The International Seismological Summary

1958 JULY, AUGUST, SEPTEMBER

The 1958 number of the Summary includes a few modifications to the presentation due to the output format of the electronic computer and card-controlled typewriter.

No lower case letters are available so the letterpress is uniformly in capitals. Phases pP, sP, sS when available are therefore designated by *PP, *SP, *SS; the asterisk implying that the first letter of the pair is equivalent to lower case. An additional column is provided and used exclusively for the phase pP. Surface waves are no longer included in a separate column. Residuals are by comparison with the Jeffreys-Bullen tables; P is used up to 105°, PKP from 110°, S up to 106° and SKS from 106°. For P and PKP beyond the scope of the tables the dummy figure of 777 is placed to complete the residual column. The quantity called SE at the head of each earthquake is the standard error of the computed P residuals.

KEW OBSERVATORY
July 1964

The Director of the I.S.S. wishes to express his thanks to H.M. Treasury, to UNESCO, and to the National Science Foundation of the United States, for financial support, which has covered the cost of the preparation and printing of this volume. Also to the United Kingdom Atomic Energy Authority for the services of their electronic computer which has performed the necessary calculations.

He also thanks the Director-General of the Meteorological Office and the Superintendent of Kew Observatory for the hospitality extended to the staff, and assistance administration.

JULY 1 5.H 53.M 14.S EPICENTRE 51.59-176.87 DEPTH= 67.KM

DEPTH OF FOCUS= 0.005R

A=-0.62293 B=-0.03404 C= 0.78154 D=-0.0546 E= 0.9985
G=-0.7804 H=-0.0426 K=-0.6239 HT= -6.0

SE= 1.93

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PETROPAVLOVK	15.02	285.5	3	25	-5								
MAGADAN	19.77	306.4	4	26	-1								
COLLEGE	20.02	37.3	4	29	-1	8	8	2			5	40	
SITKA	24.54	60.8	5	17	3								
UGLEGORSK	26.08	280.8	5	29	0	10	2	9					
Y.-SAKHLINSK	26.52	276.0	5	32	-1	10	6	6					
TIKSI	31.05	330.1	6	17	3								
ALBERNI	32.67	73.1	6	26A	-2								
KIPAPA	33.50	146.9	6	35	0								
HORSESHOE B.	33.54	72.2	6	35A	0								
HONOLULU	33.59	147.1	6	37	1						7	55	PP
VICTORIA	33.82	73.7	6	39A	1	12	4	8					
SEATTLE	34.88	74.4	6	50A	3	12	23	11					
MATUSIRO	35.00	262.4	6	47	-1	12	19	5			9	19	PCP
VLADIVOSTOK	35.08	276.6	6	48	0	12	22	7					
CORVALLIS	35.76	79.7	6	56A	2								
ABUYAMA	37.72	262.6	7	11	0	13	0	4					
SHASTA	38.44	84.5	7	19A	2								
CHANGCHUN	38.76	281.9	7	19A	0	13	12	1					
UKIAH	38.85	87.1	7	22	2								
RESOLUTE	39.05	24.7	7	23K	1	13	16	0			8	58	PP
MINERAL	39.14	84.4	7	23A	1								
HUNGRY HORSE	39.45	69.1	7	27	2	13	32	10			9	34	PCP
BERKELEY	40.21	87.9	7	32A	1	13	39	6					
RENO	40.73	84.1	7	37A	1								
LICK	40.93	88.1	7	39A	2								
BUTTE	41.49	71.4	7	43	1								
SASKATOON	41.81	60.5				14	2	5					
FRESNO	42.43	87.4	7	50A	0								
NAGASAKI	42.68	265.1	7	50K	-2	14	12	2					
EUREKA	43.14	81.5	7	57	2						8	54	
THULE	44.57	18.6	8	8	1	14	42	5			10	2	PP
SALT LAKE C.	44.89	77.3	8	11	1						9	16	
PASADENA	45.13	89.0	8	11A	0	14	55	10	8	27	10	5	PP
BOULDER CITY	46.02	84.6	8	19	0								
IRKUTSK	46.29	303.5	8	20	-1								
PEKING	46.51	283.1	8	22A	0	15	7	2			10	10	PP
NORD	46.63	3.9	8	24	1								
ULAN-BATOR	47.30	297.3	8	29	0								
RAPID CITY	48.07	68.4	8	35	0	15	31	4					
ZO-SE	49.20	270.4	8	43A	0	15	45	2					
BOULDER	49.30	73.9	8	46	2								
NANKING	50.04	273.1	8	49A	-1	15	55	1					
TUCSON	50.97	85.4	8	57	0						10	14	
TRUK	50.98	221.5	8	55	-2								
TUCSON TELE.	50.98	85.2	8	57	0								
LUBBOCK	55.61	77.8	9	32	1	17	19	9					
LANCHOW	56.50	287.3	9	38A	1	17	27	5			19	24	SCS
SCORESBY SD.	56.90	9.8	9	33	-7	17	25	-2			13	12	PPP
FAYETTEVILLE	58.49	70.5	9	50A	-1	17	36	-12			11	56	PP
APATITY	59.02	346.9	9	52A	-3	17	54	-1			12	4	PP
SEMIPALATNSK	59.23	313.4	10	4	7								
CANTON	59.83	269.7	10	1A	0	18	10	5			20	0	SCS
HONG KONG	59.85	268.4	10	0A	-1	18	10	4			19	52	SCS
SODANKYLA	60.05	349.7	10	3	1								
KIRUNA	60.20	352.5	10	2	-1	18	12	2			12	18	PP
BAGUIO CITY	60.29	258.7	10	2	-2	18	13	2					
MANILA	61.47	257.0	10	9	-3								
CLEVELAND	61.83	58.1	10	14	0	18	36	5					
OTTAWA	61.99	51.5	10	14A	-1	18	39	6			10	55	PCP
SVERDLOVSK	62.06	328.3	10	16	0	18	40	6					
BREBEUF	62.94	50.2	10	20A	-2						12	40	PP
SEVEN FALLS	63.05	47.4	10	23	1								
MORGANTOWN	64.00	58.5	10	29A	0						20	21	SCS
PENNSYLVANIA	64.24	56.4	10	31	1	19	9	8					
SKALSTUGAN	64.95	355.5	10	35	0						15	19	PCS
KUNMING	64.98	279.2	10	34	-1	19	11	1			12	56	PP
WASHINGTON	66.05	57.3	10	42	0								
PALISADES	66.11	53.8	10	42A	0	19	28	4			12	43	PP

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WESTON	66.36	51.2	10	44K	0					
PULKOVO	66.84	345.4	10	45	-2	19	32	-1		
CHAPEL HILL	67.20	60.7	10	50	1					
HELSINKI	67.21	348.4	10	49	0					
FRUNSE	67.42	311.0	10	51	1	19	43	3		
TACUBAYA	67.43	87.0	11	9	19				13	52 PP
COLUMBIA	67.53	63.4	10	52	1	19	47	6		
HALIFAX	68.22	44.9				19	51	2	20	34 PPS
UPPSALA	68.30	352.2	10	54A	-2	19	48	-2	11	20 PCP
LHASA	68.61	290.9	11	0A	2	19	59	5	20	58 SCS
MOSCOW	69.29	340.0	11	1	-1					
SUVA	69.56	184.8	11	7	3	20	19	14	15	51 PPP
NAMANGAN	70.26	311.5	11	8	0					
GOTEBORG	70.83	355.0	11	11	0					
SHILLONG	71.15	287.4	12	13A	60					
COPENHAGEN	72.82	354.5	11	24A	1	20	54	11		
CHATRA	72.96	291.6	11	24	0					
DURHAM	73.94	2.8	11	23	-7				13	21
RATHFARNHAM	75.19	5.8	11	41K	4	21	41	32	12	16
DE BILT	76.67	358.7	11	44	-1	21	30	5		
MUNSTER	76.75	357.1	11	47	1				12	45
HALLE	77.02	354.4	11	47	0	21	35	6	14	0
KEW	77.28	2.2	11	44	-5	21	37	5	22	36 PPS
BERMUDA	77.46	53.4	11	51	1	21	42	8	14	46 PP
JENA	77.61	354.5	11	50	0				14	59 PP
KRAKOW	77.73	349.0	11	54	3	21	41	4	12	3 PCP
BENSBERG	77.77	357.4	11	52	1					
UCCLE	77.98	359.2	11	53A	0	22	1	22		
PLAUEN	78.00	354.1	11	52	-1					
CHARTERS TS.	78.26	215.2	11	53A	-1					
MAKHACH-KALA	78.26	328.4	11	53	-1	21	47	5		
PRAGUE	78.26	352.6				21	32	-10	26	56 SS
DOURBES	78.68	359.0	11	54A	-2					
IASI	79.38	343.3	11	54	-6					
STUTTGART	79.89	355.9	12	2	-1	22	4	4	15	16 PP
PARIS	79.98	0.4	12	4	1	22	5	5	15	1 PP
SOTCHI	80.05	333.9	12	4	0	22	7	6		
TUBINGEN	80.13	356.0	12	4	0					
STRASBOURG	80.13	356.9	12	5	1	22	6	4	14	55 PP
SIMFEROPOL	80.18	338.2	12	4	-1					
TIFLIS	80.25	329.7	12	6	1	22	10	7		
EBINGEN	80.48	356.0	12	6	0					
GORIS	81.76	327.6	12	14	1	22	25	6		
BUCHAREST	82.33	343.6	12	17	1				13	21
TRIESTE	82.71	352.5	12	18	0	22	29	0		
BELGRADE	82.81	347.7	12	21A	3	22	37	7	14	39
CLERMONT-FD.	83.02	0.0	12	20	1	22	41	9	13	4
BRISBANE	83.06	206.7				22	39	7		
PAVIA	83.47	355.7	12	20	-2	22	34	-2		
FLORENCE X.	84.75	354.1	12	30A	2	23	11	22		
ROME	86.54	353.0				23	11	5	23	1 SKS
SAN JUAN	87.99	62.7	12	46	2					
KARAPIRO	89.38	186.0	12	50	0					
RIVERVIEW	89.57	206.2	12	46K	-5					
KSARA	90.22	333.2	12	54	0	23	52	12	16	32 PP
MALAGA	91.82	6.0	12	58	-4	23	34	-20	16	42 PP
CAPE HALLETT	123.92	184.7	18	52K	1					
LWIRO	126.32	327.5	18	58K	3					
SCOTT BASE	129.57	184.4	19	2	1				22	21 PKS
BYRD STATION	135.30	167.9	19	10	-2				22	41 SKP
SOUTH POLE	141.40	180.0	19	16	-7				22	56 SKP
WINDHOEK	149.07	334.3	19	43	7					
PIETERMZBURG	150.13	306.8	19	45	7					
KIMBERLEY	152.02	316.3	19	49K	8					
HALLEY BAY	153.22	163.9	19	50	8	27	2	21		
GRAHAMSTOWN	155.03	307.9							20	11 PKP2

JULY 2 0.H 44.M 32.S EPICENTRE 52.52 158.89 DEPTH= 0.KM

A=-0.57007 B= 0.22005 C= 0.79158 D= 0.3601 E= 0.9329
G=-0.7385 H= 0.2851 K=-0.6111 HT= -6.3

SE= 2.66

	DELTA	AZ.	P	O-C	S	O-C	*PP	SUPP.

	DEG.	DEG.	M S	S	M S	S	M S	M S
PETROPAVLOVK	0.63	346.5	0 23	7	0 32	6		
MAGADAN	8.37	330.5	2 12	7				
UGLEGORSK	11.19	258.8	2 53	9				
Y.-SAKHLINSK	11.85	248.4	2 57	4	5 11	4		
MATUSIRO	21.61	230.5	4 55A	2	8 52	3		
TIKSI	23.29	336.3	5 18	8	9 24	5		
COLLEGE	29.34	44.3	6 7	1				
RESOLUTE	44.13	21.5	8 12A	0	14 38	-7		9 56 PP
HONG KONG	45.51	246.0	8 24	1				
HUNGRY HORSE	52.37	57.3	9 16	0				10 27 PCP
SHASTA	52.76	69.5	9 20	1				
MINERAL	53.45	69.3	9 24	0				
RENO	55.01	68.9	9 37	2				
KIRUNA	56.03	342.3	9 40	-3				
EUREKA	57.22	66.5	9 52	1				
SALT LAKE C.	58.60	62.8	10 2	1				
PASADENA	59.69	72.4	10 9	1				
BOULDER CITY	60.32	68.7	10 13	0				
RAPID CITY	60.78	54.9	10 15	-1				
SKALSTUGAN	61.33	343.7	10 17A	-3				
HELSINKI	61.73	335.9	10 21	-1				
UPPSALA	63.72	339.4	10 33	-2				11 8 PCP
TUCSON TELE.	65.30	68.7	10 46	0				
TUCSON	65.30	68.9	10 46	0				
GOTEBORG	66.86	341.4	10 54A	-2				
FAYETTEVILLE	71.32	54.9	11 21	-2				
OTTAWA	71.79	37.2	11 24	-2				
BREBEUF	72.47	35.8	11 28	-2				
COLLMBERG	72.63	338.4	11 28	-3				
HALLE	72.68	339.1	11 29	-2				
CHARTERS TS.	73.05	192.4	11 33A	-1				
MUNSTER	73.12	341.9	11 34	0				11 52
JENA	73.29	339.1	11 33	-2				11 57
PLAUEN	73.57	338.6	11 34	-3				
BENSBERG	74.17	341.9	11 40	0				
KEW	74.91	346.7	11 43	-1				
MORGANTOWN	75.01	43.2	11 44K	-1				
STUTTGART	75.85	339.9	11 48	-2				
WESTON	76.00	35.9	11 50K	-1				
TUBINGEN	76.10	339.9	11 50	-1				
STRASBOURG	76.32	340.7	11 52	0				
PARIS	77.07	344.2	11 57	0				12 17
TRIESTE	77.73	335.8	11 59	-1				
CLERMONT-FD.	79.90	343.0	12 2	-10				
FLORENCE X.	80.10	336.8	12 13K	0				
MONACO	81.02	339.5	12 17	-1				
TARANTO	81.59	331.4						14 59
MESSINA	84.19	331.8						20 59
MBOUR	113.28	355.6	18 58	19			19 26	
BYRD STATION	139.80	164.5	19 21	-9				22 58 SKP
SOUTH POLE	142.33	180.0	19 28	-6				

JULY 2 4.H 48.M 4.S EPICENTRE -18.73-177.16 DEPTH= 324.KM

DEPTH OF FOCUS= 0.046R

A=-0.94654 B=-0.04695 C=-0.31916 D=-0.0495 E= 0.9988
G= 0.3188 H= 0.0158 K=-0.9477 HT= 5.0

SE= 1.74

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SUVA	4.23	277.1	1 16K	5	2 15	9		7 39 PCP
AFIAMALU	7.06	47.9	1 38A	-6	3 1	-4		
NOUMEA	15.76	254.2	3 28A	1			4 17	
KARAPIRO	20.16	197.0	4 14A	2			5 9	8 10 PCP
TUAI	20.60	192.7			7 48	6		
WELLINGTON	23.51	195.4	4 42	-2	8 33	1		
COBB RIVER	23.90	199.1	4 47	0				
KAIMATA	25.62	199.8	5 1	-2	9 0	-6		
GEBBIES PASS	26.33	196.8	5 8	-1	9 11	-6		
BRISBANE	28.71	246.8	5 29	-1	12 8	133		
CHARTERS TS.	34.49	261.7	6 18A	-2	11 17	-7		
PORT MORESBY	35.78	280.0	6 29	-2	11 38	-6		

MELBOURNE	38.07	232.0	6	49A	-1							
TRUK	40.15	307.6	7	6	-1							
ADELAIDE	42.19	238.4	7	22	-2	13	22	3				
HONOLULU	43.94	26.0	7	38	0							
KIPAPA	44.08	26.0	7	38	-1							
GUAM	49.33	307.7	8	18	-1							
CAPE HALLETT	54.07	184.7	8	56A	2				10	14	10	36 PP
SCOTT BASE	59.68	183.9	9	34K	1							
BYRD STATION	66.25	170.7	10	16	0				11	38		
MATUSIRO	69.27	322.8	10	32K	-2	19	9	-5				
BAGUIO CITY	70.51	295.7	10	41	-1							
HIROSIMA	71.32	317.7	11	28	41	20	37	60				
SOUTH POLE	71.39	180.0	10	46	-1				12	11	13	23 PP
LEMBANG	73.87	268.1	11	3	1							
BERKELEY	76.34	41.8	11	16K	0				12	37		
LICK	76.42	42.5	11	16K	0				12	37		
UKIAH	76.51	40.3	12	38	81							
PASADENA	76.90	46.9	11	20	1				12	40		
ZO-SE	77.18	309.3	11	20	0	20	31	-10				
FRESNO	77.28	43.9	11	21	0				12	42		
SHASTA	77.98	39.4	11	26	1				12	48		
MINERAL	78.24	40.1	11	26	0				12	47		
RENO	78.87	41.6	11	30	1							
NANKING	79.41	309.0				21	3	-2				
CANTON	79.61	298.7	11	33	0							
BOULDER CITY	80.20	46.8	11	37	1				12	58		
TUCSON	81.20	51.7	11	43	1				13	5		
EUREKA	81.29	43.3	11	43	1				13	4		
TUCSON TELE.	81.33	51.7	11	44	2				13	5		
CHANGCHUN	81.49	321.9	11	45	2	21	27	1				
HALLEY BAY	84.19	172.9	11	56	-1						24	2
SALT LAKE C.	84.66	43.9	12	2	3				13	23		
PEKING	85.20	315.0	12	1	-1							
COLLEGE	86.32	12.1	12	5	-2				13	29		
BUTTE	86.88	39.1	12	11	1				13	34		
HUNGRY HORSE	87.25	36.6	12	12	0				13	34	30	0 PKKP
KUNMING	89.28	296.7	12	24	3							
LANCHOW	92.34	307.3				23	11	4				
LHASA	100.54	297.7				24	17	10				
RESOLUTE	105.89	15.9				23	34	1				
GRAHAMSTOWN	123.50	203.8	18	19	0							
KIMBERLEY	128.26	204.7	18	29A	0							
SODANKYLA	129.04	348.4									21	16
KIRUNA	129.65	351.4	18	28	-3						21	18 SKP
SKALSTUGAN	134.72	354.1	18	36	-5						21	36 SKP
UPPSALA	137.57	349.0	18	37	-9							
DURHAM	143.87	4.3	18	41	-17							
POTSDAM	145.47	348.9	19	0	0							
WITTEVEEN	145.85	355.9							20	32		
RACIBORZ	146.39	342.0	18	43	-19							
HALLE	146.52	349.7	19	3	1				20	31		
GOLLMBERG	146.52	348.4	19	3	1				20	33		
MUNSTER	146.62	354.6	19	3	1				20	32		
KSARA	146.95	303.7	19	5	2							
LWIRO	147.03	233.5	19	6A	3							
JENA	147.13	349.8	19	1	-2				20	33		
KUMANGABO	147.21	235.4	19	6	3						22	32 PP
PLAUEN	147.44	348.9	19	2	-1				20	34		
BENSBERG	147.66	354.9	19	6	2				20	36		
SONNEBERG	147.72	350.0	19	6	2				20	35		
UCCLE	147.98	358.2							20	35		
JERUSALEM	148.09	300.4	19	0	-4				20	37		
DOURBES	148.67	357.8	19	7	2						21	37 PP
STUTTGART	149.59	351.7	19	6	0				20	41		
TUBINGEN	149.85	351.7	19	10	3				20	41		
STRASBOURG	149.96	353.5	19	0	-7				20	42		
PARIS	149.99	0.5	19	14	7							
BELGRADE	150.12	334.4							20	43	24	10
TAMANRASSET	175.25	328.6	19	32	1				21	4	25	11 PP

JULY 3 5.H 45.M 14.S EPICENTRE -18.08 65.19 DEPTH= 0.KM

A= 0.39917 B= 0.86341 C=-0.30853 D= 0.9077 E=-0.4196
G=-0.1295 H=-0.2801 K=-0.9512 HT= 5.1

SE= 4.02

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
TANANARIVE	16.75	264.4	3	56	-1	7	2	-2			4	10	PP
LCO. MARQUES	31.15	249.6	6	24	1						13	0	PCS
PIETERMZBURG	33.70	243.6									6	49	PP
BOMBAY	37.51	11.9				13	3	-4			9	1	PPP
HYDERABAD	37.63	21.0				13	4	-5					
GRAHAMSTOWN	37.72	238.7									7	22	PP
ASTRIDA	38.01	289.8	7	17	-4								
KIMBERLEY	38.41	246.4									7	28	PP
KUMANGABO	38.94	291.3	7	32	3								
LWIRO	39.00	289.6	7	28K	-2	13	33	4					
MEDAN	39.41	60.2	7	29K	-4								
PORT BLAIR	40.16	44.6				13	42	-5			9	23	PP
DJAKARTA	42.29	79.1	8	0	3						17	34	
LEMBANG	42.81	80.4	8	2	1						14	42	
HERMANUS	43.92	238.9				14	45	3			17	53	SS
QUETTA	48.01	2.1	8	42	-1	15	34	-7					
CHATRA	49.48	26.1	8	49	-5	16	5	4					
DEHRA DUN	49.69	14.6	9	11	15	16	2	-2			20	25	SS
LAHORE	50.12	10.2	8	57	-2								
SHILLONG	50.57	31.7	8	49	-13								
MIRNY	51.72	166.2	9	11	0	16	32	0					
WARSAK DAM	52.15	6.7	9	8	-6								
OASIS-BUNG.	53.39	162.9	9	21	-2						10	18	
LHASA	53.60	28.1	9	19	-6	16	43	-15					
PHU-LIEN	56.07	48.3									10	48	PCP
WILKES	56.41	159.7				17	37	1			23	48	
HELWAN	57.78	325.1	9	57	2	17	58	4					
KSARA	58.69	331.5	10	5	3						12	40	PP
NAMANGAN	59.07	5.7	10	11	7								
GORIS	59.93	343.2	10	5	-5	18	7	-15					
FRUNSE	61.27	7.9	10	13	-6								
CANTON	62.30	50.7	10	25	-1	18	48	-4					
TIFLIS	62.42	342.9	10	24	-3								
HONG KONG	62.50	52.0	10	31	3	18	53	-1					
MAKHACH-KALA	62.89	345.5	10	29	-1	18	54	-5					
BAGUIO CITY	64.42	61.1	10	43	3								
LANCHOW	65.10	33.9	10	44	-1	19	20	-7			11	17	PCP
SOTCHI	65.66	339.9	10	42	-6								
ADELAIDE	66.58	120.8	10	56	2								
SIMFEROPOL	68.82	336.9	11	8	0	20	10	-2					
TAMANRASSET	71.06	302.6	11	19	-3	20	45	7			14	2	PP
NANKING	71.56	46.1	11	27	2	20	44	0					
BUCHAREST	71.71	331.6	11	30A	4	20	52	7			11	56	PCP
SOFIA	71.71	328.8	11	23	-3								
SOUTH POLE	72.03	180.0	11	20	-8	20	59	10					
ZO-SE	72.68	48.1	11	22	-9								
MESSINA	72.82	321.1	11	31	-1	20	58	0			14	17	PP
KOROR	72.87	76.1	11	37	4								
TARANTO	73.34	323.8									19	36	
BELGRADE	74.68	328.7	11	47K	4	21	13	-6			15	5	
SVERDLOVSK	74.72	357.4	11	47	4	21	17	-2					
PEKING	74.80	38.2	11	42	-2	21	15	-5			12	0	PCP
SCOTT BASE	74.86	167.6	11	44	0								
ULAN-BATOR	75.56	27.5	11	54	6								
CHARTERS TS.	75.89	106.7	11	38	-12								
LWOW	76.78	334.0	11	51	-4	21	34	-8					
ROME	77.00	322.4	11	58	2	21	36	-8			26	6	SS
MOSCOW	77.14	344.4	11	52	-5								
CAPE HALLETT	77.42	162.4	12	2	3								
BRATISLAVA	78.69	329.5	12	9	3								
TRIESTE	78.70	326.0	12	6	0	22	4	1			15	22	PP
KRAKOW	78.71	332.2	12	2	-4						12	14	PCP
FLORENCE X.	78.88	323.4	12	8	1	22	3	-2			27	26	SS
KACIBORZ	79.51	331.4	12	5	-5						13	5	
WARSAW	79.84	334.2	12	2	-10	22	16	1			16	54	PPP
ALGIERS UNI.	80.03	313.9	12	8	-5	22	17	0			15	19	PP
PAVIA	80.91	323.6	12	16	-1						17	46	
MONACO	81.06	321.6	12	23	5						12	29	PCP
KELIZANE	81.26	312.0	12	24	5								
PRAGUE	81.27	329.7	12	45	26	22	41	11			16	27	PP
CHUR	81.73	325.1	12	19	-3								
BYRD STATION	82.04	179.2	12	19	-4								
PULKOVO	82.60	343.0	12	22	-4								
PLAUEN	82.65	329.0	12	22	-5						15	53	PP
COLLMBERG	82.76	330.0	12	25	-2								

EBINGEN	82.83	325.9	12	24	-3					
TUBINGEN	82.99	326.2	12	33	5					
STUTTGART	83.07	326.5	12	23	-6	22	46	-2	14 58	
BASLE	83.20	324.8	12	20	-9					
JENA	83.21	329.1	12	23	-6	23	4	15	15 54	PP
NEUCHATEL	83.24	324.1	12	35	5					
ALICANTE	83.25	313.8	12	24	-6	22	49	-1	15 42	PP
HALLE	83.39	329.7	12	16	-14	22	35	-16	15 27	PP
STRASBOURG	83.71	325.7	12	30	-2	22	51	-3	16 2	PP
ALMERIA	83.93	311.7	12	39	6					
HELSINKI	84.50	341.1	12	31	-5					
CLERMONT-FD.	84.75	321.6	12	52	15	22	48	-17		
GRANADA	84.88	311.6	12	43K	5	24	24	78	29 0	SS
MALAGA	85.25	310.9	12	43	3	23	13	3	15 45	PP
BENSBERG	85.43	327.4	12	46	5				13 6	
MUNSTER	85.80	328.4	12	45	3					
COPENHAGEN	85.87	333.1	12	43	0	23	8	-8		
DOURBES	86.29	325.8	12	50	5					
TOLEDO	86.42	313.9	12	49	3					
UPPSALA	86.69	338.1	12	42	-5	23	18	-6	23 3	SKS
PARIS	86.74	324.0	12	52	5	23	31	7	23 22	SKKS
UCCLE	86.81	326.3	12	59	12	23	25	0		
DE BILT	87.11	327.7	12	52	3	24	34	66		
MBOUR	87.16	286.0				23	40	12	24 40	PS
GOTEBORG	87.39	334.5	12	51	1					
MATUSIRO	87.67	50.4	12	41K	-11	23	21	-12	28 55	SS
APATITY	88.52	348.3	12	57	1	23	40	-1	16 36	PP
LISBON	89.50	311.1	12	56A	-4					
KEW	89.66	325.3	13	12	11	23	56	5	25 12	PS
SODANKYLA	89.81	346.0	13	2	0					
SENDAI	90.32	49.7							19 11	
SKALSTUGAN	91.11	339.1	13	7	-1					
KIRUNA	91.67	344.5	12	57	-13	23	57	-12		
DURHAM	91.95	327.8	13	18A	6	24	14	2	23 42	SKS
ABERDEEN	93.36	329.8	12	35	-43	24	31	7	23 43	SKS
RATHFARNHAM	93.74	325.2	13	30K	10				14 3	
TIKSI	99.14	16.7	13	47	3					
SCORESBY SD.	105.94	339.6							18 58	PP
TALA POZO	113.08	228.0							39 26	SSS
RESOLUTE	122.36	353.8	19	2	5	26	11	13	20 42	PP
LA PAZ	122.61	236.0	19	10	12					
COLLEGE	128.29	17.2	19	5	-4				22 50	PKS
HUANCAYO	130.86	235.3	19	13	-1					
BERMUDA	132.87	297.6							21 46	
BREBEUF	136.28	317.9	19	32	8					
OTTAWA	137.65	318.7	19	28	2					
PALISADES	138.23	311.9							22 11	PP
CHAPEL HILL	143.78	306.6	19	44	7					
BALBOA HTS.	144.60	259.9	19	40	2					
COLUMBIA	145.95	304.4	19	38	-3					
HORSESHOE B.	148.04	10.5	19	45	1					
VICTORIA	148.84	11.1	19	48	3					
HUNGRY HORSE	149.81	359.0	19	48	1				23 37	PKS
BUTTE	152.08	356.7	20	0	10				23 47	PKS
RAPID CITY	152.30	341.8	19	57	6					
BOZEMAN	152.32	354.3	20	1	10				20 21	
CORVALLIS	152.64	13.3	20	7	16					
FAYETTEVILLE	154.43	318.6	20	4	10					
SAN SALVADOR	155.03	263.7							44 13	
SHASTA	156.54	14.6	20	6	10					
MINERAL	157.05	13.4	20	8	11					
SALT LAKE C.	157.25	354.2	20	40	43				21 5	
RENO	158.19	10.4	20	11	12					
EUREKA	158.66	2.5	19	56	-3					
LICK	159.90	16.0	20	14	13					
FRESNO	160.87	12.3	20	9	7					
BOULDER CITY	162.17	0.0	20	12	9					
PASADENA	163.72	10.0	20	11	7				24 51	PP
TUCSON TELE.	165.33	346.2	20	13	7				21 15	
TUCSON	165.44	346.5	20	15	9					

JULY 3 6.H 27.M 49.S EPICENTRE -29.42-179.57 DEPTH= 410.KM

DEPTH OF FOCUS= 0.059R

A=-0.87239 B=-0.00655 C=-0.48876 D=-0.0075 E= 1.0000

G= 0.4887 H= 0.0037 K=-0.8724 HT= 2.0

SE= 2.14

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ONERAHI	8.13	217.4	2	1	3	3	40	10					
AUCKLAND	8.80	211.0	2	8K	3	3	50	6					
KARAPIRO	9.40	204.4	2	13A	1								
SUVA	11.37	350.3	2	34K	-1	4	36	-2			3	55	*SP
WELLINGTON	12.69	199.8	2	47K	-3	5	3	-2					
COBB RIVER	13.21	206.3	2	53	-2	5	15	0					
NOUMEA	14.44	296.2	3	9K	1						3	41	
GEBBIES PASS	15.55	201.5	3	17	-3	6	1	0					
AFIAMALU	17.05	26.7	3	33A	-2	6	27	-2					
ROXBURGH	18.32	205.5	3	43	-5	5	35	-77					
BRISBANE	24.15	267.9	4	40K	-3	8	32	2					
RIVERVIEW	25.27	252.5	4	55A	2	8	53	5					
MELBOURNE	30.55	244.7	5	39	0	10	14	3			7	15	PP
CHARTERS TS.	32.33	279.0	5	53A	-1	10	38	0					
RABAUL	36.68	307.8	6	28	-3								
PORT MORESBY	36.97	295.8	6	36	3	11	47	-2			8	12	PPP
CAPE HALLETT	43.28	184.5	7	28A	3	15	11	110			9	25	PP
TRUK	45.85	318.6	7	43	-2				9	12			
SCOTT BASE	48.91	183.8	8	12K	4	14	49	9			11	5	PP
HONOLULU	54.51	24.8	8	50	1	16	1	6	10	12	18	35	*SS
KIPAPA	54.65	24.8	8	50	0				10	13			
GUAM	54.81	316.0	8	49	-2	15	59	0			10	57	PP
BYRD STATION	56.13	169.5	9	0	-1	16	20	3	10	23	37	32	PKPPKP
KOROR	57.33	302.1	9	8	-1				10	31	9	58	PCP
OASIS-BUNG.	59.34	207.7	9	22	-1	16	58	0					
SOUTH POLE	60.74	180.0	9	32	0	17	16	1	10	59	38	15	PKPPKP
MIRNY	62.38	206.8	9	43	0	17	38	2					
LEMBANG	71.71	272.4	10	39	-1	19	23	-3					
DJAKARTA	72.71	272.6	10	47K	1	19	33	-4			.		
BAGUIO CITY	73.55	300.1	10	52	1								
HALLEY BAY	73.89	173.2	10	47	-6	19	49	-1					
MATUSIRO	76.67	326.2	11	4	-4	19	50	-30			11	8	PCP
ABUYAMA	76.68	323.4	11	9K	1	20	20	0					
HONG KONG	81.90	301.1	11	38K	2	21	16	2			26	49	SS
ZO-SE	82.45	312.0	11	39K	0	21	19	-1			14	51	PP
CANTON	83.02	301.2	11	43K	1	21	27	2					
Y.-SAKHLINSK	83.29	335.0	11	33	-10								
PETROPAVLOVK	84.37	347.0	11	50	2								
MEDAN	84.57	277.2	11	49K	0	21	32	-8					
NANKING	84.61	311.4	11	51K	1	21	44	3			15	10	PP
UGLEGORSK	85.32	335.8	11	53	0								
BERKELEY	85.75	41.9	11	55	0	22	3	11	13	29	14	13	*SP
LICK	85.76	42.6	11	55K	0				13	29			
PASADENA	85.80	46.9	11	55	0	21	58	6	13	33	21	47	SKS
UKIAH	86.05	40.5	11	57	0				13	35	12	23	
FRESNO	86.48	44.0	11	57	-2				13	31			
PHU-LIEN	86.84	295.9	13	2	62						14	18	
SHASTA	87.59	39.8	12	3	-1				13	35			
RENO	88.29	41.9	12	9K	2								
CHANGCHUN	88.64	323.6	12	9K	0	22	23	5	13	46	15	42	PP
BOULDER CITY	89.08	47.2	12	11	0				13	46			
TUCSON	89.51	52.2	12	14	1	22	41	15	13	50	29	50	PKKP
TUCSON TELE.	89.64	52.1	12	14	1				13	49	29	49	PKKP
CORVALLIS	89.75	36.5	12	17K	3								
MINERAL	87.80	40.4	12	7A	2				13	39			
EUREKA	90.53	43.9	12	15	-3				13	51	29	12	PKKP
PEKING	91.27	316.2	12	23K	2	22	49	7			16	3	PP
MAGADAN	91.97	345.4	12	23	-1								
SEATTLE	92.36	34.7							14	4	32	5	
VICTORIA	92.41	33.5	12	27	1	23	3	11					
HORSESHOE B.	93.07	33.0	12	32	3								
SALT LAKE C.	93.83	44.8	12	32	-1				14	8			
HUANCAYO	96.23	107.5				23	44	20	14	29	34	30	SSS
BUTTE	96.49	40.2									16	45	PP
LANCHOW	97.06	307.4	12	50	3	23	38	7			16	49	PP
HUNGRY HORSE	97.07	37.7	12	49	1				14	28	18	9	*PPP
COLLEGE	97.19	13.1	12	45	-3	23	35	3	14	23	22	47	SKS
BOULDER	97.56	48.2	12	52	2								
SHILLONG	100.95	293.1	13	7K	2								
RAPID CITY	100.99	45.5	13	7	2				14	40	17	20	PP
LHASA	103.44	296.5									17	36	PP
TIKSI	106.95	345.0	18	0	777								
RESOLUTE	116.72	17.2	17	57A	1						30	51	*SSP

KIMBERLEY	117.65	204.1	18	2K	4							
OTTAWA	119.60	51.9	18	0	-2					21	2	
WARSAK DAM	120.44	294.3	18	6	3							
oREBEUF	121.07	52.1	18	6A	1							
WESTON	122.05	56.1	18	9K	2							
QUETTA	123.06	288.6	18	8	0					19	45	PP
SEVEN FALLS	123.26	50.7	18	8	-1					21	7	
THULE	123.35	15.3	18	17	8	24	40	9	20 1	27	28	PKKP
NORD	127.31	3.1	18	17	0							
SCORESBY SD.	137.01	10.8	18	35	0					21	24	PP
APATITY	137.08	342.1	18	29	-6					21	23	
ASTRIDA	137.56	226.4	18	41	5				20 36			
LWIRO	138.42	225.7	18	35	-2					21	38	SKP
KUMANGABO	138.79	227.2								21	42	SKP
SODANKYLA	138.90	344.9	18	31	-7							
KIRUNA	139.76	348.4	18	34	-6					21	38	SKP
TIFLIS	142.27	301.2	18	43	-2							
REYKJAVIK	142.49	15.9	18	45K	-1							
MOSCOW	142.76	325.6	18	41	-5							
PULKOVO	143.54	334.9	18	43	-4							
SIDA	143.65	13.8	18	48	1							
SKALSTUGAN	144.99	350.8	18	47K	-3							
HELSINKI	145.09	338.7	18	47	-3							
SOTCHI	145.73	305.2	18	51	0							
UPPSALA	147.42	343.9	18	53K	0				20 34	22	24	PP
SIMFEROPOL	149.27	309.6	18	58	2							
KSARA	149.59	287.5	19	0	4				20 41	23	1	PP
JERUSALEM	150.04	283.4	18	51	-6				20 33			
GOTEBORG	150.61	347.3	19	0	2				20 47			
COPENHAGEN	152.39	345.3	19	3	3				20 41	22	55	PP
IASI	152.49	317.7	19	14	13					20	18	
WARSAW	152.59	332.0	19	14	13							
LWOW	152.90	325.3	19	3	2					19	25	
HELWAN	153.18	278.7	19	5	3				20 42			
DURHAM	154.63	2.7	19	15A	11				20 24	23	6	PP
KRAKOW	154.66	329.8	19	6	2				20 32	23	12	PP
BUCHAREST	154.74	313.3	19	33	29					23	11	
POTSDAM	155.23	341.3								19	34	
RACIBORZ	155.38	331.8	19	17	12							
RATHFARNHAM	155.64	9.8	19	9	4					22	12	PP
MUNSTER	156.85	348.6	19	8	1					23	16	
JENA	156.94	341.8	19	8	0	25	23	-8	20 48	23	15	PP
DE BILT	157.07	352.5	19	11	3					19	43	PKP2
PLAUEN	157.17	340.5	19	7	-1					23	17	PP
BENSBERG	157.90	348.6	19	45	37					23	23	
BELGRADE	157.93	319.6	19	46K	38					23	27	
KEW	157.97	1.3	19	45	37					23	23	PP
UCCLE	158.45	353.2	19	46	37							
ATHENS	158.87	299.9	19	14K	5					19	49	PKP2
STUTTGART	159.54	343.2	19	11	1	25	45	11		23	33	PP
TUBINGEN	159.80	343.2	19	11	1					19	52	
STRASBOURG	160.06	345.6	19	12	2					23	35	PP
EBINGEN	160.15	343.0	19	11	1					19	56	
PARIS	160.58	355.9	19	9	-2					19	57	PKP2
TRIESTE	160.71	330.7	19	11	0				20 50	23	41	PP
BASLE	161.09	344.9	19	59A	48							
CHUR	161.21	340.3	19	13K	2					20	1	
FLORENCE X.	163.27	331.8	19	24	11					20	11	PKP2
CLERMONT-FD.	163.55	353.3	19	20	6					20	11	PKP2
ROME	164.18	325.1	19	35	21					23	49	
MONACO	164.67	340.5								20	14	PKP2
MESSINA	164.70	308.8	19	55	40					25	3	
TOLEDO	168.94	18.3	19	20	2				21 0	24	23	PP
ALICANTE	171.06	4.6	19	11	-8	25	28	-13		24	26	PP
GRANADA	171.56	22.5	19	23K	4					24	43	PP
MALAGA	171.67	27.9	19	22	3					24	38	PP
TAMANRASSET	171.96	215.8	19	21	1				20 50	25	14	PP
ALMERIA	172.21	17.4	19	24	4					24	39	PP
ALGIERS UNI.	172.35	344.0	19	23	3				20 48	24	40	PP
RELIZANE	173.69	359.1	19	24	4				20 55			

JULY 3 10.H 23.M 7.S EPICENTRE -55.97-124.32 DEPTH= 0.KM

A=-0.31704 B=-0.46435 C=-0.82696 D=-0.8259 E= 0.5639
G= 0.4663 H= 0.6830 K=-0.5623 HT= -7.6

SE= 3.67

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
BYRD STATION	24.21	178.0	5	18	-1	9	58	23					
CAPE HALLETT	30.80	212.9	6	25	6						14	23	SS
SCOTT BASE	31.68	202.1	6	31	4								
SOUTH POLE	34.21	180.0	6	48	-1	12	15	-1			7	59	PP
HALLEY BAY	38.62	156.5	7	23	-3						17	19	SS
ROXBURGH	41.68	255.5				14	28	19					
SANTA LUCIA	42.93	81.4				14	37	9					
IALA POZO	50.78	82.3				16	13	-6			19	33	SS
WILKES	51.35	205.1				16	33	6					
OASIS-BUNG.	53.54	200.9									24	30	
MIRNY	54.63	197.3	9	32	0	17	17	5					
LA PAZ	57.76	70.5	9	51	-4						20	20	SCS
HUANCAYO	57.83	60.7	9	54	-1	18	7	13					
CHINCHINA	72.63	51.7	11	13	-18								
BOGOTA	73.01	53.3	11	35	2	21	0	0					
CHARTERS TS.	73.34	259.0	11	24	-11								
PORT MORESBY	81.46	265.9	12	22	2	22	29	-2					
HERMANUS	84.76	150.5				22	59	-6					
TUCSON	88.62	11.4	12	56	0								
TUCSON TELE.	88.72	11.5	12	50	-6								
PASADENA	89.91	5.1	13	12	10	23	50	-3			24	58	PS
BOULDER CITY	91.94	7.7	13	9	-2								
FRESNO	92.45	3.6	13	27	13								
BERKELEY	93.49	1.6									31	6	SS
EUREKA	95.34	6.5	13	26	-1								
BERMUDA	101.55	48.2				24	29	-64			27	5	PS
PALISADES	105.63	37.3				26	0	-4			27	42	PS
MBOUR	111.51	96.2	18	15	-21						34	44	SS
LWIRO	117.96	149.2									29	19	
COLLEGE	121.84	348.4	18	56	0								
TAMANRASSET	130.60	111.0	19	13	0						21	54	PP
RESOLUTE	131.83	10.1									39	8	PKPPKP
GRANADA	136.64	89.9	19	11A	-13								
SCORESBY SD.	145.02	34.9	19	48	9								
RATHFARNHAM	145.09	67.8	20	1	22								
CLERMONT-FD.	146.09	84.9	19	43	2								
NORD	147.46	15.1	19	43	0								
MESSINA	147.99	106.7	19	41	-3	26	48	-3			23	13	PKS
HELWAN	148.73	136.4	19	49K	4								
ROME	148.89	98.5	19	26	-19								
FLORENCE X.	149.43	94.5	19	25	-21								
STUTTGART	151.20	84.7	19	53	4						20	16	PKP2
MUNSTER	151.91	77.8	19	56	6								
ATHENS	152.09	116.7	20	1	11								
KSARA	153.97	140.0	19	56	3								

JULY 3 12.H 48.M 4.S EPICENTRE 48.08 147.27 DEPTH= 412.KM

DEPTH OF FOCUS= 0.060R

A=-0.56410 B= 0.36256 C= 0.74185 D= 0.5407 E= 0.8412
G=-0.6241 H= 0.4011 K=-0.6706 HT= -4.7

SE= 1.69

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KURILSK	2.88	171.5	1	4A	1	1	54	1				
Y.-SAKHLINSK	3.29	251.5	1	9	2	2	2	3				
UGLEGORSK	3.59	288.1	1	13	4	2	9	5				
ABASHIRI	4.56	208.2	1	18	0	2	22	2				
NEMURO	4.90	194.6	1	19K	-3	2	21	-5				
KUSIRO	5.49	202.6	1	26	-2	2	32	-5				
ASAHIGAWA	5.49	220.3	1	30	2							
SAPPORO	6.51	221.8	1	40	1	2	58	1				
URAKAWA	6.73	209.8	1	40	-1	2	57	-5				
TOMAKOMAI	6.86	217.9	1	43	0	3	2	-2				
SUTTSU	7.24	225.7	1	46	-1	3	12	0				
MURORAN	7.27	220.0	1	47	0	3	10	-2				
MORI	7.63	220.8	1	51	0	3	17	-3				
HAKODATE	7.83	218.8	1	52	-2	3	19	-5				
HATINOHE	8.60	210.7	2	0A	-2	3	33	-7				

AOMORI	8.61	214.9	2	3	0	3	34	-6			
PETROPAVLOVK	8.82	50.8	2	5	0	3	45	1			
MIYAKO	9.25	206.3	2	8	-2	3	46	-7			
MORIOKA	9.46	209.9	2	10	-2	3	52	-5			
AKITA	9.83	214.3				4	3	-2			
MIZUSAWA	9.99	208.7	2	18	0	4	7	-1			
ISINOMAKI	10.57	206.3	2	25	0	4	18	-3			
SAKATA	10.64	213.2				4	44	22			
SENDAI	10.85	207.6	2	28	0	4	24	-2			
YAMAGATA	11.04	209.7	2	32	1	4	29	-1			
HUKUSIMA	11.46	208.2	2	34	-1	4	41	2			
MAGADAN	11.68	8.9	2	39	1	4	49	5			
ONAHAMA	12.07	205.2	2	48	6	4	52	0			
SHIRAKAWA	12.12	207.9				4	50	-3		5	7
MITO	12.73	205.7				5	4	-1			
UTUNOMIYA	12.75	208.0	2	51	1					3	7
KAKIOKA	12.95	206.4	2	54	2					4	1
WAZIMA	13.12	219.2	2	50	-4						
MAEBASI	13.15	210.4	2	57	3	5	15	1		3	52
NAGANO	13.22	213.7	2	57	2	5	33	18			
KUMAGAYA	13.27	208.9				5	8	-8			
MATUSIRO	13.32	213.4	2	55K	-1	5	17	0		10	41 SCP
OIWAKE	13.39	211.9	2	58	1						
TOYAMA	13.58	216.8	2	59	0						
TOKYO C.M.O.	13.59	207.0	3	0	1	5	24	2			
MATUMOTO	13.67	213.5	3	0	0	5	26	2			
KOHU	14.02	210.6	3	4	1	5	29	-2			
HUNATU	14.07	209.8				5	15	-17			
MISIMA	14.36	208.6	3	1	-6	5	38	1			
SHIZUOKA	14.67	210.0	3	15	5						
GIHU	14.88	215.4	3	14	2	5	49	2			
NAGOYA	15.01	214.5	3	14	0	5	46	-4			
IBUKISAN	15.05	216.5	3	16	2						
HIKONE	15.20	216.6	3	18	2	6	3	10			
ABUYAMA	15.82	217.7	3	22K	0						
CHANGCHUN	15.84	262.6	3	21	-1	6	4	-2			
PEKING	23.63	261.7	4	40	3	8	26	5			
TIKSI	25.13	346.4								6	8 PPP
NANKING	26.83	243.7	6	19	73				7	15	
LANCHOW	33.97	265.6	6	9	1						
COLLEGE	37.60	39.3	6	39	1				8	21	
TRUK	40.66	173.0	7	1	-2						
KOROR	42.04	199.1	7	14	0						
SITKA	45.48	48.4	7	42	1						
LHASA	46.41	267.7	7	51	2	14	6	1			
SHILLONG	48.52	262.9	8	4	-1						
NORD	50.28	357.0	8	16K	-2				9	27	
RESOLUTE	50.81	17.7	8	20K	-2						9 30 PCP
APATITY	54.49	334.4	8	47K	-2						
ALBERNI	54.79	53.2	8	51K	0						
HORSESHOE B.	55.55	52.4	8	55K	-1						
VICTORIA	55.98	53.3	8	59K	0						
LAHORE	56.34	281.3	9	1	-1						
SODANKYLA	56.51	336.5	9	1	-2						
KIRUNA	57.74	338.9	9	10K	-1				10	39	
MINERAL	62.08	59.9	9	39K	-1						
CORVALLIS	58.42	57.0	9	17K	1						
HUNGRY HORSE	60.99	48.9	9	33	0						10 12 PCP
SHASTA	61.39	60.0	9	36K	0						
QUETTA	62.05	284.9	9	41	1						
HELSINKI	62.40	331.5	9	42	0						
SKALSTUGAN	63.17	339.2	9	45	-2						10 18 PCP
BERKELEY	63.31	62.3	9	48K	0						
RENO	63.64	59.5	9	51K	1						
LICK	64.03	62.4	9	53K	0						
BOZEMAN	64.30	49.6	9	54	0						
UPPSALA	64.88	334.6	9	56K	-2				11	23	10 25 PCP
FRESNO	65.50	61.8	10	1K	-1						
EUREKA	65.88	57.4	10	4	0				11	39	10 31 PCP
SALT LAKE C.	67.27	54.0	10	14	1						
CHARTERS TS.	67.78	181.0	10	15A	-1						
REYKJAVIK	67.81	354.9	10	17K	1						
SIDA	67.88	353.0	10	18	1						
PASADENA	68.26	62.9	10	19	0						10 38 PCP
GOTEBORG	68.29	336.0	10	18	-1						
BOULDER CITY	68.95	59.4	10	23	0						
RAPID CITY	69.35	46.5	10	26	0						
BOULDER	71.27	50.7	10	38	1						
TUCSON TELE.	73.93	59.5	10	53	1						

TUCSON	73.93	59.6	10 53	1		
SEVEN FALLS	79.54	25.4	11 23	0		
OTTAWA	79.58	29.2	11 22K	-1		
BREBEUF	80.16	27.9	11 25K	-1		
MORGANTOWN	83.13	34.8	11 42K	0		
WESTON	83.69	27.7	11 44K	0		
KARAPIRO	89.25	158.0	12 12	1		
HUANCAYO	129.55	59.2				32 6 SPP
BYRD STATION	137.48	165.1	18 24	-11		21 26 SKP

JULY 4 0.H 19.M 28.S EPICENTRE -19.39-173.08 DEPTH= 0.KM

A=-0.93712 B=-0.11381 C=-0.32994 D=-0.1206 E= 0.9927
G= 0.3275 H= 0.0398 K=-0.9440 HT= 4.8

SE= 2.77

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
AFIAMALU	5.60	13.1	1 17	-9				2 20
SUVA	8.14	277.3	2 1	-1	3 15	-21		
KARAPIRO	20.97	205.9	4 45	-2				
BRISBANE	32.05	249.0	6 25K	-5				
CHARTERS TS.	38.22	262.0	7 28A	5				11 57
GUAM	52.83	304.9	9 16	-3				
CAPE HALLETT	53.78	186.2	9 28	2				
SCOTT BASE	59.33	184.9	10 7	1				
BYRD STATION	64.99	171.1	10 43	-1				
SOUTH POLE	70.74	180.0	11 20	1				
OASIS-BUNG.	70.92	205.4	11 19	-2				
MATUSIRO	72.18	320.5	11 25A	-3	20 52	2		
MANILA	73.14	292.5	11 29	-5				
MIRNY	73.95	204.5	11 37	-2				
FRESNO	75.13	41.8	11 44	-1				
SHASTA	76.09	37.3	11 51	0				
RENO	76.86	39.5	11 55	0				
BOULDER CITY	77.88	44.9	12 0	-1				
TUCSON	78.62	49.9	12 6	1				
TUCSON TELE.	78.75	49.9	12 7	1				
EUREKA	79.17	41.4	12 7	-1				
HONG KONG	82.26	296.8	12 51	27	22 43	4		
SALT LAKE C.	82.50	42.2	12 26	1				
NANKING	82.85	307.4	12 38A	11				
CHANGCHUN	84.43	320.2	12 35A	0				
BUTTE	85.00	37.5	12 38	0				
HUNGRY HORSE	85.52	35.0	12 40	-1				
BOZEMAN	85.68	38.4	12 42	0				
COLLEGE	86.20	10.5	12 42	-2				
PEKING	88.42	313.5	12 54A	-1				
KUNMING	93.04	295.3	13 18	2				
PALISADES	109.24	52.3						34 39 SS
DURHAM	144.09	8.4	19 42	5				
WITTEVEEN	146.63	0.3	19 44	2				
LWOW	146.69	339.7	19 45	3				
POTSDAM	146.72	353.1						20 7
DE BILT	147.32	2.0	19 56	13				
KEW	147.48	8.4	19 58	15				
IASI	147.53	333.4	19 56	13				
KRAKOW	147.69	344.3	19 47	4				21 14
HALLE	147.71	354.1	19 47	4				
COLLMBERG	147.79	352.8	19 47	4				
KACIBORZ	148.08	346.2	19 47	3				
JENA	148.31	354.4	19 49	5				23 54
BENSBERG	148.49	359.7	19 49	4				
UCCLE	148.59	3.1	19 50	5				
PLAUEN	148.68	353.6	19 48	3				
ASTRIDA	148.70	228.2	19 49	4				
PRAGUE	148.80	350.6	19 48	3				
DOURBES	149.30	2.9	20 6	20				
LWIRO	149.60	227.4	19 53A	7				
RUMANGABO	149.87	229.4	19 55	8				
BRATISLAVA	150.12	346.3	19 53	6				
PARIS	150.43	5.9	20 4	16				
KSARA	150.51	305.0	19 54	6				
STUTTGART	150.63	356.9	19 49	1				19 54 PKP2
STRASBOURG	150.87	358.8	19 52	4				

JERUSALEM	151.74	301.5	19	46A	-4					19	54 PKP2
FLORENCE X.	155.41	352.5	20	16	21						
HELWAN	155.53	299.9	20	16	21						
!AMANRASSET	176.38	21.0	20	10	-1					25	40 PP

JULY 4 18.H 34.M 14.S EPICENTRE 5.84 124.90 DEPTH= 85.KM

DEPTH OF FOCUS= 0.008R

A=-0.56927 B= 0.81592 C= 0.10105 D= 0.8201 E= 0.5722
G=-0.0578 H= 0.0829 K=-0.9949 HT= 7.0

SE= 1.90

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
MANILA	9.50	336.3	2	13	-3	4	19	17					
KOROR	9.63	80.6	2	15	-3	4	2	-3					
BAGUIO CITY	11.34	338.4	2	40	-1	5	33	47					
HENGCHUN	16.56	346.4	3	50	1								
!AWU	16.86	347.1	3	57	5								
TAITUNG	17.20	348.2	3	57	1								
HSINKONG	17.50	349.1	4	0	0								
HWALIEN	18.30	350.4	4	6	-4								
ILAN	19.07	351.2	4	19	0								
TAIPEI	19.36	350.7	4	25	3	8	9	19					
HONG KONG	19.38	328.7	4	20A	-2	8	1	10					
CANTON	20.48	328.0	4	33A	0								
GUAM	20.97	67.4	4	37	-1	8	24	2			4	54	PP
LEMBANG	21.35	234.1	4	45A	3								
YAKUSIMA	25.04	11.5	5	18	0	9	33	0					
KO-SE	25.37	352.5	5	21A	0	9	43	4	5	35	5	41	*SP
KAGOSIMA	26.14	11.0	5	28	0						6	41	
MEDAN	26.23	266.3	5	29A	0						10	40	
MIYAZAKI	26.65	12.4	5	29	-4	10	8	8					
NANKING	26.69	348.4	5	34	1				5	46	5	54	*SP
TRUK	26.81	85.0	5	35	1						6	8	PP
PORT MORESBY	26.85	124.2	5	35	0	10	7	4			6	30	PP
NAGASAKI	27.15	9.2	5	40	2								
SIMIDU	27.84	14.7	5	44	0	10	22	3					
OOITA	27.96	12.1	5	44	-1								
KUNMING	28.61	314.2	5	51A	0	10	37	6	6	3	6	52	PP
KOTI	28.71	15.1	5	51	-1	10	39	6			6	39	
RABAUL	29.00	109.5	5	56K	2						6	54	
HIROSIMA	29.23	12.8	5	56	0	10	46	5					
SUMOTO	29.84	16.7	6	2	0	10	54	3					
USAKA	30.31	17.5	6	11	5	10	58	0					
ABUYAMA	30.52	17.4	6	7A	-1	11	0	-2					
KAMEYAMA	30.78	18.8	6	0	-10								
HIKONE	31.10	18.2	6	15	2								
NAGOYA	31.24	19.3	5	50	-24						6	14	
KOHU	32.21	21.2	6	22	0								
YOKOHAMA	32.43	22.8	7	26	62						8	37	
TOKYO C.M.O.	32.69	22.7	7	46	79								
IOYAMA	32.71	18.5	6	0	-27								
OIWAKE	32.83	20.6	6	49	21								
MATUSIRO	32.91	20.0	6	26A	-3	11	38	-1	6	46	7	37	PP
KUMAGAYA	32.96	21.8	6	52	23								
NAGANO	33.01	19.8	6	30	1						8	6	PPP
MAEBASI	33.07	21.2	7	4	34								
UTUNOMIYA	33.50	22.1	7	42	68								
NIIGATA	34.43	20.0									9	30	
HUKUSIMA	34.78	21.9	6	46	1								
PEKING	34.94	348.3	6	45A	-1	12	14	4	6	58	7	4	*SP
SENDAI	35.40	22.0	6	50	0	12	18	0					
TOCKLAI	35.45	309.3	6	54	4								
LANCHOW	35.78	330.1	6	55	2	12	28	5	7	7	7	17	*SP
MIZUSAWA	36.24	21.6	6	54	-3	12	34	4					
AKITA	36.41	19.9	7	0	2	12	36	3			7	29	
SHILLONG	37.19	305.4	7	4A	-1	12	43	-2			8	24	PP
VLADIVOSTOK	37.64	8.4	7	9	0	12	57	5					
CHANGCHUN	37.84	0.5	7	9A	-1	12	54	-1			8	34	PP
MORI	38.70	18.7	7	24	6	13	13	5					
URAKAWA	39.50	21.0	7	26	2	13	28	8					
LHASA	39.74	310.6	7	28	2	13	27	4	7	40	7	47	*SP
SAPPORO	39.83	18.9	7	28A	1	13	29	4					

OBIHIRO	40.32	20.9	7	34	3	13	22	-10			
CHATRA	41.54	304.5	7	41	0					9	54
ADELAIDE	42.59	163.1	7	50K	0	14	12	6		9	47 PCP
BRISBANE	42.85	142.0	7	51K	-1	14	10	1			
Y.-SAKHLINSK	43.74	17.6	7	59	0	14	25	3			
ULAN-BATOR	44.67	342.8	8	6	0	14	37	1			
UGLEGORSK	45.48	15.8	8	13	0	14	54	7			
RIVERVIEW	46.62	149.6	8	24K	2	15	18	14			
MELBOURNE	47.29	158.3	8	29K	2	15	21	8	8 47		
IRKUTSK	49.30	343.4	8	42	-1	15	46	5			
AGRA	49.32	300.9	8	43A	0	15	41	0		10	54 PP
NOUMEA	49.35	125.9	8	42K	-1					10	9
DEHRA DUN	50.28	304.9	8	54	4	15	58	3		11	43
LAHORE	53.70	305.1	9	13	-3						
PETROPAVLOVK	54.61	24.2	9	22	0	16	56	2			
MAGADAN	57.13	15.4	9	40	0	17	31	4			
FRUNSE	57.63	317.9	9	43	-1					10	2
SUVA	57.92	115.5	9	43	-3	17	43	5		11	51 PP
SEMIPALATNSK	57.96	328.0	9	44	-2						
KARACHI	58.62	296.6	9	52	1						
NAMANGAN	58.88	314.9	9	53	0	17	55	5			
QUETTA	59.49	301.6	9	56	-1	18	2	4		12	1 PP
KARAPIRO	64.07	137.2	10	28K	0					11	58
GEBBIES PASS	65.44	143.8	10	37	1						
TIKSI	65.76	1.4	10	40	2	19	18	2			
SVERDLOVSK	71.23	328.5	11	11	-1	20	21	0			
DUMONT	73.15	173.8	11	20	-4						
OASIS-BUNG.	73.95	190.0	11	27	-1						
MIRNY	75.79	192.6	11	38	-1						
HONOLULU	75.80	69.6	11	41	2	21	28	15			
KIPAPA	75.88	69.5	11	41	2						
MAKHACH-KALA	76.83	312.6	11	42	-3						
GORIS	77.50	309.0	11	49	1	21	37	6			
TIFLIS	78.76	311.2	11	55	0	21	47	3			
TANANARIVE	80.00	249.7	12	2K	0					12	15 PCP
SOTCHI	82.52	313.1	12	14	-1	22	23	0			
CAPE HALLETT	83.25	167.3	12	21A	2						
COLLEGE	83.59	25.4	12	20	-1	22	34	0		22	57 SCS
MOSCOW	83.68	325.4	12	20	-1	22	33	-2			
KSARA	85.98	303.4	12	34	2	23	5	7		15	56 PP
SIMFEROPOL	86.47	314.7	12	34	-1	23	3	1			
SCOTT BASE	86.66	171.9	12	37	1						
JERUSALEM	86.70	301.5	12	36A	0	23	31	27			
PULKOVO	87.31	329.7	12	37	-2	23	10	0			
HELSINKI	89.90	330.5	12	51	0						
KIRUNA	90.05	338.4	12	50	-2	23	39	3		16	27 PP
HELWAN	90.22	299.9	12	53	0	23	45	8			
LWOW	92.56	320.5	13	16	13						
UPPSALA	93.55	331.1	13	5	-3	23	51	-15		16	37 PP
WARSAW	93.85	323.2				24	13	4		23	37 SKS
SKALSTUGAN	94.64	335.5	13	13	0					16	56 PP
SOUTH POLE	95.80	180.0	13	19	1						
BELGRADE	96.07	316.1	14	55	96					17	4
RESOLUTE	96.07	9.9	13	19	0	23	47	-41		17	11 PP
GOTEBORG	97.05	330.1	13	21	-3						
COPENHAGEN	97.58	328.1				23	56	-44		17	26 PP
PRAGUE	98.45	322.4								25	21
HALLE	99.42	324.3	13	33	-2	24	59	3		13	53
JENA	99.85	323.9	13	35	-2					17	25 PP
BYRD STATION	100.05	170.8	15	41	124						
TRIESTE	100.36	318.3								17	56 PP
SCORESBY SD.	100.65	349.2				24	15	-51		17	35 PP
MESSINA	101.39	310.7				25	23	11		18	53 PP
STUTTGART	102.10	322.4				24	16	-62		18	1 PP
ROME	102.48	315.0				26	39	77		18	19 PP
DE BILT	102.99	326.6				27	4	98		18	4 PP
STRASBOURG	103.05	322.7	17	58	777	24	16	-70		18	30 PP
ABERDEEN	103.97	333.4								20	16 PPP
UCCLE	104.05	325.7								20	31
DOURBES	104.24	325.0	18	25	777	25	44	8			
DURHAM	105.09	331.1				26	5	3			
HUNGRY HORSE	105.50	36.4	14	3	777					17	19
PARIS	106.06	324.5	18	12	777					18	31 PP
KEW	106.26	327.8				24	36	1			
CLERMONT-FD.	107.13	321.5								18	29
BUTTE	107.47	38.0	17	45	777						
EUREKA	108.11	45.3	14	16	777					29	47 PKKP
PASADENA	108.49	51.2	19	0	777						
BOZEMAN	108.57	37.8							18 26		

ALGIERS UNI.	111.18	313.0	18	31	7	25	22	25	19	7	PP
RELIZANE	113.45	312.9							19	26	PP
RAPID CITY	114.13	36.0	18	57	27						
TAMANRASSET	114.31	298.1	18	21	-9	25	32	23	19	27	PP
TUCSON TELE.	114.94	50.4							19	40	PP
MALAGA	116.50	316.0							20	2	PP
OTTAWA	125.75	17.8	18	53	1						
BREBEUF	126.27	16.1	18	54	1						
HALIFAX	129.19	7.8							38	17	SS
WESTON	129.79	15.6							22	20	PKS
PALISADES	130.29	18.7				26	7	7	21	15	PP
COLUMBIA	133.40	30.0	19	10	3						
MBOUR	137.18	298.3	19	6	-8				25	13	PPP
BERMUDA	140.91	12.9							22	46	
BALBOA HTS.	151.52	59.1	19	41	3						
SAN JUAN	153.59	24.1	19	55	14				20	21	
HUANCAYO	159.09	108.6	19	50	2				24	12	PP
LA PAZ	163.41	130.7	19	55	2				20	47	PKP2

JULY 5 2.H 5.M 58.S EPICENTRE 42.84 41.63 DEPTH= 0.KM

A= 0.54971 B= 0.48865 C= 0.67752 D= 0.6644 E=-0.7474
G= 0.5064 H= 0.4501 K=-0.7355 HT= -2.7

SE= 2.89

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ZUGDIDI	0.37	150.6									0	5	PG
GEGECHKORI	0.74	131.6									0	9	PG
KRASNAYA	1.33	308.8									0	26	PG
ABASTUMANJ	1.41	140.5									0	23	PG
SOTCHI	1.58	298.4									0	30	PG
PIATIGORSK	1.58	40.9									0	44	PG
BORZHOMI	1.64	127.4									0	28	PG
BAKURIANA	1.79	127.8									0	31	PG
AKHALKALAKI	1.99	135.8									0	34	PG
GORI	2.03	114.3									0	34	PG
BOGDANOVKA	2.15	136.4									0	35	PG
TIFLIS	2.60	114.5	0	42	-2						1	25	SG
STEPANAVAN	2.75	131.0	0	45	-1						1	23	S*
GROZNY	3.05	79.6	0	54	3						1	47	
EREVAN	3.42	140.1	0	54	-2								
KIROVOBAD	4.12	119.2	1	4	-2						2	2	
MAKHACH-KALA	4.31	86.3	1	12	3						2	17	S*
NAKHICHEVAN	4.62	140.7									1	20	
GORIS	4.87	131.7	1	17	1								
SIMFEROPOL	5.82	293.8	1	28	-2	2	35	-3					
KSARA	10.08	208.5	2	30	1	4	28	4					
KIZYL-ARVAT	11.71	104.1	2	53	1	5	7	3			5	22	
MOSCOW	13.16	350.0	3	8	-3	5	34	-5					
SOFIA	13.45	275.6	3	16	1	5	36	-10			4	30	
ASHKABAD	13.64	105.4	3	16	-1	5	48	-3			8	22	
LWOW	14.01	306.0	3	23	1								
HELWAN	15.36	215.9	3	36	-4						4	24	
BAIRAM-ALI	16.49	101.6	3	52	-2						6	8	
KRAKOW	16.57	303.3	3	51	-4	6	43	-17			5	57	
WARSAW	16.74	311.2				6	50	-14			7	22	SS
RACIBORZ	17.65	302.3	4	16	7						7	46	
PULKOVO	18.32	341.6	4	16	-1	7	41	1					
SVERDLOVSK	18.51	34.3	4	16	-4								
SAMARKAND	19.30	90.9	4	24	-5								
PRAGUE	20.01	300.6	4	47	10						5	27	
HELSINKI	20.11	335.4	4	37	-1								
MESSINA	20.33	265.6	4	42	1						5	6	
TCHIMKENT	20.57	81.9	4	44	1								
STALINABAD	20.98	92.6	4	49	2								
COLLMBERG	21.15	303.5	4	49	0								
HALLE	21.83	303.7	4	57	1						5	27	PP
KULYAB	21.95	93.5	5	1	4						8	54	
JENA	21.96	302.0	5	2	5						5	32	
FLORENCE X.	22.07	282.9	5	6	7								
SONNEBERG	22.11	300.5	5	7	8								
NAMANGAN	22.38	84.5	5	2	1								
UPPSALA	22.48	327.5	5	1	-1	9	9	4					
FERGANA	22.62	86.0	5	2	-2						9	19	

COPENHAGEN	22.77	314.5	5	6	1	9	44	34			
ANDIJAN	22.95	84.7	5	6	-1				9	21	
STUTTGART	23.26	296.0	5	9	-1	9	20	1			
KHOROG	23.45	93.1	5	16	4						
GOTEBORG	23.83	318.9	5	17	1						
QUETTA	23.85	113.7	5	17	1						
FRUNSE	24.07	78.6	5	16	-2				9	46	
STRASBOURG	24.20	295.5	5	19	0	9	44	9	12	52	PCS
MUNSTER	24.57	303.7	5	23	0						
APATITY	25.16	352.6	5	28	0	9	55	3	6	13	PP
RYBACHE	25.24	79.0							6	53	
SODANKYLA	25.89	346.7	5	33	-2						
DE BILT	26.08	303.5				10	26	19			
DOURBES	26.31	298.9	5	44	5	10	27	16			
SKALSTUGAN	26.78	330.9	6	5	21	11	6	47			
KIRUNA	27.49	342.7	5	48	-2				12	33	
KEW	29.45	301.7							9	2	
DURHAM	30.37	308.3							7	44	
RATHFARNHAM	33.09	305.3	6	37	-3						
IAMANRASSET	35.98	247.8	7	2	-3				8	27	PP
REYKJAVIK	41.18	323.4	7	51	3						
COLLEGE	72.37	4.2	11	27	-3						
HUNGRY HORSE	86.69	344.0	12	46	-1						
EUREKA	95.58	342.8	13	14	-15						
SOUTH POLE	132.65	180.0	19	13	-4						

JULY 5 23.H 21.M 38.S EPICENTRE 30.87 141.84 DEPTH= 0.KM

A=-0.67613 B= 0.53128 C= 0.51048 D= 0.6178 E= 0.7863
G=-0.4014 H= 0.3154 K=-0.8599 HT= 1.5

SE= 4.68

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
HATIDYOZIMA	2.81	323.0	1	15	28							
MERA	4.38	337.8	1	14	4							
OMAESAKI	4.81	321.6	1	27	11							
MISIMA	4.89	331.0	1	17	0	2	12	-3				
SHIZUOKA	5.01	325.6	1	17	-1							
TOKYO C.M.O.	5.11	340.5	1	21	1	2	15	-5				
HUNATU	5.29	331.7	1	36	14							
KOHU	5.48	330.9	1	28	3	2	23	-7				
KAKIOKA	5.53	345.9	1	30	4	2	29	-2				
MITO	5.62	348.6	1	28	1							
KUMAGAYA	5.66	339.4	1	25	-3						4	45
IIDA	5.73	325.1	1	29	0							
UTUNOMIYA	5.90	344.4	1	31	0	2	32	-8				
NAGOYA	5.93	317.7	1	58	27	3	10	29				
MAEBASI	5.98	338.0	1	31	-1	2	45	3				
KAMEYAMA	6.02	312.7	1	34	1	2	54	11				
OIWAKE	6.10	334.1	1	37	3							
ONAHAMA	6.12	352.9	1	49	15	2	55	9				
GIHU	6.21	318.1	1	40	5	2	53	5				
MATUSIRO	6.42	332.9	1	36	-2	2	46	-7				
MATUMOTO	6.27	330.0	1	37	1							
SHIRAKAWA	6.38	348.3	1	41	3	2	42	-10				
HIKONE	6.43	314.6	1	50	12							
NAGANO	6.53	333.3	1	43	3	2	55	-1				
ABUYAMA	6.62	308.8	1	40A	-1							
HUKUSIMA	6.96	351.0	1	43	-3	2	57	-10				
KANAZAWA	7.11	324.0	1	34	-14							
NIIGATA	7.40	342.6				2	51	-27			4	3
SENDAI	7.43	354.3	1	48	-4	3	3	-15				
YAMAGATA	7.47	350.9	1	53	0							
ISINOMAKI	7.56	356.9	2	21	27						3	7
SAKATA	8.18	348.9	2	9	6	3	29	-8				
MIZUSAWA	8.27	356.1	2	5	1	3	26	-13				
AKITA	8.95	351.3	2	18	4	3	44	-12				
MORI	11.26	355.1				4	46	-7				
URAKAWA	11.29	3.6				4	35	-19				
OBIHIRO	12.08	4.8				4	58	-15				
SAPPORO	12.19	358.3									5	11
VLADIVOSTOK	14.57	329.8	3	36	6	6	31	18				
Y.-SAKHLINSK	16.08	2.2	3	43	-6							
GUAM	17.52	170.6	4	9	2	6	29	-53				

ZO-SE	17.72	276.1	4	10	0						
CHANGCHUN	18.40	319.3	4	15	-3	7	37	-5			
NANKING	19.69	279.4	4	30	-4				4	51	PP
PEKING	22.76	300.7	5	1	-4	9	1	-9			
BAGUIO CITY	24.15	238.3	5	17	-2						
TRUK	25.09	156.0	5	47	19						
HONG KONG	26.12	257.6	6	8	30	10	32	24	9	59	PCP
ULAN-BATOR	31.58	312.6	6	25	-2						
COLLEGE	54.19	29.7	9	18	-12						
NAMANGAN	56.34	301.2	9	38	-7						
LAHORE	56.87	289.6	9	45	-4						
SVERDLOVSK	60.09	321.2	10	9	-3						
APATITY	68.47	336.9	11	2	-4	20	4	-4	20	28	PS
KIRUNA	72.41	340.1	11	28	-2	20	49	-5			
MOSCOW	72.45	324.9	11	27	-3	20	50	-4			
HUNGRY HORSE	76.10	41.8	11	50	-1						
BUTTE	78.16	43.3	12	1	-2						
UPPSALA	78.66	334.8	12	2	-4	21	54	-9			
EUREKA	79.47	50.3	12	8	-2						
SIMFEROPOL	80.00	316.6	12	58	45						
SALT LAKE C.	81.45	47.5	12	18	-3						
BOULDER CITY	82.08	52.8	12	22	-2						
COPENHAGEN	83.59	333.9	12	31	-1	22	50	-4			
RAPID CITY	84.70	41.0	12	36	-1						
KSARA	85.07	306.5	12	39	0						
JENA	87.50	331.1	12	48	-3				13	34	
UCCLE	90.44	334.6	14	42	97						
STRASBOURG	90.89	331.5				23	44	6	16	42	PP
DOURBES	90.92	334.1	14	0	53	24	0	-3			
CAPE HALLETT	104.76	171.3	14	37	27						

JULY 6 16.H 3.M 13.5 EPICENTRE 65.76-155.21 DEPTH= 0.KM

A=-0.37481 B=-0.17311 C= 0.91080 D=-0.4193 E= 0.9078
G=-0.8269 H=-0.3819 K=-0.4129 HT=-10.7

SE= 2.83

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
COLLEGE	3.23	102.7	0	50	-3	1	28	-5				
SITKA	12.86	123.3	3	6	-1							
RESOLUTE	21.19	39.7	4	49	0	8	47	6				
KLYUCHI	22.82	266.7				9	11	0				
HORSESHOE B.	23.31	119.1	5	16	5							
VICTORIA	23.99	120.5	5	19	2							
MAGADAN	24.85	281.3	5	21	-4	9	54	8				
PETROPAVLOVK	25.94	263.3	5	39	3	10	16	11				
TIKSI	26.41	316.3	5	45	5	10	20	7			6	31 PP
HUNGRY HORSE	27.65	108.8	5	51	0						30	23 PKKP
BUTTE	30.13	109.9	6	13	-1							
BOZEMAN	31.01	108.5	6	16	-6							
SHASTA	31.19	127.3	6	24	1							
MINERAL	31.77	126.5	6	28	0							
RENO	33.10	124.9	6	41	1							
BERKELEY	33.80	129.3	6	46	0							
LICK	34.49	128.9	6	52	0							
EUREKA	34.49	120.2	6	53	1						31	25 PKKP
SALT LAKE C.	34.87	114.2	6	55	0							
RAPID CITY	35.46	101.7	6	59	-1						8	16 PP
FRESNO	35.61	127.0	7	3	2							
UGLEGORSK	35.84	273.6									13	5 SCP
BOULDER CITY	38.02	121.4	7	24	2							
PASADENA	38.54	126.7	7	27	1	13	24	1				
SCORESBY SD.	40.30	22.2				13	53	4				
TUCSON TELE.	42.76	119.1	8	2	1							
TUCSON	42.80	119.3	8	3	2							
LUBBOCK	45.00	108.7	8	22	3							
OTTAWA	45.62	75.7	8	22A	-2						10	14 PP
FAYETTEVILLE	45.88	99.2	8	27	1						23	7
SEVEN FALLS	46.14	70.5	8	31	3						18	39 SCS
BREBEUF	46.37	74.0	8	28K	-2	15	17	-1				
KIRUNA	46.65	2.3	8	31	-1							
APATITY	46.83	355.5	8	35	1						19	5
KABANSK	47.14	303.5	8	32	-4	15	34	5			10	29 PP
SODANKYLA	47.15	359.0	8	37	1							

IRKUTSK	47.75	305.3							13	13	
MATUSIRO	47.76	266.4	8	40	-1	15	28	-9			
KYAKHTA	48.61	302.4							13	16	
WESTON	49.89	74.4	8	56K	-1				26	6	
PALISADES	50.01	77.5							19	42	SS
SKALSTUGAN	50.63	7.2	9	6	3						
HALIFAX	51.00	66.7							20	11	SS
SVERDLOVSK	54.77	336.8	9	30	-4						
JENA	63.20	9.3	10	40	8						
STRASBOURG	65.24	12.4	10	59	13	19	33	4	12	53	
NAMANGAN	67.58	323.3	11	0	-1						
ANDIJAN	67.63	322.7							13	28	PP
TASHKENT	67.84	325.3							13	27	PP
FERGANA	68.12	323.0							13	28	PP
KULYAB	70.96	323.7	11	15	-6				13	31	
QUETTA	79.01	323.7	12	7	-1						
SCOTT BASE	145.21	193.2	19	40	0						
BYRD STATION	146.96	169.2	19	41	-2						
SOUTH POLE	155.62	180.0	19	50	-5						

JULY 7 5.H 16.M 2.S EPICENTRE 50.06 179.94 DEPTH= 0.KM

A=-0.64453 B= 0.00066 C= 0.76458 D= 0.0010 E= 1.0000
G=-0.7646 H= 0.0008 K=-0.6445 HT= -5.4

SE= 1.43

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PETROPAVLOVK	13.58	291.2	3	15	-1	5	53	4					
MAGADAN	19.14	310.9	4	28	1	8	5	7					
COLLEGE	22.46	36.6	5	1	-1	9	5	0					
UGLEGORSK	24.41	282.4	5	22	1								
Y.-SAKHLINSK	24.69	277.2	5	24	0	9	50	6					
TIKSI	31.40	331.7	6	29	4								
MATUSIRO	32.78	261.8	6	36	-1	11	55	1			9	21	PCP
VLADIVOSTOK	33.25	276.8	6	41	0								
CHANGCHUN	37.10	281.9	7	13	-1								
SHASTA	40.65	80.5	7	45	2								
UKIAH	41.00	83.0	7	47	1						8	20	
RESOLUTE	41.28	23.7	7	49	0	14	4	0			9	36	PCP
MINERAL	41.34	80.4	7	50	1								
HUNGRY HORSE	41.90	65.9	7	54	0						9	50	PCP
BERKELEY	42.34	83.9	7	57	0						9	51	
RENO	42.94	80.3	8	4	2								
LICK	43.05	84.1	8	4	1						9	54	
BUTTE	43.92	68.1	8	12	2						9	57	PCP
FRESNO	44.57	83.5	8	15	0								
PEKING	44.88	282.6	8	18A	0	15	0	4					
BOZEMAN	45.01	67.8	8	20	1								
EUREKA	45.40	77.9	8	23	1								
ULAN-BATOR	46.19	296.9	8	29	1								
ZO-SE	47.18	269.3	8	36A	0								
PASADENA	47.23	85.2	8	37	0	15	35	5					
SALT LAKE C.	47.23	73.9	8	36	-1								
BOULDER CITY	48.22	81.0	8	45	1								
NORD	48.28	3.2	8	44	-1								
RAPID CITY	50.53	65.4	9	3	1								
BOULDER	51.69	70.8	9	11	0								
ISFJORD	51.87	356.4	9	13	1								
TUCSON	53.15	81.9	9	22	0						10	32	PCP
TUCSON TELE.	53.16	81.8	9	22	0						10	31	PCP
LANCHOW	55.00	286.3	9	36	1	17	21	4					
HONG KONG	57.76	266.8	9	55	0	17	43	-11					
CANTON	57.78	268.1	9	55	0								
SCORESBY SD.	58.73	8.4	10	2	0	18	10	4					
APATITY	60.03	345.8	10	10	-1	18	27	4			17	29	
FAYETTEVILLE	60.92	67.6	10	15	-2						10	59	
SODANKYLA	61.17	348.6	10	17	-2								
KIRUNA	61.43	351.3	10	18	-2	18	42	1					
KUNMING	63.20	277.6	10	32	0								
OTTAWA	64.52	49.1	10	38	-3								
REYKJAVIK	64.87	10.4	10	44A	1								
SHAWINIGAN	65.10	46.6	10	43	-2								
BREBEUF	65.47	47.9	10	45A	-2								
SEVEN FALLS	65.57	45.1	10	46	-2								

SIDA	65.63	8.7	10	49	1					
SKALSTUGAN	66.29	354.0	10	51	-1					
LHASA	67.23	289.3	10	59	1					
PALISADES	68.65	51.3	11	5	-2	20	11	1	24	58 SS
WESTON	68.90	48.8	11	8A	-1					
UPPSALA	69.51	350.6	11	11	-1	20	18	-2		
SHILLONG	69.65	285.7	11	12	-1					
NAMANGAN	69.73	310.0	11	14	0					
COLUMBIA	70.03	60.8	11	16	0					
HALIFAX	70.72	42.6	11	19A	-1					
CHATRA	71.62	289.9	11	28	3					
CHITTAGONG	72.02	283.4	11	28	0				11	45 PCP
GOTEBORG	72.15	353.2	11	29	1					
COPENHAGEN	74.11	352.7	11	45	5	21	16	3		
LAHORE	75.52	301.9	11	45	-3					
DURHAM	75.53	0.9				21	28	-1		
CHARTERS TS.	75.86	212.5	11	49	-1					
RATHFARNHAM	76.88	3.8	11	55K	-1					
HALLE	78.30	352.4	12	2	-1	21	54	-5	22	18 SP
LWOW	78.37	344.4	12	6	2					
KEW	78.85	0.2	12	7	1					
JENA	78.90	352.5	12	5	-2					
UCCLE	79.45	357.2	12	11	1	22	13	2		
BERMUDA	79.99	50.9				22	23	7	27	28 SS
DOURBES	80.14	357.0	12	11	-2					
QUETTA	80.54	306.1	12	15	-1	22	19	-3	22	37 SCS
STUTTGART	81.23	353.8	12	20	1					
STRASBOURG	81.51	354.8	12	22	1	22	35	3	23	32 SP
BELGRADE	83.83	345.5	12	34	1					
TRIESTE	83.92	350.3	12	33	0				28	32 SS
CLERMONT-FD.	84.51	357.8	12	38	2					
KARAPIRO	87.69	183.5	13	51	59					
BYRD STATION	134.23	167.8	19	19	-1					
SOUTH POLE	139.87	180.0	19	22	-8					

JULY 8 5.H 2.M 24.S EPICENTRE 50.84 10.10 DEPTH= 0.KM

A= 0.62428 B= 0.11122 C= 0.77324 D= 0.1754 E=-0.9845
G= 0.7613 H= 0.1356 K=-0.6341 HT= -5.7

SE= 2.24

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SONNEBERG	0.84	122.7									0	18	PG
JENA	0.94	83.7									0	20	PG
HALLE	1.34	59.5									0	27	PG
CHEB	1.64	116.6	0	29	-1						0	51	SG
BENSBERG	1.86	275.0	0	34K	0						1	5	SG
COLLMBERG	1.89	74.6	0	36	2	0	49	-10			0	40	PG
MUNSTER	1.93	307.1	0	34	0						3	6	SG
KARLSRUHE	2.13	211.5	0	38	1						1	11	SG
STUTTGART	2.15	196.1	0	36	-2						0	44	PG
TUBINGEN	2.40	196.6	0	40	-1						0	48	PG
POTSDAM	2.41	49.0	0	42	1						0	49	PG
STRASBOURG	2.72	214.7	0	44K	-2	1	27	7			0	55	PG
EBINGEN	2.76	195.9	0	44	-2						0	55	SG
PRAGUE	2.87	103.8	0	50	2	1	25	1			1	33	SG
WITTEVEEN	2.91	314.3	0	51	3								
RAVENSBURG	3.07	186.1	0	50	-1						1	3	PG
DE BILT	3.33	294.3	0	59	4								
DOURBES	3.59	260.3	0	57	-1								
UCCLE	3.65	271.7	1	2K	3						1	16	PG
BASLE	3.70	207.5	0	51A	-9	1	11	-34			2	1	
CHUR	4.01	185.6	1	3A	-1						2	14	
NEUCHATEL	4.36	209.6	1	6	-3						2	22	
VIENNA-H.	4.83	120.0	1	16	0	2	5	-9			1	33	PG
COPENHAGEN	5.05	15.3	1	18A	-1	2	8	-11			1	40	PG
RACIBORZ	5.23	95.2	1	22	1	2	35	12			2	48	SG
BRATISLAVA	5.28	117.6	1	23	1	2	17	-8			1	39	PG
PARIS	5.33	250.6	1	38	15						3	3	SG
OROPA	5.41	196.1	1	28	4	2	33	5			1	43	PG
PAVIA	5.69	186.7									1	49	PG
TRIESTE	5.73	153.5	1	29	0	2	36	0			3	2	SG
GARCHY	5.83	235.1	1	28	-2						2	44	
HURBANOVO	6.07	116.2				2	19	-25			2	50	

KRAKOW	6.33	93.3	1	36	-1	3	5	14	2	5	PG
ZAGREB	6.37	139.8	1	35	-3	2	51	-1	2	8	PP
BOLOGNA	6.39	172.1	2	13	35				3	15	S*
KEW	6.59	279.6	1	40A	-1	3	6	9	2	17	PG
SKALNATE PL.	6.75	100.3							2	41	
BUDAPEST	6.77	116.3	1	44	1	2	55	-7	3	33	SG
CLERMONT-FD.	6.88	225.2	1	45	0	3	1	-4	2	0	P*
WARSAW	6.95	74.2	1	45	-1				1	57	PPP
GOTEBORG	6.97	8.3	1	44	-2	4	1	54	2	18	PG
FLORENCE X.	7.10	173.3				3	23	13	2	10	
KALOCSA	7.29	122.8	1	47	-3				3	48	SG
MONACO	7.34	195.3	1	50	-1	3	11	-5	1	58	PP
SZEGED	8.08	120.7							2	23	PG
DURHAM	8.10	303.6	2	1	-1	3	32	-3	2	46	
TIMISOARA	8.99	120.2	2	18	4	3	48	-9	4	49	
ROME	9.09	168.7				4	6	6	3	5	
BELGRADE	9.20	126.9	2	18A	1				4	5	
UPPSALA	9.99	22.4	2	25	-3	4	12	-10	2	51	
RATHFARNHAM	10.38	290.1	2	29	-4	4	43	11	5	35	
SOFIA	12.17	126.9	2	57	-1				6	45	
SKALSTUGAN	12.83	4.4	3	3	-4				6	0	
MESSINA	13.21	160.9	3	11	0						
ALICANTE	14.56	215.0	3	29	0	6	11	-2			
TOLEDO	14.77	227.6	3	36	4				7	32	
GRANADA	16.80	220.9	4	3K	5						
SIMFEROPOL	17.11	100.8	4	2	0						
MOSCOW	17.11	62.7	3	57	-5						
MALAGA	17.52	221.9	4	8	1				4	21	PP
KIRUNA	17.79	12.9				4	11	-197			
SODANKYLA	18.51	20.3	4	19	-1						
APATITY	20.35	25.9	4	40	-1	8	33	9			
HELWAN	26.29	134.8	5	40A	1						
TAMANRASSET	28.23	189.0	5	58	1	10	37	-5	6	41	PP
NAMANGAN	42.80	78.5	8	4	3						
QUETTA	46.60	93.9	8	33	1						
SEVEN FALLS	50.72	299.4	9	3	-1						
SHAWINIGAN	52.13	299.8	9	15	1						
LWIRO	55.25	157.1	9	37A	0						
ASTRIDA	55.82	156.1	9	43	2						
UVIRA	56.51	157.0	9	46	0						
MORGANTOWN	60.61	297.6	10	16A	1						
COLLEGE	63.37	349.7	10	33	0						
COLUMBIA	65.17	293.8	10	46	1						
RAPID CITY	69.19	314.9	11	11	0						
HUNGRY HORSE	70.20	324.1	11	17	0						
BUTTE	71.57	321.8	11	26	1						
SALT LAKE C.	75.63	318.3	11	50	1						
BOULDER CITY	80.92	317.7	12	21	3						
TUCSON TELE.	82.15	312.8	12	27	3						
TUCSON	82.27	312.8	12	29	4						
PASADENA	83.90	319.1	12	13	-20				12	35	
SOUTH POLE	140.65	180.0	19	30	-2						
MELBOURNE	145.74	85.4	19	43A	2						
BYRD STATION	146.30	194.0	19	33	-9						
SCOTT BASE	151.52	169.9	19	58	8						

JULY 8 6.H 6.M 30.S EPICENTRE -21.52-174.51 DEPTH= 0.KM

A=-0.92685 B=-0.08902 C=-0.36472 D=-0.0956 E= 0.9954
G= 0.3631 H= 0.0349 K=-0.9311 HT= 4.3

SE= 1.33

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	7.44	295.6	2	10A	18	4	3	45					
KARAPIRO	18.47	205.6	4	20	1								
CHARTERS TS.	36.65	265.1	7	8	-2								
PORT MORESBY	38.75	282.1	7	25	-2	13	57	32			16	59	SS
CAPE HALLETT	51.53	185.9	9	10	1						10	46	PP
GUAM	52.99	307.3	9	20	0								
DUMONT	53.51	200.7	9	23	-1								
SCOTT BASE	57.10	184.6	9	52	2								
KOROR	57.66	294.1	9	53	-1								
BYRD STATION	63.11	170.8	10	29	-2								
OASIS-BUNG.	68.42	205.8	11	5	0								

SOUTH POLE	68.61	180.0	11	5	-2						
MIRNY	71.45	204.9	11	24	0						
MATUSIRO	72.99	321.8	11	32A	-1	21	3	3	29	10	SSS
LICK	76.84	40.7	11	53	-2						
PASADENA	77.05	45.1	11	56	0	21	45	0	12	44	
FRESNO	77.61	42.1	11	59	0						
PETROPAVLOVK	77.90	343.8	12	0	-1						
Y.-SAKHLINSK	78.31	331.6	12	4	1						
SHASTA	78.60	37.8	12	5	0						
MINERAL	78.82	38.4	12	5	-1						
RENO	79.35	40.0	12	9	0						
BOULDER CITY	80.33	45.3	12	15	1						
VLADIVOSTOK	81.01	323.4	12	20	2						
TUCSON	81.02	50.3	12	19	1						
TUCSON TELE.	81.15	50.2	12	20	2						
HONG KONG	82.03	297.6	12	24	1	22	45	8			
NANKING	83.09	308.2	13	29A	61						
CANTON	83.12	298.0	12	30	1						
CHANGCHUN	85.21	320.9	12	40A	1						
MAGADAN	85.64	343.1							23	16	
HUNGRY HORSE	88.03	35.5	12	53	0						
COLLEGE	88.54	11.1	12	53	-2						
PEKING	88.92	314.1	12	58A	1						
KUNMING	92.74	295.7	13	17	2						
RESOLUTE	107.88	15.9				26	33	-10			
PALISADES	111.60	53.1				27	7	109	34	48	SS
BERMUDA	117.50	63.8				26	30	49	36	0	
APATITY	130.74	346.3							22	36	
COPENHAGEN	145.50	353.0	19	40	0						
UVIRA	146.05	225.8	19	45	4						
ASTRIDA	146.27	227.6	19	42	1						
DURHAM	146.38	7.4	19	42K	1				23	9	PP
SIMFEROPOL	146.84	321.5	19	45	3						
LWIRO	147.16	226.8	19	47A	5						
RUMANGABO	147.46	228.7	19	49	6						
POTSDAM	148.64	351.1	19	50	5						
MUNSTER	149.56	357.4	19	49	3						
COLLMBERG	149.70	350.6	19	52	5						
RACIBORZ	149.78	343.6	19	52	5				20	59	PKP2
JENA	150.26	352.2	19	52	5				22	55	PP
KSARA	150.54	301.1	19	53	5				20	4	PKP2
BENSBERG	150.59	357.8	19	54	6						
UCCLE	150.77	1.5	19	49	1						
SONNEBERG	150.85	352.5	19	53	5						
JERUSALEM	151.61	297.3	19	52	3						
PARIS	152.67	4.3	19	53	2						
STRASBOURG	152.94	356.7	20	0	9				20	30	
TRIESTE	155.00	346.2	20	0	6						
CLERMONT-FD.	155.74	4.0	19	57	2						
ALICANTE	162.46	15.7	20	1	-2				24	33	PP
GRANADA	162.52	24.8	20	7K	4				21	7	PKP2
MALAGA	162.58	27.4	19	58	-5				20	55	PKP2
ALGIERS UNI.	164.66	7.4	20	6	1				24	58	PP
TAMANRASSET	178.75	358.6	20	11	-1				25	58	PP

JULY 8 22.H 48.M 36.S EPICENTRE -42.85 42.05 DEPTH= 0.KM

A= 0.54608 B= 0.49255 C=-0.67764 D= 0.6698 E=-0.7426
G=-0.5032 H=-0.4539 K=-0.7354 HT= -2.7

SE= 2.39

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
GRAHAMSTOWN	15.44	302.9	3	39K	-2								
PIETERMZBURG	16.18	320.9	3	50	-1								
LCO. MARQUES	18.54	332.3	4	20	0	7	51	6			4	34	PP
HERMANUS	19.67	287.7	4	36	3						4	53	PP
TANANARIVE	24.31	12.7	5	21A	1	9	48	11			5	51	PP
WINDHOEK	28.97	306.4	6	2	-1								
MIRNY	36.25	148.3	7	6	-1	12	37	-11					
OASIS-BUNG.	39.24	146.7	7	30	-2						7	54	
UVIRA	40.86	340.0	7	53A	8								
ASTRIDA	41.56	341.3	7	52A	1						9	31	PP
LWIRO	42.12	340.0	7	57A	1	14	21	5					
RUMANGABO	42.88	341.1	8	6	4						9	54	PP

HALLEY BAY	43.68	199.8	8	9	1				9	53 PP
SOUTH POLE	47.34	180.0	8	36	-2	15	24	-8	10	33 PP
DUMONT	54.48	151.0	9	30	-2	17	7	-3		
SCOTT BASE	55.00	167.7	9	36	0					
BYRD STATION	56.94	183.8	9	55	5	17	55	12		
CAPE HALLETT	59.61	163.8	10	7A	-1				13	54 PPP
BANDUNG	67.51	78.1	11	3	3				12	27
LEMBANG	67.54	78.0	10	59	-1					
BOMBAY	67.66	31.6				19	59	1		
MEDAN	68.80	63.4	11	8K	0	20	14	2		
ADELAIDE	71.58	120.7	11	22	-3					
HELWAN	73.03	350.3	11	33	-1	21	6	5		
TAMANRASSET	73.47	325.0	11	37K	1	21	14	8	14	20 PP
JERUSALEM	74.53	354.0	11	37K	-6					
QUETTA	76.19	22.1	11	52K	0	21	38	2	14	41 PP
KSARA	76.51	354.7	11	55	1	21	40	1	14	47 PP
DEHRA DUN	79.98	31.1	12	20	7	22	11	-5		
CHATRA	80.82	39.9	12	23	6					
GORIS	82.06	3.3	12	24	0					
SHILLONG	82.09	44.2	12	23K	-1					
ATHENS	82.15	345.5	12	18A	-6					
MESSINA	84.19	339.3	12	34	-1	23	10	10	15	58 PP
TIFLIS	84.22	2.1	12	34	-1					
LHASA	85.03	41.3	12	39K	0	23	5	-3		
MAKHACH-KALA	85.58	4.0	12	41	-1	23	7	-6		
BRISBANE	85.58	123.7	12	41	-1				13	17
TARANTO	85.92	341.3				22	46	-30		
SOTCHI	86.07	358.3	12	42	-2					
CHARTERS TS.	86.52	114.0	12	45A	-1				22	42
SOFIA	86.81	346.3	12	46	-2					
ALGIERS UNI.	86.85	329.6	12	48	0	23	36	11	16	2 PP
RELIZANE	86.91	327.3	12	49	1					
KUNMING	87.60	52.3	12	51K	-1					
NAMANGAN	87.63	22.0	12	51	-1	23	24	-9		
SIMFEROPOL	87.70	354.4	12	52	0	23	24	-9		
ROME	88.47	338.4	12	57A	1	23	49	8	16	28 PP
BELGRADE	89.39	344.8	13	0K	0	23	57	8		
ALICANTE	89.58	327.9	13	4	3	23	56	5		
MALAGA	89.79	324.4	13	1	-1	23	51	-2	16	43 PP
GRANADA	89.84	325.2	12	59K	-3	24	1	8	29	37 SS
TIMISOARA	90.14	345.6	12	33	-31					
FLORENCE X.	90.55	338.2	13	4	-1	24	11	11	16	48 PP
TORTOSA	91.35	329.8	13	26	17	25	11	64		
MONACO	91.61	335.7	13	11	1					
TRIESTE	91.65	340.6	13	10	-1	24	11	2	16	48 PP
TOLEDO	92.31	326.3	13	14A	0	24	35	20	17	0 PP
CANTON	92.65	60.8	13	16	1					
HONG KONG	92.67	61.9	13	14	-1	23	32	-46	32	12 SS
LA PAZ	92.99	244.4	13	21	4	24	8	-13	25	40 PS
CLERMONT-FD.	94.79	333.8	13	25	0	24	57	20	26	4 PS
STUTTGART	95.70	338.9	13	28	-1				17	18 PP
STRASBOURG	95.92	337.9	13	29	-1	24	54	8	17	21 PP
WARSAW	96.44	347.2				24	54	3	25	57 SCS
JENA	97.10	341.1	13	33	-2				17	32 PP
HALLE	97.54	341.6							17	27 PP
PARIS	97.68	334.9	13	38	0	24	18	-43	17	36 PP
DOURBES	98.19	336.7							17	38 PP
DE BILT	99.81	337.9							27	3 PS
KEW	100.89	334.6							27	10 PS
HUANCAYO	100.97	242.2	13	56	3					
COPENHAGEN	101.32	343.4							18	12 PP
APATITY	110.27	356.5							28	37 PS
BOGOTA	112.14	255.1							28	13 PS
CHINCHINA	113.49	254.2	18	45	5					
VLADIVOSTOK	117.39	55.6							20	4 PP
MATUSIRO	117.74	64.8							19	59 PP
SENDAI	120.47	64.5	19	51	57				41	51 SSS
HALIFAX	128.03	299.2	19	9K	1					
PALISADES	133.36	290.6	19	20	1				21	44 PP
SEVEN FALLS	133.65	299.6	19	20	1					
SHAWINIGAN	134.70	298.2	19	24	3					
MAGADAN	134.71	42.7	18	41	-40					
OTTAWA	136.24	295.7	19	15	-9					
RESOLUTE	142.76	342.5	19	32	-4				41	24 SS
FAYETTEVILLE	145.85	273.6	19	42	1				23	44
LUBBOCK	150.35	263.9	19	49	1					
RAPID CITY	154.86	284.8	19	56	1					
TUCSON TELE.	156.10	253.0	20	0	4				24	5 PKS

TUCSON	156.13	252.7	20	0	4				24	6	PKS
COLLEGE	157.24	10.9	19	55	-3				24	7	PKS
SALT LAKE C.	160.46	272.8	20	2	1				20	45	
BOZEMAN	160.56	287.6	20	2	0				24	39	PKS
BOULDER CITY	160.90	256.7	20	5	3				24	32	PKS
BUTTE	161.62	288.7	20	3	0						
PASADENA	162.28	247.2	20	5	2				24	40	PP
HUNGRY HORSE	162.41	296.5	20	3	0				20	53	
EUREKA	163.12	265.9	19	4	-60				36	54	PKPPKP
RENO	165.95	262.5	20	10	3				25	1	PP

JULY 9 13.H 54.M 30.S EPICENTRE -20.63-178.67 DEPTH= 571.KM

DEPTH OF FOCUS= 0.085R

A=-0.93639 B=-0.02172 C=-0.35028 D=-0.0232 E= 0.9997
G= 0.3502 H= 0.0081 K=-0.9366 HT= 4.5

SE= 1.79

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	3.69	311.6	1	22A	0	2	23	-4			11	14	PCS
NOUMEA	13.95	260.5	2	59A	1	5	27	5					
ONERAHI	16.27	200.6	3	24	3								
KARAPIRO	17.95	195.0	3	37	0								
TUAI	18.46	190.4				6	35	-5					
WELLINGTON	21.32	193.7	4	6	-2	7	22	-5					
KAIMATA	23.36	198.7	4	26	0	7	59	-1					
GEBBIES PASS	24.12	195.5	4	30	-3	8	5	-7					
CHARTERS TS.	32.86	264.8									11	10	SCP
PORT MORESBY	34.77	283.6	6	4	-1	10	57	0	7	37	14	20	SS
MELBOURNE	35.79	233.4	6	13	0								
ADELAIDE	40.00	239.9	6	48A	1								
TRUK	40.24	310.9	6	49	0								
CAPE HALLETT	52.07	184.3	8	20	1								
DUMONT	53.02	199.2	8	24	-2								
KOROR	53.77	296.2	8	31	0								
SCOTT BASE	57.70	183.6	8	58K	0								
BYRD STATION	64.62	170.5	9	50	7	17	52	13	11	48	19	10	
SOUTH POLE	69.50	180.0	10	12	-1	18	35	-1	12	9			
MATUSIRO	69.94	324.1	10	14K	-2	18	42	1			10	32	PCP
MIRNY	70.61	205.1	10	19	-1	18	46	-3					
LEMBANG	72.41	269.2	10	29K	-1	19	29	20					
ZO-SE	77.30	310.3	10	57	0								
HONG KONG	78.20	299.3	11	3	1	20	17	7					
BERKELEY	78.70	42.2	11	5	0								
LICK	78.77	43.0	11	5	0								
CANTON	79.29	299.6	11	9K	1	20	26	4					
NANKING	79.52	310.0	11	10	1								
FRESNO	79.63	44.3	11	9	0								
SHASTA	80.34	39.9	11	13	0								
MINERAL	80.61	40.6	11	14	-1								
RENO	81.23	42.0	11	18	0								
CHANGCHUN	82.12	322.7	11	23K	1	20	56	6					
HALLEY BAY	82.49	173.2	11	22	-2	21	1	7					
TUCSON	83.49	52.2	11	31	2								
TUCSON TELE.	83.62	52.1	11	31	1						13	41	
EUREKA	83.65	43.8	11	28	-2						13	37	
PEKING	85.54	315.7	11	38	-1	21	27	4					
KUNMING	88.87	297.2	11	56	1								
HUNGRY HORSE	89.62	37.1	11	57	-1								
COLLEGE	88.47	12.6	11	50	-3				13	54			
RESOLUTE	108.10	16.1									27	5	*PS
SODANKYLA	130.59	347.4									20	38	PP
KIRUNA	131.30	350.5	18	7	-1						20	40	SKP
SKALSTUGAN	136.44	352.9									20	57	SKP
UPPSALA	139.13	347.5	18	13	-9						21	4	SKP
LWIRO	144.76	233.0	18	36A	3						20	51	
RUMANGABO	144.96	234.8	18	37	4				20	55			
RATHFARNHAM	146.87	8.4	18	39	3								
COLLMBERG	148.05	346.1	18	42	5								
HALLE	148.09	347.4	18	43	6								
JENA	148.70	347.5	18	39	1				20	59			
PLAUEN	148.99	346.5	18	41	2								
DOURBES	150.48	355.7	18	46	5						21	5	PP
STUTTGART	151.22	349.2	18	50	8								

STRASBOURG 151.64 351.0 18 52 9

JULY 9 15.H 18.M 22.S EPICENTRE 14.04 -91.63 DEPTH= 96.KM

DEPTH OF FOCUS= 0.010R

A=-0.02762 B=-0.97012 C= 0.24104 D=-0.9996 E= 0.0285
G=-0.0069 H=-0.2409 K=-0.9705 HT= 5.9

SE= 1.55

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COMITAN	2.25	347.7	0	38	2	1	5	2					
SAN SALVADOR	2.35	97.2	0	36	-1	1	8	3					
SANTIAGO MA.	3.12	99.7	0	46	-2	1	23	-1					
OAXACA	5.77	301.6	1	26	2	2	42	12					
VERA CRUZ	6.70	320.6	1	38	1	2	58	6					
MERIDA	7.14	15.3	1	44	1	3	9	6					
PUEBLA	8.02	309.1				3	28	3					
TACUBAYA	9.00	307.4	2	2	-6	3	46	-3			4	4	*SS
CHINCHINA	18.17	118.2	3	24	-43	7	36	13					
FUQUENE	19.57	114.0	4	23	1	8	20	27					
BOGOTA	19.68	116.7	4	26	3	8	10	15					
LUBBOCK	21.56	336.2	4	42	0								
COLUMBIA	22.08	24.0	4	49	2								
FAYETTEVILLE	22.08	354.5	4	45	-2	8	42	2					
TUCSON TELE.	25.22	319.5	5	18	0						6	31	
TUCSON	25.23	319.2	5	18	0						12	2	
MORGANTOWN	27.49	19.8	5	38	-1				6	16			
BOULDER CITY	30.17	320.5	6	3	0								
BERMUDA	30.63	48.8	6	6	-1								
PALISADES	31.00	26.6	5	52	-18	11	33	27					
PASADENA	31.27	314.4	6	12	0	11	19	8			7	4	
RAPID CITY	31.53	344.0	6	14	-1						7	17	PP
FRESNO	33.83	317.1	6	18	-16								
OTTAWA	34.04	20.2	6	36	0						8	0	PP
BREBEUF	34.87	22.4	6	43K	0				7	5			
LICK	35.37	316.5	6	47	-1								
RENO	35.48	321.0	6	50	2								
BOZEMAN	35.54	336.4	6	50	1	13	22	65					
SHAWINIGAN	36.07	22.3	6	55	1								
SEVEN FALLS	37.28	23.6	7	3K	-1								
SHASTA	37.75	320.6									9	23	
HUNGRY HORSE	38.91	336.1	7	17	0						9	27	PCP
CORVALLIS	40.63	324.8	7	34	3								
SEATTLE	42.10	329.0									16	11	
VICTORIA	43.24	329.3	7	52A	-1						9	44	
HORSESHOE B.	43.75	330.3	7	56A	-1								
RESOLUTE	60.66	359.0	10	2K	-1	18	1	-9			10	47	PCP
COLLEGE	63.35	336.6	10	18	-3				10	48	11	17	
NORD	74.01	8.5	11	25	-1								
SKALSTUGAN	83.62	25.9	12	19	1								
KIRUNA	85.14	20.7	12	26	0								
SODANKYLA	87.45	20.0	12	37	0								
CAPE HALLETT	105.73	198.3									38	2	PKPPKP
MATUSIRO	111.16	318.7	18	32	10						39	27	
QUETTA	131.44	24.9	19	6	5								

JULY 10 6.H 15.M 56.S EPICENTRE 58.36-136.34 DEPTH= 0.KM

A=-0.38132 B=-0.36387 C= 0.84982 D=-0.6904 E= 0.7235
G=-0.6148 H=-0.5867 K=-0.5271 HT= -8.4

SE= 3.67

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SITKA	1.43	157.0	0	20K	-6								
COLLEGE	8.50	324.9	1	58A	-8								
ALBERNI	11.36	138.4	2	45	0								
HORSESHOE B.	11.83	133.9	2	51	0								
VICTORIA	12.49	136.6	3	0A	0								

SEATTLE	13.63	135.9	3	18K	3						
BANFF	13.96	112.1	3	18A	-2						
CORVALLIS	15.97	144.1	3	46K	0	7	9	26			
HUNGRY HORSE	16.59	117.5	3	53A	-1						
SASKATOON	17.95	97.5	4	6	-5						
BUTTE	18.98	120.3	4	21A	-3						
ARCATA	19.16	150.6	4	25	-1	8	5	9			
FERNDALE	19.40	151.3	4	29	1						
SHASTA	19.79	147.2	4	31A	-2				8	29	
BOZEMAN	19.94	118.5	4	33A	-1						
MINERAL	20.34	146.0	4	38K	-1	8	33	12			
UKIAH	21.03	150.5	4	44K	-2						
RENO	21.63	143.4	4	50A	-2						
RESOLUTE	22.44	27.5	4	53	-7						
BERKELEY	22.47	149.7	4	59K	-1	9	12	11			
BRANNER	22.91	150.0	5	4K	-1						
EUREKA	22.99	136.4	5	4A	-1						
LICK	23.13	149.0	5	5A	-2	9	24	11			
SALT LAKE C.	23.49	127.8	5	11K	1						
FRESNO	24.19	146.1	5	17K	0						
RAPID CITY	24.88	110.5	5	23K	-1						
BOULDER CITY	26.52	138.2	5	40K	1				8	39	
PASADENA	27.11	145.4	5	44K	0	10	36	16			
SAN DIEGO	28.74	145.0	6	2	3	12	3	76			
THULE	29.27	26.6	6	4K	0						
TUCSON TELE.	31.27	135.2	6	21A	-1						
TUCSON	31.31	135.4	6	22A	0	11	38	11	7	42	PP
LUBBOCK	33.85	121.9	6	42	-2						
FLORISSANT	35.26	103.3	6	55A	-1	12	26	-3			
FAYETTEVILLE	35.42	110.3	6	55A	-3	12	38	7	7	22	PP
ST. LOUIS 1	35.45	103.3	6	55A	-3	12	30	-2			
PETROPAVLOVK	35.67	290.5	6	55	-5	12	38	3	13	12	SCP
MAGADAN	35.86	303.8	6	56	-5						
TERRE HAUTE	36.28	99.6	7	4	-1	13	39	55			
CHIHUAHUA	36.36	131.7	7	3K	-3	12	51	5	9	39	
NORD	36.66	12.4	7	8K	0						
DALLAS	36.79	116.5	7	8	-1						
CLEVELAND	37.91	91.9	7	18K	-1	13	17	8			
OTTAWA	38.26	82.5	7	21K	-1				13	22	PP
SHAWINIGAN	39.02	79.0	7	28K	0	13	29	3	8	59	PP
BREBEUF	39.28	80.8	7	28K	-2	12	29	-61			
PITTSBURGH	39.49	91.7	7	32K	0						
SEVEN FALLS	39.65	76.9	7	33	0	13	40	4			
MORGANTOWN	40.08	92.5	7	36K	-1						
KIPAPA	40.10	212.3	7	31	-6						
HONOLULU	40.24	212.4	7	32	-6	13	50	6	9	12	PP
PENNSYLVANIA	40.33	89.5	7	38	-1	14	8	22	9	29	PP
MAZATLAN	41.16	135.7	7	48A	2	14	8	10	17	40	SCS
KHEYS	41.74	357.8	7	43	-7	13	52	-15	16	46	SS
PALISADES	42.26	86.0	7	54	-1	14	25	11	9	32	PP
FORDHAM	42.39	86.1	7	53	-3	14	31	15			
WESTON	42.64	82.5	7	57K	-1	14	22	2			
SCORESBY SD.	43.35	26.5	8	1K	-3	14	51	21	10	0	PCP
COLUMBIA	43.76	99.0	8	4A	-3						
GUADALAJARA	44.59	133.4	8	16K	2	15	8	20	10	12	PP
HALIFAX	45.05	74.5	8	18K	1	15	9	14	10	24	PP
MANZANILLO	45.70	135.5	8	24	2	15	24	20	19	0	
TACUBAYA	47.38	129.2	8	36K	0	15	47	19	9	24	
Y.-SAKHLINSK	47.47	293.4	8	32A	-4	15	30	0			
AKUREYRI	47.92	29.5	8	46	6	15	49	13	10	50	PP
REYKJAVIK	48.09	32.5	8	50A	9	15	50	12			
PUEBLA	48.12	128.3	8	44	3	15	48	9	22	48	
NEMURO	48.66	288.0	8	39	-7	15	42	-4	9	4	
ABASHIRI	48.81	289.6	8	44	-3	16	4	16			
VERA CRUZ	48.84	125.9	8	41	-6	16	0	11	15	44	
WAKKANAI	49.07	292.6							17	2	
SIDA	49.43	31.0	8	51	-1						
KUSIRO	49.51	288.5	8	56A	4	16	8	10	9	51	
ASAHIGAWA	49.93	290.7	8	52	-3						
OBIHIRO	50.15	289.3	8	55	-2	16	7	0	10	41	
RUMOE	50.17	291.3	9	20	23						
MERIDA	50.22	117.7	9	4K	6						
OAXACA	50.51	127.8	9	4	4	16	20	8	19	48	SS
URAKAWA	50.93	289.0	8	58	-5	16	12	-6	12	21	
SAPPORO	50.95	290.8	9	1	-2	16	21	3	19	25	SS
TOMAKOMAI	51.25	290.1	9	11	6	16	50	28			
MURORAN	51.69	290.4	9	13	4	16	40	12			
SUTTSU	51.71	291.3	9	13	4	16	26	-2	11	36	PP
MORI	52.06	290.5	9	9	-3	16	45	12	11	44	

HAKODATE	52.23	290.1	9	16	3	16	37	1	10 8 PCP
HATINOHE	52.76	288.5	9	12	-5	16	32	-11	
AOMORI	52.92	289.3	9	21	3	16	57	12	
KIRUNA	52.96	10.8	9	14	-4	16	41	-5	10 20 PCP
COMITAN	53.19	123.2	9	8	-12	16	36	-13	20 26 SS
MIYAKO	53.21	287.4	9	16	-4	16	45	-4	14 43
MORIOKA	53.57	288.1	9	18	-5	16	46	-8	12 40 PPP
BERMUDA	53.61	86.1	9	23	0				
SODANKYLA	53.94	8.1	9	21	-5				
MIZUSAWA	54.02	287.6	9	26	0	16	56	-4	
AKITA	54.09	288.9	9	24	-3	17	12	11	16 22
APATITY	54.17	4.8	9	23K	-4	17	0	-2	9 28 SP
ISINOMAKI	54.46	287.0	9	33	4	16	55	-11	
SENDAI	54.80	287.1	9	26	-6	17	15	5	10 19 PCP
SAKATA	54.85	288.4	9	36	4	16	47	-24	10 29 PCP
YAMAGATA	55.09	287.5	9	39	5	17	25	11	
HUKUSIMA	55.41	287.1	9	40	4	17	29	10	
VLADIVOSTOK	55.46	297.3	9	30	-7	17	22	3	11 32 PP
ONAHAMA	55.82	286.1	9	43	4	17	28	4	10 33 PCP
NIIGATA	56.00	288.2	9	41	1	17	35	9	10 18 PCP
SHIRAKAWA	56.03	286.8	9	45	4	17	38	11	
SKALSTUGAN	56.03	16.3	9	37	-4				
AIKAWA	56.32	288.9	9	48	5	17	32	1	
MITO	56.47	286.0	9	39	-5	17	35	2	10 38 PCP
UTUNOMIYA	56.65	286.6	9	50	5	17	31	-4	10 24 PCP
SAN SALVADOR	56.70	121.6	9	53	7				
KAKIOKA	56.74	286.1	9	47	1				13 36
TAKADA	57.03	288.2	9	48	0	17	19	-21	
MAEBASI	57.17	287.1	9	49	0	17	50	8	12 24
KUMAGAYA	57.21	286.7	9	50	1				15 51
SANTIAGO MA.	57.25	120.9	9	55	6				18 10
TOKYO C.M.O.	57.38	286.0	9	47A	-3	17	15	-30	21 22 SS
NAGANO	57.39	287.9	9	50	0	17	51	6	
MATUSIRO	57.48	287.8	9	44A	-7	17	37	-9	11 57 PP
OIWAKE	57.48	287.4	9	51	0	17	37	-9	15 14
WAZIMA	57.49	289.4	9	52	1	17	50	4	
TITIBU	57.49	286.8	9	48	-3	17	45	-1	
YOKOHAMA	57.63	285.9	9	51	-1	18	27	39	11 45 PP
BERGEN	57.83	21.3	9	56	3	17	56	5	12 17 PP
MATUMOTO	57.84	287.8	9	49	-5	18	7	16	
TOYAMA	57.87	288.7	9	52	-2	18	3	12	10 34 PCP
CHANGCHUN	57.92	302.3	9	48	-6				
MERA	57.94	285.4	9	53	-1	16	26	-86	11 9
KOHU	58.02	286.9	9	59	4	18	6	13	
HUNATU	58.02	286.6	10	0	5	17	44	-9	
AJIRO	58.21	286.1	9	52	-4	17	58	2	11 45 PP
MISIMA	58.23	286.2	9	30	-26	18	7	11	10 31 PCP
TAKAYAMA	58.28	288.3	10	6	9				
KANAZAWA	58.28	289.0	9	56	-1				
OSIMA	58.29	285.6	9	52	-5	17	37	-20	10 48 PCP
IIDA	58.48	287.4	10	8	10	17	53	-6	
SHIZUOKA	58.62	286.5	9	56	-3	17	57	-4	23 15
HUKUI	58.84	288.9	10	1	0				
OMAESAKI	59.01	286.4	10	5	3	18	14	8	13 20 PPP
GIHU	59.11	288.1	9	57	-5	18	6	-1	
HAMAMATU	59.16	286.9	10	14	11	18	14	6	12 16 PP
ABERDEEN	59.18	27.0	10	8	5	18	13	5	12 29 PP
NAGOYA	59.19	287.8	10	8	5	18	25	17	
IRKUTSK	59.22	321.4	10	0A	-3	18	9	0	12 5 PP
TSURUGA	59.26	288.8	10	0	-3	18	30	21	11 14 PCP
IBUKISAN	59.32	288.4	10	3	-1	17	53	-17	
HATIDYOZIMA	59.37	284.1	10	10	6				
HIKONE	59.47	288.4	10	0	-5	18	3	-9	23 17
KAMEYAMA	59.69	287.9	10	2	-4	18	15	0	10 58 PCP
MAIZURU	59.70	289.1	10	12	5				12 6 PP
TU	59.76	287.8	10	10	3				
TOYOOKA	59.98	289.6	10	7	-1	18	19	0	12 7 PP
EDINBURGH	60.04	28.3	10	19	10	18	31	12	12 20 PP
ABUYAMA	60.13	288.6	10	3A	-6				
NARA	60.15	288.3	10	18	8				
SAIGO	60.18	291.2	10	8	-2				24 49
TOTTORI	60.29	290.1	10	18	7				
OSAKA	60.32	288.5	10	16	5	18	36	13	11 59 PP
UPPSALA	60.36	14.8	10	7	-4	18	16	-8	
OWASE	60.44	287.6	10	8	-4	18	29	4	
KOBE	60.47	288.8	10	16	4	18	25	0	13 44 PPP
YONAGO	60.78	290.7	10	20	6	18	24	-5	14 14
PORT-PRINCE	60.80	102.3	10	33	19	19	1	32	12 52 PP

WAKAYAMA	60.83	288.5	10	14	0				17	27	
SUMOTO	60.88	288.8	10	12	-3	18	33	3	13	49	PPP
HELSINKI	60.90	10.6	10	13	-2						
MATSUE	60.90	290.9	10	21	6						
HIMEJI	61.00	289.2	10	20	5				11	20	PCP
OKAYAMA	61.10	289.7							23	0	
SIOMISAKI	61.15	287.5	10	10	-6	18	40	6			
TORISIMA	61.21	281.9	11	25	68				12	34	
TOKUSIMA	61.26	288.8	10	14	-3	18	26	-9			
TAKAMATU	61.32	289.4	10	23	5	18	37	1			
DURHAM	61.47	27.9	10	20K	1	18	49	11	11	10	PCP
RATHFARNHAM	61.57	31.5	10	18	-1	18	50	11	19	15	PS
GOTEBORG	61.57	18.7	10	17	-2				39	36	P1P1
PULKOVO	61.74	7.6	10	19	-1	19	6	25	12	40	PP
HAMADA	61.84	291.3	10	26	5	21	43	181	12	50	PP
ULAN-BATOR	62.02	317.1	10	20	-2	18	50	5			
HIROSIMA	62.08	290.6	10	27	4	18	46	1	23	24	SS
MUROTO	62.11	288.5	10	21	-2	19	0	14			
KOTI	62.19	289.2	10	28	5	18	28	-19			
MATUYAMA	62.36	290.0	10	20	-5	18	43	-6	13	45	PPP
UWAZIMA	62.94	289.8	10	35	7	19	11	15	24	14	
SIMIDU	63.09	289.2	10	24	-5	19	1	3	11	27	PCP
SIMONOSEKI	63.16	291.5	10	33	3				19	38	SCS
OOITA	63.40	290.5	10	21	-10	18	28	-34			
COPENHAGEN	63.58	19.1	10	34A	1	19	12	8			
HUKUOKA	63.71	291.6	10	38	5	19	5	-1	13	12	PP
ITUHARA	63.76	292.9	10	39	5	18	57	-9			
ASOSAN	63.94	290.7	10	40	5						
SAGA	64.03	291.5	10	37	1				12	10	
SAN JUAN	64.17	96.9	10	32A	-4						
KUMAMOTO	64.18	290.9	10	24	-13				16	11	
SVERDLOVSK	64.36	349.7	10	36	-2	19	17	3	20	23	SCS
UNZENDAKE	64.48	291.2	10	45	7	19	28	13			
MIYAZAKI	64.56	289.8	10	42	3	19	35	19			
NAGASAKI	64.66	291.5	10	51	11	19	25	7			
KEW	64.80	28.7	10	40A	-1	19	26	7	13	19	PP
PEKING	64.99	306.1	10	36	-6						
WITTEVEEN	65.17	23.7	10	45	2						
KAGOSIMA	65.27	290.2	10	39	-5	19	38	13	20	5	
TOMIE	65.29	292.2	10	49	5	19	26	1			
BALBOA HTS.	65.37	114.6	10	44A	0	20	22	56			
DE BILT	65.52	24.9	10	46	1	19	41	13			
GALERAZAMBA	65.89	109.6	11	1	13	19	52	19			
MOSCOW	66.15	3.7	10	48	-1				19	38	
YAKUSIMA	66.21	289.6	10	47	-3	19	34	-2	13	40	PP
UCCLE	66.55	26.0	10	51	-1	19	47	6			
POTSDAM	66.84	19.8	10	53	-1	19	46	2			
BENSBERG	67.03	24.1	10	52	-3	20	16	30			
DOURBES	67.26	26.1	10	53	-3						
HALLE	67.48	20.8	10	54	-4	19	57	5	13	25	PP
SEMIPALATNSK	67.53	335.6	10	57	-1						
COLLMBERG	67.86	20.2	10	57	-3	20	2	6	24	52	SS
JENA	67.95	21.3	10	57	-4	20	4	7	13	23	PP
PARIS	67.95	28.0	11	2A	1	20	6	8	13	43	PP
WARSAW	68.23	14.8	11	6	4	20	6	5	24	14	SS
SONNEBERG	68.40	21.7	11	3	0	20	10	7			
ST. CLAUDE	68.44	94.4	11	16	12	20	12	9			
PLAUEN	68.47	21.0	11	2	-2				15	30	
CHEB	68.92	21.0	11	6	-1	20	15	6	13	48	PP
KARLSRUHE	69.13	24.0	11	9	1	20	9	-3	13	39	PP
PRAGUE	69.30	19.7	11	9K	0	20	18	4	13	48	PP
STRASBOURG	69.40	24.6	11	8	-2	20	23	8	13	40	PP
STUTTGART	69.53	23.6	11	11A	1	20	27	11	13	55	PP
TUBINGEN	69.73	23.7	11	11	-1	20	30	11	13	58	PP
FORT FRANCE	69.81	94.7	11	12	0	20	25	5			
RACIBORZ	69.92	17.1	11	14	1				13	38	PP
EBINGEN	70.04	23.9	11	14	1	20	31	9	13	57	PP
ZO-SE	70.18	297.1	11	9	-5	20	30	6			
KRAKOW	70.21	16.0	11	14	0	20	36	12	17	26	
BASLE	70.35	25.1	11	17K	2						
ST. LUCIA	70.48	95.0	11	10	-6				11	35	PCP
NANKING	70.49	299.4	11	10	-6	20	31	4			
RAVENSBURG	70.56	23.6	11	17	0	20	43	15			
NEUCHATEL	70.71	25.7	11	18	0	20	44	14			
CHINCHINA	70.73	113.0	11	14	-4	20	15	-15			
CLERMONT-FD.	70.94	28.8	11	18	-1	20	46	13	14	3	PP
LWOW	70.97	13.3	11	19	0				20	39	
ST. VINCENT	71.06	95.7	11	17	-3				11	40	PCP

SKALNATE PL.	71.10	16.0	11	13	-7	20	26	-9		11	48 PCP
FUQUENE	71.23	111.0	11	19	-2						
VIENNA-H.	71.40	18.9	11	23	1	20	52	14		11	43 PCP
CHUR	71.42	24.0	11	21	-1	20	50	12			
SERRA PILAR	71.75	39.0	11	23K	-1	20	42	0		12	4
BOGOTA	71.79	111.7	11	24	0	20	47	4			
BARBADOS	71.97	94.3	11	31	6						
HURBANOVO	72.07	17.7	11	33	7	21	2	16		21	46 PS
OROPA	72.25	25.5	11	28	1	21	0	12		14	17 PP
BUDAPEST	72.58	17.2	11	31	2	21	4	12		14	12 PP
GUAM	72.82	267.8	11	32	2						
PAVIA	72.93	24.8	11	32A	1	21	15	19	11 42	14	22 PP
TRINIDAD	73.02	97.3	11	33	2						
KECSKEMET	73.23	16.9	11	37	4	21	5	6		12	3 PCP
LANCHOW	73.39	312.8	11	29	-4						
TRIESTE	73.43	21.4	11	32	-2	21	12	11		11	43 PCP
KALOCSA	73.49	17.5	11	34	0	21	2	0			
ZAGREB	73.68	19.8	11	30	-5	21	3	-1		21	29 PS
LISBON	73.73	40.5	11	36A	1	21	1	-4			
MONACO	73.91	26.5	11	37K	1					14	21 PP
SZEGED	73.95	16.8	11	38	1	21	23	16		15	10 PP
IASI	73.96	11.3	11	37	0	21	17	10		13	18
BOLOGNA	74.05	23.5	11	28	-9	21	24	16	11 47	14	24 PP
TRUK	74.16	258.3	11	39	1					14	37 PP
TOLEDO	74.35	36.2	11	40	1	21	1	-10		14	21 PCP
TIMISOARA	74.60	16.1	12	44	64	21	17	3		14	23 PP
FLORENCE X.	74.72	23.7	11	38	-3	21	36	20		14	35 PP
BARCELONA	74.73	31.1	11	48	7	21	29	13			
TORTOSA	74.84	32.5	11	45	3	21	30	13			
TAIPEI	75.11	293.4	11	50	7	21	25	5			
ILAN	75.21	293.1	11	51	7	23	18	117			
BELGRADE	75.39	16.8	11	46A	1	21	30	7		30	30 SSS
FOCSANI	75.41	11.8	11	52	7	21	29	6			
HSINCHU	75.57	293.7	12	10	24						
FRUNSE	75.89	337.1	11	45A	-3					19	22
HWALIEN	75.95	292.7	11	46	-2	21	34	5			
TAICHUNG	76.25	293.6	11	50	0	21	47	14			
YUSHAN	76.69	293.0	11	54	2						
ALISHAN	76.73	293.2	11	59	6						
SIMFEROPOL	76.75	6.9	11	52A	-1	21	47	9		12	0 PCP
ROME	76.78	23.4	11	54A	1	21	52	14		14	51 PP
HSINKONG	76.81	292.5	11	59	6	21	57	18			
ALICANTE	76.84	34.2	11	56	3	21	52	13		14	56 PP
GRANADA	76.96	37.0	11	57K	3	21	50	10		15	5 PP
MALAGA	77.12	37.8	11	58A	3	21	56	14		40	6
TAITUNG	77.21	292.5	12	2	7	22	32	49			
TAINAN	77.45	293.3	12	7	10						
ALMERIA	77.62	36.3	11	57	-1	22	1	14		15	1 PP
AFIAMALU	77.63	215.2	12	2K	4	20	10	-97		13	57 PP
TAWU	77.67	292.4	12	10	12						
KAOHSIUNG	77.75	293.1	12	59	61						
SOFIA	77.89	15.2	12	2	3	21	58	8		15	22 PP
HENGCHUN	78.04	292.4	12	10	10						
SKOPJE	78.31	16.8	11	53A	-8	22	5	10		15	18 PP
TASHKENT	78.40	340.6	12	2	0	22	0	4		22	32 PS
TARANTO	79.09	20.2	12	13	7	22	27	24		15	9 PP
ALGIERS UNI.	79.33	32.1	12	7	0	22	21	15		15	18 PP
RELIZANE	79.56	34.4	12	7	-1	22	15	7		15	8 PP
TIFLIS	80.28	359.1	12	12	0	22	20	5		15	6 PP
CANTON	80.66	299.0	12	12	-2						
HONG KONG	80.92	297.9	12	11A	-4	22	24	2		15	6 PP
MESSINA	80.96	22.1	12	13	-3	22	9	-14		15	14 PP
REGGIO CALA.	81.08	22.0	12	18	2	22	29	5			
GORIS	82.47	357.9	12	24	1					22	48 SCS
ATHENS	82.58	15.8	12	24K	0	22	42	3			
BAGUIO CITY	82.86	289.6	12	22	-3	22	38	-4			
ASHKABAD	83.26	348.4	12	26A	-2					22	53 SCS
KOROR	83.38	273.2	12	33K	5						
KUNMING	83.58	308.5	12	26A	-3	22	46	-3		15	42 PP
LHASA	83.83	319.9	12	28	-2	22	57	5			
RABAUL	83.97	252.0	12	34	3					15	24 PP
MANILA	84.23	288.3	12	27	-5	22	52	-4			
SUVA	84.84	222.7	12	34K	-2	23	26	24		17	36 PPP
TOCKLAI	85.15	315.7	12	44	7	23	14	9		16	5 PP
HUANCAYO	85.78	120.9	12	39	-1	23	17	6		16	2 PP
LAHORE	86.82	334.1	12	43	-2						
DEHRA DUN	87.09	330.7	12	47	0	23	9	-15		16	53 PP
SHILLONG	87.27	317.6	12	44A	-3	23	11	-14		23	8 SKS
CHATRA	87.71	322.0	13	1	11	23	10	-19			

	DELTA	AZ.	P	O-C	S	O-C	*PP	SUPP.
	DEG.	DEG.	M S	S	M S	S	M S	M S
KSARA	87.94	6.5	12 52	1	23 38	7	24 41 PS	
QUETTA	89.66	340.0	12 56	-3	23 53	6	16 31 PP	
AGRA	90.13	329.8	13 0A	-1	23 24	-28	16 36 PP	
CHITTAGONG	90.23	316.4	13 5	3	24 9	16	16 52 PP	
BOKARO	90.94	322.1	13 10A	5	24 38	39	16 34 PP	
PORT MORESBY	90.95	253.7	13 4	-1			14 28	
HELWAN	91.50	10.7	13 7	0	24 3	-1		
MBOUR	92.34	57.7	13 23A	12	23 58	-13	17 6 PP	
LA PAZ	92.99	116.9	13 12K	-2	24 4	-13	17 4 PP	
TAMANRASSET	93.18	34.8	13 16	1	23 47	-32	16 59 PP	
NOUMEA	93.22	231.2	13 15	0	23 50	-29		
KARACHI	93.89	339.0	13 18	0			17 12 PP	
VIZIANAGRAM	97.03	322.2			24 56	4	26 16 PS	
HYDERABAD	99.22	326.5	13 52K	9	25 7	-3	17 46 PP	
BOMBAY	99.33	332.1	13 54	11	25 29	18	18 8 PP	
PORT BLAIR	99.64	311.4	13 54	9	24 27	-46	17 59 PP	
CHARTERS TS.	100.42	248.9	13 43	-5				
MADRAS	102.88	323.5	13 24	-35	24 22	-79	17 15 PP	
AUCKLAND	103.27	218.4			24 40	-64	33 25 SS	
BRISBANE	103.58	239.6			24 52	-54	14 5	
KARAPIRO	104.00	217.4					18 16 PP	
MEDAN	104.41	302.4	14 12	6			27 46 PS	
TALA POZO	104.53	119.5	14 14	8	24 34	-80	18 34 PP	
KODAIKANAL	106.33	325.2	19 2	777	29 41	0		
SANTA LUCIA	106.52	127.4	14 26	777	25 1	0	18 51 PP	
WELLINGTON	107.30	216.5			24 54	0	18 44 PP	
COLOMBO	108.71	321.7	15 39	777	26 29	0		
CONCEPCION	108.89	130.2			25 24	0	19 26 PP	
LEMBANG	109.28	289.1	18 45	777	26 12	48		
BANDUNG	109.32	289.0					17 32	
RIVERVIEW	109.82	237.6	18 28A	777	25 21	3		
ROXBURGH	112.87	218.3			25 14	-6	19 21 PP	
LA PLATA	113.39	118.7	19 29	51	25 54	32	20 14	
MELBOURNE	115.92	239.7	19 34	51			29 53 PS	
ADELAIDE	116.50	246.1	18 52	8			20 6 PP	
FORT NELSON	119.02	234.7			26 10	28	20 5 PP	
RUMANGABO	122.01	17.0	18 59	5			21 18 PPP	
LWIRO	122.83	17.8	15 39	777	26 14	19		
ASTRIDA	123.32	16.7	19 1	4			35 39 SS	
UVIRA	124.09	17.6	19 7	9				
LUANDA	125.35	37.9	19 13	12	25 55	-8	21 1 PP	
PERTH	125.78	266.0					20 55 PP	
CAPE HALLETT	135.47	200.5	19 15	-5			23 36 PPP	
BYRD STATION	138.48	175.6	19 9	-16	27 32	59	22 6 PP	
DUMONT	139.13	217.2	19 32	5				
WINDHOEK	139.47	39.5	19 31	4				
SCOTT BASE	140.32	196.1	19 25	-4				
TANANARIVE	140.51	354.2	19 39	10	26 49	13	22 30 PP	
LCO. MARQUES	146.70	18.3	19 44	4			23 2 PP	
SOUTH POLE	148.19	180.0	19 37A	-5			23 10 PP	
WILKES	149.40	227.1	19 51	7				
PIETERMZBURG	149.84	23.4	19 49	4				
HERMANUS	151.03	44.9	20 41	54	27 14	23	31 19 SKKS	
GRAHAMSTOWN	152.43	32.1	19 54	5				
OASIS-BUNG.	153.24	229.2	19 54	4			23 17 SKP	
MIRNY	156.38	229.3	19 56	2			20 30 PKP2	

JULY 11 7.H 43.M 3.S EPICENTRE 50.60-175.62 DEPTH= 0.KM

A=-0.63546 B=-0.04862 C= 0.77060 D=-0.0763 E= 0.9971
G=-0.7684 H=-0.0588 K=-0.6373 HT= -5.6
SE= 2.43

	DELTA	AZ.	P	O-C	S	O-C	*PP	SUPP.
	DEG.	DEG.	M S	S	M S	S	M S	M S
PETROPAVLOVK	16.06	289.0	3 51	2				
COLLEGE	20.36	34.9	4 37	-4				
MAGADAN	21.00	308.2	4 54	7				
SITKA	24.36	59.0	5 25	5				
Y.-SAKHLINSK	27.43	278.7	5 48	-1				
TIKSI	32.30	330.7	6 29	-4				
CORVALLIS	35.17	79.1	7 0	3				
MATUSIRO	35.67	264.9	7 0K	-2				9 28 PCP
VLADIVOSTOK	35.99	278.8	7 3	-1	12 40	-3		
BANFF	36.98	65.1	7 12	-1				

SHASTA	37.76	84.1	7 21K	2						
MINERAL	38.45	84.0	7 27K	2						
HUNGRY HORSE	39.07	68.6	7 31	1					7 53	
RESOLUTE	39.63	24.3	7 47	12					9 7	PP
RENO	40.05	83.8	7 36	-2						
LICK	40.17	87.9	7 40	1						
BUTTE	41.07	71.0	7 47	0						
BOZEMAN	42.16	70.6	7 57	1						
EUREKA	42.51	81.3	8 0	1					8 51	
SALT LAKE C.	44.34	77.1	8 15	2						
PASADENA	44.36	89.0	8 14	0	14 58	9				
THULE	45.26	18.5	8 24	3						
BOULDER CITY	45.34	84.5	8 23	2						
RAPID CITY	47.71	68.3	8 41	1						
BOULDER	48.82	73.9	8 50	1						
TUCSON	50.27	85.5	9 1	1						
TUCSON TELE.	50.28	85.3	9 1	1						
CHIHUAHUA	55.73	85.3							10 57	PCP
FAYETTEVILLE	58.07	70.7	9 55	-2						
KIRUNA	61.28	353.1	10 15	-4						
OTTAWA	61.99	51.8	10 23A	-1						
SHAWINIGAN	62.63	49.3	10 29	1						
SEVEN FALLS	63.14	47.7	10 29	-3						
MORGANTOWN	63.84	58.9	10 36A	0						
SKALSTUGAN	66.00	356.1	10 51	1						
WESTON *	66.37	51.6	10 52A	-1						
UPPSALA	69.39	352.9	11 10	-2						
SHILLONG	72.20	288.6	11 26	-3						
CHATRA	74.07	292.8	11 40	1						
POTSDAM	77.14	354.5	12 11	14						
LAHORE	77.60	304.8	11 59	0						
CHARTERS TS.	77.91	216.4	12 OK	-1						
HALLE	78.08	355.2	12 0	-2					12 14	PCP
JENA	78.67	355.4	12 5	0					12 44	
PLAUEN	79.06	355.0	12 6	-2					12 35	
SONNEBERG	79.23	355.6	12 6	-2						
DOURBES	79.68	359.9	12 9	-2	21 59	-14				
PARIS	80.96	1.3	12 25	7						
TIFLIS	81.51	330.6	12 21	0	22 30	-2				
QUETTA	82.46	309.2	12 25	0	22 37	-5			15 35	PP
CLERMONT FD.	84.01	0.9							13 34	
GRANADA	92.32	6.4	13 29A	16	24 48	33				
BYRD STATION	134.17	168.4	19 15	-5						
SOUTH POLE	140.41	180.0	19 22	-9						

JULY 11 19.H 10.M 31.S EPICENTRE -21.09 -69.75 DEPTH= 77.KM

DEPTH OF FOCUS= 0.007R

A= 0.32323 B=-0.87611 C=-0.35771 D=-0.9382 E=-0.3461
G=-0.1238 H= 0.3356 K=-0.9338 HT= 4.4

SE= 2.12

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
LA PAZ	4.82	18.8	1	16A	4	2	17	10			9	29	PCP
TALA POZO	8.36	144.3	1	58	-3	2	51	-44			2	14	PPP
HUANCAYO	10.46	328.4	2	29	0	4	39	13					
SANTA LUCIA	12.32	183.7	3	5	11	5	21	11					
CONCEPCION	15.81	186.8	3	52	12	6	57	25					
LA PLATA	17.25	145.4	3	54	-3	6	54	-11			4	4	PP
BOGOTA	25.90	350.1	5	27	0	9	58	9			12	12	PCP
CHINCHINA	26.53	346.8	5	23	-10	9	31	-28			11	29	PCP
FUQUENE	26.68	351.1	5	34	0	9	54	-8			11	26	SS
BALBOA HTS.	31.38	341.1	6	26	10								
GALERAZAMBA	32.13	349.8				11	36	8					
TRINIDAD	32.58	15.1	6	28	2								
ST. VINCENT	35.05	14.5	6	46	-2						7	14	
BARBADOS	35.43	17.2	6	47	-4								
FORT FRANCE	36.58	14.0	6	59	-2						20	29	
SAN JUAN	39.39	5.4	7	21	-3	13	33	14			8	57	PP
SAN SALVADOR	39.54	329.4	7	27	2								
COMITAN	43.12	327.6									12	49	
MERIDA	46.07	333.8	8	19	1						9	20	
VERA CRUZ	47.65	325.4				15	7	-12					

TACUBAYA	49.50	322.4	9	2	17						
BERMUDA	53.39	5.3	9	9	-5	16	37	-2		11	17 PP
COLUMBIA	55.83	348.7	9	32	0						
HALLEY BAY	58.83	168.4	9	50	-3					18	38 PS
CHIHUAHUA	60.60	323.3				18	1	-13			
MORGANTOWN	61.15	351.0	10	8A	-1						
FAYETTEVILLE	61.39	337.6	10	10A	-1	18	30	6	10 23		
FORDHAM	61.74	356.4	10	13	0	18	28	0		10	34
PALISADES	61.90	356.4	10	12	-2	18	33	3		12	35 PP
LUBBOCK	62.39	330.0	10	16	-1	18	39	3	10 24		
ST. LOUIS 1	62.44	342.0	10	15A	-3	18	35	-2		19	53 SCS
FLORISSANT	62.63	341.9	10	18A	-1	18	40	1		20	5 SCS
MBOUR	62.67	60.3	10	20A	1	18	48	8		10	59 PCP
BYRD STATION	62.78	188.6	10	18	-2	18	46	5	10 32	39	3 PKPPKP
WESTON	63.16	358.7	10	13A	-9						
CLEVELAND	63.20	350.1	10	22A	-1	18	48	2			
HALIFAX	65.63	4.8	10	38	0	19	21	5		19	48 PS
TUCSON	66.02	322.5	10	41	0					39	20 PKPPKP
TUCSON TELE.	66.02	322.6	10	42	1					39	19 PKPPKP
BREBEUF	66.36	357.0	10	42A	-1	19	30	5			
OTTAWA	66.39	355.4	10	42	-1	19	31	5		13	19 PP
SHAWINIGAN	67.37	357.7	10	50A	1	19	43	6		20	7 PS
SEVEN FALLS	67.89	359.2	10	50A	-3	19	48	4		20	14 PS
SOUTH POLE	69.04	180.0	10	58	-2	20	0	3	11 12	39	8 PKPPKP
BOULDER	69.25	331.5	11	1	0						
BOULDER CITY	71.00	322.6	11	12	0					12	34
PASADENA	71.69	319.2	11	17	1	20	38	10		11	31 PCP
RAPID CITY	71.73	335.3	11	16	0						
SALT LAKE C.	72.93	327.8	11	24	1						
EUREKA	74.13	324.5	11	31	1					38	50 PKPPKP
FRESNO	74.44	320.3	11	31	-1						
LICK	75.92	319.7	11	41A	1						
SCOTT BASE	76.09	190.5	11	41K	0	21	24	7			
BOZEMAN	76.30	331.6	11	43	1						
RENC	76.30	322.4	11	44A	2						
BERKELEY	76.64	319.8	11	45A	1	21	32	9			
BUTTE	77.25	330.9	11	49	1					15	7 PP
HERMANUS	77.58	122.2	13	6	76	22	2	29			
MINERAL	77.87	322.1	11	51A	0						
UKIAH	78.02	320.3	11	52	0					12	19
SHASTA	78.55	321.9	11	54A	-1						
CAPE HALLETT	78.58	195.7	11	58	3					12	2 PCP
WINDHOEK	79.40	110.1	12	0	0						
HUNGRY HORSE	79.66	331.7	12	1	0	22	12	17		30	36 PKKP
LUANDA	80.36	95.8	12	7A	2					12	53
CORVALLIS	81.59	324.5	12	12A	1						
LISBON	82.20	43.5	12	17A	3						
BANFF	82.41	332.9	12	18A	3						
SEATTLE	83.09	327.3	12	20A	1						
GRAHAMSTOWN	83.71	123.1	12	22A	0						
KIMBERLEY	83.89	118.3	12	23K	0						
SERRA PILAR	83.92	41.7	12	20K	-3					15	33 PP
VICTORIA	84.23	327.4	12	25A	0	22	48	6			
MALAGA	84.26	47.2	12	23A	-2	23	11	29		15	45 PP
HORSESHOE B.	84.72	328.1	12	26A	-1	22	50	3			
GRANADA	85.05	47.2	12	40A	11	22	54	4		24	23 PS
TAMANRASSET	85.33	63.6	12	32A	2					15	49 PP
ALBERNI	85.42	327.4	12	30	0						
ALMERIA	85.66	47.9	12	32	0	22	56	0			
TOLEDO	86.14	44.7	12	36A	2	23	26	25		16	7 PP
RELIZANE	87.25	50.1	12	42A	3					16	6 PP
ALICANTE	87.77	47.4	12	40	-2	23	22	6			
ALGIERS UNI.	89.51	50.1	12	51	1	23	44	12		16	22 PP
DUMONT	89.70	191.4	12	50	-1						
MIRNY	91.67	173.2	12	59	-1	23	50	-1			
RATHFARNHAM	92.05	32.5	13	1A	-1					16	43 PP
REYKJAVIK	92.67	19.0	13	6A	1					13	26
OASIS-BUNG.	92.71	176.1	13	4	-1						
CLERMONT-FD.	93.61	42.1	13	9	0	24	13	5		16	55 PP
KEW	94.24	36.0	13	13	1	24	9	-5		16	55 PP
PARIS	94.59	39.2	13	15A	1	23	49	-28		17	3 PP
DURHAM	95.18	32.7	13	14	-2	23	55	-27		17	10 PP
MONACO	95.52	45.2	12	58A	-20						
ABERDEEN	96.12	30.4				23	56	-34		26	7 PPS
DOURBES	96.40	38.6	13	21	-1						
UCCLE	96.55	37.9	13	52	30	22	59	-94			
RESOLUTE	96.90	353.5	13	23	-1	24	19	-17			
UVIRA	97.02	96.4	13	27	2						
LWIRO	97.17	95.2	13	28	3						

PAVIA	97.24	44.4					17 22 PP
SCORESBY SD.	97.24	14.5	13 25	-1			17 11 PP
THULE	97.30	0.3	13 26	0			
DE BILT	97.57	36.9	13 27	0			17 44 PP
STRASBOURG	97.67	40.9	13 26	-2	24 5	-38	17 40 PP
ASTRIDA	97.90	95.8	13 31	2			17 22 PP
RUMANGABO	97.99	94.5					17 4 PP
FLORENCE X.	98.09	46.3	13 44A	15	23 40	-66	17 45 PP
BENSBERG	98.25	38.5	13 31	1			17 47 PP
EBINGEN	98.25	41.5	13 31	1			
ROME	98.26	48.4	13 33A	3	23 59	-49	26 57 PPS
TUBINGEN	98.45	41.2	13 31	0			
STUTTGART	98.62	41.1	13 31	-1	24 35	-16	17 29 PP
MUNSTER	98.90	37.7	13 34	1			14 8
MESSINA	99.21	52.7					17 37 PP
SONNEBERG	100.41	40.0	13 41	1			17 44 PP
TRIESTE	100.42	45.1	13 40	0			17 46 PP
JENA	100.83	39.6	13 42	0			17 45 PP
HALLE	101.24	39.1	13 44	0	24 45	-28	17 50 PP
COLLMBERG	101.80	39.5	13 46	0			17 55 PP
POTSDAM	102.18	38.5	13 48	0			18 17 PKP
PRAGUE	102.27	41.0	13 59	11			18 16 PP
COPENHAGEN	102.89	35.1					17 57 PP
COLLEGE	103.95	334.5	13 54	-2			
RACIBORZ	104.60	41.7	17 40	777			
BELGRADE	104.69	47.4	18 19A	777			21 5
KRAKOW	105.67	42.0	18 19	777			18 23 PP
UPPSALA	106.69	31.8					18 52 PP
BUCHAREST	108.52	48.7	18 50	777			28 37
KIRUNA	109.39	23.7			26 40	0	28 29 PS
HELWAN	109.46	64.7	18 40	777			
PULKOVO	113.03	32.8	19 19	50			
JERUSALEM	113.14	63.5	18 31	2			19 41 PP
KSARA	114.06	61.4	18 31	0	24 22	-48	19 27 PP
SIMFEROPOL	114.26	49.1	14 45	777			
MOSCOW	116.92	37.3					19 47 PP
TIFLIS	121.84	53.3	18 45	-1			
MAKHACH-KALA	123.83	51.8					20 31
CHARTERS TS.	126.06	223.2	18 55	1			19 16
TIKSI	128.31	352.6	18 58	0			
SVERDLOVSK	129.15	32.7	19 3	3			
PETROPAVLOVK	131.23	323.2	19 20	16			
RABAUL	131.84	243.4	19 6	1			22 28 PP
MAGADAN	132.01	333.5	18 56	-9			
PORT MORESBY	132.75	233.8	19 10	3			22 36
QUETTA	140.12	67.9	19 11	-9			22 49 PKS
NAMANGAN	141.85	49.8	19 22	-1			
FRUNSE	143.15	45.6	19 25	0			
GUAM	146.25	262.7	19 32K	1			21 35
LAHORE	146.29	64.5	19 16	-15			
IRKUTSK	148.54	7.0	19 36	1			
SENDAI	148.54	309.8	19 37A	2			21 23
DEHRA DUN	149.65	65.8	19 36	0			
MATUSIRO	151.19	308.4	19 40K	1			23 36 PP
VLADIVOSTOK	151.54	325.5	19 43	4			
LEMBANG	152.14	174.4	19 39A	-1			23 29 PP
KOROR	152.88	243.2	19 30	-11			20 2
ULAN-BATOR	153.10	5.0	19 44	3			
CHANGCHUN	154.09	334.5	19 44A	1			23 40 PP
CHATRA	158.16	70.3	19 51	3			
NAGASAKI	159.04	307.7	19 45	-4			25 5 PP
PEKING	160.45	346.3	19 53	2			24 14 PP
LHASA	160.68	60.0	19 55A	4			24 19 PP
SHILLONG	162.54	71.7	18 54A	-59			19 44
LANCHOW	164.04	19.3	19 57	3			24 35 PP
ZO-SE	166.02	317.7	19 59A	3			24 43 PP
NANKING	166.68	326.8	19 58A	1			24 47 PP
CHENGTU	168.94	29.2	20 2A	4			24 59 PP
KUNMING	171.99	59.1	20 1A	1			25 17 PP
HONG KONG	176.16	289.0	20 19	18			25 57 PP
CANTON	176.56	305.7	20 4A	3			25 50 PP

JULY 12 0.H 48.M 31.S EPICENTRE -4.60-105.96 DEPTH= 0.KM

A=-0.27406 B=-0.95840 C=-0.07973 D=-0.9615 E= 0.2749

G= 0.0219 H= 0.0767 K=-0.9968 HT= 7.1

SE= 3.03

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
OAXACA	23.32	22.7				9	33	12			11	33	
SAN SALVADOR	24.65	42.1	5	22	-2								
TACUBAYA	24.76	15.4	5	37	12	10	8	23			5	59	PP
COMITAN	24.83	33.1									5	57	PP
VERA CRUZ	25.56	22.0	5	43	11						6	39	PPP
BALBOA HTS.	29.57	62.9	6	6	-3								
MERIDA	30.03	31.7	6	19	6	10	11	-60			14	29	
HUANCAYO	31.17	105.7	6	23	0	11	35	6			7	22	PP
CHIHUAHUA	33.04	359.8									9	53	
BOGOTA	33.15	74.4	6	41	0	12	3	3			13	58	SS
FUQUENE	33.71	73.1	6	43	-2	12	11	2			13	54	SS
TUCSON	36.94	353.1	7	13	0	13	6	7			8	33	PP
TUCSON TELE.	37.02	353.3	7	13	-1								
LUBBOCK	38.17	5.6	7	26	3	13	19	2					
LA PAZ	38.94	110.6	7	31A	1	13	31	2			8	59	PP
PASADENA	40.23	344.2	7	41	1	13	49	1					
BOULDER CITY	41.22	349.1	7	48	-1								
FAYETTEVILLE	41.95	14.3	7	53	-2	13	53	-21					
FRESNO	43.14	343.7	8	3	-1								
LICK	44.21	342.0	8	13	0								
BOULDER	44.42	0.7	8	15	0								
EUREKA	44.83	349.0	8	18	0								
BERKELEY	44.89	341.7	8	19	1	15	5	8					
COLUMBIA	45.04	29.7	8	20	0								
SAN JUAN	45.42	58.7	8	18	-5								
SALT LAKE C.	45.47	353.7	8	22	-1								
RENO	45.75	345.0	8	27	2								
TALA POZO	45.88	124.8	8	29	3	15	10	-1			10	54	PPP
UKIAH	46.35	341.4	8	30	0								
MINERAL	46.99	343.6	8	35	0								
SHASTA	47.53	343.0	8	38	-1								
FORT FRANCE	48.38	65.8									10	36	PP
RAPID CITY	48.52	2.7	8	46	-1								
MORGANTOWN	50.12	26.2	8	59	0								
BOZEMAN	50.26	355.4	9	0	0								
BUTTE	50.74	354.1	9	2	-2								
WASHINGTON	50.86	29.1	9	8	3								
CLEVELAND	51.00	23.6	9	11	5	16	19	-4					
CORVALLIS	51.38	344.2	9	13	4								
HUNGRY HORSE	53.20	353.3	9	20	-3								
BERMUDA	53.75	43.8	9	23	-4	17	5	5			11	26	PP
SEATTLE	53.98	346.4	9	45	17	17	14	10					
PALISADES	54.03	29.7	9	24	-5	17	4	0			11	34	PP
VICTORIA	55.06	345.9	9	35	-1						17	22	
HORSESHOE B.	55.83	346.4	9	38	-4	17	33	5					
BANFF	56.16	352.8	9	41	-3								
WESTON	56.35	30.4	9	44K	-2								
OTTAWA	56.62	25.1	9	45	-3	17	38	-1			12	6	PP
HONOLULU	57.20	298.9				17	59	12					
BREBEUF	57.61	26.5	9	54K	-1								
SHAWINIGAN	58.80	26.2	10	3K	0								
SEVEN FALLS	60.10	27.0	10	11	-1								
HALIFAX	61.95	33.0	10	25	1	18	48	0			22	41	SS
SUVA	74.92	252.5				21	33	11					
BYRD STATION	75.67	182.4	11	43	-6	21	29	-1					
COLLEGE	75.82	342.9	11	47	-3	21	34	2			26	0	SS
KARAPIRO	78.12	232.4	12	10	7								
RESOLUTE	79.44	3.0	12	11	1	22	9	-2			27	14	SS
CAPE HALLETT	83.73	197.8	12	32	-1	23	48	53			16	43	PP
THULE	83.74	8.4	12	45	12	22	55	0					
SCOTT BASE	84.96	192.3	12	37	-2								
SOUTH POLE	85.43	180.0	12	41	0								
MBOUR	90.15	75.7				23	58	2			30	4	SS
SCORESBY SD.	92.30	19.5				24	23	8			25	33	PS
BRISBANE	97.62	241.6									25	17	
DURHAM	102.03	35.0	14	7	9	25	43	5			24	38	SKS
GRANADA	102.61	53.1	14	5K	4	24	59	-44			27	7	PS
KEW	103.31	38.2				25	52	3			18	5	PP
ALICANTE	104.98	51.7	14	12	1	26	6	4			18	37	PP
DE BILT	106.53	36.9									33	5	SS
CLERMONT-FD.	106.56	43.6									27	56	
STRASBOURG	109.03	40.0									34	38	SS
COPENHAGEN	109.53	31.9									28	37	PS

TAMANRASSET	111.56	67.4				25	4	-15			18	2
FLORENCE X.	112.65	44.3									13	59
MATUSIRO	113.38	307.8									29	25 PS
KSARA	134.16	45.8	19	22	2						22	56 PKS
LWIRO	134.29	97.6									22	59 PKS
LEMBANG	144.61	251.5	19	45	6						26	53 PPP
QUETTA	153.69	14.0	20	1	8						23	49 PP

JULY 12 3.H 30.M 1.S EPICENTRE 11.71 165.16 DEPTH= 0.KM

A=-0.94680 B= 0.25083 C= 0.20163 D= 0.2561 E= 0.9667
G=-0.1949 H= 0.0516 K=-0.9795 HT= 6.3

SE= 1.37

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
TRUK	13.78	253.4	3	12	-5	5	39	-12					
GUAM	20.00	277.2	4	35	0								
PORT MORESBY	27.58	221.2	5	48	-1	13	38	190	6	7	10	32	PCS
KOROR	30.56	264.6	6	15	0								
MATUSIRO	34.65	320.1	6	50A	-1	12	21	2			9	24	PCP
ABUYAMA	35.41	315.5	6	58A	1	12	21	-10					
CHARTERS TS.	36.60	210.7	7	7A	0						9	31	
ZO-SE	44.91	302.5	8	16A	0								
CHANGCHUN	46.90	320.6	8	32A	0								
NANKING	47.12	303.0	8	34A	1								
RIVERVIEW	47.21	195.9	8	34A	0								
HONG KONG	49.68	289.3	8	55A	2	14	24	-96					
KARAPIRO	50.31	169.3	8	57A	-1						10	17	
CANTON	50.55	290.2	9	1A	1								
PEKING	51.49	312.2	9	7A	0								
ADELAIDE	52.72	207.4	9	17	1								
MELBOURNE	52.79	200.1	9	16A	-1								
LANCHOW	60.08	304.9	10	9A	0								
ULAN-BATOR	60.28	318.8	10	10	0								
KUNMING	60.31	292.2	10	11A	1								
COLLEGE	62.13	20.7	10	20	-3								
CORVALLIS	68.73	46.7	11	6	1								
VICTORIA	69.01	42.5	11	7A	0								
SHASTA	69.17	50.9	11	8A	0								
BERKELEY	69.19	53.9	11	7A	-1								
LICK	69.67	54.5	11	11A	0								
MINERAL	69.76	51.3	11	11A	-1								
LHASA	70.58	297.4	11	19A	2								
RENO	71.12	52.1	11	21A	1								
FRESNO	71.14	55.1	11	19	-1								
PASADENA	72.54	57.8	11	28	0								
EUREKA	74.10	52.1	11	38	1								
CHATRA	74.18	294.7	11	41	3								
BANFF	74.27	40.0	11	37A	-1								
BOULDER CITY	75.18	55.7	11	43	-1								
HUNGRY HORSE	75.25	42.9	11	44	0								
BUTTE	76.32	45.3	11	50	0								
SALT LAKE C.	77.17	50.6	11	54	-1								
BOZEMAN	77.40	45.6	11	56	0								
TUCSON	78.83	59.2	12	5	1						13	46	
TUCSON TELE.	78.91	59.1	12	5	1								
RESOLUTE	81.41	15.4	12	16A	-2								
BOULDER	82.23	50.8	12	23	1								
RAPID CITY	83.13	46.5	12	27	0								
CAPE HALLETT	83.89	178.4	12	32A	1								
LUBBOCK	86.08	56.7	12	42	1								
THULE	86.67	11.0	12	42	-2								
SCOTT BASE	89.41	179.7	13	1	4								
BYRD STATION	98.93	170.2	13	41A	0								
SOUTH POLE	101.63	180.0	13	53A	0								
BERMUDA	115.28	45.7	15	55	777						20	9	PP
ST. VINCENT	127.73	63.2	18	11	-54								
LA PAZ	128.21	101.8	19	11	5								
BARBADOS	129.20	62.3	18	3	-65								
ASTRIDA	134.92	278.1	19	21	2								
UVIRA	135.72	277.1	19	24	4								
LWIRO	135.74	278.9	19	25	5								
TAMANRASSET	140.34	329.8	19	25	-4						22	16	PP

JULY 13 8.H 10.M 1.S EPICENTRE 57.91-136.99 DEPTH= 0.KM

A=-0.39033 B=-0.36406 C= 0.84564 D=-0.6821 E= 0.7313
G=-0.6184 H=-0.5768 K=-0.5338 HT= -8.2

SE= 1.99

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SITKA	1.25	133.1	0 23	-2				
COLLEGE	8.69	327.9	2 7	-3	4 14	24		2 55
ALBERNI	11.27	135.0	2 45	-1				
HORSESHOE B.	11.78	130.6	2 48	-5	5 14	8		
VICTORIA	12.41	133.4	3 1A	0				
SEATTLE	13.56	133.0	3 19	2	7 6	77		
CORVALLIS	15.82	141.6	3 46	0				
HUNGRY HORSE	16.70	115.1	3 57	0				
BUTTE	19.06	118.1	4 28	1	8 31	34		
SHASTA	19.61	145.2	4 32	-1				
BOZEMAN	20.04	116.5	4 37	-1				5 3
MINERAL	20.17	144.0	4 39K	0				
RENO	21.49	141.4	4 53K	0				
BERKELEY	22.26	147.9	5 2	1	9 17	16		
EUREKA	22.91	134.5	5 7	0				
LICK	22.93	147.2	5 7K	0				
RESOLUTE	23.00	27.1	5 7K	-1	9 21	6		
SALT LAKE C.	23.50	126.0	5 14	1				6 17
FRESNO	24.01	144.3	5 20	2				
RAPID CITY	25.05	108.8	5 31	3				
BOULDER CITY	26.42	136.5	5 41	0				
PASADENA	26.94	143.8	5 46	1	10 29	7		
BOULDER	27.07	117.6	5 47	1				
TUCSON TELE.	31.20	133.7	6 23	-1				
TUCSON	31.24	133.9	6 24	0				
LUBBOCK	33.91	120.5	6 46	-1	12 18	6		
CLEVELAND	38.25	90.7	7 22	-2				
OTTAWA	38.66	81.5	7 26A	-1				
SHAWINIGAN	39.45	78.0	7 33	-1				
SEVEN FALLS	40.09	75.9	7 38	-1	13 50	4		
MORGANTOWN	40.41	91.4	7 40	-2				
WASHINGTON	42.47	89.7	8 39	40				19 26 SS
PALISADES	42.64	85.0	8 1	1	14 25	1		9 45 PP
WESTON	43.05	81.5						21 57
SCORESBY SD.	43.91	26.0	8 14	3	14 59	16		9 56 PP
COLUMBIA	44.04	97.9	8 11	-1				10 2
HALIFAX	45.50	73.6						18 33 SS
KIRUNA	53.47	10.4	9 24	-1				
BERMUDA	53.99	85.2			17 15	11		21 24
SODANKYLA	54.44	7.7	9 30	-2				
SKALSTUGAN	56.56	15.9	9 45	-2				
MATUSIRO	57.28	287.6	9 52A	0	18 16	28		
UPPSALA	60.89	14.3	10 15	-2				
HELSINKI	61.40	10.2	10 19	-2				
GOTEBORG	62.11	18.2	10 28	3				
MUNSTER	66.72	23.0	10 58	3				
STRASBOURG	69.96	24.1	11 20	4				11 45 PCP
STUTTGART	70.08	23.0	11 15	-1				
TRIESTE	73.97	20.9	11 42	2				19 42
GRANADA	77.53	36.5	12 21K	21				
HUANCAYO	85.85	120.3	12 43	0				
SHILLONG	87.37	317.1	12 52A	1				
QUETTA	89.97	339.4	13 0	-3				
TAMANRASSET	93.75	34.3	13 26	6				14 6
SOUTH POLE	147.74	180.0	19 47	3				

JULY 13 12.H 3.M 57.S EPICENTRE -10.15 161.18 DEPTH= 127.KM

DEPTH OF FOCUS= 0.015R

A=-0.93190 B= 0.31764 C=-0.17510 D= 0.3226 E= 0.9465
G= 0.1657 H=-0.0565 K=-0.9846 HT= 6.5

SE= 1.15

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
RABAUL	10.71	302.9	3 34	64				
NOUMEA	13.09	157.9	3 OK	-2	5 21	-4	3 12	3 18 PP
PORT MORESBY	13.85	271.9	3 14	3	5 58	16		8 12 PCP
SUVA	18.51	117.3	4 24A	16	7 53	26	4 39	
BRISBANE	18.87	202.9	4 13A	1	7 46	11		
TRUK	19.82	331.7	4 22	0	8 0	7		
RIVERVIEW	25.30	199.8	4 22A	-54	9 47	17		
AFIAMALU	26.71	100.7	5 11A	-18				
KARAPIRO	30.51	157.3	6 3	0			6 28	8 58 PCP
KOROR	31.76	302.1	6 13	-1				
ADELAIDE	32.07	216.2	6 17	1				
GEBBIES PASS	34.88	165.4	6 41	1				
BAGUIO CITY	48.07	302.9	8 26	-2				
KIPAPA	50.89	51.7	8 47	-2				
MATUSIRO	51.23	336.2	8 50A	-2	15 56	-3		
LEMBANG	53.03	269.1	9 4A	-2	16 23	-1		
ZO-SE	56.15	318.4	9 27A	-1	17 9	4		10 1 *SP
HONG KONG	56.24	305.4	9 29A	0				
CANTON	57.34	305.7	9 36A	-1				
NANKING	58.32	317.7	9 43	0	17 29	-5		
VLADIVOSTOK	59.37	335.4						
CAPE HALLETT	62.35	176.9	10 10K	-1			10 44	
KUNMING	66.87	302.8	10 40	0	19 27	6		
SCOTT BASE	67.75	178.7	10 46A	1				
OASIS-BUNG.	69.07	202.2	10 53	-1				
MIRNY	72.13	203.0	11 11	-1				
ULAN-BATOR	75.10	325.6	11 30	1	21 2	7		
SHILLONG	76.17	299.5	11 35K	0				
LHASA	78.17	303.2	11 49	3				
BYRD STATION	78.21	169.9	11 46	-1			12 11	15 7 PP
IRKUTSK	78.89	328.4	12 33	43				
SOUTH POLE	79.92	180.0	11 55	-1			12 16	
COLLEGE	83.90	19.5	12 14	-2			12 40	
TIKSI	84.39	350.2	12 19	0				
BERKELEY	85.75	50.5	12 26K	1				
LICK	86.08	51.2	12 28K	1				
SHASTA	86.45	47.8	12 30K	1				
MINERAL	86.93	48.3	12 31K	0				
FRESNO	87.35	52.1	12 34	1				
PASADENA	88.01	55.0	12 36	0				
RENO	88.05	49.4	12 38K	1				
EUREKA	90.92	50.2	12 51	1			13 18	
BOULDER CITY	91.08	53.8	12 51	0			13 18	16 26 PP
TUCSON	93.65	58.1	13 4	1				
TUCSON TELE.	93.76	58.0	13 4	1				
HUNGRY HORSE	94.06	41.8	13 4	0				17 5 PP
SALT LAKE C.	94.27	49.5	13 6	1				
BOZEMAN	95.62	44.8	13 12	0				
RAPID CITY	101.00	46.9	13 37	1				
SVERDLOVSK	104.20	326.1			24 21	-65		
OTTAWA	120.20	43.1	18 35A	0				
BREBEUF	121.58	42.4	18 38K	0				
SHAWINIGAN	121.78	41.0	18 39	0				
PALISADES	122.74	47.5						16 53
SEVEN FALLS	122.81	39.8	18 40	0				
ASTRIDA	130.03	257.9	18 57	3				
LWIRO	131.02	258.0	19 0	4				
STUTTGART	134.94	334.0	19 4	0				19 30
TOLEDO	147.61	338.5	19 31	5			19 56	19 42 PKP2
RELIZANE	149.02	328.4	19 34	6				21 14
TAMANRASSET	153.55	301.4	19 46	11				19 57 PKP2

JULY 15 7.H 59.M 17.S EPICENTRE 35.35 23.57 DEPTH= 0.KM

A= 0.74927 B= 0.32693 C= 0.57594 D= 0.3999 E=-0.9166
G= 0.5279 H= 0.2303 K=-0.8175 HT= 0.0

SE= 2.64

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ATHENS	2.62	2.5	0 44K	0	1 21	4		1 26 SG
SKOPJE	6.84	346.3	1 45K	1	3 10	7		3 43
REGGIO CALA.	6.93	295.7	1 44	-1	2 58	-7		

MESSINA	7.04	296.2	1	46	0	2	59	-9	2	2 P*
TARANTO	7.15	317.5	1	36	-12					
SOFIA	7.34	358.6	1	53	2	3	53	37	4	13
HELWAN	8.52	127.7	2	8	1	3	40	-5		
BUCHAREST	9.27	11.3	2	18	1	3	55	-9		
BELGRADE	9.76	346.8	2	13	-11	5	5	49	3	7
KSARA	10.26	95.0	2	30	-1	4	54	26	4	21
JERUSALEM	10.35	106.8	2	29	-3	4	19	-11		
TIMISOARA	10.54	351.0	3	56	81	7	5	150	6	14
ROME	10.86	310.3	2	39A	0	4	54	11	5	8 S*
ZAGREB	11.94	333.5	3	14	20				7	20 SS
SIMFEROPOL	12.52	36.8	3	1	-1	5	17	-6		
FLORENCE X.	12.69	315.3	3	5	1	5	17	-10		
TRIESTE	12.71	327.0	2	55	-9	5	13	-15	6	41
BOLOGNA	13.09	318.0	3	4	-5				7	3
BRATISLAVA	13.68	341.4	4	15	58	7	0	69	8	9
LWOW	14.48	1.2	3	33	5					
PAVIA	14.72	316.2	3	33	2	6	30	14	4	39
MONACO	14.99	308.8	3	33	-1					
RACIBORZ	15.24	346.7	3	43	5				9	4
CHUR	15.60	321.7	3	41	-1	6	23	-13		
OROPA	15.66	315.6	3	37	-6				6	37
PRUHONICE	16.04	338.5	3	47	-1	6	59	12		
PRAGUE	16.15	338.4	3	52	3	6	56	7	9	15
RAVENSBURG	16.19	324.3	3	55	5	7	1	11		
ALGIERS UNI.	16.66	280.9	3	57	1	7	6	5		
EBINGEN	16.79	324.2	3	57	0	7	9	5		
CHEB	16.83	334.4	4	3	5	7	20	15	8	25
TUBINGEN	16.99	325.3	3	59	-1	7	15	6		
BASLE	17.04	320.4	4	0	-1	7	15	5		
STUTTGART	17.10	326.0	4	0	-1	7	15	4	4	15 PP
PLAUEN	17.27	334.8	4	2	-2	7	18	3		
SONNEBERG	17.51	332.9	4	7	0	7	30	9	5	8
KARLSRUHE	17.64	325.4	4	13	5	7	28	5		
STRASBOURG	17.64	323.4	4	8	0	7	27	3	8	57 PCP
COLLMBERG	17.67	337.7	4	9	0					
TIFLIS	17.76	62.7	4	11	1					
JENA	17.83	334.6	4	10	-1	7	31	3	5	28
HALLE	18.18	336.2	4	17	2	7	36	0	4	33 PP
GORIS	18.53	70.3	4	20	1	7	50	6		
POTSDAM	18.60	339.5	4	24	4	8	0	15	10	35
CLERMONT-FD.	18.65	310.1	4	20	-1					
RELIZANE	18.74	277.9	4	22	0					
TORTOSA	18.95	293.6	4	40	16	8	2	9		
ALICANTE	19.47	286.0	4	30	0	8	3	-2	4	47 PP
BENSBERG	19.59	327.8	4	35	3				6	30
MAKHACH-KALA	20.01	60.4	4	34	-3	8	16	-1		
TAMANRASSET	20.10	236.3	4	38	0	8	30	11	5	4 PPP
MUNSTER	20.16	330.4	4	36	-2					
DOURBES	20.20	322.7	4	23	-16	8	17	-4		
PARIS	20.55	317.3	4	39	-3	8	21	-7	4	59 PP
UCCLE	20.78	323.9	4	46	1	8	36	4		
ALMERIA	21.08	281.7	4	48	0	8	41	3		
WITTEVEEN	21.18	330.8	4	50	1					
DE BILT	21.28	327.6				8	43	1		
COPENHAGEN	21.72	342.8	4	51	-3	8	49	-1		
GRANADA	21.96	282.8	5	0A	3	9	2	7		
MALAGA	22.64	281.7	5	4K	1	9	11	4	5	33 PP
KEW	23.53	320.6	5	20	8	9	23	0		
UPPSALA	24.82	352.8	5	22	-3	9	43	-2		
DURHAM	26.08	325.9	5	37	1	10	17	11		
RATHFARNHAM	27.60	319.8	5	53	3				6	14
SKALSTUGAN	29.11	349.6	6	1	-3					
SODANKYLA	32.12	2.2	6	27	-4					
KIRUNA	32.58	357.8	6	31	-4				7	41 PP
APATITY	32.74	7.0	5	47	-49				6	33 PP
QUETTA	36.62	85.5	7	10	1	12	55	2		
LWIRO	37.72	171.4	7	21	2					
NAMANGAN	37.85	66.7	7	20	0					
ASTRIDA	38.19	170.0	7	24	2					
UVIRA	38.97	171.2	7	31	2					
REYKJAVIK	39.73	330.7	7	36	1					
NORD	48.59	352.7	8	44	-3					
CHATRA	54.31	80.2	9	29	-1					
SHILLONG	58.65	79.3	9	58	-3					
CHITTAGONG	60.11	82.6	10	21	10					
RESOLUTE	63.15	344.8	10	30	-1					
HALIFAX	64.41	307.7	10	39A	-1					

SEVEN FALLS	67.80	312.7	11	OK	-1									
SHAWINIGAN	69.24	312.8	11	9	-1									
BREBEUF	70.28	312.2	11	16K	-1									
OTTAWA	71.60	312.9	11	24K	-1									
PALISADES	72.79	308.2				21	15	18				25	36	SS
MORGANTOWN	77.39	309.7	11	58A	0									
COLLEGE	79.88	356.3	12	9	-3									
MATUSIRO	86.16	47.2	12	43	-1									
BANFF	86.65	335.6	12	44K	-2									
RAPID CITY	87.33	324.7	12	50	0									
EUREKA	96.70	329.6	13	33	0									
SOUTH POLE	125.17	180.0	19	2	0									

JULY 16 12.H 54.M 20.S EPICENTRE -29.35-112.76 DEPTH= 0.KM

A=-0.33779 B=-0.80502 C=-0.48769 D=-0.9221 E= 0.3869
G= 0.1887 H= 0.4497 K=-0.8730 HT= 2.0

SE= 1.52

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
HUANCAYO	38.80	71.6	7	27	-1	13	36	10			9	0	PP
LA PAZ	42.81	82.7	8	0	-1	14	28	2			9	40	PP
BALBOA HTS.	49.74	45.1	8	56	0	16	2	-3					
TACUBAYA	50.20	16.7	9	5	6	16	16	5			20	51	
BYRD STATION	50.84	181.5	9	3	-1								
CAPE HALLETT	58.35	200.5	10	0	1								
KARAPIRO	58.99	241.2	10	4	0								
SCOTT BASE	59.52	194.0	10	7	0						26	42	SSS
SOUTH POLE	60.81	180.0	10	14	-2								
HALLEY BAY	60.88	163.3	10	17	1						12	35	PP
TUCSON	61.29	1.9	10	19	0	18	44	5					
TUCSON TELE.	61.39	2.0	10	19	-1						12	53	PP
PASADENA	63.37	355.0	10	32	-1	19	13	8			23	16	SS
LUBBOCK	63.44	10.2	10	32	-2								
BOULDER CITY	65.01	358.2	10	43	-1								
FRESNO	66.11	353.8	10	51	0								
LICK	66.86	352.3	10	56A	0								
FAYETTEVILLE	67.40	16.2	10	57A	-2								
BERKELEY	67.46	351.9	10	59A	0	19	55	0					
EUREKA	68.54	357.3	11	5	-1						39	39	PKPPKP
UKIAH	68.82	351.3	11	10	2								
RENO	68.85	354.2	11	9	1								
SALT LAKE C.	69.77	0.7	11	14	0								
COLUMBIA	69.79	27.8	11	15	1								
MINERAL	69.83	352.8	11	14	0								
DUMONT	69.85	203.9	11	15	1								
SHASTA	70.27	352.2	11	16A	-1								
CHAPEL HILL	72.26	28.2	11	31	2								
RAPID CITY	73.60	7.2	11	37	0								
CORVALLIS	74.20	352.2	11	40	0								
BOZEMAN	74.68	1.2	11	44	1								
BUTTE	75.02	0.1	11	45	0								
MORGANTOWN	75.12	25.7	11	42	-3								
BERMUDA	76.49	40.4				21	44	5			26	45	SS
SEATTLE	77.13	353.4	11	43	-14								
VICTORIA	78.10	352.8	12	1K	-1								
PALISADES	78.71	29.0	12	7	2	22	3	0			30	38	SSS
RIVERVIEW	78.86	237.5				22	16	11					
HORSESHOE B.	78.94	353.0	12	6	-1								
WILKES	79.17	196.4				22	12	4					
BRISBANE	80.39	244.0				22	27	7			27	55	
MIRNY	82.40	190.1	12	27	2	22	42	1					
BREBEUF	82.56	26.6	12	27	1								
SEVEN FALLS	84.99	27.3	12	39	1								
HALIFAX	86.20	32.8				23	18	-1					
CHARTERS TS.	89.45	247.4	13	0	0						15	24	
PORT MORESBY	94.11	256.9				24	45	14					
COLLEGE	97.81	345.7	13	36	-2								
RESOLUTE	104.43	4.8	14	52	44	26	0	3			27	40	PS
TAMANRASSET	124.72	81.4	19	4	2						21	6	PP
KEW	126.08	45.7									37	58	SS
CLERMONT-FD.	127.96	53.0									38	30	SS
UVIRA	131.01	125.3	19	25	11								
LWIRO	131.63	123.8	19	16	1								
ASTRIDA	132.06	125.0	19	21	5								

RUHANGABO	132.64	123.4	19 25	8		
PRUHONICE	135.57	47.2	19 29	7		21 58 PP
HELWAN	148.85	80.0	19 52	7		
JERUSALEM	152.38	76.9	19 57	6		
KSARA	152.98	72.5	19 58	6		
QUETTA	179.14	16.8	20 18	6		25 56 PP

JULY 17 5.H 37.M 6.S EPICENTRE 40.61 23.36 DEPTH= 0.KM

A= 0.69890 B= 0.30185 C= 0.64840 D= 0.3965 E=-0.9180
G= 0.5953 H= 0.2571 K=-0.7613 HT= -1.9

SE= 2.69

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
SKOPJE	2.01	313.4						0 38	PG
SOFIA	2.09	359.4						0 37	PG
ATHENS	2.65	173.8	0 46A	1	1 27	9			
BUCHAREST	4.31	27.1	1 8A	0	2 15	14		2 38	
TARANTO	4.66	270.2	1 10	-3	1 59	-10			
BELGRADE	4.72	334.0	1 16	2					
CAMPULUNG	4.81	14.2	1 15	-1	2 17	4			
TIMISOARA	5.37	343.8	1 33	10	2 33	6		1 58	PG
FOCSANI	5.81	27.6	1 33	3					
SZEGED	6.11	338.4	1 38	4				2 0	PG
REGGIO CALA.	6.48	249.7	1 38	-1	2 53	-2			
BACAU	6.49	22.2	1 38	-1				1 52	PG
MESSINA	6.51	250.8	1 39A	0	2 53	-2		1 53	P*
KALOCSA	6.71	333.2	1 39	-3	2 54	-7		2 5	PG
IASI	7.25	23.4	1 47	-3	2 53	-21		2 3	PG
ZAGREB	7.49	316.5	1 52A	-1				3 26	PS
KISHINEV	7.53	29.9	1 51	-3	3 12	-9			
BUDAPEST	7.53	337.2	1 54	0	3 33	12		2 27	PG
HURBANOVO	8.14	334.7			3 36	0		2 14	
ROME	8.30	282.5	2 8	4	3 50	10		2 42	P*
TRIESTE	8.64	308.8	2 12	3	3 40	-9		2 43	PGPG
BRATISLAVA	8.78	331.4	2 10	-1	3 50	-2			
SKALNATE PL.	8.85	346.6			5 4	70			
SIMFEROPOL	9.02	57.7	2 11	-4	3 48	-10			
VIENNA-H.	9.12	329.1	2 16	0	4 1	0		3 2	PGPG
LWOW	9.23	2.7	2 3	-14					
FLORENCE X.	9.53	293.4	2 23	1	4 8	-3			
BOLOGNA	9.69	297.6	2 24	0	4 23	8		5 5	
KRAKOW	9.74	346.8	2 23	-1	4 19	3		4 44	SSS
RACIBORZ	10.14	340.8	2 30	0	5 6	40		5 30	SG
PRUHONICE	11.23	329.5	2 42	-3	5 2	10			
CUGLIERI	11.29	272.6	3 4	18				4 44	
PRAGUE	11.34	329.4	2 48	2	5 2	7			
PAVIA	11.36	298.4	2 59	12	5 15	19		6 52	
WARSAW	11.73	352.9	2 55A	3	5 8	3		5 14	SS
CHUR	11.78	306.5	2 52K	0					
KSARA	12.06	120.2	3 1	5	5 16	3		3 13	PP
RAVENSBURG	12.18	310.6	2 59	1	5 18	3		4 6	
CHEB	12.20	324.5	3 4	6				4 0	
MONACO	12.22	290.0	2 59	1					
OROPA	12.30	299.1	2 54	-5	5 12	-7			
HELWAN	12.53	146.3	3 2	-1	5 23	-1			
PLAUEN	12.61	325.4	2 59	-5				4 32	
ERINGEN	12.76	311.1	3 3	-3	5 23	-7		3 25	
COLLMBERG	12.88	329.6	3 3	-4					
TUBINGEN	12.89	312.6	3 8	1	5 30	-3			
STUTTGART	12.95	313.7	3 6	-2	5 28	-6		4 7	
JERUSALEM	13.01	128.9	3 9	0				3 56	
JENA	13.17	325.5	3 8	-3	6 1	21		5 26	
BASLE	13.27	306.6	3 11	-1	6 18	36		7 10	
HALLE	13.45	327.9	3 14	-1	6 4	18		8 37	PCP
NEUCHATEL	13.45	303.8	3 14	-1				7 5	
KARLSRUHE	13.51	313.4	3 26	10	6 6	18			
STRASBOURG	13.65	310.9	3 20	3	6 4	13		4 18	
POTSDAM	13.72	332.5	3 18	0				7 26	
BENSBERG	15.28	318.0	3 47K	8	6 50	20			
CLERMONT-FD.	15.62	296.0	3 47	4				3 59	PP
MUNSTER	15.69	321.6	3 50	6				8 8	
TIFLIS	16.18	79.1	3 54	4					
DOURBES	16.20	312.1	3 51	0	6 53	2			

ALGIERS UNI.	16.31	262.9	3	52	0	7	0	6	4 6	PP
UCCLE	16.69	314.0	4	4	7	7	11	9		
COPENHAGEN	16.71	338.1	4	0	3	7	0	-3		
PARIS	16.91	305.9	4	6	6	7	18	11	4 20	PP
DE BILT	16.96	318.7	4	8	8	7	21	12		
GORIS	17.62	86.1	4	11	3					
MAKHACH-KALA	18.14	74.6	4	18	3	7	40	4		
ALICANTE	18.53	270.7	4	13	-7	7	32	-12	4 37	PPP
RELIZANE	18.56	262.2	4	16	-4	7	35	-10	4 40	PP
GOTEBORG	18.61	340.6	4	19	-2					
UPPSALA	19.59	351.4	4	29A	-3	8	4	-4		
HELSINKI	19.61	2.4	4	27	-6					
KEW	19.61	311.5	4	33	0	8	11	3	4 51	PP
PULKOVO	19.67	10.5	4	29	-4	8	0	-10		
ALMERIA	20.47	267.8	4	40	-2	8	41	14		
GRANADA	21.23	269.4	4	48A	-2	8	47	5	5 36	PP
DURHAM	21.80	318.9	4	55A	-1	8	48	-5	9 30	SS
MALAGA	21.98	268.8	5	0A	3				5 29	PP
BERGEN	22.75	336.6	5	6	1	9	7	-3		
TAMANRASSET	23.30	225.6	5	12K	2	9	23	3	5 59	PPP
ABERDEEN	23.34	323.8	5	11	0	9	20	0	5 31	PP
RATHFARNHAM	23.68	312.4	5	13K	-1	9	41	15		
SKALSTUGAN	23.92	347.8	5	15	-1					
SERRA PILAR	24.11	281.8	5	18K	0				5 48	PP
LISBON	25.02	276.3	5	27A	0					
SODANKYLA	26.87	2.8	5	43	-1					
KIRUNA	27.32	357.6	5	49	1	10	25	-2		
APATITY	27.56	8.3	5	50	0	10	27	-4	6 22	PP
SVERDLOVSK	28.99	43.4	6	3	0					
REYKJAVIK	35.14	327.2	7	1K	4					
NAMANGAN	36.20	73.2	7	7	1					
QUETTA	36.70	92.5	7	10K	-1	12	47	-7	15 43	SSS
FRUNSE	37.80	69.2	7	21	1					
SEMIPALATNSK	40.15	56.2	7	40	1					
LAHORE	41.68	85.9	7	52K	0				9 50	PCP
LWIRO	42.95	172.0	8	3A	1				9 46	PP
NORD	43.36	352.1	8	4	-2					
ASTRIDA	43.40	170.7	8	5	-1				9 55	PP
MBOUR	43.74	245.1							17 52	SS
UVIRA	44.19	171.7	8	12	0				9 54	PP
CHATRA	53.75	83.9	9	27	1					
IRKUTSK	54.20	48.4	10	22	53					
LHASA	55.20	78.7	9	37	0					
TIKSI	56.61	21.5	9	47	0	17	37	-1		
ULAN-BATOR	57.49	52.4	9	53	0					
SHILLONG	57.98	82.4	9	56	-1					
RESOLUTE	58.05	344.0	9	55	-2	17	59	2		
CHITTAGONG	59.74	85.5	10	11	2					
HALIFAX	61.14	305.5	10	20A	2					
LANCHOW	61.16	65.8	10	21	2					
TANANARIVE	63.36	154.3	10	32A	-1				11 0	
SEVEN FALLS	64.17	310.8	10	37	-2					
SHAWINIGAN	65.60	311.1	10	46	-2					
KUNMING	66.36	76.6	10	51	-2					
BREBEUF	66.68	310.5	10	54A	-1					
WESTON	67.08	306.7	10	57A	0					
PEKING	67.25	56.3	10	59	1					
OTTAWA	67.94	311.4	11	3A	0					
BERMUDA	68.43	294.6				20	14	7		
KIMBERLEY	69.02	178.7	11	9A	0					
PALISADES	69.45	306.7	11	12	0	20	22	3	13 34	PP
CHANGCHUN	70.53	48.7	11	18	-1					
MAGADAN	71.20	25.3	11	22	-1					
COLLEGE	74.63	356.1	11	41	-2					
VLADIVOSTOK	74.67	46.0	11	41	-2	21	11	-8		
MEDAN	76.54	96.9	11	51A	-3	21	44	4		
COLUMBIA	78.24	304.7	12	3	0					
PETROPAVLOVK	78.96	25.6	12	1	-6					
ABUYAMA	82.39	50.2	12	26A	1					
MATUSIRO	82.72	47.4	12	26A	-1				13 59	
RAPID CITY	82.95	324.3	12	28	0					
FAYETTEVILLE	84.54	313.8	12	37K	1					
BOZEMAN	84.91	329.8	12	38	0					
BUTTE	85.19	330.9	12	40	1					
SALT LAKE C.	89.34	327.6	13	2	2					
EUREKA	92.08	329.7	13	12	0				13 42	
TUCSON TELE.	95.92	322.3	13	30	0				17 25	PP
TUCSON	96.05	322.3	13	31	0					

CHARTERS TS.	127.55	84.8	19	7	0							
SOUTH POLE	130.42	180.0	19	4	-9						21	25 PP
CAPE HALLETT	144.34	163.4	20	38A	60							
KARAPIRO	158.32	91.9	20	34	35							

JULY 17 19.H 2.M 13.S EPICENTRE 51.54-176.68 DEPTH= 0.KM

A=-0.62352 B=-0.03612 C= 0.78097 D=-0.0578 E= 0.9983
G=-0.7797 H=-0.0452 K=-0.6246 HT= -6.0

SE= 2.26

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PETROPAVLOVK	15.14	285.7	3	36	-1							
COLLEGE	19.99	37.1	4	32	-5	8	25	8				
SITKA	24.47	60.7	5	22	0							
UGLEGORSK	26.21	281.0	5	41	3							
Y.-SAKHLINSK	26.64	276.2	5	42	0							
YAKUTSK	30.29	311.2	6	12	-3							
TIKSI	31.15	330.1	6	23	0							
ALBERNI	32.57	73.2	6	37	2							
HORSESHOE B.	33.44	72.2	6	43	0	12	8	4				
VICTORIA	33.72	73.7	6	58A	13	12	11	3				
SEATTLE	34.78	74.5	6	59A	5							
MATUSIRO	35.11	262.6	6	55K	-2	12	26	-4			8	7 PP
VLADIVOSTOK	35.20	276.8	6	56	-2	12	32	1				
CORVALLIS	35.66	79.7	7	9	7							
BANFF	37.20	65.8	7	16	1							
ABUYAMA	37.83	262.8	7	18A	-2	13	9	-3				
SHASTA	38.33	84.5	7	24	0							
UKIAH	38.73	87.2	7	29	2							
CHANGCHUN	38.88	282.1	7	27A	-2							
MINERAL	39.03	84.4	7	31	1							
RESOLUTE	39.05	24.7	7	32A	2	13	33	3			9	7 PP
BERKELEY	40.10	88.0	7	42	3	13	41	-5				
RENO	40.61	84.2	7	45	2							
LICK	40.81	88.2	7	45	0							
BUTTE	41.40	71.4	7	51	2							
FRESNO	42.31	87.5	7	58	1							
BOZEMAN	42.48	71.0	7	59	1							
EUREKA	43.03	81.6	7	57	-6							
SALT LAKE C.	44.79	77.4	8	18	1							
PASADENA	45.02	89.1	8	7	-12	14	52	-6			10	12 PP
BOULDER CITY	45.91	84.7	8	25	-1							
IRKUTSK	46.42	303.6	8	29	-1							
PEKING	46.64	283.3	8	31A	-1	15	23	2				
ULAN-BATOR	47.42	297.4	8	38	0							
RAPID CITY	47.98	68.4	8	43	1	15	47	7				
ZO-SE	49.32	270.6	8	52	-1							
NANKING	50.16	273.3	9	0	1							
TUCSON	50.86	85.5	9	4	0						9	36
TUCSON TELE.	50.87	85.3	9	3	-2							
LANCHOW	56.62	287.5	9	49A	2	17	42	4				
FAYETTEVILLE	58.39	70.5	9	57	-2							
APATITY	59.10	347.0	10	4	0	18	10	-1				
SEMIPALATNSK	59.35	313.6	10	5	-1							
CHENGTU	60.25	282.8	10	12	0							
KIRUNA	60.27	352.6	10	13	1						10	56 PCP
OTTAWA	61.93	51.6	10	22	-2							
SVERDLOVSK	62.16	328.5	10	26	1							
SHAWINIGAN	62.52	49.0	10	26	-2							
BREBEUF	62.88	50.3	10	29	-1							
SEVEN FALLS	63.00	47.5	10	30	-1							
PENNSYLVANIA	64.17	56.5	10	42	3	19	15	0				
SKALSTUGAN	65.01	355.6	10	46	2						11	15 PCP
KUNMING	65.10	279.4	10	44	-1							
WASHINGTON	65.98	57.4	10	53	3							
PALISADES	66.05	53.9	10	50	-1	19	33	-5			13	24 PP
WESTON	66.31	51.3	10	51A	-1							
PULKOVO	66.92	345.5	10	52	-4							
CHAPEL HILL	67.12	60.8	10	58	1						11	29
COLUMBIA	67.45	63.5	10	59	-1							
FRUNSE	67.54	311.1	11	0	0							
HALIFAX	68.17	45.0				19	59	-5				
PORT MORESBY	68.23	218.8	11	6	2	20	2	-3			24	55 SS

UPPSALA	68.37	352.3	11	4	-1					
LHASA	68.74	291.0	11	10A	2					
MOSCOW	69.38	340.1	11	10	-2	20	17	-1		
NAMANGAN	70.38	311.7	11	18	0					
SHILLONG	71.28	287.6	11	18K	-5					
DURHAM	73.98	2.9				21	7	-4		
WARSAW	75.53	348.9	11	54	6	21	49	21		
WARSAK DAM	75.98	307.3	11	43	-7					
LAHORE	76.52	303.9	11	53	0					
DE BILT	76.73	358.8	11	53	-2					
HALLE	77.08	354.5	11	56	-1					
BERMUDA	77.40	53.5	12	3	5	21	47	-2		
JENA	77.67	354.7	11	59	-1					
CHARTERS TS.	78.28	215.4	11	59K	-4					
MAKHACH-KALA	78.37	328.5	12	3	-1	23	9	70		
PRUHONICE	78.41	352.6	12	17	13					
IASI	79.46	343.4	12	10	0					
PARIS	80.03	0.6	12	14	1	22	17	0	12	19 PCP
SOTCHI	80.14	334.0	12	15	2					
STUTTGART	79.94	356.1	12	12	-1	23	5	49	27	59 SS
STRASBOURG	80.19	357.0	12	13	-1	22	20	2	17	11 PPP
SIMFEROPOL	80.27	338.3	12	14	0	22	19	0		
TIFLIS	80.36	329.8	12	15	0	22	24	4		
QUETTA	81.35	308.3	12	21A	1	22	35	5	22	52 SCS
BUCHAREST	82.41	343.7	12	25	0					
TRIESTE	82.78	352.6	12	28	1	23	1	16		
BELGRADE	82.89	347.8	12	28A	0					
CLERMONT-FD.	83.07	0.1	12	32	3					
FLORENCE X.	84.81	354.2	12	38	1	23	1	-4		
ROME	86.60	353.2				23	26	3	20	20
SAN JUAN	87.91	62.8	12	33	-20				12	57
KSARA	90.32	333.4	13	6	2				16	41 PP
GRANADA	91.45	5.5				24	22	15	16	52 PP
LWIRO	126.43	327.7							21	3
BYRD STATION	135.23	168.0	19	19	-3					
SOUTH POLE	141.35	180.0	19	22	-11				23	6 SKP
WINDHOEK	149.17	334.5	19	53	7					
PIETERMZBURG	150.25	307.0	20	1	13					
KIMBERLEY	152.14	316.6	19	58	7					

JULY 17 19.H 29.M 36.S EPICENTRE 51.40-176.74 DEPTH= 0.KM

A=-0.62542 B=-0.03558 C= 0.77948 D=-0.0568 E= 0.9984
G=-0.7782 H=-0.0443 K=-0.6264 HT= -5.9

SE= 1.70

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PETROPAVLOVK	15.15	286.2	3	38	1							
MAGADAN	19.95	306.7	4	37	1							
COLLEGE	20.12	36.9	4	38	0							
SITKA	24.57	60.4	5	23	1							
HORSESHOE B.	33.52	72.0	6	44	1						12	11
VICTORIA	33.80	73.5	6	46A	0							
MATUSIRO	35.05	262.8	6	55	-1						9	27 PCP
VLADIVOSTOK	35.18	277.0	6	57	0							
ABUYAMA	37.78	263.0	7	19A	0	13	11	0				
SHASTA	38.38	84.3	7	25	1							
UKIAH	38.78	87.0	7	29	1							
CHANGCHUN	38.87	282.2	7	27	-2							
MINERAL	39.08	84.2	7	31	1							
RESOLUTE	39.19	24.6									9	39 PCP
BERKELEY	40.14	87.8	7	37	-2							
RENO	40.67	84.0	7	55	12							
LICK	40.85	88.0	7	45	0							
BUTTE	41.48	71.3	7	51	1							
FRESNO	42.36	87.3	7	58	1							
BOZEMAN	42.56	70.9	7	59	0							
EUREKA	43.09	81.4	8	4	1							
PASADENA	45.06	88.9	8	18	-1						8	43
BOULDER CITY	45.96	84.5	8	26	0						8	52
PEKING	46.63	283.4	8	32	0							
RAPID CITY	48.07	68.3	8	43	0							
BOULDER	49.27	73.8	8	53	1							
TRUK	50.89	221.8	9	6	1							

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M S
TUCSON	50.91	85.3	9	4	-1						
TUCSON TELE.	50.92	85.2	9	4	-1						
LANCHOW	56.63	287.5	9	49	2						
FAYETTEVILLE	58.47	70.4	9	58	-2						
CHENGTU	60.25	282.8	10	12	0						
KIRUNA	60.40	352.6	10	12	-1						
OTTAWA	62.05	51.5	10	23	-1						
SVERDLOVSK	62.26	328.5	10	23	-3						
SHAWINIGAN	62.63	48.9	10	26K	-2						
BREBEUF	62.99	50.2	10	29	-2						
KUNMING	65.09	279.4	10	44	0						
SKALSTUGAN	65.14	355.6									11 15 PCP
PALISADES	66.16	53.8	10	52	1						
WESTON	66.42	51.2	10	52K	-1						
CHAPEL HILL	67.22	60.7	10	56	-2						
COLUMBIA	67.54	63.4	10	59	-1						
FRUNSE	67.60	311.1	11	0	0						
UPPSALA	68.50	352.3	11	5A	-1						11 29 PCP
LHASA	68.75	291.0	11	9A	1						
NAMANGAN	70.44	311.7	11	19	1						
SHILLONG	71.28	287.6	11	24A	1						
ARERDFEN	71.70	3.1									13 59
CHATRA	73.11	291.8	11	39	5						
HALLE	77.21	354.4	11	57	0						
KEW	77.46	2.3	11	59	0						
JENA	77.80	354.6	12	0	-1						12 30
CHARTERS TS.	78.15	215.3	12	0	-2						
MAKHACH-KALA	78.46	328.5	12	2	-2						
PRUHONICE	78.54	352.6	12	14	9						12 46
QUETTA	81.40	308.3	12	20A	0	22	28	-3			
SAN JUAN	88.01	62.8	12	54	1						
KSARA	90.42	333.3	13	5	1						18 34 PPP
SOUTH POLE	141.21	180.0	19	24	-8						23 9 SKP
PIETERMZBURG	150.31	306.7	19	54	6						
KIMBERLEY	152.21	316.3	19	47	-4						

JULY 17 20.H 59.M 24.S. EPICENTRE 51.45-176.69 DEPTH= 0.KM

A=-0.62468 B=-0.03613 C= 0.78005 D=-0.0577 E= 0.9983
G=-0.7787 H=-0.0450 K=-0.6257 HT= -5.9

SE= 2.02

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M S
PETROPAVLOVK	15.16	286.0	3	34	-1						
MAGADAN	19.94	306.6	4	33	-1						
COLLEGE	20.06	37.0	4	35	0	8	22	7			
SITKA	24.51	60.5	5	20	0						
UGLEGORSK	26.22	281.2	5	37	1						
Y.-SAKHLINSK	26.65	276.4	5	40	0	10	18	6			
YAKUTSK	30.34	311.3	6	14	1						
TIKSI	31.22	330.2	6	22	1						
SENDAI	32.35	262.8	6	30	-1	11	44	1			
ALBERNI	32.60	73.0	6	34	1						
KIPAPA	33.33	147.1	6	35	-4						
HONOLULU	33.41	147.3	6	37	-3						
HORSESHOE B.	33.47	72.1	6	40A	0						9 20 PCP
VICTORIA	33.75	73.6	6	44	1						
SEATTLE	34.81	74.4	7	4K	12						
MATUSIRO	35.09	262.8	6	53A	-1	12	26	0			8 4 PP
CORVALLIS	35.68	79.6	7	2	3						
ABUYAMA	37.82	263.0	7	19A	2	13	9	1			
SHASTA	38.34	84.4	7	22A	0						
UKIAH	38.74	87.1	7	37	12						
MINERAL	39.04	84.3	7	39	11						
RESOLUTE	39.13	24.6	7	30K	2	13	34	7			9 6 PP
BERKELEY	40.10	87.9	7	37	1	13	45	3			10 2
RENO	40.63	84.1	7	43	2						
LICK	40.82	88.1	7	43K	1						8 4
BUTTE	41.43	71.4	8	1	14						
FRESNO	42.32	87.4	7	56	1						
BOZEMAN	42.51	71.0	7	57	1						
NAGASAKI	42.78	265.4	7	58A	0	14	13	-9			
EUREKA	43.05	81.5	8	1	0						
SALT LAKE C.	44.81	77.3	8	16	1						8 53

PASADENA	45.02	89.0	8	16	-1	14	53	-1	18	18 SS
BOULDER CITY	45.92	84.6	8	24	0					
PEKING	46.66	283.4	8	29A	0	15	20	3	18	37
NORD	46.76	4.0	8	29	-1					
ULAN-BATOR	47.46	297.5	8	36	0					
RAPID CITY	48.02	68.4	8	39	-1	15	37	0	18	35 SCS
BOULDER	49.23	73.9	8	51	1					
ZO-SE	49.32	270.7	8	50A	0	16	0	5		
NANKING	50.16	273.4	8	57	0					
TUCSON	50.87	85.4	9	2	0					
LUBBOCK	55.53	77.8	9	36	-1					
LANCHOW	56.65	287.5	9	46A	1	17	38	3		
FAYETTEVILLE	58.42	70.5	9	56	-1					
APATITY	59.18	347.0	10	3	1	18	10	2	10	50 PCP
SEMIPALATNSK	59.41	313.6	10	1	-3					
SODANKYLA	60.20	349.8	10	8	-2					
CHENGTU	60.27	282.8	10	9A	-1					
KIRUNA	60.35	352.6	10	9	-2	18	27	4	10	53 PCP
RABAUL	61.49	215.9							17	22
CLEVELAND	61.81	58.1	10	21	1	18	40	-1		
OTTAWA	61.99	51.6	10	21	-1	18	44	0		
SVERDLOVSK	62.23	328.5	10	24	1	18	49	2		
BREBEUF	62.93	50.3	10	24	-4					
SEVEN FALLS	63.06	47.5	10	26	-3					
SHAWNIGAN	62.58	49.0	10	24	-2					
PENNSYLVANIA	64.22	56.4	10	35	-1	19	15	3		
SKALSTUGAN	65.09	355.6	10	40	-2					
KUNMING	65.11	279.4	10	42A	0	19	25	2		
WASHINGTON	66.03	57.3	10	48	0					
PALISADES	66.10	53.8	10	49	1	19	36	1	11	14 PCP
WESTON	66.36	51.3	10	49A	-1					
PULKOVO	67.00	345.5	10	56	2					
CHAPEL HILL	67.17	60.8	11	12	17	19	50	2		
TACUBAYA	67.33	87.1	10	49	-7				13	21 PP
COLUMBIA	67.49	63.5	10	57	0					
FRUNSE	67.59	311.2	10	58	0					
PORT MORESBY	68.17	218.8	11	5	4	19	12	-48	11 26	20 9
HALIFAX	68.24	45.0	11	2K	0					
UPPSALA	68.45	352.3	11	2	-1					
TOCKLAI	68.69	286.4	11	32	27					
LHASA	68.76	291.0	11	8A	3	20	12	5		
SUVA	69.43	185.0				20	19	4		11 57
MOSCOW	69.46	340.1	11	7	-2					
NAMANGAN	70.44	311.7	11	16	1					
SHILLONG	71.30	287.6	11	22	1	20	35	-1		
CHATRA	73.12	291.8	11	37	6					
CHITTAGONG	73.74	285.4	11	32	-3					14 20 PP
DURHAM	74.07	2.9				21	7	-1		
RATHFARNHAM	75.31	5.9	11	44	0					
DEHRA DUN	75.56	300.5	11	47	1					
WARSAW	75.62	348.9	11	45	-1	21	47	22		15 47
WARSAK DAM	76.03	307.3	11	47A	-1					
DE BILT	76.81	358.8	11	48	-5	21	36	-2		
MUNSTER	76.89	357.3	11	53	0					
HALLE	77.16	354.5	11	55	0	21	43	1		12 10 PCP
COLLMBERG	77.29	353.8	11	54	-1					
KEW	77.41	2.3	11	53	-3	21	46	1		22 17 PS
BERMUDA	77.45	53.5	11	56	0	21	46	1		
LWOW	77.56	346.4	11	57	0					
JENA	77.75	354.7	11	57	-1					13 59
UCCLE	78.12	359.3	12	2	2					
PLAUEN	78.15	354.2	11	58	-2					
CHARTERS TS.	78.21	215.4	11	58A	-2					
MAKHACH-KALA	78.44	328.5	12	1	-1					
PRUHONICE	78.49	352.6	12	14	12					
IASI	79.54	343.4	12	8	0					
STUTTGART	80.03	356.0	12	10	0	22	30	18	28	0 SS
BRATISLAVA	80.06	350.7	12	11	1					
PARIS	80.11	0.6	12	10	-1	22	17	4	15	16 PP
SOTCHI	80.22	334.0	12	11	0					
STRASBOURG	80.27	357.0	12	11	-1	22	18	3	22	32 SCS
TUBINGEN	80.27	356.1	12	11	-1					
SIMFEROPOL	80.35	338.4	12	12	0	22	18	2		
TIFLIS	80.43	329.8	12	13	1	22	19	2		
EBINGEN	80.63	356.2	12	13	0					
QUETTA	81.40	308.3	12	18A	1	22	24	-3		
CAMPULUNG	81.85	344.7	12	24	4					
BUCHAREST	82.49	343.7	12	23A	0	22	46	8		
TRIESTE	82.86	352.6	12	23	-2	22	44	2		

			P	O-C	S	O-C	*PP	SUPP.
	DELTA DEG.	AZ. DEG.	M S	S	M S	S	M S	M S
BELGRADE	82.97	347.8	12 27A	1				
CLERMONT-FD.	83.16	0.1	12 29	2	22 51	6		
MEDAN	83.87	268.0	12 30A	0				
SOFIA	84.63	345.3	12 35	1				25 6
FLORENCE X.	84.90	354.2	12 36	1	23 0	-2		
ROME	86.68	353.2	12 50	6	23 14	-5		29 29 SS
SAN JUAN	87.95	62.8	12 51	1				
ATHENS	89.17	344.0	12 55K	-1				
KARAPIRO	89.26	186.1	12 58	1				
KSARA	90.39	333.4	13 3	1	22 57	-57		16 37 PP
GRANADA	91.53	5.5			24 11	7		
JERUSALEM	92.50	333.2	13 11A	-1				
HELWAN	95.35	335.8	13 25	0	24 25	-12		
TAMANRASSET	106.07	357.9			25 12	26		18 29 PP
CAPE HALLETT	123.79	184.8	18 57	0				
SCOTT BASE	129.44	184.5	19 8	0				24 28 PKS
BYRD STATION	135.15	168.0	19 16	-3				
SOUTH POLE	141.27	180.0	19 22	-8				23 0 SKP
WINDHOEK	149.25	334.5	19 49	6				
PIETERMZBURG	150.30	306.8	19 52A	7				
KIMBERLEY	152.20	316.4	19 55K	7				
GRAHAMSTOWN	155.20	308.0	20 19K	27				

JULY 18 0.H 39.M 21.S EPICENTRE 51.45-176.60 DEPTH= 9.KM

A=-0.62471 B=-0.03708 C= 0.77998 D=-0.0593 E= 0.9982
G=-0.7786 H=-0.0462 K=-0.6258 HT= -5.9

SE= 2.83

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PETROPAVLOVK	15.22	286.1	3 36	1				
MAGADAN	19.99	306.6	4 34	0				
COLLEGE	20.03	36.9	4 33	-1	8 23	9		
SITKA	24.47	60.5	5 19	0				
UGLEGORSK	26.28	281.3	5 38	2				
YAKUTSK	30.39	311.3	6 4	-9				
TIKSI	31.25	330.2	6 21	0				
SENDAI	32.41	262.9	6 31K	0				7 57
KIPAPA	33.29	147.3	6 30	-8				7 3
HORSESHOE B.	33.42	72.1	6 40A	1	11 3	-56		
VICTORIA	33.70	73.6	6 42	0	12 49	46		
MATUSIRO	35.14	262.8	6 53A	-1	12 27	2		
VLADIVOSTOK	35.26	277.0	6 55	0	12 30	3		
CORVALLIS	35.63	79.6	7 3	5				
ABUYAMA	37.87	263.0	7 17K	0	13 8	1		
SHASTA	38.29	84.5	7 24	3				
MINERAL	38.98	84.4	7 42	15				
RESOLUTE	39.11	24.6	7 26	-2	13 19	-7		9 6 PP
HUNGRY HORSE	39.34	69.1	7 31	1	13 50	20		
BERKELEY	40.05	88.0	7 46	11	13 43	3		17 21
RENO	40.57	84.1	7 44	4				
LICK	40.76	88.2	7 43	2				
BUTTE	41.38	71.4						9 44 PCP
SASKATOON	41.73	60.5	8 19	30				
FRESNO	42.27	87.4	7 54	0				8 42
BOZEMAN	42.46	71.0	7 56	1				8 24
NAGASAKI	42.83	265.4	7 59A	1	14 23	2		
EUREKA	42.99	81.5	8 0	0				
SALT LAKE C.	44.76	77.3	8 19	5				10 19 PP
PASADENA	44.97	89.1	8 16	0	14 56	4		18 27 SS
BOULDER CITY	45.87	84.7	8 24	1				
IRKUTSK	46.51	303.7	8 24	-4				
NORD	46.76	4.0						14 23 SCP
ULAN-BATOR	47.51	297.5	8 36	0				
RAPID CITY	47.97	68.4	8 38	-1	16 5	30		
GUAM	49.00	233.6	8 44	-3				
BOULDER	49.18	74.0	8 49	0				
ZO-SE	49.37	270.7	8 50A	0	15 58	3		
NANKING	50.22	273.5	8 56A	-1	16 11	5		
TUCSON	50.82	85.5	9 2	1				
TUCSON TELE.	50.82	85.3	9 2	1				9 33
LUBBOCK	55.47	77.9	9 45	9				
CHIHUAHUA	56.27	85.2						21 39
LANCHOW	56.70	287.6	9 45A	1	17 38	4		

FAYETTEVILLE	58.38	70.5	9	55	-1	17	57	1				
APATITY	59.20	347.1	10	2	0	18	9	2			21	59 SS
SEMIPALATNSK	59.45	313.6	10	30	26							
HONG KONG	60.01	268.7	9	58	-10	18	29	12				
SODANKYLA	60.22	349.9	10	9	0							
CHENGTU	60.32	282.9	10	10	0	18	28	7				
KIRUNA	60.36	352.7	10	9	-1							
BAGUIO CITY	60.43	259.0	10	36	26							
CLEVELAND	61.77	58.2	10	21	2	18	49	9				
OTTAWA	61.95	51.6	10	19	-2							
SVERDLOVSK	62.27	328.5	10	23	0	18	52	6				
SHAWINIGAN	62.54	49.0	10	25	0							
BREBEUF	62.90	50.3	10	25K	-2							
SEVEN FALLS	63.03	47.5	10	26	-2	18	59	3			11	6 PCP
PENNSYLVANIA	64.18	56.5	10	35	0	19	13	3				
SKALSTUGAN	65.10	355.6	10	42	1							
KUNMING	65.17	279.5	10	41A	-1	19	26	4				
WASHINGTON	65.99	57.4	10	45	-2						8	17
PALISADES	66.06	53.9	10	47	-1	19	39	6			11	17 PCP
WESTON	66.32	51.3	10	49K	0							
PULKOVO	67.02	345.6	10	32	-22							
TACUBAYA	67.27	87.1	11	41	46							
COLUMBIA	67.44	63.6	10	57	1							
FRUNSE	67.64	311.2	10	58	0							
HALIFAX	68.20	45.1	10	43	-18						19	57 SS
UPPSALA	68.46	352.3	11	1	-2						11	26 PCP
TOCKLAI	68.74	286.4	11	10	6							
LHASA	68.82	291.1	11	7	2	20	12	6				
SUVA	69.43	185.0	12	16	67						18	43
MOSCOW	69.48	340.1	11	7	-2	20	14	0				
NAMANGAN	70.48	311.7	11	9	-6							
SHILLONG	71.35	287.7	11	21A	1	20	38	2			14	1 PP
ABERDEEN	71.65	3.2									17	24
CHATRA	73.17	291.9	11	36	5							
DURHAM	74.07	3.0	12	4K	28	21	14	7			22	2 SKS
RATHFARNHAM	75.31	6.0	11	40	-3				12	13	13	14
DEHRA DUN	75.61	300.6									13	48
WARSAW	75.63	348.9	11	45	0						14	44 PP
WARSAK DAM	76.07	307.4	11	47	-1							
BOKARO	76.26	290.9	11	51	2	22	9	38				
DE BILT	76.82	358.9	12	22	30	22	9	32				
HALLE	77.17	354.5	12	2	8	22	7	26			12	38 PCP
COLLMBERG	77.31	353.8	11	54	-1				12	22		
BERMUDA	77.41	53.5	11	59	4	21	49	5			40	19
KEW	77.41	2.4	12	14	19						27	25 SS
LWOW	77.58	346.5	12	26	30	23	16	91				
JENA	77.76	354.7	11	57	0				12	25	15	10 PP
KRAKOW	77.91	349.2				22	23	34			22	38 PS
BENSBERG	77.92	357.6	12	26	28							
RACIBORZ	78.07	350.3									12	15 PCP
UCCLE	78.13	359.4	12	28	29							
PLAUEN	78.16	354.3	12	27	28							
CHARTERS TS.	78.24	215.4	11	57	-3							
SONNEBERG	78.33	354.9	12	33	33							
MAKHACH-KALA	78.47	328.6	11	59	-2							
PRUHONICE	78.51	352.7	12	3	2	21	59	4	12	27	15	15 PP
IASI	79.56	343.5	12	9	2				12	37		
KARLSRUHE	79.83	356.6	12	9	0	22	13	4				
STUTTGART	80.04	356.1	12	2	-8	22	27	16			15	32 PP
BRATISLAVA	80.07	350.7	12	38	28							
PARIS	80.12	0.6	12	11	1	22	27	15			12	19 PCP
SOTCHI	80.25	334.1	12	38	27							
STRASBOURG	80.28	357.1	12	15	4	22	7	-7			15	25 PP
TIFLIS	80.46	329.9	12	12	0	22	21	5				
QUETTA	81.44	308.4	12	18A	1	22	31	5	12	37	15	24 PP
CAMPULUNG	81.87	344.8	12	50	31							
NEUCHATEL	81.89	357.5	12	44	25							
CHUR	81.94	355.8	12	46	26							
GORIS	81.97	327.8	12	21	1							
BUCHAREST	82.51	343.8	12	23	0	22	45	8	12	50		
TRIESTE	82.87	352.7	12	22	-2	22	39	-2			27	49 SS
BELGRADE	82.99	347.9	12	25K	0	22	48	6			12	55 PCP
CLERMONT-FD.	83.16	0.2	12	56	30	23	20	36				
PAVIA	83.63	355.9	12	31	3	23	20	32				
MEDAN	83.92	268.1	12	27	-3	22	39	-12				
SOFIA	84.65	345.4	12	34	1	23	11	13	13	3	17	49
FLORENCE X.	84.91	354.3	12	34	-1	22	59	-2			23	47 PS
MONACO	85.14	357.1	13	5	29							

SKOPJE	85.64	346.6	13	8K	30	23	42	34		13	39 PCP
ROME	86.70	353.2	12	46	2	23	24	6	13 14	24	32 PS
BOMBAY	87.54	297.5	13	17	29	24	14	48		23	42 SKS
SAN JUAN	87.91	62.9	12	51	2						
TORTOSA	88.08	2.2				23	37	7			
ATHENS	89.19	344.1	12	49	-7						
KARAPIRO	89.26	186.2	13	4	8				13 41		
KSARA	90.42	333.4	13	4	3	24	0	7		16	39 PP
GRANADA	91.53	5.6	13	31A	25	24	27	24		30	48 SS
MALAGA	91.94	6.3	13	6K	-2					16	46 PP
JERUSALEM	92.53	333.3	13	10	-1					13	39 PP
HELWAN	95.38	335.9	13	25	1	24	41	5			
TAMANRASSET	106.08	358.0	14	35	777	24	54	0		18	42 PP
DUMONT	122.30	198.9								19	37
CAPE HALLETT	123.79	184.8	19	1	4						
RUMANGABO	125.49	327.5	19	20	20						
LWIRO	126.53	327.8								19	20
ASTRIDA	126.54	326.5	19	20	18					21	28 PP
SCOTT BASE	129.44	184.5	19	19	11					22	56 PKS
TANANARIVE	132.57	296.5								20	4
BYRD STATION	135.13	168.0	19	18	0					22	28 PP
MIRNY	135.77	215.0								20	10
SOUTH POLE	141.26	180.0	19	23	-6					23	3 SKP
WINDHOEK	149.27	334.6	19	50	7						
PIETERMZBURG	150.35	307.0	19	51	6						
KIMBERLEY	152.24	316.6	19	55	8						
GRAHAMSTOWN	155.25	308.1	20	18K	27						

JULY 18 1.H 47.M 27.S EPICENTRE -3.67 -79.50 DEPTH= 89.KM

DEPTH OF FOCUS= 0.009R

A= 0.18190 B=-0.98126 C=-0.06351 D=-0.9832 E=-0.1823
G=-0.0116 H= 0.0624 K=-0.9980 HT= 7.1

SE= 1.95

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
HUANCAYO	9.30	153.9	2	10	-3	3	29	-27			4	35	
CHINCHINA	9.41	24.3	2	12	-2								
BOGOTA	9.86	33.4	2	18	-2	3	7	-63					
BALBOA HTS.	12.54	359.7	3	0	4								
LA PAZ	16.95	139.6	3	54K	2	7	11	15			4	10	PP
ST. VINCENT	24.64	46.9	5	12	-1	9	36	11					
SAN JUAN	25.57	30.6	5	23	1						8	19	
FORT FRANCE	25.78	44.5	5	25	1						9	47	
BARBADOS	25.86	49.5	5	26	2								
ST. CLAUDE	26.32	41.5	5	30	1	10	14	21					
TACUBAYA	30.01	320.5	6	9	7						7	48	*SPP
COLUMBIA	37.49	357.9	7	5	-1								
FAYETTEVILLE	41.87	342.1	7	43	1								
PALISADES	44.75	6.0	8	6	0						9	46	PP
TUCSON TELE.	46.48	322.8	8	20	1				8	40			
TUCSON	46.48	322.6	8	20	1				8	40			
OTTAWA	48.96	3.5	8	37K	-2						10	1	PCP
BREBEUF	49.23	5.5	8	40	-1				9	0			
BOULDER	49.52	333.9	8	43	0								
SHAWINIGAN	50.35	6.0	8	48K	-1						10	6	PCP
SEVEN FALLS	51.14	7.6	8	55K	0								
BOULDER CITY	51.45	323.1	8	58	0				9	18			
PASADENA	52.36	319.1	9	4	-1								
EUREKA	54.49	325.6	9	21	1				9	49			
FRESNO	55.02	320.7	9	22	-2								
LICK	56.53	320.1	9	35K	0								
BOZEMAN	56.56	333.9	9	34	-1								
RENO	56.76	323.3	9	37K	0								
BERKELEY	57.25	320.3	9	39K	-1						10	33	
BUTTE	57.51	333.2	9	41	-1						10	34	PCP
MINERAL	58.34	323.0	9	47K	-1								
UKIAH	58.60	321.0	9	49	0								
SHASTA	59.03	322.9	9	50K	-2								
HUNGRY HORSE	59.93	334.1	9	58	-1						10	43	PCP
CORVALLIS	61.95	325.9	10	11	-1								
LISBON	77.12	49.1	11	45K	0				12	7			
HALLEY BAY	77.70	168.1	11	47	-1						14	41	PP
SERRA PILAR	78.17	46.8	11	33	-18				12	5	11	50	PCP

BYRD STATION	78.71	186.6	11 55	1			12 16			
RESOLUTE	78.78	355.9	11 53K	-1						
MALAGA	80.30	52.0	12 2K	0			12 44			
GRANADA	81.03	51.6	12 11K	5	22 43	37				
RATHFARNHAM	82.98	35.4	12 16K	0			12 38			
RELIZANE	84.07	53.7	12 22	0						
COLLEGE	84.26	336.5	12 22	-1						
DURHAM	86.03	34.6	12 31A	0	22 58	2	13 6			
KEW	86.12	38.0	12 32K	0			12 54			
ALGIERS UNI.	86.21	52.9			22 51	-7		15 57	PP	
SOUTH POLE	86.36	180.0	12 33	0			12 53			
TAMANRASSET	86.82	67.1	12 37	2			13 5	16 10	PP	
CLERMONT-FD.	87.46	44.0	12 40	2						
PARIS	87.46	40.9	12 27	-11			12 51	13 2	*SP	
NORD	89.76	7.5	12 49K	0						
STRASBOURG	90.91	41.6	12 44	-11				14 11		
SCOTT BASE	91.32	191.2	12 57	1						
STUTTGART	91.87	41.4	12 59	0						
CAPE HALLETT	92.58	196.7	13 3	1						
HALLE	93.75	38.8	13 9	2			13 48			
PLAUEN	93.85	39.8	13 6	-2						
SKALSTUGAN	94.05	26.6	13 9	0						
PRUHONICE	95.39	40.3	13 15	0						
KIRUNA	97.13	22.1	13 23	0						
LWIRO	108.10	93.5						14 3		
RUMANGABO	108.70	92.6						15 0		
CHARTERS TS.	129.28	240.5	18 59	1			19 21			
MATUSIRO	132.33	318.2	19 4	1				19 18	PKP2	

JULY 18 21.H 38.M 22.S EPICENTRE 25.16 123.57 DEPTH= 158.KM

DEPTH OF FOCUS= 0.020R

A=-0.50109 B= 0.75510 C= 0.42277 D= 0.8332 E= 0.5529
G=-0.2338 H= 0.3523 K=-0.9062 HT= 3.3

SE= 2.81

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ILAN	1.70	257.2	0 33	1	0 58	0		
TAIPEI	1.86	266.5	0 34	0	1 1	0		
HWALIEN	2.13	236.7			0 27	-39		
HSINCHU	2.39	261.9			0 3	-69		
TAICHUNG	2.81	249.7	0 47	1	1 21	0		
HSINKONG	2.87	224.9	0 42	-4	1 16	-6		
YUSHAN	2.92	235.6	0 48	1	1 25	2		
ALISHAN	3.01	237.7	0 49	1	1 26	1		
TAWU	3.71	221.7	0 56	-1	1 27	-14		
TAINAN	3.74	235.6	1 0	2	1 15	-27		
KAOHSIUNG	3.94	230.7	2 2	62				
HENGCHUN	4.07	220.0	0 59	-3	1 47	-3		
ZO-SE	6.28	340.9	1 29A	-2	2 38	-4		
NANKING	8.04	329.7	1 53K	-1	3 26	2		
HONG KONG	9.07	253.6	2 6	-2	3 47	-1		
BAGUIO CITY	9.13	198.4	2 8	-1				
CANTON	9.62	259.7	2 15	0	4 0	-2		
MANILA	10.80	193.5	2 29	-2	4 25	-4		
ABUYAMA	14.19	44.2	3 8K	-6	4 56	-52		
PEKING	16.08	339.1	3 38K	0	6 39	8		
MATUSIRO	16.92	44.4	3 42	-6	6 50	-5		11 47
CHANGCHUN	18.68	3.9	4 5K	-3	7 30	3		
KUNMING	18.92	274.1	4 11K	1	7 40	8		
VLADIVOSTOK	19.18	18.8	4 15	2			4 45	
LANCHOW	20.14	307.4	4 23K	0	7 51	-4	4 53	
KOROR	20.57	147.7	4 27	0	8 10	7		
GUAM	23.09	116.3	4 50	-2			5 16	6 58 PP
ULAN-BATOR	26.26	334.1	5 21	-1				
Y.-SAKHLINSK	26.56	30.2	5 54	29	10 52	67		
UGLEGORSK	27.92	26.5	6 6	29	11 12	65		
SHILLONG	28.61	277.7	5 43K	0				
CHITTAGONG	29.16	271.2	5 53	5	10 51	24		6 51 PP
LHASA	29.17	286.2	5 59	11				
MEDAN	32.14	232.1	6 24	10	11 21	7		
TRUK	32.22	118.2	6 15	0				
YAKUTSK	37.08	4.8	7 24	28				

PETROPAVLOVK	38.35	33.9	7	26	19								
PORT MORESBY	41.33	143.3	7	32	1	13	37	4	8	1	14	25	*SS
SEMIPALATNSK	41.68	318.7	7	33	-1								
LAHORE	43.51	290.1	7	47	-2								
FRUNSE	43.63	306.5	7	48	-2								
NAMANGAN	45.61	303.5	7	6	-60								
WARSAK DAM	45.68	293.8	8	7	1								
TIKSI	46.60	2.3	8	10	-3								
OBETTA	49.97	289.2	8	39	0	15	43	7			9	59	PCP
CHARTERS TS.	50.03	151.7	8	39	-1						11	59	
ADELAIDE	61.46	165.8	10	2	0								
TIFLIS	65.64	306.3	10	28	-1								
COLLEGE	66.94	27.6	10	35	-2								
APATITY	67.08	335.4	10	35	-3	19	19	2	11	13	20	5	SCS
MOSCOW	67.36	322.3	10	38	-2								
SOTCHI	68.84	309.2	10	48	-1								
KIRUNA	71.76	337.1	11	4K	-2	20	14	2					
SIMFEROPOL	72.31	311.8	12	8	58								
KSARA	74.65	300.4	11	25	2	19	51	-53	12	4	14	16	
KISHINEV	75.10	315.1	11	23	-3								
IASI	75.84	315.6	11	29A	-1								
JERUSALEM	75.89	298.6	11	29A	-1						12	5	PCP
UPPSALA	76.15	330.0	11	30K	-2								
SKALSTUGAN	76.65	334.6	11	32	-2								
LWOW	77.01	319.1	11	35	-1								
RESOLUTE	77.35	9.8	11	39A	1	21	8	-6			26	38	SS
BUCHAREST	77.85	313.4	11	42A	1	22	25	66					
HELWAN	79.70	298.1	11	51	0	21	41	2					
GOTEBORG	79.77	329.5	11	51	0								
SOFIA	80.39	312.6	11	55	0						14	33	
COPENHAGEN	80.59	327.6				21	53	5					
BRATISLAVA	81.83	319.6	12	6	4								
ATHENS	82.15	308.2	12	2A	-2								
HALLE	83.03	324.2	12	9	1								
PLAUEN	83.45	323.2	12	8	-3								
JENA	83.53	323.8	12	12	1								
WITTEVEEN	85.00	327.1	12	18	0								
TRIESTE	85.08	318.5	12	17	-2						17	7	
TANANARIVE	85.93	247.1	12	24	1								
STUTTGART	86.01	322.8	12	22	-1	22	32	-10					
TUBINGEN	86.21	322.7	12	25	1								
EBINGEN	86.47	322.4	12	25	0								
STRASBOURG	86.89	323.2	12	28	1	23	6	16			23	50	PS
UCCLE	87.36	326.3	12	33	3	22	45	-10					
DURHAM	87.58	331.7	12	29	-2	23	2	5			22	38	SKS
FLORENCE X.	87.58	317.9	12	29A	-2	23	1	4			23	52	PS
CORVALLIS	87.63	41.1	12	28	-3								
ROME	87.83	315.8	12	32	0	23	4	5			16	4	PP
KEW	89.21	328.7				23	15	3			22	53	SKS
PARIS	89.54	325.5	12	48	8								
MONACO	89.90	319.4	12	41	-1								
SHASTA	90.35	44.0	12	44	0								
CLERMONT-FD.	91.12	322.9				23	10	-19			19	51	
BUTTE	92.79	35.4	13	30	35								
FRESNO	94.26	46.0	13	39	37								
EUREKA	95.04	42.0	13	6	1								
GRANADA	100.54	319.7	13	43K	13	24	19	-30					
TAMANRASSET	103.33	303.2	13	38	-5	24	13	-59			18	1	PP
PALISADES	112.20	14.2									28	42	PS
SOUTH POLE	115.01	180.0	18	22	0						19	24	PP
HUANCAYO	157.88	57.3	20	14	37								
LA PAZ	166.09	54.0	19	51	6								

JULY 19 6.H 30.M 26.S EPICENTRE -4.34 138.43 DEPTH= 180.KM

DEPTH OF FOCUS= 0.023R

A=-0.74597 B= 0.66172 C=-0.07516 D= 0.6636 E= 0.7481
G= 0.0562 H=-0.0499 K=-0.9972 HT= 7.1

SE= 1.93

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT MORESBY	10.01	120.6	2	19	-2	3	53	-18			4	9	SS
KOROR	12.24	341.2	2	49	-1	5	10	7	3	18	7	44	PCP
RABAUL	13.71	89.9	3	8	0								

CHARTERS TS.	17.35	154.5	3	52A	0	6	59	-1				
TRUK	17.81	48.8	3	55	-3	7	18	10				
GUAM	18.77	19.5	4	7	-1	7	35	8			8	32 PCP
MANILA	25.54	317.7	5	12	-2						6	7
BAGUIO CITY	27.14	319.9	5	27	-2	9	50	-2				
BANDUNG	30.73	263.8	6	6	6	11	6	17				
LEMBANG	30.75	264.0	5	58	-3	10	44	-5				
RIVERVIEW	31.64	159.5	6	8A	0	11	7	4				
NOUMEA	32.48	125.9	6	18K	2							
HWALIEN	32.56	330.6	6	27	11							
TAIPEI	33.50	331.4	6	24	0	11	32	0				
MELBOURNE	33.87	170.7	6	27A	0	11	34	-4	6	55	7	38 PP
PERTH	34.69	215.0	6	39	4							
YAKUSIMA	35.41	348.1	6	40	-1							
HONG KONG	35.55	319.1	6	41	-1	12	4	1				
KAGOSIMA	36.49	348.7	6	50	0						8	21
MIYAZAKI	36.67	350.0	6	54	3	13	25	65				
CANTON	36.68	319.1	6	51	0	12	23	2			7	45 *SP
NAGASAKI	37.75	348.2	7	0	0						7	36
OOITA	37.92	350.7	7	1A	-1						7	58
SAGA	38.17	349.0	7	2	-2							
OWASE	38.26	357.0	7	4	0							
TOKUSIMA	38.37	354.9	7	1	-4							
HUKUOKA	38.47	349.2	7	2	-4						9	7
SUMOTO	38.63	355.3	7	6	-1	14	1	71			8	2
OSAKA	38.88	356.2	7	10	0						7	58
ZO-SE	38.90	336.1	7	9K	-1	12	55	1	7	42	8	46 PP
TU	38.90	357.5	7	12	2							
HIROSIMA	38.91	352.1	6	59	-11	14	1	67				
KAMEYAMA	39.02	357.4	7	12	1						11	22
ABUYAMA	39.09	356.3	7	11K	0	12	54	-3				
HIKONE	39.45	357.2	7	16	2							
IBUKISAN	39.55	357.4	7	16	1							
GIHU	39.56	357.9	7	15	0	14	13	69			8	8
YOKOHAMA	39.57	1.6	7	16	1						8	10
KOHU	39.76	0.2	7	16	-1							
TOYOOKA	39.80	355.4	7	17	0							
TOKYO C.M.O.	39.83	1.7	7	20	3						7	52
KUMAGAYA	40.29	1.2	7	22	1						13	50
MATUMOTO	40.38	359.4	7	22	0	14	30	74				
KAKIOKA	40.39	2.2	7	23	1							
OIWAKE	40.46	0.2	7	26	3							
MEDAN	40.48	280.6	7	22A	-1	13	22	4				
MAEBASI	40.53	0.8	7	39	16						8	29
MITO	40.55	2.5	7	26	3							
MATUSIRO	40.68	359.7	7	22K	-2	14	11	51	8	17	9	22 PP
UTUNOMIYA	40.70	1.8	7	24	-1	14	30	69			8	19
NANKING	40.72	334.1	7	25K	0				8	0	9	0 PP
TOYAMA	40.84	358.5	7	28	2							
ONAHAMA	41.14	3.0	7	31	3							
SHIRAKAWA	41.28	2.2	7	28	-1	14	42	73			8	23
SUVA	41.45	112.6				13	39	7			8	8 *SP
WAZIMA	41.53	358.2	7	34	3							
HUKUSIMA	41.92	2.4	7	36	2							
NIIGATA	42.05	0.7	7	41	5							
YAMAGATA	42.41	2.2	7	40	2							
SENDAI	42.45	2.9	7	39	0							
ISINOMAKI	42.64	3.4	7	41	1							
MIZUSAWA	43.32	3.1	7	45	-1							
AKITA	43.87	1.9	7	50	0	15	18	71				
KUNMING	45.38	311.9	8	3K	1	14	31	2	8	39	9	54 PP
ONERAHI	45.55	138.0	8	6	2							
MORI	46.26	2.2	8	10	1						10	16
URAKAWA	46.44	4.5	8	12	1							
MURORAN	46.51	2.6	8	11	0							
OBIHIRO	47.24	4.8	8	18	1							
SAPPORO	47.26	2.9	8	16	-1							
KARAPIRO	47.55	139.7	8	21K	2				8	56		
VLADIVOSTOK	47.61	353.5	8	19	-1				8	58	9	16 *SP
PEKING	48.66	337.2	8	28K	0	15	17	2			10	19 PP
TUAI	49.10	139.7	8	32	1							
WELLINGTON	49.10	143.8	8	31	0							
ROXBURGH	49.10	151.5				15	22	1				
CHANGCHUN	49.38	347.5	8	32K	-1	15	28	3			9	26 *SP
GEBBIES PASS	49.48	147.5	8	35	1				9	8		
AFIAMALU	49.99	104.4	8	29A	-9				9	7		
Y.-SAKHLINSK	51.21	3.8	8	51	4				9	30	9	47 *SP
LANCHOW	51.62	324.1	8	50K	0	15	57	1	9	28	9	46 *SP

TOCKLAI	52.30	308.7	8	59	4							
CHITTAGONG	52.72	302.3	10	18	80	18	45	155	10	56	12 44	PP
SHILLONG	54.05	305.9	9	5K	-3	16	31	3			17 35	
LHASA	56.58	309.9	9	27K	1	17	7	5	10	5	21 4	SS
CHATRA	58.40	305.1	9	39	0	17	31	5				
ULAN-BATOR	58.93	335.8	9	43	0						18 42	*SS
PETROPAVLOVK	59.74	14.0	9	46	-2				10	26	19 22	SCS
DUMONT	62.23	179.3	10	3	-2	18	16	2				
HYDERABAD	63.00	291.9				18	25	1				
IRKUTSK	63.38	337.3	10	12K	0				10	50	11 7	*SP
MAGADAN	64.44	6.9	10	18A	-1						19 58	SCS
WILKES	64.77	192.1	10	20	-2	18	47	1				
DEHRA DUN	67.14	305.3	10	39	2	19	15	0			13 2	PP
HONOLULU	67.16	64.9	10	37	0	19	22	7	11	17	11 35	*SP
KIPAPA	67.26	64.8	10	36	-1				11	14	11 34	*SP
BOMBAY	68.55	292.1				19	32	0				
MIRNY	69.58	197.7	10	51	0				11	28	20 45	SCS
LAHORE	70.56	305.5	10	56K	-1				11	33		
CAPE HALLETT	70.70	170.1	10	59A	1	20	49	53	12	54	14 15	PP
WARSAK DAM	73.53	307.2	11	15K	0							
SEMIPALATNSK	73.81	325.5	11	17	0							
FRUNSE	74.21	316.7	11	18K	-1	20	39	3			12 15	*SP
SCOTT BASE	74.97	174.0	11	23	0						12 2	PCP
TIKSI	76.08	356.9	11	27	-2	20	56	-1			14 16	PP
QUETTA	76.31	302.3	11	31K	0	21	2	3	12	11	14 24	PP
TASHKENT	77.41	313.8	11	35	-2	21	14	3	12	12	21 38	SKS
ASHKABAD	84.85	308.6	12	18K	2	22	28	1	12	57	23 34	PS
SOUTH POLE	85.69	180.0	12	20	0	22	29	-6	12	59	15 40	PP
SVERDLOVSK	86.96	327.4	12	26	0	22	50	3	13	6		
COLLEGE	87.07	24.2	12	24	-2	22	37	-11	13	6	15 51	PP
BYRD STATION	87.84	170.2	12	30	0	22	46	-9	13	10	30 17	PKKP
TANANARIVE	89.44	251.2	12	39A	1							
KHEYS	93.60	350.0	12	52	-5	23	27	-20			16 41	PP
GORIS	94.35	309.2	12	59	-1							
TIFLIS	95.57	311.4	13	5	-1	23	28	-35			17 3	PP
HORSESHOE B.	98.68	40.9	13	19K	-1							
UKIAH	99.20	51.2	13	22	0				14	22		
MOSCOW	99.65	325.7	13	22	-2				14	4		
APATITY	99.70	337.9	13	22	-3	24	39	1	14	20	17 31	PP
HALLEY BAY	99.77	183.8	13	24	-1	23	47	-52				
SHASTA	99.78	49.6	13	25K	0						17 15	PP
BERKELEY	100.00	52.5	13	27A	1	25	8	27			23 52	SKS
MINERAL	100.40	49.9	13	28A	0						17 34	PP
LICK	100.52	53.0	13	30A	2						18 32	
RENO	101.82	50.7	13	35	1							
FRESNO	102.02	53.5	13	36	1							
SODANKYLA	102.27	338.4	13	34	-2							
KSARA	102.82	303.5	13	36	-3				14	32	17 52	PP
SIMFEROPOL	103.17	315.0	13	39	-1						17 59	PP
RESOLUTE	103.34	12.7	13	41A	0	25	14	5	14	22	17 54	PP
JERUSALEM	103.50	301.5									17 58	PP
PASADENA	103.52	56.1	13	43	1	25	21	11			17 55	PP
KIRUNA	104.31	339.8	13	44	-1	25	17	0			18 5	PP
EUREKA	104.79	50.4	13	48	1				14	45	18 5	PP
HUNGRY HORSE	104.86	41.2	13	49	1						18 8	PP
BOULDER CITY	106.08	53.9	13	54	777						18 6	PP
BOZEMAN	107.38	43.5	14	0	777						19 25	
UPPSALA	108.82	332.7				25	59	11			18 38	PP
BUCHAREST	108.90	315.5	18	42	777						24 34	
UVIRA	108.94	264.8									18 35	PP
SKALSTUGAN	109.29	337.5	14	6	777						18 41	PP
LWIRO	109.37	266.1									18 11	
TUCSON	109.83	57.4	18	12	777						19 41	PP
SCORESBY SD.	112.74	353.0				24	53	11			19 10	PP
BOULDER	112.77	48.3	18	17	2						29 14	
COPENHAGEN	113.19	330.1									19 11	PP
COLLMBERG	114.92	325.7	18	21	2							
HALLE	115.42	326.2	18	14	-6	25	16	24			19 52	PP
PLAUEN	115.76	325.1									19 5	
TRIESTE	116.84	319.7	18	45	22						19 45	PP
LUBBOCK	117.01	54.5	18	27	3							
WITTEVEEN	117.57	329.3	18	27	2							
MESSINA	118.21	311.3	18	21	-5	25	2	0			19 41	PP
STUTTGART	118.26	324.4	18	28	2						19 48	PP
DE BILT	118.72	329.2									19 50	PP
ROME	119.14	316.2	18	29	1	25	5	0			19 55	PP
STRASBOURG	119.18	324.8									19 50	PP
FLORENCE X.	119.23	318.6	19	12	44	24	38	-28			19 56	PP
UCCLE	119.88	328.3									19 53	PP

DURHAM	120.26	334.5				25	15	6			19	58 PP
MONACO	121.73	320.0	18	34	1				19	15		
KEW	121.84	331.0									20	12 PP
PARIS	122.01	327.2	18	17	-16				18	55		
FAYETTEVILLE	122.31	49.6	18	33	-1							
RATHFARNHAM	123.27	335.5									19	11 PP
CLERMONT-FD.	123.36	323.9	18	39	3							
ALGIERS UNI.	127.93	314.3	19	30	45						20	53 PP
OTTAWA	129.40	30.8	18	49	2				19	32		
SHAWINIGAN	130.02	27.8	18	49	0				19	31		
RELIZANE	130.19	314.4	18	51	2				19	34	21	7 PP
BREBEUF	130.38	29.3	18	46	-3							
SEVEN FALLS	130.47	26.0	18	50	1				19	32		
TAMANRASSET	130.96	296.5	18	54	4				19	35	21	10 PP
GRANADA	132.30	318.4	19	38A	45	27	5	81			22	32 PP
COLUMBIA	132.96	46.2	18	57	3				19	39		
MALAGA	133.09	318.3	19	40K	46	26	44	58			22	2 PP
CHAPEL HILL	133.34	42.8	18	58	3						23	26
PALISADES	133.37	33.8	18	58	3						21	24 PP
WESTON	133.79	30.6	18	59K	3							
HUANCAYO	142.70	116.2	19	14	2						23	6 *PPP
BERMUDA	144.70	35.1	19	18	2							
CHINCHINA	146.06	87.6	19	22	4	20	6-361					
LA PAZ	146.56	128.9	19	24A	5				20	0		
BOGOTA	147.60	88.2	19	38	18						20	27
FUQUENE	147.95	86.6	19	23	2	21	8-301					
SAN JUAN	152.24	57.9	19	29	2						20	20
MBOUR	153.78	294.0	19	54	25						20	22 PKP2

JULY 19 14.H 57.M 23.S EPICENTRE 41.08 143.68 DEPTH= 0.KM

A=-0.60917 B= 0.44774 C= 0.65455 D= 0.5922 E= 0.8058
G=-0.5274 H= 0.3876 K=-0.7560 HT= -2.1

SE= 3.20

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
HATINOHE	1.72	252.2	0	32	0	1	4	9				
OBIHIRO	1.88	349.1	0	36	2	1	13	14			0	50
MIYAKO	1.94	223.1	0	34	-1	1	5	5				
KUSIRO	1.97	15.4	0	36	0	1	3	2				
TOMAKOMAI	2.13	313.2	0	47	9						1	6
AOMORI	2.21	264.3	0	40A	1	1	16	9				
HAKODATE	2.34	288.5	0	42K	1	1	14	3			0	57
MORIOKA	2.36	235.2	0	41A	0	1	7	-4				
MURORAN	2.39	302.5	0	43	2	1	11	-1				
MORI	2.55	294.7	0	46	2	1	27	11				
SAPPORO	2.64	319.7	0	46	1	1	28	10			1	10
NEMURO	2.66	31.4	0	45	0	1	15	-4				
MIZUSAWA	2.76	226.0	0	47	0	1	19	-2				
ASAHIGAWA	2.87	340.6	0	52	4	1	36	12				
ABASHIRI	2.97	8.3	0	52	2	1	20	-7				
AKITA	3.05	244.8	0	52	1	1	38	9			1	17
SUTTSU	3.10	304.9	1	0	8	1	48	18			1	23
ISINOMAKI	3.21	215.3	0	52	-1	1	38	5				
SENDAI	3.53	218.4	0	56K	-2	1	42	1			1	13
YAMAGATA	3.82	223.4	1	1	-1	1	53	4			2	10
HUKUSIMA	4.15	217.9	1	5	-2	2	2	5				
WAKKANAI	4.58	342.0	1	8	-5							
ONAHAMA	4.66	208.6	1	12	-2	2	15	5			1	33
NIIGATA	4.77	230.2	1	38	23						2	31
SHIRAKAWA	4.78	215.4	1	11	-4	2	15	2				
AIKAWA	5.19	235.7	1	21	0	2	53	30				
MITO	5.32	209.2	1	21	-2	3	5	39				
UTUNOMIYA	5.41	214.6	1	23	-1	2	57	29			1	50
KAKIOKA	5.56	210.7	1	23	-3	2	29	-3				
TAKADA	5.80	228.5	1	23	-7							
MAEBASI	5.90	219.2	1	30K	-1	2	55	14			2	8
Y.-SAKHLINSK	5.91	353.6	1	40	9							
KUMAGAYA	5.96	215.8	1	32	0	3	2	20				
NAGANO	6.14	226.0	1	41	6	3	32	46				
OIWAKE	6.21	221.9	1	37	1							
TOKYO C.M.O.	6.21	211.1	1	34	-2	2	44	-4				
MATUSIRO	6.21	225.1	1	34A	-2							
TITIBU	6.24	216.8	1	35	-1							

AJIRO	7.02	212.5	1	45	-2	3	3	-6			
MISIMA	7.02	213.6	1	49	2	3	19	10			
KANAZAWA	7.12	232.7	2	10	21						
OSIMA	7.16	209.7	3	1	72						
IIDA	7.21	221.5	1	54	4	4	18	65			
SHIZUOKA	7.38	216.0				3	35	17			
HUKUI	7.67	231.5	2	2	6						
OMAESAKI	7.78	215.5	2	33	35				3	37	
GIHU	7.85	226.0	1	59	0	3	43	14	4	12	
NAGOYA	7.92	224.0	2	7	7	4	2	31			
UGLEGORSK	8.08	352.4	2	0	-2						
IBUKISAN	8.08	227.6	2	6	4				2	34	
HIKONE	8.24	227.6	1	59	-5						
KAMEYAMA	8.43	224.8	2	20	13	4	9	25			
TU	8.49	224.1	2	23	15						
ABUYAMA	8.91	228.5	2	13K	0	4	4	8			
OSAKA	9.09	227.7	3	11	55	4	45	45			
OWASE	9.17	222.7	2	38	21						
KOBE	9.27	229.2				4	48	43			
SUMOTO	9.68	228.9	3	59	95				5	27	
SIOMISAKI	9.88	222.1				4	49	29			
TAKAMATU	10.18	231.6	2	45	14						
KOTI	11.03	230.3	2	46	3						
CHANGCHUN	13.84	287.6	3	19	-1						
PETROPAVLOVK	15.74	35.0	3	52	7						
MAGADAN	19.02	11.2	4	23	-3						
70-SE	20.68	248.4	4	41	-4	8	41	10			
NANKING	21.87	253.6	4	53	-4	9	2	8			
YAKUTSK	22.60	342.8	4	57	-7	8	59	-9			
ULAN-BATOR	26.92	297.2	5	45	0	10	25	4			
TIKSI	31.51	351.1	6	23	-3						
KOROR	34.59	196.2	6	52	-1						
KUNMING	37.52	257.7	7	16	-2						
LHASA	43.83	272.2	8	10	0	14	44	3			
SEMIPALATNSK	44.00	304.5	8	11	0						
COLLEGE	44.75	34.4	8	17	0						
SHILLONG	45.32	266.7	8	18A	-4						
RABAUL	45.72	168.1	8	27	2						
CHATRA	48.20	271.3	8	45	0						
NAMANGAN	52.82	295.3	9	21	1						
SVERDLOVSK	53.34	317.1	9	21	-3						
LAHORE	55.36	283.8	9	36	-2						
NORD	57.13	356.6	9	49A	-2						
RESOLUTE	58.25	15.5	9	57K	-2	17	57	-3			
APATITY	59.75	335.3	10	7	-2	18	18	-2			
CHARTERS TS.	60.82	177.2	10	15	-2						
QUETTA	61.47	286.4	10	19	-2	18	41	-1			
SODANKYLA	61.93	337.0	10	22	-2						
KIRUNA	63.37	339.2	10	32	-2						
MOSCOW	65.07	323.2	10	46	1						
SHASTA	67.31	55.3	10	59K	0						
MAKHACH-KALA	67.37	307.8	10	49	-11						
HUNGRY HORSE	67.65	44.8	11	1	0						
MINERAL	68.00	55.2	11	4K	0						
SCORESBY SD.	68.27	354.8							13	19	
SKALSTUGAN	68.79	338.9	11	6	-2						
RENO	69.59	55.1	11	13	0						
TIFLIS	69.72	308.0	11	13	-1	20	22	-1			
LICK	69.74	57.9	11	14K	0						
BUTTE	69.86	46.1	11	14	-1						
UPPSALA	70.10	334.3	11	14A	-2						
FRESNO	71.26	57.4	11	31	7						
SOTCHI	71.52	312.0	11	24	-1						
EUREKA	71.98	53.2	11	28	0						
SALT LAKE C.	73.60	50.1	11	39	2						
GOTEBORG	73.61	335.3	11	39	2						
PASADENA	73.92	58.7	11	39	0						
BOULDER CITY	74.89	55.4	11	44	-1						
LWOW	75.14	324.4	11	44	-2						
BOULDER	77.81	47.2	12	2	1						
HALLE	78.68	331.6	12	14	8				15	9	PP
JENA	79.28	331.5	12	22	13						
PLAUEN	79.42	330.9	12	7	-3						
TUCSON	79.83	56.1	12	12	0						
DURHAM	80.01	340.4				22	9	-8			
KSARA	80.20	306.4	12	15	1				15	13	PP
UCCLE	81.84	335.3	13	9	46						
STUTTGART	81.93	331.5	12	2?	-1						

JERUSALEM	82.00	305.3	12 20	-4			
DOURBES	82.37	334.8	12 33	7			
PARIS	84.17	335.4	12 32	-3			12 35 PCP
LUBBOCK	84.32	49.8	12 36	0			
FLORENCE X.	85.31	327.6					16 50
ROME	86.35	325.7					17 30
CLERMONT-FD.	86.63	333.6	12 53	6			
FAYETTEVILLE	86.66	43.4	12 47	0			
SHAWINIGAN	86.91	24.2	12 48	0			
OTTAWA	86.97	26.6	12 47	-2			
BREBEUF	87.57	25.3	12 51	-1			
TAMANRASSET	105.54	320.3					18 31 PP
SOUTH POLE	130.89	180.0	19 13	-1	21 27		23 48 SKP
BYRD STATION	131.31	166.7	19 17	2			

JULY 19 17.H 23.M 21.S EPICENTRE 51.63-176.43 DEPTH= 0.KM

A=-0.62215 B=-0.03877 C= 0.78194 D=-0.0622 E= 0.9981
G=-0.7804 H=-0.0486 K=-0.6234 HT= -6.0

SE= 2.22

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PETROPAVLOVK	15.27	285.4	3 41	3				
COLLEGE	19.82	37.1	4 34	-1	8 21	8		
MAGADAN	19.97	306.2	4 39	3				
SITKA	24.29	60.9	5 21	1				5 52
UGLEGORSK	26.35	281.0	5 40	1				
ALBERNI	32.39	73.4	6 33	0				
HORSESHOE B.	33.27	72.5	6 41	0				
VICTORIA	33.55	73.9	6 40	-3				
SEATTLE	34.61	74.7	6 55	2				
MATUSIRO	35.27	262.7	6 57A	-1	12 33	1		
VLADIVOSTOK	35.35	276.9	6 49	-10				
CORVALLIS	35.49	80.0	7 2	2				
BANFF	37.02	66.0	7 16	3				
SHASTA	38.17	84.8	7 23	0				
MINERAL	38.86	84.7	7 31	3				
RESOLUTE	38.90	24.8	7 29	0	13 39	11		9 38 PCP
CHANGCHUN	39.02	282.1	7 29A	-1				
BERKELEY	39.94	88.3	7 46	9				
RENO	40.45	84.5	7 45	3				
LICK	40.65	88.5	7 43	0				
BUTTE	41.22	71.7	7 48	0				
FRESNO	42.15	87.8	7 58	2				
BOZEMAN	42.31	71.3	7 58	1				8 20
EUREKA	42.86	81.9	8 1	0				
SALT LAKE C.	44.61	77.6	8 18	2				
PASADENA	44.86	89.4	8 17	-1	14 58	2		10 11 PP
BOULDER CITY	45.75	85.0	8 29	4				
PEKING	46.77	283.4	8 34	1				
ZO-SE	49.48	270.7	8 53A	-1				
TUCSON	50.70	85.7	9 2	-1				
LANCHOW	56.75	287.6	9 48	0				
FAYETTEVILLE	58.22	70.8	9 56	-2				
APATITY	59.05	347.1						10 51
KIRUNA	60.20	352.7	10 11A	-1				10 56 PCP
BAGUIO CITY	60.57	259.0			18 30	0		20 46
OTTAWA	61.75	51.8	10 21	-1				
SHAWINIGAN	62.34	49.2	10 23	-3				
BREBEUF	62.70	50.5	10 27K	-2				
SEVEN FALLS	62.83	47.7	10 31	1				
SKALSTUGAN	64.93	355.7						11 14 PCP
KUNMING	65.24	279.5	10 43A	-2				
PALISADES	65.87	54.0	10 48	-1				
WESTON	66.13	51.5	10 50K	-1				
CHAPEL HILL	66.94	61.0	10 56	0				
COLUMBIA	67.27	63.7	10 57	-1				11 21
HALIFAX	68.00	45.2	11 2K	-1				
UPPSALA	68.30	352.4	11 3	-2				
PORT MORESBY	68.40	219.1						20 51
LHASA	69.05	291.2	11 10A	2				
NAMANGAN	70.44	311.8	11 19	1				
GOTEBORG	70.82	355.2	11 22	2				
SHILLONG	71.40	287.7	11 22A	-2				

CHATRA		73.20	291.9	11	36	2				
RATHFARNHAM		75.12	6.1	11	45K	-1				
LAHORE		76.60	304.0	11	54	0				
CHARTERS TS.		78.45	215.6	12	0	-4				
DOURBES		78.65	359.3	12	1	-4				
PARIS		79.94	0.7	12	12	0				
STRASBOURG		80.11	357.2	12	15	2			23	15 PS
QUETTA		81.41	308.5	12	20	0	22	32 1		
CLERMONT-FD.		82.98	0.3	12	30	2				
MONACO		84.97	357.2	12	39	1				
SAN JUAN		87.73	63.0	12	51	-1				
KSARA		90.31	333.6	13	4	0				
JERUSALEM		92.41	333.4	12	59	-15				
ADELAIDE		94.73	215.6						22	45
CAPE HALLETT		123.98	184.9	18	9	-51				
BYRD STATION		135.28	168.0	19	16	-6			22	48 SKP
SOUTH POLE		141.44	180.0	19	24	-9			23	4 SKP
WINDHOEK		149.16	335.0						19	53 PKP2
PIETERMZBURG		150.32	307.4						19	53 PKP2
KIMBERLEY		152.18	317.1						19	57 PKP2
GRAHAMSTOWN		155.22	308.7						20	20 PKP2

JULY 19 18.H 17.M 3.S EPICENTRE -0.69 129.77 DEPTH= 101.KM

DEPTH OF FOCUS= 0.011R

A=-0.63966 B= 0.76856 C=-0.01194 D= 0.7686 E= 0.6397
G= 0.0076 H=-0.0092 K=-0.9999 HT= 7.2

SE= 2.91

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
KOROR	9.25	30.5	2	1	-11	3	37	-18					
MANILA	17.49	330.5	3	57	-2	7	1	-7					
BAGUIO CITY	19.27	332.3	4	16	-3	8	0	14					
PORT MORESBY	19.34	117.1	4	14	-6	7	50	2			5	46	
GUAM	20.45	46.0	4	26K	-5						5	57	
RABAUL	22.65	99.2	4	51	-2	9	9	20					
BANDUNG	22.91	253.8	4	58	2	9	0	6					
HENGCHUN	24.20	339.2	5	10	2	9	29	13					
LEMBANG	22.92	254.0	4	54K	-2	8	57	3					
TRUK	23.47	69.4	4	58K	-3	9	13	9			5	22	PP
TAWU	24.48	339.8	5	14	3	9	39	18					
HSINKONG	25.02	341.5	5	19	3	10	12	42					
CHARTERS TS.	25.08	141.0	5	14	-3	9	52	21					
TAINAN	25.31	339.1	5	18	-1								
ALISHAN	25.59	340.7	5	30	9								
HWALIEN	25.76	342.6	5	38	15								
TAICHUNG	26.22	340.9	5	51	24								
ILAN	26.47	343.5	5	29	-1	10	17	23					
TAIPEI	26.79	343.2	5	39	7	10	42	43					
HONG KONG	27.45	327.3	5	34	-4	9	53	-17					
CANTON	28.56	326.9	5	47	-1	10	32	4					
YAKUSIMA	30.97	1.2	6	6	-4	10	58	-8			7	10	
MEDAN	31.36	278.0	6	14A	1	11	24	12					
KAGOSIMA	32.09	1.3	6	23	3						7	43	
MIYAZAKI	32.47	2.6	6	24	1	11	34	5			7	32	
ZO-SE	32.65	346.3	6	23	-1	11	36	4			7	36	PP
TOMIE	33.14	358.5	6	26	-3	11	43	3					
NAGASAKI	33.24	0.2	6	28	-2						7	41	
KUMAMOTO	33.34	1.4	6	29	-1								
SIMIDU	33.43	4.9	6	27	-4						7	40	
SAGA	33.76	0.8	6	41	7								
PERTH	33.77	201.6	6	34	0	12	2	13			7	38	PP
OOITA	33.78	2.8	6	29	-5						7	47	
HUKUOKA	34.09	1.0	6	36	-1	12	3	9					
NANKING	34.18	343.3	6	36	-2	12	2	6					
KOTI	34.24	5.6	6	45	7	12	0	3			7	50	PP
SIOMISAKI	34.42	8.9	6	52	12						11	3	
HIROSIMA	34.96	3.8	6	50	6	12	3	-5			8	1	PP
TAKAMATU	35.06	6.2	6	46	1								
ADELAIDE	35.07	167.1	6	44A	-1	12	10	1			8	1	
OWASE	35.10	9.3	6	43	-2						8	2	
SUMOTO	35.18	7.3	7	35	49						12	15	
KOBE	35.55	7.7	7	2	13						11	52	
OSAKA	35.57	8.2	7	44	55								

ABUYAMA	35.79	8.2	6	47A	-4	12	19	-1			
KAMEYAMA	35.91	9.4	6	54	2	12	25	3		8 5	PP
OMAESAKI	35.99	11.9	6	44	-9					8 43	
YONAGO	36.09	5.0	7	48	54						
HIKONE	36.28	9.0	6	54	-1						
NAGOYA	36.30	10.0	6	55	-1						
TOYOOKA	36.34	7.0	6	55	-1	12	28	-1		8 21	PP
SHIZUOKA	36.38	12.0	6	49	-7						
OSIMA	36.40	13.4	8	21	85					12 47	
IBUKISAN	36.41	9.1								16 56	
GIHU	36.49	9.6	6	54	-3	12	42	11		8 21	PP
KUNMING	36.64	316.2	6	59K	1	12	40	7		8 22	PP
MISIMA	36.64	12.7	7	0	2						
MERA	36.65	13.9	8	27	88					12 23	
IIDA	36.80	11.0	7	1	1						
HUNATU	36.97	12.3	7	4	3					8 32	PP
KOHU	37.05	11.9	6	59	-3					8 29	PP
YOKOHAMA	37.10	13.4	7	34	32					8 34	PP
TOKYO C.M.O.	37.36	13.4	6	49	-15	12	14	-30		7 50	PP
TITIBU	37.50	12.4	7	7	1						
MATUMOTO	37.53	10.9	6	51	-15						
OIWAKE	37.72	11.6	7	12	4						
KUMAGAYA	37.73	12.8	7	19	11					8 40	PP
TOYAMA	37.83	9.8	7	7	-1						
MATUSIRO	37.87	11.1	7	5K	-4	13	0	8		8 45	
MAEBASI	37.90	12.3								8 38	
NAGANO	37.99	11.0	7	12	2					13 17	
MITO	38.20	14.0	7	17	6						
UTUNOMIYA	38.22	13.2	7	14	2					9 27	
TAKADA	38.41	10.9	7	13	0						
WAZIMA	38.45	9.1	7	12	-2	13	6	5		8 54	
RIVERVIEW	38.58	150.9	7	14K	-1	13	14	11			
PORT BLAIR	38.80	289.6	7	20	4	13	15	9	8 14	8 53	PP
ONAHAMA	38.85	14.3	7	19	2	13	31	24		9 51	
AIKAWA	39.30	10.6	7	41	20						
NIIGATA	39.36	11.6	7	42	21					11 53	
HUKUSIMA	39.51	13.4	7	21	-1					12 47	
MELBOURNE	39.52	161.0	7	23A	1	13	25	8	8 53	9 30	*SP
YAMAGATA	39.96	13.0	7	27	1						
SENDAI	40.10	13.6	7	29	2	13	29	3			
ISINOMAKI	40.35	14.1	7	28	-1						
SAKATA	40.47	12.1	8	29	59	14	43	72			
MIZUSAWA	40.97	13.5	7	33	-1	13	49	10			
AKITA	41.31	12.1	7	37A	0					12 38	
MORIOKA	41.53	13.3	7	37	-2	13	48	1			
NOUMEA	41.65	123.7	7	43A	3	14	10	21		9 12	
MIYAKO	41.67	14.2	7	33	-7						
PEKING	42.39	344.5	7	45K	-1	14	4	5		9 31	PP
HATINOHE	42.40	13.3	7	36	-10	13	58	-2			
AOMORI	42.51	12.4	7	58	11						
TOCKLAI	43.36	311.7	7	56K	2						
HAKODATE	43.42	11.9	7	54	0						
CHITTAGONG	43.50	304.2	7	57	2					9 47	PCP
VLADIVOSTOK	43.65	2.3	7	55	-1	14	21	3		10 2	
MORI	43.70	11.6	7	58	1	14	20	2			
LANCHOW	43.83	329.2	7	58K	0	14	26	6		9 43	PP
URAKAWA	44.23	13.9	8	1	0	14	34	8		13 28	
SUTTSU	44.30	11.0	8	19	18	14	27	0		9 53	
CHANGCHUN	44.50	355.4	8	2	-1	14	34	4			
SAPPORO	44.79	12.1	8	4A	-1	14	36	2		17 52	SS
FORT NELSON	44.91	161.7	8	10	4	14	46	10			
SHILLONG	44.97	308.3	8	4K	-3	14	41	4		10 2	
OBIHIRO	45.06	13.9	8	11	3						
KUSIRO	45.42	15.1	8	10	0	14	48	5			
NEMURO	46.06	16.0	8	19	4	15	8	16			
WAKKANAI	47.11	11.4				15	3	-4			
LHASA	47.68	312.6	8	29K	1	15	52	37		10 24	PP
BOKARO	49.14	302.8	8	40K	1	15	43	7	9 6	10 27	PP
CHATRA	49.28	307.1	8	41	0	16	1	23			
COLOMBO	50.35	279.5	9	7	18	16	17	25			
SUVA	50.82	112.9	8	58K	6	16	11	12		20 7	SS
MADRAS	51.01	287.3	8	55K	1	16	5	3		10 52	PP
ULAN-BATOR	52.35	340.7	9	3	-1	16	23	3			
KODAIKANAL	53.15	283.3	8	48	-22						
HYDERABAD	53.63	292.2	9	13K	0	16	39	2		11 16	PP
COBB RIVER	55.87	141.5	9	30	0						
KAIMATA	55.91	143.6	9	33	3						
KARAPIRO	56.01	136.9	9	30	-1						

ROXBURGH	56.62	147.6	9	34	-1	17	27	10		21	17 SS
IRKUTSK	56.95	341.6	9	34	-3	17	30	9			
WELLINGTON	57.27	140.7	9	37	-2	17	37	11		22	41 SS
GEBBIES PASS	57.34	144.1	9	41	1						
TUAI	57.55	137.0	9	42	1						
DEHRA DUN	58.02	306.8	9	48	3	17	41	6		11	53 PP
PETROPAVLOVK	58.80	19.9	9	49	-1					10	36 PCP
BOMBAY	59.17	292.5	9	50	-3	17	57	7		11	55
AFIAMALU	59.28	105.7	9	55K	2	18	23	31		34	31 PKKS
LAHORE	61.44	306.8	10	0	-8					10	47 PCP
MAGADAN	62.28	11.9	10	15A	1	18	39	9			
WARSAK DAM	64.48	308.5	10	27	-1						
KARACHI	65.94	298.7	10	37	-1						
SEMIPALATNSK	66.03	327.8	10	38	0					20	22 SCS
DUMONT	66.24	175.6	10	38	-1	19	26	7			
WILKES	66.80	188.4	10	43	0	19	38	12		23	52 SS
QUETTA	67.07	303.2	10	43	-2	19	35	6		13	14 PP
TASHKENT	68.71	315.3	10	53	-2					15	6 PPP
MIRNY	70.64	194.7	11	7	0	20	19	8			
TIKSI	72.20	359.7	11	13	-3	20	32	3		11	33 PCP
HONOLULU	73.63	67.7	11	23	-1	20	55	10		25	27 SS
KIPAPA	73.72	67.6	11	24	-1						
ASHKABAD	75.84	309.4	11	37K	0					11	51 PCP
CAPE HALLETT	75.89	168.2	11	38A	1	21	27	17	11 53	14	29 PP
SVERDLOVSK	79.29	328.5	11	55	-1					22	40 PS
SCOTT BASE	79.58	172.6	11	58	0	22	3	14			
TANANARIVE	82.42	251.1	12	13A	1					15	27 PP
GORIS	85.36	309.5	12	29	2	22	52	4		15	50 PP
TIFLIS	86.69	311.7	12	33	-1	22	57	-4		23	13 SCS
COLLEGE	87.39	25.1	12	35	-2	23	16	9		28	47 SS
KHEYS	88.54	350.2	12	31	-12					23	10 SCS
SOUTH POLE	89.32	180.0	12	46A	0	23	28	3		16	20 PP
MOSCOW	91.77	325.6	12	57	-1					24	6
BYRD STATION	92.86	170.6	13	3K	0	24	12	15		16	52 PP
APATITY	93.06	337.5	13	3	-1	24	11	13		16	52 PP
KSARA	93.62	303.7	13	10	4	24	15	12		16	45 PP
JERUSALEM	94.23	301.6	13	6	-3					16	57 PP
SIMFEROPOL	94.49	314.9	13	11	1	23	55	-16		17	2 PP
PULKOVO	95.36	329.9				23	47	-31		17	10 PP
SODANKYLA	95.68	337.7	13	15	0						
HELWAN	97.67	299.9	13	24	0	24	3	-34			
NORD	97.72	355.3	13	23	-2					31	57 SS
KIRUNA	97.86	338.8	13	24	-1	24	4	-35		16	32
BUCHAREST	100.23	315.0	14	19	43	24	27	-32		17	47
RUMANGABO	100.42	268.5								18	49
GRAHAMSTOWN	100.64	236.0								13	37
LWIRO	100.93	267.6	12	58	-41					39	43
HORSESHOE B.	101.51	39.6	13	36	-6					18	2 PP
UPPSALA	101.57	331.5	13	39	-3	24	16	-54		17	56 PP
RESOLUTE	101.57	11.0	13	40	-2					17	57 PP
VICTORIA	101.61	40.5								17	57
WARSAW	101.95	323.5				24	22	-51		17	55 PP
CORVALLIS	102.50	44.4								18	4 PP
SKALSTUGAN	102.54	336.0	13	50	4					17	57 PP
KRAKOW	103.17	321.5				24	39	-45		18	7 PP
SHASTA	103.93	48.2	13	57	5					18	10 PP
SKOPJE	104.06	313.2								18	28
BELGRADE	104.11	316.2				24	43	-48		18	21 PP
RACIBORZ	104.24	321.8								27	19 PS
BUDAPEST	104.39	319.1	17	43	777	25	12	-22			
BERKELEY	104.56	51.1								18	13 PP
MINERAL	104.59	48.4								18	21 PP
HURBANOVO	104.85	319.6								20	6
GOTEBORG	105.09	330.5								18	31 PP
LICK	105.15	51.5	14	23	777					18	25 PP
BRATISLAVA	105.48	320.1	17	33	777					18	25 PP
COPENHAGEN	105.65	328.5				24	51	0		18	29 PP
RENO	106.10	49.0								17	18
HERMANUS	106.46	233.8				26	19	0			
POTSDAM	106.55	325.2								27	51
PRAGUE	106.55	322.6	18	7	777					19	27 PP
FRESNO	106.70	51.8								18	35 PP
BERGEN	106.94	334.7								30	57
COLLMBERG	106.98	324.1								16	10
HALLE	107.52	324.6	14	16	777	25	50	0		18	36 PP
PLAUEN	107.77	323.5	14	14	777					18	40 PP
SCORESBY SD.	107.89	350.4				24	58	0		18	41 PP
JENA	107.95	324.1	18	2	777	24	27	1		18	38 PP

TRIESTE	108.43	318.4	18	12	777	26	21	0	18	44	PP
PASADENA	108.55	54.2	14	23	777	26	20	0	27	51	PS
EUREKA	109.00	48.3	14	19	777				29	31	PKKP
MESSINA	109.30	310.4				24	57	0	18	51	PP
BUTTE	109.39	40.9	17	39	777				19	0	PP
WITTEVEEN	109.93	327.3							19	2	PP
STUTTGART	110.21	322.6	18	12	-8				18	57	PP
RAVENSBURG	110.34	321.5	18	12	-8						
TUBINGEN	110.38	322.4							19	0	PP
BENSBERG	110.48	325.3	18	15	-5				19	3	PP
ROME	110.50	314.9	18	10	-10				19	6	PP
EBINGEN	110.58	322.1							19	2	PP
KARLSRUHE	110.59	323.1							19	7	PP
FLORENCE X.	110.74	317.1	18	3	-18				19	9	PP
BOULDER CITY	110.79	51.6	18	56	35						
DE BILT	111.07	327.0				26	15	83	19	7	PP
STRASBOURG	111.15	322.9				26	38	105	19	6	PP
PAVIA	111.62	319.1							19	4	PP
SALT LAKE C.	111.64	46.0	18	40	17				19	13	PP
BASLE	111.70	321.9							19	12	
ABERDEEN	111.94	334.1				25	7	11	19	5	PP
UCCLE	112.15	326.1				28	36	219	19	14	PP
DOURBES	112.34	325.3				28	53	236	19	12	PP
DURHAM	113.11	331.8	18	39	14	26	25	84	22	29	PKS
MONACO	113.33	318.2	18	30	4				19	23	PP
PARIS	114.16	324.8				25	28	23	19	24	PP
KEW	114.34	328.3				25	22	17	19	29	PP
TUCSON	114.98	54.5	18	43	14				19	23	PP
CLERMONT-FD.	115.23	321.6				25	44	35	19	34	PP
RATHFARNHAM	116.21	332.3							19	44	PP
ALGIERS UNI.	119.16	312.5	19	39	62	25	42	19	30	40	PPS
TORTOSA	119.22	317.7	20	4	87				21	31	PP
ALICANTE	121.02	315.6	18	43	2	25	41	12	20	13	PP
RELIZANE	121.42	312.4	18	42	0				20	11	PP
TAMANRASSET	121.60	296.4	18	45	3	25	45	14	20	11	PP
ALMERIA	123.11	314.8							20	31	PP
GRANADA	123.75	315.7				26	12	34	20	36	PP
MALAGA	124.54	315.6	18	52	4				20	39	PP
SERRA PILAR	124.92	322.3	18	50K	2				20	39	PP
FAYETTEVILLE	126.16	44.1	18	52	1						
LISBON	126.66	320.1							20	51	PP
OTTAWA	130.12	23.4	18	59	1						
SHAWINIGAN	130.24	20.3	19	2	3						
SEVEN FALLS	130.39	18.4	19	3	4						
BREBEUF	130.84	21.7	18	59	-1						
PALISADES	134.49	25.2	19	11	4	26	27	21	22	45	PKS
HALIFAX	134.68	13.4							23	24	PKS
COLUMBIA	136.07	37.8	19	14	5						
MBOUR	144.41	294.0	19	9	-16	26	19	-3	22	40	PP
BERMUDA	145.66	22.0	19	30	3				41	47	SS
TALA POZO	148.62	155.7	19	47	15				53	47	SS
BALBOA HTS.	149.67	73.4	19	41	8						
HUANCAYO	152.05	117.7	19	47	10				20	6	PKP2
CHINCHINA	154.29	80.0	19	48	8				20	15	PKP2
LA PAZ	155.43	134.8	19	51	10				23	53	PP
BOGOTA	155.87	80.3	19	53	11				20	33	PKP2
FUQUENE	156.06	78.1	20	51	69				21	50	PKP2
SAN JUAN	156.49	40.7	19	58	15						

JULY 20 19.H 27.M 15.S EPICENTRE 46.19 -1.24 DEPTH= 0.KM

A= 0.69449 B=-0.01500 C= 0.71934 D=-0.0216 E=-0.9998
G= 0.7192 H=-0.0155 K=-0.6947 HT= -4.0
SE= 2.93

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
CLERMONT-FD.	3.07	96.4	0	53	3						1	41	SG
GARCHY	3.16	68.3	0	53	1	1	32	1					
PARIS	3.64	42.6	1	0	2	1	41	-2			1	15	PG
KEW	5.32	6.2	1	47	25	3	1	36			2	24	PG
BARCELONA	5.36	151.8	1	23	0	2	56	30					
TORTOSA	5.52	166.2									1	43	PG
DOURBES	5.53	42.9	1	25	0	2	26	-4					
NEUCHATEL	5.70	78.9	1	27	-1	2	54	19			1	50	
UCCLE	5.92	36.8									1	39	PG

BASLE	6.19	74.4	1	42	7	3	5	18	2	2
OROPA	6.45	91.8							3	5 S*
STRASBOURG	6.56	65.4	1	41	1	2	55	-1	2	8
MONACO	6.62	108.7	1	40	-1				2	11 PG
TOLEDO	6.64	199.1	1	35	-6	2	47	-11	3	10
KARLSRUHE	7.10	63.1	1	45	-2	3	2	-8	2	14 PG
EBINGEN	7.23	70.4	1	46	-3				2	21 PG
DE BILT	7.25	33.1				3	52	38		
BENSBERG	7.34	46.4	1	50	-1	3	13	-3		
SERRA PILAR	7.35	229.1	2	9A	18	3	17	1	2	27 PG
PAVIA	7.36	94.2				3	4	-12	3	35 S*
TUBINGEN	7.38	67.8	1	48	-3				2	23 PG
CHUR	7.46	81.1	1	55	3	4	7	48		
STUTTGART	7.53	66.2	1	47	-6	3	11	-9	2	25 PG
RAVENSBURG	7.59	74.0	2	22	28	3	13	-9	4	14 SG
RATHFARNHAM	7.83	337.2	1	57	-1	3	24	-4	2	31
ALICANTE	7.86	175.6	2	26	28	3	50	21		
MUNSTER	8.20	41.9	2	18	15				4	29
WITTEVEEN	8.39	34.9				3	45	3		
DURHAM	8.59	358.7							3	46
BOLOGNA	9.01	96.3							4	26
FLORENCE X.	9.17	100.8							3	16
ALMERIA	9.38	186.1	2	24	5					
JENA	9.73	56.2	2	27	3	4	17	2	3	17 PG
MALAGA	9.76	195.2	2	23	-1	3	55	-21	4	49
PLAUEN	9.90	59.3	2	23	-3				3	15 PG
ALGIERS UNI.	9.95	159.7				4	49	28		
HALLE	10.18	53.8	2	30	0	4	25	-1	5	28 SG
TRIESTE	10.46	87.6				4	31	-2	3	33
COLLMBERG	10.70	56.3	2	35	-2	4	30	-9	3	28 PG
ROME	10.76	108.6							5	25
PRAGUE	11.16	64.0							4	4 PG
POTSDAM	11.20	51.3							6	9 SG
PRUHONICE	11.22	64.5	2	41	-3	4	47	-5		
BRATISLAVA	12.63	74.4	3	5	2	5	25	-1	6	4
COPENHAGEN	12.81	37.2				5	32	2		
RACIBORZ	13.54	66.3				6	2	14	6	15 SS
GOTEBORG	14.08	30.3	4	2	39					
KRAKOW	14.64	67.0							6	55 SSS
MESSINA	14.77	116.8	3	29	-3	6	3	-14	3	41 PP
WARSAW	15.72	59.3							7	18 SS
UPPSALA	17.68	32.5	4	9	0	7	48	23		
SKALSTUGAN	19.00	18.7	4	27	2	8	14	19		
TAMANRASSET	23.99	164.5	5	14	-3				5	56 PPP

JULY 21 7.H 25.M 4.S EPICENTRE 44.28 147.72 DEPTH= 41.KM

DEPTH OF FOCUS= 0.001R

A=-0.60726 B= 0.38367 C= 0.69573 D= 0.5341 E= 0.8454
G=-0.5882 H= 0.3716 K=-0.7183 HT= -3.3

SE= 3.18

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KURILSK	0.96	6.6	0	50A	33	0	32	2				
NEMURO	1.81	239.2	0	31K	2	0	53	2				
KUSIRO	2.73	242.8	0	44	2	1	18	3				
OBIHIRO	3.55	249.1	0	56A	2	1	52	17			1	37
ASAHIGAWA	3.89	264.5	1	6	7	1	59	15				
URAKAWA	4.19	241.2	1	6	3	1	56	5				
Y.-SAKHLINSK	4.41	309.1	1	10K	4	2	2	5				
WAKKANAI	4.44	287.0	1	14	8	2	25	27				
SAPPORO	4.77	257.5	1	16A	5	2	13	7				
TOMAKOMAI	4.80	250.7	1	18	6	2	12	5				
MURORAN	5.29	250.7	1	21	3	2	21	2				
SUTTSU	5.64	257.4	1	26	3	2	35	7				
MORI	5.66	249.8	1	21	-3	2	32	4				
HAKODATE	5.70	246.4	1	25	1	2	30	1				
HATINOHE	5.91	232.8	1	26	-1	2	31	-4				
UGLEGORSK	6.18	323.0	1	35K	4	2	48	7				
AOMORI	6.18	238.4	1	32	1	2	36	-5				
MIYAKO	6.30	224.8	1	30	-3	2	38	-6				
MORIOKA	6.68	229.1	1	35A	-3	2	44	-10				
MIZUSAWA	7.12	226.0	1	41	-3	2	55	-10				

AKITA	7.27	233.8	1	44	-2	3	0	-8				
ISINOMAKI	7.57	221.6	1	47	-3	3	7	-9				
SENDAI	7.90	222.8	1	52	-3	3	14	-10				
SAKATA	7.98	230.4	2	0	4	3	34	8			3	59
YAMAGATA	8.19	225.1	1	57	-2	3	24	-7				
HUKUSIMA	8.51	222.5	2	1	-2	3	31	-8				
ONAHAMA	8.97	217.6	2	2	-8	3	39	-11				
NIIGATA	9.11	228.8	2	26	14	4	8	14				
SHIRAKAWA	9.14	221.0	2	12	0	3	40	-15				
AIKAWA	9.49	232.0	2	16	-1							
MITO	9.63	217.5	2	18	-1	4	18	11				
UTUNOMIYA	9.76	220.4	2	17	-4	3	54	-16			2	41
KAKIOKA	9.88	218.1	2	21	-1	3	59	-14				
TYOSI	10.04	213.9	2	25	1							
TAKADA	10.15	228.3	2	18	-8							
MAEBASI	10.26	222.9	2	25	-2	4	16	-6			3	18
KUMAGAYA	10.32	220.9	2	26	-2	4	14	-10				
NAGANO	10.50	226.9	2	31	0							
TOKYO C.M.O.	10.53	218.1	2	35	4	4	18	-11				
MATUSIRO	10.58	226.4	2	28A	-4	4	8	-22				
OIWAKE	10.58	224.5	2	41	9							
TITIBU	10.60	221.5	2	30	-2							
WAZIMA	10.70	233.6	2	34	1	4	31	-2				
YOKOHAMA	10.79	217.7	2	52	17	4	26	-9				
MATUMOTO	10.94	226.2	2	35	-2							
TOYAMA	11.01	230.2	2	37	-1	4	42	2			4	6
KOHU	11.12	222.2	2	39	0	4	40	-3				
HUNATU	11.13	221.1	2	43	4	4	40	-3				
MERA	11.14	215.7	2	53	14							
AJIRO	11.35	218.6	2	36	-6						3	7
MISIMA	11.36	219.4	2	38	-4	4	37	-12				
PETROPAVLOVK	11.42	35.3	2	44	1						2	57
OSIMA	11.46	216.9	4	38	114							
VLADIVOSTOK	11.51	269.7	2	46	2	4	58	5				
IIDA	11.57	224.3	2	50	5	4	50	-4				
SHIZUOKA	11.74	220.8	2	56	9	4	52	-6				
HUKUI	12.00	230.7	2	50	-1							
OMAESAKI	12.13	220.4	3	1	8	5	14	6				
GIHU	12.21	227.2	2	52	-2	5	26	16			15	40
NAGOYA	12.28	225.9	2	50	-5	4	21	-50			5	4
IBUKISAN	12.43	228.2	2	56	-1							
HIKONE	12.59	228.3	3	0	1							
KAMEYAMA	12.79	226.4	3	0	-2	5	32	9			6	5
TOYOOKA	13.19	232.9	3	5	-2	5	26	-7				
ABUYAMA	13.25	229.0	3	4A	-4	5	36	1				
OSAKA	13.44	228.5	3	12	2	6	8	29				
KOBE	13.61	229.5	3	11	-1						6	26
SUMOTO	14.02	229.4	3	15	-3	5	1	-52			4	2
MATSUE	14.27	236.8	3	22	1							
TOKUSIMA	14.39	229.4	3	21	-2							
TAKAMATU	14.50	231.3	3	20	-4						7	38
KLYUCHI	14.62	29.9									3	44
HAMADA	15.25	237.4	3	39	5	6	46	24				
KOTI	15.36	230.6	3	33	-2	6	58	34			3	51
HIROSIMA	15.40	235.2	3	41	5	6	58	33				
MAGADAN	15.41	5.9	3	36	0							
CHANGCHUN	16.11	276.2	3	45A	0	6	49	7				
UWAZIMA	16.15	232.0	3	45	0	7	1	18				
OOITA	16.68	234.1	3	52	0	6	53	-2				
HUKUOKA	17.15	237.3	3	58	0	7	12	6			7	33
SAGA	17.45	236.8	4	6	5						8	1
KUMAMOTO	17.51	235.0	4	4	2							
MIYAZAKI	17.76	231.5	4	11	6	7	30	11				
NAGASAKI	18.06	236.4	4	13	4	7	40	14				
KAGOSIMA	18.51	232.5	4	13	-2	7	40	4			6	28
YAKUSIMA	19.38	230.4	4	26	1	7	57	1				
PEKING	23.69	270.7	5	9A	1	9	22	5			5	41 PP
ZO-SE	24.65	246.7	5	19A	1	9	37	3			5	51 PP
ULAN-BATOR	28.30	292.0	5	53	2	10	40	7				
TAIPEI	28.67	236.6	6	9	14	11	10	31				
TIKSI	28.91	347.8	5	53	-4						7	3 PPP
IRKUTSK	29.59	301.2	6	3	0	10	52	-2			7	11 PPP
LANCHOW	34.18	271.5	6	45A	2	12	10	4			8	1 PP
HONG KONG	35.22	242.5	6	54K	2	12	47	25				
CANTON	35.24	244.5	6	52	0							
BAGUIO CITY	36.01	228.1	6	58	-1	12	33	-1				
CHENGTU	36.83	263.4	7	2A	-4	12	42	-5			7	57 PP
TRUK	36.84	173.2	7	19	13						8	33
MANILA	37.33	225.9	7	8	-2							

KOROR	38.58	201.4	7	19	-1	12	48	-25		
COLLEGE	40.42	36.5	7	35	-1	13	39	-2		
KUNMING	41.12	257.4	7	42A	1	13	53	2	9	21 PP
PHU-LIEN	41.22	248.9	6	34	-68					
TOCKLAI	45.69	265.7	8	59	41					
LHASA	46.70	271.6	8	30A	4	15	25	13	10	20 PP
KHEYS	47.70	346.5	8	23	-11				18	14 SCS
SITKA	47.84	45.9	8	36	1					
RABAUL	48.42	174.1	8	43	3				10	6
SHILLONG	48.48	266.6	8	40A	0				10	36
KIPAPA	49.95	98.9	9	2	10					
CHITTAGONG	50.51	263.3	8	57	1					
CHATRA	51.10	271.2	9	4	4	16	34	20		
FRUNSE	51.33	295.7	9	4	2				16	22
SVERDLOVSK	53.04	316.6				16	22	-18		
PORT MORESBY	53.43	180.7	9	15	-3	16	42	-3	22	20 SSS
BOKARO	53.90	269.2	9	19	-2	16	55	3		
NORD	54.10	357.2	9	20A	-3				10	24 PCP
RESOLUTE	54.35	16.9	9	22A	-2	17	0	2	19	8 SCS
TASHKENT	55.52	296.5	9	31	-2				19	16 SCS
DEHRA DUN	55.58	280.6	9	35	2	17	16	2	12	38 PPP
ALBERNI	56.87	51.4	9	41	-2					
STALINABAD	57.33	293.9	9	44	-2				17	40 PS
THULE	57.40	9.5	9	43	-3					
AGRA	57.47	277.5	9	48A	1	17	43	4	12	4 PP
HORSESHOE B.	57.67	50.7	9	46K	-2	17	42	0		
WARSAK DAM	58.00	288.0	9	52A	1					
VICTORIA	58.05	51.6	9	49	-2					
APATITY	58.07	335.6	9	48	-3	17	41	-6	12	18 PP
MEDAN	59.13	241.4	9	58A	0					
SEATTLE	59.15	52.0	9	59	0					
SODANKYLA	60.13	337.5	10	3	-2					
CORVALLIS	60.28	55.4	10	6	0					
BANFF	60.83	45.7	10	12A	2					
KIRUNA	61.41	339.9	10	12	-2	18	28	-2	20	18
LEMBANG	62.39	226.2	10	17K	-4	18	41	-2		
SHASTA	63.07	58.5	10	24	-1					
HYDERABAD	63.26	268.6	10	25	-1	19	7	13	13	18 PP
HUNGRY HORSE	63.29	47.6	10	24	-3				39	23 PKPPKP
QUETTA	63.40	287.1	10	28A	1	18	58	3	12	49 PP
MINERAL	63.76	58.4	10	28	-2					
CHARTERS TS.	63.99	181.5	10	28	-3				11	12
MOSCOW	64.27	323.9	10	30A	-3				15	10 SCP
PULKOVO	64.35	330.1	10	32	-1				14	13 PPP
ASHKABAD	64.38	298.8	10	34A	0				12	57 PP
BERKELEY	64.85	61.0	10	35	-2	19	13	0		
SCORESBY SD.	65.31	356.2	10	38A	-2	19	16	-3	39	24 PKPPKP
RENO	65.35	58.2	10	38	-2					
BUTTE	65.51	49.0	10	39	-2					
LICK	65.56	61.1	10	39	-2					
KARACHI	66.02	283.3	10	48A	4					
BOMBAY	66.35	273.7	10	47	1	20	4	33		
BOZEMAN	66.55	48.6	10	51	3				11	29 PCP
SKALSTUGAN	66.84	340.0	10	47	-2					
FRESNO	67.07	60.6	10	49	-2					
EUREKA	67.70	56.2	10	53	-2				39	17 PKPPKP
SUVA	68.17	148.5	11	6	8	20	0	7	15	30 PPP
NOUMEA	68.44	161.3	11	10	11					
UPPSALA	68.46	335.5	10	59A	-1	19	53	-4	21	7
SALT LAKE C.	69.28	53.0	11	4	-1				11	16 PCP
PASADENA	69.76	61.8	11	7	0	20	9	-3	24	2 SS
TIFLIS	70.06	309.1	11	12	3	20	57	41	11	27 PCP
BOULDER CITY	70.65	58.5	11	12	-1				11	24 PCP
BRISBANE	71.57	175.0	11	20	2	20	35	2		
RAPID CITY	71.76	45.8	11	19	-1					
GOTEBORG	71.90	336.8	11	22	2				11	44 PCP
SIMFEROPOL	73.40	317.2	11	30	1	21	33	47	11	46 PCP
BOULDER	73.47	50.0	11	29	-1					
WARSAW	73.47	329.0	11	28A	-2	20	58	3		
COPENHAGEN	73.48	335.4	11	30A	0	20	59	4	21	55
LWOW	74.21	325.9	11	35	1	21	5	2		
IASI	74.76	322.3	11	37A	0	21	7	-2		
BACAU	75.54	322.3	11	33	-9					
TUCSON	75.61	59.0	11	41	-1					
TUCSON TELE.	75.61	58.9	11	41	-1					
KRAKOW	75.63	328.3	11	43	1	21	21	2	12	4 PCP
ABERDEEN	75.81	343.6	11	35	-8	21	21	0	31	36
RACIBORZ	76.25	329.2	11	49	3				13	2

COLLMBERG	77.04	332.8	11	49	-1					
HALLE	77.21	333.4				21	36	0	14	34 PP
CAMPULUNG	77.37	322.5	11	55	3					
BUCHAREST	77.56	321.3	11	54A	1	21	43	3	12	54
PRAGUE	77.60	331.3	11	59	6	21	56	16	14	23 PP
PRUHONICE	77.64	331.2	11	54	1	21	43	2	14	51 PP
WITTEVEEN	77.65	337.0	11	56	3					
RIVERVIEW	77.80	177.1	12	11A	17	21	46	3		
JENA	77.82	333.3	11	54	0	21	45	2	14	28 PP
DURHAM	77.93	342.4	11	54K	-1	21	39	-5		
PLAUEN	78.01	332.8	11	55	0				12	31
HURBANOVO	78.07	327.9				22	6	21		
MUNSTER	78.13	336.1	11	56	0				12	33
BRATISLAVA	78.24	328.7	12	3A	6	22	19	32	12	18
DE BILT	78.70	337.5				22	14	22		
BENSBERG	79.15	335.8	12	2	0	21	59	2		
BELGRADE	79.68	324.9	12	6A	1	22	6	4		
LUBBOCK	80.00	52.6	12	5	-1	22	5	-1		
UCCLE	80.10	337.4	12	7A	0	22	6	-1		
SOFIA	80.15	321.9	12	9	2	22	14	7	14	41 PP
RATHFARNHAM	80.27	344.5	12	8A	0	22	11	2		
STUTTGART	80.46	333.6	12	8	-1	22	8	-3	22	32 SCS
KARLSRUHE	80.50	334.2	12	6	-3	22	18	7	15	16 PP
KSARA	80.62	308.4	12	13	3	22	13	1	12	34 15 16 PP
DOURBES	80.66	336.9	12	9	-1	21	11	-62		
KEW	80.70	340.4	12	9A	-1	22	14	1	22	35 SCS
TUBINGEN	80.71	333.6	12	10	0					
EBINGEN	81.05	333.5	12	12	0					
STRASBOURG	81.08	334.4	12	13	1	22	22	5	15	21 PP
RAVENSBURG	81.19	332.9	12	14	1					
SKOPJE	81.58	322.6	12	16K	1	22	27	5	12	51 PCP
TRIESTE	81.60	329.3	12	14A	-1	22	23	1	27	21 SS
MELBOURNE	81.77	182.2	12	14	-2				12	28 PCP
BASLE	82.07	334.0	12	18A	1	22	29	2		
FAYETTEVILLE	82.30	46.1	12	16A	-2	22	11	-18		
PARIS	82.42	337.6	12	21	2	22	31	0	15	33 PP
JERUSALEM	82.50	307.5	12	21	2				12	33 PCP
SHAWINIGAN	82.74	26.9	12	19	-2					
NEUCHATEL	82.74	334.1	12	21	0					
OTTAWA	82.75	29.2	12	18	-3					
SEVEN FALLS	82.84	25.4	12	21K	0	22	33	-2		
BREBEUF	83.38	27.9	12	21A	-3	22	38	-2		
PAVIA	83.62	331.9	12	26	1	22	49	6	32	56 SSS
ATHENS	83.75	318.8	12	26K	0					
CLEVELAND	83.87	34.9	12	26	0	22	40	-5		
FLORENCE X.	84.12	329.9	12	26A	-2	23	0	12	22	45 SKS
CLERMONT-FD.	85.00	336.0	12	36A	4				13	21
ROME	85.29	328.2	12	34A	1	22	59	0	12	56 22 42 SKS
MONACO	85.49	332.3	12	35	1					
KARAPIRO	85.60	158.3	12	51	16					
WESTON	86.92	27.9	12	41A	0					
HALIFAX	87.20	21.8				23	18	0		
MESSINA	87.22	324.2	12	40	-3	23	13	-5	16	4 PP
PALISADES	87.22	30.2	12	43	0	23	17	-1	17	42 PPP
TORTOSA	90.30	335.7	12	55	-3					
COLUMBIA	90.36	38.7	12	59	1					
ROXBURGH	91.48	165.0				24	4	7	30	11 SS
ALICANTE	92.87	335.5	13	7	-2	24	8	-1	18	51 PPP
ALGIERS UNI.	93.20	332.3	13	10	-1	24	18	6		
ALMERIA	94.85	336.4	13	17	-1					
GRANADA	94.86	337.4	13	18K	0	25	1	35		
RELIZANE	94.95	333.7	13	17	-2					
MALAGA	95.51	337.8	13	21K	0				17	15 PP
BERMUDA	98.19	27.3							23	56
TAMANRASSET	104.83	324.2	14	4	1	24	45	-65	18	23 PP
TANANARIVE	110.14	262.9							18	59 PP
DUMONT	110.77	183.3							19	7 PP
LWIRO	111.97	289.4	74	58	777				29	56
CAPE HALLETT	117.35	172.4	18	56	15					
MIRNY	118.13	201.7							18	58
SCOTT BASE	122.42	175.3	18	50	-1					
HUANCAYO	131.14	62.4	19	9	2				19	23 PKP2
BYRD STATION	133.72	166.0	19	0	-12				21	38
SOUTH POLE	134.09	180.0	19	0	-13				21	42
LA PAZ	139.02	58.9	19	25	3				22	24 PP

JULY 21 14.H 37.M 24.S EPICENTRE 51.50-178.43 DEPTH= 57.KM

DEPTH OF FOCUS= 0.004R

A=-0.62486 B=-0.01717 C= 0.78055 D=-0.0275 E= 0.9996
G=-0.7803 H=-0.0214 K=-0.6251 HT= -6.0

SE= 1.75

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KLYUCHI	13.16	299.6	3 8	2				
PETROPAVLOVK	14.11	285.6	3 17	-2	5 56	2		4 51 PPP
MAGADAN	19.04	307.0	4 21K	1				38 42 PKPPKP
COLLEGE	20.68	38.0	4 37	-1	8 22	1		
SITKA	25.43	60.4	5 25	1				
Y.-SAKHLINSK	25.57	275.2	5 26	0	9 53	6		
TIKSI	30.64	330.3	6 10	-1				9 6 PCP
ALBERNI	33.62	72.2	6 39A	2				
KIPAPA	33.97	144.5	6 40	0				
MATUSIRO	34.02	261.1	6 40A	-1	11 43	-18		7 50 PP
HONOLULU	34.06	144.7	6 40	-1	12 6	4		
VLADIVOSTOK	34.13	275.7	6 41	-1	12 6	3		7 56 PP
HORSESHOE B.	34.49	71.3	6 46A	1	12 14	6		9 19 PCP
VICTORIA	34.78	72.7	6 48A	1	12 19	6		
SEATTLE	35.84	73.5	6 59A	3	12 50	21		13 36
CORVALLIS	36.74	78.6	7 6A	2	12 51	8		
ABUYAMA	36.75	261.3	7 3A	-1				
HAWAII V.OB.	36.82	141.7	6 40	-25	12 6	-38		
CHANGCHUN	37.82	281.1	7 12A	-1	13 2	3		15 30 SS
BANFF	38.21	65.0	6 20A	-56				
SHASTA	39.42	83.3	7 28A	2	13 30	6		
RESOLUTE	39.54	24.5	7 26	-1	13 29	4		9 4 PP
UKIAH	39.82	85.8	7 31	1				9 18 PCP
MINERAL	40.11	83.2	7 33A	1				
HUNGRY HORSE	40.39	68.2	7 35	1	13 21	-17		18 0 SCS
BERKELEY	41.19	86.7	7 42A	1	13 55	5		9 34 PCP
RENO	41.70	82.9	7 47A	2				
LICK	41.90	86.8	7 48A	1	14 10	10		
BUTTE	42.44	70.4	7 51	0	13 30	-38		
FRESNO	43.40	86.1	7 59	0				
BOZEMAN	43.52	70.0	8 1	1	14 28	4		9 11
EUREKA	44.11	80.4	8 6	1				9 53 PCP
THULE	44.96	18.3	8 12	1				9 53 PP
IRKUTSK	45.53	302.9	8 15A	-1	14 54	1		9 54 PCP
PEKING	45.59	282.2	8 17A	1	15 0	6		10 2 PP
KHEYS	45.61	349.2	8 8	-9				9 59 PP
SALT LAKE C.	45.86	76.2	8 20	1	15 4	6		10 29 PP
PASADENA	46.11	87.8	8 20	-1	15 5	4		9 55 PP
ULAN-BATOR	46.47	296.5	8 23	0	15 12	5		
NORD	46.78	3.6	8 25	-1	15 23	12		10 31 PP
BOULDER CITY	47.00	83.4	8 28	0				
GUAM	48.13	231.5	8 34	-2				
ZO-SE	48.23	269.3	8 37A	0	15 34	3		10 30 PP
RAPID CITY	49.01	67.4	8 43	0	15 47	5		10 49 PP
NANKING	49.08	272.0	8 43A	-1	15 45	2		10 35 PP
BOULDER	50.26	72.9	8 54	1				
TRUK	50.27	219.7	8 52	-1				
TUCSON	51.95	84.2	9 6	0	16 28	5		19 33 SCS
TUCSON TELE.	51.96	84.0	9 6	0				
LANCHOW	55.59	286.4	9 33A	1	17 16	4		11 40 PP
LUBBOCK	56.57	76.6	9 38	-1	17 30	5		
SCORESBY SD.	57.15	9.2	9 41A	-3	17 38	5		39 36 PKPPKP
SEMIPALATNSK	58.59	312.7	9 51	-3	17 46	-5		11 59 PP
KOROR	58.60	238.3	9 51	-3	17 54	2		
HONG KONG	58.87	267.2	9 56	0	18 6	11		
APATITY	58.89	346.3	9 54	-2	17 53	-2		12 3 PP
CHENGTU	59.20	281.6	9 54A	-4	17 57	-2		12 6 PP
BAGUIO CITY	59.32	257.4	9 57	-2				
FAYETTEVILLE	59.43	69.4	9 57K	-2	18 1	-1		19 43 SCS
SODANKYLA	59.96	349.1	10 2	-1				
KIRUNA	60.16	351.9	10 3	-1	18 10	-2		10 48 PCP
RABAUL	60.90	214.1	10 10	1				
SVERDLOVSK	61.62	327.6	10 15	1	18 36	6		23 0 SS
CLEVELAND	62.70	57.1	10 21	-1	18 44	0		
OTTAWA	62.80	50.6	10 20A	-2	18 46	1		25 49 SSS
REYKJAVIK	63.26	11.3	10 25A	0				
SHAWINIGAN	63.36	48.0	10 22A	-4				10 59 PCP
BREBEUF	63.73	49.3	10 26A	-2				12 55 PP

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SEVEN FALLS	63.82	46.5	10	26A	-3	18	51	-7			25 58 SSS
KUNMING	64.03	278.1	10	30A	0	18	59	-2			12 50 PP
SKALSTUGAN	64.96	354.7	10	35A	-1						11 8 PCP
PULKOVO	66.68	344.6	10	46	-1	19	31	-2			19 58 PS
FRUNSE	66.74	310.1	10	48A	0	19	38	4			
WASHINGTON	66.91	56.3	10	48	-1	19	44	8			
PALISADES	66.94	52.8	10	49	0	19	40	4			13 12 PP
WESTON	67.17	50.2	10	44A	-6						
PORT MORESBY	67.53	217.1	10	51	-2	19	45	2			20 47 SCS
TOCKLAI	67.63	285.1	10	56	3						
LHASA	67.73	289.8	10	57A	3	19	51	5			13 24 PP
UPPSALA	68.25	351.4	10	57A	0	19	52	0			20 50 SCS
TACUBAYA	68.41	85.8	11	5	7	19	58	4			13 47 PP
COLUMBIA	68.43	62.4	10	59	1						
HALIFAX	68.96	44.0	11	1	0	19	59	-1			
MOSCOW	69.04	339.1	11	2	0						15 16 PPP
SUVA	69.40	183.2	11	4	0	20	11	6			13 58 PP
SHILLONG	70.25	286.3	11	8A	-1	20	17	2			20 50
TASHKENT	70.44	312.3				20	20	2			
GOTEBORG	70.83	354.1	11	14A	1						11 34 PCP
ABERDEEN	71.65	2.1	11	16	-2	20	34	2			21 6 PS
CHATRA	72.09	290.6	11	25	5	20	48	11			
CHITTAGONG	72.68	284.1	11	26	2	20	50	7			15 9 PP
COPENHAGEN	72.81	353.6	11	25A	0	20	49	4			
STALINABAD	72.87	310.9	11	26	1						
MERIDA	73.16	77.5	11	27	0	20	54	5			
DURHAM	74.07	1.9	11	31K	-1	21	4	5			
DEHRA DUN	74.59	299.3	11	36	1	21	5	0			
WARSAK DAM	75.13	306.1	11	37	-1						
BOKARO	75.17	289.5	11	39A	1	21	16	5			
WARSAW	75.35	347.8	11	39A	0	21	15	2			14 31 PP
RATHFARNHAM	75.37	4.9	11	39	0						14 55 PP
LAHORE	75.63	302.7	11	40	-1						
WITTEVEEN	75.97	356.8	11	48	5						
DE BILT	76.73	357.7	11	50	3	22	12	44			
MUNSTER	76.78	356.2	11	48	1						12 25
HALLE	77.00	353.4	11	49	0	21	34	3			14 42 PP
AGRA	77.09	297.3	11	47A	-2	21	29	-3			14 35 PP
COLLMBERG	77.12	352.7	11	48	-1						
LWOW	77.25	345.3	11	50	0						16 31 PPP
KEW	77.40	1.2	11	51A	0	21	39	4			14 49 PP
JENA	77.60	353.5	11	53	1	21	56	18			14 57 PP
KRAKOW	77.63	348.0	11	52	0	21	39	1			12 6 PCP
CHARTERS TS.	77.63	213.8	11	51	-1	21	40	2			
BENSBERG	77.81	356.4	11	54A	1						
RACIBORZ	77.81	349.1	11	56	3						
PLAUEN	77.98	353.1	11	53	-1						
ASHKABAD	78.04	317.5	11	55A	1						22 15 SCS
UCCLE	78.05	358.2	11	54A	0	21	44	1			
SONNEBERG	78.17	353.7	11	53	-2						12 26
PRAGUE	78.22	351.6	11	46	-9	21	46	2			14 45 PP
PRUHONICE	78.30	351.5	11	56	0	21	50	5			15 0 PP
DOURBES	78.75	358.0	11	57A	-1	21	52	2			
IASI	79.18	342.3	12	0A	-1	22	1	7			12 21
KARLSRUHE	79.70	355.4	12	4K	1	22	4	4			15 22 PP
BRATISLAVA	79.82	349.5	12	9A	5	22	10	9			15 9 PP
TIFLIS	79.83	328.6	12	6	2	22	7	6			
SIMFEROPOL	79.90	337.2	12	5A	0						15 7 PP
STUTTGART	79.90	354.9	12	4	-1	22	6	4			15 18 PP
BACAU	79.91	342.6	12	2	-3						
HURBANOVO	79.99	348.7	12	5	0	22	23	20			15 13 PP
PARIS	80.07	359.4	12	7A	2	22	19	15			15 19 PP
TUBINGEN	80.14	355.0	12	6	0						
STRASBOURG	80.16	355.8	12	7	1	22	10	5			15 13 PP
EBINGEN	80.50	355.0	12	8	0						
QUETTA	80.51	307.1	12	8A	0	22	11	3			27 26 SS
BASLE	81.22	355.9	12	12A	0						
CAMPULUNG	81.50	343.5	12	15	2	22	41	22			
NEUCHATEL	81.77	356.3	12	15	1						
BUCHAREST	82.13	342.5	12	17A	1	22	31	6			
BRISBANE	82.55	205.3	12	18A	0	22	30	1			
TRIESTE	82.66	351.4	12	19A	0	22	40	10			23 36 SP
BELGRADE	82.68	346.6	12	20	1						23 40 PPS
CLERMONT-FD.	83.10	358.9	12	22	1	22	59	24			22 42 SKS
SOFIA	84.29	344.1	12	30	3	23	2	15			23 51 PS
HYDERABAD	84.44	290.9	12	30	2	22	52	4			23 32 PS
FLORENCE X.	84.73	353.0	12	29A	0	23	2	11	13	2	16 6 PP
MONACO	85.02	355.7	12	30	-1						

SKOPJE	85.31	345.3	12	34K	2	22	57	0		15	46 PP
LEMBANG	85.45	253.2	12	30A	-3	22	34	-24			
ROME	86.50	351.9	12	39A	1	23	14	6	13 12	16	8 PP
BOMBAY	86.50	296.1	12	38	0	23	12	4			
CUGLIERI	88.50	354.6	13	26	38	23	14	-13			
BALBOA HTS.	88.53	77.5	12	48	0	23	11	-16			
TOLEDO	88.87	4.3	12	49K	0	23	16	-14		23	52
SAN JUAN	88.89	61.5	12	50	0						
RIVERVIEW	89.07	204.9	12	50A	0	23	39	7			
LISBON	89.67	8.4	12	54A	1						
MESSINA	89.84	349.0	12	52	-2	23	23	-16		16	25 PP
KSARA	89.85	332.0	12	55	1	23	49	9		16	32 PP
ALICANTE	90.51	1.6	12	57	0	23	49	4		16	32 PP
GRANADA	91.58	4.1	13	4A	2	24	3	8		16	50 PP
ALMERIA	91.95	3.2	13	2	-2						
JERUSALEM	91.95	331.8	13	3	-1					16	39 PP
MALAGA	92.00	4.8	13	4A	0					16	45 PP
ALGIERS UNI.	92.10	358.8	13	4	-1	24	4	5		16	42 PP
RELIZANE	93.12	0.8	13	9	0					14	15
HELWAN	94.85	334.4	13	18	1	23	48	-35			
ST. VINCENT	95.81	60.6	13	23	2						
ROXBURGH	97.24	188.6				24	48	5		24	8 SKS
TAMANRASSET	105.97	356.2	14	8	777	24	47	7		18	32 PP
HUANCAYO	107.49	87.4								18	35 PP
MBOUR	112.44	19.5								19	21 PP
LA PAZ	115.36	84.7	18	59	23					19	56 PP
DUMONT	121.98	198.1	18	48	0						
CAPE HALLETT	123.75	184.1	17	52K	-60						
RUMANGABO	124.82	325.4	18	56	2						
LWIRO	125.86	325.7	18	59	3					20	43
UVIRA	126.89	324.7	19	0	2					20	40 PP
WILKES	129.13	209.6								39	18 SS
SCOTT BASE	129.41	184.0	19	3	0					22	21 PKS
TANANARIVE	131.51	294.6	19	8	1					21	35 PP
MIRNY	135.16	214.6	19	12	-2						
BYRD STATION	135.42	167.7	19	2	-12					21	59 PP
SOUTH POLE	141.31	180.0	19	16	-9					22	58 SKP
WINDHOEK	148.71	331.5								19	43 PKP2
PIETERMZBURG	149.39	304.5								19	44 PKP2
KIMBERLEY	151.40	313.7								19	44 PKP2
GRAHAMSTOWN	154.31	305.3								20	10 PKP2

JULY 23 10.H 27.M 27.S EPICENTRE 31.19 141.91 DEPTH= 54.KM

DEPTH OF FOCUS= 0.003R

A=-0.67451 B= 0.52872 C= 0.51526 D= 0.6169 E= 0.7870
G=-0.4055 H= 0.3179 K=-0.8570 HT= 1.4

SE= 2.68

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TORISIMA	1.55	243.5	0	24	-2						1	4
HATIDYOZIMA	2.60	317.8	1	15	34	1	58	46				
MERA	4.11	335.4	1	5	3	1	52	2			1	28
OSIMA	4.16	329.9	1	4	1	1	48	-3				
NAGATURO	4.27	323.7	1	6	2							
AJIRO	4.52	329.3	1	10	2	2	9	9			1	32
OMAESAKI	4.61	318.6	1	8	-1	2	1	-1			1	33
YOKOHAMA	4.64	336.5	1	13	4	2	4	1				
MISIMA	4.64	328.5	1	10	0	2	4	1				
SHIZUOKA	4.79	323.0	1	13	1	2	8	2			1	36
TOKYO C.M.O.	4.83	338.7	1	13	1	2	8	0			1	52
HAMAMATU	4.98	316.1	1	13	-1	2	43	32				
HUNATU	5.04	329.4	1	15	0	2	16	3			2	41
KAKIOKA	5.23	344.5	1	17	-1	2	17	-1				
KOHU	5.24	328.7	1	18	0	2	24	6				
TITIBU	5.33	334.5				2	18	-2				
KUMAGAYA	5.38	337.6	1	19	-1	2	33	12			2	5
IIDA	5.51	322.8	1	21	-1	2	26	2				
OWASE	5.61	302.3	1	25	2						3	1
UTUNOMIYA	5.61	343.0	1	23	0						2	13
SIOMISAKI	5.67	295.1	1	24	0	2	34	6				
MAEBASI	5.71	336.3	1	31	7	2	30	0			2	37
NAGOYA	5.74	315.1	1	24	-1	2	34	4			1	43
TU	5.74	309.4	2	13	48							

ONAHAMA	5.81	352.0	1	27	1	2	23	-9	1	49	
OIWAKE	5.84	332.3	1	29	3	2	35	2			
KAMEYAMA	5.85	310.1	1	23	-3	2	40	7	3	37	
GIHU	6.01	315.7	1	23	-6	2	41	4	3	44	
MATUMOTO	6.02	328.1	1	30	1	2	50	13	1	51	
SHIRAKAWA	6.08	347.2	1	29	-1	2	35	-4			
MATUSIRO	6.17	331.2	1	28A	-3	2	37	-4	3	4	
NARA	6.18	305.9	1	33	2						
IBUKISAN	6.24	313.6	1	34	2				3	33	
HIKONE	6.25	312.2	1	35	3				3	31	
NAGANO	6.28	331.6	1	33	1	2	55	11			
TAKAYAMA	6.29	323.1	1	34	1						
OSAKA	6.38	304.5	1	36	2	3	11	25			
WAKAYAMA	6.44	299.9	1	35	0				3	28	
ABUYAMA	6.47	306.3	1	33A	-2	2	49	1			
TSURUGA	6.61	313.9	1	38	1				4	12	
TAKADA	6.63	333.8	1	38	1						
KOBE	6.64	303.4	1	36	-1	3	23	30	3	38	
HUKUSIMA	6.65	350.1	1	36	-2	2	50	-3	3	28	
SUMOTO	6.71	299.9	1	36	-2	3	2	8	2	8	
TOYAMA	6.75	325.8	1	41	2	3	15	20			
TOKUSIMA	6.82	296.9	1	41	1	3	28	31			
MUROTO	6.86	289.5	1	42	1	3	58	60			
MAIZURU	6.88	310.1	1	45	4						
SENDAI	7.12	353.6	1	40	-4	2	58	-6			
NIIGATA	7.12	341.4	1	58	14	3	6	2	3	47	
HIMEJI	7.13	299.6	1	45	1	3	18	13			
YAMAGATA	7.16	350.1	1	43	-2	2	59	-7			
ISINOMAKI	7.24	356.3	1	42	-4	3	1	-7			
TAKAMATU	7.32	297.3	1	46	-1				4	12	
TOYOOKA	7.34	308.0	1	46	-1				3	53	
WAZIMA	7.44	327.5				3	44	32			
AIKAWA	7.45	337.1	1	51	2	3	15	2			
KOTI	7.47	290.6	1	48	-1						
TOTTORI	7.73	305.9	1	55	2						
SIMIDU	7.76	284.2	1	54	1				4	23	
SAKATA	7.88	348.1	1	56	1	3	23	0	4	16	
MIZUSAWA	7.95	355.6	1	55	-1	3	11	-14			
MATUYAMA	8.17	291.2	1	59	0	3	25	-6	4	18	
UWAZIMA	8.19	286.9	1	59	0						
YONAGO	8.32	302.9	1	57	-4				3	42	
MIYAKO	8.45	0.3	1	57	-5	3	24	-13			
MORIOKA	8.52	356.2	2	1	-2	3	30	-9			
MATSUE	8.53	302.2	2	6	2						
HIROSIMA	8.59	294.2	2	4	0				4	4	
AKITA	8.64	350.7	2	1	-4	3	38	-4			
SAIGO	8.72	307.3	2	8	2				5	15	
OOITA	8.95	285.9	2	4A	-5				4	25	
MIYAZAKI	8.98	277.4	2	11	1				5	6	
HAMADA	9.05	296.8	2	13	2				4	7	
HATINOHE	9.33	358.2	2	15	0	3	48	-11	4	31	
ASOSAN	9.36	283.4	2	19	4						
KUMAMOTO	9.66	282.6	2	23	4	4	26	19			
AOMORI	9.66	354.9	2	19	0	4	3	-4			
SIMONOSEKI	9.67	289.5	2	18	-1						
YAKUSIMA	9.84	268.7	2	22A	1				2	58	
HUKUOKA	10.00	286.8	2	25	1	4	35	19			
UNZENDAKE	10.02	281.9	2	25	1						
SAGA	10.05	284.9	2	28	4				3	20	
NAGASAKI	10.33	281.7	2	27	-1				5	34	
HAKODATE	10.62	355.2	2	29	-3	4	25	-5	4	44	
MORI	10.95	354.7	2	34	-3	4	32	-6			
URAKAWA	10.97	3.4	2	37	0	4	30	-9			
ITUHARA	11.06	289.1	2	33	-5						
MURORAN	11.15	356.4							4	30	
TOMIE	11.26	280.7	2	44	3						
TOMAKOMAI	11.32	358.8							4	33	
SUTTSU	11.67	353.9	2	55	9	4	43	-13			
OBIHIRO	11.76	4.7	2	40	-7	4	41	-17			
KUSIRO	11.94	8.9	2	48	-2	4	46	-16	5	51	
NEMURO	12.47	12.5							5	0	
WAKKANAI	14.21	359.3	3	38	18	6	18	21			
VLADIVOSTOK	14.32	329.0	3	17	-4						
KURILSK	14.78	16.7	3	29	2	6	18	8			
Y.-SAKHLINSK	15.75	2.0	3	36	-4				3	43	PP
ZO-SE	17.75	275.1	4	2A	-3	7	20	2	4	14	PP
GUAM	17.83	170.9	4	4A	-2	7	15	-5			
CHANGCHUN	18.20	318.5	4	8A	-2	7	34	6			

TAIPEI	18.99	256.2	4	24	4	8	3	17			
HWALIEN	19.35	253.2	4	24	0						
NANKING	19.70	278.6	4	24A	-3	8	3	2	4	43	PP
HSINKONG	19.95	251.2	4	32	2	8	26	19			
TAITUNG	20.30	250.6	4	23	-11						
TAWU	20.69	249.9	4	36	-2						
HENGCHUN	20.99	249.3	4	35	-6						
PEKING	22.65	300.0	4	55A	-2	9	2	5	5	29	PP
BAGUIO CITY	24.36	237.8	5	12	-2	9	30	3			
KOROR	24.73	197.9	5	14	-4	9	4	-29	9	37	
PETROPAVLOVK	25.07	24.2	5	24	3						
MANILA	25.32	234.0	5	46	23	10	20	37			
TRUK	25.36	156.4	5	24	0				5	50	PP
HONG KONG	26.25	257.1	5	33	1	10	10	12			
SIAN	27.86	285.1	6	35	48						
MAGADAN	28.99	9.3	5	58	1	10	47	4			
ULAN-BATOR	31.41	312.2	6	19	1	11	25	4			
CHENGTU	32.41	279.1	6	22	-5	11	37	1			
PHU-LIEN	33.23	260.4	6	32	-2				15	41	
IRKUTSK	34.53	318.6	6	46A	1				15	3	SSS
KUNMING	35.00	269.9	6	46A	-3	12	5	-12	8	14	PPP
PORT MORESBY	40.66	172.0	7	36	-1	13	38	-5	9	34	PPP
TIKSI	41.11	353.8	7	39	-1	13	51	2	9	22	PP
LHASA	43.58	281.6	8	0A	0	14	39	14	9	45	PP
SHILLONG	44.08	275.7	8	3	-2	14	35	2	10	17	
CHATRA	47.67	279.3	8	32	-1	15	34	10			
MEDAN	49.06	244.8	8	38	-6				11	47	
BOKARO	49.86	276.1	8	47	-3	16	2	8	10	45	PP
LEMBANG	50.04	226.9	8	44A	-7	15	48	-9			
BANDUNG	50.07	226.8	8	58	6	15	47	-10			
FRUNSE	53.69	302.7	9	18A	-1				11	25	PP
COLLEGE	53.88	29.8	9	18	-2	16	54	4	19	4	SCS
HONOLULU	54.14	85.1	9	25	3	16	58	5	12	49	PPP
DEHRA DUN	54.17	286.8	9	24	2	16	42	-11	11	18	PP
LAHORE	56.81	289.4	9	39A	-2						
TASHKENT	57.88	301.9	9	47	-2				19	31	SCS
NOUMEA	58.16	153.1	10	2	11	17	53	7			
WARSAK DAM	58.26	293.1	9	51	0						
HYDERABAD	58.74	272.4	9	51	-4	18	0	6	12	6	PP
STALINABAD	59.02	298.9	9	57	0	18	5	7			
MADRAS	59.28	266.9	9	57	-2	18	11	10			
BRISBANE	59.29	168.5	9	56	-3	18	1	0			
KHEYS	59.47	348.4	9	53	-7	17	55	-8	10	42	PCP
SUVA	60.31	139.4	10	8A	2	18	29	15	13	41	PPP
COLOMBO	62.58	261.1	10	33	12				21	23	
BOMBAY	62.90	276.6				20	9	82	12	49	
QUETTA	63.24	290.5	10	24A	-1	18	56	5	12	42	PP
RIVERVIEW	65.25	171.5	10	40K	2	19	21	5			
ADELAIDE	65.83	182.9	10	43	1						
NORD	66.90	356.7	10	47	-2	19	37	1			
ASHKABAD	66.95	301.4				19	38	1	10	43	
RESOLUTE	68.16	13.9	10	55A	-2	19	55	4	20	53	SCS
APATITY	68.20	336.9	10	58	1	19	57	5	13	15	PP
ALBERNI	69.07	44.4	11	2	0						
HORSESHOE B.	69.94	43.9	11	5	-3	20	22	10			
VICTORIA	70.22	44.8	11	11	2						
SODANKYLA	70.52	338.2	11	11	0						
THULE	70.99	7.2	11	14	0						
SEATTLE	71.27	45.3	10	49	-27	20	21	-7	36	17	
KIRUNA	72.13	340.1	11	20	-1	20	43	5			
MOSCOW	72.22	324.9	11	21	0	20	43	4	14	3	PP
PULKOVO	73.45	330.6	11	30	2						
BANFF	73.56	39.8	11	33	4						
FORT NELSON	73.92	175.8	11	34	3				11	44	
SHASTA	74.34	51.8	11	33	-1						
TIFLIS	74.80	309.7	11	38	2					21	40 SCS
MINERAL	75.03	51.8	11	39K	1						
KARAPIRO	75.58	153.1	11	43	2				11	58	
BERKELEY	75.76	54.3	11	42	0	21	27	9		12	44
HUNGRY HORSE	75.82	41.9	11	41	-1						
LICK	76.44	54.6	11	46K	0						
RENO	76.63	51.9	11	47	0						
SKALSTUGAN	77.51	339.3	11	52	0						
BUTTE	77.89	43.4	11	53	-1					12	37
SCORESBY SD.	77.96	354.5	11	55	1	21	51	9		22	22 PS
FRESNO	78.00	54.3	11	55	1						
WELLINGTON	78.23	155.3				21	46	1			
UPPSALA	78.40	334.8	11	56	-1	21	48	1		14	52 PP

EUREKA	79.22	50.4	12	0	-1						
SIMFEROPOL	79.81	316.6	12	4A	0	22	7	5	15	9	PP
ROXBURGH	80.33	160.8				22	13	6			
PASADENA	80.48	55.9	12	6	-2	22	10	1	27	33	SS
SALT LAKE C.	81.19	47.6	12	12	0				12	55	
BOULDER CITY	81.84	52.9	12	15	0				13	7	
GOTEBORG	81.99	335.4	12	13	-3						
BERGEN	82.06	339.9				22	31	6			
IASI	82.18	321.2	12	18	1						
WARSAW	82.20	327.8	12	16A	-1	22	35	9	15	28	PP
LWOW	82.36	324.7	12	18	0				22	34	SCS
COPENHAGEN	83.33	333.9	12	25K	3	22	42	4			
KRAKOW	84.19	326.7	12	27	0	22	50	4	15	44	PP
SKALNATE PL.	84.63	325.9				22	59	8	24	22	
BUCHAREST	84.72	319.6	12	32K	3	22	58	7	23	56	PS
KSARA	84.93	306.6	12	33	2	23	5	12	15	51	PP
RACIBORZ	84.97	327.5	12	31	0	23	5	11	12	35	PCP
POTSDAM	85.55	331.4	12	38	4	23	13	13	16	3	PP
BUDAPEST	86.37	325.2	12	31	-7				23	15	SCS
COLLMBERG	86.38	330.7	12	37	-1	23	11	3	15	59	PP
TIMISOARA	86.47	322.9	12	53	15	23	7	-1			
HURBANOVO	86.52	325.9	12	53	15	23	19	10	28	33	SS
JERUSALEM	86.53	305.2	12	39	1	23	20	11			
HALLE	86.67	331.3	12	39	0	23	18	8	24	23	PS
TUCSON	86.67	54.1	12	40	1	23	13	3	13	50	
PRUHONICE	86.69	329.1	12	38	-1	23	13	3	16	3	PP
TUCSON TELE.	86.69	54.0	12	40	1				15	47	PP
BRATISLAVA	86.83	326.6	12	40	0	23	22	10	16	7	PP
ABERDFEN	86.88	341.3	12	36	-4				16	6	PP
JENA	87.25	331.1	12	43	1	23	38	22	16	7	PP
PLAUEN	87.34	330.6	12	41	-1	23	18	1	16	6	PP
SOFIA	87.37	319.6	12	45	3	23	29	12	24	15	
BELGRADE	87.50	322.6	12	52K	9	23	28	10	23	11	SKS
SONNEBERG	87.83	330.9				23	23	2	23	15	SKS
MUNSTER	88.02	333.7	12	47	1				14	19	
DURHAM	88.81	339.8	13	13	24	23	38	8	23	18	
DE BILT	88.82	335.0	12	54	5	23	33	3	24	45	PS
SKOPJE	88.91	320.0				23	36	5	13	20	PCP
BENSBERG	88.99	333.3	12	51	1				16	20	PP
ZAGREB	89.05	325.5				23	25	-8			
STUTTGART	89.90	330.9	12	53	-1	23	47	7	16	29	PP
KARLSRUHE	90.04	331.5	12	55	0	23	49	7	23	26	SKS
TUBINGEN	90.14	330.8	12	56	0				16	25	PP
UCCLE	90.18	334.6	12	57	1	23	25	-18			
TRIESTE	90.24	326.5	12	58	2	23	50	7	16	33	PP
HELWAN	90.36	305.6	12	57	0	23	48	3			
EBINGEN	90.45	330.7	12	58	1						
STRASBOURG	90.64	331.5	12	59	1	23	55	8	16	37	PP
DOURBES	90.66	334.1	12	58	0	23	31	-16			
KEW	91.24	337.5	13	1	0	24	0	8	16	40	PP
CHUR	91.25	329.5	12	53	-8	24	3	11	25	29	
RATHFARNHAM	91.43	341.5	13	14	12	24	13	19			
BASLE	91.54	331.0	13	4	2	23	59	4			
LUBBOCK	91.87	48.5	13	6	2	23	42	-16			
PARIS	92.50	334.5	13	7	0	24	9	6	16	49	PP
FLORENCE X.	92.82	326.6	12	48	-20	23	42	-24	17	12	PP
ROME	93.64	324.7	13	21K	9	23	47	-26	16	59	PP
MESSINA	94.76	320.5				24	26	3	17	5	PP
CLERMONT-FD.	94.78	332.4	13	19	2	24	36	13	23	52	SKS
FAYETTEVILLE	94.88	42.4	13	18	1						
OTTAWA	96.46	25.7	13	15	-10						
SHAWINIGAN	96.52	23.3	13	26	1						
PALISADES	100.90	26.8	13	43	-2	25	17	2	17	58	PP
HALIFAX	101.05	18.3				23	51	-85	32	29	SS
ALGIERS UNI.	102.19	327.3				25	31	6	18	7	PP
ALICANTE	102.44	330.6	13	52	0	25	34	7	18	8	PP
TOLEDO	102.56	333.8				25	21	-7	24	35	
MIRNY	104.29	198.1				24	40	-63	25	16	SKKS
GRANADA	104.72	332.1	14	8A	6	25	58	12	24	41	SKS
MALAGA	105.44	332.5				25	56	0	18	31	PPP
SCOTT BASE	109.80	174.6	19	3	777						
LWIRO	110.87	280.4	14	19	777				33	54	SS
BERMUDA	111.95	24.1							19	49	PP
TAMANRASSET	111.98	316.6	18	2K	-27	25	16	9	19	17	PP
SOUTH POLE	121.01	180.0	18	45	-2				20	15	PP
BYRD STATION	121.98	168.3	18	49	0						
FUQUENE	130.14	49.4	19	45	41	25	45	-21	22	31	SKP
BOGOTA	130.55	50.4				26	24	17	22	39	SKP
HUANCAYO	140.75	69.3	19	20	-4				23	15	PKS

LA PAZ 149.00 68.8 19 41A 3 30 13 SKKS

JULY 24 13.H 8.M 5.S EPICENTRE 52.74-169.77 DEPTH= 0.KM

A=-0.59842 B=-0.10795 C= 0.79388 D=-0.1775 E= 0.9841
G=-0.7813 H=-0.1409 K=-0.6081 HT= -6.4

SE= 2.70

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COLLEGE	16.53	34.1	3	56	1	7	18	19					
SITKA	20.14	63.9	4	37	-2								
MAGADAN	22.72	303.1	5	9	4								
HORSESHOE B.	29.02	77.7	5	58	-6								
VICTORIA	29.30	79.4	6	5K	-2								
SEATTLE	30.37	80.3	6	12	-4	11	18	2					
Y.-SAKHLINSK	30.71	278.5	6	20	1	11	21	-1					
TIKSI	32.29	328.6	6	34	1								
YAKUTSK	32.73	310.6	6	38	1	12	18	25					
BANFF	32.80	70.6	6	35K	-2								
SHASTA	34.03	91.4	6	46	-2								
MINERAL	34.73	91.3	6	57	3								
HUNGRY HORSE	34.94	74.3	6	54	-2						9	26	PCP
BERKELEY	35.87	95.2	7	10K	6	12	44	2			17	46	
RESOLUTE	36.15	25.8	7	6	0	12	35	-11			8	31	PP
RENO	36.31	90.9	7	16	9								
LICK	36.59	95.3	7	14	4								
BUTTE	36.97	76.9	7	13	0								
FRESNO	38.08	94.4	7	35K	13								
EUREKA	38.68	88.0	7	26	-1						9	50	PCP
VLADIVOSTOK	39.24	279.9	7	30	-2								
MATUSIRO	39.45	267.0	7	33	-1	13	29	-8					
SALT LAKE C.	40.39	83.3	7	38	-4								
PASADENA	40.82	96.1	7	54	9	13	44	-13					
BOULDER CITY	41.61	91.2	7	54	2								
ABUYAMA	42.18	267.3	7	56A	0	14	15	-2					
CHANGCHUN	42.74	285.0	8	0A	-1								
RAPID CITY	43.57	73.6	8	6	-2								
BOULDER	44.78	79.6	8	16	-1								
NORD	45.13	5.4	8	21	1								
TUCSON	46.58	91.9	8	30	-2						10	10	PCP
TUCSON TELE.	46.58	91.7	8	30	-2						10	23	PP
PEKING	50.44	286.7	9	2	0	16	14	-1			11	2	PP
ZO-SE	53.52	274.9	9	24A	-1								
NANKING	54.29	277.5	9	28A	-2	17	6	-2					
TRUK	54.88	228.8	9	31	-4								
SCORESBY SD.	54.92	12.6	9	35	0	17	31	15					
OTTAWA	57.79	56.2	9	53A	-3								
SHAWINIGAN	58.45	53.5	9	55	-5								
BREBEUF	58.77	54.9	10	0K	-2						20	11	
APATITY	58.78	349.8	10	2A	-1	18	2	-5					
SEVEN FALLS	58.98	51.9	10	1	-3								
KIRUNA	59.51	355.5	10	7	-1								
SODANKYLA	59.58	352.7	10	8	0								
LANCHOW	60.24	291.4	10	13	0	18	29	3					
PALISADES	61.84	58.6	10	21	-3	18	48	2			22	58	SS
WESTON	62.17	56.0	10	24A	-2								
COLUMBIA	63.07	68.7	10	29	-3								
SKALSTUGAN	64.01	359.0	10	38K	0								
CHENGTU	64.06	287.0	10	37	-1								
HALIFAX	64.23	49.6	10	37K	-2	19	13	-3					
UPPSALA	67.61	356.0	11	0	-1								
KUNMING	69.03	284.0	11	9A	-1	20	16	2					
MOSCOW	69.56	343.9	11	11	-2								
GOTEBORG	69.92	359.0	11	20	5								
COPENHAGEN	71.93	358.7	11	29	2								
LHASA	72.18	295.5	11	31A	2	20	56	5					
DURHAM	72.42	7.1	11	44A	14								
NAMANGAN	72.63	315.8	11	32	1								
BERMUDA	73.19	58.6	11	39	4	21	3	0					
RATHFARNHAM	73.44	10.2	11	36K	0								
SHILLONG	74.87	292.2	11	44A	-1								
HALLE	76.13	358.9	11	52	0								
CHATRA	76.49	296.5	11	55	1								
JENA	76.70	359.1	11	52	-3								

PLAUEN	77.13	358.7	11	51	-6					
SONNEBERG	77.26	359.4	11	59	1					
RACIBORZ	77.34	354.7	12	1	3					
DOURBES	77.43	3.7	11	58	-1					
PRUHONICE	77.60	357.1	12	1	1				13	7
PARIS	78.62	5.2	12	8	3				15	10 PP
STUTTGART	78.87	0.7	12	7	0					
STRASBOURG	79.04	1.7	12	9	1	22	32	25	23	10 PPS
TUBINGEN	79.11	0.8	12	9	1					
IASI	79.35	348.1	12	11	2					
KISHINEV	79.36	347.2	12	10	0					
EBINGEN	79.46	0.9	12	11	1					
SIMFEROPOL	80.55	343.0	11	23	-53					
SOTCHI	80.75	338.7	12	16	-1					
QUETTA	83.79	313.3	12	34	1	22	56	0	28	25 SS
FLORENCE X.	83.86	359.3	12	36	3	23	4	8		
ROME	85.72	358.3	12	42	0	23	15	0	23	44 PS
TOLEDO	86.93	11.0	12	50	2	23	32	6		
TARANTO	86.97	354.6				22	41	-46		
GRANADA	89.65	11.0	13	33A	32	23	51	-1	16	45 PP
MALAGA	90.01	11.7	13	5K	2					
KSARA	90.95	338.9	13	39	32					
TAMANRASSET	104.70	4.5							19	0 PP
RUMANGABO	126.35	336.0	19	7	2					
LWIRO	127.37	336.4	19	9	2					
WILKES	132.96	213.1							44	16 SSS
BYRD STATION	135.55	169.0	19	20	-3					
SOUTH POLE	142.55	180.0	19	26	-9					
WINDHOEK	149.43	347.4	19	49	2					
PIETERMZBURG	152.54	319.4	19	58	7					

JULY 26 6.H 13.M 54.S EPICENTRE -39.79 45.62 DEPTH= 0.KM

A= 0.53897 B= 0.55069 C=-0.63738 D= 0.7147 E=-0.6995
G=-0.4458 H=-0.4555 K=-0.7706 HT= -1.6

SE= 3.22

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PIETERMZBURG	16.09	304.4	3	47	0							
GRAHAMSTOWN	16.60	286.9	3	54	0							
LCO. MARQUES	17.56	317.8	4	6	0						4	20 PP
KIMBERLEY	20.39	296.3	4	37K	-2							
TANANARIVE	20.86	5.1	4	41K	-3	8	29	-2			5	1 PP
HERMANUS	21.68	276.0									5	12 PP
WINDHOEK	29.65	296.9	6	8	1							
ASTRIDA	39.73	334.7	7	30A	-3	13	37	1				
LWIRO	40.37	333.5	7	40A	1	13	46	0				
RUMANGABO	41.05	334.7	7	43	-1						10	1 PPP
LUANDA	42.26	308.1	7	54A	0	14	8	-6			9	36 PP
HALLEY BAY	47.46	199.0	8	36	0						10	39 PPP
SOUTH POLE	50.40	180.0	8	54	-5	14	55	-75				
DUMONT	55.87	151.3	9	34	-5	17	23	-1				
SCOTT BASE	57.42	167.6	8	48	-62							
BYRD STATION	60.15	183.0	10	10	1	18	27	7				
CAPE HALLETT	61.79	163.4	10	17	-3	18	48	7			12	13 PP
BOMBAY	63.67	28.9	10	51	18	19	3	-2				
LEMBANG	64.25	76.8	10	41	4							
HYDERABAD	64.64	34.9	10	40	1	19	10	-7			19	31 PS
MEDAN	65.00	61.7	10	40	-1						11	34
HELWAN	70.56	346.9	11	14	-2							
JERUSALEM	71.85	350.7	11	21	-3						14	11 PP
QUETTA	72.38	19.3	11	25	-2						14	3 PP
TAMANRASSET	72.62	321.5	11	29	0	21	6	14			14	9 PP
KSARA	73.79	351.6	11	36	1	21	6	1			14	52 PP
CHATRA	76.75	37.5	11	50	-2	21	46	8				
SHILLONG	78.02	41.8	11	55	-4							
GORIS	78.91	0.6	12	3	-1	22	3	2				
MBOUR	79.25	298.9				22	26	22			27	16 SS
RIVERVIEW	79.55	125.4	12	13	5	22	11	3				
LHASA	80.95	38.9	12	14	-1	22	19	-3				
TIFLIS	81.13	359.4	12	15	-1	22	25	1				
MESSINA	82.36	336.5	12	23	0	22	42	5			15	35 PP
MAKHACH-KALA	82.39	1.4	12	22	-1							

SOTCHI	83.15	355.7	12	23	-4	22	43	-2			
KUNMING	83.59	50.0	12	32	3	22	43	-6			
NAMANGAN	83.81	19.5	12	30	0						
BRISBANE	84.97	121.7	12	37	1	23	1	-2			
SIMFEROPOL	84.98	351.8	12	34	-2	23	4	1			
CHARTERS TS.	85.24	112.0	12	32	-5						
BUCHAREST	85.65	346.1	12	39	0	23	20	11			
ALGIERS UNI.	85.65	327.0	12	39	0	23	16	7		15	59 PP
FRUNSE	86.36	20.9	12	48	5						
ROME	86.70	335.9	12	45K	1	23	27	8	13 8	16	10 PP
ALMERIA	88.15	323.3	12	51	0					16	20 PP
ALICANTE	88.49	325.5	12	52	-1	23	37	1		16	23 PP
CHENGTU	88.59	47.2	12	51	-2						
FLORENCE X.	88.78	335.9	12	52	-2	23	37	-2	13 17	16	17 PP
CANTON	88.78	58.4	13	1	7	23	39	0			
GRANADA	88.94	322.8	13	6K	11	24	15	35		16	40 PP
MALAGA	88.95	322.0	12	58K	3					16	26 PP
TRIESTE	89.73	338.3	12	58K	-1					16	36 PP
MONACO	90.00	333.4	12	50	-10						
TORTOSA	90.13	327.5	13	32	31						
BRATISLAVA	91.16	341.4	13	25	20						
TOLEDO	91.33	324.1	12	58	-8	23	55	-7		16	40 PP
LANCHOW	92.57	43.6	13	22	10	24	21	8			
CLERMONT-FD.	93.30	331.7	13	16	1	24	32	13		16	59 PP
PRUHONICE	93.48	340.5	13	16	0	24	21	0		17	11 PP
PRAGUE	93.59	340.5				24	29	7			
STUTTGART	93.88	336.8	13	16	-2					17	16 PP
WARSAW	94.11	345.1				23	34	-52			
STRASBOURG	94.16	335.9	13	18	-1	24	30	3		31	0 SS
JENA	95.13	339.2								17	13 PP
HALLE	95.55	339.6								17	28 PP
DOURBES	96.50	334.8	16	32	182						
LA PAZ	96.76	242.2	13	37	6					26	22 PS
DE BILT	98.04	336.2				26	36	96		17	42 PP
COPENHAGEN	99.20	341.7				24	33	-36		26	51 PS
KEW	99.33	332.9				24	36	-34		17	42 PP
'EKING	102.20	47.8								18	15 PP
DURHAM	102.48	334.2	14	4	7	25	46	9		24	47 SKS
RATHFARNHAM	102.97	331.0								18	32 PP
APATITY	107.41	355.1				25	31	34			
SUVA	107.49	133.0								28	14 PS
KIRUNA	108.97	350.2								22	2 PKS
VLADIVOSTOK	113.42	52.8								19	20 PP
MATUSIRO	113.96	61.7				26	6	42		28	55 PS
BOGOTA	115.56	253.7								20	12 PP
FUQUENE	115.87	254.7								19	56 PP
KHEYS	119.64	1.3	19	11	22						
BERMUDA	124.46	285.7								37	50 SS
HALIFAX	128.85	300.0								38	27 SS
PALISADES	134.75	292.0	19	29	11					21	51 PP
BREBEUF	135.87	298.2	19	23A	3						
OTTAWA	137.28	297.5	19	25	2						
RESOLUTE	140.58	344.6	19	27	-2					22	36 PP
TACUBAYA	143.60	246.4	19	42	8						
FAYETTEVILLE	148.27	276.3	19	47	5					22	23 PP
LUBBOCK	153.28	266.9	19	58	8						
COLLEGE	153.69	12.9	19	53	3					23	48 PP
RAPID CITY	156.49	290.7	19	57	3						
LARAMIE	158.10	283.3	20	0	4					24	38 PP
TUCSON	159.55	255.8	20	3	5					24	23 PP
BUTTE	162.87	298.5	20	7	6						
HUNGRY HORSE	163.09	307.1	20	1	0					23	31 PP
BOULDER CITY	164.10	262.4	20	8	6					24	49 PP
EUREKA	165.80	274.7	20	8	4						
PASADENA	165.88	251.6	20	0	-4					25	0 PP
FRESNO	168.15	259.9	20	10	5					25	7 PP
RENO	168.76	273.4	20	25	19						
LICK	169.72	260.3	20	13	7					25	18 PP
MINERAL	170.18	277.4	20	10	3						
BERKELEY	170.35	262.4								25	28 PP
SHASTA	170.78	279.5	20	10	3						

JULY 26 17.H 37.M 13.S EPICENTRE -13.35 -69.46 DEPTH= 610.KM

DEPTH OF FOCUS= 0.091R

A= 0.34142 B=-0.91147 C=-0.22948 D=-0.9365 E=-0.3508
G=-0.0805 H= 0.2149 K=-0.9733 HT= 6.0

SE= 2.64

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
LA PAZ	3.38	157.8	1	21K	-1								
HUANCAYO	5.87	282.1	1	40A	-1								
TALA POZO	15.19	162.1	3	10	1	5	47	5					
BOGOTA	18.43	345.3	3	41	1	6	58	21			4	11	
FUQUENE	19.17	347.0	3	47	0								
CHINCHINA	19.20	341.0	3	46	-1	6	56	6					
SANTIAGO	20.02	182.9	3	52	-2	7	12	9					
SANTA LUCIA	20.02	183.0	3	52	-2	7	15	12			14	5	SCS
CONCEPCION	23.49	185.2	4	26	0						7	14	PCP
LA PLATA	23.86	156.0	4	30	1	8	3	-1					
BALBOA HTS.	24.33	335.1	4	34A	1						9	55	
GALERAZAMBA	24.66	346.2	3	43	-53	7	5	-72					
TRINIDAD	25.14	18.7	4	43	3								
GRENADA	26.38	17.2	4	51	0								
ST. VINCENT	27.57	17.5	5	0	-1	9	0	-3					
BARBADOS	28.06	20.8	5	10	4								
FORT FRANCE	29.09	16.7	5	12	-2						6	32	
DOMINICA	29.57	15.9	5	17	-1						6	47	
SAN JUAN	31.70	6.1	5	34K	-3						37	9	PKPPKP
PORT-PRINCE	31.83	354.8	5	49	11	10	11	3			7	1	PP
SANTIAGO MA.	32.65	324.0	5	47	3						10	28	SCP
SAN SALVADOR	33.28	323.2	5	49	-1						13	47	*SS
MERIDA	39.42	329.5	6	38K	-2	11	56	-5			8	29	PP
OAXACA	40.47	317.5	6	48K	0	12	12	-4			15	51	SS
VERA CRUZ	41.67	320.4	7	2	4	12	40	7					
PUEBLA	42.86	318.0	7	15	8	12	59	9			16	7	SCS
TACUBAYA	43.78	317.4	7	15K	1	13	5	2			16	9	SCS
BERMUDA	45.70	5.7	7	33K	4						12	7	PCP
MANZANILLO	47.08	312.4	7	45K	5	13	51	3			16	17	SCS
GUADALAJARA	47.45	314.9	7	48K	6	14	4	11			16	36	SCS
COLUMBIA	48.36	347.1	7	47A	-2								
OHIGGINS	50.56	173.3	8	1	-4	14	33	-3					
MAZATLAN	51.24	314.8	8	11K	1	14	47	2			16	55	SCS
WASHINGTON	52.46	352.5	8	15A	-4	14	54	-7	10	3	18	3	
WAYNESBURG	53.91	349.8	8	32	3	15	24	4					
FORDHAM	54.08	355.9	8	28K	-2	15	19	-3			10	51	
PALISADES	54.24	355.9	8	29	-3	15	27	3	10	26	10	52	PP
PENNSYLVANIA	54.44	352.2	8	28	-5	15	26	-1			10	40	PP
FAYETTEVILLE	54.44	335.4	8	30	-3	15	8	-19					
CHIHUAHUA	54.73	320.0	8	43K	8	15	40	9			19	4	*SS
ST. LOUIS 1	55.25	340.2	8	35K	-4	15	35	-2			17	0	SCS
WESTON	55.48	358.3	8	37K	-3	15	36	-4					
CLEVELAND	55.68	349.0	8	40K	-2	15	39	-4					
LUBBOCK	55.96	327.3	8	41	-2	15	47	1	10	47			
HALIFAX	57.94	4.9	8	56K	-1	16	10	-2	10	58	17	40	SCS
BREBEUF	58.69	356.6	9	0K	-2	16	23	2					
OTTAWA	58.75	354.8	9	0K	-2	16	7	-15	11	2	12	5	PP
MBOUR	58.83	64.0	9	3K	0	16	37	14	11	8	11	23	PP
SHAWINIGAN	59.70	357.4	9	4K	-5	16	15	-19			17	54	SCS
TUCSON TELE.	60.18	320.0									36	42	PKPPKP
TUCSON	60.19	319.8	9	10K	-2						36	42	PKPPKP
SEVEN FALLS	60.21	358.9	9	10K	-2	16	32	-8			18	2	SCS
BOULDER	62.69	329.6	9	27	-1								
LARAMIE	63.80	330.3	9	32	-3								
SAN DIEGO	64.64	316.3	9	50	10						11	54	
RAPID CITY	64.90	333.8	10	40K	58								
BOULDER CITY	65.14	320.5	9	47K	4	17	36	-4					
PASADENA	66.14	317.1	9	48K	-2	17	51	-1	11	49	12	30	PP
SALT LAKE C.	66.62	326.1	9	52K	-1	18	0	3					
EUREKA	68.09	322.8	10	1K	0								
FRESNO	68.77	318.5	10	3K	-2								
LICK	70.30	318.0	10	14K	0	18	43	4					
BYRD STATION	70.43	188.2	10	18K	3	18	49	8			22	16	*SS
RENO	70.44	320.8	10	15K	0								
BUTTE	70.70	329.7	10	16K	-1	18	46	2			22	22	*SS
BRANNER	70.70	317.8	10	16K	-1								
BERKELEY	71.00	318.2	10	18K	-1	18	51	4	12	19	22	50	*SS
MINERAL	72.03	320.6	10	23K	-1	19	0	1					
UKIAH	72.34	318.8	10	26K	0	19	13	11	12	29	37	57	PKPPKP
SASKATOON	72.70	337.0	10	26	-2	19	3	-3					
SHASTA	72.72	320.6	10	26K	-2	19	7	1					
HUNGRY HORSE	73.05	330.7	10	29K	-1	19	7	-3			38	9	PKPPKP

ARCATA	73.87	319.9	10	37	2	19	22	3						
CORVALLIS	75.53	323.4	10	44K	0	19	39	2						
LISBON	76.46	44.3	10	50K	1	19	50	4	12	57	20	1	SKS	
SOUTH POLE	76.73	180.0	10	52A	1	19	42	-7			22	35	SKS	
SEATTLE	76.79	326.4	10	51A	0	20	2	12						
VICTORIA	77.91	326.6	10	56K	-1	20	5	3						
SERRA PILAR	78.02	42.4	10	49A	-9	19	41	-22			25	15	SS	
HORSESHOE B.	78.35	327.4	10	58A	-1	20	7	1						
MALAGA	78.87	48.0	11	0K	-2	20	17	6	13	10	14	12	PP	
ALBERNI	79.10	326.7	11	3K	0	20	6	-8	13	17				
GRANADA	79.64	47.8	11	2K	-4	20	16	-3	13	30	15	31	PP	
ALMERIA	80.32	48.5	11	10	0	20	28	2	13	14	14	32	PP	
TOLEDO	80.50	45.2	11	12	2	20	26	-2	13	27	14	24	PP	
LUANDA	80.94	96.9	11	13K	0	20	34	2			14	35	PP	
HERMANUS	81.52	123.3	11	21	5	20	37	-1			14	31	PP	
TAMANRASSET	81.70	64.3	11	17K	0	20	37	-3	13	31	14	38	PP	
WINDHOEK	81.87	111.2	11	17	0									
ALICANTE	82.38	47.8	11	23	3	20	54	8			14	14	PP	
SCOTT BASE	83.71	190.2	11	26	-1	21	12	13			16	16	PP	
TORTOSA	84.05	45.8	11	28	0	20	57	-5						
ALGIERS UNI.	84.37	50.3	11	29K	-1	21	5	-1	13	46	15	14	PP	
REYKJAVIK	85.30	19.0	11	35K	1	21	14	0	14	16	17	17	PP	
RATHFARNHAM	85.41	32.5	11	32K	-3				14	7	17	40	PPP	
BARCELONA	85.42	45.7	11	35	0	21	18	3			25	16		
VIK	85.76	20.4	11	37	0	21	17	-2			21	44		
CAPE HALLETT	86.07	195.4	11	38K	0	21	24	3	13	52	15	15	PP	
SIDA	86.32	20.4	11	42	3				13	54	17	6	PP	
KIMBERLEY	87.33	118.8	11	43	-1									
AKUREYRI	87.54	18.9	11	47	2						13	3		
CLERMONT-FD.	87.71	41.9	11	46K	0				14	1	15	22	PP	
GRAHAMSTOWN	87.72	123.6	11	45K	-1									
KEW	87.84	35.8	11	43	-3	22	0	22	13	58	15	28	PP	
EDINBURGH	88.24	31.0	11	50	2	21	48	7	14	10	17	25	PP	
PARIS	88.45	39.0	11	49K	0	21	17	-26	14	3	15	37	PP	
SITKA	88.55	330.1	11	50K	0	21	24	-20			39	24	PKPPKP	
DURHAM	88.55	32.5	11	47K	-3	21	49	5	14	0	15	35	PP	
RESOLUTE	89.29	353.4	11	51K	-2									
ABERDEEN	89.34	30.2	11	47	-6	21	34	-17	14	15	15	40	PP	
SCORESBY SD.	89.72	14.4	11	55K	0	21	28	-26			28	20	SS	
MONACO	89.89	44.9	11	55	-1				14	8	37	32	PKPPKP	
DOURBES	90.20	38.3	11	55	-2	21	40	-19						
NEUCHATEL	90.62	41.7	11	59	0	21	36	-26						
OROPA	90.85	43.2	11	54	-6	21	37	-27	13	45	16	2	PP	
BASLE	91.20	41.3	12	2	0	21	38	-29						
DE BILT	91.24	36.5	12	2K	0	21	51	-17	14	23	15	47	PP	
HEERLEN	91.30	37.8	12	4	2									
PAVIA	91.52	43.9	12	4A	1						13	14		
STRASBOURG	91.65	40.4	12	4K	0	22	22	11	14	11	16	11	PP	
PIETERMZBURG	91.85	120.9	12	6	1									
BENSBERG	92.03	38.0	12	5	-1	22	4	-10						
KARLSRUHE	92.18	40.1	12	6K	0	21	39	-37	14	11	16	12	PP	
CHUR	92.26	42.4	12	6K	-1	21	40	-36			14	26		
EBINGEN	92.29	41.0	12	5	-2	21	54	-23			16	5	PP	
WITTEVEEN	92.34	36.1	12	6	-1									
TUBINGEN	92.46	40.7	12	6	-2	21	54	-24						
FLORENCE X.	92.55	45.7	12	4K	-4	22	20	1			23	5	PS	
RAVENSBURG	92.59	41.5	12	8	0	21	52	-27						
STUTTGART	92.61	40.5	12	7K	-1	21	55	-24	14	25	16	4	PP	
MUNSTER	92.62	37.1	12	7	-1						12	40		
BOLOGNA	92.80	45.0	12	12	3	22	47	26			15	48		
ROME	92.92	47.7	12	11K	1	22	35	13	14	41	16	47	PPP	
KIPAPA	93.47	291.1	12	12A	0				14	23	16	16	PP	
HONOLULU	93.51	290.9	12	12A	0	21	51	-36	14	29	16	24	PP	
BERGEN	94.14	28.7	12	14A	-1	22	44	12	14	29	16	7	PP	
MESSINA	94.28	51.9	12	14	-2	22	3	-31	14	17	16	13	PP	
SONNEBERG	94.31	39.3	12	18	2	21	59	-35			16	22	PP	
REGGIO CALA.	94.34	52.0	12	16	0	21	57	-37			26	12	SKKS	
JENA	94.69	38.8	12	16	-2	22	58	21	14	34	16	23	PP	
TRIESTE	94.76	44.3	12	18	0	22	39	1	14	37	16	24	PP	
LCO. MARQUES	94.77	117.9	12	21	3	22	39	1	14	33	16	15	PP	
PLAUEN	94.93	39.4	12	17	-2	22	55	16	14	35	16	21	PP	
HALLE	95.07	38.4	12	19	0	22	3	-37	14	32	16	11	PP	
COLLMBERG	95.65	38.7	12	21	-1	22	4	-41			14	51	PP	
TARANTO	96.07	50.0	12	27	3	22	11	-38			15	29		
PRAGUE	96.24	40.1	12	25	0	22	59	9	15	47	16	58	PP	
PRUHONICE	96.30	40.2	12	25	0	23	3	12	14	45	22	14	SKS	
ZAGREB	96.31	44.5	12	23K	-2	23	12	21	14	44	16	39	PP	
COPENHAGEN	96.41	34.4	12	26	1	22	58	7	14	42	16	37	PP	

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

GOTEBORG	96.65	32.3	12	23	-4			14	32	16	36 PP
VIENNA-H.	97.09	42.2	12	29	0	23	2 5	15	17	16	34 PP
COLLEGE	97.10	335.1	12	26A	-3	23	0 3			22	9 SKS
DUMONT	97.29	191.4	12	27	-2	22	4 -55				
LWIRO	97.52	94.1	12	34A	4	22	49 -12				
BRATISLAVA	97.55	42.4	12	32	1	23	8 7	14	53	16	32 PP
NORD	98.07	6.8	12	32	-1	22	17 -48			16	35 PP
SKALSTUGAN	98.21	26.6	12	33	-1	22	12 -54			29	12 PKKP
HURBANOVO	98.22	42.8	12	42	8	22	12 -55			16	18 PP
RUMANGABO	98.25	93.3	12	34A	0	24	32 85				
ASTRIDA	98.34	94.7	12	33A	-1	22	43 -25				
AFIAMALU	98.43	253.6	12	11	-24	22	11 -57	14	34	16	26 PP
KALOCSA	98.50	44.3	12	42	7	22	15 -54				
RACIBORZ	98.62	40.6	12	37	2	22	28 -42	14	53	16	47 PP
BUDAPEST	98.73	43.3	12	38	2	23	20 9	15	16	22	6 SKS
KECSKEMET	99.05	44.0	12	56	19	22	58 -16			16	40 PP
TUAI	99.13	226.6				22	19 -55				
BELGRADE	99.22	46.1	12	40A	2	22	31 -44			16	46 PP
SZEGED	99.23	44.7	13	16	38						
MIRNY	99.27	173.0	12	38	0					16	47 PP
SKOPJE	99.43	49.1	12	41K	2	22	33 -44			16	18 PP
WELLINGTON	99.67	223.5	13	1	21	22	24 -55	14	55	16	59 PP
KRAKOW	99.72	40.8	12	41	1	22	24 -55	13	0	16	57 PP
SKALNATE PL.	99.79	41.8	12	52	11	23	31 11	15	5	17	1 PP
TIMISOARA	99.90	45.3	10	48	-113					23	17
GEBBIES PASS	99.91	220.6	12	36	-5	22	22 -59				
UPPSALA	99.97	30.8	12	40	-2	23	27 6	14	48	17	2 PP
TONGARIRO	100.09	225.7	12	46	4	22	32 -50	14	57	17	7 PP
ATHENS	100.56	53.4	12	44K	0	22	18 -68	15	30	17	11 PP
KARAPIRO	100.66	226.8	12	45	0			14	57	17	10 PP
WILKES	100.67	180.0	12	44	-1			14	55	16	58 PP
WARSAW	100.72	38.8	12	43	-2	23	9 -19	15	8	17	1 PP
SOFIA	100.96	48.6	12	50	4	23	41 12			17	8 PP
ROXBURGH	101.02	217.8				22	27 -63	14	58	17	8 PP
COBB RIVER	101.13	223.0				22	23 -68				
KIRUNA	102.22	22.9	12	52	1	23	48 8	15	4	17	11 PP
LWOW	102.31	41.4				23	30 -11			13	53
ONERAHI	102.44	228.4				22	35 -67			17	22 PP
CAMPULUNG	102.49	46.1	12	57	4	22	48 -54			17	25 PP
BUCHAREST	103.16	47.1	12	55K	-1	22	44 -64	15	14	17	24 PP
BACAU	103.92	44.9	13	5	6	22	51 -63			17	4 PP
FOCSANI	104.06	45.9	13	38	38					16	37
IASI	104.43	44.3	13	2	1	22	44 -74			17	30 PP
SODANKYLA	104.57	23.4	13	5	3						
HELWAN	105.79	62.5	13	10	777			15	29		
SUVA	106.09	246.5	13	19	777	24	30 0	16	24	17	49 PP
PULKOVO	106.36	31.3	13	8	777	22	48 0			17	42 PP
APATITY	107.18	23.1	13	15	777	23	59 0	13	45	17	48 PP
KHEYS	108.34	9.0				23	7 0			18	13 PP
SIMFEROPOL	108.90	46.9	13	21	777	23	13 0			20	33 PPP
KSARA	109.97	58.7	13	29	777			15	57	18	17 PP
TANANARIVE	110.15	116.1	17	28	5	23	10 3			18	11 PP
MOSCOW	110.55	35.3	13	31	777	23	19 11	15	47	20	11
NOUMEA	114.75	237.6	18	28	56					27	10
TIFLIS	116.85	49.9	17	40	4	23	38 6			19	0 PP
MELBOURNE	119.70	211.0	17	42A	1	23	46 4			19	25 PP
TIKSI	120.70	353.3	17	43	0					21	15 PKS
BRISBANE	122.16	225.1	14	42	777					19	35 PP
SVERDLOVSK	122.43	29.9	17	49	2					29	39 PS
ADELAIDE	125.04	208.3	17	53	1	23	59 0			19	47 PP
PETROPAVLOVK	125.08	326.8	17	53	1					19	52 PP
MAGADAN	125.15	336.3	17	53	1					19	50 PP
ASHKABAD	127.76	52.2	18	0	3					20	40
CHARTERS TS.	131.68	227.3	18	5	1						
TASHKENT	134.60	44.2								25	1
PERTH	134.67	186.3								20	43 PP
RABAUL	135.14	249.9	17	59	-12			20	33	20	45 PP
STALINABAD	135.37	48.0	18	12	1					20	50 PP
SEMIPALATNSK	135.58	27.5	18	14	2					20	51 PP
QUETTA	136.49	60.1	18	4	-9	24	39 13	20	35	20	45 PP
Y.-SAKHLINSK	137.01	327.6	18	15	1					21	11 PP
PORT MORESBY	137.19	240.0	18	12	-3					21	22 SS
FRUNSE	137.28	39.5	18	20	5					20	56 PP
KARACHI	137.37	66.3	18	12	-3			20	39	20	56 PP
NEMURO	137.59	321.6	18	13	-2					21	15 PP
ABASHIRI	137.97	323.2	18	18	2						
KUSIRO	138.50	321.9	18	10	-7					20	56 PP
WAKKANAI	138.56	326.6	18	46	29						
TRUK	138.99	266.0	18	15K	-3			20	58		

OBIHIRO	139.25	322.6	18	11	-7					20	54 PP
URAKAWA	139.96	321.9	18	18	-2					21	5 PP
SAPPORO	140.24	324.1	18	15	-6	24	26	-6		21	13 PP
TOMAKOMAI	140.45	323.2	18	28	7					21	29 PP
IRKUTSK	140.86	6.1	18	21	-2				21 3	39	29 SS
MURORAN	140.92	323.4	18	16	-7						
SUTTSU	141.05	324.6	18	23	0					21	4 PP
MORI	141.29	323.4	18	22	-1	24	5	-28		21	25 PP
HAKODATE	141.41	322.9	18	21	-3					21	7 PP
HATINOHE	141.67	320.7	18	19	-5					28	10
MIYAKO	141.91	319.3	18	21	-3					21	12 PP
AOMORI	141.96	321.7	18	22	-2					35	37
MORIOKA	142.38	319.9	18	21	-4					21	11 PP
MIZUSAWA	142.74	319.2	18	24	-1					21	37 PP
ISINOMAKI	143.01	318.1	18	24	-2						
AKITA	143.04	320.7	18	23K	-3					21	3 PP
SENDAI	143.38	318.2	18	15	-11					20	53 PP
BOMBAY	143.40	76.3	18	26	0	25	48	71		21	20 PP
SAKATA	143.69	319.8	18	27	0					27	36
YAMAGATA	143.74	318.6	18	28	1						
HUKUSIMA	143.95	317.8	18	28	1					19	47
SUIHWA	144.06	340.6	18	30	3						
ONAHAMA	144.11	316.3	18	29	1	24	7	-31		21	13 PP
SHIRAKAWA	144.47	317.1	18	32	4					21	38 PP
MITO	144.71	315.8	18	31	3						
NIIGATA	144.77	319.1	18	34	5					26	20
KAKIOKA	144.98	315.8	18	31	2					18	45 PKP2
VLADIVOSTOK	145.08	332.2	18	29	0						
AIKAWA	145.21	319.9	18	32	3						
KUMAGAYA	145.57	316.3	18	33	3						
TOKYO C.M.O.	145.58	315.3	18	31	1				20 42	27	45
DEHRA DUN	145.61	55.3	18	33	3	24	41	1		21	46 PP
MAEBASI	145.64	316.9	18	30	0					21	5 PP
TAKADA	145.77	318.6	18	31	1						
YOKOHAMA	145.78	315.0	18	34	4					23	58
TITIBU	145.86	316.3	18	33	3						
MERA	145.93	314.1	18	31	1						
OIWAKE	146.02	317.3	18	35	5						
NAGANO	146.05	318.1	18	33	2					40	32
MATUSIRO	146.11	317.9	18	31K	0					25	39 PPP
OSIMA	146.32	314.3	18	32	1					19	5
HUNATU	146.34	315.9	18	33	2					35	12
AJIRO	146.36	314.9	18	33	2						
KOHU	146.40	316.2	18	34	3					22	36
MISIMA	146.43	315.1	18	33	2					40	32
MATUMOTO	146.45	317.6	18	34	3					19	42
WAZIMA	146.45	320.2	18	35	4						
GUAM	146.73	274.3	18	33K	2				20 59	28	7
HATIDYOZIMA	146.85	311.3	19	4	32						
TAKAYAMA	146.98	318.1	18	37	5						
CHANGCHUN	147.09	340.1	18	33	1				21 1	22	11 PP
KANAZAWA	147.13	319.2	18	38	6						
OMAESAKI	147.21	314.9	18	35	3					26	33
HAMAMATU	147.49	315.6	18	40	7				20 39		
KODAIKANAL	147.50	91.9	18	38	5					22	26 PKS
HUKUI	147.67	318.9	18	39	6						
TORISIMA	147.70	306.7	18	42	9						
GIHU	147.74	317.4	18	36	3					35	29
NAGOYA	147.74	316.9	18	38	5					21	12 PP
IBUKISAN	148.00	317.8	18	39	6				20 41		
TSURUGA	148.04	318.4	18	38	5						
HIKONE	148.15	317.7	18	38	4						
KAMEYAMA	148.26	316.9	18	38	4					19	51
TU	148.29	316.6	18	38	4						
MAIZURU	148.54	318.8	18	41	7					21	29 PP
NARA	148.78	317.2	18	44	9						
HYDERABAD	148.82	78.4	18	39	4	24	15	-29		21	10 PP
ABUYAMA	148.84	317.7	18	36K	1						
OWASE	148.89	315.9	18	39	4					35	6
TOYOOKA	148.92	319.5	18	42	7					41	3 SS
OSAKA	149.00	317.4	18	36	1	24	22	-22		21	29 PP
COLOMBO	149.16	99.0	18	37	2						
KOBE	149.21	317.8	18	38	3					40	45
TOTTORI	149.31	320.0	18	41	6						
SAIGO	149.40	322.0	18	40	5					19	4
WAKAYAMA	149.49	317.1	18	39	3						
SIOMISAKI	149.54	315.3	18	37	1					28	44
SUMOTO	149.61	317.6	18	39	3					21	34 PP

HIMEJI	149.83	318.3	18 39	3			
YONAGO	149.90	320.8	18 40	4	20 43	21 50	PP
TOKUSIMA	149.97	317.5	18 39	3		21 51	PP
OKAYAMA	150.02	319.1	18 43	7			
MATSUE	150.05	321.2	18 39	3		22 30	
TAKAMATU	150.17	318.4	18 45	9		21 24	
MADRAS	150.45	87.1	18 41	4		21 44	PP
MUROTO	150.74	316.6	18 41	4		19 35	
KOTI	150.98	317.7	18 41	3	21 19	19 21	PKP2
HAMADA	151.03	321.5	18 43	5		21 41	PP
HIROSIMA	151.16	320.2	18 35	-3		21 39	PP
MATUYAMA	151.31	319.0	18 44	6	20 58	40 53	SS
UWAZIMA	151.82	318.3	18 46	7			
SIMIDU	151.83	317.1	18 44	5		22 3	PP
SIMONOSEKI	152.37	321.4	18 43	3			
OOITA	152.42	319.4	18 40	0		30 51	
PAOTOW	152.87	0.8	18 45	5			
HUKUOKA	152.93	321.4	18 43	2	21 11	41 31	SS
PEKING	152.97	350.5	18 41K	0	21 12	22 41	PP
ASOSAN	152.98	319.5	18 44	3			
ITUHARA	153.17	323.8	18 55	14			
SAGA	153.23	321.0	18 53	12		19 27	
TATUNG	153.25	355.3	18 46	5			
KUMAMOTO	153.27	319.8	18 49	8		19 10	
MIYAZAKI	153.39	317.4	18 44	3		21 43	PP
VIZIANAGRAM	153.52	76.2	18 52	11			
NAGASAKI	153.84	320.7	18 44	2			
KAGOSIMA	154.18	317.9	18 45	3	21 12	28 52	
CHATRA	154.35	54.9	18 46	4		28 50	
BOKARO	154.39	62.4	18 46K	3		22 58	PP
YAKUSIMA	154.92	315.9	18 45	2	21 3	19 14	PKP2
KOROR	155.71	258.1	18 48	4	21 24	29 2	
LHASA	155.74	45.0	18 47K	3	21 18	23 8	PP
LANCHOW	156.58	13.8	18 51K	6	21 19	23 11	PP
SHILLONG	158.65	52.5	18 50A	2		23 14	PP
SIAN	159.14	3.8	18 58	9			
BANDUNG	159.68	171.7	18 59	10		21 47	
ZO-SE	159.80	332.7	18 50K	1	21 19	23 20	PP
NANKING	159.91	339.2	18 50	0	21 18	23 17	PP
CHITTAGONG	160.08	60.7	18 53	3	21 55	23 28	PP
TOCKLAI	160.11	45.6	18 54	4		21 18	PP
DJAKARTA	160.25	169.0	18 50K	0		23 34	PP
CHENGTU	161.75	18.2	18 54K	3	21 28	23 31	PP
PORT BLAIR	162.53	93.5	18 56	4		23 34	PP
TAIPEI	164.44	319.9	19 12	18			
ILAN	164.48	318.7	19 1	7			
MEDAN	164.79	128.6	18 58A	4		23 47	PP
HWALIEN	165.12	316.8	19 5	10			
TAICHUNG	165.60	319.7	19 9	14			
HSINKONG	165.87	314.8	18 59	4			
KUNMING	166.21	31.3	18 57K	1	21 29	23 59	PP
TAWU	166.69	313.7	19 2	6			
TAINAN	166.71	317.6	19 1	5			
HENGCHUN	167.02	312.9	19 47	51			
MANILA	169.79	278.1	19 1	3		20 19	PP
BAGUIO CITY	169.82	288.7	19 1	3		30 2	
CANTON	169.98	345.3	19 0K	2	21 27	24 12	PP
HONG KONG	170.45	339.3	19 1K	3		24 11	PP
PHU-LIEN	171.71	26.2	18 58	-1		24 19	PP

JULY 27 O.H 22.M 36.S EPICENTRE -20.79-178.86 DEPTH= 593.KM

DEPTH OF FOCUS= 0.088R

A=-0.93548 B=-0.01865 C=-0.35290 D=-0.0199 E= 0.9998
G= 0.3528 H= 0.0070 K=-0.9357 HT= 4.5

SE= 1.05

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SUVA	3.67	315.3	1	23A	-1	2	29	-1				
AFIAMALU	9.63	45.7	1	44A	-32	3	47	-17				
NOUMEA	13.75	261.1	2	56	0						5	30
ONERAHI	16.06	200.3	3	3	-16							
KARAPIRO	17.75	194.7	3	35A	0							

TUAI	18.27	190.0			6	36	0					
TONGARIRO	18.97	193.5	4	28	42	8	20	92				
BRISBANE	26.47	249.9	4	54	1						6	28
RIVERVIEW	29.53	237.6	6	55A	95						9	36
CHARTERS TS.	32.67	265.1	5	29K	-17	10	22	-1				
PORT MORESBY	34.64	283.9	6	3	0	10	53	0	7	43	8	17 PCP
ADELAIDE	39.77	240.1	6	45	1							
TRUK	40.22	311.3	6	48	0				8	38		
GUAM	49.38	310.5	7	59	0							
KOROR	53.68	296.4	8	30	1							
SCOTT BASE	57.53	183.6	8	56	0							
BYRD STATION	64.49	170.4	9	41	0				11	34		
SOUTH POLE	69.34	180.0	10	10	-1				12	7	38	0 PKPPKP
MATUSIRO	69.97	324.3	10	14K	-1							
LEMBANG	72.23	269.3	10	25K	-3	19	5	1				
HONG KONG	78.12	299.4	11	2	2						17	47
BERKELEY	78.93	42.3	11	4K	0							
LICK	79.01	43.0	11	6K	1							
FRESNO	79.86	44.4	11	10	1							
SHASTA	80.58	40.0	11	13K	0							
MINERAL	80.84	40.6	11	14K	0							
RENO	81.47	42.1	11	18K	1							
BOULDER CITY	82.76	47.3	11	24	0				13	28		
TUCSON	83.73	52.2	11	30	1				13	37	37	52 PKPPKP
TUCSON TELE.	83.85	52.2	11	31	2				13	39		
EUREKA	83.88	43.9	11	30	0				13	32		
SITKA	85.69	22.2	11	38	0							
SALT LAKE C.	87.25	44.4	11	46	0							
COLLEGE	88.67	12.7	11	50	-2				13	59		
HUNGRY HORSE	89.85	37.1	11	57	-1				14	3	27	2
LARAMIE	91.68	46.2									19	16
RAPID CITY	94.45	44.5	12	17	-2				14	25		
RESOLUTE	108.30	16.2	17	20A	-2							
SHAWINIGAN	115.74	47.4	17	33A	-3							
QUETTA	120.57	293.5	17	47	2							
SODANKYLA	130.71	347.3	18	4	-1							
KIRUNA	131.43	350.4	17	53	-13							
SKALSTUGAN	136.58	352.8	18	5	-11							
HELSINKI	137.18	342.7	18	7	-10							
UPPSALA	139.25	347.3	18	12	-9							
GOTEBORG	142.29	350.5	18	18	-9							
ASTRIDA	143.60	233.7	18	28	-1						18	9 PP
LWIRO	144.52	233.1	18	33K	3				20	47		
RUMANGABO	144.72	234.8	18	34	3						18	16 PP
DURHAM	146.01	2.8	18	33K	0							
KSARA	146.68	300.3	18	35	1				20	56	21	54 *SPKP
RATHFARNHAM	147.05	8.2	18	37	3							
JERUSALEM	147.67	296.8	18	37	2							
WITTEVEEN	147.75	353.7	18	39	4							
RACIBORZ	147.80	339.2	17	41	-54							
COLLMBERG	148.16	345.8	18	36	0							
HALLE	148.21	347.1	18	37	1				20	53		
JENA	148.82	347.2	18	37	0				20	58		
PRUHONICE	148.99	343.1	18	25	-12				21	2	18	44 PKP2
KEW	149.36	1.8	18	39	1							
BENSBERG	149.52	352.5	18	44K	6				20	50		
BRATISLAVA	149.81	338.5									26	45
DOURBES	150.63	355.5	18	41	2							
HELWAN	151.33	294.5	18	49K	8				21	5		
STUTTGART	151.35	348.8	18	41	0						26	54 PPP
TUBINGEN	151.60	348.9	18	41	0							
STRASBOURG	151.77	350.7	18	43	2							
EBINGEN	151.96	348.8	18	41	0							
PARIS	152.03	358.1	18	42	0						19	2 PKP2
TRIESTE	153.13	340.2	18	47	4						19	7 PKP2
ATHENS	154.03	316.1	18	53K	9							
FLORENCE X.	155.58	342.1	18	42	-4	25	54	58				
MONACO	156.53	348.5	19	21	33							
TAMANRASSET	175.48	296.7	19	5	3						21	22 24 39 PP

JULY 27 3.H 21.M 56.S EPICENTRE 45.97 148.40 DEPTH= 0.KM

A=-0.59406 B= 0.36551 C= 0.71659 D= 0.5240 E= 0.8517
G=-0.6103 H= 0.3755 K=-0.6975 HT= -3.9

SE= 2.92

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	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KURILSK	0.82	206.9	0	18	-1	0	33	1					
NEMURO	3.32	218.3	0	53	-1	1	30	-5			2	9	
ABASHIRI	3.51	237.8	0	58	1	1	36	-4					
Y.-SAKHLINSK	4.05	286.1	1	5	0								
KUSIRO	4.14	225.2	1	9	3	2	0	4					
WAKKANAI	4.74	265.8	1	9	-6	1	39	-32					
OBIHIRO	4.81	232.5	1	21	5	2	25	12			1	52	
ASAHIGAWA	4.81	245.1	1	17	1	2	7	-6					
UGLEGORSK	5.30	308.3	1	24	1								
URAKAWA	5.56	228.7	1	27	1	2	33	1					
SAPPORO	5.81	242.6	1	34	4	2	42	4			3	40	
TOMAKOMAI	5.99	237.3	1	46	14								
MURORAN	6.46	238.4	1	40	1								
MORI	6.84	238.4	1	46	2	3	4	0			3	50	
HAKODATE	6.95	235.7	1	46	0						2	31	
HATINOHE	7.39	225.1	1	49	-3	3	8	-10					
AOMORI	7.56	229.8	1	53	-1								
MORIOKA	8.21	222.8	1	59	-4	3	35	-3					
MIZUSAWA	8.68	220.7	2	6	-4	3	42	-8					
AKITA	8.72	227.2	2	9	-2								
ISINOMAKI	9.18	217.4	2	14	-3	3	53	-9					
SAKATA	9.48	224.9	2	19	-2						2	57	
SENDAI	9.49	218.5	2	28	7	4	0	-10					
YAMAGATA	9.75	220.6	2	22	-3	4	11	-5					
HUKUSIMA	10.11	218.5	3	17	47								
ONAHAMA	10.62	214.6	2	41	4								
MITO	11.28	214.7	2	59	13								
UTUNOMIYA	11.38	217.2	2	45	-2								
NAGANO	12.03	223.1	3	2	6								
VLADIVOSTOK	12.11	262.3	3	0	3	5	22	8					
MATUSIRO	12.12	222.7	2	53A	-4	5	28	14					
WAZIMA	12.13	229.1	2	51	-6								
OIWAKE	12.15	221.0	3	4	6								
TOKYO C.M.O.	12.18	215.5	3	4	6	5	9	-7			4	52	
MATUMOTO	12.48	222.6	2	59	-3								
MAGADAN	13.68	5.2	3	26	8								
HIKONE	14.10	225.0	3	23	0								
OSAKA	14.95	225.4	3	40	5								
CHANGCHUN	16.49	270.9	3	57	3	7	2	4					
HAMADA	16.60	234.0	3	55	-1								
YAKUTSK	19.35	332.9	4	30	0	8	10	7					
PEKING	24.20	267.4	5	19A	0	9	39	3					
ZO-SE	25.79	244.4	5	35	0								
NANKING	26.69	249.0	5	44	1								
TIKSI	27.37	346.7	5	48	-1								
ULAN-BATOR	28.16	289.2	5	56	0								
HONG KONG	36.44	241.3	7	8	-1								
BAGUIO CITY	37.50	227.4	7	17	0								
CHENGTU	37.52	261.8	7	17A	-1								
COLLEGE	38.78	37.7	7	28	0								
KUNMING	41.97	256.1	7	54A	-1	14	12	-2					
KHEYS	46.18	346.1	8	18	-10								
SITKA	46.33	47.2	8	37	7								
LHASA	47.15	270.5	8	37	1								
SHILLONG	49.08	265.6	8	51A	0								
SVERDLOVSK	52.15	315.9	9	12	-3								
RESOLUTE	52.59	17.4	9	15	-3								10 26 PCP
NAMANGAN	53.89	294.2	9	27	0								
VICTORIA	56.63	52.7	9	46	-1								
APATITY	56.73	335.4											21 45
SODANKYLA	58.76	337.4	10	0	-2								
CORVALLIS	58.93	56.5	10	5	1								
BANFF	59.31	46.7	10	3	-3								
KIRUNA	59.99	339.8	10	9	-2								
SHASTA	61.79	59.6	10	23	0								
HUNGRY HORSE	61.80	48.6	10	23	0								
MINERAL	62.48	59.5	10	27A	-1								
QUETTA	63.37	286.7	10	32	-2								
BERKELEY	63.62	62.1	10	36	1								
RENO	64.06	59.3	10	38	0								
LICK	64.33	62.2	10	38A	-2								
HELSINKI	64.63	332.5	10	39	-3								
CHARTERS TS.	65.69	182.2	10	47A	-2								
FRESNO	65.83	61.6	10	49	-1								
EUREKA	66.37	57.2	10	53	0								13 22 PP
UPPSALA	67.13	335.5	10	54	-4								

PASADENA	68.54	62.8	11	6	-1						
BOULDER CITY	69.36	59.4	11	12	0						
TIFLIS	69.37	309.0	11	11	-1						
RAPID CITY	70.24	46.6	11	16	-1						
LARAMIE	70.96	50.0								21	20
BOULDER	72.02	50.8	11	28	0						
BRISBANE	73.22	175.7	11	35	0						
TUCSON	74.33	59.8	11	42	1					12	21 PCP
TUCSON TELE.	74.33	59.7	11	42	1						
PRUHONICE	76.39	331.4	11	58	5						
STUTTGART	79.16	333.9	12	10	2						
KSARA	79.94	308.6	12	12	-1						
FAYETTEVILLE	80.78	46.8	12	17	0						
OTTAWA	81.04	29.8	12	18K	0						
SEVEN FALLS	81.11	25.9	12	25	6						
BREBEUF	81.67	28.4	12	21K	-1						
ROME	84.10	328.5								27	28
KARAPIRO	87.00	158.8	11	31	-78						
BYRD STATION	135.24	165.7	19	20	-2						
SOUTH POLE	135.77	180.0	19	13	-10						

JULY 27 17.H 19.M 3.S EPICENTRE -28.44 62.64 DEPTH= 0.KM

A= 0.40467 B= 0.78218 C=-0.47375 D= 0.8882 E=-0.4595
G=-0.2177 H=-0.4208 K=-0.8807 HT= 2.3

SE= 2.26

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TANANARIVE	16.75	301.2	3	56K	-1						6	21
GRAHAMSTOWN	31.24	251.9	6	25	2							
KIMBERLEY	33.16	260.2	6	39	-1							
ASTRIDA	40.55	303.4	7	39A	-3						4	13 PP
LWIRO	41.47	302.8	7	51A	1	14	7	1				
MIRNY	42.41	162.6	7	58	0	14	18	-2				
MEDAN	47.05	53.3	8	36	1							
LEMBANG	47.58	71.9	8	40A	1							
WILKES	47.73	156.0				15	45	9				
BOMBAY	48.08	13.0	8	45	2	15	47	6				
QUETTA	58.44	4.4	9	59K	0							
DUMONT	59.25	153.1	10	5	0							
CHATRA	59.78	25.4	10	11	2							
DEHRA DUN	60.25	15.3	10	13	1						18	25
SHILLONG	60.61	30.4	10	14K	0							
LAHORE	60.69	11.4	10	13K	-2							
SOUTH POLE	61.72	180.0	10	20	-2	18	46	2				
HALLEY BAY	62.52	196.5									17	12
ADELAIDE	63.63	117.1	10	31	-4							
LHASA	63.81	27.5	10	36K	0	19	12	2				
HELWAN	65.24	330.2	10	43	-2	19	27	-1				
SCOTT BASE	65.32	166.9	10	45	-1							
KUNMING	65.66	39.8	10	48K	0							
KSARA	66.91	335.9	10	58	2	19	52	4			13	29 PP
MELBOURNE	67.51	121.9	11	4	4							
CAPE HALLETT	68.33	161.7	11	7	2	20	9	4			11	22 PCP
NAMANGAN	69.57	7.3	11	12	0	20	20	0				
CHENGTU	70.78	37.1	11	19K	-1							
TIFLIS	71.73	346.0	11	25	-1	20	48	3				
BYRD STATION	71.76	179.6	11	25	-1						14	8 PP
FRUNSE	71.81	9.2	11	24	-2							
SOTCHI	74.69	342.9	11	45	2							
LANCHOW	74.98	33.5	11	46K	1							
TAMANRASSET	75.00	306.6	11	45	0	21	29	7			14	34 PP
CHARTERS TS.	75.33	105.0	11	47A	0							
SIMFEROPOL	77.53	339.7	11	57	-2	21	48	-2				
KOROR	77.74	74.7	12	0	0							
BUCHAREST	79.83	334.3	12	14	3	22	17	3				
NANKING	80.43	45.7	12	15	0							
PORT MORESBY	80.79	95.7	12	10	-7	22	26	2				
KISHINEV	81.08	337.3	12	15	-3	22	25	-2				
ZO-SE	81.33	47.7	12	19	0							
IASI	81.67	336.7	12	27	6							
ROME	83.92	324.8	12	36	3	22	51	-5			23	51 PS
PEKING	84.35	38.3	12	34	-1							
ALGIERS UNI.	85.67	316.0	12	39	-2	23	18	5				

ULAN-BATOR	85.77	28.1	12	40	-2					
FLORENCE X.	85.91	325.4	12	42	-1	23	7	-9		
TRIESTE	86.07	328.0	12	43	0	23	12	-5		
BRATISLAVA	86.51	331.4	12	44	-2					
RACIBORZ	87.55	333.2	12	48	-3					
MONACO	87.83	323.4	12	51	-1					
WARSAW	88.20	335.9	12	55A	1	23	36	-2		
KARAPIRO	88.91	133.2				23	48	4		
PRUHONICE	88.97	331.3	12	55	-3	23	36	-9	24	42 PS
ALMERIA	89.18	313.3	13	1	3				16	31 PP
TORTOSA	89.78	317.9	13	13	12					
GRANADA	90.10	313.0	13	32A	29	24	32	37		
EBINGEN	90.16	327.4	13	3	0					
TUBINGEN	90.36	327.7	13	2	-2					
PLAUEN	90.39	330.5	13	2	-2					
STUTTGART	90.47	327.9	13	3	-2				25	3 PS
COLLMBERG	90.62	331.4	13	4	-1					
JENA	90.95	330.5	13	6	-1				15	35
STRASBOURG	91.02	327.1	13	7	0	24	1	-2	16	48 PP
HALLE	91.21	331.1	13	8	0					
CLERMONT-FD.	91.47	322.9	13	12	3	24	17	10		
TOLEDO	91.97	315.0	13	11	0	24	5	-7		
DOURBES	93.57	326.8	13	22	3					
PARIS	93.77	324.9	13	21	1				17	12 PP
APATITY	98.18	349.1							17	23 PP
DURHAM	99.45	328.1	13	51A	5	24	24	-51	17	50 PP
SKALSTUGAN	99.93	339.5							17	53 PP
KIRUNA	101.00	344.9	13	50	-3				15	9
BARBADOS	124.38	266.7	19	55	54					
RESOLUTE	132.31	352.1	19	16	0				22	41
COLLEGE	138.81	19.2	19	25	-3				22	12 PP
BREBEUF	141.66	308.4	19	34K	1					
PALISADES	142.52	301.2							23	12 PKS
OTTAWA	143.12	308.7	19	31	-5					
WASHINGTON	145.13	298.0	19	37	-2					
COLUMBIA	148.56	289.4	19	49	4				23	23 PP
HUNGRY HORSE	159.95	353.5	20	2	2				24	24 PP
RAPID CITY	160.71	327.8	20	6	5				24	34 PP
BUTTE	162.05	349.1							24	32 PP
BOULDER	164.75	322.4	20	10	5					
SALT LAKE C.	166.90	341.3	20	13	6				25	0 PP
EUREKA	168.93	354.4	20	10	2				25	7 PP
BOULDER CITY	172.18	344.8	20	13	3				25	27 PP
TUCSON TELE.	173.08	305.8	20	13	2				25	35 PP
TUCSON	173.20	305.6	20	18	7				25	27 PP
PASADENA	174.27	6.8	20	15	4					

JULY 27 18.H 30.M 34.S EPICENTRE 55.49 -34.91 DEPTH= 0.KM

A= 0.46680 B=-0.32570 C= 0.82220 D=-0.5722 E=-0.8201
G= 0.6743 H=-0.4705 K=-0.5692 HT= -7.4

SE= 2.41

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
REYKJAVIK	10.84	31.7	2	42A	3							
SCORESBY SD.	16.09	15.8	3	55A	6	7	11	23				
RATHFARNHAM	16.76	85.6	4	45	48						7	31
ABERDEEN	18.17	71.1									7	51
DURHAM	18.97	78.3	4	27K	2	8	5	11				
KEW	20.83	86.7	4	51	6	8	41	7				
HALIFAX	21.23	251.2	4	46A	-3							
PARIS	23.67	90.7	5	16	2							
DE BILT	23.69	81.4	5	16	2						9	39
SEVEN FALLS	23.74	264.5	5	13	-1	9	35	8				
UCCLE	23.78	84.9	5	9	-6	9	32	4				
DOURBES	24.24	86.2	5	21	2	9	36	0				
SKALSTUGAN	24.71	51.7	5	24K	0						6	4
SHAWINIGAN	25.16	265.1	5	23A	-5							
BENSBERG	25.30	82.6	5	32	3							
TOLEDO	25.70	114.5	5	34	1	10	16	16				
CLERMONT-FD.	25.70	96.2	5	38	5							
BREBEUF	26.25	264.0	5	36A	-2							
NORD	26.78	5.9	5	41	-2							
STRASBOURG	26.79	86.9	5	42	-1	10	38	20			11	41 SS

OTTAWA	27.50	265.7	5	49	-1					
STUTTGART	27.51	85.5	5	49	-1				6	43 PP
UPPSALA	27.81	59.2	5	50	-2					
KIRUNA	27.93	41.8	5	52	-1					
MALAGA	27.93	119.5	5	56A	3				6	42 PP
PLAUEN	28.32	80.3	5	56	-1					
RESOLUTE	29.74	332.3	6	7	-3	11	14	8		
PRUHONICE	29.91	79.6	6	10	-1					
FLORENCE X.	31.52	92.2							8	46
TRIESTE	31.82	87.3	6	29	1					
APATITY	32.88	41.1	6	36	-1	11	58	3		
ROME	33.41	93.8							9	20 PCP
RAPID CITY	43.81	284.7	8	8	-1				9	48 PCP
TAMANRASSET	44.24	120.9	8	13K	1				9	58 PP
HUNGRY HORSE	46.83	296.1	8	31	-2					
BUTTE	47.59	292.8	8	39	0					
BOULDER	47.67	281.9	8	39	-1					
COLLEGE	49.55	328.9	8	53	-1					
SALT LAKE C.	50.77	287.2	9	7	4					
EUREKA	53.91	288.9	9	26	-1					
BOULDER CITY	55.83	285.2	9	40	-1					
RENO	55.92	291.6	9	42	0					
TUCSON TELE.	56.23	279.2	9	43	-1					
MINERAL	56.27	293.4	9	43	-1					
TUCSON	56.36	279.2	9	46	1					
SHASTA	56.42	294.3	9	43	-2					
FRESNO	57.95	289.3	9	58	2					
LICK	58.51	291.1	9	59	-1					
PASADENA	59.02	286.1	10	2	-2					
HUANCAYO	75.33	221.0	11	48	2					
LA PAZ	77.01	212.6	11	57	1					
MATUSIRO	88.14	5.5							18	29
BYRD STATION	143.16	196.8	19	32	-4					
SOUTH POLE	145.31	180.0	19	35	-4					
BRISBANE	151.43	345.1	19	57	8					

JULY 28 17.H 24.M 41.S EPICENTRE -20.03-177.79 DEPTH= 472.KM

DEPTH OF FOCUS= 0.069R

A=-0.93957 B=-0.03627 C=-0.34042 D=-0.0386 E= 0.9993
G= 0.3402 H= 0.0131 K=-0.9403 HT= 4.7

SE= 2.09

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	4.03	296.9	1	22K	4	2	11	-8			2	26	*SP
AFIAMALU	8.38	44.3	1	57	-4	3	29	-8			2	33	
ONERAHI	17.13	202.1	3	35	2	6	33	8					
KARAPIRO	18.75	196.6	3	49A	0								
TUAI	19.21	192.1	3	50	-3	6	54	-7					
TONGARIRO	19.96	195.4	3	42	-18	6	50	-24					
COBB RIVER	22.49	199.0	4	21	-3	7	48	-8					
KAIMATA	24.20	199.7	4	38	-1	8	16	-8					
GEBBIES PASS	24.93	196.6	4	43	-3	8	28	-7					
BRISBANE	27.67	248.9	5	10K	0	9	18	0					
RIVERVIEW	30.78	237.1	5	37A	0	10	5	-2					
RABAUL	33.22	294.3	5	57	-1	10	44	0			11	27	SCP
CHARTERS TS.	33.74	263.7	6	2K	0	10	50	-2					
MELBOURNE	36.81	233.1	6	27K	-1						8	1	
TRUK	40.49	309.5	6	58	0						7	49	
ADELAIDE	41.02	239.5	7	2K	0								
GUAM	49.66	309.1	8	6	-3				10	3			
CAPE HALLETT	52.73	184.6	8	33A	1	15	29	6			17	35	
KOROR	54.25	295.3	8	42	0								
SCOTT BASE	58.35	183.8	9	11K	0	16	44	8			10	54	PP
BYRD STATION	65.07	170.6	9	55	9								
MATUSIRO	69.95	323.5	10	23	-1	18	47	-9			11	59	
SOUTH POLE	70.10	180.0	10	25	0	18	57	-1					
MIRNY	71.51	205.0	10	33	0	19	11	-3					
LEMBANG	73.24	268.7	10	44K	0	19	5	-28					
BERKELEY	77.70	41.9	11	9K	1								
LICK	77.77	42.6	11	9K	0				12	53			
PASADENA	78.22	47.0	11	10	-1				12	57			
FRESNO	78.62	44.0	11	13	0								
HONG KONG	78.63	298.8	11	14K	1	21	4	34					

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SHASTA	79.35	39.6	11	17K	0					
RENO	80.23	41.7	11	23	1					
BOULDER CITY	81.51	46.9	11	30	2					
TUCSON	82.47	51.9	11	35	2				39	55 PKPPKP
TUCSON TELE.	82.59	51.8	11	35	1			13	25	
EUREKA	82.64	43.5	11	34	0			13	24	
HALLEY BAY	82.98	173.0	11	34	-2				14	54 PP
COLLEGE	87.71	12.3	11	57	-1	21 57	-2	13	47	
BUTTE	88.25	39.3	12	1	0					
HUNGRY HORSE	88.64	36.8	12	2	-1			13	51	29 40 PKKP
LARAMIE	90.43	45.8	12	11	0				14	21
SHILLONG	98.69	294.0	12	49	0					
RESOLUTE	107.29	16.0							35	25 SS
KIRUNA	130.84	351.0	18	15	-2				20	56 SKP
SKALSTUGAN	135.94	353.5	18	25	-1				21	14 SKP
UPPSALA	138.71	348.3	18	22	-10					
GOTEBORG	141.70	351.5	18	26	-12					
COPENHAGEN	143.58	350.2	18	39	-2					
ASTRIDA	144.86	233.3	18	43K	0			20	48	
LWIRO	145.78	232.7	18	48K	4			20	44	
RUMANGABO	145.98	234.5	18	5JK	5			20	45	
KSARA	147.15	301.7	18	51K	5	25 17	9			
RACIBORZ	147.43	340.8	18	43	-4					
COLLMBERG	147.66	347.3	18	51	4					
HALLE	147.67	348.6	18	50	3					
MUNSTER	147.84	353.7	18	52	5					
JERUSALEM	148.21	298.3	18	49A	1			20	49	
JENA	148.29	348.7	18	54	6					
PRUHONICE	148.54	344.7	18	53	5			20	52	19 13 PKP2
PLAUEN	148.59	347.8	18	46	-2					20 53
BENSBERG	148.88	353.9	18	54K	5					
DOURBES	149.93	356.9	18	55	5					
STUTTGART	150.78	350.5	18	52	0					
TUBINGEN	151.03	350.6	18	59	7					
STRASBOURG	151.16	352.3	19	0	8					
PARIS	151.28	359.6	18	59	7					
EBINGEN	151.39	350.5	19	0	8					
HELWAN	151.91	296.2	19	1	8			21	6	
TAMANRASSET	175.88	312.2	19	16	2			21	16	20 58 PKP2

JULY 28 18.H 33.M 46.S EPICENTRE -26.56-115.65 DEPTH= 0.KM

A=-0.38769 B=-0.80739 C=-0.44477 D=-0.9015 E= 0.4329
G= 0.1925 H= 0.4009 K=-0.8956 HT= 2.9

SE= 1.66

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
HUANCAYO	40.51	77.0	7	44	2						8	40	
LA PAZ	45.10	87.1	8	17K	-2						10	5	PP
BYRD STATION	53.57	180.8	9	25	0								
KARAPIRO	58.12	240.3	9	56	-1								
TUCSON	58.66	4.8	10	1	0								
TUCSON TELE.	58.76	4.9	10	3	1								
CAPE HALLETT	60.08	199.8	10	10A	-1	18 33		10					
PASADENA	60.43	357.6	10	13	0								
LUBBOCK	61.23	13.1	10	18	-1								
SCOTT BASE	61.61	193.6	10	20K	-1								
BOULDER CITY	62.21	0.8	10	27	2								
FRESNO	63.11	356.3	10	31	0								
SOUTH POLE	63.59	180.0	10	33	-2						39	14	PKPPKP
LICK	63.81	354.7	10	38K	2								
HALLEY BAY	64.27	163.8	10	46	7						12	59	PP
BERKELEY	64.39	354.2	10	40K	0								
FAYETTEVILLE	65.52	19.0	10	45	-2								
EUREKA	65.70	359.7	10	48	0						39	30	PKPPKP
RENO	65.87	356.5	10	51K	2								
SALT LAKE C.	67.08	3.1	10	58	1								
SHASTA	67.21	354.4	10	58A	0								
LARAMIE	68.17	8.2	11	3	-1								
COLUMBIA	68.61	30.5	11	5	-2								
CORVALLIS	71.14	354.2	11	22K	0								
RAPID CITY	71.22	9.4	11	23	0								
BUTTE	72.29	2.3	11	30	1								
HUNGRY HORSE	74.58	1.1	11	42	0								
RREBEUF	81.27	28.4	12	19	0								
					-1								

MIRNY	84.66	191.1	12	35	-2							
CHARTERS TS.	88.12	248.7	12	55	1							
COLLEGE	94.50	346.8	13	22	-1							
TAMANRASSET	126.80	80.5	19	6	0						21	3 PP
SKALSTUGAN	130.10	27.5	19	12	0							
KIRUNA	131.02	20.4	19	13	-1							
STUTTGART	132.23	47.2	19	12	-4							
SODANKYLA	133.18	18.9	19	17	-1							
LWIRO	135.30	124.3	19	14	-8							
PRUHONICE	135.47	44.7	19	18	-4							
ASTRIDA	135.75	125.6	19	24	2							
SHILLONG	155.27	273.9	20	4	10							

JULY 28 21.H 23.M 30.S EPICENTRE -20.16-178.99 DEPTH= 656.KM

DEPTH OF FOCUS= 0.098R

A=-0.93936 B=-0.01657 C=-0.34253 D=-0.0176 E= 0.9998
G= 0.3425 H= 0.0060 K=-0.9395 HT= 4.6

SE= 2.36

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
SUVA	3.15	308.9	1	26A	1	2	39	6			3	1	*SP
AFIAMALU	9.29	49.1	2	9A	-4	3	55	-5					
ONERAHI	16.62	199.2	3	28	6								
KARAPIRO	18.33	193.9	3	37	-1								
TUAI	18.88	189.4				6	45	3					
TONGARIRO	19.56	192.8	3	58	9								
WELLINGTON	21.72	192.8	4	7	-2								
GEBBIES PASS	24.50	194.7				8	3	-9					
BRISBANE	26.58	248.7	4	51K	0	8	42	-2					
RIVERVIEW	29.77	236.6	5	19	0	9	37	4					
RABAUL	32.25	295.6	5	40	0						6	41	
CHARTERS TS.	32.60	264.2	5	42K	0	10	14	-3					
MELBOURNE	35.83	232.7	6	8K	-1								
TRUK	39.71	310.9	6	40	-1						8	30	PCP
ADELAIDE	39.98	239.4	6	42	-1								
GUAM	48.87	310.2	7	50	-1								
CAPE HALLETT	52.52	184.1	8	12	-5								
KOROR	53.29	296.1	8	22	-1								
SCOTT BASE	58.15	183.5	8	55	-1								
BYRD STATION	65.13	170.5	9	39	-2								
MATUSIRO	69.39	324.2	10	4	-2						10	30	
SOUTH POLE	69.97	180.0	10	8	-2	18	29	-1	12	18			
LEMBANG	72.11	269.2	10	22K	0						16	36	
HONG KONG	77.70	299.4	10	55A	2								
BERKELEY	78.55	42.5	10	58	1								
LICK	78.63	43.2	10	59A	1				13	7	14	9	
UKIAH	78.71	41.0	10	59	1								
PASADENA	79.14	47.5	11	1	1						13	23	
FRESNO	79.50	44.5	11	4K	2								
SHASTA	80.17	40.1	11	7	1								
RENO	81.08	42.2	11	12	2								
CORVALLIS	82.02	36.6	11	16K	1								
BOULDER CITY	82.43	47.4	11	19	2								
HALLEY BAY	82.99	173.3	11	19	-1						16	55	PPP
TUCSON	83.44	52.3	11	23	1								
EUREKA	83.51	44.0	11	23	0								
TUCSON TELE.	83.56	52.3	11	24	1				13	42			
SALT LAKE C.	86.88	44.5	11	41	2								
COLLEGE	88.08	12.8	11	43	-1				14	2			
HUNGRY HORSE	89.42	37.2	11	49	-1				14	9	15	33	PP
BOULDER	90.97	47.5	11	49	-9								
LARAMIE	91.33	46.2	12	0	1						15	47	PP
SHILLONG	97.72	294.3									21	10	
SODANKYLA	130.07	347.4							20	23			
KIRUNA	130.78	350.4									20	26	SKP
SKALSTUGAN	135.93	352.8									20	43	SKP
UPPSALA	138.60	347.4									20	50	SKP
ASTRIDA	143.87	234.5	18	23K	0				21	4			
LWIRO	144.80	233.9	18	27	2				21	9			
KUMANGABO	144.98	235.7	18	30	5								
RACIBORZ	147.16	339.4	18	31	3								
JERUSALEM	147.27	297.7	18	29K	0				20	54			
HALLE	147.56	347.2	18	34	5								
PRUHONICE	148.35	343.3	18	35	5				20	58			
TAMANRASSET	175.05	302.7	18	50	-6				21	23	20	39	PKP2

JULY 29 10.H 49.M 31.S EPICENTRE -20.89-175.84 DEPTH= 0.KM

A=-0.93258 B=-0.06777 C=-0.35455 D=-0.0725 E= 0.9974
G= 0.3536 H= 0.0257 K=-0.9350 HT= 4.5

SE= 3.23

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SUVA	6.05	295.8	1 29	-4	2 42	-2		
NOUMEA	16.53	261.9	3 54A	-1	7 19	21		4 8 PP
ONERAHI	17.12	208.0	4 11	9				
KARAPIRO	18.54	201.9	4 18	-2				5 2
TONGARIRO	19.69	200.2	4 37	4				
WELLINGTON	21.83	199.3	4 55	-1	8 45	-8		
BRISBANE	29.09	250.8	6 3A	-1	10 57	1		
RIVERVIEW	31.88	239.2			11 47	7		7 37 PP
RABAUL	35.24	293.7	7 54	56				
CHARTERS TS.	35.47	264.6	6 58A	-2	12 40	5		
PORT MORESBY	37.41	282.1	7 14	-2	12 59	-6	9 1	PPP
CAPE HALLETT	52.03	185.3	9 16K	3	16 50	13	12 47	PPP
DUMONT	53.67	200.1	9 23	-2	17 6	7		
KOROR	56.27	294.6	9 48	4				
SCOTT BASE	57.62	184.3	9 53	-1				
BYRD STATION	63.92	170.7	10 34	-3				
SOUTH POLE	69.23	180.0	11 8	-3	20 32	16	39 11	PKPPKP
MIRNY	71.50	205.0	11 22	-2	20 45	2		
MATUSIRO	71.73	322.5	11 28	2	20 39	-7	25 31	SS
BERKELEY	77.14	40.8	11 53	-4				
LICK	77.19	41.5	11 52	-5				
UKIAH	77.37	39.3	12 3	5				
PASADENA	77.49	45.9	11 56	-3	21 51	1		
FRESNO	77.99	42.9	12 5	3				
SHASTA	78.87	38.5	12 4	-2				
MINERAL	79.11	39.2	12 6	-2				
RENO	79.68	40.7	12 15	4				
VLADIVOSTOK	79.77	324.0	13 12	61				
BOULDER CITY	80.78	46.0	12 14	-3				
CORVALLIS	80.89	35.1	12 31	14				
TUCSON	81.58	50.9	12 23	2				
TUCSON TELE.	81.71	50.9	12 19	-3				
EUREKA	82.03	42.5	12 26	3				38 53 PKPPKP
SALT LAKE C.	85.37	43.2	12 41	1				
BUTTE	87.78	38.5	12 54	2				
COLLEGE	88.17	11.6	12 50	-4				
HUNGRY HORSE	88.25	36.0	12 53	-1				16 22 PP
BOZEMAN	88.48	39.4	13 1	6				
BOULDER	89.31	46.4	12 55	-4				
LARAMIE	89.73	45.2	13 5	4				
RAPID CITY	92.57	43.5	13 19	5				
TIKSI	99.64	344.7						20 4 PPP
SHILLONG	100.71	293.3						16 34
RESOLUTE	107.62	16.0			26 9	-7		33 29 SS
PALISADES	112.21	53.1						28 50 PS
NAMANGAN	120.16	306.0	18 59	6				
QUETTA	123.20	293.0	18 51	-8				
SIMFEROPOL	145.57	321.1	19 38	-2				
ASTRIDA	145.75	230.0	19 39A	-1				
WARSAW	146.09	341.3	19 41	0				
LWIRO	146.66	229.3	19 44	2				
RATHFARNHAM	146.67	11.4	19 47A	5				
LWOW	147.10	336.1	19 43	0				
IASI	147.61	329.6	19 45	2				
KRAKOW	148.33	340.5	19 56	11				
RACIBORZ	148.82	342.4	19 46	1				
COLLMBERG	148.87	349.2	19 54	9				
KSARA	149.15	301.4	19 47	1				23 37 PP
JENA	149.46	350.7	19 50	4				23 20 PP
PRAGUE	149.77	346.8	20 20	33				
PLAUEN	149.79	349.8	19 58	11				
PRUHONICE	149.83	346.6	19 51	4				23 19 PP
BENSBERG	149.90	356.2	19 57	10				
JERUSALEM	150.22	297.8	19 47	-1				
BRATISLAVA	150.86	342.1	19 44	-5				
STUTTGART	151.89	352.9	19 59	9				41 53 SS

PARIS	152.12	2.4	19	35	-15				19	50	PKP2
TUBINGEN	152.15	353.0	20	0	9						
STRASBOURG	152.23	354.8	20	1	10						
EBINGEN	152.50	353.0	20	1	10						
TRIESTE	154.08	344.5	20	1	8				20	40	PKP2
FLORENCE X.	156.42	347.1	20	29	33						
MONACO	157.07	353.9	20	1	4				20	31	PKP2
TOLEDO	159.81	18.6	20	50	50						
MALAGA	162.55	23.5	20	53K	50				24	53	PP
TAMANRASSET	177.74	326.2	20	12	0				25	59	PP

JULY 29 21.H 37.M 23.S EPICENTRE 3.82 -26.63 DEPTH= 0.KM

A= 0.89195 B=-0.44727 C= 0.06612 D=-0.4483 E=-0.8939
G= 0.0591 H=-0.0296 K=-0.9978 HT= 7.1

SE= 1.90

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
MBOUR	14.18	41.6	3	22	-2	5	48	-15					
ST. VINCENT	35.45	287.3	7	0	0								
GRENADA	35.68	285.3	7	4	2								
TAMANRASSET	36.38	55.9	7	9A	1	12	52	2			8	26	PP
LISBON	38.22	22.3	7	23A	0	13	17	0			8	54	PP
MALAGA	38.60	29.2	7	25K	-1	13	23	0			8	57	PP
GRANADA	39.36	29.5	7	40	7	13	40	5			9	12	PP
ALMERIA	39.67	31.0	7	36	1	13	43	4			9	17	PP
SERRA PILAR	40.53	21.1	7	43K	1						9	19	PP
SAN JUAN	41.24	293.6	7	47	-1						9	47	PCP
TOLEDO	41.31	26.6	7	51A	2	14	7	3			9	29	PP
ALICANTE	41.83	31.3	7	52	-1	14	8	-4			9	31	PP
ALGIERS UNI.	42.65	35.9	8	0	0	14	26	2			9	39	PP
BERMUDA	45.56	313.1	8	22	-1						14	9	PCS
LA PAZ	45.71	242.6	8	25A	1	15	8	0			18	57	SCS
BOGOTA	47.31	272.7	8	36	-1	15	35	4			10	29	PP
TALA POZO	47.98	226.7				15	27	-13			15	37	PS
CLERMONT-FD.	49.19	27.3	8	53A	1	16	5	8			10	49	PP
MONACO	49.85	32.1	8	58	1								
WINDHOEK	50.12	123.6	8	59	0								
HUANCAYO	50.91	251.2	9	4	-1						11	2	PP
PARIS	51.26	24.4	9	9A	2	16	26	0			11	7	PP
MESSINA	51.44	42.6	9	9	0	16	31	3			10	35	PCP
REGGIO CALA.	51.46	42.7	9	8	-1								
ROME	51.54	37.0	9	11A	1	16	34	4			11	7	PP
NEUCHATEL	51.89	28.8	9	13	1								
FLORENCE X.	51.97	34.4	9	11A	-2	16	51	15			11	12	PP
HALIFAX	52.00	327.0	9	12A	-1								
RATHFARNHAM	52.09	15.3	9	14K	0								
KEW	52.33	20.5	9	16A	0	16	45	4					
BASLE	52.57	28.7	9	13	-4								
DOURBES	53.13	24.7	9	20	-1	16	50	-1					
STRASBOURG	53.40	27.9	9	24	1	17	2	7			11	27	PP
UCCLE	53.56	24.0	9	26	1	17	1	4					
EBINGEN	53.69	28.9	9	26	0								
RAVENSBURG	53.73	29.6	9	25	-1						11	26	PP
TUBINGEN	53.98	28.7	9	27	-1								
STUTTGART	54.21	28.5	9	28	-1	17	7	1			11	17	PP
TRIESTE	54.53	33.9	9	31A	-1	17	14	4			21	19	SS
DURHAM	54.71	17.5	9	34	1	17	14	1			11	45	PP
BENSBERG	54.86	25.5	9	24	-10								
DE BILT	54.89	23.4	9	37	3	17	22	7					
LWIRO	55.73	95.3	9	40A	0	17	31	5					
ZAGREB	55.89	34.9	9	43A	1								
PALISADES	56.25	318.0	9	38	-6	17	37	4			13	46	
ABERDEEN	56.64	15.7				17	42	4					
ASTRIDA	56.69	95.6	9	45	-2						13	6	PPP
PLAUEN	56.80	28.6	9	45	-3								
JENA	56.82	27.9	9	49	1	17	50	9			11	43	PP
ATHENS	57.06	46.5	9	51K	1								
HALLE	57.37	27.6	9	53	1	18	1	13					
SEVEN FALLS	57.53	325.6	9	52A	-1						10	42	PCP
PRAGUE	57.63	30.1	9	54	0	17	47	-5					
PRUHONICE	57.63	30.2	9	55	1						12	1	PP
COLLMBERG	57.73	28.3	9	55	0								
CHAPEL HILL	57.82	310.5	9	55	0								

BRATISLAVA	57.87	33.1	9	56	0						
BELGRADE	57.99	37.9	9	58A	1					13	29 PPP
BREBEUF	58.28	322.8	9	57A	-2						
SHAWINIGAN	58.33	324.2	9	57A	-2					10	41 PCP
POTSDAM	58.48	27.3	10	1	1						
COLUMBIA	58.71	307.8	10	2	0						
SOFIA	58.81	41.3	10	3	1					13	23
KIMBERLEY	59.01	126.8	10	2K	-2						
OTTAWA	59.51	321.8	10	6A	-1					10	54 PCP
RACIBORZ	59.57	31.8	10	1	-7					17	40
REYKJAVIK	60.29	2.4	10	14	2						
COPENHAGEN	60.45	24.2	10	15K	1	18	31	3			
KRAKOW	60.47	32.5	10	14	0	18	30	1			
HELWAN	60.49	57.8	10	13A	-1	18	29	0			
BUCHAREST	61.37	40.5	10	20K	0	18	42	2			
CLEVELAND	61.66	315.7	10	22	0						
GOTEBORG	61.68	22.4	10	21	-1						
WARSAW	62.25	30.9				18	55	4			
LWOW	62.61	34.3	10	28	0					12	47
IASI	63.49	38.2	10	33	-1						
JERUSALEM	64.18	56.5	10	33K	-6						
KISHINEV	64.20	38.8	10	37	-2	19	14	-1			
KSARA	65.16	54.5	10	47A	2	19	39	12		13	11 PP
UPPSALA	65.30	22.8	10	45A	-1	19	30	1			
SKALSTUGAN	66.02	17.9	10	50A	0						
SIMFEROPOL	66.87	42.4	10	55	-1	19	48	0			
HELSINKI	68.46	24.9	11	6	0						
FAYETTEVILLE	69.68	307.0	11	11A	-2						
SOTCHI	70.35	45.0	11	17	0	20	28	-2			
PULKOVO	70.59	26.7	11	19	0	20	37	5			
KIRUNA	71.39	17.0	11	24A	0	20	47	5			
MOSCOW	72.56	32.3	11	21	-10						
SODANKYLA	73.03	18.9	11	33	0						
TIFLIS	73.64	47.7	11	38	1	21	12	5			
GORIS	74.45	50.2	11	43	1	21	18	2			
APATITY	75.39	20.1	11	48A	1	21	30	3		21	59 PS
LUBBOCK	75.59	303.5	11	49	1						
MAKHACH-KALA	75.81	46.7	11	47	-2	21	29	-2			
TANANARIVE	76.34	110.4	11	54K	2						
RAPID CITY	77.71	314.2	11	59	-1						
BOULDER	78.88	309.9	12	7	1						
HALLEY BAY	79.22	180.0	12	7	-1					15	11 PP
RESOLUTE	80.68	345.5	12	16A	0	22	27	4		27	37 SS
TUCSON TELE.	82.98	302.0	12	29	1					38	56 PKPPKP
TUCSON	83.07	301.9	12	30	1						
BOZEMAN	83.39	315.4	12	31	1						
SALT LAKE C.	83.90	310.4	12	33	0						
KHEYS	84.32	9.9	12	41	6						
BUTTE	84.45	315.7	12	36	0						
SVERDLOVSK	85.33	33.4	12	41	1						
HUNGRY HORSE	85.44	318.0	12	42	1					38	50 PKPPKP
BOULDER CITY	86.32	305.7	12	46	1						
BANFF	86.37	320.9	12	44A	-1						
EUREKA	87.09	309.2	12	50	1						
PASADENA	89.16	304.0	12	58	-1						
RENO	90.05	309.5	13	5	2						
FRESNO	90.28	306.7	13	4	0						
QUETTA	91.20	59.8	13	10A	2	23	36	-29		16	50 PP
HORSESHOE B.	91.46	319.5	13	36	27						
VICTORIA	91.66	318.7	13	11A	1						
LICK	91.69	307.4	13	12	2					16	40 PP
SHASTA	91.90	310.8	13	10	-1						
CORVALLIS	92.09	314.7	13	13	1						
UKIAH	92.72	309.3	13	17	2						
NAMANGAN	93.78	48.7	13	22	2						
SOUTH POLE	93.79	180.0	13	20	0						
BYRD STATION	94.24	190.1	13	22	0					17	0 PP
FRUNSE	95.61	46.4	13	30	2						
COLLEGE	99.26	338.3	13	44	-1						
CAPE HALLETT	110.79	185.5				24	21	-54		35	7 SS
LEMBANG	134.36	95.8	19	22K	2					22	51 PKS
MATUSIRO	137.42	18.1	19	13	-13					23	3 *PPP
MELBOURNE	145.29	168.3	19	42A	2						
RIVERVIEW	150.07	176.3	19	49A	2						
BRISBANE	156.47	179.2	20	27K	31						
CHARTERS TS.	162.48	157.3	20	5A	2					24	35
PORT MORESBY	171.70	132.2	20	12	2					25	23 PP
RABAUL	178.75	107.7	20	13	1					26	5 PP

JULY 30 2.H 47.M 16.S EPICENTRE 44.53 148.83 DEPTH= 0.KM

A=-0.61199 B= 0.37018 C= 0.69888 D= 0.5176 E= 0.8556
G=-0.5980 H= 0.3617 K=-0.7152 HT= -3.4

SE= 2.76

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KURILSK	0.98	316.0	0 26A	6	0 40	5		
NEMURO	2.64	244.1	0 45	1	1 12	-5		
ABASHIRI	3.31	262.7	0 54	0	1 39	4		
KUSIRO	3.56	245.8	0 57	0	1 40	-1		
OBIHIRO	4.39	250.4	1 12	3	2 4	2		
ASAHIGAWA	4.71	263.1	1 17	3	2 13	3		
Y.-SAKHLINSK	4.91	301.6	1 21	4	2 18	3		1 35
URAKAWA	5.01	243.8	1 20	2	2 16	-1		
WAKKANAI	5.15	282.4	1 2	-18	1 32	-49		
SAPPORO	5.61	257.5	1 30	4	2 37	5		1 58
TOMAKOMAI	5.64	251.7	1 37	10	2 35	2		
MURORAN	6.13	251.7	1 37	3	2 49	3		
UTTSU	6.47	257.5	1 42	3				
MORI	6.50	250.9	1 44	5	2 55	0		
UGLEGORSK	6.50	316.8	1 44	5	3 2	7		
HAKODATE	6.54	248.0	1 40	1	2 48	-8		3 16
HATINOHE	6.71	236.0	1 44	2	2 52	-8		
AOMORI	7.00	240.8	1 46	0	3 1	-6		
MIYAKO	7.06	228.7	1 45	-2	2 56	-13		
MORIOKA	7.46	232.4	1 52	0	3 9	-10		
SEVERO-KUR.	7.86	36.1	2 2	4	3 35	6		
MIZUSAWA	7.88	229.5	1 58	0	3 17	-12		
AKITA	8.07	236.5	2 3	2	3 29	-5		
ISINOMAKI	8.30	225.3	2 1	-3	3 27	-13		
SENDAI	8.64	226.3	2 6	-3	3 36	-12		2 30
SAKATA	8.77	233.2	2 13	2	3 41	-10		
YAMAGATA	8.94	228.3	2 12	-1	3 43	-13		
HUKUSIMA	9.25	225.8	2 17	0	3 54	-9		
ONAHAMA	9.67	221.2	2 26	3	3 58	-16		
SHIRAKAWA	9.86	224.3	2 23	-3	4 6	-12		
NIIGATA	9.89	231.5						3 39
AIKAWA	10.28	234.4	3 32	61				
MITO	10.33	220.9	2 30	-2	4 28	-2		
UTUNOMIYA	10.48	223.6	2 34	0	4 21	-13		
KAKIOKA	10.59	221.4	2 33	-3	4 18	-18		
TYOSI	10.71	217.5	3 0	23				
TAKADA	10.92	230.8	2 40	0				
MAEBASI	11.00	225.8	2 39	-2	4 34	-12		3 45
KUMAGAYA	11.04	223.9	2 44	2	4 36	-11		
TOKYO C.M.O.	11.24	221.2	2 36	-9	4 36	-16		
NAGANO	11.26	229.4	2 47	2	5 35	42		
TITIBU	11.33	224.4	2 47	1				
OIWAKE	11.33	227.2	2 49	3				
MATUSIRO	11.34	229.0	2 43A	-3	4 46	-9		
YOKOHAMA	11.49	220.9	3 10	22				
WAZIMA	11.50	235.7	2 49	1	4 54	-4		
MATUMOTO	11.69	228.7	2 51	0				
TOYAMA	11.79	232.4	2 48	-4	5 13	7		5 44
MERA	11.83	218.8						4 38
KOHU	11.86	224.9	2 54	1	4 56	-11		6 34
HUNATU	11.86	223.9	3 3	10	5 0	-7		
MISIMA	12.07	222.3	2 57	1	4 57	-16		
VLADIVOSTOK	12.31	269.3	3 4	5	5 17	-1		3 22
IIDA	12.32	226.8	2 52	-7				
OMAESAKI	12.85	223.1	5 7	121				6 32
GIHU	12.98	229.5	4 8	60				6 24
NAGOYA	13.04	228.3	3 12	3				5 39
IBUKISAN	13.21	230.5	3 12	1				
HIKONE	13.36	230.5	3 12	-1				
KAMEYAMA	13.55	228.7	3 18	2	5 54	6		
TU	13.62	228.2	3 52	36				
TOYOOKA	13.98	234.8	3 18	-3	5 47	-11		
KUYUCHI	14.01	28.4	3 33	11				
ABUYAMA	14.03	231.1	3 20A	-2	6 4	4		
OSAKA	14.21	230.6	3 27	3	5 47	-17		7 21
KOBE	14.39	231.5	3 23	-4	6 11	3		
SUMOTO	14.80	231.4	3 10	-22	5 0	-78		3 46

MAGADAN	15.09	3.9	3	38	2					
TOKUSIMA	15.17	231.3	3	36	-1					
TAKAMATU	15.29	233.2	3	35	-3					
HAMADA	16.06	239.0	3	55	7	7	0	13		
CHANGCHUN	16.88	275.9	3	58	-1					
OOITA	17.48	235.7	4	10	4	7	28	8		
HUKUOKA	17.96	238.8	4	7	-5	7	16	-15		
MIYAZAKI	18.54	233.1	4	24	4	7	56	12		
KAGOSIMA	19.30	234.1	4	39	10				5	36
PEKING	24.48	270.9	5	21A	0	9	37	-3	5	55 PP
ZO-SE	25.49	247.7	5	31	0	9	55	-2	6	11 PP
NANKING	26.50	252.2	5	42	2					
TIKSI	28.84	347.0	5	59	-3				6	27 *SP
ULAN-BATOR	28.95	291.8	6	3	0					
LANCHOW	34.98	271.9	6	56A	0	12	23	-4		
HONG KONG	36.05	243.5	7	16	11	12	44	0	10	35
BAGUIO CITY	36.77	229.4	7	11	0	13	3	8		
TRUK	37.01	175.0	7	23	10				8	30
CHENGTU	37.65	264.0	7	17	-1	13	1	-8		
MANILA	38.08	227.2	7	1	-21				8	45 PP
KOROR	39.11	202.9	7	31	-1					
COLLEGE	39.74	36.7	7	36	0	13	37	-3	13	59
KUNMING	41.95	258.1	7	54A	0	14	7	-6		
SEMIPALATNSK	45.24	303.0	8	20	0					
SITKA	47.09	46.3	8	37	2					
LHASA	47.49	272.1	8	40	2	15	32	-1		
SHILLONG	49.29	267.2	8	53A	1					
FRUNSE	51.94	296.0	9	12A	0	16	31	-4	9	38
SVERDLOVSK	53.40	316.8	9	20	-3					
PORT MORESBY	53.70	182.1	9	41	16	16	58	-1	19	14
RESOLUTE	53.87	17.2	9	25A	-2	16	53	-8	19	33 SCS
TASHKENT	56.12	296.8	9	42	-1	17	27	-4	19	26 SCS
DEHRA DUN	56.31	281.1	9	50	6				18	30
STALINABAD	57.96	294.3	9	56	0	17	46	-10		
APATITY	58.17	335.9	9	55	-3	19	50	112	26	10 SSS
LAHORE	58.19	284.5	9	57	-1					
AGRA	58.23	278.1				17	55	-4		
WARSAK DAM	58.68	288.4	10	1A	0					
MEDAN	59.95	242.3	10	22A	12	18	34	12		
SODANKYLA	60.20	337.8	10	8	-4					
KIRUNA	61.45	340.2	10	17	-3				20	8 SCS
SHASTA	62.25	59.2	10	26A	0					
HUNGRY HORSE	62.52	48.2	10	27	0				39	36 PKPPKP
MINERAL	62.95	59.1	10	29A	-1					
BERKELEY	64.02	61.7	10	51	14					
QUETTA	64.08	287.6	10	37A	-1	19	10	-4		
CHARTERS TS.	64.27	182.7	10	37	-2					
PULKOVO	64.53	330.5	10	38	-3				12	56 PP
RENO	64.53	58.9	10	40	-1					
MOSCOW	64.53	324.3	10	38	-3	19	14	-5		
LICK	64.74	61.8	10	42A	0					
BUTTE	64.74	49.6	10	43	1					
ASHKABAD	64.96	299.2	10	44A	1	19	22	-3		
BOZEMAN	65.78	49.2	10	50	1					
HELSINKI	66.04	333.0	10	49	-1					
FRESNO	66.25	61.3	10	51	-1					
SKALSTUGAN	66.87	340.5	10	53	-3				12	46
EUREKA	66.90	56.9	10	56	0					
SUVA	67.98	149.6				18	9	-112		
UPPSALA	68.56	335.9	11	4A	-2					
PASADENA	68.93	62.6	11	7	-2	20	6	-7		
BOULDER CITY	69.83	59.2	11	14	0					
TIFLIS	70.52	309.6	11	18	0	20	28	-3		
RAPID CITY	71.01	46.5	11	20	-1					
LARAMIE	71.65	49.9	11	26	1					
BRISBANE	71.76	176.1	11	29	3					
GOTEBORG	71.98	337.3	11	27A	0					
BOULDER	72.69	50.7	11	33	2					
COPENHAGEN	73.58	336.0	11	36A	0	21	6	0	21	50
WARSAW	73.66	329.6				21	5	-2	21	47 PPS
SIMFEROPOL	73.75	317.8	11	36A	-1	21	4	-4		
LWOW	74.45	326.5	11	43	2				12	5 PCP
TUCSON	74.79	59.8	11	44	1				13	32
TUCSON TELE.	74.80	59.6	11	44	1					
IASI	75.04	322.9	11	44	-1					
KRAKOW	75.83	328.8	11	49	0	21	31	0	12	3 PCP
POTSDAM	76.23	333.9	11	54	2					
FOCSANI	76.37	322.1	12	0	8					

RACIBORZ	76.44	329.8	11	51	-2				12	1	PCP
COLLMBERG	77.18	333.3	11	57	0				12	24	
CAMPULUNG	77.65	323.1	12	3	3						
PRAGUE	77.76	331.9	12	1	1				13	54	
PRUHONICE	77.80	331.8	12	0	0				15	3	PP
BUCHAREST	77.86	321.9	12	0A	-1				12	24	
JENA	77.95	333.9	12	1	0	21	50	-4	13	1	
PLAUEN	78.14	333.4	12	1	-1						
MUNSTER	78.22	336.7	12	3	0				12	24	
BRATISLAVA	78.43	329.3	12	3	-1						
BENSBERG	79.25	336.5	12	8A	0						
BELGRADE	79.93	325.5	12	11K	-1	22	15	0			
UCCLE	80.17	338.0	12	12A	-1	22	12	-6			
RATHFARNHAM	80.24	345.1	12	13K	-1				12	43	
STUTTGART	80.59	334.3	12	15K	0	22	20	-2	22	56	SCS
KEW	80.72	341.0	12	15	-1	22	19	-5			
DOURBES	80.74	337.6	12	16	0	22	25	1			
TUBINGEN	80.84	334.2	12	16	-1						
KSARA	81.08	309.1	12	20A	2	22	32	5	12	26	PCP
EBINGEN	81.18	334.1	12	18	-1						
STRASBOURG	81.19	335.0	12	19	0	22	26	-3	13	20	
RAVENSBURG	81.33	333.5	12	19	0						
TRIESTE	81.79	330.0	12	21	-1	22	25	-10	23	1	
MELBOURNE	82.05	183.1	12	39	16						
OTTAWA	82.13	29.9	12	23A	-1						
SHAWINIGAN	82.15	27.6	12	22	-2						
SEVEN FALLS	82.27	26.1	12	23	-1						
PARIS	82.48	338.3	12	26A	1	22	43	1	12	32	PCP
NEUCHATEL	82.85	334.8	12	27	0				19	9	
JERUSALEM	82.97	308.2	12	22K	-6				12	58	
ATHENS	84.08	319.5	12	32A	-2						
FLORENCE X.	84.30	330.6	12	35	0	23	12	12	16	0	PP
CLERMONT-FD.	85.09	336.7	12	39	0	23	7	-1			
ROME	85.49	328.9	12	40A	-1	23	2	-10	23	26	SCS
MONACO	85.63	333.0	12	41	0						
WESTON	86.31	28.6	12	46K	1						
HELWAN	86.59	309.5	12	46	0	23	20	-2			
PALISADES	86.60	31.0	12	45	-1	23	9	-13	17	59	PPP
MESSINA	87.47	325.0				23	5	-26			
CHAPEL HILL	88.92	37.0	12	52	-5						
COLUMBIA	89.66	39.4	13	16	15						
TACUBAYA	91.25	61.1				24	8	3			
TOLEDO	92.50	339.4	13	13	-1						
TAMANRASSET	105.09	325.2							17	41	
ASTRIDA	112.27	289.4							19	26	PKPPKP
LWIRO	112.64	290.4							18	17	
MBOUR	119.96	344.1							19	53	PP
HUANCAYO	130.31	63.3	19	15	3						
SOUTH POLE	134.34	180.0	19	12	-8				22	6	PP

JULY 30 4.H 45.M 1.S EPICENTRE -2.83 139.39 DEPTH= 72.KM

DEPTH OF FOCUS= 0.006R

A=-0.75826 B= 0.65010 C=-0.04907 D= 0.6509 E= 0.7592
G= 0.0373 H=-0.0319 K=-0.9988 HT= 7.1

SE= 1.81

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT MORESBY	10.10	130.6	2	22	-2	4	56	39			3	1	
KOROR	11.22	334.1	2	41	1	4	36	-8			3	5	
RABAUL	12.83	96.4	3	2	1	5	24	2			3	8	PP
TRUK	16.10	50.5	3	44	1						4	59	
GUAM	17.05	18.1	3	54	-1	7	6	5					
CHARTERS TS.	18.34	159.1	4	9	-2	7	34	4					
BAGUIO CITY	26.67	316.4	5	33	-1	10	16	14					
BRISBANE	27.76	153.3	5	43	-1	10	22	2					
ADELAIDE	31.94	181.0	6	24	3	11	35	9			12	59	PCS
RIVERVIEW	32.74	161.7	6	19K	-9	11	44	6					
HONG KONG	35.09	316.6	6	47A	-1	12	10	-5					
MELBOURNE	35.20	172.3	6	50A	1	12	23	7			10	42	
CANTON	36.22	316.7	6	57	-1								
PERTH	36.47	214.9	7	33	33	13	9	33			11	51	
NAGASAKI	36.50	346.5	7	0	0	12	27	-9					
ABUYAMA	37.67	354.9	7	10A	0	12	58	4					

ZO-SE	37.94	334.2	7	13A	1	13	0	2		8	43 PP
MATUSIRO	39.19	358.5	7	21A	-2	13	21	4	7 46	8	51 PP
PHU-LIEN	39.78	307.7	6	27	-60	12	28	-58			
NANKING	39.82	332.2	7	28A	0	13	31	4		7	54
FORT NELSON	40.55	171.0								20	36
SENDAI	40.92	1.8	7	36A	-1					17	6 SS
SUVA	41.16	114.5	7	45	6	13	48	1		9	17 PP
MEDAN	41.18	278.7	7	38A	-1	13	48	1			
KUNMING	45.12	310.1	8	13A	2	14	47	3		10	3 PP
VLADIVOSTOK	46.24	352.4	8	20	0	15	5	5	8 45	15	38
CHENGTU	47.40	317.3	8	29A	0	15	16	-1			
PEKING	47.67	335.8	8	31	0	15	23	2		10	16 PP
KARAPIRO	48.09	141.2	8	35	1						
CHANGCHUN	48.14	346.3	8	34A	-1	15	31	4			
TONGARIRO	48.88	142.5	8	42	2						
Y.-SAKHLINSK	49.66	3.0	8	47	1	15	54	6	9 13	16	22 PS
LANCHOW	51.00	322.7	8	58A	1	16	12	5		10	57 PP
SHILLONG	53.98	304.5	9	20	1						
HOWRAH	55.84	299.6	9	53	21						
LHASA	56.38	308.6	9	38A	2	17	25	6		12	56 PPP
ULAN-BATOR	57.97	334.8	9	48	1						
PETROPAVLOVK	58.06	13.5	9	45	-3	17	36	-6	10 11		
IRKUTSK	62.38	336.5	10	18A	0	18	43	6			
MAGADAN	62.84	6.5	10	22	1					19	17 PS
DUMONT	63.72	179.7	10	25	-1	18	57	3			
HONOLULU	65.66	65.2	10	40	1						
KIPAPA	65.76	65.1	10	40	0						
WILKES	66.44	192.3				19	31	4			
DEHRA DUN	67.07	304.5	10	50	2						
LAHORE	70.49	304.8	11	8A	-1						
MIRNY	71.30	197.8				20	27	3		11	37 PCP
CAPE HALLETT	72.01	170.5	11	19K	1	20	44	11		11	52 PCP
SEMIPALATNSK	73.13	325.0	11	23	-2						
WARSAK DAM	73.40	306.6	11	27A	1						
FRUNSE	73.79	316.2	11	29A	1	20	57	4		11	47 PCP
TIKSI	74.64	356.6	11	32	-1	21	3	1		14	21 PP
QUETTA	76.33	301.8	11	44A	1	21	27	6		14	40 PP
STALINABAD	76.74	310.5	11	48	3	21	30	5			
TASHKENT	77.08	313.4	11	47	0	21	32	3		14	44 PP
ASHKABAD	84.67	308.3	12	28A	1	22	54	7			
COLLEGE	85.31	24.2	12	29	-1						
SVERDLOVSK	86.22	327.3				23	5	3			
SOUTH POLE	87.19	180.0	12	40	1	23	4	-7		16	5 PP
TANANARIVE	90.83	251.1	12	58A	1					13	21
TIFLIS	95.30	311.5	13	17	0						
SHASTA	98.07	49.5	13	31	1						
BERKELEY	98.32	52.3	13	32	1						
APATITY	98.67	338.1	13	31	-1	24	2	-50		17	31 PP
MINERAL	98.69	49.8	13	34	1						
LICK	98.84	52.8	13	34	1						
MOSCOW	98.95	325.9	13	31	-3					17	53 PP
SODANKYLA	101.23	338.7	13	43	-1						
RESOLUTE	101.67	12.7				24	19	-58		17	35
PASADENA	101.88	55.9	14	13	26	25	18	-15		27	23 PS
SIMFEROPOL	102.79	315.4								18	5 PP
KSARA	102.79	303.9	13	47	-4					18	12 PP
EUREKA	103.09	50.2	13	48	-4					17	58 PP
HUNGRY HORSE	103.10	41.0	13	52	0					17	49 PP
KIRUNA	103.24	340.1	13	51	-2	25	30	0		18	11 PP
BOZEMAN	105.63	43.3								18	20 PP
UPPSALA	107.92	333.2								27	55 PS
TUCSON	108.21	57.1	15	24	777					18	44 PP
SKALSTUGAN	108.27	337.9								18	47 PP
TUCSON TELE.	108.29	57.0								18	43 PP
LWOW	108.33	321.9								18	49 PP
ASTRIDA	109.48	266.3								18	59 PP
LARAMIE	110.52	46.8	14	40	777						
PRUHONICE	113.95	324.6	18	33	2					19	27 PP
JENA	115.18	326.5	19	12	39					20	11 PP
STUTTGART	117.60	325.2	18	39	1					20	5 PP
MESSINA	117.93	312.2								19	44 PP
STRASBOURG	118.51	325.6								20	6 PP
ROME	118.72	317.1				25	27	-1		20	3 PP
FLORENCE X.	118.73	319.5								20	6 PP
DURHAM	119.31	335.3				25	32	2			
DOURBES	119.39	328.4								20	9 PP
PARIS	121.26	328.1								20	21 PP
SHAWINIGAN	128.25	27.9	19	2	4						
TAMANRASSET	131.13	298.0	19	7	3					21	38 PP

COLUMBIA	131.23	45.7	19 7	3	
ALMERIA	131.26	318.8	19 6	2	21 9 PP
PALISADES	131.59	33.8			21 20 PP
GRANADA	131.80	319.8			22 30
MALAGA	132.59	319.9			21 36 PP
HUANCAYO	142.46	113.9	19 25	0	21 13
BERMUDA	142.92	34.9	19 23	-2	22 35 PKS
LA PAZ	146.71	126.1	19 37K	5	
SAN JUAN	150.62	56.5	19 46	8	
MBOUR	154.00	297.6	20 8	25	20 31 PKP2

JULY 30 7.H 32.M 29.S EPICENTRE 30.03 141.75 DEPTH= 0.KM

A=-0.68106 B= 0.53692 C= 0.49786 D= 0.6191 E= 0.7853
G=-0.3910 H= 0.3082 K=-0.8673 HT= 1.8

SE= 3.28

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
TORISIMA	1.33	290.2	0 25	-1	0 35	-9		
HATIDYOZIMA	3.47	332.4	1 2	6	1 34	-5		
OSIMA	5.14	337.7	1 24	4				
MERA	5.14	342.1	1 19	-1				
OMAESAKI	5.45	327.7	1 35	11	2 48	19		
AJIRO	5.49	336.6	1 25	0	2 28	-1		
MISIMA	5.60	335.8	1 27	1	2 27	-5		
YOKOHAMA	5.67	342.4	. 29	2	2 28	-6		
SHIZUOKA	5.68	331.0	1 29	2	2 32	-2		
TYOSI	5.73	352.6	1 30	2				
TOKYO C.M.O.	5.88	343.9	1 31	1	2 32	-7		
HUNATU	6.01	336.1	1 35	3	2 42	-1		
KOHU	6.20	335.3	1 39	4	2 50	3		
OWASE	6.20	312.0	1 32	-3				
KAKIOKA	6.33	348.4	1 38	1	2 42	-8		
IIDA	6.40	330.0	1 39	1	2 57	5		
KUMAGAYA	6.42	342.6	1 38	0	2 45	-8		
MITO	6.43	350.7	1 39	1	3 27	34		
TU	6.45	318.0	1 37	-1				
NAGOYA	6.52	323.1	1 38	-1	2 58	3		
KAMEYAMA	6.56	318.5	1 36	-4	2 47	-9		
UTUNOMIYA	6.69	346.9	1 55	13	2 48	-12	3 10	
MAEBASI	6.74	341.3	1 41	-1	2 46	-15	3 8	
GIHU	6.80	323.2	1 43	0	2 55	-7		
OIWAKE	6.83	337.7	1 46	2				
ONAHAMA	6.94	354.4	1 44	-1	2 55	-11		
MATUMOTO	6.97	333.9	1 48	2	3 10	3		
HIKONE	6.99	319.9	1 49	3				
OSAKA	7.00	312.8	1 51	5	3 13	6	2 18	
IBUKISAN	7.00	321.1	1 47	1				
ABUYAMA	7.11	314.4	1 44K	-4	3 0	-10		
MATUSIRO	7.14	336.5	1 45	-3	3 0	-11	4 3	
TAKAYAMA	7.18	329.5	1 49	0				
SHIRAKAWA	7.19	350.2	1 54	5	2 59	-13		
SUMOTO	7.24	308.3	1 52	3	3 4	-9		
NAGANO	7.26	336.8	1 50	0	3 28	14		
TOKUSIMA	7.30	305.4	1 49	-1				
HUKUI	7.56	324.0	1 54	0				
TAKADA	7.63	338.5	2 12	17				
TOYAMA	7.67	331.5	2 7	12	3 35	11		
KANAZAWA	7.76	328.0	2 12	15				
HUKUSIMA	7.78	352.5	1 54	-3	3 16	-11		
TOYOOKA	8.01	315.1	1 58	-2	3 27	-6		
NIIGATA	8.19	344.8	3 0	57			3 39	
SENDAI	8.25	355.3	2 0	-4	3 24	-15		
ISINOMAKI	8.39	357.7	2 4	-1	3 32	-10		
MIZUSAWA	9.10	357.0	2 10	-5	3 50	-10		
OOITA	9.21	292.9	2 12	-5				
MORIOKA	9.66	357.3	2 21	-2				
KAGOSIMA	9.75	281.9	2 23	-1				
AKITA	9.77	352.5	2 37	12			3 42	
OBIHIRO	12.92	4.8	3 13	6			5 36	
VLADIVOSTOK	15.26	331.6	3 39	1	6 31	2		
GUAM	16.71	169.8	4 2	5	7 14	11		
Y.-SAKHLINSK	16.92	2.3	4 0	1				

UGLEGORSK	19.03	0.6	4 25	-1						
KOROR	23.59	198.3	5 29	16						
BAGUIO CITY	23.65	239.8	5 8	-5	9 17	-9				
TRUK	24.36	155.1	5 23	3	10 18	40				
HONG KONG	25.88	259.2	5 49	14	10 35	32				
YAKUTSK	32.96	349.6	6 32	-6	11 40	-16				
COLLEGE	54.95	29.4	9 34	-1						
BRISBANE	58.19	168.2	9 55A	-3						
KHEYS	60.58	348.5							18 6	
QUETTA	63.52	291.0	10 26	-8						
APATITY	69.21	337.0	11 4	-6	20 1	-15				
RESOLUTE	69.32	13.7	11 8K	-3	20 4	-13				
HORSESHOE B.	70.87	43.6	11 20	0						
VICTORIA	71.14	44.4	11 23A	1						
SODANKYLA	71.54	338.3	11 19	-6						
CORVALLIS	72.86	48.2	11 34	2						
KIRUNA	73.17	340.2	11 29	-5	20 50	-12				
KARAPIRO	74.61	152.9	11 47	5						
SHASTA	75.16	51.5	11 47	1						
UKIAH	75.30	53.2	11 48	2						
MINERAL	75.86	51.5	11 45A	-5						
HELSINKI	76.36	332.7	11 48	-4						
BERKELEY	76.54	54.0	11 54A	0						
HUNGRY HORSE	76.77	41.6	11 55	0						
LICK	77.23	54.3	11 58A	1						
RENO	77.45	51.6	11 59	0						
SKALSTUGAN	78.54	339.4	11 59	-6						
FRESNO	78.79	54.1	12 7A	1						
BUTTE	78.83	43.1	12 5	-1						
UPPSALA	79.38	334.8	12 3	-6						
BOZEMAN	79.91	42.9	12 13	1						
EUREKA	80.07	50.2	12 13	0					12 33	
SIMFEROPOL	80.56	316.7	12 10	-5	22 7	-15				
PASADENA	81.24	55.7	12 19	0						
SALT LAKE C.	82.08	47.4	12 23	0						
BOULDER CITY	82.65	52.7	12 27	1						
RAPID CITY	85.38	40.9	12 40	0						
TUCSON	87.46	54.0	12 52	2						
TUCSON TELE.	87.48	53.9	12 52	2					13 14	
SOUTH POLE	119.86	180.0	18 48	-4					19 11	
BYRD STATION	120.88	168.4	18 58	4						
HUANCAYO	141.27	70.5	19 28	-5						
LA PAZ	149.53	70.5	19 53A	7						

AUGUST 1 5.H 37.M 49.S EPICENTRE -16.34-176.68 DEPTH= 395.KM

DEPTH OF FOCUS= 0.057R

A=-0.95849 B=-0.05561 C=-0.27964 D=-0.0579 E= 0.9983
G= 0.2792 H= 0.0162 K=-0.9601 HT= 5.5

SE= 2.07

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SUVA	5.01	248.3	1 23K	1	2 27	0		
NOUMEA	16.98	246.9	3 36	1	6 36	7		
ONERAHI	20.93	200.7	4 15	1				
KARAPIRO	22.56	196.2	4 28K	-1				
TUAI	23.02	192.4	4 36	3	8 46	32		
WELLINGTON	25.92	194.9	4 58	-2	9 52	51		
COBB RIVER	26.30	198.3			9 9	3		
KAIMATA	28.01	198.9	5 31	13				
GEBBIES PASS	28.74	196.2	5 22	-3	10 47	62		
BRISBANE	30.13	243.2	5 37A	0	10 10	3		
ROXBURGH	31.39	199.0			10 33	7		12 57
CHARTERS TS.	35.35	258.4	6 21	0	11 27	0		
PORT MORESBY	35.89	276.6	6 26A	0	11 38	3	7 26	7 58 PP
TRUK	39.11	304.9	6 52	0				8 57 PCP
MELBOURNE	39.92	230.0	6 58K	-1				
HONOLULU	41.61	26.6	7 13	0	12 59	0		9 6 PP
KIPAPA	41.75	26.6	7 13	-1				
GUAM	48.28	305.6	8 3	-2	14 38	4	9 24	
KOROR	53.75	292.2	8 45	0	15 55	7		
CAPE HALLETT	56.47	184.7	9 6A	2	16 38	15	10 34	11 32 PP
DUMONT	57.67	198.9	9 11	-2	16 43	4		
SCOTT BASE	62.08	183.9	9 43	1	17 46	11		11 11 PCP

MATUSIRO	67.67	321.9	10	15	-2					12	30 PP
ABUYAMA	68.18	319.0	10	20K	-1						
BYRD STATION	68.52	170.9	10	12	-11						
MANILA	68.80	293.1	9	23	-61						
BAGUIO CITY	69.91	294.7	10	30	-1	19	14	6			
OASIS-BUNG.	72.19	205.0	10	44	-1					20	11 SCS
PETROPAVLOVK	72.39	344.7	10	45	-1					12	50
Y.-SAKHLINSK	72.80	332.2	10	51	3					12	54
SOUTH POLE	73.76	180.0	10	54	0				12	22	
BERKELEY	74.27	42.0	10	58	2	20	1	4		12	59
LICK	74.36	42.7	10	55	-2				12	30	
UKIAH	74.40	40.5	10	56	-1				12	20	
PASADENA	74.95	47.1	11	0	0						
FRESNO	75.25	44.1	11	2	0						
MIRNY	75.28	204.4	11	2	0				12	34	27 55
VLADIVOSTOK	75.64	323.8	11	2	-2						
SHASTA	75.85	39.5	11	4	-1						
ZO-SE	76.05	308.6	11	6	0	20	20	4	12	36	14 0 PP
MINERAL	76.13	40.2	11	5	-2						
RENO	76.79	41.7	11	11	0						
CORVALLIS	77.66	36.0	11	16	1						
HONG KONG	77.82	297.7	11	18	2	20	43	8			23 21
BOULDER CITY	78.24	46.9	11	19	1						11 41
NANKING	78.28	308.5	11	19A	0	20	44	4			21 2 SKS
CANTON	78.88	298.1	11	21	-1	20	53	7			21 22 SKS
EUREKA	79.25	43.4	11	22	-2				12	52	14 28 PP
TUCSON	79.38	51.9	11	23	-1	20	55	4	12	51	13 29 *SP
TUCSON TELE.	79.50	51.8	11	24	-1	20	57	4	12	49	13 35 *SP
ALBERNI	79.80	31.6	11	27	0						
CHANGCHUN	79.91	321.4	11	27A	0	21	3	6	12	56	21 32 SKS
VICTORIA	80.04	32.7	11	29A	1						
SEATTLE	80.09	33.9	11	30K	2	21	5	6			
MAGADAN	80.11	343.9	11	29	1	20	54	-5			
HORSESHOE B.	80.65	32.1	11	29	-2						
SITKA	80.81	21.5	11	34	2						
SALT LAKE C.	82.63	43.9	11	43	2				13	12	
PEKING	83.85	314.6	11	47A	0	21	45	9	13	17	21 33 SKS
COLLEGE	83.90	12.0	11	44	-4	21	33	-4	13	16	24 18 *SS
TACUBAYA	84.02	67.9	11	57	9						
BUTTE	84.75	39.0	11	51	-1				13	20	12 42
HUNGRY HORSE	85.07	36.5	11	51	-2				13	30	38 11 PKPPKP
BOZEMAN	85.50	39.8	11	58	3				13	26	
HALLEY BAY	86.49	172.8	12	4	4	21	47	-14			
LARAMIE	87.11	45.5	12	3	0						13 30
KUNMING	88.63	296.5	12	12A	2	22	31	10	13	44	15 48 PP
CHENGTU	89.34	302.1	12	14A	0	22	37	10	13	47	22 8 SKS
RAPID CITY	89.83	43.7	12	17	1				13	45	
ULAN-BATOR	93.17	319.1	12	34	3						
TIKSI	95.06	345.0				22	34	-43			16 30 PP
IRKUTSK	96.20	322.6	12	47	2						25 33 PS
HUANCAYO	97.29	104.8									26 28 *SS
LHASA	99.84	298.0				24	10	13			23 4 SKS
OTTAWA	109.09	47.1	17	47	777						
PALISADES	110.08	51.8	13	49	777	23	31	-15			18 25 PP
KHEYS	112.67	351.8									18 34 PP
FRUNSE	114.60	310.0									18 53 PP
BERMUDA	116.96	61.7	19	18	80	26	39	146			21 15 PP
HALIFAX	117.68	47.9				26	35	140			29 9 PS
APATITY	125.25	346.4	18	15	1	24	46	6			20 10 PP
SODANKYLA	126.80	349.0	18	19	2						
ASHKABAD	127.32	305.5									20 23 PP
KIRUNA	127.37	351.9	18	20	2						20 21 PP
SKALSTUGAN	132.40	354.6	18	19	-9						21 23 SKP
HELSINKI	133.50	345.3	18	30	0						
UPPSALA	135.32	349.8	18	33	0						21 9 SKP
TIFLIS	136.38	314.1	18	42	7						22 15 PKS
COPENHAGEN	140.12	351.9	18	42	0						22 26 PKS
DURHAM	141.46	4.6	18	41	-4	24	47	-27			
SIMFEROPOL	141.49	324.3	18	42	-4						22 18 PKS
WARSAW	141.54	342.5	18	41	-5						21 49 PP
RATHFARNHAM	142.36	9.4	18	47K	0						18 56 PKP2
LWOW	142.63	337.8	18	48	1						
WITTEVEEN	143.51	356.6	18	51	2						
KRAKOW	143.79	341.8	18	55	6						
HALLE	144.26	350.8	18	50	0				20	50	31 44
RACIBORZ	144.26	343.5	18	49	-1						
DE BILT	144.30	358.0	18	52	2				21	5	34 11 PS
KEW	144.84	4.0	18	52A	1				20	56	40 24 SS

JENA	144.87	350.9	18 49	-2					20 24	PP
PLAUEN	145.19	350.1	18 49	-2					20 24	PP
BENSBERG	145.33	355.7	18 51	-1				20 26		
SONNEBERG	145.46	351.1	18 50	-2						
UCCLE	145.62	358.8	18 53	1						
CAMPULUNG	145.88	332.2	18 57	4						
KSARA	145.95	306.8	18 56	3	25 28	7		20 33	22 25	PP
BUCHAREST	146.04	330.2	18 57K	4				20 29	22 19	
BRATISLAVA	146.30	343.3	18 58	5				20 29		
DOURBES	146.31	358.5	18 54	1					21 8	PP
KARLSRUHE	147.16	353.8	19 3	9					25 36	PPP
STUTTGART	147.30	352.8	18 58	3				20 32	22 24	PP
TUBINGEN	147.56	352.9	18 57	2				20 34		
PARIS	147.61	1.0	19 1	6	25 23	0		20 33	22 58	PP
STRASBOURG	147.64	354.5	18 59	4				20 32	22 32	PP
ASTRIDA	147.83	236.6	19 1	6				20 34		
EBINGEN	147.91	352.9	18 59	4				20 35		
BELGRADE	148.15	336.6	19 0	4					25 3	
RAVENSBURG	148.22	351.9	19 3	7						
SOFIA	148.65	331.0	19 0	4					20 37	
BASLE	148.70	354.4	18 50	-7						
LWIRO	148.78	236.0	19 3	6						
RUMANGABO	148.89	238.1	19 5	8				20 44		
CHUR	149.15	351.7	19 1	4						
NEUCHATEL	149.28	355.1	19 7	10						
TRIESTE	149.50	345.5							19 7	PKP2
CLERMONT-FD.	150.66	0.3	19 4	4					41 31	SS
HELWAN	151.02	302.6	19 2	2				20 45		
FLORENCE X.	151.83	347.8	19 3	2	26 51	82		20 44	19 11	PKP2
ATHENS	151.95	324.1	19 12K	10						
MONACO	152.48	353.5	19 6	4				20 42		
ROME	153.34	344.6	19 10	7					25 15	
TOLEDO	155.68	13.9	19 11	4				21 1	23 15	PP
MESSINA	155.71	336.1	19 8	1						
GRANADA	158.36	15.1							22 17	PKP2
MALAGA	158.58	17.2	19 13K	3	25 39	3			23 29	PP
ALGIERS UNI.	159.65	0.6	19 21	9					23 36	PP
TAMANRASSET	173.27	342.4	19 27	5				20 56	24 41	PP

AUGUST 1 12.H 28.M 28.S EPICENTRE 13.65 120.85 DEPTH= 117.KM
DEPTH OF FOCUS= 0.013R

A=-0.49849 B= 0.83460 C= 0.23444 D= 0.8585 E= 0.5128
G=-0.1202 H= 0.2013 K=-0.9721 HT= 6.0

SE= 1.92

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
MANILA	0.94	7.8	0 21	-1	0 36	-3		
BAGUIO CITY	2.77	354.6	0 44	0	1 12	-6		
HONG KONG	10.69	324.5	2 29	-2	4 48	19		
KOROR	14.80	113.7	3 27	3				
ZO-SE	17.37	1.0	3 57A	1				
NANKING	18.41	354.5	4 9A	0				4 37 *SP
KUNMING	20.53	306.2	4 32A	1				
CHENGTU	22.97	320.2	4 56A	1	9 5	12	5 14	5 23 *SP
GUAM	23.23	87.6	5 21	23				
MEDAN	24.07	247.4	5 6K	0	9 6	-5		
LANCHOW	27.07	328.6	5 34A	0				
MATUSIRO	27.61	31.2	5 37	-1				10 53
SHILLONG	29.69	297.9	5 55A	-2	10 46	3		
TRUK	31.07	98.2	6 12	3				
LHASA	31.82	304.8	6 17A	1	11 19	3		
CHATRA	34.09	297.9	6 38	3				
CHARTERS TS.	41.76	142.7	7 40	1			8 2	
LAHORE	46.12	300.7	8 13A	-1				
WARSAK DAM	48.92	303.3	8 37A	1				
BRISBANE	51.44	142.8	8 55K	0			9 27	
RIVERVIEW	55.34	149.3	9 15A	-9				
APATITY	76.51	336.8	11 38	-1				
COLLEGE	78.33	25.8	11 49	0			12 29	
KSARA	78.41	302.2	11 52	3	21 43	9	12 25	
TANANARIVE	79.11	247.4	11 55	2			12 18	
SODANKYLA	79.14	336.9	11 52	-1				
KIRUNA	81.36	337.8	12 4A	-1				

MIRNY	82.58	190.9	12	10	-1				12	34		
HELWAN	82.92	298.9	12	14	1							
UPPSALA	84.83	330.4	12	22	-1				12	45		
SKALSTUGAN	85.92	334.8	12	27	-1				13	0		
EUREKA	105.27	42.2	18	17	777							
TAMANRASSET	107.07	299.2	18	5	777				18	35		
TUCSON	112.72	46.1									19	14 PP
TUCSON TELE.	112.75	46.0									19	13 PP

AUGUST 1 14.H 27.M 33.S EPICENTRE -18.84-177.98 DEPTH= 459.KM

DEPTH OF FOCUS= 0.067R

A=-0.94648 B=-0.03342 C=-0.32102 D=-0.0353 E= 0.9994
G= 0.3208 H= 0.0113 K=-0.9471 HT= 4.9

SE= 2.13

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
SUVA	3.48	280.8	1	14A	2	2	15	6					
AFIAMALU	7.72	51.4	1	50A	-3	3	15	-9					
KARAPIRO	19.84	195.3	4	0	1								
BRISBANE	27.95	246.7	5	12K	-1								
CHARTERS TS.	33.71	262.0	6	2K	0								
PORT MORESBY	35.04	280.7	6	14	1								
TRUK	39.61	308.6	6	51	0								
GUAM	48.79	308.4	8	1	-2								
SCOTT BASE	59.52	183.7	9	19	0						11	1	PCP
BYRD STATION	66.26	170.7	10	2	-1								
MATUSIRO	68.89	323.3	10	17A	-2						10	41	PCP
SOUTH POLE	71.28	180.0	10	32	-1								
LICK	77.03	42.9	11	12	7								
EUREKA	81.91	43.7	11	32	1				13	16			
TUCSON TELE.	82.01	52.0	11	33	2								
HALLEY BAY	84.17	173.0	11	41	-1				15	2			
COLLEGE	86.59	12.4	11	52	-2	21	47	-4	13	39			
KIRUNA	129.65	351.0									20	56	SKP
SKALSTUGAN	134.75	353.6									21	4	SKP
PRUHONICE	147.35	345.0	18	51	4				20	43			

AUGUST 3 1.H 6.M 28.S EPICENTRE -22.10-179.00 DEPTH= 567.KM

DEPTH OF FOCUS= 0.084R

A=-0.92728 B=-0.01618 C=-0.37403 D=-0.0174 E= 0.9998
G= 0.3740 H= 0.0065 K=-0.9274 HT= 4.1

SE= 1.69

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
SUVA	4.61	328.0	1	29A	1								
AFIAMALU	10.66	41.3	2	24K	-1	4	18	-4			2	42	
NOUMEA	13.48	266.4	2	54K	1	5	25	12			3	9	PP
ONERAHI	14.80	201.6	3	12	6	5	48	11					
KARAPIRO	16.46	195.4	3	24A	1	6	24	18					
TUAI	16.97	190.4	3	26	-1	6	12	-3			14	0	
WELLINGTON	19.83	193.9	3	53	-1	7	6	3			14	11	SCS
KAIMATA	21.88	199.3	4	11	-2	7	32	-5					
GEBBIES PASS	22.63	195.9	4	17	-3	7	42	-7					
ROXBURGH	25.27	199.5				8	30	-1			14	33	SCS
BRISBANE	25.92	252.4	4	49	0						11	24	
RIVERVIEW	28.74	239.5	5	14K	0	9	25	0					
CHARTERS TS.	32.45	267.2	5	45	0	10	20	-2					
MELBOURNE	34.68	234.9	6	5K	1	10	53	-3			13	59	SS
PORT MORESBY	34.84	285.8	6	5K	0	10	56	-2	7	41	11	14	SCP
TRUK	40.99	312.6	6	55	0	12	20	-8	8	30	11	38	SCP
HONOLULU	47.71	26.7	7	46	-1	14	6	4			16	46	SCS
KIPAPA	47.85	26.7	7	47	-1								
GUAM	50.13	311.5	8	5	0				10	0	17	0	SCS
CAPE HALLETT	50.59	184.2	8	10A	1	14	49	8			9	19	PCP
DUMONT	51.54	199.5	8	14	-2	14	52	-2					
KOROR	54.15	297.4	8	34	0	15	26	-3			12	34	

SCOTT BASE	56.22	183.6	8	50	2	16	5	10			10	43	PP
WILKES	62.12	205.6				17	5	-4			18	19	SCS
BYRD STATION	63.23	170.3	9	35	0	17	26	3	11	31	18	26	SCS
OASIS-BUNG.	66.08	206.0	9	51	-2				11	46	18	51	SCS
SOUTH POLE	68.04	180.0	10	5	0	18	20	0	12	3	38	8	PKPPKP
MIRNY	69.16	205.3	10	10	-1	18	31	-2	12	10	19	16	SCS
BAGUIO CITY	70.47	297.7	10	19	0	18	47	0					
SENDAI	70.87	327.5	10	21	0	18	51	-1					
MATUSIRO	70.95	324.6	10	21K	-1	18	55	2	12	17	19	38	SCS
ABUYAMA	71.20	321.8	10	24K	1	18	58	2					
MIZUSAWA	71.42	328.3	10	25	0	19	0	2					
DJAKARTA	73.05	270.1	10	32K	-2	19	14	-2					
NAGASAKI	73.18	316.7	10	34	-1	19	12	-5					
Y.-SAKHLINSK	76.92	334.2	10	56	1	20	0	2	12	56	24	16	
PETROPAVLOVK	77.39	346.4	10	55	-3	19	59	-3	12	58	13	59	PP
ZO-SE	78.01	310.7	11	1K	0	20	9	0	12	59	20	35	SKS
VLADIVOSTOK	79.05	325.7	11	6	-1	20	24	4	13	6	24	32	
CANTON	79.75	300.0	11	11K	1	20	29	2	13	14	20	51	SKS
BERKELEY	79.99	42.2	11	13A	1	20	34	5	13	12	20	56	
LICK	80.05	43.0	11	14A	2				13	16			
UKIAH	80.18	40.7	11	13	0				13	15			
NANKING	80.22	310.3	11	14K	1	20	35	3	13	12	14	13	*SP
PASADENA	80.45	47.2	11	14A	0	20	40	6	13	14	14	8	*SP
FRESNO	80.89	44.3	11	16A	0				13	19			
HALLEY BAY	81.07	173.2	11	16	-1	20	48	8					
SHASTA	81.66	39.9	11	21A	1								
MINERAL	81.91	40.6	11	22A	1				13	25			
RENO	82.52	42.1	11	20A	-4	21	1	7	13	28			
CHANGCHUN	83.10	323.0	11	27K	0	21	5	5	13	28	14	54	PP
CORVALLIS	83.58	36.4	11	31A	1				13	34			
BOULDER CITY	83.74	47.3	11	31	0				13	35			
PHU-LIEN	84.16	295.1	12	34	61	22	1	51					
MEDAN	84.23	276.2	11	34A	1				13	29			
TUCSON	84.63	52.2	11	37	2	21	9	-6	13	42	40	20	SKPPKP
EUREKA	84.91	43.8	11	37	1				13	38	40	11	SKPPKP
MAGADAN	85.05	345.1	11	35	-2	21	18	-1	13	38	21	6	SKS
VICTORIA	86.03	33.4	11	42K	0	21	32	4	13	46			
SEATTLE	86.06	34.5	11	44	2	21	35	7	13	48			
PEKING	86.37	315.9	11	43K	0	21	34	3	13	46	21	14	SKS
HORSESHOE B.	86.66	32.7	11	45K	0				13	49	14	12	PP
SITKA	86.94	22.2	11	47	1				13	53			
SALT LAKE C.	88.27	44.4	11	53	1				13	57			
TATUNG	88.30	314.8	11	56	4								
KUNMING	89.27	297.3	11	58K	1	22	4	7	14	1	21	34	SKS
COLLEGE	89.97	12.8	11	58	-2	22	0	-3	14	4	25	42	*SS
BUTTE	90.56	39.7	12	3	0				14	7			
CHENGTU	90.57	302.9	12	4K	1	22	16	7	14	7	15	46	PP
HUNGRY HORSE	90.97	37.2	12	4	-1				14	8	39	50	SKPPKP
BOZEMAN	91.29	40.5	12	6	0				14	11			
BANFF	91.70	34.3	12	8A	0				14	17			
LUBBOCK	91.93	54.5	12	9	0	22	29	8	14	16	26	15	
BOULDER	92.28	47.5	11	42	-29						14	15	
LARAMIE	92.67	46.3	12	12	0				14	16			
LANCHOW	93.01	307.7	12	15K	1	22	39	9	14	19	21	53	SKS
ULAN-BATOR	96.08	319.4	14	32	124								
HUANCAYO	97.86	106.3	12	40	4	22	22	-49	14	42	16	45	PP
SHILLONG	98.50	294.1	12	37	-2	23	20	4			17	46	
IRKUTSK	99.43	322.7	12	42	-1				14	44	16	50	PP
TIKSI	100.03	345.3									16	56	PP
LHASA	100.57	297.7	12	49	1	23	41	8			22	33	SKS
LA PAZ	102.20	113.5	12	44	-11	23	27	-20			17	17	PP
FLORISSANT	102.48	53.1				23	51	2			27	37	*SS
ST. LOUIS 1	102.53	53.3				23	58	8			22	37	SKS
CHATRA	102.90	293.8				22	47	-66			17	29	
CHINCHINA	104.24	90.4				22	52	-72			17	29	PP
BOGOTA	105.55	91.3				23	46	0			17	43	PP
FUQUENE	106.18	90.6				24	19	-2			17	46	PP
RESOLUTE	109.59	16.3				24	51	-1			28	36	PKKP
AGRA	110.81	291.7				23	16	-1					
SEMIPALATNSK	113.46	316.7				23	23	-4			18	32	PP
OTTAWA	114.55	48.9	17	36K	0								
PALISADES	115.29	53.9	17	38	1						18	47	PP
BREBEUF	116.03	49.0	17	39	0								
FRUNSE	116.51	308.0									18	46	PP
SHAWINIGAN	116.72	47.9	27	39K	-1								
WESTON	117.38	52.7	17	42K	1								
WARSAK DAM	117.69	297.8	17	41	-1								
KHEYS	118.01	351.2				23	38	-6			18	58	PP

SEVEN FALLS	118.08	47.3	17	42	0						
TRINIDAD	119.30	89.9	17	46	1						
TASHKENT	120.30	305.9								19	23 PP
STALINABAD	120.48	302.6								19	23 PP
QUETTA	120.95	292.8	17	49	1						
BERMUDA	121.50	64.7	19	36	107	23	57	1		22	17
SVERDLOVSK	124.76	324.7				24	7	1		19	46 PP
ASHKABAD	128.65	301.5								20	3 PP
SCORESBY SD.	129.74	9.8				24	38	18		20	38 PP
APATITY	130.24	344.3				24	38	17	20 21	20	37 PP
SODANKYLA	131.95	347.0								20	43 PP
KIRUNA	132.69	350.1	17	59	-12	24	27	0		20	45 SKP
PULKOVO	137.04	338.7								20	59 PP
SKALSTUGAN	137.85	352.5	18	11	-9					21	1 SKP
GORIS	137.85	304.9	18	15	-5					21	3 PP
HELSINKI	138.38	342.2	18	20	-1						
UPPSALA	140.48	346.9	18	17	-9					21	28 PP
ASTRIDA	142.71	232.4	18	29	-1					21	18 *SP
LWIRO	143.63	231.8	18	33	2						
RUHANGABO	143.84	233.5	18	52	21					21	22 *SP
SIMFEROPOL	144.58	318.0	18	34	1					27	53 SKKS
COPENHAGEN	145.40	348.6	18	34K	0				20 45	31	57
WARSAW	146.19	337.8	18	36	1				20 46	21	48 PP
LWOW	146.91	332.4	18	40	4				20 51	28	4 SKKS
IASI	147.06	325.9	18	38	2				20 55	28	7 SKKS
KSARA	147.20	298.5	18	38	2	24	55	5	20 53	22	16 PP
DURHAM	147.32	2.8	18	38	2	24	58	8		22	10 PP
JERUSALEM	148.12	294.9	18	40	2					22	15 PKS
FOCSANI	148.21	324.0	18	59	21				21 7		
RATHFARNHAM	148.36	8.3	18	38	0				21 1		
POTSDAM	148.37	345.9	18	42	4				20 55		
KRAKOW	148.37	336.5	18	42	4				20 55	22	55
RACIBORZ	148.96	338.3	18	45	6					19	2 PKP2
WITTEVEEN	149.02	353.3	18	45	6						
COLLMBERG	149.39	345.1	18	40	0				20 55		
HALLE	149.44	346.5	18	46	6				20 55	22	40 PP
BUCHAREST	149.62	323.1	18	40K	0				20 55	28	21 SKKS
MUNSTER	149.74	351.9	18	46	6						
DE BILT	149.88	354.9							21 0	33	24 PS
JENA	150.06	346.5	18	40	-1				20 56	22	18 PP
PRAGUE	150.15	342.5	18	49	8				20 54	22	37 PP
PRUHONICE	150.19	342.3	18	47	6				20 58	27	40 SKKS
SONNEBERG	150.66	346.6	18	48	7				21 2		
KEW	150.66	1.7	18	48	6				21 3	40	59 SS
CHEB	150.67	345.0							21 2		
BENSBERG	150.79	352.0	18	48	6					22	0 *SPKP
BRATISLAVA	150.97	337.5	18	44	2				21 1	19	0 PKP2
TIMISOARA	151.21	329.8								19	27
UCCLE	151.23	355.6	18	51	9					27	18
HELWAN	151.72	292.2	18	51	8					28	32
DOURBES	151.90	355.1	18	53	9					28	29
SOFIA	152.27	323.0	18	52	8	24	50	-6	20 59	28	56
KARLSRUHE	152.51	349.4	18	52	8				21 0	22	48 PP
STUTTGART	152.59	348.2	18	45	1	25	14	17	21 0	28	38 SKKS
TUBINGEN	152.85	348.2	18	49	4				21 0		
STRASBOURG	153.03	350.1	18	50	5				21 0	22	34 PP
EBINGEN	153.20	348.1	18	54	9				21 7		
PARIS	153.32	357.8	18	56	11				21 0	21	38 SKP
RAVENSBURG	153.46	346.9	18	50	4				21 4		
TRIESTE	154.30	339.1	18	46	-1				21 3	19	13 PKP2
NEUCHATEL	154.69	350.4							21 5		
ATHENS	154.86	314.1	19	16A	29						
CLERMONT-FD.	156.32	356.3							21 13	41	12 SS
FLORENCE X.	156.77	340.9	19	24	34	26	18	77	21 14	19	50 PKP2
ROME	158.03	336.6	19	29	37	27	2	120	21 8		
MESSINA	159.65	325.3	19	30	43	25	13	9	21 47	23	25 PP
MBOUR	161.30	111.2	19	46K	51	24	54	-12	21 39	23	29 PP
TOLEDO	161.76	12.5	19	4	8					19	46 PKP2
ALICANTE	163.75	4.2	18	50	-8	24	54	-13			
MALAGA	164.69	16.6	18	57A	-1				21 17	22	59 PP
TAMANRASSET	175.76	280.1	19	7	3	24	59	-41	21 27	24	43 PP

AUGUST 4 4.H 13.M 27.S EPICENTRE -6.22 129.91 DEPTH= 196.KM

DEPTH OF FOCUS= 0.026R

A=-0.63789 B= 0.76257 C=-0.10761 D= 0.7670 E= 0.6416
G= 0.0690 H=-0.0825 K=-0.9942 HT= 6.9

SE= 1.68

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT MORESBY	17.37	101.6	3	48	-4	6	54	-4					
CHARTERS TS.	20.98	132.3	4	30A	1	8	16	10					
BANDUNG	22.13	267.0	4	41	1								
LEMBANG	22.16	267.2	4	41	0						15	40	
MANILA	22.48	336.9	4	44	0	8	44	12					
BAGUIO CITY	24.31	337.8	5	2	1	9	12	9					
GUAM	24.49	36.9	5	2	-1	9	8	2	5	38	8	19	PCP
TRUK	25.76	58.5	5	15	0						12	4	
PERTH	28.78	205.4	5	42	0	10	20	4			6	26	*SP
BRISBANE	30.49	136.6	5	56K	-1	10	41	-2					
TAIPEI	32.12	345.6	5	2	-69								
HONG KONG	32.26	331.9	6	11A	-2	11	10	0	6	45	8	51	PCP
MEDAN	32.67	286.5	6	15K	-1	11	13	-4					
CANTON	33.35	331.4	6	20A	-2	11	26	-1	6	54	7	35	PP
RIVERVIEW	33.80	147.2	6	28K	2						11	39	SS
MELBOURNE	34.32	158.6	6	31K	1	11	48	6	7	4	14	6	SS
YAKUSIMA	36.46	0.9	6	44	-4	12	15	0			7	22	
KAGOSIMA	37.58	0.9	7	24	26	13	32	60			8	19	
MIYAZAKI	37.95	2.1	7	1	0	12	41	4			7	35	PP
ZO-SE	38.04	347.8	7	1A	0	12	38	-1	7	36	7	53	*SP
NOUMEA	38.71	118.1	7	6A	-1								
NAGASAKI	38.73	360.0	7	8	1						7	40	PP
KUMAMOTO	38.83	1.1	7	10	2						7	43	PP
SIMIDU	38.89	4.1	7	9	1	12	53	2			7	42	PP
SAGA	39.25	0.5	7	46	35								
OOITA	39.26	2.3	7	9	-2	12	57	0					
NANKING	39.50	345.1	7	14A	1	13	2	1	7	47	9	16	PCP
HUKUOKA	39.58	0.7	7	14	0	13	4	2			7	49	PP
KOTI	39.70	4.7				13	2	-2			7	40	PP
SIOMISAKI	39.84	7.7				13	8	2					
TOKUSIMA	40.31	6.0	7	9	-11								
HIROSIMA	40.44	3.2	7	19	-2	13	13	-1			14	16	
TAKAMATU	40.51	5.3	7	13	-9								
SUMOTO	40.62	6.3	7	23	0	13	19	2			7	57	PP
KUNMING	40.84	320.6	7	26A	2	13	23	3			9	7	PCP
HAMADA	40.95	2.7	7	25	0	13	23	1			7	59	PP
KOBE	40.98	6.6	7	59	33	13	24	2					
OSAKA	40.99	7.1	7	27	1	13	27	4			16	31	SCS
PORT BLAIR	41.04	295.6	7	28	2	13	22	-1			9	52	PCP
TU	41.20	8.3									9	28	
ABUYAMA	41.21	7.1	7	27A	0	13	27	1					
KAMEYAMA	41.31	8.2	7	30	2	13	29	2			8	4	PP
OMAESAKI	41.35	10.4	7	29	0	13	30	2					
HIKONE	41.70	7.8	7	32	1	13	34	1			8	22	PP
NAGOYA	41.70	8.7	7	33	2	13	33	0					
OSIMA	41.74	11.7	7	32	0						9	30	
TOYOOKA	41.78	6.0	7	32	0	13	36	2			16	31	SCS
IBUKISAN	41.82	7.9	7	33	1								
GIHU	41.90	8.4	7	33	0	13	36	0			8	37	
MERA	41.97	12.2	7	31	-3								
MISIMA	41.99	11.1	7	33	-1								
HUNATU	42.32	10.8	7	36	0								
KOHU	42.41	10.5	7	36	-1								
YOKOHAMA	42.43	11.8	7	30	-7						8	0	PP
TOKYO C.M.O.	42.69	11.8	7	43	4	13	42	-5			8	32	
MATUMOTO	42.92	9.6	7	42	1								
KUMAGAYA	43.07	11.2	7	40	-3						11	4	
OIWAKE	43.09	10.2	8	46	63								
TOYAMA	43.24	8.6	8	19	35	13	57	2					
MATUSIRO	43.25	9.8	7	43A	-1	13	54	-2	8	16	10	6	*PPP
MAEBASI	43.25	10.8	7	44	0	14	0	4			8	35	PP
KAKIOKA	43.31	12.1	7	43	-1								
NAGANO	43.36	9.7	7	44A	-1	13	58	1			8	41	PP
MITO	43.52	12.4	7	49	3						12	59	
UTUNOMIYA	43.56	11.7	7	46	0	13	59	-1					
WAZIMA	43.86	8.0	7	49	0	14	5	1					
ONAHAMA	44.16	12.7	7	52	1	14	11	2			8	48	PP
SHIRAKAWA	44.18	11.8	7	52	1	14	9	0					
CHENGTU	44.27	327.4	7	51A	-1	14	7	-3	8	24	9	34	PP
NIIGATA	44.73	10.3	8	1	5	14	36	19			9	18	
HUKUSIMA	44.84	11.9	7	57	0	14	20	2					
YAMAGATA	45.29	11.6	8	1	1	14	28	3					

SENDAI	45.43	12.2	8	1A	0	14	26	-1			8	51 PP
SAKATA	45.82	10.8	8	6	2	14	38	6				
MIZUSAWA	46.30	12.1	8	9	1	14	44	5				
AKITA	46.67	10.8	8	11	0	14	49	5			8	46 PP
CHITTAGONG	46.87	308.5	8	14	1							
PEKING	47.73	345.7	8	19	0	15	0	1	8	56	10	13 PP
AOMORI	47.86	11.1	8	21	1	15	5	4				
TATUNG	48.57	343.0	8	30	4							
SHILLONG	48.62	312.1	8	25	-1	15	13	1			16	11
LANCHOW	48.68	331.7	8	27A	0	15	12	-1	9	2	9	53 PCP
SUVA	48.74	108.6	8	28	1	15	22	9	9	10	9	31 *SP
HAKODATE	48.78	10.7	8	27	0							
MORI	49.06	10.5	8	31	2	15	21	3				
VLADIVOSTOK	49.14	1.9	8	30	0	15	22	3	9	6	18	5 SCS
URAKAWA	49.55	12.6	8	35	2	15	28	3			10	13
TOMAKOMAI	49.66	11.3	8	37	3							
SAPPORO	50.14	10.9	8	38	0	15	35	2				
KUSIRO	50.70	13.7	9	5	23							
NEMURO	51.32	14.6	8	45	-2							
COBB RIVER	51.56	139.0	9	26	38							
LHASA	51.62	315.8	8	50A	1	15	55	2			10	49 PP
KARAPIRO	51.99	134.2	8	52	1				9	27		
BOKARO	52.38	306.4				16	2	-1			20	6
CHATRA	52.83	310.4	8	58	0						10	11
GEBBIES PASS	52.87	141.9									10	3
MADRAS	52.97	291.3	8	59A	0						12	33
WELLINGTON	52.99	138.3	9	35	36						17	58
Y.-SAKHLINSK	54.14	10.8	9	6	-1	16	28	1	9	43		
HYDERABAD	55.99	295.7	9	20A	-1	16	50	-2			11	8 PP
ULAN-BATOR	57.59	341.9	9	32	0	17	17	4				
DUMONT	60.76	175.4	9	53	-1	17	54	1				
WILKES	61.39	188.8	9	54	-4	18	5	4			19	30 SCS
BOMBAY	61.53	295.3	9	57	-2	18	3	0			12	16
IRKUTSK	62.22	342.5	10	3A	0	18	18	6	10	41	19	21 *SS
OASIS-BUNG.	63.19	192.8	10	10	0						19	40 SCS
PETROPAVLOVK	63.93	18.8	10	10	-5	18	35	2			19	43 SCS
LAHORE	64.93	309.0	10	20	-1				11	0	10	51 PCP
MIRNY	65.37	195.3	10	23	-1	18	49	-2			19	53 SCS
MAGADAN	67.64	11.3	10	38	0				11	15		
WARSAK DAM	68.08	310.3	10	40	-1							
FRUNSE	69.96	319.9	10	53A	1	19	51	6			13	35 PP
QUETTA	70.27	305.0	10	54	0	19	55	6	11	34	13	40 PP
CAPE HALLETT	70.48	167.9	10	57K	2	19	58	7			15	22 PPP
TASHKENT	72.75	316.6	11	8	-1				11	50	21	21 PS
SCOTT BASE	74.11	172.4	11	17A	0	20	41	9				
HONOLULU	75.65	66.3	11	27	1	20	53	4	12	15	21	59 *SS
KIPAPA	75.75	66.2	11	28	2				12	15		
TIKSI	77.69	359.7	11	36	-1	21	10	-1			11	51 PCP
ASHKABAD	79.47	310.3	11	48A	2	21	33	3	12	28	22	40 PS
SOUTH POLE	83.82	180.0	12	9	0	21	12	-62	12	38	13	1 *SP
SVERDLOVSK	84.06	328.9	12	10	0						15	25 PP
BYRD STATION	87.42	170.6	12	28	1	22	38	-10				
GORIS	88.98	309.7	12	36	2	22	48	-15				
TIFLIS	90.45	311.8				22	8	-68				
COLLEGE	92.30	25.1	12	47	-2	23	32	0	13	34	16	38 PP
KHEYS	93.98	350.2	12	53	-4				13	34	16	36 PP
KSARA	96.77	303.3	13	11	1	24	19	8	13	54	17	12 PP
HALLEY BAY	97.20	185.8	13	12	0	23	30	-44				
APATITY	98.19	337.3	13	16	0	24	24	1			17	19 PP
SIMFEROPOL	98.45	314.4	13	17	0	24	26	1	13	59	17	18 PP
ASTRIDA	99.83	266.3									17	33 PP
PULKOVO	100.17	329.5									17	17 PP
HELWAN	100.50	299.1									17	33
LWIRO	100.79	266.5									17	41
SODANKYLA	100.81	337.5	13	27	-1							
KIRUNA	103.03	338.5	13	36	-2	25	12	9	14	17	17	57 PP
LWOW	104.97	319.9									17	53 PP
WARSAW	106.43	322.6	17	56	777	24	53	40			18	22 PP
UPPSALA	106.45	330.9	13	52	777	24	15	2			28	29
RESOLUTE	106.93	11.3	13	55	777	25	13	-2			18	19 PP
SHASTA	107.44	49.4	14	4	777						17	30
TIMISOARA	107.45	316.0									19	26
KRAKOW	107.53	320.6									18	32 PP
MINERAL	108.08	49.7									18	8 PP
BELGRADE	108.14	315.1	18	36	777						28	47
LICK	108.41	52.8	14	5	777						18	8 PP
RACIBORZ	108.62	320.8									18	51
RENO	109.55	50.3	18	42	777							

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

FRESNO	109.93	53.2	15	3	777						18	41	
COPENHAGEN	110.39	327.6				24	37	8			18	48	PP
PRUHONICE	110.92	321.4	18	8	-2						18	55	PP
PRAGUE	110.97	321.5									18	58	PP
POTSDAM	111.11	324.1									18	54	
TARANTO	111.21	311.0									18	42	PP
PASADENA	111.59	55.8	18	14	3						19	47	
HUNGRY HORSE	111.81	40.2	18	14	2						14	18	P
HALLE	112.05	323.4				24	21	-15			19	3	PP
JENA	112.45	322.9									18	48	PP
EUREKA	112.49	49.9	18	3	-10						14	26	P
TRIESTE	112.59	317.0									18	53	PP
MESSINA	112.92	308.8									19	2	
SCORESBY SD.	113.33	350.1									19	17	PP
BUTTE	113.41	42.3	18	18	3								
BOULDER CITY	114.02	53.4	18	29	13						19	13	PP
ROME	114.43	313.3									19	7	
BOZEMAN	114.53	42.4	18	20	3								
STUTTGART	114.62	321.3	18	19	2				19	1	19	18	PP
FLORENCE X.	114.81	315.6									19	22	PP
KARLSRUHE	115.03	321.7									19	6	
STRASBOURG	115.58	321.4									19	30	PP
DE BILT	115.73	325.8									19	33	PP
UCCLE	116.75	324.7				26	9	75			19	34	PP
DOURBES	116.90	323.9				26	18	84			20	16	
ABERDEEN	116.92	333.0	19	10	48	25	?	8					
TUCSON	117.96	56.8	18	27	3								
DURHAM	117.99	330.6									23	15	
TUCSON TELE.	118.04	56.7	18	27	3				19	17	28	50	PKKP
PARIS	118.69	323.2	18	28	3	25	5	4			19	53	PP
KEW	119.05	326.9				27	40	158			19	50	PP
CLERMONT-FD.	119.58	319.9									19	55	PP
BOULDER	120.30	46.9	18	32	4								
RAPID CITY	120.31	41.9	18	30	2								
ALGIERS UNI.	122.89	310.1				27	49	154			20	9	PP
TAMANRASSET	124.04	293.2	18	39	4	25	25	7	19	20	20	16	PP
LUBBOCK	124.96	53.1	18	40	3								
ALICANTE	124.96	313.1	18	34	-3	25	22	1			32	8	PPS
TOLEDO	126.86	316.2									20	39	PP
ALMERIA	127.00	312.1									20	46	PP
GRANADA	127.70	312.9				28	13	164			21	13	PP
MALAGA	128.47	312.7	18	43	-1				19	27	20	51	PP
LISBON	130.89	317.3									21	13	PP
OTTAWA	135.06	25.6	18	45	-11						22	11	PKS
SHAWINIGAN	135.31	22.2	18	48	-9						22	9	PKS
SEVEN FALLS	135.53	20.2	18	49	-8						22	13	PKS
HARVARD	139.16	24.5	19	1	-3								
PALISADES	139.34	28.0	18	57	-7	25	52	-1			33	2	*PPS
WESTON	139.37	24.3	18	59A	-5								
HALIFAX	139.97	15.0	18	58A	-7						22	43	*PPP
COLUMBIA	140.20	41.9	19	2	-4						22	7	PP
MBOUR	146.46	286.6	19	23	6				20	5	41	24	SS
HUANCAYO	149.02	125.9	19	26	5						23	56	*SPP
BERMUDA	150.63	25.8	19	33	10						23	11	PKS
BALBOA HTS.	150.66	82.8	19	32	9				20	21			
LA PAZ	151.22	141.9	19	29A	5						19	43	PKP2
CHINCHINA	154.56	91.5	19	32	3								
BOGOTA	156.07	92.6	19	34	3						23	22	SKP
SAN JUAN	160.24	50.9	19	38	2				20	20	24	57	PP
DOMINICA	165.69	50.0	19	53	12								
ST. VINCENT	167.00	57.1									20	49	PKP2
TRINIDAD	167.86	67.9	19	45	2								

AUGUST 6 9.H 51.M 30.S EPICENTRE -24.51 -63.53 DEPTH= 564.KM

DEPTH OF FOCUS= 0.084R

A= 0.40605 B=-0.81544 C=-0.41254 D=-0.8952 E=-0.4457
G=-0.1839 H= 0.3693 K=-0.9109 HT= 3.5

SE= 1.78

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
TALA POZO	3.36	191.0	1	20	1	2	20	-2					
LA PAZ	9.06	330.7	2	10K	0	3	54	1			2	26	PP
SANTA LUCIA	10.87	213.5	2	26	-2	4	26	0					

HUANCAYO	16.69	315.8	3	27	2	6	22	11			7	26 PCP
BOGOTA	30.72	339.1	5	30	-1	9	52	-4			12	57 PCS
FUQUENE	31.41	340.2	5	36	-1	10	4	-3			10	35 SCP
CHINCHINA	31.58	336.5	5	36	-2	10	2	-7				
TRINIDAD	35.02	3.4	6	8	1						11	20
GRENADA	36.38	3.0	6	18	0							
ST. VINCENT	37.51	3.6	6	31	3	11	37	-1				
FORT FRANCE	39.07	3.7	6	40	0	11	56	-5				
SAN JUAN	42.70	356.4	7	5	-4							
SAN SALVADOR	45.54	323.8							8	39		
MERIDA	51.83	328.5									10	9 PP
TACUBAYA	55.78	318.3	8	48	2						11	25
BERMUDA	56.58	358.8									16	0
MBOUR	59.66	54.6	9	13	1							
COLUMBIA	60.52	343.3	9	17	-1							
SOUTH POLE	65.64	180.0	9	50	-1				11	42	12	8 *SP
FAYETTEVILLE	66.87	333.3	9	58	0							
WESTON	66.94	353.7	9	57A	-2							
HARVARD	67.09	353.6	9	59	-1							
BREBEUF	70.28	352.5	10	18A	-1						12	52
OTTAWA	70.45	350.9	10	19A	-1							
SHAWINIGAN	71.22	353.3	10	23A	-1							
TUCSON TELE.	72.28	319.3	10	30	0				12	28		
TUCSON	72.28	319.2	10	30	0						13	53
WINDHOEK	72.87	107.4	10	28K	-6							
SCOTT BASE	73.75	189.8	10	39	1							
BOULDER	75.09	328.0	10	46	0							
LARAMIE	76.21	328.7	10	53	1							
CAPE HALLETT	76.80	194.7	10	55A	0				12	58		
BOULDER CITY	77.25	319.5	10	59	1							
RAPID CITY	77.33	331.9	10	58	0							
PASADENA	78.07	316.3	11	3	1							
EUREKA	80.30	321.5	11	14	0				13	13	40	30 SKPPKP
FRESNO	80.78	317.4	11	17A	1							
TAMANRASSET	81.85	60.5	11	23K	1				13	23		
BOZEMAN	82.11	328.5	11	28	5							
LICK	82.28	316.9	11	25A	1							
RENO	82.56	319.6	11	26A	1							
BERKELEY	82.99	317.0	11	28A	1							
BUTTE	83.10	328.0	11	28	0							
MINERAL	84.14	319.3	11	33A	0							
TOLEDO	84.69	41.7	11	37	1				13	39		
SHASTA	84.83	319.2	11	35A	-1							
HUNGRY HORSE	85.46	328.9	11	39	-1	21	25	2	13	42	40	13 SKPPKP
CORVALLIS	87.75	321.8	11	51A	1							
BANFF	88.14	330.2	11	50A	-2							
VICTORIA	90.25	324.9	12	0A	-2							
HORSESHOE B.	90.71	325.6	12	3A	-1							
UVIRA	90.98	94.2	12	8	3				14	12		
LWIRO	91.20	93.0	12	9	3				14	15		
ASTRIDA	91.90	93.7	12	11	1						15	58
TANANARIVE	100.21	116.2	12	34K	-13							
PRUHONICE	101.16	40.1	12	52	1				14	56	17	3 PP
CHARTERS TS.	127.09	215.9	18	2A	1						20	27
TRUK	142.17	249.4	18	27	-3				21	17		
GUAM	151.15	252.8	18	51	8				21	23		
KOROR	155.73	228.3	19	22	33							
MATUSIRO	157.81	307.8	18	40	-12						19	30 PKP2

AUGUST 6 17.H 16.M 7.S EPICENTRE 59.56 5.83 DEPTH= 0.KM

A= 0.50651 B= 0.05171 C= 0.86068 D= 0.1016 E=-0.9948
G= 0.8562 H= 0.0874 K=-0.5091 HT= -8.8

SE= 3.89

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
BERGEN	0.88	342.7	0	20	1	0	31	-2					
GOTEBORG	3.72	117.5	0	59	0						1	9	PG
SKALSTUGAN	5.07	34.6	1	18	-1	2	16	-3			2	38	SG
COPENHAGEN	5.27	134.7	1	20	-2	2	21	-3			1	40	PG
UPPSALA	5.98	82.2	1	30	-2						1	51	PG
DURHAM	6.27	223.2	1	29	-7						2	59	
WITTEVEEN	6.78	175.7	1	42	-1								
POTSDAM	8.26	147.5				4	11	32			4	44	SG

BENSBERG	8.66	174.4	2	8	-1	4	38	49			
KEW	8.82	205.9							5	53	
RATHFARNHAM	9.18	232.1	2	22K	6				3	48	
COLLMBERG	9.22	150.7	2	6	-11						
JENA	9.25	156.8				4	14	11	2	56	PG
DOURBES	9.51	184.8				4	3	-1			
HELSINKI	9.64	78.1	2	20	-3	4	2	-11			
PLAUEN	9.77	155.5				4	20	4	5	22	SG
KIRUNA	10.49	31.7	2	31	-3				5	27	SG
PRAGUE	10.72	148.8				4	45	6	6	4	SG
PRUHONICE	10.83	148.6	2	49	10	4	43	1			
STUTTGART	10.99	168.2	2	39	-2	4	31	-15			
STRASBOURG	11.06	173.3							4	2	
RACIBORZ	11.86	137.8				5	10	3	5	42	SSS
SODANKYLA	12.09	41.0	2	50	-6						
KRAKOW	12.50	133.5				5	15	-8	5	37	SS
CLERMONT-FD.	13.91	187.9							6	52	
COLLEGE	54.31	346.5	9	36	6						

AUGUST 6 21.H 9.M 18.S EPICENTRE -16.67-173.06 DEPTH= 54.KM

DEPTH OF FOCUS= 0.003R

A=-0.95148 B=-0.11575 C=-0.28509 D=-0.1208 E= 0.9927
G= 0.2830 H= 0.0344 K=-0.9585 HT= 5.4

SE= 2.01

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	8.25	258.5	2	3	3	3	3	-30					
NOUMEA	20.10	250.6	4	29K	-3	8	21	11					
ONERAHI	22.07	208.1	4	50	-2	8	53	6					
KARAPIRO	23.43	203.2	5	4	-1	9	21	10					
TUAI	23.65	199.3	5	6	-2	9	17	2					
WELLINGTON	26.68	200.7	5	34	-2	10	8	2			16	27	SCS
COBB RIVER	27.24	203.9	5	42	1	10	23	8					
GEBBIES PASS	29.55	201.3	6	8	6	10	57	5					
ROXBURGH	32.35	203.4	6	34	7						11	30	
BRISBANE	33.11	245.1	6	31	-2	11	43	-5					
RIVERVIEW	36.37	235.2	7	2K	1	12	47	9					
CHARTERS TS.	38.69	258.7	7	17A	-3						9	6	PP
KIPAPA	40.63	21.8	7	36	-1								
TRUK	42.19	301.9	7	47	-2						9	44	
MELBOURNE	42.40	231.7	7	48	-3						14	0	
GUAM	51.32	303.2	9	1A	0						11	14	PP
CAPE HALLETT	56.47	186.0	9	39A	0	17	31	7			10	35	PCP
KOROR	57.10	290.5	9	43	-1								
DUMONT	58.52	199.9	9	52	-1	17	53	2					
SCOTT BASE	62.02	184.7	10	17	0	18	47	11			12	53	PP
BYRD STATION	67.66	171.3	10	53A	-1	19	51	6			13	43	PP
WILKES	69.40	204.9	11	4	-1	20	9	3					
SENDAI	69.64	322.8	11	8	2	20	17	8					
MATUSIRO	70.11	319.9	11	8A	-1	20	19	5			20	59	SCS
ARUYAMA	70.74	317.1	11	12A	-1	20	26	4					
MANILA	72.13	291.7	11	0	-21						15	20	
BERKELEY	72.23	40.1	11	21A	-1	20	44	5					
LICK	72.29	40.9	11	22A	0								
UKIAH	72.45	38.6	11	23A	0						11	43	
PASADENA	72.67	45.3	11	23A	-1	20	53	9			14	15	PP
FRESNO	73.12	42.3	11	27A	0								
BAGUIO CITY	73.21	293.3	11	28	1								
OASIS-BUNG.	73.37	205.0	11	26	-2	20	44	-8					
NAGASAKI	73.39	312.4	11	28	0	20	52	0					
SOUTH POLE	73.44	180.0	11	28A	-1	20	58	5			13	25	PP
PETROPAVLOVK	73.67	342.7	11	29	-1								
SHASTA	73.94	37.7	11	30A	-2								
RENO	74.77	40.0	11	37A	1								
CORVALLIS	75.93	34.2	11	45A	2								
BOULDER CITY	75.96	45.3	11	43A	0						12	26	
MIRNY	76.41	204.3	11	45	-1	21	30	4					
UGLEGORSK	76.59	331.5	11	46	-1								
TUCSON	76.88	50.3	11	47	-1								
TUCSON TELE.	77.01	50.3	11	48	-1								
EUREKA	77.15	41.8	11	48A	-2								
VLADIVOSTOK	77.99	322.2				21	49	6					

ALBERNI	78.31	29.9	11	55	-1						
SEATTLE	78.47	32.3	11	59K	2	21	56	8			
VICTORIA	78.48	31.1	11	56A	-1						
ZO-SE	78.98	307.2	12	1A	1	22	3	10	22	19	SKS
HORSESHOE B.	79.12	30.5	12	10K	9						
SITKA	79.90	19.9	12	4	-1						
TACUBAYA	80.95	66.7	12	12	1						
NANKING	81.22	307.1	12	13A	1						
MAGADAN	81.44	342.3	12	12	-1						
CHANGCHUN	82.36	320.0	12	19A	1	22	38	10	22	35	SKS
BUTTE	82.85	37.7	12	19A	-1				12	41	
HUNGRY HORSE	83.30	35.2	12	21A	-2				15	31	PP
COLLEGE	83.55	10.6	12	23A	-1	22	41	1	30	31	PKKP
BOZEMAN	83.56	38.5	12	24A	0				12	50	
VERA CRUZ	83.59	67.9							27	54	
BANFF	84.12	32.3	12	25	-2						
LUBBOCK	84.22	52.6	12	27	0	22	52	5			
BOULDER	84.50	45.6	12	28	-1						
LARAMIE	84.89	44.3	12	2	-29						
HALLEY BAY	85.71	172.0	12	33	-2	23	9	8			
PEKING	86.57	313.4	12	40A	1	23	21	11	23	9	SKS
RAPID CITY	87.70	42.6	12	45	1				38	44	PKPPKP
MEDAN	89.35	273.9	12	54K	2				23	15	
YAKUTSK	90.38	336.6	12	55	-2						
FAYETTEVILLE	91.00	52.6	12	59	-1						
KUNMING	91.89	295.4	13	6A	2	24	13	15			
HUANCAYO	93.84	103.7	13	16	3				14	14	
LANCHOW	94.25	306.2	13	17A	2	24	33	14	16	59	PP
FLORISSANT	94.74	51.1	13	17	0	23	54	-29	26	4	PS
ST. LOUIS 1	94.80	51.2	13	17	0	23	52	-31			
ULAN-BATOR	95.70	318.3	13	22	1						
TIKSI	96.29	344.3	13	25	1	24	43	7			
IRKUTSK	98.58	322.0	13	34	0						
LA PAZ	99.00	110.2	13	41K	5						
TOCKLAI	99.21	295.1	13	42	5						
BOGOTA	99.91	88.1				24	31	-36	17	36	PP
FUQUENE	100.47	87.4							17	47	PP
SHILLONG	101.47	293.4	13	49K	1						
CLEVELAND	101.97	50.2				24	29	-55			
RESOLUTE	102.86	15.5	13	53A	-1	24	30	-61	18	5	PP
LHASA	103.06	297.3	13	57	2	25	45	12	24	41	SKS
WASHINGTON	104.86	53.4				25	3	-45	18	20	PP
PALISADES	107.56	51.6	14	11	777	24	55	5	18	49	PP
SHAWINIGAN	108.94	45.9	18	38	777						
BERMUDA	114.06	61.6							19	47	PP
HALIFAX	115.32	48.1				26	39	79	29	26	PS
LAHORE	117.58	297.2	18	42	2						
NAMANGAN	119.74	308.0	18	48	4						
SVERDLOVSK	123.38	328.0	18	52	0						
QUETTA	123.88	295.4	18	52	-1						
APATITY	126.35	347.7	18	55	-2				20	52	PP
TANANARIVE	126.65	230.2	19	0A	2				21	15	PP
GRAHAMSTOWN	126.87	200.6	18	59	1						
SODANKYLA	127.74	350.5	18	59	-1						
KIRUNA	128.13	353.5	19	0	-1				21	3	PP
SKALSTUGAN	132.99	356.7	19	10A	0						
PULKOVO	133.72	343.9	19	2	-9						
MOSCOW	134.54	336.1	19	12	-1						
HELSINKI	134.63	347.4	19	13	0						
UPPSALA	136.18	352.2	19	14	-2				21	49	PP
MAKHACH-KALA	136.73	315.9	19	19	2						
GOTEBORG	138.87	355.9	19	22	1						
WINDHOEK	139.75	194.6	19	19	-3						
COPENHAGEN	140.84	355.1	19	18	-6				22	20	PP
SOTCHI	141.39	320.9	19	20	-5						
DURHAM	141.41	7.9	19	29A	4				22	17	PP
RATHFARNHAM	142.01	12.9	19	22A	-4						
SIMFEROPOL	143.73	326.7	19	28	-1						
WITTEVEEN	143.93	0.3	19	31	1						
POTSDAM	144.04	353.6	19	28	-2						
LWOW	144.15	341.0	19	29	-1						
DE BILT	144.62	1.9	19	32	1				32	42	PS
KISHINEV	144.73	333.8	19	30	-1						
KEW	144.80	7.9	19	32A	1						
HALLE	145.02	354.5	19	30	-2				23	7	PP
KRAKOW	145.09	345.3	19	31	-1				19	50	PKP2
IASI	145.11	335.2	19	33A	1						
COLLMBERG	145.11	353.3	19	32	0						
RACIBORZ	145.45	347.2	19	35	3				21	59	

JENA	145.62	354.8	19 34	1			22 57	PP
BENSBERG	145.79	359.7	19 34	1				
SKALNATE PL.	145.81	344.4	19 39	6				
BACAU	145.89	335.2	19 37	4				
UCCLE	145.89	2.9	19 34	1				
PLAUEN	145.99	354.0	19 34	1			22 58	PP
PRAGUE	146.14	351.3	19 37	3			22 55	PP
SONNEBERG	146.20	355.1	19 35	1			22 13	
PRUHONICE	146.21	351.2	19 35	1			22 56	PP
FOCSANI	146.46	333.9	19 45	11				
DOURBES	146.60	2.7	19 36	2			30 0	SKKS
BRATISLAVA	147.50	347.3	19 41	5			19 47	PKP2
HURBANOVO	147.53	345.8	19 46	10				
BUDAPEST	147.69	344.5	19 41	5				
CAMPULUNG	147.70	335.8	19 40	4				
KARLSRUHE	147.72	358.2	19 38A	2			23 9	PP
PARIS	147.74	5.5	19 40A	4	26 49	12	23 19	PP
STUTTGART	147.93	357.2	19 37	0			30 0	SKKS
BUCHAREST	147.96	333.7	19 39K	2				
STRASBOURG	148.17	359.0	19 39A	2			23 12	PP
TUBINGEN	148.18	357.3	19 37	0				
EBINGEN	148.53	357.4	19 39	2				
TIMISOARA	148.64	340.6	19 47	9				
KSARA	148.90	308.7	19 43	5			19 55	PKP2
BASLE	149.22	359.1	19 41	2				
BELGRADE	149.72	340.7	19 51A	12			33 41	SKSP
NEUCHATEL	149.76	360.0	19 42	3				
ZAGREB	149.97	347.3	19 45K	5			20 3	PP
JERUSALEM	150.26	305.6	19 42	2			23 22	PKS
UVIRA	150.31	229.6	19 43	3				
ASTRIDA	150.45	231.7	19 43	3			23 22	PP
SOFIA	150.52	335.0	19 43	3			24 3	
TRIESTE	150.55	350.3	19 47	6			23 24	PP
CLERMONT-FD.	150.81	5.5	19 44	3				
OROPA	151.12	358.5	19 47	6			22 43	
LWIRO	151.37	231.0	19 46	4			33 49	
PAVIA	151.52	356.7	19 50A	8				
SKOPJE	151.88	336.7	20 0A	17			23 34	PPP
BOLOGNA	152.01	353.3					20 12	PKP2
SERRA PILAR	152.18	25.7	19 46A	3			24 0	PP
FLORENCE X.	152.73	353.2	19 45	1			20 21	PKP2
MONACO	153.02	359.2	19 46	2				
LISBON	153.90	29.5	19 48K	3			20 8	PKP2
LUANDA	153.92	194.2	19 50K	5			23 46	
HELWAN	154.09	304.8	19 47	1			23 44	PP
ATHENS	154.15	328.4	19 48	2				
ROME	154.41	350.4	19 49	3			23 51	PP
TOLEDO	154.98	20.3	19 49	2			23 52	PP
MBOUR	156.86	92.3	19 53A	4			24 0	PP
MESSINA	157.25	342.2	19 51	1				
ALICANTE	157.44	15.3	19 49	-1	26 54	5	24 3	PP
GRANADA	157.55	22.5	19 54A	4	27 17	28	20 26	PKP2
MALAGA	157.64	24.5	19 54K	4			24 6	PP
ALMERIA	158.24	20.7	19 53	2			24 11	PP
ALGIERS UNI.	159.69	9.0	19 53	0			24 16	PP
TAMANRASSET	173.78	12.1	20 3	0			21 36	PKP2

AUGUST 6 21.H 51.M 8.S EPICENTRE -12.53 166.61 DEPTH= 183.KM

DEPTH OF FOCUS= 0.024R

A=-0.94995 B= 0.22605 C=-0.21562 D= 0.2315 E= 0.9728
G= 0.2098 H=-0.0499 K=-0.9765 HT= 6.2

SE= 1.40

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NOUMEA	9.71	180.9	2	17	1	4	2	-1				
BRISBANE	19.58	218.5	4	17	2				4	56		
TRUK	24.70	322.8	5	4	-1							
RIVERVIEW	25.46	211.1	5	14K	2							
KARAPIRO	26.50	164.1	5	21	-1							
GEBBIES PASS	31.49	171.6	6	8	2							
MATUSIRO	55.68	332.4	9	17A	-2				9	51		
MANILA	52.62	299.4	8	55	-2							

KOROR	37.54	300.0	6	58	0			
DUMONT	56.94	192.3	9	27	-1			
CAPE HALLETT	59.78	178.7	9	43A	-5		10 18	
ZO-SE	61.51	315.9	9	58A	-1			
NANKING	63.71	315.4	10	16A	2			
SCOTT BASE	65.32	180.0	10	25	1			
CHANGCHUN	67.54	328.9	10	38A	0			
KUNMING	72.64	301.4	11	11A	2			
BYRD STATION	74.95	170.0	11	22	0			
LANCHOW	76.40	312.2	11	32A	2			
SOUTH POLE	77.55	180.0	11	37	0		12 8	11 49 PCP
CHITTAGONG	81.05	295.3	12	26	30			
SHILLONG	81.98	298.4	12	1A	1			
BERKELEY	83.21	48.9					12 43	
LICK	83.48	49.6	12	9K	1		12 44	
LHASA	83.93	302.0	12	12A	2			
SHASTA	84.16	46.3	12	12	0		12 47	
COLLEGE	84.44	17.8	12	11	-2		12 44	
MINERAL	84.59	46.8	12	14K	0		12 50	
FRESNO	84.66	50.7	12	15	1		12 47	
CORVALLIS	85.02	42.4	12	15	-1			
PASADENA	85.06	53.6	12	16	0		12 50	
RENO	85.60	48.1	12	19	0		12 55	
BOULDER CITY	88.22	52.7	12	32	1		13 5	
EUREKA	88.39	49.1	12	31	-1		13 5	
TUCSON	90.42	57.2	12	42	0		13 16	
TUCSON TELE.	90.53	57.1	12	43	1		13 17	
HALLEY BAY	91.75	176.7	11	50	-58	22 14 -76		
HUNGRY HORSE	92.31	41.0	12	50	0		13 22	
BUTTE	92.64	43.5	13	26	34			
BOZEMAN	93.58	44.1	13	32	36			
HUANCAYO	113.86	109.3						27 37 SP
SHAWINIGAN	119.95	43.3	18	29K	1			
KIRUNA	120.49	345.8	18	30	0			
SEVEN FALLS	121.09	42.2	18	31	0			
HELSINKI	124.72	337.8	18	39	1			
SKALSTUGAN	125.91	346.2	18	41	1			
TOLEDO	151.54	344.8						19 35 PKP2

AUGUST 8 5.H 29.M 32.S EPICENTRE 41.45 2.78 DEPTH= 0.KM
A= 0.75085 B= 0.03642 C= 0.65947 D= 0.0484 E=-0.9988
G= 0.6587 H= 0.0319 K=-0.7517 HT= -2.2

SE= 2.50

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
BARCELONA	0.49	266.5	0	13	0	0	18	-5					
TORTOSA	1.83	250.6	0	33	0						1	3	SG
ALICANTE	3.98	220.0	1	8	5	2	4	12					
MONACO	4.12	54.9	1	6	1	1	52	-4			2	10	SG
CLERMONT-FD.	4.32	3.2	1	6	-2	2	0	-1			1	26	PG
ALGIERS UNI.	4.68	177.3	1	8	-5	1	58	-11			2	22	SG
TOLEDO	5.42	255.4	1	21	-3	2	23	-5			2	55	SG
GARCHY	5.83	2.0									1	30	P*
NEUCHATEL	6.30	27.0	1	36	0						3	38	SG
GRANADA	6.53	231.3	2	28A	49	4	38	103			3	19	S*
BASLE	6.98	27.8	1	46K	0						3	12	
MALAGA	7.31	232.1	1	52A	2	3	14	-1			4	4	
PARIS	7.36	358.5	1	50	-1	3	14	-2			2	30	PG
STRASBOURG	7.96	24.7	2	0	1	3	18	-13			4	20	SG
RAVENSBURG	7.99	35.3									2	37	PG
EBINGEN	8.04	31.1	1	59	-1						4	31	SG
TUBINGEN	8.36	30.1	2	11	6						4	48	SG
SERRA PILAR	8.57	271.6	2	11A	3	4	23	36			2	20	PP
STUTTGART	8.61	29.6	2	7	-1						2	43	PG
DOURBES	8.74	7.7	2	5	-5						5	1	SG
TRIESTE	9.00	58.6				3	56	-1					
UCCLE	9.41	6.1									3	14	PG
LISBON	9.54	257.3									5	16	SG
RENSBERG	9.98	16.2				4	40	19			5	40	SG
CHEB	10.92	34.6				5	3	19			6	6	
MUNSTER	11.03	15.8				5	33	46					
PLAUEN	11.15	32.6				5	59	69			7	0	
JENA	11.26	29.7	3	46	61	5	4	11			5	59	

PRUHONICE	11.84	39.9	2 50	-3	5 12	5			
HALLE	11.86	29.0			5 28	21		3 17	PP
RATHFARNHAM	13.33	335.8	3 11A	-2	6 27	44		7 35	
DURHAM	13.64	349.2			5 58	8			
KRAKOW	14.72	48.5						8 30	
TAMANRASSET	18.76	172.1	4 22	0	8 4	15		4 42	PP
UPPSALA	20.60	21.6	4 43	0					
SKALSTUGAN	22.86	11.0	5 9	3					
HUNGRY HORSE	74.62	321.9	11 42	0					
LARAMIE	75.21	312.3	11 46	0					
EUREKA	82.08	316.8	12 25	2					
TUCSON TELE.	84.41	308.7	12 37	2					
TUCSON	84.54	308.7	12 37	1					

AUGUST 8 12.H 52.M 9.S EPICENTRE 36.64 71.04 DEPTH= 201.KM

DEPTH OF FOCUS= 0.027R

A= 0.26128 B= 0.76074 C= 0.59414 D= 0.9458 E=-0.3248
G= 0.1930 H= 0.5619 K=-0.8044 HT= -0.5

SE= 2.23

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KHOROG	0.95	27.6	0 32	2	0 57	4		
KULYAB	1.62	321.7	0 36	0	1 2	-1		
NUREK	2.23	322.8	0 42	0	1 13	-1		
OBI-GARM	2.32	333.0	0 44	1	1 16	0		
GARM	2.43	346.2	0 45	1	1 17	-1		
KARA-SU	2.47	318.9	0 45	0	1 17	-2		
DZHERGETAL	2.58	3.0	0 48	2	1 23	2		
STALINABAD	2.63	317.3	0 46	0	1 21	-1		
WARSAK DAM	2.66	170.9	0 44	-3				
GISSAR	2.69	313.7	0 47	0	1 21	-2		
ZIMCHURUD	2.78	320.8	0 48	0	1 22	-3		
MURGAB	2.87	52.1	0 52	3	1 31	4		
FERGANA	3.78	8.5	1 1	1	1 45	-2		
ANDIJAN	4.24	13.8	1 7	1	1 57	0		
NAMANGAN	4.36	6.2	1 7	0	1 58	-1		
SAMARKAND	4.41	314.6	1 6	-2	1 55	-5		
TASHKENT	4.87	344.2	1 15	1	2 10	-1		
LAHORE	5.76	150.8	1 21	-4	2 16	-15		
TCHIMKENT	5.77	349.3	1 16	-9	2 20	-12	1 26	
NARYN	6.15	37.3	1 29	-1			2 17	
FRUNSE	6.80	22.5	1 39	0	2 55	-1	2 27	
RYBACHE	6.99	32.3	1 41	0	2 58	-2	1 57	
BAIRAM-ALI	7.20	280.3	1 41	-3	2 52	-13		
QUETTA	7.29	209.2	1 43K	-2	3 2	-5		
FABRICHNAYA	7.72	30.5	1 50	-1	3 16	-1		
ALMATA	8.03	32.6	1 55	0	3 24	0	2 10	
PRZHEVALSK	8.14	42.0	1 57	1	3 26	-1		
ALMATA-2	8.21	34.3	1 57	0			2 46	
DEHRA DUN	8.59	135.1	2 0	-2	3 27	-10	2 6	PP
ILI	8.64	30.4	2 3	0			4 0	
ASHKABAD	10.20	281.2	2 20	-3	4 6	-9	5 56	
AGRA	11.17	146.0	2 32K	-3	4 30	-7	2 44	PP
KARACHI	11.30	198.7	2 46	9	4 58	18		
KIZYL-ARVAT	11.93	286.0	2 43	-2	4 47	-8	3 32	
SEMIPALATNSK	15.27	22.9	3 25	-2	6 8	-2	4 18	
CHATRA	16.82	121.0	3 44	-1	6 47	1		
BAKU	16.96	289.2	3 51	4			6 57	
BOMBAY	17.74	174.5	3 56	0	7 22	17		
BOKARO	18.01	131.0	3 57	-2	7 10	0		
GORIS	19.65	285.9	4 16	1			5 16	
HYDERABAD	20.22	159.1	4 27K	6	7 59	7	5 27	PPP
SHILLONG	20.92	116.0	4 27K	-1	8 11	7	5 27	
TIFLIS	20.93	292.1	4 30	2			5 29	
SVERDLOVSK	21.38	344.2	4 33	0			8 19	
VIZIANAGRAM	21.45	146.0	4 41	8				
CHITTAGONG	22.94	122.6	4 59	11	9 0	21	5 27	5 46 PP
SOTCHI	24.84	295.9	5 6	0			5 45	10 27 SS
MADRAS	24.92	158.5	5 50	44	10 17	64		6 28 PP
ULAN-BATOR	28.58	55.5	6 22	42				
SIMFEROPOL	28.96	298.2			10 16	-2		6 26
LWOW	36.12	306.5	7 50	65				9 9

ATHENS	37.35	286.7	6	55	0					8	4	PP
HELSINKI	37.48	323.7	6	56	0					9	27	
APATITY	37.51	337.4	6	57A	1	12	32	2				
KRAKOW	38.76	306.7	7	5	-2							
SODANKYLA	39.63	334.9	7	13	-1							
BRATISLAVA	40.69	303.9	7	24	1				8	30	9	3 PP
UPPSALA	40.98	321.8	7	24A	-1	13	22	0			10	2
KIRUNA	41.98	334.0	7	33A	0	13	39	3			17	5 SS
PRUHONICE	42.24	306.8	7	35	0				8	21	9	24 PP
POTSDAM	43.04	310.4	7	40	-2						8	49
TRIESTE	43.25	300.5	7	46	3						9	28 PP
GOTEBORG	43.68	318.2	7	45	-2							
PLAUEN	43.73	307.7	7	45	-2						10	37
HALLE	43.78	309.2	7	49	1						9	34 PP
JENA	44.06	308.4	7	49	-1				8	42	10	11
SKALSTUGAN	44.11	326.7	7	50A	0							
TIKSI	45.63	22.1	8	2	0	14	29	0	8	46	17	57 SS
STUTTGART	45.84	305.6	8	4	0	14	35	3	8	56	18	15 SS
MUNSTER	46.42	310.2	8	10	2				9	2		
STRASBOURG	46.81	305.6	8	33	22				9	15	18	41 SS
BENSBERG	46.82	308.9	8	13	1						11	9
KEW	51.37	310.6									19	51
MATUSIRO	52.88	68.6	8	56K	-1							
ASTRIDA	54.78	233.8	9	11	0							
TAMANRASSET	57.57	275.6	9	29A	-2						10	17
RESOLUTE	68.57	356.0	10	42	-1	19	28	0			23	59 SS
COLLEGE	74.35	16.2	11	16	-1						12	7
CHARTERS TS.	90.52	114.6	12	39A	-1							
SHAWINIGAN	91.04	335.9	12	44	1							
HUNGRY HORSE	95.27	3.4	13	2	0							
EUREKA	103.98	5.6	11	51	-110							
SOUTH POLE	126.45	180.0	18	38	-1							
CAPE HALLETT	127.25	157.7									28	35 SKKS

AUGUST 8 20.H 37.M 24.S EPICENTRE 41.41 2.62 DEPTH= 0.KM

A= 0.75144 B= 0.03436 C= 0.65891 D= 0.0457 E=-0.9990
G= 0.6582 H= 0.0301 K=-0.7522 HT= -2.2

SE= 2.31

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
BARCELONA	0.37	272.0	0	11	-1	0	20	0					
TORTOSA	1.70	250.5	0	32	1						1	5	SG
ALICANTE	3.87	219.0	1	3	1	1	51	2					
MONACO	4.24	55.3	1	6	-1	1	52	-6			1	14	P*
CLERMONT-FD.	4.38	4.6	1	10	1	2	2	0			1	28	PG
ALGIERS UNI.	4.64	175.7	1	8	-5	1	56	-12					
TOLEDO	5.30	255.4	1	20	-2	2	22	-3			2	53	SG
NEUCHATEL	6.40	27.6	1	37	0	3	10	18			2	4	
GRANADA	6.41	230.8	1	49A	11	3	45	53					
FLORENCE X.	6.80	66.7	1	47	4	3	20	18					
BASLE	7.07	28.4	1	46K	-1	2	52	-17					
MALAGA	7.19	231.7	1	48A	-1	3	11	-1			3	52	
PARIS	7.40	359.3	1	52	1	3	19	2			2	29	PG
ROME	7.40	82.9				4	14	57					
STRASBOURG	8.04	25.2	2	1	1						4	36	SG
RAVENSBURG	8.09	35.7	1	58	-3	3	25	-9			2	36	PG
EBINGEN	8.14	31.5	1	59	-3	3	9	-27			2	26	P*
SERRA PILAR	8.45	271.8				3	50	7			4	46	SG
TUBINGEN	8.46	30.5	2	2	-4	3	46	2			2	27	P*
STUTTGART	8.71	30.1	2	6	-4	3	40	-10			2	32	P*
DOURBES	8.80	8.4	2	10	-1	4	7	15					
TRIESTE	9.13	58.6				4	20	20			5	1	
LISBON	9.41	257.3									5	12	SG
UCCLE	9.47	6.7									3	18	PG
BENSBERG	10.06	16.7	3	32	64						5	40	SG
KEW	10.27	349.6	2	33	2								
SONNEBERG	10.78	30.7	2	42	4	5	45	64					
CHEB	11.02	34.8	2	43	1	5	12	25			6	8	SG
MUNSTER	11.11	16.3	2	43	0						4	33	
PLAUEN	11.25	32.8	2	43	-2	5	8	16			6	9	
JENA	11.36	30.0	2	49	3	5	13	18			4	21	
WITTEVEEN	11.77	12.2	3	6	14								
PRUHONICE	11.95	40.1	2	52	-2	5	11	2					
HALLE	11.96	29.3				4	43	-27			5	7	SS

COLLMBERG	12.21	32.4			3	0	2	7	5 109	6 51 PCP
BRATISLAVA	12.30	51.8								6 18
POTSDAM	13.08	29.4								7 21
RATHFARNHAM	13.32	336.2	3	10A	-3	5	50	7		
DURHAM	13.66	349.7	3	15	-2					7 34
RACIBORZ	13.89	46.1				5	44	-13		7 59
KRAKOW	14.83	48.5								8 23
TAMANRASSET	18.73	171.6	4	22	0	8	3	15		5 4
UPPSALA	20.68	21.7	4	43	-1	8	39	9		
SKALSTUGAN	22.92	11.1	5	9	3					
HELSINKI	23.30	28.7	5	9	-1					
KIRUNA	28.19	14.2	5	55	-1					
SODANKYLA	29.13	18.9	5	3	-61					
ASTRIDA	50.27	143.7	8	59	-1					10 19 PCP
RESOLUTE	52.48	340.6				16	55	13		
BREBEUF	53.54	301.9	9	24	0					
COLLEGE	71.55	347.2	11	24	0					
RAPID CITY	72.00	313.2	11	27	0					
HUNGRY HORSE	74.58	321.8	11	41	-1					
LARAMIE	75.15	312.2	11	47	2					
BUTTE	75.55	319.4	11	48	0					
EUREKA	82.03	316.7	12	24	1					
TUCSON TELE.	84.35	308.6	12	37	2					
CAPE HALLETT	148.44	172.8	19	48	4					

AUGUST 9 12.H 47.M 52.S EPICENTRE -49.42 -13.18 DEPTH= 0.KM

A= 0.63587 B=-0.14889 C=-0.75730 D=-0.2280 E=-0.9737
G=-0.7374 H= 0.1727 K=-0.6531 HT= -5.2

SE= 3.58

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
HERMANUS	28.13	70.0	6	16	20						7	32	
SOUTH POLE	40.77	180.0	7	47	2	14	21	25			9	21	PP
TALA POZO	44.35	279.7	8	13	-1	14	33	-16					
BYRD STATION	44.47	193.8	8	16	1						9	53	PP
MIRNY	51.60	150.6	9	10	-1						9	32	
SCOTT BASE	53.00	180.0	9	23	2								
OASIS-BUNG.	54.24	152.8	9	18	-12						9	53	
LA PAZ	55.00	286.5	9	15	-21	17	24	7					
UVIRA	58.14	52.3	9	37	-21								
CAPE HALLETT	58.56	181.2	10	2	1	18	34	30			10	22	PCP
ASTRIDA	59.20	52.4	9	47	-19						10	7	
RUMANGABO	60.08	51.2	10	15	3								
DUMONT	62.45	168.3	10	25	-3								
HUANCAYO	62.90	283.7	10	17	-14	19	12	12			11	21	PCP
MBOUR	63.60	355.9	10	31	-4	19	19	10					
TAMANRASSET	73.78	17.9	11	37	-1	20	59	-10			13	59	
MALAGA	86.11	7.1	12	43K	-1								
GRANADA	86.64	7.7	12	49K	2	24	21	57					
ALGIERS UNI.	87.01	13.0	12	42	-7						21	3	
LISBON	87.83	3.2	12	54	1								
HELWAN	88.32	37.5	12	37	-18						23	50	
TOLEDO	89.28	7.0	13	3	3								
JERUSALEM	91.58	39.6	13	8	-2								
ROME	93.69	18.9	13	24	4								
FLORENCE X.	95.25	17.5	13	49	22	24	46	5			17	28	PP
CLERMONT-FD.	95.86	11.4	13	39	9								
TRIESTE	97.55	18.7	13	31	-7						13	51	
STUTTGART	99.69	14.8	13	50	3						17	50	
PRUHONICE	101.84	17.9	13	58	1						18	13	PP
SOTCHI	103.53	36.6									18	19	PP
LWOW	103.90	23.8									18	23	PP
TIFLIS	104.05	40.9	14	19	12								
PALISADES	104.68	317.0									18	33	PP
MAKHACH-KALA	106.23	41.8	18	24	-2								
MOSCOW	113.02	28.4	19	32	52								
SKALSTUGAN	114.43	12.2									19	41	PP
TUCSON TELE.	118.41	287.4	19	0	10						20	14	
TUCSON	118.41	287.3	18	59	9								
KIRUNA	119.62	14.0									20	17	PP
RAPID CITY	121.68	302.1	20	4	68								
BOULDER CITY	123.36	288.0	19	9	9								
PASADENA	124.28	284.2	19	11	10	30	59	295			37	26	SS

SALT LAKE C.	124.57	294.2	19 11	9	
EUREKA	126.26	290.6	19 14	9	20 56
FRESNO	126.97	285.6	19 17	10	
BOZEMAN	127.06	299.5	18 54	-13	21 14
BUTTE	128.13	299.1	19 18	9	
LICK	128.48	285.1	19 20K	10	
RENO	128.66	288.4	19 21	11	
BERKELEY	129.19	285.2	19 21A	10	
MINERAL	130.25	288.2	19 20	7	
HUNGRY HORSE	130.26	300.9	18 56	-17	21 34
SHASTA	130.94	288.1	19 22	8	
RESOLUTE	134.83	338.2	19 27A	6	22 49
SITKA	145.50	305.2	19 49	9	
COLLEGE	151.73	320.1	19 37	-13	20 1

AUGUST 9 13.H 33.M 31.S EPICENTRE 42.41 145.14 DEPTH= 0.KM

A=-0.60768 B= 0.42330 C= 0.67197 D= 0.5716 E= 0.8205
G=-0.5514 H= 0.3841 K=-0.7406 HT= -2.6

SE= 2.58

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KUSIRO	0.79	316.4	0 18	0	0 26	-4		
NEMURO	0.97	19.3	0 25A	5	0 36	1		
OBIHIRO	1.52	290.2	0 27K	-1	0 43	-6		
ABASHIRI	1.73	338.9	0 33	2	0 54	0		
URAKAWA	1.77	262.3	0 32	0	0 54	-1		
ASAHIGAWA	2.45	304.9	0 44	3	1 10	-2		
TOMAKOMAI	2.64	273.5	0 49	5	1 13	-4		
SAPPORO	2.87	284.5	0 48	1	1 18	-5		
MURORAN	3.09	269.9	0 50	-1	1 27	-2		
HATINOHE	3.30	236.5	0 53	-1	1 28	-6		
HAKODATE	3.35	260.6	0 54	0	1 29	-7		1 56
MORI	3.41	266.3	0 56	1	1 34	-3		1 14
AOMORI	3.63	245.5	0 59	1	1 34	-9		
SUTTSU	3.64	277.8	0 59	1	1 43	0		
MIYAKO	3.65	222.0	0 57	-2	1 34	-10		
MORIOKA	4.05	229.0	1 4	0	1 46	-7		
MIZUSAWA	4.47	224.2	1 9	-1	1 56	-8		
AKITA	4.66	236.5	1 14	1	2 8	-1		
ISINOMAKI	4.93	217.5	1 16	-1	2 8	-7		
SENDAI	5.25	219.5	1 20	-1	2 16	-7		
SAKATA	5.35	230.8	1 24	1	2 22	-4		
YAMAGATA	5.54	222.9	1 24	-1	2 23	-8		
HUKUSIMA	5.87	219.1	1 29	-1				2 11
ONAHAMA	6.36	212.3			2 32	-19		
NIIGATA	6.47	228.1			2 45	-9		
SHIRAKAWA	6.50	217.3			2 50	-5		
MITO	7.02	212.5			2 49	-19		
UTUNOMIYA	7.13	216.6	1 50	2	3 2	-9		
KAKIOKA	7.27	213.5	1 50	0	3 4	-10		
MAEBASI	7.62	220.0			3 19	-4		3 51
KUMAGAYA	7.68	217.4	1 59	4	3 24	0		
NAGANO	7.85	225.4	2 8	10				
TOKYO C.M.O.	7.92	213.7			3 20	-10		
MATUSIRO	7.93	224.7	1 57A	-2	3 24	-6		
OIWAKE	7.93	222.2	2 14	15				
TITIBU	7.96	218.2			3 10	-21		
WAZIMA	8.08	234.3	2 1	0				
YOKOHAMA	8.18	213.3			3 30	-7		
KOHU	8.48	219.2			2 35	-69		3 32
HUNATU	8.50	217.8			3 38	-7		
MERA	8.55	210.7			3 29	-17		
MISIMA	8.74	215.6			3 39	-12		
NAGOYA	9.64	224.1			3 44	-29		
MANILA	34.68	224.1	6 29	-24				
COLLEGE	43.03	35.2	8 2	-1				
SHILLONG	46.49	266.4	8 21	-9				
RESOLUTE	56.67	16.0	9 44A	-3				
SODANKYLA	61.13	337.1	10 14	-4				
QUETTA	62.14	286.5	10 21	-4				
KIRUNA	62.51	339.4	10 24	-3				
SHASTA	65.66	56.5	10 49	1				
HUNGRY HORSE	65.93	45.9	10 50	0				

MINERAL	66.35	56.4	10 53	1		
HELSINKI	66.68	331.9	10 50	-4		
SKALSTUGAN	67.94	339.3	10 59	-3		
LICK	68.12	59.0	11 4	1		
UPPSALA	69.36	334.7	11 7	-4		
EUREKA	70.31	54.3	11 18	1		
BOULDER CITY	73.24	56.5	11 37	3		
RAPID CITY	74.41	44.1	11 43	2		
TUCSON	78.19	57.1	12 4	2		
TUCSON TELE.	78.19	57.0	12 4	1		12 41
PRUHONICE	78.34	330.0	12 1	-2		
MUNSTER	79.04	334.8	12 9	2		
RATHFARNHAM	81.54	343.1				15 29

AUGUST 10 18.H 5.M 56.S EPICENTRE -3.75 151.57 DEPTH= 0.KM

A=-0.87758 B= 0.47501 C=-0.06497 D= 0.4760 E= 0.8794
G= 0.0571 H=-0.0309 K=-0.9979 HT= 7.1
SE= 2.94

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
PORT MORESBY	7.13	217.8	1 48K	0					
TRUK	11.15	1.4	2 39	-5	4 33	-17			
CHARTERS TS.	16.97	197.4	4 3	3	7 25	16			
GUAM	18.40	338.5	4 17	-1					
KOROR	20.30	302.8	4 39	-1	8 29	6		9 32	
NOUMEA	23.41	143.2	5 12K	1	9 31	10		5 37	
BRISBANE	23.64	176.8	5 13A	0	9 31	6			
RIVERVIEW	29.93	180.7	6 25	13	11 15	6			
MANILA	35.37	301.7	6 58	-1					
BAGUIO CITY	36.61	304.0	7 11	1	12 55	2			
KARAPIRO	40.45	150.3	7 40	-2					
ARUYAMA	41.26	339.9	7 50A	2					
MATUSIRO	41.99	343.9	7 50	-4	13 56	-18		9 53	PCP
LEMBANG	43.86	264.1	8 7A	-2				15 51	
HONG KONG	44.80	307.0	8 18	1	15 2	7			
ZO-SE	45.17	322.3	8 21	1	15 0	0			
CANTON	45.90	307.4	8 32	6					
NANKING	47.30	321.3	8 36	-1	15 27	-3			
VLADIVOSTOK	49.93	341.2	8 56	-1					
CHANGCHUN	52.93	336.3	9 18	-2					
PEKING	54.34	326.8	9 28	-2					
HONOLULU	55.21	60.9			17 54	35			
KUNMING	55.41	303.9			17 30	8			
CHENGTU	56.82	310.5	9 50	2					
LANCHOW	59.64	316.0	10 11	3					
CHITTAGONG	63.85	297.0	10 29	-7					
ULAN-BATOR	64.58	328.4	10 41	0					
SHILLONG	64.74	300.4	10 44	2					
LHASA	66.71	304.4	10 58	3	19 53	7			
YAKUTSK	67.70	349.1	10 59	-2					
CAPE HALLETT	69.45	174.0	10 28	-44				14 34	PCS
SCOTT BASE	74.48	176.7	11 36	-6					
TIKSI	76.69	352.8	11 54	0					
COLLEGE	81.35	22.1	12 17	-3					
SITKA	84.03	31.7	12 36	3					
NAMANGAN	84.84	311.5	11 40	-57					
BYRD STATION	86.14	169.9	12 39	-5	23 16	-2			
SOUTH POLE	86.27	180.0	12 32	-13					
QUETTA	87.22	300.3	12 51	2					
SHASTA	89.41	49.3	13 6	6					
FRESNO	91.12	53.4	13 8	0					
RENO	91.29	50.6	13 22	14					
SVERDLOVSK	93.63	326.6	13 43	24					
EUREKA	94.26	50.8	13 24	2					
HUNGRY HORSE	95.71	41.9	13 31	2					
RESOLUTE	99.70	14.3			25 18	0		32 9	SS
RAPID CITY	103.53	45.7						18 20	PP
SIMFEROPOL	111.87	317.2	19 34	57					
STUTTGART	124.86	330.5	19 8	6					
PALISADES	124.88	41.1						37 43	SS
TAMANRASSET	142.09	303.0	19 34	0				22 52	PP

AUGUST 10 23.H 41.M 44.S EPICENTRE 21.63 144.21 DEPTH= 185.KM

DEPTH OF FOCUS= 0.024R

A=-0.75471 B= 0.54418 C= 0.36644 D= 0.5849 E= 0.8111
G=-0.2972 H= 0.2143 K=-0.9304 HT= 4.3

SE= 2.23

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
GUAM	8.13	176.3	1 54	-2	3 34	8		
MATUSIRO	15.76	342.0	3 35A	2	6 20	-2		4 19
TRUK	15.89	151.2	3 32	-3	6 11	-14		
KOROR	17.04	214.9	3 52	4				
BAGUIO CITY	22.92	261.0	4 51	3				
MANILA	23.15	256.3	4 51	0				
PORT MORESBY	30.97	174.4	6 1	-1				
CHARTERS TS.	41.43	177.1	7 31A	1				
SHILLONG	47.87	285.4	8 19A	-2				
COLLEGE	61.29	26.8	9 56	-2			10 32	
KARAPIRO	66.15	153.3	10 30	1			11 2	
QUETTA	68.84	295.1	10 46	0				
CORVALLIS	76.86	47.2	11 36	3				
RESOLUTE	76.92	13.5	11 33A	0			12 6	
APATITY	77.79	338.4	11 37	-1				12 8
SHASTA	78.69	50.7	11 44K	1				
BERKELEY	79.71	53.4	11 49	1				
SODANKYLA	80.14	339.6	11 50	-1				
LICK	80.35	53.7	11 53A	1				
HUNGRY HORSE	81.58	41.3	12 0	2			12 33	15 9 PP
KIRUNA	81.80	341.4	11 44	-15				12 30 *SP
FRESNO	81.93	53.8	12 1	1				
BUTTE	83.42	43.1	12 9	1			12 43	
EUREKA	83.73	50.1	12 7	-2				15 15 PP
BOZEMAN	84.54	42.9	12 10	-3				
HELSINKI	84.83	334.0	12 13	-2				
SALT LAKE C.	86.10	47.6	12 23	2			12 53	
SKALSTUGAN	87.16	340.5	12 25	-1			12 59	
RAPID CITY	90.21	41.7	12 42	2				
TUCSON	90.51	54.9	12 44	2				
TUCSON TELE.	90.56	54.8	12 44	2			13 15	16 18 PP
RATHFARNHAM	101.12	342.5	13 23	-7				
LA PAZ	149.05	86.2	19 32	10				

AUGUST 11 7.H 53.M 14.S EPICENTRE -17.93 168.12 DEPTH= 0.KM

A=-0.93162 B= 0.19603 C=-0.30602 D= 0.2059 E= 0.9786
G= 0.2995 H=-0.0630 K=-0.9520 HT= 5.2

SE= 2.58

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
NOUMEA	4.62	199.5	1 11K	-2	2 19	11		
SUVA	9.81	92.9	2 33	7	4 30	12		
BRISBANE	16.84	233.0	4 0A	1	7 16	10		
ONERAHI	18.61	163.9	4 27	6				
CHARTERS TS.	20.77	260.8	4 47K	2	8 40	7		
KARAPIRO	20.95	163.4	4 44	-3				
RIVERVIEW	21.94	220.6	4 57K	0	8 57	2		
PORT MORESBY	22.05	289.9	5 2	4	9 8	11	5 15	9 28 *SS
TONGARIRO	22.15	164.6	5 0	1				
COBB RIVER	23.41	171.2	5 16	4				
WELLINGTON	23.96	167.6	5 19	2				
MELBOURNE	28.35	221.0	5 57	0				
TRUK	29.92	326.2	6 12	0				
DUMONT	52.03	193.8	9 10	-4				
CAPE HALLETT	54.38	179.2	9 28	-3				
MANILA	56.60	301.8	9 46	-1				12 8
LEMBANG	59.89	272.5	10 27K	17	18 59	38		
SCOTT BASE	59.95	180.3	10 7	-4				
MATUSIRO	61.11	332.7	10 18A	0				
HONG KONG	66.21	305.1	11 4	12				
MIRNY	67.77	204.7	10 59	-3	20 0	1		

NANKING	68.57	316.2	11	7A	0						
MEDAN	71.65	280.1	11	26	0						
SOUTH POLE	72.18	180.0	11	25	-4						
CHANGCHUN	72.88	329.0	11	33A	0						
PEKING	75.25	321.3	11	48A	1	21	27	1			
CHENGTU	78.29	307.7	12	4A	0						
LANCHOW	81.08	312.4	12	20A	1	22	30	2			
CHITTAGONG	84.66	295.4	12	39	2						
UKIAH	85.58	46.6	12	42	0						
BERKELEY	85.68	48.1	12	41A	-1						
SHILLONG	85.81	298.4	12	43	0						
LICK	85.89	48.8	12	42A	-1						
SHASTA	86.86	45.5	12	47A	-1						
FRESNO	86.97	49.9	12	47	-2						
PASADENA	87.11	52.8	12	49	0	23	59	31			
LHASA	88.01	301.9	12	57	4	23	39	3			
RENO	88.13	47.4	12	54	0						
COLLEGE	89.12	17.3	12	56	-3						
BOULDER CITY	90.34	52.2	13	3	-2						
EUREKA	90.83	48.7	13	6	-1					14	36
TUCSON	92.12	56.9	13	12	-1						
TUCSON TELE.	92.24	56.8	13	12	-1						
HUNGRY HORSE	95.41	40.9	13	25	-3					17	22 PP
LARAMIE	98.92	49.6								18	0 PP
RESOLUTE	109.01	16.2								28	12 PS
LA PAZ	114.90	118.4	18	52	9						
OTTAWA	120.86	47.4	18	52K	-3						
PALISADES	122.55	52.5								38	3 PKPPKP
APATITY	122.66	341.1	18	56	-2						
KIRUNA	126.05	345.5	19	3	-2						
HELSINKI	130.23	336.9	19	12	-1						
SKALSTUGAN	131.47	345.9	19	13	-2					22	34 PKS
PRUHONICE	141.63	332.4	19	30	-4					22	43 PP
DURHAM	142.39	350.2								22	1 PP
RATHFARNHAM	144.44	354.2	19	37K	-1					22	43 PP
STUTTGART	144.80	335.6	19	38	-1					23	15 PP
TUBINGEN	145.05	335.5	19	40	0						
TRIESTE	145.10	328.0	19	40A	0					22	58 PP
KEW	145.30	347.3	19	39	-1						
EBINGEN	145.37	335.2	19	40	0					20	52
RAVENSBURG	145.42	334.2	19	40	0						
STRASBOURG	145.51	336.8	19	41A	1					19	47 PKP2
CHUR	146.19	333.2	19	43A	2						
BASLE	146.44	335.9	19	43A	1						
PARIS	147.06	342.4	19	46	3					19	56 PKP2
NEUCHATEL	147.12	336.0	19	45	2						
FLORENCE X.	147.69	327.8	19	44A	0						
MONACO	149.55	331.8	19	51	4						
CLERMONT-FD.	149.57	339.0	19	52	5						
TAMANRASSET	162.99	289.4	20	5K	1					20	56 PKP2

AUGUST 11 20.H 26.M 24.S EPICENTRE -2.61 100.67 DEPTH= 0.KM

A=-0.18497 B= 0.98171 C=-0.04516 D= 0.9827 E= 0.1852
G= 0.0084 H=-0.0444 K=-0.9990 HT= 7.1

SE= 2.81

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
MEDAN	6.46	342.0	1	41	3	3	0	6				
LEMBANG	8.10	121.5	2	7K	6	3	43	8				
CHITTAGONG	26.28	341.2	5	37	-1	10	20	10			6	27 PP
KUNMING	27.56	3.9	5	52	2							
HONG KONG	28.05	27.4	5	57	3	11	1	23				
LHASA	33.36	344.6	6	42	1	12	2	0				
KOROR	35.15	73.5	6	56	-1							
LANCHOW	38.60	4.1	7	27	1							
ZO-SE	38.79	28.7	7	30	2							
PEKING	44.75	16.9	8	18	2	15	0	6				
QUETTA	45.82	317.9	8	22	-3						10	46 PPP
PORT MORESBY	46.68	100.4	8	25	-7							
CHARTERS TS.	47.72	114.8	8	40	0							
NAMANGAN	50.80	331.7	9	4	0	16	16	-3				
FRUNSE	51.03	335.4	8	59	-6	16	22	0				
CHANGCHUN	51.24	22.8	9	7	0							

TRUK	52.04	78.5	9 13	0							
MATUSIRO	52.34	38.3	9 15A	0	16	59	19			9	53
VLADIVOSTOK	53.51	28.2	9 24	0							
IRKUTSK	54.76	2.7	9 33	0							
BRISBANE	55.75	121.7	9 39	-1						17	38
TIFLIS	67.07	317.7	10 55	-2	19	46	-4				
KSARA	70.78	307.1	11 27	7							
ASTRIDA	70.86	268.2	11 21	1							
GRAHAMSTOWN	75.30	236.4	11 50	4							
TIKSI	76.33	8.9	11 50	-2							
MOSCOW	77.35	328.9								11	55 PCP
APATITY	83.87	339.1	12 31	-1	22	51	-5				
HELSINKI	85.17	330.9	12 37	-2							
SODANKYLA	86.29	338.1	12 44	0							
SOUTH POLE	87.41	180.0	12 47	-3							
KIRUNA	88.71	338.0	12 54A	-2	23	36	-6				
UPPSALA	88.73	329.9	12 55	-1	23	39	-3				
PRUHONICE	89.48	319.9	12 58	-2						16	42 PP
COPENHAGEN	91.13	325.5			24	6	2				
SKALSTUGAN	91.59	333.4	13 9	-1						16	48 PP
TAMANRASSET	95.75	292.5	13 35	6							
COLLEGE	101.38	23.9								17	54 PP
RESOLUTE	107.42	4.3			25	0	-1			28	6 PS
HUNGRY HORSE	125.56	27.8	19 4	1						21	15 PP
EUREKA	130.46	37.4	19 15	3							
FAYETTEVILLE	143.96	20.7	19 36	-1							
CHAPEL HILL	146.85	359.6	19 48	6							
COLUMBIA	148.73	2.7	19 48	3							

AUGUST 12 15.H 35.M 43.S EPICENTRE 15.41 -94.61 DEPTH= 65.KM

DEPTH OF FOCUS= 0.005R

A=-0.07752 B=-0.96138 C= 0.26407 D=-0.9968 E= 0.0804
G=-0.0212 H=-0.2632 K=-0.9645 HT= 5.7

SE= 3.15

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
OAXACA	2.62	307.9	0	39	-2	1	11	-1				
VERA CRUZ	4.04	339.2	0	5	-56							
PUEBLA	4.97	316.9	1	17	3						2	25
SAN SALVADOR	5.47	107.1	1	17	-3							
TACUBAYA	5.91	312.8	1	33	7	2	39	5				
MERIDA	7.27	40.0				3	5	-2				
CHIHUAHUA	16.90	323.0	3	56	3						4	17 PP
LUBBOCK	19.24	341.4	4	20	-1				4	46		
FAYETTEVILLE	20.60	1.0	4	34A	-1							
CHINCHINA	21.35	117.1	4	43	0	8	53	22				
COLUMBIA	22.20	31.1	4	53	1							
TUCSON	22.34	321.5	4	52	-1	9	5	16				
FUQUEN	22.76	113.5	4	57	0	9	21	24	5	11		
BOGOTA	22.87	115.8	5	5	7	9	12	13	5	18	9	52 *SS
CHAPEL HILL	24.71	31.4	5	1	-5							
BOULDER CITY	27.31	322.3	5	38	-2							
LARAMIE	27.50	341.9	5	43	1							
SALT LAKE C.	29.38	332.7	5	57	-2							
RAPID CITY	29.50	347.4	6	2	2							
EUREKA	30.41	326.2	6	6	-2							
FRESNO	30.88	318.3	6	9	-3							
LICK	32.41	317.5	6	22	-3							
RENO	32.62	322.4	6	27	0							
HUANCAYO	33.30	144.0	6	27	-6							
WESTON	33.51	32.0	6	33A	-2							
OTTAWA	33.87	24.2	6	36K	-2							
BUTTE	34.03	337.4	6	39	0							
BREBEUF	34.81	26.2	6	43	-3							
SHASTA	34.88	321.7	6	45	-2							
SHAWINIGAN	36.00	25.9	6	55	-1							
HUNGRY HORSE	36.53	338.1	6	58	-3							
RESOLUTE	59.27	359.9	9	54	-3	18	8	10			28	52 PKKP
COLLEGE	60.96	337.0	10	4	-4							
RATHFARNHAM	76.82	38.0	11	56A	10				12	18		
SKALSTUGAN	83.64	25.5	12	24	2							
KIRUNA	84.87	20.2	12	32K	4							
MUNSTER	85.35	37.3	12	31	0							

			P	O-C	S	O-C	*PP	SUPP.
	DELTA DEG.	AZ. DEG.	M S	S	M S	S	M S	M S
BENSBERG	85.41	38.4	12 33	2				
GOTEBORG	85.70	31.1	12 30K	-3				
STRASBOURG	86.55	40.5	12 37	0				13 6
STUTTGART	87.38	40.0	12 43	2				19 11
EBINGEN	87.44	40.6	12 45	4				
UPPSALA	87.50	27.9	12 44	3				
PRUHONICE	90.15	37.6	12 56	2			13 15	
HELSINKI	90.53	25.8	13 5	9				
TAMANRASSET	93.15	65.5	13 8	0				
QUETTA	131.32	21.4	19 4	-1				
SHILLONG	138.78	351.1	20 0	42				

AUGUST 12 19.H 25.M 16.S EPICENTRE 0.46 126.19 DEPTH= 66.KM

DEPTH OF FOCUS= 0.005R

A=-0.59039 B= 0.80708 C= 0.00793 D= 0.8071 E= 0.5904
G=-0.0047 H= 0.0064 K=-1.0000 HT= 7.2

SE= 2.40

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KOROR	10.72	50.3	2 34	1	4 34	2		
MANILA	14.95	340.1	3 8	-21				4 16
BAGUIO CITY	16.80	341.1	3 52	0	6 59	3		
BANDUNG	19.89	248.1	4 12	-17	8 7	3		
LEMBANG	19.89	248.3	4 28A	-1				
DJAKARTA	20.42	250.9	4 36A	2				5 0 PP
HENGCHUN	22.06	346.5	4 50	-1	8 53	8		
TAWU	22.36	347.0	4 54	0	9 5	15		
GUAM	22.48	54.1	4 52	-3				9 57
HSINKONG	22.99	348.6	5 6	6	9 14	13		
PORT MORESBY	23.06	115.7	4 50	-10	8 57	-5	5 1	5 20 PP
TAINAN	23.15	345.9	5 1	0	9 9	5		
HWALIEN	23.79	349.6	5 15	8				
ILAN	24.55	350.3	5 25	10	9 40	12		
HONG KONG	24.66	332.5	5 14A	-2	9 6	-24		5 39 PP
TAIPEI	24.84	349.9	5 19	1	9 39	6		
CANTON	25.75	331.7	5 23	-3	9 48	0		
TRUK	26.52	74.1	5 32	-1	10 17	16		
MEDAN	27.66	276.8	5 42	-2	10 26	7		
PHU-LIEN	27.82	317.9	5 45	0				
CHARTERS TS.	28.30	137.1	5 48	-2	10 21	-9		
YAKUSIMA	30.11	7.4	6 4	-2	11 1	3		7 8
ZO-SE	30.84	351.6	6 11A	-1	11 11	1		7 8 PP
MIYAZAKI	31.68	8.5	6 21	2	11 30	7		
TOMIE	32.08	4.1	6 23	0	11 40	11		
NANKING	32.19	348.2	6 23A	-1				9 17 PCP
NAGASAKI	32.29	5.8	6 25	0				
KUMAMOTO	32.47	7.1	6 25	-1				
SIMIDU	32.78	10.6	6 27	-2	11 45	5		
SAGA	32.85	6.4	6 31	1				
OOITA	33.00	8.4	6 29A	-2	11 48	5		
HUKUOKA	33.19	6.5	6 29	-4	11 50	4		7 9
KUNMING	33.38	318.9	6 35A	1	11 53	4		7 47 PP
KOTI	33.63	11.1	6 36	0	11 51	-2		
PERTH	33.69	196.0	6 46	9	12 0	6		8 17
MATUYAMA	33.76	9.9	6 33	-5	11 55	3		7 56
SIOMISAKI	34.03	14.4	6 41	1	12 5	6		
HIROSIMA	34.24	9.2	6 42K	0	12 6	3		8 7
TAKAMATU	34.48	11.5	6 42	-2				
SUMOTO	34.68	12.7	6 45	0	12 10	0		8 9
HAMADA	34.70	8.5	6 44	-2				8 19
OWASE	34.73	14.7	6 46	0				
PORT BLAIR	35.04	289.8	6 48	0	12 36	21		9 58
KOBE	35.07	13.0	6 47	-2				8 31
OSAKA	35.12	13.5	6 50	1	12 20	4		8 37
ABUYAMA	35.34	13.4	6 49A	-2	12 20	0		
YONAGO	35.43	10.1	6 52	0				8 12 PP
TU	35.44	14.8						7 51
KAMEYAMA	35.54	14.6	6 54	1	12 29	6		7 40
OMAESAKI	35.78	17.1	6 56	1	12 23	-3		
TOYOOKA	35.81	12.1	6 54	-1	12 28	1		16 26
HIKONE	35.88	14.1	6 55	-1	12 32	4		
NAGOYA	35.97	15.1	6 56	0	12 30	1		
IBUKISAN	36.02	14.2	6 58	1				

GIHU	36.14	14.7	6	57	-1	12	37	5	7	27 PP
SHIZUOKA	36.18	17.1	6	59	1				15	40
OSIMA	36.29	18.5	7	6	7				15	15
MISIMA	36.48	17.7	6	57	-4				8	44
MERA	36.58	19.0	7	29	28					
HUKUI	36.63	13.8	7	5	3					
CHENGTU	36.68	327.0	7	1A	-1	12	39	-1	8	25 PP
HUNATU	36.78	17.3	7	2	-1					
KOHU	36.84	16.9	7	4	0	12	47	4		
YOKOHAMA	36.99	18.4	7	19	14				8	9 PP
TOKYO C.M.O.	37.25	18.4	7	9	2	13	2	13	9	55
MATUMOTO	37.25	15.8	7	10	3					
TITIBU	37.32	17.4	7	7	-1					
OIWAKE	37.49	16.5	7	11	2					
KUMAGAYA	37.57	17.6	7	7	-3				14	27
MATUSIRO	37.60	16.0	7	6	-4	12	53	-1	8	36 PP
MAEBASI	37.71	17.1	7	9	-2	13	6	10	7	38 PP
NAGANO	37.71	15.9	7	10	-1	12	57	1	8	58 PP
KAKIOKA	37.89	18.6				13	5	6		
BRISBANE	37.90	139.2	7	9	-4				15	55 SS
WAZIMA	38.05	13.9	7	21	7	12	46	-15		
UTUNOMIYA	38.09	18.0	7	9	-5	12	59	-3	7	53 PP
MITO	38.12	18.8	7	21	7	13	2	0		
DAIREN	38.48	354.3	7	22	5					
SHIRAKAWA	38.72	18.1	7	20	1	13	18	7		
ONAHAMA	38.78	19.0	7	20	0	13	16	4		
NIIGATA	39.12	16.2	7	42	19				9	5 PP
HUKUSIMA	39.38	18.0	7	26	1	13	25	4		
YAMAGATA	39.80	17.5	7	28	0	13	32	4		
CHITTAGONG	39.91	305.5	7	30	1	13	37	8	9	6 PP
SENDAI	39.99	18.1	7	31	1	13	35	5	8	7
SAKATA	40.25	16.6	7	28	-4					
ISINOMAKI	40.27	18.5	7	32	0				7	56
PEKING	40.43	348.1	7	32A	-1	13	36	-1	9	11 PP
MIZUSAWA	40.85	17.9	7	38	1	13	23	-20		
LANCHOW	41.08	332.0	7	38A	-1	13	45	-2	9	41 PCP
AKITA	41.09	16.4	7	42	3					
MORIOKA	41.38	17.6	7	38	-3	13	52	1		
RIVERVIEW	41.39	147.9	7	40	-1	14	7	16		
SHILLONG	41.46	309.7	7	39	-3	13	45	-7		
MIYAKO	41.58	18.4	7	44	1	13	58	4		
MELBOURNE	41.86	157.5	7	45K	0	14	4	6	9	39 PCP
HATINOHE	42.25	17.5	7	47	-1	14	7	3		
AOMORI	42.30	16.5	7	51	2					
VLADIVOSTOK	42.78	6.2	7	52	-1	14	20	8	9	34 PP
CHANGCHUN	43.19	359.1	7	54	-2	14	20	2	9	46 PCP
MORI	43.43	15.6	7	56	-2	14	27	6	8	16
TOMAKOMAI	44.10	16.4	8	16	12					
URAKAWA	44.11	17.8	8	3	-1	14	38	7	10	10
LHASA	44.30	314.1	8	5	0	14	37	3	9	56 PCP
SAPPORO	44.55	15.9	8	5	-2	14	41	4	8 24 15	58
OBIHIRO	44.94	17.7	8	13	3				9	13 PP
KUSIRO	45.37	18.8	8	14	0	14	55	6	8 40	
VIZIANAGRAM	45.50	295.2	8	20	5					
BOKARO	45.52	303.7	8	16	1	14	48	-3	10	1 PP
CHATRA	45.75	308.2	8	18	1	15	7	13		
NEMURO	46.07	19.7	8	18	-1					
WAKKANAI	46.82	15.0							15	20
MADRAS	47.25	287.3	8	29	1	15	19	3	10	23 PP
KODAIKANAL	49.40	283.0				15	38	-8		
HYDERABAD	49.88	292.5	8	49	0	15	58	5	10	39 PP
ULAN-BATOR	50.15	343.2	8	50	-1	16	3	7		
AGKA	53.27	304.1	9	10A	-4	16	38	-1	10	55 PP
DEHRA DUN	54.48	307.7	9	26	3	17	0	5	12	23 PPP
SUVA	54.57	112.7	9	29K	5	17	17	21	13	4 PPP
IRKUTSK	54.79	343.7	9	25A	0	17	7	8		
BOMBAY	55.43	292.7	9	27	-3	17	40	32	17	40
KAIMATA	58.98	142.2	10	1	6					
COBB RIVER	59.02	140.2	10	13	18					
PETROPAVLOVK	59.02	22.2	9	55	0	18	2	7	10	39 PCP
KARAPIRO	59.31	135.8	9	56	-1				14	54
ROXBURGH	59.53	146.1	9	26	-33	18	4	2	21	56 SS
TONGARIRO	59.92	137.1	10	0	-2					
WELLINGTON	60.44	139.5	10	5	0	18	26	12	23	8 SS
TUAI	60.85	136.0	10	10	2					
WARSAK DAM	60.97	309.2	10	8	-1					
MAGADAN	61.97	13.9	10	15	-1	18	41	8		
KARACHI	62.25	299.0	10	15	-2					

FRUNSE	62.49	319.5	10	17	-2	18	42	3	
AFIAMALU	63.04	105.8	10	22	-1	18	52	6	22 44 SS
SEMIPALATNSK	63.18	329.0	10	26	2	18	51	3	
QUETTA	63.46	303.7	10	23	-2	18	57	5	12 37 PP
STALINABAD	64.71	313.1	10	36	2	19	12	5	
TASHKENT	65.39	316.0	10	37	-1	19	16	1	20 21 SCS
WILKES	67.46	186.8	10	49	-2	19	40	0	
DUMONT	67.70	174.1	10	50	-2	19	49	6	
OASIS-BUNG.	68.92	190.8	10	59	-1				11 55
MIRNY	70.87	193.4	11	10	-2	20	24	3	11 54 PCP
TIKSI	71.08	0.9	11	10	-3	20	22	-1	13 52 PP
ASHKABAD	72.36	309.8	11	20A	-1	20	41	3	14 11 PP
SVERDLOVSK	76.46	329.0	11	42	-2	21	23	0	14 29 PP
HONOLULU	76.53	68.3	11	46	1	21	32	8	
KIPAPA	76.61	68.2	11	45	0				
CAPE HALLETT	77.76	167.4	11	50A	-2	21	48	11	14 45 PP
TANANARIVE	79.40	250.8	12	1A	0	22	7	12	
SCOTT BASE	81.19	172.0	12	10	0				
GORIS	81.88	309.7	12	15	1	22	31	10	15 24 PP
TIFLIS	83.26	311.8	12	21	0	22	43	9	22 36 SKS
KHEYS	86.81	350.4	12	36	-2	22	57	-12	15 54 PP
COLLEGE	87.88	25.2	12	42	-2	23	6	-13	16 23 PP
MOSCOW	88.81	325.6	12	46	-2	23	28	0	23 10 SKS
KSARA	90.00	303.6	12	55	1	24	0	21	16 37 PP
SOUTH POLE	90.45	180.0	12	55	-1	23	28	-15	16 35 PP
JERUSALEM	90.58	301.6	12	42K	-14	23	40	-4	
APATITY	90.64	337.4	12	56K	-1	23	49	5	16 38 PP
SIMFEROPOL	91.15	314.8	12	58A	-1	23	52	3	16 42 PP
PULKOVO	92.57	329.7	13	4	-2	24	13	11	23 34 SKS
SODANKYLA	93.26	337.5	13	7	-2				
HELWAN	93.99	299.8	13	14	2	24	26	12	
SITKA	94.25	32.8	13	14	1				17 19 PP
BYRD STATION	94.56	170.8	13	14	-1	23	40	-39	17 3
HELSINKI	95.18	330.5	13	17	0				
PIETERMZBURG	95.26	240.5	13	26	8				
KIRUNA	95.49	338.5	13	17A	-2	24	27	0	17 13 PP
IASI	95.53	317.4	13	20	1	24	36	9	
NORD	96.28	354.9	13	21	-1	24	38	5	17 26 PP
ASTRIDA	96.47	267.5	13	24	1				17 5 PP
BUCHAREST	96.89	314.7	13	25A	0	24	51	13	24 31 SKKS
UVIRA	97.08	266.6	13	27	1				
LWIRO	97.40	267.8	13	25	-2	24	10	-33	
LWOW	97.49	320.3							14 27
GRAHAMSTOWN	98.29	236.5	13	33	2				
UPPSALA	98.85	331.0	13	33	-1	24	57	2	17 28 PP
WARSAW	98.90	323.1	13	32A	-2	25	1	6	17 45 PP
SKALSTUGAN	100.03	335.5	13	40	1				29 59 PKKP
KRAKOW	100.04	321.1	13	40	1	25	15	10	24 24 SKS
BELGRADE	100.80	315.8	13	44A	1				17 47 PP
RESOLUTE	101.11	10.3	13	45	1	24	21	-53	17 55 PP
RACIBORZ	101.12	321.4	13	46	2				18 3 PP
BRATISLAVA	102.30	319.6	13	48	-2	26	9	45	18 6 PP
COPENHAGEN	102.79	327.9	13	51	-1	24	33	-55	18 8 PP
VICTORIA	103.05	39.8	13	55	2				18 18 PP
HALLEY BAY	103.38	186.8	13	57	3				18 17 PP
PRUHONICE	103.41	321.9	13	54	0	25	46	13	18 5 PP
PRAGUE	103.46	322.0	14	36	41	25	50	17	18 6 PP
POTSDAM	103.56	324.6	13	57	2	25	46	12	18 15 PP
ZAGREB	103.64	317.5	13	58K	3	24	30	-65	
COLLMBERG	103.95	323.5	14	0	3				18 28 PP
CORVALLIS	104.17	43.7	14	3	5				18 13 PP
HERMANUS	104.21	234.7				24	49	-51	18 16 PP
HALLE	104.50	323.9	13	57	-2	24	36	-66	18 17 PP
CHEB	104.71	322.5							25 10 SKKS
PLAUEN	104.71	322.9	13	59	-1				18 28 PP
JENA	104.91	323.5	14	1	0	26	0	14	18 20 PP
TRIESTE	105.19	317.8	14	2	777	26	1	-3	18 28 PP
SHASTA	105.82	47.4	14	9	777				17 18
MINERAL	106.49	47.6	14	22	777				18 36 PP
BERKELEY	106.61	50.2				23	51	22	18 30 PP
MUNSTER	106.83	325.4	17	50	777				19 52
STUTTGART	107.11	321.9	14	14	777	26	16	-2	18 41 PP
ROME	107.15	314.3							17 21 PP
LICK	107.22	50.6	13	58	777				18 30 PP
FLORENCE X.	107.45	316.5	14	14	777	26	21	2	18 43 PP
BENSBERG	107.49	324.6	19	0	777				19 22
WINDHOEK	107.77	246.5	18	26	777				
RENO	108.03	48.0	14	22	777				18 36 PP

STRASBOURG	108.06	322.1	14	20	777	26	24	11	18 54	PP
DE BILT	108.15	326.2	14	16	777	25	14	8	18 28	PP
FRESNO	108.79	50.8	14	21	777				18 43	PP
HUNGRY HORSE	108.99	37.8	18	25	777				14 20	P
NEUCHATEL	109.18	320.8							19 0	PP
UCCLE	109.18	325.2	18	26	777	26	38	16		
ABERDEEN	109.32	333.1				25	6	7	19 0	PP
DOURBES	109.34	324.5	14	2	777	26	37	15		
DURHAM	110.39	330.7	18	34	9	25	19	22	19 4	PP
PASADENA	110.76	53.1	14	29	777				19 8	PP
BUTTE	110.84	39.6	18	29	4				29 36	PKKP
EUREKA	110.88	47.1	14	30	777					
PARIS	111.15	323.9	18	28	2	25	12	11	19 9	PP
KEW	111.46	327.3							28 37	PKKP
BOZEMAN	111.95	39.5	18	22	-6				19 9	PP
CLERMONT-FD.	112.10	320.7							19 30	PP
BOULDER CITY	112.85	50.3	18	34	5				29 32	PKKP
SALT LAKE C.	113.38	44.6	18	38	8				19 18	PP
RATHFARNHAM	113.51	331.1							27 47	
ALGIERS UNI.	115.73	311.7	17	53	-42	25	48	30	29 7	PS
TORTOSA	115.95	316.7	19	12	37					
TUCSON	117.20	53.0	18	45	7				19 57	PP
TUCSON TELE.	117.26	52.9	18	43	5				19 54	PP
LARAMIE	117.45	41.8	18	47	9				20 5	PP
RAPID CITY	117.62	38.1	18	42	3				15 8	P
ALICANTE	117.68	314.6	18	37	-2	25	30	5	22 24	PPP
TAMANRASSET	117.88	296.1	15	15	777				19 51	PP
TOLEDO	119.47	317.6	18	48	6				20 13	PP
GRANADA	120.42	314.6							20 1	PP
MALAGA	121.20	314.5	18	48	2				22 24	PKS
LUBBOCK	123.63	48.2	18	53	3				27 39	SKKS
FLORISSANT	128.51	36.5	19	8	8				22 36	PKS
ST. LOUIS 1	128.70	36.6	19	6	6				21 12	PP
SHAWINIGAN	130.31	17.1	19	4	1				21 18	PP
SEVEN FALLS	130.33	15.2	19	4	1				21 18	PP
OTTAWA	130.39	20.2	19	5	2				21 19	PP
BREBEUF	131.00	18.4	19	6	2				22 35	PKS
CLEVELAND	131.29	27.7							22 32	PKS
TACUBAYA	131.32	63.5	19	9	4				21 19	PP
PITTSBURGH	132.85	27.3							22 37	
HALIFAX	134.28	9.8	19	17	6				21 45	PP
WESTON	134.53	18.2	19	21K	10					
PALISADES	134.87	21.5	19	14	2				21 45	PP
FORDHAM	135.02	21.6	19	14	2				21 48	PP
WASHINGTON	135.39	26.0	19	18	5				22 5	PP
COLUMBIA	137.25	34.0	19	14	-2				22 4	PP
MERIDA	139.04	56.5							21 47	
MBOUR	140.67	293.5							32 45	PS
BERMUDA	145.76	16.5	19	32	1					
IALA POZO	151.01	160.7	19	54	15				43 24	SS
BALBOA HTS.	152.70	69.3	19	44	2					
HUANCAYO	155.74	119.2	19	50	4				23 59	PP
GALERAZAMBA	155.92	61.8	19	49	3				24 43	PP
CHINCHINA	157.56	75.8	18	51	-57				20 15	PKP2
SAN JUAN	157.71	32.3	19	52	3				24 4	PP
LA PAZ	158.71	139.2	19	51K	1				24 4	PP
BOGOTA	159.14	75.8	19	55	5				20 38	PKP2
FUQUENE	159.26	73.2	19	53	2					
FORT FRANCE	163.26	25.4	19	53	-2					
T. LUCIA	163.94	26.0	19	52	-3				20 51	PKP2
ST. VINCENT	164.57	28.4	20	0	4				20 56	PKP2
BARBADOS	165.34	22.8	20	19	22					
TRINIDAD	166.55	34.5	20	4	6				21 1	PKP2

AUGUST 13 3.H 50.M 34.S EPICENTRE 0.30 126.05 DEPTH= 0.KM

A=-0.58850 B= 0.80848 C= 0.00512 D= 0.8085 E= 0.5885
G=-0.0030 H= 0.0041 K=-1.0000 HT= 7.2

SE= 2.00

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KOROR	10.93	50.1	2	41	0	4	49	4				
MANILA	15.05	340.8	3	38	2	6	8	-16				
BAGUIO CITY	16.91	341.7	4	2	3							
BANDUNG	19.70	248.4	4	24	-9	8	12	2				

LEMBANG	19.70	248.6	4	33	0	8	27	17			
GUAM	22.68	54.0	5	3	-1					5	28 PP
PORT MORESBY	23.11	115.2	5	9	1	9	14	-2	5 31	5	41 PP
HONG KONG	24.74	332.9	5	24A	0	9	42	-2		9	4 PCP
CANTON	25.83	332.1	5	34	0	10	1	-2		6	6 PP
TRUK	26.69	73.9	5	40	-2						
MEDAN	27.55	277.1	5	51	1	10	38	7			
CHARTERS TS.	28.27	136.7	5	58	1	10	46	4			
∠O-SE	30.98	351.9	6	21	0	11	24	-2			
NANKING	32.32	348.4	6	32	-1	11	46	0		17	4 SCS
KUNMING	33.41	319.2	6	44A	2	12	0	-3		8	8 PPP
ARUYAMA	35.53	13.5	7	0A	0	12	32	-4			
CHENGTU	36.74	327.3	7	10A	-1	12	48	-7		8	36 PP
MATUSIRO	37.80	16.1	7	17A	-3	13	1	-10		8	51 PP
BRISBANE	37.87	139.0	7	20K	0	13	7	-5			
CHITTAGONG	39.89	305.7	7	37	0						
TOCKLAI	39.96	313.7	7	41	3						
PEKING	40.56	348.3	7	42A	-1	13	51	-2		14	1 PS
LANCHOW	41.16	332.2	7	49	2						
RIVERVIEW	41.33	147.7	7	52K	3	14	2	-2			
SHILLONG	41.46	310.0	7	49A	-1	13	55	-11		9	49
VLADIVOSTOK	42.96	6.3	8	2	0	14	26	-2			
CHANGCHUN	43.35	359.2	8	5A	0	14	31	-3		9	46 PP
LHASA	44.31	314.4	8	15A	2	14	47	-1		10	0 PP
CHATRA	45.74	308.4	8	29	4					10	8
Y.-SAKHLINSK	48.70	15.2	8	48	0	15	48	-2			
ULAN-BATOR	50.27	343.3	9	0	0	16	11	-1			
AGRA	53.25	304.2	9	19A	-3	16	48	-5			
IRKUTSK	54.91	343.9	9	34	-1	17	16	1			
PETROPAVLOVK	59.22	22.2	10	3	-2						
KARAPIRO	59.29	135.6	10	6	0					12	20
WARSAK DAM	60.97	309.3	10	18	1						
MAGADAN	62.16	14.0	10	25	0						
KARACHI	62.21	299.2	10	25	-1						
QUETTA	63.43	303.8	10	33A	-1	19	12	6		11	12 PCP
NAMANGAN	63.62	316.6	10	35	0	19	10	2			
WILKES	67.28	186.8	10	49	-9	20	9	16			
DUMONT	67.55	174.0	11	0	0						
OASIS-BUNG.	68.74	190.7	11	9	1						
MIRNY	70.69	193.4	11	21	2					21	52
TIKSI	71.24	0.9	11	22	-1	20	33	-7			
SVERDLOVSK	76.53	329.1	11	53	-1	21	35	-4			
CAPE HALLETT	77.63	167.4	12	2K	2					14	51 PP
TANANARIVE	79.22	250.8	12	11K	3						
SCOTT BASE	81.05	172.0	12	20	2						
TIFLIS	83.27	311.8	12	32	2	22	48	-2			
SOTCHI	87.13	313.4	12	49	0	23	28	0			
COLLEGE	88.08	25.2	12	53	0					16	16
MOSCOW	88.86	325.6	12	55	-2	23	38	-6			
KSARA	89.98	303.6	13	2	0	24	6	12		16	41 PP
SOUTH POLE	90.29	180.0	13	5	1	23	37	-20		16	35 PP
JERUSALEM	90.55	301.6	12	50K	-15						
APATITY	90.74	337.4	13	4	-2	23	57	-4		25	14 PS
SIMFEROPOL	91.16	314.8	13	7	-1	24	5	0			
PULKOVO	92.64	329.7				24	17	-1			
SODANKYLA	93.36	337.5	13	17	-1						
HELWAN	93.95	299.8	13	22	1					17	32
BYRD STATION	94.43	170.8	13	24	1					17	9 PP
HELSINKI	95.26	330.5	13	26	-1						
IASI	95.56	317.3	13	29	1						
KIRUNA	95.59	338.5	13	27	-1	24	49	6		24	1 SKS
NORD	96.43	354.9	13	31	-1						
BUCHAREST	96.91	314.7	13	35	1					24	30
LWIRO	97.26	267.8								26	12
LWOW	97.53	320.3	14	36	59					18	31
UPPSALA	98.92	331.0	13	42	-1						
KRAKOW	100.08	321.0	13	49	0	25	23	2		18	25
SKALSTUGAN	100.12	335.4	13	47	-2						
BRATISLAVA	102.33	319.6	13	59	0					16	20
PRUHONICE	103.46	321.9	14	4	0					18	24 PP
HALLE	104.55	323.9	14	10	2	24	44	-74		18	30 PP
JENA	104.96	323.4	14	11	1					18	32 PP
MINERAL	106.70	47.6								18	40 PP
STUTTGART	107.16	321.8								18	50 PP
RENO	108.24	48.0								18	54 PP
FRESNO	108.99	50.8								19	2 PP
HUNGRY HORSE	109.20	37.8	14	24	777					18	44 PP
DOURBES	109.40	324.4	13	39	777	26	48	0			

PASADENA	110.97	53.1							28	41	
EUREKA	111.09	47.1	14	43	777				29	36	PKKP
PARIS	111.20	323.8	18	40	5				19	20	PP
TUCSON	117.40	53.1	18	51	3				19	59	PP
TUCSON TELE.	117.46	52.9	18	51	3				20	2	PP
TAMANRASSET	117.83	296.0	18	52	4				20	5	PP
RAPID CITY	117.83	38.1	18	51	3				20	2	PP
LUBBOCK	123.84	48.2	19	2	2						
SHAWINIGAN	130.51	17.0	19	14	1						
SEVEN FALLS	130.52	15.1	19	14	1						
OTTAWA	130.59	20.1	19	14	1						
BREBEUF	131.19	18.3	19	16K	2						
PALISADES	135.07	21.5							22	55	PKS
COLUMBIA	137.46	34.0	19	30	4				23	0	PP
BERMUDA	145.96	16.3	19	44	3						
HUANCAYO	155.78	119.6	20	1	6				24	0	PP
CHINCHINA	157.73	76.1	20	1	3						
SAN JUAN	157.92	32.2	20	33	35						
LA PAZ	158.68	139.7	20	4	5						
BOGOTA	159.31	76.1	20	14	14				46	0	SS
ST. LUCIA	164.15	25.9	19	59	-6						

AUGUST 13 7.H 33.M 29.S EPICENTRE 36.19 66.75 DEPTH= 0.KM

A= 0.31930 B= 0.74332 C= 0.58782 D= 0.9188 E=-0.3947
G= 0.2320 H= 0.5401 K=-0.8090 HT= -0.3

SE= 2.59

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
STALINABAD	2.85	33.6	0	52	4						1	26	SG
KULYAB	2.96	53.9									1	6	PG
SAMARKAND	3.48	2.9	0	59	2						1	35	S*
BAIRAM-ALI	3.97	292.2	1	3	-1						1	23	
GARM	3.98	44.0	1	7	3						1	55	S*
WARSAK DAM	4.50	117.6	1	7A	-4								
DZHERGETAL	4.66	48.1	1	16	2						2	12	S*
TASHKENT	5.49	20.3	1	27	2						2	54	SG
LUNACHARSKOE	5.52	20.6	1	27	1						1	57	
FERGANA	5.76	41.8	1	32	3	2	35	-2			3	16	
QUETTA	5.99	178.4	1	33A	0	2	43	0			2	1	PG
NAMANGAN	6.14	37.3	1	36	1	2	41	-6					
ANDIJAN	6.34	42.3	1	39	2						2	10	
TCHIMKENT	6.49	19.0	1	37	-3						2	52	S*
ASHKABAD	6.95	287.2									2	26	PG
LAHORE	7.81	124.1	1	56	-2	4	13	45			2	32	PG
KIZYL-ARVAT	8.79	292.0	2	6	-6						2	49	
NARYN	8.91	51.2				4	0	4			2	2	
FRUNSE	9.01	39.7	2	15	0						3	56	
RYBACHE	9.55	46.3	2	22	0						2	47	
PABRICHNAYA	10.20	43.8	2	30	-1								
ALMATA	10.56	44.9	2	36	0	4	36	0					
ALMATA-2	10.80	45.9	2	39	0								
PRZHEVALSK	10.99	51.6	2	41	-1								
ILI	11.07	42.4									3	5	
DEHRA DUN	11.12	118.5	2	42	-2	4	45	-5			2	56	PP
KURMENTY	11.22	48.8	2	44	-1								
AGRA	13.17	130.1	3	8	-3	5	26	-14			3	32	PPP
BAKU	13.88	292.6				4	50	-67			7	12	
MAKHACH-KALA	16.30	300.4	3	50	-2								
GORIS	16.47	287.7	3	50	-4	6	41	-17			7	11	
SEMIPALATNSK	17.23	30.3	4	3	-1	7	23	8					
TIFLIS	17.93	294.6	4	10	-3						4	21	PP
BOMBAY	18.03	161.1	4	18	4						10	18	
CHATRA	19.72	112.5	4	37	3	8	20	9					
BOKARO	20.54	121.6	4	47	4	8	36	8					
SVERDLOVSK	21.06	350.6	4	47	-1						8	43	
HYDERABAD	21.37	147.9	5	OK	8	8	48	3			5	31	PP
LHASA	21.38	100.8	4	53A	1	8	43	-2					
SOTCHI	21.96	297.9	5	1	3						9	2	PCP
SHILLONG	23.95	109.2	5	16A	-1	9	38	7					
KSARA	25.35	273.8	5	31	0								
TOCKLAI	25.61	103.6									11	1	
CHITTAGONG	25.75	115.5	5	33	-1	9	57	-5					
MADRAS	26.06	149.0				10	3	-4			13	2	

YALTA	26.06	298.6	5	36	-1				8	43	
SIMFEROPOL	26.15	299.7	5	38	0				6	37	PPP
JERUSALEM	26.45	269.7	5	24	-17	10	28	15			
MOSCOW	27.81	323.8	5	51	-2				6	52	PPP
LANCHOW	29.82	79.1	6	12	1						
HELWAN	30.24	268.3	6	12	-3						
IRKUTSK	30.93	46.8	6	21A	0						
IASI	30.96	303.1	6	34	13						
CHENGTU	31.45	89.2	6	24A	-2						
ULAN-BATOR	31.69	55.7	6	28	0						
KYAKHTA	31.78	51.0	6	28A	-1						
BUCHAREST	31.81	297.7							9	43	
KABANSK	32.26	47.9	6	34A	1						
KUNMING	32.68	99.7	6	35A	-1	11	50	-3			
PULKOVO	33.24	326.8	6	38	-3				13	6	PCS
LWOW	33.62	307.5							13	35	PCS
ATHENS	34.16	286.1	6	49A	0						
WARSAW	35.83	311.2				12	39	-2	8	31	PPP
BELGRADE	35.84	293.5	7	9A	5				9	31	PCP
HELSINKI	35.84	325.3	7	3	-1						
KRAKOW	36.27	307.4	7	7	0	12	48	0	13	16	PCS
PATITY	36.64	339.3	7	10K	0	12	54	0	8	33	PP
KACIBORZ	37.39	307.3	7	18	1				8	44	PP
SODANKYLA	38.61	336.4	7	26	-1						
UPPSALA	39.22	322.9	7	31	-1				9	2	PP
PRUHONICE	39.74	307.1	7	43	7	13	43	2	16	58	SS
PRAGUE	39.81	307.2	7	38	1	13	43	1	9	9	PP
MESSINA	40.42	288.7	7	41	-1						
POTSDAM	40.70	310.8	7	49	5						
COLLMBERG	40.73	309.1	7	45	1				9	13	PP
KIRUNA	40.90	335.2	7	45	-1	13	54	-4	9	15	PP
COPENHAGEN	41.25	315.8	7	49	0	14	3	-1	9	32	PP
PLAUEN	41.27	307.9	7	46	-3				9	28	PP
HALLE	41.38	309.4	7	50	0				9	33	PP
JENA	41.62	308.6	7	52	0				9	34	PP
GOTEBORG	41.72	318.8	7	47	-6				9	22	PP
SONNEBERG	41.88	307.7	8	2	8				9	36	PP
CANTON	42.12	94.9	7	55A	-1						
FLORENCE A.	42.51	297.9	9	7	68				9	31	PCP
SKALSTUGAN	42.61	327.5	7	59	-1				9	37	PP
NANKING	42.87	79.8	8	0	-2						
HONG KONG	43.22	95.3	8	4A	-1	14	58	25			
STUTTGART	43.29	305.5	8	6	1	14	31	-2	10	25	PP
TUBINGEN	43.40	305.1	8	5	-1						
EBINGEN	43.50	304.6	8	7	0						
STRASBOURG	44.25	305.3				14	55	8	18	9	SS
KHEYS	44.36	356.4	8	17	3				18	9	SCS
BENSBERG	44.41	308.8	8	21	6				10	7	
ZO-SE	45.10	80.0	8	19A	-1						
DOURBES	46.13	307.8	8	28	0	15	16	2			
TIKSI	47.36	22.4	8	38	0				18	28	SCS
PARIS	47.68	306.4	8	40	-1	15	46	9	10	35	PP
KEW	49.02	310.3				15	54	-1			
DURHAM	49.30	314.7							15	54	
ABERDEEN	49.31	317.9							16	1	
ASTRIDA	51.78	230.0	9	16	4				10	23	PCP
LWIRO	52.09	231.2	9	22	8						
RATHFARNHAM	52.28	313.5	9	19	3				10	35	
NORD	53.48	349.5	9	24	-1						
IAMANRASSET	54.15	273.6	9	27A	-3	17	0	-6	11	29	PP
MATUSIRO	56.25	66.7	9	42	-3	17	49	15			
MAGADAN	56.73	37.3	9	42	-6						
RESOLUTE	68.75	354.8	11	7A	-1	20	11	0			
COLLEGE	75.70	14.5	11	48	-1						
SITKA	85.26	11.9	12	41	1						
PALISADES	95.12	331.2							31	56	SS
HUNGRY HORSE	95.84	0.5	13	30	0				17	17	PP
RAPID CITY	99.59	352.7	13	48	1						
EUREKA	104.67	2.2	14	11	1				29	53	PKKP
KARAPIRO	124.45	114.8	19	1	-1						
SOUTH POLE	126.00	180.0	19	3	-2						
HUANCAYO	138.27	295.4	19	35	7						

AUGUST 13 16.H 51.M 59.S EPICENTRE -23.58-179.99 DEPTH= 551.KM

DEPTH OF FOCUS= 0.082R

A=-0.91752 B=-0.00013 C=-0.39769 D=-0.0001 E= 1.0000
G= 0.3977 H= 0.0001 K=-0.9175 HT= 3.8

SE= 1.37

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SUVA	5.60	344.4	1	37A	1	2	53	1				
AFIAMALU	12.37	40.4	2	40A	-3	4	43	-11				
NOUMEA	12.56	273.1	2	46A	1							
ONERAHI	13.10	200.6	2	53	3	5	21	14				
KARAPIRO	14.80	194.0	3	6	-1						5	45
TUAI	15.37	188.5				5	47	-1				
WELLINGTON	18.19	192.7	3	39	-1	6	38	1				
COBB RIVER	18.49	197.6	3	42	-1	6	41	-1				
KAIMATA	20.20	198.7	4	0	1	7	5	-6				
BRISBANE	24.63	255.2	4	38	-1						6	20
CHARTERS TS.	31.49	269.9	5	38	0						9	3
PORT MORESBY	34.41	288.7	6	2	-1							
HONOLULU	49.44	27.2	8	1	-1							
KIPAPA	49.58	27.3	8	0	-3							
DUMONT	49.85	199.6	8	2	-3							
KOROR	54.04	299.0	8	34	-1							
SCOTT BASE	54.70	183.4	8	41	2							
BYRD STATION	61.93	170.1	9	27	-1							
SOUTH POLE	66.57	180.0	9	57	0				11	51		
MIRNY	67.44	205.6	10	1	-2						15	23
HONG KONG	78.59	300.5	11	7	1							
BERKELEY	81.69	42.6	11	23A	1							
LICK	81.75	43.3	11	23A	1							
PASADENA	82.12	47.6	11	24	0							
FRESNO	82.58	44.6	11	27	1							
SHASTA	83.37	40.3	11	31A	1							
MINERAL	83.63	40.9	11	32A	0							
RENO	84.22	42.4	11	36	2							
BOULDER CITY	85.41	47.6	11	41	1							
TUCSON	86.25	52.5	11	46	2							
EUREKA	86.61	44.2	11	46	0				13	45		
SALT LAKE C.	89.96	44.8	12	3	1							
COLLEGE	91.60	13.1	12	7	-2				14	7	16	4 PP
HUNGRY HORSE	92.69	37.6	12	14	0							
SODANKYLA	133.17	346.2									20	51 PP
KIRUNA	133.97	349.4									20	54 PP
HELSINKI	139.49	341.0									20	22 PP
ASTRIDA	141.09	232.0	18	25	-4						21	19 *SP
UPPSALA	141.70	345.7	18	24	-6							
LWIRO	142.00	231.4	18	29	-1						21	20
GOTEBORG	144.83	348.9	18	34	-1							
COPENHAGEN	146.64	347.2	18	40	3							
STUTTGART	153.82	346.1	19	13	25							
PARIS	154.74	356.2	18	47	-2							

AUGUST 13 20.H 12.M 59.S EPICENTRE 50.59-177.75 DEPTH= 0.KM

A=-0.63694 B=-0.02508 C= 0.77050 D=-0.0393 E= 0.9992
G=-0.7699 H=-0.0303 K=-0.6374 HT= -5.6

SE= 1.78

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PETROPAVLOVK	14.79	289.0	3	32	0	6	21	3				
MAGADAN	19.94	308.8	4	38	2							
COLLEGE	21.15	36.2	4	47	-2	8	43	3				
SITKA	25.52	58.8	5	35	3							
UGLEGORSK	25.75	282.4	5	35	1							
TIKSI	31.65	331.0	6	25	-2	11	31	-5				
KIPAPA	32.98	144.7	6	39	0							
HONOLULU	33.06	144.9	6	39	0	11	57	-1				
ALBERNI	33.50	71.3	6	44	1							
MATUSIRO	34.32	263.1	6	49K	-1	12	13	-5			9	57
HORSESHOE B.	34.38	70.4	6	51	0							
VICTORIA	34.64	71.8	6	54K	1							
VLADIVOSTOK	34.66	277.5	6	52	-1							
SEATTLE	35.69	72.6	7	5	3							
CORVALLIS	36.50	77.8	7	13K	4							

ABUYAMA	37.05	263.2	7	13K	0	12	46	-14			
CHANGCHUN	38.43	282.6	7	23K	-2	13	17	-4	8	52	PP
SHASTA	39.10	82.6	7	33K	2						
UKIAH	39.47	85.2	7	35	1				8	17	
MINERAL	39.80	82.5	7	37K	1						
RESOLUTE	40.19	24.1	7	41	1	13	45	-2	9	17	PP
HUNGRY HORSE	40.33	67.5	7	42	1	13	37	-12			
BERKELEY	40.81	86.1	7	46K	1						
RENO	41.39	82.4	7	51K	2						
LICK	41.52	86.3	7	52K	1				9	48	PCP
BUTTE	42.34	69.9	7	49	-8				8	25	
FRESNO	43.04	85.7	8	4K	1						
BOZEMAN	43.43	69.5	8	6	0						
EUREKA	43.84	79.9	8	11	1						
SALT LAKE C.	45.66	75.8	8	25	1				9	8	
THULE	45.69	18.1	8	19	-5				10	9	PP
PASADENA	45.71	87.4	8	25K	0	15	11	3	10	33	PP
PEKING	46.21	283.5	8	27	-1	15	15	0	18	27	SS
IRKUTSK	46.39	303.9	8	29	-1						
BOULDER CITY	46.68	83.0	8	33	1						
ULAN-BATOR	47.27	297.6	8	37	0	15	31	1			
NORD	47.67	3.7	8	39	-1						
ZO-SE	48.66	270.6	8	47K	-1	15	50	0			
RAPID CITY	48.96	67.1	8	50	0	15	55	1			
LARAMIE	49.17	71.4	8	51	-1						
NANKING	49.55	273.3	8	53	-2	15	59	-3	10	16	PCP
IRUK	49.86	221.0	8	55	-2						
BOULDER	50.12	72.6	9	0	1						
ISFJORD	51.43	357.0	9	8	-1						
TUCSON	51.61	84.0	9	11	1	16	39	8	11	40	PP
LANCHOW	56.27	287.4	9	44	-1						
LUBBOCK	56.37	76.5	9	58	13						
HONG KONG	59.27	268.3	10	5A	-1	18	11	-2			
CANTON	59.27	269.6	10	4K	-2	18	13	0			
FLORISSANT	59.76	64.6	10	8	-1	18	18	-1			
CHENGTU	59.81	282.6	10	8	-1						
APATITY	59.87	346.7	10	8A	-2	18	18	-3	10	49	PCP
ST. LOUIS 1	59.95	64.7	10	9A	-1	18	20	-2			
SODANKYLA	60.94	349.5	10	16	-1						
KIRUNA	61.12	352.2	10	17	-1	18	35	-2	14	7	
SVERDLOVSK	62.62	328.2	10	28	0	18	56	0			
OTTAWA	63.05	50.6	10	30K	-1	19	3	2	13	5	PP
SHAWINIGAN	63.65	48.1	10	33K	-2						
BREBEUF	64.00	49.4	10	36	-2						
SEVEN FALLS	64.14	46.6	10	37	-1	19	11	-4			
KUNMING	64.59	279.0	10	39K	-2	19	19	-1	11	13	PCP
SKALSTUGAN	65.90	355.1	10	49	-1						
WASHINGTON	67.06	56.4	11	4	7	20	8	17	13	34	PP
PORT MORESBY	67.07	218.0	10	56	-1	19	49	-2	20	19	PS
PALISADES	67.15	52.9	10	57	-1	19	54	2	11	26	PCP
FORDHAM	67.29	53.0	10	59	0	19	58	5			
WESTON	67.43	50.3	10	59K	0						
FRUNSE	67.66	310.8	11	1	0	20	0	2			
PULKOVO	67.67	345.1	11	0	-1	19	54	-4			
HELSINKI	68.08	348.0	11	2	-2						
TOCKLAI	68.29	285.9	11	24	19						
LHASA	68.45	290.6	11	6	0	20	9	2	11	32	PCP
COLUMBIA	68.47	62.5	11	6	0						
UPPSALA	69.21	351.8	11	9	-2	20	13	-3	39	17	PKPPKP
HALIFAX	69.32	44.2	11	10A	-1	20	13	-5	25	8	SS
MOSCOW	70.04	339.6	11	16	0	20	24	-2			
NAMANGAN	70.51	311.2	11	18	0	20	31	-1			
SHILLONG	70.92	287.1	11	19	-2						
GOTEBORG	71.78	354.5	11	25	-1						
ABERDEEN	72.55	2.5				20	54	-1			
CHATRA	72.82	291.3	11	37	5						
COPENHAGEN	73.76	354.0	11	37K	-1	21	9	0	21	53	SCS
DURHAM	74.96	2.3	11	46	1	21	19	-3	26	34	SS
DEHRA DUN	75.42	300.0	11	50	3				21	26	
RATHFARNHAM	76.24	5.3	11	51K	-1						
WARSAW	76.33	348.3	11	51K	-2	21	35	-2	16	31	
WITTEVEEN	76.90	357.3	11	58A	2						
POTSDAM	77.00	353.2	11	57	1						
CHARTERS TS.	77.12	214.5	11	55	-2						
DE BILT	77.66	358.2	12	1	1	21	54	2			
AGRA	77.89	297.9	12	2	1						
HALLE	77.96	353.8	12	2	0	21	53	-2			
COLLMBERG	78.08	353.1							16	2	PP
LWOW	78.24	345.8	12	2	-1	21	56	-2			

KEW	78.30	1.6	12	4	1	21	58	0	27	18	SS
BERMUDA	78.50	52.6	12	5	0	22	5	4	15	4	PP
JENA	78.55	354.0	12	5	0	21	58	-3	15	22	PP
KRAKOW	78.61	348.5	12	4	-1	22	8	6	15	11	PP
BENSBERG	78.74	356.8	12	7	1	22	10	7			
RACIBORZ	78.79	349.6	12	2	-4	22	2	-2	12	14	PCP
MAKHACH-KALA	78.82	327.9	12	6	0	22	2	-2			
PLAUEN	78.94	353.6	12	6	-1						
UCCLE	78.97	358.6	12	7	0	22	7	1			
PRAGUE	79.18	352.0	12	25	17	22	6	-2	22	21	SCS
PRUHONICE	79.26	352.0	12	9	0	22	8	-1	15	21	PP
DOURBES	79.67	358.5	12	10	-1	22	13	0			
KISHINEV	80.10	341.9	12	13	0	22	16	-2			
IASI	80.17	342.8	12	15	1						
SOTCHI	80.70	333.4	12	16	0	22	24	0			
BRATISLAVA	80.80	350.0	12	19	2	22	26	1	15	23	PP
TIFLIS	80.84	329.2	12	19	2	22	28	3			
STUTTGART	80.84	355.4	12	17	0	22	26	1	22	38	SCS
SIMFEROPOL	80.90	337.7	12	17	0	22	27	1			
PARIS	80.98	359.8	12	20K	2	22	26	-1	12	37	PCP
TUBINGEN	81.09	355.4	12	19	1						
STRASBOURG	81.10	356.3	12	19K	1	22	31	3	15	41	PP
QUETTA	81.40	307.7	12	20K	0	22	36	5	12	27	PCP
EBINGEN	81.44	355.5	12	21	1						
BRISBANE	81.92	206.0	12	24	1	22	39	3			
BASLE	82.16	356.4	12	25	1						
GORIS	82.31	327.1	12	26	1						
CAMPULUNG	82.50	344.0	12	50	24	23	15	33			
TIMISOARA	82.65	346.7				22	45	1			
NEUCHATEL	82.71	356.8	12	27	0	22	46	2			
BUCHAREST	83.13	343.0	12	31	2	22	50	1	23	34	PS
TRIESTE	83.63	351.9	12	31	-1	22	54	0	31	53	
BELGRADE	83.67	347.1	12	34A	2	22	59	5	26	1	
CLERMONT-FD.	84.02	359.4	12	35	1	23	3	5			
FLORENCE X.	85.69	353.5	12	41	-1	23	3	-11			
ROME	87.46	352.4	12	49	-2	23	19	-12	31	29	SS
KARAPIRO	88.33	185.3	12	53K	-2						
SAN JUAN	88.95	62.0	12	57	-1						
TORTOSA	88.96	1.3	13	5	7						
KSARA	90.86	332.5	13	7	0	24	13	11	16	57	PP
GRANADA	92.45	4.7				24	31	15			
MALAGA	92.87	5.3	13	15A	-1				16	59	PP
JERUSALEM	92.96	332.4	12	58K	-18						
HELWAN	95.86	334.9				24	11	-35	26	37	
TAMANRASSET	106.90	356.9	14	15	777				16	30	
ASTRIDA	126.85	324.8	19	7	1						
LWIRO	126.86	326.1	19	8	2				21	8	
SCOTT BASE	128.53	184.2	19	9	0						
BYRD STATION	134.44	168.C	19	9	-11						
SOUTH POLE	140.40	180.0	19	19	-12						

AUGUST 14 9.H 45.M 16.S EPICENTRE -23.96-175.74 DEPTH= 0.KM

A=-0.91232 B=-0.06800 C=-0.40379 D=-0.0743 E= 0.9972
G= 0.4027 H= 0.0300 K=-0.9149 HT= 3.6

SE= 2.37

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	7.94	315.6	2	5K	5	3	50	19					
AFIAMALU	10.68	21.2	3	28K	51	5	18	39					
ONERAHI	14.56	213.8	4	4	35								
KARAPIRO	15.79	206.2	3	49	4								
BRISBANE	28.32	256.2	5	56	-1	11	2	19					
CHARTERS TS.	35.39	268.8	6	57A	-2								
PORT MORESBY	38.24	285.9	7	21	-3	13	12	-6			9	6	PPP
CAPE HALLETT	49.00	185.6	8	53	3	16	11	16			16	30	PPS
DUMONT	50.85	201.0	9	4	0								
SCOTT BASE	54.59	184.5	9	34	2								
BYRD STATION	60.90	170.4	10	15	-2								
OASIS-BUNG.	65.74	206.3	10	47	-2								
SOUTH POLE	66.18	180.0	10	51	-1								
MIRNY	68.78	205.4	11	7	-1								
MATUSIRO	74.22	323.0	11	38	-3	21	15	1			12	32	
LICK	79.41	41.1	12	9	-1								
PASADENA	79.56	45.4	12	10	0	22	13	1					
FRESNO	80.17	42.5	12	13	-1								
SHASTA	81.20	38.1	12	18	-1								
MINERAL	81.42	38.8	12	22	2								
RENO	81.93	40.3	12	27	4								
HONG KONG	82.18	298.5	12	24	0								
BOULDER CITY	82.84	45.6	12	28	0								
TUCSON	83.44	50.6	12	31	0								
EUREKA	84.21	42.2	12	34	-1								
BUTTE	90.11	38.4	13	2	-1								
HUNGRY HORSE	90.66	36.0	13	3	-3								
COLLEGE	91.14	11.5	13	5	-3								
RAPID CITY	94.71	43.6	13	30	6								
QUETTA	124.43	291.1	19	1	0								
UPPSALA	142.93	348.8	19	31	-5								
ASTRIDA	143.80	226.7	19	36	-1								
LWIRO	144.67	225.9	19	40	1								
GOTEBORG	145.83	352.6	19	38	-3								
RATHFARNHAM	149.63	12.5	19	49K	2						20	14	
LWOW	149.91	334.1	19	52	5								
JERUSALEM	151.62	292.8	19	38A	-12								
RACIBORZ	151.74	340.9	19	57	7								
JENA	152.48	350.0	19	57	6						20	17	
PRUHONICE	152.81	345.4	19	58	6								
STUTTGART	154.93	352.3	20	3	9						20	18	PKP2
TAMANRASSET	178.35	224.8	20	14	2						25	58	PP

AUGUST 14 11.H 26.M 59.S EPICENTRE 34.15 47.74 DEPTH= 0.KM

A= 0.55776 B= 0.61380 C= 0.55871 D= 0.7401 E=-0.6725
G= 0.3757 H= 0.4135 K=-0.8294 HT= 0.4

SE= 2.40

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
GORIS	5.46	348.5	1	27	2	2	49	19					
TIFLIS	7.91	343.8	2	2	3								

MAKHACH-KALA	8.81	358.9	2	13	1						
KSARA	9.85	271.4	2	26	0				3	54	
JERUSALEM	10.78	260.8	2	26A	-13	3	42	-60			
SOTCHI	11.30	328.8	2	48	2						
HELWAN	14.56	257.5	3	34	4	6	22	9			
SIMFEROPOL	15.04	319.9	3	36	0	6	26	2			
QUETTA	16.74	98.4	4	2	4	7	4	0	4	30	
STALINABAD	17.50	69.4	4	5	-2						
KISHINEV	19.21	317.6	4	27	-1	8	53	53			
BUCHAREST	19.59	308.0	4	33K	0	8	15	7	8	51	SS
WARSAK DAM	19.72	83.7	4	32	-2						
ATHENS	19.78	288.0	4	37A	2	8	14	1	5	3	PPP
IASI	20.03	316.6	4	39	1	8	31	13			
BACAU	20.08	314.4				8	31	12	5	11	
NAMANGAN	20.13	63.2	4	37	-2						
SOFIA	20.89	301.3	4	47	0	8	44	8	5	9	PPP
SKOPJE	22.10	298.5	4	28A	-31				5	1	PPP
LAHORE	22.47	89.2	5	2	-1						
FRUNSE	22.67	59.5	5	4	-1						
MOSCOW	22.69	345.1	5	4	-1	9	12	3			
TIMISOARA	23.29	307.8	5	15	4	9	28	8	5	41	PP
LWOW	23.44	319.1	5	13	1	9	18	-5			
BELGRADE	23.50	305.1	5	21A	8	9	33	9	10	17	SS
SVERDLOVSK	24.34	17.3	5	21	0	9	38	0			
SKALNATE PL.	25.26	314.8				11	10	76	9	56	
BUDAPEST	25.29	310.4	5	33	3	10	9	15	15	56	SCS
KRAKOW	25.84	316.4	5	34	-1	10	5	2	6	11	PP
DEHRA DUN	25.88	90.1	5	39	4	10	7	3	11	9	SS
HURBANOVO	25.98	310.7				10	1	-5	6	31	PP
REGGIO CALA.	26.15	288.0	5	36	-2	10	20	12			
MESSINA	26.22	288.2	5	40	1				6	26	PP
WARSAW	26.34	321.4	5	39K	-1	10	15	3			
BRATISLAVA	26.78	310.8	5	43	-1	10	37	18	9	58	
ZAGREB	26.81	305.3	5	44K	0	10	21	2	11	21	SS
RACIBORZ	26.85	315.3				10	38	17	6	11	
AGRA	26.91	96.8	5	44	-1	10	20	-1	12	6	SSS
PULKOVO	28.08	341.2	5	54	-2						
TRIESTE	28.29	304.2	5	59	1	10	42	-1	12	28	
ROME	28.68	296.1	6	13	12	10	49	-1			
PRUHONICE	28.98	313.2	6	3	-1	11	11	17	7	11	PPP
PRAGUE	29.09	313.3	6	8	3	11	22	26	7	15	PP
FLORENCE X.	29.75	299.8	6	10	-1	11	8	1	12	24	SS
BOLOGNA	29.78	301.2							13	51	
HELSINKI	29.98	337.2	6	15	2						
COLLMBERG	30.37	315.0	6	17	1						
PLAUEN	30.61	313.1	6	19	1				7	21	PP
HALLE	31.06	314.9	6	22	0	11	26	-1	7	26	PP
JENA	31.09	313.7	6	22	-1	11	28	0	7	18	PP
CHUR	31.39	305.4	6	24	-1	11	31	-2			
STUTTGART	31.99	308.9	6	28	-2	11	43	1	7	36	PP
EBINGEN	32.01	307.8	6	31	0						
UPPSALA	32.38	331.8	6	32	-2	11	44	-4	7	45	PP
COPENHAGEN	32.45	322.4	6	29	-5	11	50	1	13	46	SS
MONACO	32.51	299.2	6	35	0						
STRASBOURG	32.88	308.2	6	37	-1	11	49	-7	7	35	PP
NEUCHATEL	33.16	305.2	6	40	-1	11	57	-3			
GOTEBORG	33.62	325.5	6	42	-3						
MUNSTER	33.77	314.2	6	46	0						
BENSBERG	33.78	312.3	6	46	0				7	42	PP
APATITY	34.46	350.3	6	53K	1	12	21	1	8	8	PP
CHATRA	34.59	91.3	6	56	3	13	9	47			
DOURBES	35.20	310.2	6	59	1	12	32	0			
DE BILT	35.26	313.7	7	1	2	12	37	4			
SODANKYLA	35.45	346.1	6	59	-1						
UCCLE	35.48	311.3	6	44	-17						
CLERMONT-FD.	35.69	302.6	7	1	-1	12	43	4			
PARIS	36.37	307.7	7	7	-1	12	41	-9	8	35	PP
SKALSTUGAN	36.69	334.3	7	8	-3						
KIRUNA	37.19	343.3	7	14	-1	12	58	-4	8	35	PP
TORTOSA	37.71	294.3	7	18	-1	13	13	3			
BERGEN	37.92	327.0							15	49	SS
RELIZANE	38.42	286.2	7	19	-6	13	3	-18	9	7	PP
KEW	38.50	311.6	7	29	3	13	20	-2	9	0	PP
TAMANRASSET	38.56	264.2	7	29	2	13	30	7	9	2	PP
ALICANTE	38.77	290.5	7	21	-7	13	12	-14	9	11	PPP
SHILLONG	38.97	90.6	7	29	-1	13	9	-20			
RUMANGABO	39.30	109.9	7	33	0						
DURHAM	39.77	316.6				13	35	-6	9	32	PCP

COLOMBO	40.18	125.1				14	6	18	16	51	SS
ASTRIDA	40.29	208.5	7	44	3				8	4	
ABERDEEN	40.54	320.2				13	51	-2	9	21	PCP
ALMERIA	40.59	288.7	7	44	1						
TOLEDO	41.27	293.6	7	50	1	14	3	-1	17	3	SS
GRANADA	41.41	289.5	7	51K	1	14	9	3	10	33	PPP
MALAGA	42.13	289.0	7	55A	-1	14	13	-4	9	37	PP
RATHFARNHAM	42.32	313.8	7	58A	0				9	35	PP
LISBON	45.38	293.0	8	25A	3						
ULAN-BATOR	45.62	53.9	8	24	0	15	10	3			
ISFJORD	46.41	350.7	8	31	1						
NORD	52.75	350.4	9	18A	-1	16	44	-3	21	34	SS
PHU-LIEN	53.26	88.4							17	52	
TIKSI	55.22	22.4	9	37	0	17	19	-1			
HONG KONG	58.81	82.9	10	5	2	18	9	1			
THULE	62.82	346.2	10	19	-11						
WINDHOEK	63.49	211.8	10	9	-26						
VLADIVOSTOK	63.75	54.3	10	36	0						
RESOLUTE	68.69	350.0	11	6K	-2	20	15	4	24	31	SS
MATUSIRO	70.99	58.4	11	20	-2	20	37	-1	25	12	
COLLEGE	80.56	6.7	12	15	-1						
SEVEN FALLS	82.11	322.7	12	24	0						
SHAWINIGAN	83.47	323.2	12	32	1						
OTTAWA	85.74	323.9	12	44	1						
HUNGRY HORSE	96.27	347.9	13	31	-1				30	18	PKKP
RAPID CITY	97.77	339.3	13	40	1						
EUREKA	105.21	347.0	14	14	777						
LA PAZ	120.32	270.0	18	58	5						
SOUTH POLE	123.97	180.0	19	0	-1						
BYRD STATION	133.73	183.1	19	12	-7						
KARAPIRO	138.06	110.7							23	4	PP

AUGUST 14 14.H 55.M 12.S EPICENTRE 51.59-175.39 DEPTH= 0.KM

A=-0.62184 B=-0.05018 C= 0.78153 D=-0.0804 E= 0.9968
G=-0.7790 H=-0.0629 K=-0.6239 HT= -6.0

SE= 2.39

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PETROPAVLOVK	15.91	285.8	3	43	-2							
COLLEGE	19.46	36.4	4	26	-3	8	15	13				
MAGADAN	20.52	306.0	4	41	1							
SITKA	23.73	60.9	5	15	3	9	35	11				
UGLEGORSK	26.99	281.6	5	43	0							
NEMURO	27.38	268.0	5	46	-1	10	25	1				
Y.-SAKHLINSK	27.44	277.0	5	46	-1	10	33	8				
KUSIRO	28.30	268.3	5	52	-3	10	42	3				
WAKKANAI	28.78	274.8	5	47	-12	10	27	-20				
OBIHIRO	29.08	269.1	6	1	-1						11	27
URAKAWA	29.75	268.2	6	9	1	11	7	5				
SAPPORO	30.15	270.8	6	10	-2	11	10	1			11	53
TOMAKOMAI	30.30	269.7	6	20	7							
SUTTSU	30.99	271.3	6	12	-7	11	21	-1				
MORI	31.16	269.8	6	23	3	11	34	9				
HAKODATE	31.24	269.2	6	21	0							
TIKSI	31.51	329.9	6	23	-1							
MIYAKO	31.68	264.8	6	26	1							
AOMORI	31.74	267.6	6	26	0							
ALBERNI	31.78	73.9	6	25	-1							
MORIOKA	32.15	265.6	6	29	0	11	38	-2				
MIZUSAWA	32.51	264.8	6	33	1	11	59	13				
HORSESHOE B.	32.65	72.9	6	34	0	11	52	4				
AKITA	32.80	266.5	6	35	0	12	8	18				
ISINOMAKI	32.82	263.6	6	34	-1							
VICTORIA	32.93	74.4	6	36A	0							
KIPAPA	33.01	149.3	6	33	-4							
HONOLULU	33.10	149.5	6	34	-3	11	52	-3				
SENDAI	33.18	263.7	6	38	0	11	57	1			8	28
HUKUSIMA	33.77	263.4	6	44	1							
SEATTLE	33.99	75.3	6	46	1	11	10	-59				
ONAHAMA	34.00	261.9	6	56	11							
NIIGATA	34.54	264.8	6	54	4						8	46
CORVALLIS	34.85	80.6	6	53	0							
UTUNOMIYA	34.89	262.3	6	52	-1	12	24	1			8	23

KAKIOKA	34.91	261.5	6	51	-2					
KUMAGAYA	35.45	262.2	6	59	1	12	53	22		
MAEBASI	35.49	262.8	6	57	-1	12	42	10	7	55 PP
TOKYO C.M.O.	35.53	261.2	7	2	4	12	38	5		
TITIBU	35.75	262.2	7	2	2					
YOKOHAMA	35.76	261.0	7	15	15				8	35 PP
HAWAII V.OB.	35.78	146.3	6	58	-2	12	37	1		
OIWAKE	35.85	263.1	7	2	1					
NAGANO	35.85	263.9	7	1	0	12	42	4	8	22 PP
MATUSIRO	35.92	263.7	7	0	-2	12	35	-4	8	14 PP
MERA	35.98	260.2	7	0	-2	13	9	29		
VLADIVOSTOK	36.00	277.6	7	1	-1	12	45	5		
WAZIMA	36.21	265.9	7	6	2					
HUNATU	36.25	261.9	7	8	4					
MATUMOTO	36.26	263.6	7	5	0	13	1	17		
KOHU	36.29	262.2	7	7	2					
OSIMA	36.36	260.4	7	6	1					
MISIMA	36.39	261.2	7	7	1	12	49	3		
BANFF	36.44	66.4	7	5	-1					
TOYAMA	36.45	264.8	7	8	2					
IIDA	36.82	262.7							8	16 PP
SHIZUOKA	36.83	261.5	7	11	2					
OMAESAKI	37.18	261.2	7	54	42					
SHASTA	37.52	85.5	7	17A	2					
GIHU	37.55	263.5	7	15	0				8	43
NAGOYA	37.58	263.1	7	15	-1					
UKIAH	37.92	88.2	7	19	1					
HIKONE	37.96	263.8	7	20	1					
KAMEYAMA	38.10	263.1	7	22	2	13	12	0		
TU	38.15	262.9	7	21	1					
MINERAL	38.21	85.4	7	22A	1					
HUNGRY HORSE	38.58	69.8	7	25	1	13	21	2	17	36 SCS
ABUYAMA	38.64	263.9	7	24A	0	13	23	3		
RESOLUTE	38.66	24.8	7	24	-1	13	18	-2	8	57 PP
TOYOOKA	38.68	265.4	7	19	-6	13	23	2		
OSAKA	38.81	263.7	7	30	4	13	27	4	17	35 SCS
KOBE	39.01	264.0	7	17	-11					
BERKELEY	39.28	89.1	7	31A	1	13	33	3	9	13 PP
SUMOTO	39.41	263.9	7	30	-1	13	34	2	9	1
SIOMISAKI	39.46	262.1	7	29	-2				9	28
CHANGCHUN	39.66	282.8	7	30A	-3	13	36	0	9	2 PP
TOKUSIMA	39.79	263.8	7	34	0					
RENO	39.80	85.2	7	36A	2					
TAKAMATU	39.95	264.6	7	31	-4					
LICK	40.00	89.2	7	37A	1					
BUTTE	40.61	72.2	7	41	0	13	29	-21		
KOTI	40.78	264.1	7	41	-1	13	54	2	17	3 SSS
SASKATOON	41.00	61.1	7	45	1	13	56	0		
FRESNO	41.50	88.5	7	49	1					
SIMIDU	41.65	263.7	7	49	0				9	38
BOZEMAN	41.70	71.8	7	50A	0	13	33	-33	9	7
OOITA	42.18	265.4	7	54	0					
EUREKA	42.22	82.5	7	54	0					
SALT LAKE C.	43.98	78.3	8	10	2					
PASADENA	44.21	90.2	8	11A	1	14	43	1	10	11 PP
THULE	44.27	18.9	8	4	-7	14	36	-7	9	49 PP
DAIREN	44.77	279.2	8	17	2					
BOULDER CITY	45.10	85.7							9	24 PCP
NORD	46.56	4.2	8	28A	-1	15	44	28	10	46 PPP
RAPID CITY	47.21	69.2	8	44A	10	15	26	1	13	55
PEKING	47.41	284.1	8	35A	-1	15	31	3	10	23 PP
ULAN-BATOR	48.12	298.0	8	40	-1					
BOULDER	48.41	74.9	8	44	1					
GUAM	49.70	234.8	8	49	-4				12	42
TUCSON	50.05	86.5	8	56	0	16	8	3	10	55 PP
ZO-SE	50.13	271.6	8	56A	-1	16	9	3	10	54 PP
ISFJORD	50.50	357.6	8	58	-1					
NANKING	50.97	274.2	9	1A	-2	16	20	2	11	1 PP
TRUK	51.60	223.2	9	4	-4	16	29	2		
LUBBOCK	54.70	78.8	9	35	4	17	9	0	19	20
HWALIEN	54.91	264.9	9	35	3					
CHIHUAHUA	55.51	86.2	9	36	-1				15	18
SIAN	55.56	283.3	9	41	4					
HSINKONG	55.70	264.4	9	37	-1					
SCORESBY SD.	56.74	10.4	9	46A	0	17	37	1	40	17
LANCHOW	57.38	288.3	9	49A	-1	17	48	4	12	4 PP
FAYETTEVILLE	57.61	71.4	9	49A	-3					
FLORISSANT	57.99	66.6	9	53A	-1	17	50	-2	12	14 PP
ST. LOUIS 1	58.18	66.7	9	55A	-1	17	52	-3	12	10 PP

DALLAS	58.29	75.9	9	56	0						
APATITY	59.23	347.6	10	1A	-2	18	8	-1	12	24	PP
SODANKYLA	60.21	350.4	10	18	8						
KOROR	60.28	241.2	10	6	-4	18	15	-7	12	14	PP
KIRUNA	60.31	353.2	10	8	-2	18	23	0	10	54	PCP
CANTON	60.76	270.8	10	12A	-1	18	31	3	12	34	PP
HONG KONG	60.77	269.5	10	12A	-2	18	33	5			
CHENGTU	61.03	283.7	10	14	-1	18	34	2	12	31	PP
BAGUIO CITY	61.20	259.9	10	15	-1	18	38	4			
OTTAWA	61.26	52.4	10	15A	-2	18	28	-7	18	54	PS
SHAWINIGAN	61.87	49.8	10	19A	-2						
BREBEUF	62.22	51.1	10	21K	-2	18	47	0			
SEVEN FALLS	62.37	48.3	10	22A	-2	18	48	-1	20	32	SCS
MANILA	62.37	258.3	10	22	-2	18	46	-3			
SVERDLOVSK	62.54	329.1	10	25	0	18	55	4			
PITTSBURGH	62.62	58.8	10	23	-3	18	50	-2	20	16	
REYKJAVIK	62.78	12.7	10	26K	-1						
PENNSYLVANIA	63.47	57.3	10	33	1	19	5	3			
SKALSTUGAN	65.02	356.2	10	40A	-2				11	13	PCP
WASHINGTON	65.27	58.2	10	48	5	19	10	-15	23	53	SS
AFIAMALU	65.29	176.1	9	33	-70	18	18	-67			
PALISADES	65.36	54.7	10	43	-1	19	25	-1	20	33	SCS
HARVARD	65.42	52.1	10	43	-1						
FORDHAM	65.49	54.8	10	46	1	19	31	4			
WESTON	65.64	52.1	10	18A	-28	19	2	-27			
KUNMING	65.89	280.3	10	46A	-1	19	34	2	13	13	PP
TACUBAYA	66.51	88.1	11	3	12	19	24	-16	13	15	PP
PHU-LIEN	66.58	274.2	10	53	1	19	50	9			
COLUMBIA	66.69	64.4	10	53	1	19	43	1			
PULKOVO	67.07	346.2	10	52	-3	19	44	-3			
HELSINKI	67.39	349.1	10	56	-1						
HALIFAX	67.56	45.8	10	57A	-1	19	50	-3	21	9	SCS
FRUNSE	68.11	311.9	11	1	0						
BERGEN	68.36	359.6							24	58	
UPPSALA	68.42	353.0	11	1A	-2	20	0	-3	20	30	
VERA CRUZ	68.57	85.9	11	1	-3	20	5	0	19	32	
PORT MORESBY	68.79	220.1	11	4	-1	20	5	-2	11	26	PCP
TOCKLAI	69.43	287.2	11	13	4						
LHASA	69.47	291.9	11	10A	0	20	17	2	20	52	PS
MOSCOW	69.60	340.8	11	9	-1	20	17	0			
SUVA	69.65	186.3	11	18A	7	20	15	-2	14	8	PP
GOTEBORG	70.91	355.8	11	16	-2						
NAMANGAN	70.95	312.5	11	18	-1						
ABERDFEN	71.46	3.9	11	21	-1	20	5	-33	13	12	
SHILLONG	72.03	288.5	11	23A	-2	20	44	-1			
COPENHAGEN	72.90	355.4	11	30A	0	20	56	1	17	20	
CHATRA	73.82	292.7	11	42	6	21	48	43			
DURHAM	73.89	3.7	11	37K	1	21	4	-2	21	38	SKS
STALINABAD	74.23	312.8	11	36	-2						
CHITTAGONG	74.49	286.3	11	40	0	21	15	2	14	28	PP
RATHFARNHAM	75.08	6.7	11	32A	-11	21	6	-13	12	23	
NOUMEA	75.28	197.4	12	0	16						
WARSAW	75.63	349.7	11	44A	-2	21	26	1	14	40	PP
WITTEVEEN	75.95	358.7	11	48	0						
POTSDAM	76.16	354.7	11	50	1				14	45	PP
DEHRA DUN	76.19	301.4	11	48	-1	21	29	-3	14	43	PP
WARSAK DAM	76.59	308.2	11	50	-2						
DE BILT	76.69	359.6	11	53	1				26	48	SS
BERMUDA	76.71	54.4	11	51	-1	21	36	-1	16	28	PPP
MUNSTER	76.79	358.1	11	53	0						
BOKARO	76.91	291.7	11	54	1	21	44	5			
HALLE	77.10	355.3	11	53	-1	21	44	3	12	8	PCP
KEW	77.23	3.2	11	55A	0	21	44	1	22	1	SKS
COLLMBERG	77.24	354.6	11	55	0						
LWOW	77.62	347.3	11	59	2	21	59	12			
JENA	77.69	355.5	11	57	-1	21	48	0	14	54	PP
BENSBERG	77.81	358.3	11	57	-1	21	53	4			
KRAKOW	77.90	350.0	11	58	-1	21	43	-7	14	52	PP
UCCLE	77.99	0.2	11	57	-2	21	49	-2			
RACIBORZ	78.05	351.1	12	2	2	21	47	-5	12	5	PCP
PLAUEN	78.09	355.1	11	57	-3				14	58	PP
SONNEBERG	78.25	355.7	12	3	2				12	34	
PRAGUE	78.38	353.6	12	4	3	21	58	3	14	55	PP
PRUHONICE	78.46	353.5	12	0	-2	21	56	0	14	50	PP
DOURBES	78.69	0.0	12	2	-1	21	57	-2			
AGRA	78.71	299.4	12	1	-2	21	55	-4	12	21	PCP
SKALNATE PL.	78.73	349.6	12	10	7	22	13	14	18	13	
CHARTERS TS.	78.80	216.5	12	1A	-3	21	58	-2			

KISHINEV	79.59	343.4	12	7	-1	22	11	3				
IASI	79.64	344.3	12	10	2							
STUTTGART	79.94	356.9	12	9	-1	22	14	2			15	48 PP
PARIS	79.96	1.4	12	8	-2	22	10	-2			15	7 PP
BRATISLAVA	80.05	351.6	12	12	1	22	12	-1			15	6 PP
STRASBOURG	80.17	357.9	12	12A	1	22	18	4			15	12 PP
TUR'NGEN	80.19	357.0	12	10	-1							
SOTCHI	80.45	334.9	12	12	-1							
SIMFEROPOL	80.52	339.2	12	13	0	22	21	3				
EBINGEN	80.54	357.0	12	13	0							
TIFLIS	80.71	330.7	12	14	0	22	24	4				
NEUCHATEL	81.77	358.4	12	18	-2	22	35	4				
CAMPULUNG	81.92	345.6	12	24	4							
QUETTA	81.95	309.2	12	21A	1							
TIMISOARA	81.99	348.3	12	28	7	22	45	12				
PORT BLAIR	82.13	278.7	12	26	5	22	53	19			15	30 PP
GORIS	82.25	328.7	12	24	2							
ZAGREB	82.48	352.0	12	24	1	22	44	6			23	44 PPS
BUCHAREST	82.58	344.7	12	26A	2	22	42	3			23	2
TRIESTE	82.82	353.6	12	26	1	22	48	7			23	33 SP
BELGRADE	83.00	348.7	12	27K	1	22	55	12			16	5 PP
CLERMONT-FD.	83.01	1.1	12	28	2	22	50	7				
BRISBANE	83.49	207.9	12	28	0						15	38 PP
MEDAN	84.69	269.0	12	34K	0	23	6	6				
SOFIA	84.69	346.3	12	37	3	22	59	-1				
FLORENCE X.	84.84	355.2	12	35A	0	22	53	-8	12	49	24	23 PS
MONACO	85.03	358.0	12	36	0							
KARACHI	85.50	306.7	12	42A	3	22	36	-32				
SKOPJE	85.67	347.5	11	42A	-57						12	10 PP
HYDERABAD	86.17	293.2	12	43	1	23	2	-12			15	55 PP
ROME	86.64	354.1	12	44A	0	23	14	-5	13	10	24	32 PS
BALBOA HTS.	86.65	79.9	12	45K	1	23	19	0				
SERRA PILAR	86.94	10.0									12	47 PCP
SAN JUAN	87.17	63.8	12	46	-1							
LEMBANG	87.30	255.6	12	45K	-2	23	23	-2				
TARANTO	87.66	350.4	10	59	-110						21	36
GALERAZAMBA	87.85	75.5	13	10	20						23	40 SKP
TOLEDO	88.60	6.7	12	56A	2	23	26	-11			16	24 PP
LISBON	89.26	10.7	12	58A	1	23	21	-23				
KARAPIRO	89.49	187.2	12	54	-4							
RIVERVIEW	89.99	207.3	13	7A	7	23	56	6				
ALICANTE	90.33	4.0	12	58	-4	23	47	-6			16	31 PP
GRANADA	91.31	6.6	13	8K	2	24	6	4			16	46 PP
MALAGA	91.71	7.2	13	8	0	24	6	1			16	48 PP
ALMERIA	91.72	5.7	13	8	0							
CHINCHINA	92.19	79.3	13	12	2	25	28	78			23	41 SKS
JERUSALEM	92.73	334.3	12	53	-20							
FORT FRANCE	92.88	62.1									23	18
FUQUENE	92.95	77.5	13	14	0	23	45	-31			17	2 PP
RELIZANE	92.96	3.3	13	7	-7							
BOGOTA	93.41	78.3	13	27	11	23	47	-33			25	30 PS
ST. LUCIA	93.54	62.3	13	18	2							
COLOMBO	93.69	285.8				24	8	-15				
ST. VINCENT	94.09	63.0	13	20	1							
HELWAN	95.55	336.9	13	35	9						26	8 PS
TRINIDAD	95.99	64.7	13	28	0							
ROXBURGH	97.65	190.8				24	9	-47				
HUANCAYO	105.59	89.8									18	29 PP
TAMANRASSET	105.95	359.1	14	14	777	24	54	0			18	38 PP
MBOUR	111.67	22.6									19	30 PP
LA PAZ	113.46	87.1									19	32 PP
CAPE HALLETT	124.00	185.2	18	58	0	25	59	1			20	57 PP
LWIRO	126.81	329.2	19	4	1							
ASTRIDA	126.84	328.0	19	4	1						21	2 PP
SCOTT BASE	129.64	184.8	19	9	0						22	29 PKS
WILKES	130.16	210.7									21	36 PP
OASIS-BUNG.	133.40	213.8	19	17	1						22	46
BYRD STATION	135.11	168.2	19	9	-10						22	48 SKP
MIRNY	136.32	215.4	19	21	0						23	0 PKS
SOUTH POLE	141.40	180.0	19	22	-8							
LCO. MARQUES	146.75	309.6	19	41	1							
WINDHOEK	149.46	336.8	19	47	3							
PIETERMZBURG	150.86	308.9	19	53	7							
GRAHAMSTOWN	155.75	310.3	20	9	16							
HERMANUS	159.85	322.7									24	23 PP

AUGUST 14 15.H 26.M 20.S EPICENTRE 34.45 47.85 DEPTH= 0.KM

A= 0.55451 B= 0.61269 C= 0.56315 D= 0.7414 E=-0.6710
G= 0.3779 H= 0.4175 K=-0.8264 HT= 0.3

SE= 2.38

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
GORIS	5.18	346.8	1 24	3				
TIFLIS	7.64	342.6	2 1	5				
KSARA	9.95	269.7	2 29	1				
JERUSALEM	10.92	259.4	2 24	-17	4 20	-25		
SOTCHI	11.09	327.7	2 48	5	6 10	81		
HELWAN	14.72	256.5	3 33	1				8 40
SIMFEROPOL	14.87	318.9	3 37	3	6 33	13		
QUETTA	16.69	99.5	4 0	3				
STALINABAD	17.30	70.3	3 28	-37				
KARACHI	18.67	112.3	4 28	6				4 42 PP
KISHINEV	19.05	316.9	4 26	-1				
BUCHAREST	19.48	307.2	4 31K	0	8 15	9		8 51 SS
WARSAK DAM	19.60	84.6	4 30	-3				
ATHENS	19.77	287.2	4 35	0	8 12	0		4 57 PP
IASI	19.87	315.9	4 37	1				
NAMANGAN	19.90	63.9	4 35	-1				
CAMPULUNG	20.51	308.6	4 46	3				
SOFIA	20.81	300.6	4 47	1	9 24	50		11 56
SKOPJE	22.04	297.7	5 5K	7	9 15	18		5 29 PP
MOSCOW	22.42	344.7	5 3	1	9 13	9		
TIMISOARA	23.18	307.1	5 14	4	9 29	11		
LWOW	23.28	318.5	5 12	2	9 27	7		
BELGRADE	23.40	304.4	5 12	0	9 32	10		5 58 PPP
TARANTO	24.95	293.0	5 25	-2				14 52
BUDAPEST	25.17	309.8	5 31	2				12 53 PCS
KRAKOW	25.68	315.8	5 33	-1	10 3	2		7 59
HURBANOVO	25.86	310.2	6 12	37				8 50
REGGIO CALA.	26.14	287.4	5 39	1				
MESSINA	26.22	287.6	5 39	0				5 14 PP
BRATISLAVA	26.65	310.3	5 43	0	10 27	10		8 24
RACIBORZ	26.70	314.8	5 45	2	9 45	-33		6 42 PPP
ZAGREB	26.71	304.8	5 44A	1				6 34 PP
AGRA	26.85	97.5	5 43A	-1				
PULKOVO	27.82	340.9	5 53	0				
TRIESTE	28.20	303.7	5 57	0				11 8
ROME	28.63	295.6	5 57	-4				
PRUHONICE	28.84	312.7	6 2	-1				8 14
PRAGUE	28.95	312.8	6 7	4				8 0
FLORENCE X.	29.68	299.3	6 8	-2	11 45	39		7 28 PP
COLLMBERG	30.22	314.5	6 14	-1				
PLAUEN	30.47	312.7	6 15	-2				
POTSDAM	30.57	316.6	6 17	-1				
HALLE	30.91	314.5	6 20	-1	11 11	-14		7 15 PP
JENA	30.95	313.3	6 19	-2				7 22 PP
SONNEBERG	31.01	312.1	6 23	1				
CHUR	31.29	305.0	6 23	-1	11 31	0		
STUTTGART	31.87	308.5	6 27	-2				6 36 PCP
EBINGEN	31.90	307.3	6 28	-2				
TUBINGEN	31.91	308.0	6 28	-2				
UPPSALA	32.16	331.5	6 31A	-1				
COPENHAGEN	32.26	322.1	6 34	1				
BASLE	32.71	305.8	6 36K	-1				
STRASBOURG	32.76	307.8	6 37	0				7 8
NEUCHATEL	33.06	304.8	6 39	-1	11 47	-12		
GOTEBORG	33.42	325.2	6 42	-1				
BENSBERG	33.64	311.9	6 46	1				
APATITY	34.17	350.2	6 50	1				7 56 PP
DOURBES	35.07	309.8	6 56	-1	15 43	193		
SOD?NKY' A	35.18	345.9	6 53	-5				
CLERMONT-FD.	35.60	302.2	7 1	-1				
PARIS	36.26	307.3	7 8	1				
SKALSTUGAN	36.45	334.0	7 9A	0				
KIRUNA	36.93	343.1	7 13A	0				8 31
TORTOSA	37.67	294.0	7 28	9				
KEW	38.36	311.3	7 24	-1				
RELIZANE	38.43	285.9	7 19A	-6				8 39 PP
TAMANRASSET	38.69	263.9	7 29A	1	13 26	1		9 2 PP
ALICANTE	38.75	290.2	7 19	-9	13 10	-16		9 9 PPP
SHILLONG	38.88	91.0	7 28A	-1				
RUMANGABO	39.61	209.9	7 38	3				

ALMERIA	40.58	288.4	7	45	2				9	15 PP
ASTRIDA	40.61	208.5	7	45	2					
TOLEDO	41.24	293.3	7	49	0	13	58	-5		
GRANADA	41.40	289.2	7	49A	-1				9	31 PP
MALAGA	42.12	288.7	7	58A	2				9	38 PP
RATHFARNHAM	42.18	313.6	7	56A	0				9	44 PP
SERRA PILAR	44.44	295.9	8	13K	-2				9	56 PP
ISFJORD	46.12	350.7	8	30	2					
NORD	52.46	350.4	9	16	-1					
HONG KONG	58.68	83.1	10	1	-1					
MBOUR	61.34	268.2	10	21	1					
THULE	62.54	346.2	10	22	-6					
WINDHOEK	63.80	211.8	10	37K	0					
KIMBERLEY	66.54	202.0	10	53	-1					
RESOLUTE	68.41	350.0	11	5A	-1					
GRAHAMSTOWN	70.32	198.8	11	18	0					
MATUSIRO	70.75	58.5	11	18	-2					
HALIFAX	79.73	317.5	12	12K	0					
COLLEGE	80.24	6.7	12	12	-2					
SEVEN FALLS	81.92	322.8	12	22	-1					
SHAWINIGAN	83.28	323.3	12	29	-1					
OTTAWA	85.55	323.9	12	41A	-1					
HUNGRY HORSE	95.99	348.0	13	31	0				17	15
RAPID CITY	97.51	339.4	13	38	0					
HUANCAYO	124.00	279.0	19	2	1					

AUGUST 14 23.H 26.M 58.S EPICENTRE 29.18 63.45 DEPTH= 103.KM

DEPTH OF FOCUS= 0.011R

A= 0.39088 B= 0.78229 C= 0.48502 D= 0.8945 E=-0.4470
G= 0.2168 H= 0.4339 K=-0.8745 HT= 2.1

SE= 1.78

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
DEHRA DUN	12.74	81.3	3	1	3	5	7	-11			5	19 SS
AGRA	13.02	95.5	2	56	-6	5	20	-5				
FRUNSE	16.35	30.3	3	45	1	6	48	6				
MAKHACH-KALA	18.81	321.3	4	14	0	7	44	8				
TIFLIS	19.63	314.6	4	23	1	8	2	9				
BOKARO	20.69	99.7				7	58	-17				
CHATRA	21.07	90.7	4	39	2	9	4	43				
SOTCHI	23.80	313.6	5	6	2							
LHASA	24.02	82.1	5	9	3	9	25	12				
SHILLONG	25.46	91.3	5	19K	-1							
TOCKLAI	27.73	87.4									6	39
HELWAN	27.91	279.4	5	44	2							
SIMFEROPOL	28.01	312.2	5	44	1	10	23	5				
MOSCOW	32.30	332.5	6	23	2				6	43		
LANCHOW	34.50	67.9	6	41	1	12	3	3				
LWOW	36.20	315.9	6	56	2	12	29	2				
PULKOVO	37.92	333.3	7	10	1							
KRAKOW	38.78	314.9	7	16	0	13	4	-3				
RACIBORZ	39.86	314.4	7	25	0							
HELSINKI	40.33	331.3	7	28	-1							
PRUHONICE	42.14	313.5	7	44	1				8	5	9	32 PP
APATITY	42.38	343.4	7	43	-2	13	58	-1			17	2 SS
COLLMBERG	43.36	315.2	7	53	0							
UPPSALA	43.42	328.2	7	53	-1				8	16		
HALLE	44.04	315.3	8	1	2				8	23		
SODANKYLA	44.10	340.5	7	58	-1							
JENA	44.17	314.4	8	2	2				8	22		
COPENHAGEN	44.65	321.2				14	37	6			15	[illegible]
ASTRIDA	45.19	231.4	8	9	1				8	28		
STUTTGART	45.44	311.1	8	8	-2				8	31		
GOTEBORG	45.44	323.9	8	9	-1				8	32		
TUBINGEN	45.50	310.7	8	9	-1							
EBINGEN	45.54	310.3	8	10	-1							
KIRUNA	46.26	339.0	8	15	-1	14	57	3			18	22 SS
STRASBOURG	46.37	310.7	8	16	-1							
NEUCHATEL	46.85	308.5	8	19	-2							
SKALSTUGAN	47.23	331.7	8	22	-2				8	47		
DOURBES	48.52	312.6	8	32	-2	15	31	5				
PARIS	49.87	310.9	8	44	0				9	1		

KEW	51.67	314.3	8 58	0	16 12	2	9 20				
TAMANRASSET	52.03	277.2	9 0	-1					11 4	PP	
KIMBERLEY	68.44	216.2							11 27		
RESOLUTE	75.44	354.2			21 6	2					

AUGUST 15 6.H 20.M 52.S EPICENTRE 6.81 -72.98 DEPTH= 159.KM

DEPTH OF FOCUS= 0.020R

A= 0.29061 B=-0.94957 C= 0.11772 D=-0.9562 E=-0.2926
G= 0.0344 H=-0.1126 K=-0.9930 HT= 6.9

SE= 1.85

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
FUQUENE	1.52	209.3	0 31	0					
BOGOTA	2.43	206.5	0 42	1	1 7	-6			
CHINCHINA	3.19	235.3	0 51	0	1 24	-6			
GALERAZAMBA	4.55	330.4	1 8	0	1 57	-4			
BALBOA HTS.	6.86	288.6	1 35	-4	2 50	-6			
GRENADA	12.26	64.0	2 51	1					
ST. VINCENT	13.15	60.4	3 2	0					
SAN JUAN	13.31	29.5	3 3	0	5 22	-6			
ST. LUCIA	13.79	57.7	3 10	0					
FORT FRANCE	14.03	54.9	3 12	-1				5 57	
DOMINICA	14.15	52.4	3 9	-5				6 5	
BARBADOS	14.59	63.5	3 23	3					
HUANCAYO	18.88	187.1	4 11	1	7 37	5	4 44	8 18	PCP
MERIDA	21.38	312.8						8 28	PCP
LA PAZ	23.65	168.3	4 58A	0	9 0	3		10 4	SS
COLUMBIA	28.07	345.7	5 39	0					
TACUBAYA	28.38	298.7	5 49	8				6 53	PP
WASHINGTON	32.16	354.0	6 21	6					
PALISADES	34.07	358.7	6 31	0	11 41	-3		7 25	*SP
FAYETTEVILLE	35.02	329.3	6 39A	0			7 12	9 8	
WESTON	35.46	2.1	6 44A	1				9 7	
HARVARD	35.58	1.8	6 45	1					
LUBBOCK	37.74	318.8	7 2	0	12 40	0			
OTTAWA	38.52	356.9	7 9A	1				9 18	PCP
HALIFAX	38.55	10.8	7 10A	1				9 19	PCP
BREBEUF	38.55	359.3	7 10A	1				9 14	PP
SHAWINIGAN	39.60	0.2	7 18A	1				9 22	PCP
SEVEN FALLS	40.21	2.3	7 24A	2					
TUCSON	43.37	310.8	7 48	0					
BOULDER	43.96	323.7	7 53	0					
LARAMIE	44.95	324.9	8 1	0				9 39	PP
RAPID CITY	45.57	329.5	8 5	-1			8 42	9 40	PCP
BOULDER CITY	48.02	313.3	8 26	1			9 2		
SALT LAKE C.	48.41	320.4	8 28	0					
PASADENA	49.74	309.6	8 38	0	15 37	4		10 35	
EUREKA	50.45	316.8	8 44	1			9 22		
BOZEMAN	50.79	326.1	8 46	0			9 24		
BUTTE	51.85	325.6	8 54	0					
FRESNO	51.99	312.0	8 54	-1					
RENO	53.13	315.2	9 4A	1					
LICK	53.56	311.9	9 6A	0					
HUNGRY HORSE	54.03	327.2	9 9	-1			9 47	10 12	*SP
BERKELEY	54.22	312.3	9 12A	1			9 47		
MINERAL	54.71	315.4	9 14A	-1					
UKIAH	55.39	313.4	9 20	0					
SHASTA	55.41	315.5	9 18A	-2					
BANFF	56.50	329.3	9 25A	-3					
SEATTLE	58.37	323.0	9 41K	0					
VICTORIA	59.44	323.5	9 47A	-1			10 25		
HORSESHOE B.	59.75	324.4	9 48A	-2			10 26		
RESOLUTE	69.00	353.9	10 48A	-2					
SITKA	69.48	328.9	10 53	0					
THULE	69.62	1.2	10 48	-6					
PARIS	75.35	41.4	11 4	-23			11 54	12 13	*SP
CLERMONT-FD.	75.46	44.6	11 29	1			12 14		
TAMANRASSET	76.82	68.3	11 36	0			12 13		
DOURBES	76.85	40.2	11 33	-3					
COLLEGE	77.45	335.0	11 38	-1				14 36	PP
NORD	78.61	7.2	11 45A	0					
STUTTGART	79.77	41.8	11 51	-1			12 32	11 57	PCP

JENA	81.33	39.6	11 59	-1				
HALLE	81.56	39.0	12 3	2				
GOTEBORG	81.60	32.7	12 2	1				
PLAUEN	81.70	40.0	11 58	-4				
SKALSTUGAN	81.84	26.9	12 3	0	12 49			
COLLMBERG	82.22	39.7	12 5	0				
PECHORICE	83.75	40.5	12 10	0			13 25	*SP
UPPSALA	84.48	30.5	12 16	0	13 1			
KIRUNA	85.04	22.4	12 19A	0				
SODANKYLA	87.46	22.5	12 30	0				
HELSINKI	88.09	29.7	12 34	1				
BYRD STATION	89.81	187.3	12 41	-1	13 30			
APATITY	89.95	21.6	12 43	1			17 59	
SOUTH POLE	96.76	180.0	13 13	0	13 57			
QUETTA	126.81	44.1	18 48	3				
MATUSIRO	127.89	328.1	18 48K	1				
CHARTERS TS.	139.75	247.0	19 1	-8			22 31	
PORT MORESBY	140.20	263.5	18 59	-11				
SHILLONG	144.61	24.0	19 18A	0				
KOROR	149.22	296.6	19 27	2			32 52	SKSP
HONG KONG	150.24	346.6	19 35	8				
BAGUIO CITY	153.30	329.9	19 42	11				

AUGUST 15 19.H 55.M 43.S EPICENTRE 53.52 160.21 DEPTH= 52.KM

DEPTH OF FOCUS= 0.003R

A=-0.56187 B= 0.20213 C= 0.80215 D= 0.3385 E= 0.9410
G=-0.7548 H= 0.2715 K=-0.5971 HT= -6.7

SE= 2.56

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PETROPAVLOVK	1.02	248.0	0 20	1	0 37	4		
KLYUCHI	2.82	6.3	0 47	3	1 23	6		
SEVERO-KUR.	3.82	223.3	0 58	0				
MAGADAN	7.97	323.1	1 59	3				
KURILSK	11.54	229.0	2 41	-4				
UGLEGORSK	12.19	255.9	2 58	5	5 18	9		
Y.-SAKHLINSK	12.97	246.6	3 5	1	5 28	1		
NEMURO	14.05	229.4	3 17	-1	5 39	-14		3 46
ABASHIRI	14.14	234.2	3 17	-2				6 37
WAKKANAI	14.49	243.5	3 25	1	6 11	8		
KUSIRO	14.87	231.2	3 24	-5	6 3	-9		6 23
ASAHIGAWA	15.26	237.5	3 33	-1				
OBIHIRO	15.48	233.6	3 36	0	6 37	10		4 2
URAKAWA	16.27	232.7	3 44	-2	6 43	-2		4 8 PP
SAPPORO	16.28	237.7	3 44	-3	7 11	26		4 5 PP
TOMAKOMAI	16.57	235.9	3 49	-1	6 49	-3		
MURORAN	17.02	236.6	3 55	-1	6 56	-6		
SUTTSU	17.05	239.1	4 1	5	7 15	12		5 25
MORI	17.39	236.9	4 1	1	7 16	6		4 21
HAKODATE	17.55	235.9	4 0	-2	7 13	-1		4 36
HATINOHE	18.12	231.7	4 8	-1	7 14	-13		7 51
AOMORI	18.25	233.7	4 15	4	7 53	23		
MIYAKO	18.62	229.2	4 13	-2	7 38	0		
MORIOKA	18.95	230.8	4 15	-4	7 33	-12		8 5
MIZUSAWA	19.42	229.9	4 23	-2	7 59	3		
AKITA	19.43	232.9	4 29	4	8 14	18		
ISINOMAKI	19.91	228.3	4 29	-1	7 55	-11		
SAKATA	20.21	231.9	4 33	0	8 31	19		
SENDAI	20.23	228.8	4 31	-2	8 16	4		5 34
YAMAGATA	20.49	229.8	4 36	0	8 19	2		
HUKUSIMA	20.85	228.8	4 37A	-3	8 29	5		
ONAHAMA	21.32	226.8	4 43	-1	8 35	2		5 43 PP
NIIGATA	21.36	231.6	4 45	0	8 48	14		
VLADIVOSTOK	21.37	252.4	4 40	-5				9 11 SS
SHIRAKAWA	21.48	228.3	4 45	-1	8 40	4		
AIKAWA	21.66	233.2	4 48	0	8 47	8		
MITO	21.99	226.7	4 50	-1	8 51	6	4 59	5 48
UTUNOMIYA	22.11	228.1	4 52	0	8 51	3		6 9
KAKIOKA	22.24	227.0	4 54	0	8 53	3		
SUIHWA	22.26	265.5	4 59	5				
TAKADA	22.40	231.7	4 54	-1				
MAEBASI	22.59	229.2	4 57A	0	9 3	7		5 25
KUMAGAYA	22.66	228.3	4 59	1	9 7	9		

TIKSI	22.71	334.7	4	58	0	8	59	1	9	35 SS
NAGANO	22.77	231.1	4	59	0	9	10	10	7	0 PP
WAZIMA	22.82	234.4	5	3	4	9	8	8		
MATUSIRO	22.86	230.9	4	59A	-1	9	0	-1	5	22 PP
OIWAKE	22.89	230.0							6	43
TOKYO C.M.O.	22.89	227.0	4	59	-1	9	2	0	6	5
TITIBU	22.94	228.6	5	0	0					
YOKOHAMA	23.15	226.9	5	6	4	9	18	12		
MATUMOTO	23.22	230.9	5	4	1	9	15	8		
KOHU	23.46	229.0	5	5	0	9	16	4		
HUNATU	23.48	228.5	5	7	1	9	22	10		
MERA	23.50	225.9	5	8	2	9	20	8	5	55 PP
KANAZAWA	23.62	233.5	5	8	1					
TAKAYAMA	23.64	232.0	5	8	1					
AJIRO	23.71	227.3	5	8	0	9	21	5		
MISIMA	23.71	227.7	5	7A	-1	9	23	7		
OSIMA	23.82	226.5	5	8	-1				6	22
IIDA	23.88	230.1	5	10	0	9	24	5		
SHIZUOKA	24.08	228.4	5	12A	0	9	29	7		
HUKUI	24.18	233.4	5	13	0					
GIHU	24.47	231.7	5	15	0	9	29	0	5	50
OMAESAKI	24.47	228.2	5	23	8	9	41	12	7	14
NAGOYA	24.57	231.0	5	19	3	9	41	10		
HAMAMATU	24.60	229.2	5	20	3	9	40	9		
IBUKISAN	24.67	232.3	5	21	4					
CHANGCHUN	24.77	261.2	5	16A	-2	9	31	-3		
HIKONE	24.83	232.3	5	19	0	9	41	6		
MAIZURU	25.04	233.8	5	23	2	9	50	11		
KAMEYAMA	25.07	231.4	5	20	-1	9	22	-17		
TU	25.14	231.2	5	25	3					
TOYOOKA	25.30	234.9	5	22	-1	9	47	4		
ARUYAMA	25.47	232.9	5	24A	-1	9	47	1		
NARA	25.51	232.2	5	27	2	10	2	16		
SAIGO	25.52	238.1	5	23	-2	9	53	6		
TOTTORI	25.62	235.8	5	31	5					
OSAKA	25.67	232.6	5	26	-1	9	56	7		
KOBE	25.81	233.2	5	28	0	9	51	0	12	22
OWASE	25.83	230.8	5	29	1	9	57	5		
YONAGO	26.11	237.0	5	29	-2	9	58	2		
WAKAYAMA	26.19	232.6	5	32	1	10	3	5		
SUMOTO	26.23	233.2	5	30	-2	10	3	5	7	41
MATSUE	26.23	237.4	5	32	0	10	22	24		
OKAYAMA	26.42	235.1	5	34	0					
SIOMISAKI	26.55	230.7	5	36	1	10	5	2		
TOKUSIMA	26.60	233.3	5	35	0	10	10	6		
TAKAMATU	26.65	234.5	5	46	10	10	6	1		
HAMADA	27.17	238.1	5	37	-4	10	17	3		
HIROSIMA	27.41	236.9	5	42A	-1	10	19	2	6	4
MUROTO	27.46	232.9	5	19	-24	9	57	-21		
KOTI	27.53	234.2	5	42	-2	10	22	3		
COLLEGE	28.06	45.6	5	47A	-2	10	25	-3		
UWAZIMA	28.26	235.3	5	51	1	10	37	6		
SIMIDU	28.42	234.1	5	48	-4	10	33	-1	7	20
SIMONOSEKI	28.50	238.4	5	54	1	10	42	7		
OOITA	28.72	236.6	5	54A	-1	10	38	-1		
HUKUOKA	29.05	238.7	5	58	1	10	46	2		
ITUHARA	29.15	241.0	5	55	-3					
ASOSAN	29.26	236.9	6	4	5					
SAGA	29.37	239.4	6	7	7	11	2	13		
KUMAMOTO	29.51	237.4	6	2	0				7	30
UNZENDAKE	29.81	237.9	6	4	0				10	22
MIYAZAKI	29.88	235.3	6	0	-5	11	6	9		
NAGASAKI	30.00	238.4	6	9	3					
DAIREN	30.02	256.6	6	10	4					
KAGOSIMA	30.59	236.1	6	15	4	11	7	-1	6	49
TOMIE	30.65	239.7	6	12	0	11	10	1		
YAKUSIMA	31.53	234.9	6	18	-1	11	21	-2		
PEKING	32.49	263.6	6	25A	-3	11	36	-2	7	32 PP
IRKUTSK	33.01	290.9	6	32A	0	11	49	3	7	55 PPP
ULAN-BATOR	33.54	282.5	6	36	-1	11	53	-1		
TATUNG	34.17	266.2	6	43	1					
SITKA	35.67	57.8	6	59K	4	12	49	22		
ZO-SE	35.89	247.2	6	55A	-2	12	23	-7		
NANKING	36.50	250.8	7	0A	-2					
TAIPEI	40.51	240.8	7	42	7	13	44	4		
SIAN	40.65	262.9	7	46	9					
GUAM	41.79	202.9	7	46	0	13	47	-13		
HSINKONG	42.17	239.3	7	39	-10	14	1	-4		

LANCHOW	42.44	269.2	7 51A	0						
TAITUNG	42.57	239.3	7 53	1						
TAINAN	42.85	240.6	8 11	16						
RESOLUTE	42.90	22.2	7 55A	0	14	32	16		17	37 SCS
TAWU	43.03	239.3	8 4	8	14	29	11			
HENGCHUN	43.40	239.1	8 2	3						
ALBERNI	44.96	63.5	8 12	0						
KIPAPA	45.07	118.8	8 11A	-2				8 35		
NORD	45.11	359.4	8 12	-1	14	55	7		10	46 PPP
HONOLULU	45.13	118.9	8 22A	9	14	17	-31	8 34	10	22 PP
HORSESHOE B.	45.72	62.6	8 17	-1	15	0	4			
CHENGTU	46.11	263.5	8 19A	-2	14	58	-4		13	54 PCS
VICTORIA	46.15	63.6	8 21A	0	15	19	16			
TRUK	46.42	191.5	8 21	-2	15	10	4			
CANTON	46.52	248.0	8 23A	-1	15	6	-2			
HONG KONG	46.65	246.5	8 24A	-1	15	7	-3		9	45 PCP
THULE	46.69	14.1	8 18K	-7	15	5	-5			
SEMIPALATNSK	46.92	300.4							10	9 PP
ISFJORD	47.09	351.0	8 29	0					9	20
SEATTLE	47.27	64.0	8 33K	3	15	38	19			
BAGUIO CITY	48.19	235.2	8 36	-1	15	32	1			
BANFF	48.63	56.6	8 40	-1						
CORVALLIS	48.64	67.8	8 42	1	15	53	15			
MANILA	49.57	233.6	8 47	-1	15	55	4			
KOROR	50.56	213.9	8 53	-2	16	5	1		11	41 PPP
KUNMING	51.06	259.7	8 57A	-2	16	6	-5		10	30 PCP
HUNGRY HORSE	51.17	58.7	8 59A	-1	16	31	18		11	29 PP
SHASTA	51.68	71.0	9 4	0	17	24	64			
UKIAH	52.26	73.1	9 21A	13						
SASKATOON	52.31	51.1	9 7	-2	16	33	4			
MINERAL	52.36	70.9	9 1A	-8						
APATITY	52.89	337.3	9 11A	-2	16	34	-2		11	21 PP
BUTTE	53.45	60.0	9 18A	1				9 29	10	54 PCP
BERKELEY	53.67	73.6	9 21	2	16	53	6		20	47 SS
RENO	53.92	70.4	9 22	2						
LICK	54.39	73.6	9 23A	-1	17	16	19			
BOZEMAN	54.47	59.5	9 25A	0				9 42		
TOCKLAI	54.48	267.8	9 31	6						
SODANKYLA	54.53	339.9	9 23	-2						
LHASA	54.58	273.2	9 25A	0	16	58	-1		11	36 PP
FRUNSE	54.74	296.2	9 25A	-1	17	5	4			
KIRUNA	55.31	342.7	9 29A	-2	17	8	-1		39	31 PKPPKP
FRESNO	55.84	72.9	9 35	1						
EUREKA	56.10	68.0	9 36A	0					25	57 PKKP
SCORESBY SD.	56.30	0.9	9 38	0						
SHILLONG	57.09	269.2	9 43K	0	17	30	-3		10	50 PCP
SALT LAKE C.	57.44	64.2	9 46A	0					10	41 PCP
PASADENA	58.64	73.9	9 52A	-2	17	56	3		21	53 SS
TASHKENT	58.65	298.1	9 52	-2	17	52	-1		10	31 PCP
CHATRA	58.95	274.0	9 56	0	17	55	-2			
BOULDER CITY	59.22	70.1	9 58A	0					10	54 PCP
CHITTAGONG	59.54	266.8	10 10	10						
RAPID CITY	59.55	56.1	10 0A	-1	18	15	10		29	13 PKKP
PULKOVO	60.13	333.4	10 4	0	18	11	-1		10	16 *SP
LARAMIE	60.36	59.8	10 5	-1						
SKALSTUGAN	60.59	344.2	10 6A	-2	18	32	14		39	23 PKPPKP
STALINABAD	60.92	296.2	10 7	-3	18	16	-6			
HELSINKI	61.14	336.3	10 12	1						
MOSCOW	61.34	327.1	10 12	-1	18	28	0		12	32 PP
BOULDER	61.44	60.6	10 14	1						
DEHRA DUN	61.75	283.5	10 16	1	18	44	11		12	34 PP
BOKARO	62.02	272.8	10 17	0	18	36	0		10	43 PCP
REYKJAVIK	62.67	1.0	10 25K	3						
WARSAK DAM	62.74	290.9	10 19	-3						
LAHORE	62.98	287.1	10 21	-3	18	40	-8		39	20 PKPPKP
UPPSALA	63.06	339.9	10 23A	-1	18	43	-6		39	9 PKPPKP
PORT MORESBY	63.65	194.4	10 26A	-2	18	58	1		10	58 PCP
TUCSON	64.20	70.2	10 31A	-1	19	10	7	10 42	23	31 SS
BERGEN	64.67	346.5	10 38	3	19	11	2		11	5 PCP
GOTEBORG	66.16	342.0	10 46A	2						
ASHKABAD	66.79	302.7	10 47A	-1					20	40 SCS
PORT BLAIR	67.35	258.7	10 51	-1	19	41	-1		13	25 PP
VIZIANAGRAM	67.79	270.6	10 54A	0						
COPENHAGEN	67.98	341.0	10 56A	0	19	54	5		13	26 PP
LUBBOCK	68.11	63.0	10 58	2	20	12	21			
QUETTA	68.17	291.4	10 54	-3	19	47	-5			
ABERDFEN	68.73	349.8	10 58	-2	20	0	2		13	35 PP
WARSAW	69.24	334.5	11 2A	-1	20	5	1	11 15	20	37 SPP
CHIHUAHUA	69.61	69.4	10 58	-8	20	8	-1			

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ST. LOUIS 1	69.98	51.8	11	4A	-4	20	13	0				
EDINBURGH	70.07	350.1				20	17	3			20	45 PS
FAYETTEVILLE	70.10	56.1	11	7A	-2							
TIFLIS	70.12	314.0	11	9	0						21	15
MEDAN	70.50	248.6	11	12A	1	20	22	3				
OTTAWA	70.51	38.3	11	9A	-2	20	17	-2	11	29	13	58 PP
SHAWINIGAN	70.59	35.8	11	10A	-2							
LWOW	70.60	331.6	11	12	0	20	56	36			13	54 PP
SEVEN FALLS	70.76	34.2	11	11A	-2	20	23	1			20	56 PS
POTSDAM	70.96	339.4	11	15	1	20	30	6			24	17
DURHAM	71.03	349.0	11	13A	-1	20	24	-1			11	25 PCP
BREBEUF	71.19	36.9	11	25A	10							
GORIS	71.27	311.7	11	16	0	20	29	1			21	30 *SP
HYDERABAD	71.31	274.1	11	14K	-2	20	28	0			11	21 PCP
AFIAMALU	71.31	151.2	11	26	10						11	45 PCP
DALLAS	71.34	60.0	11	16	0							
KARACHI	71.47	288.4	11	28	11							
KRAKOW	71.51	334.3	11	17	0	20	32	1	11	26	20	58 *SS
CLEVELAND	71.53	44.3	11	17	0	20	31	0				
SIMFEROPOL	71.64	322.8	11	17A	-1	20	31	-1			13	56 PP
WITTEVEEN	71.76	343.5	11	20A	1							
IASI	71.89	328.1	11	29	10	21	0	25				
RACIBORZ	71.92	335.3	11	21	1	20	36	1	11	33	14	0 PP
COLLMBERG	71.99	339.1	11	20	0	20	40	4			21	9 PS
HALLE	72.02	339.8	11	21	1	20	38	1			25	49 SS
SKALNATE PL.	72.23	333.7	11	22A	1	20	36	-3			25	51 SS
JENA	72.64	339.8	11	24	0	20	45	1			14	39 PP
BACAU	72.66	328.3	11	27	3	20	52	8				
DE BILT	72.70	344.2	11	27	3	20	45	1			25	47 SS
PRAGUE	72.83	337.7	11	25A	0	20	50	4			14	7 PP
PRUHONICE	72.89	337.6	11	25	0	20	47	1			21	25 PS
PLAUEN	72.92	339.3	11	25	-1	20	44	-3				
RATHFARNHAM	72.96	351.6	11	26A	0	21	2	15			13	36
PITTSBURGH	73.05	43.8	11	26A	0	20	47	-1				
SUVA	73.08	161.9	11	30A	3	20	55	6			14	38 PP
SONNEBERG	73.24	339.9	11	25	-2	20	49	-1				
CHEB	73.27	339.0	11	27	-1	20	52	1			14	5
FOCSANI	73.34	327.7	11	36	8							
BENSBERG	73.46	342.6	11	29	0	21	3	10				
BOMBAY	73.50	279.5	11	28	-1	20	49	-4			21	21 PS
PENNSYLVANIA	73.59	42.2	11	30	1							
MADRAS	73.74	269.9	11	33K	3	20	55	-1			11	49 PCP
HURBANOVO	73.97	334.5	11	41	9	20	59	0			14	17 PP
BRATISLAVA	73.97	335.3	11	32A	0	20	53	-6			25	17 SS
VIENNA-H.	74.07	335.8	11	33A	1	21	1	1			11	51 PCP
UCCLE	74.09	344.3	11	31	-1							
BUDAPEST	74.10	333.7	11	32	0	21	4	4			22	12 PS
KEW	74.11	347.5	11	32	-1	20	52	-8			14	14 PP
CHARTERS TS.	74.21	193.6	11	31	-2	21	1	0				
CAMPULUNG	74.40	328.9	11	37	3							
LEMBANG	74.61	234.9	11	32	-3	21	3	-3				
BANDUNG	74.65	234.8	11	15	-21	20	51	-15				
WESTON	74.72	37.0	11	31A	-5	21	43	36			26	1 SS
DOURBES	74.73	344.0	11	35	-1	21	7	0				
BUCHAREST	74.83	327.8	11	36A	-1	20	48	-20			21	37 PS
SZEGED	74.94	332.5	11	40	3	21	18	9			11	49 PCP
PALISADES	74.96	39.4	11	35A	-2	21	9	-1			14	31 PP
KALOCSA	75.00	333.4	11	39	1						11	52 PCP
TIMISOARA	75.10	331.6	11	41	3	21	19	8			14	24 PP
FORDHAM	75.11	39.5	11	37A	-1						21	45 SCS
STUTTGART	75.17	340.6	11	39A	0	21	16	4			14	43 PP
HALIFAX	75.30	30.7	11	40A	1	21	14	1	12	9	14	46 PP
TUBINGEN	75.43	340.6	11	41A	1				12	2	14	32
WASHINGTON	75.53	42.7	11	40K	-1							
STRASBOURG	75.63	341.5	11	42A	1	21	21	4	11	53	14	47 PP
NOUMEA	75.69	174.0	11	41	-1	21	27	9			12	20 PCP
EBINGEN	75.78	340.6	11	43A	1				11	53		
RAVENSBURG	76.03	340.0	11	44	0	21	21	0	11	57	21	54 SCS
BELGRADE	76.17	331.7	11	44K	0	21	25	2			13	58
PARIS	76.31	345.1	11	46A	1	21	24	0	12	2	14	30 PP
ZAGREB	76.44	335.1	11	47A	1	21	28	2				
BASLE	76.67	341.3	11	48A	1	21	31	3				
CHUR	76.94	339.8	11	49	0	21	33	2				
TRIESTE	77.14	336.6	11	49A	-1	21	34	1			12	0 PCP
SOFIA	77.25	328.9	11	50	0	21	40	5			15	4 PP
NEUCHATEL	77.30	341.6	11	51	0	21	37	2				
GUADALAJARA	77.37	72.5	11	49	-2							
COLUMBIA	78.01	48.1	11	54A	-1							

OROPA	78.43	340.5	11	58	1	22	18	31				
SKOPJE	78.49	329.9	12	0A	3						19	34
PAVIA	78.61	339.6	11	59	1						15	7 PP
COLOMBO	78.75	266.4	12	7	8	21	52	1				
BOLOGNA	78.79	337.9	11	50	-9						22	9 PS
CLERMONT-FD.	79.17	343.9	12	2	1	22	2	7	12	15	22	35 PS
FLORENCE X.	79.49	337.7	12	3A	0	22	19	21			15	23 PP
MONACO	80.35	340.3	12	7A	0						22	17 PS
KSARA	80.56	315.8	12	9	1	22	4	-6				
TACUBAYA	80.72	70.1	12	7K	-2	21	54	-17	12	21	15	9 PP
BRISBANE	80.90	186.5	12	9	-1	22	14	1				
ROME	80.98	336.2	12	11A	0	22	17	3			15	24 PP
TARANTO	81.09	332.3	12	53	42	22	33	18				
ATHENS	81.42	326.6	12	9	-4	22	16	-3	12	22		
VERA CRUZ	82.59	67.8	12	17K	-2	22	37	7			26	21
JERUSALEM	82.60	315.3	11	57K	-22						15	16 PP
BARCELONA	83.57	343.6	12	38	14	22	47	7				
MESSINA	83.67	332.7	12	23	-1	22	43	2			12	27 PCP
REGGIO CALA.	83.74	332.6	11	56	-29							
TORTOSA	84.42	344.7	12	30	2	22	56	7				
MERIDA	84.68	61.8	12	29	0	22	47	-4				
SERRA PILAR	85.23	351.5	12	33A	1				12	42	22	50 PPP
HELWAN	85.88	317.3	12	36	1						24	25 PPS
TOLEDO	85.99	347.9	12	38A	2	22	56	-8	12	49	23	41 *SS
BERMUDA	86.01	36.8	12	35	-1						15	57 PP
ALICANTE	86.99	344.9	12	36	-5	23	13	-1			16	8 PP
COMITAN	87.19	66.4	12	41	-1						14	29
RIVERVIEW	87.34	187.5	12	42A	-1	23	19	2				
LISBON	87.67	351.7	12	48K	4	23	19	-1	13	8	12	53 PCP
GRANADA	88.59	347.1	13	7	19	23	38	9			17	3 PP
ALMERIA	88.76	346.2	12	47	-2	23	16	-14			15	59 PP
MALAGA	89.14	347.7	12	47A	-4	23	45	11	13	15	16	15 PP
RELIZANE	89.36	343.6	12	53	1	23	51	15	13	10	16	26 PP
ONERAHI	89.77	168.5	12	57	3				13	25		
MELBOURNE	91.93	192.0	13	4K	0	24	7	8				
PERTH	93.42	216.6	13	16	5						17	6 PP
WELLINGTON	95.25	169.0				24	35	8			23	55 SKS
SAN JUAN	98.05	43.9	13	33K	1							
ROXBURGH	99.00	173.5	13	49	13	25	12	13			32	1 SS
BALBOA HTS.	99.95	60.1				26	57	110			18	3 PP
TAMANRASSET	100.92	336.3	13	44A	-1	25	10	-5			17	52 PP
FORT FRANCE	103.35	41.1									17	57 PP
CHINCHINA	105.37	58.8	14	9	777	24	46	0			33	38 SS
FUQUENE	105.90	56.8	14	7	777	24	42	0			18	33 PP
BOGOTA	106.46	57.6				24	49	0			18	23 PP
MBOUR	112.33	357.0	14	35	777	25	35	-9			19	17 PP
RUMANGABO	114.16	304.1	18	46	12							
ASTRIDA	115.05	303.0	14	46	777						29	36 PS
LWIRO	115.21	304.1	14	47	777	26	2	43				
TANANARIVE	118.45	276.5	18	48	6						20	27 PP
HUANCAYO	119.79	68.4	18	47	2						20	21 PP
DUMONT	120.84	189.2	18	43	-4	25	45	6				
WILKES	125.20	202.2	18	40	-15						20	49 PP
CAPE HALLETT	125.72	176.2	15	47	777	26	12	17			20	47 PP
LA PAZ	127.38	64.4	19	1	2						22	37 PKS
OASIS-BUNG.	127.57	206.2	18	58	-2						21	9 PP
MIRNY	129.98	208.8	19	2	-2						22	41 PKS
SCOTT BASE	131.17	178.2	19	6	0						23	30 PPP
LCO. MARQUES	132.64	284.2	19	15	6						39	23 SS
WINDHOEK	138.38	303.4	19	16	-4							
TALA POZO	138.58	69.7									22	37 PP
BYRD STATION	140.56	164.3	19	15	-9						23	25 PKS
GRAHAMSTOWN	141.59	282.7	18	52	-34							
SOUTH POLE	143.34	180.0	19	23A	-6						19	32 *PPKP
HERMANUS	146.60	289.0	19	39	5						23	40 PKS
LA PLATA	147.44	70.6	18	52	-44						40	7 SKSP

AUGUST 15 22.H 29.M 21.S EPICENTRE 1.67 125.04 DEPTH= 197.KM

DEPTH OF FOCUS= 0.026R

A=-0.57384 B= 0.81846 C= 0.02903 D= 0.8188 E= 0.5741
G=-0.0167 H= 0.0238 K=-0.9996 HT= 7.2

SE= 1.97

	DELTA	AZ.	P	O-C	S	O-C	*PP	SUPP.

	DEG.	DEG.	M S	S	M S	S	M S	M S	
KOROR	10.96	58.9	2 29A	-4					
MANILA	13.43	342.9	3 6	2	5 31	2			
BAGUIO CITY	15.29	343.6	3 26	-1				15 14	SCS
LEMBANG	19.33	243.9	4 11A	-1	7 39	3			
BANDUNG	19.33	243.7	3 49	-23	7 7	-29			
HENGCHUN	20.63	348.6	4 25	-1	8 7	7			
TAWU	20.94	349.2	4 28	-1	8 6	1			
TAITUNG	21.29	350.1	4 30	-2	8 14	3			
HSINKONG	21.59	350.8	4 31	-4	8 17	0			
TAINAN	21.71	347.9	4 37	1	8 0	-19			
YUSHAN	22.03	350.0	4 50	11					
ALISHAN	22.10	349.6	4 41	1	8 32	6			
PENGHU	22.37	346.7	4 53	10					
HWALIEN	22.41	351.8	4 43	0					
TAICHUNG	22.74	349.7	3 47	-59	7 44	-53			
GUAM	22.76	58.0	4 46	0					
HONG KONG	23.06	333.5	4 49A	0	8 44	2			
ILAN	23.18	352.4	4 53	3	8 47	3			
TAIPEI	23.47	352.0	4 51	-2	9 44	55			
CANTON	24.14	332.7	4 59A	-1					
PORT MORESBY	24.62	116.9	5 5K	1	9 6	-2		10 19	*SS
MEDAN	26.39	274.6	5 21A	1	9 49	12			
TRUK	27.33	77.0	5 29	0	12 6	134	6 30	13 27	*SS
YAKUSIMA	29.08	9.7	5 43A	-2	10 16	-4		6 8	
ZO-SE	29.49	353.3	5 47A	-1				6 55	PP
CHARTERS TS.	29.96	137.0	5 52K	0	10 37	3			
KAGOSIMA	30.19	9.4	5 54	0	10 26	-12		6 14	
FUTZELING	30.60	345.2	6 3	5					
MIYAZAKI	30.68	10.7	5 59A	0	10 48	3			
NANKING	30.78	349.6	5 58A	-1					
TOMIE	30.98	6.1	6 1	0	10 7	-43		6 39	
NAGASAKI	31.23	7.9	6 4	1	10 55	1		11 57	
UNZENDAKE	31.28	8.5	6 3	-1	10 42	-13			
KUMAMOTO	31.44	9.2	6 5	0	10 55	-2			
ASOSAN	31.57	9.7	6 7	1					
KUNMING	31.71	319.0	6 9A	1	10 58	-3	6 45	12 5	*SS
SAGA	31.80	8.4	6 10A	2					
SIMIDU	31.83	12.7	6 8A	-1	11 3	0	7 11		
ODITA	31.99	10.5	6 9A	-1	11 0	-6			
TORISIMA	32.10	25.3	6 11	0				7 43	
HUKUOKA	32.14	8.5	6 11	0	11 7	-1	7 13		
UWAZIMA	32.17	11.9	6 12	0	11 12	3			
SIMONOSEKI	32.58	9.1	6 19	4	11 18	3			
ITUHARA	32.60	6.5	6 15	0	11 6	-9			
KOTI	32.69	13.2	6 16A	0	11 16	-1	6 52	7 36	
SIOMISAKI	33.17	16.5	6 19	-1	11 26	2		17 27	SCS
HIROSIMA	33.25	11.2	6 20	-1	11 26	1		16 26	SCS
TOKUSIMA	33.44	14.5	6 22A	0	11 29	1		16 29	SCS
TAKAMATU	33.55	13.6	6 23	0	11 28	-2			
PORT BLAIR	33.55	288.7	6 24	1	11 54	24	7 8	7 35	PP
HAMADA	33.70	10.5	6 23	-2	11 31	-1			
WAKAYAMA	33.74	15.2	6 26A	1	11 14	-19		16 30	SCS
SUMOTO	33.78	14.7	6 25A	0	11 35	1	7 9	16 25	SCS
HIMEJI	33.81	14.0	6 30	4	11 41	7		16 33	SCS
OKAYAMA	33.87	13.2	6 24	-2					
OWASE	33.88	16.8	6 25	-1	11 36	1		7 52	
KOBE	34.17	15.0	6 29	0	11 45	5		7 36	
OSAKA	34.24	15.5	6 29A	0	11 44	3		16 36	SCS
NARA	34.35	15.9	6 30	0	11 41	-1			
MATSUE	34.42	11.6	6 31	0	11 50	6			
ABUYAMA	34.45	15.4	6 30A	-1	11 41	-3			
YONAGO	34.46	12.0	6 30	-1	11 44	0		7 35	
PERTH	34.56	193.9	6 33	1	12 4	18		7 50	PP
TU	34.59	16.8	6 33	1					
KAMEYAMA	34.68	16.7	6 34	1	11 38	-9		7 47	
TOTTORI	34.72	13.2	6 38	5	11 57	9			
TOYOOKA	34.89	14.0	6 35	0	11 49	-2		16 37	SCS
HAMAMATU	34.94	18.4	6 35	0	11 53	2		7 25	
OMAESAKI	34.99	19.2	6 36	0	11 53	1		8 43	
MAIZURU	35.00	14.9	6 36	0	11 57	5			
HIKONE	35.02	16.1	6 36	0	11 51	-2		16 35	SCS
CHENGTU	35.04	327.4	6 36A	0	11 51	-2			
NAGOYA	35.13	17.1	6 37	0	11 55	1		16 37	SCS
IBUKISAN	35.16	16.2	6 38	1	11 49	-6			
SAIGO	35.20	11.7	6 37	0	12 3	8		16 40	SCS
GIHU	35.28	16.7	6 38	0	11 57	0		13 9	PCS
TSURUGA	35.32	15.6	6 38	0	11 59	2		9 48	

SHIZUOKA	35.39	19.1	6	39A	0	12	0	2	8	13	PP
OSIMA	35.54	20.5	6	44	4	12	3	2	8	2	PP
AJIRO	35.70	20.0	6	41	-1	12	0	-3	7	58	PP
MISIMA	35.71	19.7	6	40A	-2	12	2	-1	8	2	PP
IIDA	35.71	18.0	6	42	0	11	51	-12	13	54	
SIAN	35.73	336.8	6	42	0						
HUKUI	35.75	15.7	6	43	1	12	4	0			
HUNATU	35.99	19.2	6	43A	-1	12	5	-3			
KOHU	36.05	18.9	6	45	1	12	8	0			
TAKAYAMA	36.12	16.9	6	45	0						
KANAZAWA	36.31	15.9	6	51	4						
MATUMOTO	36.43	17.7	6	48	0	12	14	0			
TOKYO C.M.O.	36.49	20.3	6	47	-1	12	12	-3	7	39	
TITIBU	36.53	19.3	6	47	-2						
TOYAMA	36.62	16.5	6	49	0	12	17	0			
MATUSIRO	36.78	17.9	6	49A	-2	12	16	-4	7	19	PP
KUMAGAYA	36.79	19.6	6	48	-3				8	27	PP
MAEBASI	36.91	19.0	6	48	-4	12	21	-1	8	24	PP
KAKIOKA	37.13	20.5	6	52	-2	12	15	-10			
WAZIMA	37.17	15.7	6	55	1	12	28	3			
DAIREN	37.18	355.6	6	52	-2						
TAKADA	37.30	17.6	6	57	2						
UTUNOMIYA	37.32	19.9	6	54	-1	12	19	-9	7	48	
MITO	37.37	20.7	6	54	-2	12	24	-4	16	49	SCS
SHIRAKAWA	37.95	19.9	7	2	2	12	34	-3			
ONAHAMA	38.03	20.8	6	58	-3	12	37	-1	16	51	SCS
AIKAWA	38.15	17.0	7	4	2	12	39	-1	16	52	SCS
CHITTAGONG	38.27	305.0	7	4	1	13	2	20	9	22	PPP
TOCKLAI	38.28	313.3	7	6A	3				8	49	
NIIGATA	38.30	18.0	7	6	3	12	17	-25			
HUKUSIMA	38.60	19.8	7	6A	0	12	47	0	16	58	SCS
YAMAGATA	39.02	19.3	7	8	-1	12	55	2			
PEKING	39.02	349.2	7	7A	-2				8	45	PP
SENDAI	39.22	19.9	7	12A	1	12	57	1	7	46	
SAKATA	39.44	18.3	7	15	2	13	1	2			
LANCHOW	39.48	332.5	7	13A	0				8	48	PP
ISINOMAKI	39.51	20.3	7	14K	1	13	4	4	8	33	PP
BRISBANE	39.57	139.1	7	13K	-1				9	48	*SP
SHILLONG	39.81	309.5	7	17A	1	12	59	-6	14	14	
MIZUSAWA	40.07	19.6	7	19	1	13	11	2			
AKITA	40.28	18.1	7	20A	0	13	9	-3	8	26	PP
MORIOKA	40.60	19.2	7	23A	1	13	18	1	17	7	SCS
MIYAKO	40.82	20.1	7	24A	0	13	19	-1	8	31	PP
HATINOHE	41.47	19.1	7	29A	0	13	31	2			
AOMORI	41.49	18.1	7	30A	0	13	32	2			
VLADIVOSTOK	41.72	7.6	7	31	0	13	35	2		9	47 PPP
CHANGCHUN	41.97	0.3	7	33A	0	13	35	-2		9	11 PP
HAKODATE	42.35	17.5	7	37K	0	13	44	2		17	17 SCS
MORI	42.60	17.1	7	39	0	13	52	6		9	10 PP
LHASA	42.63	314.0	7	40A	1	13	47	1		10	7 PPP
MURORAN	42.93	17.4	7	31	-10	13	50	-1			
RIVERVIEW	43.03	147.5	7	43K	1					17	3 SS
SUTTSU	43.14	16.4	7	44	1	13	57	3		17	22 SCS
TOMAKOMAI	43.29	17.9	7	47	3	14	1	5			
URAKAWA	43.33	19.3	7	47	3	13	56	-1			
MELBOURNE	43.42	156.9	7	46K	1	14	0	2	8 37	9	27 PP
SAPPORO	43.72	17.3	7	47A	-1	14	4	2	8 34	17	21 SS
BOKARO	43.89	303.3	7	50	1	15	3	58		9	46 PP
VIZIANAGRAM	43.94	294.6	7	52	3	14	32	27			
CHATRA	44.10	308.0	7	51	0	15	28	80			
OBIHIRO	44.16	19.2	7	52	1	14	13	5		8	45 PP
KUSIRO	44.62	20.3	7	55	0	14	16	1		9	14 PP
ASAHIGAWA	44.67	17.9	7	56	1	14	20	4			
SUIHWA	44.80	1.9	7	55	-1						
COLOMBO	45.32	278.0	7	59	-1	14	29	4			
NEMURO	45.34	21.1	8	0	0	14	23	-2		8	51 PP
ARASHIRI	45.50	19.5	8	3	1	14	29	1			
MADRAS	45.80	286.5	8	4A	0	14	24	-8		9	55 PP
WAKKANAI	45.96	16.3	8	17	12					12	39
NOUMEA	46.90	123.0	8	13K	0	14	39	-8		13	17
Y.-SAKHLINSK	47.66	16.4	8	17	-1	15	0	2	8 58	10	51
KODAIKANAL	48.01	282.2	8	21A	0				9 11	11	0
HYDERABAD	48.36	291.9	8	23A	-1	15	50	42		9	2 PCP
ULAN-BATOR	48.67	343.8	8	25	-1						
DEHRA DUN	52.83	307.5	8	58	0	16	10	1		10	34 PP
IRKUTSK	53.31	344.3	9	1	0	16	17	1		10	3 PCP
BOMBAY	53.90	292.2	9	5	0	17	13	49	9 48	11	51 PP
SUVA	56.10	113.1	9	21K	0	17	1	8	9 55	11	43 PP

LAHORE	56.25	307.4	9	19	-3	16	56	1	10	1		
PETROPAVLOVK	58.35	23.1	9	36	-1	17	20	-2	10	23	11	45 PP
ONERAHI	59.15	134.1	9	43	1	17	40	7			10	33 *SP
WARSAK DAM	59.32	309.1	9	43	-1							
KAIMATA	60.64	142.1	9	55	2	17	55	3				
KARACHI	60.66	298.7	9	51	-2	18	4	12	10	47	10	33 PCP
CORB RIVER	60.68	140.1	9	53	0	17	59	7			19	25 SS
FRUNSE	60.82	319.5	9	53	-1	17	53	-1	10	34	19	19 SCS
KARAPIRO	60.98	135.7	9	55K	0						19	28
MAGADAN	61.09	14.7	9	55	-1	17	59	2	10	33		
ROXBURGH	61.18	145.9	9	55K	-1	17	58	0			25	5 SSS
SEMIPALATNSK	61.55	329.2	9	59	0	18	7	4			14	48
TONGARIRO	61.59	137.0	9	59K	0						19	39
QUETTA	61.83	303.5	9	57	-4	18	8	1	10	43	10	39 PCP
WELLINGTON	62.11	139.4	10	1K	-1	18	9	-1			12	21 PP
TUAI	62.51	136.0	10	5	0	18	15	0				
STALINABAD	63.05	313.0				18	26	4				
AFIAMALU	64.48	106.2	9	50K	-28	18	25	-14			24	30 SS
WILKES	68.53	186.3	10	41	-2	19	23	-5				
DUMONT	69.03	173.7	10	38	-8	19	25	-9				
KERGUELEN I.	69.31	214.9	10	51	3	19	42	5	11	39	11	12 PCP
TIKSI	69.89	1.3	10	50	-2						13	26 PP
OASIS-BUNG.	69.90	190.3	10	52	0	19	48	4			11	49
ASHKABAD	70.70	309.7	10	56	-1						13	43 PP
MIRNY	71.79	192.9	11	3	0	20	7	1	11	43	13	39 PP
HONOLULU	77.16	68.7	11	35K	1	21	23	18	12	34	22	56 *SS
KIPAPA	77.24	68.5	11	35	1						14	37 PP
TANANARIVE	78.72	250.5	11	44K	2	21	23	1	12	28	12	2 PCP
CAPE HALLETT	79.19	167.2	11	45K	0						12	29 PP
GORIS	80.22	309.7	11	50	0	21	37	0	12	38	23	6 *SS
TIFLIS	81.60	311.8	11	57	0				12	39		
SCOTT BASE	82.55	171.8	12	3A	1	22	5	4			18	52 PPP
MOSCOW	87.16	325.5	12	24	-1	22	44	-2	13	10	22	30 SKS
COLLEGE	87.28	25.3	12	24	-2	22	31	-16			16	39 *PPP
KSARA	88.38	303.6	12	33	2	23	0	3			24	36 PS
JERUSALEM	88.97	301.6	12	12	-22						18	44 PKS
APATITY	89.08	337.4	12	32	-2	23	1	-3	13	14	16	34 PP
SIMFEROPOL	89.48	314.8	12	35	-1	23	10	3	13	20	16	14 PP
PULKOVO	90.95	329.7	12	42	-1	22	42	-38	13	25	16	22 PP
SOUTH POLE	91.66	180.0	12	42K	-4	23	3	-24			38	10 PKPPKP
SODANKYLA	91.71	337.5	12	44	-2							
HELWAN	92.39	299.8	12	50	0						24	57 PS
LCO. MARQUES	92.92	244.2	12	54	2	23	47	9	13	39	30	47 PSS
HELSINKI	93.57	330.4	12	54	-1							
SITKA	93.85	32.7	12	59A	3				14	7	17	11 PP
IASI	93.86	317.3	12	56	0	23	10	-36	13	41		
KIRUNA	93.95	338.4	12	55A	-2	23	10	-36			16	48 PP
FOCSANI	94.29	315.9	13	4	6	23	16	-33				
BACAU	94.39	316.8	13	1	2	23	36	-14				
PIETERMZBURG	94.85	240.6	13	9	8							
NORD	94.97	354.8	12	59A	-2	23	55	0	13	44	25	28 *SS
BUCHAREST	95.22	314.7	13	2A	-1				13	46	14	9 *SP
ASTRIDA	95.37	267.6	13	4	1	24	46	47				
RUMANGABO	95.74	268.8	13	7	2	24	52	50				
LWOW	95.83	320.3	13	6	1	24	6	4	13	50	18	59 PPP
CAMPULUNG	95.86	315.6	13	8	3	23	27	-36			17	45
BYRD STATION	95.94	170.9	13	7	1	23	32	-31	13	58	24	21 SP
UPPSALA	97.23	331.0	13	9A	-3	23	27	-47			17	10 PP
WARSAW	97.24	323.0	13	10A	-2	23	32	-42	13	53	25	42 SP
SOFIA	97.46	313.3	13	14	1	23	34	-42			17	20 PP
ATHENS	97.89	308.5				24	26	6	14	24	23	32 SKS
GRAHAMSTOWN	97.99	236.8	13	17	2							
SKALNATE PL.	98.37	320.1	13	19	2	24	19	-5	14	25	23	34 SKS
KRAKOW	98.38	321.0	13	16	-1	23	35	-49	14	0	16	29
SKALSTUGAN	98.45	335.4	13	16A	-1						17	20 PP
SKOPJE	99.00	312.8	13	36K	16						19	14 PPP
SZEGED	99.06	317.2	13	40	20	23	42	-48			15	4
BELGRADE	99.13	315.8	13	19K	-1						23	42 SKKS
RACIBORZ	99.46	321.3	13	22	0	23	44	-49			17	30 PP
BUDAPEST	99.51	318.6	13	34	12	25	42	69			14	59 PP
KALOCSA	99.78	317.7	13	27	4	23	59	-37				
HURBANOVO	99.99	319.1	13	15	-9	23	45	-52			26	39 PS
RESOLUTE	100.12	10.0	13	24	-1	23	44	-54			17	34 PP
BRATISLAVA	100.63	319.6	13	21A	-6	24	54	11			17	39 PP
GOTEBORG	100.70	329.8	13	27	0						17	37 PP
VIENNA-H.	101.08	319.8	13	29A	0	24	56	9			17	49 PP
COPENHAGEN	101.16	327.8	13	30	1	24	56	9			23	53 SKS
THULE	101.63	3.2	13	25K	-7	23	49	-62	14	34		
PRUHONICE	101.75	321.9	13	32	0	24	58	6	14	17	17	45 PP

PRAGUE	101.80	322.0	13	33A	1	24	54	2	14	18	17	48 PP
POTSDAM	101.90	324.5	13	33	0	23	53	-60	14	16	17	50 PP
ZAGREB	101.97	317.5	13	33A	0	23	54	-60			17	55 PP
COLLMBERG	102.29	323.4	13	34	0						17	49 PP
TARANTO	102.37	312.0				24	2	-55	15	2		
HORSESHOE B.	102.67	38.5	13	37	1						17	59
BERGEN	102.76	333.8	13	35A	-2	25	14	13			33	39 PKKS
HALLE	102.85	323.9	13	36	-1	25	3	2	14	19	17	57 PP
VICTORIA	102.85	39.4	13	36A	-1							
CHEB	103.05	322.4	13	34	-4	25	6	3	14	18	17	59 PP
PLAUEN	103.06	322.8	13	36	-2	23	56	-67	14	20	17	52 PP
JENA	103.26	323.4	13	39	0	23	57	-68	14	22	17	55 PP
TRIESTE	103.52	317.8	13	38	-2	25	8	1	14	22	17	57 PP
SONNEBERG	103.67	322.9	13	40	0	23	59	-69	14	24	18	1 PP
SEATTLE	103.83	40.0	13	49	8	25	22	13			18	27 PKS
HERMANUS	103.97	235.1	14	57	75	25	21	10			18	9 PP
CORVALLIS	104.09	43.2	13	54	12						18	1 PP
REGGIO CALA.	104.12	309.9				24	5	-67			17	47
MESSINA	104.17	310.0	13	42	-1						17	59 PP
SCORESBY SD.	104.74	349.1	13	47	2						18	9 PP
WITTEVEEN	105.38	326.4	13	51	777						17	51 PP
STUTTGART	105.45	321.8	13	47	777	23	58	1	14	29	18	7 PP
ROME	105.48	314.3	13	48	777	24	7	10			18	7 PP
BOLOGNA	105.50	317.2				24	10	13			17	35
RAVENSBURG	105.54	320.8	13	51	777	24	11	14				
TUBINGEN	105.62	321.6	13	48	777	24	8	6	14	33	18	12 PP
UKIAH	105.65	48.6	18	37	777							
FLORENCE X.	105.78	316.5	13	48	777	24	14	2	14	57	18	12 PP
EBINGEN	105.81	321.3	13	49	777	24	8	-17			18	18 PP
SHASTA	105.84	46.9	13	52	777						26	59 PS
RENSBERG	105.84	324.5	13	51	777	24	12	10				
CHUR	105.92	319.9	13	45	777						18	3 PP
STRASBOURG	106.40	322.0	13	51	777	25	21	0	14	36	18	21 PP
DE BILT	106.51	326.1	13	54	777	24	18	17			18	9 PP
BANFF	106.66	34.9	14	0	777						18	7 PKP
BERKELEY	106.71	49.7	14	3	777	25	33	10			18	12 PP
PAVIA	106.73	318.4									18	19 PP
BASLE	106.92	321.1				24	17	14			18	21 PP
WINDHOEK	107.19	247.0	13	58	777							
LICK	107.33	50.1	13	59	777						18	11 PP
OROPA	107.37	319.1				24	20	0			16	16
NEUCHATEL	107.51	320.7	14	6	777						18	30 PP
UCCLE	107.53	325.1	13	57	777	24	18	-3				
DOURBES	107.69	324.4	14	7	777							
ABERDEEN	107.72	332.9	14	21	777	24	24	-14			18	30 PP
RENO	108.07	47.4	14	14	777							
MONACO	108.41	317.4	13	41	777						18	27 PP
HUNGRY HORSE	108.73	37.2	14	5	777						17	28 PKP
DURHAM	108.77	330.6	14	55	777	24	20	8			18	28 PP
CUGLIERI	108.82	313.6							14	59	25	34
FRESNO	108.90	50.2	14	13	777						18	47
EDINBURGH	108.91	332.1									24	24
PARIS	109.49	323.8	14	6	777	24	34	-3	18	57	18	11 PKP
KEW	109.82	327.2	14	8	777	25	50	-1			18	34 PP
REYKJAVIK	109.96	345.2	14	20	777						18	18 PKP
CLERMONT-FD.	110.44	320.7	14	29	777	24	39	10			18	53 PP
BUTTE	110.63	39.0							14	15	18	14 PP
EUREKA	110.89	46.4	18	12	2						14	14 P
PASADENA	110.95	52.4	14	18	777	26	14	103			19	15 PP
SASKATOON	111.06	31.2	18	52	42							
BOZEMAN	111.74	38.8	18	18	7						14	36 P
PATHFARNHAM	111.89	330.9									18	55 PP
BARCELONA	112.91	316.7									20	0
BOULDER CITY	112.96	49.6	18	20	6						14	31 P
SALT LAKE C.	113.32	43.8	18	22A	8						19	16
TORTOSA	114.28	316.7	19	18	62						29	41
ALICANTE	116.02	314.6	18	18	-2	24	48	-3			19	29 PP
TAMANRASSET	116.32	296.4	14	30	777				15	15	28	53 PS
RELIZANE	116.33	311.6	14	47	777						19	27 PP
LARAMIE	117.31	40.9	18	28	6							
RAPID CITY	117.37	37.3	18	24	2						14	59 P
TUCSON	117.38	52.2	18	27	5						19	44 PP
TOLEDO	117.80	317.5	14	46	777	24	56	-1	19	0	19	39 PP
ALMERIA	118.09	313.8	18	24	0	24	59	1			19	43 PP
BOULDER	119.12	42.1	18	24	0							
GRANADA	118.75	314.6	18	57	32	24	56	-5			20	11 PP
MALAGA	119.53	314.5	18	28	1				19	34	23	26 PP
SERRA PILAR	120.14	320.8	18	30K	2	25	15	10			20	33 PP

COIMBRA	120.53	319.8	18 33	5							
LISBON	121.80	318.7	18 30K	-1	25	7	-4	19	17	20 11	PP
CHIHUAHUA	122.53	54.3	19 34	62						26 24	SKKS
LUBBOCK	123.67	47.1	18 38	3							
DALLAS	127.69	45.2	18 48	6							
GUADALAJARA	127.72	62.2	18 51	9						20 43	PP
FLORISSANT	128.21	35.2	18 47	4						20 53	PP
ST. LOUIS 1	128.40	35.2	18 43	-1						20 48	PP
SEVEN FALLS	129.45	14.0	18 48	2	25	32	-1			21 4	PP
SHAWINIGAN	129.48	15.9	18 45	-1				19	32	30 50	PS
OTTAWA	129.64	18.9	18 47	1	26	13	39			22 22	PKS
BREBEUF	130.20	17.1	18 48K	1						21 53	*PPP
CLEVELAND	130.74	26.3	18 56	8						22 26	PKS
TACUBAYA	131.79	62.0	18 58	8						22 9	
PITTSBURGH	132.28	25.8	18 52	1						22 19	
PENNSYLVANIA	132.85	23.8								20 10	
HALIFAX	133.27	8.5	18 59K	6				19	41	21 25	PP
PALISADES	134.15	20.0	18 48	-6						38 47	SS
FORDHAM	134.30	20.1	19 0	5						21 12	
VERA CRUZ	134.56	60.8	18 51	-4						24 31	PPP
WASHINGTON	134.79	24.4	18 59	3							
COLUMBIA	136.87	32.3	18 57	-2							
MBOUR	139.13	294.3	19 10	6				19	56	22 28	PP
COMITAN	139.21	62.6								21 7	
SAN SALVADOR	142.74	64.7	19 12	2							
SANTIAGO MA.	143.52	64.6	19 13	1							
BERMUDA	144.90	14.4	19 15	1						22 32	PP
SANTA LUCIA	145.14	156.7	19 16	1				19	54		
LA PLATA	146.83	175.5	19 29	12	24	19-105				23 9	
TALA POZO	152.53	162.0								27 49	PKKP
BALBOA HTS.	153.31	66.3	19 30A	3							
GALERAZAMBA	156.31	58.1	19 35	4				20	5	43 23	SS
SAN JUAN	157.25	28.4	19 37	5						20 53	
HUANCAYO	157.33	118.0	19 39	7						23 43	PP
CHINCHINA	158.33	72.2	19 37	3				20	13	21 10	*PPKP2
BOGOTA	159.91	71.8	19 37	2						20 21	PKP2
FUQUENE	159.96	69.1	19 39	4							
LA PAZ	160.38	139.4	19 41K	5	26	29	9			24 3	PP
FORT FRANCE	162.59	20.4	19 41	3							
ST. VINCENT	163.98	22.8	19 33	-6							
BARBADOS	164.60	17.2	19 41	1							
GRENADA	164.80	26.1	19 53	13							

AUGUST 16 11.H 13.M 47.S EPICENTRE -24.56-175.58 DEPTH= 0.KM

A=-0.90789 B=-0.07022 C=-0.41328 D=-0.0771 E= 0.9970
G= 0.4120 H= 0.0319 K=-0.9106 HT= 3.5

SE= 2.05

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	8.47	317.6	2	6	1	3	45	3					
AFIAMALU	11.19	19.4	2	33	-9	11	17	388			4	35	PP
KARAPIRO	15.33	207.6	3	36	-1								
NOUMEA	16.65	274.1	3	57A	3	7	23	25					
WELLINGTON	18.52	203.4	4	18	0						7	22	
BRISBANE	28.32	257.3	6	3	8	10	54	14					
RIVERVIEW	30.37	244.6									7	46	
CHARTERS TS.	35.53	269.6	6	54	-4						12	36	
MELBOURNE	35.99	238.9	7	1	-1								
PORT MORESBY	38.55	286.5	7	24	0	13	37	18	7	40	8	59	PP
CAPE HALLETT	48.42	185.7	8	46K	3	15	57	14			11	1	PP
DUMONT	50.34	201.2	8	56	-2	16	10	1					
SCOTT BASE	54.01	184.6	9	26	0								
KOROR	58.07	296.5	9	50	-5								
BYRD STATION	60.29	170.4	11	9	59								
WILKES	61.30	206.4				18	36	1			20	3	
OASIS-BUNG.	65.27	206.4	10	40	-3								
SOUTH POLE	65.59	180.0	10	43	-2	19	33	4					
MIRNY	68.30	205.5	11	1	-1	19	57	-4					
MATUSIRO	74.78	323.0	11	40A	-1						26	16	SS
BERKELEY	79.75	40.2	12	10K	1	22	14	4					
LICK	79.77	40.9	12	9A	0								
PASADENA	79.87	45.2	12	10	1	22	13	2					
FRESNO	80.51	42.3	12	14	1								
Y.-SAKHLINSK	80.52	332.5	12	12	-1	22	23	5					

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

SHASTA	81.58	38.0	12	20K	2					
MINERAL	81.79	38.6	12	20K	0					
ZO-SE	82.00	309.3	12	20	-1	22	35	2		
RENO	82.29	40.2	12	23K	1					
HONG KONG	82.59	298.5	12	25	1	22	43	4		
VLADIVOSTOK	82.86	324.2	12	26	1	22	47	5		
BOULDER CITY	83.15	45.5	12	27	0					
CANTON	83.69	298.7	12	29	0	23	0	10	22	53 SKS
TUCSON	83.70	50.4	12	30	1					
CORVALLIS	83.74	34.7	12	31	1					
NANKING	84.21	309.0	12	32	0	22	58	3		
EUREKA	84.56	42.1	12	34	0					
CHANGCHUN	86.96	321.5	12	46A	0	23	30	8		
MAGADAN	88.25	343.6	12	52	0					
PEKING	90.33	314.5	13	1A	-1	23	55	2	23	32 SKS
BUTTE	90.48	38.4	13	3	1					
HUNGRY HORSE	91.06	35.9	13	3	-2					
BOZEMAN	91.15	39.3	13	6	1					
COLLEGE	91.70	11.5	13	6	-2					
KUNMING	93.18	296.0	13	15	0	24	25	7	23	53 SKS
HUANCAYO	94.17	105.2				24	39	12		
RAPID CITY	95.04	43.6	13	25	2					
LA PAZ	98.35	112.3	13	0	-38					
LHASA	104.48	296.2				25	30	-23	24	48 SKS
RESOLUTE	111.05	16.3				26	53	101	33	33
PALISADES	114.17	54.3				25	27	3	19	31 PP
NORD	122.26	3.6	18	20	-34					
APATITY	133.43	345.1							22	50 PP
KIRUNA	135.61	351.4							21	54 PP
MAKHACH-KALA	140.25	308.4	19	27	-1				22	25 PP
MOSCOW	140.52	330.8	19	28	-1				23	6 PKS
TIFLIS	142.50	307.2	19	25	-7				22	39 PP
ASTRIDA	143.49	225.9	19	33	-1					
UPPSALA	143.54	348.8	19	31	-3					
LWIRO	144.36	225.1	19	36	1					
SOTCHI	145.49	312.2	19	36	-1					
GOTEBORG	146.44	352.7	19	41	2					
COPENHAGEN	148.35	351.3	19	47	5				23	38
SIMFEROPOL	148.50	317.7	19	46	4					
DURHAM	149.50	6.9	19	49A	5					
LWOW	150.51	333.8	19	53	8				21	10
POTSDAM	151.45	348.9	19	55	8					
KRAKOW	151.84	338.6	20	21	34				21	16
JERUSALEM	151.98	291.9	19	33	-15					
SKALNATE PL.	152.47	337.2	19	44	-4					
HALLE	152.48	349.8	19	49	1					
DE BILT	152.49	359.0	19	55	7					
MUNSTER	152.52	355.7	19	50	2					
KEW	152.88	6.5	20	10	21					
JENA	153.10	350.0	19	52	3				21	53
PRAGUE	153.37	345.5	20	16	26					
PLAUEN	153.42	348.9	19	48	-2					
PRUHONICE	153.42	345.3	19	53	3				23	43 PP
BENSBERG	153.55	356.1	20	13	23					
UCCLE	153.80	0.1	19	51	1					
BRATISLAVA	154.39	340.1	19	52	1					
DOURBES	154.50	359.7	20	0	9					
HELWAN	155.52	288.4	19	55	2					
STUTTGART	155.54	352.4	19	53	0				20	5 PKP2
PARIS	155.74	3.1	19	21	-32				20	23 PKP2
STRASBOURG	155.88	354.6	20	24K	31				24	23 PP
TRIESTE	157.65	342.6	19	56	1				24	6 PP
FLORENCE X.	160.02	345.4	19	59	1				24	30
ROME	161.45	340.8	20	2	2				24	55
TOLEDO	163.14	23.0	20	3	2				25	7 PP
ALICANTE	165.63	15.7	20	34	30				24	57
GRANADA	165.66	26.8	20	18K	14	27	15	11	25	20 PP
MALAGA	165.71	29.9	20	12A	8				24	56 PP
ALMERIA	166.39	24.2	20	3	-1					
ALGIERS UNI.	167.77	5.2	20	6	1				25	2 PP
RELIZANE	168.35	15.8	19	54	-12				24	8 PP
TAMANRASSET	177.97	209.9	20	12	3				25	43 PP

AUGUST 16 13.H 17.M 54.S EPICENTRE 51.43-176.11 DEPTH= 0.KM

A=-0.62457 B=-0.04247 C= 0.77982 D=-0.0678 E= 0.9977
G=-0.7780 H=-0.0529 K=-0.6260 HT= -5.9

SE= 2.21

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KLYUCHI	14.46	298.8	3	28	2						6	43	
PETROPAVLOVK	15.52	286.2	3	39	-1								
COLLEGE	19.86	36.6	4	31	-2	8	14	3					
MAGADAN	20.25	306.5	4	38	0	8	33	14					
SITKA	24.21	60.5	5	19	2								
Y.-SAKHLINSK	27.01	276.8	5	44	1	10	24	5					
TIKSI	31.42	330.1	6	21	-2	11	27	-2			16	56	SCS
ALBERNI	32.26	73.3	6	31	1								
KIPAPA	33.11	148.0	6	34	-4								
HORSESHOE B.	33.13	72.3	6	38	0								
HONOLULU	33.20	148.2	6	38	0	11	56	-1					
VICTORIA	33.41	73.8	6	40A	0								
SEATTLE	34.46	74.6	6	51	2								
CORVALLIS	35.32	79.9	6	58K	1								
MATUSIRO	35.45	263.3	6	58A	0	12	34	3			9	28	PCP
VLADIVOSTOK	35.57	277.4	6	58	-1	12	36	3			8	15	PP
HAWAII V.OR.	35.90	145.1	7	1	-1	12	40	2					
BANFF	36.92	65.9	7	8	-2								
SHASTA	37.98	84.8	7	20K	1								
APUYAMA	38.18	263.5	7	21	0	13	15	2					
UKIAH	38.38	87.5	7	28	6	13	8	-8			14	19	
MINERAL	38.68	84.7	7	24A	-1								
RESOLUTE	39.00	24.7	7	28A	0	13	16	-10			9	5	PP
HUNGRY HORSE	39.06	69.3	7	28	0	13	27	0			9	42	PCP
CHANGCHUN	39.26	282.6	7	30A	0	13	35	5			9	6	PP
BERKELEY	39.74	88.3	7	34	0	13	40	3					
RENO	40.27	84.5	7	43	5								
LICK	40.45	88.5	7	40A	0								
BUTTE	41.09	71.7	7	44	-1						9	18	PCP
SASKATOON	41.47	60.7	7	53	5	14	4	1					
FRESNO	41.96	87.8	7	52	0								
BOZEMAN	42.18	71.3	7	52	-2								
EUREKA	42.69	81.9	7	58	0								
THULE	44.56	18.7	8	7	-6	14	43	-5			9	50	PCP
PASADENA	44.66	89.5	8	14K	0	14	27	-22	8	24			
BOULDER CITY	45.56	85.0	8	21	0								
KHEYS	45.94	349.6	8	14	-10	14	50	-18			10	3	PP
NORD	46.75	4.1	8	30	-1	15	36	17					
IRKUTSK	46.78	304.0	8	30A	-1						18	30	SS
PEKING	47.01	283.8	8	33A	0	15	27	4			10	29	PP
RAPID CITY	47.69	68.7	8	37	-1	15	50	18					
ULAN-BATOR	47.79	297.8	8	38	-1								
BOULDER	48.88	74.3	8	48	1								
GUAM	49.24	234.2	8	31	-19								
ZO-SE	49.68	271.1	8	54A	1	16	4	4			10	47	PP
PAOTOW	50.37	288.2	9	2	3								
TUCSON	50.51	85.8	8	58	-2	16	16	4					
NANKING	50.53	273.8	8	59A	-1	16	13	1			10	58	PP
ISFJORD	50.64	357.4	9	0	-1								
TRUK	51.18	222.5	9	2	-3	15	15	-66					
SIAN	55.16	282.9	9	34	0	17	20	5					
LUBBOCK	55.18	78.2	9	29	-5	17	18	3			19	23	
SCORESBY SD.	56.97	10.1	9	46	-1								
LANCHOW	57.00	287.9	9	47A	-1	17	34	-6					
DALLAS	58.76	75.3	9	58	-2								
APATITY	59.28	347.3	10	2A	-1	18	10	1			12	14	PP
SODANKYLA	60.29	350.1	10	10	0								
CANTON	60.31	270.4	10	9	-2	18	24	1					
HONG KONG	60.32	269.1	9	8K	-63	18	24	1			10	12	PCP
KIRUNA	60.42	352.9	10	10	-1						10	54	PCP
CHENGTU	60.63	283.2	10	11A	-2	18	28	1			18	46	PS
CLEVELAND	61.51	58.5	10	18	-1	18	40	2					
OTTAWA	61.72	51.9	10	18A	-2	18	40	-1					
MANILA	61.90	257.7	10	16	-5								
SHAWINIGAN	62.31	49.3	10	22A	-2								
SVERDLOVSK	62.44	328.8	10	19	-6								
BREBEUF	62.67	50.6	10	23	-3	18	52	-1					
SEVEN FALLS	62.81	47.8	10	26	-1	18	52	-2			11	7	PCP
SKALSTUGAN	65.14	355.9	10	42	-1						11	15	PCP
KUNMING	65.47	279.8	10	43A	-2	19	27	0			13	11	PP
WASHINGTON	65.74	57.7	10	48	2	19	33	2					
PALISADES	65.82	54.2	10	45A	-2	19	32	0			23	28	SS

HARVARD	65.88	51.6	10	47	0					
WESTON	66.09	51.6	10	46A	-3					
PHU-LIEN	66.14	273.8	10	50	1	19	56	20		
TACUBAYA	66.96	87.5	11	0	6				13	24 PP
PULKOVO	67.11	345.8	10	53	-2	19	44	-3	11	24 PCP
COLUMBIA	67.17	63.9	10	55	-1					
HELSINKI	67.46	348.8	10	57	0					
FRUNSE	67.88	311.5	11	1A	1	19	57	1	20	31 PS
HALIFAX	67.99	45.4	10	59	-2	19	54	-4	25	0 SS
PORT MORESBY	68.38	219.4	11	3	0	20	2	0	13	33 PP
UPPSALA	68.52	352.6	11	1	-3	20	4	0	39	10 PKPPKP
TOCKLAI	69.04	286.8	11	27	20					
LHASA	69.11	291.5	11	8	0	20	16	5	13	42 PP
SUVA	69.45	185.5	11	28K	18	20	57	42	15	0 PP
MOSCOW	69.60	340.4	11	11	0	20	17	0	21	6 SCS
GOTEBORG	71.03	355.4	11	19	0					
TASHKENT	71.54	313.8	11	22	0				21	23 SCS
ABERDEEN	71.65	3.4				20	43	2	25	4 SS
SHILLONG	71.65	288.0	11	23	0	20	41	0		
COPENHAGEN	73.02	354.9	11	33	2	21	2	6	21	16 PS
CHATRA	73.46	292.2	11	36	2					
STALINABAD	74.00	312.4	11	38	1	21	6	-1		
DURHAM	74.07	3.3	11	39	2	21	25	17	22	15 SKS
CHITTAGONG	74.10	285.9	11	40	3	21	23	15	14	28 PP
RATHFARNHAM	75.29	6.3	11	46K	2				14	22 PP
WARSAW	75.71	349.2	11	44A	-3	21	23	-3	22	17 PPS
DEHRA DUN	75.88	300.9	11	47	-1	21	13	-15		
WITTEVEEN	76.10	358.3	11	53	4					
POTSDAM	76.27	354.2	11	52	2					
WARSAK DAM	76.33	307.7	11	48	-2					
DE BILT	76.84	359.2	11	53	0					
LAHORE	76.87	304.3	11	51	-2					
MUNSTER	76.93	357.6	11	52	-2				12	32
BERMUDA	77.17	53.9	11	52	-3	21	42	0	26	42 SS
HALLE	77.22	354.8	11	52	-3	21	45	2	16	51
KEW	77.41	2.7	11	56	0					
LWOW	77.67	346.8	11	59	1				22	24 PS
JENA	77.81	355.0	11	58	0				14	28
BENSBERG	77.95	357.9	12	0	1				12	56
KRAKOW	77.98	349.5	12	28	29	21	49	-2	22	5 SKS
UCCLE	78.14	359.7	12	1	1					
PLAUEN	78.20	354.6	12	0	-1				12	53
SONNEBERG	78.38	355.2	12	3	1					
AGRA	78.40	298.9	12	0A	-2				15	0
CHARTERS TS.	78.41	215.9	12	0	-2					
PRAGUE	78.48	353.1	12	8	6	22	13	17	27	23 SS
PRUHONICE	78.56	353.0	12	4	1	21	58	1		
SKALNATE PL.	78.80	349.1	12	1	-3				22	16
DOURBES	78.84	359.5	12	3	-1	22	2	2		
ASHKABAD	79.05	319.1	12	6	1	22	6	3		
IASI	79.66	343.8	12	12	3					
STUTTGART	80.07	356.4	12	12	1	22	27	14	12	24 PCP
PARIS	80.13	0.9	12	11A	0	22	16	2	23	10 PPS
BRATISLAVA	80.13	351.1	12	12	1				12	25 PCP
STRASBOURG	80.31	357.4	12	14K	2	22	18	2	15	0 PP
TUBINGEN	80.32	356.5	12	14	2				12	26 PCP
SIMFEROPOL	80.50	338.7	12	13A	0	22	22	4		
TIFLIS	80.63	330.2	12	14	0	22	24	5	22	37 SCS
EBINGEN	80.67	356.6	12	15	1					
RAVENSBURG	81.05	356.1	12	19	3					
QUETTA	81.69	308.7	12	20	1				14	32
NEUCHATEL	81.91	357.9	12	23	3	22	33	1		
CAMPULUNG	81.96	345.1	12	26	5					
BUCHAREST	82.61	344.1	12	16	-8	22	44	5		
TRIESTE	82.93	353.0	12	24	-2	22	47	4		
BELGRADE	83.06	348.2	12	28A	2	23	1	17	17	53 PPP
BRISBANE	83.14	207.3	11	39	-48				13	42
CLERMONT-FD.	83.18	0.5	12	30	3	22	50	5		
MEDAN	84.23	268.5	12	36K	4				14	38 PP
SOFIA	84.74	345.7	12	38	3	23	13	12		
FLORENCE X.	84.95	354.7	12	25	-11	22	54	-9	12	54
MONACO	85.17	357.4	12	38	1					
HYDERABAD	85.81	292.7	12	39	-1	23	13	2	24	11 PS
ROME	86.75	353.6	12	44A	-1	22	34	-46	28	58 SS
BALBOA HTS.	87.13	79.3	12	48A	1	23	22	-2		
SERRA PILAR	87.18	9.4	12	47K	0					
SAN JUAN	87.64	63.3	12	49	0					
BOMBAY	87.82	297.9	12	52	2	23	44	14	23	26 SKKS

TOLEDO	88.80	6.1	12	55	0	23	30	-9		
KARAPIRO	89.28	186.6	12	55	-2				14	16
RIVERVIEW	89.65	206.8	13	2	3	23	53	6		
ALICANTE	90.51	3.4	13	1	-2	23	53	-2	16	36 PP
KSARA	90.57	333.8	13	6	3					
GRANADA	91.52	6.0	13	10K	3	23	40	-24	30	8 SS
MALAGA	91.92	6.7	13	7K	-2					
ALGIERS UNI.	92.17	0.7	13	9	-1	24	15	5	16	56 PP
JERUSALEM	92.68	333.7	12	49	-24				16	40 PP
RELIZANE	93.14	2.7	13	32	17	24	28	10	17	1 PP
ST. VINCENT	94.57	62.5	13	24	3					
MELBOURNE	95.20	210.0	12	18	-66					
HELWAN	95.52	336.3	13	26	0	24	0	-38		
ROXBURGH	97.42	190.3				24	12	3		
TAMANRASSET	106.10	358.4	14	12	777				18	24 PP
CAPE HALLETT	123.80	185.0	18	58	0	26	4	6	20	2 PP
SCOTT BASE	129.45	184.6	19	9	1				22	30 PKS
WILKES	129.80	210.4							31	42 SP
BYRD STATION	135.05	168.1	19	9	-10				22	50
MIRNY	135.93	215.1							22	54 PKS
SOUTH POLE	141.24	180.0	19	24	-6				23	3
WINDHOEK	149.42	335.5	19	49	5					
GRAHAMSTOWN	155.50	308.9	20	21	28					

AUGUST 16 19.H 13.M 44.S EPICENTRE 34.38 47.83 DEPTH= 0.KM

A= 0.55529 B= 0.61298 C= 0.56206 D= 0.7411 E=-0.6714
G= 0.3773 H= 0.4166 K=-0.8271 HT= 0.3

SE= 2.45

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
TIFLIS	7.71	342.9	2	0	4						4	9	
ASHKABAD	9.22	64.2	2	16	-1						3	14	
KSARA	9.92	270.1	2	27	0	4	21	1					
JERUSALEM	10.89	259.7	2	19	-21	4	11	-33					
HELWAN	14.68	256.7	3	32	1	6	18	3					
SIMFEROPOL	14.91	319.2	3	35A	1	6	27	6			4	22	
QUETTA	16.70	99.2	3	56K	-1	6	55	-8			7	14	SS
STALINABAD	17.35	70.1	4	5	0						7	34	SS
TASHKENT	18.28	61.4	4	15	-2						4	44	PPP
KARACHI	18.66	112.0	4	25K	4	7	53	6					
FOCSANI	19.36	311.9	4	30	0								
BUCHAREST	19.50	307.4	4	32	1	8	11	5			8	48	SS
WARSAK DAM	19.62	84.4	4	29K	-4								
ATHENS	19.77	287.4	4	35A	1	8	20	8			5	1	PP
IASI	19.91	316.1	4	33	-3	8	20	5			5	21	
RACAU	19.97	313.8	4	37	0	8	27	11					
CAMPULUNG	20.54	308.8	4	44	1	8	34	6			5	14	PP
SOFIA	20.83	300.7	4	46	0	8	47	13			11	1	SSS
LAHORE	22.39	89.8	4	58K	-3								
MOSCOW	22.49	344.8	5	3	1	9	12	7					
FRUNSE	22.49	59.9	5	3K	1	9	14	9					
TIMISOARA	23.21	307.3	5	14	5	9	19	1			9	58	SS
LWOW	23.32	318.7	5	10	0	9	24	4			10	34	SSS
BELGRADE	23.43	304.6	5	13A	2	9	34	12			5	46	PP
SZEGED	24.09	307.8	5	21	3	9	47	14			8	50	PCP
SVERDLOVSK	24.09	17.4	5	17	-1						5	57	PP
KALOCSA	24.94	307.8	5	26	0	10	6	18			10	54	SS
SKALNATE PL.	25.15	314.4	5	32A	4	9	44	-7			5	53	PP
BUDAPEST	25.20	310.0	5	30	1	10	0	8			6	33	PPP
KRAKOW	25.72	316.0	5	34	1	10	9	8			7	22	
DEHRA DUN	25.80	90.6	5	34	0	9	59	-3			6	16	PP
HURBANOVO	25.89	310.3	5	40	5	10	10	6			6	36	PPP
REGGIO CALA.	26.15	287.6	5	38	1	10	25	17					
MESSINA	26.22	287.8	5	39K	1	10	18	9			6	20	PP
BRATISLAVA	26.69	310.4	5	43	1	9	58	-19			6	25	PP
ZAGREB	26.73	304.9	5	43A	0	10	27	9			11	13	SS
RACIBORZ	26.74	314.9	5	45	2	10	6	-12			6	59	
AGRA	26.87	97.3	5	41K	-3	10	17	-3			9	5	PCP
BOMBAY	27.04	118.4	5	43	-3	10	24	1			6	35	PP
VIENNA-H.	27.17	310.2	5	47	0	10	27	2			9	11	PCP
PULKOVO	27.88	341.0	5	53	0	10	36	0			6	40	PP
TRIESTE	28.22	303.8	5	54A	-2	10	36	-6			6	46	PP
SEMIPALATNSK	28.51	46.0	6	2	3	10	54	8					
ROME	28.65	295.7	5	59	-1	10	53	5			7	4	PPP

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

PRUHONICE	28.88	312.8	6	1	-1	11	13	21	7	2	PP
PRAGUE	28.98	312.9	6	3	0	11	13	19	7	6	PP
FLORENCE X.	29.70	299.4	6	8	-2	11	4	-1	7	10	PPP
BOLOGNA	29.73	300.9	6	8	-2				13	37	SS
HELSINKI	29.79	337.0	6	10	-1						
CHEB	30.24	312.1	6	13	-1	11	22	8	7	29	PP
COLLMBERG	30.26	314.6	6	13	-2	11	28	14	7	26	PP
PLAUEN	30.51	312.8	6	15	-2	11	24	6	7	28	
POTSDAM	30.61	316.7	6	8	-10	11	35	15	7	19	PP
HALLE	30.95	314.6	6	20	-1	11	32	7	7	17	PP
JENA	30.98	313.4	6	20	-1	11	24	-2	7	19	PP
SONNEBERG	31.05	312.2	6	21	-1	11	36	9			
CHUR	31.32	305.1	6	22	-2	11	29	-2			
PAVIA	31.33	301.8	6	24	0				16	10	
RAVENSBURG	31.43	306.9	6	24	-1	11	54	21	11	30	
CUGLIERI	31.58	292.2	6	26	0	11	6	-29			
STUTTGART	31.90	308.6	6	26	-3	11	55	15	7	28	PP
EBINGEN	31.93	307.4	6	26	-3	11	50	10			
TUBINGEN	31.94	308.1	6	27	-2	11	52	12	7	29	PP
HYDERABAD	32.13	113.9	6	32K	1	11	46	2	7	37	PP
UPPSALA	32.22	331.6	6	30A	-2	11	39	-6	7	30	PP
OROPA	32.22	302.5	6	26	-6	11	39	-6	13	41	
COPENHAGEN	32.31	322.2	6	33A	0	11	45	-1	13	44	SS
MONACO	32.46	298.9	6	33	-1	11	55	6	7	41	PP
BASLE	32.74	305.9	6	36	0	11	51	-2			
STRASBOURG	32.79	307.9	6	35A	-2	11	51	-3	7	27	PP
NEUCHATEL	33.09	304.9	6	38	-1	11	56	-2			
GOTEBORG	33.47	325.2	6	41	-2				7	45	PP
MUNSTER	33.66	313.9	6	43	-1						
BENSBERG	33.67	312.0	6	45	0				7	56	PP
APATITY	34.24	350.2	6	50A	1	12	19	3	8	5	PP
WITTEVEEN	34.45	315.1	6	52	1						
CHATRA	34.52	91.7	6	51	-1	12	24	3			
BOKARO	34.63	97.4	6	53	0	12	26	4	8	17	PP
DOURBES	35.10	309.9	6	55	-2	12	31	1			
DE BILT	35.15	313.5	6	58A	1	10	34	-116	8	22	PP
SODANKYLA	35.25	346.0	6	58	0						
UCCLE	35.39	311.1	6	59	0	12	37	3			
VIZIANAGRAM	35.60	107.9	6	59	-2						
CLERMONT-FD.	35.62	302.3	7	0	-1	12	42	4	8	28	PP
KODAIKANAL	36.22	124.5	7	12	6	12	56	9	15	1	SS
MADRAS	36.23	118.1	7	7	1	12	46	-1	8	33	PP
ALGIERS UNI.	36.25	287.0	7	5	-2	12	51	4	8	31	PP
PARIS	36.29	307.4	7	7K	0	12	46	-2	8	28	PP
BARCELONA	36.40	294.9	7	51	43						
SKALSTUGAN	36.51	334.1	7	8A	-1						
LHASA	36.74	85.2	7	10K	-1	12	54	-1	13	35	PCS
KIRUNA	36.99	343.1	7	12A	-1	12	54	-5	8	27	PP
TORTOSA	37.68	294.1	7	18	-1	13	14	5			
BERGEN	37.77	326.8	7	20K	1	13	7	-4	15	45	SS
KEW	38.40	311.4	7	25A	0	13	16	-4	8	53	PP
RELIZANE	38.43	286.0	7	50A	25	13	52	31	9	23	PP
TAMANRASSET	38.66	264.0	7	28A	1				8	59	PP
ALICANTE	38.75	290.3	7	21	-7	13	12	-14	8	50	PP
SHILLONG	38.90	90.9	7	28K	-1	13	25	-3	8	58	PP
RUMANGABO	39.54	209.9	7	36	2						
DURHAM	39.65	316.4	7	34K	-1	13	34	-5	9	5	PP
CHITTAGONG	40.23	95.5	7	40	0						
COLOMBO	40.26	125.4	7	36	-4	13	36	-12			
ABERDEEN	40.41	320.0	7	40K	-1	13	48	-3	9	8	PP
ASTRIDA	40.53	208.5	7	42	0	13	54	2			
ALMERIA	40.59	288.4	7	41K	-2	13	53	0	9	17	PP
LWIRO	40.59	210.0	7	45	2	13	51	-2			
TOCKLAI	40.84	87.6	7	42	-3						
TOLEDO	41.25	293.3	7	49A	1	14	4	1	9	27	PP
GRANADA	41.40	289.2	7	53A	4	14	16	11	9	36	PP
MALAGA	42.13	288.8	7	54A	-1	14	12	-4	9	34	PP
RATHFARNHAM	42.22	313.6	7	56	0	14	20	3	9	28	PP
IRKUTSK	43.61	48.0	8	8K	0				17	40	SS
SERRA PILAR	44.46	296.0	8	15K	1	14	52	2	10	1	PP
LANCHOW	45.23	71.1	8	19K	-2	15	2	1	13	40	PCS
LISBON	45.35	292.8	8	22A	0	14	58	-5	20	1	SSS
ULAN-BATOR	45.43	54.1	8	23	1	15	6	2			
ISFJORD	46.20	350.7	8	27	-1						
PORT BLAIR	46.61	107.9	8	29	-3	15	21	0	9	19	PP
CHENGTU	47.01	78.2	8	34	-1	15	24	-3			
KUNMING	48.05	85.8	8	40K	-3	15	37	-4	10	33	PP
PAOTOW	48.85	63.5	8	50	1						

SIAN	49.75	71.8	8	57	1					
REYKJAVIK	50.89	328.0	9	8K	3	16	26	5	12 53	PP
SCORESBY SD.	51.28	336.2	9	10	2				11 6	PP
TATUNG	51.38	63.3	9	9	1					
NORD	52.53	350.4	9	15	-2	16	43	0	12 15	PPP
TANANARIVE	53.00	180.3	9	21A	0	16	49	-1	11 21	PP
PHU-LIEN	53.18	88.6	9	21	-1	19	53	181		
PEKING	53.53	62.6	9	23	-1	17	2	5	11 29	PP
TIKSI	54.98	22.5	9	34	-1				19 17	SCS
MEDAN	56.22	111.4	9	42K	-2	17	38	5		
CANTON	57.62	82.7	9	53K	-1	17	53	2		
DAIREN	57.89	62.2	9	59	3					
NANKING	58.28	70.7	9	57K	-2	17	59	-1	12 5	PP
HONG KONG	58.71	83.1	9	59A	-3	18	6	0	22 0	SS
CHANGCHUN	58.83	55.7	10	1K	-1	18	9	2	12 12	PP
SUIHWA	59.04	52.1	10	16	12					
ZO-SE	60.52	70.8	10	13K	-1	18	25	-4	12 27	PP
MBOUR	61.31	268.2	10	21	1	18	31	-8	12 37	PP
LCO. MARQUES	61.73	195.6	10	24	2				24 22	
THULE	62.61	346.2	10	21A	-7	18	51	-5		
TAIPEI	63.44	76.8	10	34	0	19	11	5		
VLADIVOSTOK	63.55	54.4	10	31	-3	19	8	0		
WINDHOEK	63.72	211.8	10	35	-1					
HWALIEN	64.01	77.8	10	49	12					
TAWU	64.19	79.7	10	49	10	19	30	15		
HSINKONG	64.21	78.7	10	46	7	19	17	1		
HENGCHUN	64.23	80.1	10	40	1	19	22	6		
TOMIE	65.71	66.1	10	36	-12				27 46	
KIMBERLEY	66.46	202.0	10	56K	3					
NAGASAKI	66.49	65.5	10	48	-5					
HUKUOKA	66.52	64.5	10	52	-2	19	40	-4	27 41	
BAGUIO CITY	66.84	85.5	10	55	-1	19	47	-1		
MAGADAN	67.10	32.6	10	56	-1	19	54	3		
HAMADA	67.15	62.6	10	56	-2	19	52	0		
OOITA	67.57	64.3	10	58	-2	19	58	1		
HIROSIMA	67.65	62.9	10	55	-6	20	0	2		
MIYAZAKI	68.02	65.7	11	3	0	20	5	3		
MANILA	68.12	87.0	11	4	0	20	34	31		
MATUYAMA	68.14	63.3	11	3	-1					
DJAKARTA	68.69	113.8	10	58	-9					
SIMIDU	68.79	64.2				20	10	-1		
KOTI	68.84	63.2	11	7	-1	20	11	-1		
TOYOOKA	68.87	60.8	11	8	0	20	10	-2		
TAKAMATU	68.87	62.3				20	7	-5		
WAKKANAI	68.91	48.9				20	19	6		
SUTTSU	69.21	51.9							24 44	
TOKUSIMA	69.37	62.3	11	12	1					
SUMOTO	69.46	61.9	11	13	1	20	20	1		
KOBE	69.52	61.5				20	18	-2		
LEMBANG	69.71	113.8	11	7	-7	20	11	-11		
ABUYAMA	69.72	61.2	11	12K	-2	20	22	0		
MORI	69.76	52.4	11	15	1	20	18	-5		
BANDUNG	69.77	113.8	10	26	-48	19	50	-33		
OSAKA	69.79	61.4	11	12	-2	20	25	2	14 4	PP
SAPPORO	69.81	51.2	11	12	-2	20	22	-1		
TOYAMA	70.02	58.8	11	23	8	20	28	2		
HIKONE	70.02	60.5	11	17	2					
IBUKISAN	70.06	60.3	11	20	4					
GRAHAMSTOWN	70.24	198.8	11	19	2					
GIHU	70.33	60.2	11	18	1	20	26	-3		
KAMEYAMA	70.38	60.8	11	18	0	20	30	0		
AOMORI	70.51	53.5	11	20	2					
SIOMISAKI	70.54	62.4	11	8	-11	20	25	-7		
AKITA	70.58	54.8	11	19	0	20	33	1		
NAGOYA	70.58	60.3	11	18	-1	20	32	0		
NIIGATA	70.73	56.9	11	23	3				19 36	
NAGANO	70.74	58.4	11	20	0	20	33	-1		
MATUMOTO	70.78	58.9	11	24	4					
SAKATA	70.79	55.7	11	25	5					
MATUSIRO	70.81	58.5	11	18K	-2	20	32	-3	14 5	PP
OBIHIRO	71.07	50.6	11	26	4					
HATINOHE	71.15	53.5				20	36	-3		
OIWAKE	71.15	58.6	11	34	12					
URAKAWA	71.17	51.5	11	24	2	20	37	-2		
MORIOKA	71.31	54.4				19	27	-74		
MAEBASI	71.48	58.3	11	26	2	20	45	2		
KOHU	71.50	59.2	11	24	0	20	43	0		
MIZUSAWA	71.57	54.9	11	29	4	20	50	6		

SHIZUOKA	71.71	59.9	11	23	-3	20	48	3			
HUNATU	71.71	59.2	11	27	1	20	46	1			
OMAESAKI	71.76	60.3	11	29	3	20	46	0			
HUKUSIMA	71.79	56.5	11	29	3	20	46	0			
KUSIRO	71.80	50.1	11	21	-5	20	44	-2			
KUMAGAYA	71.82	58.4	11	33	7	20	48	1			
SENDAI	71.83	55.8	11	36	10						
TOKYO C.M.O.	72.32	58.7	11	32	3	20	50	-2			
KAKIOKA	72.35	58.0	11	33	4						
NEMURO	72.37	49.3				20	46	-7			
YOKOHAMA	72.37	58.9	11	32	2	20	57	4			
MITO	72.47	57.7	11	31	1	20	55	1			
ONAHAMA	72.49	57.0	11	32	2	20	58	4	12	30	
OSIMA	72.50	59.6	11	32	2	20	57	3			
MERA	72.75	59.3							19	22	
HERMANUS	73.50	204.4				21	11	5			
PETROPAVLOVK	74.25	35.8	11	38	-3						
HALIFAX	79.77	317.5	12	11A	0	22	16	2	15	6	PP
COLLEGE	80.32	6.7	12	13	-1	22	18	-2	15	22	PP
SEVEN FALLS	81.97	322.8	12	22	-1	22	39	2	23	28	PS
KOROR	83.16	85.8	12	31	2	22	46	-3			
SHAWINIGAN	83.33	323.3	12	30	0				15	44	PP
BREBEUF	84.49	322.9	12	37K	1	23	2	0			
WESTON	85.47	319.5	12	41A	0	22	14	-58			
HARVARD	85.51	319.7	12	37	-4						
OTTAWA	85.59	323.9	12	42	1	23	3	-10	16	2	PP
PALISADES	87.81	319.9	12	53A	1	23	16	-18	18	16	PPP
FORDHAM	87.91	319.8	12	54	1	23	18	-17			
BERMUDA	88.19	308.5	12	54	0	23	23	-15	16	22	PP
SITKA	88.89	1.7	13	0	3	23	55	11			
SASKATOON	91.00	344.6							24	9	
WASHINGTON	91.02	320.2	12	54	-13	23	39	-24	16	35	PP
CLEVELAND	91.33	324.5	13	9K	0	23	37	-29			
PITTSBURGH	91.35	322.9							23	38	
BANFF	93.57	349.6	13	18	-1						
HUNGRY HORSE	96.06	347.9	13	30	0	24	43	-4	17	23	PP
HORSESHOE B.	96.24	354.2	13	34	3						
COLUMBIA	96.79	319.3							17	38	PP
VICTORIA	97.10	354.1	13	37	2						
TRUK	97.25	75.9	12	38	-58				16	30	PP
FLORISSANT	97.53	328.3	13	39	2	25	5	5	17	39	PP
RAPID CITY	97.58	339.4	13	38	1				17	38	PP
BUTTE	98.04	346.3	13	41	2				17	26	PP
BOZEMAN	98.06	345.2	13	42	3						
PORT MORESBY	102.91	92.6	14	3	2	24	42	-63	18	16	PP
SHASTA	104.75	352.3							18	32	PP
EUREKA	105.00	347.1	14	11	1						
MINERAL	105.00	351.7	16	55	777				18	32	PP
MIRNY	106.36	162.8							18	42	PP
LUBBOCK	106.65	333.9	17	38	777				25	0	PKS
BERKELEY	107.53	351.8				25	4	69	18	53	PP
CHARTERS TS.	107.77	102.4	14	24	777				19	2	
LICK	107.98	351.2							18	25	PP
OASIS-BUNG.	108.11	160.1	18	38	777						
BOULDER CITY	108.16	345.3							17	8	PP
FRESNO	108.28	349.6	17	51	777				18	57	PP
PASADENA	110.58	347.6				25	8	-6	19	12	PP
TUCSON	110.75	340.7	18	22	-13				19	12	PP
WILKES	111.09	157.3				25	17	0	19	17	PP
FUQUENE	112.19	293.6							29	17	PS
BOGOTA	113.00	293.2				25	25	1	29	11	PS
CHINCHINA	113.94	294.6							19	34	PP
BRISBANE	116.79	106.2	19	7	21				29	41	PS
TACUBAYA	117.99	324.4							19	58	PP
HONOLULU	119.38	27.9	15	32	777	27	52	124	37	2	SS
LA PAZ	120.39	270.2	18	57K	4	25	48	-3	20	20	PP
DUMONT	121.88	152.1	18	49	-7	25	52	-4			
TALA POZO	122.43	256.5	18	26	-31	26	36	38	23	56	PPP
HUANCAYO	123.99	279.0	19	5	5				20	36	PP
SOUTH POLE	124.20	180.0	18	59	-2	25	54	-9	20	50	PP
SCOTT BASE	129.35	166.1	19	11	0				22	30	PKS
CAPE HALLETT	132.14	159.6	19	17	1				21	36	PP
SUVA	133.30	82.8							22	49	PKS
BYRD STATION	133.96	183.0	19	16	-3				22	55	
ROXBURGH	134.72	122.5							23	22	
KARAPIRO	138.07	110.5	19	20	-7				23	0	

AUGUST 17 9.H 8.M 35.S EPICENTRE 51.38-176.23 DEPTH= 0.KM

A=-0.62533 B=-0.04119 C= 0.77927 D=-0.0657 E= 0.9978
G=-0.7776 H=-0.0512 K=-0.6267 HT= -5.9

SE= 2.31

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PETROPAVLOVK	15.46	286.3	4	48	67							
COLLEGE	19.94	36.6	4	35	-2	8	25	9				
MAGADAN	20.21	306.7	4	42	2							
SITKA	24.30	60.4	5	23	3							
Y.-SAKHLINSK	26.94	276.8	5	48	3							
TIKSI	31.42	330.2	6	22	-4							
KIPAPA	33.11	147.8	6	37	-3							
HONOLULU	33.20	148.0	6	39	-2	11	57	-4				
HORSESHOE B.	33.22	72.2	6	41	0							
VICTORIA	33.49	73.7	6	43	-1							
SEATTLE	34.55	74.5	6	55	2							
MATUSIRO	35.37	263.3	6	57A	-3	12	18	-16			8	12 PP
VLADIVOSTOK	35.50	277.4	6	59	-2	11	37	-59				
BANFF	37.01	65.8	7	11	-3							
SHASTA	38.06	84.6	7	24	2							
ABUYAMA	38.10	263.4	7	23A	0	13	16	0				
UKIAH	38.46	87.3	7	35	9							
MINERAL	38.76	84.6	7	28A	0							
RESOLUTE	39.07	24.6	7	30	-1	13	51	20			9	7 PP
HUNGRY HORSE	39.15	69.2	7	30	-2	13	33	1			9	41 PCP
CHANGCHUN	39.19	282.6	7	30	-2	13	28	-5			9	7 PP
BERKELEY	39.82	88.2	7	40	3	13	46	4				
RENO	40.35	84.3	7	52	11							
LICK	40.53	88.4	7	45A	2							
BUTTE	41.18	71.5	7	47	-1						8	55
FRESNO	42.04	87.6	7	59	4							
BOZEMAN	42.26	71.1	7	57	0							
EUREKA	42.77	81.7	8	1	0							
SALT LAKE C.	44.54	77.5	8	18	2							
THULE	44.63	18.7	8	11	-5						9	55 PP
PASADENA	44.73	89.3	8	19	2	14	54	-1				
BOULDER CITY	45.64	84.9	8	27	3							
PEKING	46.95	283.7	8	36A	1	15	28	2				
ULAN-BATOR	47.75	297.7	8	41	0							
RAPID CITY	47.78	68.6	8	42	1	15	43	5				
TATUNG	48.66	285.6	8	48	0							
BOULDER	48.97	74.2	8	51	0							
ZO-SE	49.61	271.1	8	55	0	16	5	1				
NANKING	50.45	273.8	9	0	-2							
TUCSON	50.59	85.7	9	3	0							
TUCSON TELE.	50.60	85.5	9	4	1							
TRUK	51.09	222.4	9	4	-3							
SIAN	55.09	282.8	9	36	-1							
LUBBOCK	55.26	78.1	9	40	2							
LANCHOW	56.94	287.9	9	50	0							
APATITY	59.31	347.2	10	6	0						18	7
KOROR	59.72	240.5	10	6	-3							
CANTON	60.23	270.3	10	12	-1	18	26	0				
HONG KONG	60.24	269.0	10	12	-1	18	31	5				
SODANKYLA	60.32	350.0	10	11	-2							
KIRUNA	60.46	352.8	10	12	-2	18	39	10			10	56 PCP
BAGUIO CITY	60.65	259.3	10	16	0							
CLEVELAND	61.60	58.4	10	21K	-1	18	42	-2				
OTTAWA	61.81	51.8	10	21	-2	18	41	-5				
SHAWINIGAN	62.40	49.2	10	25	-2						10	47
SVERDLOVSK	62.44	328.7	10	26	-2							
BREBEUF	62.76	50.5	10	27	-3							
SEVEN FALLS	62.90	47.7	10	29	-2							
SKALSTUGAN	65.19	355.8	10	44	-2						11	18 PCP
KUNMING	65.41	279.8	10	46	-1	19	31	0			11	15 PCP
WASHINGTON	65.83	57.6	10	46	-4							
PALISADES	65.91	54.1	10	48	-2	19	33	-4			20	31 SCS
WESTON	66.18	51.5	10	51K	-1							
CHAPEL HILL	66.95	61.1	10	56	-1							
TACUBAYA	67.04	87.4	10	55	-3							
PULKOVO	67.14	345.8	10	51	-7							
COLUMBIA	67.26	63.8	10	57	-2							
HELSINKI	67.49	348.7	11	0	0							
FRUNSE	67.86	311.5	11	2	-1							
HALIFAX	68.08	45.3				19	58	-5			12	6

PORT MORESBY	68.29	219.3	11	6	1	20	4	-2	24	42	SS
UPPSALA	68.56	352.5	11	6	-1						
LHASA	69.06	291.4	11	11	1	20	18	3			
SUVA	69.39	185.4	10	51K	-21	20	11	-8	11	46	
MOSCOW	69.62	340.4	11	16	2						
NAMANGAN	70.70	312.0	11	19	-1	20	41	7			
GOTEBORG	71.07	355.3	11	23	1						
SHILLONG	71.59	287.9	11	25	-1						
COPENHAGEN	73.06	354.9				21	45	44			
CHATRA	73.41	292.2	11	38	2						
CHITTAGONG	74.04	285.8	11	42A	2	21	17	5	11	57	PCP
DURHAM	74.12	3.2	11	19	-21	21	40	27			
RATHFARNHAM	75.35	6.2	11	47	0						
WARSAW	75.74	349.2	11	51	1	21	34	3	22	1	PS
DEHRA DUN	75.84	300.9	11	49	-1						
WARSAK DAM	76.30	307.7	11	52	-1						
LAHORE	76.84	304.2	11	55	-1						
DE BILT	76.89	359.1				22	30	46			
BERMUDA	77.26	53.8	11	57	-1	21	45	-3	26	41	SS
HALLE	77.26	354.8				21	53	5	12	11	PCP
KEW	77.47	2.6	12	2	3				27	25	SS
LWOW	77.70	346.7	12	4	3						
JENA	77.85	355.0	12	1	0						
BENSBERG	77.99	357.8	12	3	1				13	0	
KRAKOW	78.01	349.4				22	13	17	13	34	
UCCLE	78.19	359.6	12	7	4	21	59	1			
PLAUEN	78.25	354.5	12	0	-4						
CHARTERS TS.	78.32	215.8	12	1	-3				17	51	
PRUHONICE	78.60	352.9	12	9	3						
SKALNATE PL.	78.83	349.1	12	6	-1						
DOURBES	78.89	359.5	12	6	-1						
KISHINEV	79.64	342.9	12	13	2	22	28	15			
IASI	79.69	343.8	12	20	9						
STUTTGART	80.12	356.4	12	13	-1	22	25	7	12	18	PCP
BRATISLAVA	80.17	351.0	12	18	4				23	3	PS
PARIS	80.18	0.9	12	14A	0	22	21	2	12	22	PCP
STRASBOURG	80.36	357.3	12	18	3	22	21	0	27	57	SS
TUBINGEN	80.36	356.4	12	16	1						
SOTCHI	80.41	334.4	12	13	-2						
SIMFEROPOL	80.52	338.7	12	16	0	22	27	5			
TIFLIS	80.63	330.1	12	17	0						
EBINGEN	80.72	356.5	12	16	-1						
QUETTA	81.67	308.6	12	21A	-1	22	34	0	12	26	PCP
BUCHAREST	82.64	344.1	12	29	2						
TRIESTE	82.97	353.0	12	33	4						
BRISBANE	83.06	207.2	12	33	4				16	40	
BELGRADE	83.10	348.1	12	33A	4	23	6	17	23	29	SKKS
CLERMONT-FD.	83.23	0.5	12	34	4	22	46	-4			
FLORENCE X.	85.00	354.6	12	37	-2	23	14	6	24	7	PS
KARACHI	85.20	306.1	12	46A	6						
MONACO	85.22	357.3	12	40	0						
HYDERABAD	85.76	292.6				23	25	10			
ROME	86.79	353.5				23	17	-8	14	11	
SAN JUAN	87.73	63.2	12	53	1						
TOLEDO	88.86	6.0	12	58	0	23	30	-14	16	25	PP
RIVERVIEW	89.57	206.7	13	3A	2				29	56	SS
KSARA	90.58	333.7	13	6	0						
GRANADA	91.57	5.9	13	12A	2	24	12	3	30	36	SS
JERUSALEM	92.69	333.6	12	52	-24						
CHINCHINA	92.75	78.6	13	18	2						
RELIZANE	93.19	2.6	13	17	-1						
BOGOTA	93.97	77.6				23	54	-36	31	12	SS
ST. VINCENT	94.66	62.4	13	25	0						
CAPE HALLETT	123.74	184.9	17	33	-87				36	7	PKPPKP
LWIRO	126.71	328.2	19	8	2						
ASTRIDA	126.73	326.9	19	2	-4				21	9	PP
UVIRA	127.76	327.3	19	12	4				21	13	PP
SCOTT BASE	129.39	184.6	18	15	-56				19	11	PP
OASIS-BUNG.	132.94	213.4							22	41	
SOUTH POLE	141.19	180.0	19	25	-8						
PIETERMZBURG	150.57	307.4	19	54	5						
KIMBERLEY	152.45	317.1	19	54	2						
GRAHAMSTOWN	155.47	308.6							20	22	PKP2

AUGUST 17 18.H 1.M 8.S EPICENTRE -3.45 145.79 DEPTH= 0.KM

A=-0.82549 B= 0.56124 C=-0.05985 D= 0.5622 E= 0.8270
G= 0.0495 H=-0.0336 K=-0.9982 HT= 7.1

SE= 2.91

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
PORT MORESBY	6.06	167.2	1 31A	-3	2 41	-4		3 3	
TRUK	12.42	29.1	2 56	-5	5 27	5			
KOROR	15.56	313.5	3 41	-2					
CHARTERS TS.	16.46	178.4	3 55	1	6 57	-1			
GUAM	16.85	356.5	4 0	1	7 8	2			
BRISBANE	24.87	164.6	5 25	-1	9 48	1			
NOUMEA	27.43	134.8	5 45	-5	10 27	-3		7 12	
MANILA	30.42	306.7	6 26	9	11 20	3			
RIVERVIEW	30.63	171.2	6 20K	1	11 25	4			
BAGUIO CITY	31.79	309.1	6 27	-2	11 41	2			
MELBOURNE	34.22	181.2	6 54	4	12 22	5			
SUVA	35.14	117.0			12 41	10			
HENGCHUN	35.21	317.1	7 4	6					
HSINKONG	35.55	319.1	6 52	-9					
HWALIEN	36.01	320.4	7 11	6					
TAIPEI	36.84	321.5	7 14	2	13 6	9			
BANDUNG	38.13	263.3	7 2	-21				12 50	
LEMBANG	38.15	263.4	7 25A	2					
ABUYAMA	39.31	346.7	7 30	-3	13 30	-5			
PERTH	39.94	221.4						16 50	SS
HONG KONG	40.13	311.1	7 39A	-1	13 44	-3			
MATUSIRO	40.42	350.6	7 39A	-3	13 28	-23		17 11	
CANTON	41.25	311.3	7 48A	-1	14 7	3		13 40	PCS
ZO-SE	41.61	327.5	7 50A	-2	14 14	5		9 30	PP
ONERAHI	41.61	144.1	8 10	18					
AFIAMALU	43.14	106.6	8 7A	3	14 22	-9		17 32	SS
NANKING	43.64	326.1	8 8A	0	14 45	6		9 53	PP
KARAPIRO	43.77	145.4	8 9	0				9 56	
TONGARIRO	44.67	146.8	8 21	4					
WELLINGTON	45.78	149.4	8 25K	-1	15 6	-3			
ROXBURGH	46.71	157.3			15 20	-3			
MEDAN	47.59	278.0	8 42K	2	15 34	-1			
VLADIVOSTOK	48.03	346.3	8 41	-2					
Y.-SAKHLINSK	50.26	357.3	8 57	-3	16 11	-2			
KUNMING	50.52	306.6	9 3A	1	16 23	7		10 18	PCP
CHANGCHUN	50.54	340.9	8 58	-5	16 15	-2		11 7	PP
SIAN	51.10	320.3	9 6	-1					
PEKING	51.10	330.8	9 5A	-2	16 28	4		11 2	PP
CHENGTU	52.33	313.5	9 15A	-1	16 43	2		11 15	PP
TATUNG	52.60	328.7	9 17	-1					
PORT BLAIR	54.86	286.8						14 25	
LANCHOW	55.52	318.9	9 39	-1	17 32	8		19 24	SCS
PETROPAVLOVK	57.41	9.2	9 51	-2					
TOCKLAI	57.68	304.7	10 0	5					
SHILLONG	59.65	302.2	10 8	-1				18 22	
HONOLULU	60.17	63.2	10 14	2	18 28	3		20 32	SCS
KIPAPA	60.28	63.1	10 10	-3					
ULAN-BATOR	61.42	331.3	10 20	-1	18 50	9			
LHASA	61.83	306.2	10 23A	-1	18 55	9		14 15	PPP
MAGADAN	62.94	2.9	10 29	-2	19 8	8			
DUMONT	63.23	182.6	10 29	-4	19 2	-2			
CHATRA	64.05	302.0	10 40	2	19 30	16			
ROKARO	64.33	298.4	10 45	5	19 22	4			
MADRAS	67.14	285.6	10 57	-1	19 57	5		11 14	PCP
WILKES	67.34	194.7	10 56	-3	19 50	-4			
OASIS-BUNG.	70.05	197.8	11 15	-1					
CAPE HALLETT	70.44	172.3	11 17K	-2	20 35	4		14 5	PP
AGRA	71.97	299.8	11 26	-2	20 51	2		15 50	PPP
DEHRA DUN	72.73	303.1	11 34	2	21 4	6		14 4	PP
MIRNY	72.76	199.5	11 30	-2	20 56	-2			
BOMBAY	75.08	290.5	12 15	29	21 26	2		15 26	
SCOTT BASE	75.17	175.5	11 45	-1	21 22	-3		16 59	PPP
TIKSI	75.76	354.5	11 45	-5	20 53	-38			
FRUNSE	78.71	314.8	12 5	-1					
WARSAK DAM	78.93	305.4	12 5	-2					
NAMANGAN	80.34	312.4	12 15	0					
COLLEGE	83.30	23.2	12 26	-4	22 44	-7		24 36	PPS
SOUTH POLE	86.57	180.0	12 44	-3	23 18	-5		16 33	PP
BYRD STATION	87.44	170.0	12 51	0	23 31	0			
SVERDLOVSK	90.21	326.8	13 0	-4					
VICTORIA	93.09	41.7	13 19	2					
HORSESHOE B.	93.20	40.9	13 20	2					

SHASTA	93.61	49.6	13	24	4					
BERKELEY	93.64	52.4	13	22	2	24	27	0	23	38 SKS
SEATTLE	93.82	42.6	13	19	-2					
LICK	94.12	53.0	13	25	3					
MINERAL	94.21	50.0	13	25	2					
RENO	95.58	50.8	13	33	4					
FRESNO	95.58	53.6	13	29	0					
PASADENA	96.92	56.2	13	37	2				25	3 PS
MAKHACH-KALA	98.41	312.8	13	40	-2					
EUREKA	98.55	50.8	13	42	0					
HUNGRY HORSE	99.34	41.7	13	47	1					
TIFLIS	100.49	311.6	13	51	0					
BUTTE	100.56	44.0	13	58	7					
APATITY	101.60	338.7				25	11	-23	17	59 PP
BOZEMAN	101.66	44.2	14	0	4					
TUCSON TELE.	103.24	57.7	15	9	66				18	20 PP
SOTCHI	104.00	314.0	14	12	5	24	18	-28		
PULKOVO	105.59	331.7							20	36 PP
KIRUNA	105.94	341.2							18	44 PP
SIMFEROPOL	107.69	316.2	14	43	777	25	1	-1		
KSARA	108.43	304.4	14	28	777	25	14	9	19	4 PP
KISHINEV	110.69	319.3	24	11	336					
UPPSALA	111.28	334.8							19	2 PP
LWOW	112.70	323.4							19	36
HELWAN	112.87	300.9							19	29
BUCHAREST	113.33	317.3							20	57
WARSAW	113.41	326.6							19	28 PP
KRAKOW	115.01	324.8							19	29 PP
SKALNATE PL.	115.21	323.8							19	47 PP
ASTRIDA	115.81	265.5							19	56 PP
COPENHAGEN	115.94	332.7							19	28 PP
RUMANGABO	116.31	266.8							19	47 PP
BRATISLAVA	117.53	323.9	18	41	-7				20	8 PP
PRUHONICE	118.07	326.6							19	54 PP
PRAGUE	118.09	326.8							28	48
FLORISSANT	118.15	47.4							29	46 PS
ST. LOUIS 1	118.30	47.5							20	1 PP
HALLE	118.61	329.1							21	4
PLAUEN	119.08	328.1	19	23	32					
JENA	119.13	328.7				25	29	-18	20	17 PP
SONNEBERG	119.65	328.4							20	20 PP
ABERDEEN	120.71	340.3	17	4A	777				30	9 PS
TRIESTE	120.77	322.7							20	24 PP
DE BILT	121.53	332.7							20	40 PP
STUTTGART	121.64	327.7	18	58	2				20	35 PP
DURHAM	122.40	338.3	19	1	3				20	40 PP
STRASBOURG	122.51	328.2							23	20 PPP
UCCLE	122.79	331.9							20	46 PP
DOURBES	123.14	331.2							20	45 PP
FLORENCE X.	123.26	321.9	20	18	79					
ROME	123.43	319.4							20	43 PP
KEW	124.40	335.0	18	52	-10				27	49
OTTAWA	124.69	34.6	19	6	4					
PARIS	125.03	331.2	19	7	4				21	6 PP
MONACO	125.59	323.7	19	9	5					
SHAWINIGAN	125.59	31.9	19	13	9					
CLERMONT-FD.	125.75	328.0							20	59 PP
COLUMBIA	126.93	49.3	19	9	2					
WASHINGTON	127.47	42.0							21	17 PP
PALISADES	128.34	38.0							21	15 PP
TORTOSA	131.43	324.8							21	35
HALIFAX	131.53	27.9							31	45 PS
ALGIERS UNI.	132.35	318.9	19	19	2				21	49 PP
ALICANTE	133.61	322.9	19	15	-4	26	25	-4	21	45 PP
RELIZANE	134.58	319.4	19	10	-11				21	36 PP
BALBOA HTS.	134.62	80.9	19	23K	2					
TOLEDO	134.62	327.1							22	4 PP
SERRA PILAR	135.99	332.0	15	36A	777					
GRANADA	136.23	324.0	19	43K	19	27	30	57	23	15 PP
HUANCAYO	136.32	111.3	19	29	5					
MALAGA	137.02	324.1	19	41K	15				22	52 PKS
TAMANRASSET	137.02	300.1	19	19	-7				21	59 PP
LISBON	138.13	330.2	15	17	777					
CHINCHINA	138.68	86.4	19	48	19				23	25 PP
BERMUDA	139.45	41.3							23	13
BOGOTA	140.23	86.9	19	46	15				23	16 PP
FUQUENE	140.56	85.6	19	33	1				23	43 PP
LA PAZ	141.06	121.6	19	38K	5					

SAN JUAN	145.43	62.2	19 42	2							
ST. VINCENT	151.57	68.6	19 54	4							
MBOUR	159.82	303.6	20 22	21	27	4	-1			37	52 PPS

AUGUST 17 21.H 11.M 13.S EPICENTRE -36.08-179.80 DEPTH= 35.KM

DEPTH OF FOCUS= 0.000R

A=-0.81012 B=-0.00278 C=-0.58625 D=-0.0034 E= 1.0000
G= 0.5863 H= 0.0020 K=-0.8101 HT= -0.3

SE= 1.83

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
KARAPIRO	4.16	242.4	1	4A	1								
ONERAHI	4.74	272.0	1	14	3	2	25	19					
TONGARIRO	4.84	228.5	1	11	-2	2	8	-1					
WELLINGTON	6.71	217.6	1	36	-3	2	47	-8					
COBB RIVER	7.69	227.2	1	57	4	3	10	-10					
KAIMATA	9.36	223.9				3	51	-10					
SUVA	17.92	354.5	4	7	-2	7	30	6					
NOUMEA	18.20	315.2	4	15K	3	7	52	21			4	25	PP
AFIAMALU	23.23	20.1	5	3	-2	9	32	21					
RIVERVIEW	23.88	266.8	4	16A	-56	9	35	13					
BRISBANE	24.57	282.7	4	21K	-57	9	54	20					
MELBOURNE	28.11	255.8	5	52	1								
CHARTERS TS.	33.75	289.1	6	41K	0						12	6	
CAPE HALLETT	36.65	185.1	7	5K	0	12	53	7			8	11	PP
DUMONT	38.35	204.5	7	19	-1	13	17	6					
PORT MORESBY	40.08	303.3	7	35K	1	13	28	-10	7	46	9	39	PCP
SCOTT BASE	42.28	184.2	7	54	2						10	45	PP
WILKES	49.46	210.0	8	50	1	15	59	6					
TRUK	50.85	322.6	8	58	-2								
OASIS-BUNG.	53.43	209.8	9	17	-2	16	51	4					
MIRNY	56.42	208.7	9	40	-1	17	28	1					
HONOLULU	60.65	23.3	10	10	0	18	43	21			22	57	SS
KIPAPA	60.78	23.3	10	10	-1								
KOROR	60.87	305.6	10	10	-2								
LEMBANG	71.93	274.7	12	24K	62								
MANILA	75.24	300.7	12	8	27								
MATUSIRO	82.10	327.1	12	12	-7	22	32	3			15	26	
HONG KONG	85.20	301.9	12	35	1								
CANTON	86.33	301.9	12	41K	1								
ZO-SE	86.77	312.6	12	42	0								
NANKING	88.87	311.8	12	53K	1								
VLADIVOSTOK	90.27	326.9	12	59	0	22	57	-51					
PASADENA	90.48	46.9	13	1	1	24	2	12					
LICK	90.77	42.6	13	2K	1								
BERKELEY	90.82	41.9	13	2K	1	24	6	13					
UKIAH	91.23	40.5	13	4	1								
FRESNO	91.39	44.1	13	5K	1								
SHASTA	92.81	39.9	13	11	0								
MINERAL	92.97	40.6	13	12A	1								
RENO	93.35	42.1	13	14K	1								
BOULDER CITY	93.72	47.4	13	16	1								
TUCSON	93.73	52.4	13	16	1						30	56	PKKP
TUCSON TELE.	93.86	52.4	13	16	1						17	15	PP
CHANGCHUN	93.86	323.6	13	15	0								
HUANCAYO	94.39	108.2	13	20	2								
EUREKA	95.44	44.2	13	22	-1						17	8	PP
PEKING	95.92	316.1	13	21	-4	24	45	8			23	56	SKS
LA PAZ	96.98	116.1	13	31	1								
HUNGRY HORSE	102.42	38.5	13	44	-10						18	6	PP
RAPID CITY	105.73	46.8									18	30	PP
KIMBERLEY	111.49	203.1	18	33	2								
PALISADES	123.44	60.7									20	35	PP
OTTAWA	123.71	55.2	18	55	0						28	43	PKKP
NAMANGAN	125.30	298.4	18	59	1								
WESTON	125.73	60.0	18	59A	0								
SHAWINIGAN	126.02	54.7	18	59K	0								
SEVEN FALLS	127.45	54.4	19	2A	0								
ASTRIDA	132.67	222.0	19	13	1						21	37	PP
LWIRO	133.46	221.2	19	17	4								
SVERDLOVSK	135.19	317.3	19	14	-2								
MAKHACH-KALA	143.26	295.6	19	28	-3								
APATITY	143.28	339.4	19	28A	-3						23	6	PP

TIFLIS	145.13	293.1	19	35	1				23	17	PP
SODANKYLA	145.22	342.4	19	33	-1						
KIRUNA	146.19	346.4	19	35	-1						
MOSCOW	147.92	319.6	19	28	-11						
REYKJAVIK	148.89	18.6	19	45K	5						
SOTCHI	148.96	296.2	19	45	4						
PULKOVO	149.34	330.1	19	41	0						
JERUSALEM	150.72	271.8	19	23A	-20						
KSARA	150.76	276.2	19	46	3				23	52	PP
HELSINKI	151.10	334.3	19	50	6						
SKALSTUGAN	151.49	348.7	19	44	0						
HELWAN	153.23	265.6	19	47	0				20	9	PKP2
MBOUR	153.48	140.2	19	56	9				23	38	PP
UPPSALA	153.67	340.1	19	55K	8				20	8	PKP2
KISHINEV	156.07	306.1	19	51	0						
GOTEBORG	156.98	343.7	19	50	-2				20	20	PKP2
LWOW	157.92	315.9	19	54	1						
WARSAW	158.12	324.1	19	55K	2				24	27	PP
BUCHAREST	158.61	300.9	20	31	37						
COPENHAGEN	158.68	340.7	19	55	1				24	10	PP
KRAKOW	160.01	320.4	20	47	51						
SKALNATE PL.	160.35	318.0	19	57	1				20	41	PKP2
RACIBORZ	160.87	322.6	19	58	2						
DURHAM	161.26	3.2	19	54K	-3	28	4	67			
POTSDAM	161.32	334.8	19	56	-1						
TIMISOARA	161.45	307.9	20	32	35						
RATHFARNHAM	162.19	12.8	20	46	48						
COLLMBERG	162.23	332.9	19	58	0						
HALLE	162.44	335.0	19	58	0				20	46	
PRAGUE	162.62	328.0	20	46	48						
PRUHONICE	162.63	327.6	19	59	1				20	48	PKP2
BRATISLAVA	162.63	319.3	20	1	3				20	30	PKP2
WITTEVEEN	162.65	346.7							20	48	PKP2
JENA	163.04	334.6	19	58	-1						
PLAUEN	163.19	332.8	19	56	-3						
DE BILT	163.59	349.1	19	59	0						
SONNEBERG	163.64	334.3	20	0	1				20	52	PKP2
BENSBERG	164.30	343.5	19	59	-1				21	5	PKP2
KEW	164.61	1.2	20	1	1				24	40	PP
UCCLE	164.98	349.8	20	1	0						
STUTTGART	165.69	335.2	20	1	0				21	1	PKP2
TUBINGEN	165.94	335.0	20	1	0				21	3	PKP2
TAMANRASSET	165.97	200.7	20	4	3				21	3	PKP2
TRIESTE	165.99	317.2	20	1	0				21	2	PKP2
EBINGEN	166.28	334.5	20	1	-1				21	3	PKP2
STRASBOURG	166.32	338.3	20	2	0				24	52	PP
PARIS	167.16	353.2	20	5K	3	27	6	5	24	57	PP
MESSINA	167.56	284.4	20	2	0						
FLORENCE X.	168.55	315.6	20	2	-1				25	7	PP
ROME	168.82	305.0	20	3K	0				25	8	PP
CLERMONT-FD.	170.07	348.1				26	53	-9			
MONACO	170.55	326.2	20	5	1						
LISBON	172.11	67.7	20	8A	3				25	20	PP
TOLEDO	174.93	40.2	20	7	1				25	34	PP
MALAGA	176.24	78.8	20	8A	1				25	40	PP
GRANADA	176.75	69.0	20	7A	0	27	9	5	25	44	PP
ALGIERS UNI.	177.60	287.6	20	8K	1				25	47	PP
ALICANTE	177.67	13.2	20	8	1	27	10	6	25	46	PP
RELIZANE	179.57	221.5	20	10	3				22	4	PKP2

AUGUST 18 10.H 16.M 39.S EPICENTRE 7.36 -77.66 DEPTH= 0.KM
A= 0.21197 B=-0.96895 C= 0.12731 D=-0.9769 E=-0.2137
G= 0.0272 H=-0.1244 K=-0.9919 HT= 6.8

SE= 2.19

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
BALBOA HTS.	2.46	310.3	0	40A	-2	1	14	0				
CHINCHINA	3.12	139.4	0	52K	0	1	33	3				
GALERAZAMBA	4.14	34.6	1	9K	3	2	2	5				
FUQUENE	4.33	115.5	1	10	1	2	4	3				
BOGOTA	4.49	127.1	1	13K	2	2	13	8				
SAN JUAN	15.69	44.6	3	40	-4	6	31	-8				
TRINIDAD	16.27	77.2	3	51	-1							

GRENADA	16.38	72.2	3	48	-5					
ST. VINCENT	17.12	69.0	4	1	-2					
MERIDA	17.78	320.6							6	21
BARBADOS	18.66	70.7	4	31	9					
HUANCAYO	19.42	173.1	4	31	0	8	39	34	11	44
TACUBAYA	24.09	301.9	5	23	5				6	46
LA PAZ	25.52	158.4	5	31	-1				10	35
COLUMBIA	26.69	353.8	5	44	1					
CHAPEL HILL	28.45	357.6	5	45	-14					
WESTON	35.32	8.1	7	OK	1					
HARVARD	35.42	7.8	7	1	1					
OTTAWA	37.93	2.2	7	21	0					
SHAWINIGAN	39.27	5.3	7	33A	1					
TUCSON TELE.	39.51	313.5	7	33	-1					
TUCSON	39.55	313.3	7	33	-2					
SEVEN FALLS	40.04	7.3	7	40	1					
RAPID CITY	42.84	332.8	8	1	-1					
BOULDER CITY	44.31	315.5	8	15	1					
PASADENA	45.85	311.3	8	27	1					
EUREKA	46.92	318.9	8	34	0					
BUTTE	48.85	328.0	8	50	1					
RENO	49.51	317.0	8	55	0					
LICK	49.78	313.5	8	58	1					
MINERAL	51.10	317.0	9	23	16					
HUNGRY HORSE	51.13	329.5	9	6	-1					
RESOLUTE	68.00	355.1	11	0A	-3					
THULE	69.21	2.4	11	12	1					
COLLEGE	75.00	335.4	11	43	-2					
DURHAM	75.99	35.4	11	57	6	21	40	6	22	10 SKS
KEW	76.39	38.9	11	52	-1					
PARIS	78.01	41.7	12	3	1					
DOURBES	79.43	40.5	12	6	-4					
WITTEVEEN	80.76	37.7	12	18	1					
TAMANRASSET	80.93	68.1	12	19	1				15	26 PP
MUNSTER	81.34	38.6	12	20	0					
STUTTGART	82.45	41.8	12	25	-1				12	51
JENA	83.86	39.5	12	33	0					
PLAUEN	84.26	39.9	12	34	-1					
POTSDAM	84.67	38.0	12	37	0					
TRIESTE	85.78	44.7	12	43	0					
PRUHONICE	85.84	40.3	12	43	0					
SODANKYLA	88.70	22.0	12	56	-1					
BYRD STATION	89.80	186.7	13	1	-1					
HELSINKI	89.90	29.2	13	2	-1					
SOUTH POLE	97.31	180.0	13	35	-2					
SHILLONG	145.72	16.9	19	45A	4					

AUGUST 18 23.H 53.M 59.S EPICENTRE 34.34 25.70 DEPTH= 0.KM

A= 0.74561 B= 0.35883 C= 0.56153 D= 0.4337 E=-0.9011
G= 0.5060 H= 0.2435 K=-0.8275 HT= 0.4

SE= 2.67

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
ATHENS	3.96	336.7	1	9K	6	1	51	0				
HELWAN	6.53	131.5	1	43	4	2	53	-2				
JERUSALEM	8.39	105.1	1	37	-28	3	5	-37				
KSARA	8.46	90.7	2	8	2	3	38	-6				
SOFIA	8.55	348.2	2	11	4	3	47	1				
REGGIO CALA.	8.94	297.7	2	15	2	3	45	-11				
MESSINA	9.05	298.1	2	17A	3	3	50	-8			2	37 P*
TARANTO	9.09	314.8									3	21
BUCHAREST	10.07	1.6	2	29	1	4	55	32			4	25
SIMFEROPOL	12.41	28.9	3	3	3	5	16	-5				
ROME	12.85	309.8	3	10	4						5	47
KISHINEV	12.88	9.6	3	6	-1						6	47
TRIESTE	14.52	324.6	3	27	-1	6	9	-2			4	36
FLORENCE X.	14.64	314.3	3	31	1							
BRATISLAVA	15.24	337.6	3	46	8							
SKALNATE PL.	15.37	346.4	3	43	4							
LWOW	15.53	355.9	3	44	3						7	19
KRAKOW	16.26	346.6	3	50	-1						5	8
RACIBORZ	16.67	342.9	3	56	0							
TIFLIS	16.74	58.3	3	59	2						6	52
CHUR	17.48	320.5	4	9	3	6	49	-31				

PRUHONICE	17.65	335.7	4	9	1	7	40	16		
PRAGUE	17.76	335.6	4	11	1				24	58
RAVENSBURG	18.04	322.9	4	15	2					
WARSAW	18.20	350.8	4	16	1				5	26
EBINGEN	18.63	322.9	4	20	0				4	47
TUBINGEN	18.82	323.9	4	22	-1				4	46
STUTTGART	18.92	324.6	4	23	-1	7	38	-15	5	18
PLAUEN	18.94	332.6	4	22	-2	8	1	8		
NEUCHATEL	18.97	317.4	4	24	-1	7	49	-5		
SONNEBERG	19.22	330.9	4	27	-1	8	8	9	4	47
COLLMBERG	19.29	335.3	4	27	-1					
STRASBOURG	19.50	322.2	4	31	0	8	17	12	4	58 PP
JENA	19.51	332.5	4	30	-1				5	9
HALLE	19.83	334.0	4	33	-2	8	18	5	5	21
CLERMONT-FD.	20.64	310.3	4	43A	0	8	35	5		
TAMANRASSET	21.10	242.2	4	49A	1	8	36	-3	5	15 PP
BENSBERG	21.39	326.6	4	50	-1				5	29
MUNSTER	21.90	329.0	4	54	-2					
DOURBES	22.07	321.9	4	56	-2					
PARIS	22.47	317.0	5	1	-1					
WITTEVEEN	22.92	329.5	5	1	-5					
COPENHAGEN	23.22	340.8	5	9	0	9	17	-1		
GOTEBORG	25.13	342.6	5	28A	0					
KEW	25.41	320.3	5	28	-2					
HELSINKI	25.85	359.2	5	32	-2					
UPPSALA	26.07	350.7	5	33	-3				6	2
RATHFARNHAM	29.49	319.8	6	2	-5					
SKALSTUGAN	30.43	348.2	6	12K	-4					
SODANKYLA	33.08	0.7	6	34	-5					
APATITY	33.55	5.4	6	40	-3					
KIRUNA	33.67	356.4	6	41K	-3					
LWIRO	36.51	174.8	7	10	2					
ASTRIDA	36.94	173.3	7	13	1					
NORD	49.81	352.5	8	53K	-3					
CHATRA	52.75	80.5	9	35	17					
KIMBERLEY	62.75	180.9	10	27	-2					
SEVEN FALLS	69.76	313.7	11	11	-2					
SHAWINIGAN	71.20	313.9	11	31	9					
OTTAWA	73.56	313.9	11	35	-1					
SOUTH POLE	124.16	180.0	18	57	-3					

AUGUST 19 4.H 45.M 45.S EPICENTRE -18.75 174.98 DEPTH= 0.KM

A=-0.94395 B= 0.08289 C=-0.31950 D= 0.0875 E= 0.9962
G= 0.3183 H=-0.0279 K=-0.9476 HT= 5.0

SE= 2.82

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	3.33	80.2	0	49	-5	1	29	-7					
NOUMEA	8.74	244.7	2	9K	-2	3	53	2					
AFIAMALU	13.60	71.2	3	28	11								
ONERAHI	16.96	181.7	4	10	10								
KARAPIRO	19.11	178.7	4	30	3								
TUAI	20.07	175.1	4	40	2								
TONGARIRO	20.38	178.8	4	42	1								
BRISBANE	21.95	242.7	4	57	0	9	8	13					
WELLINGTON	22.46	180.4	5	10	8	9	34	29					
RIVERVIEW	26.03	230.0				10	13	7			14	58	
ROXBURGH	27.13	188.7				10	25	1					
PORT MORESBY	28.51	285.2	5	55	-4	10	51	4			12	31	SS
TRUK	34.63	316.7	7	51	58								
KOROR	47.61	299.3	8	39	-1								
DUMONT	52.96	196.6	9	17	-4								
CAPE HALLETT	53.62	181.8	9	25	0	17	5	7			11	23	PP
SCOTT BASE	59.28	182.0	10	4	-2								
MATUSIRO	65.05	327.9				19	26	0			23	24	SS
ABUYAMA	65.16	324.9	10	46K	1	17	34	-114					
OASIS-BUNG.	66.64	205.2	10	51	-4								
BYRD STATION	67.47	170.1	10	55	-5								
MIRNY	69.78	205.0	11	11	-3								
SOUTH POLE	71.37	180.0	11	21	-3								
HONG KONG	72.10	301.8	11	28	0	20	3	-47					
CANTON	73.19	302.1	11	35	0								
CHANGCHUN	77.09	325.5	11	57	0								

PEKING	80.09	318.2	12	13	0	22	25	7			
LICK	81.64	46.1	12	22A	1						
SIAN	81.98	310.1	12	25	2						
PASADENA	82.50	50.3	12	25	-1	22	40	-2	28	9	SS
FRESNO	82.62	47.3	12	28	1						
KUNMING	82.72	299.4	12	27	0						
MINERAL	83.22	43.5	12	30A	0						
RENO	83.99	44.9	12	34	0						
CHENGTU	84.02	305.0	12	32	-2	23	3	5			
BOULDER CITY	85.78	49.9	12	42	-1						
LANCHOW	86.53	309.8	12	49	3	23	38	16	23	19	SKS
EUREKA	86.56	46.4	12	47	1						
TUCSON	87.18	54.7	12	51	2						
TUCSON TELE.	87.31	54.7	12	51	1						
ULAN-BATOR	89.91	321.4	13	3	1						
SALT LAKE C.	89.97	46.6	13	4	1				13	31	
HUNGRY HORSE	91.84	39.1	13	0	-11						
LHASA	94.02	299.8	13	27	6	24	2	-28			
PALISADES	117.85	53.0							29	59	PS
SKALNATE PL.	143.46	331.9	19	48	11						
COLLMBERG	144.53	340.4	19	38	0						
HALLE	144.68	341.6	19	40	1				20	21	
PRAGUE	145.09	338.0	19	45	6				21	42	PP
PRUHONICE	145.13	337.8	19	39	-1				20	19	*SPKP
JENA	145.29	341.5	19	38	-2				23	32	
MUNSTER	145.39	346.2	19	43	3						
PLAUEN	145.49	340.6	19	42	2						
BRATISLAVA	145.59	333.5	19	48	8						
SONNEBERG	145.89	341.4	19	45	4						
BENSBERG	146.43	346.0	19	47	5						
UCCLE	147.16	349.0	19	39	-4						
DOURBES	147.79	348.4	19	47	3	28	8	77			
STUTTGART	147.92	342.2	19	51	7				21	20	
ATHENS	148.48	313.4	19	49	4				20	2	PKP2
STRASBOURG	148.49	343.7	19	55	10				23	17	PP
EBINGEN	148.52	342.0	19	55	10						
TRIESTE	148.99	334.0	19	51	5				20	58	
PARIS	149.40	350.2	19	55	8				24	7	PP
FLORENCE X.	151.54	334.8	19	55	5				20	56	
ROME	152.53	330.9							20	9	PKP2

AUGUST 19 16.H 6.M 19.S EPICENTRE 51.69-175.86 DEPTH= 0.KM

A=-0.62080 B=-0.04499 C= 0.78267 D=-0.0723 E= 0.9974
G=-0.7806 H=-0.0566 K=-0.6224 HT= -6.0

SE= 2.62

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COLLEGE	19.55	36.8	4	33	1								
VICTORIA	33.18	74.3	6	41	1								
MATUSIRO	35.64	263.2	6	59A	-2	12	29	-9					
BANFF	36.66	66.3	7	9	-1								
MINERAL	38.50	85.2	7	46	21								
RESOLUTE	38.69	24.8				13	54	30			9	37	PCP
HUNGRY HORSE	38.82	69.7	7	27	-1	13	26	0					
RENO	40.08	85.0	7	58	20								
LICK	40.29	89.0	7	39	-1								
BUTTE	40.86	72.1	7	45	0								
FRESNO	41.79	88.3	8	0	8								
BOZEMAN	41.94	71.7	7	55	1								
EUREKA	42.50	82.3	7	58	0								
SALT LAKE C.	44.25	78.1	8	17	5								
PASADENA	44.50	89.9	8	21	6								
BOULDER CITY	45.38	85.4	8	28	6								
NORD	46.48	4.1	8	29	-1								
RAPID CITY	47.44	69.1	8	36	-2								
TUCSON	50.33	86.2	8	59	-1								
TUCSON TELE.	50.34	86.1	8	59	-1								
FAYETTEVILLE	57.85	71.2	9	53A	-2								
SODANKYLA	60.06	350.2	10	12	1								
HONG KONG	60.48	269.1	10	11	-3								
OTTAWA	61.43	52.2	10	18K	-2								
SHAWINIGAN	62.02	49.6	10	23K	-1								
SKALSTUGAN	64.89	356.0	10	42	-1								

WESTON	65.80	51.8	8	59K	-110							
COLUMBIA	66.91	64.1	10	55	-1							
HELSINKI	67.23	348.9	10	59	1							
FRUNSE	67.82	311.6	11	1	-1							
UPPSALA	68.28	352.7	11	4	-1						11	28 PCP
NAMANGAN	70.66	312.1	11	19	0							
GOTEBORG	70.78	355.6	11	23	3							
SHILLONG	71.72	288.1	11	23K	-3							
CHATRA	73.51	292.3	11	42	6							
LAHORE	76.86	304.4	11	54	-1							
JENA	77.56	355.2	11	59	0						12	34
PRUHONICE	78.32	353.2	12	3	0							
DOURBES	78.58	359.7	12	5	0							
QUETTA	81.65	308.9	12	21	0							
KSARA	90.41	334.0	13	4	0							
BYRD STATION	135.27	168.1	19	8	-14							
SOUTH POLE	141.51	180.0	19	21	-12							
PIETERMZBURG	150.57	308.4	19	54	6							
KIMBERLEY	152.37	318.1	19	57	6							

AUGUST 19 16.H 29.M 45.S EPICENTRE 53.51 160.24 DEPTH= 74.KM

DEPTH OF FOCUS= 0.006R

A=-0.56209 B= 0.20189 C= 0.80205 D= 0.3380 E= 0.9411
G=-0.7548 H= 0.2711 K=-0.5973 HT= -6.7

SE= 1.56

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PETROPAVLOVK	1.03	248.8	0	19	-1							
MAGADAN	7.99	323.0	1	57	1							
Y.-SAKHLINSK	12.98	246.7	3	13	10						5	32
MATUSIRO	22.87	231.0	4	58A	0	8	51	-7				
COLLEGE	28.06	45.6	6	9	23							
RESOLUTE	42.91	22.2	7	52A	-1						8	24
ALBERNI	44.95	63.5	8	10	1							
NORD	45.12	359.4	8	9	-2							
HORSESHOE B.	45.71	62.6	8	14	-1							
VICTORIA	46.14	63.6	8	19	0							
HONG KONG	46.66	246.5	8	23	0							
BAGUIO CITY	48.20	235.3	8	34	-1							
HUNGRY HORSE	51.16	58.7	8	57	-1						10	12
MINERAL	52.34	70.9	9	6K	0							
APATITY	52.91	337.3	9	10K	-1							
BUTTE	53.44	60.1	9	15	0							
RENO	53.90	70.4	9	31	13							
LICK	54.38	73.6	9	21K	0							
BOZEMAN	54.46	59.5	9	24	2							
SODANKYLA	54.54	339.9	9	21	-2							
KIRUNA	55.33	342.7	9	27	-1							
FRESNO	55.83	72.9	9	32	0							
EUREKA	56.09	68.0	9	34	0						9	54
SHILLONG	57.11	269.3	9	38A	-3							
SALT LAKE C.	57.43	64.2	9	44	1							
NAMANGAN	57.64	296.4	9	54	9							
PASADENA	58.63	73.9	9	50	-2						10	9
BOULDER CITY	59.21	70.1	9	56	0							
RAPID CITY	59.54	56.2	9	58	0							
SKALSTUGAN	60.61	344.2	10	3A	-2							
HELSINKI	61.15	336.3	10	8	-1							
UPPSALA	63.08	339.9	10	20A	-2							
TUCSON TELE.	64.18	70.1	10	29	0							
TUCSON	64.19	70.2	10	30	1							
GOTEBORG	66.18	342.0	10	44A	2							
COPENHAGEN	67.99	341.0	10	53	0	19	52	7				
QUETTA	68.19	291.4	10	53	-2							
FAYETTEVILLE	70.09	56.1	11	5A	-1							
OTTAWA	70.51	38.3	11	7A	-2							
SHAWINIGAN	70.58	35.8	11	8A	-1							
SEVEN FALLS	70.75	34.2	11	9	-1							
POTSDAM	70.97	339.4	11	12	1						11	35
DURHAM	71.04	349.0	10	58	-14	20	12	-9			19	52 SKS
COLLMBERG	72.00	339.1	11	18	0							
MUNSTER	72.42	342.6	11	21	1						12	11

JENA	72.65	339.8	11	22	1				12	43	
PRAGUE	72.84	337.7	11	26	3				13	32	
PRUHONICE	72.90	337.6	11	24	1				12	40	
PLAUEN	72.94	339.3	11	22	-1	11	46				
RATHFARNHAM	72.97	351.6	11	23K	0						
SONNEBERG	73.25	339.9	11	25	0						
BRATISLAVA	73.98	335.3	11	32	3						
UCCLE	74.10	344.4	11	31	1						
KEW	74.13	347.5	11	30	0						
WESTON	74.72	37.0	11	33A	0						
DOURBES	74.74	344.0	11	33	-1						
PALISADES	74.95	39.4	10	8	-87						
STUTTGART	75.19	340.7	11	37K	1						
STRASBOURG	75.64	341.5	11	40A	1				12	5	
EBINGEN	75.79	340.6	11	40	0						
RAVENSBURG	76.05	340.1	11	42	1						
PARIS	76.33	345.1	11	44	1				11	54	PCP
BASLE	76.69	341.3	11	43	-2						
CHUR	76.95	339.8	11	47A	1						
TRIESTE	77.15	336.6	11	48	1						
NEUCHATEL	77.32	341.6	11	49	1						
FLORENCE X.	79.50	337.7	11	28	-32				12	1	
HELWAN	85.90	317.3	12	34	1						
TAMANRASSET	100.93	336.3	13	41	-1						
CAPE HALLETT	125.71	176.2							20	27	PP
SCOTT BASE	131.16	178.2	19	4	0				19	4	SSS
BYRD STATION	140.54	164.3	19	13	-8						
SOUTH POLE	143.33	180.0	19	21	-5				22	41	PP

AUGUST 19 21.H 48.M 11.S EPICENTRE -1.23 149.17 DEPTH= 0.KM

A=-0.85851 B= 0.51235 C=-0.02138 D= 0.5125 E= 0.8587
G= 0.0184 H=-0.0110 K=-0.9998 HT= 7.2

SE= 2.74

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT MORESBY	8.36	193.9	2	6A	1	3	41	0					
TRUK	9.05	17.1	2	3	-12	3	38	-20					
GUAM	15.25	343.4	3	35	-3								
KOROR	16.95	300.3	4	2	2								
BRISBANE	26.36	172.3	5	37	-2	10	12	1					
NOUMEA	26.85	142.5	5	44	0						6	5	
MANILA	32.03	300.4	6	37	7	11	39	-3					
RIVERVIEW	32.48	176.9	6	34K	0	12	0	11					
BAGUIO CITY	33.23	303.1	5	42	-58	11	57	-3					
SUVA	33.28	122.1	6	40	-1	12	11	10			7	48	PP
MELBOURNE	36.62	185.6	7	9K	0						7	45	
ABUYAMA	38.11	341.7	7	16A	-6	13	6	-10					
NAGASAKI	38.38	333.4	7	25	1	13	13	-7					
MATUSIRO	38.95	345.9	7	25	-4	13	7	-21			8	46	PP
SENDAI	40.04	349.9	7	41	3	13	35	-10					
HONG KONG	41.38	306.5	7	53	4	14	5	0					
ZO-SE	41.73	322.8	7	51	-1	14	6	-4			9	31	PP
BANDUNG	41.78	261.1	7	38	-14								
LEMBANG	41.80	261.2	7	51A	-2								
CANTON	42.48	306.9	7	59	1	14	21	0			9	39	PP
KARAPIRO	43.82	149.5	8	8	-1						9	56	
PERTH	43.84	222.4	8	13	4						10	1	PP
NANKING	43.85	321.7	8	11	2	14	38	-3			10	1	PCP
TONGARIRO	44.80	150.7	8	17	0								
COBB RIVER	45.02	154.7	8	20	1								
PHU-LIEN	47.03	300.2	8	38	3	15	30	3					
ROXBURGH	47.57	160.8				15	39	5					
Y.-SAKHLINSK	48.32	354.1	8	41	-4	15	38	-7					
CHANGCHUN	49.69	337.4	8	53	-2	16	0	-4			18	39	SCS
MEDAN	50.69	275.6	9	0K	-3						11	15	
PEKING	50.94	327.4	9	2	-3	16	16	-5			10	53	PP
SIAN	51.68	317.0	9	10	0	16	30	-1					
KUNMING	52.03	303.4	9	13	0	16	38	2			19	0	SCS
CHENGTU	53.37	310.4	9	22	-1	16	52	-3			11	23	PP
PAOTOW	54.78	323.9	9	36	3								
LANCHOW	56.18	316.1	9	44	0	17	31	-1			19	33	SCS
MAGADAN	60.62	1.0	10	11	-4	18	26	-4					
ULAN-BATOR	61.20	328.9	10	21	3	18	38	0					
SHILLONG	61.40	300.0	10	18	-2	18	37	-3					

LHASA	63.32	204.2	10	34K	1	19	5	1	20	25 SCS
DUMONT	65.62	184.0	10	46	-2					
CHATRA	65.81	300.1	10	54	5	19	46	11		
BOKARO	66.31	296.6	10	54	2	19	45	4		
WILKES	70.35	195.6	11	18K	1	20	32	3		
CAPE HALLETT	72.20	173.3	11	26	-2	20	55	4	14	34 PP
AGRA	73.85	298.6	11	35A	-3	21	6	-3		
DEHRA DUN	74.40	301.8	11	40	-1	21	15	0		
MIRNY	75.98	200.0	11	50	0	21	33	0		
SCOTT BASE	77.13	176.2	11	57	0	21	54	8		
BOMBAY	77.50	289.5				21	47	-3	26	56
LAHORE	77.76	302.5	11	58	-2					
FRUNSE	79.59	313.9	12	9	-1	22	10	-2		
COLLEGE	79.95	22.7	12	8	-4	22	5	-11	22	57 SCS
WARSAK DAM	80.44	304.6	12	14	-1					
QUETTA	83.89	300.4	12	29	-4	22	57	1		
SOUTH POLE	88.77	180.0	12	54	-3					
BYRD STATION	89.02	170.0	12	54	-4					
VICTORIA	89.19	41.6	13	1	2	23	26	-21		
HORSESHOE B.	89.33	40.8	12	58	-1					
BERKELEY	89.62	52.3	13	0	-1	23	30	-21		
SEATTLE	89.91	42.5	13	8A	6	23	35	-18		
LICK	90.09	52.8	13	6	3					
FRESNO	91.56	53.4	13	11	1					
RENO	91.56	50.7	13	12	2					
PASADENA	92.89	56.0	13	14	-2	24	18	-2	23	36 SKS
EUREKA	94.54	50.7	13	21	-2					
HUNGRY HORSE	95.44	41.7	13	27	0				17	28 PP
BUTTE	96.63	44.0	13	34	1					
BOZEMAN	97.72	44.2	13	42	4					
TUCSON TELE.	99.20	57.6	13	52	8				17	55 PP
APATITY	100.75	339.4				24	28	-58	17	54 PP
KIRUNA	104.91	342.2				24	47	-74	18	25 PP
KSARA	109.94	305.6	18	27	-6				19	7 PP
SKALSTUGAN	110.22	341.0							19	6 PP
UPPSALA	110.68	336.2				25	11	-4	28	31 PS
LWOW	112.90	324.9	19	19	40				35	8
WARSAW	113.37	328.2				25	26	1	29	6 PS
COPENHAGEN	115.46	334.5				25	32	-1	19	53 PP
PRUHONICE	118.02	328.6							20	5 PP
PLAUEN	118.92	330.2							20	5 PP
JENA	118.93	330.8	18	53	3				20	6 PP
ASTRIDA	119.34	266.3	19	49	58				20	27 PP
ABERDEEN	119.70	342.5				25	44	-5	29	31 PS
MUNSTER	120.08	333.6	18	53	0					
LWIRO	120.28	266.7							20	2C PP
OTTAWA	120.94	35.4	18	58	4					
STUTTGART	121.50	330.1	18	53	-2				23	9 PPP
DURHAM	121.53	340.6				25	57	2	20	20 PP
SHAWINIGAN	121.92	32.9	19	0	4					
STRASBOURG	122.34	330.6							20	28 PP
UCCLE	122.35	334.4	18	30	-27	27	33	96		
DOURBES	122.75	333.6	19	4	6					
WASHINGTON	123.57	42.6	20	0	61				22	6 PP
KEW	123.74	337.6				27	37	95	26	5 SKS
MESSINA	123.82	316.6				25	53	-9	23	11 PPP
ROME	123.87	321.9				26	0	-2	20	51 PP
PALISADES	124.51	38.9				26	17	13	27	45 SKKS
PARIS	124.63	333.8	19	6	5	26	10	6	20	52 PP
CLERMONT-FD.	126.57	330.9							22	30
CHINCHINA	135.13	84.2	19	24	3				22	53 SKP
BERMUDA	135.56	42.3							21	59 PP
BOGOTA	136.69	84.6	19	40	16				22	58 SKP
FUQUENE	136.98	83.3	19	26	1				22	14 PP
TAMANRASSET	138.71	304.0	19	20	-8				22	10 PP
LA PAZ	139.19	117.2	19	35K	6				22	25 PP
ST. VINCENT	147.61	67.1	19	44	1					
TRINIDAD	148.10	71.7	19	47	3					

AUGUST 20 3.H 40.M 9.S EPICENTRE -14.28 166.27 DEPTH= 0.KM

A=-0.94182 B= 0.23005 C=-0.24506 D= 0.2373 E= 0.9714
G= 0.2381 H=-0.0582 K=-0.9695 HT= 5.9

SE= 2.95

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NOUMEA	7.98	178.8	1	56	-4	3	26	-6				
SUVA	12.29	109.9	3	0A	1	5	19	1				
BRISBANE	18.02	221.1	4	13	0	7	46	13				
AFIAMALU	21.30	91.7	4	47	-3	8	47	4				
ONERAHI	22.60	162.7	5	7	4	9	13	6				
RIVERVIEW	23.81	212.5	5	16K	1						10	47 SS
KARAPIRO	24.94	162.4	5	24K	-2							
TRUK	25.92	325.6	5	33	-2	10	24	20				
TUAI	26.25	160.5	5	44	6	10	24	15				
COBB RIVER	27.29	169.3	5	49	1							
WELLINGTON	27.90	166.2	6	8	15	10	41	5				
KAIMATA	28.49	172.0	6	11	12							
MELBOURNE	30.13	215.0				11	13	1				
ROXBURGH	31.28	175.9	6	24	0	11	30	0				
KOROR	38.16	302.2	7	22	0							
PERTH	49.16	240.0	8	55	4	16	6	9			19	51 SS
HONOLULU	49.73	45.4	8	55	-1	16	11	6				
HAWAII V.OB.	50.55	49.5	8	51	-11	16	9	-7				
MANILA	53.20	300.8	9	25	3	16	42	-10				
BAGUIO CITY	54.47	302.4	9	31	0	17	13	3				
DUMONT	55.17	192.4	9	35	-1	17	21	2				
ARUYAMA	56.91	329.9	9	43K	-6	17	43	1				
MATUSIRO	57.07	333.2	9	47	-3	17	41	-3			13	9 PPP
SENDAI	57.43	336.4	9	56	3	17	55	6				
HSINKONG	57.54	309.6	9	58	5	17	58	8				
HWALIEN	57.87	310.6	10	6	10							
BANDUNG	57.97	270.7	9	23	-33	17	25	-31				
LEMBANG	58.01	270.8	9	56	-1	18	1	5				
CAPE HALLETT	58.05	178.5	9	55	-2	18	1	4			12	0 PP
NAGASAKI	58.27	324.0	9	56	-2	18	7	7				
TAIPEI	58.57	311.5	10	17	16	18	8	4				
DJAKARTA	58.92	271.4	10	1K	-2							
ZO-SE	62.54	316.8	10	26	-2	18	55	0			12	46 PP
HONG KONG	62.67	304.7	10	29	0	19	1	5			10	59 PCP
WILKES	63.56	202.0	10	37	3	19	9	2			23	19 SS
SCOTT BASE	63.59	179.9	10	32	-3	19	17	9				
CANTON	63.78	304.9	10	35	-1	19	15	5			23	28 SS
NANKING	64.72	316.2	10	41	-1	19	22	0				
OASIS-BUNG.	67.23	203.6	10	56	-2	19	53	1				
CHANGCHUN	68.86	329.4	11	6	-2	20	16	4			13	45 PP
MEDAN	69.29	279.4	11	9K	-2							
MIRNY	70.35	204.0	11	15	-2	20	31	2				
PEKING	71.31	321.5	11	22	-1	20	43	2			11	43 PCP
SIAN	72.79	313.1	11	32K	0	21	0	2				
TATUNG	73.12	320.2	11	35	1							
KUNMING	73.27	302.0	11	35	0	21	8	5			11	55 PCP
BYRD STATION	73.30	169.9	11	29	-6	21	1	-2				
CHENGTU	74.66	307.7	11	42	-1	21	20	1			22	1 PS
SOUTH POLE	75.81	180.0	11	45	-4	21	32	1				
PORT BLAIR	77.31	285.6	12	42	44	21	55	7				
LANCHOW	77.32	312.6	11	59	1	21	54	6				
ULAN-BATOR	81.32	324.2	12	18	-1							
CHITTAGONG	81.50	295.6	12	23	3	22	42	10			15	33 PP
SHILLONG	82.52	298.7	12	26	0	22	48	6				
LHASA	84.57	302.3	12	37A	1	23	5	2			15	57 PP
BERKELEY	84.60	48.9	12	36K	0	22	56	-7				
HOWRAH	84.63	294.8	12	41	5							
LICK	84.86	49.6	12	39	1							
SHASTA	85.60	46.3	12	42	1							
FRESNO	86.02	50.7	12	52	9							
MINERAL	86.02	46.8	12	43	0							
COLLEGE	86.19	17.9	12	39	-5	23	5	-14			16	2 PP
PASADENA	86.35	53.6	13	38A	53	23	17	-3			24	19 SP
CHATRA	86.92	298.5	12	54	6							
RENO	87.00	48.1	12	50	2							
VICTORIA	88.04	38.8	13	14	21	23	35	-1			13	47
SEATTLE	88.38	39.9									16	5 PP
HORSESHOE B.	88.48	38.0	13	1	6							
BOULDER CITY	89.54	52.7	13	2	2							
EUREKA	89.77	49.1	12	58	-3							
TUCSON	91.64	57.3	13	13	3	24	15	6			16	56 PP
TUCSON TELE.	91.75	57.2	13	8	-3						13	47
HYDERABAD	92.17	287.3				24	22	8				
HUNGRY HORSE	93.84	41.1	13	18	-2						17	22 PP
BOMBAY	97.71	287.5									16	50
TACUBAYA	98.81	72.2	14	29	46						17	18 PP

LUBBOCK	99.29	57.7				24	26	-48		
RESOLUTE	106.01	15.9	14	13	777	26	11	-21	24	51 SKS
FLORISSANT	109.14	53.6				25	6	-3	28	23 PS
ST. LOUIS 1	109.24	53.8	14	32	777	25	5	1	18	57 PP
THULE	111.77	12.0	15	25	777					
NORD	112.63	0.5							19	24 PP
HUANCAYO	113.59	110.1				26	51	85		
BALBOA HTS.	115.47	86.8							25	34 SKKS
TALA POZO	115.61	130.7							29	21 PS
CLEVELAND	115.91	50.7				25	34	-1		
LA PAZ	118.18	117.8	18	51	2				29	51 PS
CHINCHINA	118.43	92.1				25	39	-5	20	9 PP
APATITY	118.65	341.3	18	50	0				20	2 PP
WASHINGTON	119.52	53.3							20	17 PP
OTTAWA	119.65	45.7	18	48	-4					
BOGOTA	119.85	92.9							20	15 PP
GALERAZAMBA	119.96	85.7				25	37	-13		
FUQUENE	120.38	92.0							20	16 PP
SODANKYLA	120.79	343.0	18	52	-2					
SHAWINIGAN	121.43	43.9	18	52	-3					
PALISADES	121.67	50.5				25	59	4	20	22 PP
KIRUNA	122.09	345.4	18	54	-3				20	28 PP
SCORESBY SD.	123.60	3.3	18	57	-2				20	37 PP
HELSINKI	126.20	337.2	19	7	3					
SKALSTUGAN	127.52	345.7	19	6	-1					
HALIFAX	128.15	44.0							38	33 SS
UPPSALA	129.01	340.2	19	18	8				21	6 PP
SAN JUAN	129.69	77.9	19	17	6					
BERMUDA	130.34	59.6	19	15	3				21	23 PP
KSARA	131.21	302.6	19	16	2				21	37 PP
JERUSALEM	132.12	300.0	19	13	-3				22	40
GOTEBORG	132.51	341.6							22	47 PKS
LWOW	133.09	327.1	19	18	0				21	47 PP
WARSAW	133.09	331.3	19	11	-7				22	52 PKS
ASTRIDA	133.79	252.1	19	19	0				21	54 PP
UVIRA	134.01	250.7	19	20	1				21	57 PP
COPENHAGEN	134.01	339.7	19	19	0				21	56 PP
LWIRO	134.78	252.1	19	18	-3					
BUCHAREST	134.79	319.7	19	13	-8				21	47
KRAKOW	135.04	329.6				27	11	40	22	1
SKALNATE PL.	135.44	328.5	19	21	-1				22	0 PP
HELWAN	135.75	298.2	19	21	-2				22	24 PP
RACIBORZ	135.85	330.7							17	40
ABERDEEN	136.29	350.9							22	6
TIMISOARA	137.00	324.0	18	51	-34	27	33	59		
HURBANOVO	137.33	328.3							22	41
HALLE	137.52	336.4	19	28	2	26	38	3	23	3 PKS
PRAGUE	137.58	333.2							23	9 PKS
PRUHONICE	137.59	333.0	19	27	1				22	12 PP
BRATISLAVA	137.68	329.4	19	28	2				22	17 PP
BELGRADE	137.99	323.3							21	45
JENA	138.11	336.1	19	25	-2	26	44	8	22	43 PP
PLAUEN	138.22	335.3	19	27	0				22	20 PP
WITTEVEEN	138.27	341.5	19	33	6					
DURHAM	138.50	349.4	19	31	3				22	18 PP
SONNEBERG	138.69	335.9	19	31	3				23	7 PKS
ATHENS	139.33	312.5	19	38	9				23	16 PKS
DE BILT	139.35	342.1	19	21	-8				22	21 PP
BENSBERG	139.70	339.6	19	30	0				22	27 PP
RATHFARNHAM	140.63	353.0	19	40A	9					
UCCLE	140.74	341.9	19	7	-25					
STUTTGART	140.76	336.0	19	25	-7	27	2	22	22	48 PP
TRIESTE	141.08	329.0	19	30	-2				22	37 PP
DOURBES	141.28	341.1	19	30	-3					
EBINGEN	141.33	335.6	19	25	-8					
KEW	141.36	346.6	19	25	-8				23	17 PKS
STRASBOURG	141.47	337.0	19	31	-2				22	59 PP
PARIS	143.06	342.1	19	33	-3	27	4	20	22	46 PP
NEUCHATEL	143.08	336.3	19	37	1				23	5 PP
FLORENCE X.	143.66	328.9	19	33	-4	26	37	-8		
ROME	144.33	325.6	19	35A	3				23	7 PKS
REGGIO CALA.	144.80	317.8	19	40	1					
MESSINA	144.81	318.0	19	35	-4	26	55	9	22	59 PP
MONACO	145.51	332.5	19	41A	1					
CLERMONT-FD.	145.54	339.0	19	41	1				23	5 PP
ALGIERS UNI.	153.05	329.2	19	53	1				20	4 PKP2
TOLEDO	153.12	343.4	19	55	3				27	55
GRANADA	155.47	340.2	20	3K	8				23	59 PP
MALAGA	156.15	341.2	19	52	-4				24	0 PP

TAMANRASSET	159.90	297.7	20	2	2						24	32	PP
MBOUR	176.85	87.7	20	12A	0						22	0	PKP2

AUGUST 20 8.H 46.M 13.S EPICENTRE 23.91 122.25 DEPTH= 64.KM

DEPTH OF FOCUS= 0.005R

A=-0.48835 B= 0.77402 C= 0.40300 D= 0.8457 E= 0.5336
G=-0.2150 H= 0.3408 K=-0.9152 HT= 3.7

SE= 2.58

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
HWALIEN	0.58	276.2	0	13A	-2	0	23	-3				
ILAN	0.97	332.1	0	16K	-3	0	30	-3				
HSINKONG	1.14	225.3	0	20K	-1	0	32	-4				
YUSHAN	1.26	250.6	0	28	5	0	44	5				
TAIPEI	1.30	329.4	0	22A	-1	0	40	0				
ALISHAN	1.38	254.1	0	25	1	0	43	1				
TAICHUNG	1.45	279.8	0	27A	2	0	48	4				
HSINCHU	1.47	307.5	0	27	2	0	47	3				
TAITUNG	1.53	221.4	0	26	0	0	47	1				
TAWU	1.99	218.9	0	26	-6	0	45	-11				
TAINAN	2.07	244.5	0	35	2	1	3	5				
HENGCHUN	2.35	216.3	0	38K	1	1	10	5				
HONG KONG	7.61	259.5	1	50	-1	3	10	-6				
BAGUIO CITY	7.61	192.2	1	47	-4							
CANTON	8.27	266.1	1	57	-3	3	35	2				
NANKING	8.66	340.2	2	0	-5							
FUTZELING	9.06	325.7	3	43	93							
MANILA	9.36	187.6	2	15	1	4	28	29				
DAIREN	14.95	358.1	3	32	3							
SIAN	15.54	314.5	3	36K	0							
ABUYAMA	15.92	43.7	3	54K	13							
PEKING	16.87	343.7	3	53A	0							
CHENGTU	17.54	296.5	4	2A	1	7	21	9			4	20 PP
TATUNG	17.83	337.0	4	6	1							
KUNMING	17.85	277.7	4	7A	2	7	31	12			4	24 PP
MATUSIRO	18.65	43.8	4	9	-6	7	41	4				
LANCHOW	20.01	311.5	4	32A	2	8	17	11				
CHANGCHUN	20.03	6.5	4	26	-4							
KOROR	20.23	142.6	4	32	0							
ULAN-BATOR	26.89	336.8	5	36	-1							
SHILLONG	27.61	279.8	5	44A	1	10	40	21				
LHASA	28.39	288.4	5	53	3							
MEDAN	30.43	232.0	6	11	3							
CHATRA	31.77	282.7	6	29	9							
PORT MORESBY	41.09	140.8	7	39	0	13	50	3	8	3	9	28 PCP
LAHORE	42.82	291.2	7	54	1							
QUETTA	49.25	290.0	8	45	1							
CHARTERS TS.	49.53	149.8	8	47	1							
BRISBANE	59.10	148.0	9	57	1						12	39
MAKHACH-KALA	63.23	307.5	10	24	0							
APATITY	67.71	335.5	10	51K	-2	19	47	3				
COLLEGE	68.60	27.3	10	57	-1							
SOTCHI	68.70	309.3	10	56	-3							
SODANKYLA	70.31	335.9	11	6	-3							
ISFJORD	70.53	347.9	11	8	-2							
SIMFEROPOL	72.24	311.8	11	20	0							
KIRUNA	72.44	337.1	11	20A	-1	20	56	17				
KSARA	74.25	300.3	11	34	2							
JERUSALEM	75.43	298.5	11	36K	-3							
UPPSALA	76.63	329.9	11	45	0							
SKALSTUGAN	77.26	334.5	11	48	-1							
RESOLUTE	78.78	9.4	11	55	-2	21	57	9				
KARAPIRO	79.27	139.8	12	17	17							
PRUHONICE	82.64	321.7	12	18	0							
STUTTGART	86.27	322.4	12	34	-2							
HORSESHOE B.	86.72	36.6	12	37	-1							
UCCLE	87.72	325.9	12	43	0						19	21
DOURBES	88.01	325.2	12	43	-1							
BANFF	89.66	32.2	12	51	-1							
PARIS	89.88	325.0	12	52	-1						16	31 PP
SHASTA	92.08	43.4	13	4	1							
HUNGRY HORSE	92.22	33.7	13	4	0							

MINERAL	92.77	43.4	13 6	0
RENO	94.36	43.2	13 32	18
LICK	94.45	45.9	13 30	16
BUTTE	94.50	34.8	13 15	1
EUREKA	96.77	41.5	13 25	0
PASADENA	98.60	46.8	13 59	26
SOUTH POLE	113.77	180.0	18 44	13
BYRD STATION	118.19	170.0	18 56	16

AUGUST 21 0.H 13.M 1.S EPICENTRE -20.26 -64.95 DFPTH= 350.KM

DEPTH OF FOCUS= 0.050R

A= 0.39756 B=-0.85058 C=-0.34417 D=-0.9059 E=-0.4234
G=-0.1457 H= 0.3118 K=-0.9389 HT= 4.6

SE= 1.56

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
LA PAZ	4.80	320.5	1 18K	0	2 19	0		1 29	PP
TALA POZO	7.56	175.3	1 51	2	3 15	-1		1 59	PP
HUANCAYO	12.88	307.7	2 53	0	5 14	4			
SANTIAGO	14.07	200.0	3 5	-2	5 35	-1			
SANTA LUCIA	14.08	200.1	3 5	-2	5 35	-1		4 17	
LA PLATA	15.85	158.4	3 24A	-2	6 10	-1			
CONCEPCION	17.64	199.1	4 12	28	7 15	30		5 37	
BOGOTA	26.29	339.1	5 7	1	9 12	0		6 15	PP
FUQUENE	26.98	340.4			9 21	-2		6 17	PP
CHINCHINA	27.17	336.2	5 14	0	9 21	-5		6 19	PP
GALERAZAMBA	32.47	340.9			10 51	2		13 27	
ST. VINCENT	33.41	6.5	6 /	-1					
DOMINICA	35.50	5.9	6 25	-1					
SAN JUAN	38.41	358.2	6 47	-3				8 55	PCP
TACUBAYA	51.76	317.4	8 53	19				11 25	*PPP
BERMUDA	52.34	0.3			15 34	-2		17 59	
PALISADES	61.52	352.3			17 35	0		21 27	SS
BYRD STATION	64.29	189.1	10 1	1			11 18	10 33	PCP
OTTAWA	66.07	351.7	10 10	-1					
SHAWINIGAN	66.86	354.1	10 16A	0					
SEVEN FALLS	67.27	355.6	10 18	-1					
TUCSON TELE.	68.21	319.2	10 25	0			11 44		
TUCSON	68.22	319.1	10 25	0			11 47	10 50	
SOUTH POLE	69.87	180.0	10 35	0				10 53	PCP
RAPID CITY	72.97	332.2	10 52	-1			12 14		
BOULDER CITY	73.18	319.6	10 54	0					
PASADENA	74.10	316.3	11 0	0	20 4	1	12 21	20 36	SCS
SALT LAKE C.	74.73	324.9	11 4	1					
EUREKA	76.16	321.7	11 11	0			12 31	11 49	
FRESNO	76.77	317.6	11 15	0					
BOZEMAN	77.81	328.9	11 23	3					
LICK	78.28	317.1	11 23A	0				12 47	
RENO	78.48	319.8	11 24A	0					
BUTTE	78.81	328.3	11 25	0			12 46		
BERKELEY	78.99	317.3	11 27A	1				12 50	
MINERAL	80.07	319.6	11 32	0					
KIMBERLEY	80.29	117.0	11 35	2					
GRAHAMSTOWN	80.37	121.9	11 34	0					
CAPE HALLETT	80.56	194.8	11 35A	0			12 56		
SHASTA	80.76	319.5	11 35A	-1					
TAMANRASSET	80.96	61.7	11 39	2				13 0	
HUNGRY HORSE	81.15	329.3	11 37	-1			13 6		
PIETERMZBURG	84.66	119.5	11 48	-8					
ALGIERS UNI.	85.57	48.3	12 2	2	21 50	-10	13 24		
VICTORIA	86.02	325.4	12 1A	-1				13 24	
HORSESHOE B.	86.46	326.1	12 4A	0					
LWIRO	92.75	93.4	12 36	2					
OASIS-BUNG.	93.16	174.2	12 37	1					
STUTTGART	95.07	39.7	12 44	0					
RESOLUTE	96.63	352.3			23 41	3		30 19	SS
PLAUEN	97.53	38.9	12 57	2				19 46	PP
CHARTERS TS.	129.65	219.3	18 29	2				21 19	
QUETTA	135.65	67.2	18 42	3					
PORT MORESBY	136.80	230.0	18 50	9				19 8	PKP2
MATUSIRO	154.05	313.6	19 13	4				21 0	*SPKP
SHILLONG	158.01	71.7	19 18	4					

SIAN	165.04	20.0	19	28	6							
CHENGTU	165.63	41.7	19	26	4						30	26
KUNMING	167.62	65.0	19	29	6							
NANKING	167.78	344.8	19	28	4							

AUGUST 21 1.H 9.M 0.S EPICENTRE -24.15-175.82 DEPTH= 0.KM

A=-0.91110 B=-0.06653 C=-0.40678 D=-0.0728 E= 0.9973
G= 0.4057 H= 0.0296 K=-0.9135 HT= 3.6

SE= 2.35

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	8.02	317.0	2	3	2	3	33	0					
AFIAMALU	10.89	21:3	2	38	-2	4	31	-13					
ONERAHI	14.36	214.0									3	40	
NOUMEA	16.40	272.9	3	58K	5	7	33	37					
BRISBANE	28.20	256.5	5	56	0	11	7	26					
RIVERVIEW	30.35	243.9	6	14	2								
CHARTERS TS.	35.31	269.1	6	55A	-4	12	35	2					
MELBOURNE	36.01	238.4	7	4	-1								
PORT MORESBY	38.22	286.2	7	20	-3	13	32	14			9	35	PPP
CAPE HALLETT	48.81	185.6	8	52	3	16	2	10			11	32	PPP
DUMONT	50.64	201.0	9	1	-2								
SCOTT BASE	54.40	184.5	9	32	1	17	15	6					
BYRD STATION	60.73	170.4	10	13	-3								
WILKES	61.57	206.3	10	28	7								
OASIS-BUNG.	65.54	206.3	10	45	-3	19	33	1					
SOUTH POLE	66.00	180.0	10	50	0								
MIRNY	68.58	205.5	11	5	-2	20	9	0					
MATUSIRO	74.32	323.0	11	39	-2	21	14	-1			22	55	SCS
BERKELEY	79.59	40.3	12	11	0	22	16	4					
LICK	79.61	41.1	12	12	1								
PASADENA	79.74	45.4	12	11	0	22	17	3					
PETROPAVLOVK	80.09	344.7	12	10	-3						22	8	
FRESNO	80.36	42.5	12	15	0								
SHASTA	81.40	38.1	12	21	1								
ZO-SE	81.56	309.4	12	20	-1	22	40	7					
MINERAL	81.61	38.8	12	22	1								
RENO	82.13	40.3	12	24	0								
BOULDER CITY	83.03	45.6	12	30	1								
CANTON	83.29	298.8	12	30	0	23	4	14			22	49	SKS
TUCSON	83.62	50.6	12	33	1						13	48	
TUCSON TELE.	83.74	50.6	12	33	1								
NANKING	83.78	309.1	12	32	0	23	24	29			23	0	SKS
EUREKA	84.41	42.3	12	35	-1								
VICTORIA	86.18	31.9	12	43	-1								
CHANGCHUN	86.50	321.6	12	46	0								
SALT LAKE C.	87.72	43.1	12	55	3								
MAGADAN	87.79	343.7	12	51	-1								
PEKING	89.88	314.6	13	2A	0	24	2	9			23	33	SKS
BUTTE	90.30	38.5	13	4	0								
LUBBOCK	90.77	53.4	13	7	1								
HUNGRY HORSE	90.86	36.0	13	6	-1								
BOZEMAN	90.97	39.4	13	12	5								
COLLEGE	91.34	11.6	13	6	-3	24	14	7					
SIAN	92.02	306.7	13	12	0	24	25	12			23	49	SKS
KUNMING	92.79	296.1	13	17A	1	24	30	11			23	51	SKS
CHENGTU	94.13	301.7	13	23	1	24	38	7			23	58	SKS
HUANCAYO	94.50	105.2	13	34	11								
RAPID CITY	94.90	43.7	13	26	1								
LANCHOW	96.58	306.5	13	32	-1								
LA PAZ	98.72	112.4	13	33	-10								
LHASA	104.10	296.3	14	9	2								
RESOLUTE	110.72	16.3				27	0	105			28	40	PS
PALISADES	114.12	54.2									29	20	PS
QUETTA	124.43	291.0	19	2	1								
SVERDLOVSK	128.12	324.4	19	10	2								
APATITY	132.98	345.1	19	17	-1						22	44	
KIRUNA	135.17	351.3	19	30	8						22	50	PKS
MAKHACH-KALA	139.82	308.7	19	30	0						22	21	
PULKOVO	139.98	339.7	19	29	-2						23	5	
MOSCOW	140.05	330.9	19	33	2						22	27	
TIFLIS	142.07	307.5	19	30	-4						22	31	
UPPSALA	143.10	348.7	19	31	-5								

UVIRA	143.35	224.8	19	36	0			22	50 PP
ASTRIDA	143.61	226.6	19	35	-2			22	50 PP
SOTCHI	145.05	312.5	19	38	-1				
GOTEBORG	146.01	352.5	19	41	0				
SIMFEROPOL	148.05	317.9	19	44	0			30	9
DURHAM	149.12	6.5	19	52A	6				
WARSAW	149.15	339.7	19	47	1				
RATHFARNHAM	149.83	12.5	19	56A	9			20	9 PKP2
LWOW	150.05	333.9	19	53	5				
KSARA	150.74	296.5	19	51	2			22	52 PP
POTSDAM	151.00	348.7	19	54	5				
KRAKOW	151.37	338.6	19	56	6				
JERUSALEM	151.62	292.5	19	53	3			20	2 PKP2
RACIBORZ	151.90	340.6	19	49	-1				
SKALNATE PL.	152.00	337.2	19	57	7				
HALLE	152.04	349.6	19	56	5			24	14 PP
COLLMBERG	152.05	348.1	19	58	7				
KEW	152.50	6.1	20	16	25				
JENA	152.65	349.8	19	57	6	27 32	35	23	39 PP
PRAGUE	152.92	345.4	20	5	13			21	25
PRUHONICE	152.97	345.2	19	51	-1			24	0
BUCHAREST	153.00	323.9	19	54	2				
BENSBERG	153.13	355.8	20	0	8				
SONNEBERG	153.25	350.0	20	0	8				
UCCLE	153.39	359.8	20	12	20				
BRATISLAVA	153.93	340.1	19	57	4			20	15 PKP2
DOURBES	154.09	359.4	19	22	-31				
STUTTGART	155.11	352.1	19	55	0			24	13 PP
HELWAN	155.18	289.2	19	55	0			24	0 PP
PARIS	155.35	2.7	19	55	0	26 58	-2	23	54 PP
TUBINGEN	155.36	352.2	19	55	0				
STRASBOURG	155.45	354.3	20	2	7				
EBINGEN	155.72	352.2	19	56	1				
ATHENS	158.38	314.2						21	44
ROME	160.99	340.7						29	30 PS
MESSINA	162.96	328.0	20	4	0				
MALAGA	165.46	28.5	20	5A	-1			21	5 PKP2
ALGIERS UNI.	167.38	4.1	20	9	1			25	4 PP
RELIZANE	168.02	14.3	19	57	-11			20	22 PKP2
TAMANRASSET	178.16	222.5	20	13	1			25	52 PP

AUGUST 21 11.H 54.M 45.S EPICENTRE 27.85 139.70 DEPTH= 505.KM

DEPTH OF FOCUS= 0.074R

A=-0.67534 B= 0.57264 C= 0.46477 D= 0.6467 E= 0.7627
G=-0.3545 H= 0.3006 K=-0.8854 HT= 2.5

SE= 1.85

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TORISIMA	2.67	11.1	0	52	-18	1	55	-10				
MERA	7.04	0.8	3	8	80							
MUROTO	7.18	319.8	1	52	3	3	21	5				
MISIMA	7.27	355.1	1	54	4	3	12	-6				
KAMEYAMA	7.50	339.2	1	52	-1	3	22	0				
YOKOHAMA	7.55	359.7	1	55	2	3	22	-1				
TOKUSIMA	7.60	325.9	1	53	-1	3	25	1				
SIMIDU	7.61	311.8	1	54	0	3	27	3				
NAGOYA	7.66	342.9	1	56	2	3	15	-10				
OSAKA	7.66	333.2	1	54	0	3	26	1				
HUNATU	7.66	354.3				3	23	-2				
SUMOTO	7.68	328.6	1	55A	1	3	27	2				
KOTI	7.78	318.4	1	55	0	3	22	-5				
TOKYO C.M.O.	7.80	0.3	1	54	-2	3	26	-1				
KOHU	7.81	353.2	1	58	2	3	27	-1				
KOBE	7.83	331.5				3	23	-5				
ABUYAMA	7.84	334.2	1	56K	0	3	30	2				
GIHU	7.93	342.3	1	55	-2	3	29	-1				
HIKONE	7.96	339.1	2	0	3	3	33	3				
TAKAMATU	8.06	324.5	1	57	-1							
TITIBU	8.12	356.4				3	17	-16				
MIYAZAKI	8.25	301.4	2	1	1						3	10
KUMAGAYA	8.28	358.2				3	33	-3			3	21
KAKIOKA	8.36	2.6	1	59	-2	3	33	-5				
HATUYAMA	8.44	316.6	2	4	2	3	35	-4				

YAKUSIMA	8.45	290.0	2 2	0	3 43	3		
MATUMOTO	8.50	350.5	2 0	-3	3 41	0		
OIWAKE	8.51	353.7			3 40	-1		
MITO	8.53	4.2			3 35	-6		
MAEBASI	8.54	356.6	1 59	-4	3 31	-10		
UTUNOMIYA	8.67	0.9	2 1	-4	3 37	-7		
TOYOOKA	8.71	332.7	2 4	-1	3 46	1		
MATUSIRO	8.76	352.1	2 2	-4	3 38	-8		3 9
KAGOSIMA	8.78	297.1	2 8	2	3 49	3		
OOITA	8.79	309.5	2 7	1	3 48	2		
NAGANO	8.88	352.1	2 7	0	3 46	-2		
ONAHAMA	9.13	6.1			3 50	-2		3 16
KUMAMOTO	9.22	304.7	2 10	0	3 59	5		
SHIRAKAWA	9.25	2.6			3 50	-5		3 35
SAGA	9.73	305.9	2 17	1	4 10	6		
NAGASAKI	9.78	302.2	2 16	0	4 10	5		
HUKUSIMA	9.89	3.5	2 16	-1	4 6	-1		
NIIGATA	10.05	357.0						6 25
YAMAGATA	10.38	2.8			4 15	-2		
SENDAI	10.44	5.2	2 22	-1	4 17	-1		
SAKATA	11.02	0.5			4 33	4		
MIZUSAWA	11.31	5.7	2 36	4	4 35	1		
AKITA	11.84	1.5			4 46	1		
MORIOKA	11.88	5.5	2 37	-1	4 41	-4		
MORI	14.23	2.6			5 34	4		
URAKAWA	14.48	9.2	3 12	7	5 21	-13		5 41
TOMAKOMAI	14.71	5.5			5 47	8		
SAPPORO	15.24	4.6			5 39	-9		
OBIHIRO	15.30	9.8			5 57	8		
ZO-SE	16.45	285.8	3 23	-2	6 13	3		
NANKING	18.59	288.1	3 45K	-1	6 53	6		
CHANGCHUN	19.71	327.8	3 58	2	7 17	10		
PEKING	22.92	308.1	4 24	-2				
HONG KONG	23.76	262.2	4 33	0	8 15	2		
CANTON	24.30	264.7	4 37	-1				
SIAN	27.07	291.3	5 3A	0				
LANCHOW	31.39	294.3	5 40K	0				
ULAN-BATOR	32.38	317.1	5 49	0				
KUNMING	33.19	273.8	5 55K	0				
LHASA	42.46	284.4	7 13	2				
SHILLONG	42.58	278.4	7 11K	-1				8 52
COLLEGE	57.72	28.8	9 3	-1				
QUETTA	62.63	291.4	9 36K	0				
APATITY	70.50	337.0	10 24	-1	18 55	-2		
RESOLUTE	71.84	13.2	10 33	1	19 19	7		
SODANKYLA	72.89	338.1	10 38	-1				
KARAPIRO	73.54	151.1	10 41	-1				12 23
KIRUNA	74.59	339.9	10 48	0				19 45
SHASTA	77.92	50.4	11 7	1				
MINERAL	78.61	50.4	11 10	0				
HUNGRY HORSE	79.58	40.6	11 16	1			12 55	
SKALSTUGAN	79.92	338.8	11 15	-2				
LICK	79.95	53.2	11 17	0				
UPPSALA	80.57	334.3	11 19	-1				
EUREKA	82.83	49.1	11 33	1			13 14	
PASADENA	83.95	54.6			21 21	3		32 4
TUCSON TELE.	90.21	52.9	12 10	3				
SOUTH POLE	117.70	180.0	17 48	0				
BYRD STATION	119.11	168.7	17 51	0				
MBOUR	132.32	328.7	18 35	19				
LA PAZ	151.93	72.1	18 51	1				

AUGUST 21 12.H 18.M 57.S EPICENTRE 52.51-167.60 DEPTH= 0.KM

A=-0.59702 B=-0.13124 C= 0.79142 D=-0.2147 E- 0.9767
G=-0.7730 H=-0.1699 K=-0.6113 HT= -6.3

SE= 3.54

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
COLLEGE	16.00	31.6	3 50	2				
SITKA	19.06	63.4	4 33	7				
PETROPAVLOVK	20.30	285.3	4 33	-7				12 1
MAGADAN	23.95	303.6	5 13	-3				
VICTORIA	28.04	80.3	5 59	5				

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

SHASTA	32.70	92.8	6 40	4				
UKIAH	33.15	95.8	6 51	11				
MINERAL	33.39	92.7	6 46A	4				
HUNGRY HORSE	33.72	75.2	6 48	3			9 24	PCP
BERKELEY	34.53	96.7	6 55	3				
RENO	34.98	92.4	7 0	5				
LICK	35.25	96.9	7 1A	3				
BUTTE	35.73	77.9	7 5	3				
RESOLUTE	35.78	25.7	7 4	2	12 43	3	9 29	PCP
FRESNO	36.74	96.0	7 17	7				
EUREKA	37.36	89.3	7 20	4				
BOULDER CITY	40.28	92.7	7 45	5				
MATUSIRO	40.77	269.1	7 39A	-5	13 49	-6	16 32	
RAPID CITY	42.36	74.7	8 0	3				
TUCSON	45.24	93.5	8 25	5				
TUCSON TELE.	45.25	93.3	8 25	5			10 18	PP
FAYETTEVILLE	52.74	77.3	9 19A	1				
ZO-SE	54.86	276.7	9 30	-4				
OTTAWA	56.81	57.3	9 50K	2				
SHAWINIGAN	57.51	54.6	9 54	1				
APATITY	59.23	350.8	10 2	-3	18 16	4		
KIRUNA	59.84	356.5	10 7A	-2				
SODANKYLA	59.97	353.7	10 18	8				
WESTON	61.19	57.2	10 20K	2				
SKALSTUGAN	64.26	0.1	10 38	-1				
CHENGTU	65.39	288.7	10 43	-3				
UPPSALA	67.92	357.2	11 1	-1				
GOTEBORG	70.16	0.2	11 15	-1				
KUNMING	70.37	285.6	11 43A	26				
RATHFARNHAM	73.42	11.6	11 37K	2				
NAMANGAN	73.71	317.3	11 35	2				
SHILLONG	76.18	293.9	11 48A	-3				
HALLE	76.37	0.3	11 53	1				
JENA	76.94	0.5	11 56	1				
PLAUEN	77.37	0.2	11 56	-2				
SONNEBERG	77.49	0.8	11 59	1				
DOURBES	77.56	5.1	11 59	0			15 17	PP
PRUHONICE	77.88	358.6	12 1	0			12 13	PCP
SKALNATE PL.	78.47	354.8	12 4	0				
PARIS	78.71	6.7	12 7A	2			15 2	PP
STUTTGART	79.07	2.2	12 7	0				
STRASBOURG	79.22	3.1	12 9	1				
TUBINGEN	79.30	2.3	12 9	1				
BRATISLAVA	79.62	356.8	12 14	4				
EBINGEN	79.65	2.3	12 12	2				
SIMFEROPOL	81.14	344.6	12 18	0			22 46	
CHARTERS TS.	82.58	223.1	12 22	-4				
QUETTA	84.90	314.9	12 36A	-2				
CAPE HALLETT	125.47	188.1	14 24	777			20 14	PP
BYRD STATION	135.08	169.4	19 16	-5				
SOUTH POLE	142.32	180.0	19 26	-8				
KIMBERLEY	154.55	334.0	20 11	18				

AUGUST 21 20.H 59.M 4.S EPICENTRE -18.13-175.19 DEPTH= 163.KM

DEPTH OF FOCUS= 0.021R

A=-0.94763 B=-0.07973 C=-0.30927 D=-0.0838 E= 0.9965
G= 0.3082 H= 0.0259 K=-0.9510 HT= 5.1

SE= 1.49

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
AFIAMALU	5.34	38.5	1 17K	-2	2 14	-6			
NOUMEA	17.72	253.4	3 57K	-1	7 14	5		4 58	
ONERAHI	19.86	205.7	4 22	2	7 54	5		8 0	
KARAPIRO	21.33	200.5	4 35	0	8 24	7			
TUAI	21.65	196.4	4 39	1	8 20	-2			
WELLINGTON	24.63	198.4	5 5	-2	9 5	-8		15 45	SCS
COBB RIVER	25.12	201.9	5 11	0	9 14	-7			
ROXBURGH	30.23	201.9			9 33	-70		7 2	
BRISBANE	30.66	246.6	6 0K	-1	10 45	-5			
RIVERVIEW	33.87	235.9	6 27K	-2	11 34	-6			
CHARTERS TS.	36.43	260.7	6 49K	-1	12 15	-4			
PORT MORESBY	37.53	278.2	6 59K	-1	12 33	-3	7 48	8 12	*SP

MELBOURNE	39.91	232.3	7	18	-1	13	4	-8			8	51	
TRUK	41.30	305.2	7	36	5						9	31	PCP
HONOLULU	42.61	23.9	7	40	-1	13	56	5	8	29	15	20	
KIPAPA	42.75	23.9	7	42	-1				8	31			
GUAM	50.47	305.7	8	42	-1						8	34	SCP
CAPE HALLETT	54.83	185.4	9	17K	2	16	52	11	10	25	10	7	PCP
DUMONT	56.46	199.7	9	25	-2	16	59	-4					
SCOTT BASE	60.41	184.3	9	55A	1	17	58	4			10	47	PCP
BYRD STATION	66.54	171.0	10	33	-1	19	1	-9	11	27			
WILKES	67.22	205.1	10	38	-1	19	15	-3					
MATUSIRO	69.95	321.5	10	54K	-1	19	48	-3	12	5	13	37	PP
ABUYAMA	70.46	318.6	10	58K	0	19	54	-2					
MANILA	70.81	293.1	11	3	3						15	15	
BAGUIO CITY	71.95	294.6	11	7	0						15	2	
SOUTH POLE	71.98	180.0	11	6	-1	20	11	-3	12	0			
PETROPAVLOVK	74.48	344.0	11	20K	-2	20	36	-6					
HWALIEN	74.49	302.1	11	24	2								
BERKELEY	74.66	40.9	11	22	-1				12	15			
LICK	74.72	41.7	11	23	0				12	16	14	6	PP
UKIAH	74.85	39.4	11	24	0				12	15			
Y.-SAKHLINSK	75.04	331.6	11	25	0	20	46	-2			12	25	
TAIPEI	75.07	303.0	11	26	1								
PASADENA	75.14	46.0	11	25A	-1	20	47	-2	12	17	21	9	SCS
FRESNO	75.56	43.0	11	28	0				12	20			
BANDUNG	75.72	267.3	11	27	-2	20	46	-9					
LEMBANG	75.76	267.4	11	29K	0	20	51	-5					
SHASTA	76.33	38.6	11	31	-1				12	25			
MINERAL	76.59	39.2	11	33	-1				12	27			
RENO	77.19	40.7	11	37	0								
VLADIVOSTOK	77.92	323.3	11	42	1	21	20	1					
ZO-SE	78.27	308.3	11	43K	0	21	22	-1			13	2	*SP
BOULDER CITY	78.43	46.0	11	44	0				12	36			
TUCSON	79.37	51.0	11	50	1	21	36	1	12	42			
TUCSON TELE.	79.50	51.0	11	51	1				12	43	14	33	
EUREKA	79.58	42.5	11	39	-11				12	42	30	39	PKKP
HONG KONG	79.90	297.4	11	53K	1	21	38	-2	12	54	13	11	*SP
NANKING	80.50	308.1	11	55K	0	21	47	1	12	50	13	12	*SP
CANTON	80.97	297.8	11	58K	0	21	51	0	12	51	13	17	*SP
CHANGCHUN	82.19	321.0	12	3	-1	22	1	-3	12	58	13	21	*SP
MAGADAN	82.22	343.3	12	2	-2	21	57	-7			13	2	
SALT LAKE C.	82.94	43.2	12	8	0				13	2			
TACUBAYA	83.39	67.2	12	12	2	22	1	-15			14	41	
BUTTE	85.24	38.4	12	19	0				13	12			
COLLEGE	85.36	11.4	12	18	-2				13	16			
HUNGRY HORSE	85.66	35.9	12	19	-2	22	27	-11	13	14	16	32	PP
BOZEMAN	85.97	39.2	12	25	2				13	19			
VERA CRUZ	86.02	68.5	13	8	45	22	44	3			22	32	
PEKING	86.11	314.2	12	23K	0	22	37	-5	13	19	22	29	SKS
LUBBOCK	86.71	53.2	12	29	3				13	19			
COMITAN	88.60	72.5									24	4	
SIAN	88.92	306.5	12	39	2	23	11	3	13	33	16	5	PP
RAPID CITY	90.14	43.3	12	44	1				13	35			
KUNMING	90.69	296.0	12	47K	2	23	28	4	13	41	16	23	PP
CHENGTU	91.48	301.7	12	50K	1	23	36	5	13	43	23	1	SKS
LANCHOW	93.48	306.7	12	59K	1	23	53	4	13	58	23	11	SKS
ULAN-BATOR	95.44	318.6	13	7	0								
HUANCAYO	95.46	104.5	13	9	2	24	19	13	14	3	23	27	SKS
IRKUTSK	98.48	322.2	13	19	-2	23	36	-55			17	21	PP
SHILLONG	100.18	293.6	13	27K	-1						17	38	PP
LA PAZ	100.39	111.2	14	22	53	24	57	10			26	51	PS
CHINCHINA	100.61	88.2				23	48	-61	14	25	18	17	*PPP
LHASA	101.92	297.4	13	38	2	25	8	8			17	49	PP
BOGOTA	101.98	89.0				23	56	-64			18	18	*PPP
FUQUENE	102.56	88.3				23	56	-69	14	28	25	56	*PS
CHATRA	104.58	293.8									17	25	PP
PALISADES	110.06	52.2				24	29	-5	15	4	28	24	PS
DEHRA DUN	113.11	295.8									19	12	PP
BERMUDA	116.54	62.4				24	56	-3			19	32	PP
FRUNSE	116.83	309.4	18	25	0	24	55	-6	19	19	19	35	PP
TASHKENT	120.81	307.7	18	33	0								
STALINABAD	121.28	304.5	18	34	0								
QUETTA	122.65	294.6	18	37	1	25	16	-4			20	7	PP
APATITY	127.31	346.6	18	44	-1	25	32	-2			20	44	PP
SODANKYLA	128.82	349.4	18	46	-2								
KIRUNA	129.33	352.4	18	38	-11						20	56	PP
ASHKABAD	129.51	304.5	18	48	-1	25	27	-13			22	15	PKS
KIMBERLEY	129.56	202.9	18	44	-5								
SKALSTUGAN	134.30	355.3	18	48	-10						22	9	SKP

PULKOVO	134.51	342.2	18	53	-6				22	28	PXS
MOSCOW	135.00	334.3	18	58	-2			19	54	21	33 PP
HELSINKI	135.57	345.7	18	53	-8						
UPPSALA	137.31	350.5	18	52	-12					21	46 PP
GORIS	138.32	309.5	18	55	-11					21	56 PP
TIFLIS	138.63	313.3	18	57	-9					22	23 PKS
GOTEBORG	140.13	354.0	18	57	-12						
COPENHAGEN	142.07	353.0	19	8	-5			20	8	22	53 PKS
DURHAM	143.10	6.2	19	9A	-5					22	7 SKP
WARSAW	143.66	343.2	19	6K	-9						
SIMFEROPOL	143.76	324.0	19	14	-2			20	15	22	30 PP
RATHFARNHAM	143.85	11.3	19	13A	-3			20	10	21	8
LWOW	144.81	338.3	19	18	1			20	17		
POTSDAM	145.21	351.1	19	17	-1			20	22	21	14
WITTEVEEN	145.35	358.0	19	20K	2						
IASI	145.51	332.2	19	9	-10						
KRAKOW	145.92	342.5	19	20	1					21	57
DE BILT	146.10	359.6	19	23K	3			20	24		
HALLE	146.23	352.0	19	20	0			20	20	23	0 PP
COLLMBERG	146.27	350.7	19	20	0					20	21
RACIBORZ	146.36	344.4	19	22	2					22	50 PP
KEW	146.49	5.8	19	19K	-1			20	18		
SKALNATE PL.	146.60	341.5	19	20	-1						
JENA	146.83	352.2	19	20	-1			20	15	21	3
PLAUEN	147.18	351.3	19	18	-3			20	25	21	8
BENSBERG	147.19	357.2	19	21	0					22	53 PP
PRAGUE	147.21	348.5	19	22A	0	26	4 -8	20	18		
PRUHONICE	147.28	348.3	19	22	0	26	6 -6	20	22	23	4 PP
UCCLE	147.40	0.5	19	25	3						
SONNEBERG	147.42	352.4	19	21	-1					21	2
UVIRA	147.83	230.5	19	22	0					22	55 PP
DOURBES	148.11	0.3	19	26	3						
CAMPULUNG	148.12	332.5	19	27	4			20	23		
KSARA	148.15	305.5	19	24	1	26	5 -8	20	22	23	9 PP
BUCHAREST	148.28	330.3	19	25K	2			20	26	22	16
HURBANOVO	148.38	342.7	19	29	6			20	26		
BRATISLAVA	148.40	344.2	19	26	3			20	22	21	27
STUTTGART	149.23	354.3	19	24	-1	26	8 -6	20	27	24	21 *PPP
TIMISOARA	149.27	337.2	19	32	7					21	34
PARIS	149.34	3.0	19	24A	-1	26	3 -11	20	29	23	25 PF
JERUSALEM	149.38	302.2	19	18	-7			20	24		
TUBINGEN	149.48	354.4	19	25	0			20	26		
STRASBOURG	149.53	356.1	19	26K	1			20	26	23	9 PP
EBINGEN	149.84	354.5	19	24	-1			20	28		
RAVENSBURG	150.17	353.5	19	32	6						
BELGRADE	150.34	337.2	19	36A	10					23	3
BASLE	150.59	356.2	19	28	2						
SOFIA	150.89	331.2	19	27	0					20	20
CHUR	151.09	353.3	19	26	-1						
NEUCHATEL	151.15	357.0	19	28	1						
TRIESTE	151.57	346.8	19	27K	-1			20	31	19	44 PKP2
CLERMONT-FD.	152.40	2.6	19	32	3			20	28	23	25 PP
FLORENCE X.	153.86	349.4	19	21	-10			20	28	30	14 SKKS
ATHENS	154.22	323.9	19	36A	4						
MONACO	154.38	355.6	19	55	23						
ROME	155.42	346.1	19	33K	0			20	29	23	37 PP
TOLEDO	157.01	17.7	20	8A	33			21	4		
MESSINA	157.91	337.0	19	39	2	26	18 -6	20	40	23	57 PP
MALAGA	159.78	21.8	20	20K	41			21	13	24	55 PP
ALGIERS UNI.	161.37	4.4	19	40	0			21	25	20	26 PKP2
TAMANRASSET	175.33	351.9	19	50K	0			20	48	25	18 PP

AUGUST 22 0.H 1.M 22.S EPICENTRE -49.45 117.06 DEPTH= 0.KM

A=-0.29696 B= 0.58120 C=-0.75764 D= 0.8905 E= 0.4550
G= 0.3447 H=-0.6747 K=-0.6527 HT= -5.2

SE= 1.75

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
WILKES	17.15	189.0	4	5	2	7	28	15				
DUMONT	20.88	154.2	4	45	-1							
MIRNY	21.12	206.9	4	47	-2	8	52	12				
MELBOURNE	23.16	70.5	5	12	3						13	28
RIVERVIEW	29.56	71.0	4	59A	-70							

CAPE HALLETT	32.77	153.1	6	38	1				10	38
SCOTT BASE	33.91	163.2	6	46	-1					
BRISBANE	35.21	64.8	6	58	0	12	32	0		
CHARTERS TS.	37.49	48.9	7	16K	-1					
SOUTH POLE	40.74	180.0	7	44	-1					
PORT MORESBY	47.14	42.4	8	36	0	15	30	1	10	33 PP
CHITTAGONG	74.33	335.9	11	50	5	21	41	19	14	43 PP
SHILLONG	77.98	336.9	11	59	-3					
UVIRA	86.04	269.3	12	46	2					
LWIRO	87.17	269.9	12	51	1					
MATUSIRO	87.65	16.9	12	51	-1	23	32	-1	23	23 SKS
QUETTA	90.95	318.4	13	7	0					
TUCSON	140.64	97.6	19	34	2					
EUREKA	141.59	84.4	19	34	0					
NORD	144.66	349.4	19	19	-20					
SALT LAKE C.	144.95	85.4	19	40	1				20	25
HUNGRY HORSE	146.92	72.0	19	45	2					
BUTTE	146.93	76.6	19	44	1					
LUBBOCK	147.25	104.2	19	45	2					
BOZEMAN	147.75	78.0	19	50	6					
SAN JUAN	148.90	174.1	19	50	4					
RESOLUTE	151.35	17.1	19	55K	5				44	11 PSPS
RAPID CITY	152.15	85.6	19	51	0					

AUGUST 22 22.H 16.M 48.S EPICENTRE -5.61 150.34 DEPTH= 119.KM

DEPTH OF FOCUS= 0.014R

A=-0.86484 B= 0.49257 C=-0.09705 D= 0.4949 E= 0.8689
G= 0.0843 H=-0.0480 K=-0.9953 HT= 7.0

SE= 1.73

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT MORESBY	4.92	219.8	1	12A	-1	2	4	-6					
TRUK	13.08	6.6	3	3	1	5	32	7					
CHARTERS TS.	14.86	195.1	3	26A	1	6	14	7					
GUAM	19.75	343.7	4	24	1								
KOROR	20.38	308.9	4	29	0	8	10	4					
BRISBANE	21.90	173.6	4	45A	1	8	39	5					
NOUMEA	27.76	138.4	4	50K	-3								
RIVERVIEW	28.09	178.6	5	42A	-1	10	17	0					
SUVA	30.13	116.9	6	22	21	11	14	25			13	4	PCS
MELBOURNE	32.44	187.9	6	20	-1								
BAGUIO CITY	36.68	307.1	6	56	-1								
KARAPIRO	39.50	148.0	7	22A	1						12	37	
TONGARIRO	40.46	149.4									14	1	
KAIMATA	41.24	156.2	7	38	3								
ABUYAMA	47.60	342.0	7	47K	1								
GEBBIES PASS	42.72	156.1	7	49	2								
ROXBURGH	43.08	160.4									12	36	
MATUSIRO	43.44	345.8	7	52K	-1	14	31	19			10	32	
HONG KONG	44.97	309.3	8	5K	0	14	36	2			15	22	
ZO-SE	45.92	324.4	8	12A	-1	14	48	1	8	38	8	50	*SP
CANTON	46.08	309.6	8	14	0	14	52	3			15	37	*SS
NANKING	48.00	323.3	8	29K	0	15	20	4	8	54	10	22	PP
VLADIVOSTOK	51.30	342.7	8	55	1						16	9	
CHANGCHUN	54.15	337.8	9	14K	-1	16	37	-4	9	40	9	53	*SP
PEKING	55.24	328.3	9	22K	-1	16	59	4	9	49	10	0	*SP
KUNMING	55.44	305.5	9	26	1								
SIAN	55.67	318.4	9	25	-1								
CHENGTU	57.11	312.1	9	35	-1	17	20	0	10	1	10	12	*SP
LANCHOW	60.14	317.3	9	58	1	18	2	3			18	52	*SS
DUMONT	61.38	184.7	10	5	-1								
SHILLONG	64.63	301.6	10	35A	8								
ULAN-BATOR	65.52	329.5	10	33	0								
LHASA	66.75	305.4	10	41	0								
CAPE HALLETT	67.76	173.5	10	47	0						11	12	PCP
OASIS-BUNG.	69.47	199.3	10	56	-2						11	21	
IRKUTSK	69.62	331.9	10	57	-1								
MIRNY	72.31	200.7	11	14	-1						11	49	
SCOTT BASE	72.72	176.4	11	19	2	21	17	46					
COLLEGE	83.52	22.3	12	13	-3						13	18	
SOUTH POLE	84.43	180.0	12	21	0	22	30	-5	12	47			
BYRD STATION	84.54	169.9	12	18	-3	22	21	-15	12	48			
QUETTA	87.09	300.5	12	33	-1								

EUREKA	96.38	51.0	13 17	0		
MOSCOW	107.30	326.9	18 32	777		
SODANKYLA	107.65	340.3	14 4	777		
KIRUNA	109.40	342.0				18 44 PP
PULKOVO	109.61	332.3	18 50	777		
SKALSTUGAN	114.71	340.8				19 26 PP
STUTTGART	125.84	329.2	18 59	11	19 47	21 18 PP
HUANCAYO	131.32	111.3	19 3	5		
TAMANRASSET	142.01	300.2	19 16	-2	20 20	22 49 PP
ST. VINCENT	147.95	74.2	19 31	3		

AUGUST 22 23.H 18.M 34.S EPICENTRE -26.72-115.64 DEPTH= 0.KM

A=-0.38705 B=-0.80631 C=-0.44727 D=-0.9015 E= 0.4328
G= 0.1936 H= 0.4032 K=-0.8944 HT= 2.8

SE= 1.01

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
HUANCAYO	40.54	76.8	7 46	3				9 29 PCP
LA PAZ	45.11	87.0	8 2K	-18				
KARAPIRO	58.05	240.4	10 0	2				
TUCSON	58.82	4.8	10 4	1				
TUCSON TELE.	58.92	4.9	10 4	0				10 24
CAPE HALLETT	59.94	199.9	10 11A	0				10 38 PCP
PASADENA	60.59	357.6	10 14K	-1				
LUBBOCK	61.39	13.1	10 20	-1				
SCOTT BASE	61.46	193.6	10 21K	0				20 32 SCS
BOULDER CITY	62.37	0.7	10 28	1				
FRESNO	63.27	356.3	10 32	-1				
SOUTH POLE	63.43	180.0	10 34	0				
LICK	63.97	354.7	10 38K	0				
HALLEY BAY	64.11	163.8	10 37	-2	19 22	7		
BERKELEY	64.55	354.2	10 42	0				
SAN JUAN	65.72	52.4	10 48	-1				
EUREKA	65.86	359.7	10 51	1				
RENO	66.03	356.5	10 52	1				
MINERAL	66.96	355.1	10 57	0				
SALT LAKE C.	67.24	3.1	10 59	0				
SHASTA	67.37	354.4	10 59K	-1				
COLUMBIA	68.74	30.4	11 8	0				
DUMONT	71.21	204.1	11 23	0				
RAPID CITY	71.37	9.4	11 24	0				
BOZEMAN	72.17	3.4	11 29	0				
BUTTE	72.45	2.2	11 30	-1				
HUNGRY HORSE	74.74	1.1	11 44	0				
VICTORIA	75.22	354.7	11 47K	0				
HORSESHOE B.	76.06	354.9	11 51	-1				
BANFF	77.55	0.1	11 59	-1				
WESTON	79.99	31.7	12 15A	2				
OTTAWA	80.45	27.3	12 15	-1				
BREBEUF	81.41	28.4	12 20K	-1				
SHAWINIGAN	82.60	28.3	12 27	0				
OASIS-BUNG.	83.33	194.0	12 29	-2				
MIRNY	84.51	191.1	12 37	0				
CHARTERS TS.	88.07	248.7	12 55	1				
COLLEGE	94.66	346.8	13 23	-2				
TAMANRASSET	126.82	80.6	19 9	3				
PARIS	127.91	47.6	19 10	1				21 2 PP
HSINKING	128.54	306.1	19 49	39				
SKALSTUGAN	130.24	27.5	19 13	0				
KIRUNA	131.17	20.5	19 15	0				
STUTTGART	132.33	47.3	19 18	1				21 29 PP
SODANKYLA	133.33	19.0	19 19	0				
LWIRO	135.20	124.4	19 26	4				
ASTRIDA	135.65	125.7	19 26	3				
MOSCOW	145.16	26.4	19 40	0				
KISHINEV	145.51	44.6	19 41	0				
SIMFEROPOL	149.73	45.2	19 53	6				
SHILLONG	155.29	273.5	20 7	12				

AUGUST 24 16.H 54.M 26.S EPICENTRE 13.64 120.74 DEPTH= 143.KM

DEPTH OF FOCUS= 0.017R

A=-0.49685 B= 0.83560 C= 0.23435 D= 0.8595 E= 0.5111
G=-0.1198 H= 0.2014 K=-0.9722 HT= 6.0

SE= 1.70

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
MANILA	0.96	14.2	0 25	0	0 43	0		
BAGUIO CITY	2.77	356.9	0 44	-1	1 14	-6		
HONG KONG	10.64	325.0	2 29	-1	4 22	-5		
CANTON	11.75	324.1			5 15	22		
KOROR	14.89	113.5	3 25	0	6 15	9		
PHU-LIEN	15.23	299.8	3 31	2	6 24	10		
ZO-SE	17.38	1.3	3 55A	0	7 7	2		4 33 *SP
NANKING	18.41	354.8	4 8A	1	7 31	7	4 35	4 49 *SP
KUNMING	20.44	306.4	4 31	3	8 15	11	4 54	
CHENGTU	22.90	320.4	4 54	2	8 51	3	5 19	5 34 *SP
SIAN	23.15	334.4	4 57	2	8 57	5	5 25	5 37 *SP
GUAM	23.34	87.6	4 58	1				
DJAKARTA	24.05	215.9	5 3K	0				
PEKING	26.59	352.2	5 27A	0			5 59	6 10 *SP
LANCHOW	27.02	328.7	5 31	0	10 0	4		
MATUSIRO	27.67	31.4	5 35	-2	10 48	41		8 40 PCP
CHITTAGONG	28.79	291.7	5 47A	0	10 27	2		6 46 PP
SHILLONG	29.60	298.0	5 51K	-3	10 37	0		
CHANGCHUN	30.34	6.6	6 0	-1	10 53	4		
LHASA	31.73	304.9	6 15	2	11 14	3		
CHATRA	34.00	297.9	6 27	-5	11 42	-4		
PORT MORESBY	34.81	129.7	6 39	0			7 21	12 51 PCS
ULAN-BATOR	36.06	344.1	6 50	0				
CHARTERS TS.	41.82	142.6	7 38	1	13 45	1		
LAHORE	46.03	300.8	8 7A	-4	14 43	-2	8 39	
WARSAK DAM	48.83	303.4	8 34A	1				
MAGADAN	50.93	19.2	8 48	-1				
BRISBANE	51.50	142.7	8 52	-1				16 4
KARACHI	51.66	292.2	8 56	1				
QUETTA	52.08	297.7	8 58A	0	16 12	3		11 0 PP
TIKSI	58.17	3.0	9 42	0	17 30	0		
TIFLIS	70.60	309.7	11 3	1				
KARAPIRO	72.55	137.4	11 14	0				11 41
TONGARIRO	73.26	138.5	10 37	-41				11 42
MOSCOW	74.97	324.4	11 27	-1				
APATITY	76.47	336.8	11 35A	-1				
SIMFEROPOL	78.13	313.6	11 45	0	21 24	-2		
COLLEGE	78.38	25.8	11 46	0				17 43
SODANKYLA	79.10	336.9	11 50	0				
JERUSALEM	79.19	300.2	11 39K	-12				12 17 PCP
HELSINKI	81.13	329.8	12 0	-1				
KIRUNA	81.33	337.8	12 2A	0				12 43 PCP
MIRNY	82.55	190.8	12 8	-1				12 34
UPPSALA	84.78	330.4	12 18	-2	22 30	-4		22 51 PCP
SKALSTUGAN	85.88	334.8	12 24	-1				12 56 PCP
SOFIA	86.22	312.9	12 28	1	22 42	-6		12 58 PCP
KRAKOW	86.47	320.6	12 28	0				13 9 PCP
ATHENS	87.15	308.2	12 30K	-1				
RACIBORZ	87.52	321.0	12 34	1				
PRUHONICE	89.77	321.7	12 49	5			13 15	16 18 PP
HALLE	90.73	323.7	12 49	1				
JENA	91.17	323.3	12 50	0			13 30	
ASTRIDA	91.58	267.7	13 23	31				
CAPE HALLETT	91.73	166.5	12 53K	0				
STUTTGART	93.46	321.9	13 0	-1			13 41	
PARIS	97.37	324.0	13 20	1				
MINERAL	101.18	43.6						17 46 PP
HUNGRY HORSE	101.51	33.8	13 39	2				17 47 PP
LICK	102.58	46.3						17 56 PP
RENO	102.77	43.7						18 2 PP
SOUTH POLE	103.55	180.0	17 13	777			17 54	
EUREKA	105.34	42.1	13 57	777				18 18 PP
BOULDER CITY	107.99	44.7						18 33 PP
RAPID CITY	110.00	32.2						18 49 PP
TUCSON	112.81	46.1						18 57 PP
HALLEY BAY	115.64	188.7	18 26	0	24 59	-2		
SEVEN FALLS	118.64	9.0	18 33	2				
SHAWINIGAN	118.87	10.6	18 33	1				
MBOUR	129.72	302.0	18 45	-8			19 30	
SAN JUAN	147.47	12.2	19 28	3				

HUANCAYO 164.25 86.1 19 51 5 20 47 PKP2

AUGUST 26 5.H 0.M 24.S EPICENTRE 36.32 142.14 DEPTH= 0.KM

A=-0.63761 B= 0.49565 C= 0.58973 D= 0.6137 E= 0.7895
G=-0.4656 H= 0.3619 K=-0.8076 HT= -0.3

SE= 3.04

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ONAHAMA	1.18	302.5	0 22A	-1	0 38	-2		
TYOSI	1.21	240.5	0 22	-2	0 35	-6		
MITO	1.35	273.0	0 24	-2	0 39	-6		
KAKIOKA	1.59	267.3	0 26A	-3				
SHIRAKAWA	1.74	297.9	0 29	-2	0 50	-5		
UTUNOMIYA	1.84	277.8	0 31	-2	0 54	-3		
HUKUSIMA	1.95	317.3	0 35A	0	0 57	-3		
TOKYO C.M.O.	2.04	252.4	0 34	-2				1 6
SENDAI	2.18	333.4	0 36	-2	1 4	-2		
ISINOMAKI	2.20	343.0	0 39	1	1 10	4		
YOKOHAMA	2.21	247.0	0 36	-2	1 7	0		
KUMAGAYA	2.24	266.4	0 36	-3	1 7	0		
MERA	2.34	234.1	0 38	-2				1 19
YAMAGATA	2.40	324.0	0 41	0	1 12	1		
MAEBASI	2.48	272.7	0 40	-2	1 7	-6		0 54
TITIBU	2.50	263.1	0 40	-2	1 8	-6		
AJIRO	2.78	243.7	0 46	0	1 16	-5		1 35
HUNATU	2.86	254.3	0 49	2	1 33	10		
MISIMA	2.86	246.1	0 46	-2	1 27	4		
OIWAKE	2.90	271.2	0 49	1				1 41
MIZUSAWA	2.92	344.4	0 51	3	1 28	3		
NIIGATA	2.94	303.8	0 54	5	1 30	5		
SAKATA	3.16	325.2	0 50	-2	1 30	-1		
MATUSIRO	3.17	275.3	0 48K	-4	1 26	-5		
NAGANO	3.19	277.4	0 51	-1	1 26	-6		
TAKADA	3.22	285.1	0 59	6				
MIYAKO	3.33	357.7	0 54	0	1 36	1		
SHIZUOKA	3.33	247.2	0 54A	0	1 32	-3		1 46
MATUMOTO	3.37	270.0	0 53	-2	1 42	6		
MORIOKA	3.46	347.5	0 57	1	1 42	3		
AIKAWA	3.54	299.8	0 57	0	1 47	6		
IIDA	3.59	258.4	1 0	2	1 44	2		
OMAESAKI	3.63	242.9	0 59	1				1 56
HATIDYOZIMA	3.74	211.3	1 1	1	1 40	-6		
AKITA	3.76	335.2	1 13	13	1 52	6		
TOYAMA	4.00	276.9	1 15	11	2 0	7		
WAZIMA	4.33	285.7	1 11	3				
NAGOYA	4.36	256.2	1 7	-2	2 1	-1		
KANAZAWA	4.43	274.3			2 1	-2		
GIHU	4.46	259.7	1 12	2	1 59	-5		2 20
AOMORI	4.62	347.1						2 29
HUKUI	4.76	268.5	1 26	12				
IBUKISAN	4.77	260.3	1 14	-1				2 32
KAMEYAMA	4.85	254.0	1 18	2				2 34
TU	4.85	252.5	1 22	6				
HIKONE	4.90	259.4	1 10	-7				
OWASE	5.36	246.9	1 20	-3	1 58	-28		
NARA	5.40	254.2	1 24	0				
MAIZURU	5.48	263.0	1 30	5	2 33	4		
ABUYAMA	5.55	256.8	1 25	-1	2 29	-2		
HAKODATE	5.56	349.0	1 37	11	2 41	10		2 15
OSAKA	5.65	254.7	1 44	17	2 51	17		
URAKAWA	5.84	4.7	1 29	-1	2 37	-1		
MORI	5.90	348.6	1 41	10	2 56	16		
TOYOOKA	5.99	264.6	1 40	8	2 59	17		
MURORAN	6.07	351.8	1 49	16				2 8
WAKAYAMA	6.07	251.9						2 28
TOMAKOMAI	6.21	356.2			3 21	33		
SUMOTO	6.25	253.8			3 11	22		2 13
TOKUSIMA	6.58	252.3	1 39	-1				3 39
OBIHIRO	6.64	6.7	1 39	-2				2 23
SAPPORO	6.77	355.1	1 42	-1	3 5	3		2 0
KUSIRO	6.87	14.0			2 58	-6		2 34
TAKAMATU	6.91	255.6						2 26
ASAHIGAWA	7.45	1.3			3 14	-5		

NEMURO	7.48	19.6				3	11	-8			
KOTI	7.59	251.1							3	32	
HONG KONG	27.99	247.8				10	20	-18			
SHILLONG	44.00	270.5	8	9	-2						
CHITTAGONG	45.54	266.5	8	34	11						
COLLEGE	49.38	31.9	8	53	0						
QUETTA	61.72	288.1	10	19	-3						
RESOLUTE	63.15	14.5	10	30	-2	19	8	6			
SODANKYLA	65.85	337.5	10	47	-2						
KIRUNA	67.39	339.5	10	57A	-2						
HELSINKI	70.95	331.9	11	19	-2						
SHASTA	71.06	53.1	11	23	1						
MINERAL	71.76	53.1	11	26	0						
HUNGRY HORSE	71.91	43.0	11	27	0						
SKALSTUGAN	72.79	338.9	11	30A	-2						
UPPSALA	73.85	334.3	11	36	-2						
BUTTE	74.06	44.3	11	39	0						
EUREKA	75.84	51.4	11	50	0						
KARAPIRO	80.07	153.8	12	21	8						
PRUHONICE	82.40	328.9	12	24	-1						
JENA	82.86	331.0	12	26	-1				12	42	
STUTTGART	85.51	330.9	12	39	-2						
PARIS	87.96	334.6	12	53	0						

AUGUST 26 12.H 20.M 43.S EPICENTRE -14.04 166.74 DEPTH= 0.KM

A=-0.94465 B= 0.22259 C=-0.24101 D= 0.2293 E= 0.9733
G= 0.2346 H=-0.0553 K=-0.9705 HT= 5.9

SE= 3.17

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
NOUMEA	8.22	181.9	2	3A	-1	3	44	6					
SUVA	11.95	111.5	3	4K	9	5	30	20					
BRISBANE	18.50	221.6	4	20	0	7	45	1					
PORT MORESBY	19.72	281.4	4	34K	0	8	19	8	4	44	5	2	PPP
CHARTERS TS.	20.46	250.3	4	41	-1	8	30	3					
AFIAMALU	20.85	92.2	2	56	-110								
ONERAHI	22.70	163.8	5	9	4						5	46	
RIVERVIEW	24.26	213.0	4	50	-30						10	37	SS
KARAPIRO	25.04	163.4	5	27A	0								
GEBBIES PASS	29.99	171.4									6	10	
ROXBURGH	31.49	176.5									11	49	
MATUSIRO	57.06	332.7	9	49	-1	17	34	-10			21	23	SS
CAPE HALLETT	58.28	178.7	9	58K	-1	18	13	12			34	17	PKS
LEMBANG	58.46	270.5	10	5K	5	18	3	0					
SCOTT BASE	63.82	180.0	10	36A	-1	20	37	86					
WILKES	63.95	202.0				19	8	-5					
Y.-SAKHLINSK	64.42	342.0	10	41	0								
VLADIVOSTOK	65.22	332.6	10	42	-4								
OASIS-BUNG.	67.63	203.7	11	0	-1								
CHANGCHUN	68.88	329.1	11	8	-1								
PEKING	71.40	321.3	11	25	1	20	44	2					
SIAN	72.95	312.8	11	36	3	21	6	6					
BYRD STATION	73.46	169.9	11	33	-3								
KUNMING	73.53	301.7	11	39	2	21	11	5					
MAGADAN	74.46	351.7	11	41	-1								
CHENGTU	74.88	307.5	11	45	0	21	21	-1					
LHASA	84.84	302.1	12	40	2								
SOUTH POLE	76.05	180.0	11	45	-6								
LANCHOW	77.49	312.4	12	2	3	21	55	5					
CHITTAGONG	81.80	295.4	12	25	3								
SHILLONG	82.80	298.5	12	28	0								
COLLEGE	85.82	17.8	12	43	0								
BOULDER CITY	89.03	52.6	13	0	2								
TUCSON	91.12	57.2	12	59	-9								
RESOLUTE	105.66	15.9				25	59	4			27	57	PS
KIRUNA	121.97	345.6	18	56	-1								
SKALSTUGAN	127.39	346.0	19	6	-1								
WARSAW	133.10	331.7	19	30	12						22	49	PKS
PRUHONICE	137.58	333.5	19	28	2						22	20	PP
STUTTGART	140.73	336.5									23	9	PP
STRASBOURG	141.42	337.5	19	27	-6						22	45	PP
PARIS	142.97	342.7	19	38	2						22	57	PP
FLORENCE X.	143.69	329.5	19	39	2								

ROME	144.39	326.2	19	37	-1					34	12
CLERMONT-FD.	145.48	339.6	19	40	0						
MONACO	145.51	333.1	19	42	2						
TOLEDO	153.01	344.3	19	53	1					20	13 PKP2
TAMANRASSET	160.19	298.8	20	3	2					20	49 PKP2

AUGUST 26 12.H 45.M 5.S EPICENTRE -14.23 166.26 DEPTH= 0.KM

A=-0.94196 B= 0.23031 C=-0.24428 D= 0.2375 E= 0.9714
G= 0.2373 H=-0.0580 K=-0.9697 HT= 5.9

SE= 3.02

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
NOUMEA	8.03	178.7	2	1	0	3	42	9					
SUVA	12.32	110.1	3	3K	3	5	25	6					
BRISBANE	18.05	221.0	4	17	3	7	24	-10					
PORT MORESBY	19.31	282.3	4	32	3	8	16	14					12 26 SCP
CHARTERS TS.	19.95	250.5	4	38	1	8	32	16					
AFIAMALU	21.31	91.8	3	55	-56								
ONERAHI	22.65	162.7	5	7	3								
RIVERVIEW	23.84	212.5	4	27A	-49								
KARAPIRO	24.99	162.4	5	24	-3								
GEBBIES PASS	29.87	170.7									11	8	
DUMONT	55.22	192.4	9	39	2								
MATUSIRO	57.02	333.2	9	47	-3								
LEMBANG	58.00	270.8	9	58	1	18	2	5					
CAPE HALLETT	58.10	178.5	9	56	-2								12 27 PP
HONG KONG	62.64	304.6	9	17	-72								
SCOTT BASE	63.63	179.9	10	33	-2								
Y.-SAKHLINSK	64.46	342.3	10	40	-1								
VLADIVOSTOK	65.18	332.9	10	29	-16								
OASIS-BUNG.	67.27	203.6	10	58	-1								
PETROPAVLOVK	67.40	355.0	10	55	-4								
CHANGCHUN	68.81	329.4	11	8	0								
MIRNY	70.39	204.0	11	17	-1	20	30	0					
PEKING	71.26	321.5	11	23	0	20	42	2					
SIAN	72.75	313.1	11	34	2	21	5	8					
KUNMING	73.23	302.0	11	37	2	21	9	6					
BYRD STATION	73.35	169.9	11	29	-7								
MAGADAN	74.59	351.9	11	40	-3								
CHENGTU	74.63	307.7	11	43A	0	21	21	2					
LHASA	84.56	302.3	12	38	2	23	6	3					
SOUTH POLE	75.86	180.0	11	47	-3								
LANCHOW	77.28	312.6	12	OK	2	21	54	6					
ULAN-BATOR	81.28	324.2	12	20	0								
CHITTAGONG	81.47	295.6	12	20	-1								
SHILLONG	82.48	298.7	12	24	-2								
BERKELEY	84.58	48.9											15 43 PP
LICK	84.84	49.6	12	37	-1								
SHASTA	85.58	46.3	12	44	2								
MINERAL	86.00	46.8	12	52	8								
COLLEGE	86.15	17.9	12	40	-4								
PASADENA	86.34	53.6	12	43	-2								24 45 PS
EUREKA	89.75	49.1	12	58	-4								
TUCSON	91.62	57.3	13	11	1								
APATITY	118.60	341.3											18 18
KIRUNA	122.04	345.4	18	54	-3								
PULKOVO	124.29	334.8											20 30
SKALSTUGAN	127.47	345.7	19	5	-2								
UPPSALA	128.96	340.2	19	8	-2								
KSARA	131.17	302.6											21 40
LWIRO	134.78	252.1											23 6
PRUHONICE	137.55	333.0	19	25	-1								23 8
UCCLE	140.69	341.9	19	32	0								
STUTTGART	140.71	336.0	19	25	-7								22 31 PP
DOURBES	141.23	341.1	19	6	-27								
PARIS	143.01	342.1	19	36	0								22 47 PP
FLORENCE X.	143.62	328.9	19	34	-3								
ROME	144.29	325.6											19 38 PKP2
MONACO	145.47	332.5	19	40	0								
CLERMONT-FD.	145.49	339.0	19	40	0								
ALGIERS UNI.	153.01	329.3	19	47	-5								20 25 PKP2
TAMANRASSET	159.87	297.8	20	1	0								24 33 PP

AUGUST 26 17.H 55.M 36.S EPICENTRE -14.11 166.59 DEPTH= 0.KM

A=-0.94375 B= 0.22500 C=-0.24232 D= 0.2319 E= 0.9727
G= 0.2357 H=-0.0562 K=-0.9702 HT= 5.9

SE= 2.10

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NOUMEA	8.14	180.9	2	0	-2	3	39	3				
SUVA	12.06	111.0	2	55K	-1	5	24	11				
BRISBANE	18.35	221.4	4	19	2	7	45	5				
PORT MORESBY	19.60	281.7	4	32K	0	8	16	8			4	49 PP
CHARTERS TS.	20.29	250.4	4	41	1	8	28	5				
AFIAMALU	21.00	92.1	4	54	7							
ONERAHI	22.67	163.4	5	7	3							
RIVERVIEW	24.11	212.9	5	24K	6	9	41	7				
KARAPIRO	25.00	163.1	5	26	-1						12	49
TRUK	25.96	324.8	5	36	0							
WELLINGTON	27.99	166.8	6	14	20	11	36	58				
KAIMATA	28.61	172.5	6	3	3							
GEBBIES PASS	29.94	171.2	6	9	-3							
ROXBURGH	31.42	176.3				11	44	12				
BAGUIO CITY	54.65	302.2	9	34	1							
DUMONT	55.40	192.5	9	36	-2							
ABUYAMA	56.92	329.6	9	49A	0							
MATUSIRO	57.06	332.9	9	50K	0	17	44	0			19	39 SCS
CAPE HALLETT	58.21	178.7	9	58K	0	18	8	9			14	24 PCS
LEMBANG	58.32	270.6	9	58A	-1	18	2	1				
ZO-SE	62.63	316.5				18	57	1				
SCOTT BASE	63.75	180.0	10	35A	-1	18	39	-31				
WILKES	63.82	202.0				19	8	-3				
Y.-SAKHLINSK	64.45	342.1	10	40	0	19	21	2				
VLADIVOSTOK	65.22	332.7	10	46	1	19	30	2				
UGLEGORSK	66.56	342.7	10	55	1	19	48	3				
PETROPAVLOVK	67.32	354.8	10	55	-4	19	47	-7				
OASIS-BUNG.	67.50	203.7	10	58	-2	19	46	-10				
CHANGCHUN	68.87	329.2	11	9	1							
MEDAN	69.57	279.3	11	29	16							
MIRNY	70.62	204.0	11	18	-1	20	32	-1				
PEKING	71.37	321.4	11	25A	1							
SIAN	72.90	312.9	11	35	2							
BYRD STATION	73.41	169.9	11	33	-3							
KUNMING	73.44	301.8	11	37	1							
MAGADAN	74.52	351.7	11	40	-2							
CHENGTU	74.81	307.6	11	44	0	21	21	1				
LHASA	84.75	302.2	12	39	2	23	8	3				
SOUTH POLE	75.98	180.0	11	48	-3							
LANCHOW	77.44	312.4	12	0	1	21	53	4				
ULAN-BATOR	81.37	324.0	12	20	0							
BERKELEY	84.26	48.8	12	37	2							
LICK	84.52	49.5	12	37	1							
IRKUTSK	85.05	326.9	12	38	-1	23	1	-7				
SHASTA	85.27	46.2	12	39	-1							
FRESNO	85.68	50.6	12	44	2							
MINERAL	85.69	46.7	12	41	-1							
COLLEGE	85.94	17.8	12	41	-2							
PASADENA	86.01	53.5	12	46	2	23	10	-7			24	14 SP
RENO	86.66	48.0	12	47	0							
TIKSI	89.23	348.8	12	57	-2	23	48	1				
EUREKA	89.44	49.1	12	59	-1							
TUCSON	91.29	57.2	13	33	24							
TUCSON TELE.	91.40	57.1	13	8	-1							
HUNGRY HORSE	93.51	41.1	13	15	-4							
NAMANGAN	102.79	309.3									18	18 PP
RESOLUTE	105.77	15.9				26	9	-64			24	52 SKS
APATITY	118.60	341.4	18	50	0							
OTTAWA	119.31	45.7	18	51K	0							
SODANKYLA	120.72	343.2	18	53	-1							
SHAWINIGAN	121.10	43.9	18	54K	-1							
KIRUNA	122.01	345.6	18	55	-2							
TIFLIS	122.91	310.7	19	0	2							
MOSCOW	123.02	328.4	19	0	2							
HELSINKI	126.16	337.4	19	5	0							
SKALSTUGAN	127.43	345.9	19	6	-1							
SIMFEROPOL	129.48	317.3									21	28 PP

KSARA	131.38	302.7	19	20	5		21	44 PP
JERUSALEM	132.31	300.2	19	0	-16		22	28 PKS
GOTEBORG	132.46	341.8					22	43 PKS
WARSAW	133.10	331.6					22	40 PKS
LWOW	133.12	327.4	19	19	1			
ASTRIDA	134.13	252.1					21	53 PP
LWIRO	135.12	252.1					22	58 PKS
COLLMBERG	137.23	335.7	19	28	3		22	55
HALLE	137.49	336.7	19	29	3		23	1 PP
PRUHONICE	137.59	333.3	19	26	0		22	14 PP
JENA	138.08	336.4	19	27	0		23	1 PP
MUNSTER	138.64	340.4	19	29	1			
BERSBERG	139.65	339.9	19	30	0		23	6
UCCLE	140.68	342.2	18	59	-33			
STUTTGART	140.74	336.3	19	26	-6		22	57 PP
TRIESTE	141.10	329.3	19	33	1		22	34 PP
DOURBES	141.22	341.5	19	32	-1			
KEW	141.27	346.9					22	47 PKS
STRASBOURG	141.44	337.4	19	31	-2		22	34 PP
PARIS	143.00	342.5	19	28	-8		22	48 PP
NEUCHATEL	143.06	336.7	19	38	2		23	13
FLORENCE X.	143.68	329.3	19	35	-2			
ROME	144.37	326.0	19	36	-2		23	11
MESSINA	144.89	318.4	19	39	0			
CLERMONT-FD.	145.50	339.4	19	42	2			
MONACO	145.51	332.9	19	41	1			
SERRA PILAR	152.76	352.0	19	49K	-2			
TOLEDO	153.05	344.0	19	54	2		20	12 PKP2
TAMANRASSET	160.10	298.4	20	3	2		20	45 PKP2

AUGUST 26 23.H 31.M 38.S EPICENTRE -14.14 166.52 DEPTH= 0.KM

A=-0.94340 B= 0.22608 C=-0.24267 D= 0.2330 E= 0.9725
G= 0.2360 H=-0.0566 K=-0.9701 HT= 5.9

SE= 2.24

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
NOUMEA	8.12	180.5	2	2	0	3	42	6					
SUVA	12.11	110.8	3	2A	5	5	22	8					
BRISBANE	18.29	221.3	4	22	5	7	25	-14					
PORT MORESBY	19.54	281.8	4	34	2								
CHARTERS TS.	20.22	250.4	4	41	1	8	32	10					
AFIAMALU	21.06	92.0	5	52	64								
ONERAHI	22.67	163.3	5	5	1						5	22	
RIVERVIEW	24.06	212.8	4	52K	-26	9	42	9					
KARAPIRO	25.00	163.0	5	27	0						7	48	
TRUK	25.94	325.0	5	37	1	10	32	27					
WELLINGTON	27.98	166.7									7	22	
BAGUIO CITY	54.60	302.2	9	23	-10								
ABUYAMA	56.91	329.7	9	50A	0								
MATUSIRO	57.05	332.9	9	50	-1						13	14	
CAPE HALLETT	58.19	178.6	9	55	-3	18	2	3			13	34	PPP
LEMBANG	58.25	270.7	9	58A	-1	18	2	2					
ZO-SE	62.60	316.6	10	29	0	18	59	3					
SCOTT BASE	63.73	179.9	10	36	0						14	10	PCS
WILKES	63.78	202.0	10	37	1	19	9	-2					
Y.-SAKHLINSK	64.45	342.2	10	41	0	19	22	3					
VLADIVOSTOK	65.21	332.7	10	44	-2								
OASIS-BUNG.	67.46	203.7	10	58	-2								
MIRNY	70.58	204.0	11	17	-2	20	28	-5					
PEKING	71.35	321.4	11	24A	0	20	42	0					
BYRD STATION	73.40	169.9	11	34	-2								
KUNMING	73.40	301.8	11	38A	2	21	10	5			11	53	PCP
MAGADAN	74.53	351.8	11	40	-3								
CHENGTU	74.77	307.6	11	45A	1	21	22	2					
SOUTH POLE	75.96	180.0	11	49	-2								
LANCHOW	77.40	312.5	12	2A	3	21	54	5					
ULAN-BATOR	81.35	324.1	12	21	1								
SHILLONG	82.66	298.6	12	29A	2								
LICK	84.58	49.5	12	38	1								
LHASA	84.70	302.2	12	40	3	23	9	4					
IRKUTSK	85.03	326.9	12	37	-2	23	7	-1					
SHASTA	85.33	46.2	12	41	0								
FRESNO	85.74	50.6	12	33	-10								

COLLEGE	85.98	17.8	12	41	-3						
PASADENA	86.07	53.5	12	44	0	24	36	78	31	10	SS
RENO	86.73	48.0	12	47	0						
TIKSI	89.23	348.8	12	57	-2	23	49	1			
BOULDER CITY	89.26	52.7	13	0	0				16	29	PP
EUREKA	89.50	49.1	13	2	1				14	11	
HALLEY BAY	90.16	176.7	13	4	0				16	42	PP
TUCSON	91.36	57.2	13	12	3						
TUCSON TELE.	91.47	57.1	13	12	2				13	38	
NAMANGAN	102.75	309.3							14	16	PP
RESOLUTE	105.81	15.9	18	34	777				24	52	
APATITY	118.60	341.4	17	50	-60				29	48	
OTTAWA	119.38	45.7	18	51K	-1						
SHAWINIGAN	121.16	43.9	18	55	0						
PALISADES	121.39	50.5							20	27	PP
KIRUNA	122.01	345.5	18	56	-1						
TIFLIS	122.87	310.7	19	2	3				29	59	SS
MOSCOW	123.00	328.3	18	58	-1				20	42	PP
PULKOVO	124.31	334.9							20	22	PP
HELSINKI	126.16	337.4	19	7	2						
SKALSTUGAN	127.44	345.8	19	9	2						
UPPSALA	128.96	340.4							22	31	PKS
SIMFEROPOL	129.45	317.2	19	12	1				22	22	SKP
BERMUDA	130.06	59.5							22	37	
KSARA	131.34	302.7	19	17	2				21	40	PP
KISHINEV	131.90	321.8	19	16	0				22	43	SKP
JERUSALEM	132.26	300.2	19	1	-16				21	30	PP
GOTEBORG	132.46	341.8							22	47	PKS
WARSAW	133.09	331.5							22	51	PKS
LWOW	133.11	327.3							20	55	
ASTRIDA	134.06	252.1							22	50	PKS
COLLMBERG	137.23	335.7							23	2	PKS
HALLE	137.48	336.6							22	46	
PRUHONICE	137.58	333.3	19	28	2				22	6	PKS
JENA	138.08	336.4	19	28	1				23	1	PP
DURHAM	138.40	349.6							23	3	SKP
RATHFARNHAM	140.51	353.2	19	34A	2						
UCCLE	140.68	342.1	20	3	31						
STUTTGART	140.73	336.2	19	28	-4				23	13	SKP
TRIESTE	141.08	329.3							23	10	SKP
DOURBES	141.22	341.4	19	36	3						
KEW	141.28	346.8	19	31	-2				23	13	PKS
STRASBOURG	141.43	337.3	19	34	1				22	14	
PARIS	143.00	342.4	19	37	1				22	54	PP
FLORENCE X.	143.66	329.2	19	35	-2						
ROME	144.35	325.9	19	38A	0				33	8	PS
MESSINA	144.86	318.4	19	39	0						
CLERMONT-FD.	145.49	339.3	19	42	2						
MONACO	145.50	332.8	19	42	2						
TOLEDO	153.05	343.9	19	54	2				23	37	PP
MALAGA	156.09	341.8	19	57	1						
TAMANRASSET	160.05	298.3	20	3	2				24	24	PP

AUGUST 27 2.H 25.M 36.S EPICENTRE -4.08-104.36 DEPTH= 0.KM

A=-0.24737 B=-0.96634 C=-0.07065 D=-0.9688 E= 0.2480
G= 0.0175 H= 0.0684 K=-0.9975 HT= 7.1

SE= 3.17

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COMITAN	23.54	30.6				8	40	-41	11	36			
TACUBAYA	23.88	12.1	5	34	18	9	43	14	5	42			PP
VERA CRUZ	24.51	19.0	5	20	-2				10	52			SS
MERIDA	28.77	29.6				10	24	-26	13	24			
HUANCAYO	29.79	107.1	6	11	1	11	17	10	7	3			
CHINCHINA	30.08	72.9	6	14	1	11	21	10					
BOGOTA	31.47	74.4	6	29	4	11	39	6					
FUQUENE	32.03	73.0	6	31	1	11	46	4					
GALERAZAMBA	32.50	62.8				12	22	33					
CHIHUAHUA	32.56	357.2							13	36			
TUCSON	36.65	350.8	7	17	7								
TUCSON TELE.	36.72	351.0	7	13	3								
LUBBOCK	37.53	3.4	7	17	0	13	10	3					
LA PAZ	37.64	111.8	7	20K	2	13	14	5	8	44			PP
PASADENA	40.19	342.1	7	44	5				9	29			

BOULDER CITY	41.04	347.0	7	44	-2						
FRESNO	43.12	341.8	8	6	3						
SAN JUAN	43.79	58.1	8	9	0						
LICK	44.24	340.2	8	16	4						
EUREKA	44.64	347.2	8	14	-2						
TALA POZO	44.89	126.0				14	59	3			
SALT LAKE C.	45.16	352.0	8	19	-1						
RENO	45.68	343.3	8	29	5						
MINERAL	46.96	341.9	8	49	15						
SHASTA	47.53	341.4	8	36	-3						
RAPID CITY	47.95	1.1	8	44	2						
BOZEMAN	49.89	353.9	8	54	-3						
BERMUDA	52.27	43.1	9	18	3	16	45	5			
PALISADES	52.80	28.8				16	43	-4			20 29 SS
HUNGRY HORSE	52.89	351.9	9	16	-4						
OTTAWA	55.48	24.2	9	34K	-5	17	26	3			17 59 PS
BREBEUF	56.44	25.6	9	42	-4						
SHAWINIGAN	57.63	25.3	9	50	-4						
HALIFAX	60.65	32.3				18	30	-1			22 32 SS
COLLEGE	75.80	342.4	11	45	-4						
BYRD STATION	76.26	182.7	11	50	-2						
RESOLUTE	78.84	2.6	12	1	-5	22	2	-2			26 50 SS
KARAPIRO	79.71	232.4	12	11	0						
ONERAHI	80.55	234.6									19 56
ROXBURGH	84.53	224.8									28 57
CAPE HALLETT	84.72	197.8	12	39	2	23	11	7			28 54 SS
SOUTH POLE	85.95	180.0	12	42	-1						
DURHAM	100.69	35.1	13	47	-4	25	35	9			24 35 SKS
UCCLE	104.93	38.5				24	53	3			
DOURBES	105.23	39.1				24	49	-2			
UPPSALA	109.13	26.9									28 26 PS
HALLE	109.36	36.4									20 35
KSARA	132.65	46.4									21 40 PP

AUGUST 27 13.H 9.M 0.S EPICENTRE 53.26 159.73 DEPTH= 0.KM

A=-0.56358 B= 0.20817 C= 0.79940 D= 0.3465 E= 0.9381
G=-0.7499 H= 0.2770 K=-0.6008 HT= -6.6

SE= 1.42

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
MATUSIRO	22.47	230.6	5	4A	2	9	4	-1			8	57	PCP
COLLEGE	28.45	45.3	5	59	0								
RESOLUTE	43.26	22.0	8	5A	0	14	30	-3			9	53	PCP
HORSESHOE B.	46.10	62.1	8	27	-1								
VICTORIA	46.53	63.1	8	30	-1								
THULE	47.01	13.9	8	37	2								
HUNGRY HORSE	51.55	58.2	9	10	0						10	24	PCP
SHASTA	52.04	70.5	9	14	0								
MINERAL	52.72	70.4	9	18	-1								
BUTTE	53.83	59.6	9	27	0								
RENO	54.28	69.9	9	30	0								
SODANKYLA	54.67	339.7	9	33	0								
LICK	54.75	73.1	9	33	-1								
KIRUNA	55.48	342.5	9	38	-1								
FRESNO	56.20	72.4	9	43	-1						10	38	PCP
EUREKA	56.47	67.5	9	46	0								
SHILLONG	56.79	269.0	9	48A	-1								
SALT LAKE C.	57.82	63.8	9	57	1								
CHATRA	58.68	273.7	10	2	0								
RAPID CITY	59.94	55.7	10	11	0								
SKALSTUGAN	60.76	344.0	10	15	-1						10	59	PCP
UPPSALA	63.21	339.7	10	32A	-1						11	8	PCP
TUÇSON TELE.	64.56	69.6	10	41	0								
TUCSON	64.57	69.8	10	41	-1								
LUBBOCK	68.49	62.6	11	6	0								
FAYETTEVILLE	70.49	55.7	11	16	-3								
OTTAWA	70.90	37.9	11	19A	-2								
SHAWINIGAN	70.97	35.4	11	20A	-2								
POTSDAM	71.10	339.1	11	22	0								
BREBEUF	71.58	36.5	11	24	-1								
WITTEVEEN	71.92	343.2	11	38	11								
COLLMBERG	72.13	338.8	11	29	0								
HALLE	72.17	339.5	11	29	0								

MUNSTER	72.57	342.3	11 32	1	
JENA	72.78	339.5	11 32	0	12 23
PRUHONICE	73.02	337.3	11 36	2	12 37
PLAUEN	73.07	339.0	11 32	-2	
RATHFARNHAM	73.17	351.3	11 35	0	
KEW	74.31	347.2	11 40	-1	
DOURBES	74.90	343.7	11 44	-1	
HARVARD	74.91	36.7	11 45	0	
STUTTGART	75.32	340.3	11 47	0	
STRASBOURG	75.79	341.2	11 50	0	
PARIS	76.49	344.7	11 56	2	12 7 PCP
NEUCHATEL	77.46	341.3	12 0	1	
CLERMONT-FD.	79.34	343.6	12 11	2	
KSARA	80.55	315.5	12 16	0	
BRISBANE	80.61	186.0	12 16	0	
ATHENS	81.48	326.3	12 20K	-1	
JERUSALEM	82.58	314.9	12 9K	-18	
HELWAN	35.87	317.0	12 43	0	
TAMANRASSET	101.04	335.8	13 59	6	17 15 PP
BYRD STATION	140.38	164.3	19 23	-9	23 4 SKP
SOUTH POLE	143.07	180.0	19 31	-5	

AUGUST 27 15.H 16.M 34.S EPICENTRE 37.45 20.72 DEPTH= 0.KM

A= 0.74438 B= 0.28155 C= 0.60550 D= 0.3538 E=-0.9353
G= 0.5663 H= 0.2142 K=-0.7958 HT= -0.8

SE= 2.74

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ATHENS	2.44	76.8	0 42K	2	1 18	8		1 22 SG
TARANTO	4.05	319.2	0 54	-9	2 6	15		
REGGIO CALA.	4.07	280.7	1 1	-2	1 43	-8		1 56 S*
MESSINA	4.16	281.9	1 1K	-3	1 41	-13		1 13 PG
SKOPJE	4.55	6.4	1 11K	1	1 54	-9		1 24 PG
SOFIA	5.61	20.1	1 26	1	2 32	2		2 15
BELGRADE	7.36	358.5	1 47K	-2	3 22	8		3 49 PGSG
ISTANBUL KA.	7.42	58.3	1 50	0				
ROME	7.75	307.5	1 52A	-3	3 23	0		2 17 P*
BUCHAREST	8.06	28.6	1 59K	0	3 46	15		2 37 PG
TIMISOARA	8.30	2.4	2 3	1	3 34	-3		4 9 S*
CAMPULUNG	8.46	21.2	2 3	-2				2 57
SZEGED	8.80	357.3	2 12	3	3 48	-2		2 51 PG
ZAGREB	9.08	338.5	2 10	-3				4 24 PS
KALOCSA	9.16	352.4	2 16	2	3 46	-12		2 59 PG
KECSKEMET	9.49	355.3	2 24	5	4 2	-5		3 12 PG
FOCSANI	9.56	29.4	2 28	8	4 21	13		2 59
FLORENCE X.	9.59	314.3	2 21	1				4 55
BOLOGNA	9.99	317.7	2 37	11				5 8
BUDAPEST	10.10	353.6	2 27	0	4 15	-6		3 15 PG
HURBANOVO	10.58	350.7	2 37	2	4 41	8		2 47 PP
IASI	10.98	25.3	2 40	1	4 54	11		3 18
BRATISLAVA	11.04	347.2	2 37	-3	4 42	-2		
VIENNA-H.	11.25	344.9	2 40	-3	4 40	-10		5 43 SG
PAVIA	11.41	315.3	3 0	12	5 17	19		4 56
HELWAN	11.63	177.5	2 43	-5	4 44	-15		
SKALNATE PL.	11.73	353.5	2 47	-2	4 59	-2		4 8
MONACO	11.88	306.0	2 49	-3				2 58 PP
CHUR	12.52	322.1	3 7	7	5 15	-6		
OROPA	12.55	314.5	3 9	8	5 23	7		6 22
SIMFEROPOL	12.56	49.2	3 0K	-1				3 20
LWOW	12.60	9.8	3 0	-1	5 19	-3		4 9
KRAKOW	12.61	357.7	2 59	-2	5 12	-11		3 0 PP
RACIBORZ	12.75	352.6	3 2	-1				3 22 PPP
KSARA	12.85	101.8	3 3	-2	5 28	-1		5 44 SS
RAVENSBURG	13.15	325.2	3 13	4	5 52	16		
JERUSALEM	13.21	111.1	2 47A	-22	5 11	-26		
PRUHONICE	13.29	342.4	3 8	-4	5 29	-10		
PRAGUE	13.40	342.3	3 13	1	5 27	-15		
EBINGEN	13.74	325.0	3 15	-1	5 54	4		
NEUCHATEL	13.95	317.5	3 14	-5				6 10
TUBINGEN	13.95	326.2	3 16	-3	5 56	1		
BASLE	13.96	320.3	3 17	-2	5 12	-43		
CHEB	13.98	337.2	3 20	1	5 36	-19		
STUTTGART	14.08	327.1	3 16	-5	5 55	-3		3 23 PP

ALGIERS UNI.	14.12	272.6	3	18	-3	5	56	-3			9	30	
PLAUEN	14.42	337.5	3	19	-6	6	2	-4			6	56	
STRASBOURG	14.59	323.8	3	26K	-1	6	6	-4			6	22	SS
SONNEBERG	14.61	335.2	3	24	-4	6	30	19			4	53	
WARSAW	14.78	0.7	3	28K	-2						3	44	PP
COLLMBERG	14.89	340.8	3	34	3	6	35	18			3	39	PP
BARCELONA	14.90	291.2	3	33	2	6	31	14					
JENA	14.97	337.1	3	29	-3	6	38	19			4	31	
HALLE	15.36	338.9	3	38	1	6	44	16			3	53	PP
CLERMONT-FD.	15.54	307.8	3	41	1	6	32	0			3	55	PP
POTSDAM	15.87	342.6	3	43	-1	6	55	15			4	50	
TORTOSA	16.04	288.4	3	48	2	6	53	9					
BENSBERG	16.60	328.8	3	56	3	7	12	15					
ALICANTE	16.76	279.6	3	55	0	7	4	3					
HEERLEN	17.04	326.6	4	4	5								
DOURBES	17.14	322.6	3	58	-2						4	11	PP
MUNSTER	17.20	331.7	4	1	0								
PARIS	17.44	316.4	4	3	-1	7	13	-3			4	18	PP
UCCLE	17.73	324.0	4	8	1	7	27	4					
WITTEVEEN	18.23	331.9	4	20K	6								
DE BILT	18.28	328.2	4	17	3	7	47	12					
ALMERIA	18.49	275.2	4	17	0	7	50	10			4	35	PP
TIFLIS	19.02	69.6	4	23	0	7	59	7			4	42	PP
COPENHAGEN	19.07	345.6	4	24K	0	7	59	6			8	16	SS
GRANADA	19.34	276.6	4	23K	-4	8	5	6			5	16	PP
TOLEDO	19.48	284.8	4	27K	-2	8	2	0			4	48	PP
TAMANRASSET	19.62	226.1	4	28A	-2	8	15	10			4	48	PP
MALAGA	20.04	275.6	4	33K	-2	8	17	3			11	55	
GORIS	20.14	76.3	4	35	-1	8	22	6					
KEW	20.44	320.0	4	37K	-2	8	19	-3			8	48	PCP
GOTEBORG	21.07	346.9	4	39K	-7								
MOSCOW	21.56	26.6	4	50	0	8	46	2					
UPPSALA	22.50	355.9	4	59K	-1	9	1	0					
HELSINKI	22.90	5.5	5	2	-2								
SERRA PILAR	22.94	288.3	5	3	-1	9	26	17			5	46	PP
DURHAM	23.05	325.8	5	4	-1	9	14	3			6	49	
PULKOVO	23.17	12.4	5	5	-1	9	17	4			5	36	PP
LISBON	23.50	282.3	5	9A	-1	9	17	-2					
EDINBURGH	24.49	326.6	5	26	7	9	42	6			6	5	PP
RATHFARNHAM	24.51	318.9	5	18A	-1	9	42	6			5	46	PP
ABERDEEN	24.86	329.8	5	22	-1	9	37	-5			10	49	SS
SKALSTUGAN	26.66	351.6	5	38K	-2								
ASHKABAD	29.65	77.4	6	3	-4	10	58	-2			7	20	PPP
SODANKYLA	30.16	4.6	6	10	-1								
KIRUNA	30.43	359.8	6	12K	-2	11	14	1					
APATITY	30.99	9.4	6	17	-2	11	19	-3			7	17	PP
SVERDLOVSK	32.71	40.7	6	32	-2								
REYKJAVIK	36.77	330.2	7	11	3								
QUETTA	38.78	86.8	7	27	2	13	17	-5					
RUMANGABO	39.40	166.4	7	30	0								
SCORESBY SD.	39.92	339.2	7	35	0	13	42	3			7	56	PP
MBOUR	40.56	245.7	7	41	1	13	45	-4			9	15	PP
ASTRIDA	40.72	166.1	7	40	-1	13	35	-16					
KARACHI	40.74	92.8	7	50	9						9	25	PP
WARSAK DAM	41.01	79.0	7	42	-2								
UVIRA	41.46	167.3	7	47	0								
LAHORE	44.08	81.1	8	10	1	14	34	-6			9	48	PP
NORD	46.22	352.9	8	28	2	15	8	-3			10	56	PPP
DEHRA DUN	47.50	80.9	8	39	3	15	26	-3			11	23	PPP
AGRA	48.87	84.7	8	45	-2	15	45	-3			14	13	PCS
BOMBAY	48.87	97.3	9	3	16	15	51	2			19	42	SS
THULE	53.73	343.0	9	25	2	15	54	-61					
CHATRA	56.22	80.2	9	39	-2	17	27	-2					
LHASA	57.91	75.4	9	53	0	17	50	-1			10	45	PCP
MADRAS	58.03	98.3	8	51	-63	17	51	-2			10	30	
WINDHOEK	59.80	183.9	10	5	-2								
RESOLUTE	60.51	344.0	10	10K	-1	18	26	1			20	1	SCS
SHILLONG	60.52	79.1	10	9K	-2								
ULAN-BATOR	61.07	50.1	10	15	0	18	33	1					
HALIFAX	61.31	305.9	10	17A	0	18	32	-3			20	7	SCS
TANANARIVE	61.50	150.9	10	19A	1						11	17	
CHITTAGONG	62.12	82.2	10	26	4	18	56	11			12	45	PP
TOCKLAI	62.19	76.4	10	15K	-8								
LCO. MARQUES	64.06	168.1	10	38	3				10	49			
LANCHOW	64.38	63.1	10	36	-1	19	13	0			11	10	PCP
SEVEN FALLS	64.68	311.0	10	38A	-1	19	16	-1			19	49	PS
KIMBERLEY	65.96	176.1	10	45K	-2								
SHAWINIGAN	66.12	311.1	10	48	0						11	29	PCP
BREBEUF	67.16	310.5	10	55	0	19	51	4					

CHENGTU	67.21	68.2	10	53	-2	19	46	-2	11	20 PCP
WESTON	67.32	306.6	10	56K	0	19	51	2		
HARVARD	67.40	306.8	10	57	1					
BERMUDA	67.87	294.4	11	6	7	20	2	6	24	26 SS
OTTAWA	68.48	311.2	11	4A	1	20	4	1	21	4 SCS
PORT BLAIR	68.74	91.4				20	5	-1		
SIAN	68.91	62.5	11	5	-1	20	10	2		
KUNMING	69.15	74.0	11	6	-1	20	9	-2	11	36 PCP
PALISADES	69.68	306.5	11	11	0	20	21	4	11	26 PCP
GRAHAMSTOWN	70.62	174.8	11	16	0					
PEKING	70.74	54.1	11	15	-2	20	28	-2	11	36 PCP
HERMANUS	71.52	181.3							14	11 PP
CHANGCHUN	74.17	46.7	11	36K	-1	21	8	-1	11	52 PCP
CLEVELAND	74.18	310.3	11	40	3	21	11	2		
PHU-LIEN	74.52	75.5	11	43	4	21	11	-2		
ST. VINCENT	75.81	275.8	11	49	2					
SAN JUAN	76.62	282.9	11	51	0					
GRENADA	76.83	275.1	11	55	3					
COLLEGE	77.62	355.0	11	56	-1	21	50	3	15	10 PP
CANTON	78.27	70.0	12	3	3	21	56	2	22	21 SCS
COLUMBIA	78.32	303.8	12	1	0					
ZO-SE	79.21	59.2	12	5K	-1	22	1	-3	22	26 SCS
HONG KONG	79.39	70.1	12	26	19	22	6	0		
SITKA	83.71	347.1	12	31	2					
NAGASAKI	83.94	53.2	12	31	1	22	45	-7		
RAPID CITY	84.28	323.1	12	34	2					
FAYETTEVILLE	85.20	312.5	12	39	2				14	10
HUNGRY HORSE	85.56	331.6	12	39	1	22	52	-16	30	45 PKKP
ABUYAMA	86.01	48.4	12	41K	0	23	5	-7		
MATUSIRO	86.38	45.7	12	33	-9	23	5	-11		
BOZEMAN	86.56	328.4	12	46	3				13	29
SENDAI	86.64	43.0	12	47	3					
BUTTE	86.90	329.5	12	47	2				13	59
BAGUIO CITY	87.75	71.1	12	50	1	23	16	-13		
HORSESHOE B.	87.85	337.4	12	48	-2					
GALERAZAMBA	88.23	282.1				23	43	9	24	45 *PS
VICTORIA	88.66	337.1	12	54K	1	23	17	-20	23	23
SEATTLE	89.07	336.0	12	57	2	23	23	-18		
FUQUENE	90.24	277.0	13	6	5				24	33 PS
SALT LAKE C.	90.86	326.0	13	5	1				13	38
LUBBOCK	91.39	315.3	13	8	2	23	38	-24	24	12
LEMBANG	91.65	97.3	13	5	-2	23	58	-7		
BANDUNG	91.72	97.3	12	59	-9	23	35	-30		
CHINCHINA	92.03	277.8	13	9	0	23	36	-32	24	13 SKKS
CORVALLIS	92.10	335.2	13	11	2					
EUREKA	93.71	327.9	13	18	1				30	51 PKKP
SHASTA	95.20	332.7	13	24	0					
RENO	95.23	330.4	13	29	5					
BOULDER CITY	96.12	325.2	13	29	1					
TUCSON TELE.	97.10	320.2	13	34	2					
TUCSON	97.22	320.3	13	36	3					
FRESNO	97.61	329.0	13	37	2					
LICK	97.85	330.6	13	37	1				17	41 PP
LA PAZ	98.95	256.2	14	1	20	24	20	-47	17	46 PP
PASADENA	99.15	326.5	13	38	-4	25	14	5	17	47 PP
HALLEY BAY	116.76	192.0	18	44	1					
MIRNY	117.26	154.6	18	54	10					
OASIS-BUNG.	119.81	152.5	18	53	4				20	22 PP
PORT MORESBY	124.37	74.1							20	41
SOUTH POLE	127.26	180.0	19	3	-1				21	3 PP
CHARTERS TS.	129.87	85.5	19	16	7				22	21
BYRD STATION	134.66	189.0	19	18	0				21	55 PP
DUMONT	135.28	150.4	19	30	11					
SCOTT BASE	137.02	170.0	19	27	5	26	46	17	22	11 PP
BRISBANE	138.93	90.3	19	33	7				22	40
CAPE HALLETT	141.85	165.5	18	30	-61				22	51 PKS
NOUMEA	146.88	72.6	19	46	7				20	16
KARAPIRO	160.07	99.1	20	42	44					

AUGUST 28 9.H 36.M 4.S EPICENTRE -34.01 -70.06 DEPTH= 0.KM

A= 0.28325 B=-0.78086 C=-0.55680 D=-0.9401 E=-0.3410
G=-0.1899 H= 0.5234 K=-0.8306 HT= 0.5

SE= 2.08

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SANTIAGO	0.76	319.8	0	13	-5	0	23	-7					
SANTA LUCIA	0.78	318.3	0	13	-5	0	23	-8					
TALA POZO	7.94	40.5	2	1	1	3	51	20			2	6	PP
LA PLATA	10:06	98.4	2	26	-3								
LA PAZ	17.53	6.2	4	8	0	7	38	16					
HUANCAYO	22.39	346.4	5	4	2								
BOGOTA	38.61	353.6	7	27	0								
CHINCHINA	39.13	351.2	7	33	2						11	11	
BYRD STATION	50.03	190.0	8	54	-5								
SAN JUAN	52.23	4.7	9	11	-4								
SOUTH POLE	56.17	180.0	9	45	1								
SCOTT BASE	63.39	191.4	10	36	2								
FAYETTEVILLE	73.29	339.8	11	36K	1								
LUBBOCK	73.57	332.7	11	37	0								
WESTON	76.03	359.0	11	51A	0								
HARVARD	76.16	358.9	11	47	-5								
TUCSON	76.27	325.3	11	53	0								
TUCSON TELE.	76.29	325.4	11	53	0								
BREBEUF	79.21	357.5	12	8K	-1								
OTTAWA	79.21	355.9	12	8K	-1								
OASIS-BUNG.	79.89	176.2	12	14	2								
SHAWINIGAN	80.23	358.1	12	15	1								
SEVEN FALLS	80.76	359.5	12	18K	1								
BOULDER CITY	81.22	324.7	12	20	1								
PASADENA	81.44	321.4	12	21	0								
RAPID CITY	83.38	336.6	12	31	0								
SALT LAKE C.	83.79	329.4	12	33	0								
FRESNO	84.31	322.0	12	35K	0								
EUREKA	84.56	326.1	12	38	1								
LICK	85.69	321.2	12	44K	2								
BERKELEY	86.41	321.2	12	48	2								
RENO	86.45	323.7	12	47K	1								
BOZEMAN	87.55	332.6	12	53	2								
MINERAL	87.95	323.2	12	53K	0								
BUTTE	88.43	331.9	12	56	0								
SHASTA	88.61	323.0	12	56K	0								
HUNGRY HORSE	90.92	332.4	13	7	0								
TAMANRASSET	91.35	63.4	13	11	2								
CHAMPFLEURY	104.12	42.2	11	36K	-151								
QUETTA	143.58	83.9	19	38	1								
WARSAK DAM	148.30	79.1	19	50	5								

AUGUST 29 12.H 24.M 27.S EPICENTRE -14.30 166.27 DEPTH= 0.KM

A=-0.94173 B= 0.23002 C=-0.24544 D= 0.2373 E= 0.9714
G= 0.2384 H=-0.0582 K=-0.9694 HT= 5.9

SE= 2.80

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
NOUMEA	8.00	178.8	1	57	-3	3	28	-5					
SUVA	12.29	109.8	2	59A	0	5	21	3					
BRISBANE	18.01	221.2	4	13	0	7	47	15					
PORT MORESBY	19.33	282.5	4	29	0	8	13	11			4	50	PP
CHARTERS TS.	19.94	250.7	4	36K	0	8	26	10					
AFIAMALU	21.30	91.6	5	11	21						9	3	
ONERAHI	22.58	162.6	5	11	8	9	18	11			10	2	
RIVERVIEW	23.79	212.6	5	16	1						10	43	SS
KARAPIRO	24.92	162.4	5	24	-2								
TRUK	25.93	325.6	5	35	0								
TUAI	26.23	160.5	4	49	-49								
GEBBIES PASS	29.80	170.7	6	7	-4								
MELBOURNE	30.11	215.0	6	14	1	11	14	2			13	24	
ROXBURGH	31.26	175.9				11	28	-2					
FORT NELSON	32.85	206.0				12	4	10					
PERTH	49.15	240.1	9	8	17	16	17	20					
BAGUIO CITY	54.49	302.5	9	32	1	17	18	8					

DUMONT	55.15	192.4	9	36	0				
ABUYAMA	56.93	329.9	9	49K	0	17	47	5	
MATUSIRO	57.09	333.2	9	49K	-1	17	45	0	12 6 PP
LEMBANG	58.01	270.8	9	58A	1	18	3	6	
ZO-SE	62.56	316.8				18	59	4	
HONG KONG	62.69	304.7	10	35	6	19	1	4	
WILKES	63.54	202.0				19	7	0	23 15 SS
SCOTT BASE	63.56	179.9	10	32	-2				20 33 SCS
CANTON	63.79	304.9	10	37	1	19	15	5	19 39 PS
Y.-SAKHLINSK	64.53	342.3	10	41	0	19	23	3	
VLADIVOSTOK	65.25	332.9	10	45	0	19	34	6	
UGLEGORSK	66.64	342.9	10	53	-1	19	51	6	
OASIS-BUNG.	67.21	203.7	10	56	-2	19	57	5	
PETROPAVLOVK	67.47	355.0	10	57	-3	19	57	2	
CHANGCHUN	68.87	329.4	11	7	-1	20	16	4	13 43 PP
MIRNY	70.33	204.0	11	15	-2	20	29	0	
PEKING	71.33	321.6	11	22	-1	20	44	3	14 1 PP
BYRD STATION	73.28	169.9	11	31	-4				
KUNMING	73.28	302.0	11	36	1	21	9	6	
MAGADAN	74.65	351.9	11	40	-3				
CHENGTU	74.68	307.7	11	43	0	21	21	2	22 0 SCS
SOUTH POLE	75.79	180.0	11	47	-2				
LANCHOW	77.33	312.6				21	57	9	
ULAN-BATOR	81.34	324.2	12	19	-1				
CHITTAGONG	81.51	295.6	12	18	-2	22	33	1	17 14 PPP
SHILLONG	82.53	298.7	12	26K	0				
LHASA	84.59	302.3	12	38	2	23	8	5	15 58 PP
LICK	84.87	49.6	12	39	1				
SHASTA	85.62	46.3	12	39	-2				
FRESNO	86.03	50.7	12	48	5				
MINERAL	86.04	46.8	13	2	18				
COLLEGE	86.21	17.9	12	40	-4	23	16	-3	
PASADENA	86.37	53.6	12	40	-5	23	12	-8	24 16 SP
CHATRA	86.93	298.5	12	52	4				
RENO	87.02	48.1	12	51	3				
TIKSI	89.35	348.9	12	57	-2	23	51	3	
BOULDER CITY	89.55	52.7	13	9	9				
EUREKA	89.79	49.1	12	59	-3				
HALLEY BAY	90.01	176.8	13	5	2				16 41 PP
TUCSON	91.65	57.3	13	14	4				
TUCSON TELE.	91.76	57.2	13	11	0				16 50 PP
NAMANGAN	102.66	309.3							18 23 PP
QUETTA	105.00	297.8				24	57	-65	17 41
RESOLUTE	106.03	15.9				25	57	-4	24 55 SKS
APATITY	118. 7	341.3							20 37 PP
OTTAWA	119.66	45.7	18	51A	-1				
SODANKYLA	120.81	343.0	18	40	-14				
BREBEUF	121.10	45.3	18	51	-4				
SHAWINIGAN	121.45	43.9	18	53	-2				
PALISADES	121.68	50.5							37 46 PKPPKP
KIRUNA	122.11	345.4	18	53	-4				
SEVEN FALLS	122.61	42.9	18	56K	-2				
TIFLIS	122.79	310.6	18	59	1				
MOSCOW	123.01	328.2							20 40
KIMBERLEY	123.28	220.8	18	59	0				
SOTCHI	126.03	313.8							21 13 PP
SKALSTUGAN	127.54	345.7	19	6	-1				
SIMFEROPOL	129.41	317.1							21 25
KSARA	131.22	302.5	19	17	3	26	34	11	21 42 PP
WARSAW	133.11	331.3	19	16	-2				22 54 PKS
ASTRIDA	133.78	252.1	19	33	14				38 11
LWIRO	134.77	252.1							22 59 PP
KRAKOW	135.06	329.6				28	58	147	22 6
HELWAN	135.76	298.2	19	43	20				22 55
HALLE	137.54	336.3	19	25	-1				23 7
PRUHONICE	137.61	333.0	19	27	1				22 14 PP
JENA	138.13	336.1	19	27	0	26	54	18	22 21 PP
DURHAM	138.52	349.4	19	22	-6	25	54	-43	
MUNSTER	138.71	340.0	19	34	6				
BENSBERG	139.72	339.6							23 15
STUTTGART	140.78	335.9	19	29	-3				22 39 PP
TRIESTE	141.10	329.0							22 10 PP
STRASBOURG	141.49	337.0	19	25	-8	26	57	16	22 33 PP
PARIS	143.08	342.1	19	34	-2	26	41	-3	22 55 PP
FLORENCE X.	143.68	328.9				25	33	-72	
ROME	144.35	325.6	19	35	-3				29 43 SKKS
REGGIO CALA.	144.81	317.8	19	51	12				
CLERMONT-FD.	145.56	339.0	19	38	-2				

ALGIERS UNI.	153.07	329.2	19	50	-2					20	37
TAMANRASSET	159.91	297.6	20	1	0	27	23	19		24	29 PP
MBOUR	176.85	88.2								25	48 PP

AUGUST 30 7.H 35.M 41.S EPICENTRE 37.25 20.49 DEPTH= 0.KM

A= 0.74749 B= 0.27938 C= 0.60266 D= 0.3501 E=-0.9367
G= 0.5645 H= 0.2110 K=-0.7980 HT= -0.7

SE= 3.33

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ATHENS	2.66	73.3	0	46K	1	1	20	2					
REGGIO CALA.	3.94	284.0	1	9	6	1	45	-6					
MESSINA	4.03	285.1	1	3	-1	1	46	-8			2	0	S*
TARANTO	4.09	322.8	1	14	9	1	56	1			2	19	
SKOPJE	4.78	8.1	1	14K	-1	2	40	28			1	43	
SOFIA	5.87	20.9	1	29	-1	2	47	8			3	34	
BELGRADE	7.57	359.8	1	51A	-3						2	34	*SPG
ROME	7.74	309.4	3	10	74	3	10	-16			4	26	
BUCHAREST	8.33	28.9	2	5	0	3	47	6			2	53	
TIMISOARA	8.51	3.4	2	46	39	5	6	81					
CAMPULUNG	8.71	21.6	2	14	4								
SZEGED	9.00	358.4				3	46	-11			2	52	PG
ZAGREB	9.21	339.9	2	5	-12						3	49	PS
FLORENCE X.	9.59	315.7	3	1	39						4	27	
TRIESTE	9.80	331.1	2	24	-1	4	7	-10			5	28	SGSG
BRATISLAVA	11.20	348.2	2	42	-2	4	51	0			4	3	
IASI	11.24	25.5	2	47	2								
KISHINEV	11.55	29.7	2	57	8								
PAVIA	11.63	316.5									7	37	
MONACO	11.86	307.1	2	58	5						3	18	
KRAKOW	12.81	358.4	3	1	-5						3	50	
SIMFEROPOL	12.83	48.9	3	5	-1								
LWOW	12.83	10.3	3	4	-2								
RACIBORZ	12.93	353.4	2	43	-25						3	24	
KSARA	12.99	100.7	3	7	-1								
RAVENSBURG	13.22	326.2	3	31	20						5	50	
PRUHONICE	13.43	343.3	3	10	-4	6	10	25					
EBINGEN	13.81	325.9	3	28	9						8	20	
ALGIERS UNI.	13.95	273.3									11	34	
TUBINGEN	14.03	327.1	3	23	1								
STUTTGART	14.15	328.0	3	23	-1	6	2	-1			4	43	
PLAUEN	14.54	338.3	3	22	-7	6	59	47					
STRASBOURG	14.65	324.7	3	28	-2	6	15	1			4	31	
SONNEBERG	14.73	336.0	3	37	6								
WARSAW	14.99	1.3	3	41	6						6	34	SS
COLLMBERG	15.03	341.6	3	34	-1								
JENA	15.09	337.9	3	33	-3	6	43	18			8	58	
HALLE	15.49	339.6	3	46	5	6	47	13			4	22	
SOTCHI	15.94	60.6	3	47	0								
POTSDAM	16.01	343.3	3	53	5	7	0	14					
BENSBERG	16.68	329.5	4	1	5								
DOURBES	17.19	323.4	4	4	1	7	22	8					
MUNSTER	17.30	332.4	4	3	-1						4	28	
PARIS	17.47	317.1	3	42	-24						4	25	
COPENHAGEN	19.23	346.1	4	29	1	8	1	1					
TIFLIS	19.26	69.1	4	29	1	7	59	-2					
TAMANRASSET	19.33	226.1	4	30A	1	8	4	1			4	47	PP
TOLEDO	19.36	285.4	4	13	-16						13	29	
KEW	20.48	320.6	4	47	5								
GOTEBORG	21.22	347.3	4	47	-2								
MAKHACH-KALA	21.38	66.1	4	50	-1	8	43	-1					
MOSCOW	21.82	26.6	4	52	-4								
UPPSALA	22.70	356.3	5	2	-2	9	5	-4					
DURHAM	23.12	326.3	5	9	1	9	18	2					
PULKOVO	23.41	12.6	5	9	-2	9	20	-1					
SKALSTUGAN	26.83	351.9	5	41	-3								
SODANKYLA	30.37	4.7	6	13	-3								
KIRUNA	30.63	360.0	6	15	-3								
APATITY	31.22	9.5	6	23	0								11 27
SVERDLOVSK	32.99	40.6	6	39	1								
NAMANGAN	39.42	68.3	7	33	0								
TIKSI	60.54	20.2	10	12	-2								
RESOLUTE	60.66	344.0	10	15	0								
COLLEGE	77.80	354.9	12	0	-1								

HUNGRY HORSE 85.66 331.5 12 42 0

AUGUST 30 18.H 38.M 20.S EPICENTRE 27.58-111.71 DEPTH= 0.KM

A=-0.32841 B=-0.82464 C= 0.46056 D=-0.9290 E= 0.3700
G=-0.1704 H=-0.4279 K=-0.8876 HT= 2.6

SE= 2.99

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
TUCSON	4.72	9.2	1	7	-7								
TUCSON TELE.	4.82	10.1	1	9	-7								
CHIHUAHUA	5.09	76.8	1	20	0								
SAN DIEGO	6.99	318.2	2	44	58	3	32	24					
PASADENA	8.58	321.3	2	10	1								
BOULDER CITY	8.78	343.2	2	11	0								
GUADALAJARA	10.29	130.1	4	24	112	4	24	-6					
FRESNO	11.43	325.3	2	49A	1								
EUREKA	12.38	344.5	3	0	-1								
LICK	12.83	321.8	3	7K	0								
SALT LAKE C.	13.16	359.5	3	12	1						3	50	
BOULDER	13.51	21.5	3	17	1								
BERKELEY	13.55	321.8	3	16A	0						4	18	
RENO	13.69	332.6	3	19	1								
TACUBAYA	14.07	122.7	3	42	19						6	30	
LARAMIE	14.59	18.6	3	34	4								
UKIAH	14.99	323.1	3	36	1								
MINERAL	15.13	329.8	3	40	3						8	22	
SHASTA	15.77	328.8	3	46	1						5	15	
VERA CRUZ	16.55	117.0	3	52	-3						7	27	
FAYETTEVILLE	17.12	55.9	4	2	0								
BOZEMAN	18.06	1.5	4	15	1						5	51	
BUTTE	18.42	358.1	4	20	1								
CORVALLIS	19.34	334.3	4	35	5								
HUNGRY HORSE	20.81	355.7	4	42	-4	8	45	11					
MERIDA	21.18	103.3	4	49	-1	8	52	11			6	55	
SEATTLE	21.68	340.4	4	55	0	9	15	25			12	24	
VICTORIA	22.79	339.6	5	2	-4	9	17	6					
HORSESHOE B.	23.52	340.8	5	11	-2								
BANFF	23.74	354.0	5	14	-1								
SASKATOON	24.81	7.5				9	53	7					
COLUMBIA	27.06	68.7	5	50	4								
CHAPEL HILL	28.89	65.1	6	7	4						14	41	
WASHINGTON	30.92	59.7				11	10	-14			7	28	PP
OTTAWA	33.61	48.4	6	40	-4	12	7	0			9	25	PCP
PALISADES	33.72	56.7	6	47	2	12	10	1					
BREBEUF	35.04	49.1	6	52K	-5	12	35	6					
HARVARD	35.74	54.7	7	1	-2						18	58	
WESTON	35.89	55.0	7	1A	-3						17	37	
SHAWINIGAN	35.93	47.7	7	3	-1								
SEVEN FALLS	37.37	47.4	7	17A	1	12	49	-16					
BERMUDA	40.77	71.5				14	20	24					
HONOLULU	42.50	272.1	7	52	-7	14	26	4					
COLLEGE	43.72	338.6	8	6	-3								
RESOLUTE	47.94	5.9	8	45	3	15	40	0					
HUANCAYO	52.88	133.3	9	22	2								
LA PAZ	60.87	130.8	10	15	-2								
NORD	63.64	9.4	10	35	0								
PETROPAVLOVK	68.23	319.5	11	6	1								
TIKSI	72.63	343.2	11	28	-3								
KIRUNA	78.46	16.7	12	6	1								
SKALSTUGAN	79.05	22.2	12	10	2								
SODANKYLA	80.33	15.1	12	16	1								
KEW	80.98	36.1	12	18	0	22	22	-5					
APATITY	81.64	12.8	12	16	-6						27	56	
GOTEBORG	82.87	26.8	12	23	-5								
DE BILT	83.41	33.6	12	36	5								
UPPSALA	83.48	23.1	12	30	-1						12	51	
WITTEVEEN	83.69	32.5	12	35	3								
PARIS	83.97	37.3	12	36	2						15	52	PP
DOURBES	84.32	35.5	12	34	-1								
COPENHAGEN	84.42	28.1				22	53	-9			23	58	PS
BENSBERG	85.09	33.8	12	40	1								
STRASBOURG	86.89	35.4									18	6	PPP
STUTTGART	87.50	34.6	12	48	-3								

MBOUR	87.56	75.2	12	54	3				28	40 SS
MATUSIRO	88.40	310.8	13	3	8	23	6	-34	29	42 SS
PRUHONICE	89.27	31.4	13	2	2				13	30
WARSAW	90.42	26.9				23	33	-26		
MOSCOW	92.99	16.8	13	17	0					
TAMANRASSET	101.40	56.8	14	0	5				17	52 PP
PORT MORESBY	104.12	266.7				24	45	-70		
KSARA	111.64	28.7	18	32	-5				21	42 PPP
CAPE HALLETT	112.46	198.9							29	15 PPS
SOUTH POLE	117.42	180.0	18	49	1					
QUETTA	122.55	1.4	19	0	2					

AUGUST 31 23.H 0.M 18.S EPICENTRE 63.27-144.23 DEPTH= 26.KM

A=-0.36692 B=-0.26437 C= 0.89189 D=-0.5846 E= 0.8113
G=-0.7236 H=-0.5214 K=-0.4522 HT= -9.9

SE= 1.84

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COLLEGE	2.25	317.1	0	36	0	1	2	-1					
SITKA	7.65	140.5	1	52	-1	3	46	27					
ALBERNI	17.57	133.9	4	5	0								
HORSESHOE B.	17.99	130.9	4	11	1								
VICTORIA	18.69	132.5	4	17A	-1	7	55	13					
BANFF	19.49	115.0	4	26A	-2								
SEATTLE	19.82	131.9	4	34	3	8	49	41					
CORVALLIS	22.22	137.5	4	57A	1								
HUNGRY HORSE	22.30	117.9	4	57	0						39	57	PKPPKP
SASKATOON	22.61	101.9	4	59	-1	9	13	12					
BUTTE	24.78	119.2	5	21	0						5	43	
BOZEMAN	25.67	117.6	5	30	1						6	52	
SHASTA	26.04	139.9	5	33A	0								
MINERAL	26.59	138.9	5	38	0								
UKIAH	27.26	142.5	5	54	10								
KLYUCHI	27.73	281.2	5	48	0						11	54	SS
RENO	27.88	136.9	5	50	0								
BERKELEY	28.70	141.9	5	57A	0	11	18	35					
EUREKA	29.18	131.3	6	1	0						9	8	
LICK	29.37	141.4	6	3A	0						9	11	
SALT LAKE C.	29.51	124.3	6	4	0						8	17	PCP
FRESNO	30.43	139.0	6	12	0								
PETROPAVLOVK	30.72	277.8	6	15	0	11	18	3			9	7	PCP
TIKSI	31.39	322.6	6	20	-1	11	30	5			9	13	PCP
NORD	32.68	12.5	6	34A	2	11	52	7			7	32	PP
BOULDER CITY	32.73	132.6	6	33	0						7	10	
PASADENA	33.35	138.5	6	37	-1	12	0	4					
KHEYS	36.60	355.3				13	7	21			8	42	PP
TUCSON TELE.	37.44	129.8	7	13	0						8	49	
TUCSON	37.48	130.0	7	14	1						17	36	SCS
FAYETTEVILLE	40.68	107.8	8	9	29						8	58	
OTTAWA	41.44	82.1	7	45A	-1	14	7	8			9	28	PP
SHAWINIGAN	41.87	78.6	7	50A	1								
Y.-SAKHLINSK	42.27	283.0	7	54	1	14	14	3					
SEVEN FALLS	42.29	76.6	7	53	0	14	18	6			9	33	PP
BREBEUF	42.30	80.3	7	52A	-1	14	19	7					
CHIHUAHUA	42.46	126.4									16	52	
KIPAPA	42.86	199.1	7	59	1								
HONOLULU	42.99	199.1	7	59	0	14	26	4					
PENNSYLVANIA	44.09	88.1	8	8	0						11	29	PP
PALISADES	45.71	84.5	8	21A	0	15	5	4			10	11	PP
WESTON	45.78	81.2	8	21A	0						21	28	
WASHINGTON	45.99	89.0	8	11	-12	15	9	4			10	6	PP
HALIFAX	47.40	73.2	8	34A	0						10	27	PP
COLUMBIA	48.25	96.3	8	40	-1								
KIRUNA	48.73	7.7	8	44A	0	15	48	4			19	41	SCS
APATITY	49.46	1.2	8	50	0	16	0	6			10	46	PP
SODANKYLA	49.49	4.6	8	50	0	15	58	4					
CHANGCHUN	52.21	293.7	9	9A	-2	16	36	4			16	54	SCS
SKALSTUGAN	52.26	13.0	9	11A	0								
MATUSIRO	52.60	278.2	9	12	-2	16	43	6			19	7	SCS
IRKUTSK	52.99	314.3	9	15	-1	16	46	3			10	26	PCP
TACUBAYA	53.40	123.7	9	30K	10	16	32	-16			30	6	
ABUYAMA	55.19	279.3	9	32A	-1								
ULAN-BATOR	55.84	309.7	9	38	1								

ABERDEEN	56.39	23.7	9	41A	0	17	34	6	11	46	PP
UPPSALA	56.43	10.9	9	41A	-1	17	31	2	19	29	SCS
HELSINKI	56.61	6.4	9	42	-1	17	41	10			
BERMUDA	56.99	82.9	9	51	5	17	47	11	11	57	PP
PULKOVO	57.22	3.3	9	47	0	17	44	5			
GOTEBORG	57.98	14.8	9	52A	-1						
DURHAM	58.76	24.3	9	57A	-1	18	5	6	10	50	PCP
PEKING	59.1'	298.1	10	0A	0	18	9	5	19	51	SCS
RATHFARNHAM	59.21	27.9	10	7K	6	18	28	23			
COPENHAGEN	60.01	15.0	10	7A	0	18	23	7	12	22	PP
MOSCOW	61.33	358.8	10	16	0	18	40	8			
WITTEVEEN	62.03	19.5	10	29A	9						
KEW	62.14	24.6	10	22A	1	18	51	8	22	49	SS
DE BILT	62.49	20.7	10	24A	1	18	56	9	12	42	PP
MUNSTER	63.00	19.1	10	27	0				11	9	
POTSDAM	63.33	15.4	10	30	1				12	49	PP
BENSBERG	63.91	19.7	10	34K	1	19	14	9			
HALLE	64.05	16.3	10	33	-1	19	13	6	12	53	PP
WARSAW	64.26	10.0	10	35A	0	19	17	8	19	37	PPS
DOURBES	64.33	21.7	10	36	1	19	19	9			
JENA	64.56	16.7	10	37	0	19	18	5	12	59	PP
ZO-SE	64.70	289.0	10	39	1						
SONNEBERG	65.05	17.1	10	40	0						
PLAUEN	65.06	16.4	10	39	-1				13	1	PP
PARIS	65.21	23.6	10	42A	1	19	30	9	11	15	PCP
PRAGUE	65.76	14.9	10	46	1				13	9	PP
PRUHONICE	65.86	14.8	10	44	-1				13	10	PP
RACIBORZ	66.15	12.3	10	38	-9	19	41	9			
STRASBOURG	66.32	19.9	10	49A	1	19	48	14	12	12	
KRAKOW	66.34	11.1	10	48	0	19	42	7	20	46	SCS
STUTTGART	66.35	18.9	10	49K	1	19	43	8	13	12	PP
TUBINGEN	66.56	19.0	10	50	0				11	18	PCP
SKALNATE PL.	67.23	11.0	10	53	-1						
LANCHOW	67.30	305.5	10	54A	0	19	50	4	20	9	PS
BASLE	67.31	20.3	10	55	1						
RAVENSBURG	67.37	18.8	10	56	1						
NEUCHATEL	67.73	20.9	10	58	1						
BRATISLAVA	67.93	13.4	11	1	3				13	31	PP
CLERMONT-FD.	68.26	24.0	11	1	1	20	10	12			
SAN JUAN	68.41	92.0	11	0	-1						
CERNAUTI	68.53	7.0	11	2	0	20	6	5	13	35	PP
RAKHOV	68.76	8.4	11	3	-1						
PRZHEVALSK	69.27	327.6	11	6	-1						
IASI	69.69	6.0	11	9	0	20	21	6			
PAVIA	69.85	19.7	12	2	52	21	37	81			
RYBACHE	69.85	329.3	11	10	0	20	21	5			
KISHINEV	69.92	5.1	11	11	0	20	23	6			
TRIESTE	70.03	16.3	11	10A	-1	20	23	4	11	35	PCP
SERRA PILAR	70.11	34.2	11	13	1						
TIMISOARA	70.72	10.7	11	16	1						
NARYN	70.84	329.1	11	16	0	20	31	3			
MONACO	70.99	21.3	11	18	1						
TCHIMKENT	71.38	334.2	11	19	0	20	33	-1			
FLORENCE X.	71.52	18.5	11	19	-1	20	56	20			
SIMFEROPOL	72.12	1.2	11	25	1	20	51	8			
NAMANGAN	72.23	332.2	11	25	1						
ANDIJAN	72.30	331.6	11	26	1	20	51	6			
LUNACHARSKOE	72.37	334.1	11	23	-2						
BUCHAREST	72.38	7.3	11	27	2	20	53	7	12	25	
TASHKENT	72.39	334.1	11	25	0	20	49	3			
TOLEDO	72.40	31.1	11	27A	1	20	56	10			
SOTCHI	73.45	357.0	11	32	0	21	5	7			
ROME	73.54	17.9	11	34	2	21	9	10			
SOFIA	73.91	9.5	11	35	1				13	33	
CANTON	75.08	291.5	11	32	-9						
GRANADA	75.08	31.6	11	54K	13	21	32	16			
TIFLIS	75.11	353.0	11	42	1	21	24	7	14	30	PP
STALINABAD	75.16	333.8	11	42	0	21	22	5			
ST. VINCENT	75.17	90.2	11	40	-2						
MALAGA	75.33	32.4	11	43K	0	21	29	10	14	33	PP
HONG KONG	75.39	290.4	11	44	1	21	27	7			
KHOROG	75.60	331.3	11	46	2						
ALMERIA	75.66	30.8	11	45	1						
EREVAN	76.66	353.1							24	30	PS
KIZYL-ARVAT	76.74	343.7	11	51	0	21	43	9	14	45	PP
ALGIERS UNI.	76.93	26.5	11	51	-1	21	45	9	14	50	PP
RELIZANE	77.39	28.7	11	55	1				14	27	
ASHKABAD	77.52	341.9	11	55	0	21	50	7	14	51	PP
NAKHICHEVAN	77.59	352.4	11	56	1						

MESSINA	77.59	16.2	11	52	-3	21	46	2	12 20	14 42 PP
KUNMING	77.60	301.3	11	54	-1	21	43	-1		22 11 SCS
LHASA	77.61	312.9	11	58	3	21	50	6		22 15 SCS
ATHENS	78.64	9.7	12	1A	0					
DEHRA DUN	80.87	323.9	12	22	9	22	23	5		
SHILLONG	81.08	310.6	12	13A	-1					
KSARA	83.25	359.9	12	28	3					15 28 PP
QUETTA	83.62	333.2	12	28	1	22	46	0		
JERUSALEM	85.28	0.5	12	8	-28					15 28 PP
HELWAN	87.12	3.9	12	46	1					
PORT MORESBY	88.97	246.8	12	52	-1	23	39	1		
TAMANRASSET	90.98	27.7	13	3	0	23	29	-27		16 43 PP
HUANCAYO	91.47	114.1	13	6	1					
MBOUR	92.59	50.5	13	12	2					
BYRD STATION	143.76	172.9	19	27	-6					
SCOTT BASE	143.98	195.8	19	30	-3					36 26 SKKS
KIMBERLEY	144.75	16.9	19	35K	1					
GRAHAMSTOWN	149.48	15.3	19	13	-29					
SOUTH POLE	153.11	180.0	19	45	-2					

AUGUST 31 23.H 27.M 11.S EPICENTRE -24.01-175.63 DEPTH= 0.KM

A=-0.91183 B=-0.06964 C=-0.40461 D=-0.0762 E= 0.9971
G= 0.4034 H= 0.0308 K=-0.9145 HT= 3.6

SE= 2.02

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SUVA	8.04	315.3	1	43	-18	3	52	18			2	4
AFIAMALU	10.70	20.6	1	21	-77							
KARAPIRO	15.79	206.5	3	56	11							
NOUMEA	16.57	272.3	3	59	4						7	18
BRISBANE	28.40	256.3	10	54	296						15	26
CHARTERS TS.	35.48	268.8	6	57	-3						12	34
PORT MORESBY	38.35	285.9	7	21	-3							
CAPE HALLETT	48.96	185.7	8	51	1							
BYRD STATION	60.83	170.5	10	14	-2							
OASIS-BUNG.	65.74	206.3	10	36	-13							
SOUTH POLE	66.13	180.0	10	49	-2							
MIRNY	68.77	205.4	11	6	-2							
BERKELEY	79.37	40.3	12	10K	1							
LICK	79.39	41.0	12	12K	3							
PASADENA	79.52	45.3	12	10	0							
FRESNO	80.14	42.4	12	14K	1							
MINERAL	81.40	38.7	12	19	-1							
RENO	81.91	40.3	12	23	0							
BOULDER CITY	82.81	45.5	12	28	1							
TUCSON	83.39	50.5	12	31	1							
TUCSON TELE.	83.52	50.5	12	32	1							
EUREKA	84.19	42.2	12	35	1							
SALT LAKE C.	87.50	43.0	12	51	0							
BOZEMAN	90.76	39.3	13	7	1							
COLLEGE	91.17	11.5	13	6	-2							
QUETTA	124.54	291.1	19	2	0							
KIRUNA	135.06	351.4	19	25	3							
MOSCOW	140.01	331.1	19	30	-1							
UPPSALA	143.00	348.9	19	28	-8							
ASTRIDA	143.83	226.5	19	36	-1							30 49
LWIRO	144.70	225.7	19	40	1					19 49		
RUMANGABO	145.04	227.4	19	41	2							
SOTCHI	145.08	312.7	19	38	-1							
GOTEBORG	145.90	352.7	19	40	-1							
COPENHAGEN	147.81	351.4	19	58	14							
SIMFEROPOL	148.07	318.2	19	45	1							
DURHAM	148.96	6.7	19	47K	1							
WARSAW	149.08	339.9	19	47	1						20	20 PKP2
IASI	150.35	327.1	17	58	-110							
KSARA	150.83	296.8	19	52	3						20	10 PKP2
POTSDAM	150.90	349.0	19	55	6							
WITTEVEEN	151.18	357.1	20	3	14							
KRAKOW	151.31	338.9	19	53	4						27	1
JERUSALEM	151.72	292.8	19	28	-22							
RACIBORZ	151.83	341.0	19	59	9							
HALLE	151.94	349.9	19	56	6							
SKALNATE PL.	151.95	337.6	19	54	4							

MUNSTER	151.97	355.7	19	58	8		
KEW	152.35	6.3	19	58	7		
JENA	152.55	350.1	19	51	0	20 25	PKP2
PLAUEN	152.87	349.1	19	49	-3		
PRUHONICE	152.88	345.5	19	52	0	23 11	PKS
BENSBERG	153.01	356.1	20	1	9		
BRATISLAVA	153.86	340.4	20	8	15	22 32	
STUTTGART	155.00	352.4	19	55	0		
TUBINGEN	155.25	352.5	20	19	24		
HELWAN	155.30	289.6	20	4	9	23 59	
STRASBOURG	155.33	354.6	19	57	2	24 13	PP
SOFIA	155.64	324.5	19	55	0	21 52	
CLERMONT-FD.	158.27	2.4	20	0	1		
TAMANRASSET	178.38	221.1	20	14	2	25 54	PP

SEPTEMBER 1 0.H 57.M 31.S EPICENTRE -23.96-176.35 DEPTH= 162.KM

DEPTH OF FOCUS= 0.020R

A=-0.91298 B=-0.05828 C=-0.40382 D=-0.0637 E= 0.9980
G= 0.4030 H= 0.0257 K=-0.9148 HT= 3.6

SE= 1.61

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	7.56	318.9	1	45	-3						3	24	
AFIAMALU	10.90	24.2	0	59	-93	2	53	-99					
KARAPIRO	15.55	204.6	3	33	1								
NOUMEA	15.91	272.5	3	38	2	6	37	10					
BRISBANE	27.78	256.2									11	49	
CHARTERS TS.	34.83	269.0	6	36	-1								
PORT MORESBY	37.71	286.3	7	1	0	13	1	22	7	12	17	30	
CAPE HALLETT	48.95	185.4	8	32	1								
DUMONT	50.64	200.8	8	43	-1						12	50	
SCOTT BASE	54.54	184.3	9	14	1						13	25	PCS
BYRD STATION	60.99	170.4	9	55	-3								
OASIS-BUNG.	65.49	206.3	10	28	0								
SOUTH POLE	66.18	180.0	10	30	-2								
MIRNY	68.54	205.5	10	45	-2								
MATUSIRO	73.89	323.3	11	20	1								
LICK	79.78	41.4	11	57	6						15	31	PP
PASADENA	79.96	45.7									15	33	PP
FRESNO	80.55	42.8	11	55	0								
SHASTA	81.55	38.4	12	1	0						15	40	
MINERAL	81.77	39.1	12	1	-1						15	40	PP
RENO	82.30	40.6	12	5	0								
BOULDER CITY	83.24	45.9	12	9	0						15	51	PP
TUCSON	83.87	50.9	12	12	0								
TUCSON TELE.	84.00	50.8	12	12	-1								
EUREKA	84.59	42.5	12	15	-1								
SALT LAKE C.	87.91	43.3	12	33	1								
HUNGRY HORSE	90.99	36.2	12	46	-1								
COLLEGE	91.26	11.8	12	48	0								
LARAMIE	92.21	45.4									16	32	PP
QUETTA	123.91	291.2	18	43	4								
HELSINKI	140.88	343.3	19	7	-4								
UPPSALA	142.82	348.4	19	12	-2								
LWIRO	144.27	226.6	19	21K	4								
GOTEBORG	145.76	352.1	19	23	4								
DURHAM	148.98	5.9	19	28	4								
LWOW	149.67	333.5	19	34	9								
RATHFARNHAM	149.75	11.9	19	32	7						23	3	
KSARA	150.23	296.6	19	35	9								
POTSDAM	150.73	348.2	19	37	10								
WITTEVEEN	151.09	356.2									23	6	PP
JERUSALEM	151.10	292.7	19	29	2								
RACIBORZ	151.56	340.1	19	39	11								
SKALNATE PL.	151.65	336.8	19	40	12						19	49	
HALLE	151.77	349.0	19	34	6								
MUNSTER	151.87	354.8									19	36	
KEW	152.37	5.4	19	40	11								
JENA	152.38	349.1	19	32	3						23	5	PP
PRUHONICE	152.67	344.6	19	41	11						20	15	PKP2
PLAUEN	152.69	348.1	19	32	2						19	59	PKP2
BENSBERG	152.91	355.1									19	51	

UCCLE	153.20	359.0						21 10	
BRATISLAVA	153.59	339.5						19 49	PKP2
HELWAN	154.66	289.5						19 46	
STUTTGART	154.85	351.3	19	36	3			23 15	PKS
STRASBOURG	155.21	353.5	19	56	23			20 4	PKP2
MALAGA	165.52	26.7						24 31	PP
SETIF	167.71	353.3	19	47	1			24 47	PP
TAMANRASSET	177.92	236.0	19	55	5			25 34	PP

SEPTEMBER 1 15.H 29.M 34.S EPICENTRE 38.00 134.51 DEPTH= 405.KM

DEPTH OF FOCUS= 0.059R

A=-0.55386 B= 0.56339 C= 0.61305 D= 0.7131 E= 0.7011
G=-0.4298 H= 0.4372 K=-0.7900 HT= -1.0

SE= 1.60

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
WAZIMA	1.99	107.3	0	58K	1						1	33
SAIGO	2.03	208.1	0	58	1	1	43	2				
KANAZAWA	2.25	130.0	0	58	0							
HUKUI	2.40	143.6	1	0	1	1	49	3				
TOYOOKA	2.48	174.2	1	0	0	1	52	5			1	36
TOTTORI	2.50	185.3	1	1	1	1	49	1				
TOYAMA	2.50	120.3	1	0K	0	1	50	2				
MAIZURU	2.64	162.7	1	2	1	1	51	2				
TSURUGA	2.66	151.4	1	2	1	1	49	-1				
YONAGO	2.73	200.4	1	3	1	1	51	0				
MATSUE	2.79	204.9	1	2	0	1	54	3				
TAKAYAMA	2.86	129.3	1	3	0							
AIKAWA	2.95	88.4	1	4	1	1	55	2				
IBUKISAN	3.01	149.5	1	5	1	1	55	1				
HIKONE	3.06	152.3	1	4	0	1	53	-2				
TAKADA	3.10	105.6	1	6	1	1	58	2				
GIHU	3.16	144.3	1	4	-1	1	56	-1			1	28
NAGANO	3.22	113.1	1	6	0	1	59	1				
ABUYAMA	3.24	164.4	1	5K	-1	1	58	0				
MATUMOTO	3.27	121.2	1	6	0	2	0	2				
MATUSIRO	3.29	114.9	1	5K	-1	1	59	0				
OKAYAMA	3.35	188.4	1	7	0	2	1	1				
KOBE	3.35	170.5	1	6	-1	1	59	-1				
OSAKA	3.44	165.9	1	9	1	2	0	-1				
NAGOYA	3.45	144.2	1	8K	0	2	0	-1				
NARA	3.48	161.8	1	8	0	2	2	0				
HIMEJI	3.49	181.5	1	2	-6	1	54	-8				
KAMEYAMA	3.52	152.7	1	8	0	2	2	0				
NIIGATA	3.59	89.9	1	10	1	1	52	-11				
OIWAKE	3.63	116.1	1	10	1	2	5	1				
IIDA	3.64	131.9	1	10	1	2	5	1				
TU	3.64	153.0	1	8	-1							
SUMOTO	3.65	175.2	1	10	0	2	4	0			3	3
TAKAMATU	3.69	185.9	1	10	0	2	6	1				
WAKAYAMA	3.80	171.7	1	11	0	2	5	-2				
TOKUSIMA	3.92	179.2	1	13	1	2	11	2				
MAEBASI	3.97	112.3	1	12	0	2	8	-1			4	6
HIROSIMA	3.99	205.6	1	13K	0	2	10	0				
KOHU	4.02	124.7	1	12	-1	2	9	-1				
OWASE	4.15	160.3	1	7	-7	2	17	4				
HAMMATU	4.17	140.7				2	17	3				
TITIBU	4.17	117.5	1	13	-1							
HUNATU	4.23	124.8	1	15	0	2	14	0				
SAKATA	4.27	76.2	1	15	0						1	52
KUMAGAYA	4.31	113.9	1	17	1	2	12	-3				
MATUYAMA	4.40	199.5	1	17K	0	2	17	0				
KOTI	4.51	190.5	1	18	0	2	20	1			14	10 SCS
UTUNOMIYA	4.51	107.1	1	16	-2	2	13	-6				
OMAESAKI	4.52	137.4	1	17	-1	2	20	1				
MISIMA	4.58	127.5	1	18	0	2	20	0				
YAMAGATA	4.61	85.1	1	18	-1	2	20	-1				
SHIRAKAWA	4.62	99.2	1	17	-2	2	20	-1				
SIOMISAKI	4.65	166.9	1	18	-1	2	22	1				
AKITA	4.69	66.8	1	19K	-1	2	24	2				
HUKUSIMA	4.72	91.2	1	19	-1	2	20	-3				
AJIRO	4.72	127.1	1	20	0	2	23	0				
MUROTO	4.75	183.4	1	22	2	2	25	2				

TOKYO C.M.O.	4.80	117.2	1	20	-1	2	21	-3			1	58
YOKOHAMA	4.86	120.3	1	21	0	2	21	-4				
KAKIOKA	4.86	109.6	1	20K	-1	2	24	-1				
SIMONOSEKI	4.97	216.8	1	20	-2	2	26	-1				
UWAZIMA	5.02	199.1	1	24	1	2	28	0				
MITO	5.02	106.9	1	22	-1	2	24	-4				
SENDAI	5.04	85.0	1	22K	-1	2	26	-2				
OSIMA	5.08	127.9	1	24	1	2	28	-1				
UNAHAMA	5.19	99.7	1	22K	-3	2	27	-4			2	2
MERA	5.27	124.0	1	25	-1	2	29	-4				
OOITA	5.31	207.2	1	26K	0	2	34	1				
MIZUSAWA	5.31	75.7	1	24	-2	2	1	-32				
SIMIDU	5.36	194.1	1	29	3	2	36	2				
ISINOMAKI	5.38	83.3	1	25K	-2	2	28	-7				
MORIOKA	5.47	69.8	1	26K	-2	2	32	-5				
VLADIVOSTOK	5.49	339.6	1	29	1							
HUKUOKA	5.52	218.2	1	33	5	2	42	4				
TYOSI	5.57	112.2	1	27	-2	2	36	-2				
AOMORI	5.61	57.9	1	29	0	2	33	-6				
ITUHARA	5.68	229.7	1	30	0	2	39	-2				
ASOSAN	5.81	209.9	1	30	-1	2	45	2				
SAGA	5.85	217.2	1	34K	2	2	45	1				
HATINOHE	6.00	62.9	1	32K	-1	2	45	-2				
KUMAMOTO	6.03	212.2	1	34	0	2	50	3				
MIYAKO	6.05	71.9	1	35	1	2	44	-4				
HAKODATE	6.09	49.7	1	35K	1	2	49	1				
MORI	6.20	46.7	1	36	1						4	35
NAGASAKI	6.48	217.1	1	39	1	2	56	0				
SUTTSU	6.48	40.5	1	39	0	2	58	2				
HATIDYOZIMA	6.53	136.8	2	0	21							
MURORAN	6.57	46.8	1	37	-3	2	55	-3				
MIYAZAKI	6.57	203.6	1	40K	0	3	2	4				
TOMAKUMAI	7.04	47.9	1	48	3							
TOMIE	7.13	222.9	1	46K	0	3	13	4				
KAGOSIMA	7.19	208.1	1	47K	0	3	13	2				
SAPPORO	7.26	43.6	1	46K	-1	3	9	-3			14	9 SCS
URAKAWA	7.57	54.2	1	51	0	3	16	-3				
YAKUSIMA	8.23	205.0	1	58K	0	3	27	-5			2	27
OBIHIRO	8.25	50.7	1	57	-2	3	28	-4				
ASAHIGAWA	8.29	43.4	1	58	-1							
KUSIRO	9.03	53.4	2	5	-2	3	41	-7				
CHANGCHUN	9.08	312.8	2	9	1	3	53	3				
WAKKANAI	9.15	33.6	2	16	7							
ABASHIRI	9.52	47.7	2	12	-1	3	54	-5				
NEMURO	9.95	54.2	2	16	-2	4	1	-7				
DAIREN	10.15	279.1	2	21	1							
SUIHWA	10.25	329.5	2	21	-1							
Y.-SAKHLINSK	10.80	31.5	2	26	-2	4	23	-3				
KURILSK	12.33	49.9	2	50	5	5	6	9				
ZO-SE	12.96	241.9	2	51K	-1	5	11	1				
PEKING	14.41	283.8	3	7K	-1	5	41	2				
TAIPEI	17.00	224.2	3	36	1	6	33	5				
ILAN	17.08	223.1	3	35	0	6	35	5				
HWALIEN	17.80	221.9	3	43	0							
ALISHAN	18.60	223.0	3	49	-1							
HSINKONG	18.64	220.9	3	13	-38							
PAOTOW	19.11	285.4	3	57	1							
HENGCHUN	19.87	220.5	4	6	3							
ULAN-BATOR	22.40	305.1	4	27	0							
PETROPAVLOVK	22.53	40.0	4	25	-3	8	4	0				
HONG KONG	23.46	234.0	4	38	1	8	24	5			8	7 PCP
CANTON	23.49	236.8	4	37K	0	8	22	2				
LANCHOW	24.52	275.0	4	45K	-1	8	33	-4	5	52		
BAGUIO CITY	24.75	213.5	4	46	-2							
IRKUTSK	25.41	313.9	4	52	-2				6	4		
GUAM	26.07	156.8	4	59	-1							
CHU-LIEN	29.57	242.5	5	26	-5						16	28
KUNMING	29.89	253.7	5	33K	-1	9	59	-2			12	18 SS
TIKSI	33.83	356.8	6	8	1							
TOCKLAI	35.15	263.2	6	21K	2							
LHASA	36.80	270.1	6	33	1	11	47	0				
SHILLONG	38.00	263.6	6	42K	0	11	57	-8				
CHITTAGONG	39.70	259.3	6	58A	2	12	36	6	7	57	8	37 PP
CHATRA	41.10	268.6	7	8	1	12	49	-1				
FRUNSE	45.04	296.0	7	39	0	13	48	1	8	54	16	51 SCS
DEHRA DUN	46.74	278.2	7	53	1	14	9	-2				
AGRA	48.18	274.4	8	2	-1	14	27	-4				
PORT MORESBY	48.61	163.3	8	6K	0	14	37	1			17	18 *SS

LAHORE	49.11	281.5	8	9K	-1	14	45	2	9	25						
TASHKENT	49.27	295.5	8	11	0	14	46	1	9	31			17	17	SCS	
STALINABAD	50.58	292.3	8	19	-2	15	5	2								
SVERDLOVSK	50.75	317.0	8	23	1											
LEMBANG	51.15	215.2	8	25K	0	15	11	0								
COLLEGE	51.22	32.4	8	26	0				9	45			9	3		
QUETTA	55.41	283.5	8	55K	-1	16	1	-7	10	16			11	8	PP	
KARACHI	57.42	278.9	9	13K	3											
ASHKABAD	58.34	295.6	9	16K	0	16	49	3	10	39			18	26	SCS	
CHARTERS TS.	58.75	167.1	9	18	-1											
APATITY	59.49	334.1	9	23K	-1	16	59	-1	10	51			12	52	PPP	
NORD	59.70	355.3	9	24	-1											
RESOLUTE	62.98	13.1	9	46A	-1	17	35	-9	11	16			18	57	SCS	
MOSCOW	63.13	321.0	9	47	-1	17	45	-1	11	10						
KIRUNA	63.59	337.2	9	50K	-1	17	55	4	11	15						
PULKOVO	64.48	327.1	9	56	0	18	1	-1					19	5	SCS	
TIFLIS	65.83	304.9				18	17	-2								
GORIS	65.93	302.1	10	6	0	18	21	1								
BRISBANE	67.41	162.2	10	15	0											
SKALSTUGAN	68.91	336.1	10	23K	-1								14	20		
UPPSALA	69.58	331.3	10	27	-1				11	54						
SIMFEROPOL	70.70	312.3	10	35K	0	19	54	39	12	1			20	14		
ADELAIDE	72.66	176.4	10	47	1											
GOTEBORG	73.20	331.8	10	45	-4											
LWOW	73.26	320.7	10	50	0	19	43	-1	12	24						
HUNGRY HORSE	74.70	40.1	10	59	1				12	28						
SHASTA	74.81	50.1	11	0A	2											
KRAKOW	75.12	322.7	11	1	1	19	59	-5					12	39	PCP	
MINERAL	75.50	50.0	11	2A	0											
RACIBORZ	75.92	323.5	11	6	1											
KSARA	76.06	302.0	11	6	1				12	39			13	20	*SP	
BERKELEY	76.60	52.4	11	9A	1											
RENO	77.08	49.8	11	12A	1											
LICK	77.32	52.5	11	13A	1				12	46						
COLLMBERG	77.41	326.7	10	26	-47											
PRUHONICE	77.68	325.1	11	14	0				12	40			15	35		
HALLE	77.72	327.4	10	48	-26								11	15		
JERUSALEM	77.72	300.7	10	46	-28				12	20						
BRATISLAVA	77.76	322.5	11	15	0				12	48						
BOZEMAN	78.00	40.7	11	18	2											
JENA	78.29	327.2	11	17	-1				12	46						
FRESNO	78.82	52.0	11	22	2											
MUNSTER	79.15	329.7	11	22	0				13	3						
EUREKA	79.40	47.9	11	24	1				12	54			41	4	SKPPKP	
DURHAM	80.22	335.9	10	40	-48											
SALT LAKE C.	80.90	44.8	11	33	2											
STUTTGART	80.93	326.9	11	31	0				13	5						
TRIESTE	81.17	322.4	11	20	-13											
TUBINGEN	81.17	326.8	11	32	-1											
EBINGEN	81.48	326.6	11	33	-1											
PASADENA	81.52	53.2	11	35	1								13	6		
HELWAN	81.53	301.2	11	35	1	21	11	0								
STRASBOURG	81.69	327.5	11	36	1	21	15	2	13	14			23	49	*SS	
DOURBES	81.80	330.1	12	58	82	21	18	4								
PARIS	83.66	330.4	11	46	1				13	17						
LARAMIE	83.89	41.1	11	46	0											
KARAPIRO	84.48	148.6	11	52	3				14	19						
BOULDER	84.97	41.8	11	54	2											
TUCSON	87.35	50.4	12	4	1				13	38						
TUCSON TELE.	87.35	50.3	12	4	1				13	37						
TAMANRASSET	102.87	312.6											17	34	PP	
SOUTH POLE	127.81	180.0	18	18	0				19	55			20	59	SKP	
BYRD STATION	129.91	167.4	18	7	-15				20	4			21	8	SKP	
HALLEY BAY	141.39	187.5	18	37	-7								21	41	PP	
HUANCAYO	142.90	53.8	18	46	-1											
LA PAZ	150.76	49.1	19	2	3											

SEPTEMBER 2 1.H 13.M 23.S EPICENTRE 37.47 20.67 DEPTH= 0.KM

A= 0.74449 B= 0.28084 C= 0.60569 D= 0.3529 E=-0.9356
G= 0.5667 H= 0.2138 K=-0.7957 HT= -0.8

SE= 3.65

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S

ATHENS	2.47	77.3	0	44K	2					0	48 PG
REGGIO CALA.	4.03	280.6	1	11	7	1	42	-11			
MESSINA	4.12	281.8	1	4	-1	1	49	-6		1	18
SKOPJE	4.54	6.9	1	10K	-1	2	20	14		1	24 PG
SOFIA	5.61	20.5	1	27	1	2	40	7		1	54
BELGRADE	7.35	358.8	1	49A	-2					3	4 PGSG
ISTANBUL UN.	7.38	58.5	1	56	5						
ROME	7.71	307.6	1	50	-6					2	30 PG
BUCHAREST	8.07	28.9	2	2A	1					4	25 SG
TIMISOARA	8.29	2.7	2	21	17	4	11	32		4	45
CAMPULUNG	8.46	21.4	2	13	7					4	21
SZEGED	8.79	357.6	2	40	29	4	8	16		2	56 PG
ZAGREB	9.05	338.7	2	12	-3					3	53 PS
KALOCSA	9.14	352.7				4	3	2		3	7 PG
FOCSANI	9.57	28.7	2	44	22						
TRIESTE	9.68	329.8	2	18	-5	4	5	-9		3	2 PGPG
BUDAPEST	10.08	353.8				3	57	-27		2	57 PG
BACAU	10.21	25.0	2	37	7						
HURBANOVO	10.56	350.9				5	10	35		6	8
IASI	10.98	25.5	2	45	4					3	42
BRATISLAVA	11.01	347.4	2	39	-3	4	42	-5			
HELWAN	11.67	127.4	2	45	-5	4	46	-17			
SKALNATE PL.	11.71	358.7	2	50	-1	5	11	7		6	35
MONACO	11.84	306.0	2	50	-3					2	59 PP
SETIF	12.30	268.7	2	55	-4					3	8 PP
SIMFEROPOL	12.58	49.3	3	3	0	5	30	5			
KRAKOW	12.59	357.8	3	2	-1					6	46 PCP
LWOW	12.59	10.0	3	4	1	5	31	6			
RACIBORZ	12.74	352.8	3	1	-4	4	12	-77			
KSARA	12.90	101.8	3	2	-5	5	14	-18			
RAVENSBURG	13.12	325.3	3	17	7	5	54	16		3	42
JERUSALEM	13.25	111.0	2	34	-38	4	52	-49			
PRUHONICE	13.26	342.5	3	9	-3	5	31	-10			
PRAGUE	13.37	342.4	3	11	-2	5	52	8		4	16
EBINGEN	13.71	325.1	3	17	-1	6	1	9			
NEUCHATEL	13.91	317.5	4	1	41						
TUBINGEN	13.92	326.3	3	19	-1					3	54
BASLE	13.92	320.4	3	37K	16					8	20
CHEB	13.95	337.3	3	27	6	6	23	25		4	14
STUTTGART	14.04	327.2	3	19	-3	6	3	3		5	7
STRASBOURG	14.55	323.8	3	30	1	6	13	1		3	35 PP
SONNEBERG	14.58	335.3	3	26	-3	6	25	12		4	34
WARSAW	14.77	0.9								3	38 PP
COLLMBERG	14.87	340.9	3	33	0						
JENA	14.94	337.2	3	30	-4	6	39	18		4	42
HALLE	15.33	339.0	3	39	0	6	46	16			
CLERMONT-FD.	15.50	307.9	3	39	-2	6	36	2			
SOTCHI	15.71	61.2	3	56	12						
POTSDAM	15.84	342.7	3	49	3	7	2	20		4	54
TORTOSA	16.00	288.3	3	48	0	7	20	34			
RELIZANE	16.25	270.0	3	53	2	6	42	-10		4	3 PP
BENSBERG	16.56	328.8	3	57	2	7	1	2			
ALICANTE	16.71	279.5	4	6	9	7	16	13		7	49 SSS
DOURBES	17.10	322.7	4	0	-2	7	21	10			
MUNSTER	17.17	331.8	4	2	0					10	5
PARIS	17.40	316.4	4	10	5	7	24	6		4	27 PP
UCCLE	17.69	324.1	4	5	-4	7	33	8			
WITTEVEEN	18.20	332.0	4	18	3						
DE BILT	18.24	328.3	4	17	1						
ALMERIA	18.45	275.1	4	33	15	7	47	5		4	46 PPP
COPENHAGEN	19.05	345.6	4	25K	-1	7	59	3		4	54
TIFLIS	19.06	69.6	4	24	-2	8	2	6			
GRANADA	19.29	276.6	4	27A	-2	8	27	26		5	0 PP
TOLEDO	19.44	284.8	4	26	-4	8	1	-3		9	29
TAMANRASSET	19.60	224.0	4	27	-5	8	13	5		8	33 PCP
MALAGA	20.00	275.5	4	33K	-4	8	15	-2		4	51 PP
GORIS	20.18	76.3	4	36	-2	8	23	3			
KEW	20.40	320.0	4	39	-2	8	22	-3		12	16 PCS
GOTEBORG	21.04	346.9	4	45	-2						
MAKHACH-KALA	21.17	66.6	4	52	3					5	15
MOSCOW	21.57	26.7	4	50	-3	8	47	-1			
UPPSALA	22.49	356.0	4	58	-4	9	3	-2			
HELSINKI	22.89	5.5	5	3	-3						
SERRA PILAR	22.89	288.3	5	6K	0					5	33 PP
DURHAM	23.02	325.9	5	5	-2	9	10	-4			
PULKOVO	23.17	12.5	5	5	-4	9	17	0			
LISBON	23.46	282.3	5	18K	7						
RATHFARNHAM	24.47	319.0	5	39K	18						
ABERDEEN	24.82	329.9				9	51	5		5	46 PP

SKALSTUGAN	26.64	351.6	5	38	-4						
SODANKYLA	30.14	4.6	6	11	-2						
KIRUNA	30.42	359.8	6	12	-4	11	14	-2			
APATITY	30.99	9.5	6	23	2	11	24	-1	12	54	SS
SVERDLOVSK	32.73	40.8	6	31	-5						
QUETTA	38.82	86.8	6	54	-34						
NAMANGAN	39.21	68.5	7	39	8				13	26	
LWIRO	40.23	167.4	7	38	-2				9	24	PP
NORD	46.20	352.9	8	25	-3						
CHATRA	56.26	80.2	9	42	-2						
RESOLUTE	60.49	344.0	10	12A	-2	18	24	-4			
WESTON	67.27	306.6	11	13A	15						
COLLEGE	77.60	355.0	12	0	1						
HONG KONG	79.43	70.1	12	17	8	22	16	6			
HUNGRY HORSE	85.53	331.6	12	40	-1						
MATUSIRO	86.40	45.7	12	45	0				19	19	
BUTTE	86.87	329.4	12	50	3						
EUREKA	93.68	327.8	13	29	10						

SEPTEMBER 2 2.H 27.M 41.S EPICENTRE -10.58 164.54 DEPTH= 0.KM

A=-0.94767 B= 0.26201 C=-0.18240 D= 0.2665 E= 0.9638
G= 0.1758 H=-0.0486 K=-0.9832 HT= 6.5

SE= 2.13

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
NOUMEA	11.80	171.3	2	54A	2	4	56	-10					
SUVA	15.41	120.8	3	53A	13	6	41	9					
PORT MORESBY	17.17	272.4	3	58	-4	6	58	-15			4	9	PP
CHARTERS TS.	19.96	239.8	4	36	0	8	20	4					
BRISBANE	20.00	211.2	4	39	2	8	25	8					
TRUK	21.94	324.3	5	0	4								
RIVERVIEW	26.20	205.9	5	39K	1								
KARAPIRO	28.96	161.9	6	2	-1						6	41	
TUAI	30.28	160.2	6	13	-2								
MELBOURNE	32.33	209.7	6	33A	0								
GEBBIES PASS	33.74	169.4	6	43	-2								
ADELAIDE	33.78	220.1	6	46	1								
ABUYAMA	52.88	330.0	9	21K	2								
MATUSIRO	53.02	333.4	9	21K	1	16	47	-3			21	1	SS
DUMONT	58.43	191.2	9	58	-1								
CAPE HALLETT	61.78	178.0	10	22A	0						31	49	PKKP
SCOTT BASE	67.27	179.5	10	58K	0								
BYRD STATION	77.22	170.0	11	57	0								
SHILLONG	79.27	298.7	12	9A	1								
SOUTH POLE	79.49	180.0	12	9	-1								
COLLEGE	83.22	18.5	12	28	-1								
LICK	83.78	50.3	12	33	1								
SHASTA	84.30	47.0	12	28	-7								
MINERAL	84.76	47.5	12	35	-2								
PASADENA	85.55	54.2	13	0	19	23	11	-1					
RENO	85.82	48.7	12	43	1								
EUREKA	88.66	49.6	12	55	-1								
TUCSON	91.08	57.5	13	7	0								
TUCSON TELE.	91.19	57.5	13	8	0								
HUNGRY HORSE	92.18	41.3	13	9	-3								
BUTTE	92.63	43.8	13	17	3								
BOZEMAN	93.60	44.4	13	23	4								
RESOLUTE	102.93	15.6				25	51	6					
DE BILT	135.33	342.0									22	9	PP
SETIF	148.26	326.8	19	50	6						21	4	
TOLEDO	149.11	342.8	19	52	6						20	2	PKP2
RELIZANE	151.03	332.4	19	56	7						20	14	PKP2
TAMANRASSET	156.57	303.8	19	58	2						24	7	PP

SEPTEMBER 2 3.H 8.M 3.S EPICENTRE 34.52 23.00 DEPTH= 0.KM

A= 0.76005 B= 0.32266 C= 0.56411 D= 0.3908 E=-0.9205
G= 0.5193 H= 0.2204 K=-0.8257 HT= 0.3

SE= 2.32

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ATHENS	3.49	9.4	0	59A	2						1	39	S*
MESSINA	7.04	303.6	1	48	1	3	7	-2					
SKOPJE	7.55	350.9	1	53	-1						3	39	
SOFIA	8.17	1.7	2	4	1								
HELWAN	8.44	121.0	2	8K	1	3	45	1					
BUCHAREST	10.17	12.7	3	21	50								
KSARA	10.69	90.1	2	38	0	4	35	-4					
ZAGREB	12.49	336.7									5	39	
TRIESTE	13.17	330.3				5	35	-5					
BRATISLAVA	14.33	343.9	3	26	0						7	41	
SETIF	14.46	281.7	3	35	7						3	59	
KRAKOW	15.68	352.7	3	47	3						9	52	
RACIBORZ	15.94	348.7	3	42	-5								
PRUHONICE	16.65	340.7	3	57	1	7	18	16					
PRAGUE	16.76	340.5	4	1	3	7	26	22					
STRASBOURG	18.04	325.7	4	17	3						7	43	
SONNEBERG	18.05	335.0	4	14	0								
COLLMBERG	18.27	339.6	4	16	-1								
JENA	18.38	336.6	4	19	1						5	24	
TIFLIS	18.57	60.8	4	24	4						7	57	
HALLE	18.76	338.1	4	25	2								
CLERMONT-FD.	18.85	312.5	4	21	-3								
POTSDAM	19.22	341.3	4	29	1								
TAMANRASSET	19.26	237.2	4	26	-3	8	7	6			8	39	PCP
DOURBES	20.59	324.7	4	41	-2	8	39	10					
MUNSTER	20.65	332.3	4	42	-2						5	24	
PARIS	20.85	319.4	4	44	-2								
UCCLE	21.18	325.8	4	52	3	9	13	32					
MOSCOW	23.49	21.0	5	11	-1								
GOTEBORG	24.35	345.6	5	21	0								
UPPSALA	25.59	353.7	5	31K	-1	10	0	1					
HELSINKI	25.69	2.3	5	32	-1								
PULKOVO	25.71	8.5	5	34	0								
SKALSTUGAN	29.84	350.4	6	9	-2								
SODANKYLA	32.96	2.6	6	37	-2								
KIRUNA	33.39	358.2	6	40	-2								
APATITY	33.62	7.2	6	42	-2						15	57	
SHILLONG	59.27	78.5	10	5K	-1								
HUNGRY HORSE	89.01	333.0	13	58	60								

SEPTEMBER 2 14.H 25.M 37.S EPICENTRE -5.72 144.81 DEPTH= 0.KM

A=-0.81325 B= 0.57343 C=-0.09897 D= 0.5763 E= 0.8173
G= 0.0809 H=-0.0570 K=-0.9951 HT= 7.0

SE= 2.93

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT MORESBY	4.33	147.8	1	15	6	2	1	0					
CHARTERS TS.	14.28	174.5	3	32K	6						11	59	
TRUK	14.86	28.3	3	41	7								
KOROR	16.56	321.4	4	2	6								
GUAM	19.06	359.8	3	28	-59	7	8	-49			3	52	
BRISBANE	23.01	161.0	5	8K	0	10	6	51					
RIVERVIEW	28.58	168.9	5	56	-4	10	47	-1					
ADELAIDE	29.61	190.2	6	13	4						17	3	SCS
MELBOURNE	31.96	179.8	6	31	T						7	9	
LEMBANG	36.98	266.3	6	53	-20								
ONERAHI	40.40	141.8	7	44	2								
HONG KONG	40.93	313.9	7	50	4	13	53	-6					
ABUYAMA	41.30	348.5	7	49K	0								
CANTON	42.06	314.0	7	59K	4	14	13	-2					
MATUSIRO	42.50	352.1	7	58K	-1	14	9	-13			13	31	PCS
KARAPIRO	42.51	143.3	8	0K	1						9	50	PCP
ZO-SE	43.02	329.7	8	5K	2								
TONGARIRO	43.36	144.7	8	6	0								
AFIAMALU	43.49	104.1	8	43	36								
NANKING	45.00	328.2	8	22K	3	14	53	-5					
GEBBIES PASS	45.06	151.4	8	21	1						8	48	
MEDAN	46.99	280.3	8	39K	4						9	44	
KUNMING	51.12	308.6	9	11K	4	16	23	-2					
CHANGCHUN	52.37	342.2	9	16	0								
PEKING	52.62	332.4	9	18K	0	16	39	-6					

SHILLONG	60.06	303.7	10	12	0	18	20	-4			
DUMONT	60.94	182.2	10	16	-2						
LHASA	62.40	307.6	10	30	3						
CHATRA	64.44	303.2	10	46	5	18	39	-40			
OASIS-BUNG.	67.61	197.8	11	1	0						
CAPE HALLETT	68.35	171.9	11	4	-2				11	34	PCP
MIRNY	70.31	199.5	11	17	-1						
SCOTT BASE	73.01	175.3	11	33	-1	20	58	-3			
DEHRA DUN	73.16	303.9	11	38	3	20	57	-5			
LAHORE	76.57	304.2	11	54A	0						
WARSAK DAM	79.46	306.0	12	11A	1						
KARACHI	81.54	297.1	12	22A	1						
QUETTA	82.43	301.4	12	27A	1	22	46	4	15	36	PP
SOUTH POLE	84.32	180.0	12	34	-2						
BYRD STATION	85.39	170.0	12	40	-1						
COLLEGE	85.75	23.3	12	39	-4				13	8	
PASADENA	98.98	56.4	13	43	-1						
EUREKA	100.72	51.0	13	49	-3				17	54	PP
HUNGRY HORSE	101.66	41.9	13	53	-3				30	2	PKKP
KIRUNA	107.75	340.8	18	28	-1						
SKALSTUGAN	112.92	339.0	18	38	-1						
GOTEBORG	116.53	333.9	18	44	-2						
PRUHONICE	119.39	325.6	18	52	0				20	49	PP
STUTTGART	123.00	326.5	18	58	-1						
PARIS	126.51	329.8	19	6	0						
OTTAWA	127.09	35.0	19	6	-1						
SETIF	132.02	314.9	19	17	1				21	47	PP
HUANCAYO	136.35	114.0	19	26A	2				22	49	PP
TAMANRASSET	137.25	297.5	19	31	5				22	7	PP
LA PAZ	140.64	124.6	19	35	3						
SAN JUAN	147.31	64.7	19	44	0				20	13	
MBOUR	160.12	297.0							20	45	PKP2

SEPTEMBER 2 20.H 7.M 0.S EPICENTRE 14.56 -92.99 DEPTH= 0.KM

A=-0.05043 B=-0.96697 C= 0.24984 D=-0.9986 E= 0.0521
G=-0.0130 H=-0.2495 K=-0.9683 HT= 5.8

SE= 2.32

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
COMITAN	1.87	26.1	0	38K	4	1	1	3				
SAN SALVADOR	3.74	102.3	1	1	1	1	55	9				
OAXACA	4.39	304.4	1	9	-1	1	57	-6				
SANTIAGO MA.	4.51	103.1	1	14	3	2	22	16				
VERA CRUZ	5.51	327.3	1	23	-2							
PUEBLA	6.68	312.4				3	0	0			2	50
MERIDA	7.12	26.3	1	58K	10	3	26	15			2	10
TACUBAYA	7.65	309.8	1	57	1	3	26	2				
BALBOA HTS.	14.27	111.5	3	25	-1							
MAZATLAN	15.31	306.0									7	3 SS
CHIHUAHUA	18.53	321.2	4	20	0	7	40	-4			10	20
CHINCHINA	19.57	117.4	4	31A	-1	8	21	13				
LUBBOCK	20.57	338.5	4	43	0	8	45	16				
BOGOTA	21.08	116.1	4	49K	1	8	47	8			5	10 PP
FAYETTEVILLE	21.47	357.3	4	53	1							
COLUMBIA	22.17	27.1	5	0	1							
TUCSON TELE.	23.97	320.6	5	18	1	9	56	24			6	17
TUCSON	23.98	320.3	5	19	2	9	32	0				
CHAPEL HILL	24.67	27.9	5	23	-1							
BOULDER	27.57	339.3	5	51	0							
CLEVELAND	28.61	18.2				10	46	-2			6	44 PP
BOULDER CITY	28.94	321.4	6	4	1							
PASADENA	29.97	315.1	6	12	0	11	16	6				
FORT FRANCE	30.79	85.6									12	42 SS
SALT LAKE C.	30.86	331.4	6	21	1							
BERMUDA	31.30	50.6	6	24	0	10	44	-47				
EUREKA	31.99	325.2	6	31	1							
FRESNO	32.56	317.7	6	34	-1							
OTTAWA	34.03	21.9	6	46	-2							
LICK	34.09	317.0	6	49	0							
RENO	34.25	321.7	6	51	1							
BOZEMAN	34.55	337.5	6	52	0						7	16
BREBEUF	34.91	24.1	6	53K	-3							
BUTTE	35.42	336.2	7	2	2							
SHAWINIGAN	36.11	23.9	7	4	-2							

SHASTA	36.52	321.2	6 57	-12				9 30		
HUNGRY HORSE	37.91	337.1	7 20	-1						
HALIFAX	38.98	33.9			13 29	0		9 7	PP	
LA PAZ	39.43	140.6	7 36	2	13 32	-4				
BANFF	40.79	338.3	7 45A	0						
VICTORIA	42.12	329.9	7 55	-1						
HORSESHOE B.	42.65	330.9	8 2	2						
DURHAM	79.06	36.2	12 13	5						
TOLEDO	80.01	51.4			22 8	-9				
KEW	80.40	39.3	12 23	8						
GRANADA	80.87	54.0	13 37K	79						
SKALSTUGAN	83.72	25.7	12 31A	-1						
DOURBES	83.75	40.0	14 31	119	23 40	45				
KIRUNA	85.12	20.5	12 38	-1				23 13	SCS	
GOTEBORG	85.61	31.3	12 32	-10						
STRASBOURG	86.17	40.8	12 40	-5				24 24	SPP	
COPENHAGEN	86.56	33.2	12 48	1						
STUTTGART	87.01	40.4	12 46	-3				24 42	PPS	
SODANKYLA	87.41	19.7	12 49	-2						
UPPSALA	87.50	28.2	12 49	-2	23 20	-12				
APATITY	89.43	18.0			23 23	-6				
PRUHONICE	89.86	38.0	13 2	0						
TRIESTE	91.00	42.2	13 7	-1				24 8		
TAMANRASSET	92.06	66.0	13 10	-2						
QUETTA	131.50	23.4	19 16	1				22 43	PKS	
SHILLONG	139.83	353.2	19 23	-7						

SEPTEMBER 3 3.H 44.M 24.S EPICENTRE 0.03 -17.75 DEPTH= 0.KM

A= 0.95239 B=-0.30487 C= 0.00045 D=-0.3049 E=-0.9524
G= 0.0004 H=-0.0001 K=-1.0000 HT= 7.2

SE= 2.04

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
MBOUR	14.28	3.1	3 24	-2				3 34	PP
TAMANRASSET	32.00	43.5	6 31A	0	11 42	0		7 42	PP
MALAGA	38.55	17.3	7 27K	1	13 23	0		8 55	PP
GRANADA	39.22	18.0	7 35K	3	13 35	2		9 11	PP
ALMERIA	39.28	19.5	7 32	-1	13 51	17		16 29	SS
LISBON	39.31	10.6	7 34A	1	13 37	2		8 16	PP
RELIZANE	39.42	23.7	7 34	0	13 39	3		9 6	PP
WINDHOEK	40.68	125.9	7 44	0					
ALICANTE	41.31	20.7	7 50	1	14 6	1		9 29	PP
ALGIERS UNI.	41.33	25.6	7 49A	0	14 1	-4		9 23	PP
TOLEDO	41.59	15.9	7 52A	0	14 13	4		9 29	PP
SERRA PILAR	41.75	10.4	7 54A	1	14 12	1		9 32	PP
SETIF	41.93	28.4	7 54	0	14 13	-1		9 29	PP
BARBADOS	43.46	289.1	8 14	7					
TORTOSA	43.86	20.1	8 11	1	14 44	2			
TRINIDAD	44.77	285.1	8 16	-2					
BARCELONA	44.96	21.2			13 44	-74		18 22	
ST. VINCENT	45.06	288.6	8 21	1					
GRENADA	45.25	287.0	8 22	1					
FORT FRANCE	45.32	290.8	8 22	0	15 6	3		10 8	PP
DOMINICA	45.70	291.5	8 25	0					
LWIRO	46.59	93.1	8 33	1	15 24	3			
RUMANGABO	47.10	91.8	7 36	-60				10 3	PCP
ASTRIDA	47.54	93.5	8 40	1				10 35	PP
HERMANUS	48.69	138.5			15 57	6		18 51	
MESSINA	48.79	35.1	8 53K	4	15 57	5		10 47	PP
MONACO	48.98	24.1	8 52	1					
CLERMONT-FD.	49.13	19.3	8 54	2	16 2	5		10 44	PP
KIMBERLEY	49.69	128.9	8 55K	-1					
ROME	49.81	29.5	8 59A	2	16 12	6		10 48	PP
OROPA	50.76	23.2	8 58	-6					
SAN JUAN	50.88	293.8	9 4	-1					
PAVIA	50.88	24.4	9 7	2	16 28	7		11 1	PP
PRETORIA	51.17	123.7	9 7	0					
BOLOGNA	51.27	26.5	9 15	7	16 32	5		19 6	
NEUCHATEL	51.53	21.4	9 10	0	16 30	0			
PARIS	51.64	17.0	9 12	1	16 34	2		11 8	PP
BASLE	52.20	21.5	9 14A	-1	16 39	0		9 46	
LA PAZ	52.29	249.1	9 16A	0	16 32	-9		11 24	PP
CHUR	52.39	23.4	9 17K	0					

TALA POZO	52.45	234.1	9	6	-11	16	41	-2	10 46	PP
STRASBOURG	53.16	20.9	9	22A	0	16	56	4	11 21	PP
RAVENSBURG	53.18	22.8	9	21	-1	16	56	3	10 29	PCP
GRAHAMSTOWN	53.22	133.1	9	22A	-1					
TRIESTE	53.24	27.2	9	20A	-3	16	55	1	17 20	PS
EBINGEN	53.26	22.1	9	22	-1	17	0	6		
KEW	53.34	13.5	9	24A	0	16	56	1	11 28	PP
DOURBES	53.42	17.8	9	22	-2	16	53	-3		
TUBINGEN	53.59	21.9	9	23	-2	17	0	2		
ATHENS	53.67	40.5	9	25A	-1	16	59	0		
STUTTGART	53.84	21.8	9	27	0				11 26	
RATHFARNHAM	53.94	8.5	9	28K	0				10 16	
UCCLE	53.96	17.2	9	27	-1	16	52	-11		
ZAGREB	54.41	28.5	9	32A	0	17	10	1	12 24	PPP
PIETERMZBURG	54.50	127.2	9	31K	-1					
SKOPJE	54.65	35.2	9	36K	3				11 57	PP
BERMUDA	54.69	310.8	9	32	-2	17	12	-1	11 36	PP
LCO. MARQUES	54.96	122.2	9	37	1					
HELWAN	55.31	53.0	9	38	0	17	24	3		
DE BILT	55.36	17.0	9	38	0	17	27	5		
SONNEBERG	55.90	22.0	9	40	-2	17	28	-1	11 46	PP
BELGRADE	55.97	32.1	9	43A	0				13 4	PPP
MUNSTER	55.99	18.6	9	42	-1				13 49	
CHEB	56.11	22.9	9	42	-2	17	34	2	11 47	
DURHAM	56.16	11.2	9	43K	-1	17	31	-2	11 56	PP
SOFIA	56.22	35.6	9	45	0	17	38	4	12 55	
PLAUEN	56.36	22.5	9	43	-3				10 55	
VIENNA-H.	56.38	26.8	9	45	-1	17	34	-2	10 42	PCP
WITTEVEEN	56.43	17.5	9	46	0					
BOGOTA	56.44	275.5	9	44K	-2	17	42	6		
JENA	56.49	21.8	9	46	-1	17	36	-1	11 46	PP
BRATISLAVA	56.65	27.3	9	51	3	17	37	-2	11 48	PP
SZEGED	56.77	30.6	9	47	-2	17	6	-35	11 52	PP
PRUHONICE	56.90	24.3	9	47	-3	17	44	1	12 4	PP
PRAGUE	56.92	24.2	9	50	0	17	36	-7	12 4	PP
TIMISOARA	57.00	31.7	9	51	1	17	49	5	11 58	PP
BUDAPEST	57.09	29.0	9	51	0	17	38	-7	19 26	SKS
HALLE	57.09	21.6	9	50	-1	17	47	2	11 54	PP
COLLMBERG	57.32	22.4	9	53	0	17	51	3		
CHINCHINA	58.00	275.8	9	56A	-1	18	2	5		
GALERAZAMBA	58.15	282.6	9	59	1	18	12	13		
POTSDAM	58.21	21.7	9	59	0	18	2	2	11 5	
ABERDEEN	58.34	9.9	9	58	-2	17	56	-5	23 53	SSS
HUANCAYO	58.37	255.9	9	59	-1					
RACIBORZ	58.54	26.3	10	1	0	18	5	1	12 17	PP
CAMPULUNG	58.77	34.1	10	1	-1				12 1	PP
SKALNATE PL.	58.84	28.2	10	1	-2	18	8	0	11 59	PP
BUCHAREST	58.86	35.4	10	4	1	18	11	3	12 14	PP
JERUSALEM	59.13	52.4	9	30	-35				9 37	PCP
KRAKOW	59.30	27.3	10	5	-1	18	10	-4	10 53	PCP
HALIFAX	60.15	323.8	10	14K	2	18	25	0		
FOCSANI	60.25	34.8	10	14	1					
KSARA	60.40	50.4	10	15A	1	18	30	2	12 24	PP
BACAU	60.58	33.8	9	24	-51					
COPENHAGEN	60.67	19.1	10	16A	0					
LWOW	61.10	29.5	10	19	0	18	38	1	12 30	PP
WARSAW	61.32	26.0	10	19A	-1	18	40	0	19 10	PPS
IASI	61.33	33.5	9	19	-61					
BALBOA HTS.	62.17	280.1	10	26	0	18	55	4		
GOTEBORG	62.18	17.5	10	26	0				12 33	PP
BERGEN	62.79	12.6	10	29K	-1	18	53	-6	23 16	SS
SIDA	63.60	359.8	10	34K	-1					
WESTON	63.88	318.4	10	38K	1	19	12	0		
SIMFEROPOL	63.97	38.4	10	36A	-2	19	11	-2	11 9	PCP
REYKJAVIK	64.03	358.0	10	38	0					
UPPSALA	65.67	18.7	10	47A	-2	19	33	-1		
SEVEN FALLS	65.76	323.2	10	49	0	19	36	1		
WASHINGTON	66.52	313.0	10	54	0				12 2	
SHAWINIGAN	66.67	322.0	10	53	-2				11 55	
TANANARIVE	66.71	110.6	10	58A	3	19	57	10	11 11	PCP
BREBEUF	66.74	320.7	10	56	0					
SKALSTUGAN	67.19	14.1	10	57	-1					
OTTAWA	68.04	319.9	11	2A	-2	20	4	1		
COLUMBIA	68.05	306.9	11	4	0					
HELSINKI	68.43	21.4	11	4	-2					
TIFLIS	69.79	45.1	11	15	0	20	22	-2	24 54	SS
PULKOVO	70.21	23.6				20	26	-3	13 52	PP
GORIS	70.22	47.7	11	17	0				20 31	PS

SCORESBY SD.	70.39	358.5	10	20	-58	20	35	4	21	35	SKS
CLEVELAND	70.59	314.4	11	22	3	20	39	6			
MOSCOW	71.23	29.5	11	19	-4	20	37	-3	13	51	PP
KIRUNA	72.62	14.2	11	31	-1	20	58	2	21	42	SCS
HALLEY BAY	75.63	182.3	11	48	-1	21	23	-7			
APATITY	76.04	18.0	11	51A	0	21	37	2	12	1	PCP
VERA CRUZ	79.02	289.4							14	4	
ASHKABAD	79.04	51.4	12	8A	0	21	58	-9	15	8	PP
FAYETTEVILLE	79.04	306.7	12	5	-3						
ISFJORD	79.74	6.3	12	13	1						
NORD	81.52	0.2	12	21	0	22	35	2			
TACUBAYA	81.92	289.5	12	28	5						
SVERDLOVSK	83.62	32.8							12	37	PCP
LUBBOCK	85.06	303.5	12	39	0	23	8	0			
KARACHI	85.29	64.2	12	44	4						
QUETTA	85.40	59.9	12	41A	0	23	14	2	15	56	PP
STALINABAD	87.26	51.6	12	51	1	23	16	-13			
TASHKENT	87.75	48.8.	12	54	2	23	18	-16	23	36	SCS
WARSAK DAM	89.40	56.2	13	1	1						
SOUTH POLE	90.03	180.0	13	1	-2				14	46	
BOMBAY	90.53	71.2				24	4	4	32	18	
FRUNSE	91.70	47.3	13	11A	0	23	47	-23	16	47	PP
BYRD STATION	92.06	189.8	13	12	-1				15	39	
BOZEMAN	92.29	315.5	13	17	3						
TUCSON TELE.	92.50	302.2	13	16	1						
TUCSON	92.60	302.1	13	16	1				16	54	PP
BUTTE	93.34	315.9	13	18	-1						
HUNGRY HORSE	94.17	318.3	13	20	-2						
DEHRA DUN	95.00	59.7	13	31	5	25	59	81	16	48	
AGRA	95.13	62.9	13	26A	-1	25	48	69	17	14	
BOULDER CITY	95.72	306.0	13	31	2				17	9	PP
HYDERABAD	95.91	72.6				24	11	-35			
EUREKA	96.34	309.6	13	32	0				17	25	PP
MADRAS	97.72	77.0							17	37	
PASADENA	98.61	304.4				25	11	2	17	45	PP
RENO	99.28	310.0	14	11	25				17	36	PP
LICK	101.01	308.0	13	53	0						
SHASTA	101.06	311.4	13	38	-16						
BERKELEY	101.42	308.6				24	36	2	27	8	PS
BOKARO	102.38	65.7							18	11	
CHATRA	103.29	62.5							17	38	
SHILLONG	107.64	63.2							17	29	
CAPE HALLETT	107.66	182.6				26	36	-9	18	54	PP
ULAN-BATOR	112.46	36.8							19	29	PP
NAGASAKI	135.37	40.0							21	56	PP
ABUYAMA	137.24	33.0	19	24K	-2						
MATUSIRO	137.32	28.9	19	36A	10				19	51	PKP2
RIVERVIEW	144.80	163.9	19	17A	-22				42	3	SS
BRISBANE	151.30	162.8	20	5A	15				20	34	
CHARTERS TS.	154.71	142.7	20	9	14				23	51	
PORT MORESBY	162.32	122.2	20	38	34				20	53	PKP2

SEPTEMBER 3 8.H 10.M 27.S EPICENTRE 40.69 143.11 DEPTH= 43.KM

DEPTH OF FOCUS= 0.002R

A=-0.60817 B= 0.45644 C= 0.64945 D= 0.6003 E= 0.7998
G=-0.5194 H= 0.3898 K=-0.7604 HT= -1.9

SE= 2.34

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
HATINOHE	1.21	262.9	0	20K	-1	0	36	-1				
MIYAKO	1.36	220.4	0	20	-3	0	38	-3				
URAKAWA	1.48	350.4	0	26	1	0	47	3				
AOMORI	1.78	274.9	0	29K	0	0	52	1				
MORIOKA	1.79	237.0	0	28K	-1	0	48	-3				
HAKODATE	2.11	301.9	0	34	0	1	0	1				
TOMAKOMAI	2.16	328.4	0	39	4	1	6	6				
MIZUSAWA	2.18	225.0	0	34	-1	0	54	-7				
OBIHIRO	2.23	1.7	0	34	-2	1	4	2				
MURORAN	2.29	316.2	0	38K	1	1	6	2				
MORI	2.37	307.2	0	40	2	1	10	4				
KUSIRO	2.48	22.4	0	38A	-1	1	6	-3				
AKITA	2.50	248.2	0	41A	2	1	14	5				
ISINOMAKI	2.65	212.1	0	40A	-2	1	19	6			2	11

SAPPORO	2.72	331.6	0	43	0	1	13	-2			
SENDAI	2.96	216.0	0	45A	-1	1	24	3			
SUTTSU	3.01	315.3	0	46	-1	1	17	-5			
SAKATA	3.10	235.8	0	49	1	1	29	5			
ASAHIGAWA	3.14	350.1	0	49	1	1	28	3			
NEMURO	3.21	34.1	0	47K	-3	1	23	-4	1	6	
YAMAGATA	3.24	222.1	0	49	-1	1	28	0			
ABASHIRI	3.44	14.2	0	55	2	1	31	-2			
RUMOE	3.44	341.7	0	52	-1				1	52	
HUKUSIMA	3.58	215.8	0	55	0	1	45	9			
ONAHAMA	4.12	205.5	0	59	-3	1	55	5	1	28	
NIIGATA	4.19	230.0	1	2	-1	1	55	3			
SHIRAKAWA	4.22	213.2	1	5	1	2	6	13			
AIKAWA	4.62	236.3	1	9	0	2	14	11			
MITO	4.78	206.5	1	10	-2	2	19	12	1	51	
UTUNOMIYA	4.85	212.6	1	12	-1	2	16	8	1	52	
KAKIOKA	5.01	208.2	1	12	-3	2	19	7	1	35	
TAKADA	5.22	228.1	1	18	0	2	25	7			
TYOSI	5.27	200.4	1	15	-4	2	48	29			
MAEBASI	5.33	217.8	1	19A	0	2	28	8			
KUMAGAYA	5.40	214.0	1	19	-1	2	4	-18			
NAGANO	5.56	225.3	1	24	1	2	51	25			
OIWAKE	5.63	220.8	1	29	5	2	51	23	3	38	
MATUSIRO	5.64	224.4	1	23A	-1	2	34	6	1	35	
TOKYO C.M.O.	5.66	208.9	1	20	-4	2	25	-4	2	49	
TITIBU	5.67	215.2	1	22	-2	2	41	12			
KURILSK	5.72	36.0	1	22	-3	2	26	-4	1	42	
WAZIMA	5.86	237.6	1	27	0	2	44	10			
YOKOHAMA	5.92	208.6	1	27	-1				1	57	
MATUMOTO	5.99	223.9	1	29	0	3	0	23			
TOYAMA	6.10	231.1	1	31	1	2	51	11	2	22	
KOHU	6.19	216.7	1	32	1	3	5	23			
HUNATU	6.21	214.8	1	33	1	2	50	8			
Y.-SAKHLINSK	6.26	357.5	1	31	-1	2	40	-4			
MERA	6.32	205.3	1	31	-2	2	48	3			
TAKAYAMA	6.46	227.3	1	36	1						
MISIMA	6.46	211.9	1	32	-3	2	51	2			
AJIRO	6.46	210.7	1	35	0	3	25	36			
KANAZAWA	6.55	232.7	1	33	-3						
OSIMA	6.61	207.7	1	54	17	3	19	27			
IIDA	6.63	220.6	1	43	5	3	8	15	2	23	
SHIZUOKA	6.82	214.6	1	38	-2	3	21	23			
HUKUI	7.09	231.4	1	49	5						
OMAESAKI	7.21	214.1	1	50	4	3	31	24	2	10	
GIHU	7.27	225.4	1	46	-1	3	19	10	2	47	
HAMMATU	7.33	217.3	2	40	53				3	41	
NAGOYA	7.34	223.3	1	51	3	3	34	23			
TSURUGA	7.49	230.0	1	52	2	3	17	3			
IBUKISAN	7.50	227.2	1	53	3	3	40	25			
HIKONE	7.66	227.2	1	53	1						
KAMEYAMA	7.85	224.1	2	1	6	3	42	19			
TU	7.92	223.3	1	57	1						
MAIZURU	7.97	231.6	1	57	1	3	47	21			
HATIDYOZAMA	8.02	200.1				3	21	-6			
TOYOOKA	8.32	234.4	2	0	-1	3	35	0	4	47	
NARA	8.32	226.2	1	58	-3	3	47	12			
ABUYAMA	8.33	228.2	1	59A	-2	3	49	14			
OSAKA	8.51	227.3	2	3	-1	3	51	11	2	23	
OWASE	8.60	221.9	2	22	17	4	3	21			
KOBE	8.69	228.8	2	10	4	3	47	3	4	42	
VLADIVOSTOK	8.71	289.9	2	7	1	3	51	7			
TOTTORI	8.71	236.3	2	8	2	3	51	7			
SAIGO	8.89	242.8	2	4	-5						
WAKAYAMA	9.02	226.9	2	17	6				2	59	
SUMOTO	9.10	228.5	2	23	11	4	7	13	2	43	
HIMEJI	9.27	230.9	2	7	-7	4	5	7			
SIOMISAKI	9.30	221.4	2	38	23	4	40	41			
YONAGO	9.32	238.8	2	16	1	4	8	9			
TOKUSIMA	9.47	228.4	2	19	2	4	14	11			
MATSUE	9.49	239.7	2	19	2				5	52	
TAKAMATU	9.60	231.4	2	11	-8	4	16	10			
MUROTO	10.30	226.7	2	34	6				4	59	
KOTI	10.45	230.0	2	39	9	4	21	-6	5	32	
HAMADA	10.47	240.0	2	36	5	4	27	-1			
HIROSIMA	10.57	236.7	2	38	6	4	37	7			
MATUYAMA	10.72	233.6	2	32	-2	4	40	6			
SIMIDU	11.33	229.0	2	46	4	5	0	11			
OOITA	11.82	234.6	2	45K	-4	5	20	19			

HUKUOKA	12.36	239.0	2	53	-3	5	25	12				
SAGA	12.64	238.1	3	22	22							
KUMAMOTO	12.67	235.6	3	0	0							
ITUHARA	12.75	243.9	3	2	1							
MIYAZAKI	12.85	230.8	3	4	1	5	57	32				
NAGASAKI	13.25	237.3	3	5	-3							
KAGOSIMA	13.62	232.0	3	14	1	6	33	49			3	59
YAKUSIMA	14.47	229.0	3	21	-3						6	7
PETROPAVLOVK	16.31	35.1	3	52	4							
DAIREN	16.60	270.8	3	50	-1							
MAGADAN	19.49	11.8	4	23	-3							
ZO-SE	20.14	248.5	4	33	0							
PEKING	20.52	277.0	4	34K	-3	8	18	-1			5	9 PPP
NANKING	21.34	253.9	4	42	-4							
TATUNG	22.68	278.3	5	0	1							
ULAN-BATOR	26.71	297.9	5	37	0							
IRKUTSK	28.77	306.9	5	56A	0	10	44	3				
HONG KONG	30.54	241.9	6	12	0	11	10	1	6	29		
TIKSI	31.83	351.5	6	21	-2	11	28	-1			7	25 PP
KOROR	34.10	195.4	6	42	-1							
PHU-LIEN	36.74	248.4	7	5	0						8	19
KUNMING	37.02	257.7	7	7A	-1	12	49	-1			8	32 PP
LHASA	43.41	272.2	8	1A	1	14	27	2				
SHILLONG	44.87	266.7	8	11A	-1	14	49	3				
COLLEGE	45.31	34.1	8	16	0	14	57	5			18	13 SCS
CHITTAGONG	46.70	263.0	8	25A	-2	15	8	-4	8	48	10	19 PP
CHATRA	47.77	271.3	8	38	3	15	59	32				
FRUNSE	49.84	296.5	8	51A	0						9	25
PORT MORESBY	49.98	174.8	8	53K	1	15	58	0	9	9	10	46 PP
DEHRA DUN	52.88	280.5	9	12	-2	16	49	11				
SVERDLOVSK	53.33	317.2	9	17	0	16	47	3			11	16 PP
TASHKENT	54.08	296.7	9	21	-2						10	17 PCP
MEDAN	54.39	239.2	9	26	1						11	31
AGRA	54.55	277.1	9	25A	-1	17	9	8	9	43	11	27 PP
LAHORE	55.03	283.8	9	27A	-3	17	12	5	9	40	17	36 *SS
STALINABAD	55.67	293.9	9	32	-2	17	16	0				
WARSAK DAM	55.85	287.8	9	35A	-1							
LEMBANG	57.45	223.2	9	44A	-3						11	23
NORD	57.49	356.5	9	45	-2							
ISFJORD	57.69	349.0	9	48	-1						10	14
RESOLUTE	58.74	15.3	9	54K	-2	17	58	2			19	44 SCS
APATITY	59.92	335.3	10	3A	-1	18	10	-1			12	8 PPP
CHARTERS TS.	60.47	176.6	10	6	-2							
MADRAS	61.16	262.3	10	13	0						18	55
QUETTA	61.16	286.3	10	12A	-1	18	29	2			12	41 PP
SODANKYLA	62.12	336.9	10	18	-1							
HORSESHOE B.	62.60	47.3	10	21	-1							
VICTORIA	62.97	48.2	10	24	-1							
ASHKABAD	63.09	298.0	10	26	0	18	59	7			11	3 PCP
BOMBAY	63.14	272.4	10	24	-2							
KIRUNA	63.58	339.1	10	28A	-1	19	0	2			12	43 PP
SEATTLE	64.06	48.5	10	33	1							
MOSCOW	65.12	323.1	10	36	-3	19	16	-1			12	56 PP
PULKOVO	65.72	329.2	10	42	-1	19	24	0			23	51 SS
HELSINKI	67.47	331.5	10	53	-1							
SHASTA	67.88	54.9	10	57	1							
HUNGRY HORSE	68.23	44.5	10	59	1				11	19		
BRISBANE	68.45	170.5	11	0A	0	20	0	3				
MINERAL	68.58	54.8	11	0A	-1							
SCORESBY SD.	68.61	354.7	11	2	1	20	5	6				
SKALSTUGAN	69.00	338.7	11	2A	-1							
BERKELEY	69.61	57.3	11	7A	0	20	14	3				
TIFLIS	69.62	307.8	11	8	1	20	9	-2			13	39 PP
GORIS	70.00	305.2	11	10	1	20	18	3				
RENO	70.16	54.7	11	12A	2							
UPPSALA	70.26	334.1	11	10A	-1	20	17	-1			13	45 PP
LICK	70.32	57.4	11	12	1							
BUTTE	70.44	45.8	11	12	0							
BOZEMAN	71.49	45.3	11	19	1						11	52
FRESNO	71.84	57.0	11	20	0							
EUREKA	72.55	52.8	11	25	0							
SIMFEROPOL	73.65	315.6	11	30A	-1	20	59	2			21	13 SKS
GOTEBORG	73.78	335.1	11	31A	-1						14	16 PP
SALT LAKE C.	74.18	49.7	11	35	1				11	58		
PASADENA	74.50	58.3	11	37	1	21	8	2			25	51 SS
WARSAW	74.72	327.3	11	37A	0	21	12	3			14	22 PP
SIDA	74.80	351.5	11	40	2							
LWOW	75.20	324.2	11	40	0	21	17	3			14	27 PP

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COPENHAGEN	75.25	333.6	11	32	-8						14	20	PP
IASI	75.44	320.5	11	42	1								
BOULDER CITY	75.46	55.0	11	42	1								
BACAU	76.21	320.4	11	53	7								
KRAKOW	76.81	326.3	11	50	1	21	34	2			22	3	SCS
SKALNATE PL.	77.33	325.6	11	53	1								
RACIBORZ	77.51	327.2	11	53	0						22	47	PPS
CAMPULUNG	78.05	320.4	11	59	3								
BUCHAREST	78.14	319.3	11	58K	2	21	49	3			14	55	PP
MELBOURNE	78.16	178.5	11	58	1								
ABERDEEN	78.20	341.5	12	43	46	21	50	3					
COLLMBERG	78.58	330.7	11	59	0								
PRAGUE	79.02	329.2	12	4	3	22	3	7			14	53	PP
PRUHONICE	79.05	329.1	12	2	1	22	0	4			22	31	PS
JENA	79.41	331.2	12	3	0	21	57	-3	12	38	15	5	PP
BRATISLAVA	79.44	326.6	12	5	1	22	2	2			23	2	
WITTEVEEN	79.53	334.8	12	5	1								
PLAUEN	79.55	330.6	12	4	0				12	38	15	7	PP
MUNSTER	79.93	333.9	12	6	0						15	42	
SONNEBERG	80.00	331.1	12	6	-1								
KSARA	80.08	306.2	12	9A	2	22	13	6			15	11	PP
DURHAM	80.23	340.1	12	11A	3						15	3	PP
TUCSON	80.41	55.7	12	10	1						15	17	PP
TUCSON TELE.	80.42	55.5	12	10	1						15	19	PP
BELGRADE	80.55	322.6	12	10	0	21	55	-17			15	28	PP
DE BILT	80.62	335.2				22	17	5					
BENSBERG	80.94	333.6	12	11	-1						15	32	PP
JERUSALEM	81.87	305.0	11	42K	-34								
UCCLE	82.01	335.0	12	16	-1								
STUTTGART	82.06	331.2	12	18A	1	22	27	0	12	39	15	27	PP
TUBINGEN	82.31	331.2	12	19	0								
DOURBES	82.53	334.5	12	31	11	23	17	45					
EBINGEN	82.64	331.0	12	20	0						15	31	PP
STRASBOURG	82.74	331.9	12	21	0	22	35	1			15	35	PP
KEW	82.83	337.9	12	22	1	22	38	3					
TRIESTE	82.84	326.9	12	19A	-2	22	20	-15			17	23	PPP
KARAPIRO	83.67	154.7	12	27	1						13	14	
PARIS	84.33	335.1	12	29	0						13	19	
LUBBOCK	84.90	49.4	12	33	1	22	59	3					
HELWAN	85.60	306.0	12	35A	0	22	57	-5					
CLERMONT-FD.	86.78	333.2	12	43	2	23	21	7			16	7	PP
SHAWINIGAN	87.43	23.9	12	44	0								
SEVEN FALLS	87.50	22.4	12	45	0								
OTTAWA	87.50	26.2	12	44	-1								
BREBEUF	88.10	24.9	12	48K	1								
WESTON	91.64	24.8	13	5K	1								
TOLEDO	94.41	335.3	13	17	0								
ALICANTE	94.58	332.1	13	9	-8	24	13	-11			34	25	SSS
GRANADA	96.71	333.8									17	30	PP
MALAGA	97.40	334.2									17	25	PP
TAMANRASSET	105.55	319.8				24	52	10			18	29	PP
ASTRIDA	109.31	283.7									18	53	PP
LWIRO	109.76	284.6									19	0	PP
CAPE HALLETT	114.29	171.2	19	3	28								
MBOUR	122.18	337.0	18	52	2								
SOUTH POLE	130.50	180.0	18	58	-8								
HUANCAYO	135.84	60.8	19	20	4								
LA PAZ	143.81	57.4	19	33	2						23	9	PP

SEPTEMBER 4 0.H 2.M 56.S EPICENTRE 36.59 26.69 DEPTH= 0.KM

A= 0.71907 B= 0.36154 C= 0.59349 D= 0.4492 E=-0.8934
G= 0.5302 H= 0.2666 K=-0.8048 HT= -0.4

SE= 2.41

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ATHENS	2.74	301.0									0	44	PG
SOFIA	6.63	338.0	2	0	21	3	37	42			4	17	
SKOPJE	6.77	324.3	1	41A	0						3	10	
HELWAN	7.74	148.6	1	52K	-3						4	4	SG
BUCHAREST	7.83	356.9				3	30	4			3	7	
KSARA	8.01	107.5	1	56	-2	3	31	1			2	6	PP
TARANTO	8.35	300.5	2	57	54	5	7	89			6	9	
MESSINA	9.01	283.6	2	11A	-1	3	53	-2			2	36	P*
BELGRADE	9.49	332.0	2	22	3						3	56	PGSG

TIMISOARA	10.03	337.5	4	4	98				5	23
IASI	10.62	3.2	2	32	-2					
SZEGED	10.83	335.0				5	0	21		
SOTCHI	12.17	51.0	2	56	1					
ROME	12.22	300.0				5	14	1	5	14
ZAGREB	12.24	322.2	2	59	3				6	53 SS
BUDAPEST	12.26	334.9	2	54	-3	4	24	-50		
HURBANOVO	12.90	333.5							6	24
TRIESTE	13.29	316.9	3	9	-1	5	43	4	4	19
LWOW	13.38	352.5	3	10	-1				4	23
SKALNATE PL.	13.43	341.5	3	12	0	6	11	29	7	50
BRATISLAVA	13.56	331.6	3	11	-3	5	44	-1	5	5
BOLOGNA	14.09	308.8	3	56	35	4	15	-103		
KRAKOW	14.32	342.1	3	15	-9				3	36 PP
RACIBORZ	14.82	338.2	3	39	9				3	49 PP
TIFLIS	14.95	64.4	3	31	-1					
PAVIA	15.76	308.4	4	10	27	7	55	78	10	11
PRUHONICE	16.01	330.5	3	49	3	6	46	3		
PRAGUE	16.13	330.5	3	49	2				4	33
WARSAW	16.14	347.4	3	49	1	6	55	9		
MONACO	16.34	301.8	3	50	0				4	2
OROPA	16.72	308.4	4	12	17	7	55	55		
RAVENSBURG	16.84	316.9	4	2	6	7	4	2		
PLAUEN	17.40	327.6	4	2	-1				4	51
EBINGEN	17.43	317.2	4	2	-2					
TUBINGEN	17.58	318.2	4	5	-1					
STUTTGART	17.66	319.0	4	6	-1	7	32	11	4	27 *SP
COLLMBERG	17.66	330.7	4	10	3					
SONNEBERG	17.74	325.8	4	9	1	7	32	9	5	6
BASLE	17.86	313.7	4	9	0	7	12	-14		
JENA	17.96	327.7	4	11	1	7	40	12	8	30
NEUCHATEL	17.98	311.5	4	10	-1					
HALLE	18.23	329.4	4	13	-1	7	43	9	5	53
STRASBOURG	18.32	316.7	4	17A	2	7	44	8	8	34 SS
POTSDAM	18.49	332.9	4	17	0	7	48	8	5	27
ALGIERS UNI.	18.96	277.6	4	20	-3	7	37	-13	4	44 PPP
CLERMONT-FD.	19.91	304.7	4	32	-1					
BENSBERG	20.04	321.9	4	34	-1				7	11
MOSCOW	20.54	17.8	4	39	-1	8	31	7		
DOURBES	20.89	317.2	4	37	-7					
RELIZANE	21.11	275.5	4	45	-1	8	8	-27	5	4 PP
UCCLE	21.40	318.6	4	49	0	8	47	6		
COPENHAGEN	21.41	337.6	4	50A	1	8	48	7		
WITTEVEEN	21.47	325.4	4	50	1					
PARIS	21.47	312.2	4	49	-1	8	52	10	5	9 PP
ALICANTE	21.61	282.9	4	44	-7	8	28	-17	5	23 PPP
DE BILT	21.72	322.3				9	4	17		
TAMANRASSET	22.91	238.9	5	5	1	9	10	1	5	34 PP
GOTEBORG	23.27	339.8	5	8K	1					
PULKOVO	23.31	4.6	5	6	-2	9	22	6		
ALMERIA	23.34	279.4	5	9	1					
HELSINKI	23.62	357.9	5	13	2					
UPPSALA	24.00	348.7	5	14	0	9	29	1		
GRANADA	24.19	280.5	5	27A	11	9	42	11	6	0 PP
KEW	24.28	316.3	5	18	1	9	44	11	5	48 PP
TOLEDO	24.31	287.2	5	17	0				5	51 PP
MALAGA	24.89	279.7	5	25K	2					
DURHAM	26.56	322.1	5	39A	0	10	10	-1		
ABERDEEN	28.12	326.2				9	11	-85	12	14 SS
RATHFARNHAM	28.36	316.6	6	34	39					
SKALSTUGAN	28.42	346.5	5	54	-2					
SVERDLOVSK	30.36	37.4	6	2	-11					
APATITY	31.24	5.0	6	20	-1	11	28	3	12	2 *SS
KIRUNA	31.49	355.5	6	22A	-1	11	31	2		
QUETTA	34.03	88.9	6	46	1				7	56 PP
NAMANGAN	35.04	68.8	6	55	1					
LWIRO	38.69	176.6	7	26	2					
ASTRIDA	39.09	175.2	7	31	3					
LAHORE	39.46	83.0	7	30A	-1					
UVIRA	39.93	176.2	7	35	0					
NORD	47.69	352.2	8	35	-2					
CHATRA	51.62	82.7	9	12	4					
SHILLONG	55.95	81.6	9	39A	0					
SEVEN FALLS	68.80	313.4	11	5	0					
SHAWINIGAN	70.24	313.7	11	12	-2					
BREBEUF	71.30	313.1	11	19	-1					
WESTON	71.61	309.4	11	22K	0					
OTTAWA	72.59	313.9	11	27K	-1					

COLLEGE	78.78	357.6	12 1	-2				
MATUSIRO	83.45	48.9	12 29	1				
HUNGRY HORSE	88.48	335.0	12 52	-1			13 11	
EUREKA	96.86	331.8	13 33	2				
CHARTERS TS.	125.12	89.9	19 2	2				
KARAPIRO	155.21	102.5	17 56	-116				

SEPTEMBER 4 21.H 51.M 11.S EPICENTRE -33.94 -70.01 DEPTH= 0.KM

A= 0.28421 B=-0.78132 C=-0.55566 D=-0.9398 E=-0.3418
G=-0.1899 H= 0.5222 K=-0.8314 HT= 0.5

SE= 3.02

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
SANTA LUCIA	0.75	311.9	0 7	-10					
CONCEPCION	3.33	209.4	0 49	-5	1 48	13			
TALA POZO	7.85	40.6	1 56A	-2	2 59	-30		3 29	SSS
BUENOS AIRES	9.57	97.2	2 22	0	4 38	27			
LA PLATA	10.03	98.9	2 29	1	4 3	-20		4 59	SSS
LA PAZ	17.44	6.0	4 6	0	7 32	13		4 27	PP
HUANCAYO	22.32	346.2	5 1K	1	9 18	16			
BOGOTA	38.54	353.5	7 26A	0	13 27	5			
CHINCHINA	39.06	351.1	7 28	-2	13 36	6			
FUQUENE	39.35	354.2	7 30	-2	13 35	1			
BALBOA HTS.	43.61	346.3	8 5K	-2	14 37	0			
GALERAZAMBA	44.75	352.6	8 12	-5	14 52	-2			
TRINIDAD	45.09	11.8	8 21	2					
HALLEY BAY	46.39	166.2			15 21	4		10 18	PP
GRENADA	46.40	11.2	8 28	-2				9 44	
ST. VINCENT	47.58	11.6	8 38	-1				12 38	
FORT FRANCE	49.12	11.4	8 48	-3	15 57	1		19 37	
DOMINICA	49.64	10.9	8 56	1					
BYRD STATION	50.11	190.0	8 58	-1	16 20	10			
SANTIAGO MA.	50.33	336.4	9 6	6					
SAN SALVADOR	50.81	335.6	9 12	8					
SAN JUAN	52.15	4.7	9 9	-5				13 11	
COMITAN	54.17	333.5	9 32	3	17 9	4		22 55	
SOUTH POLE	56.24	180.0	9 42	-2	17 19	-14		39 16	PKPPKP
MERIDA	57.69	338.2	9 58	4	17 49	-3		11 13	
VERA CRUZ	58.41	330.8	10 5K	6	18 9	7		23 13	
TACUBAYA	59.89	327.8	10 17K	7	18 37	16		28 34	
GUADALAJARA	62.90	324.7	10 35	5	19 0	1			
SCOTT BASE	63.48	191.4	10 34	0	19 20	14		14 34	PPP
BERMUDA	66.15	4.9	10 52	1	19 43	4		14 52	PPP
CAPE HALLETT	66.23	196.9	10 50	-2	19 47	7		12 7	PCP
MAZATLAN	66.52	323.5			19 45	1		22 1	
COLUMBIA	68.36	350.2	11 3	-2				12 19	
MBOUR	69.68	55.7	11 14K	1	20 27	5		13 50	PP
CHIHUAHUA	70.98	326.8	11 20	-1	20 34	-3		13 25	
HERMANUS	71.23	119.2	11 21	-2	20 47	7		11 32	PP
GEORGETOWN	72.76	354.2	11 29	-3	20 43	-14		15 29	
LUBBOCK	73.52	332.7	11 33	-3	21 10	4		15 35	
WAYNESBURG	74.07	351.9	11 44	5	21 46	34			
FORDHAM	74.50	357.0	11 41	-1	21 16	-1			
PITTSBURGH	74.57	352.1	11 38	-4	21 21	3			
PENNSYLVANIA	74.72	353.8	11 45	2	21 11	-8		14 20	PP
FLORISSANT	74.79	343.6	11 41K	-3	21 17	-3		22 0	PS
WINDHOEK	75.48	107.5	11 47	0					
CLEVELAND	75.79	351.1	11 48	-1	21 32	1			
WESTON	75.95	359.0	11 46K	-4	21 29	-4			
HARVARD	76.09	358.8	11 50	-1				15 50	
GRAHAMSTOWN	77.06	121.4	11 55	-1					
KIMBERLEY	78.18	116.6	11 41	-21					
HALIFAX	78.40	4.7	12 8K	4	22 6	7		14 58	PP
MIRNY	78.99	173.2	12 5	-2				22 10	SCS
BREBEUF	79.13	357.4	12 5	-3	22 10	3			
OTTAWA	79.13	355.9	12 6K	-2	21 53	-14		15 15	PP
OASIS-BUNG.	79.96	176.2	12 11	-1	22 14	-2		15 12	PP
SHAWINIGAN	80.15	358.1	12 14	1				15 13	PP
WILKES	80.18	180.2	12 18	5	22 22	4			
BOULDER	80.50	333.3	12 12	-3					
SEVEN FALLS	80.69	359.4	12 15	-1	22 24	1		15 21	PP
BOULDER CITY	81.18	324.7	12 19K	0				16 19	
PASADENA	81.40	321.3	12 16	-4	22 37	6		15 29	PP

LARAMIE	81.72	333.7	12	18	-3	22	33	-1				
PIETERMZBURG	81.81	120.1	12	21	-1							
PRETORIA	82.34	115.8	12	27	2							
SALT LAKE C.	83.74	329.4	12	31	-1				13	24		
FRESNO	84.27	322.0	12	32	-3							
WELLINGTON	84.36	223.2	12	39	4	23	5	4	16	40	PP	
ROXBURGH	84.41	217.4				23	4	3	25	1	PS	
EUREKA	84.52	326.0	12	34K	-2				38	58	PKPPKP	
TONGARIRO	85.28	225.2	12	41	1							
LICK	85.66	321.2	12	40A	-1				16	45	PP	
KARAPIRO	86.11	226.2	12	44	0				16	43	PP	
BERKELEY	86.38	321.2	12	43	-2	23	14	-6	16	44	PP	
RENO	86.41	323.7	12	44	-1							
BOZEMAN	87.50	332.6	12	50K	-1				16	53		
UKIAH	87.82	321.4	12	53	1				16	53	PP	
MINERAL	87.91	323.2	12	53	1				16	52	PP	
BUTTE	88.38	331.9	12	52K	-3				15	47	PP	
SHASTA	88.57	323.0	12	52	-4	24	33	52	16	52	PP	
ARCATA	89.56	322.1	13	8	8							
HUNGRY HORSE	90.87	332.4	13	3	-3				16	44	PP	
TAMANRASSET	91.27	63.4	13	6	-2	23	56	-10	14	46	PP	
SASKATOON	91.50	338.4	13	6	-3	23	42	-26				
LISBON	91.69	43.1	13	11K	1				16	58	PP	
AFIAMALU	91.83	252.0				24	34	24	17	46	PP	
MALAGA	93.15	47.1	13	17A	0	24	31	9	17	1	PP	
SERRA PILAR	93.64	41.7	13	19K	0				19	12	PPP	
BANFF	93.73	333.2	13	16	-4							
SEATTLE	93.76	327.6	13	25A	5	24	5	-22				
GRANADA	93.94	47.2	13	24A	3	24	17	-12	17	16	PP	
ALMERIA	94.42	48.0	13	22	-1	24	49	16	17	13	PP	
VICTORIA	94.91	327.6	13	24	-1	24	1	-36	17	22	PP	
TOLEDO	95.41	44.9	13	33	6	24	24	-17	17	14	PP	
HORSESHOE B.	95.49	328.3	13	27	-1	24	4	-38	17	28	PP	
RELIZANE	95.63	50.4	13	30	2	24	54	11	17	32	PP	
UVIRA	95.64	98.0	13	30	2				26	18	PS	
LWIRO	96.06	96.8	13	34	4	24	21	-26				
ALBERNI	96.09	327.4				24	40	-7				
ALICANTE	96.59	47.9	13	30	-3	24	49	-2	31	27	SS	
ASTRIDA	96.63	97.6	13	34	1				17	33	PP	
SUVA	96.80	243.0	13	36	2	24	31	-22	17	35	PP	
ALGIERS UNI.	97.86	50.8	13	38	0	24	57	-5	17	40	PP	
TORTOSA	98.70	46.4	13	52	10	24	24	-45				
SETIF	99.05	52.4	13	46	2	24	19	-53	17	50	PP	
HONOLULU	100.07	288.8	13	53	5	24	27	-54	32	30	SS	
TANANARIVE	100.67	121.4							17	58	PP	
RIVERVIEW	102.31	214.1	12	38	-80	24	48	-51				
RATHFARNHAM	102.92	33.5				24	40	-65	18	9	PP	
CLERMONT-FD.	103.18	43.5	14	11	9	25	51	4	24	53	SKKS	
PARIS	104.58	40.7	14	14	6	26	6	8	24	57	SKS	
MONACO	104.58	47.0	14	8	0				18	6	PP	
KEW	104.66	37.3	18	31	777	26	9	10	24	48	SKS	
SIDA	105.68	21.3							18	26	PP	
DURHAM	106.01	34.1	14	8A	777	26	19	22	18	37	PP	
DOURBES	106.44	40.3	14	20	777	25	7	13				
BRISBANE	106.55	219.2				25	6	11				
UCCLE	106.69	39.6	18	46	777				28	11		
ROME	106.77	50.6	14	25	777				18	49	PP	
MESSINA	106.95	55.2	14	8	777	26	9	7	18	43	PP	
ABERDEEN	107.20	31.9				25	2	-1	18	49	PP	
STRASBOURG	107.37	42.8	14	23	777	26	19	7	18	49	PP	
DE BILT	107.83	38.8	14	19	777	25	7	6	18	49	PP	
EBINGEN	107.85	43.6							18	49	PP	
TUBINGEN	108.09	43.4							18	49	PP	
STUTTGART	108.28	43.2	18	4	777	25	12	14	14	26	P	
BENSBERG	108.29	40.5							18	7	PP	
TARANTO	109.20	53.8							27	44		
TRIESTE	109.43	47.7				25	3	2	18	51	PP	
SCORESBY SD.	109.67	15.4							19	4	PP	
JENA	110.69	42.0	18	16	-18	25	46	31	19	8	PP	
PLAUEN	110.80	42.6							19	9	PP	
ZAGREB	110.89	48.3	18	32	-3				19	26	PP	
HALLE	111.16	41.6	18	10	-25				19	14	PP	
COLLMBERG	111.65	42.1	17	50	-46				19	14		
PRAGUE	111.90	43.7	18	31	-6	25	29	9	19	29	PP	
PRUHONICE	111.93	43.9	18	33	-4				19	16	PP	
POTSDAM	112.19	41.1	18	19	-18				19	20	PP	
BERGEN	112.19	31.2							27	53		
BRATISLAVA	112.63	46.4	18	18	-20				19	15	PP	
SKOPJE	112.68	53.9	17	4A	-94				25	44	SKKS	

BELGRADE	113.27	50.8	19	31A	52				21	4	
COPENHAGEN	113.34	37.7							19	30	PP
BUDAPEST	113.53	47.7							29	16	SCSP
GOTEBORG	113.99	35.6	18	42	1				29	32	PKKP
TIMISOARA	114.16	50.1							19	49	PP
HELWAN	114.67	69.6	19	55	73				29	28	PS
SKALNATE PL.	114.95	46.4	19	43	60				23	26	
KRAKOW	115.10	45.4							19	42	PP
COLLEGE	115.31	332.5	18	41	-2				14	55	PP
SKALSTUGAN	116.56	29.7	18	56	10				21	8	
WARSAW	116.57	43.4							19	56	PP
BUCHAREST	116.81	53.0	19	36	50				20	1	PP
LWOW	117.47	46.7	18	51	4				20	1	PP
UPPSALA	117.54	34.7							19	59	PP
NORD	118.47	7.7	18	45	-4				20	1	PP
JERUSALEM	118.51	69.2	18	9	-41				29	26	PS
IASI	118.77	50.5	19	3	13						
KSARA	119.83	67.4	18	53	1	26	13	24	20	21	PP
KIRUNA	121.10	26.3	18	56	1				20	28	PP
SIMFEROPOL	122.37	54.6	19	1	4				20	29	PP
SODANKYLA	123.34	27.4	18	58	-1						
PULKOVO	123.69	36.7							20	15	PP
PORT MORESBY	124.31	226.2	19	18	17	26	4	0	30	40	PS
RABAUL	125.03	234.9	18	43	-19				19	37	PP
APATITY	125.96	27.5	19	4	0				21	1	PKP2
MOSCOW	126.92	42.4	19	6	0				22	9	SKP
TIFLIS	129.02	61.0	19	11	1				22	35	PKS
GORIS	129.60	64.1	19	10	-1				22	39	SKP
ASHKABAD	138.43	69.1	19	25	-2				22	21	PP
LEMBANG	139.40	176.4	19	22	-7				22	26	
SVERDLOVSK	139.63	40.1	19	27	-3				22	29	PP
DJAKARTA	139.99	175.1							21	13	
PETROPAVLOVK	140.75	314.4	19	28	-4				22	36	PP
TIKSI	140.93	350.6							22	0	
COLOMBO	141.29	127.2	21	39	126						
MAGADAN	143.01	326.4	19	31	-4				20	14	
QUETTA	143.53	83.8	19	35	-1				20	49	
BOMBAY	143.72	104.8	19	58	21						
KOROR	145.18	226.1	19	38	-1				23	36	
MADRAS	145.83	120.4	19	45	5				23	46	PP
STALINABAD	146.64	70.0	19	43	1				29	42	SKKS
TASHKENT	147.16	65.0	19	46	3				23	18	PKS
HYDERABAD	147.34	112.3	19	48	5				23	20	PP
MEDAN	148.01	158.3				26	48	-3	19	47	PKP2
WARSAK DAM	148.24	78.9	19	47	3						
FRUNSE	151.03	61.5	19	50	1				23	10	SKP
AGRA	151.72	95.2	19	49A	-1				23	43	PP
Y.-SAKHLINSK	152.12	307.6	19	56	6				30	34	
DEHRA DUN	152.77	88.8	20	1	10						
PORT BLAIR	152.80	140.5	19	40	-11				24	5	PP
SENDAI	154.72	288.8	20	26	32						
BOKARO	156.60	109.1	20	34	38				21	43	PKP2
MATUSIRO	156.83	284.5	19	59K	2				24	14	PP
ABUYAMA	158.88	279.8	20	0K	1						
CHATRA	159.10	103.7	20	2	2				28	21	
CHITTAGONG	160.29	121.1	19	59	-2						
VLADIVOSTOK	160.60	304.6	20	8	7				24	31	
IRKUTSK	161.22	10.9	20	1	-1						
SHILLONG	162.21	113.2	20	3	0				20	52	PKP2
LHASA	163.33	99.7	20	6A	2				21	4	PKP2
CHANGCHUN	164.53	314.2	20	8	3				24	53	PP
ULAN-BATOR	165.84	8.5	20	9	3						
HONG KONG	167.84	198.7	21	18	70				24	32	PP
CANTON	168.81	195.8							25	27	PP
KUNMING	169.10	142.4	20	14	6				25	16	PP
PEKING	172.16	322.7	20	15	5				25	31	PP
NANKING	172.36	258.2							25	34	PP
LANCHOW	174.50	65.4	20	18	7				25	45	PP

SEPTEMBER 5 13.H 1.M 55.S EPICENTRE -4.73 101.96 DEPTH= 0.KM

A=-0.20645 B= 0.97502 C=-0.08199. D= 0.9783 E= 0.2071
G= 0.0170 H=-0.0802 K=-0.9966 HT= 7.0

SE= 2.79

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
DJAKARTA	5.06	106.7	1	19A	0	2	23	4					
LEMBANG	6.01	110.5	1	35A	3	2	48	5					
MEDAN	8.88	338.3	2	13K	0	3	55	0					
MADRAS	27.90	309.4	6	0	6	10	36	-1			6	58	PPP
HONG KONG	29.41	23.5	6	25	18	11	5	4					
KUNMING	29.61	1.3	6	10	1								
SHILLONG	31.67	342.5	6	26A	-1								
CHATRA	34.49	336.3	6	52	0								
CHENGTU	35.25	3.1	6	57	-1								
LHASA	35.75	343.6	7	4A	1	12	40	0					
SIAN	39.33	9.1	7	34	1								
DEHRA DUN	41.70	328.2	7	51	-1	14	6	-4					
PORT MORESBY	45.06	98.5	8	19A	0								
ADELAIDE	45.35	136.3	8	21	-1								
CHARTERS TS.	45.69	113.4	8	24	0						10	46	
WARSAK DAM	48.05	325.6	8	43	0								
CHANGCHUN	52.73	21.1	9	18A	-1								
MATUSIRO	53.24	36.5	9	21A	-2						9	37	
NAMANGAN	53.27	331.5	9	23	0	16	50	-4					
BRISBANE	53.56	120.8	9	25	0						10	26	
RIVERVIEW	54.01	128.9	9	29	1						9	40	
VLADIVOSTOK	54.80	26.6	9	49	15								
OASIS-BUNG.	61.33	180.6	10	25	5								
MIRNY	62.02	184.0	10	20	-5								
TIFLIS	69.49	317.8	11	11	-1	20	18	-2					
YAKUTSK	69.90	13.5	11	13	-2								
SVERDLOVSK	69.94	337.3	11	16	1								
KSARA	73.08	307.3	11	33	-1								
PETROPAVLOVK	74.67	31.5	11	42	-1								
CAPE HALLETT	79.01	163.2	12	15	8								
MOSCOW	79.82	328.8	12	9	-3								
SCOTT BASE	80.21	168.8	12	0	-14								
SOUTH POLE	85.30	180.0	12	37	-3								
SODANKYLA	88.73	338.0	12	56	-1								
RACIBORZ	89.59	320.2	12	57	-4								
KIRUNA	91.15	337.9	13	8K	0								
PRUHONICE	91.92	319.8	13	29	17								
BYRD STATION	92.84	173.4	13	13	-3								
SKALSTUGAN	94.06	333.4	13	33	12								
TAMANRASSET	97.74	292.3	13	54	16						17	50	PP
COLLEGE	102.78	24.3									18	13	PP
RESOLUTE	109.43	4.7				25	16	6			28	33	PS
HUNGRY HORSE	126.80	29.3	19	6	0								
EUREKA	131.33	39.3	19	16	1						21	36	PP
TUCSON	138.90	44.3	19	39	10								
TUCSON TELE.	138.92	44.1	19	33	4						29	15	
LUBBOCK	143.74	34.7	19	36	-1								
COLUMBIA	150.75	5.1	19	55	6								

SEPTEMBER 5 13.H 8.M 4.S EPICENTRE -4.83 101.87 DEPTH= 0.KM

A=-0.20503 B= 0.97517 C=-0.08364 D= 0.9786 E= 0.2058
G= 0.0172 H=-0.0819 K=-0.9965 HT= 7.0

SE= 1.50

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
LEMBANG	6.05	109.4	1	34A	1	2	45	1					
MEDAN	8.94	339.0	2	14K	1	3	58	2					
CHITTAGONG	28.76	340.4	6	4	3								
KUNMING	29.71	1.5	6	11	1								
SHILLONG	31.74	342.6	6	26A	-2								
CHATRA	34.54	336.4	6	52	0								
CHENGTU	35.35	3.2	6	58	-1								
LHASA	35.82	343.8	7	5A	2								
SIAN	39.43	9.2	7	34	1								
PORT MORESBY	45.13	98.4	8	19A	-1						8	37	
ADELAIDE	45.34	136.2	8	21	0						8	34	
CHARTERS TS.	45.72	113.3	8	24	0						9	24	
PEKING	46.54	15.1	8	31	0								
WARSAK DAM	48.08	325.7	8	44	1								
CHANGCHUN	52.85	21.2	9	19A	0								
NAMANGAN	53.32	331.6	9	23	0	16	52	-2					

MATUSIRO	53.36	36.5	9	22A	-1					15	12	
BRISBANE	53.58	120.7	9	25	0					10	14	
TANANARIVE	54.75	250.3	9	32	-1							
IRKUTSK	56.92	1.8	9	49	0							
OASIS-BUNG.	61.23	180.5	10	23	4							
MIRNY	61.92	184.0	10	20	-4							
TIFLIS	69.51	317.9	12	11	59	20	11	-9				
SVERDLOVSK	70.00	337.3	11	15	0							
YAKUTSK	70.01	13.6	11	13	-2							
PETROPAVLOVK	74.80	31.5	11	43	-1							
TIKSI	78.33	8.5	12	2	-1							
CAPE HALLETT	78.95	163.2	12	11	4							
MOSCOW	79.86	328.8	12	11	-1							
SCOTT BASE	80.13	168.8	12	13	0							
SOUTH POLE	85.20	180.0	12	38	-1							
SODANKYLA	88.79	338.0	12	57	0							
BRATISLAVA	90.08	318.2	13	3	0							
KIRUNA	91.21	338.0	13	8	0							
UPPSALA	91.25	329.8	13	8	0					18	8	
PRUHONICE	91.94	319.8	13	12	1							
SKALSTUGAN	94.11	333.4	13	21	0							
TAMANRASSET	97.70	292.2	13	37	-1					17	57	PP
COLLEGE	102.90	24.3	17	45	777					18	6	PP
RESOLUTE	109.53	4.7				25	16	6		28	41	PS
HUNGRY HORSE	126.92	29.3	19	7	1							
BOZEMAN	130.25	30.0	19	14	2							
EUREKA	131.45	39.3	19	16	1							21 36 PP
PASADENA	132.80	46.6	19	20	3							
TUCSON	139.02	44.3	19	34	5							
TUCSON TELE.	139.05	44.1	19	34	5							
OTTAWA	139.54	357.4										22 24 PP
LUBBOCK	143.87	34.7	19	37	0							
COLUMBIA	150.85	5.0	19	56	7							

SEPTEMBER 8 5.H 25.M 43.5 EPICENTRE 53.03 159.37 DEPTH= 67.KM

DEPTH OF FOCUS= 0.005R

A=-0.56524 B= 0.21276 C= 0.79702 D= 0.3523 E= 0.9359
G=-0.7459 H= 0.2808 K=-0.6040 HT= -6.5

SE= 2.06

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PETROPAVLOVK	0.45	282.9	0	14	0	0	22	-2			0	34	
SEVERO-KUR.	3.12	221.9	0	47	-1	1	23	-1			1	4	*SP
KLYUCHI	3.39	13.3	0	54	2	1	37	6			1	9	
MAGADAN	8.08	327.3	1	59	2	3	43	15			2	19	
KURILSK	10.84	228.5	2	34	0								
UGLEGORSK	11.58	257.0	2	50	6	5	6	13			3	6	
Y.-SAKHLINSK	12.31	247.0	2	56	2	5	9	-1					
NEMURO	13.35	228.9	3	5	-3						6	59	
KUSIRO	14.17	230.8	3	11	-7	6	3	9					
OBIHIRO	14.79	233.3	3	22	-5								
SAPPORO	15.60	237.5	3	38	1	6	49	21			5	1	
TOMAKOMAI	15.88	235.7	3	46	6								
MORI	16.70	236.6	4	0	9								
HAKODATE	16.86	235.6	3	49	-4								
AOMORI	17.56	233.3	4	12	11								
MORIOKA	18.25	230.3	4	10	0								
MIZUSAWA	18.72	229.3	4	15	0								
AKITA	18.74	232.4	4	16K	0								
ISINOMAKI	19.21	227.7	4	20	-1						5	5	
SAKATA	19.51	231.4	4	25	1								
SENDAI	19.53	228.3	4	23	-1	8	1	5					
YAMAGATA	19.79	229.3	4	27	0						4	43	
HUKUSIMA	20.15	228.2	4	31A	0						9	10	
ONAHAMA	20.62	226.1	4	36	0						5	37	
NIIGATA	20.66	231.1	4	40	4						6	3	
VLADIVOSTOK	20.74	252.5	4	33	-4						4	56	PP
SHIRAKAWA	20.78	227.7	4	35	-2	8	32	11			6	11	
AIKAWA	20.96	232.7	4	39	0	8	35	11					
MITO	21.29	226.1	4	45	2	8	36	6					
UTUNOMIYA	21.41	227.4	4	44	0	8	36	4					
KAKIOKA	21.54	226.4	4	45	0								
MAEBASI	21.89	228.7	4	49A	0						5	8	

KUMAGAYA	21.96	227.7	4	52	3	8	57	15		
NAGANO	22.07	230.6	4	52	2	8	11	-33		
WAZIMA	22.12	234.0	4	51	0	8	58	13		
MATUSIRO	22.16	230.4	4	51A	0	8	46	0	9	28
OIWAKE	22.19	229.5	4	54	2					
TOKYO C.M.O.	22.19	226.4	4	53	1	8	49	2	9	43
TITIBU	22.23	228.0	4	53	1					
YOKOHAMA	22.44	226.2	4	58	4				6	44
TOYAMA	22.52	232.4	4	55	0					
MATUMOTO	22.52	230.4	4	57	2					
KOHU	22.76	228.4	4	59	2	9	4	7		
HUNATU	22.77	227.9	4	59	2					
MERA	22.80	225.2	5	2	5					
TIKSI	22.94	335.6	4	59	0				8	43 PCP
MISIMA	23.01	227.0	5	1	1					
OSIMA	23.12	225.8	5	3	2					
HUKUI	23.49	232.9	5	6	2					
GIHU	23.77	231.2	5	7	0				5	43
IBUKISAN	23.98	231.8	5	10	1					
HIKONE	24.13	231.8	5	12	2					
CHANGCHUN	24.20	261.4	5	10A	-1	9	20	-2	5	32 *SP
KAMEYAMA	24.37	230.9	5	16	3					
TU	24.44	230.6	5	6	-7					
TOYOOKA	24.61	234.5	5	15	0	9	33	4		
ABUYAMA	24.78	232.4	5	17A	0	9	39	8		
OSAKA	24.97	232.1	5	20	1				7	29
KOBE	25.12	232.7	5	21	1	9	40	3		
SUMOTO	25.53	232.7	5	25	1	9	51	7		
SIOMISAKI	25.85	230.2	5	28	1				6	27
TOKUSIMA	25.90	232.8	5	28	1					
TAKAMATU	25.95	234.0	5	27	-1					
MUROTO	26.76	232.4	5	34	-1					
KOTI	26.83	233.8	5	37	1	10	15	10	7	16
OOITA	28.03	236.2	5	47	0					
SAGA	28.69	238.0	5	56	3					
COLLEGE	28.76	45.0	5	52	-1	10	37	1	6 4 11	19
KUMAMOTO	28.82	236.9	5	56	2					
NAGASAKI	29.31	238.0	5	57	-1					
KAGOSIMA	29.90	235.6	6	4	1					
YAKUSIMA	30.84	234.4	6	12	0	10	25	-44		
PEKING	31.94	263.6	6	19	-2					
IRKUTSK	32.72	291.3	6	27A	-1	11	39	0	7	49 PPP
ULAN-BATOR	33.15	282.7	6	31	-1	11	53	8		
ZO-SE	35.23	246.8	6	50	0	12	21	3	7	14 *SP
NANKING	35.86	250.5	6	53A	-2					
SITKA	36.35	56.9	6	59	0					
SIAN	40.09	262.7	7	29	-1				7	53 *SP
LANCHOW	41.92	269.0	7	46A	1				9	52 PPP
RESOLUTE	43.55	21.8	7	58	-1	14	24	2	9	42 PP
KIPAPA	45.29	117.4	8	11	-2				10	7 PP
HONOLULU	45.34	117.6	8	11	-2	14	50	2	9	32 PCP
CHENGTU	45.56	263.3	8	15	0					
NORD	45.59	359.2	8	14	-1	14	49	-3	10	43 PPP
ALBERNI	45.63	62.7	8	15K	0	14	55	3	8	30 PP
TRUK	45.84	190.4	8	14	-3					
CANTON	45.86	247.6	8	18	1					
HONG KONG	45.99	246.0	8	19	1	14	57	0		
HORSESHOE B.	46.39	61.7	8	21A	0	15	8	5		
VICTORIA	46.82	62.8	8	24A	-1	15	12	3	10	32
THULE	47.29	13.8	8	25	-3	15	13	-3		
BAGUIO CITY	47.49	234.7	8	30	0					
SEATTLE	47.94	63.1	8	35K	1	15	30	5		
CORVALLIS	49.29	66.9	8	44	0					
BANFF	49.32	55.8	8	43A	-1					
KOROR	49.88	213.1	8	48	0					
KUNMING	50.48	259.3	8	51A	-2	16	2	2		
HUNGRY HORSE	51.85	57.9	9	3	0	16	25	6	9 17	10 30 PCP
SHASTA	52.31	70.1	9	7A	0					
UKIAH	52.89	72.2	9	10	-1				9 25	
MINERAL	53.00	70.0	9	11A	-1					
APATITY	53.15	337.1	9	11	-2	16	34	-3		
LHASA	54.11	272.9	9	21A	1	16	55	5		9 42 *SP
BUTTE	54.13	59.2	9	20	0				9 34	10 22 PCP
BERKELEY	54.30	72.7	9	21A	0	16	57	5		9 35
FRUNSE	54.50	296.0	9	23	0	17	23	28		
RENO	54.56	69.6	9	24A	1					
SODANKYLA	54.81	339.6	9	21	-4					
LICK	55.02	72.7	9	26A	-1					

BOZEMAN	55.15	58.7	9	28	0				9	42		
KIRUNA	55.63	342.4	9	30	-1							
FRESNO	56.47	72.0	9	36A	-1							
SHILLONG	56.58	268.9	9	37A	-1	17	44	21			13	25
EUREKA	56.75	67.1	9	40	1				9	54	38	57 PKPPKP
SCORESBY SD.	56.79	0.5	9	40	1	17	31	5	10	1	11	55 PP
SALT LAKE C.	58.11	63.4	9	49	0				10	3	10	29 PCP
TASHKENT	58.43	297.9				18	16	29				
CHATRA	58.48	273.6	9	51	0						20	6
CHITTAGONG	59.01	266.4	10	10	15	18	27	32	10	27	12	29 PP
PASADENA	59.26	73.0	9	56A	-1	18	2	4			21	59 SS
BOULDER CITY	59.86	69.3	10	2	1				10	16	39	27 PKPPKP
STALINABAD	60.68	295.9	10	7	1						18	38 PS
SKALSTUGAN	60.92	343.9	10	7A	-1							
DEHRA DUN	61.37	283.1	10	12	1	18	46	21				
HELSINKI	61.38	336.0	10	9	-2							
MOSCOW	61.48	326.8	10	10	-2						14	22
WARSAK DAM	62.44	290.5	10	16A	-2							
PORT MORESBY	63.06	193.6	10	20A	-2	18	48	2	10	38	10	57 PCP
REYKJAVIK	63.17	0.6	10	23A	0							
UPPSALA	63.35	339.5	10	23A	-1	18	53	3				
SIDA	63.51	358.7	10	27K	2							
AGRA	63.74	280.7	10	25A	-2						12	9
TUCSON TELE.	64.84	69.3	10	34	0	19	22	14	10	49	39	20 PKPPKP
TUCSON	64.85	69.4	10	34	0	19	24	16	10	49	39	20 PKPPKP
GOTEBORG	66.47	341.6	10	48A	4							
ASHKABAD	66.62	302.3	10	44	-1						13	14 PP
QUETTA	67.88	291.0	10	52A	-1	19	49	4				
COPENHAGEN	68.27	340.6	10	56A	0	19	55	5	11	12	20	21 PS
LUBBOCK	68.79	62.3	10	59	0							
WARSAW	69.46	334.1	11	4A	1						11	31 PCP
MEDAN	69.85	248.0	11	5	0						13	48
TIFLIS	70.10	313.6	11	7	0	20	13	2			13	17 PP
FLORISSANT	70.49	51.1	11	8A	-1	20	17	1			14	0
ST. LOUIS 1	70.68	51.1	11	10A	0	20	18	0				
LWOW	70.79	331.2	11	11	0	20	21	2			13	51 PP
AFIAMALU	71.13	150.3	11	23	10							
OTTAWA	71.21	37.6	11	11A	-3	20	23	-1	11	34	13	51 PP
GORIS	71.22	311.2	11	15	1	20	29	5			13	58 PP
SHAWINIGAN	71.28	35.1	11	13A	-1				11	28		
DURHAM	71.41	348.5	11	13A	-2	20	23	-3	11	35	20	55 SKS
SEVEN FALLS	71.45	33.6	11	14A	-1	20	28	1			13	51 PP
SIMFEROPOL	71.72	322.4	11	16A	-1						20	56 PS
KRAKOW	71.73	333.8	11	16	-1							
IASI	72.03	327.7	11	18	0	20	45	11				
WITTEVEEN	72.08	343.0	11	20A	1							
RACIBORZ	72.16	334.9	11	21	2						11	48 PCP
COLLMBERG	72.26	338.6	11	19	-1							
HALLE	72.30	339.3	11	20	0	20	43	6	11	41	11	34 PCP
SKALNATE PL.	72.44	333.2	11	21	0				11	39		
MUNSTER	72.72	342.1	11	24	2						13	27
SUVA	72.78	161.0	11	22	-1	20	52	10				
BACAU	72.81	327.8	11	25	2							
JENA	72.92	339.3	11	24	0	20	40	-4			12	28
DE BILT	73.03	343.7	11	25	1	20	47	2			21	17 PS
PRAGUE	73.09	337.2	11	26A	1						14	0
PRUHONICE	73.14	337.1	11	25	0	20	48	2			11	47 PCP
PLAUEN	73.20	338.8	11	24	-1	20	51	4				
RATHFARNHAM	73.36	351.1	11	27	1							
SONNEBERG	73.52	339.4	11	27	0						21	21 PS
CHARTERS TS.	73.62	192.8	11	27A	-1				11	43		
BENSBERG	73.77	342.1	11	29	0	21	59	66				
HURBANOVO	74.19	334.0	11	35	4						14	32
BRATISLAVA	74.20	334.8	11	37	6						22	3
PENNSYLVANIA	74.29	41.5	11	30	-2	20	57	-2			14	28 PP
BUDAPEST	74.31	333.3	11	34	2							
UCCLE	74.42	343.8	11	33	1	21	2	2				
KEW	74.48	347.0	11	32A	-1	21	0	-1	11	53	21	28 PS
CAMPULUNG	74.56	328.4	11	38	5							
BUCHAREST	74.97	327.3	11	35K	-1	22	11	64				
DOURBES	75.05	343.5	11	36	0						21	36 PS
HARVARD	75.22	36.4	11	37	0							
NOUMEA	75.26	173.2	11	37A	0				11	53		
TIMISOARA	75.29	331.1	11	40	3	21	21	11				
WESTON	75.42	36.3	11	38A	0							
STUTTGART	75.46	340.1	11	39A	1	21	11	-1			12	1 PCP
TUBINGEN	75.72	340.1	11	41	1						21	47 SCS
FORDHAM	75.81	38.8	11	39	-1	21	31	15				
STRASBOURG	75.93	341.0	11	42A	1	21	25	8	11	58	14	33 PP

HALIFAX	75.98	30.1	11	43K	2	21	18	0	12	6	30	3 SSS
EBINGEN	76.07	340.1	11	43	1						12	4 PCP
GEORGETOWN	76.23	42.0	11	42A	-1	21	29	9			14	35 PP
WASHINGTON	76.23	42.0	11	36	-7							
RAVENSBURG	76.32	339.5	11	45	2						12	5 PCP
PARIS	76.65	344.5	11	47	2	21	27	2	12	3	14	38 PP
BASLE	76.97	340.8	11	47A	0						13	6
TRIESTE	77.38	336.1	11	47A	-2	21	39	6	12	10	22	0 SKS
SOFIA	77.41	328.4	11	50	1	21	50	17			14	5
NEUCHATEL	77.60	341.1	11	51	1							
COLUMBIA	78.71	47.4	11	56	0				12	12		
PAVIA	78.89	339.0	11	59	2						15	23 PP
CLERMONT-FD.	79.50	343.3	12	1	0	22	3	8	12	18	12	4 PCP
BRISBANE	80.36	185.7	11	42	-23	21	47	-17				
KSARA	80.56	315.3	12	6A	0	22	16	10			15	12 PP
MONACO	80.64	339.8	12	8A	1							
ROME	81.22	335.6	12	12	2	22	44	31			23	30 PS
TACUBAYA	81.36	69.4	12	15K	4						15	22 PP
ATHENS	81.55	326.0	12	10A	-2							
JERUSALEM	82.59	314.7	12	16K	-1						17	15 PPP
MESSINA	83.87	332.1	12	22	-1	22	46	6			15	40 PP
REGGIO CALA.	83.94	332.0	12	27	3							
TORTOSA	84.75	344.1	12	29	1	23	2	13				
SERRA PILAR	85.64	350.9	12	27A	-5				12	36		
HELWAN	85.89	316.7	12	34A	1	23	29	29				
TOLEDO	86.36	347.3	12	37A	1	23	9	5	12	54	23	33 *SS
BERMUDA	86.70	36.1	12	43	6	23	17	9			16	6 PP
RIVERVIEW	86.79	186.8	13	38A	60							
ALICANTE	87.33	344.3	12	41	1	23	25	11			16	9 PP
LISBON	88.08	351.0	12	38K	-6							
ALGIERS UNI.	88.23	341.2	12	30	-15	23	35	13			16	19 PP
SETIF	88.30	339.2	12	45	0				13	2		
GRANADA	88.95	346.5	13	22	34	23	28	-1			16	33 PP
ALMERIA	89.11	345.5	12	45	-4	23	30	0	13	8		
ADELAIDE	89.42	196.8	12	51	1							
MALAGA	89.51	347.0	12	52	1	23	41	7			16	16 PP
MELBOURNE	91.35	191.4	13	0A	1				13	10	13	19
KARAPIRO	91.66	167.3	13	1	0							
SAN JUAN	98.76	43.3	13	52	19						17	53 PP
TAMANRASSET	101.16	335.5	13	43	-1	25	20	6			17	55 PP
CHINCHINA	• 106.06	58.1									18	33 SS
BOGOTA	107.15	56.9									27	52 PS
LWIRO	115.06	303.1	18	36	3						29	12 PS
DUMONT	120.27	188.8	18	42	-1							
HUANCAYO	120.44	67.8	18	46	2							
CAPE HALLETT	125.27	175.9	18	53K	0						20	37 PP
LA PAZ	128.05	63.9	19	1A	3						21	9 PP
MIRNY	129.31	208.3									19	19
SCOTT BASE	130.70	177.9	19	3	0							
PIETERMZBURG	136.28	281.6	18	36	-38							
KIMBERLEY	138.91	287.9	19	12	-7							
SOUTH POLE	142.85	180.0	19	20	-6						23	24 PKS

SEPTEMBER 8 14.H 53.M 18.S EPICENTRE 33.75 131.85 DEPTH= 84.KM

DEPTH OF FOCUS= 0.008R

A=-0.55592 B= 0.62062 C= 0.55298 D= 0.7449 E= 0.6672
G=-0.3690 H= 0.4119 K=-0.8332 HT= 0.6

SE= 1.75

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
OOITA	0.55	200.6	0	16K	0	0	27	-2				
MATUYAMA	0.75	83.7	0	17A	-1	0	28	-3				
UWAZIMA	0.78	131.5	0	18	0	0	30	-2				
HIROSIMA	0.78	37.6	0	17A	-1	0	28	-4				
SIMONOSEKI	0.79	284.8	0	18	0	0	30	-2				
ASOSAN	1.07	217.9	0	22	1	0	38	2				
HAMADA	1.16	8.9	0	21A	-1	0	34	-4				
HUKUOKA	1.21	262.3	0	24A	1	0	40	1				
KUMAMOTO	1.34	226.5	0	26A	2	0	44	2				
SIMIDU	1.35	135.6	0	23K	-1	0	42	-1				
SAGA	1.39	249.4	0	25A	0	0	45	1				
KOTI	1.41	97.7	0	25A	0	0	42	-2				

UNZENDAKE	1.68	233.3	0	29A	0	0	51	1			
MIYAZAKI	1.86	191.4	0	33K	2	0	58	4			
TAKAMATU	1.91	72.1	0	29A	-3	0	51	-4			
NAGASAKI	1.94	238.9	0	33A	1	0	56	0			
OKAYAMA	1.95	61.0	0	31A	-1	0	51	-5			
MATSUE	1.97	30.3	0	34	2	0	54	-2			
MUROTO	2.01	103.7	0	32	-1	0	55	-2			
YONAGO	2.08	36.0	0	33	-1	0	58	-1			
ITUHARA	2.18	282.6	0	35	0	0	57	-5			
HIMEJI	2.24	69.8	0	39	3	1	9	6			
TOKUSIMA	2.29	81.2	0	37	0	1	2	-2			
KAGOSIMA	2.44	207.2	0	40K	1	1	9	1			
SUMOTO	2.58	75.8	0	40A	-1	1	8	-4			
TOTTORI	2.63	47.7	0	43	2	1	13	0			
SAIGO	2.73	26.0	0	44	1	1	14	-1			
WAKAYAMA	2.80	79.2	0	44A	0	1	14	-3			
TOMIE	2.82	247.3	0	46A	2	1	20	3			
KOBE	2.91	70.5	0	44A	-1	1	14	-6			
TOYOOKA	3.02	53.2	0	46A	-1	1	21	-1			
OSAKA	3.18	72.6	0	48A	-1	1	24	-2			
ABUYAMA	3.27	69.0	0	49A	-1	1	26	-3			
SIOMISAKI	3.28	94.1	0	48A	-3	1	21	-8			
NARA	3.42	73.2	0	53	0	1	30	-2			
MAIZURU	3.44	59.1	0	52	-1	1	26	-7			
YAKUSIMA	3.48	199.6	0	52K	-1	1	33	-1			
OWASE	3.63	83.8	0	54A	-1	1	24	-13			
HIKONE	3.93	66.1	1	0	0	1	46	1			
TSURUGA	3.96	60.2	1	0	0	2	44	58			
KAMEYAMA	3.98	72.7	1	0A	0	1	43	-3			
TU	3.99	74.5	1	0	0	1	42	-4			
IBUKISAN	4.07	65.2	1	1A	-1	1	48	0			
HUKUI	4.29	56.5	1	4	-1						
GIHU	4.38	66.5	1	5A	-1	1	54	-2			
NAGOYA	4.46	70.1	1	6A	-1	1	57	-1			
KANAZAWA	4.81	53.4	1	12	0						
HAMAMATU	4.96	77.1	1	13	-1				2	57	
TAKAYAMA	5.04	60.1	1	15	0	2	11	-1			
IIDA	5.23	68.6	1	19	2	2	14	-3			
TOYAMA	5.27	54.6	1	18	0	2	19	1			
OMAESAKI	5.35	79.1	1	18	-1	2	13	-7	2	34	
WAZIMA	5.48	47.2	1	21	0						
MATUMOTO	5.61	61.9	1	23	0	2	28	2			
KOHU	5.84	69.4	1	26	0	2	32	0			
MATUSIRO	5.92	60.0	1	26A	-1	2	33	-1			
NAGANO	5.96	58.9	1	29	2	2	39	4			
HUNATU	5.96	71.0	1	28	1	2	35	0			
MISIMA	6.02	74.9	1	27	-1	2	31	-6			
OIWAKE	6.07	63.0	1	30	1						
AJIRO	6.13	75.8	1	29	-1	2	35	-4			
TAKADA	6.20	55.6	1	28	-3						
OSIMA	6.32	78.6	1	32	0						
TITIBU	6.34	67.4	1	33	0						
MAEBASI	6.48	63.9	1	35A	0	3	0	12			
KUMAGAYA	6.63	66.7	1	38	1	2	53	1			
YOKOHAMA	6.65	73.2	1	37	0	2	55	3	3	19	
HATIDYOZIMA	6.70	93.4				2	47	-7			
MERA	6.70	77.7	1	37	-1				2	31	
AIKAWA	6.72	48.8	1	39	1						
TOKYO C.M.O.	6.78	71.3	1	39	0	2	59	4			
UTUNOMIYA	7.14	64.7	1	42	-2				2	14	
NIIGATA	7.17	52.5	1	57	13	3	25	20			
KAKIOKA	7.27	67.8	1	44	-2						
MITO	7.54	67.2	1	51	2	3	46	32			
SHIRAKAWA	7.61	61.4	1	50	0	3	16	0	3	53	
ONAHAMA	8.05	64.1	1	55	-1	3	28	2			
HUKUSIMA	8.06	57.9	1	57	1						
YAMAGATA	8.22	54.5	2	0	1						
SAKATA	8.24	49.1	1	57	-2	3	37	6			
SENDAI	8.61	55.8	2	5	1	3	45	5			
AKITA	8.90	45.6	2	11	3	3	58	11			
ISINOMAKI	8.97	55.9	2	10	1				2	39	
MIZUSAWA	9.20	51.7	2	15	3	3	54	-1			
VLADIVOSTOK	9.36	0.2	2	13	-1	3	53	-5			
ZO-SE	9.40	256.6	2	16A	1						
MORIOKA	9.55	48.9	2	17	0	4	3	0			
AOMORI	10.01	42.6	2	23	0						
HAKODATE	10.65	38.6	2	46	15						
MORI	10.80	37.0	2	37	3	4	32	-1			

NANKING	11.10	264.8	2	40A	2	4	48	8						
SUTTSU	11.17	33.6	2	37	-1	4	54	12						
CHANGCHUN	11.28	335.1	2	45	5									
TOMAKOMAI	11.62	38.3	2	46	2									
SAPPORO	11.91	35.9	2	47	-1	5	6	6						
URAKAWA	12.02	42.6	2	58	8	4	57	-5						
TAIPEI	12.51	228.7	3	16	20									
KUSIRO	13.47	43.2	3	12	3									
PEKING	14.02	301.1	3	17K	1	5	58	8					3	41 *SP
Y.-SAKHLINSK	15.55	28.8	3	35	-1									
UGLEGORSK	17.10	23.4	3	54	-1	7	2	1						
SIAN	19.02	277.9	4	16	-2									
HONG KONG	19.30	238.3	4	19A	-2	8	28	39	4	43			4	53 PP
CANTON	19.46	241.7	4	23K	1	7	55	3					8	27 PCP
LANCHOW	23.07	283.7	4	56	-3	9	0	0					5	23 *SP
ULAN-BATOR	23.46	314.5	5	2	-1									
CHENGTU	23.73	270.2	5	3	-2									
KOROR	26.40	174.1	5	29	-1									
KUNMING	26.78	258.9	5	32	-2	10	7	5						
IRKUTSK	27.09	321.4	5	36	-1	10	8	1						
PETROPAVLOVK	27.19	36.5	5	37	-1	10	4	-5						
YAKUTSK	28.32	357.9	5	44	-4	10	20	-7						
MAGADAN	28.69	20.2	5	51	0									
SHILLONG	35.51	267.5	6	48A	-3	12	51	32					14	25
TIKSI	37.98	358.5	7	8	-3									
CHATRA	38.96	272.1	7	18	-1									
PORT MORESBY	45.31	158.5	8	11	0	14	45	0	8	31			9	58 PP
DEHRA DUN	45.31	281.0				14	46	1						
AGRA	46.45	276.9				15	3	2					18	59
NAMANGAN	47.55	297.1	8	50	21								15	17
QUETTA	54.37	285.2	9	18	-2	16	50	0	9	40			17	25 *SS
CHARTERS TS.	55.20	163.4	9	26A	0								13	7
COLLEGE	55.96	30.5	9	29	-3				9	54				
APATITY	62.37	334.6	10	14	-2									
NORD	63.74	355.1	10	22	-3									
BRISBANE	64.12	159.1	10	27A	-1									
MAKHACH-KALA	64.17	305.8				19	6	9						
SODANKYLA	64.83	335.6	10	31	-1									
MOSCOW	65.08	321.5	10	32	-2									
KIRUNA	66.67	337.4	10	42	-2									
PULKOVO	66.88	327.4				19	26	-4						
RESOLUTE	67.59	12.1	10	48	-2	19	33	-5	11	9			11	17 PCP
ADELAIDE	68.62	173.9	10	56	0				11	18				
RIVERVIEW	69.62	162.9	11	5	3	20	13	10						
SKALSTUGAN	71.90	335.8	11	15	-1									
MELBOURNE	72.25	169.1	11	19	1									
UPPSALA	72.25	331.1	11	16K	-2									
CORVALLIS	76.45	45.3	11	44	2									
SHASTA	79.21	48.1	11	59	2									
HUNGRY HORSE	79.35	38.3	11	58	0				12	18			12	30 *SP
COLLMBERG	79.75	326.0	11	59	-1									
PRUHONICE	79.89	324.4	12	2	1								12	25 *SP
BERKELEY	80.94	50.4	12	8	1				12	28				
RENO	81.49	47.9	12	12	2									
BUTTE	81.61	39.4	12	11	1				12	31				
LICK	81.65	50.6	12	12	2									
KARAPIRO	82.06	146.5	12	14K	1				12	36				
FRESNO	83.17	50.1	12	21	3									
DURHAM	83.18	334.9				22	27	-3						
STUTTGART	83.27	325.9	12	18	-1	22	28	-3	12	44			23	9 *SS
EUREKA	83.87	46.1	12	22	0				12	43				
STRASBOURG	84.07	326.4	12	42	19	22	40	1					23	20 PPS
DOURBES	84.36	329.0	12	42	18	22	39	-3						
SALT LAKE C.	85.45	43.1	12	33	3				12	53				
PASADENA	85.82	51.4	12	55	24	22	51	-5						
BOULDER CITY	86.79	48.2	12	39	3									
CLERMONT-FD.	88.28	326.9				23	27	8						
LARAMIE	88.52	39.4	12	46	2									
TUCSON	91.74	48.9	13	3	4				13	24				
TUCSON TELE.	91.75	48.7	13	2	2				13	25			13	32 *SP
CAPE HALLETT	109.08	168.4											18	50 PP
SOUTH POLE	123.57	180.0	18	47	-1								20	29
BYRD STATION	126.22	168.2	18	52	-1									
HUANCAYO	147.11	55.4	19	36	5									
LA PAZ	155.13	51.2	20	12	29									

SEPTEMBER 9 11.H 32.M 12.S EPICENTRE 46.08 151.60 DEPTH= 58.KM

DEPTH OF FOCUS= 0.004R

A=-0.61233 B= 0.33102 C= 0.71797 D= 0.4755 E= 0.8797
G=-0.6316 H= 0.3414 K=-0.6961 HT= -4.0

SE= 1.88

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KURILSK	2.75	253.4	0	45	2	1	20	5			1	1	*SP
NEMURO	5.10	239.5	1	15A	-1	2	11	-3			1	34	
SEVERO-KUR.	5.48	31.5	1	22	1	2	27	4					
ABASHIRI	5.58	251.0	1	25	3	2	35	9					
KUSIRO	6.01	241.5	1	29	1	2	35	-2					
Y.-SAKHLINSK	6.19	281.3	1	32	1	2	50	9					
OBIHIRO	6.79	245.3	1	39	0						3	9	
UGLEGORSK	7.11	298.4	1	46	2	3	16	12					
URAKAWA	7.47	241.4	1	47	-2	3	13	0					
SAPPORO	7.92	251.3	1	57	2	3	26	2					
TOMAKOMAI	8.02	247.2	2	0	4	3	37	11					
PETROPAVLOVK	8.41	30.4	2	2	1								
MURORAN	8.51	247.7	2	4	1						3	52	
SUTTSU	8.77	252.1									4	0	
MORI	8.88	247.3	2	9	1	3	52	4					
HAKODATE	8.95	245.2	2	6	-3						4	10	
HATINOHE	9.20	236.5	2	20	8	3	50	-5					
AOMORI	9.46	240.1	2	14	-2	4	5	3					
MORIOKA	9.96	233.9	2	20	-3	4	5	-9					
MIZUSAWA	10.38	231.7	2	28	0	4	16	-8					
AKITA	10.56	237.1	2	29	-2	4	18	-11					
ISINOMAKI	10.79	228.5	2	29	-5	4	26	-8					
SENDAI	11.13	229.3	2	34	-5	4	19	-23					
SAKATA	11.26	234.6	2	39	-1	4	56	10					
HUKUSIMA	11.74	228.8	2	44	-3	4	58	1					
ONAHAMA	12.14	225.1									4	47	
NIIGATA	12.39	233.3	3	24	29								
UTUNOMIYA	12.96	226.9	3	0	-3	5	25	-2					
MAEBASI	13.49	228.6	3	25	15						5	33	
MAGADAN	13.50	358.2	3	9	-1								
KUMAGAYA	13.52	227.1	3	8	-2						6	45	
TOKYO C.M.O.	13.71	224.9	3	14	1	6	17	33					
NAGANO	13.76	231.6	3	15	2	6	11	26					
TITIBU	13.81	227.5	3	15	1								
OIWAKE	13.82	229.8	3	20	6						6	30	
MATUSIRO	13.83	231.2	3	12A	-2	6	17	30					
YOKOHAMA	13.96	224.5	3	29	13						- 4	52	
WAZIMA	13.99	236.8	3	22	6								
HUNATU	14.34	227.0	3	27	6								
KOHU	14.34	227.9	3	23	2								
VLADIVOSTOK	14.35	265.2	3	21	0						3	35	*SP
NAGOYA	15.54	230.6	3	48	11								
IBUKISAN	15.70	232.5	3	39	0						4	1	
HIKONE	15.85	232.5	3	41	0								
ABUYAMA	16.53	233.0	3	47A	-2	6	57	7					
TOKUSIMA	17.67	233.2	4	2	-1								
CHANGCHUN	18.72	272.6	4	17	1								
HUKUOKA	20.43	239.8	4	34	-1								
NAGASAKI	21.35	239.0	4	45	1								
YAKUSIMA	22.66	233.8	4	59	2						9	6	
PEKING	26.44	269.6	5	33	0	10	1	1					
TIKSI	27.81	344.8	5	43	-3						12	40	SCP
ZO-SE	27.88	248.3	5	47A	1								
NANKING	28.84	252.5	5	56A	1								
ULAN-BATOR	30.23	290.0	7	2	55								
SIAN	34.30	265.2	6	44	1								
LANCHOW	36.89	271.7	7	6A	1								
COLLEGE	37.32	37.8	7	7	-1								
HONG KONG	38.49	244.8	7	19	1								
BAGUIO CITY	39.27	231.4	7	26	2								
CHENGTU	39.75	264.3	7	31A	3	13	29	1					
KUNMING	44.18	258.8	8	5A	0								
SHILLONG	51.31	267.9	9	1A	1								
RESOLUTE	51.80	18.1	9	3	-1	16	21	1			18	50	SCS
SVERDLOVSK	53.61	316.9	9	15	-2								
HORSESHOE B.	54.40	53.2	9	22A	-1								
VICTORIA	54.77	54.2	9	26	0								
PORT MORESBY	55.37	185.3	9	30	0								

CORVALLIS	56.99	58.1	9 43A	1				
APATITY	57.54	336.3	9 47	1				
BANFF	57.59	48.1	9 46	0				
STALINABAD	59.09	294.9	9 59	3				
SHASTA	59.79	61.4	10 1A	0				
HUNGRY HORSE	60.03	50.2	10 3	0				39 23 PKPPKP
WARSAK DAM	60.03	289.2	10 3	0				
UKIAH	60.21	63.3	10 5	1				
MINERAL	60.48	61.3	10 4A	-2				10 24
KIRUNA	60.64	340.9	10 5	-2				
BERKELEY	61.57	63.9	10 14A	1				
RENO	62.06	61.0	10 17A	0				
BUTTE	62.24	51.6	10 17	-1				
LICK	62.29	64.0	10 18A	0				
BOZEMAN	63.29	51.1	10 24	-1				
SCORESBY SD.	63.66	357.6	10 27	0				
FRESNO	63.79	63.5	10 28A	0				
MOSCOW	64.40	325.0	10 31	-1				
EUREKA	64.41	59.0	10 33	1				
QUETTA	65.46	288.6	10 39A	0	19 19	1		
HELSINKI	65.54	333.8	10 37	-2				
LEMBANG	65.64	229.2	10 40K	0				
ASHKABAD	65.89	300.2	10 43K	1				
CHARTERS TS.	65.95	185.5	10 42	0				
SALT LAKE C.	66.00	55.7	10 43	1				
SKALSTUGAN	66.05	341.4	10 42	-1				
PASADENA	66.49	64.7	10 45	0			11 2	
BOULDER CITY	67.37	61.3	10 52	1				
UPPSALA	67.93	336.9	10 53A	-1				
KARACHI	68.25	285.0	11 0	4				
RAPID CITY	68.52	48.4	10 58	0				39 9 PKPPKP
REYKJAVIK	70.02	357.0	11 8A	1				
SIDA	70.18	355.1	11 10A	2				
TIFLIS	71.01	310.7	11 14	1				
GOTEBORG	71.28	338.5	11 14A	-1				
TUCSON	72.32	61.8	11 21	0				
TUCSON TELE.	72.33	61.7	11 22	1				
COPENHAGEN	72.94	337.2	11 24A	-1				
BRISBANE	73.22	178.7	11 26	0				11 48
SIMFEROPOL	73.90	319.0	11 31	1				
LWOW	74.21	327.8	11 32	0				
SKALNATE PL.	76.12	329.5	11 43	0				
LUBBOCK	76.72	55.3	11 46	0			11 57	
HALLE	76.77	335.4	11 44	-3				
DURHAM	76.99	344.4			21 31	1		
WITTEVEEN	77.01	339.0	11 50	2				
PRUHONICE	77.33	333.2	11 50	0				12 1 PCP
JENA	77.39	335.4	11 50	0				12 18
MUNSTER	77.54	338.1	11 51	0				
BRATISLAVA	78.07	330.8	11 54	0				12 3 PCP
RATHFARNHAM	79.21	346.7	12 0	0				
OTTAWA	79.80	31.8	12 2A	-1				
SHAWINIGAN	79.85	29.4	12 3A	-1				
KEW	79.86	342.6	12 4A	0	22 2	1		
STUTTGART	80.01	335.8	12 5	0				
DOURBES	80.02	339.1	12 4	-1	22 12	9		
TUBINGEN	80.26	335.8	12 6	0				
BREBEUF	80.47	30.4	12 6A	-1				
STRASBOURG	80.58	336.6	12 8A	0			12 37	
EBINGEN	80.61	335.7	12 8	0				
TRIESTE	81.39	331.6	12 10	-2				
KSARA	81.59	310.7	12 14	1				
BASLE	81.59	336.3	12 13A	0				
CHUR	81.65	334.8	12 14A	1				
PARIS	81.73	339.9	12 15	1				12 18 PCP
NEUCHATEL	82.25	336.4	12 16	0				
MELBOURNE	83.74	185.3	12 25	1				
HARVARD	83.80	30.6	12 23	-1				
WESTON	84.00	30.5	12 27K	2				
ATHENS	84.14	321.2	12 25K	-1				
CLERMONT-FD.	84.41	338.4	12 28	1				
MONACO	85.10	334.8	12 30A	-1				
SETIF	92.62	333.2	13 6	0				
HUANCAYO	127.87	64.9	19 2	3				
BYRD STATION	134.80	165.8	18 58	-14				22 37 PP
LA PAZ	135.74	61.5	19 19	5				
SOUTH POLE	135.89	180.0	19 0	-14				

SEPTEMBER 9 22.H 23.M 36.S EPICENTRE 53.97 171.14 DEPTH= 0.KM

A=-0.58374 B= 0.09096 C= 0.80683 D= 0.1540 E= 0.9881
G=-0.7972 H= 0.1242 K=-0.5908 HT= -6.9

SE= 1.71

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KLYUCHI	6.40	295.8	1 38	1	3 2	10		2 48
PETROPAVLOVK	7.49	268.6	1 49	-4	3 19	0		
MAGADAN	12.45	304.8	3 8	7				
KURILSK	17.37	249.3	4 6	1	7 27	9		
UGLEGORSK	18.67	266.7	4 23	2	8 0	13		
Y.-SAKHLINSK	19.32	260.3	4 29	0	8 12	10		
COLLEGE	23.09	45.6	5 8	0	9 18	2		
TIKSI	25.34	330.1	5 28	-2	9 53	-1		6 15 PP
VLADIVOSTOK	27.81	263.2	5 53	1				
MATUSIRO	28.63	246.0	6 0A	0	10 31	-17		9 10 PCP
IRKUTSK	38.80	295.6	7 28	0				
ALBERNI	38.82	69.9	7 29A	1				
HORSESHOE B.	39.62	68.9	7 35A	1				
ULAN-BATOR	39.67	288.4	7 35	0				
VICTORIA	40.01	70.2	7 37A	-1				
CORVALLIS	42.35	75.0	7 58A	1				
BANFF	42.81	62.6	8 1	0				
HUNGRY HORSE	45.23	65.1	8 19	-1				
SHASTA	45.30	78.7	8 22A	1				
UKIAH	45.84	81.0	8 25	0				
MINERAL	45.98	78.6	8 26A	0				
BERKELEY	47.24	81.6	8 36A	0				
BUTTE	47.45	66.8	8 38	0				
LICK	47.96	81.7	8 42A	0				10 9 PCP
BOZEMAN	48.49	66.2	8 45	-1				
FRESNO	49.42	80.9	8 53A	0				
EUREKA	49.80	75.6	8 58	2				
SALT LAKE C.	51.26	71.6	9 7	0				
PASADENA	52.20	82.1	9 14	0	16 49	10		11 25 PP
BOULDER CITY	52.86	78.0	9 19	0				
APATITY	54.75	341.6	9 32	-1				
SVERDLOVSK	55.93	321.6	9 40	-2	17 26	-3		
SODANKYLA	56.10	344.3	9 43	0				
KIRUNA	56.57	347.1	9 45A	-1	17 36	-1		
TUCSON	57.84	78.3	9 55	0				
FRUNSE	60.17	302.7	10 10	-1	18 23	-1		
SKALSTUGAN	61.64	349.4	10 21	0				
LUBBOCK	61.97	70.8	10 24	0				
HELSINKI	63.04	341.8	10 30	-1				
SHILLONG	63.54	277.6	10 30A	-4				
TASHKENT	63.95	304.9	10 35	-2				20 12 SCS
MOSCOW	64.20	332.9	10 38	0				
UPPSALA	64.56	345.6	10 39A	-2				
OTTAWA	65.86	45.2	10 47K	-2				
CHITTAGONG	66.02	275.3	10 33	-17				
SHAWINIGAN	65.14	42.7	10 50	-1				
PORT MORESBY	66.32	206.0	10 53	1	19 39	-2		
STALINABAD	66.33	303.3	10 53	1				
BREBEUF	66.65	43.9	10 52K	-2				
GOTEBORG	67.41	348.1	11 2	3				
WARSAK DAM	68.45	298.3	11 7	2				
DURHAM	71.46	355.6			20 42	0		
ASHKABAD	71.75	309.9	11 26	0				
COLUMBIA	72.61	56.0	11 30	-1				
LWOW	72.93	338.4	11 34	1	20 59	0		
RATHFARNHAM	73.08	358.4	11 33A	0				
HALLE	73.47	346.6	11 34	-2				12 12
KRAKOW	73.56	341.1	11 37	1				12 20
QUETTA	73.85	299.1	11 38A	0	21 4	-5		14 22 PP
RACIBORZ	73.85	342.2	11 37	-1				
JENA	74.07	346.7	11 39	0				
PRUHONICE	74.57	344.6	11 42	0				14 32 PP
KEW	74.69	354.5			21 17	-2		26 23 SS
SIMFEROPOL	74.86	329.9	11 44	0	21 20	-1		
UCCLE	75.01	351.4	11 54	9				26 25 SS
DOURBES	75.69	351.1	11 46	-2	21 49	19		
BRATISLAVA	75.89	342.4	11 51	1				

STUTTGART	76.50	347.8	11 52	-1						
CHARTERS TS.	76.73	204.0	11 54A	0						
STRASBOURG	76.86	348.7	11 56	1						
PARIS	77.15	352.3	11 57	0						
BUCHAREST	77.55	335.1			21 40	-10				
BELGRADE	78.45	339.2	12 14K	10						
TRIESTE	78.90	344.1	12 5	-1	22 2	-3			15 16	PP
ROME	82.76	344.1			22 48	3				
KSARA	84.40	323.9	12 37	2						
MESSINA	85.81	340.9			22 45	-30				
RIVERVIEW	89.14	196.5	13 33	35						
KARAPIRO	91.60	176.5	13 9	-1						
SAN JUAN	92.90	53.1	13 16	0						
TAMANRASSET	102.57	346.4							16 45	
SCOTT BASE	131.59	181.2			26 21	-2			31 17	SKSP
BYRD STATION	139.30	165.5	19 22	-7						
SOUTH POLE	143.79	180.0	19 33	-4						
KIMBERLEY	144.88	302.3	19 39	0						

SEPTEMBER 11 18.H 1.M 55.S EPICENTRE 7.49 126.79 DEPTH= 82.KM

DEPTH OF FOCUS= 0.008R

A=-0.59379 B= 0.79415 C= 0.12943 D= 0.8009 E= 0.5988
G=-0.0775 H= 0.1037 K=-0.9916 HT= 6.8

SE= 2.24

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KOROR	7.63	90.7	1 41	-10	3 6	-10		
MANILA	9.06	321.6	2 9	-1	3 58	6		
BAGUIO CITY	10.75	326.2	2 37	4	4 39	7		
GUAM	18.63	69.9	4 7	-7				
HONG KONG	19.10	321.8	4 19	0	7 51	6		
LEMBANG	23.83	233.8	5 6	0	9 20	7		
ZO-SE	24.07	348.1	5 9A	0	9 31	14		5 48 PP
DJAKARTA	24.10	236.2	5 12	3	9 20	2		
NANKING	25.55	344.1	5 23A	0	9 59	17		6 10 PP
PORT MORESBY	26.32	129.3	5 30A	0	9 56	1	5 43	6 15 PP
MEDAN	28.24	263.6	5 47A	-1				
ABUYAMA	28.43	15.3	5 50A	1	10 56	27		
KUNMING	28.90	310.0	5 54A	1	10 43	7		6 47 PP
MATUSIRO	30.75	18.2	6 8A	-2	10 59	-7		7 10 PP
CHARTERS TS.	33.37	145.3	6 33	0	11 49	2		
PEKING	33.77	345.3	6 35	-1	11 57	4		
PORT BLAIR	33.83	279.7			12 19	25		8 15 PPP
LANCHOW	35.36	326.9	6 50	0	12 25	8		8 7 PP
VLADIVOSTOK	35.77	6.4	6 54	1				8 23 PP
CHANGCHUN	36.22	358.2	6 57A	0	12 40	10		8 28 PP
CHITTAGONG	36.76	297.6	8 9	68				
SHILLONG	37.82	302.5	7 10A	0	12 53	-2		8 44 PP
LHASA	40.15	307.9	7 31A	1	13 58	28		8 10 PP
PERTH	40.59	194.4	7 33	0	13 41	5		16 43
Y.-SAKHLINSK	41.62	16.4	7 42	0				
CHATRA	42.21	302.0	7 47	0	14 28	28		
BOKARO	42.48	297.2	7 50	1				
BRISBANE	43.05	144.9	7 53A	0	14 7	-6		
UGLEGORSK	43.41	14.6	7 59	3				
ADELAIDE	43.67	165.8	7 58	0				
ULAN-BATOR	43.70	340.7	7 53	-6				
RIVERVIEW	47.14	152.1	8 27A	1	15 26	15		
MELBOURNE	48.17	160.6	8 35A	1				
IRKUTSK	48.30	341.7	8 35	0	15 32	4		
AGRA	50.12	299.1	8 49A	0	16 38	45		10 44 PP
DEHRA DUN	50.91	303.1	8 55	0	16 7	3		11 1 PP
PETROPAVLOVK	52.36	23.7	9 6	0	16 31	7		
BOMBAY	53.56	287.9			16 41	1		20 56
YAKUTSK	54.47	1.7	9 20	-1	16 24	-28		
MAGADAN	55.06	14.6	9 25	-1				
SUVA	56.97	117.2	9 42	2	17 33	8		21 42 SS
WARSAK DAM	57.20	305.7	9 40	-1				
NAMANGAN	59.07	313.6	9 54	0				
QUETTA	60.25	300.4	10 1	-1	18 12	4		
KARAPIRO	64.03	138.6	10 27	0				
TIKSI	64.09	0.7	10 16	-12				

HONOLULU	73.48	70.1	11	28	2	21	2	15	25	39	SS
KIPAPA	73.56	69.9	11	30	4						
WILKES	74.46	186.8	11	32	1	21	2	4			
DUMONT	74.59	174.6	11	30	-2						
OASIS-BUNG.	75.90	190.6	11	39	0				13	32	
MAKHACH-KALA	77.10	312.3	11	46	0						
MIRNY	77.81	193.2	11	49	-1	21	34	-1			
GORIS	77.92	308.7	11	50	-1						
TIFLIS	79.09	311.0	11	57	0						
COLLEGE	81.31	25.5	12	9	0	22	16	5	27	41	SS
SOTCHI	82.77	313.0	12	16	-1	22	24	-2			
MOSCOW	83.40	325.3	12	18	-2	22	32	-1			
APATITY	84.42	337.3	12	25A	0	22	47	4			
CAPE HALLETT	84.45	167.8	12	25K	0	22	48	5	12	43	PCP
KSARA	86.64	303.5	12	37A	1	23	13	9	16	5	PP
SIMFEROPOL	86.65	314.7	12	35	-1	23	6	2			
SODANKYLA	87.04	337.6	12	37	-1						
ISFJORD	87.40	349.0	13	41	62						
SCOTT BASE	88.02	172.2	12	43	1						
KIRUNA	89.21	338.6	12	47	-1	23	44	16	13	14	
HELSINKI	89.39	330.7	12	48	-1						
KISHINEV	89.97	317.3	13	0	8						
HELWAN	91.02	300.1	12	57	0	24	11	26			
LWOW	92.48	320.8	13	3	0	23	59	2			
UPPSALA	93.01	331.5	13	7	1						
SKALSTUGAN	93.91	335.9	13	11	1						
GOTEBORG	96.56	330.6	13	32	10						
SOUTH POLE	97.44	180.0	13	24	-2						
LWIRO	98.20	268.8	13	25	-4				25	54	PS
PRUHONICE	98.25	322.9	13	30	1	24	47	1			
JENA	99.61	324.5	13	39	3						
SHASTA	100.60	46.3	13	41	1						
MESSINA	101.73	311.4	13	41	-4	25	19	3	17	52	PP
DE BILT	102.63	327.4				27	23	120	18	5	PP
STRASBOURG	102.86	323.4				24	29	-56	20	5	PPP
HUNGRY HORSE	103.07	36.7	13	54	3						
DOURBES	103.95	325.8				25	47	13	23	50	
DURHAM	104.55	332.0	13	50K	-8	25	20	-19	17	55	PP
BUTTE	105.03	38.4	14	4	777						
EUREKA	105.63	45.6	14	5	777						
SETIF	109.97	312.7	18	37	777						
ALGIERS UNI.	111.41	314.2							19	13	PP
TAMANRASSET	115.16	299.4	18	35	3				19	52	PP
OTTAWA	123.61	18.9	18	50	2						
SAN JUAN	151.32	26.2	19	47	9						
CHINCHINA	154.45	61.7	19	46	4				20	11	PKP2
FUQUENE	155.82	58.4	19	49	5				23	50	
HUANCAYO	157.74	103.5	19	55	8				20	38	PKP2

SEPTEMBER 14 14.H 21.M 38.S EPICENTRE 56.74 120.94 DEPTH= 0.KM

A=-0.28327 B= 0.47262 C= 0.83450 D= 0.8577 E= 0.5141
G=-0.4290 H= 0.7158 K=-0.5510 HT= -7.8

SE= 2.27

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
YAKUTSK	6.93	36.6	1	43	-2	2	58	-8					
KABANSK	9.56	246.6	2	20K	-2						4	19	
IRKUTSK	10.64	252.1	2	36K	-1						3	10	
KYAKHTA	10.71	239.5	2	37K	-1	4	40	1			2	57	
ULAN-BATOR	12.30	230.0	2	58	-1	5	23	5					
CHANGCHUN	13.22	166.0	3	6	-5								
UGLEGORSK	14.83	112.2	3	34	1	6	23	4			6	40	SS
TIKSI	15.32	9.5	3	38	-1								
VLADIVOSTOK	15.32	148.2	3	38A	-1						3	42	PP
MAGADAN	15.94	67.4	3	46	-1	6	47	2			6	58	SS
Y.-SAKHLINSK	16.58	117.0	3	55	0	6	52	-8			8	8	
PEKING	17.01	192.6	3	58	-3	7	10	0			8	40	PCP
WAKKANAI	17.19	122.4									5	4	
PAOTOW	17.67	208.4	4	11	2								
SUTTSU	18.61	130.4	4	22	1	7	50	4					
SAPPORO	18.87	127.8	4	23	-1	7	57	5			8	45	
MORI	19.33	130.9	4	34	5	7	47	-15			6	3	
TOMAKOMAI	19.42	128.4	4	36	6	8	8	4					
ABASHIRI	19.46	120.9	4	32	1	8	13	8					

HAKODATE	19.66	131.2	4	30	-3			8	23	
OBIHIRO	19.81	124.8	4	33	-2	8	16	3	5	33
URAKAWA	20.24	126.9	4	38	-1	8	21	-1	11	17
KUSIRO	20.32	122.7	4	40	0	8	24	1	11	19
KURILSK	20.35	113.0	4	39	-1				8	30
AOMORI	20.49	132.6	4	51	9				10	52
NEMURO	20.60	120.2	4	44	1	8	26	-3		
HATINOHE	21.04	131.7	4	44	-4	8	35	-3		
AKITA	21.16	135.5	4	47	-2	8	41	1		
MORIOKA	21.60	133.5	4	46	-7	8	46	-2		
KLYUCHI	21.76	74.3	4	56	1				9	2 PCP
SAKATA	21.77	137.1	4	57	2	9	11	19		
PETROPAVLOVK	21.78	83.5	4	55	0				8	59 PCP
MIYAKO	21.96	132.2	4	54	-3	8	54	-1		
AIKAWA	21.98	141.1	5	4	7	8	57	1		
MIZUSAWA	22.07	134.4	4	59	1	8	54	-3		
SAIGO	22.18	152.6	5	0	1	9	8	9		
NIIGATA	22.35	139.7	5	0	-1	9	7	5		
YAMAGATA	22.53	136.9	5	5	2	9	16	10		
SENDAI	22.73	135.9	5	4	-1	9	6	-3	5	54
ISINOMAKI	22.75	135.0	5	4	-1	9	8	-2		
TAKADA	22.81	142.1	5	9	4	9	16	5		
KANAZAWA	22.81	145.8	5	9	4					
TOYAMA	22.83	144.5				9	20	9		5 27
MATSUE	22.83	153.7	5	2	-4	9	19	8		
YONAGO	22.92	153.2	5	7	1	9	13	0		
HUKUSIMA	23.02	137.3	5	8	1	9	22	7		
TOTTORI	23.08	151.4	5	8	0	9	25	9		
HAMADA	23.12	156.2	5	7	-1	9	24	8		
HUKUI	23.14	147.0	5	20	11					
NAGANO	23.18	142.7	5	12	3	9	23	6		
TOYOOKA	23.21	150.2	5	7	-2	9	20	2		
ITUHARA	23.25	162.3				9	13	-5		
MATUSIRO	23.30	142.8	5	8A	-2	9	24	5	5 34	8 43 PCP
SHIRAKAWA	23.48	138.5	5	13	1	9	23	0		
MATUMOTO	23.49	143.6	5	19	7					
OIWAKE	23.61	142.4	5	19	6	9	42	17		
LANCHOW	23.67	216.4	5	16K	2	9	32	6		
HIROSIMA	23.71	155.8	5	14A	0	9	32	5		
MAEBASI	23.72	141.4	5	15	1	9	30	3		6 22
IBUKISAN	23.79	147.4	5	18	3					
SIMONOSEKI	23.80	159.1	5	16	1	9	37	9		
HIKONE	23.86	147.7	5	16	0	9	31	2		
UTUNOMIYA	23.87	139.8	5	15	-1	9	27	-2	6	1
ONAHAMA	23.88	137.5	5	16	0	9	33	3	6	15
GIHU	23.89	146.6	5	30	14	9	51	21		
SIAN	23.95	205.1	5	17	1	9	34	3		
ABUYAMA	24.03	149.3	5	13K	-4	9	28	-4		
KUMAGAYA	24.05	141.1	5	16	-1	9	38	5		
HUKUOKA	24.06	160.3	5	18	0	9	32	-1	11	56
TITIBU	24.10	141.8	5	19	1					
KOBE	24.10	150.2	5	12	-6	9	32	-2		
TAKAMATU	24.15	152.7	5	16	-2	9	27	-7		
NAGOYA	24.16	146.4	5	27	8				9	30
OSAKA	24.23	149.6	5	23	4	9	53	17	6	21 PP
KOHU	24.25	143.1	5	24	5	9	44	8		
KAKIOKA	24.26	139.6	5	7	-13				10	18
MATUYAMA	24.30	155.5	5	16	-4	9	29	-8	10	34
KAMEYAMA	24.31	147.7	5	24	4				9	23
SUMOTO	24.33	151.1	5	18	-2	9	37	0	6	30
SAGA	24.36	160.7	5	23	3					
HUNATU	24.44	142.8	5	24	3					
TOKUSIMA	24.52	151.9	5	23	1					
TOKYO C.M.O.	24.61	140.9	5	24	1	9	42	0		
OOITA	24.64	158.1	5	22	-1	9	49	6		
SEMIPALATNSK	24.68	272.5	5	24	0	9	46	3		
TOMIE	24.72	164.0	5	24	0	9	50	6	11	56
NANKING	24.73	184.3	5	23K	-1	9	43	-1		
KOTI	24.75	154.2	5	21	-3	9	40	-5	12	2
YOKOHAMA	24.80	141.3	5	28	3	9	47	2	10	53
SHIZUOKA	24.80	144.0	5	18	-7					
MISIMA	24.84	142.9	5	26	1	9	44	-2		
KUMAMOTO	24.85	160.1	5	27	2					
OMAESAKI	25.08	144.7	5	44	17	9	52	2		
MUROTO	25.20	153.2	5	28	-1					
OSIMA	25.30	142.5	5	43	13	9	57	3		
MERA	25.32	141.5	5	29	-1	9	54	0		
SIMIDU	25.36	155.8	5	28	-2	10	7	12		

SIOMISAKI	25.42	150.1	5	25	-6				10	20	
ZO-SE	25.64	179.5	5	30	-3	9	57	-2	6	6	PP
FUTZELING	25.64	189.2	5	35	2						
MIYAZAKI	25.86	159.2	5	32	-3	10	17	14			
KAGOSIMA	26.04	161.1	5	41	5	10	11	5			
CHENGTU	28.64	211.6	5	58	-2	10	48	0	7	8	PP
KURMENTY	30.16	261.4	6	14	0						
PRZHEVALSK	30.48	260.5	6	18	1						
ALMATA	30.74	263.0	6	21	2				10	38	
FABRICHNAYA	31.10	263.4	6	23	1						
SVERDLOVSK	32.10	296.0	6	31	0	11	44	1	7	30	
FRUNSE	32.29	264.7							7	33	
NARYN	32.50	261.3	6	35	1				9	21	PCP
ALISHAN	33.19	180.2	6	40	0						
CANTON	34.09	192.6	6	46	-2	12	10	-4	9	26	PCP
LHASA	34.26	230.4	6	50K	0	12	22	5			
KUNMING	34.31	210.3	6	48K	-2	12	14	-3			
HONG KONG	34.76	191.0	6	51	-3	12	17	-7	8	13	PP
ANDIJAN	34.95	263.9	6	56	0				8	20	PP
NAMANGAN	35.18	264.8	6	58	1						
TCHIMKENT	35.42	268.3	7	0	0	12	36	1			
FERGANA	35.53	263.9	7	2	1	12	38	2	8	21	
TASHKENT	36.26	267.3	7	8	1				13	15	PCS
PHU-LIEN	37.43	202.4	7	13	-3	12	42	-23			
SHILLONG	37.52	226.1	7	18K	1	13	10	3	8	33	PP
KHOROG	37.70	260.7	7	19	0				13	16	SCP
CHATRA	38.38	233.1	7	25	1				14	23	
KULYAB	38.39	262.9	7	25	0				13	29	PCS
STALINABAD	38.47	264.5	7	26	1				13	22	PCS
APATITY	38.77	322.2	7	27	-1				8	56	PP
DEHRA DUN	39.80	246.8	7	38	2	13	35	-6	9	16	PP
NORD	40.04	351.1	7	38	0	12	47	-58	9	15	PP
BAGUIO CITY	40.25	180.5	7	39	-1	13	46	-2			
WARSAK DAM	40.32	257.1	7	40	-1						
CHITTAGONG	40.43	224.0	7	40K	-1	13	47	-4	9	16	PP
COLLEGE	41.45	40.2	7	50	0	14	8	2	9	28	PCP
BOKARO	41.59	232.6	7	53K	2	14	21	13			
AGRA	42.43	244.1	8	0K	2	14	14	-6	9	33	PP
KIRUNA	42.78	326.7	8	1	0	14	28	2	9	36	PP
MOSCOW	43.57	305.4	8	7	0	14	36	-1	10	17	PCP
PULKOVO	44.21	313.5	8	12	0	14	45	-1	17	58	SS
ASHKABAD	44.64	272.7	8	17K	1	15	0	8	10	3	PP
KIZYL-ARVAT	45.01	275.5	8	22	3				18	4	SCS
QUETTA	45.74	258.0	8	24K	-1	15	12	4	10	13	PP
HELSINKI	46.05	316.3	8	26	-1						
RESOLUTE	46.71	12.3	8	32A	0	15	22	0	10	26	PP
GUAM	46.88	147.4	8	29	-5						
MAKHACH-KALA	47.00	285.8	8	35	0	15	30	4	10	28	PP
SKALSTUGAN	48.13	325.3	8	43K	0				10	34	PP
UPPSALA	48.98	319.4	8	48	-2	15	55	1	10	48	PP
KARACHI	49.14	254.3	8	56K	5						
KIROVOBAD	49.17	284.5	8	52	1	15	55	-2	10	44	PP
TIFLIS	49.30	286.5	8	53	1	16	0	1	10	52	PP
PORT BLAIR	49.96	217.2	8	57	-1	16	22	14	9	59	PCP
GORIS	50.07	283.4	8	59	1	16	15	6	10	59	PP
SCORESBY SD.	50.34	344.7	8	59	-1						
KOROR	50.42	162.5	9	7	6				10	18	PCP
HYDERABAD	50.48	236.7	9	1K	-1	16	4	-11	10	49	PP
SOTCHI	50.63	291.7	9	2K	-1	16	21	4	11	4	PP
SITKA	51.15	43.0	9	9	2						
SIMFEROPOL	52.46	296.6	9	16K	-1				12	25	PPP
GOTEBORG	52.56	320.2	9	20	3						
BERGEN	52.70	325.8	9	19	1	16	23	-23			
YALTA	52.79	296.2	9	18K	-1						
WARSAW	53.16	310.8	9	22A	0				16	58	PPS
MADRAS	53.61	232.2	9	27	2	17	7	9	10	15	PCP
LWOW	53.64	307.0	9	25	0	17	0	2	11	30	PP
COPENHAGEN	53.93	318.3	9	28	1	17	5	3	19	17	SCS
IASI	53.96	302.7	9	27	-1	17	27	24	11	46	PP
BACAU	54.74	302.6	9	39	6						
TRUK	54.79	141.4	9	32	-2						
KRAKOW	55.24	309.6	9	36	-1	17	23	3	11	40	PP
SKALNATE PL.	55.76	308.7	9	54	13	17	32	5	12	44	
RACIBORZ	55.95	310.7	9	43	1				16	4	
POTSDAM	56.24	315.4	9	43	-1	17	39	6	11	41	PP
CAMPULUNG	56.58	302.7	9	50	3						
BUCHAREST	56.72	301.3	9	47	-1	17	47	7	11	58	PP
COLLMBERG	57.11	314.7	9	49	-1	18	15	30	23	32	

HALLE	57.36	315.4	9	51	-1	17	48	0	19	27	SCS
PRAGUE	57.50	312.9	9	54A	1	17	56	6	12	7	PP
PRUHONICE	57.53	312.8	9	52	-1	17	54	4	12	3	PP
BUDAPEST	57.57	308.1	10	0	6				10	41	PCP
ABERDEEN	57.58	327.2				17	54	3	21	40	SS
HURBANOVO	57.64	309.0	9	57	3	17	51	-1	12	9	PP
BRATISLAVA	57.88	309.9	9	56	0	17	59	4	12	11	PP
TIMISOARA	57.95	305.5	9	59	3	18	4	8	11	38	PP
JENA	57.96	315.2	9	55	-1	17	57	1	12	5	PP
SZEGED	58.05	306.6							10	34	PCP
PLAUEN	58.07	314.6	9	55	-2	17	58	1	10	27	
VIENNA-H.	58.12	310.4	9	55	-3	17	58	0	12	12	PP
CHEB	58.31	314.1	9	58	-1	18	2	1	10	51	*SP
KALOCSA	58.34	307.5	10	6	7						
SONNEBERG	58.54	315.1	10	0	0	18	6	2	12	10	PP
MUNSTER	58.62	318.3	10	0	-1				32	30	
BELGRADE	59.01	305.3	10	3K	-1	18	14	4	12	18	PP
SOFIA	59.33	301.8	10	4	-2	18	17	3	26	32	
DE BILT	59.40	319.8	10	10	4	18	18	3	22	2	SS
DURHAM	59.44	325.4	10	4A	-3	18	17	2	12	22	PP
BENSBERG	59.60	317.9	10	6	-2	18	21	4			
KSARA	59.88	286.5	10	9K	-1	18	21	0	12	25	PP
ZAGREB	60.20	308.9	10	13	1				13	43	PPP
STUTTGART	60.61	315.1	10	13	-2	18	32	2	12	28	PP
UCCLE	60.76	319.4	10	14	-2	17	33	-59			
SKOPJE	60.79	302.6	10	16A	0	18	18	-15	13	29	
TUBINGEN	60.86	315.1	10	15	-1	18	34	1			
ALBERNI	61.16	43.0	10	19	1						
EBINGEN	61.18	314.9	10	17	-2						
RAVENSBURG	61.25	314.2	10	18	-1						
DOURBES	61.25	318.8	9	45	-34	18	7	-31			
TRIESTE	61.28	310.2	10	17K	-2	18	42	3	12	36	PP
STRASBOURG	61.32	315.9	10	18K	-2	18	44	5	12	38	PP
HORSESHOE B.	61.64	42.0	10	21K	-1	18	47	4			
JERUSALEM	61.81	285.5	10	23K	0	19	21	35			
KEW	61.82	322.7	10	22K	-1	18	47	1	12	36	PP
CHUR	62.04	313.7	10	24K	0	18	54	6			
RATHFARNHAM	62.13	327.3	10	14K	-11	18	46	-4	12	36	PP
BASLE	62.25	315.3	10	23	-3						
VICTORIA	62.30	42.6	10	26	0	18	55	3			
ATHENS	62.83	298.2	10	28K	-2						
NEUCHATEL	62.93	315.4	10	29	-1	19	3	3			
PARIS	63.09	319.3	10	31K	0	19	3	1	12	48	PP
BOLOGNA	63.22	311.0	10	53	21	19	19	16			
SEATTLE	63.44	42.4	10	36A	2	18	58	-8			
PAVIA	63.55	312.8	10	36	2	19	12	5	13	4	PP
OROPA	63.67	313.9	10	32	-3	19	5	-4			
DJAKARTA	63.76	195.7	10	31	-5						
TARANTO	63.89	304.4	10	34	-3	18	44	-28			
LEMBANG	64.29	194.7	10	36	-3						
ROME	64.85	308.5	10	43	0	19	28	4	13	7	PP
HELWAN	65.37	287.2	10	45K	-1	19	32	2			
CLERMONT-FD.	65.42	317.1	10	46	-1	19	34	3	19	59	PS
MONACO	65.45	313.0	10	46	-1						
HUNGRY HORSE	65.75	36.8	10	49	0	19	38	3	13	18	PP
MESSINA	66.50	304.1	10	51	-2	19	41	-3	13	22	PP
KIPAPA	67.49	85.1	10	58	-2						
HONOLULU	67.54	85.2	11	12	12	20	3	7			
BUTTE	68.27	37.1	11	5	0				11	30	
BOZEMAN	69.08	36.3	11	10	0				11	57	
SHASTA	69.27	46.6	11	10	-1						
PORT MORESBY	69.37	152.2	11	10	-1	20	18	0	13	54	PP
MINERAL	69.88	46.2	11	14K	-1						
UKIAH	70.26	48.0	11	17	0				11	42	
TORTOSA	70.64	316.1	11	20	1	20	35	2			
RENO	71.28	45.4	11	23K	0						
BERKELEY	71.73	48.1	11	26K	0	20	48	2	14	10	PP
LICK	72.44	47.9	11	30K	0						
SETIF	72.63	310.1	11	31A	0	21	1	5	14	19	PP
EUREKA	72.81	42.7	11	33	1				38	50	PKPPKP
RAPID CITY	72.93	31.7	11	31	-2						
ALGIERS UNI.	73.12	312.1	11	33	-1	21	0	-1	14	16	PP
TOLEDO	73.15	318.8	11	34K	0	20	47	-15	14	8	PP
ALICANTE	73.15	315.5	11	33	-1	20	59	-3	14	17	PP
SALT LAKE C.	73.16	39.2	11	35	1				12	54	
SERRA PILAR	73.63	322.6	11	37K	0				14	24	PP
FRESNO	73.67	46.9	11	37	0						
LARAMIE	74.74	34.5	11	47	4	21	44	24			
RELIZANE	75.01	313.4	11	43	-2				14	25	PP

ALMERIA	75.23	316.2	11	47	1	21	26	1	14	21 PP
GRANADA	75.37	317.2	11	50A	3	21	29	2	14	33 PP
LISBON	75.98	321.9	11	50K	0				14	45 PP
SEVEN FALLS	76.04	8.3	11	50K	-1	21	35	1	14	59 PP
MALAGA	76.07	317.5	11	54K	3	22	6	32	14	44 PP
BOULDER CITY	76.31	43.6	11	53	1					
SHAWINIGAN	76.44	9.7	11	54	1				39	7 PKPPKP
PASADENA	76.60	47.0	11	54	0	21	43	3	14	47 PP
OTTAWA	77.27	11.9	11	57	-1	21	47	0	15	1 PP
BREBEUF	77.40	10.4	11	58K	0				16	58 PPP
HALIFAX	78.94	3.3	12	6A	-1	22	9	4		
CHARTERS TS.	79.37	155.8	12	7K	-2				15	9
CLEVELAND	80.33	16.9	12	14	0	21	55	-25		
WESTON	80.71	9.2	12	17K	1	22	28	4		
TUCSON TELE.	81.09	42.2	12	18	0				15	30 PP
TUCSON	81.13	42.3	12	19	0	22	25	-3	15	26 PP
FLORISSANT	81.21	24.3	12	18K	-1	22	28	-1	24	23
ST. LOUIS 1	81.39	24.2	12	20K	0	22	28	-3	15	27 PP
FORDHAM	81.97	11.3	12	25	2	22	35	-2		
FAYETTEVILLE	82.86	28.0	12	26K	-2	23	24	38		
LUBBOCK	83.00	34.8	12	29	1	22	51	4		
WASHINGTON	83.51	14.1	12	33	2					
TAMANRASSET	84.09	303.1	12	34K	0	22	51	-7	15	46 PP
COLUMBIA	87.71	18.1	12	52	0					
BRISBANE	88.18	151.8	12	53A	-1	23	37	-1		
SUVA	88.67	126.7	12	59K	3	23	52	10	16	24 PP
AFIAMALU	89.58	116.4	12	59A	-2					
BERMUDA	91.10	4.8	13	8	0	24	2	-2	16	42 PP
ADELAIDE	92.55	165.5	13	15	1					
ASTRIDA	92.82	269.6	13	15	-1				17	10
LWIRO	93.04	270.6	13	17K	0	23	56	-25		
RIVERVIEW	93.79	155.2	13	17A	-3				15	58
UVIRA	93.89	269.6	13	21	1					
TANANARIVE	96.88	246.0	13	34	0					
MBOUR	100.97	318.6							18	3 PP
FUQUENE	116.85	16.4							19	53 PP
BOGOTA	117.63	16.9				25	44	2	20	2 PP
OASIS-BUNG.	123.53	189.7	18	58	-1				20	41
MIRNY	124.75	193.2	18	59	-3				20	50
CAPE HALLETT	133.21	161.4	19	13	-5				22	46 PKS
HUANCAYO	133.67	22.3	19	22	3				22	57 PP
SCOTT BASE	137.24	167.1	19	16	-9					
LA PAZ	139.25	13.4	19	30	1					
SOUTH POLE	146.56	180.0	19	39	-3					
BYRD STATION	150.35	162.1	19	46K	-2				23	31 PP

SEPTEMBER 14 19.H 42.M 17.S EPICENTRE 31.58 131.42 DEPTH= 0.KM

A=-0.56469 B= 0.63997 C= 0.52111 D= 0.7498 E= 0.6616
G=-0.3448 H= 0.3907 K=-0.8535 HT= 1.3

SE= 5.27

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
MIYAZAKI	0.34	359.4	0	7K	-3	0	14	-4				
KAGOSIMA	0.75	269.5	0	18A	2	0	35	8				
ASOSAN	1.35	347.2	0	21	-3	0	38	-4				
YAKUSIMA	1.38	215.4	0	27	2	0	54	11				
KUMAMOTO	1.38	333.8	0	21A	-4	0	44	1				
UNZENDAKE	1.52	319.3	0	26A	-1	0	51	5				
NAGASAKI	1.74	311.6	0	28	-2	0	54	2				
SIMIDU	1.78	47.2	0	22	-8	0	36	-17				
UWAZIMA	1.90	29.7	0	25	-7	0	42	-14				
SAGA	1.92	330.6	0	30A	-2	1	0	3				
HUKUOKA	2.17	337.2	0	34A	-2	1	1	-2				
SIMONOSEKI	2.40	350.1	0	35	-4	1	8	-1				
TOMIE	2.48	295.4	0	40	0	1	24	13				
MATUYAMA	2.51	26.1	0	29	-12	0	58	-14				
KOTI	2.65	41.6	0	45	2						1	16
MUROTO	2.86	53.7				1	1	-20			0	49
HIROSIMA	2.91	16.6	0	39	-8	1	9	-13				
ITUHARA	3.18	326.0	0	46	-4							
HAMADA	3.36	9.1	0	53	0	1	29	-4				
TAKAMATU	3.51	38.2	0	58	3	1	42	5				
TOKUSIMA	3.64	46.1	0	53	-4						1	55

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OKAYAMA	3.73	33.4	0	55	-3					
HIMEJI	3.84	39.8				2	0	14	1	24
SUMOTO	4.01	45.5	0	54	-8	1	44	-6	2	6
MATSUE	4.10	19.2	1	8	5	1	53	1		
WAKAYAMA	4.11	49.0							1	29
SIOMISAKI	4.12	61.9	1	31	27	2	12	19		
YONAGO	4.16	22.2	1	4	0	1	55	1		
KOBE	4.41	44.5	1	20	12	2	5	5		
TOTTORI	4.56	30.2	1	22	12	2	4	0		
OSAKA	4.61	47.3	1	33	22	2	28	23	15	3 SCS
OWASE	4.73	57.0	1	3	-9	1	43	-25	2	46
ABUYAMA	4.78	45.5	1	34K	21	2	30	21		
TOYOOKA	4.85	34.8				2	19	8	1	28
SAIGO	4.87	18.5	1	21	7	2	21	9		
KYOTO	4.98	45.3	1	8	-8	2	22	8		
MAIZURU	5.14	40.0	1	26	8	2	32	14		
TU	5.30	52.3							1	30
KAMEYAMA	5.34	51.0	1	19	-2	2	13	-10		
HIKONE	5.46	46.3	1	15	-8	2	50	24		
IBUKISAN	5.61	46.2	1	17	-8	2	55	25		
NAGOYA	5.86	50.8	1	22	-6	2	23	-13		
GIHU	5.87	48.1	1	22	-6	2	19	-17	14	57 SCS
HUKUI	6.01	40.8							1	28
OMAESAKI	6.45	60.3	2	7	30					
TAKAYAMA	6.65	45.2	1	45	6					
TOYAMA	7.00	41.6	1	56	12				3	36
MATUMOTO	7.16	47.7	1	41	-6					
KOHU	7.20	54.0	1	45	-2					
MISIMA	7.22	58.7	1	38	-9					
HUNATU	7.27	55.5							2	32 PG
WAZIMA	7.34	36.5	1	43	-6					
MATUSIRO	7.51	46.8	1	42	-9				2	29
NAGANO	7.57	46.1	2	6	14				4	1 SG
MAEBASI	7.96	50.8	2	18	20				4	20 SG
KUMAGAYA	8.03	53.3	2	42	43					
ZO-SE	8.78	269.5	2	9	0					
NANKING	10.75	275.8	2	37	1					
CHANGCHUN	13.15	340.2	3	5	-4					
GUAM	21.79	142.8	4	47	-6					
KOROR	24.29	172.6	5	13	-4					
ULAN-BATOR	24.78	318.2	5	17	-5					
SHILLONG	35.11	270.3	6	48	-6					
LEMBANG	44.45	214.9	8	9A	-3					
CHARTERS TS.	53.23	162.5	9	15K	-5				9	28
QUETTA	54.61	286.6	9	25	-5					
COLLEGE	58.01	29.8	9	47	-7					
BRISBANE	62.24	158.3	10	17A	-6				11	15 PCP
ADELAIDE	66.51	173.5	10	47	-4					
RESOLUTE	69.78	11.8	11	3	-8					
SKALSTUGAN	73.73	336.0	11	38	3					
UPPSALA	73.98	331.3	11	39	3					
HORSESHOE B.	75.68	40.6	11	51	5					
VICTORIA	76.06	41.4	11	55	7					
GOTEBORG	77.62	331.4	12	1K	4					
KARAPIRO	80.46	146.1	12	18	6					
SHASTA	80.93	47.7	12	8	-7					
HUNGRY HORSE	81.27	37.9	12	11	-6					
PRUHONICE	81.44	324.4	12	24	6					
MINERAL	81.63	47.6	12	26	7					
JENA	82.26	326.4	12	27	5					
PLAUEN	82.27	325.8	12	25	3					
RENO	83.22	47.5	12	35	8					
BUTTE	83.51	39.1	12	35	7					
BOZEMAN	84.55	38.7	12	28	-6					
FRESNO	84.84	49.8	12	44	9					
STUTTGART	84.86	325.8	12	41	6					
TUBINGEN	85.08	325.7	12	42	6					
EBINGEN	85.37	325.5	12	43	5					
EUREKA	85.64	45.6	12	33	-6					
STRASBOURG	85.67	326.3	12	47	8					
DOURBES	86.03	328.9	12	13	-28					
RATHFARNHAM	87.83	336.2	11	45	-65					
RAPID CITY	89.71	36.0	13	5	6					
LARAMIE	90.43	39.2	13	9	7					
TUCSON	93.44	48.7	13	23	7					
TUCSON TELE.	93.45	48.6	13	23	7					
SOUTH POLE	121.41	180.0	18	48	-5					
BYRD STATION	124.18	168.5	18	53	-5					
HALLEY BAY	134.71	187.6	19	26	8				22	54 PKS

HUANCAYO 148.61 57.7 19 43 1 19 56 PKP2

SEPTEMBER 14 21.H 31.M 54.S EPICENTRE -7.14 67.91 DEPTH= 0.KM

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G=-0.0464 H=-0.1143 K=-0.9924 HT= 6.9

SE= 1.96

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
COLOMBO	18.35	40.8	4 16	-2	8 6	26		
KODAIKANAL	19.70	29.0	4 33	-1				
TANANARIVE	23.01	237.4	5 9K	1				9 37 SS
MADRAS	23.42	31.4	5 14A	2	9 37	15		5 51 PP
HYDERABAD	26.54	23.0	5 42A	1	10 21	7		6 39 PP
PORT BLAIR	30.95	53.1	6 0	-21	11 31	6		6 24 PP
BOKARO	35.39	29.1	6 11	-48	12 46	12		
AGRA	35.44	15.6	7 0K	0	12 39	4		8 19 PP
HOWRAH	35.63	33.6	7 6	4	13 22	44		
QUETTA	37.11	358.6	7 16K	2	13 7	6		
CHITTAGONG	37.52	38.0	7 18A	1				
ASTRIDA	38.30	274.8	7 26	2				9 0
DEHRA DUN	38.49	14.2	7 28	2	13 30	8		8 58 PP
CHATRA	38.58	28.2	7 29	3	13 59	36		
DJAKARTA	38.66	91.0	7 27K	0				11 48
UVIRA	38.79	273.3	7 32A	4				
LAHORE	38.95	8.7	7 19	-10	13 15	-14		
LWIRO	39.27	275.2	7 37A	5	13 40	7		
LEMBANG	39.41	92.1	7 34	1	14 6	30		
SHILLONG	39.99	34.8	7 39K	1	13 46	2		16 40 SS
PIETERMZBURG	41.75	232.8	7 53K	1				
LHASA	42.80	30.2	8 3K	2	14 30	4		
KIMBERLEY	45.98	236.6	8 26	-1				
GRAHAMSTOWN	46.27	229.9	8 30	1				
KUNMING	46.57	45.4	8 32	1	15 22	2		
NAMANGAN	48.00	3.8	8 43	0				
KSARA	50.80	325.3	9 5	1	15 32	-48		11 6 PP
HELWAN	50.87	318.1	9 5	0				
CHENGTU	51.07	40.7	9 5	-1	16 23	0		10 23 PP
TIFLIS	53.02	338.4	9 21	0	16 59	9		
MAKHACH-KALA	53.21	341.4	9 21	-1	16 44	-9		
CANTON	53.56	54.5	9 27	2	17 2	5		
HONG KONG	53.92	55.9	9 27	0	17 10	8		
LANCHOW	54.64	35.6	9 32	-1	17 14	2		
SEMIPALATNSK	58.29	9.2	9 58	-1				
SIMFEROPOL	60.08	332.9	10 10	-1				18 29
ATHENS	60.87	320.9	10 16	-1				
NANKING	62.20	48.2	10 25	-1				
OASIS-BUNG.	63.15	165.7	10 30	-2				
BUCHAREST	63.64	327.8	10 35	0				11 8
SOFIA	64.04	324.9	10 38	0				
KISHINEV	64.08	331.3	10 36	-2				
PEKING	64.64	39.3	10 42	0	19 24	3		
ULAN-BATOR	64.69	27.9	10 42	0				
CAMPULUNG	64.78	327.9	10 36	-7				
IASI	64.82	330.8	10 43	0				
MESSINA	66.33	317.1			19 29	-13		13 5 PP
TARANTO	66.41	319.9	10 37	-16	17 37	-126		
IRKUTSK	66.83	23.4	10 55	-1				19 50
BELGRADE	67.00	325.3	10 58A	1				13 12
MOSCOW	67.48	342.0	10 59	-1				
TAMANRASSET	67.86	298.0	11 3K	1	20 8	8		13 30 PP
KOROR	67.93	79.1	11 1	-2				
LWOW	68.34	331.1	10 59	-6				
HURBANOVO	70.07	326.9	11 21	5				
ZAGREB	70.14	324.2	11 10K	-6				13 57 PP
ADELAIDE	70.22	124.4	11 46	29				
ROME	70.23	319.2	11 16	-1				
BRATISLAVA	70.85	326.7	11 21	0				
TRIESTE	71.36	323.1	11 22K	-2				17 51
RACIBORZ	71.39	328.8	11 22	-2				
CHANGCHUN	72.43	39.8	11 30	0				
SETIF	72.67	311.3	11 30	-1				11 57
PULKOVO	73.05	341.2	11 33	-1				
PRUHONICE	73.26	327.2	11 35	0	19 56	-67		14 18 PP

PRAGUE	73.37	327.3	11 36	0			
MONACO	74.37	319.1	11 41	0			
CHUR	74.49	322.7	11 41K	-1			
ALGIERS UNI.	74.64	311.1	11 43	0	21 22	3	14 33 PP
PLAUEN	74.83	326.8	11 45	1			
RAVENSBURG	74.89	323.5	11 45	1			
HELSINKI	75.15	339.4	11 46	0			
SONNEBERG	75.29	326.4	11 47	0			
JENA	75.37	327.0	11 47	0			14 45 PP
EBINGEN	75.47	323.7	11 48	0			
HALLE	75.47	327.6	11 47	-1	21 34	6	14 32 PP
TUBINGEN	75.57	324.0	11 48	0			
STUTTGART	75.61	324.3	11 48	-1	21 24	-5	20 0
BASLE	75.99	322.6	11 50K	-1			12 16
ABUYAMA	76.12	51.6	11 56	5			
NEUCHATEL	76.13	321.9	11 51	0			
RELIZANE	76.18	309.4	11 46	-6			
STRASBOURG	76.36	323.7	11 53K	0	21 38	0	14 37 PP
VLADIVOSTOK	76.43	42.6	11 53	0			
DUMONT	76.43	157.1	11 49	-4			
CHARTERS TS.	76.68	108.8	11 53	-2			
UPPSALA	77.67	336.6	11 59	-1			
BENSBERG	77.81	325.6	12 2	1			
ALICANTE	77.81	311.6	11 47	-14	21 37	-16	14 43 PP
TORTOSA	77.94	314.2	11 57	-5			
CLERMONT-FD.	78.01	319.7	12 3	1			27 36 SS
MUNSTER	78.04	326.7	12 2	0			12 23
PORT MORESBY	78.29	98.1	12 3	0	21 52	-7	12 19 PCP
MATUSIRO	78.69	50.6	12 5K	-1	21 26	-37	
GOTEBORG	78.79	333.0	12 5	-1			15 2 PP
DOURBES	78.89	324.1	12 35	28	21 38	-27	
UCCLE	79.34	324.7	12 7	-2			
DE BILT	79.44	326.1					22 36 PS
PARIS	79.61	322.3	12 12	1	22 16	3	15 14 PP
GRANADA	79.80	309.7	12 13A	1	22 22	8	21 13 SKS
SODANKYLA	79.93	345.0	12 13	1			
MALAGA	80.28	309.0	12 16K	2			12 24 PCP
TOLEDO	80.93	312.2	12 18	0	22 25	-1	
KIRUNA	81.93	343.6	12 23	0			
SKALSTUGAN	81.94	338.1	12 23	0			
KEW	82.30	324.1	12 26	1			15 35 PP
SOUTH POLE	82.91	180.0	12 27	-1			
YAKUTSK	83.55	24.7	12 30	-1			
DURHAM	84.21	326.9	12 36K	1	22 58	-2	15 49 PP
LISBON	84.44	310.0	12 38K	2			
SERRA PILAR	84.61	312.5	12 37K	0			
SCOTT BASE	84.93	167.9	12 39	1			
TRUK	84.95	81.9	12 38	0			
RATHFARNHAM	86.36	324.6	12 46	1			
MBOUR	86.83	284.8	12 50	2	23 48	23	
CAPE HALLETT	87.00	162.6	12 49	1	23 32	5	12 59 PCP
BYRD STATION	92.88	178.7	13 17	1			
RESOLUTE	111.78	355.1					28 56 PS
COLLEGE	117.10	16.3	18 46	-1			19 56 PP
BERMUDA	129.35	306.3					21 26
HUANCAYO	138.78	242.7	19 36	8			
HUNGRY HORSE	138.90	2.0	19 30	1			22 22 PP
BOZEMAN	141.60	358.8	19 35	2			22 40 PP
BOGOTA	142.11	268.4					22 27 PP
RAPID CITY	142.39	349.5	19 35	0			22 35 PP
SHASTA	145.33	13.8	19 40K	0			
LARAMIE	145.48	351.3	19 11	-29			
MINERAL	145.85	13.0	19 42	1			
SALT LAKE C.	146.51	359.7	19 45	3			
UKIAH	146.60	15.8	19 45	3			
FAYETTEVILLE	146.85	332.9	19 45	3			
RENO	147.00	11.0	19 47	4			23 15 PP
EUREKA	147.61	5.6	19 46	2			23 9 PP
BERKELEY	148.04	15.3	19 49K	5			
LICK	148.70	14.8	19 51K	6			23 22 PP
FRESNO	149.67	12.3	19 53	6			
BOULDER CITY	151.18	4.6	19 58	9			
LUBBOCK	152.03	341.6	20 0	10			23 39 PP
PASADENA	152.54	11.0	20 1	10			
TUCSON TELE.	154.89	357.3	19 58	4	27 27	27	23 58 PP
TUCSON	154.98	357.5	19 58	3			24 10 PP

SEPTEMBER 15 5.H 36.M 16.S EPICENTRE 9.21-102.66 DEPTH= 8.KM

A=-0.21641 B=-0.96325 C= 0.15909 D=-0.9757 E= 0.2192
G=-0.0349 H=-0.1552 K=-0.9873 HT= 6.6

SE= 3.07

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
TACUBAYA	10.64	18.1	2 37	1				2 46 PPP
MERIDA	17.15	45.7	4 0	0				
TUCSON	24.14	342.9	5 18	2	10 2	32		
LUBBOCK	24.26	1.7	5 19	2	9 56	24		12 49
GALERAZAMBA	27.02	84.4	5 37	-6	10 26	8		
PASADENA	28.62	332.4	5 56	-1	10 57	13		
BOGOTA	28.74	97.2	5 58	-1	11 1	16		12 25 SS
BOULDER CITY	28.86	339.3	5 59	-1				
FRESNO	31.53	333.1	6 26	3				
EUREKA	32.40	340.6	6 32	1				
SALT LAKE C.	32.47	346.9	6 34	2				
LICK	32.84	331.4	6 35	0				
RENO	33.86	335.8	6 44	0				
RAPID CITY	34.74	359.3	6 53	2				
MINERAL	35.29	334.6	6 56	0				
SHASTA	35.91	334.1	6 58	-3				
MORGANTOWN	36.45	30.1	7 10K	4				
BOZEMAN	37.03	350.2	7 12	1				
BUTTE	37.65	348.7	7 16	0				
HUNGRY HORSE	40.17	348.2	7 38	1				
BERMUDA	41.99	51.1	7 44	-8	14 25	16		8 39 PP
LA PAZ	42.66	126.6	8 4	7				
OTTAWA	42.86	28.0	8 2	3				
BREBEUF	43.93	29.5	8 10A	2				
SHAWINIGAN	45.10	29.0	8 21K	4				
COLLEGE	63.82	340.3	10 29	-4			11 4	
RESOLUTE	65.58	2.3			19 35	7		38 16 PKPPKP
CAPE HALLETT	97.81	198.0						26 25 PKKP
TANANARIVE	149.58	111.7	19 46	2				

SEPTEMBER 15 16.H 48.M 17.S EPICENTRE -33.27-179.22 DEPTH= 51.KM

DEPTH OF FOCUS= 0.003R

A=-0.83770 B=-0.01134 C=-0.54601 D=-0.0135 E= 0.9999
G= 0.5460 H= 0.0074 K=-0.8378 HT= 0.7

SE= 2.12

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ONERAHI	5.85	243.0	1 30	4				
TUAI	6.25	207.0	1 31	-1	2 41	-2		
KARAPIRO	6.31	221.2	1 35A	2				
TONGARIRO	7.28	214.1	1 45	-1				3 35
WELLINGTON	9.31	209.2	2 9	-5	3 52	-7		
COBB RIVER	10.09	217.1			4 10	-8		
KAIMATA	11.82	215.9	2 51	3	4 52	-8		
GEBBIES PASS	12.20	209.0	2 47	-6	4 55	-14		
SUVA	15.20	351.5	3 34	1	6 24	4		4 24 PP
NOUMEA	16.72	307.2	3 54A	2				
AFIAMALU	20.44	21.1	4 18	-17				
BRISBANE	24.58	276.2	5 20K	4				10 16
RIVERVIEW	24.66	260.5	5 37A	20				
CHARTERS TS.	33.40	284.5	6 35	-1	12 17	25		
ADELAIDE	34.68	255.3	6 48	1				9 18 PCP
PORT MORESBY	39.02	299.8	7 23	0	13 26	8	7 43	
CAPE HALLETT	39.48	185.0	7 30A	3	13 36	11		9 40 PCP
DUMONT	41.10	203.3	7 40	0				
SCOTT BASE	45.11	184.2	8 15	2				
TRUK	48.96	320.5	8 40	-3				
BYRD STATION	52.31	169.0	9 9	1				10 25 PCP
SOUTH POLE	56.91	180.0	9 43	1				10 40 PCP
KOROR	59.67	303.8	9 58	-3				
HALLEY BAY	70.05	172.9	11 7	-1				13 46 PP
MATUSIRO	80.03	326.4	12 2	-3				
HONG KONG	84.14	301.3	12 26	-1	23 9	23		

PASADENA	88.21	46.6	12 47	0		
LICK	88.39	42.3	12 47A	0		
BERKELEY	88.41	41.6	12 47A	-1		
FRESNO	89.04	43.7	12 51	0		
SHASTA	90.36	39.5	12 57K	0		
MINERAL	90.53	40.2	12 57	-1		
RENO	90.95	41.7	13 0A	0		
TUCSON	91.64	52.0	13 4	1		
TUCSON TELE.	91.77	52.0	13 5	2		
EUREKA	93.09	43.8	13 9	0		
COLLEGE	100.86	13.1	13 43	-2		
OTTAWA	121.69	53.6	18 48	0		
QUETTA	124.48	286.1	18 53	-1		
SODANKYLA	142.68	343.8	19 23	-4		
KIRUNA	143.57	347.6	19 28	-1		
REYKJAVIK	146.08	17.6	19 35K	2		
SIDA	147.29	15.4	19 39	4	20 3	
HELSINKI	148.75	336.7	19 40	2		
SKALSTUGAN	148.82	350.1	19 40	2		
KSARA	150.82	280.9	19 48	7		
UPPSALA	151.17	342.3	19 45A	4		
GOTEBORG	154.41	346.0	19 51	5	20 12	PKP2
RATHFARNHAM	159.35	12.1	20 30K	38		
HALLE	160.04	339.2	20 21	28	20 51	
PRUHONICE	160.44	332.7	20 34	41	20 54	
JENA	160.66	339.0	19 52	-2	20 50	
STUTTGART	163.28	340.3	19 55	-1	20 58	
PARIS	164.42	355.8			20 52	PKP2
TAMANRASSET	168.74	203.0	20 3A	2	21 12	PKP2
SETIF	175.20	308.8	20 4	0	21 34	PKP2
RELIZANE	177.52	4.2	20 7	3		

SEPTEMBER 15 19.H 45.M 50.S EPICENTRE 2.55 120.79 DEPTH= 690.KM

DEPTH OF FOCUS= 0.104R

A=-0.51141 B= 0.85820 C= 0.04421 D= 0.8590 E= 0.5119
G=-0.0226 H= 0.0380 K=-0.9990 HT= 7.1

SE= 2.07

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
MANILA	11.95	0.9	2 30	-8	6 38	113			
BAGUIO CITY	13.78	359.2	2 55	-1	5 14	-2		13 38	SCS
KOROR	14.44	70.3	3 0	-2					
DJAKARTA	16.42	238.1	3 20	0	6 6	6			
HENGCHUN	19.33	359.9	4 50	64	7 50	62			
TAWU	19.68	0.3	3 50	1	6 53	0			
KAOHSIUNG	19.96	358.6	3 16	-36					
TAITUNG	20.08	1.0	3 55	2	7 10	10			
TAINAN	20.34	358.5	3 55	0					
HSINKONG	20.43	1.5	3 55	-1	6 59	-6			
HONG KONG	20.66	342.4	3 58A	0	7 9	0		7 38	PCP
ALISHAN	20.85	0.0	4 2	2					
HWALIEN	21.31	2.1	4 5	1	7 16	-3			
TAICHUNG	21.47	359.7	4 7	1	7 21	-1			
CANTON	21.67	341.0	4 7A	0	7 24	-1			
MEDAN	22.10	273.2	4 11K	0	7 31	-1			
ILAN	22.11	2.3	4 13	2	7 3	-29			
TAIPEI	22.36	1.7	4 15	2	7 31	-5			
PHU-LIEN	22.79	323.8	4 14	-3			5 38		
GUAM	26.05	64.1	4 44K	-2	8 30	-4		7 38	PCP
KUNMING	28.37	323.6	5 6A	1	9 11	2	6 52	7 54	PCP
ZO-SE	28.40	0.7	5 6A	0	9 7	-3	6 46	8 3	*SP
PORT MORESBY	28.82	114.7	5 9A	0	9 14	-2	6 57	7 57	PCP
YAKUSIMA	29.23	17.4	5 10	-3	8 54	-29		6 40	
PORT BLAIR	29.26	289.4	5 11	-2	9 20	-3		6 46	PP
NANKING	29.40	356.6	5 14A	0	9 26	1	6 57	7 58	PCP
KAGOSIMA	30.30	16.7	5 14	-8	9 37	-2			
TOMIE	30.84	13.2	5 24	-2	9 42	-5		7 0	
MIYAZAKI	30.88	17.8	5 29	3	9 47	-1		12 31	
NAGASAKI	31.21	14.9	5 30	1	9 50	-3			
TRUK	31.31	79.9	5 30	0	9 54	0			
KUMAMOTO	31.51	16.1	5 31	-1	9 54	-3			
SAGA	31.81	15.2	5 37	3	10 2	0			
CHENGTU	32.15	332.1	5 37A	0	10 3	-4	7 21	7 46	PPP

HUKUOKA	32.16	15.2	5 39	2	10 5	-2			9 35	
ODITA	32.16	17.2	5 36K	-1	10 0	-7			14 46	
SIMIDU	32.17	19.5	5 37	0	10 4	-3				
UWAZIMA	32.45	18.6	5 44	4	10 10	-1				
SIMONOSEKI	32.64	15.7	5 43	2	10 13	-1				
MUROTO	33.02	20.9	5 46	2	10 18	-2			7 23	
KOTI	33.06	19.7	5 45K	0	10 19	-2			7 22	
MATUYAMA	33.06	18.4	5 46	1	9 56	-25			13 22	
SIAN	33.43	342.0	5 49	1	10 26	0				
HIROSIMA	33.47	17.6	5 48	0	10 23	-4			12 3	
CHARTERS TS.	33.58	133.0	5 49A	0	10 28	0				
SIOMISAKI	33.79	22.9	5 50	-1					11 14	
HAMADA	33.85	16.8	5 51	0	10 27	-5			12 37	
TOKUSIMA	33.90	20.8	5 52	0	10 31	-2				
TAKAMATU	33.94	19.9	5 53	1	10 32	-2			7 36	
HIMEJI	34.22	20.2			10 41	3			15 2	SCS
OKAYAMA	34.22	19.4	5 54	0						
WAKAYAMA	34.25	21.4	5 52	-2						
SUMOTO	34.26	21.0	5 55A	1	10 34	-4	6 42		7 40	
OWASE	34.50	22.9	5 58	2	10 40	-2			13 55	
PERTH	34.63	187.4	5 56	-2	10 42	-2			8 58	
KOBE	34.66	21.1	5 56	-2	10 42	-2			7 41	
MATSUE	34.66	17.8	5 53	-5	10 44	0				
YONAGO	34.73	18.2	5 58	0	10 42	-3			7 45	
OSAKA	34.76	21.6	5 59	0	10 38	-8			7 37	
ABUYAMA	34.97	21.5	5 59A	-1	10 42	-7				
TOTTORI	35.08	19.3	6 3	2	10 48	-3				
TU	35.21	22.8	5 59	-3						
HATIDYOZIMA	35.24	28.3			10 46	-7				
KAMEYAMA	35.29	22.6	6 5	2	10 49	-5			7 51	
TOYOOKA	35.30	20.0	6 3	0	10 49	-5			7 48	
SAIGO	35.43	17.6	6 2	-2	10 54	-2			7 52	
MAIZURU	35.47	20.9	6 5	1	10 54	-2				
HIKONE	35.58	22.0	6 7	2	10 56	-2				
IBUKISAN	35.73	22.1	6 9	3	10 58	-2				
NAGOYA	35.77	23.0	6 8	1	10 58	-3				
OMAESAKI	35.78	25.0	6 7	0	10 59	-2			8 17	
GIHU	35.89	22.6	6 7	-1	10 57	-6			7 49	
SHILLONG	36.03	312.0	6 12A	3	11 3	-2			8 59	
SHIZUOKA	36.17	24.9	6 8	-2	12 3	56			15 22	SCS
DAIREN	36.19	1.1	6 10	0						
HUKUI	36.28	21.4	6 12	1	11 6	-2				
OSIMA	36.43	26.2	6 13	1	11 5	-5				
MISIMA	36.53	25.4	6 12A	-1	11 9	-3				
TAKAYAMA	36.74	22.5			11 3	-12				
MERA	36.75	26.6	6 15	0	11 1	-14				
HUNATU	36.78	24.9	6 14	-1	11 12	-4				
KOHU	36.81	24.5	6 16	1	11 13	-3				
KANAZAWA	36.85	21.5	6 19	3						
LANCHOW	36.87	336.8	6 18A	2	11 17	0	8 5		9 4	PP
YOKOHAMA	37.10	26.0	6 16	-2	11 16	-4			7 15	
MATUMOTO	37.10	23.3	6 19	1	11 20	0				
TOYAMA	37.20	22.1	6 19	0	11 19	-3			14 8	
HOWRAH	37.25	304.9	6 25	6	11 27	5				
TITIBU	37.32	24.8	6 22	2	11 23	0				
TOKYO C.M.O.	37.35	25.8	6 18	-2	11 19	-5			8 18	
OIWAKE	37.40	23.9	6 24	4					9 21	
MATUSIRO	37.46	23.4	6 19A	-2	11 20	-5			7 58	PP
PEKING	37.54	354.2	6 20A	-1	11 23	-4	8 18		8 59	PPP
NAGANO	37.56	23.2	6 21	0	11 23	-4			8 31	PCP
MAEBASI	37.68	24.5	6 25	3	11 30	1			8 42	
WAZIMA	37.69	21.2	6 23	0	11 26	-3				
TAKADA	37.95	23.0	6 26	1						
KAKIOKA	38.01	25.8	6 23	-2	11 8	-25				
UTUNOMIYA	38.14	25.2	6 6	-20	11 19	-16			15 19	SCS
MITO	38.26	26.0	6 28	1	11 31	-6				
AIKAWA	38.76	22.2	6 31	0	11 32	-12				
SHIRAKAWA	38.77	25.1	6 29	-2	11 42	-2			15 25	SCS
ONAHAMA	38.92	26.0	6 33	1	11 42	-5			15 23	SCS
NIIGATA	38.98	23.2	6 37	4	11 48	1			8 58	
LHASA	39.03	316.7	6 35A	2	11 50	2	8 30		9 28	PPP
HUKUSIMA	39.41	24.9	6 35	-1	11 50	-4				
VIZIANAGRAM	39.73	295.5	6 43	4	11 50	-8				
YAMAGATA	39.79	24.3	6 39	0	11 57	-2			15 32	SCS
BOKARO	39.89	305.0	6 38A	-2	11 58	-2	8 34		13 4	SS
SENDAI	40.03	24.9	6 41	0	11 59	-3			7 33	
SAKATA	40.13	23.3	6 42	0	12 5	1				
CHATRA	40.25	310.0	6 42	-1	12 6	0				

ISINOMAKI	40.34	25.2	6	44	0	12	4	-3			
MIZUSAWA	40.85	24.4	6	49	1	12	6	-8			
ADELAIDE	40.90	157.3	6	48	0	12	11	-4	8	31	15 34 SCS
AKITA	40.95	22.9	6	50	2	12	14	-1			7 28
COLOMBO	41.00	277.5	6	30	-19	11	30	-46			
CHANGCHUN	41.30	5.0	6	50	-1	12	19	-1	8	32	9 54 *SP
MORIOKA	41.35	24.0	6	51	-1	12	18	-3			
MADRAS	41.49	286.7	6	54K	1	12	23	0			9 13 PCP
VLADIVOSTOK	41.59	12.3	6	53	0	12	24	-1	8	47	15 41 *SS
MIYAKO	41.64	24.8	6	50	-4	12	23	-2			
AOMORI	42.16	22.7	6	58	0	12	30	-3			
HATINOHE	42.20	23.7	6	56	-2	12	32	-1			
HAKODATE	42.96	22.0	7	4	0	12	42	-2			7 47
BRISBANE	43.08	136.1	7	4A	-1	12	45	0			
MORI	43.18	21.6	7	9	3	12	47	0			
SUTTSU	43.67	20.8	7	9	-1	12	55	1			15 54 SCS
KODAIKANAL	43.68	282.1	7	7K	-3	13	4	10			8 58
TOMAKOMAI	43.92	22.2	7	20	8	13	0	3			
URAKAWA	44.08	23.6	7	14	1	13	0	1			15 59 SCS
HYDERABAD	44.10	292.5	7	13K	0	12	58	-2			9 3 PP
SUIHWA	44.23	6.1	7	4	-10						
SAPPORO	44.31	21.6	7	13	-1	12	59	-3			15 57 SCS
OBIHIRO	44.89	23.4	7	19	0	13	12	1			
ASAHIGAWA	45.30	22.0	7	24	2	13	16	0			
KUSIRO	45.43	24.4	7	22	-1	13	15	-3			16 6 SCS
MELBOURNE	46.00	153.2	7	27A	0	13	23	-3			8 48 PCP
RIVERVIEW	46.13	144.3	7	29	1	13	30	2			
NEMURO	46.21	25.1	7	27	-2	13	24	-5			14 14
ABASHIRI	46.24	23.5	7	22	-7	13	24	-5			
ULAN-BATOR	46.76	347.2	7	33	0	13	37	1			
AGRA	47.65	305.0	7	40K	0	13	47	-1			9 34 PPP
Y.-SAKHLINSK	48.16	20.1	7	42	-1	13	52	-3	9	41	8 58 PCP
DEHRA DUN	48.96	308.9	7	51	2	14	2	-4			9 46 PPP
BOMBAY	49.65	292.7	7	55	1	14	15	0			9 52 PPP
NOUMEA	50.95	121.5	8	4A	0	14	25	-8			
IRKUTSK	51.42	347.1	8	6A	-1	14	42	3	10	11	9 8 PCP
LAHORE	52.37	308.6	8	21	7				10	25	
WARSAK DAM	55.50	310.2	8	36A	1	15	33	1			
KARACHI	56.53	299.4	8	41	-1				10	48	
FRUNSE	57.44	321.0	8	47A	-2	15	56	0	10	52	9 34 PCP
QUETTA	57.82	304.3	8	50A	-1	16	0	-1	10	55	9 34 PCP
PETROPAVLOVK	59.30	25.5	9	0	-1	16	20	0	11	7	12 13 *SP
STALINABAD	59.37	314.1	9	2	1	16	23	2	11	11	
TASHKENT	60.17	317.2	9	6	-1				11	15	17 50 SCS
SUVA	60.35	112.4	9	11K	3	16	28	-5			14 25 PP
MAGADAN	61.40	16.9	9	16	2	16	49	3	11	23	18 3 SCS
ONERAHI	62.83	132.6	9	25	1						
KAIMATA	63.98	140.5	9	31	0						
COBB RIVER	64.11	138.6	9	31	-1						
ROXBURGH	64.32	144.2	9	32	-1	17	47	26			
KARAPIRO	64.59	134.4	9	36A	1	17	27	3	11	13	10 3 PCP
TONGARIRO	65.15	135.6	9	39	1						10 4 PCP
GEBBIES PASS	65.35	141.1	9	39	0	17	36	3			
WELLINGTON	65.56	138.0	9	38A	-3	17	24	-11			21 2 SS
TUAI	66.12	134.6	9	44	0						
ASHKABAD	66.89	310.4	9	49	0	17	55	4	12	1	18 42 SCS
AFIAMALU	68.80	105.9	9	37	-23	18	10	-2			22 10 SS
WILKES	69.00	184.4	9	59A	-2	18	11	-4	12	7	
TIKSI	69.17	2.7	10	0	-2	18	11	-6	12	20	22 10 *SS
OASIS-BUNG.	70.07	188.5	10	8	0	18	28	1	12	18	12 51 PP
DUMONT	70.42	172.0	10	9	-1	18	29	-2			
MIRNY	71.75	191.3	10	18	1	18	41	-4	12	32	13 4 PP
SVERDLOVSK	71.93	329.9	10	18	0	18	44	-3	12	29	22 44 *SS
TANANARIVE	75.02	249.8	10	35A	-1	19	20	-1	12	54	13 36 PP
GORIS	76.40	309.9	10	44	1	19	35	0	13	1	13 40 PP
TIFLIS	77.86	312.0	10	52	1	19	52	2	13	7	24 4 *SS
HONOLULU	80.80	69.0	11	8	2	20	26	6	13	24	14 26 PP
KIPAPA	80.87	68.8	11	8	2						
CAPE HALLETT	81.01	166.4	11	8A	1	20	24	2			14 23 PP
SCOTT BASE	84.04	171.2	11	22K	0	20	47	-4			13 42 PP
MOSCOW	84.04	325.6	11	22	0	20	49	-2	13	43	21 53
KSARA	84.36	303.6	11	25A	1	21	7	13	13	49	14 49
JERUSALEM	84.90	301.5	11	24K	-2	21	3	3			
SIMFEROPOL	85.85	314.7	11	31A	0	21	6	-2	13	52	15 3 PP
APATITY	86.65	337.4	11	33A	-2	21	13	-3	13	57	15 13 PP
PULKOVO	88.05	329.6	11	41	0	21	5	-23	14	1	
HELWAN	88.28	299.7	11	43	1						
COLLEGE	88.30	25.3	11	41	-1	21	22	-8			14 50 *SP

IASI	90.34	317.1	11	43	-9	21	14	-34			
FOCSANI	90.71	315.6				21	24	-27			
HELSINKI	90.71	330.2	11	52	-1						
BACAU	90.85	316.5				21	22	-31			
KIRUNA	91.56	338.1	11	56A	-1	21	51	-8		29	13 PKKP
PIETERMZBURG	91.59	240.6	12	0	3						
BUCHAREST	91.59	314.4	14	21	144					20	40
UVIRA	91.82	266.6	12	0	2				14	21	
LWIRO	92.09	267.9	12	1	1	22	7	4			
CAMPULUNG	92.26	315.3				21	30	-35			
LWOW	92.44	319.9	12	1	0	22	4	-2	14	24	21 31 SKS
SOUTH POLE	92.53	180.0	12	1	-1	21	35	-32	14	22	29 11 PKKP
NORD	93.70	354.3	12	6A	-1	22	10	-7			21 38 SKS
SOFIA	93.77	312.9	12	6	-1	21	41	-37			14 27
WARSAW	93.98	322.6	12	6A	-2				14	30	16 8 PP
ATHENS	94.02	308.2	12	7K	-2	22	22	2			21 31 SKS
UPPSALA	94.40	330.5	12	9A	-1	22	19	-4			21 38 SKS
TIMISOARA	94.86	316.1				21	46	-41			18 20
SKALNATE PL.	94.97	319.6	12	17	4	21	50	-38	14	41	16 23 PP
KRAKOW	95.02	320.5	12	13	0	22	27	-1			16 25 PP
SKOPJE	95.28	312.4				22	22	-8			23 32 PS
SITKA	95.40	32.2	12	16	1						
SZEGED	95.53	316.8									21 49
BELGRADE	95.54	315.3	12	15A	0						16 24 PP
SKALSTUGAN	95.87	334.8	12	15A	-2	21	50	-45			16 22 PP
BUDAPEST	96.04	318.1									26 28 PPS
RACIBORZ	96.11	320.8	12	18	0	21	52	-45			
KALOCSA	96.27	317.2									21 51
KIMBERLEY	96.49	241.5	12	20	0						
HURBANOVO	96.54	318.6	12	24	4	22	44	3			21 55 SKS
BRATISLAVA	97.21	319.0	12	21A	-2	22	44	-2	14	44	16 10 PP
BYRD STATION	97.46	171.2	12	25	1	22	52	3	14	43	16 31 PP
GOTEBORG	97.80	329.1	12	18A	-8						
COPENHAGEN	98.14	327.1	12	26	-1	22	56	2	14	50	16 42 PP
PRUHONICE	98.43	321.2	12	28	0	23	2	5	14	52	16 44 PP
ZAGREB	98.45	316.9	12	28	-1	22	55	-2			16 22 PP
PRAGUE	98.48	321.3	12	31	2	23	59	62			16 44 PP
POTSDAM	98.71	323.8	12	27	-3	24	18	79	14	47	16 45 PP
COLLMBERG	99.05	322.7	12	31	0						16 49
HALLE	99.62	323.1	12	34	0	23	9	2	15	0	16 53 PP
CHEB	99.76	321.7				23	9	1			22 8 SKS
PLAUEN	99.78	322.1	12	32	-3				14	58	16 51 PP
JENA	100.01	322.6	12	35	-1	24	35	85	14	59	16 55 PP
TRIESTE	100.01	317.1	12	34	-2	23	9	-1	14	56	16 42 PP
MESSINA	100.35	309.4				23	10	-3	15	4	16 50 PP
SONNEBERG	100.40	322.2	12	37	0						16 57 PP
HERMANUS	100.98	235.6				23	27	9			26 22 PS
MUNSTER	102.03	324.4	12	46	2						15 43
STUTTGART	102.13	321.0	12	44	-1	22	19	-69	15	4	17 12 PP
RAVENSBURG	102.16	320.0				22	20	-68			22 59 SKKS
TUBINGEN	102.28	320.8	12	45	-1	22	18	-71			17 12 PP
EBINGEN	102.46	320.5	12	50	4	22	22	-68			17 14 PP
CHUR	102.50	319.1				22	17	-74			16 16
STRASBOURG	103.08	321.1	12	37	-12	22	24	-72	15	13	17 26 PP
DE BILT	103.39	325.1				23	43	5			17 22 PP
BASLE	103.55	320.2				22	27	-72			17 5
WINDHOEK	103.62	247.5									14 47
ALBERNI	103.70	37.9	12	55	3						17 10 PP
NEUCHATEL	104.13	319.8				22	28	-76			16 57
UCCLE	104.37	324.1	12	55	0						
DOURBES	104.49	323.4	12	25	-30	22	2	-105			
HORSESHOE B.	104.60	37.4	12	57	1	22	34	-74			17 7 PP
VICTORIA	104.83	38.3	12	58K	1	25	36	106			17 8 PP
MONACO	104.88	316.5									17 1 PP
ABERDEEN	104.98	331.7				22	33	-78			17 30 PP
SEATTLE	105.85	38.8	13	5	777						17 10
DURHAM	105.90	329.4	13	1K	777	24	1	80	15	8	17 29 PP
PARIS	106.26	322.7	13	3	777	22	42	1	15	28	17 34 PP
KEW	106.76	326.0	13	6	777	24	10	87			17 44 PP
CLERMONT-FD.	107.05	319.6	17	20	777	22	48	5			17 51 PP
SIDA	107.13	342.2	13	20	777						28 30 PKKP
UKIAH	108.22	47.4	17	17	777						17 53 PP
SHASTA	108.30	45.6	13	13	777						17 15 PKP
SETIF	108.69	309.5	17	15	777	24	38	107			17 56 PP
JERSEY	108.82	324.4									16 52
MINERAL	108.99	45.7	13	17A	777						18 2 PP
RATHFARNHAM	109.03	329.6	13	18	777						17 52 PP
BERKELEY	109.35	48.4	13	22	777						18 0 PP
LICK	109.99	48.7	13	26A	777						18 4 PP

ALGIERS UNI.	110.31	310.7	17	19K	3	23	9	15	15	42	18	4 PP
HUNGRY HORSE	110.55	35.6	17	18	1	23	30	35			13	24 P
RENO	110.56	46.0	13	26	777						18	9 PP
TORTOSA	110.71	315.5	18	15	58							
FRESNO	111.57	48.8	13	29	777						18	16 PP
TAMANRASSET	112.12	295.7	13	38	777	23	8	7			18	23 PP
ALICANTE	112.36	313.4	17	34	14	23	6	4			18	28 PP
RELIZANE	112.55	310.5	17	22K	2						18	22 PP
BUTTE	112.57	37.3	17	23	3						13	34 P
EUREKA	113.32	44.8	17	25	3				20	0	13	37 P
BOZEMAN	113.66	37.0	17	26	3						18	38 PP
PASADENA	113.73	50.9	17	26	3	23	15	7	19	59	18	29 PP
TOLEDO	114.27	316.1	17	26K	2	23	14	4			18	32 PP
ALMERIA	114.40	312.6	17	25	1	23	11	1	19	57	18	29 PP
GRANADA	115.09	313.3									18	46 PP
SALT LAKE C.	115.57	42.0	17	29	3							
BOULDER CITY	115.58	47.9	17	30	4						20	3
MALAGA	115.87	313.1	17	31	4	23	57	42			18	43 PP
SERRA PILAR	116.74	319.2	17	31K	2							
LISBON	118.31	317.1	17	35K	0							
RAPID CITY	119.17	35.0	17	34	-8				20	8	19	8 PP
TUCSON	120.14	50.2	17	40	5						19	16 PP
TUCSON TELE.	120.18	50.0	17	39	4						14	19 P
CHIHUAHUA	125.40	51.9									24	40
LUBBOCK	126.10	44.4	17	49	2						21	11 PKS
SEVEN FALLS	129.49	10.3	17	46	-7						19	32 PP
FAYETTEVILLE	129.57	37.0	17	37	-16						20	9
SHAWINIGAN	129.66	12.1	17	29	-25						19	33 PP
DALLAS	129.99	42.1	17	48	-6				20	18		
OTTAWA	130.05	15.2	17	42	-12	23	35	-24			19	35 PP
BREBEUF	130.47	13.3	17	45A	-10						28	28 SKP
HALIFAX	132.88	4.3	18	2K	2	24	58	52	20	28		
MORGANTOWN	133.90	22.3	17	51K	-11				20	31		
WESTON	133.95	12.5	17	52K	-10							
MBOUR	134.90	293.1	18	8	5	24	28	18	20	36	21	6 PP
TACUBAYA	135.06	59.2	18	6	2	24	26	16	20	35	23	52 PPP
WASHINGTON	135.59	20.0	18	8	3				20	36	29	45 SKKP
CHAPEL HILL	137.47	24.1	18	0	-8							
VERA CRUZ	137.76	57.6	18	22	13						19	58
COLUMBIA	138.24	27.6	18	4	-6				20	44	29	35 SKKP
MERIDA	142.15	50.4	18	24	6						20	19
COMITAN	142.49	59.0									19	42
BERMUDA	144.88	8.1	18	24	2						21	50 PKS
SAN SALVADOR	146.12	60.7	18	31	7							
SANTIAGO MA.	146.88	60.5	18	30	5							
SANTA LUCIA	147.46	162.0	18	32	7						20	56
TALA POZO	154.41	169.6	18	30	-5							
SAN JUAN	158.12	17.9	18	42	2						19	22
GALERAZAMBA	159.24	50.1	18	44	2						19	26 PKP2
HUANCAYO	161.45	121.4	18	50	6						19	40 PKP2
CHINCHINA	161.98	65.5	18	47A	3						23	24 PP
DOMINICA	162.13	6.9	18	49	5						22	14
FORT FRANCE	162.72	6.3	18	48	3							
FUQUENE	163.45	61.2	18	50	4						19	48 PKP2
BOGOTA	163.53	64.4	18	51	5						19	49 PKP2
LA PAZ	163.59	148.2	18	53	7						23	44 PP
BARBADOS	164.43	1.4	18	39	-8							
TRINIDAD	166.67	9.9	18	54	5						19	59 PKP2

SEPTEMBER 16 3.H 52.M 53.S EPICENTRE 61.22 136.45 DEPTH= 0.KM

A=-0.35073 B= 0.33347 C= 0.87509 D= 0.6890 E= 0.7247
G=-0.6342 H= 0.6030 K=-0.4840 HT= -9.3

SE= 1.60

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
YAKUTSK	3.31	287.0	0	57	3						1	48
MAGADAN	7.31	96.9	1	48	-3	3	12	-3			3	38
TIKSI	10.87	347.2	2	40	0	4	36	-8			2	52
UGLEGORSK	12.58	162.8									6	9
KLYUCHI	13.50	100.5	3	17	2							
PETROPAVLOVK	14.45	114.1	3	30	2						6	31
VLADIVOSTOK	18.33	190.6									9	41
IRKUTSK	19.57	257.3	4	31	-1						4	55

KYAKHTA	19.86	250.5	4 36	1		
ULAN-BATOR	21.45	245.1	4 53	1		
MATUSIRO	24.72	176.6	5 22	-2	5 39	
COLLEGE	32.63	50.1	6 34	-1		
SVERDLOVSK	37.23	298.3	7 16	1		
APATITY	39.99	324.4	7 37	-1		
RESOLUTE	40.25	18.7	7 40	0		
NARYN	40.86	269.5			9 15	PP
SODANKYLA	41.98	327.0	7 53	-1		
ANDIJAN	43.13	272.0	8 5	1	10 13	PP
KIRUNA	43.19	330.1	8 5	1		
FERGANA	43.70	272.2	8 9	1		
STALINABAD	46.59	273.1	8 29	-2		
MOSCOW	47.18	310.4	8 36	0		
HELSINKI	47.99	321.2	8 44	2		
SKALSTUGAN	48.62	330.4	8 50	3		
UPPSALA	50.38	325.0	9 1	0		
ASHKABAD	52.06	281.2	9 14	0		
ALBERNI	52.19	55.0	9 15	0		
HORSESHOE B.	52.71	53.9	9 16	-2		
VICTORIA	53.34	54.7	9 22	-1		
GOTEBORG	53.76	326.7	9 25	-1		
PIATIGORSK	54.16	297.3	9 34	5		
QUETTA	54.23	268.4	9 29	-1		
TIFLIS	55.27	294.4	9 40	3		
HUNGRY HORSE	57.04	48.5	9 48	-2	10 41	PCP
NAKHICHEVAN	57.04	292.2	9 34	-16		
BUTTE	59.54	49.0	10 8	1		
PRUHONICE	59.79	320.6	10 11	2	10 32	
JENA	59.83	323.1	10 10	1		
PLAUEN	60.05	322.5	10 10	-1		
SHASTA	60.19	59.3	10 11A	-1		
BOZEMAN	60.39	48.2	10 14	1		
MINERAL	60.81	58.9	10 15A	-1		
RENO	62.23	58.1	10 25	-1		
LICK	63.33	60.8	10 30A	-3		
EUREKA	63.83	55.3	10 35	-1		
TRIESTE	63.88	318.9	10 35	-2	22 4	
SALT LAKE C.	64.32	51.5	10 39	-1		
RAPID CITY	64.51	43.5	10 39	-2		
FRESNO	64.59	59.7	10 41	0		
LARAMIE	66.14	46.7	10 52	1		
BOULDER CITY	67.30	56.4	10 58	-1		
OTTAWA	70.59	23.4	11 19	0		
TUCSON TELE.	72.13	55.1	11 28	0		
TUCSON	72.16	55.2	11 29	1		
TAMANRASSET	87.46	315.7	12 53	2	16 17	PP
SOUTH POLE	151.06	180.0	19 53	4		
BYRD STATION	151.90	158.9	19 55	5		

SEPTEMBER 16 14.H 22.M 31.S EPICENTRE 34.59 59.43 DEPTH= 0.KM

A= 0.41962 B= 0.71035 C= 0.56508 D= 0.8610 E=-0.5086
G= 0.2874 H= 0.4865 K=-0.8250 HT= 0.3

SE= 3.11

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
QUETTA	7.73	122.6	1 50	-7	3 27	1		3 38 SS
WARSAK DAM	10.05	89.9	2 21	-8				
KARACHI	10.93	141.0	2 49	8				
NAMANGAN	11.59	53.0	2 49	-1				5 11
MAKHACH-KALA	12.51	315.5	3 2	0	5 23	0		
TIFLIS	13.53	306.1	3 19	3				6 4
DEHRA DUN	16.28	100.0			7 2	9		8 40
AGRA	17.59	109.9	4 8A	0	7 26	3		4 22 PP
SOTCHI	17.71	306.3	4 9	-1				
KSARA	19.49	274.4	4 33	2	8 15	9		8 44 SS
BOMBAY	19.64	139.3	4 29	-4	8 8	-1		8 40
JERUSALEM	20.44	268.9	4 41	-1				
SIMFEROPOL	21.95	305.7	4 58	1	9 0	5		
HYDERABAD	24.10	130.4			9 32	-2		13 11
HELWAN	24.19	266.6	5 18	-1	9 45	10		
CHATRA	25.02	100.4	5 25	-2				
MOSCOW	25.93	331.3	5 39	3				

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HOWRAH	27.96	107.7			10	23	-14				
SHILLONG	29.37	99.0	6	45	38				12	3	
PULKOVO	31.55	331.9	7	25	59						
TARANTO	33.72	292.7			11	56	-12				
MESSINA	35.26	288.9							14	51	
TRIESTE	36.19	301.8							14	8	SS
APATITY	36.24	343.5	7	9	2				15	22	
UPPSALA	37.03	326.0	7	15	2						
ROME	37.21	295.6							13	59	
JENA	38.01	310.4	7	20	-1						
GOTEBORG	39.08	321.1	7	31	1						
STUTTGART	39.38	306.7	7	30	-3						
KIRUNA	39.99	338.2	7	38	0						
SKALSTUGAN	40.85	329.9	7	44	-1				9	24	PP
LWIRO	46.58	224.5							19	12	SSS
TAMANRASSET	48.23	270.8	8	38	-6				10	31	PP
HONG KONG	49.14	89.3	8	51	0	15	57	0			
COLLEGE	78.59	11.5	12	4	-1						

SEPTEMBER 18 14.H 41.M 40.S EPICENTRE 0.40 -29.89 DEPTH= 0.KM

A= 0.86696 B=-0.49833 C= 0.00693 D=-0.4983 E=-0.8670
G= 0.0060 H=-0.0035 K=-1.0000 HT= 7.2

SE= 2.54

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
MBOUR	18.88	42.0	4	23A	-1	7	43	-9			4	41	PP
FORT FRANCE	34.02	296.2	6	49	1								
TAMANRASSET	40.99	54.6	7	44	-2	13	54	-5			9	21	PP
LA PAZ	41.28	244.2	7	48	-1	14	10	6			17	12	SS
LISBON	42.62	24.2	8	1K	1						9	45	PP
MALAGA	43.16	30.4	8	7K	3	14	36	4			9	51	PP
GRANADA	43.93	30.7	8	23	13	14	43	0			17	53	SS
FUQUENE	44.05	277.4	8	24	12	15	8	24			18	18	SS
ALMERIA	44.26	32.0	8	15K	2	14	50	3			9	53	PP
BOGOTA	44.32	276.2	8	17	3	14	58	10			18	12	
SERRA PILAR	44.90	22.9	8	17K	-1								
RELIZANE	45.14	35.5	8	21	1	15	15	15			9	59	PP
BERMUDA	45.69	317.6				15	7	-1			10	40	PPP
TOLEDO	45.81	27.9	8	27K	1	15	11	1			10	12	PP
CHINCHINA	45.89	276.5	8	22	-4	15	3	-8					
ALICANTE	46.43	32.2	8	26	-4	15	11	-8			10	14	PP
HUANCAYO	46.77	253.1	8	31	-2								
ALGIERS UNI.	47.31	36.4	8	35	-2	15	26	-5			10	19	PP
CLERMONT-FD.	53.71	28.2	9	27	1	17	8	8			11	29	PP
MONACO	54.46	32.7	9	32	0								
PARIS	55.70	25.4	9	42	1	17	34	8			11	41	PP
MESSINA	56.15	42.5	9	47	3	17	30	-2			10	41	PCP
HARVARD	56.15	323.7	8	44	-60								
ROME	56.21	37.3	9	48A	4	17	43	10			11	49	PP
NEUCHATEL	56.44	29.5	9	47	1								
KEW	56.67	21.7	9	47	-1	17	43	4			21	19	SS
HERMANUS	57.51	132.2									18	3	PS
CHAPEL HILL	57.67	313.4	9	47	-8						10	17	
STRASBOURG	57.93	28.6	9	57	0	17	57	1			12	4	PP
UCCLE	58.00	24.9	9	12	-45	17	57	0					
EBINGEN	58.24	29.6	9	57	-2								
TUBINGEN	58.53	29.3	10	0	-1								
STUTTGART	58.76	29.2	10	2	0	17	57	-10			12	2	PP
BREBEUF	59.13	325.5	10	4	-1								
TRIESTE	59.17	34.3	10	2	-3	18	13	1			12	12	PP
SHAWINIGAN	59.29	326.9	10	5	-1								
DE BILT	59.32	24.3				18	25	11					
BENSBERG	59.33	26.3	10	7	1								
KIMBERLEY	59.71	123.9	9	49	-20								
MUNSTER	60.25	25.7	10	12	-1								
OTTAWA	60.28	324.4	10	10	-3								
ZAGREB	60.54	35.2	9	49	-26								
PLAUEN	61.34	29.2	10	18	-2								
JENA	61.35	28.5	10	20	0						12	26	PP
HALLE	61.89	28.2	10	16	-8						18	54	PS
PRAGUE	62.20	30.6	10	26	0	19	0	9			26	15	SSS
PRUHONICE	62.21	30.7	10	26	0	19	4	13			12	33	PP
COLLMBERG	62.27	28.9	10	26	0								

BRATISLAVA	62.50	33.5	10	29	1	19	25	30		
BELGRADE	62.67	38.1	10	31A	2	19	29	32	12	43 PP
POTSDAM	62 99	28.0	10	35	4					
SOFIA	63.51	41.3	10	36	1					
RACIBORZ	64.17	32.2	10	21	-18				10	40 PP
COPENHAGEN	64.89	24.9	10	43	-1	19	31	7		
KRAKOW	65.09	32.9	10	46	1				15	10
GOTEBORG	66.07	23.1	10	51	0					
BUCHAREST	66.07	40.5							12	45 PP
LWOW	67.25	34.6	10	59	0					
JERUSALEM	68.77	56.0	10	57	-11					
KISHINEV	68.88	38.8	11	6	-3					
FAYETTEVILLE	69.19	308.7	11	9	-2					
UPPSALA	69.70	23.4	11	19	5	20	40	18		
KSARA	69.79	54.0	11	14	0	20	20	-3	13	46 PP
SKALSTUGAN	70.26	18.6	11	16	-1					
SIMFEROPOL	71.58	42.3				20	51	7	13	17
SOTCHI	75.05	44.8	11	45	-1					
KIRUNA	75.60	17.6	11	50	1				26	28 SS
HALLEY BAY	75.85	179.1	11	47	-3	21	33	1		
MOSCOW	77.17	32.4	11	56	-2					
SODANKYLA	77.30	19.3	11	57	-1					
RAPID CITY	77.77	315.1	12	1	0				12	18
TIFLIS	78.33	47.5	12	6	2	22	6	7		
LARAMIE	79.00	312.0	12	9	1					
MAKHACH-KALA	80.51	46.6	12	11	-5	22	21	-1		
TUCSON TELE.	82.03	302.5	12	26	2					
RESOLUTE	83.17	346.0	12	41	11	22	45	-4	27	51 SS
BOZEMAN	83.53	315.8	12	33	2					
BUTTE	84.62	316.0	12	39	2					
BOULDER CITY	85.66	305.9	12	44	2					
HUNGRY HORSE	85.80	318.3	12	42	-1				14	3
EUREKA	86.71	309.3	12	48	1					
SVERDLOVSK	89.95	33.3	13	9	6					
BYRD STATION	90.33	190.0	13	4	0					
SOUTH POLE	90.40	180.0	13	9	4					
QUETTA	95.72	59.8	13	43	14	24	59	14		
ADELAIDE	144.04	164.0	19	46	8					
PORT MORESBY	170.59	161.9	20	21	11				46	32 SS

SEPTEMBER 18 20.H 53.M 4.S EPICENTRE 36.49 70.70 DEPTH= 157.KM

DEPTH OF FOCUS= 0.020R

A= 0.26638 B= 0.76059 C= 0.59207 D= 0.9438 E=-0.3305
G= 0.1957 H= 0.5588 K=-0.8059 HT= -0.4

SE= 2.27

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KHOROG	1.23	35.8	0	28	1								
KULYAB	1.59	332.8	0	31	0	0	54	-2					
OBI-GARM	2.35	340.5	0	39	-1	1	9	-2					
KARA-SU	2.41	326.0	0	40	-1	1	10	-2					
GARM	2.53	352.9	0	42	0	1	14	-1					
STALINABAD	2.57	323.9	0	43	1	1	13	-2					
WARSAK DAM	2.58	164.1	0	38K	-5								
ZIMCHURUD	2.73	327.1	0	44	-1	1	18	-1					
DZHERGETAL	2.76	8.5	0	46	1	1	22	2					
MURGAB	3.18	52.9	0	53	3	1	33	4					
FERGANA	3.98	12.0	1	1	0	1	47	0			1	15	
SAMARKAND	4.32	318.4	1	4	-1	1	50	-6					
ANDIJAN	4.45	16.6	1	7	0	1	59	0			1	25	
NAMANGAN	4.55	9.3	1	9	1	2	0	-1					
TASHKENT	4.95	347.5	1	12	-1	2	8	-2			1	33	
LUNACHARSKOF	4.95	348.0	1	14	1	2	10	0			2	30	
LAHORE	5.77	147.5	1	30	6	2	36	6					
TCHIMKENT	5.87	352.0	1	25	0	2	25	-7					
NARYN	6.43	38.3	1	32	-1	2	41	-5			1	47	
QUETTA	7.03	207.6	1	37K	-4	2	51	-9			2	15	*SP
FRUNSE	7.05	23.9	1	42	1	2	59	-1					
FABRICHNAYA	7.99	31.5	1	53	-1								
ALMATA	8.30	33.4	1	59	1	3	32	2			4	39	
PRZHEVALSK	8.44	42.5	1	59	-1								
ALMATA-2	8.49	35.1	2	0	0						4	2	

DEHRA DUN	8.69	132.9	2	0	-3	3	31	-9			2	7	PP
KURMENTY	8.77	39.4	2	3	-1								
ILI	8.91	31.2	2	5	-1						4	5	
ASHKABAD	9.96	282.1	2	17	-3	4	1	-8					
KARACHI	11.08	197.4	2	41K	7	4	46	10			3	14	*SP
AGRA	11.21	144.3	2	31K	-5	4	25	-14			3	9	
KIZYL-ARVAT	11.70	286.9	2	42	0	4	42	-8			3	10	
BAKU	16.75	289.7	3	51	5						6	58	
CHATRA	16.99	119.9	3	46	-3						6	58	
BOMBAY	17.62	173.4	3	57	1	7	5	-2					
BOKARO	18.13	129.9	3	59	-3	7	7	-9			4	27	
LHASA	18.35	106.0	4	6K	1	7	14	-7					
MAKHACH-KALA	18.95	297.1	4	11	0						4	41	
GORIS	19.43	286.3	4	15	-1						7	49	
KIROVOBAD	19.46	290.0	4	15	-1						7	44	
HYDERABAD	20.19	158.1	4	25K	1	7	52	-4			4	39	PP
HOWRAH	20.64	127.5	4	33	5	8	13	8					
TIFLIS	20.73	292.5	4	30	1						5	36	*SP
SHILLONG	21.11	115.1	4	32K	-1	8	13	0	5	4	9	21	SSS
SVERDLOVSK	21.44	344.8	4	35	-1						8	17	
VIZIANAGRAM	21.48	145.0	4	42	6								
CHITTAGONG	23.10	121.8	5	1K	9	9	2	14	5	35	5	57	*SP
SOTCHI	24.66	296.3	5	9	2				5	48	6	59	
MADRAS	24.89	157.6	5	26	17	9	21	3			9	10	PCP
LANCHOW	26.63	80.9	5	26	1								
IRKUTSK	28.42	45.6	5	42	1								
KSARA	28.50	275.0	5	43	1				6	15	6	47	PP
YALTA	28.73	297.5	5	45	1								
SIMFEROPOL	28.79	298.5	5	53	8	10	25	4			6	26	
ULAN-BATOR	28.89	55.3	5	42	-4								
KYAKHTA	29.12	50.2	5	49	1								
MOSCOW	29.51	321.2	5	51	0						6	33	
KUNMING	29.62	103.6	5	33	-19								
JERUSALEM	29.63	271.4	5	52A	0				6	44			
LWOW	35.98	306.7									7	19	
HELSINKI	37.44	323.9	7	0	1								
APATITY	37.54	337.6	7	0	0								
TIMISOARA	37.88	299.9	7	1	-2								
KRAKOW	38.63	306.9	7	8	-1						9	12	PP
SODANKYLA	39.64	335.0	7	18	1								
RACIBORZ	39.74	306.9	7	11	-7						7	58	
HONG KONG	40.09	98.4	7	21	0	14	14	59					
BRATISLAVA	40.54	304.0	7	26	1				8	13	9	4	PP
UPPSALA	40.93	322.0	7	28A	0				8	1	9	9	PP
KIRUNA	41.99	334.1	7	37	0						9	28	PP
PRUHONICE	42.10	306.9	7	38	0				8	14	9	16	PP
PRAGUE	42.17	307.0	7	38	0				8	40	9	20	PP
POTSDAM	42.92	310.5	7	43	-1						9	27	PP
COLLMBERG	43.01	308.9	7	45	0								
TRIESTE	43.09	300.6	7	44	-2				9	30			
COPENHAGEN	43.27	315.4				14	9	7			17	28	SCS
MESSINA	43.33	289.6	7	49	2	14	4	1			15	2	
GOTEBORG	43.60	318.3	7	47A	-3				8	21	9	32	PP
PLAUEN	43.60	307.8	7	47	-3								
HALLE	43.66	309.3	7	50	0				8	25	9	35	PP
JENA	43.93	308.5	7	52	0	13	58	-13	8	24	9	34	PP
SKALSTUGAN	44.08	326.8	7	53A	-1				8	27	8	44	*SP
SONNEBERG	44.22	307.7	7	55	0								
STUTTGART	45.70	305.7	8	6	0						9	27	PCP
TUBINGEN	45.82	305.4	8	7	0								
TIKSI	45.87	22.0	8	9	1				8	54	18	44	SSS
EBINGEN	45.94	304.9	8	8	0								
MUNSTER	46.30	310.3	8	12	1						10	39	
STRASBOURG	46.67	305.6	8	26	12				9	6	10	1	PP
CLERMONT-FD.	50.36	302.8	9	15	33						9	36	
DURHAM	51.34	315.0	8	48K	-2								
SETIF	51.64	290.4	8	53	1				9	27	10	51	PP
MATUSIRO	53.19	68.3	9	3	-1								
NORD	53.77	349.5	9	8A	0								
RATHFARNHAM	54.37	314.0									9	22	PP
LWIRO	54.81	234.7	9	15	0								
RELIZANE	55.46	291.7	9	36	16				10	7			
UVIRA	55.52	233.5	9	18	-3								
TOLEDO	57.23	298.0	9	32	-1						10	4	
TAMANRASSET	57.31	275.5	9	31A	-2						11	36	PP
TANANARIVE	59.29	205.6	9	46A	-1								
RESOLUTE	68.70	355.9	11	7	19				11	26	19	43	
COLLEGE	74.57	16.0	11	22	-1						11	58	
PIETERMZBURG	75.87	215.5	11	29A	-1								

WINDHOEK	77.52	229.6	11	56	17						
KIMBERLEY	77.94	220.2	11	41	-1						
CHARTERS TS.	90.71	114.4	12	45A	-1					13	24
SOUTH POLE	126.30	180.0	18	42	-2						
BYRD STATION	136.17	177.4	18	52	-10						

SEPTEMBER 19 8.H 12.M 34.S EPICENTRE 2.76 127.33 DEPTH= 0.KM

A=-0.60575 B= 0.79422 C= 0.04780 D= 0.7951 E= 0.6064
G=-0.0290 H= 0.0380 K=-0.9989 HT= 7.1

SE= 1.63

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KOROR	8.44	57.2	2	7	0	3	38	-6					
MANILA	13.31	332.3	3	13	0	5	47	4					
BAGUIO CITY	15.11	334.4	3	38	1	6	43	17			15	57	PCS
GUAM	20.24	57.3	4	39	-1								
LEMBANG	21.86	244.1	4	58K	1	9	4	10					
PORT MORESBY	23.15	121.7	5	22A	13	9	39	22	5	32	5	59	PP
HONG KONG	23.25	327.7	5	10A	0	9	22	3			5	37	PP
CANTON	24.36	327.2	5	21K	0	9	35	-4					
PHU-LIEN	26.99	313.2	5	46	0								
MEDAN	28.62	272.4	6	1A	0						6	25	
ZO-SE	28.78	349.0	6	3K	1	10	51	0					
CHARTERS TS.	29.28	141.4	6	7A	1						12	54	
NANKING	30.22	345.5	6	16K	1	11	16	2					
KUNMING	32.48	315.2	6	34K	-1								
ABUYAMA	32.86	12.5	7	4K	26								
MATUSIRO	35.10	15.3	6	59	2	12	24	-6			9	33	PCP
SIAN	35.73	333.4	7	3	0	12	38	-2					
PEKING	38.46	346.2	7	27K	1	13	20	-2					
BRISBANE	38.95	142.2	7	30K	0						21	2	
ADELAIDE	38.98	165.1	7	31	1								
TATUNG	39.29	342.9	7	34	1								
CHITTAGONG	39.58	302.4	7	35K	0								
LANCHOW	39.65	329.6	7	36	0								
SHILLONG	40.95	306.9	7	46K	0								
LHASA	43.58	311.6	8	9K	1								
CHATRA	45.30	305.8	8	21	0								
ULAN-BATOR	48.32	341.7	8	47	1								
YAKUTSK	59.15	1.3	10	4	-1								
KARAPIRO	60.18	137.2	10	12	0								
WARSAK DAM	60.45	307.8	10	13	-1								
KARACHI	62.17	297.7	10	24	-2								
QUETTA	63.17	302.5	10	31	-1								
TIKSI	68.78	0.5	11	7	-1						20	6	
DUMONT	69.86	174.7	11	14	-1								
MAKHACH-KALA	80.68	312.9	12	16	-1						22	19	
TIFLIS	82.60	311.5	11	58	-29								
SCOTT BASE	83.30	172.2	12	21	-9								
KHEYS	84.75	350.3	12	32	-6								
COLLEGE	85.32	25.3	12	42	1								
KSARA	89.69	303.7	13	4	2								
SODANKYLA	91.59	337.6	11	9	-121								
SOUTH POLE	92.74	180.0	13	17	1	23	46	-2					
KIRUNA	93.78	338.7	13	19	-2								
UPPSALA	97.40	331.4	13	36	-1								
SKALSTUGAN	98.42	335.8	13	43	1								
HALLEY BAY	105.79	186.6	14	17	777						18	35	PP
EUREKA	108.48	46.8	18	23	-7								
TAMANRASSET	117.88	297.5	18	50	1								
HUANCAYO	155.73	113.5	20	3	7						20	12	PKP2

SEPTEMBER 20 10.H 33.M 58.S EPICENTRE 15.50 -45.82 DEPTH= 0.KM

A= 0.67192 B=-0.69136 C= 0.26560 D=-0.7171 E=-0.6970
G= 0.1851 H=-0.1905 K=-0.9641 HT= 5.7

SE= 2.22

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S

BARBADOS	13.57	261.7	3	13A	-3					
FORT FRANCE	14.83	269.0	3	32	-1				6	28
DOMINICA	15.03	271.3	3	43	8					
GRENADA	15.83	259.5	3	42	-4					
TRINIDAD	16.03	254.5	3	43	-5					
SAN JUAN	19.63	281.3	4	32	-1					
BERMUDA	24.01	317.7	5	17	0	9	38	6		
MBOUR	27.89	88.5	5	56	3	10	44	8		
FUQUENE	29.16	253.0	6	10	5	11	1	4		
BOGOTA	29.80	251.7	6	16	5	11	14	7		
CHINCHINA	31.09	253.5	6	19	-3	11	28	1		
HALIFAX	32.70	336.2							13	56 SS
COLUMBIA	36.66	306.6	7	11	1					
SEVEN FALLS	37.75	331.9	7	20	1					
BREBEUF	37.95	327.8	7	21A	0					
SHAWINIGAN	38.25	329.7	7	21A	-2					
MORGANTOWN	38.28	315.6	7	26	2					
LA PAZ	38.68	215.6	7	26A	-1	13	30	6	9	6 PP
OTTAWA	38.99	326.1	7	30A	0					
LISBON	39.61	47.1	7	35K	0					
HUANCAYO	40.04	228.5	7	40	2				8	57 PP
MALAGA	42.35	52.1	7	58	1					
GRANADA	43.11	51.8	8	30	27	14	48	18		
TOLEDO	43.70	47.9	8	8	0				9	48 PP
ALICANTE	45.82	51.2	8	24	-1	15	6	-3	10	52 PPP
RELIZANE	45.92	55.0	8	25	-1	15	53	42	10	28 PP
FAYETTEVILLE	47.59	304.9	8	37K	-2					
ALGIERS UNI.	48.12	54.3	8	44	1				10	36 PP
TAMANRASSET	48.84	73.2	8	48	-1	15	56	4	10	43 PP
SETIF	49.86	55.6	8	45	-12				10	48 PP
CLERMONT-FD.	50.73	43.0	9	4	1					
PARIS	51.45	39.1	9	14	5				12	5
MONACO	53.05	46.6	9	20	-1					
LUBBOCK	53.42	300.4	9	23	-1					
NEUCHATEL	53.64	42.6	9	25	0					
STRASBOURG	54.65	40.9	9	32	-1				11	33 PP
BENSBERG	55.06	38.0	9	36	0					
EBINGEN	55.29	41.7	9	37	0					
STUTTGART	55.61	41.1	9	38	-2				10	39
MUNSTER	55.67	37.0	9	38	-2					
RAPID CITY	56.04	313.0	9	42	-1					
LARAMIE	57.29	309.3	9	53	1					
SONNEBERG	57.31	39.7	9	51	-1				10	32
JENA	57.70	39.1	9	53	-2				12	6 PP
TRIESTE	57.87	45.6	9	36	-20				19	10 SCS
PLAUEN	57.93	39.7	9	54	-2					
HALLE	58.08	38.5	9	55	-2					
MESSINA	58.16	54.5				17	49	-10		
PRAGUE	59.24	40.6	10	6	1					
PRUHONICE	59.30	40.7	10	5	-1				12	24 PP
GOTEBORG	60.00	31.6	10	18	7					
BRATISLAVA	60.58	43.2	10	13	-2				12	24 PP
TUCSON TELE.	60.82	298.6	10	17	1					
TUCSON	60.91	298.5	10	16	-1					
BOZEMAN	61.80	313.7	10	22	-1					
SALT LAKE C.	61.95	308.2	10	23	-1					
BUTTE	62.89	314.0	10	29	-1					
UPPSALA	63.46	30.3	10	36	2					
HUNGRY HORSE	64.12	316.5	10	36	-2				13	27 PP
BOULDER CITY	64.19	302.7	10	39	0					
SOFIA	64.38	49.8	10	40	0					
RESOLUTE	64.92	347.2				19	27	3		
EUREKA	65.07	306.6	10	44	0					
KIRUNA	66.85	22.2	10	57	1					
PASADENA	67.00	300.8	10	56	-1	20	2	12		
NORD	67.26	4.5	10	57	-1					
RENO	68.04	306.7	11	4	1					
FRESNO	68.17	303.8	11	10	6					
MINERAL	69.38	307.7	11	11	0					
LICK	69.60	304.5	11	15	2					
PULKOVO	69.76	31.6	11	12	-2					
SHASTA	69.96	308.1	11	14	-1					
HELWAN	71.46	63.3	11	24	0					
APATITY	71.68	23.4	11	27	2					
MOSCOW	73.66	35.8	11	36	-1					
JERUSALEM	74.51	60.8	11	41	-1					
KSARA	74.75	58.6	11	44	1					
LWIRO	75.81	96.4	11	51A	2					
SOTCHI	76.29	48.2	11	52	0					

ASTRIDA			76.80	96.5	11 53	-2					
COLLEGE			81.11	335.0	12 18	0					
MATUSIRO			128.09	355.9	19 9	1					

SEPTEMBER 20 17.H 9.M 34.S EPICENTRE -6.51 154.85 DEPTH= 65.KM

DEPTH OF FOCUS= 0.005R

A=-0.89947 B= 0.42222 C=-0.11260 D= 0.4249 E= 0.9052
G= 0.1019 H=-0.0478 K=-0.9936 HT= 6.9

SE= 2.15

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
RABAUL	3.52	310.5	0 55	1				
PORT MORESBY	8.15	248.9	1 57K	-1	3 28	-2		
CHARTERS TS.	15.80	211.1	3 39	-1	6 43	10		
NOUMEA	19.28	145.7	4 20A	-2	7 54	3		
BRISBANE	20.93	184.5	4 38	-1	8 27	3		
KOROR	24.54	303.7	5 14	-1	9 43	15		
SUVA	25.73	118.9	5 23A	-3	9 48	0		
RIVERVIEW	27.40	186.7	5 42K	1	10 1	-14		
ADELAIDE	31.96	205.6	6 21	-1	11 28	1		9 11 PCP
AFIAMALU	33.63	105.3	6 46	10				9 11 PCP
ONERAHI	34.19	151.1	6 43	2				
TUAI	37.94	151.2			12 57	-3		8 10 PP
COBB RIVER	37.94	157.8	7 14	1				
KAIMATA	38.75	160.3	7 26	6				
WELLINGTON	38.91	155.9	7 20	-1	13 13	-1		8 55 PP
MANILA	39.59	302.1	7 26	-1	13 22	-3		
GEBBIES PASS	40.21	159.9	7 29	-3				
BAGUIO CITY	40.85	304.3	7 37	0	13 45	2		
HENGCHUN	43.81	311.3	7 25	-36				
TAWU	43.91	311.8	8 4	2				
HSINKONG	44.02	313.0	8 4	1	14 36	6		
PERTH	44.31	230.0	8 6	1	14 47	13		9 56 PP
HWALIEN	44.37	314.2	8 9	3				
ILAN	44.79	315.2	7 53	-16	15 7	26		
ABUYAMA	45.00	337.4	8 10	-1				
TAIPEI	45.11	315.3	8 17	5	14 47	2		
MATUSIRO	45.58	341.2	8 13A	-2	14 49	-3		9 56 PCP
NAGASAKI	45.68	330.2	8 15	-1	14 48	-6		
SENDAI	46.40	344.8	8 21	-1	15 2	-2		
LEMBANG	46.90	266.7	8 26	0	15 14	3		
DJAKARTA	47.72	267.6	8 31A	-1	15 23	1		
HONG KONG	49.06	306.9	8 44A	1	15 45	4		9 49 PCP
ZO-SE	49.35	321.2	8 44A	-1	15 47	2		10 35 PP
CANTON	50.16	307.3	8 53A	2				
NANKING	51.49	320.3	9 2A	1	16 20	5		10 57 PP
VLADIVOSTOK	53.61	339.2	9 16	-1				
HONOLULU	53.79	57.8	9 17	-1	16 36	-10		20 56
KIPAPA	53.91	57.7	9 18	-1				
PHU-LIEN	54.58	301.1	9 23	-1	16 59	2		
CHANGCHUN	56.78	334.7	9 38A	-2				
MEDAN	56.97	278.5	9 40	-1	17 38	9		
PEKING	58.44	325.7	9 50A	-1	17 48	0		10 45 PCP
SIAN	59.38	316.2	9 58	0	18 3	3		
KUNMING	59.65	303.9	10 1A	1	18 10	6		10 52 PCP
DUMONT	60.93	186.7	10 7	-2	18 22	2		
CHENGTU	61.08	310.2	10 9A	-1	18 25	3		18 34 PS
PORT BLAIR	64.38	286.2	10 34	3	19 4	1		15 34 PCS
CAPE HALLETT	66.41	174.9	10 44A	0	19 34	6		12 59 PP
WILKES	66.97	197.9	10 48	0	19 36	1		
CHITTAGONG	68.01	297.1	10 55K	1	19 48	1	11 17	13 29 PP
ULAN-BATOR	68.63	327.6	10 58	0	19 51	-4		
SHILLONG	68.94	300.4	11 1A	1	20 0	2		13 28 PP
OASIS-BUNG.	70.15	200.5	11 7	-1	20 14	1		
LHASA	70.95	304.3	11 13A	1	20 26	4		13 47 PP
YAKUTSK	71.04	347.8	11 11	-2				
SCOTT BASE	71.58	177.4	11 16	0	20 41	12		16 12 PPP
IRKUTSK	72.59	330.2	11 14	-8				
MIRNY	73.10	201.6	11 24	-1				14 10 PP
CHATRA	73.35	300.4	11 26	-1				
BOKARO	73.74	297.0	11 30K	1	20 56	3		

COLOMBO	75.99	278.7	11	46	4					
HYDERABAD	79.08	289.1	11	59A	0	21	51	-1	15	3 PP
TIKSI	79.84	351.9	12	2	-1	21	46	-14		
AGRA	81.34	298.6	12	9A	-2	22	11	-4	15	48 PP
DEHRA DUN	81.98	301.8	12	16	2	22	20	-2	17	9 PPP
COLLEGE	82.69	21.2	12	16	-2					
BYRD STATION	82.87	169.9	12	17	-2	22	36	5		
SOUTH POLE	83.53	180.0	12	22	0	22	44	7	15	47 PP
BOMBAY	84.60	289.6	12	27	-1	22	52	4		
SEMIPALATNSK	85.28	321.7	12	29	-2					
LAHORE	85.35	302.3	12	30	-1					
WARSAK DAM	88.08	304.4	12	54	9					
BERKELEY	88.36	51.8	12	46A	0	23	27	3		
SHASTA	88.73	49.0	12	48A	0					
LICK	88.76	52.4	12	48A	0					
NAMANGAN	89.10	311.2	12	50	1					
MINERAL	89.27	49.4	12	50A	0					
FRESNO	90.14	53.2	12	54	0					
RENO	90.51	50.4	12	57A	1					
PASADENA	91.11	55.9	12	59A	0	23	39	-10	13 30	16 39 PP
QUETTA	91.42	300.0	13	0	0	23	57	5	23	26 SKS
EUREKA	93.45	50.8	13	11	1				30	16 PKKP
BOULDER CITY	94.03	54.4	13	13	1				16	58 PP
HUNGRY HORSE	95.55	42.1	13	18	-1				17	3 PP
BUTTE	96.42	44.5	13	25	2				17	8 PP
SALT LAKE C.	96.70	49.8	13	25	1					
TUCSON	97.07	58.4	13	30	4				17	21 PP
BOZEMAN	97.47	44.9	13	28	0					
HALLEY BAY	98.10	179.6	13	31	0				17	36 PP
KHEYS	98.57	350.1	13	26	-7					
RAPID CITY	103.08	46.4	13	53	0				17	50 PP
NORD	104.83	358.7				26	7	22		
MAKHACH-KALA	107.10	312.9	14	3	777					
TACUBAYA	107.15	71.8	13	58	777				18	34 PP
APATITY	107.63	339.9	14	13	777	24	43	-1	18	22 PP
TIFLIS	109.25	311.8	14	18	777				28	17 PS
SODANKYLA	109.98	341.1							29	24
MOSCOW	110.49	327.5	18	36	11				19	2 PP
FAYETTEVILLE	110.72	54.0	18	32	7				29	35
KIRUNA	111.60	343.0	18	28	1					
PULKOVO	112.47	333.2	18	49	20				28	42 PS
SOTCHI	112.59	314.6							19	19 PP
FLORISSANT	113.31	50.6							19	21 PP
ST. LOUIS 1	113.44	50.7	18	30	-1	25	32	22	19	16 PP
HELSINKI	114.59	335.0	18	34	1					
SCORESBY SD.	116.07	358.8							29	22 PS
SIMFEROPOL	116.10	317.2							19	43 PP
SKALSTUGAN	116.98	342.2	18	37	-1					
KSARA	117.59	304.7	18	40	1	25	35	10	19	58 PP
UPPSALA	117.73	337.2	18	39	0					
JERUSALEM	118.52	302.6							19	58 PP
KISHINEV	118.81	320.8							19	49 PP
LWOW	120.43	325.4	18	44	0				19	36
KIMBERLEY	120.52	231.3	18	46K	2					
MORGANTOWN	120.92	47.4	18	46A	1					
HERMANUS	121.59	222.7				25	52	13	30	8 SCSP
OTTAWA	121.64	39.7	18	47A	0				20	36 PP
COLUMBIA	121.71	54.0	18	48	1					
HELWAN	122.17	301.2	18	49	1				30	32 PS
KRAKOW	122.58	327.2							20	41
CHAPEL HILL	122.75	51.2	18	49	0					
BREBEUF	122.91	38.8	18	49A	0					
SHAWINIGAN	122.94	37.4	18	46A	-3				20	37 PP
SEVEN FALLS	123.80	36.0	18	51A	0				27	30 SKKS
ASTRIDA	124.47	262.4	18	54A	2				20	50 PP
POTSDAM	124.58	332.6	18	54	2					
FORDHAM	124.79	44.0	18	53	0				30	54
BRATISLAVA	125.17	326.6	18	56	3				20	50 PP
COLLMBERG	125.33	331.6	18	54	0					
PRUHONICE	125.42	329.6	18	55	1				20	47 PP
PRAGUE	125.42	329.7	18	58	4				20	49 PP
LWIRO	125.45	262.6	18	56A	2				31	6 PS
HARVARD	125.62	41.2	18	56	2					
HALLE	125.68	332.3	18	51	-3	25	48	-4	20	49 PP
WESTON	125.83	41.3	18	53A	-2					
JENA	126.24	332.0	18	56	1				20	53 PP
PLAUEN	126.26	331.3	18	54	-1				21	6 PP
SONNEBERG	126.79	331.7	18	56	0					
HUANCAYO	126.80	110.2	19	0	4					

MUNSTER	127.26	335.1	18	58	1					
DE BILT	128.15	336.7							22	26 PKS
BENSBERG	128.19	334.5	19	0	1					
DURHAM	128.28	342.8	18	58K	-1					
TRIESTE	128.51	325.7	19	0	0				21	10 PKS
STUTTGART	128.84	331.4	19	0	0				21	14 PP
TUBINGEN	129.07	331.2	19	0	-1					
EBINGEN	129.36	331.0	18	56	-5					
HALIFAX	129.38	35.1	19	1A	0				22	20 PKS
UCCLE	129.48	336.1							22	9 PKS
STRASBOURG	129.65	332.1	19	4	2				21	12 PP
CHINCHINA	129.77	88.9	19	12	10				22	27 PKS
CHUR	130.00	329.4	19	4	1					
KEW	130.69	339.7							22	31 PKS
RATHFARNHAM	130.88	345.1	19	5	1					
NEUCHATEL	131.17	331.1	19	5	0					
BOGOTA	131.28	89.6	19	8	3				22	31 PKS
ROME	131.49	322.5	19	5	0	26 13	6		31	43 PS
MESSINA	131.52	316.7	19	6	0	25 53	-14		21	25 PP
FUQUENE	131.68	88.5	19	12	6				22	32 PKS
LA PAZ	131.72	118.8	19	10A	4				22	38 PKS
PARIS	131.79	335.7	19	3	-3				21	31 PP
CLERMONT-FD.	133.87	332.6	19	11	1				21	44 PP
BERMUDA	135.11	49.7	19	14	2				21	46 PP
SAN JUAN	138.39	69.7	19	10	-8				23	16 PP
SETIF	139.32	320.9	19	17	-3				22	14 PP
ALGIERS UNI.	140.38	323.5	19	24	2				22	21 PP
ALICANTE	141.22	328.4	19	22	-1	26 30	5			
TOLEDO	141.75	333.4	19	22	-2				22	28 PP
SERRA PILAR	142.50	339.3	19	25K	-1					
RELIZANE	142.54	324.6	19	23	-3				22	23 PP
ST. CLAUDE	142.98	72.0	19	26	0					
ALMERIA	143.39	328.8	19	23A	-4				22	52 PP
GRENADA	143.50	78.6	19	21	-6					
GRANADA	143.70	330.3	19	48	20				23	30 PP
FORT FRANCE	143.73	74.0	19	26	-2					
TRINIDAD	143.81	80.9	19	29	1					
ST. VINCENT	143.83	76.6	19	31K	3					
MALAGA	144.45	330.7	19	25K	-4				22	43 PP
LISBON	144.82	338.0	19	28K	-2					
BARBADOS	145.45	76.4	19	30K	-1					
TAMANRASSET	146.32	301.9	19	34A	2				23	8 PKS
MBOUR	168.79	314.9	20	2	3				25	13 PP

SEPTEMBER 21 5.H 45.M 18.S EPICENTRE 38.36 141.92 DEPTH= 61.KM

DEPTH OF FOCUS= 0.004R

A=-0.61884 B= 0.48484 C= 0.61803 D= 0.6167 E= 0.7872
G=-0.4865 H= 0.3812 K=-0.7862 HT= -1.1

SE= 2.37

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
ISINOMAKI	0.48	278.5	0	10K	-4	0	17	-7				
SENDAI	0.81	263.9	0	16K	-1	0	25	-5				
MIZUSAWA	0.99	321.4	0	18	-1	0	30	-3				
YAMAGATA	1.24	265.4	0	20	-2	0	32	-7				
MIYAKO	1.29	1.6	0	22K	-1	0	35	-5				
HUKUSIMA	1.30	242.4	0	20K	-3	0	36	-4				
MORIOKA	1.46	336.6	0	25K	0	0	43	-1				
ONAHAMA	1.63	210.3	0	27	0	0	44	-4				
SAKATA	1.72	288.8	0	28	-1	0	45	-5				
SHIRAKAWA	1.83	228.0	0	29	-1	0	42	-11				
AKITA	1.96	314.3	0	32K	0	0	57	1				
HATINOHE	2.19	352.1	0	35	0	1	3	2				
MITO	2.29	210.8	0	34	-3	1	0	-4				
NIIGATA	2.31	259.9	0	40	3	1	9	5				
UTUNOMIYA	2.44	222.7	0	38	-1	1	7	-1				
KAKIOKA	2.54	213.7	0	36	-4	1	3	-7				
AOMORI	2.61	340.6	0	43	2	1	17	5				
TYOSI	2.77	198.4	0	44	1	1	13	-3				
AIKAWA	2.91	264.4	0	46	1							
KUMAGAYA	3.00	223.4	0	44	-3	1	27	5				
MAEBASI	3.00	230.1	0	45A	-2	1	25	3				

TAKADA	3.17	247.8	0	49	0						
TOKYO C.M.O.	3.19	213.7	0	48	-1	1	21	-6			
TITIBU	3.29	224.6	0	46	-5						
OIWAKE	3.37	234.0	0	51	-1	1	40	9			
NAGANO	3.41	241.4	0	52	0	1	30	-2			
YOKOHAMA	3.45	212.6	0	56	3	1	31	-2			
MATUSIRO	3.46	239.6	0	52K	-1	1	33	0			
HAKODATE	3.54	345.3	0	56	2	1	39	4			
MATUMOTO	3.79	237.4	0	59	1	1	51	9			
HUNATU	3.81	222.4	1	0	2	1	44	2			
MERA	3.82	206.7	0	59	1	1	36	-6	2	1	
KOHU	3.82	225.6	0	56	-2	1	48	6			
URAKAWA	3.84	9.6	1	2	4	1	45	2			
MORI	3.88	344.9	1	2	3	1	56	12	1	23	
AJIRO	4.01	215.3	1	1	0	1	44	-3			
MISIMA	4.02	217.3	0	58	-3	1	44	-3			
MURORAN	4.03	349.9	1	0	-1	1	54	6			
WAZIMA	4.09	257.7	1	4	2						
TOYAMA	4.10	247.6	1	2	0				1	25	
OSIMA	4.13	210.5	1	2	0	1	46	-4			
TAKAYAMA	4.33	240.8	1	8	3						
IIDA	4.33	230.4	1	5	0	2	2	7			
SHIZUOKA	4.41	221.0	1	14	8	2	4	7			
SUTTSU	4.62	344.3	1	11	2	2	17	15			
OBIHIRO	4.66	11.6	1	9	-1	2	12	9			
SAPPORO	4.72	354.9	1	10	-1	2	8	3			
OMAESAKI	4.79	219.6	1	17	5	2	5	-2			
HAMAMATU	4.96	224.2	1	16	2						
KUSIRO	4.98	21.4	1	10	-4	2	7	-4			
HUKUI	5.07	244.7	1	18	3						
GIHU	5.08	236.0	1	16	0	2	14	0			
NAGOYA	5.09	232.8	1	14	-2	2	14	0			
IBUKISAN	5.35	237.9	1	21	2	2	29	9			
TSURUGA	5.41	241.8	1	27	7	2	32	10			
ASAHIGAWA	5.42	3.4	1	20	0	2	38	16			
HIKONE	5.50	237.6	1	23	2	2	41	17			
HATIDYOZIMA	5.52	198.6	1	32	10				2	19	
KAMEYAMA	5.61	233.0	1	27	4	2	26	-1			
TU	5.66	231.8	1	25	1						
NEMURO	5.69	28.0	1	22	-2	2	20	-9			
MAIZURU	5.92	242.8	1	30	3	2	43	8			
ABASHIRI	5.93	16.7	1	45	18				2	33	
NARA	6.13	235.0	1	32	2	2	41	1			
ABUYAMA	6.18	237.6	1	30K	-1	3	1	20			
OWASE	6.30	228.9	1	34	1	2	46	2			
OSAKA	6.34	236.2	1	37	4	3	9	24	3	52	
TOYOOKA	6.35	245.8	1	34	1	2	37	-8			
KOBE	6.55	238.0	1	33	-3	3	3	13			
WAKAYAMA	6.83	235.0	1	40	0	2	59	2			
SUMOTO	6.95	237.0	1	41	-1	3	11	11	3	36	
SIOMISAKI	6.99	227.4	1	37	-5	3	14	13			
HIMEJI	7.18	239.8	1	40	-5	3	3	-3			
TOKUSIMA	7.32	236.4	1	47	0	3	12	3			
TAKAMATU	7.52	240.0	2	26	36				3	38	
KOTI	8.33	237.3	2	0	-1	2	58	-36			
Y.-SAKHLINSK	8.60	3.7	2	4	0						
HIROSIMA	8.63	245.4	2	7	2	3	49	7			
HAMADA	8.64	249.4	2	5	0	3	52	10			
MATUYAMA	8.69	241.4	2	6	0	4	7	24			
VLADIVOSTOK	8.97	305.2	2	10	1				5	2	
SIMIDU	9.17	235.3	2	8	-4	4	1	6			
OOITA	9.81	241.6	2	34	13	4	48	38			
HUKUOKA	10.47	246.4				4	19	-8			
CHANGCHUN	13.66	298.8	3	13	1	5	48	5			
ZO-SE	18.50	253.2	4	13K	0	7	34	0			
NANKING	19.89	258.6	4	26	-3						
PEKING	20.01	282.9	4	28	-2	8	7	0	4	46	PP
MAGADAN	21.96	12.1	4	50	0						
YAKUTSK	24.85	346.3	5	17	-1						
SIAN	26.83	271.4	5	38	1	10	18	11			
ULAN-BATOR	27.08	302.0	5	40	1						
HONG KONG	28.66	244.0	5	51	-2	10	46	10			
BAGUIO CITY	28.79	226.5	5	53	-1						
CANTON	28.80	246.4	5	55	1	10	46	8	6	11	
MANILA	30.06	223.7	6	3	-3				8	34	
CHENGTU	32.00	267.7	6	20	-3	11	25	-4	6	38	
KUNMING	35.66	259.8	6	52	-2	12	23	-2			
LHASA	42.62	274.0	7	53	1						
SHILLONG	43.85	268.3	8	1	-1						

CHATRA	46.93	272.7	8 25	-1					
COLLEGE	47.76	32.9	8 33	0					
PORT MORESBY	47.76	173.0	8 28	-5	15 25	1	8 40	11 20	PPP
NAMANGAN	52.78	296.5	9 12	1					
LAHORE	54.71	284.8	9 26	1					
WARSAK DAM	55.71	288.7	9 32	-1					
CHARTERS TS.	58.20	175.2	9 51	1					
NORD	59.76	356.4	10 0	-1					
QUETTA	60.95	286.9	10 8A	-1	18 24	3			
RESOLUTE	61.22	14.7	10 10A	-1	18 22	-2		22 24	SS
APATITY	61.65	335.6	10 13A	-1					
SODANKYLA	63.90	337.1	10 28	-1					
KIRUNA	65.42	339.2	10 38A	-1				10 56	
MOSCOW	66.43	323.3	10 44	-1					
PULKOVO	67.26	329.3	10 49	-1				19 19	
HELSINKI	69.08	331.5	10 51	-11					
SHASTA	69.99	53.6	11 22	15					
HUNGRY HORSE	70.54	43.3	11 11	1					
MINERAL	70.68	53.6	11 26	15					
SKALSTUGAN	70.83	338.6	11 12	0					
BERKELEY	71.66	56.0	11 34	17					
UPPSALA	71.95	334.0	11 18A	-1					
SOTCHI	72.31	311.8	11 21	0					
BOZEMAN	73.79	44.3	11 31	1					
FRESNO	73.89	55.8	11 46	16					
SIMFEROPOL	74.66	315.5	11 34	-1					
EUREKA	74.71	51.7	11 37	2					
GOTEBORG	75.50	334.8	11 41	1					
SALT LAKE C.	76.40	48.6	11 47	2					
PASADENA	76.52	57.2	11 41	-4					
BOULDER CITY	77.56	53.9	11 54	3					
RAPID CITY	79.04	41.8	12 1	2					
LARAMIE	79.64	45.0	12 5	3					
HALLE	80.40	330.9	12 3	-4				12 19	PCP
PRAGUE	80.55	328.8	12 10	3				13 53	
PRUHONICE	80.57	328.7	12 7	0				14 56	
KSARA	80.70	305.8	12 10	2					
JENA	81.00	330.8	12 9	-1					
SONNEBERG	81.58	330.6	12 13	0					
MUNSTER	81.61	333.4	12 14	1				12 31	
DURHAM	82.10	339.6	12 9K	-6					
JERUSALEM	82.44	304.6	12 19A	2					
TUCSON	82.49	54.7	12 20	3					
STUTTGART	83.65	330.7	12 23	0					
TUBINGEN	83.90	330.7	12 24	-1					
EBINGEN	84.22	330.5	12 27	1					
TRIESTE	84.28	326.3	12 24	-2					
STRASBOURG	84.35	331.4	12 29	2					
RATHFARNHAM	84.65	341.5	12 30K	2				14 21	
PARIS	86.05	334.5	12 37K	2				12 57	
FAYETTEVILLE	89.58	42.3	12 54	2					
SHAWINIGAN	89.94	23.1	12 54K	0					
OTTAWA	90.00	25.5	12 55K	1					
BREBEUF	90.60	24.1	12 53	-4					
TAMANRASSET	106.71	318.4	14 9	777				18 35	PP
MIRNY	111.08	198.9	13 40	777				21 28	PPP
SOUTH POLE	128.17	180.0	19 0	0					
BYRD STATION	128.97	167.2	18 54	-7					
HUANCAYO	137.76	61.7	14 10	777					
LA PAZ	145.82	58.8	19 36	5					

SEPTEMBER 21 13.H 29.M 8.S EPICENTRE -14.97-174.03 DEPTH= 132.KM

DEPTH OF FOCUS= 0.016R

A=-0.96123 B=-0.10053 C=-0.25677 D=-0.1040 E= 0.9946
G= 0.2554 H= 0.0267 K=-0.9665 HT= 5.8

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
AFIAMALU	2.44	64.3	0	37	-3	1	7	-4					
SUVA	7.89	245.4	1	57	4	3	23	2					
NOUMEA	19.87	245.6	4	27A	4						8	7	
ONERAHI	23.17	204.6	5	17	22								
BRISBANE	33.02	242.4	6	21	-4						14	3	SS

RIVERVIEW	36.61	232.9								14 58	SS
CHARTERS TS.	38.14	256.6	7 5	-3						10 7	
PORT MORESBY	38.31	273.8	7 8	-1	12 50	-3	7 40			9 11	PCP
MELBOURNE	42.74	229.9	7 43K	-3							
CAPE HALLETT	58.05	185.6	9 47	5	17 42	12				10 22	PCP
SCOTT BASE	63.62	184.5	10 18	-1							
MATUSIRO	68.22	320.1	10 46	-2						20 16	SCS
BYRD STATION	69.47	171.3	10 54	-2	19 54	3	11 27				
LICK	71.64	41.7	11 9	0			11 53				
PASADENA	72.16	46.1	11 13	1	20 29	7				12 28	
FRESNO	72.51	43.1	11 16	2							
SHASTA	73.19	38.5	11 19	1							
MINERAL	73.45	39.2	11 20	0			11 58				
RENO	74.09	40.7	11 23	0							
OASIS-BUNG.	74.50	204.8	11 23	-3						19 0	
SOUTH POLE	75.12	180.0	11 28	-1			12 5				
BOULDER CITY	75.45	46.0	11 32	1			12 11				
EUREKA	76.52	42.5	11 38	1			12 16				
TUCSON	76.53	51.1	11 38	1			12 11				
LEMBANG	77.05	266.3	11 39K	-1							
ZO-SE	77.22	307.3	10 59	-42						12 28	*SP
NANKING	79.46	307.2	11 55	2						12 41	*SP
SALT LAKE C.	79.89	43.0	11 57	1							
CHANGCHUN	80.47	320.2	11 59	0						12 47	*SP
CANTON	80.52	297.0	11 56	-3						12 47	*SP
COLLEGE	82.06	11.0	12 5	-2			12 41				
HUNGRY HORSE	82.47	35.6	12 8	-1							
BOZEMAN	82.83	39.0	12 12	1							
LARAMIE	84.34	44.8	12 20	2							
PEKING	84.74	313.6	12 20	0						13 9	*SP
SIAN	87.96	306.1	12 38	2						13 25	*SP
KUNMING	90.33	295.7	12 48	1						13 37	*SP
RESOLUTE	101.48	15.5			25 8	5				24 10	SKS
RACIBORZ	143.60	346.7	19 17	-2							
JENA	143.85	354.0	19 19	-1			20 4			20 58	PP
BENSBERG	144.09	358.7	19 20	0							
PRAGUE	144.33	350.6	19 23	2						22 22	
PRUHONICE	144.40	350.5	19 21	0			20 4			22 51	PP
SONNEBERG	144.43	354.2	19 20	-1							
BRATISLAVA	145.64	346.8	19 27	4							
PARIS	146.14	4.1	19 29	5			20 1				
STUTTGART	146.20	356.2	19 26	2			20 0				
TUBINGEN	146.44	356.3	19 26	2							
STRASBOURG	146.46	357.8	19 29K	5			20 0			20 25	*SPKP
EBINGEN	146.80	356.3	19 28	3							
TRIESTE	148.73	349.5	19 30	2			20 4				
CLERMONT-FD.	149.21	3.9	19 33	4							
ASTRIDA	150.70	235.3	19 38	7							
LWIRO	151.65	234.7	19 41	9							
HELWAN	152.35	306.7	19 43	10						24 13	PP
GRANADA	156.30	19.3	20 10A	32						23 50	PP
SETIF	158.86	1.3	19 38	-4						20 20	PKP2
TAMANRASSET	172.22	3.1	20 10	17						21 19	PKP2

SEPTEMBER 22 7.H 0.M 17.S EPICENTRE -5.52 110.06 DEPTH= 551.KM

DEPTH OF FOCUS= 0.082R

A=-0.34151 B= 0.93501 C=-0.09558 D= 0.9393 E= 0.3431
G= 0.0328 H=-0.0898 K=-0.9954 HT= 7.0

SE= 1.32

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
DJAKARTA	3.28	258.4	1 16K		-2	2 19		0					
MEDAN	14.53	308.2	3 8A		4	5 41		8					
CHITTAGONG	32.97	327.8							7 7				
SHILLONG	35.60	331.0	6 14K		1								
PORT MORESBY	36.96	98.3	6 25K		1								
CHARTERS TS.	38.01	115.6	6 32K		0						11 44		
CHATRA	39.06	326.5	6 41		0								
ADELAIDE	39.45	141.7	6 45		1	12 6		-2					
RIVERVIEW	47.35	131.9	7 47		1								
MATUSIRO	49.46	30.0	8 0		-2				9 48		9 34		PCP
WARSAK DAM	53.57	320.0	8 31K		0								
QUETTA	54.45	313.3	8 36		-2	15 30		-5					

TANANARIVE	62.24	251.6	9	30K	0						
DUMONT	64.46	167.3	9	43	-1						
SCOTT BASE	77.92	169.6	11	3K	1						
SOUTH POLE	84.52	180.0	11	36	0	21	4	-12	13	38	
BYRD STATION	91.06	172.4	12	7	0				14	7	
UPPSALA	95.96	329.5	12	28	-1						
SHASTA	121.55	45.0	17	54	3						
MINERAL	122.24	45.1	17	54A	2						
HUNGRY HORSE	123.24	33.7	17	55	1						
LICK	123.33	48.5	17	57A	2						
RENO	123.83	45.4	17	58	2						
EUREKA	126.54	43.9	17	52	-9						
PASADENA	127.11	50.9	18	4	2						
RAPID CITY	131.77	32.0	18	14	3						
SHAWINIGAN	139.05	3.0	18	26	2						
FAYETTEVILLE	142.29	33.0	18	29K	-2						
WESTON	143.28	1.7	18	31A	-1						
COLUMBIA	149.85	18.6	18	50	8						
HUANCAYO	161.74	162.9	19	3	6						19 51 PKP2

SEPTEMBER 22 8.H 37.M 24.S EPICENTRE 27.38 140.12 DEPTH= 393.KM

DEPTH OF FOCUS= 0.057R

A=-0.68239 B= 0.57022 C= 0.45738 D= 0.6412 E= 0.7674
G=-0.3510 H= 0.2933 K=-0.8893 HT= 2.6

SE= 2.15

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TORISIMA	3.10	2.9	1	3	-1	1	54	0				
HATIDYOZIMA	5.71	357.6	1	36	6	2	36	-5				
SIOMISAKI	7.12	329.3	1	46	0	3	3	-6				
OMAESAKI	7.38	347.7	1	49	0	3	14	-1				
MERA	7.52	358.2	1	49	-1	3	12	-5				
AJIRO	7.70	353.8	1	54	2	3	17	-4				
SHIZUOKA	7.71	349.4				3	20	-1				
MISIMA	7.78	352.9	1	51	-2	3	18	-5				
YOKOHAMA	8.04	357.3	1	54	-2	3	24	-4			3	55
KAMEYAMA	8.08	338.1	2	0	3	3	32	3				
HUNATU	8.18	352.3	1	57	-1	3	29	-2				
TOKUSIMA	8.20	325.8				3	34	3				
NAGOYA	8.22	341.7	1	58	-1	3	32	0				
OSAKA	8.25	332.6				3	39	7				
SUMOTO	8.28	328.4	1	59	0	3	38	5				
TOKYO C.M.O.	8.28	357.9	2	0	1	3	27	-6				
KOHU	8.33	351.3	2	2	2	3	32	-2				
TYOSI	8.34	4.1	2	0	0	3	31	-3				
KOBE	8.42	331.0				3	33	-3				
ABUYAMA	8.42	333.6	2	3K	2	3	36	0				
GIHU	8.49	341.2	2	2	0	3	37	-1				
HIKONE	8.54	338.2	1	58	-4						4	31
IBUKISAN	8.59	339.1	1	57	-6							
TITIBU	8.62	354.4	2	10	7							
KUMAGAYA	8.77	356.1	2	3	-2	3	41	-2				
MIYAZAKI	8.82	303.0	2	12	7	3	44	0				
KAKIOKA	8.83	0.3	2	1	-5	3	27	-17				
MITO	8.98	1.8	2	6	-1						2	42
OIWAKE	9.03	351.9	2	11	3	3	57	8				
MATUMOTO	9.03	348.9	2	8	0	3	49	0				
MATUYAMA	9.04	317.2	2	10	2	3	52	3				
MAEBASI	9.04	354.6	2	6	-2	3	41	-8				
UTUNOMIYA	9.15	358.7	2	10	1	3	42	-9				
MATUSIRO	9.29	350.5	2	9	-2	3	52	-2			3	22
KAGOSIMA	9.33	298.9	2	12	1	4	4	9			2	36
OOITA	9.38	310.5	2	16	4	4	34	38				
NAGANO	9.41	350.5	2	13	1	3	53	-4				
ONAHAMA	9.57	3.8	2	14	0	3	54	-6			3	3
TOYAMA	9.62	345.8	2	17	2	4	4	3				
SHIRAKAWA	9.72	0.5	2	15	-1	3	58	-5				
KUMAMOTO	9.79	305.9	2	20	3	4	14	9				
SAGA	10.30	307.0	2	33	10	4	26	10				
NAGASAKI	10.35	303.5	2	27	4							
HUKUSIMA	10.35	1.6	2	22	-1	4	10	-7				
HUKUOKA	10.40	308.8	2	24	0	4	16	-2				

YAMAGATA	10.85	1.0	2	29	0	4	23	-4				
SENDAI	10.88	3.3	2	27	-3	4	23	-5			4	39
ISINOMAKI	11.07	4.9	2	30	-2	4	28	-4				
SAKATA	11.50	358.9	2	36	-1	4	41	0				
MIZUSAWA	11.75	3.9	2	39	-1	4	42	-4				
AKITA	12.31	359.9	2	49	3	4	58	0			3	26
MORIOKA	12.32	3.8	2	45	-1	4	56	-2				
MIYAKO	12.34	6.7	2	46	0	4	56	-2				
HATINOHE	13.17	4.7				5	18	2				
AOMORI	13.42	2.2				5	19	-2				
HAKODATE	14.38	1.8				5	45	5				
MORI	14.69	1.3	3	13	1	5	50	4				
URAKAWA	14.90	7.7	3	18	4	5	53	3				
TOMAKOMAI	15.16	4.1				6	0	5				
SAPPORO	15.69	3.3	3	22	0	6	5	0			7	30
OBIHIRO	15.71	8.4	3	24	2	6	11	6				
KUSIRO	15.95	11.5	3	23	-2	6	14	4				
NEMURO	16.52	14.1	3	31	0	6	24	3			6	45
ZO-SE	16.94	287.2				6	32	3				
VLADIVOSTOK	17.07	339.1	3	36	0						6	36
NANKING	19.09	289.2	3	54	-2	7	10	3			7	46 PCP
Y.-SAKHLINSK	19.65	5.3	4	3	1	7	23	6			5	49
CHANGCHUN	20.31	327.8	4	8K	0	7	33	4			5	50 *SP
BAGUIO CITY	21.12	243.0	4	15	-1	7	50	7			13	15 SCS
MANILA	21.90	238.3	4	21	-3	7	54	-2				
TRUK	22.71	148.5	4	29	-2	8	45	36				
PEKING	23.50	308.6	4	37	-1							
HONG KONG	24.06	263.6	4	41	-2	8	31	0				
CANTON	24.63	266.0				6	44	-116				
SIAN	27.58	292.1	5	14	-1	9	27	0				
PHU-LIEN	31.20	265.2				10	25	1				
CHENGTU	31.66	284.7	5	49	-1	10	27	-4			12	38 *SS
ULAN-BATOR	32.98	317.4	6	1	-1							
MAGADAN	33.00	10.0	6	2	0	10	52	1				
KUNMING	33.59	274.7	6	5	-2	10	59	-1			13	43 SS
IRKUTSK	36.48	322.8	6	29	-2							
PORT MORESBY	37.19	168.5	6	36A	-1	11	51	-4	7	11	14	51 SSS
LHASA	42.93	285.0	7	25	1	13	20	1			16	39 SS
SHILLONG	43.01	279.0	7	23K	-1							
CHITTAGONG	43.89	274.5	7	32	1	13	41	8				
TIKSI	44.74	355.0	7	36	-2						3	34 PP
CHATRA	46.83	282.1	7	53	-1							
CHARTERS TS.	47.48	172.2	7	58	-1						10	9
DEHRA DUN	53.85	288.9	8	54	8						15	50
FRUNSE	54.49	304.7	8	50K	-1							
KIPAPA	56.16	81.6	9	3	0							
COLLEGE	57.96	28.6	9	14	-1							
WARSAK DAM	58.36	294.7	9	17K	-1							
TASHKENT	58.62	303.6	9	19	0						21	6 SS
STALINABAD	59.54	300.5	9	26	0						17	7
RIVERVIEW	61.76	169.6	9	52A	12				10	18		
SVERDLOVSK	61.88	322.2	9	41	0							
ADELAIDE	61.98	181.3	9	41	-1						11	59
QUETTA	63.14	291.7	9	48K	-1	17	48	0	10	13	18	36 *SS
KARACHI	64.44	287.1	9	59K	1							
ASHKABAD	67.62	302.2	10	18K	0							
NORD	70.60	356.5	10	36	0							
APATITY	71.08	337.1	10	37K	-1	19	21	-1				
RESOLUTE	72.22	13.2	10	44A	-1							
ALBERNI	72.89	43.1	10	50K	1							
SODANKYLA	73.47	338.3	10	52	0							
HORSESHOE B.	73.78	42.5	10	55	1							
VICTORIA	74.03	43.4	10	56K	0							
KIRUNA	75.17	340.1	11	0	-2							
CORVALLIS	75.69	47.1	11	7A	2							
GORIS	75.86	307.2				20	15	0				
TIFLIS	76.02	309.8	11	7	0							
SHASTA	77.94	50.4	11	18A	1							
HELSINKI	78.04	332.4	11	17	-1							
MINERAL	78.63	50.5	11	23	2							
BERKELEY	79.27	53.0	11	24A	0							
HUNGRY HORSE	79.71	40.7	11	27	0				13	27		
LICK	79.94	53.2	11	29A	1				12	54		
RENO	80.23	50.6	11	31	2							
SKALSTUGAN	80.50	339.0	11	30	-1						14	35 PP
UPPSALA	81.16	334.5	11	33K	-1	21	5	-5				
SIMFEROPOL	81.49	316.4	11	36K	0							
FRESNO	81.51	53.1	11	38	2							
BUTTE	81.74	42.2	11	39	2						12	19

BOZEMAN	82.83	42.0	11 45	2	
EUREKA	82.87	49.2	11 43	0	
PASADENA	83.92	54.8	11 49	1	20 39 -58
GOTEBORG	84.78	334.9	11 52	0	
SALT LAKE C.	84.93	46.5	11 55	2	
BOULDER CITY	85.40	51.8	11 48	-7	
KSARA	85.91	306.0	11 58	0	
SIDA	87.53	350.5	12 7	1	
RAPID CITY	88.32	40.1	12 10	1	
COLLMBERG	88.91	330.0	12 11	-1	
PRUHONICE	89.12	328.3	12 13	0	15 51 PP
JENA	89.80	330.3	12 15	-1	
TUCSON	90.18	53.2	12 19	1	15 59 PP
STUTTGART	92.43	330.0	12 28	0	
TUBINGEN	92.66	329.9	12 30	1	
EBINGEN	92.97	329.7	12 30	-1	
PARIS	95.23	333.4	12 41	0	
PARIS	95.23	333.4	12 41	0	
SOUTH POLE	117.22	180.0	17 59	0	
BYRD STATION	118.57	168.7	18 2	0	
SAN JUAN	127.89	32.1	18 21	1	21 6 PP
DOMINICA	132.72	28.8	18 31	2	21 23
ST. VINCENT	134.67	30.0	18 29	-4	21 25
HUANCAYO	143.47	72.4	18 49K	0	21 53 PP
LA PAZ	151.72	73.4	19 6	4	

SEPTEMBER 22 19.H 5.M 53.S EPICENTRE -33.67-178.07 DEPTH= 77.KM

DEPTH OF FOCUS= 0.007R

A=-0.83350 B=-0.02806 C=-0.55181 D=-0.0336 E= 0.9994
G= 0.5515 H= 0.0186 K=-0.8340 HT= 0.6

SE= 2.67

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
TUAI	6.41	215.7	1	31	-3	2	43	-4					
ONERAHI	6.57	249.3	1	37	1								
AUCKLAND	6.65	239.3	1	43	6	2	58	6					
TONGARIRO	7.55	221.2	1	48	-2	3	17	2					
WELLINGTON	9.49	214.7	2	12	-4	3	54	-8					
COBB RIVER	10.40	222.0	2	24	-4	4	14	-10					
KAIMATA	12.10	220.0	2	50	-1	4	53	-12					
GEBBIES PASS	12.35	213.1	2	51	-4	4	59	-12					
ROXBURGH	15.31	215.5	3	37	4	6	27	6					
SUVA	15.77	347.7	3	35K	-4	5	31	0					
NOUMEA	17.73	305.7	4	4K	1	7	28	12			4	28	PP
AFIAMALU	20.50	17.7	4	37	3	8	7	-7					
RIVERVIEW	25.55	261.0	5	29K	6	9	54	11					
MELBOURNE	30.15	251.4	6	5A	0	11	5	8	6	47	7	27	PP
CHARTERS TS.	34.43	284.1	6	42A	0	11	59	-5					
ADELAIDE	35.51	255.6	6	53	2	12	26	6			9	20	PCP
CAPE HALLETT	39.17	185.6	7	25A	3	13	30	14			9	2	PP
PORT MORESBY	40.05	299.0	7	39	10	13	27	-2			9	32	PPP
DUMONT	41.12	203.9	7	39	1	13	51	6					
SCOTT BASE	44.78	184.5	8	9K	1	15	4	25			9	51	PCP
TRUK	49.88	319.5	8	43	-5								
BYRD STATION	51.74	169.1	9	2A	0	16	13	-3			10	15	PCP
WILKES	52.25	209.1	8	56A	-10	16	29	6					
PERTH	54.70	252.2	9	23	-1	16	57	1			19	10	
OASIS-BUNG.	56.22	208.9	9	33	-2	17	22	6			10	26	PCP
SOUTH POLE	56.51	180.0	9	37A	0	17	45	25			39	3	PKPPKP
HONOLULU	57.88	22.1	9	44A	-2	17	45	7			10	35	PCP
KIPAPA	58.02	22.1	9	46K	-1								
MIRNY	59.21	207.8	9	55	-1	17	56	0			10	44	PCP
HALLEY BAY	69.53	172.6	11	0	-3						13	35	PP
LEMBANG	73.19	273.0	11	25	1	20	48	3					
DJAKARTA	74.20	273.1	11	28K	-2	20	58	2					
MANILA	75.28	298.9	11	36	-1	21	34	26					
BAGUIO CITY	76.78	300.1	11	44	-1	21	22	-3					
ABUYAMA	80.84	322.9	12	6A	-1	22	8	0					
MATUSIRO	80.89	325.7	12	6A	-1	22	6	-2			27	4	SS
CONCEPCION	81.68	128.8	12	29	17	22	36	20					
SANTA LUCIA	84.60	126.7	12	41	15	22	53	7			13	11	
HONG KONG	85.17	300.7	12	30	1	22	51	0			15	39	PP
ZO-SE	86.22	311.4	12	34A	0	22	57	-4			16	22	PP

CANTON	86.30	300.7	12	36A	1	23	9	7	22	57 SKS
MEDAN	86.35	276.7	12	34K	-1	23	9	6		
Y.-SAKHLINSK	87.67	334.3	12	41	0	23	4	-11	23	25 SCS
PASADENA	87.79	45.9	12	41A	-1	23	0	-16	16	8 PP
LICK	88.04	41.6	12	43A	0					
BERKELEY	88.08	40.9	12	43A	0	23	9	-10	16	8 PP
NANKING	88.36	310.7	12	44A	-1	23	27	6	16	14 PP
UKIAH	88.48	39.5	12	46A	1					
FRESNO	88.67	43.1	12	46	0					
PETROPAVLOVK	88.78	346.2	12	45	-2	23	7	-18	24	30 PS
VLADIVOSTOK	89.06	325.9	12	47	-1	23	12	-16		
GUADALAJARA	89.33	64.6	12	52K	3					
SHASTA	90.06	38.9	12	52A	-1					
MINERAL	90.22	39.6	12	52A	-1					
RENO	90.61	41.1	12	55	0					
BOULDER CITY	91.04	46.4	12	48A	-9				13	44
TUCSON	91.13	51.4	12	57A	-1	23	56	9	16	32 PP
TACUBAYA	91.73	67.9	13	4K	4	23	22	-30	16	30
TALA POZO	92.42	125.8	13	2	-2	23	47	-11	16	42 PP
CORVALLIS	92.42	35.8	13	4A	0					
EUREKA	92.72	43.2	13	4A	-1				16	55 PP
CHANGCHUN	92.79	322.8	13	5A	0	24	9	8	18	53 PPP
HUANCAYO	93.75	107.0	13	11A	1	24	20	11	16	56 PP
SUIHWA	93.99	325.6	13	2	-9					
VERA CRUZ	94.01	69.7	13	19	8					
PEKING	95.20	315.3	13	16	0	24	30	8	23	49 SKS
KUNMING	95.23	296.5	13	18A	2	24	33	11	17	16 PP
VICTORIA	95.24	33.0	13	16	0					
PORT BLAIR	95.72	280.1	13	19	0	24	27	1	17	21 PP
HORSESHOE B.	95.94	32.5	13	19	-1					
SALT LAKE C.	95.94	44.3	13	20K	0				17	10 PP
SIAN	96.16	307.2	13	22	1	24	38	8	23	54 SKS
MAGADAN	96.39	344.6	13	21	-1				24	40
LA PAZ	96.73	114.8	13	25A	2				17	18 PP
CHENGTU	97.44	301.8	13	26	0	24	47	6	17	29 PP
BUTTE	98.91	39.9	13	33A	0					
BOZEMAN	99.51	40.9	13	37K	1				29	52 PKKP
HUNGRY HORSE	99.65	37.5	13	34A	-2				17	38 PP
LARAMIE	100.01	46.9	13	39	1				17	45
COLLEGE	101.03	12.7	13	42A	-1	24	14	0	17	14 PKP
CHITTAGONG	102.13	288.8							17	41 PP
RAPID CITY	103.04	45.6	13	52K	0				18	5 PP
CHINCHINA	103.10	92.8	13	51	-1	24	30	6	18	21 PP
SHILLONG	103.75	291.6	13	54	-1	24	31	4	18	15 PP
COLOMBO	103.82	269.1				24	27	0	18	27 PP
BOGOTA	104.20	93.9	14	4	7				18	26 PP
FAYETTEVILLE	104.57	56.3	13	58	0					
FUQUENE	104.95	93.4	14	0	0				18	23 PP
LHASA	106.43	294.8	18	18	777	24	44	5	26	7 S
GALERAZAMBA	106.51	87.9							18	46 PP
MADRAS	106.79	274.6				24	50	10	18	39 PP
KODAIKANAL	107.60	270.7				24	49	6	29	10
BOKARO	107.65	287.2	21	15	777					
CHATRA	108.03	290.5				24	52	6	18	18 PP
ST. LOUIS 1	108.58	55.6							29	33 PKKP
HERMANUS	110.35	195.2							19	17 PP
TIKSI	111.37	344.2				25	2	3	19	7 PP
TANANARIVE	111.98	226.9	19	11K	45				19	27 PP
COLUMBIA	113.08	63.7							19	17 PP
KIMBERLEY	114.25	202.0	18	32	1					
CHAPEL HILL	115.37	62.5	18	32	-1				19	33
AGRA	115.40	286.7				25	18	3	19	44 PP
CLEVELAND	115.82	56.0				25	22	6	19	38 PP
BOMBAY	115.86	276.2	18	37	3	25	20	4	19	46 PP
MORGANTOWN	116.20	58.4	18	36	1					
PITTSBURGH	116.52	57.6	19	39	64				29	33
DEHRA DUN	116.75	289.9				25	24	4	20	0 PP
SAN JUAN	117.97	85.7	18	37	-1				19	51 PP
WASHINGTON	117.99	60.2	18	38K	0				19	52 PP
PENNSYLVANIA	118.12	57.9	18	37	-1				19	56 PP
RESOLUTE	120.37	17.8	18	43K	0	25	31	-1	20	11
FORDHAM	120.97	59.1							20	12 PP
OTTAWA	121.15	53.5	18	43A	-1	25	42	7	20	15 PP
SEMIPALATNSK	122.14	312.3	18	45	-1	25	37	-1	27	12 SKKS
WINDHOEK	122.24	196.6	18	48	2					
BREBEUF	122.59	53.9	18	46A	-1				25	46
WARSAK DAM	123.26	291.4	18	49	1					
SHAWINIGAN	123.45	52.9	18	48	-1				28	40 PKKP
KARACHI	123.74	280.5	18	51	2					

FRUNSE	123.84	302.4	18	50	1					27	28 SKKS
SEVEN FALLS	124.88	52.7	18	51A	0	25	53	6		20	39 PP
BERMUDA	125.05	71.5	18	55	3					20	44 PP
QUETTA	125.52	285.3	18	54A	1	26	0	11		20	53 PP
STALINABAD	126.84	295.7	18	57	2					27	44 SKKS
TASHKENT	127.22	299.2	18	57	1					27	47 SKKS
HALIFAX	129.27	57.1	19	1A	1					21	9 PP
NORD	131.46	3.6	19	3	-1					22	27 PKS
SVERDLOVSK	134.36	318.9	19	10	1					28	31 SKKS
ASHKABAD	134.63	292.2	19	11	1					28	39 SKKS
ASTRIDA	135.40	221.6	19	1K	-10					22	4 PP
LWIRO	136.21	220.7	19	3K	-10					27	49 PPP
LUANDA	136.40	196.3	18	49	-24					21	47
RUMANGABO	136.68	222.1	19	18	4					21	55 PP
SCORESBY SD.	140.90	12.5	19	16	-6					22	20 PP
APATITY	141.50	341.2	19	17K	-6				20 13	22	44 PP
GORIS	144.15	292.4	19	27	0						
KIRUNA	144.16	348.1	19	24A	-3					29	28 SKKS
TIFLIS	145.43	296.2	19	30	1						
AKUREYRI	145.78	14.6	19	31	1						
REYKJAVIK	146.16	18.6	19	34A	3						
MOSCOW	146.94	322.8	19	33	1					29	50 SKKS
SIDA	147.41	16.4	19	33	0						
SKALSTUGAN	149.38	350.9	19	35	-1						
KSARA	151.84	279.9	19	41A	2	26	49	12		23	41 PP
UPPSALA	151.84	343.2	19	38A	-1					19	55 PKP2
JERUSALEM	151.99	275.4	19	40K	0					19	48 PKP2
SIMFEROPOL	152.83	304.0	19	41	0					23	35 PP
MBOUR	154.26	133.7	19	47	4					23	54 PP
HELWAN	154.76	269.4	19	44	1					30	31 SKKS
GOTEBORG	155.02	347.2	19	42	-2					20	0 PKP2
ABERDEEN	156.34	5.5								30	12 SKKS
COPENHAGEN	156.81	344.8	19	46	0				19 59	24	15 PP
WARSAW	156.90	329.2	19	46A	0					24	3 PP
LWOW	157.06	321.3	19	45	-2					30	43 SKKS
BACAU	157.08	311.6	20	22	35						
ISTANBUL KA.	157.26	296.8	19	46	-1						
BUCHAREST	158.45	307.0	19	48A	0				20 25	30	52 SKKS
DURHAM	158.76	5.6	19	49K	0					24	3 PP
CAMPULUNG	158.81	309.9	19	50	1					21	25
KRAKOW	158.93	326.3	19	50	1					21	23
SKALNATE PL.	159.37	324.2	19	41	-8					20	33 PKP2
RATHFARNHAM	159.52	14.2	19	50	0					20	40 PKP2
POTSDAM	159.65	340.1	19	49	-1					20	30 PKP2
RACIBORZ	159.69	328.7	19	51	1	27	1	16		32	45 PPP
COLLMBERG	160.62	338.7	19	50	-1					20	56
HALLE	160.75	340.7	19	52	1					20	36 PKP2
TIMISOARA	160.93	314.9	20	5A	14						
SOFIA	160.95	304.5	19	53	2					24	39 PP
BUDAPEST	161.09	321.9	20	17	26					24	52 PP
PRAGUE	161.20	334.4	19	32	-19					20	37 PKP2
PRUHONICE	161.23	334.0	19	51	0					24	27 PP
MUNSTER	161.25	349.0	19	52	1					20	57
HURBANOVO	161.26	324.0	19	45	-6					20	39 PKP2
JENA	161.36	340.6	19	51	0					20	37 PKP2
DE BILT	161.43	353.7	19	53	2					24	19 PP
BRATISLAVA	161.58	326.3	19	53	1					24	19 PP
PLAUEN	161.58	339.0	19	50	-2					24	17 PP
ATHENS	161.82	289.9	19	52K	0						
CHEB	161.88	337.9	19	55	3					20	38 PKP2
BELGRADE	161.88	313.4	19	53A	1					24	34
SONNEBERG	161.96	340.5	19	52	0					20	40 PKP2
KEW	162.13	4.6	19	53A	1				20 5	24	21 PP
BENSBERG	162.30	349.0	19	54	2					24	22 PP
SKOPJE	162.55	304.0	19	26K	-27					20	20 PKP
ZAGREB	163.78	322.6	19	51A	-3	26	51	2		24	26 PP
STUTTGART	163.97	342.4	19	52	-2					20	49 PKP2
TUBINGEN	164.22	342.3	19	53	-1					20	50 PKP2
STRASBOURG	164.48	345.4	19	49A	-6					20	47 PKP2
EBINGEN	164.57	342.0	19	54	-1					20	52 PKP2
RAVENSBURG	164.76	339.9								24	31 PP
PARIS	164.87	358.6	19	56A	1	27	8	18		24	37 PP
TRIESTE	164.99	326.3	19	55	0	26	57	7		24	36 PP
TARANTO	166.02	303.4	19	57	1					31	17
NEUCHATEL	166.15	345.5	19	55	-1					24	18
BOLOGNA	166.96	328.8								25	13 PP
PAVIA	167.22	336.2	19	58A	1					24	59 PP
CLERMONT-FD.	167.88	356.0	19	58	1					24	55 PP

REGGIO CALA.	168.03	295.6	20	0	3						24	8	PP
MESSINA	168.07	296.1	19	57	0	27	7	15			25	15	PP
ROME	168.30	317.6	19	57A	0						25	3	PP
TAMANRASSET	168.70	197.2	19	59A	1						21	10	PKP2
SERRA PILAR	168.80	45.3	20	0A	2	27	1	9			21	9	PKP2
LISBON	169.73	57.5	19	58A	0				20	14	25	4	PP
TOLEDO	172.16	36.0	20	2A	2	26	56	3	20	16	21	13	PKP2
TORTOSA	172.77	8.6	19	10	-50								
MALAGA	173.99	57.8	20	3A	3						25	27	PP
GRANADA	174.29	50.6	20	3A	2	26	18	-36			21	36	PKP2
ALICANTE	174.94	22.0	20	2	1	27	4	10			25	28	PP
ALMERIA	175.20	47.4	20	1	0						25	33	PP
SETIF	176.19	312.5	20	1	0						25	36	PP
ALGIERS UNI.	176.77	343.8	20	2A	1						25	35	PP
RELIZANE	177.63	28.3	20	3A	2						25	38	PP

SEPTEMBER 22 20.H 8.M 39.S EPICENTRE 41.70 142.47 SHALLOW

A=-0.59386 B= 0.45619 C= 0.66274 D= 0.6092 E= 0.7930
G=-0.5256 H= 0.4037 K=-0.7488 HT= -2.3

SE= 3.79

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
URAKAWA	0.50	27.2	0	20	6	0	32	8				
TOMAKOMAI	1.05	321.3	0	32	10	0	49	11				
MURORAN	1.28	299.8	0	30K	4	0	49	5				
HAKODATE	1.31	274.0	0	29	3	0	46	2				
OBIHIRO	1.33	23.7	0	34	8	0	55	10				
HATINOHE	1.37	211.5	0	21K	-6	0	37	-9				
MORI	1.47	286.3	0	33	5	0	55	7				
AOMORI	1.55	235.9	0	30	1	0	50	0				
SAPPORO	1.60	329.1	0	35K	5	0	59	7				
KUSIRO	1.92	47.6	0	37	2	1	1	1				
SUTTSU	1.99	304.2	0	42	6	1	9	7				
ASAHIGAWA	2.08	358.0	0	46	9	1	23	19				
MIYAKO	2.08	190.7	0	34	-3	0	55	-9				
MORIOKA	2.23	206.7	0	36A	-3	0	58	-10				
ABASHIRI	2.67	29.3	0	52	7	1	24	5				
AKITA	2.68	223.1	0	45	0	1	17	-2				
MIZUSAWA	2.76	202.1	0	47	0	1	14	-7				
NEMURO	2.82	53.7	0	47	0	1	24	1				
ISINOMAKI	3.38	195.5	0	55	-1	1	29	-8				
SAKATA	3.45	216.7	0	57	1	1	37	-2				
SENDAI	3.63	199.9	0	59	0	1	36	-8			1	57
YAMAGATA	3.81	206.0	1	3	1	1	42	-6				
HUKUSIMA	4.24	202.0	1	13	5	1	55	-4				
NIIGATA	4.60	216.0	1	48	35						2	40
SHIRAKAWA	4.90	201.6	1	22	5	2	11	-4				
ONAHAMA	4.90	194.9	1	45	28						2	19
AIKAWA	4.90	222.8	1	17	0							
Y.-SAKHLINSK	5.25	1.9	1	26	4							
UTUNOMIYA	5.53	202.3	1	22	-4	2	21	-10				
MITO	5.54	197.0	1	29	3	2	42	11				
KAKIOKA	5.75	198.8	1	27	-2	2	27	-10			1	45
MAEBASI	5.92	207.6	1	35	4	2	41	0				
NAGANO	6.02	214.8	1	20	-13							
KUMAGAYA	6.04	204.5	1	34	1	2	51	7				
MATUSIRO	6.11	214.1	1	32A	-2	2	54	8			2	4
OIWAKE	6.17	210.9	1	42	7	3	0	13				
TOKYO C.M.O.	6.38	200.4	1	29	-9	2	40	-12			3	1
TOYAMA	6.46	221.0									2	27
MATUMOTO	6.47	214.2	1	39	0							
YOKOHAMA	6.64	200.3	1	42	0	2	44	-15				
KOHU	6.79	208.0	1	43	-1	3	6	3				
HUNATU	6.83	206.3	1	58	14	3	9	5				
MERA	7.08	197.9	2	57	69							
MISIMA	7.13	203.9	2	2	14							
GIHU	7.71	217.2	1	55	-2	3	26	0				
NAGOYA	7.82	215.3	2	18	20	3	35	7				
OMAESAKI	7.84	206.6				3	23	-6				
IBUKISAN	7.91	219.0	2	2	3							
VLADIVOSTOK	7.95	283.8	2	1	1							
HIKONE	8.06	219.2	2	3	1							
KAMEYAMA	8.31	216.5				3	36	-5				

HONG KONG	30.61	239.6	6 28	10	11 56 36	
SHILLONG	44.46	265.2	8 10A	-5		
COLLEGE	44.75	34.7	8 17	0		
CHITTAGONG	46.35	261.6	8 39	9		
CHATRA	47.28	269.9	8 34	-3		
NAMANGAN	51.73	294.4	9 8	-3		
WARSAK DAM	55.09	286.8	9 30	-6		
RESOLUTE	57.89	15.3	9 53A	-3		
APATITY	58.80	334.9	10 0A	-3		
QUETTA	60.42	285.4	10 11A	-3		
KIRUNA	62.46	338.7	10 25A	-3		
MOSCOW	64.02	322.5	10 34	-4		
SHASTA	67.70	54.9	11 0	-2		
HUNGRY HORSE	67.85	44.5	11 0	-2		
SKALSTUGAN	67.88	338.4	11 0	-3		13 26 PP
MINERAL	68.39	54.8	11 3	-3		
UPPSALA	69.14	333.7	11 6	-5		
EUREKA	72.33	52.7	11 28	-2		
GOTEBORG	72.66	334.7	11 35	3		
LWOW	74.10	323.7	11 38	-2		
RAPID CITY	76.29	42.5	11 51	-2		
LARAMIE	77.00	45.8	11 55	-2		
COLLMBERG	77.47	330.2	11 57	-2		
PRUHONICE	77.94	328.6	12 1	-1		
JENA	78.29	330.8	12 1	-3		
STUTTGART	80.95	330.8	12 15	-3		
TUBINGEN	81.19	330.7	12 17	-2		
EBINGEN	81.52	330.6	12 19	-2		
PARIS	83.21	334.7	12 27	-3		
OTTAWA	86.81	25.9	12 45	-3		
BREBEUF	87.39	24.5	12 48K	-3		
TAMANRASSET	104.47	319.4				18 43 PP

SEPTEMBER 24 3.H 44.M 17.S EPICENTRE 59.46-143.13 DEPTH= 0.KM

A=-0.40851 B=-0.30642 C= 0.85978 D=-0.6000 E= 0.8000
G=-0.6878 H=-0.5159 K=-0.5107 HT= -8.7

SE= 4.17

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SITKA	4.78	117.0	1 17	2				
COLLEGE	5.85	340.0	1 21	-9				
ALBERNI	14.71	125.9	3 34	3	6 45	29		
HORSESHOE B.	15.28	122.6	3 38	-1	6 11	-19		3 58
VICTORIA	15.88	125.0	3 43	-4	6 19	-25		5 54
CORVALLIS	19.14	132.3	4 28	1				
HUNGRY HORSE	20.25	110.4	4 36	-4	8 49	27		5 40
SASKATOON	21.56	93.7	5 4K	11	9 16	28		
BUTTE	22.62	112.9	5 3	-1	9 41	33		5 21
SHASTA	22.84	136.1	5 8	2				
RESOLUTE	23.18	30.3	5 11A	2	9 23	5		5 39
MINERAL	23.43	135.2	5 11	-1				
BOZEMAN	23.59	111.5	5 12	-1				5 40
RENO	24.80	133.1	5 25	0				
BERKELEY	25.42	138.9	5 30	-1	10 13	17		
LICK	26.11	138.4	5 31	-6				5 53
EUREKA	26.35	127.3	5 35	-5				6 0
FRESNO	27.26	136.0	5 49	1				
RAPID CITY	28.57	104.7	5 58	-2				
BOULDER CITY	29.82	129.4	6 6	-5				
THULE	29.89	27.2	6 13	1				
PASADENA	30.19	135.9	6 4	-10	11 24	11		
PETROPAVLOVK	31.98	284.7	6 29	-1	11 50	9		
MAGADAN	32.29	299.4	6 33	0				
TUCSON TELE.	34.65	127.1	6 55	2				
TUCSON	34.68	127.3	6 54	1	12 48	25		7 26
TIKSI	34.81	326.3	6 48	-7				
NORD	36.31	11.5	7 3	-4	13 5	16		9 29 PCP
LUBBOCK	37.47	115.1	7 14	-3	13 11	5		
FLORISSANT	38.92	98.0	7 27	-2				13 46 PS
FAYETTEVILLE	39.11	104.5	7 27K	-4				15 3
ST. LOUIS 1	39.11	98.1	7 30	-1				9 13 PP
KIPAPA	39.47	202.1	7 33	-1				
HONOLULU	39.60	202.2	7 45	10	13 55	16		15 29
CLEVELAND	41.42	87.4	7 50	0				

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

OTTAWA	41.55	78.7	7	49	-2	14	21	13	9	27 PP
SHAWINIGAN	42.21	75.3	7	52	-4				9	52
BREBEUF	42.53	77.1	7	28	-31					
UGLEGORSK	42.62	290.4	8	10	10					
SEVEN FALLS	42.77	73.4	8	1	0	14	26	0	9	45 PP
MORGANTOWN	43.60	87.9	8	4	-4					
PENNSYLVANIA	43.79	85.1	8	22	13	15	4	24	10	17 PP
Y.-SAKHLINSK	43.79	287.8	8	9	0	14	50	9		
SCORESBY SD.	43.87	24.5							18	30
WASHINGTON	45.62	86.2	8	40	16				10	31 PPP
FORDHAM	45.78	81.8	8	35	10	15	31	22		
WESTON	45.93	78.4	8	52A	26					
CHAPEL HILL	46.89	90.5	8	44	10					
COLUMBIA	47.38	93.9	8	37	-1				9	2
HALIFAX	48.08	70.7	8	38	-5	15	31	-11	15	53 PPS
SENDAI	51.12	281.2				16	37	13	20	8 SCS
VLADIVOSTOK	51.81	291.9	9	15	3				15	43
VERA CRUZ	52.40	119.3	9	14	-2	16	45	3	11	30 PP
KIRUNA	52.44	7.8	9	17	0	16	53	11	17	15
SODANKYLA	53.25	4.9	9	15	-8					
APATITY	53.27	1.6	9	19	-4	16	58	4	23	18 SSS
MATUSIRO	53.79	281.9	9	19	-8	17	18	17	19	25 SCS
CHANGCHUN	54.32	297.0				17	4	-4	17	15 PS
SKALSTUGAN	55.86	13.0	9	34	-8					
ABUYAMA	56.44	282.7	9	51K	5	17	8	-28		
BERMUDA	56.99	81.3	10	0	10	17	43	0	19	53 SCS
ULAN-BATOR	58.74	312.3	10	4	2	18	19	13		
ABERDEEN	59.68	23.4				18	24	5	22	47 SS
UPPSALA	60.08	11.1	10	3	-8	18	37	13		
NAGASAKI	60.97	285.7	10	3	-14				22	11 SS
PULKOVO	61.00	3.8	10	14	-4	18	43	8		
PEKING	61.45	300.8	10	21	0	18	49	8	12	38 PP
GOTEBORG	61.54	14.9	10	19	-2					
DURHAM	62.03	24.1	10	20K	-5	18	54	5	12	43 PP
SVERDLOVSK	62.53	345.5	10	26	-2					
COPENHAGEN	63.56	15.2	10	37	2	19	23	15	15	22
SEMIPALATNSK	64.97	331.0	10	38	-6	19	24	-1		
MOSCOW	65.16	359.5	10	48	3	19	46	18		
KEW	65.39	24.6	10	40	-7	19	46	16		
DE BILT	65.88	20.8				20	13	37		
MUNSTER	66.43	19.3	10	50	-3	19	38	-5		
ZO-SE	66.52	291.5	10	58	4					
NANKING	66.85	293.9	10	54	-2					
POTSDAM	66.87	15.6	10	59	3	20	3	15	13	52 PP
JERSEY	67.15	26.6							17	14
HALLE	67.57	16.6	11	17	16	20	25	28	11	30 PCP
SAN JUAN	67.76	91.5	11	31	29				12	14
WARSAW	67.93	10.4	11	8	5				20	18 PS
JENA	68.07	16.9	11	1	-3	20	2	-1	13	51 PP
PARIS	68.50	23.7	11	1	-5	20	11	3	13	39 PP
PLAUEN	68.57	16.7	11	33	26					
PRAGUE	69.31	15.2	11	35	24	20	37	19	14	9 PP
PRUHONICE	69.41	15.2	11	10	-2	20	39	20	13	52 PP
GALERAZAMBA	69.58	103.8	11	13	0	20	25	4	20	47 PS
STRASBOURG	69.73	20.1	11	18	4	20	41	18	13	51 PP
RACIBORZ	69.76	12.7	11	12	-2				11	32 PCP
KRAKOW	69.98	11.5	11	12	-3	20	36	10	11	35 PCP
LANCHOW	69.99	307.5	11	18	2	20	35	9	11	37 PCP
NEUCHATEL	71.10	21.2	11	49	27					
BRATISLAVA	71.52	13.8	11	22	-3				14	19 PP
CLERMONT-FD.	71.53	24.2	11	28	3	21	6	22		
SERRA PILAR	72.97	34.3	11	44	11					
PAVIA	73.26	20.1	11	55	20				22	21 PS
FORT FRANCE	73.37	89.2							20	39
IASI	73.43	6.6	11	39	3				12	11
TRIESTE	73.54	16.7	11	43	6	21	25	19	12	4 PCP
CHINCHINA	74.42	107.1	11	45	3	21	30	14		
CHENGTU	74.62	304.6	11	45	2	21	25	7	14	35 PP
FUQUENE	74.91	105.2	11	50	5					
LISBON	75.04	35.6	12	6K	21					
BELGRADE	75.20	12.0	12	15K	29	21	43	18	23	20
TOLEDO	75.39	31.4	11	42	-5	21	46	19	14	36 PP
BOGOTA	75.48	105.9	12	13	25	21	51	23	22	40 PS
NAMANGAN	75.87	333.5	11	47	-3	21	48	16		
SIMFEROPOL	75.93	2.0	11	53	3					
BUCHAREST	76.10	7.9	12	5	14	22	32	57	14	18
ROME	77.01	18.4	12	13	17	22	7	22	14	39 PP
HONG KONG	77.27	292.1	11	18	-40	21	54	6		

SOTCHI	77.29	357.9	12	0	2	22	0	12	
ALICANTE	77.76	29.2	11	58	-3	21	50	-3	14 55 PP
GRANADA	78.05	32.0	12	7K	5	22	17	21	15 29 PP
MALAGA	78.26	32.8	11	58	-5				15 8 PP
ALMERIA	78.66	31.2	12	20	14	22	19	16	
STALINABAD	78.83	335.0	12	6	-1				
TIFLIS	78.97	354.0	12	10	3				
TARANTO	79.11	15.1				22	33	26	13 48
KUNMING	80.08	302.9	12	14A	1	22	24	6	12 24 PCP
ALGIERS UNI.	80.11	27.0	12	25	12	22	27	9	15 29 PP
RELIZANE	80.48	29.2	12	13	-2				12 45
MANILA	80.54	282.5	12	18	2				
LHASA	80.63	314.3	12	20A	4	22	34	11	15 32 PP
MESSINA	81.10	16.9	12	18	-1	22	31	3	15 29 PP
SETIF	81.18	25.3	12	20	1				
PHU-LIEN	82.06	297.6							23 51
ATHENS	82.31	10.5	12	22	-3				
WARSAK DAM	82.55	331.5	12	19	-7				
SHILLONG	84.00	311.9	12	26	-8	23	5	7	
DEHRA DUN	84.29	325.1	12	57	22	23	7	7	
CHATRA	84.58	316.3	12	32	-5	23	13	10	
CHITTAGONG	86.92	310.6	12	49	1				
KSARA	87.06	0.8	12	51	2	23	35	8	17 16 PP
QUETTA	87.28	334.2	12	45	-5	23	18	-11	16 13 PP
AGRA	87.29	324.1	12	51A	1	23	48	19	23 24 SKS
BOKARO	87.81	316.3				23	28	-6	16 28 PP
PORT MORESBY	87.99	247.8				23	32	-4	24 42 PS
JERUSALEM	89.09	1.4	12	54	-5	24	0	14	
HUANCAYO	89.40	115.1	13	3	3				
HELWAN	90.89	4.8	13	13	6				25 22 PS
TAMANRASSET	94.10	28.8	13	19	-3	24	13	-18	17 19 PP
PORT BLAIR	96.20	305.4				24	21	13	
BOMBAY	96.58	326.0	14	2	29	23	35	-77	17 32
RIVERVIEW	107.56	232.7				25	36	7	28 8 PS
LWIRO	122.60	9.6	19	11A	13				20 47 PP
UVIRA	123.84	9.3							20 44
CAPE HALLETT	135.33	198.4	19	8	-14				22 23 PKS
BYRD STATION	139.90	173.8	19	20	-10				
KIMBERLEY	148.20	20.4							19 48 PKP2
SOUTH POLE	149.29	180.0	19	44	-2				
PIETERMZBURG	149.84	11.3							20 5 PKP2
OASIS-BUNG.	151.29	229.4	20	2	13				

SEPTEMBER 25 6.H 54.M 4.S EPICENTRE 36.59 70.11 DEPTH= 219.KM

DEPTH OF FOCUS= 0.029R

A= 0.27386 B= 0.75682 C= 0.59349 D= 0.9403 E=-0.3403
G= 0.2019 H= 0.5581 K=-0.8048 HT= -0.4

SE= 1.80

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KULYAB	1.33	348.8	0	35	0	1	2	0				
KHOROG	1.49	52.9	0	37	1	1	6	2				
KARA-SU	2.09	334.9	0	41	0	1	11	-2				
OBI-GARM	2.13	351.4	0	42	0	1	14	0				
CHUIAN-GARON	2.19	340.4	0	42	0	1	13	-2				
STALINABAD	2.23	331.9	0	42	-1	1	13	-3				
ZIMCHURUD	2.41	334.9	0	45	0	1	18	-2				
GARM	2.41	3.6	0	45	0	1	20	0				
DZHERGETAL	2.77	18.2	0	50	1	1	26	0				
WARSAK DAM	2.84	155.0	0	47A	-3							
MURGAB	3.52	58.6	0	58	0	1	42	0				
SAMARKAND	3.94	322.2	0	59	-4	1	43	-8				
FERGANA	4.01	18.6	1	4	1	1	51	-1				
ANDIJAN	4.52	22.4	1	11	1	2	3	-1				
NAMANGAN	4.55	15.1	1	11	1	2	3	-1				
TASHKENT	4.77	352.5	1	12	-1	2	4	-5				
LUNACHARSKOE	4.77	352.9	1	13	0	2	8	-1	1	26		
TCHIMKENT	5.72	356.2	1	25	0	2	28	-3				
LAHORE	6.13	143.9	1	33K	3	2	37	-3	2	15	*SP	
NARYN	6.66	41.7	1	36	-1	2	48	-4	2	22		
QUETTA	6.92	203.3	1	39K	-1	2	55	-3	2	27	*SP	
FRUNSE	7.16	27.4	1	43	0	3	2	-2	2	47		

FABRICHNAYA	8.17	34.4	1 56	0	3 27	0				
ALMATA	8.49	36.1	2 1	0					3 36	
PRZHEVALSK	8.69	44.9	2 3	0	3 39	0				
KURMENTY	9.01	41.7	2 4	-3					4 6	
ILI	9.08	33.8	2 8	0					3 21	
DEHRA DUN	9.11	131.0	2 7	-2	3 54	5			2 20	PPP
ASHKABAD	9.47	281.8	2 15	2	3 57	0				
KARACHI	11.04	194.6	2 42K	9	4 46	12				
KIZYL-ARVAT	11.22	286.7	2 36	1					4 32	
AGRA	11.58	142.3	2 36K	-4	4 38	-8			2 44	PP
SEMIPALATNSK	15.62	24.7	3 32	2						
CHATRA	17.45	119.1	3 48	-3	7 0	4				
BOMBAY	17.78	171.6	3 56	1	7 20	17			9 28	
BOKARO	18.56	128.9	4 1	-2	7 20	2				
LHASA	18.84	105.6	4 7	2	7 29	6				
GORIS	18.94	286.0	4 2	-5						
KIROVOBAD	18.98	289.8	4 8	1	7 30	4				
TIFLIS	20.25	292.4	4 21	1						
HYDERABAD	20.46	156.7	4 20K	-2	7 58	5			5 23	PPP
SVERDLOVSK	21.22	345.5	4 31	2					5 3	PP
SHILLONG	21.59	114.5	4 34K	1	8 15	2			5 39	*SP
CHITTAGONG	23.56	121.0	4 53	1	8 51	4	5 24		5 32	PP
SOTCHI	24.18	296.2			9 3	6				
MADRAS	25.17	156.4	5 35	28	10 8	54			6 18	PP
SIMFEROPOL	28.32	298.4							6 22	
IRKUTSK	28.69	46.0	5 39A	0						
CHENGTU	28.75	91.9	5 39	0	10 12	1				
MOSCOW	29.13	321.4	5 40K	-3						
ULAN-BATOR	29.23	55.6	5 45	1						
KYAKHTA	29.43	50.6	5 45A	0					12 57	
KABANSK	29.99	47.4	5 53A	3						
KUNMING	30.11	103.2	5 51	0	10 32	-1				
SIAN	31.57	82.6	6 4	0						
LWOW	35.54	306.6	6 37	-1						
PEKING	36.00	70.2	6 42	0						
APATITY	37.26	337.7	6 53A	1						
CANTON	39.48	97.7	7 11	0						
UPPSALA	40.55	322.0	7 20A	0						
KIRUNA	41.69	334.2	7 29A	0					9 9	PP
CHANGCHUN	42.10	62.4	7 33	1						
ZO-SE	42.37	82.0	7 35	1						
COLLMBERG	42.58	308.8	7 37	1						
SKALSTUGAN	43.74	326.8	7 45A	0					9 27	PP
TIKSI	45.96	22.2	8 3	0	14 31	1	8 49		9 51	
NORD	53.58	349.5	9 0A	0					10 3	PCP
MATUSIRO	53.59	68.2	8 59A	-2						
TAMANRASSET	56.82	275.1	9 22	-2	17 9	11	10 10			
TANANARIVE	59.18	205.0	9 40A	0						
RESOLUTE	68.57	355.8	10 41K	0						
COLLEGE	74.60	15.8	11 15	-2			12 8			
PIETERMZBURG	75.68	215.0	10 35	-48						
CHARTERS TS.	91.19	114.0	12 39	-2						
HUNGRY HORSE	95.36	2.8	13 1	1						
RAPID CITY	99.48	355.1							17 18	PP
EUREKA	104.10	4.8	13 43	3					17 46	PKP
TUCSON TELE.	111.42	0.8	18 34	26					18 58	
TUCSON	111.51	0.9	18 51	43						
CAPE HALLETT	127.49	157.7	18 39K	0	25 26	3				
BYRD STATION	136.29	177.6	19 49	53					22 6	

SEPTEMBER 25 7.H 20.M 0.S EPICENTRE 8.06 -39.29 DEPTH= 0.KM
A= 0.76644 B=-0.62706 C= 0.13920 D=-0.6332 E=-0.7740
G= 0.1077 H=-0.0881 K=-0.9903 HT= 6.8

SE= 2.59

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
BARBADOS	20.58	285.9	4	42	-1							
TRINIDAD	22.09	278.5	4	57	-2							
ST. VINCENT	22.19	285.1	4	59	-1							
FORT FRANCE	22.42	289.2	5	1	-1	9	17	13				
GRENADA	22.45	282.0	5	8	6							
MBOUR	22.76	72.0	5	6A	1	9	5	-6			5	47 PP
DOMINICA	22.80	290.4	5	3	-3							

ST. CLAUDE	23.29	292.0	5	0	-11	9	18	-2			
SAN JUAN	28.02	294.2	5	56	1	11	10	31			
BERMUDA	33.78	319.3	6	56	10	12	18	8	8	0	PP
FUQUENE	34.29	267.9	6	50	0	12	29	11			
BOGOTA	34.73	266.5	6	55	1	12	22	-2			
GALERAZAMBA	35.59	277.2	7	2	1	12	49	11	7	33	PP
CHINCHINA	36.22	267.4	7	3	-4	12	49	2	8	26	PP
LA PAZ	37.55	229.4	7	18A	0	13	13	5	8	56	PP
BALBOA HTS.	39.83	274.3	7	38	1	13	41	-1			
LISBON	40.83	36.9	7	45K	0	13	54	-3	9	27	PP
HUANCAYO	41.02	241.3	7	45A	-2	14	6	6	9	27	PP
HALIFAX	42.10	334.0	7	57A	1	14	11	-5	9	33	PP
MALAGA	42.65	42.7	7	56A	-4	14	22	-2	9	42	PP
SERRA PILAR	42.73	34.6	7	58K	-3	14	18	-7	9	38	PP
TALA POZO	43.07	213.2	8	4	0	14	34	4	9	50	PP
GRANADA	43.44	42.7	8	11K	4	14	42	6	10	10	PP
ALMERIA	44.03	43.8	8	11A	0	14	44	0	10	2	PP
WESTON	44.31	325.8	8	14K	0	14	45	-3			
TOLEDO	44.66	39.2	8	16K	-1	15	1	8	10	11	PP
FORDHAM	44.84	322.4	8	19	1	14	52	-4			
TAMANRASSET	45.41	66.0	8	31	8	15	7	3	10	13	PP
RELIZANE	45.61	46.8	8	25	1	15	6	-1	10	13	PP
CHAPEL HILL	45.64	313.4	8	25	1				10	15	
GEORGETOWN	45.75	318.1	8	26K	1	15	17	8			
WASHINGTON	45.75	318.1	8	26	1	15	15	6	18	24	SCS
ALICANTE	46.15	43.1	8	28	0	15	21	6	10	17	PP
LA PLATA	46.21	201.3	8	28A	-1	15	10	-6	10	20	PP
COLUMBIA	46.26	310.0	8	30	1	15	27	11			
PENNSYLVANIA	47.29	319.9	8	38	1	15	46	15	10	33	PP
SEVEN FALLS	47.31	330.9	8	35	-3	15	26	-5	11	9	PPP
BREBEUF	47.62	327.5	8	38	-2	14	44	-52			
SHAWINIGAN	47.87	329.1	8	39	-3	15	21	-18	10	31	PP
ALGIERS UNI.	47.88	46.8	8	40	-2	15	44	5	10	37	PP
MORGANTOWN	48.04	317.4	8	44K	1	14	52	-50			
TORTOSA	48.08	40.8	8	44	0	14	46	-56			
PITTSBURGH	48.45	318.4	8	50A	4	16	12	25	10	46	PP
OTTAWA	48.69	326.2	8	46	-2	15	54	3	10	13	PCP
SETIF	49.36	48.6	8	52	-1	15	49	-11	10	45	PP
BARCELONA	49.44	40.9	8	58	4	15	4	-57			
CLEVELAND	50.01	318.7	9	0K	2	16	22	13			
MERIDA	50.18	290.5	9	6	6	16	15	3	11	2	PP
SANTA LUCIA	50.91	214.1	9	4	-1	16	22	0	11	58	PP
JERSEY	51.48	30.5							15	56	
COMITAN	52.17	284.3	9	16	1	16	38	-1	11	12	PP
CLERMONT-FD.	52.32	36.6	9	16	0	16	45	4	12	30	PPP
PARIS	53.66	33.1	9	26	0	17	0	1	11	23	PP
KEW	53.83	29.2	9	25	-2	17	1	0	11	25	PP
MONACO	53.98	40.7	9	27A	-1						
CONCEPCION	54.19	212.4	9	58	28	17	42	36			
ST. LOUIS 1	54.88	312.0	9	35	0	17	17	1	17	29	PS
LUANDA	54.94	106.7	9	36	1				11	42	PP
FLORISSANT	55.04	312.1	9	36K	0	17	18	0			
OROPA	55.19	38.9	9	42	5	17	39	19	12	53	
NEUCHATEL	55.23	37.0	9	35	-2	17	24	4			
DURHAM	55.43	25.5	9	33K	-6	17	30	7	12	2	PP
PAVIA	55.74	39.8	9	45	4	17	28	1	12	48	PPP
UCCLE	55.78	32.0	9	43	2	17	28	0			
BASLE	55.86	36.7	9	41K	-1	17	33	4			
VERA CRUZ	56.13	287.7	9	48	4	17	24	-8	13	10	PP
STRASBOURG	56.49	35.7	9	46K	-1	17	32	-5	12	3	PP
ROME	56.63	44.6	9	50A	3	17	42	3	11	59	PP
CHUR	56.72	38.2	9	47K	-1	17	46	6			
ABERDEEN	56.87	23.2	10	17	28	17	47	5	21	7	SS
EBINGEN	57.00	36.5	9	48	-2	17	48	4			
FAYETTEVILLE	57.12	307.9	9	50A	-1	17	53	8			
RAVENSBURG	57.20	37.2	9	48	-4	17	50	4			
TUBINGEN	57.22	36.2	9	50	-2	17	49	2	12	0	PP
REYKJAVIK	57.34	9.0	10	5K	12						
STUTTGART	57.41	36.0	9	50	-3	17	50	1	12	0	PP
MESSINA	57.65	49.7	9	54	-1	18	9	17	12	9	PP
SIDA	57.67	11.0	10	2	7						
REGGIO CALA.	57.70	49.8	9	56	1	17	56	3			
MUNSTER	58.14	32.1	9	56	-2				12	23	
DALLAS	58.46	303.6	10	0	0	18	1	-2			
TRIESTE	58.88	40.9	10	0	-3	18	9	1	12	18	PP
TACUBAYA	59.03	287.7	10	4K	0	17	55	-15	12	10	PP
TARANTO	59.57	47.6							11	5	
JENA	59.78	34.6	10	7	-3	18	20	0	12	18	PP

CHEB	59.86	35.8	10	8	-2	18	27	6	12	34	PP
PLAUEN	59.91	35.2	10	6	-4	18	20	-2			
HALLE	60.25	34.2	10	7	-6	18	14	-12	15	5	SCP
ZAGREB	60.39	41.4	10	14K	0	18	28	0	12	25	PP
COLLMBERG	60.75	34.7	10	15	-1	18	44	11			
PRAGUE	61.05	36.4	10	22A	4	18	46	10	12	42	PP
PRUHONICE	61.08	36.5	10	18	0	18	48	11	12	41	PP
POTSDAM	61.27	33.6	10	18	-2	18	37	-2	12	44	PP
VIENNA-H.	61.52	38.9	10	20	-1	18	52	10	12	46	PP
BRATISLAVA	61.94	39.2	10	25	1	18	51	3	12	39	PP
COPENHAGEN	62.48	30.1	10	28	0	18	56	1	19	5	PS
HURBANOVO	62.53	39.8	10	36	8	19	6	11	12	46	PP
KALOCSA	62.59	41.4	10	35	6				13	56	PPP
LUBBOCK	62.77	303.6	10	28	-2	19	7	9	23	12	SS
BUDAPEST	62.96	40.4	10	24	-7	18	57	-4	14	22	PPP
GUADALAJARA	62.97	289.0	10	48	17						
SKOPJE	62.98	46.9	10	31A	0	19	6	5	11	22	PCP
WINDHOEK	63.03	120.3	10	30K	-1						
BELGRADE	63.07	43.6	10	31A	-1	19	8	6	13	42	PP
SZEGED	63.27	42.0	10	31	-2				13	22	PP
RACIBORZ	63.30	37.5	10	33	0	19	5	0	12	57	PP
SCORESBY SD.	63.33	6.4	10	34	1	19	7	2	19	19	PS
TIMISOARA	63.85	42.8	10	41	4	19	16	4			
ATHENS	63.86	51.7	10	37A	0	19	15	3			
SKALNATE PL.	64.25	38.9	10	41	1	19	17	0	13	10	PP
KRAKOW	64.33	37.9	10	40	0	19	24	6	13	1	PP
SOFIA	64.54	46.5	10	48	7	19	32	12			
WARSAW	65.70	35.9	10	50K	1	19	36	1	26	48	SSS
RAPID CITY	65.77	314.8	10	46	-3				39	32	PKPPKP
CHIHUAHUA	65.83	297.7	10	46	-4	19	26	-10	17	14	
CAMPULUNG	66.32	44.0	10	55	2				11	32	PP
SKALSTUGAN	66.43	22.5	10	59	5						
LWOW	66.79	39.0	10	55	-1				19	55	PS
UPPSALA	66.86	27.4	10	54	-2	19	47	-2			
BUCHAREST	66.88	45.1	10	57	1	19	54	5	12	18	
LARAMIE	66.96	311.4	10	56	-1						
BACAU	67.88	42.9	11	1	-2						
ISTANBUL KA.	68.45	49.1	11	4	-2						
IASI	68.46	42.4	11	6	0				11	29	PP
LWIRO	68.66	95.6	11	8	0	20	14	4			
RUMANGABO	69.04	94.5	11	13	3						
UVIRA	69.18	96.8	11	11K	0				13	52	PP
HELWAN	69.24	61.2	11	11	0	20	18	1			
HERMANUS	69.56	131.2				20	28	7	20	56	PS
ASTRIDA	69.64	95.8	11	13K	-1						
SASKATOON	69.83	322.7	11	20	5	20	21	-3			
TUCSON TELE.	70.06	301.4	11	16	0				39	21	PKPPKP
THULE	70.13	353.0	11	28	11	21	46	78			
TUCSON	70.15	301.3	11	17	0	20	42	14	15	34	PPP
KIRUNA	71.44	20.2	11	22	-3	20	42	-1	21	11	PS
BOZEMAN	71.54	315.4	11	27	2				13	15	
SALT LAKE C.	71.58	310.2	11	27	2				13	40	PP
KIMBERLEY	71.72	123.7	11	24	-2						
SIMFEROPOL	72.61	45.5	11	30	-2				14	6	PP
BUTTE	72.64	315.6	11	31	-1				13	30	
JERUSALEM	72.65	59.3	11	33	1	21	40	43			
PULKOVO	72.86	29.8	11	32	-1				14	13	PP
KSARA	73.25	57.2	11	38	3	21	2	-1	14	20	PP
RESOLUTE	73.57	346.8	11	36	-1	21	6	-1	25	38	SS
BOULDER CITY	73.62	305.1	11	37	0				14	33	PP
HUNGRY HORSE	73.89	317.9	11	37	-2				14	24	PP
NORD	74.21	3.4	11	38	-3	21	17	3	21	53	SCS
EUREKA	74.65	308.6	11	43	0				12	37	
GRAHAMSTOWN	74.75	127.6	11	42	-2						
MOSCOW	76.02	34.6	11	51	0				14	40	PP
APATITY	76.02	22.2	11	51K	0	21	37	3	14	29	PP
PASADENA	76.34	303.1	11	52	-1	21	41	3	14	57	PP
PIETERMZBURG	76.65	122.9	11	55	0						
LCO. MARQUES	77.50	118.8	12	1	2				15	5	PP
RENO	77.62	308.7	12	0	0						
MINERAL	78.99	309.5	12	6A	-2						
LICK	79.10	306.4	12	8A	0						
BERKELEY	79.57	307.0	12	13	2	22	16	4	15	23	PP
SHASTA	79.58	309.9	12	9A	-2						
HORSESHOE B.	80.03	318.7	12	12	-1						
VICTORIA	80.14	317.8	12	12	-2						
CORVALLIS	80.14	313.8	12	15A	1						
UKIAH	80.28	308.3	12	18	3						
TIFLIS	80.29	49.1	12	15	0	22	21	1	15	17	PP

ALBERNI	81.04	318.6	12	20	1						
GORIS	81.56	51.3	12	23	2					22	45 SCS
KHEYS	82.37	10.1	12	36	10					15	43 PP
SITKA	86.58	327.0	12	48	1						
SVERDLOVSK	88.71	32.8	12	57	0	23	35	-8		16	36 PP
TANANARIVE	89.61	109.1	13	5	4	24	17	26		23	39 SKS
COLLEGE	90.49	336.1	13	4	-1	24	4	5		30	0 SS
ASHKABAD	91.08	51.6	13	11	3					30	18 SS
BYRD STATION	96.19	190.0	13	30	-2	24	4	-45		17	24 PP
TASHKENT	98.39	46.2	13	36	-5					17	38 PP
STALINABAD	98.88	49.0	13	50	7						
QUETTA	99.80	57.5	13	47	-1	25	32	13		17	58 PP
FRUNSE	101.55	43.3								18	1 PP
SEMIPALATNSK	101.86	34.7								18	14 PP
BOMBAY	107.94	67.2								18	55 PP
DEHRA DUN	108.86	54.3								18	44 PP
AGRA	109.98	57.4	18	30	-3					28	32 PS
MAGADAN	112.13	354.5								19	25 PP
IRKUTSK	112.34	23.2								19	27 PP
KIPAPA	113.14	297.3								19	43 PP
CAPE HALLETT	113.33	189.5	18	10	-30					26	30 SKKS
KODAIKANAL	114.47	74.9	19	56A	74					29	41 PS
PETROPAVLOVK	117.17	348.0								19	56 PP
CHATRA	117.60	54.2	18	47	-1						
BOKARO	117.73	57.8								20	9
WILKES	118.32	166.6								30	5 PS
LHASA	119.30	49.6								20	21 PP
SHILLONG	121.93	53.2	18	54	-3					20	32
LANCHOW	124.05	35.9				26	10	7		20	51 PP
Y.-SAKHLINSK	125.21	358.3								20	54 PP
CHANGCHUN	126.50	13.8								21	8 PP
PEKING	127.05	23.6				26	23	11		21	10 PP
CHENGTU	127.84	40.7				26	19	4		21	4 PP
PORT BLAIR	128.41	68.3				25	54	-22		21	16 PP
VLADIVOSTOK	128.44	8.2	19	22	13					21	22 PP
KUNMING	130.46	47.3	19	14	1	26	24	3		21	30 PP
MATUSIRO	135.57	2.9	19	20	-3					22	4 PP
MEDAN	136.51	76.2	19	27K	3					23	2 PKS
ZO-SE	136.80	24.8								22	15 PP
ABUYAMA	137.03	6.2								22	16 PP
NAGASAKI	138.15	13.7	19	9	-19					22	25 PP
CANTON	139.04	40.3								22	28 PP
HONG KONG	140.17	40.2								23	22 PKS
SUVA	141.99	250.9								23	59 PKS
DJAKARTA	146.33	89.1	19	49	7						
PERTH	146.82	139.2	19	50	7					42	16
BAGUIO CITY	148.56	39.3	19	58	13						
MELBOURNE	150.11	186.8	19	51	3						
NOUMEA	151.48	237.4	20	0	10					20	31
RIVERVIEW	152.60	199.1	19	40A	-12					23	42 PP
ADELAIDE	153.19	176.4	20	2	10						
BRISBANE	157.43	209.6	20	7K	9					25	50 PP
CHARTERS TS.	166.96	203.8	20	9	1					25	9
RABAUL	167.98	287.9	20	17	9					25	13 PP
PORT MORESBY	173.50	257.7	20	13	2					25	45 PP

SEPTEMBER 25 15.H 15.M 39.S EPICENTRE -33.33-178.28 DEPTH= 0.KM

A=-0.83686 B=-0.02514 C=-0.54684 D=-0.0300 E= 0.9995
G= 0.5466 H= 0.0164 K=-0.8372 HT= 0.7

SE= 4.18

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
ONERAHI	6.54	246.1	1	43	3						2	2
TUAI	6.60	212.8	1	39	-1	2	54	-3				
TONGARIRO	7.70	218.7	2	1	5	3	43	18				
WELLINGTON	9.67	212.9				4	2	-12				
COBB RIVER	10.54	220.2				4	23	-12				
KAIMATA	12.25	218.5				5	4	-13				
GEBBIES PASS	12.55	211.8				5	8	-16				
NOUMEA	17.39	305.3	4	4A	-1						8	55
BRISBANE	25.38	275.6	5	29K	-1	10	10	15				
RIVERVIEW	25.43	260.3	5	34	3							
MELBOURNE	30.10	250.9	6	11	-2							

CHARTERS TS.	34.18	283.8	6 45	-4	12	8	-7			
ADELAIDE	35.43	255.1	6 58	-2						
CAPE HALLETT	39.50	185.5	7 37	3	13	50	13		9 45	PCP
PORT MORESBY	39.74	298.9	7 32	-4					15 14	
SCOTT BASE	45.11	184.4	8 21	2						
BYRD STATION	52.11	169.1	9 13	-1						
SOUTH POLE	56.85	180.0	9 37	-11						
MIRNY	59.43	207.7	10 5	-1						
MATUSIRO	80.52	325.8	12 23	8						
PASADENA	87.68	46.0	12 59	8						
LICK	87.90	41.8	12 50	-2						
SHASTA	89.90	39.0	13 2	0						
MINERAL	90.07	39.7	13 7	4						
EUREKA	92.59	43.3	13 11	-3						
CHITTAGONG	101.86	288.9							18 19	PP
QUETTA	125.26	285.7	19 1	-2					21 2	PP
KIRUNA	143.79	348.1	19 29	-8						
REYKJAVIK	145.89	18.3	19 49K	9						
MOSCOW	146.57	323.0	19 37	-5						
PULKOVO	147.53	333.2	19 43	0						
SKALSTUGAN	149.01	350.8	19 50	4						
UPPSALA	151.46	343.2							19 58	PKP2
JERUSALEM	151.79	276.1	19 54	4						
TAMANRASSET	168.97	198.6	20 10	2					25 22	PP
GRANADA	174.19	47.1	20 13A	2					25 59	PP

SEPTEMBER 25 20.H 24.M 44.S EPICENTRE -36.20 -99.26 DEPTH= 0.KM

A=-0.13017 B=-0.79831 C=-0.58801 D=-0.9870 E= 0.1609
G= 0.0946 H= 0.5803 K=-0.8089 HT= -0.3

SE= 1.73

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
CONCEPCION	21.86	99.8				9	23	29					
SANTA LUCIA	23.59	91.7	5	18	5	9	42	17			6	12	PP
TALA POZO	30.71	84.3				11	26	4					
HUANCAYO	32.31	47.9	6	38A	5								
LA PAZ	33.88	62.8	6	40	-7	12	46	35			15	34	SSS
BYRD STATION	44.65	184.9	8	16	0								
SOUTH POLE	53.98	180.0	9	28	0						10	33	
SCOTT BASE	55.75	194.8	9	41K	0								
CAPE HALLETT	56.09	201.6	9	44A	1	18	41	69			9	52	PCP
SAN JUAN	62.69	35.8	10	28	-1								
TUCSON	68.95	349.5	11	9	0								
TUCSON TELE.	69.02	349.6	11	10	0								
LUBBOCK	69.46	357.7	11	12	0								
COLUMBIA	71.88	15.9	11	26	-1								
FAYETTEVILLE	72.08	4.3	11	28A	0								
PASADENA	72.18	343.6	11	27	-2								
BOULDER CITY	73.26	346.9	11	35	0								
FRESNO	75.06	343.0	11	44	-2								
LICK	76.06	341.8	11	52A	1								
BERKELEY	76.71	341.5	11	55A	0								
EUREKA	76.87	346.8	11	56	0								
MIRNY	77.14	185.0	11	56	-1								
SALT LAKE C.	77.46	350.2	11	59	0						13	49	
MORGANTOWN	77.53	15.2	11	59A	0								
RENO	77.71	343.9	12	1A	1								
UKIAH	78.15	341.2	12	4	1								
MINERAL	78.90	342.8	12	7	0								
SHASTA	79.42	342.3	12	9A	-1								
RAPID CITY	79.98	357.1	12	14	1								
BOZEMAN	82.18	351.7	12	26	2								
WESTON	82.27	20.5	12	26K	1								
BUTTE	82.72	350.7	12	29	2								
OTTAWA	83.96	16.4	12	33	-1								
BREBEUF	84.56	17.8	12	35	-1								
HUNGRY HORSE	85.20	350.2	12	40	0								
MELBOURNE	85.37	225.7	12	40	-1								
SHAWINIGAN	85.75	18.0	12	42	0								
SEVEN FALLS	86.78	19.0	12	47	-1								
RESOLUTE	110.63	1.2				26	52	97			34	44	SS
TAMANRASSET	114.63	79.0	18	53	10						19	44	PP
STRASBOURG	126.65	52.3	18	59	-7								

STUTTGART	127.62	52.4	19	6	-2							
PULKOVO	140.17	37.5	19	38	7							
MOSCOW	144.98	42.3	19	38	-1							
SHILLONG	165.74	225.1	21	7	60							
QUETTA	166.99	113.5	20	11	3							
NAMANGAN	171.45	53.4	20	21	11							

SEPTEMBER 26 18.H 10.M 29.S EPICENTRE 50.57-175.02 DEPTH= 0.KM

A=-0.63526 B=-0.05539 C= 0.77031 D=-0.0869 E= 0.9962
G=-0.7674 H=-0.0669 K=-0.6377 HT= -5.6

SE= 1.49

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
COLLEGE	20.16	34.5	4	40	1							
MINERAL	38.07	84.4	7	23K	1							
HUNGRY HORSE	38.72	68.8	7	27	-1							
RESOLUTE	39.49	24.3				13	44	7			9	6 PP
RENO	39.66	84.2	7	37K	1							
LICK	39.79	88.3	7	37K	0							
FRESNO	41.30	87.6	7	50	1							
BOZEMAN	41.80	70.9	7	53	0							
EUREKA	42.13	81.7	7	56	0							
SALT LAKE C.	43.97	77.5	8	11	0							
PASADENA	43.98	89.4	8	11	0	15	12	29				
BOULDER CITY	44.95	84.9	8	20	1							
RAPID CITY	47.36	68.6	8	38	0							
TUCSON	49.88	85.9	8	57	0							
TUCSON TELE.	49.89	85.8	8	57	-1							
TRUK	51.02	224.2	9	5	-1							
KIRUNA	61.35	353.4	10	18	-2							
OTTAWA	61.70	52.2	10	21K	-2							
SHAWNIGAN	62.36	49.6	10	23	-4							
BREBEUF	62.68	50.9	10	27A	-2							
SEVEN FALLS	62.87	48.1	10	31	1							
SKALSTUGAN	66.05	356.4	10	50	-1							
UPPSALA	69.46	353.2	11	10	-2							
MOSCOW	70.64	341.1	11	19	-1							
NAMANGAN	71.81	313.0	11	27	0						20	34
CHITTAGONG	75.00	286.9	11	46	1	21	26	3			11	58 PCP
LAHORE	77.93	305.2	12	9	7							
CHARTERS TS.	78.12	217.0	12	1	-2							
HALLE	78.13	355.6	12	2	-1							
COLLMBERG	78.28	354.9	12	3	-1							
JENA	78.72	355.7	12	5	-1							
PRUHONICE	79.50	353.7	12	10	0						12	43
STUTTGART	80.97	357.2	12	18	0							
PARIS	80.98	1.7	12	20	2							
BRATISLAVA	81.09	351.8	12	20	1							
STRASBOURG	81.20	358.1	12	20	1							
TUBINGEN	81.22	357.3	12	20	1							
EBINGEN	81.57	357.3	12	22	1							
TIFLIS	81.72	331.0	12	23	1							
QUETTA	82.77	309.6	12	27	-1	22	45	0				
MEDAN	84.90	269.4									16	36
ADELAIDE	94.41	216.5				24	39	5				
SOUTH POLE	140.38	180.0	19	22	-10							

SEPTEMBER 27 7.H 36.M 16.S EPICENTRE -8.65 106.46 DEPTH= 74.KM

DEPTH OF FOCUS= 0.007R

A=-0.28009 B= 0.94828 C=-0.14937 D= 0.9590 E= 0.2833
G= 0.0423 H=-0.1432 K=-0.9888 HT= 6.7

SE= 1.96

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
LEMBANG	2.14	32.7	0	34K	0							
DJAKARTA	2.48	8.6	0	37K	-2	1	10	1				
MEDAN	14.41	327.1	3	27K	6	6	6	6				
PORT BLAIR	24.37	325.7				9	22	-2			7	24

HONG KONG	31.67	13.7	6	19A	1	11	20	-1		
KOROR	32.13	61.2	6	19	-3					
SHILLONG	36.85	337.7	7	1	-2	12	39	-2	10	24
CHENGTU	39.15	356.7	7	21K	-1	13	15	-1		
ADELAIDE	39.45	136.4	7	25	1					
CHARTERS TS.	40.08	110.8	7	31A	1	13	35	5		
PORT MORESBY	40.18	94.3	7	33	3	13	37	6	7 50	13 18 PCS
LHASA	40.86	339.3	7	39A	3	13	43	2		
ZO-SE	41.97	19.0	7	46K	1	14	3	5		
NANKING	42.15	15.7	7	48K	1	14	4	3		
LANCHOW	44.56	357.0	8	7	1	14	39	3		
AGRA	45.00	323.1	8	9A	-1	14	40	-2	15	6
MELBOURNE	45.26	136.0	8	14	2					
BRISBANE	47.75	119.3	8	32K	1				19	6 SS
TRUK	47.99	71.8	8	33	0					
RIVERVIEW	48.10	128.1	8	35A	1					
PEKING	49.26	9.8	8	43K	0	15	44	2		
LAHORE	50.42	323.9	8	52	0	16	1	3		
KARACHI	51.41	312.9	8	52A	-7					
WARSAK DAM	53.80	323.9	9	17A	0					
MATUSIRO	53.96	31.6	9	16A	-2					
QUETTA	54.13	317.2	9	18A	-2	16	49	0	11	22 PP
ULAN-BATOR	56.32	0.4	9	37	2					
OASIS-BUNG.	57.57	182.8	9	43	-1				10	4
TANANARIVE	57.89	253.1	9	46	0				10	7
MIRNY	58.55	186.3	9	49	-2					
NAMANGAN	58.85	329.7	9	52	-1	17	53	2		
DUMONT	62.28	165.6	10	13	-3					
SEMIPALATNSK	63.06	341.5	10	20	-2				18	39
YAKUTSK	72.74	11.2	10	20	-62					
CAPE HALLETT	74.01	163.4	11	30A	1					
MAKHACH-KALA	74.17	319.2	11	28	-2	20	55	-1		
SVERDLOVSK	75.29	335.9	11	38	1	21	10	1		
TIFLIS	75.38	317.1	11	38	1	21	9	-1		
SCOTT BASE	75.54	169.0	11	37	-1					
UVIRA	76.97	268.4	11	48	2					
LWIRO	77.46	269.6	11	50A	1					
JERUSALEM	78.89	304.7	11	54	-3					
KSARA	78.99	306.9	11	58	1				15	11 PP
TIKSI	81.48	7.0	12	9	-1	22	10	-4		
SIMFEROPOL	83.81	317.1	12	23	1	22	39	1		
MOSCOW	85.48	328.1	12	31	0				12	49
BYRD STATION	88.44	172.8	12	45	0					
PULKOVO	90.51	330.6	13	14	19					
APATITY	91.55	338.4	12	58	-2	23	47	-4	23	16 SKS
LWOW	91.69	320.0	13	0	0					
KIRUNA	96.44	337.6	13	21	-1					
UPPSALA	96.82	329.5	13	27	3					
PRUHONICE	97.78	319.4							17	30 PP
JENA	99.72	320.2	17	36	777				17	57 PP
TAMANRASSET	103.33	291.4	17	21	777				17	56 PP
COLLEGE	104.45	25.1							18	23 PP
RESOLUTE	112.88	6.0				25	14	9	29	0 PS
MINERAL	126.97	45.4	18	58K	3					
HUNGRY HORSE	127.80	33.2	18	58	1					
LICK	128.07	48.9	19	1K	3					
BOZEMAN	131.03	34.5	19	7	4					
EUREKA	131.26	44.0	19	6	2				22	27 PP
PASADENA	131.84	51.4	19	8	3				22	29
RAPID CITY	136.29	31.1	19	15	2				22	3 PP
LARAMIE	136.86	35.8	19	18	4					
TUCSON	138.24	50.4	19	16	-1				22	11 PP
TUCSON TELE.	138.28	50.2	19	12	-5				22	12 PP
SEVEN FALLS	141.59	357.0	19	26	3					
SHAWINIGAN	142.23	359.1	19	25	1					
OTTAWA	143.34	2.6	19	24K	-2					
LUBBOCK	144.00	42.3	19	28	1					
WESTON	146.35	357.0	19	23K	-8					
MORGANTOWN	148.62	9.5	19	42K	7					
TACUBAYA	152.95	64.0	20	15	34				23	21 PP
HUANCAYO	159.36	175.0	18	19	-90				20	30 PKP

SEPTEMBER 27 12.H 37.M 4.S EPICENTRE 36.27 141.57 DEPTH= 0.KM

A=-0.63305 B= 0.50233 C= 0.58899 D= 0.6216 E= 0.7833

G=-0.4614 H= 0.3661 K=-0.8081 HT= -0.3

SE= 4.04

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TYOSI	0.80	226.9	0	16K	-2	0	27	-4				
ONAHAMA	0.87	321.8	0	18K	-1	0	28	-5				
MITO	0.89	277.4	0	18	-2	0	28	-6				
KAKIOKA	1.12	268.4	0	22K	-1	0	28	-11				
SHIRAKAWA	1.38	308.5	0	26	-1	0	44	-2				
UTUNOMIYA	1.40	282.1	0	25K	-2	0	42	-4				
TOKYO C.M.O.	1.59	248.8	0	28	-2	0	45	-6				
HUKUSIMA	1.72	329.6	0	31K	-1	0	52	-3				
YOKOHAMA	1.77	242.3	0	32	0	1	5	9				
KUMAGAYA	1.77	266.8	0	32	0	0	59	3				
MERA	1.95	227.0	0	32	-3	1	6	6				
MAEBASI	2.02	274.4	0	36K	0	1	3	1				
TITIBU	2.03	262.6	0	35	-1	1	0	-3				
SENDAI	2.07	345.3	0	37K	0	1	0	-3				
ISINOMAKI	2.17	354.8	0	37	-1	1	2	-4			1	49
YAMAGATA	2.20	334.2	0	40	2	1	5	-2				
OSIMA	2.33	230.7	0	43	3						2	11
AJIRO	2.35	239.5	0	41	0	1	12	1				
HUNATU	2.40	252.1	0	43	2	1	18	6				
MISIMA	2.42	242.5	0	41	-1	1	13	1				
OIWAKE	2.44	272.3	0	42	0	1	22	9				
KOHU	2.51	256.2	0	42K	-1	1	24	9				
NIIGATA	2.60	310.0	1	7	23	1	45	28				
MATUSIRO	2.72	276.9	0	45K	-1	1	20	0			0	57
NAGANO	2.74	279.4	0	46K	0	1	25	4				
TAKADA	2.79	288.2	0	51	4	1	27	5				
MIZUSAWA	2.88	353.2	0	53	5	1	25	1				
SHIZUOKA	2.89	244.3	0	27	-21	1	3	-21				
MATUMOTO	2.91	270.7	0	47	-2	1	24	-1				
SAKATA	2.97	332.8	0	56	7	1	29	3				
IIDA	3.13	257.3	0	53	1	1	38	8				
AIKAWA	3.17	304.4	0	59	7	1	37	5				
OMAESAKI	3.20	239.6	1	4	11						2	6
MIYAKO	3.39	5.3	0	57	2	1	37	0				
MORIOKA	3.44	354.9	0	56	0	1	41	3				
HATIDYOZIMA	3.47	204.9	1	36	39							
TAKAYAMA	3.49	269.3	0	58	1							
HAMAMATU	3.50	244.9				2	6	26			1	33
TOYAMA	3.55	278.3	0	56	-2	1	28	-13				
AKITA	3.63	341.8	1	1	2	1	53	9				
NAGOYA	3.90	255.0	1	6	3	1	54	4				
WAZIMA	3.91	287.9	1	5	2							
GIHU	3.99	258.9	1	2	-2	1	51	-2			1	34
HATINOHE	4.25	359.6	1	10	2	2	1	2				
HUKUI	4.29	268.6	1	29	21							
IBUKISAN	4.31	259.6	1	9	1						2	16
KAMEYAMA	4.39	252.7	1	26	16	2	16	13				
TU	4.40	251.0	1	33	23							
HIKONE	4.44	258.6	1	23	13	2	10	6				
TSURUGA	4.50	263.7	1	15	4	2	12	7				
AOMORI	4.59	352.5	1	19	7	2	22	15				
OWASE	4.91	245.0	1	31	14	2	38	22				
NARA	4.94	253.0	1	29	12	2	37	21				
ABUYAMA	5.08	255.8	1	17A	-2							
OSAKA	5.19	253.6	1	49	28	2	36	14				
KOBE	5.45	254.9				2	52	23				
TOYOOKA	5.53	264.3	0	56	-30						3	4
SIOMISAKI	5.53	241.1	1	34	8	2	59	28				
HAKODATE	5.54	353.4	1	29	3	2	45	14				
WAKAYAMA	5.62	250.6	2	9	42							
SUMOTO	5.79	252.7	1	38	9	3	0	22			3	37
MORI	5.87	352.7	1	35	4	2	38	-2				
URAKAWA	5.95	8.7	1	34	2	2	40	-1				
MURORAN	6.07	355.8	1	39	6	2	57	12				
TOKUSIMA	6.13	251.1	1	36	2	3	15	29				
TOMAKOMAI	6.24	0.1				2	50	2				
TAKAMATU	6.45	254.6									3	19 S*
SUTTSU	6.60	351.4	2	29	48							
OBIHIRO	6.76	10.2	1	42	-1							
MUROTO	6.78	245.8	1	23	-20	2	33	-29				
SAPPORO	6.79	358.7	1	53	9	3	16	13				
KUSIRO	7.05	17.2	1	42	-5	3	1	-8			3	50
KOTI	7.14	250.0	2	4	16	3	18	7			3	47

NEMURO	7.70	22.4				3	13	-12				
HIROSIMA	7.71	258.4	2	3	7						2	43
KUMAMOTO	9.60	252.1									4	54
SAGA	9.75	255.3	3	45	80						5	47
VLADIVOSTOK	10.11	315.5	2	29	-1						5	15
CHANGCHUN	14.55	306.2	3	26	-3							
NANKING	19.30	264.0	4	24	-5							
LANCHOW	30.35	281.0	6	12	-4							
KUNMING	35.06	262.4	6	51	-6							
TIKSI	36.04	353.2									11	2
LHASA	42.52	276.1	7	57	-2							
SHILLONG	43.54	270.2	8	1	-6							
CHITTAGONG	45.08	266.2	8	10	-10							
COLLEGE	49.67	31.9	8	54	-2							
LEMBANG	53.41	223.7	9	20K	-4							
NAMANGAN	53.48	297.8	9	21	-3	16	57	0				
LAHORE	55.00	286.0	9	29	-7							
SVERDLOVSK	55.81	319.0	9	10	-31							
CHARTERS TS.	56.15	174.7	9	47	3							
QUETTA	61.30	287.9	10	15A	-5							
RESOLUTE	63.31	14.4	10	29	-4	18	52	-13				
APATITY	63.44	335.9	10	29	-5							
KIRUNA	67.27	339.4	10	55	-4							
MOSCOW	67.94	323.7	10	59	-4							
PULKOVO	68.91	329.6	11	4	-5							
MAKHACH-KALA	69.03	308.4				20	14	0				
TIFLIS	71.39	308.3	11	20	-4							
MINERAL	72.16	52.9	11	26A	-3							
HUNGRY HORSE	72.26	42.7	11	27	-2							
SKALSTUGAN	72.67	338.7	11	27	-5							
BERKELEY	73.07	55.3	11	41	7							
UPPSALA	73.70	334.1	11	35	-3							
RENO	73.75	52.8	11	45	7							
LICK	73.77	55.5	11	37A	-1							
BUTTE	74.42	44.1	11	46	4							
FRESNO	75.31	55.2	11	44	-3							
SIMFEROPOL	75.96	315.7	11	47	-4						21	48
EUREKA	76.23	51.1	11	50	-2							
LWOW	78.07	324.1	12	1	-1							
RAPID CITY	80.79	41.3	12	16	-1							
LARAMIE	81.32	44.6	12	29	9							
KSARA	81.70	305.9	12	28	6							
PRUHONICE	82.20	328.6	12	22	-2							
BRATISLAVA	82.45	326.2	12	23	-3						15	38
JERUSALEM	83.40	304.6	12	25	-6							
TUCSON	83.93	54.3	12	42	9							
TUCSON TELE.	83.95	54.2	12	32	-1							
STUTTGART	85.33	330.6	12	36	-4						12	58
TUBINGEN	85.58	330.6	12	38	-4							
STRASBOURG	86.05	331.3	12	51	7							
TAMANRASSET	108.07	317.6									18	39 PP
BYRD STATION	127.00	167.5	19	5	-1							
LA PAZ	147.11	61.1	19	44	1							

SEPTEMBER 27 13.H 55.M 4.S EPICENTRE -15.21-174.00 DEPTH= 122.KM

DEPTH OF FOCUS= 0.014R

A=-0.96015 B=-0.10083 C=-0.26067 D=-0.1044 E= 0.9945
G= 0.2592 H= 0.0272 K=-0.9654 HT= 5.7

SE= 1.72

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
AFIAMALU	2.52	59.3	0	38	-3	1	5	-7					
SUVA	7.82	247.0	1	59A	6	3	28	8					
NOUMEA	19.80	246.2	4	25	2	8	9	15	4	45	8	23	PCP
ONERAHI	22.97	204.8	4	57	2								
TONGARIRO	25.61	199.1	5	20	0								
WELLINGTON	27.74	198.4	5	36	-3								
COBB RIVER	28.24	201.5	5	44	0								
KAIMATA	29.97	201.9	5	56	-3								
GEBBIES PASS	30.60	199.2	6	4	-1								
BRISBANE	32.94	242.8	6	23K	-2						7	2	
RABAUL	35.03	284.7	6	41	-2								

RIVERVIEW	36.49	233.1	6	55A	0					
CHARTERS TS.	38.11	256.9	7	7	-2					
PORT MORESBY	38.35	274.0	7	11K	0	12	58	2	7 45	13 57 *SS
KIPAPA	39.63	23.7	7	21	0				7 57	
TRUK	40.65	301.3	7	29	-1					
MELBOURNE	42.61	230.1	7	46K	0					
FORT NELSON	43.05	222.2	7	48	-1					
ADELAIDE	46.62	236.1	8	16	-2					
CAPE HALLETT	57.83	185.6	9	44A	3				10 21	
DUMONT	59.58	199.4	9	52	-1					
SCOTT BASE	63.40	184.5	10	20K	1					17 19
MATUSIRO	68.41	320.1	10	49	-2					
BYRD STATION	69.24	171.3	10	57	1	19	58	7		
BERKELEY	71.72	40.9	11	11	0				11 48	
LICK	71.79	41.6	11	12	1				11 48	
UKIAH	71.89	39.3	11	13	1				11 49	
PASADENA	72.30	46.1	11	15	1	20	17	-9	11 52	
FRESNO	72.66	43.0	11	17A	1					
SHASTA	73.35	38.5	11	21	1					
MINERAL	73.62	39.1	11	22A	0				11 57	
RENO	74.25	40.7	11	27A	1					
OASIS-BUNG.	74.30	204.9	11	24	-2				11 58	
BOULDER CITY	75.59	46.0	11	33	0					
TUCSON	76.66	51.0	11	40	1				12 20	
EUREKA	76.67	42.4	11	40	1				12 17	
TUCSON TELE.	76.78	51.0	11	41	1				12 12	
LEMBANG	77.06	266.4	11	42	1					
MIRNY	77.37	204.2	11	44	1					
COLLEGE	82.28	11.0	12	8	-1				12 40	
HUNGRY HORSE	82.64	35.6	12	10	-1					30 35 PKKP
BOZEMAN	82.99	39.0	12	15	2					
BOULDER	84.13	46.0	12	20	1					
LARAMIE	84.49	44.7	12	21	0					
RAPID CITY	87.25	43.0	12	34	0					
ULAN-BATOR	94.02	318.5								27 54
RESOLUTE	101.70	15.5				25	10	3		
KIRUNA	126.59	353.2	18	49	0					
SKALSTUGAN	131.49	356.3	18	59	0					
UPPSALA	134.62	351.8	18	57	-7					
WINDHOEK	140.91	196.4	19	9	-7					
MUNSTER	143.30	358.3	19	16	-4					
HALLE	143.48	353.7	19	17	-3					22 30 PP
COLLMBERG	143.56	352.6	19	18	-3					
JENA	144.08	354.0	19	20	-2					22 41 PP
PLAUEN	144.45	353.2	19	20	-2					
PRUHONICE	144.63	350.5	19	22	0				20 4	20 26 *SPKP
SONNEBERG	144.67	354.2	19	23	0					
BRATISLAVA	145.88	346.7	19	24	-1				20 8	22 53 PKS
PARIS	146.37	4.2	19	28K	3				20 3	
STUTTGART	146.43	356.2	19	26	0				19 45	22 52 PP
TUBINGEN	146.68	356.3	19	28	2					22 56 PP
STRASBOURG	146.69	357.9	19	29K	3				19 49	
EBINGEN	147.03	356.3	19	28	1					
KSARA	147.27	309.9	19	33A	6				20 9	22 57 PP
RAVENSBURG	147.38	355.5	19	31	4					
BASLE	147.75	358.0	19	31K	3					20 30
BELGRADE	148.04	340.4	19	34A	6					21 45
NEUCHATEL	149.29	358.8	19	30	1					
JERUSALEM	148.67	306.9	19	31A	2					
SOFIA	148.82	334.9	19	35	6					
TRIESTE	148.96	349.4	19	23	-7				20 7	19 35 PKP2
CLERMONT-FD.	149.44	4.0	19	38	8					
UVIRA	150.52	232.8	19	41K	9					
LWIRO	151.54	234.4	19	43A	10					
HELWAN	152.51	306.4	19	43	8					
LISBON	153.05	26.8	19	46K	10					
TOLEDO	153.90	17.8	19	39	2					20 2 PKP2
GRANADA	156.51	19.5	20	15K	35					23 54 PP
MALAGA	156.66	21.5								23 36 PP
ALGIERS UNI.	158.37	6.4	19	40	-3				20 19	23 59 PP
SETIF	159.09	1.3	19	45	2				20 21	
TAMANRASSET	172.45	3.3	19	56	2				20 36	25 10 PP

SEPTEMBER 28 20.H 53.M 53.S EPICENTRE 36.55 140.07 DEPTH= 118.KM

DEPTH OF FOCUS= 0.013R

A=-0.61743 B= 0.51688 C= 0.59297 D= 0.6419 E= 0.7668
G=-0.4547 H= 0.3806 K=-0.8052 HT= -0.4

SE= 1.76

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
UTUNOMIYA	0.16	269.1	0	17K	-1	0	29	-2				
KAKIOKA	0.34	164.0	0	18K	-1	0	30	-2				
MITO	0.37	117.8	0	18	-1	0	30	-3				
SHIRAKAWA	0.58	12.3	0	19	-1	0	32	-3				
KUHAGAYA	0.68	234.2	0	19K	-2	0	33	-3				
ONAHAMA	0.78	59.1	0	20	-1	0	35	-2				
MAEBASI	0.82	259.5	0	20	-2	0	36	-2				
TOKYO C.M.O.	0.91	196.4	0	21	-1	0	37	-2				
TITIBU	0.98	234.6	0	23	0	0	37	-2				
TYOSI	1.05	142.4	0	22A	-1	0	40	-1				
YOKOHAMA	1.17	196.9	0	24K	-1	0	43	0				
HUKUSIMA	1.24	15.0	0	25K	0	0	44	0				
OIWAKE	1.24	260.1	0	27	1	0	45	0				
HUNATU	1.49	225.4	0	27	-1	0	46	-3				
MATUSIRO	1.49	270.4	0	28K	0	0	49	-1				
NAGANO	1.51	275.0	0	28	-1	0	49	-1				
KOHU	1.52	233.2	0	30	1	0	50	0				
TAKADA	1.56	291.1	0	29	0	0	51	0				
NIIGATA	1.59	329.6	0	52	22							
MERA	1.64	186.8	0	29	-1	0	51	-2				
AJIRO	1.69	207.9	0	31	0	0	51	-3				
MISIMA	1.69	212.7	0	29	-2	0	50	-4				
YAMAGATA	1.71	7.5	0	32	1	0	55	1				
MATUMOTO	1.72	260.5	0	32	1	0	51	-3				
SENDAI	1.84	20.9	0	32	-1	0	54	-3			1	25
OSIMA	1.86	197.6	0	31A	-2	0	54	-3				
AIKAWA	2.06	315.9	0	34	-1	1	0	-1				
SHIZUOKA	2.08	221.1	0	36	1	1	1	-1				
ISINOMAKI	2.12	27.7	0	35	-1	0	59	-4			1	16
TAKAYAMA	2.31	260.8	0	39	0							
TOYAMA	2.31	274.5	0	39	0	1	4	-3				
SAKATA	2.35	355.5	0	41	2	1	12	4				
OMAESAKI	2.46	218.2	0	45	4	1	19	8				
WAZIMA	2.67	289.0	0	42	-1							
MIZUSAWA	2.71	17.8	0	43	-1	1	14	-3				
NAGOYA	2.87	242.2	0	46	0	1	20	0				
GIHU	2.91	247.7	0	45	-2	1	15	-6			1	53
HUKUI	3.11	261.8	0	49	0							
AKITA	3.16	0.5				1	29	2				
IBUKISAN	3.21	249.7	0	51	0	1	46	17				
MORIOKA	3.26	15.2	0	51	0	1	29	-1				
HIKONE	3.35	248.7	0	54	2	1	28	-4				
KAMEYAMA	3.38	240.9	1	0	7	1	52	19				
TU	3.41	238.8	0	55	2							
MIYAKO	3.44	25.3	0	54	0	1	30	-4				
HATIDYOZIMA	3.45	183.3	0	52	-2	1	30	-4				
OWASE	4.02	233.0	0	59	-2	1	34	-14				
HATINOHE	4.13	15.7	1	2	-1	1	47	-4				
OSAKA	4.15	244.1	1	10	7	2	31	40				
AOMORI	4.30	7.3				1	49	-6				
SIOMISAKI	4.69	230.0	1	31	20	2	36	32				
SUMOTO	4.77	244.1	1	12	0	2	28	22				
HAKODATE	5.24	5.4				2	18	0				
MORI	5.55	3.9	1	38	16							
TOMAKOMAI	6.07	10.6				2	37	-1				
KOTI	6.14	242.7				2	30	-10			3	18
OBIHIRO	6.80	19.8	1	38	-1	2	50	-6				
KUSIRO	7.23	26.1	1	35	-10	2	56	-10				
COLLEGE	50.07	32.0	8	45	0				9	11		
CHARTERS TS.	56.56	173.0	9	31	-2							
HUNGRY HORSE	72.87	42.2	11	18	0				11	46		
UPPSALA	72.91	333.5	11	16	-2				11	44		
MINERAL	72.95	52.3	11	18	-1							
LICK	74.60	54.9	11	28	0							
EUREKA	76.99	50.4	11	43	1				12	11		
RAPID CITY	81.37	40.6	12	34	29							
TUCSON	84.75	53.5	12	23	1							
TUCSON TELE.	84.76	53.4	12	23	0				12	52		

SEPTEMBER 29 14.H 17.M 11.S EPICENTRE 39.79 143.57 DEPTH= 0.KM

A=-0.61992 B= 0.45752 C= 0.63747 D= 0.5938 E= 0.8046
G=-0.5129 H= 0.3785 K=-0.7705 HT= -1.6

SE= 3.72

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
MIYAKO	1.24	263.9	0 22A	-3	0 36	-7		
HATINOHE	1.73	295.8	0 30A	-2	0 51	-4		
MORIOKA	1.85	267.9	0 32A	-2	0 53	-5		
MIZUSAWA	2.00	251.5	0 34	-2	0 58	-4		
ISINOMAKI	2.22	232.9	0 36	-3	0 59	-8		1 37
AOMORI	2.37	296.5	0 40A	-1	1 9	-2		
URAKAWA	2.43	346.0	0 44	2	1 9	-4		
SENDAI	2.58	234.7	0 41A	-3	1 5	-11		
AKITA	2.68	269.5	0 44	-1	1 20	1		
HAKODATE	2.94	313.4	0 49	0	1 22	-4		
YAMAGATA	2.94	239.5	0 47	-2	1 25	-1		
SAKATA	3.04	254.1	0 50	-1	1 30	2		
TOMAKOMAI	3.11	331.7	1 0	8	1 41	11		
OBIHIRO	3.14	355.0	0 52	0	1 42	11		
HUKUSIMA	3.17	230.9	0 50	-2	1 29	-3		
MURORAN	3.21	323.0	0 55	2	1 35	2		
MORI	3.24	316.4	0 58	5	1 46	13		
KUSIRO	3.24	10.8	0 55	2	1 31	-3		2 4
ONAHAMA	3.53	217.3	0 55	-3	1 41	0		1 15
SAPPORO	3.67	333.7	1 5	5	1 46	1		
SHIRAKAWA	3.75	225.6	0 58	-3				2 1
NEMURO	3.84	22.4	1 1	-1	1 42	-7		
SUTTSU	3.92	321.1	1 15	12	1 49	-2		
NIIGATA	3.99	243.5	1 33	29	2 23	30		
ASAHIGAWA	4.08	347.7	1 1'	6				2 23
MITO	4.20	216.6	1 5	-2	2 2	4		
ABASHIRI	4.26	6.9	1 9	1	1 57	-3		
UTUNOMIYA	4.36	223.2	1 11	2	1 56	-6		
AIKAWA	4.51	248.6	1 9	-3	1 46	-20		
TYOSI	4.60	208.8	1 11	-2				
MAEBASI	4.91	227.8	1 15	-2	2 17	1		
KUMAGAYA	4.92	223.6	1 17	0	2 17	1		
TAKADA	4.97	238.9	1 17	-1				
TOKYO C.M.O.	5.10	217.6	1 16	-4	2 19	-1		
TITIBU	5.21	224.4	1 19	-2				
NAGANO	5.25	235.3	1 22	0	2 41	17		
OIWAKE	5.26	230.5	1 21	-1				
MATUSIRO	5.32	234.2	1 21A	-2	2 23	-3		
YOKOHAMA	5.35	216.8	1 23	0	2 45	18		2: 5
MATUMOTO	5.66	233.1	1 36	8				
MERA	5.70	212.7	1 33	5				
KOHU	5.74	225.2	1 27	-2	2 39	3		
WAZIMA	5.76	247.4	1 30	1	2 52	15		
TOYAMA	5.89	240.4	1 33	2	2 53	13		
MISIMA	5.94	219.7	1 31	-1	2 39	-2		
OSIMA	6.03	215.0	1 45	12	2 58	14		
TAKAYAMA	6.18	235.9	1 30	-5				
IIDA	6.24	228.7	1 42	6	2 54	5		
SHIZUOKA	6.33	222.1	1 29	-8	2 36	-15		
OMAESAKI	6.72	221.1	1 50	7	3 12	11		4 6
HUKUI	6.87	239.4	1 46	1				
GIHU	6.96	233.0	1 49	3	3 11	4		
NAGOYA	6.99	230.7	1 53	7	3 9	1		
IBUKISAN	7.21	234.6	1 49	-1	3 6	-7		
HIKONE	7.36	234.5	1 55	3				
KAMEYAMA	7.51	231.1	2 10	16	3 31	10		
TU	7.56	230.2	2 1	7				
MAIZURU	7.74	238.7	2 2	5				
NARA	8.01	232.8	2 19	18				
ABUYAMA	8.05	234.9	1 57K	-4	2 41	-53		
TOYOOKA	8.14	241.2	2 13	10	3 36	0		
OWASE	8.21	228.2	2 2	-2				
OSAKA	8.21	233.8	2 25	21				4 14
KOBE	8.41	235.3			3 44	1		4 13
SUMOTO	8.82	234.7	2 38	26	4 11	18		5 44
SIOMISAKI	8.91	227.1	3 3	50	4 32	36		
TOKUSIMA	9.19	234.4	2 23	6				
VLADIVOSTOK	9.37	294.5	2 19	-1				
KOTI	10.19	235.4	3 4	33	4 55	28		
HAMADA	10.37	245.5	4 6	93	5 49	77		

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HIROSIMA	10.41	242.2	2	30	-4						
HUKUOKA	12.24	243.7				5	58	41			
PETROPAVLOVK	16.86	32.7	4	1	2	7	21	14			
ZO-SE	20.16	251.5	4	35	-4						
PEKING	20.99	279.5	4	41	-7						
YAKUTSK	23.80	343.8	5	10	-6	9	24	-5			
KUNMING	37.18	259.3	7	10A	-5						
LHASA	43.81	273.4	8	10	0						
SEMIPALATNSK	44.67	305.6	8	13	-4						
SHILLONG	45.18	267.9	8	14A	-7						
COLLEGE	45.86	33.6	8	25	-1						
NAMANGAN	53.30	296.2	9	19	-4						
RESOLUTE	59.51	15.2	10	5	-3	18	20	3	20	5	SCS
QUETTA	61.76	287.0	10	19	-4						
KIRUNA	64.54	339.4	10	37	-4						
MOSCOW	66.05	323.5	10	49	-2						
PULKOVO	66.68	329.6	11	8	13						
SHASTA	68.11	54.8	11	4A	0						
HUNGRY HORSE	68.62	44.4	11	6	-1						
MINERAL	68.80	54.8	11	7A	-1						
BERKELEY	69.80	57.3	11	13	-1						
RENO	70.40	54.6	11	28	10						
TIFLIS	70.45	308.3	11	16	-2						
LICK	70.50	57.4	11	18A	-1						
BUTTE	70.81	45.8	11	20	-1						
EUREKA	72.82	52.8	11	32	-1						
SALT LAKE C.	74.49	49.7	11	52	10						
PASADENA	74.67	58.3	11	43	0	21	17	-2			
BOULDER CITY	75.69	55.1	11	49	0						
RAPID CITY	77.12	42.8	11	7	-50						
LARAMIE	77.72	46.1	12	1	0						
COLLMBERG	79.54	331.0	12	8	-3						
PRUHONICE	80.00	329.4	12	12	-1				13	6	
JENA	80.36	331.5	12	7	-8				12	30	
TUCSON	80.62	55.8	12	27	11						
TUCSON TELE.	80.63	55.7	12	16	0						
DURHAM	81.19	340.4	12	34K	15						
STUTTGART	83.02	331.5	12	27	-2				26	24	
BYRD STATION	130.08	166.9	19	12	0						
LA PAZ	143.98	59.0	19	39	1						

SEPTEMBER 30 7.H 8.M 39.S EPICENTRE 2.99 128.40 DEPTH= 0.KM

A=-0.62025 B= 0.78270 C= 0.05175 D= 0.7837 E= 0.6211
G=-0.0321 H= 0.0406 K=-0.9987 HT= 7.1

SE= 2.36

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KOROR	7.44	54.3	1	51	-1	3	12	-7					
MANILA	13.65	328.0	3	17	0	6	4	13					
BAGUIO CITY	15.40	330.6	3	42	2	6	50	18					
GUAM	19.23	56.3	4	26	-2								
PORT MORESBY	22.38	123.6	5	7	6	9	13	10			5	36	PP
DJAKARTA	23.38	247.1	6	52	101						9	33	
HONG KONG	23.65	325.4	5	19	5	9	30	4					
TRUK	23.77	78.3	5	15	0								
CANTON	24.77	325.0	5	29	4								
RABAUL	24.81	106.6	5	27	2								
PHU-LIEN	27.62	311.6	5	57	6						11	11	
MEDAN	29.67	272.0	6	6A	-4	11	1	-4					
NANKING	30.29	343.7	6	14	-1								
KUNMING	33.08	313.9	6	40	0								
MATUSIRO	34.61	14.0	6	50	-3						14	48	
CHENGTU	35.90	322.6	7	6	2	12	41	-1					
SIAN	36.01	332.0	7	5	0	12	39	-5					
BRISBANE	38.49	143.5	7	27	1	13	27	5					
PEKING	38.50	344.9	7	24	-2								
ADELAIDE	38.94	166.4	7	31	2	13	41	12			13	28	PCS
LANCHOW	40.00	328.4	7	38	0	13	40	-4					
RIVERVIEW	42.44	151.5									9	34	PP
MELBOURNE	43.42	160.8	8	7	1								
LHASA	44.23	310.8	8	15	2	14	45	-2					
CHATRA	46.02	305.1	8	26	-1								

ULAN-BATOR	48.45	340.8	8	46	0						
AGRA	53.77	301.7	9	23	-3	16	52	-8			
DEHRA DUN	54.76	305.4	9	33	-1	17	6	-8			
WARSAK DAM	61.15	307.4	10	16K	-3						
QUETTA	63.94	302.2	10	35	-2	19	6	-7			
DUMONT	69.99	175.1	11	13	-2						
OASIS-BUNG.	71.81	191.5	11	26	0						
MIRNY	73.84	194.0	11	37	-1						
CAPE HALLETT	79.74	168.0	12	11A	0	22	11	-3	13	1	
TANANARIVE	82.31	250.6	12	24	-1				12	52	
SCOTT BASE	83.38	172.4	12	30	0						
COLLEGE	84.67	25.2	12	36	-1						
SOUTH POLE	92.97	180.0	13	15	-1						
BYRD STATION	96.69	170.6	13	33	0						
RESOLUTE	98.24	10.6	13	37A	-3	25	5	-1	26	1	PS
HUNGRY HORSE	105.65	37.9	17	50	777						
EUREKA	107.55	47.0	17	49	777				14	29	P
TUCSON	113.92	52.8							20	7	PP
TUCSON TELE.	113.98	52.7	18	44	1				14	43	P
TAMANRASSET	118.71	297.9	18	52	2				20	7	PP
LA PAZ	158.92	130.6	21	1	61						

SEPTEMBER 30 8.H 45.M 26.S EPICENTRE 47.39 10.57 DEPTH= 0.KM

A= 0.66792 B= 0.12469 C= 0.73372 D= 0.1835 E=-0.9830
G= 0.7213 H= 0.1347 K=-0.6795 HT= -4.4

SE= 2.80

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
CHUR	0.90	233.2									0	15	PG
MUNICH	1.03	42.0	0	22	0						0	38	SG
STUTTGART	1.66	326.8	0	31K	0	0	52	-1			0	34	PG
BASLE	2.04	275.0	0	37	1	1	7	4			0	40	P*
STRASBOURG	2.23	303.3	0	39K	0	1	9	1			0	44	PG
PAVIA	2.42	204.3	0	44	2	1	9	-3					
NEUCHATEL	2.50	262.3	0	42	-1	1	21	6					
TRIESTE	2.80	127.3	0	47A	0	1	22	0			0	53	PG
BOLOGNA	2.94	169.4	0	50	↑						1	26	SG
CHEB	2.94	23.3	0	49	0	1	19	-7			1	0	PG
SONNEBERG	3.02	7.6	0	48	-2	1	12	-16			1	1	PG
PLAUEN	3.28	17.9	0	52	-2	1	28	-7			1	7	PG
JENA	3.60	10.2	0	58	-1	1	29	-14			1	12	PG
PRUHONICE	3.69	44.0	0	58	-2	1	38	-7			1	10	PG
PRAGUE	3.70	42.2	1	11	11	1	41	-4			1	57	SG
VIENNA-H.	4.00	75.5	1	2	-2	1	46	-7			1	21	PG
ZAGREB	4.04	110.9	1	3	-2	2	7	13			1	18	PG
BENSBERG	4.21	329.2	1	7	0	1	57	-1					
COLLMBERG	4.22	21.2	1	5	-2	1	49	-10			1	26	PG
MONACO	4.28	212.2	1	8	0	2	0	0			1	16	P*
BRATISLAVA	4.47	77.6	1	9	-2	1	56	-9			1	23	PG
HURBANOVO	5.18	81.9	1	26	5	2	16	-6			1	48	PG
POTSDAM	5.25	17.0	1	46	24	2	19	-5			2	51	SG
UCCLE	5.32	312.1	1	29	6	2	50	24					
CLERMONT-FD.	5.39	255.2	1	21	-3	2	26	-2			1	45	PG
PARIS	5.60	287.7	1	25	-2	2	28	-5			1	55	PG
ROME	5.66	165.4	1	23	-5	2	38	4			2	13	
RACIBORZ	5.72	59.1	1	25	-4						2	41	
BUDAPEST	5.77	86.0	1	45	16	3	6	29			3	24	SG
DE BILT	5.87	325.4	1	14	-17						3	17	
WITTEVEEN	5.99	336.7	1	43	11								
SZEGED	6.66	96.4				3	8	9			2	46	
SKALNATE PL.	6.70	70.9	1	40	-2	2	38	-22			3	33	SG
KRAKOW	6.74	63.3	1	41	-2						3	33	
BELGRADE	7.33	106.9	1	58	7						2	28	PG
TIMISOARA	7.52	98.7	2	26	32						4	1	
KEW	8.19	303.9	2	9	6	3	52	14			2	45	
WARSAW	8.31	50.5									3	3	
COPENHAGEN	8.38	7.3				3	52	9			4	15	S*
JERSEY	8.64	286.6	3	14	64								
LWOW	9.24	69.7	2	18	0						4	45	S*
UPPSALA	13.15	15.8				5	53	14					
SKALSTUGAN	16.25	2.7	3	54	2								
PULKOVO	16.97	35.8	3	57	-4						8	42	
MOSCOW	18.68	53.5	4	21	-1						10	7	

KIRUNA	21.11	10.4	4	50	1					
KSARA	23.39	116.3	5	10	-2					
HELWAN	23.73	130.1	5	14	-1				5	58
TAMANRASSET	24.89	191.1	5	25	-1	10	7	20	6	3 PP
RESOLUTE	48.77	340.1	8	11K	-38					
HUNGRY HORSE	73.19	325.0	11	33	-2					
EUREKA	81.29	321.0	12	20	0					
MINERAL	82.85	325.2	12	27	-1					
TUCSON TELE.	84.73	313.4	12	41	3					
TUCSON	84.86	313.4	12	45	7					
LICK	85.45	323.7	12	41	0				14	26

ADDITIONAL READINGS

JULY 28 18.H 33.M 46.S EPICENTRE -26.56-115.65 DEPTH= 0.KM

SHAWINIGAN	82.47	28.3	12	24	-1					
SEVEN FALLS	83.74	29.0	12	32	0					
RUMANGABO	136.31	123.8	19	28	5					

JULY 19 14.H 57.M 23.S EPICENTRE 41.08 143.68 DEPTH= 0.KM

WAZIMA	6.43	237.2	1	41	2				4	17
YOKOHAMA	6.47	210.7	1	41	2	3	14	19		
MATUMOTO	6.57	224.7	1	52	11					
TOYAMA	6.68	231.3	1	45	3				3	50
KOHU	6.76	218.1	1	43	0	3	16	14		
HUNATU	6.78	216.3	1	56	12	3	23	21	2	53
MERA	6.86	207.6	1	46	1				3	36

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A digital hypocenter file of the ISS (Villaseñor and Engdahl, 2005) can be obtained from the USGS web site: http://earthquake.usgs.gov/scitech/iss/

Villaseñor, A., and E.R. Engdahl, *A digital hypocenter catalog for the International Seismological Summary,* Seism. Res. Lett., vol. 76, no. 5, pp. 554-559, 2005.

Villaseñor, A., E.A. Bergman, T.M. Boyd, E.R. Engdahl, D.W. Frazier, M.M. Harden, J.L. Orth, R.L. Parkes, and K.M. Shedlock*, Toward a comprehensive catalog of global historical seismicity,* Eos Trans. AGU, vol. 78, no. 50, pp. 581, 583, 588, 1997.