OCTOBER 1 3.H 56.M 50.S EPICENTRE -17.54-178.82 DEPTH= 523.KM

A=-0.95388 B=-0.01957 C=-0.29956 D=-0.0205 E= 0.9998
G= 0.2995 H= 0.0061 K=-0.9541 HT= 5.2

DEPTH OF FOCUS= 0.077R

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
AFIAMALU	7.68	63.0	1 54	-1	3 27	0		
RAOUL ISLAND	11.68	176.1	2 36	0	4 50	8		
PORT VILA	12.26	267.2	2 42K	0	5 0	8		
NOUMEA	14.63	248.7	3 7K	1				
KOUMAC	16.25	256.7	3 27K	5				
ONERAHI	19.14	197.1	3 54	4	7 9	13		
KARAPIRO	20.90	192.6	4 8	1	7 32	7	5 27	
TUAI	21.47	188.6	4 11	-1	7 27	-8		7 45 PCP
CHATEAU	22.13	191.7	4 18	0				
HONIARA	22.14	288.6	4 18	0				
TARATA	22.37	194.0	4 22	2				
WELLINGTON	24.29	191.8	4 36	-2	8 16	-4		
COBB RIVER	24.56	195.5	4 40	0	8 21	-3		
KAIMATA	26.25	196.5	4 54	-1	8 47	-4		
GEBBIES PASS	27.06	193.7	5 0	-2	8 59	-5		5 27
BRISBANE	27.95	244.4	5 8	-2				12 2
ROXBURGH	29.56	197.0	5 23	-1				12 30
RABAUL	31.35	291.6	5 37	-2				9 45
RIVERVIEW	31.39	233.1	5 49K	9				
CHARTERS TS.	33.11	260.0	5 53K	-1	10 32	-5		
CANBERRA	33.61	231.9	5 58K	0				7 46 PP
PORT MORESBY	34.02	279.3	6 2K	0	10 50	-1		8 23
TOOLANGI	37.10	230.2	6 28K	1				7 44
MACQUARIE I.	40.67	199.8	6 56	0				
ADELAIDE	41.49	236.8	7 3K	0				
HAWAII V.OP.	43.42	33.3	7 18	0				
KIPAPA	43.76	28.6	7 21	0				
DARWIN	48.80	268.7	7 58	-1				
DUMONT	55.88	198.5	8 48	-2				
MUNDARING	59.93	242.8	9 16	-1				
SCOTT BASE	60.76	183.5	9 23	0				
WILKES	66.32	204.6	9 58	0			11 50	
MATUSIRO	67.38	323.5	10 3	-2				
BYRD STATION	67.67	170.7	10 7	0				
LEMBANG	72.33	268.3	10 34	0				
SOUTH POLE	72.57	180.0	10 36	0				
MIRNY	73.34	204.7						12 12
TANGERANG	73.46	268.7	10 38	-3				
BERKELEY	76.53	42.8	10 58A	0				
PRIEST	76.62	45.0	10 59A	1				
LICK	76.63	43.5	11 0A	2				
CALISTOGA	76.77	42.0	10 59A	0				
PASADENA	77.27	47.8	11 1	-1			12 56	
MINERAL	78.37	41.0	11 8K	0				
CHANGCHUN	79.59	322.5	11 13	-1				
EUREKA	81.54	44.1	11 24	0			13 21	
LONGMIRE	81.97	35.6	11 26A	0				
VICTORIA	82.16	33.5	11 27A	0				
GLEN CANYON	83.32	48.0	11 31	-2				
BLUE MTS.	83.50	39.0	11 34A	0			13 27	23 38 PS
DUGWAY	84.00	44.7	11 36A	0				
MAWSON	84.07	199.8	11 36K	-1			13 31	
PENTICTON	84.66	34.4	11 40A	0				
SALT LAKE C.	84.92	44.6	11 41	0			13 43	
COLLEGE	85.51	12.7	11 42	-2	21 15	-16	13 40	
SIAN	85.81	307.7	11 47	2				
ALBUQUERQUE	86.18	51.7	11 48	1			13 45	
FLAMING GRGE	86.65	45.3	11 49	0				
BUTTE	86.97	39.7	11 51	0			13 50	
HUNGRY HORSE	87.26	37.2	11 52	0				
KUNMING	87.31	297.2	11 53	1				
BOZEMAN	87.74	40.5	11 55	1			13 55	
BANFF	87.86	34.2	11 55A	0				
LANCHOW	90.35	307.7	12 8A	2				
WICHITA MTS.	92.09	54.3	12 15	1	21 59	-31		29 28 PKKP
MOULD BAY	100.07	12.1	12 48A	-3				
SODANKYLA	127.56	347.9	17 56	-10				20 36 SKP
KIRUNA	128.24	350.8						20 38
KAJAANI	130.11	345.1	18 6	-5				20 48 SKP

UMEA	131.95	348.8								20	51
SKALSTUGAN	133.37	353.2								20	58
BULAWAYO	133.88	216.9	18	19	1					21	0 PP
NURMIJARVI	133.89	344.1	18	5	-13					20	58 SKP
HELSINKI	134.10	343.7								20	59 SKP
UPPSALA	136.09	348.1								21	4
BROKEN HILL	138.34	221.9	18	19	-7					21	13 PP
RACIBORZ	144.77	340.9	18	38	0						
COLLMBERG	145.03	347.0	18	39A	1					21	15 PP
HALLE	145.05	348.2	18	38	0						
DE BILT	145.37	355.7	18	38A	-1						
BANDEIRA	145.61	201.1	18	43K	4					18	45 PKP2
JENA	145.67	348.3	18	40	1			20	55	21	31 PP
PRUHONICE	145.90	344.6	18	42A	2					21	32
JERUSALEM	146.13	301.2	18	44	4						
KEW	146.13	1.7	18	43	3						
BENSBERG	146.32	353.2	18	42A	2						
LWIRO	146.41	236.9	18	45K	5						
BUDAPEST	146.74	337.7	18	41	0						
KASPERSKE H.	146.92	345.0	18	44A	3					19	6
VIENNA-H.	146.95	341.3	18	45A	4						
DOURBES	147.40	355.9	18	45	3						
STUTTGART	148.16	349.8	18	48	5						
STRASBOURG	148.58	351.6	18	49	6						
FOLINIERE	148.82	2.1	18	49	5						
LJUBLJANA	149.48	341.5	18	58K	13						
TRIESTE	150.08	342.2	18	53	7						
BESANCON	150.11	353.4	19	0	14						

OCTOBER 1 9.H 53.M 40.S EPICENTRE 47.47 151.56 DEPTH= 186.KM

A=-0.59657 B= 0.32316 C= 0.73463 D= 0.4763 E= 0.8793
G=-0.6459 H= 0.3499 K=-0.6785 HT= -4.5

DEPTH OF FOCUS= 0.024R

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
KURILSK	3.39	230.1	0	48	-6	1	29	-7				
SEVERO-KUR.	4.38	41.3	1	5A	-1							
Y.-SAKHLINSK	6.03	269.0	1	28K	0	2	41	4				
UGLEGORSK	6.53	287.8	1	36A	2	2	54	6				
PETROPAVLOVK	7.18	36.7	1	42A	-1	2	54	-10				
OKHA	8.20	321.1	1	56	0	3	42	14				
TUKUBASAN	14.10	221.3	3	4	-8							
VLADIVOSTOK	14.49	259.8	3	15	-2	5	50	-3	3	40		
MATUSIRO	14.73	227.0	3	14	-6						7	10
CHANGCHUN	18.67	268.5	4	1	-5						15	29 SCS
YAKUTSK	19.12	327.6	4	8	-2	7	42	10			4	53 PPP
PEKING	26.45	266.8	5	21	0	9	44	5	5	46		
TIKSI	26.47	344.1	5	19	-2						6	30 PPP
ZO-SE	28.40	245.8	5	38	-1	10	13	3				
ULAN-BATOR	29.75	287.7	5	50	-1							
SIAN	34.41	263.1	6	30	-1							
COLLEGE	36.25	39.0	6	46	0				7	20		
LANCHOW	36.84	269.7	6	51	0	12	22	1			8	41 PP
ESEN BULAK	37.10	289.4	6	55	1							
HONG KONG	39.07	243.2				12	58	3				
CHENGTU	39.88	262.6	7	16	-1	13	7	0			14	4 *SS
MOULD BAY	44.30	20.1	7	52A	0						13	13
KUNMING	44.35	257.4	7	53K	0	14	14	2			15	13 *SS
KIPAPA	47.97	104.8	8	21	0							
ALERT	49.15	5.6	8	26	-4							
RESOLUTE	50.50	18.4	8	41K	1							
HAWAII V.OB.	51.19	104.2	8	45	-1							
FRUNSE	52.38	295.2	8	55A	0				9	31		
SVERDLOVSK	52.58	316.2	8	55	-1							
THULE	53.79	10.8	9	3	-2							
VICTORIA	53.99	55.0	9	7	1							
PENTICTON	55.62	52.4	9	18	0							
APATITY	56.26	336.0	9	22A	-1						10	18
KEVO	56.30	339.8	9	23	0				10	0	10	18 PCP
TASHKENT	56.50	296.5	9	23	-1				9	57		
BANFF	56.69	48.8	9	26	0							

	KHOROG	57.41	291.6	9 31	0			
	DEHRA DUN	57.62	281.0	9 32	0			
	TROMSOE	58.18	342.3	9 37	1			
	SODANKYLA	58.19	338.1	9 34	-2	10 13	10 25	PCP
	DUZHANBE	58.47	294.2	9 37	-1			
	HUNGRY HORSE	59.17	50.8	9 43	0			
	LAHORE	59.30	284.5	9 44	0			
	NEW DELHI	59.30	280.0	9 42K	-2			
	KIRUNA	59.32	340.6	9 43	-1			
	BLUE MTS.	59.55	55.6	9 46	0		10 30	
	WARSAK DAM	59.55	288.4	9 45	-1			
	MINERAL	59.85	61.9	9 48K	0			
	KAJAANI	60.41	335.2	9 51	0	10 28	10 35	PCP
	BUTTE	61.41	52.1	9 58	0			
	LICK	61.72	64.6	10 1K	1			
	DARWIN	62.39	203.0	10 0	-5			
	BOZEMAN	62.45	51.7	11 6	61			
	UMEA	62.63	338.0	10 5	-1		10 43	
	VIBORG	62.66	332.3	10 8	2			
	PULKOVO	62.90	330.9				14 20	PPP
	EUREKA	63.73	59.6	10 14	1			
	NURMIJARVI	64.10	333.9	10 14K	-2	10 54	14 51	PCS
	HELSINKI	64.28	333.5	10 16K	-1		10 50	PCP
	WOODY	64.48	64.4	10 17	-1			
	SKALSTUGAN	64.72	341.2	10 18	-2			
	QUETTA	65.00	288.0	10 22	0			
	DUGWAY	65.08	57.2	10 22K	0			
	PASADENA	65.93	65.3				16 10	
	FLAMING GRGE	66.51	54.7	10 32	1		16 51	
	PRICE	66.62	56.5	10 32A	0			
	UPPSALA	66.64	336.7	10 31	-1	10 59		
	RAPID CITY	67.62	48.8	10 38	0			
	POONA	68.34	274.1	10 41A	-2			
	BERGEN	69.05	342.8	10 47	0			
	GOLDEN	69.58	53.3	10 51	1			
	KARLSKRONA	70.37	335.6	10 56	1			
	TEHERAN	70.74	302.0	10 59	2			
	ALBUQUERQUE	72.35	57.5	11 7	0			
	SIMFEROPOL	72.83	318.7	11 11	1		11 29	PCP
	SCHEFFERVLLE	73.08	22.0	11 11	0			
	MANHATTEN	74.57	48.4	11 20	0			
	DUBUQUE	74.88	42.7	11 22	1			
	COLLMBERG	75.37	334.6	11 24A	0	12 1		
	PRUHONICE	76.08	333.0	11 29	1		14 58	
	JENA	76.11	335.2	11 28	0	12 6	14 8	PP
	BRATISLAVA	76.84	330.6	11 33	1	12 0		
	WICHITA MTS.	76.90	52.7	11 33	0		13 15	
	VIENNA-H.	77.01	331.1	11 35	2	12 8		
	KASPERSKE H.	77.12	333.2	11 34	0	11 38	13 59	
	BENSBERG	77.28	337.8	11 36	1		11 59	
	TULSA	77.48	50.1	11 36	0			
	FELDBERG	77.62	336.7	11 50	13			
	ROLLA	77.91	46.4	11 38	0			
	FLORISSANT	77.94	44.8	11 38	0			
	ST. LOUIS 1	78.13	44.8	11 40	1			
	HEIDELBERG	78.29	336.2	11 42	2			
	KEW	78.53	342.5	11 43	1			
	STUTTGART	78.71	335.6	11 44	1			
	DOURBES	78.71	339.0	11 43	0			
	TUBINGEN	78.98	335.6	11 46	2			
	BREBEUF	79.29	30.5	11 46K	0			
	RAVENSBURG	79.51	335.0	11 47	0			
	LJUBLJANA	79.55	331.1	11 48	1			
	TRIESTE	80.15	331.4	11 50	0			
	KSARA	80.66	310.5	11 51	-2		15 46	
	FOLINIERE	81.12	341.7	11 56	1			
	GARCHY	81.71	338.9	11 59	1			
	CANBERRA	82.45	182.1	12 2	0			
	JERUSALEM	82.61	309.7	12 6	3			
	ADELAIDE	82.87	190.6	12 5	1			
	ISOLA	83.53	335.1	12 9	1			
	MONACO	83.83	334.7	12 10	1			
	TOOLANGI	84.83	184.8	12 15	1			
	MUNDARING	85.22	209.6	11 58	-18			
	KARAPIRO	87.68	161.2	12 29	1			
	TARATA	88.64	162.4	12 33	0			
	TUAI	88.87	160.3	12 32	-2			
	WELLINGTON	90.74	162.7	12 41	-1			
	KAIMATA	91.31	165.4	12 49	4			

SANTA LUCIA 145.41 81.6 19 17 2

OCTOBER 1 12.H 14.M 1.S EPICENTRE 27.95 54.78 DEPTH= 40.KM

A= 0.51023 B= 0.72274 C= 0.46617 D= 0.8169 E=-0.5767
G= 0.2689 H= 0.3808 K=-0.8847 HT= 2.5

DEPTH OF FOCUS= 0.001R

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	
TEHERAN	8.29	340.5	2	1	1	3	32	-2					
ASHKABAD	10.42	15.8	2	30	0								
QUETTA	10.88	75.3	2	35	-1	4	31	-7					
KARACHI	11.42	103.0	2	41	-2	4	55	4					
GORIS	13.49	330.8	3	12A	1	5	52	11					
KIROVOBAD	14.46	333.4	3	23A	-1	6	10	7					
WARSAK DAM	15.59	63.1	3	38	0								
TIFLIS	15.98	331.9	3	45A	2	6	49	10					
KHOROG	16.98	51.7	3	56	0						7	17	SS
KSARA	17.24	294.5	3	58A	-1	7	14	6					
LAHORE	17.35	73.3	3	57	-4								
JERUSALEM	17.39	287.4	4	2	1								
TASHKENT	17.87	37.9	4	6A	-1						4	28	PP
BOMBAY	18.83	114.7	4	17A	-2	7	46	2			8	30	SSS
NEW DELHI	19.76	82.9	4	28A	-1	8	9	5			4	38	PP
POONA	19.85	114.1	4	30A	0	8	16	10			4	51	PP
DEHRA DUN	20.46	77.8	4	38A	1	8	30	12			4	59	PP
SEHORE	20.66	98.3	4	40	-1	8	44	24					
FRUNSE	21.88	42.1	4	52A	1	8	52	7			12	35	PCS
SIMFEROPOL	23.64	321.3	5	9A	1	9	23	6			5	40	PP
ISTANBUL UN.	24.84	308.4	5	20A	0								
ATHENS	27.80	299.0	5	47A	0	10	31	5			6	10	
MADRAS	27.98	117.0	5	49	0	10	38	9			6	43	PP
FOCSANI	28.10	316.5	5	32	-18	10	17	-14			6	9	
VISHAKHAPTNM	28.12	105.1	5	54A	4	10	50	19			7	1	PP
BOKARO	28.17	91.3	5	53A	2	10	36	4					
BUCHAREST	28.20	313.3	5	52	1	10	34	2			7	11	
IASI	28.66	319.4	5	56	1	10	41	1			6	15	
CHATRA	28.74	84.6	5	58	2	10	55	14					
SVERDLOVSK	29.17	6.6	5	59K	-1	10	55	7					
CAMPULUNG	29.25	314.2	6	1	1	10	54	5					
SOFIA	29.38	308.4	6	3	2	11	5	14			7	3	PP
SEMIPALATNSK	29.62	33.8	6	7	3								
MOSCOW	30.39	340.7	6	11A	1	11	15	8			7	33	PPP
SKOPJE	30.49	306.1	5	53	-18	11	32	23					
CALCUTTA	30.80	92.5	6	14	0	11	24	11			13	4	SS
LHASA	31.74	78.1	6	23	1								
TIMISOARA	31.89	312.9	6	24	0	11	35	4					
LWOW	32.04	321.4	6	24A	-1	11	42	9			7	44	PPP
BELGRADE	32.07	310.9	6	26A	1	11	43	10			13	57	SSS
TITOGRAD	32.17	306.1	6	25	-1						7	31	PP
SHILLONG	33.12	85.4	6	34A	0	12	6	16			7	54	PP
TARANTO	33.21	302.0	6	24	-11	11	44	-7			16	44	
SKALNATE PL.	33.90	318.2	6	45	4	12	25	23			7	41	PP
CHITTAGONG	33.90	91.0	6	41	0								
BUDAPEST	33.95	314.8	6	32	-10	12	3	0			7	48	PP
NIEDZICA	33.96	318.6									21	41	
MESSINA	34.21	297.6	6	44K	0	12	10	3			7	11	PP
KRAKOW	34.47	319.4	6	46	0	12	12	1			8	11	PP
WARSAW	34.92	323.3				12	27	9			8	24	PPP
ZAGREB	35.37	310.8	6	55	1	12	21	-4					
BRATISLAVA	35.41	315.1	6	22A	-32	12	32	7			8	26	PPP
RACIBORZ	35.49	318.6	6	55	0						8	25	PP
VIENNA-H.	35.89	314.9	6	58A	0	12	37	4					
PULKOVO	35.95	339.1	6	59	0	12	34	1			8	17	PP
LJUBLJANA	36.42	310.7	7	3A	0	12	48	7			8	34	PP
TRIESTE	36.83	309.8	7	5	-1	12	55	8			8	36	PP
ROME	37.00	303.4	7	7A	0	12	56	6			8	36	PP
VIBORG	37.16	339.1	7	12A	3	13	4	12					
ESEN BULAK	37.32	49.1	7	12A	2								
PRUHONICE	37.62	316.9	7	13A	0	13	5	6			14	11	
PRAGUE	37.73	317.0	7	15	1						9	1	
KASPERSKE H.	37.93	315.3	7	15A	0						8	15	
HELSINKI	38.05	336.2	7	16A	0								

PADOVA	38.06	308.9	7 22	6			8 53	PPP
FLORENCE X.	38.19	306.2	7 36	19	12 56	-12	8 35	PP
NURMIJARVI	38.40	336.4	7 19A	0	13 6	-5	8 51	PP
PORT BLAIR	39.00	106.8	7 26	2				
COLLMBERG	39.01	318.4	7 24A	0			9 3	PP
LWIRO	39.06	224.0	7 25A	0	13 28	7		
KARLSKRONA	39.65	326.4	7 29A	0				
CHIAVARI	39.65	306.7					9 12	PP
HALLE	39.70	318.3	7 30	0	13 40	10		
JENA	39.73	317.3	7 30	0	13 38	7	9 41	
CUGLIERI	39.77	300.2					18 49	
PAVIA	39.89	308.0					9 12	
CHUR	39.95	310.6	7 31A	-1	13 26	-9		
KAJAANI	40.10	341.9	7 34	1				
RAVENSBURG	40.10	312.1	7 32	-1				
STUTTGART	40.55	313.5	7 36	-1				
EBINGEN	40.62	312.5	7 36	-2				
UPPSALA	40.68	332.1	7 38A	0	13 42	-3	9 14	PP
MONACO	40.92	305.5	7 39	-1			9 18	
COPENHAGEN	41.01	324.5	7 42	1				
HEIDELBERG	41.06	314.3	7 40	-1				
ISOLA	41.24	306.1	7 43	0			9 23	
FELDBERG	41.44	315.4	7 42	-2				
STRASBOURG	41.48	312.8	7 43	-2	13 59	2	8 2	
APATITY	41.68	347.9	7 47A	1	14 7	7	9 27	PP
NEUCHATEL	41.72	310.3	7 46	-1	14 8	7		
LANCHOW	42.01	66.1	7 50A	1	14 8	3		
AMDERMA	42.05	3.6	7 49A	0	14 9	4		
GOTEBORG	42.11	327.0	7 49A	-1			9 30	PP
UMEA	42.18	338.0	7 50A	0	14 5	-2	9 28	PP
BENSBERG	42.41	316.2	7 53A	1				
BESANCON	42.42	310.5	7 51	-1			9 31	
CHENGTU	42.75	74.0	7 54	-1	14 16	0		
KUNMING	42.79	82.3	7 56A	1	14 18	2	9 37	PP
SODANKYLA	42.97	344.5	7 57A	0			9 42	PP
WITTEVEEN	43.20	318.7	7 59A	0				
DOURBES	43.82	314.4	8 3	-1	14 42	11		
DE BILT	43.89	317.3	8 29	25			10 29	PP
IRKUTSK	43.90	42.4	8 5A	1	14 36	4	9 43	PP
KONGSBERG	44.07	328.8	8 5	-1		8 20	9 50	PP
CLERMONT-FD.	44.19	308.0	8 7A	0				
GARCHY	44.38	310.2	8 7A	-1			13 10	
ULAN-BATOR	44.74	49.0	8 13A	2				
KEVO	44.81	346.7	8 12	0	14 47	1	10 5	PP
KIRUNA	44.89	342.3	8 13A	1	14 50	3	9 52	PP
PARIS	44.97	312.3	8 12	-1				
TORTOSA	45.93	301.0	8 19	-2	15 4	2		
SIAN	46.33	68.1	8 24A	0	15 14	7		
BERGEN	46.37	328.6	8 24	0				
TROMSOE	46.55	343.6	8 25	0				
PAOTOW	46.67	59.3	8 27A	1	15 18	6	10 18	PP
ALICANTE	46.81	297.6	8 26	-2	15 21	7	10 16	PP
FOLINIERE	46.91	311.9	8 27	-1				
TANANARIVE	47.11	189.4	8 33K	3			10 12	PP
KEW	47.13	315.6	8 30	0	15 23	4		
DURHAM	48.40	319.8	8 41A	1				
ALMERIA	48.53	295.8	8 40A	-1	15 49	11	10 30	PP
BROKEN HILL	49.26	214.5	8 47A	0				
GRANADA	49.38	296.4	8 48A	0			11 58	
TOLEDO	49.45	299.9	8 47A	-1	15 55	4	10 36	PP
MALAGA	50.08	295.9	8 52A	-1	16 1	1		
PEKING	51.40	59.6	9 3A	0	16 22	4	11 5	PP
CANTON	52.65	81.2	9 11A	-1	16 37	2		
SERRA PILAR	52.78	302.0	9 13K	0	16 45	8	11 12	PP
HONG KONG	53.63	81.9	9 20	0	16 55	6		
LUANDA	54.33	233.8	9 29A	4				
NANKING	54.86	68.9	9 28A	-1	17 9	4		
ZO-SE	57.08	69.5	9 44A	-1	17 37	2		
CHANGCHUN	57.65	53.9	9 47A	-2	17 40	-2		
SIDA	57.75	329.9	9 50	1				
YAKUTSK	58.70	32.2	9 54A	-2	17 56	0		
REYKJAVIK	59.45	330.3	10 2	1				
TANGERANG	60.42	116.0	10 0	-8				
LEMBANG	61.60	115.9	10 16	0				
PIETERMZBURG	61.81	204.1	10 16	-1				
WINDHOEK	62.01	219.8	10 19A	1				
KIMBERLEY	63.28	209.4	10 25A	-2				
ALERT	65.87	352.6	10 44	0				

Y.-SAKHLINSK	68.79	47.2	11 2	0				
MATUSIRO	69.03	59.0	11 2A	-1	20 7	3		
MAGADAN	69.27	32.8	11 4	-1				
THULE	70.19	347.9	11 7	-4				
MIZUSAWA	70.32	55.5	11 14	3	20 26	7		
HERMANUS	70.56	210.6						27 21
RESOLUTE	75.74	352.0	11 44	1				
PETROPAVLOVK	75.92	37.2	11 43A	-1				21 49 PS
MOULD BAY	76.01	358.5	11 45A	0				14 37 PP
MUNDARING	83.46	131.3	12 24	-1				
SCHEFFERVLLE	83.56	330.2	12 25A	0				
DARWIN	83.74	107.5	12 28	2				
COLLEGE	85.83	9.5	12 35	-1				15 58 PP
HALIFAX	88.51	321.1	12 50A	1				
BREBEUF	93.16	326.5	13 11K	0				
PORT MORESBY	96.42	97.2	13 31	5				14 31
PALISADES	96.53	323.5			24 44	45		
MIRNY	98.57	165.5	13 54	18				
CHARTERS TS.	100.41	107.2	13 44	0				
MORGANTOWN	100.64	326.1	13 47	2				17 54 PP
BANFF	100.77	353.8	13 47K	1				
PENTICTON	102.92	356.2	13 56	1				
HUNGRY HORSE	103.39	352.4	13 12	-45				
BUTTE	105.50	350.9						30 6 PKKP
LONGMIRE	105.59	357.6	13 29	777				
BLUE MTS.	107.20	354.1	14 3K	777				18 41 PP
LAWRENCE	107.79	335.9						17 36
FLAMING GRGE	109.92	347.3	17 48	777				14 44 P
GOLDEN	110.21	343.8	17 47	-40				
TULSA	110.69	334.8	17 42	-46				28 38 PS
DUGWAY	111.23	349.8	17 56K	-33				
MINERAL	111.97	357.0	17 55A	-36				
EUREKA	112.37	352.3	17 59	-32				29 24 PKKP
WICHITA MTS.	112.78	336.4	18 33	1				18 54 PP
CALISTOGA	113.72	357.7	18 33K	-1				
LICK	114.97	356.9	18 40K	3				
ALBUQUERQUE	114.98	343.1						29 19 PKKP
PRIEST	116.11	355.9	18 42K	3				
WOODY	116.41	354.2	18 40	1				19 51
SOUTH POLE	117.79	180.0	18 42	0				
PASADENA	117.88	353.4	19 50	68				22 12 PP
TUCSON	118.59	346.1	18 47	3				
KIPAPA	121.58	36.3	18 51	2				
SCOTT BASE	121.72	166.6	18 50	0				
BYRD STATION	127.78	181.3	19 5	4				
WELLINGTON	129.77	121.9	19 7	2				
KARAPIRO	130.03	117.5	19 7	1				22 30 SKP
HUANCAYO	130.86	278.4	19 12	5				

OCTOBER 1 20.H 42.M 27.S EPICENTRE -19.36-174.44 DEPTH= 55.KM

A=-0.93969 B=-0.09152 C=-0.32956 D=-0.0969 E= 0.9953
G= 0.3280 H= 0.0319 K=-0.9441 HT= 4.8

DEPTH OF FOCUS= 0.003R

SE= 2.05

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
AFIAMALU	5.99	25.6	1 26	-3	2 25	-12		
NOUMEA	18.10	257.4	4 13K	4	8 16	50		
KOUMAC	20.04	263.0	4 33K	2	8 27	18		
KARAPIRO	20.46	203.2	4 35	-1				
TUAI	20.70	198.9	4 36	-2				8 12
TARATA	22.00	203.7	4 52	1				
WELLINGTON	23.71	200.5	5 6	-2	9 15	-1		5 25
COBB RIVER	24.27	204.1	5 17	4				
KAIMATA	26.00	204.3	5 34	4				
ROXBURGH	29.32	203.7	6 4	4				
BRISBANE	31.06	248.9	6 13	-2	11 34	19		
RIVERVIEW	33.80	237.7	6 39	0				
CANBERRA	35.92	236.1	6 56A	-1				
CHARTERS TS.	36.95	262.1	7 6A	0	12 45	-1		
PORT MORESBY	38.42	279.4	7 20A	2				
TOOLANGI	39.27	233.9	7 24	-1				9 6 PP
MOORLANDS	39.69	226.0	7 27	-2				

HONOLULU	43.46	22.4	8	2	2			
KIPAPA	43.60	22.4	8	2	1	8	31	
ADELAIDE	44.08	239.5	8	3	-2			
DUMONT	55.55	200.2	9	30	-2			
SCOTT BASE	59.24	184.6	9	58	0			10 19
MUNDARING	62.83	243.4	10	21	-2	11	1	
BYRD STATION	65.22	171.0	10	35	-3			
WILKES	66.43	205.2	10	44	-2			
SOUTH POLE	70.76	180.0	11	11	-2			
ABUYAMA	71.85	318.5	11	10	-9			
MIRNY	73.43	204.7						13 1
PRIEST	75.04	42.5	11	38K	0			
BERKELEY	75.12	40.3	11	39K	1			33 51
LICK	75.17	41.0	11	39A	0			
CALISTOGA	75.42	39.5	11	40K	0			
PASADENA	75.48	45.4	11	40	0			
LEMBANG	76.42	267.5	11	47A	1			
TANGERANG	77.56	267.8	11	53	1			
RENO	77.66	40.2	11	53K	0			
TUCSON	79.59	50.5	12	4	1			
EUREKA	80.01	42.1	12	5	0			
LONGMIRE	81.10	33.6	12	12	1			
VICTORIA	81.45	31.5	12	13	0			
GLEN CANYON	81.50	46.1	12	37	24			
BLUE MTS.	82.36	37.1	12	18	0			15 24 PP
DUGWAY	82.43	42.8	12	18K	0			
SALT LAKE C.	83.35	42.7	12	23	0			
PRICE	83.41	44.2	12	24K	1			
PENTICTON	83.87	32.5	12	26K	1			
ALBUQUERQUE	84.09	50.0	12	28	2			
FLAMING GRGE	85.03	43.6	12	31	0			
BUTTE	85.77	38.0	12	36	1			
HUNGRY HORSE	86.24	35.5	12	37	0			
COLLEGE	86.42	11.1						12 58
BOZEMAN	86.47	38.9	12	35	-3			16 0 PP
BANFF	87.08	32.7	12	43K	2			
GOLDEN	87.10	46.2	12	42	1			
LARAMIE	87.72	44.7	12	44	0			
WICHITA MTS.	89.81	53.0	12	54	0	13	26	
TULSA	92.38	52.8	13	7	1			
MANHATTEN	93.05	49.5	13	9	0			
FAYETTEVILLE	93.65	53.1	13	12K	0	13	49	16 43
LAWRENCE	93.92	50.1	13	13	0			
FLORISSANT	97.44	51.6	13	28	-1			
ST. LOUIS 1	97.49	51.8	13	29	0			
QUETTA	123.80	293.8	18	54	2			
KEVO	127.94	350.7	19	1	1			
SODANKYLA	130.15	349.5						19 23
NURMIJARVI	136.70	346.3	19	17	0			19 41
GOTEBORG	141.42	354.5	19	23	-2			
LWOW	146.22	338.3	19	35	1			
KRAKOW	147.30	342.8	19	40	5	20	7	
DE BILT	147.33	0.4	19	38	3			
HALLE	147.54	352.6	19	41	5	20	3	
COLLMBERG	147.59	351.3	19	40	4			
RACIBORZ	147.73	344.7	19	42	6			19 49 PKP2
JENA	148.14	352.8	19	42	5	20	21	21 3
RENSBERG	148.45	358.1	19	43	6			
PRAGUE	148.55	349.0	19	45	8			
PRUHONICE	148.62	348.8	19	43K	6			20 4
LWIRO	148.65	229.3	19	45	7			20 6
CHEB	148.87	351.5	19	46	8			
FELDBERG	149.13	356.4	19	52	14			
DOURBES	149.32	1.2	19	45	6			
KSARA	149.44	304.3	20	3	24			
KASPERSKE H.	149.61	349.6	19	45K	6	20	7	
BRATISLAVA	149.78	344.6	19	41	2			19 46 PKP2
VIENNA-H.	149.88	345.5	19	48A	9			
HEIDELBERG	149.93	355.9	19	47	8			
FOLINIERE	150.26	8.1	19	42	2			
STUTTGART	150.51	355.0	19	41	1			20 53
PARIS	150.52	4.1	19	49	9			20 18
TUBINGEN	150.77	355.2	19	49	8			
STRASBOURG	150.80	357.0	19	49	8			20 18
RAVENSBURG	151.46	354.3	19	51	9			
BELGRADE	151.75	337.3	19	52	10			24 29 PKS
GARCHY	152.08	3.6	19	51	8			20 12 PKP2
BESANCON	152.18	359.4	19	52	9			

LJUBLJANA	152.38	346.5	19	45A	2					20	23	
MONACO	155.65	356.7	20	18	31							
MALAGA	160.62	24.8	20	39A	45							

OCTOBER 3 1.H 16.M 44.S EPICENTRE 40.95 -29.55 DEPTH= 0.KM

A= 0.65900 B=-0.37353 C= 0.65283 D=-0.4931 E=-0.8700
G= 0.5679 H=-0.3219 K=-0.7575 HT= -2.0

SE= 3.19

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
HORTA	2.51	163.4				0	46	-29					
ANGRA DO HO.	2.91	141.4				1	6	-19					
PONTA DELGDA	4.39	135.7	0	57K	-13	1	42	-20					
TOLEDO	19.43	84.8	4	27	-4								
MALAGA	20.01	94.0	4	34A	-3								
GRANADA	20.47	92.1	4	48A	6								
JERSEY	20.97	57.7									5	13	
ALMERIA	21.43	92.2	4	51	-1	8	35	-11			5	13	PP
FOLINIERE	21.94	59.3	5	1	4								
ALICANTE	22.49	87.1	4	54	-9	9	5	0					
KEW	22.65	52.5	5	8	4	9	10	2					
PARIS	23.89	60.0	5	20	4								
CLERMONT-FD.	24.13	67.5	5	22	3						5	42	
GARCHY	24.14	63.8	5	18	-1								
HALIFAX	25.15	289.8	5	27	-2								
DOURBES	25.42	57.4	5	32	1								
BESANCON	26.12	64.1	5	38	0								
ISOLA	27.00	70.8	5	45	-1						8	25	
BENSBERG	27.16	55.9	5	49	2								
MONACO	27.33	71.8	5	51	2								
STRASBOURG	27.36	61.2	5	45	-4								
STUTTGART	28.36	60.8	5	55	-3								
JENA	29.94	56.5	6	13	1						6	35	
FLORENCE X.	30.10	70.7									13	42	SS
COLLMBERG	30.85	55.9	6	21	1								
KASPERSKE H.	31.20	60.1	6	22	-1								
ROME	31.32	74.1									13	41	SS
TRIESTE	31.57	66.8	6	30	3								
PRAGUE	31.73	58.3	6	31	3								
PRUHONICE	31.81	58.5	6	30	1								
LJUBLJANA	32.05	65.9	6	30	-1								
MESSINA	34.58	79.5									8	22	
BUDAPEST	34.94	62.6	6	55	-1						9	31	PCP
KRAKOW	35.28	58.0	7	6	7						9	35	PCP
KIRUNA	37.92	28.2	7	23	2								
MORGANTOWN	38.04	285.0	7	5	-17						9	53	PCP
NURMIJARVI	38.14	40.5	7	27	4								
SAN JUAN	38.53	245.3	7	58	32								
SODANKYLA	40.08	30.0	7	39	0								
KEVO	40.77	26.4	7	46	1								
APATITY	42.70	30.3									10	37	
BLOOMINGTON	42.96	287.1	8	2K	-1								
FLORISSANT	45.90	288.2	8	23	-3								
ROLLA	47.36	287.7	8	39	1	18	12	160					
LITTLE ROCK	49.03	284.1	8	51	0								
MANHATTEN	50.16	291.3	8	56	-4								
MOULD BAY	50.62	341.9	9	4A	1								
TULSA	51.03	287.1	9	7	1								
KSARA	51.40	75.7	9	9	0						10	16	PCP
WICHITA MTS.	53.61	287.1	9	21	-4	16	50	-8					
GOLDEN	56.05	295.6	9	34	-9								
HUNGRY HORSE	57.66	308.2	9	51	-4								
FLAMING GRGE	58.18	298.6	9	31	-27								
ALBUQUERQUE	59.12	291.2	10	3	-2								
PRICE	59.77	297.9	10	7	-2								
PENTICTON	60.46	311.2	10	12	-2								
DUGWAY	60.81	299.4	10	15A	-2								
BLUE MTS.	61.32	305.9	10	16	-4								
TEHERAN	61.53	66.1	10	21	0								
EUREKA	63.26	300.1	10	31	-2								
TUCSON	63.64	290.8	10	34	-1								
MINERAL	66.41	303.5	10	52A	-1								
PASADENA	67.67	296.3	11	2	1								
LICK	68.15	300.9	11	8A	4								

LWIRO	68.17	113.6	10	59	-6						
BERKELEY	68.24	301.7								32	46
QUETTA	75.38	62.8	11	46	-2						
WARSAK DAM	75.98	57.2	11	48	-3						
WILKES	146.28	152.2	19	38	-4						
PORT MORESBY	148.45	6.2	19	49	4					22	22 PP

OCTOBER 3 1.H 19.M 23.S EPICENTRE 39.24 -29.76 DEPTH= 87.KM

A= 0.67416 B=-0.38543 C= 0.63004 D=-0.4963 E=-0.8681
G= 0.5470 H=-0.3127 K=-0.7766 HT= -1.4

DEPTH OF FOCUS= 0.009R

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
HORTA	1.13	128.6				0	43	5				
PONTA DELGDA	3.54	114.0	0	55K	1	1	39	4				
TOLEDO	19.82	80.0	4	24A	-1	8	9	10			4	46 PP
MALAGA	20.13	89.2	4	31K	2							
GRANADA	20.64	87.5	4	39A	5						5	18 PP
ALMERIA	21.59	87.7	4	46K	2						5	9 PP
JERSEY	21.80	56.7				8	55	19				
FOLINIERE	22.99	55.9	4	54	-3							
TORTOSA	23.17	76.4	5	6	7							
KEW	23.85	49.5	5	3	-2	9	5	-7				
PARIS	24.92	56.8	5	18	2							
CLERMONT-FD.	24.98	64.1	5	16	0						5	37
GARCHY	25.08	60.6	5	16	-1							
HALIFAX	25.63	293.1	5	22	0							
DOURBES	26.51	54.5	5	28	-3							
BESANCON	27.05	61.1	5	34	-2							
MONACO	28.06	68.7	5	45	0							
BENSBERG	28.28	53.3	5	45	-2							
STRASBOURG	28.35	58.4	5	44	-3	10	19	-7				
STUTTGART	29.37	58.2	5	53	-3							
JENA	31.04	54.2	6	9	-2	11	10	1			7	25 PPP
HALLE	31.33	53.1	6	15	1	11	12	-1				
CHEB	31.48	55.9	6	14	-1							
COLLMBERG	31.97	53.6	6	17	-2						8	56
KASPERSKE H.	32.21	57.7	6	19	-2						7	4
TRIESTE	32.42	64.2	6	21	-2							
PRAGUE	32.79	56.0	6	26	0							
PRUHONICE	32.87	56.2	6	25	-2						6	48
LJUBLJANA	32.93	63.4	6	27	-1							
VIENNA-H.	34.07	59.3	6	39	2							
KARLSKRONA	34.15	45.1	6	42K	4							
BRATISLAVA	34.56	59.4	6	40	-2							
SKALSTUGAN	34.76	31.7	6	39	-4							
UPPSALA	35.97	39.2	6	52	-2							
SAN JUAN	37.69	247.0	6	45	-23							
UMEA	38.18	33.3	7	8	-4							
KIRUNA	39.50	27.3	7	19	-4							
NURMIJARVI	39.55	39.2	7	21	-2	13	23	4				
ATHENS	41.30	74.2				13	45	0			9	14 PP
SODANKYLA	41.64	29.0	7	36	-5							
KEVO	42.37	25.6	7	43	-4	13	57	-4				
BLOOMINGTON	43.33	288.7	7	57	3							
ISTANBUL UN.	44.20	68.0				14	31	3			9	51
C. GIRARDEAU	46.21	287.4	8	19	2							
ST. LOUIS 1	46.25	289.4	8	20	2							
FLORISSANT	46.30	289.6	8	24	6							
ROLLA	47.74	289.1	8	31	2	15	33	15				
LITTLE ROCK	49.31	285.5	8	42	0							
MANHATTEN	50.65	292.5	8	53	1							
TULSA	51.39	288.3	8	59	2							
KSARA	51.99	74.3	9	4	2	16	33	16			11	7 PP
MOULD BAY	52.19	342.3	8	59A	-4							
WICHITA MTS.	53.97	288.2	9	17	0	16	56	12			11	26
BOZEMAN	57.88	305.1	9	46	1							
HUNGRY HORSE	58.60	309.0	9	49	-1							
BUTTE	58.70	306.0	9	50	0							
ALBUQUERQUE	59.60	292.1	9	59	3							
PRICE	60.44	298.7	10	2	0							
SALT LAKE C.	60.59	300.3	10	3	0							

PENTICTON	61.47	311.9	10 13	4	
DUGWAY	61.51	300.1	10 9A	0	
BLUE MTS.	62.20	306.5	10 13	-1	10 56 PCP
TEHERAN	62.38	65.1	10 16	1	
EUREKA	63.98	300.8	10 28	2	
TUCSON TELE.	63.98	291.5	10 28	2	
COLLEGE	65.56	335.5	10 33	-3	
MINERAL	67.22	304.1	10 45	-1	
PASADENA	68.29	296.8	10 58	5	
CALISTOGA	68.79	303.0	10 58A	2	
LICK	68.89	301.4	10 58	1	
PRIEST	68.90	299.8	11 0A	3	
QUETTA	76.31	62.3	11 42	1	
WARSAK DAM	77.04	56.7	11 45	0	
BYRD STATION	128.30	192.8	19 6	10	
WILKES	144.84	153.4	19 34	8	

OCTOBER 4 19.H 46.M 9.S EPICENTRE 37.87 22.35 DEPTH= 43.KM

A= 0.73191 B= 0.30091 C= 0.61136 D= 0.3802 E=-0.9249
G= 0.5654 H= 0.2325 K=-0.7914 HT= -0.9

DEPTH OF FOCUS= 0.002R

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	
ATHENS	1.09	84.6	0	19K	0	0	32	-2			0	35	SGSG
SKOPJE	4.15	350.6	0	51	-12						2	15	SG
TARANTO	4.73	304.8	1	12	1	2	7	2					
SOFIA	4.88	8.5	1	14	1	2	8	-1			1	33	PG
TITOGRAD	5.13	333.5	1	15	-1						1	30	PG
MESSINA	5.38	275.5	1	18A	-2	2	15	-6			1	37	PG
ISTANBUL UN.	6.03	56.3	1	24	-5								
SARAJEVO	6.68	334.9	1	29	-9								
BELGRADE	7.08	349.0	1	47K	3						3	58	SG
BUCHAREST	7.12	22.2				3	11	6			2	10	
CAMPULUNG	7.66	14.4									2	17	
ROME	8.58	301.0	2	3	-2	3	53	12			4	35	S*
FOCSANI	8.62	23.3				3	18	-24			2	41	
ZAGREB	9.25	331.1	2	14	0						4	13	S*
BACAU	9.32	19.8									2	41	
BUDAPEST	9.91	346.8	2	21	-2	4	13	-1			4	52	S*
LJUBLJANA	10.03	327.0	2	21	-3	4	7	-10			5	10	SGSG
TRIESTE	10.07	323.2	2	21	-4	4	8	-10			5	8	SGSG
IASI	10.08	20.8	2	30	5	5	2	44					
FLORENCE X.	10.27	308.5	2	21	-7	4	1	-22					
KISHINEV	10.31	25.6	2	25	-3	4	25	1					
UZHGOROD	10.75	359.8	2	34	0								
PADOVA	10.86	317.2	2	37	1	4	41	4			5	41	
BRATISLAVA	10.98	341.2	2	21	-16	5	13	33			5	51	SG
VIENNA-H.	11.25	339.1	2	39	-2						5	59	SGSG
SIMFEROPOL	11.31	47.6	2	43	1	4	59	11					
SKALNATE PL.	11.40	353.0	2	40	-3	4	45	-5			5	31	S*
NIEDZICA	11.63	353.4	2	16	-30						2	51	PP
KSARA	11.70	106.2	2	49	2	5	12	15					
CHIAVARI	11.74	307.3	2	38	-10	4	32	-26			4	58	
LWOW	12.00	5.2	2	55	4						5	0	
PAVIA	12.27	310.6				5	47	36			4	28	
KRAKOW	12.29	352.7									3	10	PP
RACIBORZ	12.56	347.6									3	20	PPP
MONACO	12.72	302.1	2	59	-2								
KASPERSKE H.	12.91	333.4	3	2	-1						7	17	
CHUR	13.03	317.5	3	8	3	5	22	-8					
ISOLA	13.15	303.4	3	7	1								
PRUHONICE	13.33	337.7	3	7	-2	5	36	-1			6	27	
PRAGUE	13.45	337.6									3	57	
RAVENSBURG	13.59	320.8	3	9	-3								
ROSELEND	14.07	308.7	3	19	0	5	46	-8					
CHEB	14.14	332.8									4	10	
EBINGEN	14.18	320.8	3	19	-1								
SOTCHI	14.34	61.1	2	55	-27								
TUBINGEN	14.37	322.0	3	21	-1								
WARSAW	14.39	356.7									6	19	SS
STUTTGART	14.44	323.1	3	21	-2						6	20	
BASLE	14.50	316.4	3	28	4						8	36	

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NEUCHATEL	14.55	313.7	3 29	4			9 59	
COLLMBERG	14.97	336.7	3 36A	6			3 54	PP
STRASBOURG	15.05	319.9	3 34A	3	6 26	9	4 59	
JENA	15.13	333.1	3 32	0	6 21	2	4 3	
HEIDELBERG	15.14	323.9	3 33	1				
BESANCON	15.25	313.1	3 37	3				
HALLE	15.48	335.0	3 40	3	6 43	16		
FELDBERG	15.84	325.6	3 23	-19				
CLERMONT-FD.	16.34	305.0	3 53K	5				
BENSBERG	16.95	325.4	4 0K	5	6 59	-2	4 21	PP
GARCHY	16.99	309.7	3 56	0	6 59	-3	5 1	
TORTOSA	17.15	286.7	3 58	0				
EREVAN	17.36	75.5	4 4A	3	7 29	18		
DOURBES	17.62	319.6	4 4	0			7 24	
TIFLIS	17.66	70.4	4 7	3	7 35	18		
ALICANTE	17.97	278.6	4 7	-1	7 33	9	4 28	PP
PARIS	18.06	313.6	4 10	1	7 40	14		
WITTEVEEN	18.50	328.9	4 19	4				
DE BILT	18.63	325.3	4 16	0	7 51	12		
KIROVOBAD	18.76	74.0	4 18K	0	7 57	15		
GORIS	18.78	77.6	4 19K	1				
KARLSKRONA	18.85	348.2	4 23	4				
COPENHAGEN	19.02	342.6	4 20	-1				
ALMERIA	19.74	274.7	4 23	-6	8 9	5	4 55	PP
FOLINIERE	19.78	310.7	4 28	-1				
GRANADA	20.58	276.1	4 43A	5	8 38	18		
MOSCOW	20.61	25.1	4 37A	-1	8 29	8		
TOLEDO	20.63	283.8	4 37K	-1	8 26	5	5 6	PP
KEW	20.97	317.7	4 46	4	8 41	13		
GOTEBORG	20.98	344.3	4 40	-2				
MALAGA	21.29	275.1	4 47A	2				
BENI ABBES	21.72	256.4	4 42	-7				
UPPSALA	22.20	353.7	4 52	-2	8 49	-2		
HELSINKI	22.38	3.4	4 55	-1				
PULKOVO	22.50	10.6	4 55	-2	8 58	2		
NURMIJARVI	22.70	3.0	4 57	-2	9 0	0	8 56	PCP
KONGSBERG	23.27	343.6	5 4	0	9 14	4	5 55	PP
TEHERAN	23.31	86.3	5 5	0	9 15	4	15 0	SCS
DURHAM	23.45	323.8	5 6	0	9 24	11	5 14 9 37	*SS
SERRA PILAR	24.04	287.5	5 13K	1			5 22	PP
BERGEN	25.00	339.9	5 21	0				
ABERDEEN	25.16	328.0			9 58	16		
UMEA	26.01	357.9	5 30	-1	9 54	-2	12 43	PCS
SHIRAZ	26.31	99.2	5 34K	1	10 3	2	5 43 8 59	PCP
KAJAANI	26.44	5.3	5 33	-2				
SKALSTUGAN	26.45	349.9	5 33	-2				
VANNOVSKAYA	28.10	78.7	5 47	-3				
ASHKABAD	28.30	78.6	5 55	3				
SODANKYLA	29.64	3.3	6 1	-3				
KIRUNA	30.03	358.5	6 4	-3				
APATITY	30.37	8.4	6 10K	0				
SVERDLOVSK	31.55	40.6	5 59	-21				
TROMSOE	31.87	357.7	6 21	-2				
KEVO	32.04	3.1	6 22	-3				
TASHKENT	35.99	69.5	7 5	6				
DUZHANBE	36.17	74.2	6 59	-1				
QUETTA	37.47	88.2	7 10	-1				
AMDERMA	38.18	20.9	7 15	-2				
KHOROG	38.56	75.0	7 22	2				
FRUNSE	39.61	65.9	7 29K	0				
WARSAK DAM	39.66	80.2	7 27	-2				
KARACHI	39.96	95.8	7 33	1				
LWIRO	40.37	170.0	7 36K	1			16 43	
ALMATA-2	41.50	64.6	7 44A	-1				
NEW DELHI	46.24	84.7	8 21K	-2				
BOMBAY	47.65	98.8	8 35	1				
POONA	48.66	98.5	8 41K	-1				
ALERT	52.01	350.4	9 7	0				
CHATRA	54.88	81.4	9 28K	0				
SHILLONG	59.17	80.2	9 55K	-4				
SCHEFFERVLLE	59.63	317.9	10 1	-1				
RESOLUTE	60.46	344.2	10 7K	-1				
CHITTAGONG	60.78	83.4	10 8	-2				
HALIFAX	62.10	306.3	10 18A	-1				
MOULD BAY	63.59	350.5	10 28	-1				
SHAWINIGAN	66.82	311.6	10 50	1				
BREBEUF	67.87	311.0	10 57	1				
LONDON ONT.	73.74	312.1	11 31K	0				

MORGANTOWN	75.04	308.6	11 41A	2	
COLLEGE	77.30	355.7	11 51	-1	
SAN JUAN	77.78	283.8	11 55	1	
Y.-SAKHLINSK	80.09	36.8	12 7	0	
BANFF	83.95	334.9	12 33	6	
LAWRENCE	84.43	316.0	12 30	1	
MATUSIRO	85.16	46.7	12 32	-1	
HUNGRY HORSE	85.80	332.5	12 36	0	
FAYETTEVILLE	85.86	313.4	12 38A	2	
BOZEMAN	86.87	329.3	12 43	2	
PENTICTON	86.88	336.2	12 41	0	
WICHITA MTS.	89.34	315.0	12 54	1	16 27 PP
BLUE MTS.	89.96	332.6	12 56	0	16 2
DUGWAY	92.11	327.3	13 6K	0	
EUREKA	94.03	328.9	13 16	1	
SOUTH POLE	127.69	180.0	19 1	0	
CHARTERS TS.	128.59	86.3	19 5	2	
BYRD STATION	135.28	188.8	19 18	3	

OCTOBER 5 20.H 2.M 23.S EPICENTRE 35.22 58.73 DEPTH= 0.KM

A= 0.42502 B= 0.69978 C= 0.57417 D= 0.8547 E=-0.5191
G= 0.2981 H= 0.4907 K=-0.8187 HT= 0.0

SE= 2.05

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ASHKABAD	2.74	353.7	0 49	3	1 24	3		
KIZYL-ARVAT	4.43	334.4	1 9A	-1	2 18	15		
TEHERAN	6.01	277.0	1 33	0	2 59	16		
SHIRAZ	7.64	225.1	1 53K	-3				4 17 SG
QUETTA	8.56	123.7	2 7	-1	3 39	-8		2 44 PG
DUZHANBE	8.71	64.5	2 10K	0				
TASHKENT	10.28	50.6	2 31K	-1				
KHOROG	10.57	74.0	2 35	-1	4 36	0		
WARSAK DAM	10.64	92.9	2 36	-1				
KIROVOBAD	11.18	302.6	2 40	-5				
KARACHI	12.61	143.0	3 4	0				
TIFLIS	12.69	304.9	3 2	-3	5 28	0		
LAHORE	13.54	101.3	3 15	-1				
FRUNSE	14.49	53.6	3 27A	-2				
ALMATA-2	16.50	55.3	3 52A	-3				
DEHRA DUN	16.97	101.3	4 3K	2	7 26	17		4 20 PP
NEW DELHI	17.02	107.8	3 59K	-2	7 21	11		
KSARA	18.88	272.3	4 26	2	8 5	13		
BOMBAY	20.50	138.8	4 42A	-1	8 36	8		9 40
SIMFEROPOL	21.11	304.8	4 48	-1				
POONA	21.36	137.2	4 49A	-2	8 55	10		
SVERDLOVSK	21.65	2.8	4 54	0				
ISTANBUL UN.	24.03	292.9	5 20K	2				
MOSCOW	25.10	331.3	5 29	1				
CHATRA	25.70	101.1	5 37A	3				
IASI	26.14	306.8	5 40	2				
LHASA	27.76	92.4	5 54	1				
ATHENS	28.14	286.0	5 55A	-1				11 7
SOFIA	28.36	296.0	6 31	33				7 11
CALCUTTA	28.76	108.1						9 27
LWOW	29.14	310.8						12 6 SS
MADRAS	29.42	133.5						11 13
UZHGOROD	29.93	307.8	6 12	0				
SHILLONG	30.05	99.5	6 22A	9				
ESEN BULAK	30.25	56.8	6 16A	1				
PULKOVO	30.72	331.9	6 21	2				
CHITTAGONG	31.55	105.0	6 25	-1				7 37 PPP
KRAKOW	31.76	309.9	6 26	-2				
NURMIJARVI	33.43	329.8	6 42	-1				7 48 PP
VIENNA-H.	33.75	305.9	6 46	0				
KAJAANI	34.50	336.4						8 1 PP
MESSINA	34.51	287.9	6 52	0				
LJUBLJANA	34.84	301.8	6 55	0				8 15 PP
PRUHONICE	35.16	308.6	6 59	1				8 22 PP
TRIESTE	35.37	301.1	7 0	0				
APATITY	35.47	343.6	6 59A	-1				
KASPERSKE H.	35.69	307.0	7 1	-1				9 28
KARLSKRONA	35.89	319.3	7 4	0				8 15 PP
UPPSALA	36.19	325.8	7 5	-1				8 18 PP

COLLMBERG	36.32	310.6	7	8	0				9	33 PCP
IRKUTSK	36.39	47.7	7	8	0					
LANCHOW	36.42	75.2	7	9A	1					
UMEA	36.98	332.7	7	18	5				8	40 PP
SODANKYLA	37.07	340.1	7	14	0				8	33 PP
JENA	37.16	309.8	7	17	2				8	53 PPP
ULAN-BATOR	37.61	55.2	7	21A	3					
GOTEBORG	38.22	320.8	7	24	0					
STUTTGART	38.49	306.1	7	25	-1					
KEVO	38.68	343.0	7	27	0				8	56 PP
KUNMING	39.09	92.6	7	30A	-1	13 33	2		9	7 PP
KIRUNA	39.19	338.1	7	30	-2				8	50 PP
STRASBOURG	39.49	305.8	7	33	-1					
KONGSBERG	39.93	323.3	7	38	0				9	9 PP
BENSBERG	39.94	309.5	7	39A	1				7	59
SKALSTUGAN	40.01	329.7	7	38	-1					
ISOLA	40.18	299.0	7	40	0					
ROSELEND	40.35	301.3	7	39	-2					
TROMSOE	40.70	339.9	7	44	0					
BESANCON	40.72	303.8	7	43	-1					
DOURBES	41.56	308.1	7	52	1				17	25
GARCHY	42.69	304.0	8	0	0				9	52
PARIS	42.98	306.3	8	4	1					
KEW	44.65	310.2	8	16	0					
FOLINIERE	44.94	306.4	8	20	1					
PEKING	45.08	66.1	8	20A	0					
DURHAM	45.34	314.9	8	23	1					
LWIRO	46.64	223.3	8	34	2				19	17
TOLEDO	49.09	295.1	8	51	0					
GRANADA	49.52	291.6	10	8K	73					
MALAGA	50.27	291.3	9	0A	0					
YAKUTSK	50.80	35.1	9	4	0					
CHANGCHUN	50.82	58.9	9	4A	-1					
RENI ABBES	50.83	282.4	9	3	-2				10	20
TANANARIVE	54.88	193.0	9	37	2				9	56
ALERT	59.11	352.4	10	1	-4					
MATUSIRO	62.57	63.1	10	27A	-1					
MOULD BAY	68.81	359.5	11	16A	8					
COLLEGE	78.09	11.2	12	2	-1					
BLUE MTS.	100.22	357.1	13	57	7				17	29
SOUTH POLE	125.04	180.0	19	1	-2					

OCTOBER 6 3.H 17.M 3.S EPICENTRE 40.63 -29.48 DEPTH= 10.KM

A= 0.66256 B=-0.37458 C= 0.64862 D=-0.4922 E=-0.8705
G= 0.5646 H=-0.3192 K=-0.7611 HT= -1.9

SE= 1.87

	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	
PONTA DELGDA	4.14	133.2	1	2K	-3	1	47	-7					
LISBON	15.77	90.3	3	43A	-1						7	27	SS
SERRA PILAR	15.80	81.4	3	42A	-2	6	43	3			3	58	PP
COIMBRA	16.04	84.7	3	48A	1								
TOLEDO	19.41	83.9	4	30A	1	8	3	1			4	50	PP
MALAGA	19.95	93.2	4	35A	0	8	21	7			4	55	PP
GRANADA	20.41	91.3	4	43A	3	8	37	14			5	31	
JERSEY	21.10	56.9	4	46	-1	8	48	11					
ALMERIA	21.37	91.4	4	52K	2	8	33	-9			5	15	PP
BAGNERES	22.16	73.9	4	57	-1						5	39	
ALICANTE	22.46	86.4	5	3	2	9	15	13			5	35	PP
TORTOSA	22.68	79.7	5	4	1	9	12	6					
KEW	22.81	51.8	5	6	2	9	15	6					
DURHAM	23.31	43.3	5	10A	1	9	29	12					
PARIS	24.01	59.4	5	17	1	9	42	12					
ABERDEEN	24.20	37.7				9	49	16			11	35	
CLERMONT-FD.	24.21	66.9	5	19A	1	9	45	12					
GARCHY	24.24	63.2	5	19	1	9	48	14					
HALIFAX	25.31	290.4	5	28A	0								
DOURBES	25.55	56.8	5	33	3	10	12	16					
BESANCON	26.21	63.5	5	35	-2						6	1	
DE BILT	26.27	52.4	5	38	1	10	19	11					
ROSELEND	26.67	67.0	5	41	0								
ISOLA	27.07	70.3	5	45	1								
BENSBERG	27.30	55.4	5	42	-5						9	18	

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BASLE	27.31	62.9	5 48	1					
WITTEVEEN	27.32	51.3	5 48	1					
MONACO	27.38	71.2	5 48	1					
STRASBOURG	27.47	60.6	5 47	-1	10	33	6	6 25	PP
SCHEFFERVLLE	28.43	312.6	6 1	4					
STUTTGART	28.48	60.3	5 57	0	10	44	1	6 36	PP
PAVIA	28.49	67.9						7 1	
CUGLIERI	28.83	78.3						16 7	
JENA	30.07	56.1	6 9	-3	11	12	3	7 4	PP
FLORENCE X.	30.12	70.4	6 26A	14	11	37	27	7 23	PP
KONGSBERG	30.83	38.7	6 19	1					
COLLMBERG	30.99	55.4	6 19	-1				7 19	PP
KASPERSKE H.	31.31	59.7	6 20	-3					
ROME	31.34	73.7	6 25A	2	11	35	6	7 21	PP
GOTEBORG	31.41	43.0	6 24	1					
SHAWINIGAN	31.60	295.4	6 25	0					
TRIESTE	31.65	66.3	6 26	1	11	41	7	7 38	PP
PRAGUE	31.86	57.8	6 29	2					
PRUHONICE	31.94	58.0	6 28K	0	11	48	10	7 55	PP
LJUBLJANA	32.14	65.4	6 28	-2				7 42	PP
BREBEUF	32.30	293.6	6 34	3					
KARLSKRONA	33.04	46.6	6 38A	0					
VIENNA-H.	33.20	61.2	6 38	-1					
PALISADES	33.35	285.5	6 40	0	12	6	6		
SKALSTUGAN	33.48	32.7	6 45	4					
MESSINA	34.59	79.1	6 50	-1	12	19	0	9 3	PP
UPPSALA	34.78	40.4	6 52	-1					
BELGRADE	36.45	66.4	7 7K	0	12	50	2	8 42	PPP
UMEA	36.91	34.3	7 11	0	13	0	5		
UZHGOROD	37.09	59.8	7 13	1					
ST. CLAUDE	37.14	238.1						16 7	
FORT FRANCE	37.75	236.1						16 15	SS
LWOW	38.06	57.6	7 12	-8					
LONDON ONT.	38.10	291.2	7 20K	-1					
MORGANTOWN	38.17	285.5	7 23	2					
KIRUNA	38.18	28.0	7 21	0					
NURMIJARVI	38.35	40.3	7 22	-1	13	23	6		
SAN JUAN	38.44	245.7	7 25	1					
SOFIA	38.98	69.0	7 30	2	13	30	3		
SODANKYLA	40.33	29.8	7 40	1					
VIBORG	40.40	40.2	7 38K	-2					
ATHENS	40.74	75.9	7 43A	0					
KEVO	41.04	26.2	7 46	1					
TRINIDAD	41.05	232.3	7 49	4	14	15	17		
PULKOVO	41.13	41.7	7 46K	0					
KISHINEV	41.70	61.1	7 50	-1					
APATITY	42.95	30.1	8 1A	0	14	31	5		
CHICAGO JSA.	43.01	291.6	8 4	3					
BLOOMINGTON	43.10	287.4	8 3	1	14	24	-4		
ISTANBUL UN.	43.51	69.5	8 7A	2				14 37	
RESOLUTE	44.81	339.9	8 17	1					
MOSCOW	45.39	47.1	8 21A	1					
SIMFEROPOL	45.81	62.5	8 24	0	15	11	4		
ST. LOUIS 1	46.00	288.2	8 27	2					
C. GIRARDEAU	46.01	286.2	8 26	1					
FLORISSANT	46.04	288.5	8 25	-1					
LITTLE ROCK	49.15	284.4	8 48	-2					
LAWRENCE	49.47	290.7	8 52	0					
FAYETTEVILLE	49.93	286.9	8 55	-1					
MANHATTEN	50.32	291.6	8 58K	-1					
MOULD BAY	50.93	342.0	9 3	0					
TULSA	51.17	287.4	9 5	0	16	25	3		
KSARA	51.43	75.4	9 9	2	16	31	5		
RAPID CITY	52.88	299.8	9 16	-2					
BOGOTA	53.69	240.3	9 17	-7	17	1	4		
WICHITA MTS.	53.75	287.4	9 23	-2	17	7	10	11 22	PP
TIFLIS	54.24	62.6			17	14	10		
CHINCHINA	54.46	242.0	9 32A	2	17	13	6		
LARAMIE	55.65	297.6	9 38	0					
KIROVOBAD	55.75	63.2	9 39K	0	16	59	-25		
GOLDEN	56.23	295.8	9 43	0				17 37	
GORIS	56.27	64.4	9 42	-1					
LUBBOCK	56.66	287.8			17	41	-4		
SVERDLOVSK	57.25	40.8	9 49A	-1					
BOZEMAN	57.27	304.5	9 50	0					
HUNGRY HORSE	57.90	308.4	9 53	-1					
BUTTE	58.06	305.4	9 56	0					
FLAMING GRGE	58.38	298.8	9 58	0					
ALBUQUERQUE	59.29	291.4	10 5	1					

PRICE	59.96	298.1	10	9K	0						
SALT LAKE C.	60.09	299.7	10	10	0						
PENTICTON	60.71	311.4	10	13	-1						
DUGWAY	61.00	299.6	10	16K	0	18	40	7			
BLUE MTS.	61.55	306.1	10	18	-2					12	37 PP
TEHERAN	61.61	65.9	10	20	0						
GLEN CANYON	61.83	295.9	10	21	0						
TUCSON	63.73	291.0	10	36	0						
COLLEGE	64.39	335.4	10	40	2						
VANNOVSKAYA	65.00	60.6	10	41	-1						
ASHKABAD	65.17	60.5	10	44	1						
SHIRAZ	65.71	71.0	10	47K	0	19	32	0		13	11 PP
RENO	65.93	302.1	10	41	-7						
MINERAL	66.62	303.7	10	52K	-1						
LA PAZ	67.22	220.5	10	58	1	20	28	38			
PASADENA	67.86	296.5	11	2	1						
LWIRO	68.00	113.5	11	2K	1						
CALISTOGA	68.21	302.6	11	5K	2						
LICK	68.35	301.0	11	5A	1						
PRIEST	68.40	299.5	11	5A	1						
TASHKENT	70.17	52.3	11	15	0						
DUZHANBE	71.51	54.9	11	24	1						
ALMATA-2	73.63	46.8	11	34	-1						
KHOROG	73.90	54.4	11	39	2						
QUETTA	75.49	62.7	11	48	2						
WARSAK DAM	76.11	57.1	11	49	-1						
YAKUTSK	76.33	9.9	11	52A	1						
ESEN BULAK	80.76	34.7	12	15	0						
DEHRA DUN	82.67	56.2	11	26	-59						
NEW DELHI	83.31	58.0	12	27K	-1						
ULAN-BATOR	83.72	27.8	12	31	1						
BYRD STATION	129.70	193.1	19	12	2						
WILKES	145.97	152.4	19	41	2						
PORT MORESBY	148.76	6.4	19	49K	5						
MUNDARING	151.18	83.5	19	55	8						
DUMONT	153.26	170.7	19	50	0						

OCTOBER 6 3.H 54.M 54.5 EPICENTRE 40.67 -29.51 DEPTH= 0.KM
A= 0.66197 B=-0.37466 C= 0.64917 D=-0.4926 E=-0.8703
G= 0.5650 H=-0.3198 K=-0.7606 HT= -1.9

SE= 1.97

	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	
ANGRA DO HO.	2.68	138.2				1	12	-7					
PONTA DELGDA	4.18	133.4	1	3K	-4	1	48	-9					
LISBON	15.79	90.5	3	43A	-3						7	36	SS
SERRA PILAR	15.82	81.5	3	43A	-3	6	43	0			3	56	PP
COIMBRA	16.06	84.8	3	48	-1								
TOLEDO	19.43	84.0	3	31	-60	8	5	0			4	50	PP
MALAGA	19.97	93.3	4	36A	-1	8	26	9					
GRANADA	20.43	91.4	4	41A	-1	8	45	19			5	10	PP
ALMERIA	21.39	91.5	4	53A	1	8	51	6					
FOLINIERE	22.06	58.7	4	59	1								
BAGNERES	22.17	74.0	5	1	1								
ALICANTE	22.47	86.4	5	5	2	9	14	9					
TORTOSA	22.69	79.7	5	6	1	9	8	-1					
KEW	22.80	51.9	5	7	1	9	15	4					
DURHAM	23.29	43.3				9	30	10					
PARIS	24.00	59.4	5	18	0	9	45	13					
CLERMONT-FD.	24.21	67.0	5	20	0	9	52	16					
GARCHY	24.24	63.3	5	20	0						5	48	
HALIFAX	25.27	290.4	5	30	0								
DOURBES	25.55	56.9	5	31	-1	10	12	14					
BESANCON	26.21	63.6	5	38	-1								
DE BILT	26.27	52.5	5	40	1								
ROSELEND	26.67	67.1	5	46	3								
ISOLA	27.07	70.3	5	46	0								
BENSBERG	27.29	55.5	5	48A	0						7	0	PP
WITTEVEEN	27.31	51.3	5	50	1								
MONACO	27.39	71.3	5	52	3								
STRASBOURG	27.47	60.7	5	49	-1						6	9	
STUTTGART	28.47	60.4	5	57	-2								
JENA	30.07	56.1	6	12	-1	11	15	3			7	3	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.

HALLE	30.34	55.0	6	14	-2					
COLLMBERG	30.98	55.5	6	21	-1				7	20 PP
KASPERSKE H.	31.31	59.7	6	23	-1				6	49
GOTEBORG	31.40	43.1	6	27	2					
PRAGUE	31.86	57.9	6	19	-10					
PRUHONICE	31.93	58.1	6	30	0	11	48	7		
KARLSKRONA	33.02	46.7	6	42A	3					
VIENNA-H.	33.20	61.2	6	34	-7					
BRATISLAVA	33.69	61.3	6	44	-1					
MESSINA	34.60	79.1				12	26	4	8	11 PP
UPPSALA	34.76	40.5	6	53	-1					
UMEA	36.89	34.3	7	13	1					
UZHGOROD	37.08	59.9	7	14	0					
MORGANTOWN	38.14	285.4	7	24	1					
KIRUNA	38.15	28.1	7	24	1					
NURMIJARVI	38.33	40.3	7	26A	1					
SAN JUAN	38.44	245.6	7	26	0					
SODANKYLA	40.31	29.8	7	42	1					
PULKOVO	41.12	41.7	7	49K	1					
APATITY	42.92	30.1	8	3	1					
BLOOMINGTON	43.07	287.4	8	3	-1					
ISTANBUL UN.	43.51	69.5	8	13	6					
DUBUQUE	44.91	293.4	8	19	0	15	0	3		
MOSCOW	45.37	47.1	8	23K	1					
SIMFEROPOL	45.81	62.5	8	26	0	15	13	3		
FLORISSANT	46.01	288.4	8	26	-1					
LITTLE ROCK	49.12	284.4	8	51	-1					
LAWRENCE	49.44	290.7	8	54	0					
FAYETTEVILLE	49.89	286.8	8	57	-1					
MANHATTEN	50.29	291.5	9	0	-1					
MOULD BAY	50.89	342.0	9	4	-1					
TULSA	51.14	287.3	9	7	0	16	26	1		
KSARA	51.44	75.5	9	11	2	16	29	0		
WICHITA MTS.	53.72	287.3	9	25	-1	16	58	-2	10	31
TIFLIS	54.24	62.6	9	31	1	17	13	6		
CHINCHINA	54.46	241.9	9	33	1					
LARAMIE	55.61	297.6	9	40	0					
GOLDEN	56.20	295.8	9	44	0					
GORIS	56.27	64.4	9	44	-1					
BOZEMAN	57.23	304.4	9	53	1					
SVERDLOVSK	57.23	40.8	9	51K	-1					
HUNGRY HORSE	57.85	308.3	9	56	0					
FLAMING GRGE	58.34	298.8	10	0	0					
ALBUQUERQUE	59.25	291.4	10	6	0					
PRICE	59.93	298.1	10	11	0					
SALT LAKE C.	60.05	299.7	10	13	2					
PENTICTON	60.66	311.4	10	17	1					
DUGWAY	60.97	299.5	10	17	-1					
BLUE MTS.	61.51	306.0	10	19	-2				11	3 PCP
TUCSON	63.77	291.0	10	38	2					
COLLEGE	64.34	335.4	10	40	0					
VANNOVSKAYA	65.00	60.6	10	43	-1					
SHIRAZ	65.71	71.0	11	48K	59				12	16
MINERAL	66.58	303.7	10	56A	1					
WOODY	67.41	298.2	10	56	-4					
LWIRO	68.04	113.5	12	4A	60					
TASHKENT	70.16	52.3	11	16	-1					
DUZHANBE	71.51	54.9	11	26	1					
ALMATA-2	73.62	46.8	11	38A	1					
KHOROG	73.89	54.4	11	41	2					
QUETTA	75.49	62.7	11	48	0					
WARSAK DAM	76.11	57.1	11	51	-1					
YAKUTSK	76.29	9.9	11	52	-1					
BROKEN HILL	76.72	122.4	11	55	0					
ESEN BULAK	80.74	34.7	12	18	1					
NEW DELHI	83.30	58.0	12	29A	-1					
ULAN-BATOR	83.70	27.8	12	34	2					
WILKES	146.02	152.4	19	43	2					
PORT MORESBY	148.72	6.4	19	50	4					
DUMONT	153.30	170.7	19	52	-1					

OCTOBER 6 4.H 23.M 20.S EPICENTRE -17.26 167.72 DEPTH= 0.KM

A=-0.93367 B= 0.20323 C=-0.29489 D= 0.2127 E= 0.9771
G= 0.2881 H=-0.0627 K=-0.9555 HT= 5.3

SE= 3.62

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PORT VILA	0.74	129.3	0 14K	-3				
KOUMAC	4.62	224.2	1 11K	-2	2 3	-5		
NOUMEA	5.15	193.2	1 18K	-2	2 16	-5		
HONIARA	10.85	314.9	2 40K	0	4 38	-5		
BRISBANE	17.09	231.3	3 59	-3	7 7	-5		
ONERAHI	19.36	163.5	4 38	8	8 12	9		
RABAUL	20.02	308.7	4 36K	-1				
AFIAMALU	20.02	83.3	4 33	-4	8 26	8		
CHARTERS TS.	20.52	258.8	4 43K	1	8 35	7		
PORT MORESBY	21.47	288.7	4 52K	0	8 50	4		
KARAPIRO	21.71	163.1	4 53	-2				
RIVERVIEW	22.21	218.9	5 0K	U				5 22 PP
WAIRAKEI	22.49	162.8	5 9	7				
TARATA	22.61	166.4	5 5	1				
CHATEAU	22.90	164.2	5 17	11				
TUAI	22.99	160.9	5 6	-1	9 17	3		
COBB RIVER	24.13	170.7	5 22	4	9 42	8		
CANBERRA	24.52	219.2	5 23A	1	9 44	3	5 32	6 2 PP
WELLINGTON	24.70	167.2	5 23	-1	9 54	10		6 12
KAIMATA	25.37	173.6	5 33	3	10 22	27		
GEBBIES PASS	26.69	172.0	5 42	-1				11 10
TOOLANGI	28.13	219.6	5 55	-1	10 40	0	6 5	6 46 PP
ROXBURGH	28.17	177.6	5 55	-1	10 42	1		9 18 PCP
MOORLANDS	30.61	210.7	6 18	0				15 18
TARRALEAH	30.86	211.6	6 20	0				15 17
ADELAIDE	31.28	230.1	6 27	3	11 28	-2		7 22 PP
GUAM	38.03	321.9	7 22	U				
MUNDARING	48.64	242.4	8 46	-2	15 48	-2		
PERTH	48.96	242.5	9 5	15	15 56	2		11 2 PP
HONOLULU	50.90	42.5	9 3	-2	16 30	9		11 20 PP
KIPAPA	51.04	42.4	9 15	9				
HAWAII V.OB.	51.49	46.5	9 17	8	16 40	11		
DUMONT	52.59	193.5	9 14	-4	16 40	-4		11 17 PP
CAPE HALLETT	55.07	179.1	9 30	-6				
MANILA	55.89	301.8	9 43	1	17 3	-26		
TUKUBASAN	59.26	334.1	10 2A	-4	18 7	-6		10 17 PP
LEMBANG	59.48	272.2	10 14	7	18 31	15		
ABUYAMA	60.17	329.7	10 11A	-1				
MATUSIRO	60.34	332.8	10 9A	-4	18 25	-2		
DJAKARTA	60.41	272.7	10 26	12				
TANGERANG	60.61	272.6	10 18K	3	18 47	17		
MIZUSAWA	61.36	336.6	10 26	6	18 37	-3		
WILKES	61.40	202.7	10 18	-2	18 38	-3		20 4
NHATRANG	64.79	292.9	10 47	4				
HONG KONG	65.51	305.1	10 46	-1	19 32	0		
ZO-SE	65.65	316.9	10 45	-3	19 31	-3		11 7 *SP
CANTON	66.58	305.3			19 44	-1		11 16 *SP
Y.-SAKHLINSK	67.82	341.8	11 1	-1				
MIRNY	68.22	204.6	11 2A	-3	20 3	-2		13 35 PP
VLADIVOSTOK	68.50	332.6	11 6	0				11 25 PCP
BYRD STATION	70.14	169.8	11 14	-2				16 47
PETROPAVLOVK	70.42	354.2	11 20	2	20 32	1		
CHANGCHUN	72.12	329.1	11 26	-2	20 47	-3		14 9 PP
PEKING	74.50	321.4	11 40A	-2	21 16	-1		12 2 *SP
SIAN	75.83	313.0	11 48	-2	21 31	-1		12 10 *SP
KUNMING	76.00	302.2	11 51	0	21 36	2		12 11 *SP
CHENGTU	77.58	307.7	11 58	-2	21 49	-2		12 20 *SP
MAWSON	79.71	202.1	12 9	-2	22 13	-1		23 51
LANCHOW	80.33	312.4	12 15A	1	22 23	3		12 37 *SP
CHITTAGONG	84.03	295.5	12 33	-1	22 54	-4		15 52 PP
ULAN-BATOR	84.54	323.8	12 35A	-1				
YAKUTSK	84.54	343.0	12 34A	-2	22 50	-13		
SHILLONG	85.16	298.5	12 39A	0				
UKIAH	85.40	46.8	12 47	6				
BERKELEY	85.52	48.2	12 37A	-4				23 12
CALISTOGA	85.63	47.4	12 45A	3				16 9
LICK	85.74	48.9	12 42A	0				16 12
PRIEST	85.94	50.4	12 45A	2				16 14
PASADENA	87.01	53.0	12 53	5	23 27	0		16 21 PP
MINERAL	87.05	46.2	12 45A	-4				13 7
CALCUTTA	87.08	294.5						13 19
WOODY	87.10	51.4						24 27
LHASA	87.33	302.0	12 50	0				
RENO	87.96	47.5	12 50K	-3				
IRKUTSK	88.26	326.7	12 53A	-2	23 22	-17		24 59 PS
COLLEGE	88.59	17.4	12 55	-1				

ARGENTINE I.	88.87	160.6	12	55	-2					
VICTORIA	89.49	38.3	13	3	3					
LONGMIRE	89.68	40.4	12	57	-4				36	40 PPS
VISHAKHAPTNM	90.04	288.4	13	9	6					
ESEN BULAK	90.16	319.0	13	4	1					
MADRAS	91.49	283.1	13	16	6	23	44	-24	16	54 PP
BLUE MTS.	91.78	43.4	13	5	-6				17	0 PP
TUCSON	92.08	57.0	13	10	-2					
PENTICTON	92.10	38.7	13	11	-1					
TIKSI	92.51	348.5	13	10	-4	24	14	-3	16	49 PP
DUGWAY	93.20	49.0	13	26K	9					
SALT LAKE C.	94.08	48.7	17	11	229					
BUTTE	95.31	43.5	17	26	239					
DEHRA DUN	98.24	299.1	13	40	0	24	22	4		
GOLDEN	98.50	51.2	13	59	17				17	20
NEW DELHI	98.51	297.2	13	38A	-4	25	10	50		
LARAMIE	98.77	49.6	13	47	4					
POONA	98.88	286.6	13	45	2				18	22
LUBBOCK	99.69	57.9							18	4
BOMBAY	99.92	286.7	14	8	20					
SEMIPALATNSK	101.51	319.3	13	56	1					
WICHITA MTS.	102.58	57.4	14	6	6	24	41	2	18	9 PP
MOULD BAY	102.66	13.6	14	15	15				18	22 PKP
MANHATTEN	105.03	53.2	9	8	777					
TULSA	105.06	56.6	14	5	777	24	47	-4	18	30 PP
LAWRENCE	106.01	53.6	18	28	777					
TASHKENT	107.43	308.7				25	8	7	18	52 PP
RESOLUTE	108.48	16.1	18	32	777					
ALERT	111.90	6.3							19	16
ASHKABAD	115.54	304.3							19	52
LA PAZ	115.55	118.4	18	51	7				19	49 PP
CHINCHINA	116.91	93.2	18	47	0				29	43 PS
BOGOTA	118.28	94.1							20	4 PP
CHANGALANE	118.83	225.9	18	52	1				20	24 PP
SHIRAZ	119.95	294.6	18	52A	-1				20	23 PP
HERMANUS	120.50	210.1							20	32 PP
APATITY	121.91	341.1	18	54	-2				30	15 PS
BREBEUF	122.14	46.8	19	0	3				20	30 PP
KEVO	122.26	344.9	18	55	-2					
PALISADES	122.44	52.1							20	31 PP
SODANKYLA	124.03	342.9	19	1	0					
SCHEFFERVLLE	124.17	34.7	19	4	3					
TROMSOE	124.22	347.3	19	1	0					
GORIS	124.88	306.4	19	5	3				21	6 PP
BULAWAYO	125.30	228.9	19	3	0					
KIRUNA	125.31	345.4	19	2A	-1					
TIFLIS	125.75	309.3	19	3	-1				21	4 PP
KAJAANI	125.92	339.6	19	2	-2					
MOSCOW	126.25	327.5	19	4	-1					
PULKOVO	127.61	334.4	19	5	-2				21	12 PP
VIBORG	127.65	335.9							21	5
UMEA	128.44	342.3	19	9	0				21	19 PP
SAN JUAN	128.89	80.1	19	9	-1					
BROKEN HILL	128.91	234.4	19	11	1					
HALIFAX	129.26	46.1	19	10	-1					
NURMIJARVI	129.36	337.4	19	9	-2				22	44 SKP
SKALSTUGAN	130.73	345.8	19	13	0				22	47 PKS
TRINIDAD	131.98	91.1	19	21	5				22	45 PKS
UPPSALA	132.27	340.1	19	17A	1				22	59 PKS
SIMFEROPOL	132.50	315.8	19	24	7				21	45 PP
KSARA	133.95	300.5	18	43	-36	26	37	8	21	53 PP
KONGSBERG	134.77	344.5	19	22	1				23	1 PKS
LWIRO	135.09	248.4	19	22A	0					
GOTEBORG	135.77	341.6	19	32	9				23	5 PKS
KARLSKRONA	135.81	338.0	19	24	1				22	57 PKS
LWOW	136.34	326.3	19	32	8				22	26
COPENHAGEN	137.27	339.6	19	27	1					
ISTANBUL UN.	137.40	312.5							20	16
BANDEIRA	139.27	219.8	19	23	-6				22	23 PP
ABERDEEN	139.43	351.5	20	0	30				23	25 SKP
SOFIA	140.53	317.5	19	29	-2				22	35 PP
COLLMBERG	140.53	335.1	19	30	-2				22	40 PP
HALLE	140.79	336.1	19	34	2	19	44			
PRUHONICE	140.87	332.5	19	33	1				22	52 PP
BRATISLAVA	140.94	328.6	19	31	-1				23	11 PKS
BELGRADE	141.19	322.1	19	35A	2				22	58 PP
VIENNA-H.	141.24	329.2	19	29	-4				19	47
JENA	141.38	335.8	19	29	-4				22	43 PP
WITTEVEEN	141.52	341.5	19	35	2					

KASPERSKE H.	141.92	332.3	19 28	-6			22 56 PP
ATHENS	142.34	310.5	19 33K	-2			20 24
DE BILT	142.60	342.3	19 28	-7			22 46 PP
BENSBERG	142.96	339.5	19 25	-11			19 50
ZAGREB	143.07	326.6	19 49	13			23 16 PP
FELDBERG	143.14	337.7	19 39	3			
LJUBLJANA	143.67	328.0	19 33A	-4			23 13 PP
HEIDELBERG	143.71	336.7	19 33	-4			
STUTTGART	144.01	335.6	19 34	-3			23 11 PP
TRIESTE	144.34	328.1	19 36	-2			23 15 PP
DOURBES	144.53	341.2	19 36	-2	22 48		
KEW	144.57	347.1	19 40	2			41 48 SS
EBINGEN	144.60	335.2	19 37	-2			
RAVENSBURG	144.65	334.2	19 36	-3			
STRASBOURG	144.74	336.8	19 36	-3			21 39
CHUR	145.42	333.3	19 42A	2			
PADOVA	145.44	329.5	19 45	5			24 10
TARANTO	145.58	318.3	19 35	-5			22 51 PP
BASLE	145.68	335.9					20 40
PARIS	146.31	342.3	19 44	3			
NEUCHATEL	146.36	336.0	19 48	6			
BESANCON	146.52	337.2	19 42	0			
PAVIA	146.87	331.8	19 46A	4		19 57	23 28 PKS
FLORENCE X.	146.92	328.0	19 46A	3		20 40	23 20 PP
FOLINIERE	147.13	345.6	19 44	1			
GARCHY	147.50	340.4	19 48	5			
ROSELEND	147.56	334.9	19 46	2			
ROME	147.56	324.3	19 46A	2			23 20 PP
MESSINA	147.93	316.2	19 45	1		19 56	23 17 PP
ISOLA	148.60	332.8	19 48	3			
MONACO	148.79	331.9	19 48	2			
CLERMONT-FD.	148.81	339.0	19 48	2			23 15 PP
BAGNERES	152.19	340.2	20 0	9			20 28
TORTOSA	154.06	337.4	20 22	29			
SERRA PILAR	156.00	353.2	19 55	-1			20 26 PKP2
TOLEDO	156.35	344.1	19 59	3			24 1 PP
ALICANTE	156.58	336.1	19 57	0			24 13 PP
COIMBRA	156.90	352.5	20 9	12			20 37 PKP2
ALMERIA	158.65	338.0	20 2	3			24 34 PP
GRANADA	158.73	340.6	20 44	45	26 14 -49		24 31 PP
MALAGA	159.40	341.8	20 6K	6			24 20 PP

OCTOBER 6 5.H 38.M 37.S EPICENTRE 26.28 127.06 DEPTH= 86.KM

A=-0.54100 B= 0.71647 C= 0.44044 D= 0.7980 E= 0.6026
G=-0.2654 H= 0.3515 K=-0.8978 HT= 3.0

DEPTH OF FOCUS= 0.008R

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
TAIPEI	5.15	257.2	1 19	3	2 27	12		
HWALIEN	5.44	246.1	1 7	-13	1 34	-48		
HSINCHU	5.69	256.3	1 24	0				3 47
HSINKONG	6.07	239.7	1 25	-4				
TAICHUNG	6.15	251.2	1 34	4				
ALISHAN	6.31	245.5	1 31	-1	2 39	-4		
ZO-SE	7.05	314.3	1 41	-1	3 10	9		
HFNGCHUN	7.17	234.8	1 51	7				
NANKING	9.24	310.4	2 11	-1	4 4	9		
ABUYAMA	11.27	38.5	2 45	6				
MANILA	12.84	207.0	2 57	-3	5 47	26		
CANTON	12.87	258.6			5 25	3		
MATUSIRO	13.96	40.2	3 10	-5			6 9	
TUKUBASAN	14.90	45.2	3 23K	-4				
PEKING	16.44	329.2	3 48	2	6 56	11		7 16 SS
SIAN	17.55	301.2	4 1A	1	7 24	14		4 19 *SP
CHANGCHUN	17.56	355.8	4 0	0	7 21	10		4 15 *SP
CHENGTU	20.71	287.5	4 32	-3				4 52 *SP
GUAM	20.93	124.2	4 36	-1				
KUNMING	21.94	272.3	4 48	1				
LANCHOW	22.08	301.8	4 48	-1	8 49	7		5 4 *SP
ULAN-BATOR	26.77	329.0	5 33	0				
SHILLONG	31.60	276.6	6 16K	0				
ESEN BULAK	31.62	317.5	6 17K	0				

CHITTAGONG	32.28	270.7	6	22A	0	11	35	7	6 42	9 11 PCP
TANGERANG	37.86	214.4	7	11	1					
PORT MORESBY	40.49	148.5	7	31K	-1					9 48 PCP
DEHRA DUN	43.07	287.1	7	53	0					
NEW DELHI	44.06	284.8	7	59A	-2					
LAHORE	46.09	289.4	8	16	-1					
WARSAK DAM	48.12	293.1	8	33	0					
POONA	49.51	272.5	8	43A	-1					
CHARTERS TS.	49.72	156.1	8	44K	-1	15	51	5		
BOMBAY	50.31	273.4	8	51A	1					
QUETTA	52.57	289.0	9	6A	-1					
BRISBANE	58.83	153.2	9	52	0					
MUNDARING	58.85	190.8	9	51	-1					
ADELAIDE	61.91	169.2	10	11A	-2					
TEHERAN	64.09	298.8	10	28	1					
COLLEGE	64.48	28.1	10	29	0				10 47	
CANBERRA	64.69	160.2	10	31K	0					
SHIRAZ	64.84	292.0	10	31A	-1				10 51	39 8 PKPPKP
TOOLANGI	65.84	164.0	10	38K	0					
APATITY	67.37	335.5	10	46K	-2					
KEVO	69.00	338.5	10	56	-2					
SODANKYLA	69.93	336.1	11	3A	-1					
MOULD BAY	70.03	13.5	11	3	-1					
KAJAANI	70.64	332.6	11	7A	-1					
NORD	70.78	354.7	11	7	-2					
ALERT	71.34	1.3	11	11A	-1					
TROMSOE	71.65	339.5	11	13	-1					
KIRUNA	71.94	337.5	11	14A	-2					
NURMIJARVI	73.30	329.7	11	23A	-1					
UMEA	73.77	333.8	11	26	0					
RESOLUTE	75.70	10.6	11	37A	0					
UPPSALA	76.73	330.7	11	43	0					
KSARA	76.78	301.2	11	45	1					
SKALSTUGAN	76.96	335.4	11	44	-1					
KARAPIRO	78.41	142.8	11	53	0					
CHATEAU	79.33	143.7	11	57	-1					
KARLSKRONA	79.56	328.0	11	57	-2					
TUAI	79.91	142.5	11	58	-3					
KONGSBERG	80.25	332.8	11	48	-15					
GOTEBORG	80.37	330.4	12	2A	-1					
KRAKOW	80.43	321.3	12	3	0					12 18 PCP
COPENHAGEN	81.30	328.6	12	8A	0					
SOFIA	81.92	313.7	11	55	-16					
VICTORIA	82.56	39.2	12	15A	1					
BELGRADE	82.72	316.6	12	16K	1					15 27 PP
VIENNA-H.	83.36	321.0	12	20A	1					
PRUHONICE	83.43	323.1	12	20A	1					
PRAGUE	83.44	323.2	12	31	12					
COLLMBERG	83.51	324.8	12	20A	1					15 48 PP
HALLE	83.93	325.3	12	22	1				12 40	
PENTICTON	84.23	37.2	12	24A	1					
LONGMIRE	84.42	40.1	12	23	-1					
KASPERSKE H.	84.42	322.7	12	24A	0					13 26
JENA	84.45	325.0	12	23	-1				12 42	15 54 PP
LJUBLJANA	85.62	319.8	12	30	0				12 48	
WITTEVEEN	85.73	328.3	12	32K	2					
TRIESTE	86.29	319.8	12	33	0				12 52	23 17 *SSKS
ABERDEEN	86.53	335.0								32 43 SSS
BENSBERG	86.66	326.7	12	35A	0				12 53	
STUTTGART	86.94	324.1	12	37	1					
PADOVA	87.51	320.4	12	53	14					17 23 PP
HUNGRY HORSE	87.79	35.8	12	42	2					
STRASBOURG	87.84	324.6	12	41	0					13 0
MINERAL	88.03	45.4	12	42A	0					
BLUE MTS.	88.09	39.9	12	43	1					13 3
CALISTOGA	88.33	47.3	12	44A	1					
DOURBES	88.47	327.1	12	43	-1					
FLORENCE X.	88.82	319.3	12	35	-10					23 21
BERKELEY	88.95	47.8	12	48	2					
MESSINA	89.32	312.9								17 15
RENO	89.63	45.3	12	51K	2					
LICK	89.65	48.0	12	51K	2					
KEW	89.84	330.2	12	51	1					
BUTTE	90.02	37.0	12	53	2				13 12	
PRIEST	90.97	48.5	12	58K	3					
MONACO	91.05	320.9	12	57	1					
BOZEMAN	91.07	36.5	12	57	1				13 17	
FOLINIFRE	91.81	328.3	13	0	1					

WILKES	93.19	186.6	13	5	-1				13	20		
DUGWAY	93.56	41.6	13	9A	2							
PASADENA	93.78	49.0	13	19	11							
FLAMING GRGE	95.08	39.3	13	15	1							
PRICE	95.12	41.1	13	16	2							
WICHITA MTS.	105.50	37.7	14	17	777						18	22 PP
TULSA	106.09	35.1	17	10	777						21	23 PPP
BYRD STATION	119.73	169.4	18	42	2							
CHINCHINA	141.94	38.5	19	25	3							
BOGOTA	143.08	36.7	19	27	3							
AREQUIPA	160.18	64.2	20	32	43							

OCTOBER 6 7.H 56.M 17.5 EPICENTRE -17.26 167.81 DEPTH= 0.KM

A=-0.93399 B= 0.20179 C=-0.29487 D= 0.2112 E= 0.9774
G= 0.2882 H=-0.0623 K=-0.9555 HT= 5.3

SE= 3.00

	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	
PORT VILA	0.68	133.9	0	14K	-2								
KOUMAC	4.68	224.9	1	11K	-2	2	4	-5					
NOUMEA	5.18	194.1	1	18K	-2	2	15	-7					
HONIARA	10.91	314.5	2	40	0	4	39	-5					
BRISBANE	17.16	231.4	4	1	-2	7	11	-2					
ONERAHI	19.34	163.7	4	42	13								
AFIAMALU	19.94	83.2	4	34	-2	8	27	11			8	51	
RABAUL	20.09	308.5	4	37	-1	8	19	0					
CHARTERS TS.	20.61	258.8	4	43	0	8	40	11					
PORT MORESBY	21.55	288.6	4	53	0	8	53	5					
KARAPIRO	21.68	163.3	5	5	11								
RIVERVIEW	22.27	219.0	4	57A	-3						5	23	PP
TARATA	22.59	166.6	5	18	15								
CHATEAU	22.88	164.4	5	9	3								
TUAI	22.96	161.0	5	7	0								
CANBERRA	24.58	219.3	5	23K	0	9	50	8					
WELLINGTON	24.68	167.4	5	27	3	9	53	10					
GEBBIES PASS	26.67	172.2	5	42	0								
ROXBURGH	28.17	177.7									10	41	
TOOLANGI	28.19	219.7	6	0	4				6	11			
ADELAIDE	31.35	230.1	6	23	-1	11	27	-4					
MUNDARING	48.71	242.4	8	47	-1								
HONOLULU	50.84	42.4	9	19	15	16	17	-3			20	51	SS
DUMONT	52.62	193.5	9	16	-2								
CAPE HALLETT	55.07	179.1	9	31	-5	17	16	-2			19	23	SCS
MANILA	55.97	301.8	9	43	1	17	13	-17					
MATUSIRO	60.37	332.8	10	2K	-11								
SCOTT BASE	60.62	180.3	10	13	-2								
WILKES	61.43	202.7	10	18	-2						18	37	
HONG KONG	65.58	305.0	10	53	5	19	40	7					
NANKING	67.90	316.2	11	2	0								
CHANGCHUN	72.16	329.1	11	27	-1								
PEKING	74.55	321.3	11	42A	0	21	19	2					
SIAN	75.89	313.0	11	50	0								
KUNMING	76.08	302.1	11	53	2	21	37	3					
CHENGTU	77.65	307.7	12	1	1	21	51	0					
MAWSON	79.75	202.1	12	10K	-1				12	20			
LANCHOW	80.39	312.4	12	17	2								
CHITTAGONG	84.11	295.5	12	35	1						12	41	PCP
SHILLONG	85.23	298.5	12	40K	0								
LICK	85.67	48.9	12	42	0								
MINERAL	86.99	46.2	12	47	-1								
WOODY	87.03	51.3	12	47	-1								
RENO	87.90	47.5	12	53K	0								
COLLEGE	88.57	17.4	12	55	-1								
ESEN BULAK	90.21	319.0	13	5	-1								
BLUE MTS.	91.72	43.4	13	9	-1						16	53	PP
PENTICTON	92.05	38.7	13	11	-1								
WICHITA MTS.	102.51	57.4				24	39	0			27	29	PS
TULSA	104.99	56.6									28	3	PS
SHIRAZ	120.03	294.6	19	53A	60						27	55	
KIMBERLEY	121.95	218.5	18	58	2								
BULAWAYO	125.36	228.8	19	4	1								
UMEA	128.46	342.3	19	9	0								
SAN JUAN	128.81	80.1	19	12	2								

NURMIJARVI	129.39	337.4	19	8	-3						
PRUHONICE	140.91	332.6	19	33	1					23 3	PP
JENA	141.42	335.9	19	33	0					20 59	
KASPERSKE H.	141.96	332.4	19	29	-5					19 51	
BENSBERG	142.99	339.6	19	33	-3						
FELDBERG	143.17	337.8	19	41	5						
LJUBLJANA	143.71	328.1	19	35	-2						
HEIDELBERG	143.74	336.8	19	35	-2						
STUTTGART	144.04	335.6	19	37	0						
TUBINGEN	144.32	335.6	19	37	-1						
DOURBES	144.56	341.3	19	38	0						
EBINGEN	144.64	335.3	19	38	0						
RAVENSBURG	144.69	334.3	19	38	-1						
STRASBOURG	144.78	336.9	19	39	0					23 1	PP
CHUR	145.46	333.4	19	41	1						
PARIS	146.34	342.4	19	44	3						
BESANCON	146.55	337.3	19	43	1						
GARCHY	147.53	340.5	19	47	4					20 34	
ROME	147.61	324.4	20	13	30					21 13	
MESSINA	147.98	316.2	19	44	0	26 42	-9			23 20	PP
ISOLA	148.64	332.9	19	53	8						
MONACO	148.82	331.9	19	50	5						
BAGNERES	152.21	340.4	19	53	2						
TORTOSA	154.09	337.6	19	59	6						
GRANADA	158.76	340.8	19	47K	-12						
MALAGA	159.43	341.9	19	58	-2	27 7	3			24 19	PP
BENI ABBES	164.27	326.3	21	12	67						

OCTOBER 6 8.H 3.M 29.S EPICENTRE -17.21 167.86 DEPTH= 0.KM

A=-0.93441 B= 0.20103 C=-0.29405 D= 0.2103 E= 0.9776
G= 0.2875 H=-0.0618 K=-0.9558 HT= 5.3

SE= 3.52

	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 VILA	0.68	139.7	0	13	-3								
KOUMAC	4.75	224.9	1	13A	-1	2	3	-8					
NOUMEA	5.23	194.4	1	17	-4	2	15	-8					
HONIARA	10.91	314.2	2	42	2								
BRISBANE	17.23	231.4	4	2	-1	7	16	2					
ONERAHI	19.37	163.9	4	37	8								
RABAUL	20.09	308.3	4	47	10								
CHARTERS TS.	20.66	258.7	4	43	0						7	57	
PORT MORESBY	21.58	288.4	4	53	0	8	56	8					
KARAPIRO	21.72	163.4	4	53	-1								
RIVERVIEW	22.34	219.0	4	57A	-3						9	31	SS
TARATA	22.63	166.7	5	7	4								
CHATEAU	22.91	164.5	5	8	2								
TUAI	22.99	161.2	5	4	-3								
CANBERRA	24.65	219.3	5	23K	0	9	54	12	5	30	6	1	PP
WELLINGTON	24.72	167.5	5	27	3								
GEBBIES PASS	26.72	172.3	5	41	-1								
TOOLANGI	28.26	219.7	5	59	3						7	7	PPP
MOORLANDS	30.72	210.8	6	26	8								
TARRALEAH	30.98	211.7	6	29	8								
ADELAIDE	31.42	230.1	6	25	0	11	27	-5			14	11	
PERTH	49.10	242.5	8	47	-4	15	58	2			19	51	SS
DUMONT	52.67	193.5	9	16	-2								
MANILA	55.98	301.7	9	43	1						12	43	
TUKUBASAN	59.27	334.0	10	9K	4				10	20	24	57	SSS
MATUSIRO	60.35	332.7	10	11	-2	18	26	-1					
SCOTT BASE	60.67	180.3	10	12	-3								
TANGERANG	60.74	272.5	10	17	2								
WILKES	61.50	202.7				18	33	-9			21	52	
NHATRANG	64.89	292.8	10	48	5								
ZO-SE	65.71	316.8	10	50	2	19	34	0					
CANTON	66.66	305.2	11	0	6	19	48	3					
Y.-SAKHLINSK	67.82	341.7	11	4	3	20	3	4					
NANKING	67.90	316.2	11	4	2	20	4	4					
MIRNY	68.32	204.6	11	4	-1								
BYRD STATION	70.16	169.8	11	13	-3								
CHANGCHUN	72.14	329.1	11	28	0	20	47	-3					
PEKING	74.54	321.3	11	44K	2	21	20	3					
SIAN	75.89	313.0	11	56	6	21	42	10					
KUNMING	76.09	302.1	11	54	3	21	38	4					

CHENGTU	77.65	307.6	12	2	3	21	51	0				
MAWSON	79.81	202.1	12	10K	-1				12	18		
LANCHOW	80.39	312.4	12	16	2	22	25	5				
CHITTAGONG	84.13	295.4	12	36	2	23	1	3			15	52 PP
YAKUTSK	84.53	343.0	12	35	-1						24	52
ULAN-BATOR	84.58	323.8	12	36	0							
SHILLONG	85.25	298.4	12	36A	-3							
PASADENA	86.87	53.0	12	53	6							
IRKUTSK	88.30	326.6	12	53	-1	23	31	-7				
COLLEGE	88.50	17.4	12	54	-1							
MADRAS	91.60	283.0									16	30
BLUE MTS.	91.65	43.4	13	8	-2						16	52 PP
PENTICTON	91.98	38.6	13	8	-3							
BOMBAY	100.03	286.7									17	14
WICHITA MTS.	102.44	57.3				24	48	10			18	30 PP
MOULD BAY	102.58	13.6	18	21	262							
TULSA	104.92	56.6				24	57	7			27	47 PS
TASHKENT	107.51	308.6	18	53	777	25	5	4				
DUZHANBE	107.51	305.7	18	54	777							
ASHKABAD	115.62	304.3	18	41	-3							
VANNOVSKAYA	115.82	304.3	18	45	1							
SHIRAZ	120.05	294.6	18	53	1							
APATITY	121.90	341.2	18	56	0							
KEVO	122.25	344.9	18	59	2							
SODANKYLA	124.02	343.0	19	2	2							
SCHEFFERVLLE	124.05	34.7	19	2	2							
TROMSOE	124.20	347.4	19	2	2							
KIRUNA	125.29	345.5	19	3	1							
BULAWAYO	125.43	228.8	19	3	0							
TIFLIS	125.82	309.3	19	4	1							
KAJAANI	125.92	339.6	19	3	-1							
PULKOVO	127.62	334.5	19	7	0							
UMEA	128.43	342.3	19	8	-1							
SAN JUAN	128.75	80.0	19	13	4							
NURMIJARVI	129.36	337.5	19	11	1						22	33 PKS
SKALSTUGAN	130.72	345.9	19	17	4							
WINDHOEK	131.20	216.9									22	44
UPPSALA	132.27	340.2	19	18	2						22	44
KSARA	134.04	300.6	19	22	3						22	5
KONGSBERG	134.75	344.6	19	18	-2							
JERUSALEM	134.87	297.9	19	24	3							
LWIRO	135.23	248.4	19	24	3							
KARLSKRONA	135.81	338.1	19	26	4							
COLLMBERG	140.54	335.2	19	30	-1						22	28 PP
PRUHONICE	140.88	332.6	19	28	-4						22	39 PP
VIENNA-H.	141.27	329.3	19	31	-1							
JENA	141.39	335.9	19	34	2						22	37
WITTEVEEN	141.52	341.7	19	31	-2							
KASPERSKE H.	141.94	332.5	19	31	-2						22	54 PP
DE BILT	142.59	342.4	19	31	-4							
BENSBERG	142.96	339.7	19	35	0							
FELDBERG	143.14	337.9	19	39	4							
LJUBLJANA	143.70	328.1	19	33	-3						20	0
HEIDELBERG	143.72	336.8	19	37	1							
STUTTGART	144.01	335.7	19	36	-1							
TUBINGEN	144.29	335.7	19	37	0							
TRIESTE	144.36	328.3	19	52	14							
KEW	144.55	347.2	19	36	-2							
EBINGEN	144.61	335.4	19	38	0							
RAVENSBURG	144.67	334.4	19	38	0							
STRASBOURG	144.75	336.9	19	39	1						23	4 PP
CHUR	145.44	333.5	19	43	4							
BASLE	145.69	336.1	19	42	2							
PARIS	146.30	342.5	19	43	2							
BESANCON	146.52	337.4	19	44	3							
PAVIA	146.89	331.9	19	49	7						23	17
FLORENCE X.	146.94	328.2	19	50	8						20	45 PKP2
FOLINIERE	147.12	345.7	19	45	3							
GARCHY	147.49	340.6	19	47	4							
ROME	147.60	324.5	19	50K	7				20	45	23	14 PP
ISOLA	148.61	333.0	19	48	3							
MONACO	148.80	332.0	19	49	4							
BAGNERES	152.18	340.5	19	58	8							
TOLEDO	156.34	344.3	19	58	2						24	2 PP
COIMBRA	156.87	352.7									21	29 PKP2
MALAGA	159.39	342.1	20	41	41							
BENI ABBES	164.25	326.5	20	6	1						24	57 PP

OCTOBER 6 11.H 0.M 56.5 EPICENTRE -13.46 167.03 DEPTH= 224.KM

A=-0.94806 B= 0.21844 C=-0.23124 D= 0.2245 E= 0.9745
G= 0.2253 H=-0.0519 K=-0.9729 HT= 6.0

DEPTH OF FOCUS= 0.030R

SE= 1.95

	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	
KOUMAC	7.54	200.0	1	50K	1	3	16	3					
HONIARA	8.01	299.2	1	52K	-3	3	20	-4					
NOUMEA	8.81	183.5	2	4K	-1	3	42	0					
RABAUL	17.31	300.8				6	41	-12					
BRISBANE	19.22	221.7	4	10	1	7	39	9					
PORT MORESBY	19.89	279.6	4	16K	0	7	55	12					
AFIAMALU	20.60	93.8	4	21A	-2	8	0	5			5	16	
CHARTERS TS.	20.94	248.8	4	27K	0	8	10	8					
ONERAHI	23.18	164.7	4	51	3								
RIVERVIEW	24.89	212.8	5	5A	1	9	17	8			6	10	
KARAPIRO	25.52	164.2	5	10A	0						11	57	SCP
WAIRAKEI	26.31	164.0	5	18	1								
TARATA	26.44	167.1	5	19	0						11	59	SCP
CHATEAU	26.72	165.2	5	21A	0						11	59	SCP
TUAI	26.79	162.3	5	19	-3	9	39	0			11	59	SCP
CANBERRA	27.17	213.7	5	25A	0						15	55	SCS
COBB RIVER	27.97	170.8	5	35	3						12	5	SCP
WELLINGTON	28.53	167.7	5	35	-2	10	14	7			12	4	SCP
KAIMATA	29.21	173.3	5	43	0						12	5	SCP
GEBBIES PASS	30.52	172.0	5	54	-1						8	53	PCP
TOOLANGI	30.74	214.8	5	57	0				6	33	6	58	
ROXBURGH	31.98	177.0	6	7	-1						11	4	
ADELAIDE	33.34	225.1	6	19A	0	11	24	2	7	8	12	22	SCP
MOORLANDS	33.60	207.0	6	23	2								
DARWIN	35.28	267.5	6	36	0								
MACQUARIE I.	41.44	187.1	7	28K	1								
KIPAPA	48.77	45.2							9	11			
MUNDARING	49.89	239.5	8	34	1	15	28	4					
MANILA	53.38	299.9	8	59	0						11	53	
DUMONT	56.13	192.6	9	17	-2								
MATUSIRO	56.67	332.3	9	20	-2						10	12	PCP
LEMBANG	58.73	270.1	9	39	2								
ZO-SE	62.45	316.0	10	0A	-2				10	45			
NHATRANG	62.74	291.4	10	2	-2								
SCOTT BASE	64.40	180.1	10	14	-1								
WILKES	64.64	201.9	10	14A	-2	18	39	3	11	2			
NANKING	64.66	315.5	10	15	-1	18	38	1					
PETROPAVLOVK	66.60	354.5	10	26	-3								
CHANGCHUN	68.53	328.8	10	39A	-2	19	26	3	11	23			
PEKING	71.13	321.0	10	55A	-1	19	58	5	11	40			
MIRNY	71.39	204.0	10	57	-1								
SIAN	72.77	312.6	11	6	0				11	51			
KUNMING	73.44	301.6	11	11A	1	20	26	7					
BYRD STATION	73.98	170.0	11	12	-1						13	58	PP
CHENGTU	74.75	307.3	11	17	0	20	36	2	12	3			
LANCHOW	77.29	312.1	11	31A	-1	21	5	4	12	18			
YAKUTSK	80.73	343.2	11	48A	-2	21	37	0					
CHITTAGONG	81.81	295.3	11	56A	0	21	49	1	12	42	15	12	PP
SHILLONG	82.77	298.4	12	0A	-1								
MAWSON	82.97	202.0	12	0K	-2								
UKIAH	83.31	47.3	12	4	1				12	51			
BERKELEY	83.51	48.7	12	4A	0								
CALISTOGA	83.58	47.9	12	2A	-3								
LICK	83.77	49.4	12	5K	-1						12	53	
IRKUTSK	84.74	326.7	12	9A	-1								
LHASA	84.76	302.0	12	11	0								
MINERAL	84.93	46.6	12	14A	3						12	58	
COLLEGE	85.19	17.7	12	9	-4				12	58	15	39	PP
PASADENA	85.28	53.4	12	11	-2				13	3			
RENO	85.91	47.9	12	16K	0								
LONGMIRE	87.24	40.7	12	16	-7								
BLUE MTS.	89.49	43.6	12	41A	8						29	56	PKKP
PENTICTON	89.57	38.8	12	32	-2								
TUCSON	90.58	57.1	12	38	0								
DUGWAY	91.22	49.0	12	40A	-1								
SALT LAKE C.	92.09	48.7							13	21			
ARGENTINE I.	92.66	160.8	12	48	0								
HUNGRY HORSE	92.74	41.0	12	50	2								
BUTTE	93.03	43.5							13	37			

FLAMING GRGE	93.93	49.0	12 51	-3					
BOZEMAN	93.96	44.1						13 43	
ALBUQUERQUE	94.78	55.4	12 56	-2					
POONA	97.13	287.3	13 8K	0				23 25	
MOULD BAY	99.14	13.5	13 16	-1					
WICHITA MTS.	101.09	56.8						17 14	PP
VANNOVSKAYA	113.02	305.7	18 12	1					
SHIRAZ	117.72	296.5	18 20A	0	24 56	5	18 29		
LA PAZ	117.90	117.0	18 22	2					
APATITY	118.11	341.6	18 19	-2					
KEVO	118.44	345.3	18 20	-1					
TEHERAN	118.48	303.4	18 14	-7					
SODANKYLA	120.22	343.4	18 23	-2				28 32	PKKP
KIRUNA	121.48	345.8	18 26	-1				28 28	PKKP
KIROVOBAD	121.87	309.6	18 28A	0					
KAJAANI	122.14	340.2	18 28	0					
VIBORG	123.92	336.8	18 32	0					
KIMBERLEY	124.39	220.7	18 35	2					
UMEA	124.63	342.8	18 32A	-1			19 22	37 19	PKPPKP
NURMIJARVI	125.60	338.2	18 34A	-1			19 24	21 53	SKP
HELSINKI	125.72	337.7	18 35	0					
SKALSTUGAN	126.90	346.2	18 37	-1					
BULAWAYO	127.20	231.5	18 39A	1					
UPPSALA	128.49	340.8	18 40	-1				21 42	SKP
SAN JUAN	128.80	77.2	18 40	-1				21 42	PP
BROKEN HILL	130.48	237.5	18 46	2					
KONGSBERG	130.94	345.0	18 44	-1				21 54	SKP
KSARA	131.38	303.3	18 43K	-3				21 57	PP
GOTEBORG	131.97	342.3	18 47	0				21 56	SKP
KARLSKRONA	132.04	338.9	18 46	-1				21 55	SKP
WINDHOEK	133.63	219.8	18 52	2					
RACIBORZ	135.49	331.6						22 9	
LWIRO	135.72	252.5	19 6	12				22 11	
COLLMBERG	136.81	336.3	18 56A	0				21 42	
HALLE	137.05	337.3	18 57	0				22 12	SKP
PRAGUE	137.17	334.1						22 20	
PRUHONICE	137.19	334.0	18 57A	0				21 35	
BRATISLAVA	137.34	330.3	18 58	1					
VIENNA-H.	137.63	330.9	18 54	-4				22 16	
JENA	137.65	337.0	18 57	-1			19 52	21 46	PP
WITTEVEEN	137.72	342.3						22 15	
BELGRADE	137.76	324.3	18 57	-1				21 52	PP
KASPERSKE H.	138.25	333.8	18 59A	0				21 38	
BENSBERG	139.18	340.5	19 1A	0				22 19	SKP
ATHENS	139.31	313.6						22 19	
FELDBERG	139.38	338.9	19 0	-1				22 26	PP
ZAGREB	139.52	328.6	19 4A	3					
HEIDELBERG	139.96	337.9						22 20	PP
LJUBLJANA	140.08	329.9	18 56	-6					
STUTTGART	140.27	336.9	18 55	-8				22 21	PP
KEW	140.73	347.5	19 3	-1				22 22	PP
DOURBES	140.73	342.1	19 0	-4					
EBINGEN	140.88	336.6	19 6	2					
RAVENSBURG	140.94	335.7	19 4	0				22 24	PP
STRASBOURG	140.99	338.1	19 4	0					
BANDEIRA	141.65	223.6	19 3K	-2				22 28	PP
BESANCON	142.76	338.5	19 4	-3					
FOLINIERE	143.30	346.1	19 5	-3				22 29	
GARCHY	143.71	341.5	19 7	-2				19 50	
ROME	144.06	326.9	19 8A	-2				19 36	
MESSINA	144.67	319.4	19 9A	-2					
ISOLA	144.91	334.6	19 11	0				22 32	
MONACO	145.12	333.8	19 11	0					
BAGNERES	148.39	341.5	19 18	2					
TORTOSA	150.30	339.1	19 26	7					
SERRA PILAR	152.17	352.9	19 19A	-3				19 38	PKP2
TOLEDO	152.53	345.0	19 25A	2			20 30	19 43	PKP2
COIMBRA	153.06	352.3	19 30A	7					
MALAGA	155.59	343.1	19 27K	0					
BENI ABBES	160.65	330.7	19 34	1					

OCTOBER 6 23.H 31.M 22.S EPICENTRE -17.39 167.85 DEPTH= 0.KM

A=-0.93347 B= 0.20104 C=-0.29701 D= 0.2105 E= 0.9776
G= 0.2904 H=-0.0625 K=-0.9549 HT= 5.3

SE= 2.04

	DELTA DEG.	AZ. DEG.	P M	P O-C S	S M	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT VILA	0.57	127.0	0	12 -2	0	20 -5					
KOUMAC	4.62	226.4	1	11 -1							
NOUMEA	5.06	194.8	1	16K -2	2	14 -5					
HONIARA	11.02	314.9	2	41 -1	4	44 -3					
BRISBANE	17.11	231.8	4	1 -1	7	8 -3					
ONERAHI	19.20	163.7	4	29 2	8	15 16					
AFIAMALU	19.92	82.9	4	34 -2	8	30 15			8	51	
RAPAUL	20.19	308.7	4	41 2	8	27 6					
CHARTERS TS.	20.62	259.1	4	43K 0	8	35 6					
KARAPIRO	21.55	163.2	4	52 0							
PORT MORESBY	21.63	288.9	4	53 0	8	54 5					
RIVERVIEW	22.19	219.3	4	57 -2					5	18	PP
WAIRAKEI	22.34	163.0	5	8 8							
TARATA	22.46	166.6	5	4 2							
CHATEAU	22.74	164.4	5	4 0							
TUAI	22.83	161.0	5	5 0	9	2 -9					
COBB RIVER	23.98	170.9	5	21 5	9	34 3					
CANBERRA	24.50	219.6	5	23K 2	9	42 2	5	30	6	3	PP
WELLINGTON	24.54	167.4	5	21 -1	9	40 -1			6	12	PP
KAIMATA	25.23	173.8	5	30 1							
GEBBIES PASS	26.54	172.2	5	39 -2							
ROXBURGH	28.04	177.8	5	53 -1							
TOOLANGI	28.11	219.9	5	55K 0	10	38 -1			12	17	
MOORLANDS	30.56	210.9	6	16 -1							
TARRALEAH	30.82	211.9	6	19 0							
ADELAIDE	31.30	230.3	6	20 -3	11	30 0	6	28	14	6	
MUNDARING	48.68	242.5	8	47 0	16	7 17					
PERTH	49.01	242.6			16	14 20			19	45	SS
HONOLULU	50.91	42.3	9	6 2	16	27 6			11	25	PP
DUMONT	52.50	193.6	9	15 -1							
CAPE HALLETT	54.94	179.1	9	33 -1							
MANILA	56.06	301.8							19	46	
LEMBANG	59.61	272.2	10	9K 2	18	21 4					
ABUYAMA	60.34	329.7	10	11A -2							
SCOTT BASE	60.49	180.3	10	12 -2							
MATUSIRO	60.50	332.8	10	12A -2	18	26 -3					
TANGERANG	60.73	272.6	10	14K -1							
WILKES	61.33	202.8	10	17 -2	18	36 -3					
NHATRANG	64.95	292.9	10	44 1							
HONG KONG	65.68	305.0			19	48 15					
ZO-SE	65.83	316.9	10	48A -1	19	35 0					
Y.-SAKHLINSK	67.98	341.7	11	4K 2	20	3 2					
NANKING	68.02	316.2	11	3A 0	20	2 0					
MIRNY	68.16	204.6	11	2 -2	20	1 -2					
CHANGCHUN	72.29	329.1	11	29A 0	20	52 0			14	20	PP
PEKING	74.67	321.3	11	43A 0	21	20 2					
SIAN	76.00	313.0	11	51 1	21	34 1					
KUNMING	76.17	302.1	11	53A 2	21	38 3					
CHENGTU	77.75	307.7	12	1A 1	21	52 0					
LANCHOW	80.50	312.4	12	16A 1	22	25 4					
CHITTAGONG	84.20	295.5	12	34 0			12	42	23	3	SCS
YAKUTSK	84.70	343.0	12	36A -1	23	1 -3					
ULAN-BATOR	84.71	323.8	12	37 0	23	0 -4					
BERKELEY	85.51	48.2	12	42 1					24	38	
CALISTOGA	85.63	47.4	12	39A -2							
LICK	85.73	48.9	12	43 1							
PRIEST	85.93	50.3	12	43K 0							
PASADENA	86.99	53.0	12	50 2	23	30 4					
MINERAL	87.05	46.2	12	46A -2							
IRKUTSK	88.44	326.6	12	54A -1							
COLLEGE	88.68	17.4	12	53 -3							
VICTORIA	89.52	38.3	13	3 3							
ESEN BULAK	90.33	319.0	13	4 0							
EUREKA	90.66	48.7	13	4 -1			13	17	30	35	PKKP
MADRAS	91.63	283.0	13	17 7					23	46	
BLUE MTS.	91.79	43.4	13	9 -1			13	22	30	25	PKKP
PENTICTON	92.12	38.7	13	11A -1							
TUCSON TELE.	92.16	56.9	13	12 0							
ALBUQUERQUE	96.34	55.5	13	34 3							
GOLDEN	98.49	51.2	13	44 3	24	12 -7					

LUBBOCK	99.66	57.9								27	1	PS
SEMIPALATNSK	101.69	319.2	18	3	247							
WICHITA MTS.	102.55	57.4				24	43	4		18	15	PP
WARSAK DAM	104.61	301.4	18	25	257							
TULSA	105.03	56.7				24	53	3		18	31	PP
TASHKENT	107.61	308.6	18	48	777							
QUETTA	107.75	296.8	18	30	777							
ROLLA	108.43	55.1	18	57	777							
DUBUQUE	109.90	50.4	19	6	777							
LA PAZ	115.39	118.3	18	36	-7					29	29	PS
VANNOVSKAYA	115.91	304.2	18	49	5							
CHINCHINA	116.78	93.2	18	38	-8					29	42	PS
BOGOTA	118.15	94.1								20	2	PP
GALERAZAMBA	118.65	87.0								30	8	PS
FUQUENE	118.72	93.3								20	0	PP
SHIRAZ	120.12	294.5	18	53A	1	25	53	3		21	10	
KIMBERLEY	121.88	218.4	18	57K	1							
APATITY	122.07	341.1	18	55	-1							
BREBEUF	122.14	46.9	18	55	-1					30	26	PS
KEVO	122.42	344.9	18	53	-4							
PALISADES	122.42	52.2				26	5	8				
SHAWINIGAN	122.57	45.5	18	56	-1							
SODANKYLA	124.19	343.0	19	2	2							
SCHEFFERVLLE	124.20	34.8	18	59	-1							
TROMSOE	124.37	347.3	19	1	0							
KIRUNA	125.46	345.5	19	2K	-1							
TIFLIS	125.93	309.2	19	4	0					22	39	PKS
MOSCOW	126.42	327.5	19	5	0							
PULKOVO	127.78	334.4	19	4	-3							
UMEA	128.60	342.3	19	8K	-1							
SAN JUAN	128.79	80.1	19	18	9							
BROKEN HILL	128.94	234.2	19	11	2							
NURMIJARVI	129.52	337.4	19	10	-1					22	44	PKS
HELSINKI	129.63	336.9	19	9	-2							
SKALSTUGAN	130.89	345.8	19	13	0							
WINDHOEK	131.05	216.8								22	41	
UPPSALA	132.43	340.1	19	16	0							
KSARA	134.12	300.4	19	21	2					21	47	PP
LWIRO	135.16	248.2	19	22	1							
ISTANBUL UN.	137.58	312.5	19	26	0							
UZHGOROD	138.12	325.8	19	19	-8							
ANDEIRA	139.25	219.6	19	24	-5							
SOFIA	140.70	317.5	19	32	1					22	54	PP
HALLE	140.96	336.1	19	32	0	19	43					
PRUHONICE	141.04	332.5	19	26	-6					22	56	PP
BRATISLAVA	141.11	328.6	19	33	1							
BELGRADE	141.36	322.1	19	12	-20					20	33	
VIENNA-H.	141.41	329.2	19	29	-4							
JENA	141.55	335.8	19	26	-7	19	44			22	32	PP
WITTEVEEN	141.68	341.6	19	34	1	19	46					
KASPERSKE H.	142.09	332.3	19	30	-4					20	44	
ATHENS	142.51	310.4	19	32	-2					20	34	
DE BILT	142.75	342.3	19	34	-1	19	44			22	38	
BENSBERG	143.12	339.6	19	33K	-2							
ZAGREB	143.24	326.6	19	34	-2							
LJUBLJANA	143.84	328.0	19	34	-3	20	3					
HEIDELBERG	143.88	336.7	19	35	-2							
STUTTGART	144.17	335.6	19	36	-1					23	7	PP
TUBINGEN	144.45	335.6	19	38	0							
TRIESTE	144.51	328.1	19	37	-1							
DOURBES	144.69	341.3	19	36	-2							
KEW	144.72	347.2	19	37	-1							
EBINGEN	144.77	335.3	19	38	0							
RAVENSBURG	144.82	334.3	19	39	1							
STRASBOURG	144.91	336.8	19	38	-1					22	58	PP
CHUR	145.59	333.3	19	41	1							
PADOVA	145.61	329.5								20	8	
BASLE	145.84	335.9	19	42	2							
PARIS	146.47	342.4	19	44	3					20	24	
NEUCHATEL	146.52	336.0	19	38	-3							
BESANCON	146.68	337.3	19	42	0					20	15	
PAVIA	147.04	331.8	19	49	7					23	13	
FLORENCE X.	147.09	328.0	19	44	2					33	8	PP
FOLINIERE	147.29	345.7	19	43	0							
GARCHY	147.66	340.5	19	44	1					20	13	
ROSELEND	147.73	335.0	19	50	7							
ROME	147.74	324.3	19	44K	1					23	13	PP
MESSINA	148.10	316.1	19	47A	3	26	43	-8	19 58	23	22	PP
ISOLA	148.77	332.8	19	50	5							

MONACO	148.95	331.9	19	50	5							
BAGNERES	152.35	340.3	19	52	2						20	18
SERRA PILAR	156.14	353.4	19	56A	0						20	27 PKP2
TOLEDO	156.51	344.2	19	58	2	28	5	64			24	7 PP
COIMBRA	157.04	352.7	20	30	33							
GRANADA	158.89	340.7	20	0A	1						24	13 PP
MALAGA	159.56	341.9	20	1A	1						24	20 PP

OCTOBER 8 21.H 56.M 25.S EPICENTRE 24.24 121.66 DEPTH= 45.KM

A=-0.47915 B= 0.77699 C= 0.40829 D= 0.8512 E= 0.5249
G=-0.2143 H= 0.3475 K=-0.9129 HT= 3.6

DEPTH OF FOCUS= 0.002R

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
HWALIEN	0.27	187.9	0	6	-3							
TAIPEI	0.80	350.7	0	13K	-3	0	26	-1				
HSINCHU	0.84	311.6	0	12	-4	0	25	-3				
TAICHUNG	0.90	264.4	0	15	-2	0	29	0				
YUSHAN	1.00	220.8	0	17	-1	0	36	5				
ALISHAN	1.07	227.8	0	16K	-3	0	29	-4				
HSINKONG	1.17	193.3	0	17	-3	0	37	1				
TAITUNG	1.56	197.6	0	25	-1	0	56	11				
TAINAN	1.81	227.2	0	32K	3	1	6	15				
TAWU	2.01	200.5	0	29K	-3	0	57	1				
PENGHU	2.06	250.3	0	25	-8	0	58	1				
KAOHSIUNG	2.06	218.6	0	37	4	0	50	-7				
ISIGAKIZIMA	2.29	87.3	0	32	-4	0	41	-22				
HENGCHUN	2.38	200.8	0	38K	1	1	7	1				
MAWASHI	5.81	68.8	1	24	-2	3	23	51				
ZO-SE	6.85	356.5	1	36K	-4	2	53	-5				
HONG KONG	7.15	255.8	1	42	-2	2	50	-15				
CANTON	7.71	263.1	1	52	0	3	27	8				
NANKING	8.19	342.6	1	54	-5	3	29	-2				
MANILA	9.54	183.4	2	19	2	4	15	11				
YAKUSIMA	10.00	49.9	2	26K	2	4	31	15				
KAGOSIMA	10.72	45.1	2	37	3	4	55	22				
NAGASAKI	11.12	38.7	2	38	-1	5	37	54				
MIYAZAKI	11.52	46.2	2	48A	4	5	13	21				
KUMAMOTO	11.66	40.9	2	48A	2	5	18	22				
SAGA	11.74	38.2	2	48	1						6	2
ITUHARA	11.94	32.1	2	51	1	5	21	18				
ASOSAN	11.94	41.7	2	49	-1	5	23	20				
HUKUOKA	12.03	37.4	2	54A	3	5	24	19				
NOBOEKA	12.11	44.5	2	56	4						9	45
OOITA	12.50	42.0	3	3K	5	5	38	22				
SIMONOSEKI	12.61	37.8	3	0	1							
ASHIZURI	13.06	47.2	3	6	1	5	42	12				
UWAZIMA	13.09	44.4	3	8	3	5	52	22				
MATUYAMA	13.63	42.9	3	18	6	6	51	68				
HIROSIMA	13.78	40.5	3	18K	4	6	3	16				
KOTI	13.92	45.6	3	15	-1	6	7	17				
HAMADA	13.95	38.0	3	28A	11	6	8	17				
MUROTO	14.17	47.9	3	21	2						11	11
TSURUGISAN	14.42	45.6	3	22	-1							
TAKAMATU	14.74	44.3	3	27	0	6	22	12				
MATSUE	14.91	38.9	3	30	1	6	31	17				
SIAN	14.92	314.8	3	30A	1	6	42	28				
YONAGO	15.06	39.6	3	31	0	6	32	15				
SUMOTO	15.31	45.9	3	36	2	7	2	39				
SIOMISAKI	15.38	50.2	3	29	-6						6	38
WAKAYAMA	15.42	46.7	3	41	5	7	8	43				
SAIGO	15.60	37.5	3	40	2	7	27	58				
TOTTORI	15.60	41.1									11	39
KOBE	15.69	45.4	3	42	3	7	1	29				
OSAKA	15.90	46.1	3	39	-3	7	0	23				
TOYOOKA	16.01	42.3	3	42	-1	6	48	9			8	57
OWASE	16.02	49.0	3	43	0						10	9
ABUYAMA	16.06	45.6	3	44K	0							
KYOTO	16.26	45.4	3	48	2	7	19	34				
MAIZURU	16.32	43.6									4	8
PEKING	16.41	344.9	3	50A	2	6	59	11				

KAMEYAMA	16.65	47.2	3	54K	3	7	45	51		
HIKONE	16.75	45.7	3	56	3	7	37	41		
NHATRANG	16.80	226.8	3	58	5					
TSURUGA	16.87	44.3	3	57	3					
CHENGTU	16.91	296.1	3	52	-3	7	21	21		
NAGOYA	17.17	47.1	3	58	0	8	29	83		
GIHU	17.17	46.2	3	55	-3					
HUKUI	17.22	43.5	4	2	4					
KUNMING	17.22	276.8	3	59A	1	7	22	15		
HAMAMATU	17.43	49.5	4	0	-1					
OMAESAKI	17.71	50.6	4	11	6					
KANAZAWA	17.78	43.0	4	13	8	8	8	48		
TAKAYAMA	17.93	45.0	4	8	1					
IIDA	17.94	47.5	4	10	3					12 32
SHIZUOKA	18.03	49.8	4	16	7	7	39	14		11 39
TOYAMA	18.23	43.5	4	12	1					9 22
MATUMOTO	18.46	45.8	4	17	3					
WAZIMA	18.48	41.3	4	8	-6	7	49	14		
MISIMA	18.50	50.2	4	10	-4	7	58	22		
KOHU	18.52	48.2	4	10	-4					
AJIRO	18.57	50.6	4	11	-4					
HUNATU	18.57	48.9	4	15	0	7	55	18		
OSIMA	18.62	51.7	4	12	-4					
MATUSIRO	18.78	45.4	4	11A	-7	7	49	7		
NAGANO	18.85	45.1	4	17	-1	7	55	11		10 10
OIWAKE	18.88	46.5	4	18	-1	8	2	18		
MERA	19.02	51.8	4	14	-6	7	21	-26		
TITIBU	19.04	48.1	4	21	0					
TAKADA	19.14	44.1	4	14	-8					
YOKOHAMA	19.15	50.3	4	19	-3	8	10	20		
MAEBASI	19.27	47.0	4	28	5					9 25
KUMAGAYA	19.34	48.1	4	22	-2	8	45	51		
TOKYO C.M.O.	19.34	49.7	4	26	2	8	13	19		
LANCHOW	19.36	311.5	4	24A	0					
HONGO	19.37	49.7	4	23	-1					
AIKAWA	19.71	42.0	4	33	5					
CHANGCHUN	19.77	7.8	4	27A	-2	8	15	11		
TUKUBASAN	19.87	48.8	4	22A	-8	7	59	-7		4 56 PP
UTUNOMIYA	19.89	47.7	4	28	-2					
KAKIOKA	19.93	48.9	4	28	-2	8	27	20		
NIIGATA	20.15	43.3	4	40	7					
MITO	20.21	48.9	4	49	16	9	20	67		
SHIRAKAWA	20.44	46.8	4	29	-7					
VLADIVOSTOK	20.64	21.7	4	36A	-2	8	23	2		
ONAHAMA	20.80	48.0	4	43	4					
HUKUSIMA	20.95	45.6	4	51	10					
YAMAGATA	21.16	44.3	4	44	1					
ISINOMAKI	21.89	45.1	4	48	-2	8	49	4		
AKITA	21.91	40.8								5 24
MIZUSAWA	22.18	43.4	4	56	3	9	24	34		
MORIOKA	22.54	42.2	4	53	-4	9	0	4		5 29
MIYAKO	23.01	43.3	4	58	-3					
AOMORI	23.01	39.5								5 27
HATINOHE	23.27	41.0	4	51	-13	9	32	23		
HAKODATE	23.65	37.6	5	13	5					
SUTTSU	24.04	35.1	5	23	12					
MURORAN	24.11	36.9								5 43
GUAM	24.29	112.0	5	13	-1					
TOCKLAI	24.39	281.6	5	29	14					
SAPPORO	24.82	36.0	5	8	-11	9	22	-14		
URAKAWA	25.01	39.3	5	19	-2	9	56	17		
OBIHIRO	25.74	38.4	5	34	6					
ASAHIGAWA	25.84	36.0	5	35	6					
ULAN-BATOR	26.38	337.3	5	34A	0					
KUSIRO	26.47	39.5	5	27	-7	10	24	21		
WAKKANAI	26.63	32.5	5	31	-5	10	24	18		
SHILLONG	27.03	279.1	5	39	-1	10	29	17		
ABASHIRI	27.05	37.6	5	35	-5					
CHITTAGONG	27.45	272.2	5	45A	2	10	25	6	5 55	6 36 PP
LHASA	27.78	287.9	5	48	2	10	36	12		
Y.-SAKHLINSK	28.28	31.3	5	44	-7					7 3 PPP
ESEN BULAK	30.08	323.7	6	6A	-1					
PORT BLAIR	30.16	250.6	6	13	5	11	17	15		7 17 PP
CALCUTTA	30.57	273.6	6	13	2	11	17	8		7 20 PP
IRKUTSK	30.96	339.1	6	14	-1	11	18	3		7 18 PP
CHATRA	31.17	282.2	6	16A	-1	11	20	2		7 21 PP
BOKARO	32.70	276.8	6	31A	1	11	53	11		12 42 SCP
DJAKARTA	33.52	207.4	6	39A	2	11	47	-8		

TANGERANG	33.59	207.8	6	39K	1	11	56	0				
LEMBANG	33.78	205.7	6	41K	2	12	6	7				
VISHAKHAPTNM	36.32	267.2	7	3A	2	12	47	9			8	30 PP
DARWIN	37.48	165.2	7	9	-2							
YAKUTSK	38.16	6.1	7	14A	-2						8	50 PP
DEHRA DUN	39.05	288.8	6	35A	-49	11	53	-87			7	44 PP
NEW DELHI	39.89	286.1	7	30A	-1	13	37	5			9	9 PP
PETROPAVLOVK	40.02	34.4									17	37 SCS
SEHORE	40.70	277.9	7	42	4							
MADRAS	40.73	261.7	7	40A	2	13	54	9			9	20 PP
HYDERABAD	40.83	268.9	7	42	3	13	51	5			14	9 PPS
RABAUL	41.00	129.5	7	33	-7	13	55	6			12	39
SEMIPALATNSK	41.25	320.1	7	43A	1	13	59	7			9	20 PP
PORT MORESBY	41.68	140.3	7	46A	0	14	3	4	7	54		
LAHORE	42.20	290.8	7	51	1	14	10	3				
WARSAK DAM	44.47	294.5	8	11	3							
KHOROG	44.53	299.5	8	11	2	14	49	9				
POONA	44.71	272.3	8	11A	1	14	45	2				
BOMBAY	45.55	273.2	8	20A	3	15	8	13			8	55 PP
TASHKENT	46.51	304.7	8	26A	2	15	18	9			10	20 PP
DUZHANBE	46.75	300.9	8	29A	3	15	19	7				
QUETTA	48.63	289.6	8	41A	0	15	44	5			10	39 PP
CHARTERS TS.	50.16	149.4	8	51	-2	16	4	4				
HONIARA	50.17	127.2	8	52K	-1	16	3	3				
SVERDLOVSK	54.26	323.7									11	26 PP
ASHKABAD	54.96	300.4	9	30	1	17	17	12			11	39 PP
MUNDARING	56.14	185.6	9	35	-2	17	22	1				
PERTH	56.15	186.0				17	29	8			15	18
BRISBANE	59.47	147.8	10	1	1	17	49	-16				
TEHERAN	60.78	298.7	10	10	1	18	29	7				
KOUMAC	60.86	133.4	10	9A	-1	18	31	8				
SHIRAZ	61.06	291.6	10	9	-2	18	32	7			12	22 PP
ADELAIDE	61.07	164.0	10	9	-2	18	27	2				
NOUMEA	63.52	133.2	10	26A	-2	19	12	16				
GORIS	64.05	303.7	10	33A	2	19	15	12			12	57 PP
RIVERVIEW	64.20	152.9	10	31K	-1	19	9	4			12	57 PP
CANBERRA	64.65	155.4	10	35K	0	19	16	6			10	50 *SP
TIFLIS	64.78	306.3	10	38A	2	19	24	12			19	48 PS
TOOLANGI	65.44	159.3	10	38	-2	19	26	6	10	47	11	6 PCP
MOSCOW	67.02	322.3	10	48K	-2	19	43	4			13	21 PP
APATITY	67.18	335.4	10	49	-2	19	40	-1			13	25 PP
COLLEGE	68.55	27.3	10	57	-3	19	59	2			12	53 PP
KEVO	69.08	338.2	11	2	-1	20	7	3			13	41 PP
SUVA	69.56	121.9	11	50	44	21	5	56			14	20 PP
SODANKYLA	69.79	335.7	11	5	-2							
PULKOVO	70.04	327.4	11	9A	0	20	18	3			13	42 PP
KAJAANI	70.18	332.2	11	7	-3							
VIBORG	70.54	328.6	11	9A	-3							
SIMFEROPOL	71.62	311.6	11	19A	1	20	37	4			14	5 PP
KIRUNA	71.93	336.9	11	21	1	20	39	2				
NORD	72.33	354.1	11	20	-3	21	16	35				
HELSINKI	72.52	328.6	11	21	-3							
NURMIJARVI	72.56	329.0	11	22	-2	20	49	5			15	48 PPP
HONOLULU	73.04	73.9	11	24	-3	20	58	9			22	9 SCS
MOULD BAY	73.12	12.6	11	23A	-4							
UMEA	73.40	333.0	11	27K	-2	20	51	-2			15	58
KSARA	73.61	300.1	11	31A	1	20	59	3			14	15 PP
KISHINEV	74.52	314.8	11	35A	0	21	9	3				
AFIAMALU	75.22	112.9	11	41A	2	20	51	-23			26	25 SS
IASI	75.27	315.3	11	39K	-1	21	17	3				
UPPSALA	76.07	329.7	11	42K	-2	21	23	0				
HAWAII V.OB.	76.17	74.8	11	44	-1	21	38	14				
ISTANBUL UN.	76.42	309.0	11	46A	0							
LWOW	76.55	318.7	11	47A	0	21	33	5			12	4 PCP
SKALSTUGAN	76.72	334.3	11	47	-1							
SITKA	76.73	33.2	11	46	-2	21	18	-12				
BUCHAREST	77.21	313.0				21	41	6				
WARSAW	77.39	321.7				21	45	8			22	11 SCS
RESOLUTE	78.54	9.3	11	55	-3							
KARLSKRONA	78.64	326.7	11	52	-7						14	3
KRAKOW	78.90	320.0	12	1	1	21	58	4				
SKALNATE PL.	79.07	319.1	12	3	2	22	3	8			15	9 PP
GOTEBORG	79.67	329.1	12	2	-2							
SOFIA	79.73	312.2	12	7	3	22	7	5			15	11 PP
KONGSBERG	79.76	331.4	12	2	-3	22	21	19			15	12 PP
TIMISOARA	79.88	315.6	12	6	1	22	11	7				
KARAPIRO	79.89	139.5	12	6	1						14	46 PP
RACIBORZ	79.90	320.5	12	7	2						12	15 PCP
TARATA	80.05	141.1	12	16	10							

SZEGED	80.37	316.4	12	0	-8					14	22
COPENHAGEN	80.42	327.2	12	8	0	22	15	6			
BUDAPEST	80.53	317.9	12	6	-3	22	14	3		12	39
CHATEAU	80.73	140.5	12	10	0						
BELGRADE	80.76	315.0	12	12K	2	22	19	6		15	18 PP
HURBANOVO	80.86	318.5								15	7 PP
SKOPJE	81.30	312.1	12	14	1	22	20	1			
BRATISLAVA	81.39	319.1	12	14A	1	22	47	28		15	21 PP
TUAI	81.41	139.4	12	12	-1						
WELLINGTON	81.68	142.5	12	13	-2	22	25	3		23	21 SP
VIENNA-H.	81.79	319.4	12	15A	0	22	33	9		15	23 PP
ROXBURGH	81.81	148.3				22	26	2		28	9 SS
PRUHONICE	82.04	321.5	12	15A	-2	22	29	3		28	17 SS
PRAGUE	82.07	321.6	12	23	6	22	33	7			
SCORESBY SD.	82.10	348.4	12	17	0						
COLLMBERG	82.27	323.1	12	15	-3	22	31	2			
TITOGRAD	82.57	313.2	12	21	2	22	40	9		15	38 PP
HALLE	82.75	323.6	12	18	-2	22	37	4			
KASPERSKE H.	83.01	321.0	12	19A	-3					16	11
ZAGREB	83.15	317.3	12	24	2	22	42	5			
CHEB	83.22	322.2				22	24	-14		23	51
JENA	83.24	323.2	12	23	0	22	39	1		15	34 PP
LJUBLJANA	83.94	318.0	12	26A	0					12	50
TANANARIVE	83.97	246.3	12	29	3	22	55	9		15	55 PP
TRIESTE	84.60	317.9	12	29	-1	22	55	3		18	17 PPP
TARANTO	84.80	312.1	12	10	-21	21	30	-84			
WITTEVEEN	84.81	326.5	12	32	1						
BENSBERG	85.59	324.7	12	35A	1					15	56 PP
HEIDELBERG	85.60	322.9	12	34	-1						
STUTTGART	85.63	322.2	12	33A	-2	23	13	11		15	55 PP
PADOVA	85.87	318.4	12	35	-1	23	5	1			
TUBINGEN	85.88	322.0	12	36	0						
RAVENSBURG	85.96	321.2	12	36	0						
DE BILT	85.97	326.4	12	38	2	22	57	-8		15	57 PP
EBINGEN	86.12	321.8	12	38	1						
ABERDEEN	86.21	333.0	12	35A	-3	23	0	-7		15	49 PP
CHUR	86.51	320.4	12	38	-1	22	57	-13			
STRASBOURG	86.57	322.5	12	40	1	23	2	-9		16	3 PP
MESSINA	87.03	310.7	12	42A	0	23	15	0	12 52	16	5 PP
FLORENCE X.	87.08	317.2	12	43A	1	23	19	3	12 57	15	59 PP
VICTORIA	87.18	37.1	12	44K	2						
BASLE	87.26	321.7	12	45	2	23	29	12			
ROME	87.26	315.1	12	43A	0	23	19	2	12 57	15	59 PP
DOURBES	87.43	325.0	12	43	0	23	38	19			
DURHAM	87.55	331.0				23	11	-9		24	33 PS
PAVIA	87.61	319.2	12	35A	-9	22	51	-30		23	31 SCS
CHIAVARI	87.98	318.4	13	19	27	23	22	-2		16	15 PP
BESANCON	88.32	322.1	12	47	-1					16	15 PP
PENTICTON	88.76	35.0	12	49K	-1						
KEW	89.08	328.0	12	51A	0	23	35	1		17	22 PP
LONGMIRE	89.08	38.0	12	51A	0	23	28	-6			
PARIS	89.30	324.7	12	53	1	23	27	-9		15	51 PP
ISOLA	89.43	319.1	12	48	-5					16	1
MONACO	89.45	318.6	12	54	1					16	30
BANFF	89.66	32.0	13	1	7						
GARCHY	89.91	323.3	12	55	0					16	29
WILKES	90.69	184.5	12	59	0	23	51	2		23	11 SKS
DUMONT	91.69	172.8	13	9	5	23	58	0		16	44 PP
HUNGRY HORSE	92.24	33.5	13	6	0					13	29
BLUE MTS.	92.74	37.6	13	7	-1					16	50 PP
MINERAL	92.90	43.1	13	9A	0						
MIRNY	93.07	191.1	13	6	-4	24	1	-9		25	34 PS
CALISTOGA	93.26	44.9	13	11A	0						
LWIRO	93.52	269.1	13	11A	-1						
BERKELEY	93.90	45.4	13	15A	1	24	30	13		17	11 PP
BAGNERES	94.12	321.2	13	15	0						
RENO	94.49	43.0	13	17K	1						
BUTTE	94.53	34.6	13	16	-1	23	43	-39			
LICK	94.61	45.6	13	17A	0					13	39
BOZEMAN	95.55	34.1	13	21	0						
PRIEST	95.94	46.1	13	23A	0						
EUREKA	96.87	41.2	13	27	0					17	0 PP
ALICANTE	97.44	317.8								17	32 PP
DUGWAY	98.27	39.0	13	34K	1						
TOLEDO	98.58	320.8	13	36	1	24	29	21		17	35 PP
BROKEN HILL	98.65	258.1	13	36	1						
PASADENA	98.76	46.5	13	36	0	24	20	11		18	51 PP
ALMERIA	99.62	317.7	13	40K	0					17	44 PP

FLAMING GRGE	99.69	36.7	13	39	-1						
GRANADA	100.09	318.5							18	11	PP
SERRA PILAR	100.26	324.1	13	42	-1	24	22	6	17	49	PP
RAPID CITY	100.56	31.1	13	42	-2						
MALAGA	100.88	318.6	13	45A	0	24	29	10	17	53	PP
MAWSON	101.29	199.5	14	20	33				18	4	PP
LARAMIE	101.44	34.4	13	49	1						
CAPE HALLETT	101.77	166.5	13	52	3				18	10	PP
GOLDEN	102.73	35.4	13	57	3	25	41	73			
ALBUQUERQUE	105.53	39.4	14	1	777						
LUBBOCK	109.14	37.5							18	52	PP
BREBEUF	109.21	11.3	18	53	777	25	5	8	28	17	
WICHITA MTS.	110.02	34.5	14	35	-231	25	13	13	18	49	PP
TULSA	110.48	31.8	14	30	-237	25	7	5	18	55	PP
PONTA DELGDA	111.14	332.7							19	7	PP
WESTON	112.64	10.4							19	27	
HERMANUS	113.09	241.4							29	6	SCSP
PALISADES	113.49	12.8	14	46	-227	25	22	8			
BYRD STATION	118.61	170.0	18	46	3				28	59	
ST. CLAUDE	139.84	5.0	20	19	56				24	6	PPP
FORT FRANCE	141.17	4.3	19	28	2				22	29	
TRINIDAD	145.19	5.3	19	32	0						
CHINCHINA	146.44	32.4	19	37A	2				29	53	SKKS
BOGOTA	147.48	30.2	19	39A	3				29	57	SKKS
HUANCAYO	159.84	56.0	19	58	5						
SANTA LUCIA	165.86	133.2							21	18	

OCTOBER 9 15.H 59.M 18.S EPICENTRE 36.42 71.16 DEPTH= 237.KM

A= 0.26047 B= 0.76343 C= 0.59104 D= 0.9464 E=-0.3229
G= 0.1909 H= 0.5594 K=-0.8066 HT= -0.4

DEPTH OF FOCUS= 0.032R

SE= 1.53

	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	1.10	15.4	0	36	1	1	2	1				
KULYAB	1.86	323.2	0	42	1	1	12	0				
WARSAK DAM	2.43	172.4	0	45	-1							
GARM	2.67	345.4	0	49	0	1	24	-2				
DZERGETAL	2.80	1.1	0	50	0							
DUZHANBE	2.87	319.2	0	51A	0	1	29	-1				
FERGANA	3.99	6.8	1	4K	0	1	51	-2				
ANDIJAN	4.43	12.0	1	9K	0	2	0	-3				
NAMANGAN	4.57	4.8	1	11K	0	2	4	-2				
SAMARKAND	4.63	315.8	1	11K	0							
TASHKENT	5.11	343.9	1	17K	0	2	15	-3				
LAHORE	5.52	150.6	1	23	1						2	17
TCHIMKENT	6.00	348.8				2	34	-4				
NARYN	6.27	35.5	1	32	0						2	30
FRUNSE	6.94	21.6	1	40A	0	2	57	-2			2	36 *SP
QUETTA	7.15	210.7	1	43K	0	3	3	-1				
FABRICHNAYA	7.84	29.5	1	52	0							
PRZHEVALSK	8.25	40.5	1	56K	-1						3	21
ALMATA-2	8.34	33.0	1	57	-1							
DEHRA DUN	8.37	134.6	1	55A	-4	3	30	-2			2	0 PP
NEW DELHI	9.33	145.2	2	8K	-3	3	52	-2			3	29
ASHKABAD	10.34	282.3	2	23	-1	4	16	-1				
KARACHI	12.08	198.2	2	42	-4	4	52	-4				
KIZYL-ARVAT	12.10	287.8	2	46	0	5	2	5				
SEHORE	14.16	157.2	3	14	3	5	44	1			6	58
SEMIPALATNSK	15.44	22.3	3	26K	-1							
TEHERAN	16.00	273.4	3	37	3	6	34	10				
CHATRA	16.63	120.6	3	39K	-2	6	35	-2				
SHIRAZ	17.01	252.0	3	45A	0	6	52	7			15	5 SCS
BOMBAY	17.51	174.8	3	50K	0	7	1	6			4	49
LHASA	17.97	106.4	3	58	3	7	10	6				
POONA	17.97	171.7	3	56K	1	7	11	7			4	9 PP
GORIS	19.80	286.5	4	14	0						5	23 *SP
CALCUTTA	20.35	128.1									7	56
SHILLONG	20.74	115.6	4	23K	0							
TIFLIS	21.10	292.6	4	27	0						5	39 *SP
EREVAN	21.23	288.3	4	28	0							
SVERDLOVSK	21.61	344.2	4	31K	-1	8	14	3				
MADRAS	24.68	158.5									6	15

LANCHOW	26.29	81.0	5 17	2				
MOSCOW	29.80	321.0	5 47A	0				
PULKOVO	35.06	324.8	6 32A	0				
PEKING	35.26	70.2	6 35	1				
UZHGOROD	37.41	304.7	6 51	-1			8 10	*SP
HELSINKI	37.72	323.9	6 52A	-2	7 44		8 25	PP
APATITY	37.75	337.4	6 54A	0				
NURMIJARVI	37.97	324.3	6 54A	-2	7 46		8 28	PP
KAJAANI	37.98	330.6	6 55	-1				
SODANKYLA	39.87	335.0	7 12A	0				
BRATISLAVA	40.89	304.1					9 1	
KEVO	40.93	338.3	7 21	0			10 5	
UPPSALA	41.22	322.0	7 22A	-1	8 14			
KIRUNA	42.22	334.1	7 31A	0				
PRUHONICE	42.44	307.0	7 33A	0			8 30	
LJUBLJANA	42.86	301.2	7 37A	1			9 21	PP
KASPERSKE H.	43.14	305.8	7 38	-1			9 24	PP
COLLMBERG	43.35	309.0	7 40	0			11 17	
TROMSOE	43.40	336.2	7 40	-1				
GOTEBORG	43.90	318.3	7 44	-1				
HALLE	43.99	309.4	7 45	0			8 36	
JENA	44.27	308.6	7 48	0	8 39		9 46	PP
SKALSTUGAN	44.35	326.8	7 48A	0				
KONGSBERG	45.22	321.0	7 56	1			9 45	PP
STUTTGART	46.00	305.8	8 2	1			9 33	
BENSBERG	47.04	309.0	8 10	1				
DOURBES	48.79	308.2	8 22	-1				
GARCHY	50.37	304.9	8 34	-1	9 27		9 48	*SP
ABUYAMA	51.47	71.4	8 51K	8				
FOLINIERE	52.32	307.5	8 48	-1				
Y.-SAKHLINSK	52.73	54.7	8 52	0				
MATUSIRO	52.87	68.5	8 51A	-2			9 46	
NORD	53.91	349.5	9 1	0				
LWIRO	55.07	235.2	9 10K	1				
SIDA	57.70	328.3	9 29	1				
ALERT	59.16	353.6	9 37	-1				
TANANARIVE	59.39	206.1	9 42	3				
BROKEN HILL	64.67	226.6	10 14A	0				
RESOLUTE	68.80	356.1	10 39	-1				
BULAWAYO	69.14	222.8	10 43	1				
DARWIN	74.21	118.8	11 12	0			12 9	
COLLEGE	74.53	16.2	11 13	-1	12 10			
MUNDARING	80.04	142.4	11 43	-1	12 44			
PORT MORESBY	84.44	105.9	12 7K	0				
CHARTERS TS.	90.39	114.7	12 34	-1			13 34	
PENTICTON	94.10	7.0	12 53K	1				
BLUE MTS.	98.75	6.1	13 12	-2			17 13	
EUREKA	104.19	5.7	13 42	4				
WICHITA MTS.	108.59	351.1	18 19	777			18 26	PP
SOUTH POLE	126.23	180.0	18 33	-1				
AREQUIPA	141.42	291.0	19 0	-3				
ANTOFAGASTA	144.64	280.2	19 9	1				

OCTOBER 9 20.H 14.M 34.S EPICENTRE -3.16 148.32 DEPTH= 0.KM

A=-0.84970 B= 0.52442 C=-0.05476 D= 0.5252 E= 0.8510
G= 0.0466 H=-0.0288 K=-0.9985 HT= 7.1

SE= 2.43

	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	
RABAUL	3.98	105.2	0	58K	-6								
PORT MORESBY	6.31	190.5	1	38K	1	2	58	8					
HONIARA	13.13	118.9	3	8	-3	5	33	-6					
GUAM	16.89	347.9	4	0	1								
CHARTERS TS.	16.95	186.6	3	59	-1	7	17	9					
DARWIN	19.58	241.2	4	32	0								
KOUMAC	23.26	139.3	5	11K	1	9	36	17					
PORT VILA	24.38	127.8	5	20K	-1	9	46	7					
BRISBANE	24.47	170.4	5	21	-1	9	24	-16					
NOUMEA	25.91	138.7	5	34K	-2	10	8	4					
RIVERVIEW	30.63	175.4	6	17A	-1	11	17	-3			7	20	PP
CANBERRA	32.01	178.9	6	28	-2	11	39	-3	6	37	7	37	PP
MANILA	32.28	304.0	6	30	-3	12	0	14					
ADELAIDE	32.88	194.6	6	36K	-2	11	54	-2			7	43	PP

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SUVA	33.04	119.0			11	58	0			7	41
BAGUIO CITY	33.61	306.2	6	48	4					14	12
TOOLANGI	34.34	184.0	6	48	-3	12	20	2	6 58	8	15 PP
TAITUNG	36.97	315.5	7	12	-1						
TAIPEI	38.23	318.6	7	32	8						
TARRALEAH	39.00	182.2	7	30	0						
MOORLANDS	39.12	181.3	7	30	-1						
ABUYAMA	39.68	343.5	7	33A	-3						
TUKUBASAN	39.92	349.6	7	32A	-6	13	28	-15		9	7 PP
MATUSIRO	40.61	347.5	7	39	-4	13	33	-21			
LEMBANG	40.70	263.2	7	42K	-2					13	44
AFIAMALU	40.81	107.6	7	42	-3	13	57	0		9	23 PP
DJAKARTA	41.45	264.3	7	53K	3	13	39	-27			
MUNDARING	41.61	222.9	7	49	-2	14	7	-2			
TANGERANG	41.65	264.3	7	51A	-1					13	8
PERTH	41.86	223.2	8	0	7	14	16	4		9	38 PP
HONG KONG	41.87	308.8	7	55A	1	14	18	6		9	59 PPP
KARAPIRO	42.64	147.7	7	59	-1						
ZO-SE	42.77	324.8	8	0A	-1	14	26	0			
CANTON	42.94	309.2	8	4	2	14	34	6		8	30 #SP
CHATEAU	43.58	149.0	8	9	1						
TUAI	44.14	147.2	8	12	0						
WELLINGTON	44.78	151.5			14	54	-1			16	17
NANKING	44.87	323.6	8	17A	-1	14	57	1	8 33		
GEBBIES PASS	45.77	155.4	8	27	2						
ROXBURGH	45.99	159.5			15	12	0			10	8
VLADIVOSTOK	48.39	343.9	8	45A	-1	15	40	-6		11	21 PPP
Y.-SAKHLINSK	50.21	355.0	8	56	-4					16	9 PS
CHANGCHUN	51.14	338.7	9	4	-3	16	22	-3		10	59 PP
PEKING	52.12	328.8	9	13A	-1	16	40	2		17	8 *SS
UGLEGORSK	52.31	354.8	9	13	-3						
KUNMING	52.38	305.2	9	16	0	16	45	3	9 32	9	43 *SP
SIAN	52.52	318.5	9	17	0	16	46	3			
CHENGTU	53.99	311.9	9	28	0	17	6	3	9 43	9	59 *SP
PETROPAVLOVK	56.65	7.5				17	28	-11			
LANCHOW	56.96	317.4	9	49A	-1	17	44	1	10 4		
PORT BLAIR	57.20	285.9	10	9	18	18	13	27		13	9 PPP
HONOLULU	57.79	62.5	9	57	1	17	53	-1		12	15 PP
CHITTAGONG	60.69	297.7	10	18K	2	18	39	7	10 27	12	41 PP
SHILLONG	61.64	301.2	10	20K	-2	18	50	6		22	58 SS
ULAN-BATOR	62.41	329.9	10	26	-1						
DUMONT	63.66	183.7	10	35	0	19	8	-1		13	1 PP
LHASA	63.71	305.2	10	37	1	19	16	6			
CALCUTTA	63.80	296.9	11	1	25						
CHATRA	66.05	301.1	10	48	-3	19	44	5			
IRKUTSK	66.53	332.3	10	53A	-1						
YAKUTSK	66.54	350.6	10	52	-2						
VISHAKHAPTNM	67.33	290.6	10	59	0	20	2	8		13	33 PP
ESEN BULAK	67.34	323.7	10	59A	0						
WILKES	68.38	195.4	11	4	-2	19	58	-9			
MADRAS	69.50	285.0	11	16	3	20	21	1		15	26
CAPE HALLETT	70.40	173.0	11	14	-4						
HYDERABAD	71.83	289.4	11	36	9	20	45	-2		21	1 PS
MIRNY	73.88	200.0	11	37	-2	21	6	-4		11	51 PCP
DEHRA DUN	74.69	302.4	11	45	2	21	23	4		11	56 PCP
NEW DELHI	75.04	300.5	11	44A	-1	21	22	-1		12	6 PCP
SCOTT BASE	75.28	176.0	11	45	-2						
POONA	76.33	289.8	11	52K	-1						
BOMBAY	77.34	290.0	12	4	6	21	49	1		14	54 PP
LAHORE	78.07	303.0	12	4	2						
SEMIPALATNSK	78.66	322.7	12	6	0						
WARSAK DAM	80.83	305.0	12	17	0						
KHOROG	81.47	308.4	12	22	1	22	35	3			
COLLEGE	82.05	22.8	12	22	-2	22	34	-4			
KARACHI	83.41	295.3	12	31	0						
DUZHANBE	83.80	309.2	12	35K	2					22	51 SCS
TASHKENT	83.86	311.9	12	34A	1	23	0	4		12	41 PCP
QUETTA	84.12	300.6	12	34	0	23	3	4		28	34 SS
MAWSON	85.35	202.5	12	40A	0					13	49
SOUTH POLE	86.86	180.0	12	46	-2						
BYRD STATION	87.29	169.9	12	48	-2	23	34	5			
CALISTOGA	91.25	51.6	13	12A	3						
SVERDLOVSK	91.35	326.7	13	7	-2						
BERKELEY	91.46	52.3	13	14K	4	24	14	6		30	26 SS
ASHKABAD	91.90	307.7	13	11	-1					24	2 SKKS
LICK	91.93	52.9	13	14K	2						
MINERAL	92.09	49.9	13	13	1						
PRIEST	92.67	54.1	13	16A	1						

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RENO	93.44	50.7	13	22K	3					
MOULD BAY	93.61	13.9	13	18	-1					
PENTICTON	93.72	40.9	13	20	0					
PASADENA	94.66	56.2	13	28	4				25	46 PS
BLUE MTS.	95.32	45.4	13	29	2	24	46	43	17	16 PP
EUREKA	96.41	50.8	13	35	3				17	35 PP
SHIRAZ	96.59	299.3	13	33A	0	25	3	53	17	29 PP
HUNGRY HORSE	97.44	41.8	13	39	2					
TEHERAN	97.46	305.5	13	41	4	24	22	8	17	41 PP
RESOLUTE	99.93	13.9	13	49	1					
GORIS	101.25	309.5	13	58	4	24	35	2	18	7 PP
TIFLIS	102.18	311.9				24	40	2	18	16 PP
APATITY	102.24	339.1				24	33	-5	18	4 PP
KEVO	103.41	342.2				24	45	2	18	16 PP
MOSCOW	104.16	326.9							18	42 PP
ALBUQUERQUE	104.28	54.9	17	11	183				18	16 PP
KIRUNA	106.46	341.8							33	39 SS
PULKOVO	106.52	332.2							18	40 PP
NURMIJARVI	108.75	334.2				25	6	-1	18	56 PP
SIMFEROPOL	109.22	316.7							19	11 PP
KSARA	110.34	304.8							19	9 PP
WICHITA MTS.	110.71	54.1	18	38	3				19	8 PP
UPPSALA	112.08	335.6							28	48 PS
KISHINEV	112.10	320.0							19	37 PP
TULSA	112.70	52.3							19	18 PP
ISTANBUL UN.	113.94	313.8	19	38	57					
BUDAPEST	117.98	323.5							19	26
PRUHONICE	119.19	327.7							20	10 PP
COLLMBERG	119.23	329.6	20	7	76				20	36 PP
LWIRO	119.30	265.7							20	19 PP
HALLE	119.64	330.2							20	0 PP
JENA	120.17	329.9	19	16	23				20	16 PP
KASPERSKE H.	120.19	327.3	18	56	3				20	11 PP
ABERDEEN	121.26	341.7							28	44
TRIESTE	122.04	323.9							20	41 PP
BENSBERG	122.29	332.0	18	59	2				20	36
DE BILT	122.40	334.0							20	36 PP
STUTTGART	122.68	329.0	19	1	3				30	31 PS
DURHAM	123.04	339.7	19	2	3	25	37	-23		
STRASBOURG	123.57	329.6							20	45
FLORENCE X.	124.56	323.2							20	42
MESSINA	124.60	315.4	18	59	-3	25	58	-7	20	50 PP
ROME	124.83	320.7	18	46	-16				21	2 PP
PAVIA	124.95	325.6				25	23	-43	21	18 PP
BESANCON	125.35	329.3							21	0
CHIAVARI	125.38	324.7							26	51 SKKS
PARIS	125.96	332.7							21	1
PALISADES	126.54	39.3							21	13 PP
GARCHY	126.78	331.0	19	10	4				20	17
CLERMONT-FD.	127.81	329.6							21	17 PP
HUANCAYO	134.06	110.0	20	24	64					
ALICANTE	134.86	324.9	19	24	3	26	40	9	20	53 PP
TOLEDO	135.70	329.3	19	31	8	26	24	-8	22	7 PP
AREQUIPA	136.10	117.6	19	30	6					
CHINCHINA	136.14	86.1	19	17	-7				25	2 PPP
SERPA PILAR	136.87	334.3	19	3A	-22	26	6	-28	21	1 PP
ALMERIA	137.04	324.9	19	29	4				22	23 PP
GRANADA	137.44	326.2	19	46K	20	26	31	-4	22	33 PP
COIMBRA	137.55	333.4							22	15 PP
BOGOTA	137.69	86.6	19	29	3				25	17 PPP
MALAGA	138.21	326.4	19	30	3				22	18 PP
LA PAZ	139.03	119.6	19	26	-3					
LISBON	139.08	332.8							23	24 PP
SAN JUAN	143.05	63.3	19	38	2					
PONTA DELGDA	145.16	351.7	19	58	18					
ST. KITTS	146.44	63.0	19	48	6					
ST. CLAUDE	147.82	64.6	20	6	22				23	5 PP
FORT FRANCE	148.75	66.6	19	55	9				26	13 PPP
TRINIDAD	149.60	74.3	19	57	10					

OCTOBER 10 21.H 52.M 32.S EPICENTRE -15.37-173.12 DEPTH= 0.KM

A=-0.95776 B=-0.11556 C=-0.26333 D=-0.1198 E= 0.9928
G= 0.2614 H= 0.0315 K=-0.9647 HT= 5.7

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
AFIAMALU	1.94	42.0	0	33K	-2	0	52	-8				
NOUMEA	20.52	247.3	4	43K	1	8	49	21				
KOUMAC	22.10	253.2	5	5K	7	9	23	25				
KARAPIRO	24.61	201.9	5	25	2							
TUAI	24.87	198.3	5	23	-2							
WELLINGTON	27.87	199.8	5	42	-11							
GEBBIES PASS	30.74	200.4	6	24	5							
BRISBANE	33.82	243.6	6	43	-3	12	17	7				
RIVERVIEW	37.08	233.7	7	14K	0							
CHARTERS TS.	38.91	257.0	7	26	-3							
PORT MORESBY	39.21	273.9	7	37	6							
CANBERRA	39.26	232.5	7	30K	-2				7	38		
KIPAPA	39.45	22.5	7	34	1							
TOOLANGI	42.70	230.8	7	58K	-2				8	7	9	7
SAVANNAH	43.09	224.4	8	3	0							
TARRALEAH	43.83	224.0	8	7	-2							
ADELAIDE	47.26	236.4	8	34K	-3							
CAPE HALLETT	57.77	185.9	9	57	2							
DUMONT	59.72	199.7	10	8	-1							
SCOTT BASE	63.31	184.7	10	34	1							
MUNDARING	65.79	241.6	10	48	-1				10	56		
MATUSIRO	69.08	319.7	11	8	-2							
PRIEST	71.26	42.7	11	24K	1							
BERKELEY	71.28	40.4	11	24K	1							
LICK	71.35	41.2	11	17K	-7							
CALISTOGA	71.55	39.6	11	25K	0							
WOODY	72.20	43.9	11	28	-1				12	1		
MINERAL	73.21	38.7	11	34A	-1							
TUCSON	76.10	50.6	11	49	-2							
EUREKA	76.22	42.0	11	52	0							
TUCSON TELE.	76.22	50.6	11	53	1							
LONGMIRE	77.09	33.4	11	57	0							
VICTORIA	77.40	31.3	11	59K	1							
MIRNY	77.57	204.1	11	58	-1							
GLEN CANYON	77.84	46.1	12	3	2							
BLUE MTS.	78.43	36.9	12	4	0							
DUGWAY	78.66	42.7	11	49K	-16							
SALT LAKE C.	79.58	42.6	12	11	1							
PENTICTON	79.84	32.3	12	12K	0							
ALBUQUERQUE	80.57	49.9	12	17	1						12	38
FLAMING GRGE	81.28	43.4	12	20	1							
HUNGRY HORSE	82.28	35.3	12	23	-2							
COLLEGE	82.28	10.6	12	24	-1						12	58
BOZEMAN	82.58	38.7	12	27	1							
GOLDEN	83.44	46.0	12	32	1							
LARAMIE	84.00	44.4	12	36	3							
WICHITA MTS.	86.41	52.7	12	45	0	23	20	-1			14	51
MAWSON	87.91	198.5	12	54	1							
TULSA	88.97	52.4	12	58	0	23	52	7				
MOULD BAY	96.84	11.2	13	33	-1							
QUETTA	123.26	296.2	19	1	2							
UMEA	130.72	352.2	19	13	0							
NURMIJARVI	133.11	348.1	19	17	-1						22	45 PKS
KONGSBERG	135.74	358.0	19	25	2							
GOTEBORG	137.57	355.9	19	22	-4							
BROKEN HILL	143.49	216.8	19	36	0							
COLLMBERG	143.82	353.5	19	35	-2						23	12
JENA	144.32	354.9	19	37	-1						23	18 PP
BENSBERG	144.50	359.7	19	38A	0							
PRAGUE	144.85	351.5									20	11
PRUHONICE	144.92	351.4	19	40A	1						20	14
FELDBERG	145.21	358.2	19	48	9							
DOURBES	145.31	2.6	19	41	1							
KASPERSKE H.	145.88	352.1	19	42A	1						22	59 PP
HEIDELBERG	146.03	357.8	19	44	3							
FOLINIERE	146.14	8.8	19	43	2							
BRATISLAVA	146.22	347.7	19	43	2						20	18
HURBANOVO	146.26	346.2	19	45	4							
VIENNA-H.	146.29	348.5	19	44	3						23	17
BUDAPEST	146.43	345.0	19	42	0						20	27
PARIS	146.45	5.3	19	39	-3						20	5
STUTTGART	146.63	357.1	19	44	2						20	17
STRASBOURG	146.87	358.9	19	46	4						22	46
TUBINGEN	146.88	357.3	19	46	4							
EBINGEN	147.23	357.4	19	46	3							
RAVENSBURG	147.60	356.6	19	47	4							

GARCHY	148.02	4.9	19	49A	5	20	41
ISTANBUL UN.	148.03	327.5	19	59	15		
KSARA	148.03	310.3	19	47	3	23	21 PP
BESANCON	148.20	1.2	19	48	4		
LJUBLJANA	148.75	349.7	19	47A	2	20	12
TRIESTE	149.26	350.6	19	52	6		
BANDEIRA	149.26	192.2	19	53A	7		
SOFIA	149.32	335.9	19	51	5		
JERUSALEM	149.44	307.3	19	53	7		
ROSELEND	149.77	0.3	19	54	7	20	14
SERRA PILAR	151.03	24.6	19	48A	-1	20	4 PKP2
ISOLA	151.28	359.7				20	58
FLORENCE x.	151.44	353.4	19	42	-7		
BAGNERES	151.79	10.5	20	4	14		
LWIRO	152.13	232.9	20	0A	9		
TOLEDO	153.77	19.3	20	15	22		
MALAGA	156.48	23.2	20	28	32	24	16 PP

OCTOBER 13 10.H 23.M 38.S EPICENTRE 35.75 50.07 DEPTH= 35.KM

A= 0.52207 B= 0.62376 C= 0.58169 D= 0.7668 E=-0.6418
G= 0.3733 H= 0.4461 K=-0.8134 HT= -0.1

DEPTH OF FOCUS= 0.000R

SE= 1.82

	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	
TEHERAN	1.07	90.3	0	18K	-1								
LENKORAN	3.17	342.2	0	48	-1								
GORIS	4.78	322.7	1	12K	0								
SHEMAKHA	5.00	347.3	1	16	1								
KIZYL-ARVAT	6.01	53.2	1	27K	-2						4	15	
EREVAN	6.24	316.8	1	34A	2						3	15	
SHIRAZ	6.43	160.6	1	33	-2	3	7	19			3	59	SG
ASHKABAD	6.99	69.3	1	43	0	2	58	-4					
TIFLIS	7.24	326.9	1	46	-1						3	51	
MAKHACH-KALA	7.48	345.3	1	49	-1								
BAKURIANA	7.86	321.4	1	57	2						4	6	
GROZNY	8.26	337.5	2	3	2						3	56	
PIATIGORSK	9.86	329.1	2	20	-3						4	39	
SOTCHI	11.16	317.6	2	44A	3	4	45	0			3	39	
KSARA	11.83	264.7	2	50	0	5	3	2			5	24	SS
DUZHANBE	15.17	73.8	3	34A	0								
QUETTA	15.21	106.6	3	36A	2						6	42	
SIMFEROPOL	15.22	312.0	3	35	1	6	27	5					
TASHKENT	16.02	63.9	3	43	-2						6	58	SS
KHOROG	17.31	77.9	4	0	-1						7	28	SS
ISTANBUL UN.	17.34	294.1	4	2A	1	7	22	11					
ANDIJAN	18.20	67.4	4	11K	-1						7	46	SS
KISHINEV	19.45	311.9	4	24K	-3						8	5	
BUCHAREST	20.23	302.6	4	37A	2	8	26	11			5	40	PP
IASI	20.30	311.2	4	35	-1	8	22	6					
BACAU	20.45	309.0	4	40	3	8	22	3					
LAHORE	20.61	94.8	4	36	-3						8	29	
ATHENS	21.18	283.8	4	44A	-1	8	40	6					
CAMPULUNG	21.21	304.3	4	49	4	8	45	11					
MOSCOW	21.72	340.8	4	51K	1						5	46	PPP
SVERDLOVSK	22.26	15.4	4	56A	0								
SKOPJE	23.08	294.3	5	2	-2	9	11	3			13	6	
LWOW	23.57	314.7									9	28	
NEW DELHI	24.00	99.7	5	12K	-1	9	29	5			5	44	PP
DEHRA DUN	24.03	95.0	5	14K	1	9	43	18			5	55	PP
UZHGOROD	24.12	310.8	5	16	2								
BELGRADE	24.23	301.0	5	16	1						5	54	PPP
TITOGRAD	24.74	295.0	5	36	16	9	39	2			6	13	PPP
SARAJEVO	25.50	298.2									9	52	
SKALNATE PL.	25.58	310.9	5	29	1	10	7	16			5	58	PP
BUDAPEST	25.83	306.6	5	31	1	9	40	-15			5	58	PP
KRAKOW	26.08	312.6	5	34	1	10	7	8					
TARANTO	26.16	290.3	6	17	44	10	32	31					
BOMBAY	26.17	123.9	5	35	2	10	15	14			11	35	SS
SEMIPALATNSK	26.24	46.7	5	34K	0								
WARSAW	26.36	317.7	5	37	2	10	13	9			6	30	PP
HURBANOVO	26.47	307.1				9	51	-15			6	32	PP
POONA	27.13	123.0	5	43K	1	10	26	10			6	37	PP

RACIBORZ	27.14	311.8	5	43	1					6	26	PP
PULKOVO	27.24	338.1	5	43	0	10	22	4		6	28	PP
BRATISLAVA	27.26	307.3	5	43	0					9	16	PCP
ZAGREB	27.52	302.0	6	0	14	10	29	6				
MESSINA	27.60	285.4								11	54	
VIENNA-H.	27.75	307.2	5	48	0	10	36	10				
VIBORG	28.46	338.0	5	54	0							
LJUBLJANA	28.56	302.1	5	55	0	10	43	4		7	22	
TRIESTE	29.04	301.1				10	52	5		11	14	
HELSINKI	29.30	334.3	6	1	-1							
PRUHONICE	29.35	310.1	6	2	0	10	56	4				
PRAGUE	29.45	310.2								7	9	
NURMIJARVI	29.65	334.6	6	4	-1	11	1	4		6	57	PP
ROME	29.75	293.4	6	8A	2	11	6	8		7	16	PP
KASPERSKE H.	29.76	308.1	6	5	-1					7	6	
PADOVA	30.33	300.4								12	42	
COLLMBERG	30.66	312.1	6	14A	0					7	15	PP
FLORENCE X.	30.67	297.1	6	7	-7	11	5	-8		7	15	PP
KARLSKRONA	30.99	322.0	6	14	-3							
HYDERABAD	31.09	118.5	6	20	2	11	29	10		13	24	SS
HALLE	31.35	312.1	6	20	0					12	39	
JENA	31.43	310.9	6	19	-2	11	28	3		7	34	PPP
KAJAANI	31.45	341.3	6	21	0							
UPPSALA	31.93	329.2	6	24	-1	11	36	3		7	36	
CHUR	32.08	302.9	6	34	8	11	21	-14				
RAVENSBURG	32.12	304.6	6	26	-1							
PAVIA	32.22	299.7	6	32	5					10	52	
COPENHAGEN	32.40	319.8	6	30A	1	11	45	5				
STUTTGART	32.48	306.4	6	30	0	11	50	9		7	54	PPP
EBINGEN	32.60	305.3	6	30	-1							
CUGLIERI	32.80	290.4								14	52	
HEIDELBERG	32.93	307.4	6	33	-1							
BOKARO	33.03	101.2	6	37	2	11	53	3		8	4	PPP
APATITY	33.24	348.4	6	36K	0	11	50	-3		7	49	PP
GOTEBORG	33.44	323.1	6	37	-1							
STRASBOURG	33.44	305.8	6	36	-2					11	40	
UMEA	33.45	336.4	6	37	-1					7	47	
MUNSTER	34.07	311.8	6	44	0							
BENSBERG	34.17	310.0	6	42	-2					12	53	
SODANKYLA	34.39	344.2	6	46	0	12	16	5		7	51	PP
WITTEVEEN	34.82	313.1	6	50	0							
MADRAS	35.33	122.3	6	57	3	12	34	9		8	13	PP
KONGSBERG	35.37	325.3	6	53	-2	12	29	3		8	16	PP
DE BILT	35.58	311.6	6	40	-16					7	0	
DOURBES	35.67	308.1	6	57	0	12	28	-3				
CALCUTTA	35.73	101.1	7	5	7	12	42	11				
ESEN BULAK	35.94	58.3	7	1K	2	12	43	8				
SKALSTUGAN	36.12	332.3	7	1	0							
KIRUNA	36.25	341.5	7	2	0	12	42	3				
KEVO	36.31	346.7	7	2	-1	12	46	5		8	26	PP
GARCHY	36.51	303.2	7	4	0					7	29	
PARIS	36.95	305.7	7	6	-2							
SHILLONG	37.12	94.0	7	8K	-1	12	53	0		8	32	PP
TROMSOE	37.94	342.9	7	16	0							
CHITTAGONG	38.57	98.7	7	22	0	13	21	6		9	0	PP
KEW	38.90	309.9	7	25	1	13	22	2				
FOLINIERE	38.91	305.6	7	23	-1							
DURHAM	39.96	315.0	7	33	0	13	37	1		9	19	PP
ABERDEEN	40.57	318.6				13	55	10		12	36	
IRKUTSK	41.33	49.0	7	45	1					9	13	PP
ALMERIA	41.91	287.6	7	49K	0	14	9	4		9	18	PP
TOLEDO	42.41	292.4	7	51	-2	14	24	12		17	2	SS
GRANADA	42.70	288.4	8	17A	21					9	56	
LWIRO	42.72	212.3	7	57A	1	14	22	5				
LANCHOW	43.07	73.2	8	0K	1	14	30	8				
MALAGA	43.44	288.0	7	59A	-3	14	29	2				
CHENGTU	44.95	80.4	8	14K	0	14	54	5		18	10	SS
PORT BLAIR	45.33	111.1								15	5	
SERRA PILAR	45.52	295.3	8	16K	-2				8 28			
KUNMING	46.15	88.1	8	23K	0	15	11	5		18	21	SS
PAOTOW	46.60	65.2	8	28K	1	15	23	10				
SIAN	47.59	73.8	8	34K	-1	15	33	6				
SCORESBY SD.	50.78	335.6	9	1	2							
PEKING	51.27	64.1	9	4	1	16	26	8				
NORD	51.49	350.1	9	3	-2							
BROKEN HILL	53.95	206.2	9	22	-1							
YAKUTSK	54.42	34.8	9	26K	0							
TANANARIVE	54.42	182.9	9	28K	2					11	31	PP

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CANTON	55.68	84.7	9	35	-1	17	24	6			
NANKING	56.08	72.4	9	38K	0	17	23	0			
CHANGCHUN	56.54	57.0	9	40K	-2						
HONG KONG	56.73	85.1	9	30	-13	17	2	-30			
ALERT	57.61	351.7	9	49	0	17	52	9			
ZO-SE	58.34	72.5	9	54K	0	17	57	4			
BULAWAYO	59.19	203.6	9	59A	-1						
BANDEIRA	61.22	221.3	10	12	-2						
MANILA	66.26	88.7	10	46	-1						
Y.-SAKHLINSK	66.52	48.2	10	49A	0						
RESOLUTE	67.44	350.5	10	55	0						
MOULD BAY	68.09	357.3	10	58K	-1	20	0	6			
KIMBERLEY	68.44	203.8	10	57K	-4						
MATUSIRO	68.52	59.9	11	1	0						
SCHEFFERVLLE	74.83	327.7	11	38	-1						
COLLEGE	78.73	7.7	12	1	0						
HALIFAX	79.98	318.4	12	8K	0						
SHAWINIGAN	83.31	324.3	12	26A	1						
PALISADES	87.93	321.1				23	34	7			
MORGANTOWN	91.97	323.7	13	7A	0						
WICHITA MTS.	104.03	333.8	14	5	4					18	13 PP
SOUTH POLE	125.57	180.0	18	57	-1						
BYRD STATION	135.42	182.6	19	19	2					22	44 PP

OCTOBER 13 18.H 47.M 49.S EPICENTRE -12.67 166.48 DEPTH= 68.KM

A=-0.94894 B= 0.22813 C=-0.21789 D= 0.2337 E= 0.9723
G= 0.2119 H=-0.0509 K=-0.9760 HT= 6.2

DEPTH OF FOCUS= 0.005R

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 VILA	5.34	160.8	1	21	2	1	36	-44					
HONIARA	7.17	296.0	1	42	-2	2	59	-6					
KOUMAC	8.13	194.8	1	54K	-3	3	38	9					
NOUMEA	9.58	180.2	2	17	0	4	17	13					
SUVA	12.74	116.8				5	29	9					
RABAUL	16.46	299.5	3	49	1						7	2	
PORT MORESBY	19.25	277.8	4	23	2	8	1	11			4	53	
CHARTERS TS.	20.74	246.5	4	37	0	8	29	9					
AFIAMALU	21.19	95.8	4	44	2								
RIVERVIEW	25.28	211.0	5	24A	3						10	30	
CANBERRA	27.54	212.1	5	43	1	10	22	5	5	53	11	58	SS
CHATEAU	27.62	164.7	5	43	0								
TUAI	27.70	161.9	5	47	3								
WELLINGTON	29.41	167.2				10	39	-8					
TOOLANGI	31.09	213.4	6	13	-1						6	28	*SP
GEBBIES PASS	31.38	171.4	6	17	1								
ROXBURGH	32.79	176.3									12	39	
SAVANNAH	33.48	206.6	6	35	0								
ADELAIDE	33.53	223.8	6	34	-1	11	55	4					
MOORLANDS	34.07	205.9	6	42	2						6	58	
TARRALEAH	34.27	206.8	6	37	-4						6	55	
MUNDARING	49.84	238.8	8	47	-1	15	57	6					
PERTH	50.15	238.9	8	56	6	16	3	7			19	43	SS
MANILA	52.53	299.7	9	6	-2								
BAGUIO CITY	53.80	301.3	9	18	0	16	47	1					
MATUSIRO	55.73	332.5	9	29A	-3	17	16	5					
DUMONT	56.78	192.2	9	38	-1								
LEMBANG	58.21	269.8	9	49A	0						17	53	
TANGERANG	59.29	270.3	9	57	0								
CAPE HALLETT	59.65	178.7	9	57	-2								
ZO-SF	61.52	316.1	10	11	-1	18	30	3					
HONG KONG	61.94	303.9	10	16	1	18	37	5			22	59	SS
NHATRANG	61.96	291.3	10	14	-1								
CANTON	62.99	304.2	10	22A	0	18	52	7			19	7	*SS
NANKING	63.73	315.5	10	27A	0								
WILKES	65.18	201.6	10	35	-1	19	14	2					
SCOTT BASE	65.18	179.9	10	35	-1								
CHANGCHUN	67.58	329.0	10	51A	0								
PEKING	70.19	321.1	11	8A	1	20	21	9					
MIRNY	71.90	203.8	11	17	0								
KUNMING	72.58	301.6	11	23A	1	20	48	8			21	7	*SS
CHENGTU	73.85	307.3	11	29A	0	20	58	4			21	19	*SS

PADTOW	74.36	318.8	11	36A	4						
BYRD STATION	74.84	170.0	11	35	0						
LANCHOW	76.37	312.2	11	44A	1	21	28	6		21	50 *SS
SOUTH POLE	77.41	180.0	11	47	-2						
CHITTAGONG	80.99	295.3	12	11	2				12 23		
SHILLONG	81.93	298.4	12	13A	0						
MAWSON	83.50	202.0	12	20A	-1				12 33		
COLLEGE	84.60	17.9	12	26	-1						
WOODY	85.20	52.0	12	30	0						
CHATRA	86.34	298.4	12	36K	0						
PENTICTON	89.29	39.0	12	45	-5						
BLUE MTS.	89.29	43.7	12	51	1						
DUGWAY	91.11	49.1	12	57K	-1						
ALBUQUERQUE	94.77	55.4	13	15	0						
POONA	96.39	287.5	13	24K	2						
MOULD BAY	98.50	13.5	13	32	0						
WICHITA MTS.	101.10	56.8				24	22	7		27	4 PS
TULSA	103.52	55.8								27	39 PS
QUETTA	104.41	298.1	13	59	1						
KIMBERLEY	124.63	221.4	18	53	1						
NURMIJARVI	124.68	338.2	18	51	-1						
KSARA	130.50	303.8								21	20 PP
ISTANBUL UN.	133.37	315.3	19	8	0						
COLLMBERG	135.88	336.3	19	16	3					22	50 PP
PRUHONICE	136.25	333.9								40	35
ATHENS	138.38	313.9								22	9
STUTTGART	139.35	336.8	19	23	4						
GARCHY	142.79	341.2	19	23	-3						
ROME	143.12	327.0								22	41 PKS
BAGNERES	147.48	341.2	18	41	-53						
MALAGA	154.69	342.7	19	41	-3					23	43 PP

OCTOBER 14 0.H 29.M 57.S EPICENTRE -33.32-179.11 DEPTH= 42.KM

A=-0.83718 B=-0.01294 C=-0.54678 D=-0.0155 E= 0.9999
G= 0.5467 H= 0.0084 K=-0.8373 HT= 0.7

DEPTH OF FOCUS= 0.001R

SE= 2.35

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
RAOUL ISLAND	4.19	14.4	1	1	-2	1	49	-3					
ONERAHI	5.90	243.8	1	31	4								
TUAI	6.25	207.9	1	33	1	2	44	1					
KARAPIRO	6.33	221.9	1	36	3								
CHATEAU	7.28	214.8	1	46	-1						3	42	
TARATA	7.86	220.1	1	56	1						3	57	
WELLINGTON	9.31	209.7	2	12	-3	3	51	-8					
COBB RIVER	10.11	217.7				4	12	-7			2	40	
KAIMATA	11.83	216.4				4	50	-11					
GEBBIES PASS	12.20	209.5	2	48	-6	4	59	-11					
NOUMEA	16.82	307.1	3	56	2								
KOUMAC	19.48	306.6	4	29	3								
RIVERVIEW	24.74	260.5	5	4	-15						10	27	SS
BRISBANE	24.92	276.2	5	21	0	9	45	6					
CANBERRA	26.35	256.7	5	36K	2								
TOOLANGI	29.04	251.5									9	3	PCP
CHARTERS TS.	33.46	284.4	6	36	-1						7	25	
ADELAIDE	34.75	255.3	6	50A	1						12	51	
RABAUL	39.45	311.1	7	26	-2						18	43	
DUMONT	41.09	203.4	7	42	0								
SCOTT BASE	45.06	184.2	8	17	3								
DARWIN	50.08	282.4	8	52	-1								
WILKES	52.13	208.8	9	6	-3						16	35	
BYRD STATION	52.24	169.0	9	12	3				9	24			
MUNDARING	53.67	252.5	9	17	-3								
SOUTH POLE	56.85	180.0	9	44	1								
MIRNY	59.11	207.8	9	57	-2								
MAWSON	69.25	201.2	11	4A	-1				11	15			
MATUSIRO	80.12	326.3	12	4	-3								
PASADENA	88.18	46.5	12	49	1								
TUCSON TELE.	91.73	51.9	13	7	2								
GLEN CANYON	94.08	47.9	13	17	2								
BLUE MTS.	95.91	39.1	13	23	-1								
ALBUQUERQUE	96.13	52.1	13	25	0								

PENTICTON	97.78	34.7	13	35	3	
COLLEGE	100.89	13.1	13	46	0	
WICHITA MTS.	101.33	56.0	13	47	-1	
MOULD BAY	115.46	13.3	18	36	-2	
RESOLUTE	120.31	17.8	18	46A	-1	
BULAWAYO	120.61	210.5	18	49K	1	
QUETTA	124.59	286.0	18	55	0	
BROKEN HILL	125.69	213.5	18	59	2	
ALERT	126.27	8.4	18	58	-1	
BANDEIRA	130.60	195.9	19	8K	1	22 26 SKP
KEVO	140.73	346.0	19	26	0	
TROMSOE	142.27	349.8	19	24	-4	
KIRUNA	143.64	347.6	19	25	-6	
KAJAANI	145.04	339.8	19	31	-2	
REYKJAVIK	146.10	17.7	19	39A	4	
UMEA	147.19	344.3	19	36	-1	
SIDA	147.32	15.5	19	42	5	
NURMIJARVI	148.68	337.4	19	41	2	
HELSINKI	148.84	336.8	19	42	3	
SKALSTUGAN	148.89	350.2	19	43	3	
KSARA	150.92	280.8	19	48	5	
JERUSALEM	151.09	276.4	19	49	6	
UPPSALA	151.25	342.4	19	47	4	20 13
KONGSBERG	153.03	350.2	19	52	6	
GOTEBORG	154.48	346.1	19	55	7	
COLLMBERG	159.97	337.4	20	33K	38	21 20
HALLE	160.12	339.3	19	54	-1	
PRUHONICE	160.53	332.8	19	52	-3	20 25
JENA	160.74	339.1	19	57	2	20 36
KASPERSKE H.	161.59	332.8	19	56	0	20 41
BENSBERG	161.78	347.2	19	55	-1	
STUTTGART	163.34	340.3	19	58	0	21 8
GARCHY	165.96	353.9				21 1
MALAGA	174.50	50.5	20	7	2	25 31 PP
GRANADA	174.68	42.4				25 33 PP
ALMERIA	175.53	37.1	20	6A	1	25 58 PP

OCTOBER 14 15.H 9.M 5.S EPICENTRE 31.72 131.33 DEPTH= 72.KM
A=-0.56285 B= 0.63991 C= 0.52317 D= 0.7509 E= 0.6605
G=-0.3455 H= 0.3928 K=-0.8522 HT= 1.3

DEPTH OF FOCUS= 0.006R

SE= 4.95

	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
MIYAZAKI	0.21	19.9	0	3K	-9	0	13	-8				
KAGOSIMA	0.69	257.8	0	17A	1	0	32	3				
NOBOEKA	0.91	19.2	0	12	-6	0	23	-9				
ASOSAN	1.20	349.3	0	17	-5	0	37	-1				
KUMAMOTO	1.22	334.1	0	22A	0	0	42	3				
UNZENDAKE	1.36	318.0	0	25	1	0	50	8				
YAKUSIMA	1.45	209.7	0	24A	-1	0	45	1				
OOITA	1.53	9.0	0	23	-3	0	44	-2				
NAGASAKI	1.59	309.7	0	28A	1	0	57	10				
ASHIZURI	1.73	54.3	0	14	-15	0	37	-13				
SAGA	1.76	330.5	0	31A	2	1	5	14				
UWAZIMA	1.82	34.0	0	18	-12	0	37	-16				
HUKUOKA	2.02	336.8	0	32A	-1	1	3	6				
SIMONOSEKI	2.25	351.4	0	32A	-4	1	2	-1				
HUKUE	2.34	295.4	0	37	0	1	24	19				
MATUYAMA	2.44	29.5	0	38	-1	1	11	3				
KOTI	2.60	44.8	0	40	-1	1	10	-2				
HIROSIMA	2.80	18.9	0	42	-2	1	14	-3				
MUROTO	2.85	56.8	0	33	-11	1	9	-9				
TSURUGISAN	3.10	46.0	1	1	13	1	35	11				
TAKAMATU	3.45	40.6	0	44	-9	1	38	5				
TOKUSIMA	3.60	48.5	1	4	9	1	54	18				
OKAYAMA	3.66	35.6	0	48	-8	1	36	-2				
HIMEJI	3.78	42.0	1	3	6	1	56	15				
SUMOTO	3.98	48.0	1	10	10	1	54	8				
MATSUE	3.99	20.8	1	1	1	1	45	-1				
YONAGO	4.07	23.9	1	4	3	1	52	4				
WAKAYAMA	4.08	51.1	1	2	1	1	53	4				
SIOMISAKI	4.12	64.1	1	4	2						2	30

KOBE	4.37	46.5								1	21
TOTTORI	4.47	31.3	1	6	-1	2	15	17			
OSAKA	4.57	49.1	1	24	16	2	19	18			
OWASE	4.72	58.9	1	8	-2	2	14	10			
ABUYAMA	4.74	47.3	1	2K	-9	2	22	17			
SAIGO	4.77	19.8	1	22	11	2	15	9			
TOYOOKA	4.79	36.5	1	18	7	2	16	10		1	54
NARA	4.79	50.7	1	9	-2						
KYOTO	4.94	47.0	1	8	-5	2	25	15			
TU	5.27	54.2	1	28	10						
KAMEYAMA	5.31	52.6	1	16	-3	2	17	-2			
HIKONE	5.42	47.9	1	15	-5	2	29	7			
TSURUGA	5.56	43.9	1	15	-7	2	21	-4			
NAGOYA	5.83	52.3	1	18	-8	2	20	-12			
GIHU	5.84	49.6	1	21	-5						
HAMAMATU	6.13	59.1	1	43	13	3	15	36			
OMAESAKI	6.45	61.7								2	1
KANAZAWA	6.52	41.1				3	10	21			
IIDA	6.61	53.3	1	30	-7	3	27	36			
SHIZUOKA	6.74	59.4				3	36	42		3	16
TOYAMA	6.95	42.8	1	53	12						
MATUMOTO	7.13	48.8	1	51	7						
KOHU	7.20	54.8	1	54	9					4	0
MISIMA	7.21	59.9								4	15
HUNATU	7.26	56.7				3	55	48		2	18
MATUSIRO	7.46	48.0	1	38K	-10	3	10	-2			
NAGANO	7.53	47.2				3	56	42		2	8
OIWAKE	7.55	50.5	1	47	-2						
YOKOHAMA	7.86	59.7								4	25
MAEBASI	7.94	51.9	1	54	-1						
KUMAGAYA	8.01	54.4	1	51	-5						
TOKYO C.M.O.	8.05	58.3								4	9
TUKUBASAN	8.55	56.0	1	55K	-8					4	35
UTUNOMIYA	8.56	53.4	2	8	5						
ZO-SE	8.70	268.6	2	7A	2	3	58	15			
MITO	8.89	56.0	2	0	-8	4	12	25			
NANKING	10.68	275.1	2	35A	3						
CHANGCHUN	12.99	340.3	3	2	-1					3	13 *SP
PEKING	14.82	308.2	3	28A	1	6	23	14		3	38 *SP
PAOTOW	19.31	303.2	4	23A	1						
MANILA	19.39	211.3	4	22	0					4	49
LANCHOW	23.21	288.2	5	2A	1	9	16	12		5	11 *SP
CHENGTU	23.38	274.6	5	3A	0	9	18	11		5	13 *SP
ULAN-BATOR	24.63	318.1	5	12A	-3						
KUNMING	25.95	262.6	5	30	3	10	5	15			
NHATRANG	28.13	231.3	5	47	0						
ESEN BULAK	30.65	308.7	6	10	0						
SHILLONG	35.03	270.1	6	44K	-4						
CHITTAGONG	36.24	265.0	6	58	0						
RABAUL	40.86	147.2	7	34	-2						
TANGERANG	44.44	216.4	8	7A	2						
NEW DELHI	46.52	280.8	8	22A	0						
LAHORE	48.04	285.6	8	33	-1						
CHARTERS TS.	53.46	162.5	9	13	-2						
QUETTA	54.50	286.4	9	23A	1				9	33	
COLLEGE	57.93	29.8	9	45	-2						
MOULD BAY	63.87	14.6	10	15A	-12					10	39
TEHERAN	64.83	297.7	10	33	0						
ALERT	65.82	2.0	10	37	-3						
SHIRAZ	66.33	291.2	10	43A	0					11	30
ADELAIDE	66.70	173.4	10	45	0						
KAJAANI	67.56	332.5	10	50	-1						
RESOLUTE	69.66	11.8	11	1A	-3						
TOOLANGI	70.19	168.1	11	7	0						
NURMIJARVI	70.51	329.8	11	7A	-2						
THULE	71.42	4.8	11	9	-5						
VICTORIA	76.01	41.4	11	40K	-1						
LWOW	76.44	320.5	11	55	12						
GOTEBORG	77.46	331.4	11	58	9						
PENTICTON	77.66	39.3	11	48A	-2						
COLLMBERG	81.18	326.0	12	8A	-1					14	54
HUNGRY HORSE	81.21	37.8	12	8	-1						
PRUHONICE	81.28	324.3	12	10	0					12	46
PRAGUE	81.28	324.5	12	10	0						
HALLE	81.55	326.6	12	10	-1	22	12	-4			
BLUE MTS.	81.55	42.0	12	10	-1					22	26
JENA	82.10	326.3	12	12	-2	22	35	14		15	22 PP
KASPERSKE H.	82.31	324.1	12	14	-1					13	6

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MUNSTER	83.20	328.8	12 27	7							
BUTTE	83.45	39.0	12 20	-1							
LJUBLJANA	83.82	321.3	12 22A	-1							
BENSBERG	84.11	328.3	12 35A	11							
HEIDELBERG	84.49	326.4	12 25	-1							
BOZEMAN	84.49	38.6	12 25	-1							
STUTTGART	84.66	325.7	12 27	0							
STRASBOURG	85.51	326.3	12 42	11							
DOURBES	85.87	328.8	12 31	-2							
WOODY	86.05	50.1	12 32	-2			12 41				
DUGWAY	87.04	43.6	12 44A	5							
CHIAVARI	87.71	322.5								16 55	PP
FLAMING GRGE	88.53	41.4	12 46	0							
GARCHY	88.64	327.7	12 35	-11						12 57	
LARAMIE	90.37	39.1	12 55	1							
ALBUQUERQUE	94.29	44.2	13 13	1							
WICHITA MTS.	98.94	39.6	13 30	-3							
BYRD STATION	124.33	168.5	18 52	1							
AREQUIPA	154.29	59.1	19 51	8							

OCTOBER 15 23.H 36.M 29.S EPICENTRE -43.51 170.03 DEPTH= 0.KM

A=-0.71652 B= 0.12600 C=-0.68609 D= 0.1732 E= 0.9849
G= 0.6757 H=-0.1188 K=-0.7275 HT= -3.0

SE= 1.64

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KAIMATA	1.43	46.3	0 29	1				
GEBBIES PASS	1.91	96.5	0 36	1	1 24	24		0 41 PG
ROXBURGH	2.03	194.2	0 35	-1	1 0	-3		0 38 PG
COBB RIVER	3.15	40.4	0 53	1				
WELLINGTON	4.16	59.2	1 7	0	1 58	1		
TARATA	5.42	38.6	1 25A	1	2 34	6		
CHATEAU	5.98	45.8	1 32	0				
WAIRAKEI	6.65	44.8	1 42	0				
KARAPIRO	6.97	38.7	1 45A	-1				
TUAI	7.14	51.2	1 48	-1	3 16	4		
AUCKLAND	7.57	30.4	1 52	-3	3 28	6		
ONERAHI	8.43	24.8	2 5	-2	3 48	4		
MOORLANDS	16.74	265.8	3 58	0	6 44	-20		
RIVERVIEW	17.59	297.0	4 13K	5				7 44 SS
CANBERRA	18.16	289.7	4 14A	-2	7 30	-6	4 18	4 28 PP
TOOLANGI	19.54	279.3	4 33A	1	8 3	-4	4 41	8 34 SS
BRISBANE	21.29	313.4	4 49	-2	8 59	16		
NOUMEA	21.36	350.9	4 52A	1				
KOUMAC	23.39	346.3	5 15A	3				
ADELAIDE	25.59	278.8	5 35K	2	10 20	21		
PORT VILA	25.74	356.3	5 35K	1				
DUMONT	28.33	204.8	5 57	-1				
CHARTERS TS.	30.68	312.1	6 19A	0				14 1
SCOTT BASE	34.47	181.2	6 53	1				
HONIARA	35.07	342.5	6 57	0				
WILKES	39.04	213.5	7 29	-1	13 25	-5		
PORT MORESBY	39.40	322.8	7 34A	1	13 39	3	7 39	9 42 PPP
RABAUL	42.22	332.9	7 53	-4				
MUNDARING	43.40	266.7						9 56 PCP
BYRD STATION	44.11	166.3	8 15	3				
MIRNY	46.04	212.8	8 26	-2	15 11	-2		
SOUTH POLE	46.68	180.0	8 33	0				
MAWSON	56.53	206.0	9 45A	-2			9 56	10 42 PCP
ARGENTINE I.	63.67	157.6	10 36	0				
LEMBANG	65.44	284.6	10 47A	0				
TANGERANG	66.60	284.4	10 53	-2				
MANILA	73.16	310.3	11 34	-1				
MATUSIRO	84.77	334.8	12 37A	-1				16 1 PP
SHILLONG	99.19	296.4	13 44K	-1				
EUREKA	106.22	50.8	18 32	777				
ALBUQUERQUE	108.89	59.6	18 35	777				
BLUE MTS.	109.15	46.0	18 33	777				
WICHITA MTS.	113.79	64.2	18 41	0				19 30 PP
QUETTA	119.06	285.2	18 52A	1				
DUZHANBE	122.50	294.3	18 59	1				
LWIRO	122.68	228.0	19 0A	2				
MOULD BAY	127.47	16.5	19 6K	-2				

SHIRAZ	129.06	276.1	19	10A	-1			22 43 PKS
ASHKABAD	129.24	288.5	19	3	-8			
VANNOVSKAYA	129.41	288.3	19	9	-2			
LONDON ONT.	129.67	64.4	19	11	-1			
RESOLUTE	132.73	21.1	19	16	-2			
TEHERAN	133.05	282.3	19	18	0			
SVERDLOVSK	134.91	312.9	19	20	-2			
GORIS	138.33	284.5	19	28	0			
TIFLIS	140.27	286.9	19	25	-6			
JERUSALEM	142.77	267.1	19	14	-22			
KSARA	143.32	270.5	19	33	-4		20 32	22 46 PP
APATITY	146.77	331.2	19	43A	0			
KEVO	147.72	336.9	19	45	1			
SIMFEROPOL	148.66	288.2	19	50	4			
SODANKYLA	149.17	333.2	19	50A	4			
TROMSOE	149.96	340.2	19	52	4			
KAJAANI	150.38	327.1	19	52	4			
PULKOVO	150.76	317.9	19	54	5			
KIRUNA	150.80	336.8	19	53A	4			
VIBORG	151.20	320.3	19	54A	4			
ISTANBUL UN.	151.24	278.6	19	49	-1			
HELSINKI	153.17	320.6	20	0K	8			
NURMIJARVI	153.18	321.5	19	59K	7			
UMEA	153.35	330.2	19	52A	-1			
ATHENS	153.99	269.3	19	51	-3			
SKALSTUGAN	156.18	335.2	20	0	4			20 24
UPPSALA	156.59	323.9	20	4	7			20 25
UZHGOROD	157.14	294.2	19	54	-4			
KRAKOW	158.60	298.3	19	59	-1			
BRATISLAVA	160.62	293.3	20	44	42			
VIENNA-H.	161.10	293.7	20	47	45			
PRUHONICE	162.04	299.7	20	1	-2			24 38 PP
PRAGUE	162.10	300.0						20 51
LJUBLJANA	162.44	286.8	20	3	-1			20 52 PKP2
COLLMBERG	162.66	304.7	20	2K	-2			24 53
KASPERSKE H.	162.82	297.3	20	3	-1			20 53
HALLE	163.22	306.1	20	3	-1			20 56 PKP2
JENA	163.62	304.5	20	3	-2			24 37 PP
RAVENSBURG	165.65	294.1	20	6	-1			21 6
STUTTGART	165.67	298.2	20	7	0			21 5 PKP2
BENSBERG	166.20	308.6	21	9K	62			
STRASBOURG	166.68	298.5	21	11	63			
DOURBES	168.05	308.5	21	16	68			25 8
KEW	169.71	324.0	20	9	0			21 24 PKP2
PARIS	169.87	305.8	21	26	77			25 16 PP
GARCHY	170.08	296.8	20	5A	-5			21 25 PKP2
BAGNERES	172.60	270.0	20	11	0			

OCTOBER 16 18.H 2.M 50.S EPICENTRE 52.07-176.01 DEPTH= 162.KM

A=-0.61574 B=-0.04299 C= 0.78677 D=-0.0697 E= 0.9976
G=-0.7849 H=-0.0548 K=-0.6172 HT= -6.2

DEPTH OF FOCUS= 0.020R

SE= 3.11

	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	15.43	283.5	3	30	0							
COLLEGE	19.31	37.6	4	11	-3	7	43	4				
Y.-SAKHLINSK	26.98	275.8	5	28A	0	10	1	9				
YAKUTSK	30.26	310.6	5	57A	-1							
MOULD BAY	32.32	22.0	6	15A	-1	11	40	24			9	0 PCP
VICTORIA	33.17	74.8	6	6	-17							
LONGMIRE	34.96	76.7	6	35	-3	11	52	-5				
PENTICTON	35.06	71.6	6	36	-3							
VLADIVOSTOK	35.56	276.6	6	41A	-2	12	14	8				
MATUSIRO	35.60	262.5	6	41A	-3	12	17	10				
HAWAII V.OB.	36.40	145.7	7	6	16							
ABUYAMA	38.32	262.8	7	5A	-1							
RESOLUTE	38.39	25.0	7	7	0						9	17 PCP
BLUE MTS.	38.64	76.8	7	6	-3	13	8	15			17	14 SCS
CALISTOGA	38.99	88.5	7	17K	5							
CHANGCHUN	39.18	281.9	7	12A	-1	13	9	8			8	45 PP
BERKELEY	39.66	89.2									17	46
RENO	40.15	85.3	7	34A	13							

LICK	40.38	89.3	7 17	-6				
BUTTE	40.83	72.4	7 29	2				
ALERT	41.64	10.5	7 34	0			9 27	
PRIEST	41.75	90.0	7 39K	5				
BOZEMAN	41.91	72.0	7 33	-3			7 53	
EUREKA	42.54	82.6	7 40	-1				
DUGWAY	44.03	79.6	7 49A	-4				
PASADENA	44.59	90.2	8 6	9				
BOULDER CITY	45.45	85.7	8 16	12				
PRICE	45.60	78.9	8 2	-3				
FLAMING GRGE	45.65	76.6	8 3	-3				
IRKUTSK	46.47	303.5	8 11	-1				
GLEN CANYON	46.80	82.3	8 13	-2				
PEKING	46.93	283.2	8 16A	0	15 3 10		10 12 PP	
RAPID CITY	47.40	69.3	8 17	-2				
ULAN-BATOR	47.55	297.3	8 21	0				
LARAMIE	47.69	73.7	8 19	-3				
GOLDEN	48.82	75.3	8 28	-2				
ZO-SE	49.74	270.7	8 38A	1	15 44 11		10 33 PP	
PAOTOW	50.23	287.8	8 42A	1	15 48 9			
TUCSON	50.40	86.4	8 41	-1				
TUCSON TELE.	50.41	86.3	8 41	-2				
NANKING	50.56	273.4	8 42A	-2	15 51 7			
ALBUQUERQUE	51.25	80.7	8 45	-4				
ESEN BULAK	54.22	301.5	9 41A	30				
MANHATTEN	54.32	70.1	9 7	-5				
SIAN	55.08	282.5	9 17K	0				
DUBUQUE	55.47	63.5	9 17	-3	16 52 2			
WICHITA MTS.	56.16	75.4	9 21	-4	17 8 9		11 4 PP	
LANCHOW	56.88	287.6	9 30	0	17 18 9			
TULSA	57.01	72.5	9 27	-4	17 20 10			
KEVO	57.32	350.7	9 32	-1			17 58 PS	
FAYETTEVILLE	57.82	71.3	9 32	-4				
ROLLA	57.90	68.3	9 32	-5	17 37 15			
FLORISSANT	58.15	66.5	9 35	-4	17 31 6			
ST. LOUIS 1	58.34	66.6	9 38	-2	17 36 8			
SCHEFFERVLLE	58.40	39.9	9 40K	-1				
SEMIPALATNSK	59.29	313.7	9 47	0				
SODANKYLA	59.67	350.1	9 49	0				
KIRUNA	59.79	352.9	9 51	1			18 26 PS	
LITTLE ROCK	59.81	71.2	9 46	-4				
LONDON ONT.	60.20	57.3	9 51A	-2				
CHENGTU	60.55	283.0	9 55A	0	18 6 10		12 13 PP	
BAGUIO CITY	60.91	259.1	9 56	-2	18 20 19			
SHAWINIGAN	61.85	49.6	10 1	-3				
SVERDLOVSK	61.92	328.6	10 4	-1				
MANILA	61.97	257.5	10 1	-4				
BREBEUF	62.21	50.9	10 4K	-2	18 25 8		12 27 PP	
RABAUL	62.24	216.5	10 0	-7				
MORGANTOWN	63.29	59.3	10 12	-1				
PENNSYLVANIA	63.53	57.1	10 13A	-2				
UMEA	63.75	352.0	10 15	-2			23 17 SS	
KUNMING	65.34	279.6	10 27A	0	19 11 15			
PALISADES	65.39	54.5	10 27	0	19 5 8	10 38	20 19 SCS	
WESTON	65.64	51.9	10 28	-1				
AFIAMALU	65.81	175.5			18 54 -8			
VIBORG	65.81	346.9	10 30K	0				
ALMATA-2	65.90	309.9	10 31	1				
CHAPEL HILL	66.49	61.5	10 33	-1				
PULKOVO	66.50	345.8	10 30	-4				
NURMIJARVI	66.55	349.0	10 35	1			14 46 PPP	
HELSINKI	66.84	348.8	10 38	2				
UPPSALA	67.89	352.6	10 44K	1	19 36 9			
PORT MORESBY	68.91	219.4	10 46K	-3	19 46 7		11 0 PCP	
MOSCOW	69.02	340.4	10 50	0				
GOTEBORG	70.39	355.5	11 0	2				
TASHKENT	71.15	313.7	11 4	1				
SHILLONG	71.51	287.9	11 3A	-2				
COPENHAGEN	72.39	355.0	11 10A	0				
KHOROG	73.20	309.8	11 16	1				
CHATRA	73.28	292.1	11 16A	1				
CHITTAGONG	73.98	285.8	11 20A	1	20 51 14	11 28	14 3 PP	
WARSAK DAM	75.99	307.7	11 37	6				
DE BILT	76.20	359.2	11 32	0				
BOKARO	76.38	291.2	11 34	1	21 39 36			
LAHORE	76.57	304.3	11 33A	-1				
COLLMBERG	76.72	354.2	11 37	2				
LWOW	77.07	346.8	11 37	0				

JENA	77.17	355.1	11	36	-1	21	28	17	14	33 PP
BENSBERG	77.31	357.9	11	42	4				12	35
NEW DELHI	77.43	300.4	11	37A	-2	21	52	38	21	46 SKS
PRUHONICE	77.93	353.1	11	45	4				27	4 SS
DOURBES	78.20	359.6	11	39	-4					
UZHGOROD	78.47	347.7	11	47	3					
ASHKABAD	78.61	319.1	11	46	1					
KASPERSKE H.	78.85	353.6	11	48	2					
KISHINEV	79.02	343.0	11	49	2					
CHARTERS TS.	79.04	215.9	11	43	-4				13	30
STUTTGART	79.44	356.4	11	53	4					
FOLINIERE	79.46	3.0	11	52	2					
PARIS	79.49	1.0							12	54
STRASBOURG	79.68	357.5	11	54	3				15	10
SIMFEROPOL	79.93	338.8	11	53	1	21	56	15		
BUDAPEST	80.00	349.7	12	4	12	21	56	15	22	56 PPS
TIFLIS	80.10	330.2	11	55	2					
GARCHY	81.02	0.6	12	1	3				13	46
QUETTA	81.34	308.7	12	1A	1					
BRISBANE	83.72	207.6	12	25	13	22	33	14		
FLORENCE X.	84.32	354.7							23	40 PS
ISTANBUL UN.	84.75	341.3	12	17A	0					
KARACHI	85.74	305.7	12	23	1					
ROME	86.12	353.7							23	40 PS
LEMBANG	87.05	255.1	12	26	-2					
TANGERANG	87.12	256.3	12	26	-2					
SAN JUAN	87.29	63.4	12	30	1					
POONA	87.32	296.9	12	40A	11				23	7
BOMBAY	87.58	297.9	12	32	1	23	11	15	23	39
GALERAZAMBA	88.10	75.0	12	21	-12	23	21	20	24	45 PPS
TOLEDO	88.16	6.2	12	36	3				15	37 PP
ATHENS	88.69	344.5	12	36	0					
KSARA	90.03	333.9	12	45	3					
RIVERVIEW	90.25	206.8	12	43	0	23	35	14		
GRANADA	90.87	6.1	12	26A	-20				16	1 PP
MALAGA	91.28	6.7	12	48A	0	23	34	4	16	30 PP
CANBERRA	92.25	208.0	12	56	4					
CHINCHINA	92.47	78.8	12	53	0				23	53 SKKS
FUQUENE	93.22	77.0	12	58	1					
BOGOTA	93.69	77.8	12	57	-2	23	28	-23	24	10 S
TOOLANGI	95.39	209.8							13	25
CAPE HALLETT	124.46	185.1	18	39	-1					
SCOTT BASE	130.09	184.7	18	50	-1					
WILKES	130.47	210.6							22	13 SKP
BROKEN HILL	137.67	323.4	19	1	-4					
SOUTH POLE	141.88	180.0	19	6	-6					
BULAWAYO	142.80	319.7	19	13K	-1					
ARGENTINE I.	144.08	138.2	19	12	-4					
MAWSON	148.10	218.4	19	25A	2					
WINDHOEK	148.86	336.1	19	27	3					
KIMBERLEY	152.03	318.4	19	32	3					

OCTOBER 17 12.H 39.M 13.S EPICENTRE 33.45 137.86 DEPTH= 342.KM

A=-0.61994 B= 0.56093 C= 0.54867 D= 0.6709 E= 0.7415
G=-0.4068 H= 0.3681 K=-0.8360 HT= 0.7

DEPTH OF FOCUS= 0.049R

SE= 2.01

	DELTA	AZ.	P	O-C	S	O-C	*PP		SUPP.	
	DEG.	DEG.	M	S	S	M	S	S	M	S	M	S
OMAESAKI	1.18	14.5	0	47	1	1	22	0				
HAMAMATU	1.27	354.8	0	46A	-1	1	22	-1				
OWASE	1.51	294.4	0	47	-1	1	24	-2				
SHIZUOKA	1.58	16.3	0	48	-1	1	23	-4				
TU	1.67	318.6	0	51	2							
SIOMISAKI	1.75	270.5	0	49	-1	1	27	-1				
KAMEYAMA	1.81	320.8	0	50A	0	1	30	1				
OSIMA	1.82	43.4	0	50	0	1	26	-3				
NAGOYA	1.86	337.0	0	50A	0	1	30	0				
MISIMA	1.89	28.2	0	49K	-1	1	28	-2				
AJIRO	1.90	32.5	0	49K	-2	1	28	-2				
IIDA	2.06	359.3	0	52	0	1	32	0				
NARA	2.08	306.5	0	53A	1							
GIHU	2.14	335.4	0	54	2	1	34	1				

HUNATU	2.18	19.9	0	58	5	1	32	-2	
MERA	2.19	47.6	0	50	-3	1	29	-5	
HIKONE	2.25	324.1	0	54A	1	1	34	-1	
OSAKA	2.27	302.3	0	54	1	1	36	1	
KOHU	2.29	14.4	0	53	0	1	34	-1	
KYOTO	2.36	312.1	0	53	-1	1	36	0	
ABUYAMA	2.37	307.3	0	54A	0	1	36	0	
WAKAYAMA	2.37	289.8	0	56	2	1	35	-1	
YOKOHAMA	2.46	36.4	0	56	1	1	33	-5	
KOBE	2.54	299.6	0	55A	-1	1	39	0	
SUMOTO	2.61	290.6	0	55	-1	1	39	-1	
TSURUGA	2.64	326.5	0	56	0				
TITIBU	2.71	21.4	0	59	2	1	39	-2	
TOKYO C.M.O.	2.71	34.5	0	55	-2	1	37	-4	
TAKAYAMA	2.74	349.6	0	56	-1				
HONGO	2.75	34.4	0	57	0	1	38	-4	
MATUMOTO	2.79	1.8	0	59	1	1	44	1	
TOKUSIMA	2.80	283.6	1	0	2				
MAIZURU	2.87	315.3	0	58A	0	1	43	-1	
HUKUI	2.92	333.1	1	0A	1	1	47	3	
OIWAKE	2.93	11.0	0	58	-1	1	44	-1	
KUMAGAYA	2.97	24.5	0	58	-1	1	43	-2	
HIMEJI	3.06	290.9	0	59	-1	1	45	-2	
MUROTO	3.09	267.2	1	0K	0	2	0	13	
MATUSIRO	3.09	5.2	0	59	-1	1	46	-1	
MAEBASI	3.10	18.3	0	58	-2	1	44	-4	
TOYOOKA	3.26	310.4	1	2A	0	1	50	0	
TOYAMA	3.28	350.7	0	53	-9				
TAKAMATU	3.29	286.3	1	3	1	1	52	1	
TUKUBASAN	3.32	33.1	0	59A	-4				
TYOSI	3.35	46.6	1	0A	-3	1	48	-4	
KAKIOKA	3.36	33.9	1	1	-2	1	47	-5	
UTUNOMIYA	3.50	27.5	1	2	-2	1	48	-7	
KOTI	3.62	272.7	1	6A	1	1	58	1	
MITO	3.62	35.6	1	3	-3	1	51	-6	
TAKADA	3.65	4.9	1	4	-2	1	55	-2	
TOTTORI	3.67	305.0	1	6	0				
WAZIMA	4.00	349.0	1	10	1				
SHIRAKAWA	4.14	27.1	1	9	-2	2	1	-5	
ASHIZURI	4.15	261.2	1	10	-1	1	46	-20	
YONAGO	4.22	299.1	1	12	0	2	9	1	
ONAHAMA	4.29	34.6	1	18	6	2	3	-6	
MATSUE	4.43	298.0	1	14	0	2	14	2	
NIIGATA	4.56	11.9							1 30
AIKAWA	4.57	3.9	1	16	1				
HIROSIMA	4.61	282.9	1	16	0	2	16	1	
SAIGO	4.63	307.6	1	12	-4	2	12	-3	
HUKUSIMA	4.79	25.6	1	16	-2	2	16	-3	
HAMADA	5.01	288.3	1	21K	1	2	25	2	
YAMAGATA	5.20	22.2	1	20	-2	2	22	-5	
OOITA	5.23	269.3	1	22A	-1	2	30	3	
SENDAI	5.40	26.3	1	23	-2	2	25	-6	
MIYAZAKI	5.64	256.0	1	15	-12				
ISINOMAKI	5.70	28.5	1	25A	-3	2	31	-6	
ASOSAN	5.72	266.3	1	30	2	2	42	5	
KUMAMOTO	6.04	266.0	1	34	2	2	49	5	
HUKUOKA	6.25	273.2	1	37	3	2	52	4	
MIZUSAWA	6.25	24.0	1	36	2	2	44	-4	
KAGOSIMA	6.45	255.1				3	0	7	
AKITA	6.51	15.4							2 16
NAGASAKI	6.74	266.0	1	41A	1	3	3	4	
MORIOKA	6.78	22.2	1	39	-2	2	57	-2	
YAKUSIMA	6.93	246.4	1	32	-10				
MIYAKO	7.01	26.9				2	53	-11	
HATINOHE	7.65	21.5				3	8	-10	
AOMORI	7.71	16.7							2 54
URAKAWA	9.51	22.7	2	16	3	4	0	2	
SAPPORO	9.98	14.9				4	17	8	
OBIHIRO	10.34	22.4	2	24	1				
KUSIRO	10.81	26.5	2	31	2	4	25	-1	
CHANGCHUN	14.25	320.3	3	7K	-3	5	42	1	
NANKING	16.12	270.3	3	28K	-2				
PEKING	18.56	296.9	3	53K	-1	7	5	1	5 28 *SP
SIAN	24.02	280.0	4	46K	-1				
LANCHOW	28.00	285.0	5	21	-2				
YAKUTSK	29.06	352.1	5	31K	-1				
CHITTAGONG	41.86	266.9	7	16	-3				
PORT MORESBY	43.52	166.6	7	31K	-2				

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ALMATA-2	47.50	300.4	8	4	0							
DEHRA DUN	50.27	283.6	8	24	-1							
NEW DELHI	51.58	281.9	8	32K	-2							
LAHORE	52.86	286.5	8	43	-1							
COLLEGE	53.66	30.7	8	51	2							
TASHKENT	53.78	299.6	8	50	0							
WARSAK DAM	54.24	290.4	8	53	-1							
SVERDLOVSK	55.95	319.7	9	6	0							
QUETTA	59.26	287.8	9	28	-1							
HAWAII V.OB.	60.57	85.2	9	38	1							
MOULD BAY	60.77	15.5	9	37K	-2							
VANNOVSKAYA	63.03	299.2	9	53	1							
APATITY	64.75	335.7	10	4A	0							
KEVO	65.74	339.1	10	11	0							
RESOLUTE	66.77	13.3	10	17K	0							
SODANKYLA	67.12	337.0	10	19A	0							
KAJAANI	68.52	333.7	10	27A	-1							
KIRUNA	68.81	338.8	10	28	-2							
VIBORG	69.91	330.3	10	37A	1							
GORIS	70.71	305.0	10	42	1							
SHIRAZ	70.78	293.2	10	41K	-1							
UMEA	71.35	335.5	10	45	0							
NURMIJARVI	71.71	331.4	10	47	0							
HELSINKI	71.78	331.0	10	47	-1							
SKALSTUGAN	74.15	337.8	11	1A	0							
UPPSALA	74.86	333.1	11	5A	-1							
BLUE MTS.	76.50	45.0	11	16	1			12	44			
BUTTE	78.56	42.1	11	27	1			13	3			
UZHGOROD	80.14	322.6	11	35	1							
EUREKA	80.37	48.9	11	37	2			12	50	14	35	PP
WOODY	80.65	53.4	11	37	0							
DUGWAY	81.91	46.9	11	45A	2							
COLLMBERG	82.70	328.7	11	47K	0					15	2	
PRUHONICE	82.96	327.1	11	51	2					15	4	PP
HALLE	83.01	329.3	11	50	1					15	3	
PRICE	83.48	46.4	11	53A	2							
JENA	83.58	329.1	11	51	-1			13	17	15	9	PP
KASPERSKE H.	84.01	326.9	11	54	0					12	13	
BENSBERG	85.39	331.2	12	1	0							
STUTTGART	86.19	328.8	12	5	0							
WICHITA MTS.	93.99	43.5	12	42	1							

OCTOBER 18 4.H 6.M 26.S EPICENTRE -8.55 116.19 DEPTH= 229.KM

A=-0.43648 B= 0.88752 C=-0.14764 D= 0.8974 E= 0.4413
G= 0.0652 H=-0.1325 K=-0.9890 HT= 6.7

DEPTH OF FOCUS= 0.031R

SE= 5.56

	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	
LEMBANG	8.66	280.8	1	52	-10	3	41	3					
DJAKARTA	9.57	283.6	1	59	-15	3	26	-33					
TANGERANG	9.77	283.3	2	15K	-2	4	22	18					
DARWIN	14.89	106.1	2	50	-31	5	21	-39					
MUNDARING	23.31	180.0	4	35	-14	8	41	0					
MANILA	23.57	11.9	4	49	-2						7	5	
BAGUIO CITY	25.18	9.9	5	12	6	10	0	48					
PORT MORESBY	30.59	94.0	5	38	-16	10	34	-4					
CHARTERS TS.	31.25	114.8	5	47	-13	10	45	-4					
ADELAIDE	33.44	145.2	6	5A	-14				6	14			
KUNMING	35.94	338.9	6	43A	3	12	44	43					
CHITTAGONG	38.91	322.5	7	5	0	13	3	17			8	44	PP
TOOLANGI	39.20	142.0	6	56K	-11				7	6	9	10	PCP
BRISBANE	39.32	123.2	6	58	-10						14	21	
ZO-SE	39.71	6.7	7	10	-1								
CANBERRA	40.12	136.5	7	3A	-12				7	13			
NANKING	40.45	3.4	7	18A	0								
CHENGTU	40.70	343.8	7	20A	0	13	45	33					
RIVERVIEW	40.84	133.2	7	5K	-16	13	10	-4			16	8	SS
SHILLONG	41.35	325.7	7	25A	0								
SIAN	43.12	351.2	7	39A	0								
HONIARA	43.21	94.7	7	28K	-12	13	47	-2					
MOORLANDS	43.38	146.3	7	44	3	14	0	9					
LANCHOW	45.86	346.0	8	2A	1	14	59	32					

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ABUYAMA	46.91	21.9	8	7K	-2							
PEKING	48.33	360.0	8	18A	-2	15	31	30			10	13 PP
PAOTOW	49.21	353.8	8	27	0							
MATUSIRO	49.39	23.4	8	23	-5	15	6	-10				
POONA	49.68	303.1	8	30A	0							
NOUMEA	50.12	111.9	8	24	-10							
BOMBAY	50.72	302.9	8	37	-1						16	11
NEW DELHI	52.71	315.9	8	50A	-3							
CHANGCHUN	52.78	8.3	8	51	-2							
WILKES	57.84	182.7	9	27	-3	17	12	3				
KARACHI	58.25	306.1	9	31	-1							
WARSAK DAM	59.83	317.5	9	42	-1							
KARAPIRO	60.72	128.7	9	40	-9							
WELLINGTON	60.95	132.6	9	40	-11							
QUETTA	60.97	311.4	9	50	-1							
CHATEAU	61.01	130.2	9	54	3							
TUAI	62.14	129.4	9	49	-10							
MAWSON	68.72	199.3	10	35A	-6				10	42	38	49 PKPPKP
CAPE HALLETT	71.45	164.9	10	52	-5							
SHIRAZ	71.99	304.9	11	0A	0	20	17	15	11	9	13	45 PP
SCOTT BASE	73.90	170.2	11	4	-7							
BULAWAYO	84.85	250.5	12	11A	1							
BROKEN HILL	85.71	256.1	12	17A	3							
KSARA	86.74	304.7	12	23	4				12	36		
JERUSALEM	86.85	302.6	12	23	3							
LWIRO	87.09	268.2	12	23K	2							
BYRD STATION	87.24	171.7	12	19	-2							
MOULD BAY	106.11	11.9	17	50	777							
RESOLUTE	111.56	8.5	18	7	0							
PENTICTON	118.38	38.0	18	21K	1							
CALISTOGA	119.57	50.3	18	25K	3							
LICK	120.59	51.6	18	26K	2							
BLUE MTS.	121.48	42.1	18	26	0						29	3 PKKP
SERRA PILAR	121.53	313.3									22	4 PP
PRIEST	121.64	52.7	18	28A	2							
BUTTE	124.07	39.2	18	32	1							
PASADENA	124.09	54.5	18	32	1							
EUREKA	124.27	47.7	18	33	2						29	19 PKKP
BOZEMAN	125.18	39.0	18	35	2							
DUGWAY	126.29	45.8	18	36A	1							
SALT LAKE C.	126.75	44.8	18	38	2							
GLEN CANYON	128.37	49.2	18	42	3							
FLAMING GRGE	128.38	43.7	18	40	1							
RAPID CITY	130.79	37.2	18	45	1						22	5 PP
GOLDEN	131.68	43.3	18	46	0							
ALBUQUERQUE	132.98	49.5	18	35	-13						22	13
MANHATTEN	137.66	38.6	18	48	-9							
WICHITA MTS.	138.84	45.6	18	51	-8				19	0	22	30 SKP
TULSA	140.11	42.1	18	55	-6						22	36 SKP
FAYETTEVILLE	141.05	40.7	18	55	-8							
SHAWINIGAN	141.36	9.9	19	4	0						22	38
FLORISSANT	141.57	34.2	18	58	-6							
ST. LOUIS 1	141.77	34.3	18	59	-5							
BREBEUF	142.22	11.3	19	1K	-4							
BLOOMINGTON	143.33	30.1	19	4K	-3							
HALIFAX	144.06	359.7	19	9K	1							
PENNSYLVANIA	145.53	19.0	19	12A	1							
MORGANTOWN	145.84	22.5	19	13A	2							
PALISADES	146.45	13.9	19	15	3							
AREQUIPA	154.02	163.0	19	36	12							
LA PAZ	154.75	170.3	19	36	12							
SAN JUAN	169.97	12.7	19	41	2						20	56

OCTOBER 18 8.H 40.M 58.S EPICENTRE 46.40 149.64 DEPTH= 169.KM

A=-0.59711 B= 0.34982 C= 0.72186 D= 0.5055 E= 0.8628
G=-0.6228 H= 0.3649 K=-0.6920 HT= -4.1

DEPTH OF FOCUS= 0.021R

SE= 1.94

	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	1.70	227.1	0	34	0	0	58	-2				
Y.-SAKHLINSK	4.80	279.9	1	15K	3	2	10	2				

UGLEGORSK	5.76	300.4	1	29K	4	2	37	7				
SEVERO-KUR.	6.05	42.8	1	29K	1	2	36	-1				
OKHA	8.36	331.3	2	2	3	3	39	7				
PETROPAVLOVK	8.83	38.1	2	3	-2	3	40	-3				
MIZUSAWA	9.58	223.7	2	12	-3	3	51	-10				
KLYUCHI	12.14	31.1	2	48	0						3	19
TUKUBASAN	12.43	218.5	2	47A	-5	4	58	-9				
VLADIVOSTOK	13.02	261.8	3	OK	0	5	21	0				
MATUSIRO	13.04	225.0	2	57K	-3	5	12	-9				
MAGADAN	13.19	2.6	3	5	3	5	25	0				
ABUYAMA	15.68	227.7	3	32K	-1							
CHANGCHUN	17.35	270.3	3	52	-1	6	55	-3			15	25 SCS
YAKUTSK	19.37	331.0	4	13K	-2	7	43	3			4	43 PP
PEKING	25.08	267.4	5	11K	1	9	24	4				
ZO-SE	26.76	245.2	5	27K	1	9	51	4			16	11 SCS
NANKING	27.66	249.8	5	34	0							
ULAN-BATOR	28.83	288.8	5	43	-1							
PAOTOW	29.09	272.9	5	47	0							
SIAN	32.98	263.1	6	21K	0							
LANCHOW	35.52	269.8	6	44K	2	12	11	6				
ESEN BULAK	36.22	289.9	6	49K	1							
COLLEGE	37.91	38.1	7	4	2					7	41	
CHENGTU	38.44	262.2	7	8K	1	12	50	1				
KUNMING	42.83	256.8	7	44K	1	13	56	2				
MOULD BAY	45.74	19.5	8	6	0							
NHATRANG	48.18	238.3	8	26	1							
KIPAPA	49.00	102.2	8	31	0							
SHILLONG	49.97	266.2	8	40A	1							
ALERT	50.34	5.2	8	41	0							
RABAUL	50.43	176.7	8	42	0							
RESOLUTE	51.92	17.8	8	53K	0							
CHITTAGONG	52.10	263.1	8	56K	1							
CHATRA	52.42	270.9	9	3K	6							
SVERDLOVSK	52.44	316.1	8	56A	-1							
THULE	55.08	10.2	9	16	0							
PORT MORESBY	55.59	183.0	9	20	0							
VICTORIA	55.69	53.5	9	21	0							
TASHKENT	55.80	296.1	9	21K	-1							
HONIARA	56.34	167.7	9	24	-1							
DEHRA DUN	56.52	280.4	9	26	-1							
KHOROG	56.58	291.1	9	28	1							
APATITY	56.69	335.6	9	22A	-6							
KEVO	56.85	339.5	9	27	-2						10	9
PENTICTON	57.32	51.0	9	34A	2							
NEW DELHI	58.18	279.3	9	41K	3							
LAHORE	58.28	283.9	9	39	0							
WARSAK DAM	58.64	287.8	9	42	0							
SODANKYLA	58.69	337.7	9	40	-2						10	22
TROMSOE	58.79	341.9	9	51	8							
KIRUNA	59.88	340.1	9	49	-1						10	30 PCP
KAJAANI	60.82	334.7	9	55	-1							
BLUE MTS.	61.24	54.1	10	0A	1						14	27
MINERAL	61.51	60.4	10	1A	0						10	40
CALISTOGA	61.98	62.4	10	4K	0							
BERKELEY	62.65	62.9	10	9K	0							
VIBORG	62.98	331.7	10	8K	-3	18	24	-2				
RENO	63.09	60.1	10	12A	0							
BUTTE	63.11	50.7	10	3	-9				10	48		
UMEA	63.12	337.4	10	10	-2						10	47 PCP
PULKOVO	63.18	330.4									10	48 PCP
SCORESBY SD.	63.27	356.8	10	13	0							
LICK	63.37	63.0	10	13A	0						10	49
QUETTA	64.06	287.2	10	18K	0							
BOZEMAN	64.14	50.3	10	19	1				10	55		
NURMIJARVI	64.47	333.3	10	19K	-2						10	52 PCP
ASHKABAD	64.55	298.9	10	22	1							
HELSINKI	64.64	332.9	10	19	-3						11	3
PRIEST	64.74	63.5	10	22A	0							
SKALSTUGAN	65.30	340.5	10	24	-2							
EUREKA	65.41	58.1	10	24	-3				10	59	12	54 PP
WOODY	66.14	62.8	10	30	-1				11	7	11	25 *SP
CHARTERS TS.	66.24	183.5	10	31	-1							
DUGWAY	66.77	55.7	10	36A	1							
SALT LAKE C.	66.94	54.7	10	37	1				11	13		
UPPSALA	67.09	336.0	10	35	-2						11	4 PCP
POONA	67.09	273.1	10	37K	0							
KARACHI	67.51	282.8	10	39K	-1							
FLAMING GRGE	68.21	53.2	10	45	1							

PRICE	68.31	55.1	10	45A	0							
RAPID CITY	69.31	47.4	10	52	1							
GLEN CANYON	69.65	57.6	10	54	1				11	30		
TIFLIS	69.76	309.5	10	55	1							
LARAMIE	70.02	50.8	10	57	2						11	33
NOUMEA	70.05	163.4	10	57K	2							
GOTEBORG	70.47	337.4	10	57	-1							
GORIS	70.48	307.0	10	59K	1	19	59	3				
GOLDEN	71.27	51.9	11	3	0							
BRISBANE	73.50	177.1	11	17	1						13	0
ALBUQUERQUE	74.03	56.0	11	20	1				11	56		
SCHEFFERVLLE	74.55	20.9	11	22K	0							
COLLMBERG	75.76	333.6	11	28K	-1				12	10		
HALLE	75.90	334.3	11	30	1							
MANHATTEN	76.26	47.1	11	31	0							
PRUHONICE	76.42	332.0	11	33K	1						12	14
JENA	76.51	334.2	11	33	0				12	15	14	41 PP
DUBUQUE	76.55	41.3	11	31K	-2							
KASPERSKE H.	77.47	332.2	11	38K	0						15	0
BENSBERG	77.75	336.8	11	40	0							
WICHITA MTS.	78.59	51.3	11	45	1						12	22
STUTTGART	79.12	334.5	11	48	1							
KEW	79.13	341.4	11	49	2							
TULSA	79.17	48.7	11	48	1						12	26 *SP
ROLLA	79.59	45.0	11	49	-1							
FLORISSANT	79.62	43.5	11	50	0							
ST. LOUIS 1	79.82	43.5	11	51	0							
LJUBLJANA	79.83	330.0	11	51	0						12	49
FAYETTEVILLE	79.86	47.6	11	52A	1				12	29		
RIVERVIEW	79.87	178.7									19	43
BREBEUF	80.87	29.2	11	57	1							
CANBERRA	81.35	180.5	12	0	1							
ADELAIDE	81.59	189.0	12	1K	1							
FOLINIERE	81.70	340.5	12	1	0							
LITTLE ROCK	81.82	47.2	12	2	1							
GARCHY	82.21	337.8	12	4	1							
JERUSALEM	82.26	308.5	12	6	2							
ATHENS	83.03	319.8	12	8	0							
MUNDARING	83.65	208.1	12	12	1							
TOOLANGI	83.67	183.3	12	12A	1						12	32
KARAPIRO	87.11	159.8	12	29	1							
TARATA	88.04	161.0	12	34	2							
CHATEAU	88.32	160.1	12	33	0							
TUAI	88.33	158.8	12	33	0							
TARRALEAH	88.36	182.4	12	36	2							
MOORLANDS	88.48	181.8	12	37	3							
WELLINGTON	90.13	161.3	12	41	-1							
DUMONT	112.98	184.1	19	6	49							
MAWSON	130.67	210.3	18	53K	2						22	0 PP
BYRD STATION	135.44	165.6	18	52	-8						12	26 PP
LA PAZ	136.77	59.1	18	59	-3							
SANTA LUCIA	146.87	81.5	19	22	2							

OCTOBER 18 11.H 22.M 44.S EPICENTRE 46.43 149.56 DEPTH= 164.KM

A=-0.59629 B= 0.35045 C= 0.72224 D= 0.5067 E= 0.8621
G=-0.6227 H= 0.3659 K=-0.6916 HT= -4.1

DEPTH OF FOCUS= 0.021R

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
KURILSK	1.68	225.0									0	33
UGLEGORSK	5.70	300.4	1	29A	6	2	38	10				
SEVERO-KUR.	6.07	43.3	1	29A	1							
OKHA	8.30	331.5	1	52	-6	3	40	10				
PETROPAVLOVK	8.84	38.4	2	4	-1						3	26
MIZUSAWA	9.57	223.3	2	13	-2	3	52	-8				
TUKUBASAN	12.42	218.1	2	48A	-4	4	56	-11				
VLADIVOSTOK	12.97	261.6	2	59	0						5	15
MATUSIRO	13.03	224.7	2	57K	-2	5	35	14				
MAGADAN	13.16	2.8	3	3	2						5	41
ABUYAMA	15.66	227.4	3	31K	-2							
CHANGCHUN	17.29	270.1	3	51	-1	6	53	-4			15	26 SCS
YAKUTSK	19.32	331.1	4	14K	0	7	43	4			4	45 PP

PEKING	25.02	267.3	5	11K	1	9	22	3				
ZO-SE	26.72	245.1	5	27K	1	9	51	4				
NANKING	27.62	249.6	5	39	5							
ULAN-BATOR	28.77	288.7									6	21
PAOTOW	29.03	272.8	5	48	2							
IRKUTSK	29.65	298.1	5	50	-2							
SIAN	32.93	263.0	6	23K	3							
LANCHOW	35.47	269.7	6	44K	2	12	9	5				
ESEN BULAK	36.16	289.9									7	34
HONG KONG	37.37	242.1	6	54	-4							
COLLEGE	37.92	38.1	7	4	1				7	42		
CHENGTU	38.39	262.1	7	8K	2	12	50	2				
KUNMING	42.78	256.7	7	44K	2	13	56	3				
MOULD BAY	45.73	19.5	8	6	0							
SHILLONG	49.91	266.1	8	40A	2							
RABAUL	50.46	176.6	8	39	-4							
RESOLUTE	51.91	17.7	8	53K	0							
CHITTAGONG	52.05	263.1	8	56K	2							
CHATRA	52.36	270.8	9	4K	7							
SVERDLOVSK	52.38	316.1	8	56A	-1							
VICTORIA	55.71	53.5	9	21K	0							
TASHKENT	55.73	296.1	9	22K	1							
APATITY	56.64	335.6	9	27A	-1				10	23		
KEVO	56.80	339.5	9	28	-1						10	23 PCP
PENTICTON	57.34	51.0	9	33K	0							
LONGMIRE	57.61	54.5	9	34	-1							
NEW DELHI	58.12	279.3	9	38K	0							
LAHORE	58.22	283.8	9	39	0							
WARSAK DAM	58.57	287.8	9	40	-1							
SODANKYLA	58.64	337.6	9	41A	-1							
TROMSOE	58.75	341.9	9	41	-2							
KIRUNA	59.83	340.1	9	49	-1							
KAJAANI	60.77	334.7	9	56	0							
BLUE MTS.	61.27	54.1	10	0	0						10	36 PCP
MINERAL	61.55	60.4	10	1K	-1							
CALISTOGA	62.01	62.4	10	5K	0							
BERKELEY	62.69	62.9	10	10A	1							
VIBORG	62.93	331.7	10	8	-3							
UMEA	63.07	337.4	10	9	-3							
RENO	63.13	60.1	10	15A	3							
LICK	63.40	63.0	10	14K	0							
QUETTA	64.00	287.2	10	18K	0	18	45	6				
NURMIJARVI	64.42	333.3	10	19	-1							
ASHKABAD	64.48	298.9	10	21	0							
HELSINKI	64.58	332.9	10	19	-2							
PRIEST	64.77	63.5	10	24K	1							
SKALSTUGAN	65.25	340.5	10	25	-1							
EUREKA	65.44	58.0	10	26	-1				11	0	12	54 PP
WOODY	66.17	62.8	10	30	-2				11	8	11	25 *SP
CHARTERS TS.	66.27	183.4	10	31	-1							
DUGWAY	66.80	55.7	10	36A	0							
SALT LAKE C.	66.96	54.7	10	37	0							
UPPSALA	67.03	335.9	10	36K	-1							
POONA	67.04	273.1	10	37K	0							
KARACHI	67.45	282.7	10	39	-1						13	6 PP
PRICE	68.33	55.0	10	43K	-2							
RAPID CITY	69.33	47.4	10	52	1							
BERGEN	69.62	342.0	10	53	0							
TIFLIS	69.70	309.5	10	55	2							
LARAMIE	70.04	50.8	10	27	-29						10	49
GORIS	70.42	306.9	10	59K	1							
GOLDEN	71.29	51.9	11	4	1							
TUCSON	73.40	60.7	11	16	1							
BRISBANE	73.53	177.0	11	17	1							
SHIRAZ	73.64	295.8	11	18K	1						11	42
ALBUQUERQUE	74.06	56.0	11	21	2				11	58		
SCHEFFERVLLE	74.54	20.8	11	23K	1							
COLLMBERG	75.71	333.5	11	28K	-1				12	11		
MANHATTEN	76.28	47.0	11	31	-1							
PRUHONICE	76.36	332.0	11	33	1						14	27 PP
JENA	76.46	334.2	11	32	-1						14	50 PP
DUBUQUE	76.56	41.3	11	31	-2							
KASPERSKE H.	77.41	332.1	11	38	0						12	20
BENSBERG	77.70	336.7	11	40	0							
WICHITA MTS.	78.61	51.3	11	45	0						12	23
STUTTGART	79.07	334.5	11	48	1							
KEW	79.09	341.4	11	49	2							
TULSA	79.19	48.7	11	49	0							

ROLLA	79.61	45.0	11 50	0			
FLORISSANT	79.64	43.4	11 50	0			
ST. LOUIS 1	79.83	43.4	11 51	0			
FAYETTEVILLE	79.88	47.6	11 51A	0		12 28	
KSARA	80.28	309.3	11 54	0			
PARIS	80.90	338.7	11 59	2			
BLOOMINGTON	81.12	40.7	11 57	-1			
CANBERRA	81.38	180.5	12 0	1			
FOLINIERE	81.65	340.5	12 1	0			
LITTLE ROCK	81.84	47.2	12 2	0			
GARCHY	82.17	337.7	12 4	1			
ATHENS	82.97	319.8	12 8	0			
MUNDARING	83.66	208.0	12 12	1			
BAGNERES	86.84	338.1	12 30	3			
WELLINGTON	90.17	161.3	12 42	0			
BENI ABBES	99.63	335.4	13 27	1			
MAWSON	130.67	210.3	18 54A	3			22 0 PP
BYRD STATION	135.49	165.6	18 56	-4			22 16 PP

OCTOBER 19 4.H 13.M 3.S EPICENTRE -30.93 -69.59 DEPTH= 104.KM

A= 0.29972 B=-0.80539 C=-0.51139 D=-0.9372 E=-0.3488
G=-0.1784 H= 0.4793 K=-0.8594 HT= 1.5

DEPTH OF FOCUS= 0.011R

SE= 1.53

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SANTA LUCIA	2.66	199.3	0 43K	1	1 11	-3		
CONCEPCION	6.23	198.5	1 33	2	2 41	0		
ANTOFAGASTA	7.24	353.9	1 39	-6	3 16	10		
LA PAZ	14.42	5.6	3 22	2	6 16	19		
AREQUIPA	14.51	352.7	3 18	-3				
HUANCAYO	19.52	343.0	4 24	3	8 11	20		
BOGOTA	35.60	352.3	6 50	1	12 22	5	7 18	13 16 *SS
CHINCHINA	36.16	349.8	6 53	-1			7 22	
FUQUENE	36.41	353.0	6 56	0			7 24	
GALERAZAMBA	41.82	351.6	8 4	23	13 59	9		
TRINIDAD	42.08	12.1	7 43	0				9 37 PP
FORT FRANCE	46.11	11.4	8 31	16				
ST. KITTS	48.44	8.8						9 0
SAN JUAN	49.13	4.4	8 36	-3			9 4	
BLACK RIVER	49.29	349.6	8 40	0				
BYRD STATION	53.13	189.6	9 8	-1				
SOUTH POLE	59.24	180.0	9 50	-2				
SCOTT BASE	66.49	191.1	10 39	-1				
CAPE HALLETT	69.22	196.4	10 56	-1				
FAYETTEVILLE	70.55	339.0	11 4K	-1			11 33	
WICHITA MTS.	70.78	335.0	11 5	-2			11 37	13 32 PP
TULSA	70.89	337.7	11 7	0			11 36	
BLOOMINGTON	71.51	346.2	11 10	-1				
FLORISSANT	72.02	343.1	11 13	-1				
MANHATTEN	74.15	338.5	11 26	-1				
ALBUQUERQUE	74.15	329.2	11 27	0			11 57	
MAWSON	75.53	163.0	11 33K	-1				
DUBUQUE	75.61	344.1	11 36K	1				
BREBEUF	76.15	357.1	11 37A	-1			12 7	
BANDEIRA	76.50	99.4	11 43K	3			12 12	
SHAWINIGAN	77.17	357.7	11 43	-1				
GOLDEN	77.73	332.5	11 47	0				
GLEN CANYON	78.16	326.8	11 51	2			12 21	
LARAMIE	79.19	333.2	11 56	1				12 26
PASADENA	79.30	320.7	11 57	2			12 29	
DUMONT	80.12	191.5	11 58	-2				
FLAMING GRGE	80.42	330.5	12 1	0			12 31	
RAPID CITY	80.72	336.2	12 3	0			12 33	
DUGWAY	81.32	328.0	12 5K	-1				
SALT LAKE C.	81.35	328.9	12 5	-1				
PRIEST	82.14	320.5	12 11K	1				12 44
EUREKA	82.24	325.6	12 12	1	21 50	-26	12 43	
WILKES	83.05	180.0	12 14	-1				16 51
LICK	83.55	320.8	12 18A	1				12 50
RENO	84.21	323.3	12 21A	0				
BERKELEY	84.27	320.8	12 22K	1				
CALISTOGA	85.00	321.1	12 25K	0				12 57

BOZEMAN	85.01	332.2	12 25	0	12 56		
SCHEFFERVLLE	85.43	1.6	12 26K	-1			
MINERAL	85.73	322.8	12 28A	0			
BUTTE	85.91	331.6	12 30	1	13 1	13 17	*SP
BULAWAYO	86.57	111.3	12 30	-2			
TUAI	86.91	226.0	12 36	2			
BLUE MTS.	87.03	328.2	12 34K	-1	13 5		
CHATEAU	87.65	224.9	12 38	0			
HUNGRY HORSE	88.38	332.1	12 41	0	13 12		
KARAPIRO	88.44	225.9	12 42	1			
BROKEN HILL	89.42	106.4	12 47	1			
PENTICTON	91.46	329.9	12 55A	-1			
MOULD BAY	111.31	348.7	18 21	0			
COLLEGE	112.80	333.0	18 24	0			
UMEA	117.20	29.9	18 33	0			
NURMIJARVI	118.42	34.1	18 34	-1	19 5		
HELSINKI	118.49	34.5	18 35	0			
SODANKYLA	120.50	26.5	18 39	0	19 10		
SHIRAZ	130.49	75.8	18 52K	-6			
QUETTA	142.74	79.7	19 23A	2	19 49	22 33	PP
POONA	144.73	101.8	19 23	-1			
WARSAK DAM	147.20	74.2	19 30	1			
LAHORE	149.23	79.3	19 36A	4			
NEW DELHI	151.13	86.1	19 36A	1		20 6	
DEHRA DUN	152.19	82.8	19 38	2		20 16	
MATUSIRO	156.26	291.1	19 41	-1		20 12	PKP2
CHITTAGONG	161.34	112.7	19 49	1			
SHILLONG	162.82	103.5	19 50A	1			

OCTOBER 19 23.H 42.M 36.S EPICENTRE -5.78 130.28 DEPTH= 190.KM

A=-0.64328 B= 0.75907 C=-0.10004 D= 0.7629 E= 0.6465
G= 0.0647 H=-0.0763 K=-0.9950 HT= 7.0

DEPTH OF FOCUS= 0.025R

SE= 1.28

	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	
DARWIN	6.58	175.3	1	34	-2	2	40	-10					
PORT MORESBY	17.10	103.2	3	51K	2	6	49	-3					
CHARTERS TS.	21.06	133.9	4	31	1	8	14	5					
RABAUL	21.86	86.9	4	37	-1	8	26	3					
MANILA	22.27	335.9	4	44	2	8	34	4					
LEMBANG	22.55	266.1	4	47K	2	8	38	4					
TANGERANG	23.52	267.8	4	53	-1	9	10	19					
BAGUIO CITY	24.05	336.6	5	0	1	8	58	-2					
MUNDARING	29.19	205.1	5	45	-1								
ADELAIDE	30.07	166.1	5	53K	-1	10	37	0			8	50	PCP
BRISBANE	30.33	137.6	5	58	2						15	23	
HONG KONG	32.06	331.0	6	28	17	11	1	-7			7	36	PP
RIVERVIEW	33.97	147.9	6	28K	0	11	39	1			9	13	
CANBERRA	34.09	152.1	6	29K	0						7	55	PP
TOOLANGI	34.55	158.4	6	34K	1	11	51	4			8	3	PP
KOUMAC	36.11	117.2	6	45K	-1								
ZO-SE	37.69	347.2	7	0	1	12	31	-3					
NOUMEA	38.59	118.8	7	6K	0								
PORT VILA	39.00	111.1	7	9K	-1								
TARRALEAH	39.10	160.9	7	12	1						9	17	
NANKING	39.19	344.5	7	12	1	12	57	0					
MOORLANDS	39.47	160.2	7	16	2						9	20	
ABUYAMA	40.74	6.7	7	24K	0								
KUNMING	40.75	320.1				12	18	-62					
MATUSIRO	42.75	9.4	7	38K	-2								
CHENGTU	44.10	326.8				14	10	1			17	27	SCS
SIAN	44.64	334.6	7	57	1	14	15	-2					
PEKING	47.40	345.3	8	17	0	14	52	-4			17	50	SCS
LANCHOW	48.45	331.2	8	27	2	15	10	0			17	57	SCS
SHILLONG	48.61	311.6	8	27A	0								
CHANGCHUN	49.58	355.3				15	24	-2					
PAOTOW	49.75	339.8				15	28	0					
KARAPIRO	52.04	134.6	8	53	0								
CHATEAU	52.61	136.0	8	59	2								
TUAI	53.56	134.9	9	3	-1								
ULAN-BATOR	57.30	341.5	9	30K	0	17	11	1					
AFIAMALU	57.54	102.7	9	33A	1								

ESEN BULAK	60.10	333.5	9	30K	-20	17	47	1							
POONA	60.63	294.9	10	14A	21										
DUMONT	61.16	175.6	9	55	-2	17	58	-2					12	7	PP
NEW DELHI	61.44	306.8	9	56A	-3										
IRKUTSK	61.91	342.2	10	1	-1										
WILKES	62.00	188.9	10	1K	-2										
PETROPAVLOVK	63.31	18.7	10	10	-1										
LAHORE	64.94	308.7	10	21	-1				11	8					
YAKUTSK	67.60	359.7	10	37	-2	19	22	3							
WARSAK DAM	68.08	310.1	10	42	1	19	26	2	11	30					
ALMATA-2	68.29	321.2	10	43A	0										
QUETTA	70.33	304.7	10	56	1	19	48	-2	11	44					
CAPE HALLETT	70.82	168.0	10	58	0										
TASHKENT	72.69	316.4	11	10	1	20	18	1							
SCOTT BASE	74.50	172.5	11	19	-1										
HAWAII V.OB.	77.37	68.7	11	36	0										
VANNOVSKAYA	79.66	310.1	11	49	1										
TANANARIVE	81.29	251.8											12	0	PP
SHIRAZ	82.28	300.9	12	2K	0	21	54	-6	12	49			22	46	*SS
SVERDLOVSK	83.88	328.8	12	9A	-1	22	10	-6							
SOUTH POLE	84.26	180.0	12	11	-1										
BYRD STATION	87.79	170.6	12	30	1										
TIFLIS	90.44	311.7	12	43	2	23	22	5							
COLLEGE	91.75	25.0	12	45	-3				13	28					
KSARA	96.83	303.3											23	38	
APATITY	97.93	337.4	13	14	-2										
MOULD BAY	100.38	13.2	13	25K	-2										
SODANKYLA	100.55	337.5	13	25	-3										
KAJAANI	100.66	334.1	13	26	-2										
KIRUNA	102.76	338.5	13	35	-2										
UZHGOROD	106.18	318.9	13	53	777										
RESOLUTE	106.43	11.3	13	53	777										
PENTICTON	107.42	40.1	18	5	777										
BLUE MTS.	109.89	44.4	14	9	777								14	59	
COLLMBERG	111.36	323.2	18	11	-1										
KASPERSKE H.	111.66	320.8	18	13	1										
FLAMING GRGE	116.49	46.9	17	53	-29										
GOLDEN	119.79	47.2	18	29	1										
ALBUQUERQUE	120.35	52.7	18	32	3								19	57	PP
WICHITA MTS.	126.57	50.6	18	42	1								20	37	PP
TULSA	128.23	48.1	18	46	2										
SCHEFFERVLLE	129.20	12.7	18	46	0										
HUANCAYO	148.98	124.9	19	26	4										
AREQUIPA	149.14	136.1	19	29	7										
HOPE	150.95	63.0	19	27	3										
LA PAZ	151.33	140.8	19	29	4										
SAN JUAN	159.68	50.5	19	37	1				20	18			23	53	
TRINIDAD	167.47	66.5	19	45	2								20	50	PKP2

OCTOBER 20 5.H 30.M 41.S EPICENTRE -6.78 129.87 DEPTH= 153.KM

A=-0.63658 B= 0.76225 C=-0.11727 D= 0.7675 E= 0.6410
G= 0.0752 H=-0.0900 K=-0.9931 HT= 6.9

DEPTH OF FOCUS= 0.019R

SE= 2.84

	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
DARWIN	5.65	170.4	1	23	0	2	23	-4				
PORT MORESBY	17.31	99.8	3	53	0	6	56	-3				
CHARTERS TS.	20.69	131.3	4	30K	1	8	12	6				
LEMBANG	22.09	268.5	4	43K	0	8	31	-1				
RABAUL	22.35	84.6	4	21	-25	8	37	1			5	13
MANILA	23.02	337.8	4	54	2						5	24
TANGERANG	23.10	270.2	4	52A	-1	8	53	4				
MUNDARING	28.12	205.2	5	39	0							
ADELAIDE	29.22	165.0	5	49K	0							
BRISBANE	29.89	136.0	5	57K	2						12	31
HONIARA	29.89	97.1	5	54A	-1							
RIVERVIEW	33.36	146.7	6	26K	1							
CANBERRA	33.41	150.9	6	26K	0							
TOOLANGI	33.78	157.4	6	29K	0						7	47 PP
KOUMAC	36.03	115.8	6	48K	0							
TARRALEAH	38.31	160.0	7	8	1							
NOUMEA	38.49	117.5	7	9K	0							

MOORLANDS	38.68	159.3	7	12	2						
MATUSIRO	43.80	9.7	7	50A	-2					8	33
CHITTAGONG	47.19	308.9	8	23	4					8	54
SHILLONG	48.97	312.5	8	32K	-1						
KAIMATA	51.07	140.9	8	53	4						
COBB RIVER	51.17	138.7	8	50	1						
TARATA	51.38	135.8	8	40	-11						
KARAPIRO	51.65	133.8	8	53	0						
CHATEAU	52.19	135.3	8	57	0						
WELLINGTON	52.61	138.0	8	58	-2						
MACQUARIE I.	53.02	159.2	9	3K	0						
TUAI	53.16	134.2	9	3	-1						
CHATRA	53.16	310.8	9	4A	0						
AFIAMALU	57.73	102.1	9	37K	0						
DUMONT	60.20	175.4	9	52	-2						
WILKES	60.96	188.8	9	57K	-2						
NEW DELHI	61.71	307.4	10	0	-4						
WARSAK DAM	68.40	310.5	10	47	0						
YAKUTSK	68.59	359.9	10	46K	-2	19	33	-4			
CAPE HALLETT	69.94	167.8	10	57	1						
QUETTA	70.56	305.2	10	59A	-1	19	57	-3			
TASHKENT	73.13	316.7	11	15	0						
MAWSON	75.10	201.4	11	26K	-1						
ASHKABAD	79.80	310.4	11	58	5						
VANNOVSKAYA	79.99	310.3	12	5	11						
SHIRAZ	82.43	301.0	12	6A	0	22	8	0	11 51	15	20 PP
SOUTH POLE	83.27	180.0	12	9	-2						
SVERDLOVSK	84.52	328.9	12	16K	-1						
MOULD BAY	101.44	13.2	13	33	-2						
RESOLUTE	107.49	11.3	18	8	777						
PENTICTON	108.45	40.2	18	12K	777						
BLUE MTS.	110.88	44.6	14	21	-234					17	27
WOODY	111.19	54.4	18	17	2						
EUREKA	112.89	50.0	14	28	-230						
DUGWAY	115.12	48.7	18	23K	0						
PRICE	116.76	49.0	18	27K	1						
GOLDEN	120.76	47.5	18	35	1						
ALBUQUERQUE	121.28	53.1	18	37	2						
MANHATTEN	127.27	45.0	18	38	-8						
WICHITA MTS.	127.52	51.0	18	48	1					20	49 PP
TULSA	129.20	48.5	18	51	1					21	58 SKP
BENI ABBES	129.41	303.6	18	51	1					21	57 PP
FAYETTEVILLE	130.30	47.6	18	53A	1					22	1 PP
FLORISSANT	131.73	42.6	18	57	2						
SHAWINIGAN	135.85	22.4	19	2	0						
BREBEUF	136.38	24.0	19	5	2						
ANTOFAGASTA	143.80	147.4	19	17	0						
AREQUIPA	148.70	137.7	19	32	7						
HUANCAYO	148.73	126.6	19	29	4						
BLACK RIVER	150.75	65.0	19	35	7						
LA PAZ	150.81	142.6	19	32	4						
SAN JUAN	160.62	52.0	19	42	1					20	25
TRINIDAD	168.22	70.2	19	50	2						

OCTOBER 21 2.H 5.M 13.S EPICENTRE 61.19-149.58 DEPTH= 0.KM

A=-0.41775 B=-0.24531 C= 0.87482 D=-0.5064 E= 0.8623
G=-0.7544 H=-0.4430 K=-0.4844 HT= -9.3

SE= 2.50

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
COLLEGE	3.78	11.5	1	8	7							
SITKA	8.42	113.2	2	4	-2				2	18		
MOULD BAY	18.27	22.6	4	19K	2	7	41	3				
VICTORIA	19.51	118.7	4	32	1							
PENTICTON	20.58	111.6	4	43A	0							
BANFF	21.18	102.8	4	54A	5							
LONGMIRE	21.58	119.4	4	53A	0	8	51	3				
SPOKANE	22.78	111.5	5	6	1	9	12	1				
RESOLUTE	23.39	33.1	5	13K	2							
BLUE MTS.	25.01	116.1	5	27A	0				5	42		
BUTTE	26.23	108.4	5	38	0				5	52	6	3 PP
MINERAL	26.98	127.8	5	45A	0							
BOZEMAN	27.19	107.1	5	47	0				6	1		
UKIAH	27.44	131.5	6	1	12							

CALISTOGA	28.11	131.0	5	55A	-1									
RENO	28.37	126.1	6	11A	13									
PETROPAVLOVK	28.57	277.1	5	57A	-3									
MAGADAN	28.64	293.6	5	59	-1									
BERKELEY	28.91	131.3	6	2A	-1									
ALERT	29.50	15.5	6	10K	2							6	30	
LICK	29.60	130.9	6	8A	-1									
THULE	29.84	28.0	6	14	3									
EUREKA	29.97	121.0	6	12	0	11	11	1	6	25	7	22	PP	
SALT LAKE C.	30.67	114.4	6	19	1									
DUGWAY	30.72	116.2	6	18A	-1									
PRIEST	31.03	130.6	6	21A	-1									
FLAMING GRGE	31.64	111.3	6	8	-19									
RAPID CITY	32.08	100.8	6	32	1									
PRICE	32.08	114.4	6	29	-2									
LARAMIE	33.09	106.6	6	10	-30									
PASADENA	33.72	128.9	6	45	0	12	8	0	6	58	7	5	*SP	
GLEN CANYON	33.94	118.0	6	44	-3									
GOLDEN	34.46	108.1	6	52	0									
YAKUTSK	36.07	307.8	7	4	-1	12	38	-7						
ALBUQUERQUE	37.87	113.9	7	20	0				7	34				
TUCSON TELE.	38.27	121.0	7	24	0				7	37	7	44	*SP	
MANHATTEN	38.99	99.5	7	29	-1	13	1	-28						
DUBUQUE	39.29	90.7	7	34A	2	13	15	-19						
LAWRENCE	39.81	98.5	7	36	-1									
SCHEFFERVLLE	41.53	60.0	7	51	0									
WICHITA MTS.	41.65	105.6	7	51	-1	14	56	47	8	16	9	42	PP	
HAWAII V.OB.	41.91	188.1	8	6	12						8	12	PP	
TULSA	42.00	101.8	7	54	-1	14	7	-7			9	47	PP	
ROLLA	42.27	96.3	7	55A	-2	14	12	-6						
FLORISSANT	42.29	94.1	7	56A	-1									
FAYETTEVILLE	42.61	100.1	7	58	-2						8	56		
LONDON ONT.	43.47	82.2	8	19	12									
SCORESBY SD.	43.57	22.7	8	9	2									
BLOOMINGTON	43.86	90.2	8	9A	-1	14	34	-7						
SHAWINIGAN	44.82	72.4	8	16	-1									
BREBEUF	45.21	74.0	8	19	-2	15	19	18			9	57	PCP	
MORGANTOWN	46.69	84.3	8	47	15									
PENNSYLVANIA	46.78	81.6	8	33K	0									
BLACKSBURG	48.36	86.7	8	44	-1						9	1		
PALISADES	48.50	78.2	8	47	0	15	26	-22	9	4	10	26	PCP	
FORDHAM	48.64	78.3	9	3	15	15	45	-5						
WESTON	48.66	75.1	8	47	-1									
TROMSOE	49.22	5.3	8	54	2									
KEVO	49.32	1.6	8	53	0						9	15		
MATUSIRO	50.37	275.4	8	59	-2									
HALIFAX	50.46	67.5	9	1A	-1									
CHANGCHUN	50.69	291.2	9	1A	-2	16	11	-7						
KIRUNA	51.08	4.9	9	5	-1				9	23				
APATITY	51.54	358.5	9	9K	-1									
SODANKYLA	51.71	1.9	9	11K	0									
IRKUTSK	52.59	312.0	9	16	-2	16	41	-3						
ABUYAMA	52.99	276.3	9	18A	-3									
SKALSTUGAN	54.80	9.8	9	33	-1				9	54				
KAJAANI	55.03	1.5	9	36	0									
UMEA	55.07	5.5	9	34	-2	17	7	-11	9	50				
ULAN-BATOR	55.17	307.2	9	37A	0									
BERGEN	57.21	14.5	10	5	14									
PEKING	57.80	295.2	9	55	0	17	49	-5						
VIBORG	58.42	0.9	9	57	-3									
KONGSBERG	58.42	12.2	9	59	-1						10	28	PCP	
NURMIJARVI	58.55	3.3	10	0K	-1						10	20		
UPPSALA	58.89	7.5	10	2	-1				10	16				
HELSINKI	58.90	3.2	10	2	-1						10	23		
PULKOVO	59.37	0.1	10	6K	0									
SVERDLOVSK	59.96	341.4	10	9	-1	18	19	-3						
ESEN BULAK	60.38	313.4	10	12	-1									
GOTEBORG	60.58	11.2	10	13	-2				10	28				
KARLSKRONA	62.41	9.3	10	25	-2				10	40				
MOSCOW	63.29	355.4	10	40	7									
WITTEVFEN	64.78	15.7	10	58	15									
LANCHOW	66.39	302.1	10	51	-2									
BENSBERG	66.66	15.8	10	54	-1						11	17		
HALLE	66.69	12.5	10	38	-17						11	8		
COLLMBERG	67.00	11.8	10	57	0						13	55		
DOURBES	67.14	17.7	10	57	-1	19	51	-1						
JENA	67.22	12.8	10	57	-1	19	47	-6	11	14	13	30	PP	
FOLINIERE	67.61	21.6	11	0	-1									

PARIS	68.07	19.5	11 19	15								
PRAGUE	68.35	11.0	11 6	1								
PRUHONICE	68.45	10.9	11 5K	-1								
RACIBORZ	68.65	8.4	11 2	-5							11 25	PCP
KRAKOW	68.80	7.2	11 7	-1							11 22	PCP
STRASBOURG	69.07	15.9	11 26	16								
STUTTGART	69.08	14.8	11 9	-1				11 32				
ALMATA-Z	69.15	325.2	11 8	-2								
KASPERSKE H.	69.20	11.7	11 9	-2							11 52	
GARCHY	69.65	19.5	10 13	-60							10 39	
SKALNATE PL.	69.68	7.1	11 21	7							12 3	
BESANCON	70.13	17.4	11 38	22							13 45	
UZHGOROD	70.34	5.7	11 18	0								
BRATISLAVA	70.47	9.4	11 19	1							11 40	PCP
SAN JUAN	70.94	86.5	11 16	-5								
CHENGTU	70.98	299.0	11 19	-2								
BUDAPEST	71.30	8.1	11 31	8							20 37	
KISHINEV	72.14	1.1	11 34	6								
TASHKENT	73.07	330.4	11 34	0	20 57	-4						
BAGNERES	73.22	22.7	11 33	-2							12 5	
ISOLA	73.29	17.3	11 35	0								
TOLEDO	75.44	26.7	11 48	0							21 38	
KHOROG	76.13	327.4	11 52	1								
TIFLIS	76.78	349.0	11 55	0	21 40	-2						
ALICANTE	77.66	24.4	12 13	13								
CHINCHINA	77.96	101.8	12 25	23								
MALAGA	78.39	27.9	12 5A	1	22 1	1						
ASHKABAD	78.62	337.8	12 4	-1	22 0	-2						
VANNOVSKAYA	78.66	338.0	12 6	1								
BOGOTA	79.00	100.5	12 21	14							31 8	SSS
WARSAK DAM	79.41	326.2	12 15	5								
SHILLONG	80.42	306.4	12 16A	1								
ATHENS	81.04	5.4	12 32K	14								
TEHERAN	81.91	342.9	12 16	-7	22 13	-23						
NEW DELHI	82.85	319.8	12 25	-3								
CHITTAGONG	83.33	305.1	12 30	0				12 45				
QUETTA	84.23	328.8	12 34	-1	22 55	-5		12 53			23 30	*SS
KSARA	85.23	355.4	12 42	2				13 3				
PORT MORESBY	85.81	242.1	12 55	12								
SHIRAZ	87.72	340.9	12 51K	-1	23 22	-11		13 9			16 21	PP
CHARTERS TS.	95.75	238.2	13 27	-2							13 48	
KIMBERLEY	147.34	9.2	19 46K	3								
SOUTH POLE	151.02	180.0	19 52	3								
MIRNY	153.00	231.5	20 1	9							20 29	

OCTOBER 22 15.H 23.M 37.S EPICENTRE 49.59 156.05 DEPTH= 56.KM

A=-0.59475 B= 0.26417 C= 0.75927 D= 0.4059 E= 0.9139
G=-0.6939 H= 0.3082 K=-0.6508 HT= -5.3

DEPTH OF FOCUS= 0.004R

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
PETROPAVLOVK	3.80	24.4	0	58A	0	1	41	-1				
KURILSK	7.06	234.9	1	44	1	3	10	7				
KLYUCHI	7.34	21.5	1	47	0						3	51
UGLEGORSK	9.15	272.1	2	15	3							
Y.-SAKHLINSK	9.25	258.9	2	18	5						3	53
MAGADAN	10.43	345.1	2	28	-1							
TUKUBASAN	17.70	227.0	4	3K	-1	7	24	7				
VLADIVOSTOK	17.84	257.9	4	5	-1	7	29	9				
MATUSIRO	18.38	231.5	4	10	-2	7	38	6				
YAKUTSK	19.16	320.4				7	55	6			8	11 SS
ABUYAMA	21.03	233.3	4	41	0							
CHANGCHUN	21.76	266.4	4	46	-2							
PEKING	29.56	266.5	6	1	0	10	46	-5				
ZO-SE	31.98	247.8	6	23	0	11	31	2				
ULAN-BATOR	31.99	286.2	6	24	1							
IRKUTSK	32.15	294.9	6	23	-1						7	54 PPP
COLLEGE	32.71	41.0	6	29	0	11	45	5				
NANKING	32.78	251.8	6	29	-1	11	43	1				
PAOTOW	33.26	272.1	6	29	-5	11	46	-3				
SIAN	37.62	264.0	7	13	2							

ESEN BULAK	39.23	289.0	7	25	1						
LANCHOW	39.83	270.4	7	28	-1						
MOULD BAY	41.25	21.2	7	40A	-1	13	47	-4			
HONG KONG	42.68	245.8	7	51	-2	14	39	27			
BAGUIO CITY	43.78	233.6	8	4	2	14	53	25			
ALERT	46.72	6.5	8	30	5	15	9	-1			
RESOLUTE	47.51	19.9	8	31A	0						
KUNMING	47.70	259.4	8	32	-1	15	21	-3			
VICTORIA	50.33	58.4	8	53A	0						
THULE	51.11	12.3	8	57	-2						
PENTICTON	51.96	55.8	9	5A	0						
LONGMIRE	52.23	59.5	9	7	0	16	29	2			
RABAUL	53.68	184.8	9	18	0				24	28	
FRUNSE	54.15	296.2	9	21	-1						
SHILLONG	54.42	268.6	9	25A	1						
KEVO	55.31	340.8	9	29	-1				17	43	PS
APATITY	55.51	336.9	9	39	8				11	53	PP
BLUE MTS.	55.89	59.1	9	34A	0	17	26	10	11	38	PP
MINERAL	56.23	65.7	9	37A	0				9	59	
CHATRA	56.61	273.3	9	40	1						
CHITTAGONG	56.70	265.9	9	40A	1				11	39	PPP
CALISTOGA	56.73	67.8	9	40A	0						
SODANKYLA	57.30	339.2	9	41	-3						
BERKELEY	57.41	68.3	9	45A	0	17	42	6	21	29	SS
BUTTE	57.75	55.5	9	38	-9				10	1	
RENO	57.80	65.4	9	49K	1						
LICK	58.13	68.4	9	50A	0						
TASHKENT	58.20	297.8	9	50	-1				13	26	PPP
KIRUNA	58.27	341.8	9	49	-2						
BOZEMAN	58.78	55.0	9	55	0				10	43	PCP
PORT MORESBY	59.25	190.2	9	58A	0	18	3	3			
KHOROG	59.37	293.0	10	5	6						
PRIEST	59.51	68.9	10	1K	1						
FUREKA	60.09	63.2	10	4	0	19	1	50	12	41	PP
DUZHANBE	60.29	295.6	10	4	-1						
DUGWAY	61.43	60.7	10	14A	1						
SALT LAKE C.	61.59	59.6	10	15	1						
LAHORE	61.62	286.2	10	14	0						
WARSAK DAM	61.68	290.0	10	13	-1						
UMEA	61.74	339.4	10	12	-3				14	18	
PASADENA	62.36	69.0	10	19	0	18	50	11			
PULKOVO	62.45	332.4	10	19A	-1				10	59	PCP
FLAMING GRGE	62.85	58.1	10	6	-16						
PRICE	62.96	60.0	10	23	0						
MOSCOW	63.20	326.1	10	23	-2	18	54	4	12	43	PP
NURMIJARVI	63.45	335.5	10	24	-2	18	51	-2	14	37	PPP
HELSINKI	63.66	335.1	10	25	-2						
LARAMIE	64.66	55.6	10	35	1						
DARWIN	65.58	207.2	10	41	1						
UPPSALA	65.81	338.5	10	42	1						
GOLDEN	65.91	56.7	10	43	1						
ASHKABAD	66.67	301.4	10	46	-1	19	36	3	13	14	PP
QUETTA	67.13	290.0	10	49	-1						
KONGSBERG	67.74	342.3	10	53	-1				11	38	PCP
BERGEN	67.84	344.8	10	54	0						
CHARTERS TS.	69.91	189.8	11	7	0				11	28	
SCHEFFERVLLE	69.94	24.8	11	6A	-1						
MANHATTEN	70.91	51.7	11	12	-1						
TIFLIS	70.93	312.4	11	12	-1						
POONA	71.12	276.5	11	15K	1						
DUBUQUE	71.27	45.8	11	17	2						
BOMBAY	71.51	277.6	11	21	4	21	19	49			
LAWRENCE	71.76	51.0	11	17	-1						
TEHERAN	72.09	304.2	11	20	0						
LWOW	72.76	329.7	11	29	5						
WICHITA MTS.	73.23	56.1	11	27A	0	20	55	6	13	54	PP
TULSA	73.82	53.4	11	30	0	20	55	-1	25	58	SS
KRAKOW	73.86	332.3	11	28	-2						
ROLLA	74.27	49.6	11	33	0						
DURHAM	74.33	346.8				21	3	1			
ST. LOUIS 1	74.51	48.1	11	34	0						
FAYETTEVILLE	74.51	52.3	11	34A	0						
COLLMBERG	74.66	337.0	11	34	-1				14	37	
HALLE	74.74	337.7	11	45	9				12	9	
SHAWINIGAN	75.30	32.5	11	38A	-1						
JENA	75.36	337.7	11	37	-2	21	13	0	14	33	PP
PRUHONICE	75.46	335.5	11	39K	-1	21	18	4	26	57	SS
DE BILT	75.70	341.9	11	43	2				17	38	
BLOOMINGTON	75.84	45.3	11	41A	-1						

BREBEUF	75.90	33.6	11	41	-1			11	55			
SHIRAZ	76.05	299.3	11	43A	0					28	43	PKKP
RENSBERG	76.36	340.3	11	44	-1					12	11	
BRATISLAVA	76.38	333.1	11	46	1							
BUDAPEST	76.42	331.6	11	50	5	21	15 -10			14	55	PP
KASPERSKE H.	76.50	335.7	11	46K	0					14	34	PP
VIENNA-H.	76.52	333.6	11	47	1					12	3	PCP
BRISBANE	76.69	183.0	11	49	2	21	41 13					
KEW	77.32	345.1	11	51	1							
DOURBES	77.72	341.6	11	51	-1							
STUTTGART	77.92	338.2	11	53	0							
MORGANTOWN	78.39	40.8	11	56K	0							
STRASBOURG	78.46	339.1	11	57	1	21	29 -18			31	23	
ISTANBUL UN.	78.47	322.0	11	55	-1							
LJUBLJANA	79.05	333.8	12	1	1					12	23	
PARIS	79.37	342.6	12	1	0					12	29	
PALISADES	79.66	36.1	12	1	-2	22	1 2					
FOLINIERE	79.96	344.5	12	4	-1							
HALIFAX	80.00	27.6	12	5	0							
BESANCON	80.12	339.8	12	4	-1							
BLACKSBURG	80.20	42.5	12	4	-2	22	18 13					
GARCHY	80.71	341.7	12	18	9					14	15	
PAVIA	81.30	337.0	12	12	0					31	45	SSS
ROSELEND	81.44	338.9	12	13	1							
KSARA	81.47	313.3	12	12	-1	22	34 16			15	20	PP
CLERMONT-FD.	82.15	341.2	12	16	0							
ROME	83.44	333.5	12	23	0	23	8 30			23	57	PS
CANBERRA	84.77	185.8	12	33	4							
BAGNERES	85.34	342.5	12	33	1							
TOOLANGI	87.29	188.4	12	44	2					13	29	
MUNDARING	88.59	213.0	12	50	2							
TOLEDO	89.20	344.8	12	51	0	23	22 -11					
WELLINGTON	91.98	166.0				23	31 -27			30	35	SS
MALAGA	92.34	344.4	13	3	-2	23	36 -25			16	43	PP
BROKEN HILL	124.94	290.5	18	56	2							
MIRNY	125.29	205.9	18	54	-1							
MAWSON	135.65	213.2	19	12	-2							
BYRD STATION	137.44	165.1	19	11	-6							
KIMBERLEY	137.75	281.0	19	18	0							
SOUTH POLE	139.40	180.0	19	13	-8							

OCTOBER 25 9.H 34.M 11.S EPICENTRE 2.29 126.92 DEPTH= 26.KM

A=-0.60027 B= 0.79882 C= 0.03969 D= 0.7994 E= 0.6007
G=-0.0238 H= 0.0317 K=-0.9992 HT= 7.2

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	
MANILA	13.59	335.2	3	14	0	6	4	19					
HENGCHUN	20.49	343.4	4	40	1								
TAWU	20.78	344.1	4	42	0								
GUAM	20.82	56.9	4	41	-1								
TAITUNG	21.10	345.0	4	42	-3	8	38	5					
LEMBANG	21.29	244.7	4	46	-1	8	37	0					
HSINKONG	21.38	345.9	4	33	-15								
DJAKARTA	21.76	247.2	4	56K	4	8	38	-8					
ALISHAN	21.92	344.8	4	51	-2								
TANGERANG	21.94	247.4	4	54K	1	8	49	0					
ISIGAKIZIMA	22.07	353.3	4	57	2								
HWALIEN	22.15	347.0	4	59	3	8	58	5					
PORT MORESBY	23.26	120.2	5	6A	0	9	13	0	5	21	5	33	PP
HONG KONG	23.43	329.1	5	8	0	9	12	-4			5	41	PP
MAWASHI	23.81	1.7	5	19	7								
CANTON	24.51	328.6	5	17A	-2	9	28	-7			5	41	*SP
RABAUL	26.04	104.3	5	30	-3						9	47	
ZO-SE	29.16	349.9	6	1	0	10	49	-2			6	24	*SP
CHARTERS TS.	29.23	140.4	6	1	-1						14	8	
KAGOSIMA	29.32	6.3	6	6	3						6	55	
NAGASAKI	30.41	4.9	6	13K	1	11	11	1					
KUMAMOTO	30.58	6.3	6	3	-11	10	39	-34					
NANKING	30.59	346.3	6	14	0						6	37	*SP
ASHIZURI	30.80	10.0	6	15	-1	11	17	0					
OOITA	31.09	7.6	6	18	-1								
KOTI	31.71	10.5	6	24	0	11	31	0					

SIOMISAKI	32.09	14.0	6	27	0	11	32	-5		
KUNMING	32.53	316.3	6	30A	-1	11	39	-5	7	43 PP
SUMOTO	32.75	12.3	6	33	0	11	46	-1		
OSAKA	33.18	13.0	6	36	-1				8	43
NARA	33.28	13.4	6	39	1					
ABUYAMA	33.40	13.0	6	38K	-1					
MATSUE	33.48	9.1	6	42	3					
KYOTO	33.58	13.1	6	37	-3	11	52	-8		
KAMEYAMA	33.59	14.3	6	42	2	11	57	-3		
HAMAMATU	33.80	16.1	6	42	0	12	1	-2		
OMAESAKI	33.83	16.9	6	43	1					
TOYOOKA	33.88	11.6	6	43	0					
HIKONE	33.94	13.7	6	45	2	12	6	0		
NAGOYA	34.02	14.8	6	44K	0	12	6	-1		
GIHU	34.19	14.4	6	46	1	12	6	-3		
SHIZUOKA	34.22	16.9	6	45	-1					
TSURUGA	34.26	13.3							7	4
AJIRO	34.51	17.8	6	46	-2					
MISIMA	34.53	17.5	6	42	-6					
IIDA	34.58	15.8	6	51	2					
HUNATU	34.83	17.1	6	50	-1				8	10
HONIARA	34.90	110.0	6	50	-2				14	51
KOHU	34.92	16.7	6	50	-2	12	8	-13		
YOKOHAMA	35.03	18.3	6	27	-26					
PORT BLAIR	35.16	287.0	6	49	-5				17	24
TOKYO C.M.O.	35.29	18.2	7	8	13	12	49	23		
MATUMOTO	35.30	15.5	6	55	0					
TOYAMA	35.53	14.3	6	59	2	12	30	0		
OIWAKE	35.54	16.3	6	56	-1	12	26	-4		
MUNDARING	35.56	195.8	6	53	-4	12	27	-4		
CHENGTU	35.59	324.8	6	56A	-1	12	22	-9	8	5 PP
KUMAGAYA	35.61	17.4	6	54	-4					
MATUSIRO	35.64	15.7	6	55K	-3	12	27	-5		
PERTH	35.64	196.3	6	59	1	12	31	-1	8	24 PP
MAEBASI	35.75	16.9	6	58	-1					
NAGANO	35.76	15.6	6	59	0	13	31	57		
TUKUBASAN	35.90	18.3	6	56K	-4	12	26	-10		
SIAN	35.96	334.2	6	59	-2	12	29	-8		
UTUNOMIYA	36.13	17.8	7	0	-2					
MITO	36.16	18.7	7	1	-1				7	59
SHIRAKAWA	36.76	17.9	7	8	1					
ONAHAMA	36.82	18.8	7	7	-1					
HUKUSIMA	37.42	17.8	7	14	1	12	57	-2		
YAMAGATA	37.84	17.3	7	17K	1	13	4	-2		
SENDAI	38.03	18.0	7	17	-1	13	7	-1		
SAKATA	38.30	16.3	7	24	4					
ISINOMAKI	38.31	18.4	7	19	-1	13	12	-1		
BRISBANE	38.62	141.6	7	24A	1	13	15	-2		
ADELAIDE	38.68	164.4	7	23A	0	13	15	-3		
PEKING	38.81	346.8	7	25A	0	13	17	-3	9	23 PP
MIZUSAWA	38.89	17.7	7	24	-1	13	20	-2		
MORIOKA	39.43	17.4	7	28	-2	13	33	3		
CHITTAGONG	39.49	303.2	7	30	0	13	26	-5	9	26 PPP
LANCHOW	39.81	330.2	7	33A	0	13	29	-6	7	55 *SP
HATINOHE	40.30	17.3	7	37	0					
AOMORI	40.35	16.3	7	39	2					
VLADIVOSTOK	40.89	5.6	7	42	0	13	48	-4		
SHILLONG	40.90	307.6	7	38A	-4	13	43	-9		
PAOTOW	41.07	340.3	7	43	0	13	48	-6	9	20 PP
HAKODATE	41.26	15.7	7	45	0					
CHANGCHUN	41.39	358.2	7	44	-2	13	53	-6	9	21 PP
MORI	41.48	15.4	7	49	2	14	0	0		
SUTTSU	42.05	14.7	7	52	1	14	8	-1		
URAKAWA	42.16	17.6	7	52	0					
CALCUTTA	42.47	301.4	8	3	8	13	38	-37		
RIVERVIEW	42.56	149.7	7	56A	1	14	12	-4	8	17 9 40 PP
SAPPORO	42.60	15.7	7	54K	-2	14	14	-3		
CANBERRA	42.75	153.1	7	57A	0	14	16	-3	8	18 9 39 PP
OBIHIRO	42.99	17.6	8	0	1					
KOUMAC	43.08	123.6	8	1	1					
TOOLANGI	43.24	158.3	8	1A	0	14	25	-1	8	23 9 44 PP
KUSIRO	43.41	18.7	8	2	0	14	24	-5		
ASAHIGAWA	43.53	16.3	8	4	1					
NEMURO	44.11	19.6	8	8	0					
ABASHIRI	44.31	17.9	8	10	0					
WAKKANAI	44.87	14.7	8	14	0					
BOKARO	45.15	301.8	8	17	1	14	48	-6		10 37 PPP
CHATRA	45.23	306.4	8	17	0					
PORT VILA	45.38	117.7	8	17	-1					

VISHAKHAPTNM	45.46	292.7	8	21K	2	14	58	0			10	5 PP
NOUMEA	45.67	124.5	8	22K	1							
Y.-SAKHLINSK	46.62	14.8	8	27	-1	15	13	-2				
MADRAS	47.45	285.5	8	35K	1	15	25	-1			10	25 PP
ULAN-BATOR	48.63	342.1	8	40A	-4							
IRKUTSK	53.26	342.9	9	19K	0	16	47	0				
DEHRA DUN	53.97	306.3	9	21K	-3	16	51	-6			19	7 SCS
NEW DELHI	54.05	304.0	9	21A	-4	16	50	-8			19	11 SCS
POONA	54.40	291.1	9	25K	-2	16	59	-3			17	7 PS
BOMBAY	55.43	291.3	9	34	-1	17	8	-8			11	44 PP
PETROPAVLOVK	56.97	22.3	9	45K	-1	17	31	-6				
LAHORE	57.39	306.4	9	42	-7							
YAKUTSK	59.62	1.5	10	2	-2	18	5	-6				
ALMATA-2	59.96	320.1	10	7	0							
COBB RIVER	59.96	141.2	10	6	-1							
KAIMATA	59.99	143.2	10	16	9							
TARATA	60.00	138.6	10	8	1							
MAGADAN	60.03	13.8	10	7	0	18	18	2				
KARAPIRO	60.13	136.8	10	7	-1						14	5 SCP
WARSAK DAM	60.41	308.2	10	8	-2	18	12	-9				
ROXBURGH	60.60	147.0				18	49	25				
CHATEAU	60.77	138.1	10	12	0							
WELLINGTON	61.36	140.5	10	14	-2	18	25	-8			25	49 SSS
GEBBIES PASS	61.41	143.7	10	15	-1							
FRUNSE	61.55	318.5	10	17	0							
TUAI	61.66	137.0	10	17	-1							
KARACHI	61.83	296.9	10	18	-1	18	37	-2				
MACQUARIE I.	62.49	159.6	10	24K	0							
AFIAMALU	62.84	106.8	10	24A	-2	18	58	6				
QUETTA	63.07	302.8	10	25A	-3	18	51	-4				
DUZHANBE	64.03	312.2	10	38A	4	19	14	7				
TASHKENT	64.60	315.2	10	38A	0	19	14	0				
DUMONT	69.44	174.5	11	6	-2	20	6	-6			13	38 PP
WILKES	69.48	187.0	11	7A	-1	20	10	-3	11	24	11	30 PCP
ASHKABAD	71.77	309.2	11	21	-1	20	44	5				
MIRNY	72.81	193.5	11	28	0	20	49	-2			14	13 PP
HONOLULU	75.18	68.7	11	44	2	21	23	5			12	11 PCP
KIPAPA	75.26	68.6	11	44	2						12	11 PCP
SVERDLOVSK	75.29	328.6	11	41	-2	21	8	-11				
SHIRAZ	75.32	299.9	11	42A	-1	21	12	-7	12	2	14	34 PP
TEHERAN	76.93	306.0	11	52	0	21	36	-1			25	54 SS
CAPE HALLETT	79.37	167.7	12	5	0							
TANANARIVE	80.70	250.5	12	15A	2						15	17 PP
GORIS	81.29	309.4	12	17K	1	22	24	1				
MAWSON	82.47	200.3	12	21A	-1	22	31	-4	12	34		
TIFLIS	82.60	311.6	12	23	1	22	35	-1				
COLLEGE	85.92	25.3	12	38	-1	23	9	0			15	59 PP
MOSCOW	87.72	325.5	12	49K	1	23	22	-5				
APATITY	89.24	337.5	12	59A	4							
KSARA	89.61	303.7	12	59	2	23	51	7			24	57 PS
SIMFEROPOL	90.39	314.8	13	2	2							
PULKOVO	91.37	329.8	13	4	-1							
SODANKYLA	91.86	337.6	13	7	0						30	26 PKKP
SOUTH POLE	92.27	180.0	13	9	0	23	41	-27				
MOULD BAY	93.32	12.7	13	12K	-2							
HELSINKI	93.96	330.6	13	20	3							
NURMIJARVI	94.04	331.0	13	17	0	24	22	-1				
KIRUNA	94.07	338.6	13	17A	0						13	38
ALERT	95.20	1.2	13	24	1						17	13
UMEA	95.26	334.7	13	33	10							
UPPSALA	97.61	331.3	13	33	0						13	52
LWIRO	98.20	268.1	13	38K	2						16	32
BULAWAYO	98.59	250.1	13	39A	1							
BROKEN HILL	98.75	255.8	13	40A	1							
RESOLUTE	99.19	10.3	13	40K	-1							
VICTORIA	101.18	39.7	13	50	0							
BRATISLAVA	101.38	320.0									18	35 PP
KIMBERLEY	101.74	241.3	13	52A	0							
PRUHONICE	102.43	322.3	13	56	1						17	18 PP
LONGMIRE	102.73	41.1	12	55	-62						18	3
COLLMBERG	102.91	323.9	13	58	1						22	45
PENTICTON	103.31	38.1	13	59	0							
JENA	103.88	323.9	14	3	1						18	19 PP
CALISTOGA	104.44	49.2	13	59A	-5							
MINERAL	104.71	47.3	14	8A	3						18	23
BERKELEY	104.88	49.9	14	31	25	24	44	1			18	18 PP
LICK	105.49	50.3	14	12K	777						17	17
STUTTGART	106.08	322.4	18	3	777						18	45 PP
RENO	106.26	47.7	17	57A	777							

BLUE MTS.	106.33	41.9	14	12	777	24	44	-5	18	36 PP
PRIEST	106.57	51.3	14	14K	777					
HUNGRY HORSE	107.10	37.6	14	16	777					
ROSELEND	108.96	320.2	18	35	777					
BUTTE	108.97	39.4	17	51	777				29	45 PKKP
PASADENA	109.08	52.7	14	27	777	25	4	3	18	57 PP
EUREKA	109.10	46.8	18	47	777				14	22 P
GARCHY	110.48	322.9	18	57	27					
DUGWAY	111.11	45.2	14	34K	-237					
GLEN CANYON	113.22	48.0							29	25 PKKP
BAGNERES	114.29	319.9	18	27	-11					
TUCSON	115.51	52.6	18	42	2				29	21 PKKP
TUCSON TELE.	115.57	52.4	18	42	2				29	11 PKKP
LARAMIE	115.60	41.5	18	13	-27					
GOLDEN	116.50	43.0	18	43	1					
ALICANTE	116.92	315.5	18	44	1					
ALBUQUERQUE	117.84	48.2	18	47	3				29	12 PKKP
TOLEDO	118.61	318.6	18	49	3					
ALMERIA	119.01	314.9	18	49K	2				20	1 PP
MALAGA	120.43	315.6	18	52	3				31	17
BENI ABBES	121.75	307.7	18	53	1					
SCHEFFERVLLE	121.97	9.3	18	59	7					
MANHATTEN	122.56	39.4	18	54	0					
LAWRENCE	123.53	38.9	18	55	0					
WICHITA MTS.	123.66	44.9	18	57	1	26	2	7	28	45 PKKP
TULSA	124.95	42.2	18	59	1				20	45 PP
ROLLA	126.27	38.0	19	1K	0					
FLORISSANT	126.61	36.1	19	2	1					
ST. LOUIS 1	126.80	36.2	19	2	0					
LITTLE ROCK	127.89	41.3	19	5	1					
LONDON ONT.	128.26	26.1	19	5	0					
SHAWINIGAN	128.36	17.3	19	6A	1					
BLOOMINGTON	128.55	33.2	19	10	5					
BREBEUF	129.04	18.5	19	8K	2					
PENNSYLVANIA	131.52	25.2	19	11A	0					
MORGANTOWN	131.54	27.8	19	13	2				21	29
BLACKSBURG	133.21	30.2	19	15	1				22	45
HOPE	149.17	48.2	19	48	6					
SAN JUAN	155.78	31.5	19	55	4				23	56 PP
HUANCAYO	155.91	114.8	19	56	4					
CHINCHINA	156.35	72.2	19	56	4				24	3 PP
BOGOTA	157.93	71.9	19	58	4				24	10 PP
FUQUENE	157.98	69.5	19	57	3					
TRINIDAD	164.71	32.6	20	5	4				20	58 PKP2

OCTOBER 25 15.H 52.M 28.S EPICENTRE 8.16 -82.76 DEPTH= 50.KM

A= 0.12480 B=-0.98210 C= 0.14106 D=-0.9920 E=-0.1261
G= 0.0178 H=-0.1399 K=-0.9900 HT= 6.8

DEPTH OF FOCUS= 0.003R

SE= 3.08

	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
BALBOA HTS.	3.26	75.7	0	49	-1							
CHINCHINA	7.77	113.7	1	53	0						2	12 P*
SAN SALVADOR	8.37	311.5	1	56	-5							
BOGOTA	9.32	111.7	2	16A	2	3	38	-21			2	35 PPP
FUQUENE	9.35	106.1	2	15	0							
HOPE	11.39	30.3	2	42	0							
COMITAN	12.18	312.2	2	56	3	5	20	12			3	32
OAXACA	16.25	304.1	3	56	10							
VERA CRUZ	16.99	311.6	4	0	5						9	12
SAN JUAN	19.10	56.2	4	20	-1						8	59
TACUBAYA	19.47	306.7	4	28	3							
TRINIDAD	21.21	81.6	4	43	0	8	39	8			9	20 SS
HUANCAYO	21.40	159.7	4	36	-9	9	24	50				
ST. KITTS	21.54	63.0	4	49	3							
FORT FRANCE	22.15	70.9	4	53	1	9	0	12				
HOUSTON	24.51	332.7	5	17	2							
CHAPEL HILL	27.83	6.5	5	46	0							
LITTLE ROCK	27.92	343.0	5	43	-4							
TULSA	30.08	338.6	6	5	-1	11	8	8				
WICHITA MTS.	30.17	333.4	6	4	-3						7	19 PP

ROLLA	30.74	345.8	6	9	-3	11	7	-4			
LUBBOCK	30.83	327.8	6	14	1	11	46	34			
BLOOMINGTON	31.07	354.4	6	13	-2	11	10	-6			
ST. LOUIS 1	31.08	348.6	6	15	0						
FLORISSANT	31.26	348.5	6	15	-2						
MORGANTOWN	31.43	4.2	6	18	0	10	55	-26			
LAWRENCE	32.67	341.8	6	25	-4						
PENNSYLVANIA	32.79	6.9	6	30A	0						
CLEVELAND	33.20	1.7	6	39K	5	11	51	2			
MANHATTEN	33.30	340.2	6	30	-5						
PALISADES	33.64	12.1	6	42	4	12	2	6			
ANTOFAGASTA	33.89	159.4	6	40	0						
LONDON ONT.	34.77	2.0	6	45	-2						
DUBUQUE	34.91	349.7				12	14	-2			
TUCSON TELE.	35.38	316.7	6	52	0						
TUCSON	35.40	316.5	6	52	-1						
GOLDEN	37.36	330.7	7	9	0						
BREBEUF	38.03	10.4	7	15	0	13	2	-1		8	50 PP
LARAMIE	38.72	332.2	7	22	1					9	22
GLEN CANYON	38.82	322.0	7	17	-4						
SHAWINIGAN	39.20	10.9	7	24A	0						
PRICE	40.14	325.7	7	34	2						
PASADENA	41.59	313.6	7	49	5	14	8	11		9	34 PP
DUGWAY	41.67	324.8	7	34A	-11						
SANTA LUCIA	42.95	165.1	7	55	0	14	26	10			
EUREKA	43.08	321.6	7	57	1					9	54 PCP
PRIEST	44.34	314.6	8	11A	4						
BOZEMAN	44.62	331.8	8	8	-1						
RENO	45.54	319.2	8	17A	1						
LICK	45.62	315.6	8	18K	1					12	54
BERKELEY	46.31	315.9	8	23K	1	15	12	7			
CALISTOGA	46.91	316.6	8	28A	1						
MINERAL	47.13	319.2	8	31K	2					13	4
BLUE MTS.	47.22	326.7	8	26	-3					10	26 PP
HUNGRY HORSE	47.97	332.2	8	35	0					13	10
SCHEFFERVLLE	48.25	12.3	8	36A	-2						
LONGMIRE	50.87	326.0	8	57	-1	15	58	-11		13	16
PENTICTON	51.32	329.8	9	1	0						
VICTORIA	52.80	327.0	9	11	-1						
RESOLUTE	66.84	356.5	10	47A	-1						
MOULD BAY	70.89	351.3	11	10	-3						
COLLEGE	72.19	336.0	11	23	2					15	56
SERRA PILAR	72.75	49.5	11	25A	1						
HONOLULU	73.47	289.8				21	12	19		21	54
ALERT	74.80	2.7	11	36	0						
MALAGA	75.85	54.3	11	42	0	21	42	22		14	20 PP
TOLEDO	76.16	51.0	11	44	0	21	31	8		26	24 SS
GRANADA	76.49	53.8	11	48K	2					24	9
BENI ABBES	77.83	61.0	11	53	0					12	0 PCP
FOLINIERE	78.83	41.9	11	57	-2						
ALICANTE	78.95	52.5	11	47	-13						
BAGNERES	79.31	47.7	12	8	6						
STUTTGART	85.27	41.6	12	31	-1						
JENA	86.45	39.2	12	43	5					13	5
HALLE	86.60	38.6	12	38	-1						
COLLMBERG	87.28	38.7	12	42	0					17	18
PRUHONICE	88.49	39.8								13	25
BRATISLAVA	90.50	41.3	12	59	2						
SOUTH POLE	98.11	180.0	13	32	0						
WILKES	121.19	186.2	18	49	2						
MATUSIRO	121.23	321.9	18	48	1					30	24 PS
TOOLANGI	127.55	228.4	19	0	1						
CHARTERS TS.	131.18	250.5	19	8	2						
WARSAK DAM	131.50	28.7	19	7	0						
QUETTA	132.04	36.0	19	10	2					22	35 PKS
CHITTAGONG	149.20	9.8	19	40	2				19	57	23 5 PKS
MUNDARING	150.47	214.1	19	43	3						

OCTOBER 25 20.H 6.M 4.S EPICENTRE -61.70 154.73 DEPTH= 0.KM

A=-0.43091 B= 0.20340 C=-0.87917 D= 0.4269 E= 0.9043
G= 0.7950 H=-0.3753 K=-0.4765 HT= -9.5

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

MACQUARIE I.	7.56	19.0	1	51	-3						
DUMONT	8.11	225.8	1	59	-3						
CAPE HALLETT	12.19	157.2	2	54	-4						
ROXBURGH	18.34	34.3	4	19A	2	7	46	6			
WILKES	19.57	237.2	4	33A	1	8	2	-5			
GEBBIES PASS	20.92	38.7	4	48	2	8	52	17			
KAIMATA	21.65	35.1	4	56	2	9	4	15			
COBB RIVER	23.35	36.1	5	12	1	9	38	18			
WELLINGTON	23.76	39.9	5	16	1	9	36	8			
TOOLANGI	24.84	342.3	5	25	0	9	57	11	5	37	6 11 PP
CHATEAU	25.91	39.2	5	35	0						
MIRNY	26.36	232.5	5	40	1	10	16	5			6 27 PP
CANBERRA	26.65	349.5	5	42A	0	10	9	-7	5	52	11 27 SS
TUAI	26.77	41.4	5	43	0						
KARAPIRO	27.08	38.1	6	0	14						
AUCKLAND	27.85	36.1									6 26
RIVERVIEW	27.99	353.6	5	55A	1						6 39 PP
SOUTH POLE	28.46	180.0	6	0	2						
ADELAIDE	28.63	331.8	6	0A	0	10	52	4			12 12 SS
BRISBANE	34.33	356.9	6	50	0	12	22	4			
MAWSON	36.28	220.3	7	8A	1	12	53	5	7	16	8 42 PP
MUNDARING	38.73	302.2	7	27	0						13 28 *SS
PERTH	38.90	301.8				13	33	5			9 13 PP
NOUMEA	40.20	16.9	7	40A	0	13	54	7			
KOUMAC	41.65	13.5	7	49A	-2						
CHARTERS TS.	42.00	348.1	7	55A	1	14	16	2			
PORT VILA	44.96	18.5	7	53	-25						
HONIARA	52.32	6.5	9	16A	1	16	51	11			
PORT MORESBY	52.50	350.6	9	16A	-1	16	50	7			
AFIAMALU	53.42	41.9	9	18	-6	17	0	5			22 9 SSS
RABAUL	57.40	357.0	9	50	-2	17	46	-2			13 14
LEMBANG	64.79	306.5	10	43K	1						
TANGERANG	65.78	305.8	10	50A	1						
HERMANUS	77.66	216.4				21	59	8			22 37 PS
SANTA LUCIA	78.33	142.6	12	4A	1	21	51	-8			27 3 SS
KIMBERLEY	81.26	222.9	12	20	1						
TANANARIVE	81.37	246.2	12	32	12						12 47
PORT BLAIR	87.57	300.0									23 59
BULAWAYO	87.88	229.4	12	53	1						
HONG KONG	89.80	323.0	12	58	-4	23	54	2			29 51 SS
HONOLULU	90.88	43.2				24	16	14			25 26 PS
KIPAPA	91.02	43.2	13	7	0						
BROKEN HILL	93.16	231.5	13	16	-1						
AREQUIPA	93.94	136.0	13	23	2						
MATUSIRO	98.82	346.6				25	22	61			17 42 PP
POONA	101.89	286.8									27 11
BOMBAY	102.68	286.1									27 25
LWIRO	104.19	236.6				26	9	82			18 28 PP
NEW DELHI	109.14	294.6									18 58
CHINCHINA	112.25	124.0									19 22 PP
BOGOTA	112.53	125.7									19 25 PP
QUETTA	115.07	287.2	18	45	2						
WARSAK DAM	116.25	293.1									19 53
BERKELEY	119.44	64.4									23 4
SHIRAZ	121.36	274.9	19	0	5				20	25	21 15
MINERAL	121.79	63.3	19	24A	28						
DUGWAY	125.51	70.1	19	5K	2						
PRICE	125.94	72.0	19	6K	2						
TEHERAN	126.92	278.1	19	8	2						21 51 PP
BLUE MTS.	127.29	63.3	19	6	-1						21 18 PP
WICHITA MTS.	127.67	85.5	19	8	1						28 23 PKKP
GOLDEN	128.50	76.2	19	11	2						
PENTICTON	129.88	58.2	19	12	0						
TULSA	129.97	87.0									22 36 SKP
FAYETTEVILLE	130.87	88.2	19	14	1						
HUNGRY HORSE	131.44	62.8	19	16	1						
MANHATTEN	132.23	83.7	19	17	1						
LAWRENCE	132.67	85.0	19	17	0						22 47
KSARA	132.72	263.0	19	19	2						
COLLEGE	133.27	29.6	19	18	0						21 43 PP
ROLLA	133.42	88.8	19	22	4						
ATHENS	141.79	254.6	19	37	4						30 25
PALISADES	144.39	102.7	19	46	8						
BENI ABBES	144.96	216.3	19	51	12						23 50 PP
MESSINA	145.64	245.9	19	40	0						22 0
MOULD BAY	147.72	26.6	19	46A	2						
BREBEUF	147.96	97.8	19	48K	4						42 36 SS
BELGRADE	148.69	258.7	19	57	12						23 33
SHAWINIGAN	149.14	97.3	19	50	4						

ROME	150.02	246.2								42	56	SS
ALMERIA	151.32	220.4	19	51K	2			20	5	23	36	PP
BUDAPEST	151.33	260.8	20	6	17							
MALAGA	151.78	217.3	19	58	8					36	36	PPS
GRANADA	151.97	218.9	19	57A	7					23	45	PP
ALICANTE	152.05	224.7	19	49	-1					20	27	
LJUBLJANA	152.36	253.9	20	7	16							
KRAKOW	152.69	265.6	20	8	17					20	23	PKP2
BRATISLAVA	152.72	259.8	20	3	12							
RESOLUTE	153.08	33.4	19	59K	7							
PAVIA	154.09	246.3	19	14	-39					27	1	
TOLEDO	154.59	220.5	19	53	-1					24	2	PP
KASPERSKE H.	155.05	257.6	20	26	32					21	28	
PRUHONICE	155.19	260.1	20	14	19					21	24	
ROSELEND	155.59	243.7								30	32	
BAGNERES	156.01	230.7								30	26	
NURMIJARVI	156.32	289.5	20	12	16							
STUTTGART	156.77	252.0	20	32	35							
COLLMBERG	156.81	260.9	20	11	14					24	16	
ALERT	157.15	11.8	20	28	31							
JENA	157.23	258.6	20	11	14					24	30	PP
STRASBOURG	157.31	249.8								30	36	
HALLE	157.43	260.1	20	47	49							
SODANKYLA	157.59	307.0	20	30	32							
BENSBERG	159.29	253.6	20	52	52							
DOURBES	159.83	248.5	20	52	52							
KIRUNA	160.00	307.4	20	26	25							

OCTOBER 26 7.H 20.M 22.S EPICENTRE -17.57 167.51 DEPTH= 0.KM

A=-0.93135 B= 0.20629 C=-0.30006 D= 0.2163 E= 0.9763
G= 0.2930 H=-0.0649 K=-0.9539 HT= 5.2

SE= 3.32

	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
PORT VILA	0.79	101.6	0	16K	-2							
KOUMAC	4.26	225.3	1	6K	-2	1	56	-3				
NOUMEA	4.81	191.8	1	13K	-2	2	8	-5				
HONIARA	10.93	316.8	2	39A	-2	4	57	12				
BRISBANE	16.74	231.7	3	56	-1	6	57	-7				
ONERAHI	19.12	162.8	4	28	1							
RABAUL	20.06	309.7	4	36	-2						7	46
AFIAMALU	20.26	82.6	4	40	0							
CHARTERS TS.	20.27	259.5	4	41A	1	8	30	7				
PORT MORESBY	21.38	289.7	4	53	2	8	57	12			5	24 PP
KARAPIRO	21.47	162.4	4	52	0							
RIVERVIEW	21.85	219.1	4	57K	1	9	2	9			9	47
TARATA	22.36	165.9	5	11	10							
CHATEAU	22.66	163.6	5	9	5							
TUAI	22.76	160.2	5	5	0							
CANBERRA	24.16	219.4	5	19K	0	9	37	2	5	27		
WELLINGTON	24.44	166.7	5	20	-1	9	47	8			11	23 SS
TOOLANGI	27.77	219.8	5	52	0						6	37 PP
ADELAIDE	30.93	230.3	6	19	-2	11	28	3			13	58
MUNDARING	48.32	242.6	8	44	-1	15	44	-1				
PERTH	48.64	242.7				16	10	20			15	56
HONOLULU	51.27	42.5				16	54	28				
KIPAPA	51.40	42.4	9	26	17							
DUMONT	52.25	193.4	9	13	-2	16	38	-2				
CAPE HALLETT	54.76	179.0	9	32	-2							
LEMBANG	59.29	272.5	10	7A	1	18	19	5				
TANGERANG	60.42	272.9	10	4A	-10							
MATUSIRO	60.52	333.1	10	12	-2	18	32	3				
WILKES	61.04	202.8	10	16	-2	18	30	-6				
HONG KONG	65.53	305.3	11	9	22	19	35	3				
ZO-SE	65.75	317.1	10	48	-1	19	29	-6				
NANKING	67.93	316.5	11	4	1							
Y.-SAKHLINSK	68.06	342.0	11	3	-1	20	4	1				
CHANGCHUN	72.28	329.3	11	28	-1	20	52	0				
SOUTH POLE	72.54	180.0	12	30	59							
PEKING	74.61	321.5	11	43	0	21	14	-4				
SIAN	75.90	313.2	11	49	-1							
KUNMING	76.00	302.3	11	53	2	21	38	4				
MAGADAN	78.05	351.4	12	14	12							

			P	O-C	S	O-C	*PP	SUPP.	
	DELTA DEG.	AZ. DEG.	M S	S	M S	S	M S	M S	
PORT BLAIR	79.35	285.9	12 34	25				16 3	
MAWSON	79.35	202.2	11 58K	-11	22 11	1			
LANCHOW	80.39	312.5	12 16	1	22 23	2			
CHITTAGONG	83.99	295.6	12 34	1	23 0	3	12 44		
ULAN-BATOR	84.67	323.9	12 37	0					
YAKUTSK	84.78	343.1	12 36A	-1					
SHILLONG	85.13	298.6	12 41A	2					
BERKELEY	85.87	48.3	12 44A	1	23 19	3		24 24	PS
LICK	86.09	49.0	12 44A	0					
PRIEST	86.30	50.4	12 44A	-1					
LHASA	87.33	302.1	12 53	3					
MINERAL	87.41	46.3	12 49A	-1					
WOODY	87.45	51.4	12 55	4					
RENO	88.32	47.6	12 56K	1					
COLLEGE	88.95	17.5	12 57	-1					
VICTORIA	89.86	38.4	13 1	-1					
ESEN BULAK	90.26	319.1	13 8	4					
EUREKA	91.03	48.8	13 6	-1					
BLUE MTS.	92.14	43.5	13 11	-2	24 20	6		16 28	PP
TUCSON	92.41	57.0	13 13	-1					
PENTICTON	92.47	38.7	13 13	-1					
TUCSON TELE.	92.53	57.0	13 13	-1					
DUGWAY	93.56	49.0	13 17A	-2					
WICHITA MTS.	102.92	57.5			24 46	5		25 59	S
TULSA	105.40	56.8						33 30	SS
RESOLUTE	108.83	16.2	18 31	777					
BOGOTA	118.46	94.3						20 8	PP
FUQUENE	119.03	93.5						20 11	PP
SHIRAZ	119.90	294.5	18 54	1				20 48	
KIMBERLEY	121.53	218.6	18 54	-2					
BREBEUF	122.50	46.9	18 56A	-2				37 14	SS
SHAWINIGAN	122.92	45.6	18 58A	0					
SAN JUAN	129.14	80.4	19 3	-7					
NURMIJARVI	129.57	337.2	19 12	1					
KSARA	133.93	300.2	19 16	-3				21 55	PP
NIEDZIKA	138.66	327.6						31 5	
COLLMBERG	140.73	334.7	19 35	3				23 48	
PRUHONICE	141.05	332.2	19 37	5				20 26	
KASPERSKE H.	142.10	332.0	19 29	-5				20 50	
BENSBERG	143.18	339.2	19 45	9					
STUTTGART	144.20	335.2	19 37	-1					
DOURBES	144.76	340.9	19 40	1					
STRASBOURG	144.95	336.4	19 40	1					
PARIS	146.55	341.9	19 45	3					
FLORENCE X.	147.07	327.6	19 46	3					
FOLINIERE	147.38	345.2	19 46	3					
ROME	147.70	323.9	19 49	5				20 13	
GARCHY	147.72	340.0	19 48	4				20 20	
ROSELEND	147.76	334.5	19 48	4					
MESSINA	148.01	315.6	19 47	3				21 44	
ISOLA	148.78	332.3	19 50	4					
MONACO	148.96	331.4	19 50	4					
CLERMONT-FD.	149.02	338.5	19 58	12					
BAGNERES	152.41	339.7	20 2	11					
TOLEDO	156.60	343.5	20 29	32					
BENI ABBES	164.36	324.9	20 8	3					

OCTOBER 26 11.H 26.M 7.S EPICENTRE 33.55 27.62 DEPTH= 0.KM

A= 0.73992 B= 0.38715 C= 0.55012 D= 0.4636 E=-0.8860
G= 0.4874 H= 0.2550 K=-0.8351 HT= 0.6

SE= 2.45

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
ATHENS	5.43	325.4	1 26A	2				2 25	SG
KSARA	6.89	85.5	1 38	-7	2 57	-8		2 9	
ISTANBUL UN.	7.55	7.9	1 57	3					
SOFIA	9.73	341.0	2 20	-4	4 11	-5			
TARANTO	10.78	312.8	2 39	0	4 19	-22			
MESSINA	10.83	298.8	2 36K	-3	4 28	-15		3 4	P*
BUCHAREST	10.92	354.2	2 43A	2				3 45	PP
TITOGRAD	11.04	325.8	2 40	-2	4 47	-1		3 27	PG
SIMFEROPOL	12.44	21.9	3 4A	3					
BELGRADE	12.54	335.9	3 3K	0				7 21	SG

KISHINEV	13.48	3.6	3	16K	1					
ROME	14.58	309.2	3	28	-1	6	32	19	4	47
EREVAN	15.03	59.1	3	36	1					
ZAGREB	15.16	327.3	3	45	8					
BUDAPEST	15.36	337.5	3	39	-1	6	33	2	3	53 PP
UZHGOROD	15.58	346.8	3	42	-1					
TIFLIS	15.85	54.1	3	47	1	6	48	5		
GORIS	16.16	63.1	3	53	3	7	5	15		
LWOW	16.47	351.8	3	46	-8					
NIEDZIKA	16.76	343.3	3	59	1					
PADOVA	16.94	319.0	3	58	-2				5	18
VIENNA-H.	16.94	333.4	4	0	0					
KRAKOW	17.44	343.3	4	7	1				4	29 PP
RACIBORZ	17.92	340.0	4	13	1				4	29 PP
PAVIA	18.35	314.7							12	14
MONACO	18.72	308.8	4	21	-1					
KASPERSKE H.	18.75	330.3	4	21A	-1	7	51	2	6	57
PRUHONICE	19.04	333.4	4	26A	0	7	54	-2		
CHUR	19.10	319.4	4	27	0	8	1	4		
PRAGUE	19.16	333.4	4	25	-2					
ISOLA	19.16	309.6	4	27	0				7	4
RAVENSBURG	19.64	321.7	4	32	-1					
TEHERAN	19.67	76.9	4	35	2				5	19
CHEB	19.98	330.3	4	37	0	8	23	6	5	15
ROSELEND	20.14	313.2	4	37	-1	8	13	-7	8	33
EBINGEN	20.23	321.8	4	39	0					
TUBINGEN	20.40	322.7	4	41	0					
STUTTGART	20.46	323.4	4	41	-1	8	32	6		
BASLE	20.58	318.6	4	36	-7	8	30	1		
NEUCHATEL	20.63	316.7	4	43	-1	8	29	-1		
COLLMBERG	20.69	333.4	4	43	-1				11	29
JENA	20.96	330.7	4	48	1	8	35	-2	5	0 PP
STRASBOURG	21.11	321.2	4	49	1	8	47	8	9	33
HEIDELBERG	21.15	324.1	4	49	0					
HALLE	21.25	332.2	4	49	-1	8	42	0		
SHIRAZ	21.55	93.6	4	53A	0	8	45	-3	5	18 PP
CLERMONT-FD.	22.36	310.3	5	1	0				5	30
TORTOSA	22.73	296.5	5	12	7	9	7	-3		
BENSBERG	22.93	325.4	5	7A	0	9	17	4		
GARCHY	23.06	313.8	5	8	0				9	18
ALICANTE	23.20	290.0	5	9	0	9	19	1	5	48 PP
MOSCOW	23.24	14.4	5	11K	1					
MUNSTER	23.41	327.8	5	13	2					
BAGNERES	23.47	301.9	5	13	1					
DOURBES	23.68	321.2	5	15	1				5	35
KARLSKRONA	24.09	343.4	5	17A	-1					
PARIS	24.14	316.6	5	19	1					
WITTEVEEN	24.42	328.3	5	23K	2					
ALMERIA	24.76	286.2	5	27K	3	9	51	6	6	12 PP
ASHKABAD	25.26	71.2	5	30	1	10	3	10		
BENI ABBES	25.51	270.4	5	30	-2	10	5	8	6	15 PP
GRANADA	25.66	287.0	5	54A	21	10	9	9	7	15
FOLINIERE	25.86	314.4	5	35	0					
TOLEDO	26.07	293.2	5	39	2	10	15	8	6	15 PP
PULKOVO	26.29	3.1	5	39K	0					
MALAGA	26.31	286.0	5	41K	2	10	16	5	9	7 PCP
GOTEBORG	26.38	341.0	5	39	-1					
HELSINKI	26.68	357.0	5	42	-1					
NURMIJARVI	27.04	356.8	5	45	-1	10	34	11		
KEW	27.04	319.9	5	46A	0					
UPPSALA	27.12	348.9	5	47A	0	10	29	5	6	15
DURHAM	29.45	324.9	6	8A	0					
UMEA	30.64	353.6	6	14	-4					
SKALSTUGAN	31.54	346.9	6	25A	-1					
QUETTA	33.44	84.9	6	44	1					
SODANKYLA	33.86	359.3	6	46A	0				13	12 SCP
APATITY	34.21	4.0	6	49K	0					
KIRUNA	34.57	355.2	6	46A	-6					
LWIRO	35.63	178.0	7	1K	0					
KEVO	36.26	359.6	7	10	3					
WARSAK DAM	36.31	76.8	7	7	0					
TROMSOE	36.45	354.9	7	12	4					
FRUNSE	37.66	61.7	7	21K	2					
ALMATA-2	39.66	60.9	7	35	0					
NEW DELHI	42.44	82.9	7	57K	-1					
SCORESBY SD.	45.56	339.0	8	25	2					
BROKEN HILL	47.74	178.9	8	41	0				9	22
CHATRA	51.31	80.7	9	6	-2					
ESEN BULAK	52.58	54.2	9	19	1					

SHILLONG	55.68	80.1	9	38A	-2							
ALERT	56.96	351.0	9	49	0							
CHITTAGONG	57.01	83.6	9	49	-1							
KIMBERLEY	62.02	182.8								20	22	
RESOLUTE	65.73	345.8	10	50	1							
YAKUTSK	66.26	30.3	10	43A	-9							
MOULD BAY	68.50	351.9	11	5A	-1							
SHAWINIGAN	72.89	314.7	11	34	1							
BREBEUF	73.94	314.1	11	40K	1							
COLLEGE	81.84	358.0	12	23	1							
MATUSIRO	84.86	49.2	12	38K	0					31	36	
HUNGRY HORSE	91.55	335.5	13	11	1							
FAYETTEVILLE	91.94	316.5	13	12A	0							
PENTICTON	92.50	339.2	13	15	1							
TULSA	92.98	317.3	13	16	0							
WICHITA MTS.	95.42	318.1	13	28	0			13	42	17	21	PP
BLUE MTS.	95.71	335.7	13	29	0					26	5	SP
DUGWAY	98.01	330.5	13	40K	1							
EUREKA	99.89	332.2	13	50	2							

OCTOBER 27 8.H 10.M 24.S EPICENTRE 14.10 -90.53 DEPTH= 88.KM

A=-0.00902 B=-0.97023 C= 0.24203 D=-1.0000 E= 0.0093
G=-0.0023 H=-0.2420 K=-0.9703 HT= 5.9

DEPTH OF FOCUS= 0.009R

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	
SAN SALVADOR	1.36	107.6	0	23K	-2	0	44	1					
COMITAN	2.64	324.4	0	40	-2	1	14	1					
OAXACA	6.68	296.6	1	38	1	2	42	-11					
MERIDA	6.87	7.2	1	24	-16	2	57	0			1	42	
VERA CRUZ	7.38	314.2				3	11	1			4	36	
PUEBLA	8.84	304.7	2	28	21						4	4	
TACUBAYA	9.83	303.6									3	24	
CHINCHINA	17.27	120.2	4	4	7								
FUQUENE	18.63	115.7	4	9	-4								
BOGOTA	18.76	118.6	4	17	2	7	46	9					
DALLAS	19.52	344.1	4	23	0								
LITTLE ROCK	20.66	355.8	4	34K	-1								
WICHITA MTS.	21.79	341.9	4	45	-1	8	43	7	4	59	5	8	PP
LUBBOCK	21.95	334.0	4	48	0								
FAYETTEVILLE	22.14	352.1	4	49A	0	9	11	28	5	3			
TULSA	22.23	348.7	4	50	0	8	58	14			5	14	
ROLLA	23.74	357.3	5	7K	2	10	7	56					
SAN JUAN	23.81	76.4	5	4	-2	8	42	-30					
CHAPEL HILL	24.05	23.4	5	10	2								
ST. LOUIS 1	24.45	0.6	5	12	0								
FLORISSANT	24.61	0.3	5	13	0	10	10	45					
LAWRENCE	25.12	351.3	5	19	1								
BLOOMINGTON	25.25	7.4	5	20	1	10	30	54					
ALBUQUERQUE	25.25	328.1	5	20	1						7	50	
MANHATTEN	25.57	349.1	5	23	1								
TUCSON TELE.	25.88	318.0	4	51	-34	8	52	-54			5	39	PP
TUCSON	25.89	317.7	5	25	0				5	39			
MORGANTOWN	27.08	18.2	5	54	18								
DUBUQUE	28.31	359.8	5	58K	1								
GOLDEN	28.65	335.7	5	52	2						14	12	
PENNSYLVANIA	28.81	20.2	5	52A	0								
GLEN CANYON	29.53	324.3	6	3	5				6	17			
LONDON ONT.	29.94	13.8	6	2K	0								
HUANCAYO	30.03	149.2	6	2	-1								
LARAMIE	30.11	337.1	6	4	0								
PALISADES	30.48	25.3	6	8	1				6	23			
BOULDER CITY	30.81	319.3	6	10	0								
PRICE	31.04	328.7	6	12K	0								
PASADENA	31.99	313.4	6	19	-1				6	33			
SALT LAKE C.	32.44	329.0	6	25	1				6	39	6	46	*SP
DUGWAY	32.51	327.3	6	25A	1								
EUREKA	33.76	323.3	6	36	1				7	3	8	0	PP
PRIEST	34.77	314.6	6	44A	0								
SHAWINIGAN	35.62	21.2	6	51A	0								
AREQUIPA	35.72	147.6	6	51	-1								

BOZEMAN	35.93	335.2	6 52	-2				
LICK	36.07	315.6	6 56A	1			8 20	
BERKELEY	36.77	315.9	7 1A	0			9 22	
BUTTE	36.84	334.1					9 22	
CALISTOGA	37.39	316.8	7 6A	0				
MINERAL	37.70	319.8	7 8A	-1			9 24	
BLUE MTS.	38.16	328.8	7 12	0	7 26		13 21	SCS
HUNGRY HORSE	39.30	335.2	7 21	-1			9 33	PCP
LONGMIRE	41.76	327.6	7 42A	0				
BANFF	42.13	336.6	7 45	0				
PENTICTON	42.45	331.9	7 47A	-1				
VICTORIA	43.74	328.5	7 58	0				
SCHEFFERVLLE	44.66	19.4	8 5A	-1				
RESOLUTE	60.62	358.7	10 1A	-3				
COLLEGE	63.72	336.4	10 22	-3	10 38		10 58	PCP
MOULD BAY	63.98	352.6	10 24A	-2				
ALERT	69.35	3.8	10 59	-1				
NORD	73.80	8.5	11 25	-2				
FOLINIERE	79.58	42.3	11 57	-2				
COLLMBERG	87.37	37.7					12 57	
LJUBLJANA	90.10	42.3	13 18	27				
MATUSIRO	111.83	319.3	18 23	-2				
BROKEN HILL	121.05	98.5	18 44A	1				
BULAWAYO	121.79	105.1	18 45	1				
SHIRAZ	123.77	39.0	18 48	0				
MAWSON	123.79	168.1					18 46	PP
TOOLANGI	125.30	233.8	18 51	0				
CHARTERS TS.	125.60	255.3	18 52	1				
WARSAK DAM	129.22	19.3	19 3	5				
NEW DELHI	135.95	15.6	19 12A	1				
SHILLONG	140.50	356.6	19 13K	-6				
MUNDARING	149.77	229.4	19 39	4				

OCTOBER 27 13.H 52.M 44.5 EPICENTRE 11.61 -86.69 DEPTH= 0.KM

A= 0.05663 B=-0.97816 C= 0.19999 D=-0.9983 E=-0.0578
G= 0.0116 H=-0.1997 K=-0.9798 HT= 6.3

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
COMITAN	7.01	311.7			3 28 20			
MERIDA	9.70	343.5			3 48 -27			5 34
HOPE	11.51	55.4	2 52	3				
VERA CRUZ	11.82	310.8			5 0 -6			6 40
CHINCHINA	12.78	120.2	3 10	4				
FUQUENE	14.19	114.4	3 24	-1				
BOGOTA	14.29	118.1	3 26	0				
TACUBAYA	14.32	304.2	3 23	-3				
CARACAS	19.42	91.3	4 24	-7				
SAN JUAN	20.96	68.8	4 45	-2				
DALLAS	23.08	337.9	5 9	1				
ST. KITTS	23.87	73.4	5 14	-2				
TRINIDAD	24.83	89.7	5 20	-5				
CHAPEL HILL	25.17	14.7	5 29	0				
FAYETTEVILLE	25.30	345.7	5 28A	-2				
WICHITA MTS.	25.43	336.7	5 30A	-1	10 4 8			9 1 PCP
TULSA	25.55	342.7	5 31	-1	9 46 -12			
LUBBOCK	25.90	330.0	5 36	1				
HUANCAYO	26.07	154.0	5 35	-2				
LAWRENCE	28.29	345.8	5 55	-2				
MORGANTOWN	28.54	10.9	6 25	25				
ALBUQUERQUE	29.37	325.5	6 7	0				9 12
PENNSYLVANIA	30.09	13.4	6 12A	-2				
TUCSON TELE.	30.23	316.8	6 15	0				
TUCSON	30.25	316.5	6 15	0				
PALISADES	31.37	18.8			11 43 11			
GOLDEN	32.51	332.6	6 34	-1				12 36
LARAMIE	33.91	334.1	6 48	1				
PRICE	35.14	326.7	6 50A	-7				
BREBEUF	35.57	15.9	6 59A	-2		7 21		
PASADENA	36.42	313.2	7 9	1				
SALT LAKE C.	36.52	327.1	7 9	0				9 30 PP
DUGWAY	36.64	325.6	7 10A	0				
PRIEST	39.18	314.3	7 30A	-2				9 39
BOZEMAN	39.79	333.1	7 36	-1				

LICK	40.46	315.3	7	44A	2				9	43	
BUTTE	40.74	332.2	7	44	0				9	44	PP
BERKELEY	41.15	315.6	7	49A	1				9	46	
CALISTOGA	41.76	316.4	7	54K	1				9	48	
MINERAL	42.01	319.2	7	53A	-2				9	46	
BLUE MTS.	42.24	327.4	7	54	-3				9	48	PCP
HUNGRY HORSE	43.15	333.4	7	46	-18				9	51	PP
SCHEFFERVLLE	45.87	15.9	8	22	-4						
PENTICTON	46.42	330.6	8	29	-1						
RESOLUTE	63.22	357.6	10	27K	-6						
MOULD BAY	66.93	351.9	10	52	-5						
COLLEGE	67.49	336.1	10	56	-4						
MALAGA	77.01	54.8	12	13A	16	21	56	11			
FOLINIERE	78.88	42.3							12	33	
UMEA	86.98	25.1	12	44	-5						
COLLMBERG	87.01	38.3							13	6	
PRUHONICE	88.31	39.3							13	24	
CHARTERS TS.	128.55	253.6	18	48	-21						
QUETTA	131.31	30.8	19	12	-3				22	46	PKS
MUNDARING	150.75	222.6	19	51	2						

OCTOBER 28 22.H 53.M 7.S EPICENTRE 16.02 -93.15 DEPTH= 135.KM

A=-0.05283 B=-0.96018 C= 0.27434 D=-0.9985 E= 0.0549
G=-0.0151 H=-0.2739 K=-0.9616 HT= 5.6

DEPTH OF FOCUS= 0.016R

SE= 3.71

	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	1.01	77.0	0	21	-2	0	45	3			3	53	
OAXACA	3.61	286.4	0	41	-15	1	25	-13			1	17	
VERA CRUZ	4.25	318.4	0	53	-11	1	45	-8					
SAN SALVADOR	4.47	120.9	1	5	-2	2	5	6					
SANTIAGO MA.	5.18	118.5	1	15	-1	2	24	8					
MERIDA	5.93	33.8	1	29	3	2	44	10					
TACUBAYA	6.67	301.1	1	41	5	2	58	6			3	44	
GUADALAJARA	10.71	297.1	2	21	-9						5	7	
MANZANILLO	11.08	287.4				4	38	-1					
HOPE	15.81	80.5	3	42	6								
DALLAS	17.07	349.5	3	46	-5								
CHIHUAHUA	17.31	318.6	2	53	-61						8	59	
LITTLE ROCK	18.69	2.1	4	6	-4								
LUBBOCK	19.16	337.4	4	9	-6								
WICHITA MTS.	19.25	346.3	4	11A	-5						8	34	PCP
TULSA	19.94	353.7	4	19	-4	7	55	0					
FAYETTEVILLE	20.01	357.5	4	20K	-4	8	1	5					
CHINCHINA	20.42	120.7	4	48	20	8	46	42					
C. GIRARDEAU	21.45	7.9	4	16	-22								
ROLLA	21.82	2.7	4	39A	-3	8	56	27					
BOGOTA	21.90	119.1	4	46	3	8	48	17	5	5	9	33	*SS
ALBUQUERQUE	22.31	330.1	4	43	-4	8	53	15			7	1	
TUCSON TELE.	22.76	318.7	4	47	-4								
TUCSON	22.77	318.3	4	46	-5								
LAWRENCE	22.93	355.8	4	51	-2						8	57	
MANHATTEN	23.28	353.2	4	52	-4								
CHAPEL HILL	23.47	29.8	5	0	2								
BLOOMINGTON	23.80	12.9	5	0A	-1								
GOLDEN	25.89	338.0	5	18	-3						10	5	
SAN JUAN	25.92	80.9	5	21	0						8	47	
MORGANTOWN	26.19	23.5	5	40	17						10	9	
GLEN CANYON	26.50	325.4	5	22	-4								
LARAMIE	27.39	339.4	5	32	-2								
BOULDER CITY	27.72	319.9	5	31	-6								
PENNSYLVANIA	28.02	25.2	5	53	13								
PASADENA	28.84	313.4	5	41	-6	10	23	-3			6	18	
ST. KITTS	29.16	83.1	5	48	-2								
SALT LAKE C.	29.51	330.4	5	50	-3								
DUGWAY	29.54	328.5	5	50A	-4								
PALISADES	29.95	30.0	6	33	36	11	4	20					
EUREKA	30.71	324.0	5	59	-5								
TRINIDAD	31.33	95.8	6	8	-1								
PRIEST	31.63	314.5	6	6K	-6								
LICK	32.93	315.6	6	18K	-5								
HUANCAYO	33.00	146.7	6	23	-1								

RENO	33.02	320.4	6	16	-8							9	14	PP
BOZEMAN	33.15	336.8	6	23	-2							9	14	PP
BERKELEY	33.63	316.0	6	26K	-3							9	3	
BREBEUF	33.65	25.1	6	30K	1									
BUTTE	34.03	335.5	6	30	-3									
CALISTOGA	34.26	316.9	6	29A	-6									
MINERAL	34.60	320.1	6	32K	-6									
SHAWINIGAN	34.85	24.9	6	39	-1									
BLUE MTS.	35.22	329.7	6	38A	-5							8	1	PP
HUNGRY HORSE	36.51	336.4	6	20	-34				7	5				
AREQUIPA	38.71	145.5	7	11	-1									
LONGMIRE	38.79	328.2	7	8A	-5							7	35	
BANFF	39.38	337.8	7	14	-4									
PENTICTON	39.58	332.8	7	15	-4									
VICTORIA	40.79	329.1	7	24	-5									
RESOLUTE	58.67	359.5	9	41	-4									
COLLEGE	60.95	336.5	9	56	-5	17	29	-37	10	17				
MOULD BAY	61.77	353.1	10	2A	-4									
ALERT	67.62	4.2	10	41	-3									
SCORESBY SD.	68.74	20.0	10	49	-2									
NORD	72.28	8.6	11	10K	-2									
MALAGA	79.62	54.8	11	53	0	22	33	50				15	5	PP
FOLINIERE	79.86	42.2	11	56	1									
BAGNERES	81.60	47.7	12	3	-1									
SKALSTUGAN	82.48	25.8	12	9	1									
TROMSOE	82.51	19.1	12	9	0									
KIRUNA	83.81	20.5	12	15	0									
BENSBERG	84.06	38.7	12	18K	2							12	59	
GOTEBORG	84.45	31.4	12	19	1									
KEVO	84.89	17.6	12	20	0	22	47	11				12	40	
STRASBOURG	85.17	40.9	12	23	1							13	0	
ROSELEND	85.34	43.9	12	24	1									
UMEA	85.61	24.1	12	25	1									
STUTTGART	86.06	40.4	12	27	1							13	9	
SODANKYLA	86.09	19.7	12	26	0									
UPPSALA	86.30	28.2	12	27	0									
JENA	86.69	37.8	12	28	-1				12	50		13	11	
HALLE	86.70	37.2	12	30	1							14	2	
COLLMBERG	87.39	37.1	12	33K	0							13	59	
KASPERSKE H.	88.57	39.0	12	39	1							13	31	
PRUHONICE	88.81	38.0	12	41	2							13	11	
NURMIJARVI	89.06	26.0	12	39	-2	23	3	-12						
VIENNA-H.	90.61	39.1	12	49	1									
KIMBERLEY	121.79	114.1	18	37	-1									
SHIRAZ	123.80	36.2	18	30A	-12							21	15	PP
BROKEN HILL	123.81	96.9	18	42	0									
WARSAK DAM	128.16	16.2	18	49	-1									
QUETTA	130.22	22.7	18	55A	1									
TANANARIVE	142.45	100.3	19	16	-1							19	57	
MUNDARING	148.97	233.9	19	28	0									

OCTOBER 29 0.H 19.M 57.5 EPICENTRE 7.56 -82.57 DEPTH= 150.KM

A= 0.12825 B=-0.98308 C= 0.13075 D=-0.9916 E=-0.1294
G= 0.0169 H=-0.1297 K=-0.9914 HT= 6.8

DEPTH OF FOCUS= 0.018R

SE= 3.34

	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
BALBOA HTS.	3.28	64.8	0	40	-12	1	32	1				
CHINCHINA	7.37	110.1	1	52A	6	3	19	10				
GALERAZAMBA	7.88	65.5	1	47	-6	3	28	7				
SANTIAGO MA.	8.27	315.9	2	2	4							
SAN SALVADOR	8.91	319.6	1	58	-8						3	39
BOGOTA	8.94	108.6	1	55	-12	3	37	-9				
HOPE	11.82	28.1	2	41	-4							
SAN JUAN	19.28	54.5	4	13	-2							
TACUBAYA	19.98	307.7									4	47
HUANCAYO	20.77	159.7	4	19	-11							
TRINIDAD	21.12	80.1	4	31	-3	8	33	18				
ST. KITTS	21.65	61.5	4	42	3							
ST. CLAUDE	22.07	65.7	4	44	1	9	3	31				
FORT FRANCE	22.17	69.4	4	45	1	8	57	23				
AREQUIPA	26.27	155.4	5	14	-9							

LITTLE ROCK	28.54	343.0	5 41	-3				
FAYETTEVILLE	30.32	341.1	5 58	-1				
TULSA	30.70	338.7	6 1	-2				
WICHITA MTS.	30.79	333.6	6 1	-2			7 0	PP
ROLLA	31.36	345.7	6 7	-2				
LUBBOCK	31.44	328.1	6 9	0			8 58	PCP
BLOOMINGTON	31.69	354.2	6 6A	-5				
FLORISSANT	31.88	348.4	6 11A	-2				
MORGANTOWN	32.01	3.8	6 14	0				
ANTOFAGASTA	33.26	159.4					9 1	
LAWRENCE	33.29	341.8	6 23	-2				
PENNSYLVANIA	33.36	6.5	6 26A	0				
MANHATTEN	33.93	340.3	6 29	-2				
ALBUQUERQUE	35.00	324.5	6 40	0				
LONDON ONT.	35.36	1.8	6 42K	-1				
DUBUQUE	35.53	349.7	6 45A	1				
TUCSON TELE.	35.95	317.1	6 48	0				
TUCSON	35.97	316.9	6 48	0				
GOLDEN	37.97	330.9	7 5	0				
BREBEUF	38.58	10.1	7 11K	1		7 19	9 19	PPP
LARAMIE	39.34	332.3	7 17	1				
GLEN CANYON	39.41	322.3	7 19	2				
SHAWINIGAN	39.75	10.6	7 20	1				
PRICE	40.74	325.9					25 19	
BOULDER CITY	40.85	318.5	7 30	2				
SALT LAKE C.	42.11	326.4	7 40	1			8 18	
PASADENA	42.13	314.0	7 39	0				
DUGWAY	42.26	325.0	7 41A	1				
EUREKA	43.67	321.9	7 52	1				
PRIEST	44.90	315.0	8 1A	0				
BOZEMAN	45.23	331.9	8 4	0			9 43	PCP
RENO	46.11	319.5	8 22A	11				
LICK	46.18	315.9	8 11A	0				
BUTTE	46.21	331.1	8 12	1			9 46	
BERKELEY	46.87	316.2	8 17A	0				
CALISTOGA	47.47	316.9	8 21A	0				
MINERAL	47.71	319.4	8 22A	-1				
BLUE MTS.	47.82	326.8	8 23	-1				
HUNGRY HORSE	48.58	332.3	8 29	-1				
SCHEFFERVLLE	48.79	12.1	8 31A	-1				
LONGMIRE	51.47	326.2	8 52A	0				
PENTICTON	51.93	329.9	8 56A	1				
VICTORIA	53.40	327.2	9 6A	0				
RESOLUTE	67.45	356.5	10 40A	-1				
MOULD BAY	71.51	351.3	11 6A	0				
COLLEGE	72.81	336.1	11 14	0			13 56	PP
ALERT	75.39	2.7	11 28	-1				
MALAGA	76.04	54.1	11 34A	2	21 31	29	22 3	PS
TOLEDO	76.39	50.9	11 36K	2			14 13	PP
ALMERIA	77.59	54.0	11 40A	-1				
NORD	79.11	7.9	11 49A	0				
FOLINIERE	79.14	41.9	11 51	2				
KEW	79.30	39.1	11 51K	1				
BAGNERES	79.57	47.7	11 47	-5				
GARCHY	81.54	43.3	12 3	1				
CLERMONT-FD.	81.63	44.9	12 4K	1				
BENSBERG	84.02	39.5	12 16A	1				
ROSELEND	84.09	44.8	12 16	1				
STRASBOURG	84.61	41.8	12 19	1				
MONACO	84.83	46.7	12 20	1				
FELDBERG	84.90	40.2	12 19	0				
SKALSTUGAN	85.44	26.6	12 22	0				
STUTTGART	85.59	41.5	12 23	1				
GOTEBORG	86.10	32.4	12 26	1				
JENA	86.80	39.2	12 29	1			13 24	
TROMSOE	86.95	20.1	12 29	0				
HALLE	86.95	38.6	12 30	1		12 38		
COLLMBERG	87.63	38.7	12 33A	1			15 7	
KIRUNA	87.92	21.7	12 34A	0				
KASPERSKE H.	88.35	40.8	12 37	1				
PRUHONICE	88.82	39.8	12 39	1				
UMEA	88.87	25.6	12 39	1				
BYRD STATION	89.46	186.0	12 35	-6				
KEVO	89.60	19.1	12 41	-1				
SODANKYLA	90.32	21.4	12 45A	0				
VIENNA-H.	90.33	41.3					13 18	
NURMIJARVI	91.81	28.2	12 52	0				
ATHENS	98.03	50.0	13 18	-2				
MATUSIRO	121.81	321.8	18 36	0				

SHIRAZ	123.16	47.2	18	39A	0							20	21	
TANANARIVE	130.31	108.3	18	55	2									
WARSAK DAM	131.93	29.2	18	56	0									
QUETTA	132.41	36.5	18	59	2									
HONG KONG	146.09	331.4	19	24	3									
SHILLONG	146.63	9.2	19	18	-4									
MUNDARING	150.07	213.3	19	30	3									

OCTOBER 30 1.H 46.M 29.S EPICENTRE -53.62 9.24 DEPTH= 0.KM

A= 0.58806 B= 0.09568 C=-0.80314 D= 0.1606 E=-0.9870
G=-0.7927 H=-0.1290 K=-0.5958 HT= -6.7

SE= 2.54

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
HERMANUS	20.45	24.2	4	41	0	8	29	3			7	19	
KIMBERLEY	27.34	30.8	5	47A	-1								
PIETERMZBURG	28.51	41.2	5	58K	-1								
MAWSON	28.69	140.0	5	55A	-5	10	51	2			6	39	PP
SOUTH POLE	36.57	180.0	7	8	-1								
BULAWAYO	36.58	31.5	7	8A	-1								
BANDEIRA	38.76	6.3	7	26	-1								
MIRNY	40.36	142.1	7	41	0						8	10	
BROKEN HILL	41.92	28.5	7	52A	-1								
TANANARIVE	45.46	55.4	8	26A	4						10	5	PCP
WILKES	46.54	147.0	8	31	0	15	25	5			18	26	
CAPE HALLETT	53.67	172.9	9	29	4	17	1	3					
LWIRO	53.68	24.5	9	25	0	17	4	5					
DUMONT	54.43	158.2	9	30	-1	17	9	0					
SANTA LUCIA	58.13	255.8	9	55	-2	18	0	2			21	38	SS
AREQUIPA	71.44	267.4	11	23	-1								
MUNDARING	74.01	122.3	11	39	0								
HUANCAYO	77.19	267.1	11	58	1								
MOORLANDS	77.73	149.5	11	54	-6								
ROXBURGH	79.83	165.9				22	25	11			26	59	SS
ADELAIDE	81.54	140.1	12	21	1								
TOOLANGI	81.62	146.3	12	14	-7				12	24	12	54	
WELLINGTON	84.66	169.1				23	11	7			28	25	SS
CANBERRA	84.82	148.0	12	42	5								
CHATEAU	86.80	169.4	12	48	1								
TRINIDAD	87.32	291.8	12	51	1								
TUAI	87.37	170.6	13	2	12						17	0	
JERUSALEM	87.98	21.9	12	55	2								
KARAPIRO	88.06	169.2	12	56	3						16	20	PP
TANGERANG	89.45	99.6	13	3	3								
LEMBANG	89.50	100.8	13	1K	1								
BOGOTA	89.72	278.1	13	1	0	23	37	-15			23	52	SKKS
KSARA	90.09	21.9	13	5	2								
MALAGA	90.74	349.1				24	15	14			30	15	
CHINCHINA	90.91	277.1	13	5	-2								
SHIRAZ	91.01	36.6	13	6A	-1	24	2	-1			16	56	PP
GRANADA	91.11	349.8	13	8	1						18	1	
ATHENS	92.07	11.4	13	10K	-2						24	26	
TOLEDO	93.83	349.8	13	20	0						17	3	PP
ISTANBUL KA.	95.85	14.9	13	29	0								
TEHERAN	96.18	33.3	13	30	-1								
QUETTA	97.24	47.6	13	37	1								
BUDAPEST	101.06	6.7									17	45	
STUTTGART	102.01	0.0	13	57	0						18	4	PP
KASPERSKE H.	102.44	2.9	18	6	247								
WARSAK DAM	102.53	48.9	13	59	0								
PRUHONICE	103.32	3.5	14	5	2								
AFIAMALU	112.74	178.9									28	51	SP
NURMIJARVI	114.44	8.3									19	37	PP
SODANKYLA	121.37	7.8									20	20	PP
KEVO	123.74	7.3									20	35	PP
FAYETTEVILLE	125.67	284.1	19	5	2								
TULSA	126.47	282.8	19	1	-4						38	1	SS
WICHITA MTS.	127.27	279.8	19	6	0				19	15	20	49	PP
ALBUQUERQUE	132.09	274.1	18	59	-17						19	17	
TUCSON TELE.	132.80	268.3	19	18	1								
TUCSON	132.80	268.1	19	19	2								
GOLDEN	134.62	279.8	19	12	-8								
GLEN CANYON	136.51	272.3	19	23	-1								

PASADENA	138.50	263.8	19	22	-5						
EUREKA	140.76	271.7	19	36	5						
MATUSIRO	141.06	94.9	19	36	4						
BOZEMAN	141.57	283.1	19	25	-8						
LICK	142.74	264.4	19	37K	2						
RENO	143.08	268.7	19	47K	12						
BERKELEY	143.46	264.5	19	34	-2						
CALISTOGA	144.15	265.2	19	36K	-1						
RESOLUTE	144.38	333.7	19	35A	-3						
MINERAL	144.66	268.3	19	39K	1						
HUNGRY HORSE	144.72	285.0	19	37	-1						
BLUE MTS.	144.77	277.8	19	37	-1					22	54 PP
KIPAPA	146.42	201.8	19	48	7						
BANFF	146.93	288.6	19	42	0						
PENTICTON	148.42	283.3	19	48	4						
LONGMIRE	148.45	277.7	19	48	3						
VICTORIA	150.27	279.7	19	46	-1						
MOULD BAY	150.31	337.8	19	52A	5						
COLLEGE	163.85	323.3	20	2	-2					24	40 PKS

OCTOBER 30 8.H 31.M 53.S EPICENTRE 12.63 -87.92 DEPTH= 85.KM

A= 0.03549 B=-0.97546 C= 0.21730 D=-0.9993 E=-0.0364
G= 0.0079 H=-0.2172 K=-0.9761 HT= 6.2

DEPTH OF FOCUS= 0.008R

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
SANTIAGO MA.	1.01	327.7	0	15	-5	0	28	-7				
SAN SALVADOR	1.63	309.9	0	22	-6	0	40	-9				
COMITAN	5.44	311.9	1	23	3	2	23	1				
MERIDA	8.43	349.1	2	7	6	3	40	4				
OAXACA	9.61	298.1	2	19	2	4	7	3				
VERA CRUZ	10.25	310.6	2	27	1	4	11	-9			2	51
HOPE	12.02	62.3	2	53	3							
GALERAZAMBA	12.52	97.1	2	51	-5							
TACUBAYA	12.76	303.3	3	1	1	5	24	4			5	59
CHINCHINA	14.33	121.0	3	26A	6	6	21	24			6	35 SS
FUQUENE	15.71	115.7	3	38	0							
BOGOTA	15.83	119.0	3	41A	2	6	39	7			6	57 SS
GUADALAJARA	16.78	300.5				6	55	1				
CARACAS	20.67	93.7	4	29	-6							
SAN JUAN	21.76	72.0	4	46	0	8	45	9				
LITTLE ROCK	22.41	350.4	4	53K	1							
WICHITA MTS.	24.03	338.0	5	8	0						5	53
FAYETTEVILLE	24.03	347.4	5	9	1	10	11	55				
TULSA	24.24	344.3	5	10	0	9	37	17				
LUBBOCK	24.42	330.9	5	12K	0	9	33	10				
CHAPEL HILL	24.53	17.5	5	14	1	9	27	3				
ST. KITTS	24.77	76.0	5	15	0							
ROLLA	25.41	352.6	5	21A	0							
ST. CLAUDE	25.62	79.3	6	24	61						11	4
TRINIDAD	26.04	91.6	5	28	1	9	52	2				
FORT FRANCE	26.08	82.3	5	26	-2	9	40	-10				
FLORISSANT	26.15	355.6	5	27K	-1							
BLOOMINGTON	26.48	2.5	5	30A	-1							
LAWRENCE	27.03	347.4	5	35	-1							
MANHATTEN	27.55	345.3	5	38	-3							
MORGANTOWN	27.80	13.3	5	44K	1					5	58	
ALBUQUERQUE	27.86	326.0	5	43	-1							11 23
GEORGETOWN	27.88	18.3	5	44	0							
TUCSON TELE.	28.67	316.9	5	51	0							
TUCSON	28.69	316.6	5	52	1							
CLEVELAND	29.28	9.8	5	55A	-1							
PENNSYLVANIA	29.41	15.6	5	58A	0							
DUBUQUE	29.86	355.9	6	2K	0							
PALISADES	30.82	20.9	6	11	1	11	27	21		6	22	
LONDON ONT.	30.85	9.7	6	9K	-1							
GOLDEN	31.06	333.3	6	11	-1					6	26	
GLEN CANYON	32.21	322.9	6	23	1							
LARAMIE	32.48	334.8	6	25	0							
AREQUIPA	33.16	150.3	6	32	2							
BOULDER CITY	33.59	318.4	6	35	1							

PRICE	33.63	327.1	6 35	1								
PASADENA	34.85	313.0	6 45	0								
LA PAZ	34.94	145.5	6 45	-1								
BREBEUF	34.94	17.7	6 46	0	12 13	3						
SALT LAKE C.	35.02	327.5	6 47	1						9 18		
DUGWAY	35.13	325.9	6 47K	0								
SHAWINIGAN	36.15	17.8	6 55	-1								
HALIFAX	38.06	28.5	7 15K	3								
BOZEMAN	38.34	333.6	7 15	1			8 9					
RENO	38.86	319.4	7 20K	1								
LICK	38.90	315.2	7 20K	1								
BUTTE	39.28	332.7	7 23	1			7 58					
BERKELEY	39.59	315.5	7 25K	0						9 32		
CALISTOGA	40.19	316.4	7 30K	0								
MINERAL	40.46	319.2	7 32A	0						9 11		
BLUE MTS.	40.74	327.7	7 33	-1						9 6	PP	
HUNGRY HORSE	41.71	333.8	7 42	0			8 1			9 31		
LONGMIRE	44.36	326.7	8 3K	-1								
BANFF	44.50	335.4	7 57	-8								
PENTICTON	44.95	330.9	8 8	U								
SCHEFFERVLLE	45.24	17.1	8 10A	-1								
VICTORIA	46.32	327.7	8 18K	-1								
SANTA LUCIA	48.69	160.7	8 37	-1	15 41	9						
RESOLUTE	62.16	357.9	10 12K	-3								
HAWAII V.OB.	64.75	285.6	10 31	-1								
MOULD BAY	65.76	352.1	10 36K	-2								
COLLEGE	66.08	336.2	10 38	-2								
KIPAPA	67.14	288.0	10 48	1								
HONOLULU	67.23	287.9	10 45	-2								
ALERT	70.64	3.4	11 7	-1								
NORD	74.87	8.3	11 49	16								
KIRUNA	85.16	21.2	12 26	-2			12 46					
STUTTGART	85.29	41.2	12 45	16								
COLLMBERG	86.96	38.1	12 36	-1						16 4		
PRUHONICE	88.29	39.1	13 17	34								
BYRD STATION	93.95	185.3	13 9	0								
BROKEN HILL	118.30	99.7	18 41	3								
SHIRAZ	123.24	41.5	18 48	1								
TOOLANGI	126.46	232.5	18 56	3			19 9					
CHARTERS TS.	127.67	254.3	18 59	3								
QUETTA	131.03	29.2	19 5	3								
MUNDARING	150.65	225.1	19 44	7			20 3					
TANGERANG	164.28	292.8	19 58	5								

OCTOBER 31 11.H 32.M 24.S EPICENTRE 5.39 -82.61 DEPTH= 0.KM

A= 0.12801 B=-0.98738 C= 0.09326 D=-0.9917 E=-0.1286
G= 0.0120 H=-0.0925 K=-0.9956 HT= 7.0

SE= 2.02

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
BALBOA HTS.	4.67	40.3	1 12	-1	2 27	18		
CHINCHINA	6.98	93.1	1 43A	-3	2 59	-8		
BOGOTA	8.54	94.7	2 9A	1	3 43	-3		
FUQUENE	8.84	89.0	2 12	0				
GALERAZAMBA	9.03	53.1	2 13	-1	3 43	-15		
SANTIAGO MA.	9.91	324.8	2 29	3	4 20	0		
SAN SALVADOR	10.49	322.2	2 34	0	4 28	-6		
HOPE	13.78	24.1	3 17	-2				
COMITAN	14.27	319.9	3 28	3	6 28	23		8 48
MERIDA	16.90	336.9	4 7	8	7 16	9		8 56
OAXACA	18.05	311.0	4 16	2				8 56
HUANCAYO	18.78	157.3	4 23	U				
PUEBLA	20.37	313.1	4 40	-1	8 40	16		
SAN JUAN	20.64	49.9	4 43	0				
TACUBAYA	21.33	312.2	4 55	4	9 6	23		10 29
TRINIDAD	21.64	74.7	4 52K	-2	8 50	1		
FORT FRANCE	23.06	64.7	5 8	0	9 22	7		
ST. CLAUDE	23.08	61.1	5 11	3	9 26	10		
MANZANILLO	25.15	304.6						12 36
GUADALAJARA	25.21	309.0			9 52	0		12 36
DALLAS	30.35	335.9	6 14	-1				
CHAPEL HILL	30.56	5.7	6 15	-2				
LITTLE ROCK	30.60	344.1	6 14K	-4				
ANTOFAGASTA	31.26	158.1	6 23	0				7 8

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CHIHUAHUA	32.08	318.8								11	56
FAYETTEVILLE	32.36	342.3	6	30	-3						
TULSA	32.71	340.0	6	34	-2	11	52	0			
WICHITA MTS.	32.72	335.2	6	34A	-2	11	53	0		7	33 PP
LUBBOCK	33.27	329.9	6	40	-1						
ROLLA	33.45	346.6	6	40A	-2	12	2	-2			
GEORGETOWN	33.74	7.8	6	44	-1	12	11	3			
BLOOMINGTON	33.83	354.6	6	45	-1	12	6	-4			
LAWRENCE	35.34	342.9	6	57	-2	12	15	-18			
PENNSYLVANIA	35.51	6.2	6	59A	-1						
CLEVELAND	35.95	1.4	7	2K	-2	12	40	-3			
MANHATTEN	35.96	341.4	7	1A	-3	12	44	1			
FORDHAM	36.17	11.3	7	8	2	12	50	4			
PALISADES	36.32	11.1	7	9	2	12	53	5			
ALBUQUERQUE	36.75	326.3	7	11	0						
LONDON ONT.	37.52	1.7	7	15K	-2						
TUCSON TELE.	37.53	319.1	7	18	1						
TUCSON	37.54	318.9	7	18	1						
DUBUQUE	37.66	350.2	7	16A	-2	13	7	-2			
GOLDEN	39.85	332.2	7	37	0	12	50	-52			
SANTA LUCIA	40.25	164.4	7	34	-6	13	30	-18			
BREBEUF	40.72	9.7	7	42	-2	13	52	-3	7 56	9	18 PP
GLEN CANYON	41.11	323.8	7	48	1						
SHAWINIGAN	41.88	10.2	7	52K	-1						
HALIFAX	42.48	20.2	8	0	2						
PRICE	42.52	327.3	7	58A	0						
PASADENA	43.63	315.7	8	8	0	14	46	8		9	57 PP
SALT LAKE C.	43.90	327.7	8	9	-1					9	59 PP
DUGWAY	44.02	326.3	8	11A	0						
PRIEST	46.41	316.5	8	29A	-1						
BOZEMAN	47.13	332.9	8	35	0						
LICK	47.72	317.3	8	40	0						
RENO	47.75	320.8	8	50A	10						
BUTTE	48.09	332.1	8	42	-1					10	42 PP
BERKELEY	48.42	317.5	8	46A	0	15	58	12		10	45 PP
CALISTOGA	49.04	318.2	8	49A	-1						
MINERAL	49.34	320.7	8	51A	-2						
BLUE MTS.	49.62	327.9	8	53A	-2	16	10	7		10	52 PP
HUNGRY HORSE	50.49	333.2	9	1	0						
SCHEFFERVLLE	50.92	11.7	9	3A	-2						
BANFF	53.23	334.7	9	19A	-3						
LONGMIRE	53.25	327.2	9	21A	-1	16	46	-7			
PENTICTON	53.79	330.8	9	25A	-1						
VICTORIA	55.20	328.1	9	36A	-1						
RESOLUTE	69.60	356.5	11	10	-3						
REYKJAVIK	72.69	23.6	11	31K	0						
MOULD BAY	73.64	351.4	11	35A	-2						
SIDA	74.12	24.6	11	41K	1						
SERRA PILAR	74.44	48.9	11	40K	-2					14	28 PP
KIPAPA	74.48	290.6	11	44	2						
HONOLULU	74.55	290.5	11	44	2						
COLLEGE	74.77	336.3	11	42	-1					14	29 PP
SCORESBY SD.	75.42	17.6	11	47	0						
MALAGA	77.35	53.7	12	1A	3	21	52	4		14	55 PP
ALERT	77.55	2.7	11	57	-2						
TOLEDO	77.79	50.5	12	1	1					14	50 PP
GRANADA	78.01	53.3	12	8K	6					14	37 PP
ALMERIA	78.91	53.6	12	8	1						
BENI ABBES	79.05	60.5	12	7	0					12	10 PCP
FOLINIERE	80.79	41.6	12	18	1						
KEW	81.01	38.9	12	19	1						
BAGNERES	81.06	47.4	12	19	1						
NORD	81.26	7.8	12	18	-1						
GARCHY	83.15	43.1	12	30	1					12	50
CLERMONT-FD.	83.20	44.7	12	33A	4						
DOURBES	84.12	40.3	12	33	-1						
ROSELEND	85.66	44.7	12	42	0						
BENSBERG	85.72	39.4	12	43A	1						
STRASBOURG	86.26	41.7	12	46	1						
MONACO	86.35	46.6	12	47	2						
HEIDELBERG	86.82	40.9	12	49	2						
EBINGEN	87.08	42.1	12	49	0						
STUTTGART	87.24	41.5	12	50	1					16	20 PP
BYRD STATION	87.30	186.0	12	48	-2						
SKALSTUGAN	87.40	26.5	12	51	1						
JENA	88.50	39.1	12	57	2	23	16	-24		29	16 55
HALLE	88.67	38.6	12	58	2					16	32 PP
TROMSOE	88.99	20.1	12	59	1						

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COLLMBERG	89.34	38.7	13	1	2					16	37	
KIRUNA	89.94	21.7	13	3	1	23	42	-12				
KASPERSKE H.	90.01	40.8	13	0	-3							
AFIAMALU	90.47	256.2				24	10	12		30	13	SS
PRUHONICE	90.51	39.8	13	7	2					16	40	PP
KEVO	91.66	19.1	13	10	0	24	10	1		30	16	SS
SODANKYLA	92.35	21.4	13	14	1							
NURMIJARVI	93.74	28.3								25	46	PS
SOUTH POLE	95.35	180.0	13	26	-1							
HERMANUS	102.79	123.9								27	18	PS
WELLINGTON	103.02	229.0								27	34	PS
ROXBURGH	106.47	224.2								34	12	SS
WILKES	118.47	186.0								36	30	SS
SHIRAZ	124.64	48.3	19	4	3					20	47	
PEKING	131.61	340.7	19	17	2					21	33	PP
WARSAK DAM	133.83	30.1	19	20	1							
QUETTA	134.16	37.7	19	24	4							
LANCHOW	138.34	352.1								22	16	PP
SIAN	139.10	345.3								22	19	PP
NEW DELHI	141.03	28.9	19	28	-4							
CHATRA	146.48	16.7	19	43K	2							
POONA	146.78	43.8	19	47K	5							
CANTON	147.69	331.7	19	38	-5							
HONG KONG	147.95	329.7	19	51	7							
MUNDARING	148.22	211.4	19	49	5							
SHILLONG	148.77	9.6	19	49A	4							
KUNMING	149.23	350.5	19	54	8							
CHITTAGONG	151.89	11.0	19	56	6							

NOVEMBER 1 15.H 33.M 32.S EPICENTRE 2.01 132.85 DEPTH= 127.KM

A=-0.67962 B= 0.73274 C= 0.03484 D= 0.7332 E= 0.6800
G=-0.0237 H= 0.0255 K=-0.9994 HT= 7.2

DEPTH OF FOCUS= 0.015R

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
DARWIN	14.44	187.9	3	26	7							
GUAM	16.37	45.4	3	44	1						4	17 PP
MANILA	17.12	317.9	4	6	14	7	59	62				
PORT MORESBY	18.21	128.7	4	0A	-5							
RABAUL	20.27	107.7	4	24A	-3	8	27	25			9	35
HENGCHUN	23.09	330.3	5	12	17							
TAWU	23.31	331.0	5	9	12							
TAITUNG	23.54	332.1	5	14	15							
HSINKONG	23.74	332.9	4	56	-5							
HWALIEN	24.38	334.4	5	11	4							
TAIPEI	25.36	335.4	5	32	16	10	16	45				
NHATRANG	25.52	294.5	5	16	-2							
CHARTERS TS.	25.60	149.7	5	16	-3	9	46	11				
LEMBANG	26.67	250.6	5	38	10	10	8	16				
HONG KONG	27.13	319.4	5	32	-1	10	16	16	5	48	6	21 PP
DJAKARTA	27.22	252.4	5	34	0	9	59	-2				
TANGERANG	27.41	252.6	5	35K	0	10	24	20				
CANTON	28.23	319.5	5	43	0	10	34	16				
HONIARA	29.30	113.3	6	0	8						14	10
ZO-SE	30.97	340.3	6	6K	-1	11	15	14				
NANKING	32.70	337.5	6	22	0	11	42	14				
ABUYAMA	32.79	4.1	6	20A	-3							
TUKUBASAN	34.70	10.3	6	43A	4	12	3	4			8	7 PP
MATUSIRO	34.72	7.6	6	37A	-2	12	13	14				
BRISBANE	34.97	148.1	6	39	-2				7	52		
KUNMING	37.02	311.0	6	59	0	12	50	16			8	29 PP
ADELAIDE	37.20	172.0	6	57	-3	12	42	5			8	21 PP
MUNDARING	37.30	203.7	6	57	-4	12	45	7				
PERTH	37.43	204.2	6	59	-3	12	52	12			8	55 PPP
SIAN	39.08	327.8	7	16	0	13	22	17				
CHENGTU	39.46	319.2	7	18K	-1	13	26	15				
RIVERVIEW	39.60	155.8	7	22K	2	13	23	10			8	57 PP
CANBERRA	40.10	159.3	7	22	-2	13	21	0			8	55 PP
PEKING	40.76	340.3	7	30K	0	13	44	14			9	11 PP
PORT BLAIR	40.92	285.5	7	31	0	13	41	8			9	48
VLADIVOSTOK	40.94	358.9	7	31A	0							
CHANGCHUN	42.18	351.9	7	41A	0	14	6	15				

LANCHOW	43.23	325.0	7	51K	1				8	10		
PAOTOW	43.60	334.6	7	53	0	14	28	16				
CHITTAGONG	44.67	300.2	8	1K	0	14	25	-2	8	14	9	47 PP
Y.-SAKHLINSK	45.65	9.4	8	2	-7							
SHILLONG	45.86	304.4	8	8A	-3	14	55	11			16	57
MOORLANDS	46.11	165.3	8	12	-1							
LHASA	48.27	309.0	8	30K	0	15	36	18	8	50		
SUVA	49.13	116.1	8	38	2						9	41
CHATRA	50.24	303.7	8	43	-2							
PETROPAVLOVK	55.16	18.7	9	21	0							
IRKUTSK	55.45	339.1	9	18	-5							
CHATEAU	56.71	140.9	9	33	1							
AFIAMALU	57.10	107.9	9	43K	8	17	16	-2			17	43 PS
ROXBURGH	57.27	150.2				17	34	14			21	28 SS
WELLINGTON	57.48	143.3				17	33	10			13	0 PP
TUAI	57.51	139.7	9	35	-3						11	16
DEHRA DUN	58.96	304.4	9	46A	-2	17	56	14				
MAGADAN	59.06	10.5	9	50	1							
NEW DELHI	59.16	302.3	9	47K	-2	17	51	6			12	4 PP
YAKUTSK	59.91	358.3	9	53A	-1	18	9	15				
LAHORE	62.37	304.7	10	9	-2							
WARSAK DAM	65.28	306.7	10	30	0							
FRUNSE	65.75	316.7	10	33A	0							
KHOROG	66.25	310.3	10	37	1							
KARACHI	67.25	296.0	10	42	0							
QUETTA	68.23	301.7	10	49K	0	19	52	15				
DUZHANBE	68.65	310.8	11	0	9							
HONOLULU	69.77	68.1	11	1	3							
KIPAPA	69.86	68.0	11	3	4							
WILKES	70.05	189.4	10	57	-3	19	58	-1			12	19
ASHKABAD	76.55	308.4	11	39	2							
VANNOVSKAYA	76.75	308.4	11	40	1							
SVERDLOVSK	78.64	327.7	11	49K	0							
SHIRAZ	80.60	299.6	12	0K	1	22	6	12			13	41
TEHERAN	81.89	305.6	12	7	1	22	21	13				
COLLEGE	83.66	25.0	12	15	0							
MAWSON	84.32	201.2	12	17K	-1						31	36 SS
GORIS	86.04	309.3	12	28A	1							
TANANARIVE	86.20	251.0	12	30A	2						14	3
TIFLIS	87.21	311.5	12	36	3	23	26	26				
MOSCOW	91.30	325.7	12	56	4							
APATITY	91.76	337.7	12	53A	-1							
SOUTH POLE	92.00	180.0	12	55	0							
MOULD BAY	92.26	13.2	12	56K	0							
KEVO	93.57	340.4	13	2	0	23	44	-13			25	24 PS
SODANKYLA	94.35	338.1	13	5	-1							
KSARA	94.68	304.0	13	23	16	24	38	32			17	16 PP
KAJAANI	94.78	334.8	13	9	1							
BYRD STATION	95.00	170.4	13	10	1							
VIBORG	95.10	331.4	13	9	0							
KIRUNA	96.45	339.3	13	16A	1							
HELSINKI	97.08	331.3	13	19	1							
NURMIJARVI	97.13	331.7	13	18	-1	23	52	10			26	4 PS
RESOLUTE	98.34	11.5	13	25	1							
ISTANBUL KA.	99.04	312.0									17	11
ISTANBUL UN.	99.11	311.9									17	32 PP
PENTICTON	99.83	39.3	13	32	1							
UPPSALA	100.65	332.3	13	34	-1							
UZHGOROD	101.92	320.6	13	42	2							
BLUE MTS.	102.52	43.3	13	43	0						18	0 PP
WOODY	103.60	52.7	13	57	9							
LWIRO	104.11	268.2									18	6 PP
EUREKA	104.92	48.3	13	55	2						18	13 PKP
PRUHONICE	106.21	323.7	17	23	777						28	39 PPS
COLLMBERG	106.57	325.4	18	10	777						18	37 PP
JENA	107.53	325.4	17	52	777						28	4
ALBUQUERQUE	113.53	50.4	18	11	-12						18	34 PP
WICHITA MTS.	119.57	47.8	18	38	4						20	0 PP
TULSA	121.05	45.3	18	41	4						31	38 SP
FAYETTEVILLE	122.09	44.4									18	42 PP
MALAGA	124.67	318.5									20	44
BENI ABBES	126.53	310.4	18	51	3						20	22 PP
SANTA LUCIA	141.77	147.4									23	14
ANTOFAGASTA	148.82	135.6	19	36	8							
HUANCAYO	150.35	111.0	19	42	12							
CHINCHINA	150.73	76.2	19	28	-3							
AREQUIPA	152.07	122.4	19	44	11							
BOGOTA	152.31	76.2	19	45	12						43	57 SSP

SAN JUAN	152.45	41.9	19	44	11														
CARACAS	156.72	57.4	20	14	35														

NOVEMBER 1 17.H 52.M 23.S EPICENTRE 1.97 132.86 DEPTH= 56.KM

A=-0.67982 B= 0.73258 C= 0.03418 D= 0.7330 E= 0.6802
G=-0.0233 H= 0.0251 K=-0.9994 HT= 7.2

DEPTH OF FOCUS= 0.004R

SE= 1.94

	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	
DARWIN	14.40	188.0	3	36	14	6	8	7					
GUAM	16.38	45.2	3	51	4								
MANILA	17.16	318.0	3	59	-4	7	3	-2					
PORT MORESBY	18.17	128.7	4	8A	-2	7	37	10					
RABAUL	20.25	107.6	4	32A	-1	8	35	23			9	37	
TAWU	23.35	331.1	4	40	-24								
TAITUNG	23.58	332.1	5	9	3								
HSINKONG	23.78	332.9	4	49	-19								
HWALIEN	24.42	334.5	5	17	3	9	44	17					
TAIPEI	25.40	335.4	5	26	2	9	59	15					
NHATRANG	25.55	294.6	5	25	0								
CHARTERS TS.	25.56	149.7	5	25	0	9	53	6					
LEMBANG	26.67	250.6	5	35A	0	10	17	12					
HONG KONG	27.17	319.5	5	41	1	10	20	7			6	18	PP
DJAKARTA	27.22	252.5	5	39	-2	9	59	-15					
CANTON	28.27	319.5	5	50	0	10	41	10					
HONIARA	29.27	113.2	5	58K	-1						15	2	
ZO-SE	31.01	340.3	6	12K	-2	11	21	7			7	18	PP
NANKING	32.74	337.5	6	30K	1	11	51	10			7	41	PP
ABUYAMA	32.83	4.1	6	31A	1								
MATUSIRO	34.75	7.6	6	44	-3	12	22	10					
BRISBANE	34.93	148.1	6	48	0	12	20	5					
KUNMING	37.05	311.0	7	7K	1	13	0	12	7	27	8	36	PP
ADELAIDE	37.16	172.0	7	6	-1	12	51	2			8	30	PP
MUNDARING	37.27	203.7	7	6	-2	12	54	3					
PERTH	37.41	204.2	7	11	2	12	58	5			8	47	PP
SIAN	39.12	327.8	7	24	1	13	28	9					
CHENGTU	39.50	319.2	7	27K	0	13	35	10	7	47			
RIVERVIEW	39.56	155.8	7	29A	2	13	29	4			16	19	SS
CANBERRA	40.06	159.3	7	31	0	13	33	0			9	4	PP
NOUMEA	40.70	128.2	7	35A	-2								
PEKING	40.80	340.3	7	38K	1	13	53	9					
PORT BLAIR	40.95	285.5	8	29	50	14	38	52			9	52	PP
VLADIVOSTOK	40.98	358.9	7	39A	0								
CHANGCHUN	42.22	351.9	7	49	0	14	14	9					
LANCHOW	43.27	325.0	7	59K	1				8	18			
PAOTOW	43.64	334.6	8	2	1	14	38	12					
CHITTAGONG	44.71	300.2	8	9K	0	14	50	9	8	20			
Y.-SAKHLINSK	45.68	9.4	8	13	-4								
SHILLONG	45.89	304.4	8	17K	-2	15	4	6			10	5	PP
MOORLANDS	46.07	165.3	8	20	0								
CALCUTTA	47.76	298.9	8	40	7	15	21	-4			10	34	PP
LHASA	48.30	309.0	8	38K	1	15	44	12	8	58			
SUVA	49.10	116.1									14	37	
CHATRA	50.27	303.8	8	50K	-3	16	7	7					
BOKARO	50.42	299.6	8	54A	0	16	13	11			10	51	PP
VISHAKHAPTNM	51.08	291.2	9	0K	1	16	23	12			10	59	PP
MADRAS	53.26	284.7	9	16A	1	16	47	6			11	23	PP
PETROPAVLOVK	55.19	18.7	9	29	0								
IRKUTSK	55.49	339.1	9	32	1								
HYDERABAD	55.57	289.7	9	31A	-1	17	19	7			11	38	PP
CHATEAU	56.67	140.9	9	42	2								
AFIAMALU	57.08	107.9	9	44	1	17	13	-19			17	52	PS
ROXBURGH	57.23	150.2				17	41	7			23	37	SSS
TUAI	57.47	139.7	9	44	-2								
DEHRA DUN	58.99	304.5	9	56K	0	18	7	10			12	18	PP
NEW DELHI	59.20	302.3	9	55K	-3	18	1	2			10	48	PCP
YAKUTSK	59.95	358.3	10	1A	-2								
POONA	60.06	290.2	10	1K	-2	18	19	9					
BOMBAY	61.08	290.4	10	10	0	18	33	9			12	24	PP
LAHORE	62.40	304.7	10	17K	-2	18	41	1	10	26	12	36	PP
WARSAK DAM	65.32	306.7	10	38K	0								
FRUNSE	65.79	316.7	10	41A	0	19	36	14					

KARACHI	67.28	296.0	10	51	0						
QUETTA	68.26	301.7	10	57	0	20	1	9		13	30 PP
DUMONT	68.68	176.9	11	8	9						
DUZHANBE	68.68	310.8	10	58	-1						
WILKES	70.01	189.4	11	6K	-2					38	45 PKPPKP
MIRNY	74.00	195.5	11	31	0	21	5	7			
ASHKABAD	76.59	308.4	11	48	2						
VANNOVSKAYA	76.78	308.4	11	48	1	21	42	13			
CAPE HALLETT	77.86	169.1	11	54	1						
SVERDLOVSK	78.68	327.7	11	58K	0						
SHIRAZ	80.63	299.6	12	8K	0	22	11	1			
TEHERAN	81.93	305.6	12	15	0	22	36	13		15	12 PP
COLLEGE	83.68	25.0	12	23	-1						
HAWSON	84.29	201.2	12	26K	-1						
GORIS	86.08	309.3	12	37A	1						
TANANARIVE	86.20	251.0	12	39A	3						
MOSCOW	91.34	325.7	13	0	-1						
APATITY	91.80	337.7	13	2A	-1						
KEVO	93.61	340.4	13	11	0	23	49	-23		25	31 PS
SODANKYLA	94.39	338.1	13	14	-1						
KSARA	94.71	304.0	13	14	-2	24	35	13		17	8 PP
SIMFEROPOL	94.81	315.2								17	12 PP
KAJAANI	94.82	334.8	13	17	0						
NORD	95.33	355.7	13	19	0						
KIRUNA	96.49	339.3	13	24A	0						
HELSINKI	97.12	331.3	13	26	-1						
NURMIJARVI	97.17	331.7	13	27	0					17	26 PP
RESOLUTE	98.38	11.5	13	33A	0						
ISTANBUL UN.	99.14	311.9								17	51 PP
PENTICTON	99.85	39.3	13	41A	1						
UPPSALA	100.69	332.3	13	42	-1						
UZHGOROD	101.96	320.6	13	49	0						
BLUE MTS.	102.54	43.3	13	53	1					18	6 PP
SOFIA	102.90	314.5								18	10
WOODY	103.61	52.7	13	57	1						
EUREKA	104.93	48.3	14	6	4					18	21 PKP
PRUHONICE	106.25	323.7	17	42	777					18	43 PP
ALBUQUERQUE	113.54	50.4	18	12	-20					18	35
BANGUI	113.99	275.6	18	35	2						
WICHITA MTS.	119.58	47.8	18	45	1					20	13 PP
TULSA	121.07	45.4								37	2 SS
MALAGA	124.71	318.4								20	45
BENI ABBES	126.56	310.3	19	7	10					20	55 PP
GALERAZAMBA	149.28	65.1	18	51	-47						
HUANCAYO	150.32	111.0	19	45	6						
CHINCHINA	150.72	76.3	19	37	-3						
AREQUIPA	152.04	122.4	19	47	5						
BOGOTA	152.31	76.3	19	48	6					43	53 SSP
SAN JUAN	152.47	41.9	19	53	10						
CARACAS	156.73	57.4	19	51	3					24	10 PP

NOVEMBER 2 14.H 46.M 35.S EPICENTRE -10.12 117.90 DEPTH= 0.KM

A=-0.46073 B= 0.87021 C=-0.17454 D= 0.8838 E= 0.4679
G= 0.0817 H=-0.1543 K=-0.9847 HT= 6.5

SE= 2.26

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
LEMBANG	10.68	287.0	2	36A	-1	5	9	30				
DJAKARTA	11.63	288.8	2	49A	-1	5	51	49				
TANGERANG	11.82	288.5	2	52A	-1	5	46	39				
DARWIN	12.88	101.3	3	2	-5	5	19	-13				
MUNDARING	21.80	183.9	4	52	-3	8	55	3				
PERTH	21.81	184.7	4	54	-1	9	4	12			5 8	PP
MANILA	24.83	7.3	5	24	-1	10	0	14				
PORT MORESBY	28.83	91.1	6	2	0							
CHARTERS TS.	29.08	113.3	6	4	0	10	52	-3				
ADELAIDE	31.19	145.7	6	22K	-1	11	34	5				
HONG KONG	32.42	353.6	6	35	1	11	43	-5			7 52	PP
PORT BLAIR	33.09	310.2				11	55	-			8 46	
CANTON	33.30	352.3	6	44	3	12	1	1			8 7	PPP
RABAUL	34.49	82.7	6	51	-1							
GUAM	35.47	49.2	7	0	0						8 40	PP
BRISBANE	37.05	122.4	7	17K	4	12	57	-3				

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CANBERRA	37.82	136.5	7	20A	0	13	11	0	7	32		
KUNMING	38.01	337.4	7	25	4	13	17	3	7	36	9	8 PP
RIVERVIEW	38.54	132.9	7	27A	1	13	21	-1	7	38	16	0 SS
ZO-SE	41.10	4.3	7	47	0	13	59	-2				
CHITTAGONG	41.18	321.8	7	47	-1	13	42	-20			9	45 PCP
HONIARA	41.43	92.8	7	50	0							
NANKING	41.95	1.1	7	56	2	14	14	1				
CHENGTU	42.68	342.2	8	0	0	14	22	-2				
SHILLONG	43.60	324.9	8	5A	-2							
MADRAS	43.93	300.7	8	10	0	14	41	-1			9	52 PP
VISHAKHAPTNM	43.97	308.8	8	18	8	14	42	-1				
SIAN	44.94	349.5	8	18	0	14	56	-1				
LHASA	47.24	327.6	8	37	0	15	27	-3				
CHATRA	47.32	321.6	8	34	-3						10	8 PP
ABUYAMA	47.77	19.7	8	40A	-1							
LANCHOW	47.80	344.6	8	42	1	15	38	0			18	35 SCS
NOUMEA	47.97	110.9	8	43	1							
PEKING	49.92	358.3	8	56	-1	16	4	-3				
MATUSIRO	50.19	21.3	8	56A	-3						9	58
PAOTOW	50.96	352.3	9	6	1	16	21	-1	9	18	18	51 SCS
POONA	51.95	303.1	9	11K	-2	16	28	-7				
BOMBAY	52.98	302.9	9	25	5	16	47	-2			11	32
CHANGCHUN	54.11	6.6	9	26	-3	16	58	-7				
VLADIVOSTOK	54.50	12.6	9	31	-1							
MACQUARIE i.	54.91	152.1	9	36	1							
NEW DELHI	55.01	315.6									17	4
DEHRA DUN	55.53	317.8	9	36	-3							
ROXBURGH	56.22	138.6									22	52 SSS
WILKES	56.37	183.6	9	43A	-2	17	26	-9				
TARATA	57.83	130.1	9	58	3							
DUMONT	58.44	169.9	9	58	-2	17	54	-8				
WELLINGTON	58.65	132.3	10	0	-1							
CHATEAU	58.71	129.8	10	18	16							
LAHORE	58.79	316.5	10	0	-2	18	3	-4				
MIRNY	58.84	191.4	10	1	-2							
TUAI	59.85	129.0	10	9	-1							
KARACHI	60.54	306.0	10	15	1							
Y.-SAKHLINSK	61.04	19.2	10	15	-3							
WARSAK DAM	62.13	317.2	10	23	-2							
IRKUTSK	63.23	350.7	10	31	-1	19	0	-3				
QUETTA	63.26	311.2	10	29	-4	18	56	-8	10	41		
ALMATA-2	64.69	328.3	10	40	-2							
FRUNSE	65.85	326.4	10	48	-1							
DUZHANBE	66.63	319.8	10	54	0							
MAWSON	67.82	199.8	11	OK	-2						11	13 *SP
TASHKENT	67.94	322.4	11	2	-1							
TANANARIVE	68.30	253.6	11	8	3						12	22
AFIAMALU	68.67	101.0	11	33	26							
CAPE HALLETT	69.50	165.0	11	13	1							
PETROPAVLOVK	71.85	24.5	11	25	-1							
YAKUTSK	72.50	5.8	11	29K	-1							
ASHKABAD	73.28	314.6	11	35	0	20	59	-4				
VANNOVSKAYA	73.46	314.5	11	36	0							
SHIRAZ	74.26	304.7	11	38	-3	21	6	-8				
TEHERAN	77.42	310.1	11	58	0	21	43	-6				
SOUTH POLE	79.95	180.0	12	12	0							
SVERDLOVSK	81.55	332.1	12	18	-3							
GORIS	82.51	312.2	12	28A	2	22	39	-3				
BYRD STATION	85.45	171.5	12	41	0						14	3 PP
BULAWAYO	85.92	250.4	12	45	2							
KIMBERLEY	87.91	241.3	12	55	2							
HONOLULU	88.11	68.1	12	59	5							
KIPAPA	88.21	68.0	12	59	5							
LWIRO	88.72	268.0	13	18	21	23	43	0			25	10 PS
KSARA	89.02	304.5	13	2A	4	23	59	14			24	44 PS
JERUSALEM	89.12	302.3	13	1	3							
HERMANUS	91.40	234.8				23	52	-15				
SIMFEROPOL	92.70	315.0	13	16	1							
MOSCOW	92.85	326.1	13	17A	1							
ISTANBUL UN.	95.74	310.5	13	29	0							
APATITY	97.16	337.3	13	35	0	24	56	43			24	17 SKS
VIBORG	98.30	330.2	13	40	-1							
KEVO	99.73	339.3	13	47	0							
SODANKYLA	99.75	336.9	13	46	-1							
BANGUI	99.88	272.7	13	45	-3							
HELSINKI	100.15	329.5	13	48	-1							
NURMIJARVI	100.32	329.9	13	49	-1							
COLLEGE	100.91	25.7	17	45	233							
KIRUNA	102.13	337.4	13	57	-1						17	16

UPPSALA	103.84	329.2	14	5	0			
PRUHONICE	106.26	319.1	17	49	777		18	37 PP
COLLMBERG	107.15	320.6					17	23
MOULD BAY	107.29	12.2	14	29	777			
PENTICTON	118.55	38.9	18	52A	2			
BLUE MTS.	121.49	43.2	18	57	2		20	49 PP
HUNGRY HORSE	122.35	38.4	18	57	0			
WOODY	122.73	54.0	19	2	4			
EUREKA	124.05	49.0	19	3	3			
DUGWAY	126.14	47.2	19	7K	3			
ALBUQUERQUE	132.68	51.4	19	9	-8		21	43 PP
MANHATTEN	137.78	40.9	19	20	-6			
WICHITA MTS.	138.68	47.9	19	23	-5		22	27 PP
TULSA	140.09	44.6	19	28	-3			
FAYETTEVILLE	141.08	43.2	19	28K	-4		26	48 PP
ROLLA	141.51	39.2	19	30	-3			
BREBEUF	143.38	13.6	19	36	0			
BLOOMINGTON	143.78	32.9	19	37	0			
ANTOFAGASTA	145.42	166.5	19	43	3			
HALIFAX	145.60	1.9	19	42	2			
PENNSYLVANIA	146.41	21.9	19	44A	3			
MORGANTOWN	146.59	25.5	19	46K	4			
PALISADES	147.51	16.8	19	48	5		20	2 PKP2
FORDHAM	147.67	16.8	19	47	3			
AREQUIPA	152.01	160.5	19	57	7			
HUANCAYO	154.35	148.9	20	7	13			
CHINCHINA	165.66	109.9	20	11	5			
GALERAZAMBA	167.03	85.9	19	55	-12			
CARACAS	175.23	85.0					25	43 PP
TRINIDAD	179.13	307.5					22	8

NOVEMBER 2 15.H 0.M 23.5 EPICENTRE 36.84 141.39 DEPTH= 52.KM

A=-0.62691 B= 0.50065 C= 0.59694 D= 0.6240 E= 0.7814
G=-0.4664 H= 0.3725 K=-0.8023 HT= -0.5

DEPTH OF FOCUS= 0.003R

SE= 2.74

	DELTA	AZ.	P	O-C	S	O-C	*PP		SUPP.	
	DEG.	DEG.	M	S	S	M	S	S	M S	M S
ONAHAMA	0.41	286.3	0	9K	-4	0	17	-5		
MITO	0.87	238.6	0	14K	-4	0	24	-6		
SHIRAKAWA	0.98	287.2	0	17K	-2	0	30	-2		
KAKIOKA	1.15	238.5	0	19K	-2	0	30	-6		
HUKUSIMA	1.17	321.5	0	21K	0	0	37	0		
TYOSI	1.20	201.5	0	19K	-3	0	32	-5		
TUKUBASAN	1.21	239.7	0	18K	-4					
UTUNOMIYA	1.25	257.3	0	19	-3	0	35	-4		
SENDAI	1.48	345.0	0	25K	-1	0	44	0		
ISINOMAKI	1.59	358.1	0	26K	-1	0	46	-1		
YAMAGATA	1.64	330.0	0	27K	-1	0	47	-1		
HONGO	1.72	229.8	0	27A	-2	0	47	-3		
TOKYO C.M.O.	1.76	229.4	0	27K	-2	0	48	-3		
KUMAGAYA	1.76	247.7	0	26K	-3	0	48	-3		
MAEBASI	1.92	257.6	0	30K	-2	0	53	-2		
YOKOHAMA	1.99	225.6	0	32	-1	0	55	-2		
TITIBU	2.05	246.0	0	31	-2	0	55	-3		
NIIGATA	2.15	300.8	0	41K	6	1	5	4		
MERA	2.29	214.0	0	36	-1	1	15	11		
MIZUSAWA	2.30	355.0	0	37	0	0	59	-5		
OIWAKE	2.34	258.4	0	37	-1	1	4	-1		
SAKATA	2.40	329.6	0	40	2	1	10	3		
HUNATU	2.50	238.6	0	39	-1	1	10	0		
TAKADA	2.53	276.9	0	35	-5	0	59	-11		
KOHU	2.57	243.9	0	39	-2	1	10	-1		
NAGANO	2.57	267.2	0	42	1	1	24	13		
MATUSIRO	2.57	264.3	0	40K	-1	1	12	1		
AJIRO	2.57	226.9	0	39A	-2	1	7	-4		
MISIMA	2.62	229.8	0	40	-1	1	8	-4		
OSIMA	2.63	219.0	0	41	-1	1	8	-5		
AIKAWA	2.76	296.3	0	44	0	1	24	8		
MATUMOTO	2.81	259.0	0	43	-1	1	17	0		
MIYAKO	2.85	9.1	0	43	-2	1	17	-1		
MORIOKA	2.86	356.6	0	46	1	1	22	3		
AKITA	3.05	341.0	0	47	-1	1	26	3		

SHIZUOKA	3.06	233.4	0	47	-1	1	22	-1				
IIDA	3.16	246.5	0	49K	0	1	28	2				
TOYAMA	3.37	268.9	0	54	2	1	21	-10				
TAKAYAMA	3.40	259.6	0	52	-1	1	13	-19				
OMAESAKI	3.41	230.1	0	55	2.	1	43	11				
WAZIMA	3.63	279.9	0	55	-1	1	45	7				
HAMAMATU	3.65	235.8	0	56	0	1	39	1				
HATINOHE	3.69	1.7	0	56	-1	1	43	4				
KANAZAWA	3.82	266.8	0	58	0							
NAGOYA	3.95	246.4	0	59	-1							
HATIDYOZIMA	3.95	199.9	0	54	-6							
GIHU	4.00	250.4	1	1	0	1	45	-2				
AOMORI	4.01	353.4	1	3K	2	1	47	0				
HUKUI	4.23	260.9	1	4	0	2	5	12				
HIKONE	4.45	250.9	1	8	1	1	57	-1				
TSURUGA	4.46	256.2	1	6	-1	1	47	-12				
KAMEYAMA	4.46	245.1	1	12	5	1	59	0				
TU	4.50	243.1	1	14	6	2	10	10				
KYOTO	4.94	250.1	1	13	-1	2	8	-3				
HAKODATE	4.99	354.6	1	18	3	2	19	7				
NARA	5.01	246.2	1	15	0	2	20	8				
MAIZURU	5.04	256.1	1	10	-6	2	9	-4				
OWASE	5.05	238.4	1	22	6	2	24	10				
ABUYAMA	5.12	249.2	1	15K	-2							
OSAKA	5.24	247.1	1	18	0	2	12	-6				
MORI	5.29	353.4	1	22	3	2	23	3				
URAKAWA	5.41	11.0	1	21	0	2	25	2				
TOYOOKA	5.47	258.2	1	21	0							
MURORAN	5.49	356.8	1	26	4	2	25	1				
KOBE	5.49	248.8				2	39	15				
HIROO	5.64	14.7	1	23	-1	2	29	1				
WAKAYAMA	5.70	244.7	1	26	1	2	10	-20				
SIOMISAKI	5.71	235.4	1	26	1	2	55	25				
TOMAKOMAI	5.79	1.4	1	39	13							
SUMOTO	5.84	246.7	1	33	6	2	55	22				
TOTTORI	5.98	259.4	1	28	-1	2	26	-11				
SUTTSU	6.02	351.8	1	36	7							
HIMEJI	6.15	249.8	1	39	8	2	52	11				
TOKUSIMA	6.20	245.6	1	34	2	3	10	28				
SAPPORO	6.23	359.7	1	32A	0	2	42	-1				
OBIHIRO	6.23	12.3	1	31	-1	2	42	-1				
TAKAMATU	6.49	249.4	1	40	4	3	19	30				
SAIGO	6.52	266.8	1	34	-2							
KUSIRO	6.56	19.7	1	32	-5	2	45	-6				
YONAGO	6.66	260.2	1	38	0	3	24	31				
TSURUGISAN	6.73	245.9									2	41
MATSUE	6.87	260.9	1	48	7	3	0	1				
MUROTO	6.91	240.9	1	49	7	3	25	25				
RUMOE	7.11	1.3				3	13	8				
KOTI	7.22	245.3	2	3	17	3	13	6				
NEMURO	7.24	25.0	1	43	-3	2	59	-9				
ABASHIRI	7.51	16.2	2	7	17							
MATUYAMA	7.64	249.5	1	56	4	3	38	20				
HIROSIMA	7.70	254.0	2	37	44	3	59	40				
HAMADA	7.81	258.4	2	9	15	3	34	12				
OOITA	8.78	248.7	2	21	14	4	23	37				
SIMONOSEKI	9.01	254.4	1	52	-19							
ASOSAN	9.34	248.2	2	14	-1							
HUKUOKA	9.58	253.4	2	54	36	4	43	37				
VLADIVOSTOK	9.61	313.7	2	19K	0							
KUMAMOTO	9.66	248.6	2	24	5	5	0	52				
SAGA	9.77	251.8	2	36	15	4	37	27				
Y.-SAKHLINSK	10.22	5.1	2	22	-5							
YAKUSIMA	11.08	238.1	2	38	-1							
PEKING	19.99	286.9	4	25	-6	8	6	-2				
PETROPAVLOVK	20.19	31.3	4	33	0							
GUAM	23.47	171.8	5	1	-5							
PAOTOW	24.69	288.4	5	17	-1							
YAKUTSK	26.24	347.5	5	32K	0	10	5	6				
LANCHOW	30.10	279.9	6	5K	-2							
CHENGTU	31.54	269.8	6	19	-1							
KUNMING	34.91	261.6	6	47	-2							
LHASA	42.32	275.4	7	51	0	14	11	3				
SHILLONG	43.39	269.5	7	57K	-3							
CHITTAGONG	44.97	265.5	8	10	-2	14	46	0	8	23	15	7 *55
PORT MORESBY	46.31	172.1	8	22	-1							
CHATRA	46.60	273.8	8	24A	-1							
COLLEGE	49.27	32.2	8	47	1						9	11
DARWIN	49.95	193.5	8	49	-2							

DEHRA DUN	52.33	282.5	8	10	-59							
LEMBANG	53.72	223.2	9	19K	0							
NEW DELHI	53.75	281.0	9	17K	-3							
LAHORE	54.70	285.6	9	25	-2	17 2 1		9 36				
SVERDLOVSK	55.29	318.7	9	28	-3							
WARSAK DAM	55.81	289.5	9	34	-1							
MOULD BAY	56.73	16.4	9	40A	-1							
CHARTERS TS.	56.80	174.5	9	39	-3							
ALERT	60.33	3.5	10	5	-1					11 9		
QUETTA	60.99	287.5	10	9	-2			10 21		12 21	PP	
POONA	61.35	272.4	10	12K	-1							
RESOLUTE	62.80	14.4	10	22A	-1							
APATITY	62.86	335.8	10	22K	-1							
KEVO	63.62	339.3	10	27	-1	18 57 0						
VANNOVSKAYA	63.92	299.1	10	24	-6							
BRISBANE	64.78	168.8	10	49	13							
SODANKYLA	65.14	337.2	10	37	-1					13 0	PP	
KIRUNA	66.69	339.2	10	47K	-1							
MOSCOW	67.40	323.5	10	51A	-1							
SEATTLE	67.66	46.6	11	0	6							
PENTICTON	68.32	44.1	10	59	1							
VIBORG	68.39	330.8	10	57	-2							
TEHERAN	69.69	299.8	11	6	-1							
NURMIJARVI	70.11	332.0	11	8	-1					13 32	PP	
HELSINKI	70.21	331.6	11	8	-2							
MINERAL	71.93	52.9	11	21K	1							
HUNGRY HORSE	71.94	42.8	11	20	0							
BLUE MTS.	72.08	47.1	11	21K	0					11 35	PCP	
SHIRAZ	72.09	293.8	11	19	-2	20 39 1		11 33				
SKALSTUGAN	72.09	338.6	11	20	-1							
CANBERRA	72.14	173.5	11	29	8							
CALISTOGA	72.23	54.9	11	23K	1							
BERKELEY	72.86	55.4	11	27A	1							
UPPSALA	73.13	334.0	11	27K	0							
LICK	73.57	55.6	11	21K	-9							
BUTTE	74.12	44.1	11	33	0							
PRIEST	74.89	56.1	11	40A	3							
SIMFEROPOL	75.45	315.5	11	40	-1							
EUREKA	75.99	51.1	11	45	1			11 58				
WOODY	76.34	55.6	11	47	1			12 0				
GOTEBORG	76.70	334.8	11	47	-1							
DUGWAY	77.50	49.0	11	53K	1							
UZHGOROD	79.17	323.8	12	0	-1							
KRAKOW	79.26	326.0	12	2	0					12 14	PCP	
KSARA	81.25	305.7	12	13	1							
COLLMBERG	81.27	330.1	12	12	0					15 17	PP	
HALLE	81.53	330.8	12	17	3							
BUDAPEST	81.53	324.6								19 13		
PRUHONICE	81.64	328.5	12	16	2					15 15	PP	
BRATISLAVA	81.90	326.0	12	15	-1							
JENA	82.12	330.6	12	17	0							
VIENNA-H.	82.17	326.5	12	18	1							
KASPERSKE H.	82.70	328.5	12	21	1					12 56		
JERUSALEM	82.96	304.5	12	22	1							
LJUBLJANA	84.66	326.0	12	29	-1							
ALBUQUERQUE	84.73	49.8	12	32	2							
STUTTGART	84.74	330.5	12	31	1			12 44				
DOURBES	85.41	333.7	12	10	-23							
ROSELEND	88.29	330.1	12	47	0							
GARCHY	88.33	333.1	12	48	0							
WICHITA MTS.	89.55	45.5	12	52	-1							
TULSA	90.26	43.0	12	58	1			13 11				
BANGUI	112.81	294.6	18	56	25					19 21		
SAN JUAN	119.25	30.2	18	43	-1							

NOVEMBER 4 22.H 53.M 31.S EPICENTRE -43.25 -75.87 DEPTH= 0.KM

A= 0.17839 B=-0.70857 C=-0.68272 D=-0.9697 E=-0.2441
G=-0.1667 H= 0.6621 K=-0.7307 HT= -2.9

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	
SANTA LUCIA	10.61	24.4	2	32	-4	4	42	5			5	18	SSS
BUENOS AIRES	16.03	63.2	3	48	0								

ANTOFAGASTA	20.01	14.7	4	32	-5	8	21	4			
DECEPCION I.	21.65	161.1							5	28	
ARGENTINE I.	22.99	167.5	5	7	0						
AREQUIPA	26.96	9.3	5	44	-1						
LA PAZ	27.47	16.3	5	49	-1						
BYRD STATION	40.14	190.8	7	37	-2				9	15	
BOGOTA	47.67	2.4	8	40K	0	15	41	5			
CHINCHINA	47.99	0.3	8	45K	2	15	47	6	19	29	SS
FUQUENE	48.53	2.8	8	46	-1	15	50	2			
BALBOA HTS.	52.07	355.4	9	12	-2	16	39	2			
SCOTT BASE	53.41	193.5	9	22	-2						
GALERAZAMBA	53.77	0.7	9	38	12						
CARACAS	54.11	10.9	9	27K	-2	17	4	-1			
TRINIDAD	55.24	17.4	9	36	-1	17	20	0	21	37	
CAPE HALLETT	55.98	199.7	9	40	-3	17	34	4			
FORT FRANCE	59.25	16.6	10	5	-1	18	10	-3			
ST. CLAUDE	60.40	15.7	10	9	-4	18	22	-6			
COMITAN	61.06	342.1							18	44	
ST. KITTS	61.49	14.3	10	20	-1						
SAN JUAN	61.97	10.5	10	19	-5						
VERA CRUZ	64.87	338.8							18	29	
MERIDA	65.12	345.8							21	34	
TACUBAYA	65.93	335.8	10	46	-4	19	43	6			
DUMONT	67.02	194.7	10	53	-4	19	49	-1	13	23	PP
MIRNY	70.20	175.3	11	16	-1						
WILKES	70.63	182.7	11	12K	-7	20	36	3	13	53	PP
HERMANUS	70.70	119.3				20	40	6			
ROXBURGH	74.37	221.5				21	41	25			
WELLINGTON	74.57	227.5	11	41K	-2	21	23	5	14	36	PPP
CHATEAU	75.60	229.5	11	47	-1						
KARAPIRO	76.49	230.4	11	55	2						
CHIHUAHUA	76.72	333.0							19	29	
KIMBERLEY	77.99	118.1	12	0A	-2						
DALLAS	78.11	342.1	12	0	-2						
LITTLE ROCK	79.10	346.2	12	4	-4						
LUBBOCK	80.07	338.2	12	11	-2	22	9	-8	33	59	
WICHITA MTS.	80.32	341.2	12	11	-3	22	14	-6	13	7	PP
FAYETTEVILLE	80.71	345.0	12	16	-1	21	57	-27			
TULSA	80.85	343.7	12	16	-1				23	9	
C. GIRARDEAU	81.15	349.0	12	15	-4						
TUCSON	81.67	330.6	12	20	-2						
TUCSON TELE.	81.71	330.7	12	20	-2						
ROLLA	82.07	347.3	12	21K	-3	22	26	-12			
BLOOMINGTON	82.62	351.7	12	23K	-3	22	39	-5			
ALBUQUERQUE	82.68	335.1	12	26	-1	22	49	5			
FLORISSANT	82.72	348.6	12	23K	-4	22	38	-7			
LAWRENCE	83.70	344.9	12	28	-4						
PALISADES	83.89	1.5	12	31	-2	22	52	-4			
MANHATTEN	84.19	344.0	12	32	-2	22	55	-4			
LONDON ONT.	86.04	356.1	12	41A	-3						
PASADENA	86.18	326.0	12	43	-1	23	23	4			
GLEN CANYON	86.20	332.1	12	43	-2						
BULAWAYO	86.44	114.3	12	45K	-1						
BOULDER CITY	86.47	329.3	12	45	-1						
HALIFAX	88.17	8.7	12	53K	-1						
PRICE	88.33	333.7	12	53K	-2						
BREBEUF	88.39	1.6	12	57A	2						
PRIEST	88.92	325.2	12	57A	-1						
FLAMING GRGE	89.08	335.3	12	57	-1						
SHAWINIGAN	89.46	2.1	12	57	-3						
DUGWAY	89.52	332.6	12	59K	-1						
SALT LAKE C.	89.72	333.5	12	59	-2						
EUREKA	89.99	330.1	13	1	-2						30 33 PKKP
BROKEN HILL	90.34	110.2	13	5K	1						
LICK	90.35	325.2	13	4K	0						
BERKELEY	91.06	325.0	13	10	2	24	15	11			25 22 PS
TOOLANGI	91.22	211.7	13	6	-2				13	17	13 48
RENO	91.49	327.5	13	9A	-1						
CANBERRA	91.75	215.3	13	8K	-3				13	19	
CALISTOGA	91.85	325.2	13	12K	1						
RIVERVIEW	92.08	217.5	13	12A	0						
MINERAL	92.90	326.8	13	12	-4						
NOUMEA	93.26	235.2	13	17A	-1						
BOZEMAN	93.90	336.1	13	19	-2						
BUTTE	94.67	335.3	13	23	-1						
BLUE MTS.	95.18	331.8	13	24	-3	24	6	4			17 24 PP
ADELAIDE	96.00	208.0	13	28	-2						
BANGUI	96.25	89.9	13	33	2						17 28 PP

HUNGRY HORSE	97.20	335.5	13	34	-2			
SCHEFFERVLLE	98.00	5.3	13	38	-1			
LWIRO	99.11	101.8	13	46K	2			
TANANARIVE	99.26	126.8	13	47	2			
SEATTLE	99.35	330.2					26 29	PS
MALAGA	102.70	51.3	14	5A	4		18 19	PP
MUNDARING	104.33	190.6					18 27	PP
PORT MORESBY	114.61	227.8	18	22	-20			
KEW	114.75	41.8					19 38	PP
MESSINA	115.77	61.0					19 47	PP
ROME	116.01	56.1					19 54	PP
DOURBES	116.38	45.1	18	46	0			
STUTTGART	118.10	48.4	18	49	0			
RESOLUTE	118.33	354.3	18	48	-2			
TRIESTE	118.89	53.2					20 12	PP
THULE	119.49	2.0	18	50	-2			
LJUBLJANA	119.56	53.2	18	53	1		20 14	PP
KASPERSKE H.	120.67	49.8	18	52	-2		20 55	PP
ATHENS	120.96	65.3	18	55A	0		20 23	
COLLEGE	121.38	331.6	18	53	-2			
COLLMBERG	121.49	47.4	18	55A	-1		20 15	
PRUHONICE	121.66	49.3	18	55	-1		20 50	PP
VIENNA-H.	121.80	51.8	18	56	0			
MOULD BAY	122.40	348.7	18	55K	-2			
KONGSBERG	123.99	37.6	19	0	-1			
GOTEBORG	124.14	40.4	19	2	1			
KRAKOW	124.72	51.3	19	0	-2			
KARLSKRONA	125.19	43.2	19	4	1			
JERUSALEM	125.57	77.7	19	4	0		20 58	PP
ALERT	125.67	2.2	19	1K	-3			
ISTANBUL UN.	126.03	64.7	19	1	-3		20 50	
SKALSTUGAN	126.87	34.0	19	4	-2			
KSARA	127.13	75.9	19	5	-2	26 15 3	21 5	PP
UPPSALA	127.72	39.6	19	6	-2		31 5	
NORD	128.34	9.3	19	6	-3			
LEMBANG	130.06	184.5	19	12	0		22 38	
SIMFEROPOL	131.15	62.4	19	15	1		21 27	PP
NURMIJARVI	131.25	40.3	19	12	-2		21 27	PP
HELSINKI	131.30	40.8	19	12	-3			
TROMSOE	131.37	27.7	19	13	-2			
KIRUNA	131.46	30.2	19	13	-2		22 39	PKS
KAJAANI	133.52	36.1	19	17	-2		22 46	PKS
SODANKYLA	133.69	31.5	19	13	-6		22 49	PKS
KEVO	134.16	28.2	19	19	-1		22 49	PKS
APATITY	136.31	31.7	19	22	-2		22 56	PKS
MOSCOW	136.70	49.2	19	24	-1		22 51	PKS
SHIRAZ	136.97	90.8	19	15	-10		22 58	PKS
TIFLIS	137.02	70.8	19	27	2		22 12	PP
GORIS	137.20	74.5	19	28	3		23 4	PKS
TEHERAN	139.19	82.2	19	21	-8		22 18	PP
MADRAS	143.46	138.3	19	37	0		23 13	
BOMBAY	144.18	122.8	19	35	-3		24 25	
POONA	144.52	124.5	19	36K	-2			
KARACHI	144.56	109.1	19	40	2			
PORT BLAIR	147.02	159.1	19	47	4			
QUETTA	147.73	101.4	19	44	0		23 20	PP
MANILA	148.02	212.2	19	45	1		21 59	
SVERDLOVSK	149.50	48.2	19	46	-1			
BAGUIO CITY	149.81	212.7	19	47	0			
TUKUBASAN	151.62	268.0	19	48K	-2		23 36	PP
MATUSIRO	153.14	267.2	19	59	7			
LAHORE	153.74	106.5	19	52	-1		23 52	PP
NEW DELHI	153.88	115.2	19	51K	-2			
TASHKENT	154.25	82.2	19	53	-1		29 33	
CALCUTTA	155.54	142.7	19	50	-5			
DEHRA DUN	155.56	113.2	19	56	1			
CHITTAGONG	156.79	149.9	19	52	-5			
HONG KONG	157.50	205.0					23 41	PP
FRUNSE	158.47	80.9	19	59	0		24 14	PP
CANTON	158.50	203.7	19	59	0		24 12	PP
CHATRA	158.59	134.4	19	57K	-2			
SHILLONG	159.71	146.4	19	56A	-5			
ZO-SE	161.83	233.8	20	2	-1		24 35	PP
KUNMING	161.88	175.9	20	2	-1		24 31	PP
NANKING	163.92	230.8	20	6	1		24 45	PP
CHENGTU	167.43	179.5	20	9	1		24 59	PP
SIAN	170.27	204.1	20	12	3		21 27	PKP2
PEKING	170.43	254.4	20	10	0		25 18	PP
LANCHOW	172.81	178.0	20	10	-1		25 26	PP

PAOTOW	174.85	240.8	20	13	1						25	42 PP

NOVEMBER 6 0.H 9.M 49.S EPICENTRE 28.12 55.51 DEPTH= 36.KM

A= 0.50009 B= 0.72804 C= 0.46890 D= 0.8243 E=-0.5662
G= 0.2655 H= 0.3865 K=-0.8833 HT= 2.4

DEPTH OF FOCUS= 0.000R

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	
SHIRAZ	3.02	300.8	0	47	-1						8	16	PCP
TEHERAN	8.36	336.3	2	2	1	4	32	56					
ASHKABAD	10.08	12.9	2	27	2								
QUETTA	10.21	75.7	2	27K	0	4	21	0					
KARACHI	10.83	105.0	2	31	-4								
KIZYL-ARVAT	11.07	3.1	2	38	-1	4	45	3			3	18	
GORIS	13.67	328.5	3	14A	1	5	53	8			7	35	
WARSAK DAM	14.93	62.9	3	30A	0								
TIFLIS	16.14	330.0	3	48K	3	6	53	10					
KHOROG	16.36	51.2	3	49	1						6	59	SS
LAHORE	16.68	73.6	3	50	-2						4	0	PP
TASHKENT	17.33	37.0	3	59K	-1						7	23	
KSARA	17.76	293.5	4	5A	-1	7	34	14			8	2	SS
JERUSALEM	17.96	286.7	4	7	-1	7	37	13					
BOMBAY	18.32	116.3	4	11	-2	7	47	15			4	29	PP
NAMANGAN	18.44	41.8	4	15	1						4	51	PPP
NEW DELHI	19.09	83.5	4	19A	-3	7	55	5			4	33	PP
POONA	19.33	115.6	4	23A	-2	8	7	12			4	45	PP
DEHRA DUN	19.79	78.2	4	30A	0	8	14	9			4	52	PP
SEHORE	20.05	99.4	4	34	2								
FRUNSE	21.32	41.5	4	46A	1						8	51	PCP
ISTANBUL UN.	25.25	307.6	5	27A	3	9	59	14					
MADRAS	27.48	118.2	5	46	1	10	26	5			6	32	PP
BOKARO	27.52	92.0	5	48	3	10	40	18			6	45	PP
VISHAKHAPTNM	27.54	106.1	5	53K	8	10	43	21			6	43	PP
CHATRA	28.08	85.1	5	47A	-3								
ATHENS	28.29	298.5	5	56K	4	11	0	26					
SVERDLOVSK	28.92	5.8	5	57	0								
CALCUTTA	30.16	93.2	6	11	3	11	19	15			7	19	PP
MOSCOW	30.44	339.9	6	11A	0	11	11	3			7	13	PP
LHASA	31.07	78.6	6	17	0	11	18	0					
SHILLONG	32.46	85.9	6	26A	-3	11	41	1					
UZHGOROD	32.74	317.8	6	31	0						8	3	PPP
CHITTAGONG	33.25	91.6	6	35	-1	12	4	12			9	17	PCP
BUDAPEST	34.29	314.3	6	35	-10						7	35	
KRAKOW	34.76	318.9	6	48	-1								
BRATISLAVA	35.75	314.6	6	57	0						7	45	
RACIBORZ	35.79	318.1	6	57	0								
PULKOVO	36.02	338.5	7	0K	1						8	25	PP
VIENNA-H.	36.23	314.5	7	1	0						9	29	PCP
LJUBLJANA	36.80	310.3	7	6	0						7	49	
PRUHONICE	37.94	316.5	7	16	1						7	58	
PRAGUE	38.04	316.6									8	56	
HELSINKI	38.15	335.7	7	17	0								
KASPERSKE H.	38.27	314.9	7	16A	-2						7	59	
NURMIJARVI	38.50	335.9	7	20	0	13	14	1			8	53	PP
CHEB	39.30	315.9	7	31	4						9	45	
COLLMBERG	39.31	318.0	7	27A	0	13	33	8					
LWIRO	39.64	224.8	7	31	1	13	41	11					
KARLSKRONA	39.86	325.9	7	31	0				8	14			
JENA	40.04	317.0	7	31	-2						9	24	PPP
KAJAANI	40.13	341.5	7	34	0						9	19	PP
CHUR	40.34	310.3	7	37	2	13	39	-2					
UPPSALA	40.83	331.7	7	39	0	13	46	-2	8	22	9	19	PP
STUTTGART	40.90	313.1	7	39	-1								
EBINGEN	40.98	312.2	7	42	1								
LANCHOW	41.35	66.4	7	45A	1								
APATITY	41.64	347.4	7	46A	0	14	6	6			16	32	SS
ISOLA	41.67	305.9	7	50	4						8	38	
FELDBERG	41.77	315.1	7	45	-2								
BASLE	41.77	311.0	6	55	-52						7	18	
STRASBOURG	41.84	312.5	7	46	-2								
KUNMING	42.12	82.8	7	50	0	14	10	3					
ROSELEND	42.14	308.1	7	47	-3						8	24	

BANGUI	42.28	242.9	7	50	-1	14	7	-2				
GOTEBORG	42.32	326.7	7	51	-1				8	28		
MUNSTER	42.71	317.4	7	56	1							
BENSBERG	42.74	315.9	7	55	0							
SODANKYLA	42.97	344.1	7	57	0						9	45 PP
IRKUTSK	43.33	42.4	8	1A	1						17	29 SS
DOURBES	44.16	314.2	8	7	0							
KONGSBERG	44.26	328.5	8	7	0				8	17	9	50 PP
GARCHY	44.77	310.0	8	11	0						8	44
KEVO	44.79	346.4	8	12	0	14	49	3			18	8 SS
KIRUNA	44.92	342.0	8	14	1	14	45	-3	8	56	10	0 PP
SKALSTUGAN	44.99	334.3	8	13A	0						13	44 PCS
PARIS	45.33	312.0	8	15	-1							
PADTOW	46.02	59.5	8	22	0							
TORTOSA	46.40	300.8	8	26	2							
BERGEN	46.56	328.3	8	27	1							
TROMSOE	46.56	343.3	8	25	-1							
BAGNERES	46.61	303.9	8	21	-5						8	47
FOLINIERE	47.28	311.7	8	30	-1							
TANANARIVE	47.40	190.3	8	35A	3						10	36 PPP
KEW	47.46	315.4	8	31	-2							
BROKEN HILL	49.77	215.2	8	51A	0							
TOLEDO	49.93	299.9	8	51	-1							
MALAGA	50.59	295.9	8	56A	-1							
PEKING	50.75	59.8	8	58	0							
NANKING	54.19	69.2	9	24	0	16	56	-1				
BULAWAYO	54.58	211.4	9	26A	-1							
ZO-SE	56.41	69.8	9	39	-1	17	28	2				
YAKUTSK	58.21	32.3	9	47A	-6							
BANDEIRA	59.15	229.2	10	0A	1							
SCORESBY SD.	59.60	337.6	10	2	0							
NORD	59.77	350.7	10	3	0							
KIMBERLEY	63.75	210.0	10	29	-1							
ALERT	65.77	352.7	10	43A	0						12	9
GRAHAMSTOWN	66.99	206.1	10	51A	0							
Y.-SAKHLINSK	68.20	47.4	10	57	-1							
MATUSIRO	68.38	59.2	10	58K	-2							
THULE	70.16	348.0	11	12	2						11	38
MOULD BAY	75.85	358.7	11	43A	-1	21	23	1				
MUNDARING	83.09	131.7	12	22	-1							
DARWIN	83.17	107.8	12	24	1							
SCHEFFERVLLE	83.73	330.5	12	26A	0							
COLLEGE	85.54	9.8	12	35	0							
CHARTERS TS.	99.84	107.5	13	42	0							
BLUE MTS.	107.09	354.7	14	42K	777						18	46 PP
TULSA	110.80	335.4									28	39 PS
MINERAL	111.82	357.6	19	11A	40							
EUREKA	112.28	352.9	18	34	2						19	22 PP
WICHITA MTS.	112.87	337.0	18	34	1						19	28 PP
CAPE HALLETT	124.01	160.4	18	56	2							
AREQUIPA	129.95	271.7	19	10	4							
HUANCAYO	131.48	279.0	19	13	4							

NOVEMBER 6 3.H 36.M 47.S EPICENTRE 45.81-122.46 DEPTH= 44.KM

A=-0.37536 B=-0.59021 C= 0.71467 D=-0.8438 E= 0.5366
G=-0.3835 H=-0.6030 K=-0.6995 HT= -3.9

DEPTH OF FOCUS= 0.002R

SE= 2.63

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	#PP M	S	SUPP. M	S
LONGMIRE	1.04	25.2	0	19	0							
TUMWATER	1.25	345.6	0	19	-3							
SEATTLE	1.84	3.3	0	18K	-12	0	34	-19				
VICTORIA	2.79	346.7	0	43	0							
BLUE MTS.	3.75	103.0	0	55A	-2	1	55	14				
PENTICTON	4.00	27.6	1	2	1							
SPOKANE	4.01	59.6	1	2	1	2	17	30				
HUNGRY HORSE	6.29	63.1	1	33	0	3	10	26				
UKIAH	6.70	185.1	1	38	0						1	58
BUTTE	6.90	84.7	1	40	-1							
BANFF	7.06	38.1	1	44	0							
EUREKA	7.93	140.7	1	56	1							

BOZEMAN	7.98	86.9	1 56	0						
DUGWAY	9.02	125.0	2 10K	-1						
SALT LAKE C.	9.23	119.3	2 16	3	4	54	57			
TINEMAHA	9.30	158.6	2 15	1						
PRICE	10.57	121.8	2 33A	1						
ISABELLA	10.58	162.0	2 33	1						
KING RANCH	10.67	167.9	2 37	4						
FLAMING GRGE	10.69	112.5	2 34	1						
BOULDER CITY	11.38	146.9	2 31	-12						
GLEN CANYON	12.01	133.5	2 51	0						
PASADENA	12.10	162.8	2 50	-2						
RIVERSIDE	12.43	160.0	2 56	-1						
LARAMIE	13.04	104.2	3 6	1					6	54
HAYFIELD	13.17	154.2	3 7	0						
BARRETT	13.85	159.2	3 15	-1						
GOLDEN	13.95	109.9	3 17	0						
TUCSON TELE.	16.22	141.9	3 46	0					4	29 PP
TUCSON	16.25	142.4	3 46	-1	7	2	17			
ALBUQUERQUE	16.28	126.2	3 47	0					8	37
LUBBOCK	19.95	120.5	4 29	-2						
MANHATTEN	20.14	99.9	4 33A	0						
LAWRENCE	21.16	99.1	4 42	-2						
WICHITA MTS.	21.23	113.0	4 42	-2	8	47	13		6	20
TULSA	22.37	106.8	4 54	-2	9	11	17			
DUBUQUE	22.95	86.8	5 2	1						
FAYETTEVILLE	23.35	104.6	5 5	0					12	21
COLLEGE	23.63	332.9	5 11	3						
ROLLA	23.98	98.3	5 11	0						
FLORISSANT	24.63	95.0	5 17	-1	9	49	16			
ST. LOUIS 1	24.80	95.3	5 17	-2						
LITTLE ROCK	25.32	105.1	5 24	0						
BLOOMINGTON	27.16	91.2	5 40	-1						
MOULD BAY	30.55	1.5	6 12K	0	11	18	9			
RESOLUTE	31.37	13.7	6 19K	0						
PENNSYLVANIA	32.50	82.6	6 27	-2						
BREBEUF	33.71	72.6	6 51A	12					14	43 SS
PALISADES	35.16	80.1	6 56	4	13	12	51		17	42 SCS
ALERT	41.02	10.0	7 41	0	13	49	-1			
SCORESBY SD.	50.93	25.2	9 9	10						
SAN JUAN	53.69	101.2	9 20	0					10	24
CHINCHINA	57.44	120.4	9 51	4						
BOGOTA	58.65	119.2	9 56	1						
CARACAS	58.75	108.5	9 55K	-1	18	13	17			
KEVO	62.59	11.5	10 21	-1						
KIRUNA	63.29	14.9	10 25	-2						
SODANKYLA	64.74	12.7	10 35K	-1						
SKALSTUGAN	65.23	20.5	10 39K	0						
KAJAANI	67.96	13.6	10 56	0						
UPPSALA	69.75	20.2	11 7K	-1						
GOTEBORG	70.12	24.1	11 9K	-1						
MATUSIRO	70.59	302.6	11 11K	-2						
NURMIJARVI	70.71	16.5	11 13K	0						
HELSINKI	71.08	16.5	11 15	-1						
FOLINIERE	73.09	35.9	11 27	-1						
DOURBES	74.02	32.3	11 34	1						
BENSBERG	74.25	30.4	11 35A	1						
JENA	75.78	28.0	11 43	0					12	35
COLLMBERG	75.92	27.0	11 44	0					12	27
CHEB	76.77	28.0	11 47	-2					14	23
AREQUIPA	77.21	130.2	11 52	1						
PRUHONICE	77.56	26.8	11 55	2						
KASPERSKE H.	77.99	27.8	11 55	0						
ROSELEND	78.43	33.7	11 59	1						
LA PAZ	79.07	127.5	12 1	0						
BRATISLAVA	79.95	26.2	12 6	0						
BROKEN HILL	140.30	47.5	19 26A	2						
BULAWAYO	145.06	52.5	19 33	0						

NOVEMBER 7 12.H 57.M 41.S EPICENTRE 40.46 -29.36 DEPTH= 0.KM

A= 0.66504 B=-0.37406 C= 0.64638 D=-0.4902 E=-0.8716
G= 0.5634 H=-0.3169 K=-0.7630 HT= -1.9

SE= 1.22

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

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ANGRA DO HO.	2.44	137.0	0	41	0	1	2	-11				
PONTA DELGDA	3.95	132.4	1	0A	-3	1	44	-7				
TOLEDO	19.33	83.5	4	32	3							
MALAGA	19.84	92.8	4	35K	0						4	56 PP
FOLINIERE	22.07	58.3	5	0	2							
BAGNERES	22.11	73.5	4	59	1							
KEW	22.84	51.5	5	7A	1							
DURHAM	23.37	42.9				9	37	16				
PARIS	24.01	59.0									12	31
CLERMONT-FD.	24.19	66.5	5	17	-2							
GARCHY	24.23	62.8	5	19	0						5	55
DOURBES	25.57	56.5	5	32	0							
BESANCON	26.20	63.2	5	37	-1							
BASLE	27.30	62.6	5	50	2	10	35	8				
BENSBERG	27.32	55.1	5	49	1							
STRASBOURG	27.47	60.3	5	53	4							
STUTTGART	28.48	60.0	5	57	-2							
SCHEFFERVLLE	28.62	312.8	5	59	-1							
JENA	30.09	55.8	6	11	-2						6	58 PP
HALLE	30.37	54.7	6	15	0	10	9	-67				
COLLMBERG	31.01	55.2	6	20	-1						7	17 PP
KASPERSKE H.	31.32	59.4	6	23	-1							
PRUHONICE	31.95	57.8	6	28A	-1	11	47	6				
MESSINA	34.53	78.9									16	28
BUDAPEST	35.04	62.0	6	56	0						18	56
UZHGOROD	37.09	59.6	7	14	0							
KIRUNA	38.28	27.9	7	24	0							
MORGANTOWN	38.31	285.7	7	26A	2							
NURMIJARVI	38.41	40.1	7	24	-1	13	13	-7			16	1 55
SAN JUAN	38.46	246.0	7	26	1							
SODANKYLA	40.43	29.6	7	41K	0							
VIBORG	40.47	40.0	7	40	-2							
TRINIDAD	41.02	232.6	7	49	3							
KEVO	41.14	26.1	7	47	0							
NORD	41.51	2.8	7	49	-1							
KISHINEV	41.70	60.9	7	49	-3							
APATITY	43.04	30.0	8	3K	0							
ALERT	43.53	354.0	8	6	-1							
CARACAS	44.62	238.6				14	55	3				
RESOLUTE	45.00	340.0	8	19K	0							
MOSCOW	45.43	47.0	8	22	0							
SIMFEROPOL	45.81	62.4	8	25A	0	15	13	4				
FLORISSANT	46.19	288.7	8	28	0							
ROLLA	47.65	288.2	8	39	-1							
LITTLE ROCK	49.29	284.6	8	51	-1							
LAWRENCE	49.62	290.9	8	55	0							
FAYETTEVILLE	50.07	287.1	8	58K	0							
MANHATTEN	50.48	291.8	9	0	-1							
MOULD BAY	51.12	342.1	9	6A	0							
TULSA	51.31	287.6	9	9	1	16	19	-7				
KSARA	51.38	75.4	9	9	1							
JERUSALEM	51.85	78.0	9	13	1							
WICHITA MTS.	53.89	287.6	9	26	-1	17	17	15			10	32 PCP
TIFLIS	54.23	62.6	9	31	2							
BANGUI	56.06	116.8	9	41	-2				9	51		
GORIS	56.26	64.4	9	45K	1	17	45	12				
GOLDEN	56.39	296.0	9	45	0							
SVERDLOVSK	57.31	40.8	9	51	-1							
BOZEMAN	57.44	304.6	9	52	-1							
HUNGRY HORSE	58.08	308.5	9	56	-1							
BUTTE	58.24	305.5	9	59	1							
FLAMING GRGE	58.54	299.0	10	1	1							
ALBUQUERQUE	59.44	291.6	10	7	0							
PRICE	60.13	298.2	10	11	0							
SALT LAKE C.	60.25	299.9	10	12	0							
PENTICTON	60.89	311.5	10	16	-1							
DUGWAY	61.17	299.7	10	19A	1							
TEHERAN	61.60	65.9	10	21	0							
BLUE MTS.	61.73	306.2	10	21A	-1						18	52
EUREKA	63.63	300.4	10	35	0							
TUCSON TELE.	63.83	291.2	10	37	1							
TUCSON	63.95	291.1	10	38	1							
COLLEGE	64.58	335.4	10	40	-1							
VANNOVSKAYA	65.00	60.6	10	43	-1							
LA PAZ	67.16	220.7	10	57	-1							
PASADENA	68.02	296.6	11	2	-1							
CALISTOGA	68.39	302.8	11	5A	0							
LICK	68.52	301.2	11	7A	1							
PRIEST	68.56	299.6	11	6A	0							

BERKELEY	68.62	301.9	11	7K	0							
TASHKENT	70.19	52.3	11	16A	0							
DUZHANBE	71.53	54.9	11	25K	1							
FRUNSE	72.41	48.5	11	30	0							
QUETTA	75.48	62.8	11	48	1							
WARSAK DAM	76.12	57.2	11	51	0							
BROKEN HILL	76.51	122.5									11	54
LAHORE	79.49	57.5	12	9	-1							
DEHRA DUN	82.69	56.3	12	30K	3							
NEW DELHI	83.32	58.1	12	29K	-1							
SHILLONG	94.58	50.8									16	55
WILKES	145.78	152.5	19	42	2							
PORT MORESBY	148.91	6.7	19	52	7							
MUNDARING	151.10	83.9	19	56	7							
DUMONT	153.07	170.7	19	52	0							

NOVEMBER 7 16.H 3.M 8.S EPICENTRE -8.03 119.79 DEPTH= 185.KM
A=-0.49202 B= 0.85946 C=-0.13875 D= 0.8679 E= 0.4968
G= 0.0689 H=-0.1204 K=-0.9903 HT= 6.8

DEPTH OF FOCUS= 0.024R

SE= 2.00

	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	
DARWIN	11.69	112.6	2	40	-2	4	36	-14					
LEMBANG	12.13	274.8	2	48A	0	4	57	-3					
DJAKARTA	12.99	277.3	2	59	0	5	47	27					
TANGERANG	13.19	277.2	3	2A	1	5	24	0					
MANILA	22.59	3.3	4	48	3	8	51	15					
MUNDARING	24.05	187.5	4	57	-2	9	20	20					
PERTH	24.08	188.3	4	58	-2	9	28	27			5	48	PP
BAGUIO CITY	24.30	1.8	5	17	15	10	2	57					
PORT MORESBY	27.08	94.9	5	25	-2								
CHARTERS TS.	28.28	117.9	5	37	-1	10	9	0					
HONG KONG	30.64	349.7	6	13	14	10	40	-6					
ADELAIDE	31.95	149.8	6	9K	-2	11	5	-2			7	2	*SP
RABAUL	32.41	85.2	6	11	-3						13	0	
PORT BLAIR	33.28	305.7				11	47	19			7	45	
BRISBANE	36.67	125.8	6	53A	2	12	23	3					
KUNMING	36.90	333.7	6	55	3	12	28	5					
TOOLANGI	37.50	145.5	6	58K	0	12	34	2			8	30	PP
CANBERRA	38.12	139.7	7	4A	1	12	42	1			8	37	PP
RIVERVIEW	38.66	136.1	7	9	2	12	54	4			15	49	SS
ZO-SE	38.93	1.9	7	11	2	12	56	2					
HONIARA	39.70	95.1	7	17	1						8	48	
NANKING	39.87	358.7	7	19	2	13	11	3					
CHITTAGONG	40.78	318.3	7	26	1	13	27	6			9	6	PP
CHENGTU	41.34	339.2				13	29	0			17	12	SCS
TARRALEAH	41.45	149.8	7	32	2								
MOORLANDS	41.92	149.3	7	36	2	13	46	8					
SHILLONG	43.05	321.7	7	43	0								
SIAN	43.29	346.8	7	45	0	13	59	1					
VISHAKHAPTNM	44.20	305.6	7	53K	1						9	44	
MADRAS	44.55	297.6	7	54	-1						9	47	
ABUYAMA	45.20	18.4	7	59A	-1								
BOKARO	45.88	314.5	8	11A	5						10	5	
LANCHOW	46.34	342.1	8	10K	1	14	44	3			9	8	*SP
LHASA	46.56	324.8	8	14	3	14	45	1			9	6	*SP
CHATRA	46.92	318.7	8	13A	-1								
NOUMEA	47.01	113.0	8	15K	1	14	54	3					
MATUSIRO	47.59	20.2	8	16K	-3	14	56	-3					
PEKING	47.93	356.3	8	21	-1	15	4	0			17	53	SCS
PORT VILA	48.16	106.5	8	24A	1								
PAOTOW	49.20	350.2	8	33	2	15	23	2					
CHANGCHUN	51.86	5.1	8	50	-1	15	56	-2			18	21	SCS
POONA	52.44	300.7	8	53A	-3	15	59	-7			13	41	SCP
BOMBAY	53.48	300.6	9	1	-2	16	17	-3			18	28	SCS
NEW DELHI	54.89	313.3	9	9A	-5	16	32	-7			13	51	
DEHRA DUN	55.30	315.6	9	18K	2						10	18	
MACQUARIE I.	55.90	153.6	9	22A	1								
ROXBURGH	56.58	140.1				17	2	1			22	52	SSS
ONERAHI	56.80	127.6	9	31	4								
COBB RIVER	57.18	134.1	9	34	4				10	15			
TARATA	57.77	131.5	9	31	-3				10	17			

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GEBBIES PASS	58.05	137.0	9	36	0				10	21		
WILKES	58.57	184.4	9	36	-4	17	24	-3			18	33
LAHORE	58.61	314.5	9	37	-3	17	20	-7			10	21 PCP
CHATEAU	58.64	131.2	9	41	1				10	22	9	58
WELLINGTON	58.70	133.7	9	39	-1				10	20	20	52 SS
TUAI	59.74	130.4	9	47	-1				10	29		
DUMONT	60.17	170.9	10	48	58	17	47	-1			11	55 PP
KARACHI	60.87	304.1	9	55	0							
MIRNY	61.25	191.9	9	58	0						19	14
WARSAK DAM	61.92	315.4	10	0	-2							
QUETTA	63.35	309.5	10	9	-3	18	22	-5	10	51	12	25 PP
ALMATA-2	63.94	326.7	10	14	-1							
FRUNSE	65.19	324.9	10	23K	-1	18	50	0				
DUZHANBE	66.29	318.3	10	28K	-3							
TASHKENT	67.47	321.0	10	37K	-1						19	15
PETROPAVLOVK	69.19	23.9	10	48	0							
MAWSON	70.40	199.9	10	55K	-1							
TANANARIVE	70.69	252.8	11	0A	2				11	41		
CAPE HALLETT	71.04	165.6	10	59	-1	20	2	3				
VANNOVSKAYA	73.36	313.4	11	11	-2							
SHIRAZ	74.64	303.6	11	19A	-2	20	30	-10				
TEHERAN	77.53	309.2	11	37	0	21	4	-7				
SVERDLOVSK	80.61	331.4	11	51	-2							
SOUTH POLE	82.02	180.0	12	0	-1							
GORIS	82.52	311.6	12	3K	0	22	2	-1				
TIFLIS	84.26	313.4	12	13	1							
BULAWAYO	88.38	250.0	12	33	1						13	17
BROKEN HILL	89.29	255.6	12	38K	2						13	19
KSARA	89.39	304.1	12	40	3	23	9	1				
KIMBERLEY	90.55	241.0	12	43K	1							
LWIRO	90.67	267.6	12	45	2							
KAJAANI	98.07	333.7									17	23 PP
COLLEGE	98.23	25.5	13	18	1							
SODANKYLA	98.57	337.0	13	16	-3							
NURMIJARVI	99.46	330.0	13	20	-3	24	26	44			17	35 PP
UZHGOROD	100.92	317.9	13	30	1							
KIRUNA	100.92	337.6	13	29A	0							
BANGUI	101.64	272.8	13	32	-1						17	45 PP
LJUBLJANA	106.33	315.6	18	3	777							
RESOLUTE	110.50	9.3	18	12	2							
PENTICTON	115.77	38.7	18	21K	1							
BLUE MTS.	118.70	42.9	18	26	0						19	45 PP
HUNGRY HORSE	119.56	38.2	18	29	1							
WOODY	120.00	53.4	18	29	0							
EUREKA	121.27	48.5	18	33	2						28	30 PKKP
BOZEMAN	122.51	40.1	18	34	1							
DUGWAY	123.36	46.8	18	37A	2							
SALT LAKE C.	123.85	45.8	18	38	2							
GLEN CANYON	125.32	50.1	18	39	0							
FLAMING GRGE	125.52	44.8	18	40	1							
TUCSON TELE.	127.37	55.3	18	44	1							
SCHEFFERVLLE	133.04	5.2	18	54	0							
MANHATTEN	134.99	40.7	18	49	-8							
WICHITA MTS.	135.90	47.3	18	48	-11						22	13 SKP
DUBUQUE	136.43	33.0	18	55	-5							
TULSA	137.30	44.1	18	52	-9						22	18 SKP
FAYETTEVILLE	138.29	42.9	18	54	-9						22	21 SSS
ROLLA	138.72	39.0	18	54	-10							
FLORISSANT	139.08	36.8	18	58	-7							
SHAWINIGAN	140.13	13.5	19	2	-5							
BREBEUF	140.91	15.0	19	3	-5							
HALIFAX	143.43	4.1	19	11A	-2							
MORGANTOWN	143.90	26.3	19	12	-1						20	2
PALISADES	144.97	18.2	19	18	3				20	7		
CHAPEL HILL	147.33	29.1	19	22	3							
AREQUIPA	153.23	155.4	19	40	12							
LA PAZ	154.40	162.2	19	34	5							
SAN JUAN	168.21	28.6	19	46	2							

NOVEMBER 8 0.H 33.M 18.S EPICENTRE -4.07-105.04 DEPTH= 35.KM

A=-0.25885 B=-0.96334 C=-0.07050 D=-0.9657 E= 0.2595
G= 0.0183 H= 0.0681 K=-0.9975 HT= 7.1

DEPTH OF FOCUS= 0.000R

SE= 2.76

	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	
OAXACA	22.49	21.1									10	27	
MANZANILLO	22.98	1.7									10	58	
COMITAN	23.89	32.0									9	45	
PUEBLO	23.92	16.1									11	56	
TACUBAYA	24.02	13.6	5	4	-8						11	50	
BALBOA HTS.	28.51	62.9				10	50	12					
HUANCAYO	30.44	106.9									13	43	
CHIHUAHUA	32.53	358.3									14	42	
TUCSON	36.54	351.7	7	3	-1	12	52	9					
TUCSON TELE.	36.61	351.9	7	4	-1								
LUBBOCK	37.57	4.4									9	44	PCP
LA PAZ	38.27	111.5	7	17	-2	13	19	9					
ANTOFAGASTA	38.68	123.6	7	23	1								
ALBUQUERQUE	38.83	358.1									7	8	
WICHITA MTS.	39.06	8.4	7	24	-1	13	33	11			8	48	PP
PASADENA	39.98	343.0	7	33	0	13	48	12			8	23	
CARACAS	40.61	68.8				13	52	7			17	12	SSS
TULSA	40.70	11.5	7	38	-1	13	57	10			17	7	
FAYETTEVILLE	41.22	13.4	7	41	-2								
GLEN CANYON	41.28	352.0	7	43	-1								
PRIEST	42.59	341.2	7	52K	-2								
ROLLA	43.50	15.1	8	1	-1	14	39	11					
GOLDEN	43.55	359.6	8	2	0								
MANHATTEN	43.76	9.5	8	3	-1								
LAWRENCE	43.77	11.0	8	4	0								
LICK	44.00	340.9	8	4K	-2								
SAN JUAN	44.37	58.6	8	6	-3								
EUREKA	44.49	347.9	8	8	-2						8	38	PCP
DUGWAY	44.63	351.5	8	7K	-4								
BERKELEY	44.69	340.5	8	10A	-1	14	52	7					
FLORISSANT	44.76	16.3	8	13	1								
FLAMING GRGE	44.96	355.3	8	14	1						7	59	
SALT LAKE C.	45.06	352.7	8	15	1								
LARAMIE	45.16	359.4	8	16	1								
RENO	45.48	343.9	8	18K	0								
CALISTOGA	45.49	340.7	8	16K	-2								
MORGANTOWN	49.24	25.6	8	47K	0								
HUNGRY HORSE	52.79	352.5	9	11	-3								
PALISADES	53.12	29.3				16	51	8					
SEATTLE	53.69	345.6									20	6	
PENTICTON	54.66	348.4	9	23	-5								
BREBEUF	56.73	26.0	9	41A	-2	17	42	11			21	30	SS
COLLEGE	75.59	342.6	11	39	-4								
RESOLUTE	78.87	2.7	11	57	-4								
MOULD BAY	80.61	356.6	12	7	-4								
ROXBURGH	84.06	224.9									28	14	SS
CAPE HALLETT	84.54	197.8	12	30	-1								
SOUTH POLE	85.96	180.0	12	30	-8								
BRISBANE	98.91	241.6									17	11	
RIVERVIEW	99.16	235.0									32	12	SS
CANBERRA	100.59	233.1									18	16	
MALAGA	100.95	53.5									14	54	
TOOLANGI	102.79	230.2									18	48	
CHARTERS TS.	106.05	247.9									18	11	
KIRUNA	106.55	18.8									33	38	SS
PORT MORESBY	106.84	259.0	18	38	777								
BENSBERG	107.04	37.8									26	12	
KASPERSKE H.	111.53	38.3									32	48	
NURMIJARVI	112.12	24.3									29	7	PS
SHIRAZ	146.85	37.4	19	38K	1	27	25	45					
WARSAK DAM	150.05	5.7	19	40	-2								
QUETTA	152.95	15.4	19	52	6								
SHILLONG	153.16	324.4	19	49A	3								

NOVEMBER 9 1.H 11.M 5.S EPICENTRE 33.53 47.16 DEPTH= 56.KM

A= 0.56796 B= 0.61252 C= 0.54977 D= 0.7333 E=-0.6799
G= 0.3738 H= 0.4031 K=-0.8353 HT= 0.6

DEPTH OF FOCUS= 0.004R

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

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TEHERAN	4.13	56.5	0	55	-7						8	19 PCP
SHIRAZ	5.99	128.8	1	24K	-4							
GORIS	6.00	353.8	1	28K	0							
EREVAN	6.97	343.0	1	43	1							
KIZYL-ARVAT	9.27	49.8	2	12	-2							
KSARA	9.41	274.9	2	16	0	4	4	3			2	52
MAKHACH-KALA	9.43	1.5	2	23	7	4	6	4				
ASHKABAD	10.11	61.0	2	24	-1							
JERUSALEM	10.22	263.4	2	28	1							
SOTCHI	11.60	332.1	2	46	1	5	3	9				
SIMFEROPOL	15.21	322.4	3	32	-1							
ISTANBUL UN.	16.27	302.7	3	46K	0						4	1 PP
QUETTA	17.14	95.9	3	57A	0	7	9	5	4	6		
TASHKENT	19.18	59.7	4	21	-1							
KARACHI	19.38	111.4	4	19	-5							
GARM	19.42	67.1	4	23K	-1							
ATHENS	19.52	289.8	4	23	-2	8	7	10				
WARSAK DAM	20.27	81.9	4	31	-2							
ANDIJAN	21.31	62.9	4	44K	0							
LAHORE	22.97	87.5	4	59A	-1							
MOSCOW	23.17	346.2	5	2	0	9	13	7				
FRUNSE	23.41	58.6	5	7A	2							
BELGRADE	23.47	306.6	5	7A	2						10	19 SSS
LWOW	23.59	320.5	5	6	0	9	21	8				
UZHGOROD	23.91	316.5	5	10	0	9	31	12				
SVERDLOVSK	25.07	17.6	5	21	0	9	40	2				
SKALNATE PL.	25.36	316.1	5	25	2	9	37	-6			6	4 PP
BUDAPEST	25.37	311.7	5	25	1						8	34
ALMATA-2	25.48	58.7	5	24	-1							
KRAKOW	25.96	317.6	5	29	0						6	7 PP
MESSINA	25.97	289.4	5	29A	0	10	17	24	5	37	6	17 PP
HURBANOVO	26.03	312.0	5	25	-5	9	37	-17			6	4 PP
NEW DELHI	26.15	92.7	5	30A	-1	10	9	13			6	28 PP
DEHRA DUN	26.36	88.5	5	31A	-2						9	8
WARSAW	26.53	322.6	5	35	1	10	21	18			6	30 PPP
BRATISLAVA	26.83	312.0	5	37K	0							
RACIBORZ	26.96	316.5	5	38	0						6	21 PP
BOMBAY	27.14	116.0	5	41	1	10	21	8			10	44
VIENNA-H.	27.31	311.8	5	43	2						6	40 PPP
LJUBLJANA	27.82	306.4	5	47	1						6	35 PP
POONA	28.14	115.4	5	49A	0	11	4	35				
TRIESTE	28.25	305.3	5	51	1							
PULKOVO	28.51	342.1	5	52A	0							
ROME	28.53	297.2									17	24
PRUHONICE	29.06	314.2	5	57	0						11	21
KASPERSKE H.	29.35	312.2	5	59	-1						7	27
FLORENCE X.	29.65	300.8									17	13
HELSINKI	30.37	338.1	6	7	-2							
COLLMBERG	30.47	316.0	6	9A	-1						12	50
NURMIJARVI	30.73	338.2	6	11	-1	11	7	-3				
HALLE	31.16	315.8	6	15	-1						9	10 PCP
JENA	31.17	314.7	6	11	-5							
CHUR	31.36	306.4	6	17	-1	11	20	0				
KARLSKRONA	31.37	325.8	6	22	4							
RAVENSBURG	31.50	308.1	6	18	-1							
STUTTGART	31.96	309.9	6	23	0						7	42
EBINGEN	32.02	308.7	6	23	0							
MONACO	32.39	300.1	6	27	0							
UPPSALA	32.70	332.6	6	25	-4							
BASLE	32.80	307.1	6	32	2							
FELDBERG	32.86	312.2	6	23	-8							
KAJAANI	32.86	344.4	6	29	-2							
STRASBOURG	32.89	309.1	6	28	-3						8	19
ROSELEND	33.16	303.6	6	33	0							
BESANCON	33.82	306.3	6	39	0							
BENSBERG	33.84	313.1	6	39	0							
APATITY	34.99	350.9	6	49K	0							
CHATRA	35.06	90.1	6	50A	0							
DOURBES	35.23	311.0	6	49	-2							
KONGSBERG	35.90	328.2	6	58	1						8	21 PP
SODANKYLA	35.94	346.6	6	56	-1						13	9 SCP
VISHAKHAPTNM	35.97	106.9	7	0K	3	12	41	10				
MADRAS	36.33	116.3	7	2K	2	12	43	6			8	21 PP
SKALSTUGAN	37.04	334.9	7	6	0							
LHASA	37.37	83.8	7	10A	1	13	0	7				
KIRUNA	37.65	343.8	7	11	0	13	3	6			8	37 PP
BAGNERES	37.68	298.7	7	18	6							
CALCUTTA	37.77	96.0									17	56
KEVO	37.97	348.8	7	14	0						8	46 PP

BERGEN	38.18	327.6	7	24	8						
FOLINIERE	38.32	308.0	7	16	-1						
KEW	38.55	312.3	7	20K	1						
BANGUI	39.34	228.7	7	25	0	13	23	1			
TROMSOE	39.41	344.9	7	26	0						
SHILLONG	39.45	89.5	7	24A	-2						
LWIRO	39.58	209.6	7	29K	2						
CHITTAGONG	40.71	94.0	7	37A	0	13	45	2	7 46	9	9 PP
TOLEDO	41.08	294.1	7	41	1					7	58 PP
MALAGA	41.88	289.5	7	47K	1						
SERRA PILAR	44.34	296.7	8	0A	-6	14	25	-11		9	43 PP
LANCHOW	46.05	70.1	8	21A	1						
KUNMING	48.69	84.6	8	40	-1					10	35 PP
PAOTOW	49.73	62.7	8	49	0						
SIAN	50.55	70.9	8	55A	0						
BROKEN HILL	50.93	203.6	8	59	1						
SCORESBY SD.	51.84	336.5	9	6	1						
TANANARIVE	52.15	179.5	9	11A	4					9	56
NORD	53.28	350.5	9	14	-1						
PEKING	54.41	61.8	9	23A	-1						
BULAWAYO	56.23	201.1	9	37	0						
ALERT	59.46	351.7	9	59A	-1						
THULE	63.30	346.2	10	25	0						
KIMBERLEY	65.47	201.6	10	40K	1						
RESOLUTE	69.22	349.9	11	3K	0						
MOULD BAY	70.17	356.6	11	8A	-1						
MATUSIRO	71.72	58.0	11	17A	-1						
HALIFAX	80.02	317.3	12	7K	2						
COLLEGE	81.23	6.4	12	12	1						
SHAWINIGAN	83.67	323.0	12	25	1						
BREBEUF	84.82	322.6	12	31K	1						
BLUE MTS.	100.72	348.8	17	7	203					17	45 PP
WICHITA MTS.	104.90	331.3	13	57	-5					18	24 PP
LA PAZ	119.84	269.3	18	49	5						
BYRD STATION	133.09	183.2	19	13	3					21	37 PP

NOVEMBER 9 9.H 21.M 34.S EPICENTRE 35.96 140.52 DEPTH= 65.KM

A=-0.62615 B= 0.51585 C= 0.58467 D= 0.6359 E= 0.7718
G=-0.4513 H= 0.3718 K=-0.8113 HT= -0.2

DEPTH OF FOCUS= 0.005R

SE= 2.56

	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
TYOSI	0.36	131.8	0	11A	-2	0	18	-5				
KAKIOKA	0.38	314.4	0	11K	-2	0	20	-3				
MITO	0.42	354.8	0	12K	-2	0	22	-2				
TUKUBASAN	0.42	307.3	0	11	-3	0	20	-4				
HONGO	0.66	247.6	0	14	-2							
TOKYO C.M.O.	0.68	245.8	0	15K	-1	0	27	-1				
UTUNOMIYA	0.79	318.4	0	16K	-1	0	27	-3				
YOKOHAMA	0.88	233.2	0	18K	0	0	32	0				
KUMAGAYA	0.94	281.8	0	18K	-1	0	33	0				
ONAHAMA	1.03	17.3	0	20	0	0	35	1				
TITIBU	1.17	271.2	0	21	-1	0	38	0				
SHIRAKAWA	1.18	348.4	0	22K	0	0	38	0				
MERA	1.18	208.5	0	21	-1	0	38	0				
MAEBASI	1.25	290.8	0	22K	-1	0	38	-1				
AJIRO	1.47	232.2	0	25	-1	0	43	-2				
HUNATU	1.49	252.5	0	26	0	0	46	1				
OSIMA	1.51	218.3	0	26	0	0	43	-3				
MISIMA	1.53	237.1	0	25K	-2	0	40	-6				
KOHU	1.62	260.1	0	28K	0	0	49	1				
OIWAKE	1.63	283.5	0	28	0	0	50	2				
HUKUSIMA	1.78	358.8	0	31A	1	0	55	3				
MATUSIRO	1.95	287.8	0	31K	-1	0	54	-2				
SHIZUOKA	1.99	240.8	0	34K	1	0	53	-4				
NAGANO	2.00	291.3	0	34	1	0	59	2				
MATUMOTO	2.08	278.6	0	34	0	1	1	2				
TAKADA	2.15	302.5	0	37A	2	1	2	1				
IIDA	2.23	259.3	0	37K	1	1	13	10				
NIIGATA	2.28	329.4	0	44	7	1	11	7				
YAMAGATA	2.29	356.7	0	39A	2	1	6	2				
OMAESAKI	2.32	234.8	0	38	1							

SENDAI	2.32	7.5	0	38	1	1	6	1			
ISINOMAKI	2.54	14.4	0	40K	0	1	10	-1			
HAMAMATU	2.60	242.3	0	41A	0	1	18	6			
TAKAYAMA	2.65	275.0	0	43	1	1	16	3			
AIKAWA	2.74	319.2	0	44	1	1	26	10			
TOYAMA	2.78	286.3	0	46	2	1	15	-1			
HATIDYOZIMA	2.92	192.1	0	45	-1	1	19	-1			
SAKATA	2.98	349.6	0	50	3	1	27	5			
NAGOYA	3.00	255.7	0	47	v	1	23	1			
GIHU	3.10	260.7	0	50	4	1	32	7			
KANAZAWA	3.18	281.4	0	51	2						
MIZUSAWA	3.20	8.6	0	51	1	1	27	0			
WAZIMA	3.23	297.0	0	50	v						
HUKUI	3.48	272.7	0	53	-1	1	6	-28		2	52
KAMEYAMA	3.49	252.6	0	56A	2	1	36	2			
TU	3.50	250.1	0	57	3						
HIKONE	3.54	260.0	0	55	1	1	38	2			
TSURUGA	3.63	266.4	0	56	0	1	32	-6			
AKITA	3.76	355.1	1	7	9	1	51	10			
MORIOKA	3.77	7.7	0	59	1	1	39	-2			
MIYAKO	3.86	16.9	0	56	-3	1	40	-3			
OWASE	4.01	243.2	1	1	0	2	7	20			
KYOTO	4.02	257.8	1	9	8	1	59	12			
NARA	4.04	252.9	1	1	v	2	7	19			
ABUYAMA	4.18	256.3	1	3A	0	2	4	12			
MAIZURU	4.20	264.8	1	3	-1	2	5	13			
OSAKA	4.28	253.6	1	6	1	1	56	2			
KOBE	4.55	255.2	1	8	0	2	18	17			
HATINOHE	4.63	9.6	1	10	0	2	1	-2			
SIOMISAKI	4.64	238.7	1	1	-9	2	24	21			
TOYOOKA	4.65	266.3	1	10	0						
WAKAYAMA	4.71	250.0	1	10	-1	1	59	-6			
AOMORI	4.85	2.4	1	14	1	2	11	3			
SUMOTO	4.87	252.2	1	15	2	2	22	13			
TOTTORI	5.17	266.8	1	15	-2	2	11	-5			
HIMEJI	5.22	255.5	1	18	0	2	34	17			
TOKUSIMA	5.23	250.5	1	20	2	2	48	30			
TAKAMATU	5.55	254.7	1	25	3	2	46	20			
TSURUGISAN	5.75	250.4	1	19	-6	2	39	8			
SAIGO	5.83	274.4	1	28	2	2	41	9			
HAKODATE	5.84	1.8	1	26	0						
YONAGO	5.86	266.9	1	45	18	2	57	24			
MUROTO	5.88	244.4	1	27	0	3	6	32			
MATSUE	6.08	267.3	1	35	5	3	5	26			
MORI	6.13	0.4								2	44
KOTI	6.23	249.3	1	31	-1	2	31	-12			
URAKAWA	6.42	15.2	1	33	-1	2	48	1			
HIROO	6.67	18.2	1	36	-2	2	48	-5			
MATUYAMA	6.70	253.8	1	41	3	3	28	34			
TOMAKOMAI	6.71	6.7	1	50	12						
HIROSIMA	6.81	258.9	1	39	-1	3	33	36			
HAMADA	6.98	263.7	1	48	6	3	20	19			
ASHIZURI	7.01	244.7	1	56	13	2	49	-13			
SAPPORO	7.13	4.9	1	50	6	3	4	-1			
OBIHIRO	7.25	15.8	1	45	-1						
KUSIRO	7.62	22.0	1	45	-6	3	8	-9			
OOITA	7.83	252.2	2	2	8	3	57	35			
SIMONOSEKI	8.12	258.5	1	36	-22						
NEMURO	8.33	26.4	1	56	-5	3	24	-10			
ASOSAN	8.38	251.3	2	3	1						
MIYAZAKI	8.57	244.5	2	9	5	4	5	25			
HUKUOKA	8.67	257.0	2	7	2	4	30	47			
KUMAMOTO	8.70	251.7	1	40	-26	3	9	-34			
SAGA	8.85	255.1	2	10	2	4	28	41			
NAGASAKI	9.37	252.9	2	14	-1	4	37	37			
VLADIVOSTOK	9.76	319.7								3	20
YAKUSIMA	10.03	239.6	2	24	0						
Y.-SAKHLINSK	11.17	7.8	2	35	-4						
CHANGCHUN	14.06	308.6	3	16	-2	6	1	9			
NANKING	18.43	264.1	4	10	-3						
PEKING	19.59	289.3	4	21	-5	8	0	2			
PETROPAVLOVK	21.30	31.2	4	46K	3						
PAOTOW	24.31	290.2	5	10	-3						
YAKUTSK	26.95	348.8	5	36K	-2	10	13	5			
MANILA	27.43	224.4	5	36	-6	10	15	-1			
LANCHOW	29.57	281.1	5	58A	-3						
KUNMING	34.09	262.2	6	38	-3						
LHASA	41.70	275.9	7	45	1						
SHILLONG	42.69	269.9	7	49A	-3						

CHITTAGONG	44.21	265.9	8	3A	-2				9	47 PP
PORT MORESBY	45.55	170.8	8	15	0					
CHATRA	45.95	274.2	8	18	-1				9	55
ALMATA-2	48.16	299.0	8	36A	0					
DARWIN	48.94	192.6	8	39	-3					
COLLEGE	50.38	31.7	8	54	1					
DEHRA DUN	51.83	282.8	9	4	0					
NEW DELHI	53.23	281.2	9	11A	-3					
LAHORE	54.26	285.8	9	19	-3					
TASHKENT	54.47	298.8	9	23	0					
WARSAK DAM	55.44	289.7	9	29	-1					
SVERDLOVSK	55.48	318.9	9	30A	-1					
DUZHANBE	55.79	295.8	9	32K	-1					
CHARTERS TS.	56.01	173.5	9	33	-2					
MOULD BAY	57.77	16.2	9	46A	-1					
QUETTA	60.58	287.5	10	5A	-1	18	15	-1	10	50 PCP
POONA	60.69	272.4	10	6A	-1					
ALERT	61.24	3.4	10	11A	0					
NORD	62.07	356.3	10	15A	-1					
APATITY	63.37	335.8	10	24A	-1	18	55	4	11	1
ASHKABAD	63.55	299.0	10	25	-1					
RESOLUTE	63.82	14.1	10	28	0					
BRISBANE	64.07	167.9	10	31	1					
KEVO	64.18	339.2	10	29	-1					
SODANKYLA	65.67	337.1	10	39A	-1					
THULE	66.41	7.1	10	45	0					
TROMSOE	66.49	341.0	10	44	-1					
KAJAANI	67.23	333.9	10	49A	-1					
KIRUNA	67.26	339.1	10	49A	-1					
MOSCOW	67.68	323.4	10	52	-1	19	42	-1		
PULKOVO	68.74	329.4	10	58	-1					
PENTICTON	69.44	43.5	11	4	0					
TEHERAN	69.51	299.7	11	3	-1					
NURMIJARVI	70.55	331.8	11	9A	-1					
HELSINKI	70.64	331.4	11	10	-1					
CANBERRA	71.36	172.7	11	15K	0					
SHIRAZ	71.79	293.7	11	17A	-1					
SKALSTUGAN	72.65	338.4	11	22A	-1					
BLUE MTS.	73.19	46.6	11	28	2					
TOOLANGI	73.31	175.9	11	26	-1					
CALISTOGA	73.31	54.3	11	29A	2					
UPPSALA	73.60	333.8	11	27A	-1					
BERKELEY	73.94	54.8	11	33A	3					
LICK	74.64	55.0	11	36K	2					
BUTTE	75.23	43.6	11	40	2					
PRIEST	75.96	55.5	11	44A	2					
KONGSBERG	76.47	336.7	11	44	-1					
EUREKA	77.08	50.5	11	50	2					
GOTEBORG	77.18	334.5	11	47A	-2					
DUGWAY	78.60	48.5	11	58A	1					
PASADENA	78.77	56.0	12	1	3					
SALT LAKE C.	78.83	47.5	12	0	2					
UZHGOROD	79.46	323.5	12	1	0					
KRAKOW	79.58	325.6	12	2	0					
PRICE	80.18	48.0	12	7	2					
FLAMING GRGE	80.19	46.2	12	7	2					
KARAPIRO	80.36	152.6	12	20	14					
KSARA	81.19	305.4	12	11	1				14	57
COLLMBERG	81.67	329.8	12	12A	-1				16	2
HALLE	81.94	330.4	12	13	-1					
PRUHONICE	82.02	328.2	12	16A	1				13	0
LARAMIE	82.13	44.0	12	17	2					
JENA	82.53	330.2	12	18	1					
KASPERSKE H.	83.07	328.1	12	20A	0				13	2
BENSBERG	84.22	332.5	11	26	-60					
TUCSON	84.80	53.7	12	31	2					
TUCSON TELE.	84.82	53.6	12	31	2					
STUTTGART	85.15	330.0	12	31	0					
ALBUQUERQUE	85.83	49.3	12	36	2					
DOURBES	85.87	333.3	11	35	-59					
FOLINIERE	88.78	335.4	12	48	0					
WICHITA MTS.	90.67	45.0	12	58	1				13	30
TULSA	91.37	42.5	13	2	2					
FAYETTEVILLE	92.11	41.4	13	4A	0					
BREBEUF	93.25	23.3	13	10	1					
MIRNY	108.45	198.1	16	38	777					
BULAWAYO	118.98	265.2							30	0
SOUTH POLE	125.78	180.0	18	55	0					

BYRD STATION	126.88	167.6	18	58	1								
LA PAZ	148.00	60.2	19	39	4								

NOVEMBER 10 1.H 33.M 18.5 EPICENTRE 43.78 147.51 DEPTH= 50.KM

A=-0.61098 B= 0.38901 C= 0.68947 D= 0.5371 E= 0.8435
G=-0.5816 H= 0.3703 K=-0.7243 HT= -3.1

DEPTH OF FOCUS= 0.003R

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
NEMURO	1.48	252.9	0	25K	0	0	42	-2				
ABASHIRI	2.35	276.9	0	40A	3	1	6	1				
KUSIRO	2.41	251.6	0	38K	0	1	5	-2				
OBIHIRO	3.26	256.2	0	51	1	1	28	0				
HIROO	3.42	245.4	0	52K	0	1	29	-3				
ASAHIGAWA	3.73	271.8	1	0K	3	1	42	2				
URAKAWA	3.84	246.5	0	58K	0	1	43	0				
RUMOE	4.27	274.3	1	6K	2	1	50	-4				
WAKKANAI	4.48	293.5	1	12K	5	2	4	5				
TOMAKOMAI	4.49	257.2	1	10	3	1	57	-2				
SAPPORO	4.55	263.1	1	12	4	2	2	1				
Y.-SAKHLINSK	4.68	315.5	1	12K	2	2	5	1				
MURORAN	5.01	255.3	1	15	0	2	9	-3				
HAKODATE	5.35	250.7	1	19A	0	2	15	-6				
MORI	5.37	254.1	1	19K	-1	2	18	-3				
SUTTSU	5.41	262.1	1	21	1	2	27	5				
HATINOHE	5.51	235.9	1	20	-2	2	13	-12				
AOMORI	5.80	241.7	1	24	-2	2	26	-6				
MIYAKO	5.85	227.0	1	22	-5	2	19	-14				
MORIOKA	6.26	231.5	1	29	-3	2	31	-12				
UGLEGORSK	6.50	326.5				2	53	4			1	40
MIZUSAWA	6.68	228.1	1	35	-3	2	42	-12				
AKITA	6.87	236.3	1	47	6	2	50	-9				
ISINOMAKI	7.10	223.3	1	39A	-5	2	52	-12				
SENDAI	7.44	224.5	1	43	-6	2	59	-14				
YAMAGATA	7.74	226.8	1	50K	-3	3	8	-12				
HUKUSIMA	8.05	224.0	1	52	-5	3	15	-13				
ONAHAMA	8.49	218.7	1	58	-5	3	22	-17				
SHIRAKAWA	8.67	222.3	2	2	-4	3	30	-13				
NIIGATA	8.68	230.5	1	57	-9	3	40	-3				
AIKAWA	9.07	233.8	2	11	0	3	41	-12				
MITO	9.15	218.5	2	8A	-4	3	41	-14				
UTUNOMIYA	9.29	221.6	2	12	-2	3	44	-14				
KAKIOKA	9.41	219.2	2	7	-9	3	47	-14				
TUKUBASAN	9.45	219.5	2	10A	-6	3	44	-18				
TYOSI	9.54	214.7	2	13	-5	3	49	-16				
TAKADA	9.71	229.7	2	17	-3	3	59	-10				
MAEBASI	9.80	224.1	2	18	-3	3	55	-16				
KUMAGAYA	9.85	222.0	2	16	-6	4	0	-12				
HONGO	10.02	219.1	2	23	-1						4	3
NAGANO	10.05	228.2	2	27	2	3	55	-22				
TOKYO C.M.O.	10.06	219.0	2	6	-19	4	2	-15				
OIWAKE	10.12	225.7	2	24	-2	4	10	-9				
TITIBU	10.13	222.6	2	24	-2	4	5	-14				
MATUSIRO	10.14	227.7	2	22A	-4	4	8	-11				
OKHA	10.23	344.4	2	30	3						4	34
WAZIMA	10.29	235.2	2	33	5	4	14	-9				
YOKOHAMA	10.31	218.6	2	30	2	4	11	-12				
MATUMOTO	10.49	227.4	2	31	0	4	22	-6				
TOYAMA	10.59	231.6	2	46	14	4	16	-14				
KOHU	10.63	223.4	2	29	-4	4	21	-10				
MERA	10.66	216.5	2	36	3							
HUNATU	10.66	222.1	2	34	1	4	21	-11				
AJIRO	10.87	219.5	2	30	-6	4	22	-15				
MISIMA	10.89	220.3	2	34	-2	4	21	-16				
TAKAYAMA	10.95	229.4	2	46	9							
OSIMA	10.98	217.7	2	45	8	4	22	-18				
KANAZAWA	11.02	232.6	2	41	3							
IIDA	11.12	225.4	2	38	-1	4	29	-14				
SHIZUOKA	11.27	221.7	2	36	-5	3	55	-52				
VLADIVOSTOK	11.37	272.1	2	42	-1						4	35
HUKUI	11.60	232.1	2	53	7	4	46	-9				
OMAESAKI	11.66	221.3	3	12	26							

GIHU	11.77	228.3	2	45	-3	4	45	-14			
HAMAMATU	11.80	223.2	2	57	9	4	49	-11			
PETROPAVLOVK	11.83	34.7	2	48	-1				5	8	
NAGOYA	11.84	227.0	2	50	1	5	5	5			
TSURUGA	11.97	231.2	2	30	-21						
HIKONE	12.15	229.4	2	52	-1	4	53	-15			
HATIDYOZIMA	12.26	212.1							3	55	
KAMEYAMA	12.35	227.5	3	10	14	5	1	-12			
MAIZURU	12.49	232.4	2	57	-1	5	7	-9			
KYOTO	12.62	230.1	2	56	-3	5	6	-13			
NARA	12.82	228.8	3	5	3						
ABUYAMA	12.82	230.1	2	59K	-3						
OSAKA	13.01	229.5	3	7	3	5	30	2			
OWASE	13.09	226.0				5	10	-20	4	17	
TOTTORI	13.17	235.7	3	4	-3						
SAIGO	13.24	239.9	3	2	-6	5	54	20			
SUMOTO	13.58	230.3	3	29	17	5	28	-14			
YONAGO	13.73	237.4				5	34	-12			
SIOMISAKI	13.79	225.5	3	21	6	5	20	-27			
MATSUE	13.89	238.1	3	14	-2	5	37	-12			
TOKUSIMA	13.96	230.4	3	28	11						
TAKAMATU	14.08	232.4	3	24	6	5	41	-13			
HAMADA	14.86	238.6	3	26	-3	6	5	-7			
KOTI	14.94	231.5	3	17	-13	5	43	-31			
HIROSIMA	15.00	236.3	3	38	8	6	6	-10	15	AA	SCS
ASHIZURI	15.85	230.7	3	39	-2	6	47	12			
MAGADAN	15.92	6.1	3	43	1						
CHANGCHUN	16.03	277.9	3	41K	-3	6	35	-4	3	51	*SP
SIMONOSEKI	16.20	238.3	3	42	-4						
OOITA	16.27	235.0	3	53	6	6	59	14			
HUKUOKA	16.78	238.4	4	2	9	7	9	12			
ASOSAN	16.83	235.3	3	58	4	7	10	12			
SAGA	17.06	237.7	4	2	5	7	36	33			
KUMAMOTO	17.11	235.9	4	4	7	7	16	12			
MIYAZAKI	17.34	232.3	4	8	8	7	23	14			
NAGASAKI	17.67	237.3	4	3	-1	7	20	3			
KAGOSIMA	18.09	233.3	4	13	4	7	27	1			
YAKUSIMA	18.96	231.1	4	23	3	7	51	5			
YAKUTSK	21.05	336.3	4	40A	-2	8	26	-3			
PEKING	23.55	271.7	5	6	-1	9	11	-3	5	19	*SP
MAWASHI	23.78	229.1	5	16	7						
ZO-SE	24.33	247.5	5	15A	1	9	30	3	5	29	*SP
NANKING	25.38	252.2	5	24	0	9	46	1	5	37	*SP
PAOTOW	27.81	276.5	5	47A	0	10	23	-1	6	1	*SP
TIKSI	29.37	348.1	5	56	-5				6	49	PPP
IRKUTSK	29.72	302.0	6	2A	-2	10	54	-1	12	42	SCP
LANCHOW	34.06	272.1	6	42A	0	12	1	-2	6	55	*SP
MANILA	36.75	226.1	7	14	9	12	54	10			
KUNMING	40.78	257.8	7	38A	0	13	42	-3	7	52	*SP
COLLEGE	40.90	36.1	7	41	2	13	50	3	14	16	
SEMIPALATNSK	44.85	303.2	8	10	-1	14	40	-5	13	42	PCS
LHASA	46.57	272.0	8	25	0	15	10	1	8	40	*SP
SHILLONG	48.31	266.9	8	2A	-36						
MOULD BAY	48.71	18.6	8	40A	-2	15	38	-1			
ALMATA-2	49.41	295.2	8	48K	1	15	48	-1			
ALMATA	49.69	295.4	8	50A	1	15	55	2			
KIPAPA	50.02	98.3	8	52	0	16	5	8			
HONOLULU	50.04	98.5	8	53	1	16	6	8			
CHITTAGONG	50.31	263.6	8	53A	-1	16	2	1	9	8	10 48 PP
CHATRA	50.97	271.5	8	59K	0						
FRUNSE	51.41	295.9	9	2A	0	16	18	1			
CALCUTTA	52.69	266.3							16	36	
PORT MORESBY	52.93	180.5	9	12	-1	16	38	1			9 32
ALERT	53.08	4.7	9	12A	-3						
HAWAII V.OB.	53.26	98.1	9	17	1						
SVERDLOVSK	53.30	316.8	9	15K	-1	16	38	-4			11 11 PP
BOKARO	53.75	269.4	9	20A	0	16	48	-1			
NORD	54.58	357.2	9	24	-2						
RESOLUTE	54.87	16.7	9	26	-2						
TASHKENT	55.62	296.7	9	33A	0	17	15	1			11 38 PP
KHOROG	56.13	291.6	9	37	0	17	22	2			
PORT BLAIR	56.80	253.1	9	41A	-1	17	29	0			17 39 PS
NEW DELHI	57.13	279.6	9	42A	-2	17	30	-4	9	56	23 54 *SS
DUZHANBE	57.39	294.1	9	45A	-1	17	35	-2			
LAHORE	57.46	284.2	9	45A	-1	17	36	-2			11 58 PP
THULE	57.92	9.4	9	47	-2						10 40
DARWIN	57.93	199.3	9	49	-1						
WARSAK DAM	58.02	288.2	9	43	-7						

APATITY	58.46	335.7	9	50A	-3	17	47	-4			17	59 PS
VICTORIA	58.48	51.2	9	53	0							
KEVO	58.77	339.5	9	53	-2	17	50	-5			13	26 PPP
VISHAKHAPTNM	59.41	265.6	10	1K	1	18	6	3				
SEATTLE	59.58	51.6	10	6A	5							
PENTICTON	60.15	48.9	10	5A	0							
SODANKYLA	60.54	337.6	10	5A	-3	18	18	0				
BANFF	61.28	45.4	10	12A	-1							
KIRUNA	61.83	339.9	10	14A	-2	18	32	-2			19	59
TANGERANG	61.91	227.5	10	16K	-1							
LEMBANG	61.94	226.2	10	15K	-2							
KAJAANI	62.54	334.5	10	21	0	18	46	3				
QUETTA	63.41	287.2	10	26A	-1	18	53	-1			12	44 PP
CHARTERS TS.	63.56	181.3	10	26	-2						10	46
HUNGRY HORSE	63.73	47.4	10	29	0							
UKIAH	63.86	60.0	10	31	1							
BLUE MTS.	64.02	52.0	10	31	0	19	5	3			23	16 SS
ASHKABAD	64.50	298.9	10	34	0	19	10	2			13	4 PP
CALISTOGA	64.55	60.1	10	34A	0							
MOSCOW	64.58	323.9	10	34A	0	19	3	-6			13	3 PP
PULKOVO	64.71	330.1	10	34A	-1	19	8	-2			13	3 PP
MADRAS	64.78	263.8	10	36A	0	19	11	0			12	53 PP
BERKELEY	65.21	60.7	10	39A	0	19	20	4				
POONA	65.73	272.8	10	41A	-1	19	20	-3			11	3
RENO	65.73	57.9	10	42A	0							
SCORESBY SD.	65.80	356.1	10	42	0	19	28	5				
LICK	65.93	60.8	11	3A	20							
BUTTE	65.95	48.7	10	44	1	19	28	3			13	5 PP
NURMIJARVI	66.13	333.0	10	43A	-1	19	27	0			12	48 PP
GODHAVN	66.22	8.0	10	44A	-1	19	53	24				
BOMBAY	66.23	273.8	10	41	-4	19	27	-2			13	15 PP
HELSINKI	66.28	332.6	10	44A	-1							
BOZEMAN	66.99	48.3	10	51	1	19	39	1			13	21 PP
SKALSTUGAN	67.26	340.0	10	50A	-1							
PRIEST	67.28	61.3	10	52A	0							
NOUMEA	68.01	161.1	11	14K	18							
EUREKA	68.10	56.0	10	57	0						38	58 PKPPKP
UPPSALA	68.86	335.5	11	0A	-1	19	57	-3				
DUGWAY	69.51	53.7	11	6A	1							
SALT LAKE C.	69.70	52.7	11	8	1	20	14	4			13	42 PP
PASADENA	70.12	61.6	11	9	0	20	16	1				
TEHERAN	70.24	300.7	11	11	1	20	12	-5				
TIFLIS	70.26	309.1	11	12	2	20	19	2			11	29 PCP
GORIS	70.85	306.5	11	14A	0	20	26	2			13	55 PP
BRISBANE	70.99	175.0	11	15	1	20	27	2				
FLAMING GRGE	71.00	51.3	11	15	1							
PRICE	71.06	53.1	11	15A	0							
KONGSBERG	71.27	338.9	11	16	0						13	54 PP
BERGEN	71.68	341.3	11	18	-1	20	36	3				
REYKJAVIK	72.11	355.1	11	22A	1							
SIDA	72.18	353.3	11	23A	2							
GOTEBORG	72.30	336.7	11	21A	-1							
GLEN CANYON	72.35	55.6	11	23	0							
KARLSKRONA	72.50	334.1	11	19A	-4							
LARAMIE	72.86	49.0	11	26	0							
SHIRAZ	73.47	295.2	11	29A	0	20	49	-5	11	46	14	2 PP
SIMFEROPOL	73.67	317.2	11	30A	0	20	56	0				
WARSAW	73.82	329.0	11	31A	0	20	57	0			11	48 PCP
COPENHAGEN	73.87	335.4	11	32A	1	20	57	-1				
GOLDEN	74.09	50.1	11	34	1	21	4	4				
LWOW	74.55	325.9	11	35A	0	21	4	-2				
KISHINEV	74.64	321.5	11	36A	0	21	7	0			11	50 PCP
KRAKOW	75.98	328.2	11	44	0	21	21	0			12	7 PCP
TUCSON	75.99	58.8	11	45	1							
TUCSON TELE.	75.99	58.7	11	45	1							
SKALNATE PL.	76.56	327.5	12	0	13	21	56	28			14	34 PP
RACIBORZ	76.61	329.2	11	48	1	21	31	3			12	0 PCP
ALBUQUERQUE	76.77	54.2	11	49	1						14	19 PP
RIVERVIEW	77.31	176.9	11	52A	1	21	40	4	12	9	26	41 SS
COLLMBERG	77.42	332.7	11	51A	-1	21	36	-1				
SCHEFFERVLLE	77.53	19.5	11	52A	0							
HALLE	77.59	333.4	11	52	-1	21	38	-1				
PRAGUE	77.97	331.2	11	56	1	21	48	5			13	42
PRUHONICE	78.00	331.1	11	55A	0	21	42	-1	12	8	22	36 PS
WITTEVEEN	78.05	336.9	11	56A	1							
JENA	78.20	333.3	11	56	0	21	44	-1	12	7	15	2
DURHAM	78.36	342.3	11	57K	0	21	39	-8	12	20		
HURBANOVO	78.42	327.9	11	46	-11	21	30	-18			14	28 PP
BUDAPEST	78.42	327.2	11	58	1	21	50	2			16	53 PPP

BRATISLAVA	78.59	328.7	11	58	0					12	19	PCP
CHEB	78.66	332.4	11	58	0	21	52	2		12	57	
CANBERRA	78.74	178.8	11	59A	0				12 18			
ADELAIDE	78.79	187.4	11	59	0							
VIENNA-H.	78.80	329.1	12	0A	1	21	55	3				
TIMISOARA	78.93	324.9	12	0	0	21	56	3				
KASPERSKE H.	79.06	331.2	12	1A	0					13	42	
ISTANBUL UN.	79.09	317.4	12	1A	0	21	58	3				
DE BILT	79.11	337.4	12	2A	1	21	58	3		12	24	
MANHATTEN	79.16	45.4	12	0	-1	21	57	1				
KALOCSA	79.21	326.6	12	1	0					22	4	
DUBUQUE	79.52	39.7	12	3	0	21	55	-4				
BENSBERG	79.55	335.8	12	3A	0	21	59	-1	12 18	13	30	
FELDBERG	79.81	334.7	12	19A	14							
BELGRADE	80.00	324.8	12	6A	0	22	4	0		16	55	PPP
LAWRENCE	80.01	44.7	12	15	9							
LUBBOCK	80.42	52.4	12	8	0	22	12	3				
SOFIA	80.45	321.8	12	5	-3	22	8	-1		15	7	PP
KSARA	80.81	308.4	12	9A	-1	22	16	3	12 25	15	11	PP
STUTTGART	80.82	333.5	12	10	0	22	12	-1	12 26			
ZAGREB	80.97	328.0	12	12	1							
TOOLANGI	80.99	181.6	12	12	1				12 28			
TUBINGEN	81.10	333.5	12	12A	0							
KEW	81.12	340.3	12	12A	0	22	16	0				
LJUBLJANA	81.33	329.0	12	12A	-1	22	22	4		15	2	PP
WICHITA MTS.	81.42	49.6	12	13A	0	22	23	4		15	11	PP
EBINGEN	81.43	333.4	12	12A	-1							
STRASBOURG	81.47	334.3	12	14A	1	22	14	-6	12 28	12	54	
TRIESTE	81.95	329.2	12	15	-1	22	25	0				
TULSA	82.04	47.1	12	17	1	22	27	1		15	27	PP
WELSCHBRUCH	82.06	335.0	12	15	-2							
CHUR	82.41	332.4	12	18	0	22	31	2				
BASLE	82.45	333.9	12	19	0	22	34	4				
ROLLA	82.52	43.4	12	18	-1	22	29	-1				
FLORISSANT	82.57	41.9	12	19A	0	23	30	59				
JERUSALEM	82.69	307.4	12	21A	1							
FAYETTEVILLE	82.75	46.0	12	20	0	22	4	-29				
ST. LOUIS 1	82.76	41.9	12	19	-1							
PARIS	82.82	337.5	12	22A	2							
BESANCON	83.20	334.7	12	24	2					12	46	
LONDON ONT.	83.20	33.7	12	23A	1							
SHAWINIGAN	83.25	26.7	12	23A	0							
FOLINIERE	83.65	339.3	12	25	0							
DALLAS	83.81	49.7	12	26	1							
BREBEUF	83.89	27.7	12	26A	0				12 50			
PAVIA	83.99	331.8	12	27	1					23	10	SCS
ATHENS	84.03	318.7	12	9A	-18	22	44	-1		12	38	
GARCHY	84.05	336.5	12	32	5							
BLOOMINGTON	84.08	39.2	12	27	0	22	48	2				
CLEVELAND	84.36	34.8	12	28A	0	22	49	0	13 35			
ROSELEND	84.39	333.6	12	29	1	22	47	-2		12	48	
FLORENCE X.	84.47	329.8	12	29	0	22	52	2	12 42	15	32	PP
LITTLE ROCK	84.71	45.6	12	29	-1							
KARAPIRO	85.21	158.1	12	36	4				12 53			
CLERMONT-FD.	85.40	335.9	12	30A	-3					13	0	
ISOLA	85.59	332.7	12	33	-1							
ROME	85.63	328.1	12	20	-15	22	55	-6		15	42	PP
TARRALEAH	85.70	180.8	12	55	20							
MOORLANDS	85.84	180.2	12	55	19							
MONACO	85.86	332.2	12	36A	0							
PENNSYLVANIA	86.41	32.8	12	39A	1							
TUAI	86.46	157.2	12	38	-1							
MORGANTOWN	86.57	34.8	12	40A	1					16	1	PP
MESSINA	87.54	324.1	12	42A	-2	23	13	-6	12 52	23	31	*SS
HALIFAX	87.72	21.7	12	45A	0							
PALISADES	87.73	30.1	12	46	1	23	22	1	13 2	23	8	SKS
FORDHAM	87.88	30.1	12	45	0	23	7	-16				
WELLINGTON	88.16	159.8				23	12	-13		22	32	
BAGNERES	88.73	336.7	12	50	0					13	25	
TORTOSA	90.70	335.6	12	55	-4							
ROXBURGH	90.96	164.8				23	30	-21		30	0	SS
TOLEDO	92.85	338.5	13	9K	0	24	10	3				
ALICANTE	93.26	335.3	13	10	-1	24	6	-5		23	41	SKS
GRANADA	95.26	337.2	13	29A	9					16	46	PP
MALAGA	95.91	337.6	13	22K	-1	24	26	33		17	14	PP
DUMONT	110.27	183.2	19	4	38							
SAN JUAN	110.89	34.3	19	8	40							
LWIRO	112.00	289.1								19	8	PP
BANGUI	113.65	302.1								20	5	PP

CAPE HALLETT	116.88	172.4						20	1	
CARACAS	117.56	38.9						19	53	PP
MIRNY	117.62	201.6						20	9	PP
CHINCHINA	117.86	50.4	18	46	5					
FUQUENE	118.48	48.3						20	2	PP
BOGOTA	119.00	49.2						20	7	PP
BROKEN HILL	120.77	279.7	18	48	1					
BULAWAYO	124.40	274.5	18	55	1					
BANDEIRA	131.64	292.0	19	9A	1			22	30	SKP
KIMBERLEY	132.36	268.5						21	24	
AREQUIPA	137.24	62.8	19	21	3					
LA PAZ	139.40	59.2	19	18	-4					
ANTOFAGASTA	143.06	69.7	19	28	-1					
SANTA LUCIA	148.69	83.8	19	40	2			20	2	
ARGENTINE I.	152.20	151.6	19	51	8			20	21	

NOVEMBER 11 7.H 39.M 19.S EPICENTRE -24.05 69.33 DEPTH= 71.KM
A= 0.32272 B= 0.85535 C=-0.40524 D= 0.9356 E=-0.3530
G=-0.1431 H=-0.3792 K=-0.9142 HT= 3.6

DEPTH OF FOCUS= 0.006R

SE= 1.94

	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	20.89	279.9	4	42K	3						5	51	
BULAWAYO	37.84	267.7	7	10	-2								
BROKEN HILL	39.62	276.3	7	19K	-8								
TANGERANG	39.97	69.7	7	36	6								
LEMBANG	40.50	71.3	7	34A	0								
MUNDARING	41.87	111.7	7	45	0						14	11	
POONA	42.55	6.3	7	50K	-1	14	2	-6					
BOMBAY	42.82	4.9	7	53	0	14	19	7			11	20	
MAWSON	43.74	183.6	8	1K	1								
LWIRO	44.75	292.7	8	11	2								
MIRNY	45.05	166.9	8	11	0	14	52	8					
WILKES	49.58	159.6	8	46A	0	15	56	8					
CHITTAGONG	51.05	27.1	8	58A	0						11	0	PP
NEW DELHI	52.87	8.7	8	10K	-61								
BANDEIRA	53.31	269.0	9	15A	1								
SHILLONG	53.94	25.4	9	16K	-3								
QUETTA	53.97	357.5	9	19K	0	16	57	9	9	26			
DEHRA DUN	54.70	9.2	10	22	57								
LAHORE	55.49	5.2	9	28	-2								
SHIRAZ	55.78	342.3	9	31K	-1	17	17	5					
BANGUI	56.87	292.9	9	40	0						11	45	PP
WARSAK DAM	57.77	2.2	9	47K	0								
DUMONT	60.52	154.4	10	4	-2								
TEHERAN	61.84	343.5	10	14	0								
ASHKABAD	62.53	350.2	10	18	-1								
JERUSALEM	64.39	328.0	10	33	2								
TASHKENT	65.03	360.0	10	35K	0	19	20	9					
TOOLANGI	65.18	121.8	10	36	0								
KSARA	65.76	329.8	10	38	-2						17	41	
SOUTH POLE	66.09	180.0	9	42	-60								
FRUNSE	66.72	4.2	10	46A	0								
GORIS	66.77	340.8	10	46A	-1								
CANBERRA	68.45	120.1	10	57	0								
TIFLIS	69.27	340.6	11	2	0								
CAPE HALLETT	70.55	161.4	11	10	0								
CHARTERS TS.	70.57	103.9	11	10	0								
SEMIPALATNSK	74.75	7.2	11	35	0								
ISTANBUL UN.	74.81	329.5	11	35K	0	20	56	-9					
PORT MORESBY	75.16	93.8	11	37	0								
SIMFEROPOL	75.81	335.0	11	41A	0	21	13	-3					
BYRD STATION	76.03	178.4	11	42	0								
KISHINEV	79.62	333.1	12	2	0								
SVERDLOVSK	80.89	355.2	12	8K	0								
UZHGOROD	83.67	330.8	12	23	0								
MOSCOW	83.92	342.6	12	26K	2								
BRATISLAVA	85.77	328.0	12	34	1								
VIENNA-H.	86.18	327.7	12	36	1								
RACIBORZ	86.58	329.8	12	38	1								
KASPERSKE H.	88.14	327.1	12	45K	0								
PRUHONICE	88.23	328.2	12	46K	1						15	50	

MATUSIRO	88.56	48.7	12 44	-3	23 13 -12			
CHUR	88.80	323.6	12 49	1				
PULKOVO	89.43	341.4	12 52K	1				
ROSELEND	89.72	321.5	12 53	1				
COLLMBERG	89.84	328.5	12 54K	1				
JENA	90.29	327.6	12 55	0			13 23	
HALLE	90.47	328.2	12 57	1			16 30	PP
BAGNERES	92.16	316.7	13 5	2				
DOURBES	93.36	324.3	13 3	-6				
LA PAZ	122.13	230.0					16 25	
MORGANTOWN	149.81	308.3	19 47	10				
PENTICTON	153.82	13.3	19 49	6				
BUTTE	158.03	3.5	20 24	35				
BOZEMAN	158.43	0.7	19 53	4			24 7	PP
BLUE MTS.	158.56	13.0	20 25	35			24 31	PP
LAWRENCE	160.19	322.3					20 34	
LARAMIE	162.27	347.3					20 44	
CALISTOGA	162.28	32.1					20 43	
TULSA	162.54	316.0	19 57	3			20 45	PKP2
RENO	162.73	24.4	19 55A	1				
SALT LAKE C.	163.30	3.1	19 59	5			24 32	PP
LICK	163.76	32.8					20 50	
DUGWAY	163.80	5.9	19 58K	3				
WICHITA MTS.	165.05	318.1	20 0	4			24 43	PP
PRIEST	165.18	33.3					20 57	
PASADENA	167.99	31.4	20 2	4			21 7	
ALBUQUERQUE	168.54	342.3	20 3	4			21 12	
TUCSON TELE.	171.74	0.3	20 6	5			25 18	PP
TUCSON	171.83	0.9	20 5	4				

NOVEMBER 11 11.H 31.M 40.S EPICENTRE 55.89 113.14 DEPTH= 0.KM

A=-0.22140 B= 0.51799 C= 0.82624 D= 0.9195 E= 0.3930
G=-0.3247 H= 0.7597 K=-0.5633 HT= -7.5

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	
KABANSK	5.43	227.5	1 24	0				1 44	PG
IRKUTSK	6.33	238.7	1 38	1	2 55	4		1 59	PG
KYAKHTA	6.84	218.8	1 45	1				2 13	PG
CHANGCHUN	14.37	142.1	3 26	-1					
PAOTOW	15.46	188.9	3 42	1				3 54	*SP
PEKING	16.00	171.5	3 50	2					
TIKSI	17.15	16.9	3 58	-5				9 4	
VLADIVOSTOK	17.58	128.8	4 9	1				7 24	
UGLEGORSK	18.79	99.1						9 48	
MAGADAN	20.25	64.0	4 40	0			4 50	8 36	
Y.-SAKHLINSK	20.32	103.5	4 41	0				8 32	SS
SEMIPALATNSK	20.35	268.2	4 39A	-2	8 23	-1			
LANCHOW	20.84	201.6	4 46K	0	8 35	1		4 56	*SP
SIAN	21.84	189.4	4 56K	0					
NANKING	24.15	168.2	5 19K	0					
MIZUSAWA	25.01	120.3	5 34	7				12 57	
ZO-SE	25.43	163.8	5 30K	-1					
MATUSIRO	25.75	128.2	5 31	-3	10 3	1			
CHENGTU	26.04	198.2	5 35	-2					
ABUYAMA	26.05	134.4	5 33	-4					
PETROPAVLOVK	26.24	77.1	5 39A	0				12 51	PCS
ALMATA	26.31	256.7	5 44	5	10 16	5			
TUKUBASAN	26.86	125.8	5 41K	-3					
FRUNSE	27.89	258.4	5 55K	1	10 40	3	6 2		
SVERDLOVSK	28.52	294.0	5 58K	-1	10 42	-5			
KHEYS	29.78	344.3	6 9A	-2				8 3	PPP
LHASA	30.58	220.1	6 19	1					
KUNMING	31.67	198.2	6 26K	-1					
TASHKENT	31.86	261.5	6 30	1	11 39	-1		9 32	PCP
KHOROG	33.31	254.1	6 44	2	12 3	1			
HONG KONG	33.56	178.3	6 42	-2					
SHILLONG	34.03	215.8	6 48K	0					
DUZHANBE	34.04	258.3	6 49	1					
CHATRA	34.57	223.6	6 52K	-1					
DEHRA DUN	35.55	238.8	8 1A	60					
WARSAK DAM	35.92	250.1	7 4K	0					
LAHORE	36.39	244.4	7 16	8					
APATITY	36.73	320.8	7 9A	-2	12 51	-4		15 13	SS

CHITTAGONG	37.03	214.0	7	14K	0	12	57	-3	7	23		
NEW DELHI	37.41	238.2	7	14A	-3						15	58
BOKARO	37.80	223.3	7	21	1	13	11	0				
KEVO	38.02	325.7	7	20	-2	13	9	-6			8	46 PPP
CALCUTTA	38.03	219.0									17	39
SODANKYLA	39.18	322.3	7	30	-2	13	40	8				
NORD	40.16	349.9	7	38	-2							
ASHKABAD	40.29	267.2	7	42	1							
KAJAANI	40.37	317.4	7	41	0						9	15 PP
MOSCOW	40.44	302.4	7	41A	-1	13	47	-4			9	18 PP
TROMSOE	40.59	327.5	7	43	0							
KIRUNA	41.04	324.7	7	44	-3	13	53	-7			9	29 PP
QUETTA	41.33	251.1	7	49	0	14	3	-2	7	58		
PULKOVO	41.56	310.8	7	51	0	14	3	-5			9	28 PP
MANILA	41.59	168.4	7	51	0	13	35	-33				
ALERT	41.84	359.1	7	53	0							
NURMIJARVI	43.50	314.1	8	6	-1	14	32	-4			9	51 PP
HELSINKI	43.57	313.5	8	6	-2							
MOULD BAY	43.95	15.9	8	8A	-3	14	38	-5				
COLLEGE	44.82	36.7	8	18	0							
TIFLIS	45.30	281.8	8	22	0	15	5	3	8	31	10	10 PP
TEHERAN	45.78	270.8	8	28	3	15	11	2				
GORIS	45.97	278.4	8	28A	1	15	17	5			11	17 PPP
SKALSTUGAN	46.25	322.5	8	27	-2							
UPPSALA	46.69	316.3	8	31A	-2	15	16	-6			19	33 SSS
POONA	47.57	234.5	8	39A	0							
BOMBAY	47.73	235.9	8	39	-2	15	36	-1			15	49 PS
RESOLUTE	48.37	9.6	8	44K	-2							
SIMFEROPOL	48.86	292.2	8	49	0	15	52	-1			10	43 PP
KONGSBERG	49.84	319.8	8	56	-1						10	49 PP
KARLSKRONA	49.95	313.6	8	54	-4							
KISHINEV	50.15	297.5	8	58	-1	16	12	1	9	6	10	56 PP
GOTEBORG	50.32	316.8	8	59	-2							
LWOW	50.57	303.0	9	2	-1	16	18	1	9	10	11	1 PP
BERGEN	50.84	322.4	9	6	1							
COPENHAGEN	51.56	314.7	9	19	9							
KRAKOW	52.32	305.6	9	15	-1	16	39	-2				
RACIBORZ	53.08	306.6	9	19	-3	16	53	2			12	26 PPP
ISTANBUL UN.	54.28	292.0	9	30K	0	16	40	-27				
COLLMBERG	54.49	310.6	9	30	-2	16	32	-38				
BUDAPEST	54.58	303.9	9	35	2	16	35	-36			13	1 PPP
PRAGUE	54.77	308.8	9	31	-3	17	17	3			24	59
PRUHONICE	54.79	308.6	9	33A	-1	17	16	2			20	58 SS
HALLE	54.79	311.4	9	34	0	17	14	0				
BRATISLAVA	54.96	305.6	9	34	-1						17	6 PS
VIENNA-H.	55.24	306.1	9	37	0	17	12	-8				
JENA	55.37	311.1	9	36	-2	17	20	-2	9	44	11	38 PP
CHEB	55.66	310.0	9	48	8						12	41
BELGRADE	55.83	300.8	9	47K	5	17	48	20			28	31 SCS
KASPERSKE H.	55.84	308.5	9	41A	-1						12	49
KSARA	55.87	281.2	9	37	-5	17	27	-2				
BENSBERG	57.18	313.7	9	50	-1				9	56		
DURHAM	57.53	321.4	9	28K	-26	17	47	-4				
LJUBLJANA	57.72	305.5	9	54A	-1						10	33
JERUSALEM	57.76	280.1	9	55	0							
STUTTGART	57.98	310.7	9	55	-2				10	3		
TRIESTE	58.37	305.6	9	59	-1	19	2	60				
STRASBOURG	58.76	311.5	10	1	-1	18	2	-5			10	36
DOURBES	58.89	314.5	10	3	0						17	51
ATHENS	59.29	293.2	10	11	5							
PADOVA	59.41	306.6									18	25
WELSCHBRUCH	59.49	312.2	10	3	-4							
KEW	59.71	318.4	10	7	-2	18	17	-2				
BESANCON	60.56	311.6	10	20	5							
PARIS	60.75	314.8	10	15	-1							
PAVIA	60.80	308.2									23	32
FLORENCE X.	60.95	305.8	10	32	15	19	5	30			22	52 SS
ROSELEND	61.51	310.1	10	20A	-1							
GARCHY	61.74	313.4	10	21	-2						11	11
ROME	61.84	303.7	10	29A	6	18	46	0			22	50 SS
FOLINIERE	61.95	316.6	10	22	-2							
TANGERANG	62.08	187.3	10	24	-1							
ISOLA	62.52	308.8	10	26	-2							
MESSINA	63.25	299.0									18	52
VICTORIA	65.74	37.5	10	58	9							
BANFF	65.93	31.2	10	49K	-1							
PENTICTON	66.31	34.7	10	51A	-2							
BAGNERES	66.36	312.6	11	2	9							

RABAUL	67.89	137.3	11 1	-2							
DARWIN	69.61	161.5	11 11	-2							
SCHEFFERVLLE	69.65	360.0	11 12	-2							
TOLEDO	70.76	313.5	11 27	7	20 33	-2			13 55	PP	
PORT MORESBY	70.93	144.3	11 20K	-1							
BLUE MTS.	71.00	35.5	11 21	-1	20 48	10					
BUTTE	71.43	31.8	11 24	0							
SERRA PILAR	71.49	317.4	11 23	-2			11 32		14 5	PP	
BOZEMAN	72.19	30.9	11 28	-1							
MALAGA	73.59	312.0	11 36A	-1	21 6	-1			14 32	PP	
CALISTOGA	74.61	42.2	11 42K	-1							
RENO	74.84	39.7	11 45A	1							
BERKELEY	75.41	42.3	11 47	-1							
LICK	76.11	42.1	11 51A	-1					12 17		
EUREKA	76.24	37.0	11 52	0							
SALT LAKE C.	76.41	33.5	11 53	0							
DUGWAY	76.63	34.5	11 54K	0							
PRIEST	77.53	42.0	12 0K	1							
LARAMIE	77.75	28.8	12 0	-1							
PRICE	77.80	33.3	12 1	0							
SHAWINIGAN	77.81	4.2	12 8	7							
BREBEUF	78.82	4.8	12 14K	7							
GOLDEN	79.30	29.3	12 9	0							
GLEN CANYON	79.96	34.9	13 16	63							
PASADENA	80.23	41.1	12 14	0					37 9		
CHARTERS TS.	80.72	148.6	12 16	-1							
MANHATTEN	81.95	22.9	12 22	-1			12 32				
LAWRENCE	82.46	22.0	12 25	-1							
PENNSYLVANIA	83.22	8.4	12 37K	7							
PALISADES	83.28	5.4	12 39	9	22 53	3					
ALBUQUERQUE	83.42	31.8	12 31	0							
ST. LOUIS 1	83.75	18.2	12 34	2							
BLOOMINGTON	83.82	15.2	12 38	5							
ROLLA	84.16	19.7	12 33K	-2			12 42				
MORGANTOWN	84.19	10.1	12 44K	9							
TUCSON TELE.	84.49	36.1	12 37	1							
TUCSON	84.53	36.2	12 37	1							
TULSA	85.28	23.2	12 40	0	23 7	-3					
FAYETTEVILLE	85.46	21.9	12 44	3					12 52	PCP	
WICHITA MTS.	85.77	25.7	12 42	-1					16 0	PP	
LITTLE ROCK	87.10	20.8	12 47	-2			12 56				
MUNDARING	87.55	177.4	12 50	-1							
BANGUI	88.95	276.2	12 57	-1					16 28	*PPP	
MAWSON	128.69	202.2	19 8A	-2			19 17				
AREQUIPA	140.48	7.0	19 33	1							
LA PAZ	140.67	1.9	19 34	2							
SOUTH POLE	145.71	180.0	19 40	-1							
ANTOFAGASTA	147.74	6.1	19 47	3							
BYRD STATION	150.83	163.5	19 53	4							

NOVEMBER 11 15.H 15.M 34.S EPICENTRE 17.12 40.52 DEPTH= 43.KM

A= 0.72688 B= 0.62135 C= 0.29252 D= 0.6498 E=-0.7601
G= 0.2224 H= 0.1901 K=-0.9563 HT= 5.3

DEPTH OF FOCUS= 0.002R

SE= 2.55

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
JERUSALEM	15.37	342.7	3 35	-1					
SHIRAZ	16.62	39.2	3 49A	-3				8 41	
KSARA	17.15	346.8	3 59K	1	7 7	1		4 19	
TEHERAN	20.91	25.4	4 41	-1	8 32	5			
LWIRO	22.45	212.1	4 58	1	8 26	-30			
GORIS	22.87	11.6	5 4A	3	9 8	5		5 32	PP
TIFLIS	24.79	7.6	5 21	1				7 16	PPP
BANGUI	24.93	242.0	5 19	-2	9 39	0			
ATHENS	25.48	327.9	5 28K	2	9 55	7			
ISTAMBUL UN.	25.83	339.7	5 32A	3	10 4	11			
ASHKABAD	26.00	33.5	5 31	0				6 11	PP
QUETTA	27.40	56.9	5 45A	1	10 26	7		6 29	PP
SIMFEROPOL	28.26	350.4	5 54	2	10 40	7		6 40	PP
MESSINA	30.33	318.8	6 20	10	11 12	6		12 45	SS
BOMBAY	30.74	81.7	6 13	-1	11 50	37		9 41	
POONA	31.73	82.3	6 22A	0	11 49	21		7 36	PP

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BELGRADE	32.36	332.8	6	40A	12				12	30
WARSAK DAM	32.48	52.9	6	29	0					
TIMISOARA	32.78	334.7	6	32	0	11	47	3		
BROKEN HILL	33.54	201.5	6	38	0					
LAHORE	33.83	58.6	6	40A	-1				7	55 PP
KHOROG	33.97	47.2	6	43	1					
ROME	34.44	321.6	6	44K	-2	12	16	6	7	51 PP
TASHKENT	34.53	39.7	6	47A	0				8	7 PP
BUDAPEST	35.07	334.4	6	52	1	12	24	4	7	57 PP
ZAGREB	35.17	329.7	6	54	2					
LWOW	35.24	341.4	6	50	-3	12	19	-3		
NEW DELHI	35.54	64.7	6	56A	1	12	36	9	8	16 PP
LJUBLJANA	36.05	328.7	6	59	-1				8	21 PP
TRIESTE	36.16	327.6	6	59	-2	12	44	7		
FLORENCE X.	36.31	323.3	7	38	36	13	46	67		
BRATISLAVA	36.42	333.4	7	4	1	12	45	4	7	27
TANANARIVE	36.47	168.8	7	6	3				8	39 PP
DEHRA DUN	36.61	62.0	7	5A	1	12	56	12		
VIENNA-H.	36.80	332.8	7	7	1	12	53	7	8	29 PP
KRAKOW	36.80	337.8	7	5	-1	12	52	5		
PADOVA	36.99	325.8							10	16
RACIBORZ	37.47	386.3	7	4	-8					
WARSAW	38.27	340.6				13	10	1		
PAVIA	38.34	323.6							8	38 PP
MADRAS	38.47	90.5	7	20A	0	13	20	8	8	52 PP
MONACO	38.53	320.6	7	20	0					
MOSCOW	38.60	357.4	7	21	0				8	48 PP
FRUNSE	38.68	41.3	7	22A	0					
KASPERSKE H.	38.69	331.6	7	20K	-2				8	56 PP
BULAWAYO	38.83	198.0	7	18	-5					
PRUHONICE	38.89	333.2	7	23K	0	13	14	-4	8	48 PP
PRAGUE	39.01	333.2	7	27	3	13	24	4	9	37
ISOLA	39.01	320.9	7	24	0					
CHUR	39.16	326.0	7	30	4				13	23
ROSELEND	40.09	322.6	7	31	-2					
EBINGEN	40.29	327.2	7	34	-1					
TUBINGEN	40.47	327.7	7	35	-1					
STUTTGART	40.51	328.1	7	38	1	13	46	3	16	54
COLLMBERG	40.53	333.5	7	35K	-2	13	55	12		
VISHAKHAPTNM	40.75	82.6	7	39A	0	13	59	13		
JENA	40.88	332.1	7	41	1	13	46	-2	7 51	9 14 PP
HALLE	41.13	333.0	7	41	-1	13	53	1		
STRASBOURG	41.17	326.9	7	47	5	13	53	1	9	31 PP
BESANCON	41.35	324.2	7	43	-1					
ALICANTE	41.57	309.0	7	43	-3				9	28 PP
BANDEIRA	41.63	221.7	7	45K	-1					
TORTOSA	41.73	312.8	7	49	2					
FELDBERG	41.87	329.3	7	36	-12					
CLERMONT-FD.	42.22	320.7	7	51	0				8	18
SVERDLOVSK	42.44	16.3	7	52K	-1	14	18	7		
ALMERIA	42.63	306.1	8	1	7	14	15	1	9	41 PP
BOKARO	42.80	73.3	7	58A	2	14	29	13	9	49 PP
BAGNERES	42.87	315.8	7	57	1				9	31 PP
BENSBERG	42.97	329.3	7	55	-2				8	23
GARCHY	43.02	322.6	7	56K	-1				8	39
PULKOVO	43.24	352.5	8	0A	1	14	25	2	9	43 PP
GRANADA	43.59	306.2	8	6A	4				10	0 PP
DOURBES	43.74	326.9	7	50	-13					
COPENHAGEN	44.03	337.4	8	8	2					
MALAGA	44.10	305.4	8	12A	6	14	42	7	9	59 PP
CHATRA	44.12	69.0	8	6A	0	14	33	-3		
PARIS	44.16	324.2	8	7	0					
WITTEVEEN	44.40	331.1	8	11	2					
HELSINKI	44.45	349.0	8	8	-1					
DE BILT	44.65	329.5				14	52	9		
TOLEDO	44.68	309.8	8	10K	-1	14	49	5	10	1 PP
NURMIJARVI	44.82	348.9	8	11	-1	14	48	2	18	20 SS
CALCUTTA	45.19	75.1	8	19	4	14	6	-45		
GOTEBORG	45.75	339.0	8	18K	-1					
UPPSALA	45.80	344.1	8	18	-2	14	56	-4	18	35 SS
FOLINIERE	45.83	322.8	8	18	-2					
SEMIPALATNSK	45.94	34.7	8	20	-1					
KEW	47.10	326.1	8	31	1	15	23	5		
LHASA	47.68	65.3	8	36A	1					
KAJAANI	47.73	352.4	8	34	-1					
KONGSBERG	48.03	339.5	8	37	0	15	37	6		
KIMBERLEY	48.07	198.7	8	37K	-1					
SHILLONG	48.31	70.8	8	39K	0					
SERRA PILAR	48.36	310.2							9	34

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CHITTAGONG	48.38	75.1	8	40A	0	15	44	8	8	48	10	31 PP
DURHAM	49.49	329.3	8	57	8	15	55	3				
SKALSTUGAN	50.32	344.0	8	53	-2							
APATITY	50.61	356.5	8	57	0	16	11	4				
SODANKYLA	51.03	353.1	8	58	-2							
KIRUNA	52.30	350.5	9	9K	-1	16	31	0			22	16
KEVO	53.29	354.2	9	16	-1	16	48	4				
TROMSOE	54.17	350.9	9	22	-2							
KUNMING	58.16	70.7	9	51	-1	17	57	8				
LANCHOW	58.70	57.9	9	56A	0	18	9	13				
IRKUTSK	60.64	39.2	10	8	-1							
PAOTOW	63.61	52.8	10	30	1	19	10	12				
KHEYS	64.01	3.2	10	31	-1							
SCORESBY SD.	64.91	340.8	10	38	0							
PEKING	68.32	53.2	10	59	0	20	8	12				
NORD	68.56	352.4	10	59	-2							
TANGERANG	69.27	103.6	11	5K	0							
LEMBANG	70.43	103.9	11	12	0						21	24
NANKING	71.35	61.3	11	18	0	20	46	15			11	25 *SP
ZO-SE	73.53	62.0	11	31	0	21	6	10			11	38 *SP
CHANGCHUN	74.65	48.4	11	37	0	21	20	12			11	44 *SP
YAKUTSK	74.68	29.3	11	35A	-2							
ALERT	74.82	352.4	11	38	0							
THULE	77.80	346.8	11	52	-3							
RESOLUTE	84.21	349.2	12	30	1							
MATUSIRO	85.96	53.1	12	37A	0	23	3	-3				
MOULD BAY	86.05	355.3	12	37K	-1							
MAWSON	86.06	171.6	12	38	0							
CHARTERS TS.	110.10	105.6									19	14
TULSA	112.99	322.5									29	4 PS
BLUE MTS.	115.11	342.8	18	39	2						19	44 PP
WICHITA MTS.	115.45	323.3									19	53 PP
AFIAMALU	148.73	88.7	19	58	19							

NOVEMBER 11 16.H 9.M 58.S EPICENTRE -12.88 166.41 DEPTH= 75.KM

A=-0.94786 B= 0.22914 C=-0.22149 D= 0.2350 E= 0.9720
G= 0.2153 H=-0.0520 K=-0.9752 HT= 6.1

DEPTH OF FOCUS= 0.007R

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
PORT VILA	5.16	159.3	1	16K	-1	2	8	-8				
HONIARA	7.21	297.8	1	42A	-3	2	50	-16				
KOUMAC	7.90	194.7	1	53K	-1							
NOUMEA	9.37	179.8	2	13A	-1	3	53	-6				
SUVA	12.71	115.8	3	7	8	5	30	10				
RABAUL	16.50	300.3	3	46	-2	6	53	5			7	18
PORT MORESBY	19.21	278.4	4	22K	1	7	57	9			7	24
BRISBANE	19.26	219.4	4	21	0	7	45	-4				
CHARTERS TS.	20.60	247.0	4	36K	1	8	26	10				
AFIAMALU	21.24	95.3	4	41A	-1	8	34	6			4	57 PP
ONERAHI	23.90	163.9	5	14	6							
RIVERVIEW	25.06	211.1	5	21K	2	9	40	5	5	35	5	53 PP
KARAPIRO	26.24	163.5	5	30	0							
TARATA	27.14	166.3	5	40K	2							
CANBERRA	27.33	212.2	5	40A	0	10	17	5			8	58 PCP
TONGARIRO	27.43	164.5	5	43	2							
CHATEAU	27.43	164.5	5	41	0							
TUAI	27.52	161.6	5	40	-2	10	19	4			12	39 SCP
COBB RIVER	28.63	170.0	5	53	1							
WELLINGTON	29.22	167.0	5	54A	-3	10	45	2			12	39 SCP
KAIMATA	29.85	172.5	6	2	0							
TOOLANGI	30.88	213.6	6	12	0	11	12	3			16	43 SCS
GEBBIES PASS	31.18	171.2	6	12	-2						9	9
ROXBURGH	32.58	176.2	6	25A	-1	11	38	3				
MOORLANDS	33.85	205.9	6	37	0							
TARRALEAH	34.05	206.9	6	39	0							
DARWIN	34.71	266.8	6	45	0						8	20
MACQUARIE I.	41.93	186.5	7	45A	0							
HONOLULU	48.67	46.1	8	45	7	15	50	16				
HAWAII V.OB.	49.55	50.3	9	6	21	16	34	48				
MUNDARING	49.67	238.9	8	46	0	15	51	3				
PERTH	49.98	239.0	8	49	0	15	58	6			10	49 PP

MANILA	52.57	299.9	9	13	5					10	33 PCP
TUKUBASAN	54.79	334.0	9	22	-2	16	58	0	9 44	11	39 PP
ABUYAMA	55.78	329.4	9	32A	0						
MATUSIRO	55.89	332.6	9	32A	0	17	20	8			
DUMONT	56.56	192.2	9	35	-2	17	22	1			
MIZUSAWA	56.86	336.6	9	42	3	17	28	3			
LEMBANG	58.13	269.9	9	49	1	17	49	7			
DJAKARTA	59.03	270.5	9	57	3	17	40	-14			
TANGERANG	59.23	270.4	9	57	1	17	40	-16			
CAPE HALLETT	59.44	178.6	9	56	-1						
ZO-SE	61.62	316.2	10	12	0					10	25 *SP
HONG KONG	62.00	304.0	10	14	-1						
Y.-SAKHLINSK	63.29	342.1	10	23K	0	18	51	3			
NANKING	63.83	315.7	10	28	1	18	59	5		10	40 *SP
VLADIVOSTOK	64.05	332.5				19	2	5			
WILKES	64.95	201.6	10	32A	-2	19	10	2		20	20 PS
PETROPAVLOVK	65.97	354.9	10	40A	-1						
CHANGCHUN	67.73	329.1	10	52A	0					11	4 *SP
PEKING	70.31	321.2	11	9A	2	20	14	2		11	21 *SP
MIRNY	71.67	203.8	11	15	-1	20	30	2			
SIAN	71.94	312.7	11	18A	1					11	29 *SP
KUNMING	72.63	301.6	11	24	3	20	47	8	11 34	11	37 *SP
CHENGTU	73.92	307.4	11	30A	1	20	58	5		11	40 *SP
PAOTOW	74.47	318.8	11	34A	2	21	2	3		11	47 *SP
BYRD STATION	74.65	170.0	11	31	-2						
LANCHOW	76.46	312.3	11	46A	3	21	29	8			
SOUTH POLE	77.20	180.0	11	47	0						
YAKUTSK	80.01	343.4	12	4	1	21	57	-2			
CHITTAGONG	81.02	295.4	12	10A	2	22	16	6	12 25	15	22 PP
SHILLONG	81.97	298.5	12	14A	1						
MAWSON	83.27	202.0	12	19A	-1						
UKIAH	83.36	47.5	12	20	0						
BERKELEY	83.59	49.0	12	21A	0	22	42	6		23	6 SCS
CALISTOGA	83.64	48.2	12	20A	-2					12	44
LICK	83.86	49.7	12	22A	-1					23	50
IRKUTSK	83.93	326.9	12	24K	1						
LHASA	83.95	302.1	12	26A	3	22	42	3			
CALCUTTA	84.12	294.6	12	27	3	22	35	-6			
PRIEST	84.17	51.1	12	24A	0					12	47
COLLEGE	84.83	17.9	12	25	-3						
PASADENA	85.42	53.6	12	30	0	23	19	25		23	3 SKS
RENO	85.98	48.1	12	34A	1					12	58
CHATRA	86.37	298.4	12	34A	-1	22	58	-5			
BOKARO	86.75	295.2	12	39A	2	23	13	6		22	31 SKS
VISHAKHAPTNM	87.45	288.7	12	43K	3	23	5	-8			
EUREKA	88.77	49.1	12	46	-1					31	14 PKKP
MADRAS	89.26	283.4	12	51	2	23	38	8		16	19 PP
BLUE MTS.	89.49	43.7	12	49	-1	23	28	-4	13 14	25	8 PPS
PENTICTON	89.50	39.0	12	50A	0						
TUCSON	90.77	57.2	12	56	0						
TUCSON TELE.	90.89	57.1	12	57	0						
DUGWAY	91.30	49.1	12	58A	-1						
GLEN CANYON	91.37	52.5	12	59	0						
SALT LAKE C.	92.16	48.8	13	2	0				13 26	30	20 PKKP
BANFF	92.58	38.1	13	3	-1						
PRICE	92.64	50.1	12	58	-7						
HUNGRY HORSE	92.70	41.1	13	4	-1				13 29	30	19 PKKP
BUTTE	93.03	43.6	13	5	-1				13 30	30	18 PKKP
ARGENTINE I.	93.40	161.0	13	8	0						
BOZEMAN	93.96	44.2	13	11	0				13 35	30	15 PKKP
FLAMING GRGE	94.01	49.1								36	13 PKKP
ALBUQUERQUE	94.95	55.4	13	12	-3					30	8 PKKP
DEHRA DUN	95.00	299.8	13	16K	1	24	51	31			
NEW DELHI	95.37	298.0	13	18A	1	24	23	38		25	49 PS
POONA	96.39	287.5	13	23A	1	24	36	46		23	49
GOLDEN	96.75	50.9	13	23	0					20	2
LARAMIE	96.90	49.3	13	24	0						
SEMIPALATNSK	97.38	319.9	13	25K	-1						
BOMBAY	97.42	287.7	13	26	0	24	44	48		23	56
LAHORE	98.37	300.4	13	31	0	24	4	3	13 45	24	51 S
MOULD BAY	98.72	13.5	13	32	0						
FRUNSE	99.93	311.7	13	38K	0						
WARSAK DAM	101.06	302.5	13	44	1						
WICHITA MTS.	101.28	56.8	14	7	23					18	16 PP
TULSA	103.70	55.9								18	40 PP
TASHKENT	103.70	309.7	13	56	1	24	33	7			
DUZHANBE	103.84	306.9				24	35	8			
QUETTA	104.45	298.1	14	0	2	24	39	9	14 12	18	16 PP

RESOLUTE	104.64	15.8	18	12	253					
FAYETTEVILLE	105.01	55.8							30	1 PPS
ROLLA	106.97	54.1	18	46	777					
SVERDLOVSK	109.32	325.9				24	57	6		
SHIRAZ	116.92	296.8	18	38	2				27	26
APATITY	117.38	341.6	18	38K	1	25	27	5	26	33
TEHERAN	117.67	303.7	18	40	2					
KEVO	117.73	345.2	18	38	0	25	28	5	29	28 PS
LA PAZ	118.70	117.0	18	42	2					
SODANKYLA	119.50	343.3	18	41K	0				28	52 PKKP
TROMSOE	119.70	347.5	18	42	1					
BREBEUF	120.00	44.7							36	50 SS
GRAHAMSTOWN	120.19	218.7	18	45	3					
KIRUNA	120.78	345.7	18	44K	0				28	49 PKKP
CHANGALANE	120.86	228.5	18	46A	2					
GORIS	121.23	308.5	18	46K	1	25	43	8		
KAJAANI	121.40	340.1	18	46	1				28	46 PKKP
MOSCOW	121.88	328.7	18	48A	2					
TIFLIS	121.97	311.3	18	49	3					
SCORESBY SD.	122.20	3.3	18	48	2					
PULKOVO	123.13	335.2	18	49	1	25	47	5		
VIBORG	123.16	336.7	18	39	-9					
KIMBERLEY	124.43	221.4	18	53	2					
NURMIJARVI	124.85	338.1	18	53	2	25	52	5	31	33
HELSINKI	124.96	337.6	18	53	1				31	33
SKALSTUGAN	126.20	346.0	18	55K	1					
BULAWAYO	127.08	232.3	18	46	-10					
UPPSALA	127.75	340.7	18	57	0					
SIMFEROPOL	128.45	317.9	19	0K	2				27	58 SKKS
SIDA	129.07	2.6	19	3A	3					
SAN JUAN	129.25	76.7	19	1	1			19	26	
KONGSBERG	130.23	344.8	19	3	1				22	24 PKS
BROKEN HILL	130.28	238.3	18	51	-11					
KSARA	130.56	303.6	19	3	1				21	28 PP
KISHINEV	130.85	322.4	19	4K	1					
GOTEBORG	131.24	342.1	19	5	1				22	27 PKS
JERUSALEM	131.53	301.1	19	7	3				22	30 PKS
WARSAW	131.94	332.0	19	6A	1				21	41 PP
TRINIDAD	133.19	87.4	19	9	2				22	32
ISTANBUL UN.	133.47	315.1	19	10K	2				22	35 PKS
UZHGOROD	133.62	327.5	19	10	2					
KRAKOW	133.90	330.4	19	10	1				21	43 PP
LWIRO	135.32	253.3	19	15	4					
TIMISOARA	135.95	324.9	19	12	0					
COLLMBERG	136.04	336.1	19	3K	-10				21	53 PP
BUDAPEST	136.05	328.2	19	14	1	26	14	0	21	55 PP
PRAGUE	136.39	334.0	19	14	1				21	59
PRUHONICE	136.41	333.8	19	6	-7				21	57 PP
BRATISLAVA	136.54	330.2	19	18	4				21	58 PP
VIENNA-H.	136.84	330.8	19	7	-7				22	10 PP
JENA	136.89	336.8	19	14	0			19	29	22 13 PP
BELGRADE	136.94	324.3	19	17K	3					22 24 PP
WITTEVEEN	136.99	342.1	19	19	5			19	55	
KASPERSKE H.	137.47	333.7	19	8	-7				22	13
DE BILT	138.06	342.7							21	19
BENSBERG	138.44	340.3	19	18	1				22	22 PP
ATHENS	138.48	313.7	19	16	-1				22	54
FELDBERG	138.63	338.6	19	17	0				22	24 PP
ZAGREB	138.72	328.5	19	38	20				22	22 PP
LJUBLJANA	139.29	329.8	19	10	-9				22	16 PP
STUTTGART	139.51	336.7	19	11	-8				22	29 PP
TUBINGEN	139.79	336.6	19	14	-5					
TRIESTE	139.95	330.0	19	21	1				22	31 PP
KEW	140.04	347.1	19	21	1					
EBINGEN	140.11	336.4	19	15	-5				22	32 PP
RAVENSBURG	140.18	335.5	19	16	-4					
STRASBOURG	140.24	337.8	19	16	-4			19	36	22 21 PP
CHUR	140.95	334.7	19	18	-4				22	38
PADOVA	141.03	331.2	19	32	10				24	32
BASLE	141.18	337.0	19	18	-4					
BANDEIRA	141.64	224.8	19	20K	-3				23	2 SKP
PARIS	141.78	342.8	19	22	-1				23	4 PP
BESANCON	142.01	338.2	19	20	-4				22	40
PAVIA	142.43	333.3	19	21	-3				22	46 PKS
FLORENCE X.	142.53	330.0	19	25	1	26	10	-15	22	30 PP
FOLINIERE	142.60	345.7	19	21	-4					
GARCHY	142.97	341.1	19	24	-1				22	49
ROSELEND	143.07	336.2	19	24	-1				20	2
ROME	143.25	326.7	19	24A	-2	26	10	-16	19	46 23 2 PKS

MESSINA	143.85	319.4	19	26A	-1	26	14	-13	19	47	22	2	PP		
ISOLA	144.14	334.3	19	28	1										
CLERMONT-FD.	144.29	339.8	19	29A	2										
MONACO	144.34	333.5	19	26	-2										
BANGUI	147.09	258.0	19	24	-8						23	13	PP		
BAGNERES	147.66	341.0	19	36	3						29	34			
TORTOSA	149.55	338.6	19	44	8										
SERRA PILAR	151.52	352.1	19	37A	-2						19	55	PKP2		
TOLEDO	151.82	344.3	19	41A	1	26	50	13	19	59	23	27	PP		
ALICANTE	152.08	337.6	19	50	10	27	1	23			20	10	PKP2		
COIMBRA	152.41	351.4	19	49A	9						20	1	PKP2		
LISBON	153.96	352.1	19	54	11										
ALMERIA	154.13	339.2	19	45K	2				20	20	23	55	PP		
GRANADA	154.20	341.4	19	54	11						24	0	PP		
MALAGA	154.87	342.4	19	55K	11						23	46	PP		

NOVEMBER 11 22.H 14.M 14.S EPICENTRE -43.06 -75.82 DEPTH= 0.KM
A= 0.17960 B=-0.71057 C=-0.68032 D=-0.9695 E=-0.2450
G=-0.1667 H= 0.6596 K=-0.7329 HT= -2.8

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	
CONCEPCION	6.86	26.2	1	39	-5	3	18	14					
SANTA LUCIA	10.43	24.6	2	32	-2	4	49	16					
BUENOS AIRES	15.91	63.7	3	49	2								
ANTOFAGASTA	19.82	14.7	4	34	-1								
ARGENTINE I.	23.16	167.6	5	9	0								
AREQUIPA	26.77	9.2	5	43	0								
LA PAZ	27.27	16.3	5	50	2	10	33	7					
HUANCAYO	30.90	0.9	6	22	2								
CHINCHINA	47.81	0.3	8	38	-3	15	42	4					
BALBOA HTS.	51.88	355.3	9	13	1								
CARACAS	53.92	10.8	9	30A	3	17	5	3					
TRINIDAD	55.05	17.4	9	37	1	17	24	7					
CAPE HALLETT	56.17	199.7	9	41	-3								
FORT FRANCE	59.06	16.6	10	6	2						12	16	
ST. CLAUDE	60.21	15.7	10	15	3	18	25	0					
ST. KITTS	61.29	14.3	10	18	-1								
SAN JUAN	61.78	10.5	10	20	-3								
MAWSON	65.33	163.8	10	43A	-3						39	12	PKPPKP
DUMONT	67.21	194.7	11	10	6						11	25	
MIRNY	70.38	175.3	11	13	-5						24	46	SS
HERMANUS	70.76	119.3				20	38	4					
WILKES	70.82	182.7	11	18	-2	20	33	-2			13	51	PP
ROXBURGH	74.54	221.5				21	20	3			26	4	SS
HOUSTON	74.63	342.4	11	46	3								
GRAHAMSTOWN	76.09	122.6	11	51	0								
KARAPIRO	76.63	230.4	11	53A	-1								
KIMBERLEY	78.04	118.1	12	2	0								
LITTLE ROCK	78.93	346.2	12	5	-2								
BANDEIRA	79.36	100.4	12	11K	2	22	10	0	12	20			
LUBBOCK	79.91	338.2	12	13	1								
WICHITA MTS.	80.16	341.1	12	12	-1	22	24	6			15	18	PP
FAYETTEVILLE	80.54	345.0	12	4	-11	22	26	4					
TULSA	80.68	343.7	12	15	-1	22	26	3			23	9	
TUCSON	81.53	330.6	12	21	0								
TUCSON TELE.	81.57	330.7	12	20	-1						13	3	
ROLLA	81.90	347.2	12	19	-4	22	28	-8					
ST. LOUIS 1	82.37	348.7	12	24	-1								
MORGANTOWN	82.39	356.8	12	26	1								
BLOOMINGTON	82.44	351.6	12	23	-2	22	40	-2					
ALBUQUERQUE	82.53	335.0	12	25	-1								
FLORISSANT	82.54	348.6	12	24	-2								
PENNSYLVANIA	83.50	358.4	12	30K	-1								
LAWRENCE	83.53	344.9	12	31	0								
FORDHAM	83.55	1.5	12	32	1	22	58	5					
PALISADES	83.71	1.5	12	33K	1	22	55	1					
MANHATTEN	84.02	343.9	12	33	0								
AFIAMALU	84.92	255.8	12	33	-5	22	16	-50			24	3	PS
LONDON ONT.	85.85	356.1	12	42A	-1								
PASADENA	86.04	325.9	12	46	2	23	27	10			23	15	SKS
GLEN CANYON	86.05	332.0	12	42	-2								
DUBUQUE	86.23	349.0	12	46	1	23	3	-16					

BULAWAYO	86.49	114.3	12	47	1							
MOORLANDS	86.52	210.4	12	44	-2							
GOLDEN	86.62	337.6	12	45	-1				13	15		
HALIFAX	87.98	8.7	12	54	1							
LARAMIE	88.17	338.0	12	54	0							
PRICE	88.18	333.7	12	54	0							
BREBEUF	88.20	1.5	12	54K	0	23	41	3			16	26 PP
PRIEST	88.79	325.2	12	58K	1							
SHAWINIGAN	89.27	2.1	13	1A	2							
DUGWAY	89.37	332.6	12	59A	-1							
SALT LAKE C.	89.56	333.5	13	8	7							
EUREKA	89.84	330.1	13	2	0						30	32 PKKP
LICK	90.22	325.1	13	7A	3							
BROKEN HILL	90.37	110.1	13	6K	2							
BERKELEY	90.93	325.0	13	10A	3	24	13	10			25	21 PS
RENO	91.35	327.5	13	11A	2							
TOOLANGI	91.40	211.6	13	6	-3						13	55
CALISTOGA	91.71	325.2	13	12A	2							
CANBERRA	91.93	215.2	13	9	-2							
RIVERVIEW	92.26	217.5	13	10	-3	24	18	4			13	40
UKIAH	92.39	325.0	13	15	1							
BOZEMAN	93.74	336.1	12	34	-46							
BUTTE	94.52	335.3	12	43	-40						13	3
BLUE MTS.	95.03	331.8	13	27	1	24	7	6			17	23 PP
BANGUI	96.21	89.8	13	33	2	24	8	1				
HUNGRY HORSE	97.05	335.4	13	18	-17						14	18
HONOLULU	98.85	290.7									26	2
LWIRO	99.11	101.7	13	47	3							
TANANARIVE	99.34	126.8	13	51	6							
MALAGA	102.55	51.3	14	2	2						18	22 PP
GRANADA	103.33	51.4	14	39K	36						18	33 PP
MUNDARING	104.52	190.5	14	7	-1						19	27 PP
TOLEDO	104.95	49.2				24	54	4			18	35 PP
BAGNERES	109.43	48.9									19	6 PP
JERSEY	112.24	42.9	18	34	-3							
CLERMONT-FD.	112.79	48.2									19	29 PP
GARCHY	113.71	46.9	18	44	4						19	33 PP
PARIS	114.35	45.3									19	38 PP
KEW	114.58	41.8									19	45 PP
ROSELEND	114.69	49.9	18	45	3						19	42 PP
PORT MORESBY	114.76	227.8									19	38 PP
MESSINA	115.64	60.9									19	48 PP
PAVIA	115.83	51.5									19	52 PP
ROME	115.87	56.0	18	50	5						19	51 PP
DURHAM	116.05	38.4									20	7 PP
FLORENCE X.	116.22	53.7	18	49	4						19	50 PP
STRASBOURG	117.02	47.8	18	56	9						19	58 PP
DE BILT	117.69	43.5	19	4	16						20	5 PP
STUTTGART	117.95	48.3	18	50	1						20	2 PP
BENSBERG	118.06	45.3									20	4 PP
RESOLUTE	118.14	354.3	18	50	1							
TRIESTE	118.75	53.1				26	23	37			20	16 PP
MUNSTER	118.86	44.6	18	53	3							
LJUBLJANA	119.42	53.1	18	54	3						20	15 PP
SCORESBY SD.	119.70	18.2	18	54	2							
JENA	120.38	47.1	18	54	1						20	22 PP
KASPERSKE H.	120.52	49.7	18	54	0						20	22
ATHENS	120.85	65.2									20	25 PP
HALLE	120.88	46.7	18	56	2						20	27 PP
COLLEGE	121.23	331.6	18	52	-3							
COLLMBERG	121.33	47.3	18	55K	0						22	21 PKS
PRAGUE	121.48	49.1	18	52	-4						20	29 PP
PRUHONICE	121.50	49.2	18	58	2						20	31 PP
VIENNA-H.	121.65	51.7	18	56	0							
BRATISLAVA	122.03	52.1	18	57	0							
MOULD BAY	122.22	348.8	18	54	-3							
BELGRADE	122.33	56.9	19	1K	4						30	53 PS
BUDAPEST	122.81	53.5	19	1	3						30	49
KONGSBERG	123.82	37.5	19	1	1						20	47
GOTEBORG	123.97	40.3	19	0	u							
KRAKOW	124.57	51.2	19	5	4						23	41 PPP
ALERT	125.48	2.2	19	3	u							
JERUSALEM	125.49	77.5									19	4 PP
ISTANBUL UN.	125.92	64.6	19	6A	2						20	54 PP
WARSAW	126.16	49.2	19	6	1						21	17 PP
SKALSTUGAN	126.69	33.9	19	6A	0							
LWOW	126.83	52.9	19	8	2							
KSARA	127.05	75.7	19	8	2	26	19	7			21	7 PP
UPPSALA	127.55	39.5	19	7	0						22	23 SKP

NORD	128.15	9.2	19 8	0					
TANGERANG	130.95	183.2	19 16K	2				21 35	
SIMFEROPOL	131.03	62.2	19 16	2				21 28	PP
NURMIJARVI	131.08	40.2	19 14	0				22 36	PKS
HELSINKI	131.13	40.7	19 14	0					
TROMSOE	131.18	27.6	19 15	1					
KIRUNA	131.28	30.1	19 14A	0			19 38	21 35	PP
SODANKYLA	133.51	31.4	19 18	-1				22 49	PKS
PULKOVO	133.62	42.2	19 18	-1					
KEVO	133.98	28.1	19 20	1				21 51	PP
APATITY	136.13	31.6	19 16	-7				22 0	PP
MOSCOW	136.55	49.0	19 25	1	26 17	-16		22 5	PP
TIFLIS	136.93	70.6	19 28	3				22 21	PP
SHIRAZ	136.93	90.6	19 27	2				22 14	PP
GORIS	137.12	74.3	19 26	1				23 3	PKS
KHEYS	138.98	10.4	19 31	2				22 22	PP
TEHERAN	139.13	82.0						22 26	PP
MADRAS	143.58	138.1	19 37	0				23 41	
BOMBAY	144.25	122.5	19 37	-1				23 14	
POONA	144.60	124.2	19 37A	-1				24 22	
ASHKABAD	145.12	82.6	19 40	1					
HYDERABAD	146.39	131.5	19 46	5					
QUETTA	147.73	101.1	19 45A	1	26 52	1		23 25	PP
MANILA	148.20	212.3	19 50	6					
VISHAKHAPTNM	149.15	138.5	19 53A	7				23 21	
SVERDLOVSK	149.35	48.0	19 45	-1					
TUKUBASAN	151.67	268.3	19 49K	-1				20 35	PP
WARSAK DAM	153.05	98.6	19 55A	3					
MATUSIRO	153.19	267.5	19 52	0				23 36	PP
LAHORE	153.76	106.0	19 53	0			20 3	23 47	PP
NEW DELHI	153.92	114.8	19 54K	1				23 49	PP
TASHKENT	154.19	81.8	19 55	2				23 53	PP
BOKARO	155.54	135.8	19 57	2					
DEHRA DUN	155.60	112.8						21 8	
CHITTAGONG	156.93	149.6	20 0	3			20 11		
FRUNSE	158.40	80.4	20 0	1					
CHATRA	158.69	134.0	20 1A	2				20 51	
VLADIVOSTOK	159.79	279.7	19 59	-1				24 19	PP
SHILLONG	159.84	146.0	19 59	-2					
ZO-SE	161.97	234.1	20 4K	1			20 21	20 50	PKP2
KUNMING	162.06	175.7	20 4K	1			20 21	24 33	PP
LHASA	162.96	137.5	20 9	5					
NANKING	164.07	231.2	20 5	0				24 41	PP
CHANGCHUN	164.64	280.1	20 4	-1				24 46	PP
CHENGTU	167.62	179.3	20 9K	1			20 27	25 0	PP
SIAN	170.46	204.4	20 12K	3			20 29	21 26	PKP2
PEKING	170.52	255.4	20 10K	1			20 29	25 17	PP
IRKUTSK	170.79	359.5	19 59	-11				25 20	PP
LANCHOW	172.99	177.6	20 12K	1				25 27	PP
PAOTOW	174.98	242.4	20 12K	1			20 29	25 39	PP

NOVEMBER 12 12.H 49.M 13.S EPICENTRE 26.36 128.47 DEPTH= 51.KM

A=-0.55819 B= 0.70241 C= 0.44165 D= 0.7829 E= 0.6222
G=-0.2748 H= 0.3458 K=-0.8972 HT= 3.0

DEPTH OF FOCUS= 0.003R

SE= 2.51

	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	
TAIPEI	6.41	259.6	1	39	4	3	6	19					
HWALIEN	6.65	250.5									2	32	
TAICHUNG	7.39	254.3	1	49	1	3	19	7					
TAITUNG	7.57	243.2	1	12	-39								
ZO-SE	7.95	308.1	1	55	-1	3	40	14					
TAWU	7.98	241.6									3	13	
NANKING	10.19	306.1	2	25	-2	4	31	10					
ABUYAMA	10.45	34.1	2	25K	-5								
MATUSIRO	13.11	36.9	3	14	8	5	40	9					
MANILA	13.53	212.2	3	17	5	5	57	16					
HONG KONG	13.65	255.8	3	10	-3	6	43	59					
VLADIVOSTOK	16.95	8.6	3	56	1								
PEKING	17.06	326.1	3	57A	0	7	20	17			4	13	*SP
CHANGCHUN	17.62	352.4	4	2	-2	7	27	11					
SIAN	18.60	299.7	4	14A	-2	7	55	17					

PAOTOW	20.86	317.4	4	39A	-1						
CHENGTU	21.91	287.0	4	47	-4	8	51	6			
LANCHOW	23.13	300.7	5	2A	-1	9	20	13			
KUNMING	23.20	272.6	5	3A	-1	9	23	15			
Y.-SAKHLINSK	23.50	25.0	5	7	1	9	22	9			
UGLEGORSK	25.02	21.4	5	23K	2						
IRKUTSK	31.63	331.3								7	33 PP
SHILLONG	32.85	276.9	6	31A	0						
LHASA	33.12	284.4	6	23	-11						
CHITTAGONG	33.56	271.2	6	37A	-1	11	57	2	6 45	7	53 PP
PETROPAVLOVK	34.86	32.1	6	49	0						
YAKUTSK	35.66	1.0	6	54	-2	12	29	1			
CALCUTTA	36.61	272.8	7	9	5	12	58	16			
CHATRA	36.82	280.2	6	52A	-13						
RABAUL	38.07	139.5	7	12	-4						
DARWIN	38.58	176.3	7	26	6						
BOKARO	38.60	275.8	7	20	0	13	26	13			
TANGERANG	38.66	216.3	7	19	-1						
LEMBANG	38.71	214.4	7	26	6					14	18
PORT MORESBY	39.91	150.5	7	27K	-4	13	25	-7			
VISHAKHAPTNM	42.57	267.9	7	54K	1	14	30	18			
DEHRA DUN	44.27	287.3	8	7	0	14	51	15			
NEW DELHI	45.26	285.0	8	43A	28	15	1	10		15	2 PS
FRUNSE	46.49	305.0	8	24A	0					15	22 PS
MADRAS	47.12	263.3	8	30	1	15	34	17		10	21 PP
LAHORE	47.26	289.6	8	30A	0	15	20	1			
WARSAK DAM	49.26	293.3	8	47A	1						
CHARTERS TS.	49.30	157.7	8	43K	-3						
TASHKENT	50.46	303.0	8	54A	-1					16	18 PS
POONA	50.78	273.0	8	56A	-2	16	18	10			
DUZHANBE	51.02	299.5	8	59A	0	16	19	8			
BOMBAY	51.58	273.9	9	2	-2	16	36	17			
QUETTA	53.75	289.3	9	19A	-1	16	51	2			
SVERDLOVSK	56.29	322.3	9	37K	-1						
MUNDARING	59.17	192.1	10	3	5						
ASHKABAD	59.23	300.1	9	58	-1					18	22 PS
KHEYS	60.99	349.8	10	9A	-2						
COLLEGE	63.81	28.2	10	28	-2						
CANBERRA	64.35	161.5	10	30	-3						
TOOLANGI	65.57	165.2	10	39A	-2					11	1
SHIRAZ	65.99	292.4	10	44A	0						
APATITY	67.82	335.6	10	55A	0	19	54	6			
GORIS	68.00	304.2	10	56A	0	19	59	9			
TIFLIS	68.48	306.9	10	59	0						
MOSCOW	69.10	322.7	11	3	0						
KEVO	69.39	338.6	11	5	0	20	14	7			
MOULD BAY	69.66	13.7	11	5A	-2	20	15	5			
SODANKYLA	70.37	336.3	11	10A	-1						
NORD	70.82	354.9	11	13	-1						
KAJAANI	71.15	332.9	11	16	0						
ALERT	71.23	1.5	11	16A	0						
PULKOVO	71.55	328.1	11	17	-1	20	37	5			
TROMSOE	72.03	339.7	11	20	-1						
KIRUNA	72.35	337.7	11	22A	-1						
NURMIJARVI	73.87	330.0	11	31A	-1						
HELSINKI	73.87	329.6	11	31	-1						
SIMFEROPOL	74.78	312.8	11	37A	0						
RESOLUTE	75.38	10.9	11	40	0						
THULE	76.93	4.0	11	47	-2						
UPPSALA	77.29	331.1	11	51A	0						
SKALSTUGAN	77.42	335.7	11	51A	-1						
KSARA	77.83	301.7	11	55	1						
LWOW	78.96	320.3	12	1	1						
JERUSALEM	79.16	300.0	12	3	2						
TUAI	79.20	143.3	11	59	-3						
ISTANBUL UN.	79.80	310.7	12	5	0						
KONGSBERG	80.75	333.2	12	10	0						
GOTEBORG	80.93	330.9	12	10A	-1						
KRAKOW	81.16	321.8	12	13	1	22	35	18			
SCORESBY SD.	81.16	350.3	12	13	1						
VICTORIA	81.69	39.7	12	15	0						
COPENHAGEN	81.89	329.1	12	17	1						
RACIBORZ	82.10	322.4	12	17	0					12	27 PCP
BUDAPEST	83.00	319.9	12	32	10	21	39	-58		14	34 PP
PENTICTON	83.40	37.7	12	25	1						
BELGRADE	83.53	317.1	12	26A	2					12	36 PCP
BRATISLAVA	83.73	321.2	12	26	1						
VIENNA-H.	84.10	321.5	12	29	2					12	39 PCP
PRUHONICE	84.12	323.6	12	28A	1	23	1	14		32	59

PRAGUE	84.14	323.7	12 26	-1							
COLLMBERG	84.17	325.3	12 28A	0	22 55	8					
BANFF	84.51	34.6	12 29	0							
HALLE	84.59	325.8	12 30	0				12 40			
ATHENS	84.84	309.9	12 29K	-2							
JENA	85.12	325.5	12 32	0	23 17	21		12 42		29 23	55
KASPERSKE H.	85.13	323.3	12 33A	1						15 30	
WITTEVEEN	86.33	328.9	12 43K	5							
LJUBLJANA	86.37	320.4	12 37	-1							
MUNSTER	86.43	327.9	12 37	-2							
TRIESTE	87.04	320.4	12 50	8							
BLUE MTS.	87.21	40.5	12 43	1	23 27	11				36 15	
BENSBERG	87.29	327.3	12 46	3							
CALISTOGA	87.33	47.9	12 44K	1							
STUTTGART	87.61	324.7	12 47	3				12 55		15 20	PP
BERKELEY	87.95	48.4	12 47A	1							
LICK	88.65	48.6	12 49K	0							
DOURBES	89.09	327.7	12 51	0							
BUTTE	89.19	37.6	12 52	0							
FLORENCE X.	89.59	319.9	12 28	-26	23 1	-38		12 56			
PRIEST	89.96	49.1	13 5K	9							
ROME	89.98	317.9								39 27	
BOZEMAN	90.24	37.2	12 58	1							
EUREKA	91.14	44.3	13 2	1							
DUGWAY	92.65	42.3	13 8A	0							
PASADENA	92.76	49.7	13 8	-1							
SALT LAKE C.	92.87	41.4	13 22	13							
PRICE	94.22	41.8	13 18K	3							
TOLEDO	100.64	324.8	13 44	0	24 46	28				17 50	PP
WICHITA MTS.	104.66	38.6								18 17	PP

NOVEMBER 13 8.H 54.M 43.5 EPICENTRE 42.31 142.11 DEPTH= 80.KM

A=-0.58535 B= 0.45554 C= 0.67071 D= 0.6142 E= 0.7892
G=-0.5293 H= 0.4119 K=-0.7417 HT= -2.5

DEPTH OF FOCUS= 0.007R

SE= 4.35

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
TOMAKOMAI	0.50	309.1	0	15	0	0	29	2				
URAKAWA	0.52	108.0	0	10A	-6	0	22	-5				
MURORAN	0.84	270.8	0	15K	-3	0	29	-3				
HIROO	0.90	91.8	0	16A	-3	0	31	-2				
SAPPORO	0.94	323.7	0	20K	1	0	37	4				
OBIHIRO	1.01	52.7	0	21	1	0	39	5				
HAKODATE	1.12	243.8	0	16K	-5	0	31	-6				
MORI	1.16	259.9	0	20	-2	0	37	-1				
SUTTSU	1.47	289.9	0	25	-1							
ASAHIGAWA	1.48	7.4	0	29A	3	0	53	8				
RUMOE	1.67	347.8	0	31	3	0	58	9				
AOMORI	1.79	214.2	0	24K	-6	0	41	-11				
KUSIRO	1.82	67.7	0	28K	-2	0	51	-2				
HATINOHE	1.83	193.9	0	21A	-9	0	39	-14				
ABASHIRI	2.33	42.2	0	38	1	1	8	3				
MIYAKO	2.66	182.3	0	32	-10	0	57	-16				
MORIOKA	2.71	195.5	0	34	-8	1	1	-13				
NEMURO	2.75	67.1	0	41	-2	1	13	-2				
AKITA	3.00	211.1	0	50	4	1	5	-17				
WAKKANAI	3.12	354.4	0	52	4	1	30	6				
MIZUSAWA	3.27	193.5	0	45A	-5	1	18	-10				
SAKATA	3.83	207.7	0	53	-5	1	34	-8				
ISINOMAKI	3.93	189.1	0	49K	-10	1	28	-16				
SENDAI	4.14	193.3	0	53	-9	1	36	-14				
YAMAGATA	4.28	198.9	0	57	-7	1	43	-10				
Y.-SAKHLINSK	4.73	5.1	1	14A	4							
HUKUSIMA	4.73	196.0	1	3	-7	1	54	-10				
NIIGATA	4.98	209.1				2	5	-6				
AIKAWA	5.21	215.8	1	12	-5							
SHIRAKAWA	5.39	196.3	1	11	-8	2	17	-4				
ONAHAMA	5.44	190.3				2	2	-20			1	48
TAKADA	6.00	211.0	1	30	2							
UTUNOMIYA	6.01	197.5	1	19	-9	2	23	-13				
MITO	6.06	192.6	1	19	-10	2	23	-14				
KAKIOKA	6.26	194.5	1	32	1							

TUKUBASAN	6.28	195.0	1 20A	-12				
MAEBASI	6.36	202.7	1 28	-5	2 43	-2		
NAGANO	6.39	209.5	1 30	-3				
MATUSIRO	6.51	208.9	1 27	-8	2 37	-11		
KUMAGAYA	6.51	199.9	1 28	-7	2 36	-12		
OIWAKE	6.58	205.9	1 34	-2				
TITIBU	6.75	201.4						2 7
MATUMOTO	6.85	209.3	1 38	-2				
TOKYO C.M.O.	6.87	196.3						2 30
YOKOHAMA	7.14	196.4						2 55
KOHU	7.19	203.8	1 43	-1				
HUNATU	7.28	202.0						2 59
IIDA	7.56	207.6	1 45	-4				
MERA	7.59	194.3						2 58
MISIMA	7.59	200.0	1 56	6				
AJIRO	7.62	198.9	1 41	-9	3 0	-16		
GIHU	8.06	212.8						2 33
NAGOYA	8.18	211.0	1 52	-6				3 48
HAMAMATU	8.32	205.8						3 45
KAMEYAMA	8.66	212.5	2 16	12				
ABUYAMA	9.02	216.7	2 3A	-6				
SHILLONG	44.24	264.3	8 1K	-2				
COLLEGE	44.40	35.0	8 4	0				
CHITTAGONG	46.18	260.7	8 17	-1				
ALMATA-2	46.43	294.2	8 22	2				
CHATRA	47.01	269.1	8 29A	4				
MOULD BAY	51.34	17.7	8 57	-1				
SVERDLOVSK	51.63	316.1	9 0K	0				
PORT MORESBY	51.67	173.7	9 12	12				
NEW DELHI	53.43	277.4	9 10A	-4				
LAHORE	53.93	282.1	9 15	-2				
WARSAK DAM	54.66	286.2	9 21	-2				
ALERT	54.83	3.8	9 25	1				
NORD	55.82	356.3	9 29	-2				
RESOLUTE	57.37	15.4	9 41K	-1				
APATITY	58.13	334.6	9 47K	0				
KEVO	58.72	338.4	9 50	-1				
QUETTA	60.00	284.9	9 58	-2				
SODANKYLA	60.33	336.3	10 2A	0				10 22
TROMSOE	60.91	340.4	10 6	0				
KIRUNA	61.79	338.5	10 12	0				
POONA	61.80	269.9	10 9A	-3				
VANNOVSKAYA	61.84	296.9	10 12	-1				
KAJAANI	62.11	333.1	10 15	1				
CHARTERS TS.	62.21	175.6	10 11	-4				
MOSCOW	63.37	322.2	10 23	0				
VIRORG	63.91	329.8	10 25	-1				
PENTICTON	64.06	46.1	10 27	0				
NURMIJARVI	65.56	331.2	10 36A	-1				10 59
HELSINKI	65.69	330.8	10 37	-1				11 0
SKALSTUGAN	67.21	338.1	10 47	0				
BLUE MTS.	68.01	48.9	10 52	0			11 12	
TIFLIS	68.04	306.8	10 52	-1				
UPPSALA	68.47	333.4	10 54	-1				
KONGSBERG	71.13	336.7	11 12	1				
FUREKA	72.17	52.7	11 18	0				
WOODY	72.85	57.3	11 21	-1			11 40	
DUGWAY	73.54	50.5	11 26A	0				
FLAMING GRGE	74.97	48.1	11 35	1				
KRAKOW	75.04	325.6	11 35	1				11 55 PCP
UZHGOROD	75.09	323.4	11 35	U				
LARAMIE	76.77	45.7	11 46	2				
COLLMBERG	76.80	330.0	11 44A	0				14 36 PP
PRUHONICE	77.27	328.4	11 47A	0				12 8
JENA	77.63	330.5	11 48	-1				12 8
KSARA	78.52	305.3	11 54	U				
TOOLANGI	79.56	177.3	12 0	1				12 25 *SP
STUTTGART	80.25	330.5	12 3	0				12 45
LJUBLJANA	80.43	326.0	12 3	-1				12 23
ALBUQUERQUE	80.80	50.8	12 7	1				
FOLINIERE	83.50	336.1	12 20	0				
ROSELEND	83.82	330.4	12 22	0				
WICHITA MTS.	85.34	46.1	12 29	0			12 49	13 33
KARAPIRO	85.47	154.1	12 49	19				
TULSA	85.89	43.6	12 33	1			12 54	
BREBEUF	86.94	24.3	12 37	U				

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NOVEMBER 14 7.H 48.M 9.5 EPICENTRE 36.30 141.01 DEPTH= 72.KM

A=-0.62791 B= 0.50825 C= 0.58942 D= 0.6292 E= 0.7773
G=-0.4581 H= 0.3708 K=-0.8078 HT= -0.3

DEPTH OF FOCUS= 0.006R

SE= 4.11

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
MITO	0.45	280.5	0	10	-5	0	20	-5				
TYOSI	0.59	192.9	0	2K	-14	0	7	-21				
ONAHAMA	0.66	352.1	0	16A	-1	0	32	3				
KAKIOKA	0.68	264.3	0	9K	-8	0	20	-9				
TUKUBASAN	0.74	264.1	0	10	-7	0	21	-9				
UTUNOMIYA	0.95	285.5	0	15	-4	0	29	-5				
SHIRAKAWA	1.04	322.4	0	21A	1	0	41	6				
HONGO	1.17	240.1	0	14A	-8	0	30	-8				
TOKYO C.M.O.	1.20	239.2	0	14K	-8	0	31	-8				
KUMAGAYA	1.33	264.0	0	18K	-6	0	40	-2				
YOKOHAMA	1.41	232.3	0	17K	-8	0	34	-10				
HUKUSIMA	1.51	343.5	0	28K	2	0	56	10				
MAEBASI	1.57	274.2	0	23K	-4	0	46	-1				
TITIBU	1.60	259.0	0	21	-7	0	50	2				
MERA	1.68	215.3	0	18A	-11	0	36	-14				
SENDAI	1.97	357.4	0	34K	2	1	4	8				
HUNATU	1.99	247.0	0	26	-7	0	54	-3				
OIWAKE	1.99	271.6	0	30	-3	0	55	-2				
AJIRO	1.99	231.9	0	23K	-10	0	46	-11				
YAMAGATA	2.02	345.0	0	35K	2	1	9	11				
OSIMA	2.03	221.6	0	22A	-11	0	44	-14				
MISIMA	2.05	235.6	0	25A	-9	0	46	-12				
KOHU	2.09	253.2	0	28A	-6	1	2	3				
ISINOMAKI	2.14	6.5	0	35K	0	1	8	7				
NIIGATA	2.25	316.5	0	39K	3	1	14	11				
MATUSIRO	2.27	276.9	0	33K	-4	1	3	-1				
NAGANO	2.30	280.1	0	35	-2	0	56	-8				
TAKADA	2.36	290.6	0	38A	0	1	10	4				
MATUMOTO	2.46	269.7	0	37	-2	1	10	1				
SHIZUOKA	2.51	238.8	0	32A	-8	1	0	-10				
IIDA	2.70	254.2	0	37A	-6	1	12	-2				
SAKATA	2.76	340.5	0	47	3	1	25	9				
AIKAWA	2.80	308.7	0	43	-1	1	24	7				
MIZUSAWA	2.83	1.9	0	47	3	1	18	0				
OMAESAKI	2.84	234.2	0	36	-9							
TAKAYAMA	3.05	268.3	0	45	-3	1	15	-8				
TOYAMA	3.10	278.5	0	46	-2	1	41	17				
HAMAMATU	3.11	240.6	0	40	-8	1	20	-5				
HATIDYOZIMA	3.35	197.9	0	38	-14	1	10	-21				
MORIOKA	3.40	2.1	0	52K	0	1	34	2				
MIYAKO	3.43	12.5	0	52K	-1	1	36	3				
WAZIMA	3.47	289.3	0	53	0							
NAGOYA	3.48	252.3	0	48	-5	1	29	-5				
AKITA	3.49	348.4	0	57	3	1	46	12				
KANAZAWA	3.53	275.0	0	53	-1	1	46	11				
GIHU	3.56	256.6	0	50	-5	1	46	10				
HUKUI	3.88	267.7	1	2	3	1	49	5				
KAMEYAMA	3.98	250.0	0	56	-4	1	44	-2				
TU	4.00	247.8	1	5	4	1	52	5				
HIKONE	4.01	256.5	0	56	-5	1	57	10				
TSURUGA	4.06	262.3	0	56	-6							
HATINOHE	4.24	5.3	1	11	7	2	4	11				
KYOTO	4.49	255.0	1	7	-1	1	56	-3				
AOMORI	4.52	357.8	1	9K	1	2	15	15				
OWASE	4.53	242.0	0	59	-9	2	16	16				
NARA	4.53	250.6	1	7	-1	1	57	-3				
MAIZURU	4.64	261.4	1	8	-2	2	12	9				
ABUYAMA	4.66	253.8	1	3A	-7	2	10	7				
OSAKA	4.77	251.4	1	10	-1	2	6	0				
KOBE	5.03	252.9	1	13	-2	2	30	18				
TOYOOKA	5.08	263.1	1	12	-4	2	41	27				
SIOMISAKI	5.16	238.1	1	14	-3	2	21	5				
WAKAYAMA	5.21	248.3	1	13	-4	2	20	3				
SUMOTO	5.36	250.4	1	21	1	2	24	3				
HAKODATE	5.51	358.0	1	23	1	2	39	15				
TOTTORI	5.60	263.9	1	26	3	2	52	25				
HIMEJI	5.69	253.5	1	16	-8	2	35	6				
MORI	5.80	356.7	1	27	1	2	51	19				
TORISIMA	5.83	186.1	1	13	-13							

URAKAWA	6.00	12.7	1 28	0	2 45	8		
MURORAN	6.01	359.8	1 29	0	2 57	20		
TAKAMATU	6.03	252.9	1 20	-9	2 42	5		
SAIGO	6.21	271.3	1 38	7	2 59	17		
HIROO	6.23	16.0	1 31	-1	2 47	5		
TSURUGISAN	6.24	249.0						2 3
YONAGO	6.28	264.3	1 47	15	3 7	23		
TOMAKOMAI	6.34	3.8	1 35	2	2 58	13		
MUROTO	6.39	243.6	1 26	-8	3 13	27		
MATSUE	6.50	264.8	1 38	3	3 6	17		
SUTTSU	6.52	354.9	1 40	4	3 5	16		
KOTI	6.73	248.1	1 32	-7	2 49	-6		
SAPPORO	6.77	2.1	1 38A	-1	3 7	12		
OBIHIRO	6.82	13.7	1 39	-1	3 12	15		
KUSIRO	7.16	20.3	1 41K	-4	3 3	-2		
MATUYAMA	7.18	252.4	1 44	-1	3 49	43		
HIROSIMA	7.27	257.2	1 41	-5	3 16	8		
HAMADA	7.42	261.8	1 48K	0	3 11	-1		3 49
ASHIZURI	7.52	243.9			3 37	23		4 55
ASAHIGAWA	7.54	7.5	1 48K	-2	3 21	6		
UWAZIMA	7.61	248.7	1 44	-7				2 19
RUMOE	7.66	3.3	1 50	-1				
NEMURO	7.85	25.2	1 51	-3	3 41	19		
ABASHIRI	8.11	17.0	1 55A	-3	3 34	5		
OOITA	8.31	251.1	1 58	-2	4 20	46		
SIMONOSEKI	8.59	257.1	1 58	-6				
ASOSAN	8.87	250.4	2 1	-7	4 33	46		
MIYAZAKI	9.07	244.0	1 51	-20				
WAKKANAI	9.13	3.0	2 12K	1	4 11	17		
HUKUOKA	9.14	255.8	2 19	7	4 3	9		12 31
KUMAMOTO	9.19	250.8	2 18	6	4 3	8		
SAGA	9.32	254.1	2 18	4	4 52	54		
NAGASAKI	9.85	252.0	2 14	-7	4 36	25		
KAGOSIMA	9.89	244.5			4 9	-3		5 27
KURILSK	10.32	28.1	2 25	-3				
HUKUE	10.67	253.9						5 19
Y.-SAKHLINSK	10.79	6.3	2 30	-4				
UGLEGORSK	12.80	3.1	2 59	-2				5 48
ZO-SE	17.29	258.3	3 52	-6				
NANKING	18.86	263.5	4 21	4				
PEKING	19.87	288.3	4 24	-4				
PETROPAVLOVK	20.81	31.0	4 39K	1				4 58 PP
MAGADAN	24.12	12.2	5 13	3				
PAOTOW	24.57	289.5	5 20	5				
YAKUTSK	26.70	348.1	5 35K	0	10 11	8		
HONG KONG	27.14	246.4	5 41	2				
KUNMING	34.54	262.0	6 39	-5				
RABAUL	41.62	163.1						16 55
LHASA	42.07	275.8	7 46	-1				
SHILLONG	43.09	269.9	7 49A	-6				
CHITTAGONG	44.63	265.8	8 4	-3	14 35	-2		9 42 PCP
SEMIPALATNSK	45.14	308.0	8 10	-1				
PORT MORESBY	45.82	171.5	8 9A	-8	14 47	-7		15 9
CHATRA	46.33	274.1	8 19	-2				
DARWIN	49.36	193.2	8 36	-8				
COLLEGE	49.88	31.9	8 49	1				9 32 PP
FRUNSE	50.41	299.0	8 51	-1				16 12 PS
DEHRA DUN	52.15	282.7	10 4	58				
TANGERANG	53.13	224.6	9 5K	-8				
NEW DELHI	53.56	281.2	9 12A	-4	16 40	-2		
KHOROG	54.38	293.6						17 9 PS
LAHORE	54.56	285.8	9 21	-2	16 55	0		
HONOLULU	54.59	88.3			17 29	33		
KIPAPA	54.60	88.1	9 22	-2				
TASHKENT	54.66	298.7	9 23	-1				17 18 PS
SVERDLOVSK	55.49	318.9	9 29A	-1	17 13	5		
WARSAK DAM	55.70	289.7	9 30	-2				
CHARTERS TS.	56.30	174.1	9 28A	-8				
MOULD BAY	57.33	16.3	9 44K	1	17 40	8		
KOUMAC	60.68	154.9	10 0A	-6				
QUETTA	60.86	287.6	10 5	-3	18 17	-1	10 24	18 33 *SS
ALERT	60.88	3.4	10 8K	0	18 28	10		
POONA	61.07	272.5	10 5A	-4				
BOMBAY	61.71	273.4	10 29	16				18 30
NOUMEA	63.05	153.5	10 18	-4				
APATITY	63.23	335.8	10 23A	0	19 2	14		
RESOLUTE	63.40	14.3	10 24K	0				
ASHKABAD	63.74	299.0	10 24	-3				

KEVO	64.01	339.3	10	28	0				
BRISBANE	64.31	168.4	10	26	-4				
SODANKYLA	65.52	337.2	10	38K	0				
AFIAMALU	66.91	129.2	10	45	-2				
KIRUNA	67.09	339.2	10	48	0				
KAJAANI	67.11	334.0	10	49	1				
VICTORIA	67.16	45.9	10	49K	0				
MOSCOW	67.65	323.5	10	51	-1				
PULKOVO	68.66	329.5	10	56A	-2				
TEHERAN	69.69	299.8	11	5	1	20	9	3	
BANFF	70.14	40.6	11	7	0				
NURMIJARVI	70.44	331.9	11	8K	-1	20	39	24	
HELSINKI	70.54	331.5	11	8	-1				
ADELAIDE	70.94	182.0	11	6	-6				
TIFLIS	71.01	308.1	11	10	-2				
GORIS	71.19	305.4	11	13K	0	20	30	7	
CANBERRA	71.64	173.1	11	10A	-6				
MUNDARING	71.78	202.0	11	11	-6				
SHIRAZ	72.02	293.8	11	17K	-1	20	34	1	
SKALSTUGAN	72.48	338.5	11	20	-1				
MINERAL	72.50	52.6	11	20K	-1				
HUNGRY HORSE	72.54	42.5	11	22	1			11	34
BLUE MTS.	72.66	46.9	11	22K	0				20 47
CALISTOGA	72.79	54.6	11	24A	1				
SCORESBY SD.	72.81	354.1	11	24	1				
BERKELEY	73.42	55.1	11	27A	1				20 1
UPPSALA	73.48	333.9	11	26	-1				
TOOLANGI	73.62	176.3	11	23K	-5				12 18
RENO	74.09	52.5	11	31K	1				
LICK	74.12	55.3	11	30K	-1				
BUTTE	74.71	43.9	11	35	1				
PRIEST	75.44	55.8	11	39K	1				
BOZEMAN	75.77	43.5	11	41	1			11	53
KONGSBERG	76.32	336.9	11	43	0				
EUREKA	76.56	50.8	11	45	1			11	53
KARLSKRONA	76.90	332.1	11	39	-7				
GOTEBORG	77.05	334.7	11	46	-1				
DUGWAY	78.08	48.7	11	54	1				
PASADENA	78.25	56.3	11	53	-1	22	4	22	
SALT LAKE C.	78.31	47.8	12	3	9			12	15
TARRALEAH	78.38	175.9	11	51	-4				
MOORLANDS	78.57	175.3	11	57	1				
PRICE	79.65	48.3	12	2	1				
FLAMING GRGE	79.67	46.5	12	2	0				
KARAPIRO	80.47	153.0	12	1	-5				
ISTANBUL UN.	81.00	314.8	12	23	14	22	15	5	
KSARA	81.32	305.6	12	3	-7				15 15 PP
COLLMBERG	81.58	330.0	12	11	-1				15 19 PP
LARAMIE	81.61	44.3	12	13	1				
TUAI	81.84	152.3	12	9	-4				
HURBANOVO	81.89	325.1							14 49 PP
PRAGUE	81.92	328.5	12	14	1				
PRUHONICE	81.94	328.4	12	14K	0	22	26	6	15 21 PP
BRATISLAVA	82.17	325.9							13 16
JENA	82.43	330.5	12	15	-1				13 5
VIENNA-H.	82.44	326.3	12	18	2				
KASPERSKE H.	83.00	328.3	12	19K	0				15 30 PP
JERUSALEM	83.01	304.3	12	19	0				
WELLINGTON	83.18	155.1	12	31	11				
BENSBERG	84.11	332.7	12	23	-2				
FELDBERG	84.22	331.6	12	35	10				
TUCSON	84.28	54.0	12	25	0				
TUCSON TELE.	84.29	53.9	12	25	0				
LJUBLJANA	84.93	325.8	12	28K	-1				
STUTTGART	85.05	330.3	12	29	0			12	41
ALBUQUERQUE	85.30	49.6	12	31	1				
TUBINGEN	85.33	330.3	12	31	0				
EBINGEN	85.65	330.1	12	32	0				
STRASBOURG	85.80	331.0	12	34	1				
SCHEFFERVLLE	86.15	15.7	12	36K	1				
WELSCHBRUCH	86.49	331.7	12	35	-1				12 58
MANHATTEN	88.02	41.0	12	44K	0				
DUBUQUE	88.48	35.5	12	45	-1				
ROSELEND	88.61	329.9	12	46	0				
FOLINIERE	88.64	335.7	12	46	-1				
GARCHY	88.67	332.9	12	47	0				13 24
ROME	89.06	324.3	12	17	-32	22	24	-65	17 11
WICHITA MTS.	90.14	45.3	12	54	0				16 23 PP

MESSINA	90.36	320.1								23	48
TULSA	90.85	42.8	12	58	1	23	46	1			
ROLLA	91.42	39.1	12	59	-1						
BREBEUF	92.78	23.6	13	6K	0						
LITTLE ROCK	93.56	41.4	13	9	0						
DUMONT	102.65	180.4	17	57	246						
MAWSON	118.73	205.3	18	37A	-3						
HUANCAYO	139.36	62.9	19	14	-5						
ARGENTINE I.	147.37	160.5	19	33	0						
ANTOFAGASTA	150.16	73.9	19	44	6						

NOVEMBER 14 21.H 59.M 30.S EPICENTRE 0.12 122.55 DEPTH= 179.KM

A=-0.53803 B= 0.84292 C= 0.00210 D= 0.8429 E= 0.5380
G=-0.0011 H= 0.0018 K=-1.0000 HT= 7.2

DEPTH OF FOCUS= 0.023R

SE= 4.70

	DELTA	AZ.	P	O-C	S	O-C	*PP	SUPP.
	DEG.	DEG.	M S	S	M S	S	M S	M S
MANILA	14.53	354.3	3 21	3				3 55
DARWIN	14.89	146.8	3 5	-18				
LEMBANG	16.42	244.8	3 38	-3	7 11	34		
DJAKARTA	16.89	248.0	3 49A	2	7 35	47		
TANGERANG	17.07	248.3	3 46	-3	6 52	0		
HONG KONG	23.51	340.2	4 55A	0	9 10	18		5 36 PP
CANTON	24.52	339.2	5 5A	1	9 26	17	5 23	
PORT MORESBY	26.25	111.8	5 9A	-11	9 33	-5	5 32	5 58 PP
RABAUL	29.90	98.6	5 42	-11	10 28	-8		12 18
CHARTERS TS.	30.70	132.2	5 50	-10	10 43	-5		
ZO-SE	30.84	357.7	6 0	-1				
KUNMING	31.38	323.8	6 8	2	11 15	16	6 29	11 49 *SS
NANKING	31.97	353.9	6 10	-1				
MUNDARING	32.48	190.1	6 13	-3	11 16	0		
CHENGTU	35.11	331.5	6 38	0			6 59	7 9 *SP
SIAN	36.27	340.7	6 48A	0			7 9	
ABUYAMA	36.65	18.1	6 47A	-4				
CHITTAGONG	37.20	308.5	6 57	1	12 43	14	7 18	8 52 PPP
ADELAIDE	38.04	158.2	6 54	-9	12 36	-5		15 12 SS
SHILLONG	38.95	312.9	7 12A	2				10 37
MATUSIRO	39.04	20.2	7 5A	-6	13 22	26		
LANCHOW	39.76	336.0	7 17A	0	13 22	15	7 35	13 55 *SS
BRISBANE	39.89	135.7	7 11	-7	12 29	-40		13 29
CALCUTTA	40.03	306.1						9 30
PEKING	40.14	352.4	7 18	-2	13 23	10		
LHASA	41.99	317.1	7 36	1	13 54	14		
VISHAKHAPTNM	42.38	296.5	7 56	18	14 36	51		
CANBERRA	43.03	147.7	7 35A	-8	13 53	-2		7 55
RIVERVIEW	43.14	144.4	7 45	1	13 57	1		14 29 *SS
CHATRA	43.16	310.9	7 46A	2				
MADRAS	43.90	288.7	7 50	0	14 20	13		9 22 PP
KOUMAC	45.69	119.3	7 56A	-9				
NOUMEA	48.20	120.5	8 20	-4				
PORT VILA	48.38	114.0	8 32K	6				
POONA	51.18	293.8	8 51	4	16 33	43		
NEW DELHI	51.75	307.2	8 48K	-3	16 8	11		16 39
BOMBAY	52.22	293.9	8 51	-4	16 11	7		13 41
LAHORE	55.26	309.2	9 15	-2	16 55	11		11 21 PP
WARSAK DAM	58.40	310.7	9 38	-1				
ALMATA-2	58.92	322.8	9 42	0				
KARACHI	58.98	299.1	9 53	10				
FRUNSE	60.37	321.1	9 51K	-1				
QUETTA	60.64	304.9	9 52	-2	18 4	9	10 10	12 5 PP
PETROPAVLOVK	60.67	24.1	9 53K	-1				
ROXBURGH	61.29	144.2	10 8	9	18 30	27		24 30 SSS
TARATA	61.38	135.9	9 56	-3				
KARAPIRO	61.66	134.2	10 1	0				
YAKUTSK	61.98	3.8	10 0K	-3				
MACQUARIE I.	62.11	156.9	10 14	10				
DUZHANBE	62.32	314.4	10 3	-2	18 30	14		
WELLINGTON	62.59	137.9	10 6	-1	18 20	1		25 0 SSS
TASHKENT	63.14	317.4	10 9K	-2	18 40	14		
TUAI	63.17	134.5	10 2	-9				
MAGADAN	63.23	15.7	10 9	-2				
AFIAMALU	66.45	105.2	10 33	1				23 46 SS

WILKES	66.87	185.2	10	27	-8	19	13	2	10	49	
DUMONT	67.79	172.6	10	32	-9	19	23	1			
MIRNY	69.74	192.1	10	47	-5	19	49	4			
ASHKABAD	69.80	310.7	10	52	-1						
VANNOVSKAYA	69.99	310.6	10	52	-2						
SHIRAZ	72.64	301.0	11	8K	-2						11 30
TEHERAN	74.70	307.0	11	49	27						
TANANARIVE	75.86	250.6	11	29	1						12 52
GORIS	79.30	310.1	11	45	-2	21	40	9			
HONOLULU	80.03	68.5	12	10	19						
KIPAPA	80.11	68.4	12	10	19						
TIFLIS	80.78	312.2	11	55	0						
HAWAII V.OB.	82.58	70.5	12	2	-2						
MOSCOW	87.03	325.7	12	26	0						
KSARA	87.16	303.7	12	27K	0				12	55	15 46 PP
JERUSALEM	87.66	301.6	12	44	15						
APATITY	89.55	337.4	12	37	-1						
COLLEGE	89.73	25.3	12	37	-2						
SOUTH POLE	90.12	180.0	12	36	-5						
KAJAANI	92.02	334.0	12	44	-6						
SODANKYLA	92.18	337.3	12	49	-1						
ISTANBUL UN.	92.61	310.9									16 40
BULAWAYO	93.74	249.9	12	56	-1						
BROKEN HILL	93.98	255.6	12	56	-3						13 39
BYRD STATION	94.81	171.1	12	53	-9						
MOULD BAY	96.37	12.3	13	6	-3						
ATHENS	96.89	308.1									17 9 PP
PRUHONICE	101.41	321.2									17 44 PP
COLLMBERG	102.03	322.8									18 11
ROSELEND	107.75	318.6									18 48
CLERMONT-FD.	110.02	319.5									19 20
BLUE MTS.	110.84	41.2	18	12	1						19 15 PP
EUREKA	113.76	46.1	18	16	-1						
DUGWAY	115.72	44.4	18	17K	-4						
FLAMING GRGE	117.76	42.4	18	24	-1						
MALAGA	118.80	312.9									19 50
GOLDEN	121.04	41.9	18	30	-1						
ALBUQUERQUE	122.52	47.3	18	33	-1						
WICHITA MTS.	128.26	43.6	18	43	-2						21 8 PP
TULSA	129.46	40.7	19	0	12						
FAYETTEVILLE	130.38	39.5	18	56	7						20 51 PP
BREBEUF	132.38	15.4	18	49	-4						22 43
HUANCAYO	158.66	124.4	20	1	25						
AREQUIPA	158.66	140.2	19	56	20						
SAN JUAN	159.74	24.4	20	28	51						
LA PAZ	160.62	147.6	19	39	1						
CARACAS	165.85	41.5	20	3	20						31 48 SKKS

NOVEMBER 15 23.H 25.M 14.S EPICENTRE -8.69 -80.03 DEPTH= 23.KM

A= 0.17125 B=-0.97372 C=-0.15017 D=-0.9849 E=-0.1732
G=-0.0260 H= 0.1479 K=-0.9887 HT= 6.7

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
HUANCAYO	5.70	126.2	1	25	0	2	35	4				
AREQUIPA	11.35	133.7	2	40	-4							
CHINCHINA	14.27	18.1	3	30	8	6	31	30				
BOGOTA	14.50	24.4	3	25	0	6	30	24	3	35		
FUQUENE	15.41	24.3	3	36	-1							
ANTOFAGASTA	17.53	149.5	4	4	0	7	29	12				
BALBOA HTS.	17.54	1.5	4	6K	2							
GALERAZAMBA	19.92	13.8				8	24	14			4	54 PP
CARACAS	23.10	34.6	5	5A	0	9	11	1				
SAN SALVADOR	24.02	337.6	5	25	11							
SANTA LUCIA	26.11	161.9	5	33A	-1	10	6	4			6	8 PP
TRINIDAD	26.70	44.3	5	39A	0	10	14	3				
HOPE	26.72	6.9	5	41	2							
FORT FRANCE	29.86	38.9	6	5	-3	11	14	12				
SAN JUAN	30.20	27.0	6	9	-2							
ST. CLAUDE	30.54	36.5	6	14	0	11	19	6				
ST. KITTS	31.01	33.5	6	16	-2							
DALLAS	44.29	339.7	8	10	1							
LITTLE ROCK	44.78	345.6	8	13K	0							
BLACKSBURG	45.66	359.6	8	19	-1	15	0	-1				

FAYETTEVILLE	46.50	344.1	8 26A	-1						
WICHITA MTS.	46.62	338.8	8 27A	-1	15	22	7			10 16 PP
TULSA	46.79	342.4	8 30	1	15	16	-1			
LUBBOCK	46.88	334.8	8 29	-1						
ROLLA	47.66	347.3	8 35A	-1	15	29	-1			
ST. LOUIS 1	48.04	349.2	8 38A	-1						
MORGANTOWN	48.08	0.1	8 38K	-1						
FLORISSANT	48.22	349.2	8 40	-1	15	34	-4			
PENNSYLVANIA	49.29	2.2	8 48A	-1						
PALISADES	49.78	6.1	8 47	-5	15	59	0	9	8	
CLEVELAND	49.94	358.5	8 52A	-2						
MANHATTEN	50.07	343.2	8 54A	-1	16	11	8			
ALBUQUERQUE	50.09	331.5	8 55	0	15	52	-12			
TUCSON	50.22	325.6	8 56	0						
TUCSON TELE.	50.23	325.8	8 56	0						
LONDON ONT.	51.49	358.9	9 2A	-4						
DUBUQUE	51.88	350.0	9 7A	-1						
GOLDEN	53.57	335.8	9 20	-1	16	58	7			
GLEN CANYON	54.22	328.9	9 26	0						
BREBEUF	54.25	5.5	9 24A	-2	17	2	1			22 46 SSS
LARAMIE	55.03	336.6	9 31	-1						
BOULDER CITY	55.21	325.7	9 34	1						
PASADENA	55.88	321.8	9 38	0	17	29	7			
FLAMING GRGE	56.30	333.5	9 40	-1						
DUGWAY	57.31	330.5	9 48	0						
ARGENTINE I.	57.53	172.2	9 48	-2						
EUREKA	58.37	327.8	9 55	-1						
PRIEST	58.72	321.9	9 58A	0						10 8 PP
LICK	60.10	322.4	10 8A	0						
RENO	60.51	325.4	10 11A	1						
BERKELEY	60.82	322.5	10 12A	0						
BOZEMAN	60.86	335.6	10 12	-1				10	23	10 44 PCP
CALISTOGA	61.51	322.9	10 17A	0						10 29 PP
BUTTE	61.77	334.8	10 18	-1						11 5 PCP
MINERAL	62.07	325.0	10 10A	-11						
BLUE MTS.	63.00	331.1	10 26	-1				10	37	
HUNGRY HORSE	64.22	335.5	10 34	-1				10	47	11 8 PCP
SCHEFFERVLLE	64.25	8.5	10 33A	-2						
SPOKANE	65.16	333.2	10 40	-1						11 40
BANFF	67.05	336.6	10 51	-2						
PENTICTON	67.36	333.1	10 55A	0						
VICTORIA	68.56	330.6	11 2	-1						
BYRD STATION	73.68	186.6	11 34	1						
HAWAII V.OB.	79.16	291.7	12 5	1						
SOUTH POLE	81.36	180.0	12 16	0						
COIMBRA	81.80	47.2	12 19A	1						
SERRA PILAR	81.98	46.3	12 18K	-1						12 25 PCP
HONOLULU	82.17	292.9			22	47	15			23 26
RESOLUTE	83.73	356.1	12 26A	-2						
MALAGA	83.81	51.5	12 29A	0	22	52	3			12 34 PCP
GRANADA	84.55	51.3	12 35K	3	22	53	-3			15 38 PP
TOLEDO	84.92	48.5	12 35A	1	23	3	3			15 53 PP
THULE	85.25	2.8	12 35	-1						13 28
ALMERIA	85.34	51.8	12 36A	0						15 50 PP
SIDA	85.88	23.1	12 39A	0						
ALICANTE	87.23	50.7	12 46	1						16 19 PP
CAPE HALLETT	87.66	196.7	12 48	0	23	21	-5			
MOULD BAY	87.85	351.3	12 48A	0						
SCORESBY SD.	88.03	16.6	12 49	0	23	37	7			
COLLEGE	88.64	336.7	12 51	-1						
BAGNERES	88.77	46.2	12 52	-1						13 16
AFIAMALU	89.63	256.1	12 59	2	23	40	-5			29 40 SS
FOLINIERE	'89.65	40.6	12 56	-1						
KEW	90.38	38.0	12 59A	-1	23	48	-3			23 28 SKS
DURHAM	90.44	34.6	13 1A	0	23	46	-6			23 19 SKS
ANDEIRA	90.99	105.1	13 5K	2						
ALERT	91.42	2.3	13 4A	-1	23	32	-29			
PARIS	91.58	41.0	13 6A	0						
GARCHY	91.66	42.5	13 5A	-1						13 38
HERMANUS	92.69	125.2								25 30 PS
DOURBES	93.17	40.0	13 22	9						
ROSELEND	93.82	44.5	13 15	-1						
WELSCHBRUCH	94.03	41.8	13 20	3						
MONACO	94.11	46.6	13 16	-2						
WITTEVEEN	94.86	37.5	13 21	0						
BENSBERG	94.92	39.3	13 21A	0						
STRASBOURG	94.99	41.8	13 20	-2						
WELLINGTON	95.55	226.9	13 32	8						
FELDBERG	95.63	40.2	13 22	-3						

HEIDELBERG	95.71	41.0	13	24	-1									
EBINGEN	95.74	42.3	13	24	-1									
TUBINGEN	95.84	41.9	13	24	-1									
KARAPIRO	95.91	230.3	13	25	-1									
STUTTGART	96.01	41.7	13	25	-1				13	36				
RAVENSBURG	96.13	42.7	13	26	-1									
FLORENCE X.	96.86	46.8	13	25	-5	24	21	17	13	36	17	16	PP	
ROME	97.60	48.8				24	48	40			26	36	PS	
JENA	97.69	39.7	13	33	-1	24	22	13			17	31	PP	
HALLE	97.96	39.1	13	35	0				13	50				
ROXBURGH	97.97	221.7									26	46	PS	
GÖTEBORG	98.35	32.8	13	36	-1									
COLLMBERG	98.61	39.4	13	38	0						17	1		
KIMBERLEY	98.63	120.8	13	34	-4									
KASPERSKE H.	98.86	41.6	13	38A	-1									
BANGUI	99.18	87.0	13	39	-2						17	56		
MAWSON	99.41	166.4	13	40K	-2									
DUMONT	99.42	195.1	13	40	-2									
PRUHONICE	99.53	40.7	13	42A	0	24	21	3			17	49	PP	
VIENNA-H.	100.68	42.5	13	47	0									
BRATISLAVA	101.17	42.6	12	47	-63									
BUDAPEST	102.46	43.3									14	36		
KEVO	103.98	20.1				24	38	-1			27	42	PS	
BULAWAYO	104.21	113.3	14	5	2									
NURMIJARVI	104.74	29.7				24	40	-3			27	36	PS	
WILKES	104.77	184.4									27	40	PS	
ATHENS	106.12	53.0	18	33	777									
LWIRO	108.24	95.3	18	23	777									
ISTANBUL UN.	109.99	49.6	18	56	777									
MOSCOW	112.55	32.9	18	33	-1						19	16	PP	
JERUSALEM	115.96	59.0	18	42	1									
KSARA	116.28	56.6	18	44	3						31	15		
TOOLANGI	117.34	219.7	18	44	1						19	53	PP	
TIFLIS	121.48	46.1	18	52	1									
TANANARIVE	121.49	118.4	18	55	3						20	25	PP	
SVERDLOVSK	123.08	24.6	18	53	-2									
CHARTERS TS.	126.22	237.4	19	2	1									
TEHERAN	128.27	51.0	19	3	-2						22	17	PKS	
PORT MORESBY	129.70	250.2	19	7	0									
SHIRAZ	130.98	58.2	19	10	0						22	30	SKP	
VANNOVSKAYA	132.37	45.6	19	13	1									
ASHKABAD	132.55	45.5	19	13	0									
SEMIPALATNSK	135.31	17.9	19	17	-1									
MATUSIRO	135.60	314.6	19	4	-14						19	18	PKP2	
IRKUTSK	136.41	356.1	19	20K	0									
MUNDARING	136.69	200.3	19	21	1									
TASHKENT	137.66	34.8	19	24K	2									
FRUNSE	139.37	28.9	19	26	1									
ALMATA	140.10	26.4	19	28K	1									
QUETTA	142.46	50.8	19	27A	-4						22	36	PP	
WARSAK DAM	143.70	41.9	19	27	-6									
KARACHI	144.75	58.9	19	36	1									
PEKING	145.61	337.7	19	36A	0									
PAOTOW	147.01	345.9	19	40	1									
LAHORE	147.05	42.8	19	39A	0				19	52	23	9	PKS	
NEW DELHI	150.83	44.3	19	46A	1									
BOMBAY	151.79	66.1	19	47	1									
LANCHOW	152.54	353.2	19	49A	2									
POONA	152.83	66.2	19	49A	2						23	36	PP	
MADRAS	160.10	75.8	20	7	10						24	19	PP	
SHILLONG	161.53	23.7	19	58A	0									
LEMBANG	162.80	206.5	20	1A	2						25	46		
KUNMING	163.45	351.2	20	2	2									
TANGERANG	163.81	204.4	20	2A	2								24	24
CHITTAGONG	164.31	29.1	20	3A	2				20	16	24	36	PP	

NOVEMBER 16 7.H 19.M 1.S EPICENTRE -32.40-110.80 DEPTH= 257.KM

A=-0.30046 B=-0.79084 C=-0.53320 D=-0.9348 E= 0.3552
G= 0.1894 H= 0.4984 K=-0.8460 HT= 1.0

DEPTH OF FOCUS= 0.035R

SE= 2.17

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

SANTA LUCIA	33.59	102.9	6	17A	-1	11	49	29	7 29 PP
ANTOFAGASTA	36.50	86.7	6	41	-1				16 55
HUÁNCAYO	38.32	66.3	6	59	2				
AREQUIPA	38.90	75.5	7	2	0				
ARGENTINE I.	43.23	153.5	7	39	2				20 0
BYRD STATION	47.86	182.0	8	12	-2	15	21	31	
CHINCHINA	49.98	48.6	8	35A	5	15	53	34	
BOGOTA	50.72	50.4	8	37	2	15	59	29	
BALBOA HTS.	50.80	41.4	8	34	-2				
OAXACA	50.94	17.4							23 47
MANZANILLO	51.53	7.8							21 29
COMITAN	51.57	23.1	8	43	1	16	11	30	23 43
FUQUENE	51.58	50.0	8	41	-1				
PUEBLA	52.54	15.1							26 5
TACUBAYA	52.69	13.8	8	37	-13	16	22	26	21 28 SSS
VERA CRUZ	53.19	17.4							30 53
GUADALAJARA	53.26	8.8							26 5
MERIDA	56.78	23.8	9	20	1	17	17	26	11 29 PP
SOUTH POLE	57.78	180.0	9	26	0				
AFIAMALU	58.27	273.3	9	29	-1	17	34	24	21 19 SS
WELLINGTON	58.56	238.3	9	28	-4	17	39	25	
KARAPIRO	59.03	242.3	9	33	-2				
CARACAS	59.79	52.1	9	39A	-1	17	55	26	
AUCKLAND	59.93	243.2				17	56	25	
CHIHUAHUA	60.86	4.8							10 1
ROXBURGH	61.08	232.3				18	12	26	19 45 SCS
TRINIDAD	63.69	56.4	10	5	-1	18	45	27	
TUCSON	64.30	360.0	10	8	-2	18	41	15	
TUCSON TELE.	64.39	0.1	10	10	0				
SUVA	64.53	264.0				19	4	35	21 54
DALLAS	66.23	12.9	10	21	-1				
PASADENA	66.55	353.3	10	23	-1	19	23	30	
FORT FRANCE	66.72	53.4	10	24	-1	19	10	15	
HAWAII V.OB.	66.83	314.0	10	27	1	19	24	28	
ALBUQUERQUE	67.11	3.9	10	27	-1				
ST. CLAUDE	67.28	52.0	10	29	0	19	26	24	
ST. KITTS	67.54	50.3	10	29	-1				
WICHITA MTS.	67.74	10.9	10	29	-3	19	37	30	13 4 PP
DUMONT	67.77	204.0	10	31	-1	19	39	32	
PRIEST	68.80	351.5	10	38A	0				
GLEN CANYON	69.01	359.3	10	39	0				
LITTLE ROCK	69.03	16.2	10	37	-2				
TULSA	69.39	13.0	10	41	-1	19	51	24	24 19 SS
HONOLULU	69.97	313.2				20	1	28	24 35
LICK	70.11	350.8	10	46A	0				
BERKELEY	70.72	350.4	10	49A	-1	20	12	30	24 30
CALISTOGA	71.52	350.3	10	53A	-1				
PRICE	71.64	360.0	10	55	0				
EUREKA	71.67	355.8	10	56	1				
GOLDEN	71.91	4.4	10	57	0				11 19
RENO	72.06	352.7	10	58A	0				
ROLLA	72.12	15.6	10	57A	-1	20	26	28	
DUGWAY	72.26	358.4	10	59A	0				
MANHATTEN	72.45	11.6	11	0	0	20	31	29	
NOUMEA	72.54	254.4	11	3K					23 57
SALT LAKE C.	72.81	359.2	11	2	0	20	31	25	12 16
FLAMING GRGE	72.97	1.1	11	2	-1				
MINERAL	73.07	351.4	11	2A	-2				
ST. LOUIS 1	73.22	16.7	11	4	0	20	37	27	
FLORISSANT	73.34	16.5	11	6	1	20	38	27	
LARAMIE	73.50	4.1	11	6	0				
BLACKSBURG	74.84	24.7	11	12	-2	20	56	28	
KOUMAC	75.14	254.9	11	25	9				
WILKES	76.62	195.9	11	23	-1	21	15	28	25 52 SS
DUBUQUE	76.80	15.1	11	25	0	21	18	29	
MOORLANDS	76.81	228.0	11	26	1				
BLUE MTS.	77.11	355.3	11	26A	0				
MORGANTOWN	77.16	24.0	11	28	1				
TARRALEAH	77.34	227.9	11	28	0				
BOZEMAN	77.70	359.8	11	29	-1				14 31 PP
BUTTE	78.07	358.7	11	32	0				14 30 PP
CLEVELAND	78.31	22.0	11	34A	1	21	35	30	
RIVERVIEW	78.65	237.2	11	34A	-1	21	36	27	26 47 SS
PENNSYLVANIA	78.93	24.9	11	37A	1				
CANBERRA	79.37	235.0	11	39K	0	21	30	14	27 1 SS
MIRNY	79.70	189.4	11	40	0				14 43 PP
LONDON ONT.	79.83	21.6	11	42	1				
SPOKANE	79.98	355.5	11	42	0	21	44	21	
MAWSON	80.20	177.5	11	36K	-7	21	54	29	27 17 SS

HUNGRY HORSE	80.43	357.8	11	43	-1					
TOOLANGI	80.54	231.5	11	46K	1				11	54 PCP
PALISADES	80.59	27.4	11	47	2	21	56	27		
BRISBANE	80.80	243.5	11	46	0	21	49	18		
VICTORIA	81.34	351.6	11	49	0					
PENTICTON	81.73	354.2	11	51A	0					
BANFF	83.31	357.0	11	59A	0					
HONIARA	84.39	262.4	12	14	10				39	2
BREBEUF	84.55	25.3	12	6A	1	22	39	30	23	33 PS
SHAWINIGAN	85.75	25.2	12	12	1					
ADELAIDE	86.49	230.4	12	14	-1	22	58	31	28	43 SS
CHARTERS TS.	89.77	246.4	12	31	1					
RABAUL	93.69	262.7	12	43	-5				23	31
SCHEFFERVLLE	94.75	23.8	12	54	1					
PORT MORESBY	95.03	255.6	12	56	2	23	39	35		
COLLEGE	101.17	344.8	13	21	-1				17	45 PP
PERTH	102.30	219.2	13	19	-8				17	40 PP
BANDEIRA	108.81	122.3							18	41 PP
SCORESBY SD.	119.77	22.8							19	43 PP
TOLEDO	121.88	60.2	18	27	4				20	4 PP
ALMERIA	122.13	64.0	18	36K	12				20	5 PP
BANGUI	125.18	109.5	18	34	4				20	29 PP
JERSEY	125.48	49.8							42	29
KEW	126.95	47.2							37	46 SS
TANGERANG	127.66	229.8	18	49	14					
CLERMONT-FD.	128.38	54.7	18	49K	13					
LWIRO	128.54	124.1	18	42	6					
GARCHY	128.58	52.8	18	40	4					
TIKSI	129.88	339.1	18	41	2				20	52 PP
DOURBES	129.91	49.3	18	53	14					
VLADIVOSTOK	130.33	301.4	18	55	15				21	4 PP
DE BILT	130.41	46.7							38	29 SS
KHEYS	131.46	2.4				25	36	11	21	6 PP
BENSBERG	131.60	48.3	18	47	5				21	9 PP
STRASBOURG	131.86	51.5	18	39	-4				21	33 PP
FELDBERG	132.39	49.4	18	47	3					
PAVIA	132.52	56.2							30	54
STUTTGART	132.87	51.4	18	48	3					
FLORENCE X.	133.85	58.4							40	1
JENA	134.39	48.4	18	51	4				21	23 PP
COLLMBERG	135.28	47.8	18	53	4				22	31 PKS
KASPERSKE H.	135.71	50.9	18	53	3					
TRIESTE	135.77	55.9							40	20 SSP
KEVO	135.89	19.6							22	23 PKS
PRUHONICE	136.32	49.7	18	57	6				21	37 PP
UPPSALA	136.53	35.1							39	46 SS
SODANKYLA	137.12	22.6	19	7	15					
APATITY	139.11	20.1	19	2	6				21	14
KAJAANI	139.24	26.5	19	8	12					
BUDAPEST	139.40	53.2	19	0	3	25	49	10	21	51 PP
NURMIJARVI	139.62	32.4	19	8	11				22	35 PKS
WARSAW	140.12	45.6	19	2	4				22	2 PP
SKOPJE	141.20	61.8							22	10
PEKING	141.71	295.1	19	8	7					
LWOW	142.43	48.9	19	1	-1	26	6	22		
PULKOVO	142.48	31.4	18	58	-4					
ATHENS	142.70	68.4	19	2	-1					
CINE	146.12	69.5	19	8	-1				20	10
PAOTOW	146.41	295.8	19	14K	5				22	55 PP
ISTANBUL UN.	146.87	63.3	19	15A	5				19	23 PKP2
MOSCOW	147.93	33.9	19	15	4				22	44 PKS
KUNMING	149.80	264.8	19	23	9				23	16 PP
SIMFEROPOL	150.12	55.0	19	23	8				19	37 PKP2
LANCHOW	151.22	286.9	19	24	8				19	33 PKP2
JERUSALEM	151.27	82.0	19	22	6					
KSARA	152.12	77.9	19	22	4				23	13 PP
SVERDLOVSK	154.86	11.1	19	24	3					
CHITTAGONG	157.60	249.1	19	31	6			19 43	23	37
MADRAS	158.23	210.0	19	46	20				24	20 PP
TIFLIS	158.48	57.5	19	31	5				23	48 PP
SHILLONG	159.05	256.9							39	27
GORIS	160.21	62.6	19	29	1	26	27	21	23	56 PP
SEMIPALATNSK	160.23	338.7	19	30	2					
LHASA	161.08	267.4	19	34	5				19	40 PKP2
CHATRA	163.42	255.1	19	41	10					
TEHERAN	164.87	72.4	19	32	-1				21	2 PKP2
SHIRAZ	165.44	96.5	19	38A	5				24	22 SKP
POONA	165.57	198.0	19	38K	5				24	9

BOMBAY	166.17	194.5	19 46	12			24 13	PP
FRUNSE	168.74	339.1	19 40	5			24 36	PP
ASHKABAD	169.54	55.0	19 41	5				
TASHKENT	171.09	359.6	19 40	3			24 51	PP
NEW DELHI	172.12	243.2	19 42A	5				
DEHRA DUN	172.15	257.0	19 38	1				
KARACHI	172.23	165.4	19 44	7				
LAHORE	175.56	260.4	19 47	9				
QUETTA	177.07	138.4	19 44	5	19 52			
WARSAK DAM	177.46	309.7	19 44	5				

NOVEMBER 16 21.H 10.M 0.S EPICENTRE 13.58 92.93 DEPTH= 9.KM

A=-0.04970 B= 0.97114 C= 0.23329 D= 0.9987 E= 0.0511
G=-0.0119 H= 0.2330 K=-0.9724 HT= 6.0

SE= 2.63

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
PORT BLAIR	1.91	186.2	0	28	-5								
CHITTAGONG	8.80	353.3	2	10A	0								
CALCUTTA	9.90	334.7	2	26	1	4	20	2					
VISHAKHAPTNM	10.15	295.2	2	31	2	4	20	-4					
SHILLONG	11.97	355.4	2	51A	-3	5	5	-3			3	0	PP
BOKARO	12.23	327.5	2	58A	1	5	18	3			3	7	PP
MADRAS	12.42	268.8	2	57	-3	5	15	-4			3	7	PP
CHATRA	14.24	338.6	3	22K	-2	5	57	-6			3	48	PP
HYDERABAD	14.47	287.2	3	24	-3	5	57	-11			6	10	SS
KUNMING	14.74	37.4	3	33A	3	6	19	4			3	50	*SP
KODAIKANAL	15.49	259.3	3	39	-1	6	51	19			7	24	SSS
LHASA	16.08	354.1	3	48A	0						4	5	*SP
SEHORE	17.80	304.7	4	13	4	7	19	-7			7	42	SS
POONA	18.98	287.5	4	25A	1	7	45	-7			4	40	PP
BOMBAY	20.01	288.0	4	37	1	8	40	25			5	3	PP
NEW DELHI	20.90	318.1	4	47A	2	8	34	1			5	3	PP
CANTON	21.54	61.0	4	52	1	8	47	2			5	9	*SP
DEHRA DUN	21.59	322.9	4	9K	-43	8	5	-41			4	31	PP
HONG KONG	21.97	63.7	4	56	0	8	54	1			5	11	PP
TANGERANG	23.87	144.4	5	10K	-4	9	58	31					
DJAKARTA	24.00	144.0	5	26	11	10	31	62					
LANCHOW	24.43	21.8	5	23A	3	9	43	6			5	39	*SP
LAHORE	24.73	319.4	5	25A	2	9	47	5			6	3	PP
LEMBANG	24.98	143.4	5	19K	-6								
SIAN	25.17	32.4	5	29A	2	9	58	9			5	45	*SP
KARACHI	26.84	298.5	5	46A	4								
MANILA	27.32	84.3	5	40	-7						13	30	
TAWU	27.96	67.8	6	23	30								
WARSAK DAM	28.10	320.0	5	56A	2								
TAITUNG	28.28	67.1	5	55	0								
QUETTA	29.12	308.8	6	6	3	11	0	6					
TAIPEI	29.22	62.8	6	12	8								
NANKING	29.97	47.8	6	10K	-1						6	27	*SP
KHOROG	30.50	325.1	6	18	3	11	22	6					
PAOTOW	30.79	25.9	6	18A	0	11	21	1	6	29	6	32	*SP
ZO-SE	31.28	51.5	6	21K	-1	11	26	-2					
FRUNSE	33.16	335.0	6	42A	3	12	1	4			7	53	PP
PEKING	33.33	33.5	6	41	1	12	1	1	6	52	6	56	*SP
TASHKENT	34.47	327.7	6	54A	4	12	27	9			8	15	PP
SEMIPALATNSK	38.15	346.9	7	21	0						8	47	PP
ASHKABAD	39.12	314.7	7	32	3	13	33	4			9	3	PP
IRKUTSK	39.66	11.0	7	36A	2	13	42	5			9	8	PP
SHIRAZ	40.59	299.9	7	43A	2	13	54	3			13	32	PCS
CHANGCHUN	40.95	36.3	7	45	1	13	53	-3			8	1	*SP
TEHERAN	43.30	308.1	8	6	3	14	52	21			9	50	PP
ABUYAMA	43.87	53.5	8	8K	0								
VLADIVOSTOK	44.57	41.0	8	11K	-3	14	40	-9					
DARWIN	45.57	122.8	8	19	-3								
MATUSIRO	46.42	52.2	8	27	-2						10	2	PP
GORIS	48.34	311.2	8	46A	2	15	49	6			10	40	PP
MIZUSAWA	49.40	49.8	8	49	-3						13	57	
SVERDLOVSK	49.71	337.3	8	55K	1	16	4	2					
TIFLIS	50.17	313.5	9	0	2	16	15	7			16	29	PS
PERTH	50.31	154.5				16	17	7			14	40	
MUNDARING	50.49	154.2	8	55	-5	16	4	-9					
Y.-SAKHLINSK	53.15	40.8	9	20A	0	16	49	0			20	30	SS

YAKUTSK	55.04	20.2	9	33A	-1	17	14	-1				
TANANARIVE	55.15	235.2	9	34A	-1						10	42
KSARA	55.28	301.8	9	35A	-1	17	28	10			11	43 PP
JERUSALEM	55.62	299.3	9	40A	2						11	48 PP
PORT MORESBY	58.46	110.1	9	49	-9	17	54	-6				
SIMFEROPOL	58.54	314.6	9	59A	0						13	31 PPP
MOSCOW	59.63	327.4	10	7A	1	18	17	2			13	40 PPP
RABAUL	61.38	102.5	10	14	-4						18	36
ISTANBUL UN.	61.59	309.4	10	20A	0	18	41	1			12	37 PP
TIKSI	61.91	12.2	10	22	0						19	7 PS
CHARTERS TS.	62.21	121.6	10	20	-4	18	42	-6				
MAGADAN	62.34	29.1	10	24	-1	18	51	1				
PULKOVO	64.69	330.2	10	41	1	19	21	2			13	11 PP
PETROPAVLOVK	64.69	37.5	10	40K	0							
ADELAIDE	64.93	139.5	10	38	-4	19	14	-8				
ATHENS	65.44	305.7	10	44	-1	19	26	-2				
LWIRO	65.49	261.2	10	47A	2							
SOFIA	65.95	310.8	10	50	2	19	38	3			13	22 PP
APATITY	66.11	338.8	10	49A	0	19	34	-2			13	12 PP
LWOW	66.14	318.6	10	50A	0	19	40	3			14	45 PPP
KAJAANI	67.13	334.3	10	57A	1							
SKOPJE	67.32	310.0	10	55	-2	19	53	2				
HELSINKI	67.39	329.9	10	58	0							
NURMIJARVI	67.61	330.2	10	58	-1	19	52	-3			13	26 PP
TIMISOARA	67.65	314.0	10	59	0	19	54	-1			20	11 PS
BELGRADE	68.15	313.0	11	4K	2						24	48 SS
WARSAW	68.31	321.0	11	0	-3	20	7	4			13	39 PP
SODANKYLA	68.51	337.6	11	4A	-1							
SKALNATE PL.	68.53	317.7	11	16	11						21	8
KRAKOW	68.80	318.6	11	7	1						13	46 PP
KHEYS	68.84	354.2	11	6A	-1	20	9	0			13	47 PP
KEVO	69.10	340.1	11	8	0							
BUDAPEST	69.25	315.8	11	8	-1	20	15	1			13	32
BROKEN HILL	69.62	248.8	11	11A	0							
HURBANOVO	69.82	316.2	11	5	-8						13	47 PP
RACIBORZ	69.91	318.6	11	14	1						11	41
HONIARA	70.33	105.3	11	15K	-1							
TARANTO	70.47	308.3				20	18	-10				
BRATISLAVA	70.57	316.5	11	18	1	21	30	60			13	49 PP
TOOLANGI	70.85	138.1	11	16	-3				11	25	11	30 *SP
BRISBANE	70.88	125.5	11	17	-2	20	31	-2				
KIRUNA	70.92	337.5	11	20A	1	20	36	2				
UPPSALA	70.98	328.9	11	20A	0	20	32	-2				
VIENNA-H.	71.06	316.6	11	21A	1	20	27	-8				
ZAGREB	71.32	314.0	11	23A	1	20	37	-1				
BULAWAYO	71.57	243.2	11	24A	1							
KARLSKRONA	71.78	324.9	11	23A	-1							
TROMSOE	71.80	339.2	11	24	-1							
MESSINA	71.88	306.0	11	26A	1	20	46	1	11	38	14	7 PP
CANBERRA	71.97	134.5	11	22K	-4							
PRUHONICE	72.27	318.4	11	28A	1	20	51	2			15	53 PPP
LJUBLJANA	72.33	314.3	11	29A	1				11	36	14	12 PP
RIVERVIEW	72.72	132.2	11	28	-2	20	50	-4			21	39
TRIESTE	72.88	313.9	11	45	14	20	56	0			14	18 PP
KASPERSKE H.	72.91	317.5	11	31A	0						14	12 PP
COLLMBERG	73.24	319.8	11	34A	1	21	0	0				
COPENHAGEN	73.54	324.4	11	36	1	21	4	0				
CHEB	73.66	318.5	11	36	0	21	6	1			12	10
RANGUI	73.74	270.6	11	36	0	21	7	1				
SKALSTUGAN	73.78	332.6	11	37	1						11	54 PCP
GOTEBORG	73.80	326.5	11	36A	0							
HALLE	73.90	320.0	11	38	1	21	13	5				
PIETERMZBURG	73.99	233.5	11	38A	1							
ROME	74.00	310.0	11	36A	-1	21	30	21			14	30 PP
JENA	74.15	319.4	11	39	1	21	12	2			14	24 PP
TARRALEAH	74.19	141.7	11	35	-4							
PADOVA	74.21	313.7	11	39	0	21	15	4			14	15 PP
SAVANNAH	74.30	140.9	11	37	-2							
MOORLANDS	74.72	141.5	11	40	-2							
FLORENCE X.	74.77	312.0	11	35	-7	20	54	-23			14	18 PP
KONGSBERG	75.01	328.5	11	43	0	21	36	16	11	52	14	30 PP
RAVENSBURG	75.60	316.2	11	48	1							
CHUR	75.74	315.3	11	48A	1	21	26	-2				
STUTTGART	75.75	317.3	11	48A	0	21	30	2	11	56	14	40 PP
TUBINGEN	75.91	317.0	11	50	2							
EBINGEN	76.01	316.7	11	50	1							
HEIDELBERG	76.07	318.0	11	50	1							
CHIAVARI	76.11	312.7									14	15 PP
PAVIA	76.13	313.6	11	51A	1	21	39	7			14	45 PP

FELDBERG	76.18	318.8	11	52	2						
MUNSTER	76.56	320.7	11	54	2						
STRASBOURG	76.77	317.2	11	54A	1	21	38	-1		14	50 PP
BENSBERG	76.93	319.6	11	54A	0					15	0 PP
BASLE	77.00	316.1	11	57	2						
WITTEVEEN	77.06	321.6	11	58A	3						
MONACO	77.53	312.3	11	56	-1						
WELSCHBRUCH	77.72	317.1	11	56	-3					12	56
ISOLA	77.74	312.7	12	0	1						
ROSELEND	77.86	314.3	12	0	1						
KOUMAC	77.88	114.8	11	58A	-1						
DE BILT	78.04	320.9	12	1A	1	21	55	2		14	54 PP
KIMBERLEY	78.10	236.4	12	0	-1						
BESANCON	78.11	316.0	12	0	-1					15	48
GRAHAMSTOWN	78.52	231.5	12	23K	20						
DOURBES	78.65	319.0	12	22	18	22	20	20			
NORD	79.47	351.9	12	7A	-1	22	5	-3			
MIRNY	79.90	180.0	12	7	-3	22	6	-7		12	19 PCP
GARCHY	80.07	316.3	12	11A	0					15	16 PP
PARIS	80.21	317.9	12	13	1					15	21 PP
CLERMONT-FD.	80.28	314.8	11	58	-14					12	29
NOUMEA	80.36	115.7	12	12A	-1						
WILKES	80.76	172.9	12	12	-3	22	14	-8	12 24	12	48
ABERDEEN	81.42	326.7				22	33	5		29	41 SSS
KEW	81.52	320.8	12	22A	3	22	33	4			
DURHAM	81.61	324.3	12	21A	2	22	21	-9		22	31 SKS
FOLINIERE	82.14	318.2	12	23	1						
BAGNERES	82.87	312.5	12	26	0					13	25
TORTOSA	83.07	310.2	12	24	-3	22	49	4			
ALERT	83.41	356.8	12	29A	0	22	49	0			
BANDEIRA	83.70	253.1	12	31A	1						
MAWSON	83.85	191.1	12	30K	-1	22	48	-5		23	1 *SS
ALICANTE	84.34	307.9	12	34	1	22	54	-4		15	49 PP
SCORESBY SD.	85.29	342.2	12	40	2	22	59	-8			
ALMERIA	86.22	306.8	12	44A	1	23	16	0		16	15 PP
TOLEDO	86.67	310.1	12	47A	2	23	27	6		16	8 PP
SIDA	86.89	335.5	12	10	-36						
GRANADA	87.02	307.4	12	48K	1	23	27	3		16	13 PP
DUMONT	87.15	163.0	12	46	-1						
MACQUARIE I.	87.65	147.8	12	50	0						
MALAGA	87.75	307.1	12	50A	0	23	30	-1		16	19 PP
MOULD BAY	88.31	7.3	12	52A	-1						
THULE	89.48	355.6	12	57	-1					13	40
COLLEGE	89.54	21.9	12	58	-1	23	48	1		30	37 PKKP
SERRA PILAR	89.65	312.3	13	0K	1				13 8	16	35 PP
ROXBURGH	90.28	136.9				23	29	-25		30	0 SS
LISBON	90.79	310.1	13	7	2	23	36	-23			
ONERAHI	91.03	126.5	13	17	11						
RESOLUTE	91.79	2.1	13	9A	0						
TARATA	91.98	129.7	12	43	-27						
WELLINGTON	92.83	131.7								30	28 SS
TUAI	93.96	128.8	13	18	-1						
GODHAVN	94.06	348.6	13	23K	3						
AFIAMALU	98.21	102.3				24	15	0		26	15 SP
CAPE HALLETT	99.02	162.4	13	42	0						
HORTA	104.74	316.3								27	46 PS
SCHEFFERVLLE	109.73	347.7	18	58	777						
PENTICTON	111.10	22.2	18	28	-6						
HUNGRY HORSE	113.85	19.3	18	15	-24					15	1 P
BLUE MTS.	115.70	23.4	18	43	0					19	37 PP
BUTTE	116.38	19.6								19	54
BOZEMAN	117.17	18.7	18	48	3						
MINERAL	117.50	29.2	18	48	2						
CALISTOGA	118.35	31.1	18	50K	2						
BERKELEY	119.10	31.5	18	53K	4					36	40 SS
LICK	119.82	31.4	18	56K	5						
BREBEUF	119.95	349.1	18	59	8					30	20 PS
EUREKA	120.74	25.8	18	55	3					20	27 PP
PRIEST	121.25	31.6	18	56A	3						
DUGWAY	121.39	22.9	18	56A	2						
FLAMING GRGE	121.96	19.8	19	5	10						
PRICE	122.65	21.7	18	57	1						
LARAMIE	122.77	16.5	18	57	1						
LONDON ONT.	123.40	354.8	18	58	0						
PASADENA	124.07	34.1	19	3	4						
DUBUQUE	124.09	3.2	19	0	1						
GOLDEN	124.32	17.1	19	0	1						
PALISADES	124.34	348.0				25	33	-28			
PENNSYLVANIA	125.23	351.5	19	2A	1						

MORGANTOWN	126.65	353.1	19	8K	4							
MANHATTEN	126.75	9.2	19	5K	1							
LAWRENCE	127.17	8.0	19	6	1					21	12	
BLOOMINGTON	127.51	359.4	19	20	15							
ROLLA	128.60	4.9	19	8K	0							
TUCSON TELE.	129.04	25.9	19	11	3							
BLACKSBURG	129.10	353.2	19	10	2							
TULSA	130.10	9.3	19	12	2					21	23	PP
FAYETTEVILLE	130.15	7.5	19	12	2					22	33	PP
WICHITA MTS.	130.74	12.5	19	6	-6					21	19	PP
LUBBOCK	131.03	16.4	19	31	19					22	37	
LITTLE ROCK	131.65	5.8	19	14	1							
HOUSTON	136.21	10.5								22	3	PP
TRINIDAD	144.95	312.1	19	40	3							
HOPE	147.01	341.8	19	46	5							
CARACAS	148.83	319.1	19	46	2	26	43	-6				
SANTA LUCIA	155.21	214.3	20	14	21							
BOGOTA	157.79	323.6	20	3	7							
CHINCHINA	158.35	327.6	20	2	5					24	27	PP
LA PAZ	161.48	258.6	20	3	3							
AREQUIPA	164.68	257.3	20	7	3							

NOVEMBER 17 11.H 7.M 25.S EPICENTRE 16.31 -98.11 DEPTH= 104.KM

A=-0.13541 B=-0.95067 C= 0.27907 D=-0.9900 E= 0.1410
G=-0.0394 H=-0.2763 K=-0.9603 HT= 5.5

DEPTH OF FOCUS= 0.011R

SE= 3.14

	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
OAXACA	1.46	60.9	0	29	2	0	53	6				
PUEBLA	2.71	358.1	0	51	8	1	29	13				
TACUBAYA	3.25	341.4	0	42	-9							
VERA CRUZ	3.44	32.9	0	42	-11							
COMITAN	5.74	89.7	1	39	14	2	21	-9				
LEON	5.86	325.3	0	23	-63						1	4
MANZANILLO	6.53	295.6				3	5	16				
GUADALAJARA	6.59	312.1	2	44	68						3	14
SAN SALVADOR	8.99	105.7	2	6	-3						5	6
MERIDA	9.27	58.9	2	11	-2	3	49	-7				
MAZATLAN	10.37	312.5				4	44				5	53
CHIHUAHUA	14.30	330.4									7	35
DALLAS	16.51	3.9	3	43	-4							
LUBBOCK	17.53	349.6	3	56	-3							
WICHITA MTS.	18.34	358.7	4	5A	-4	7	38	11			4	27
LITTLE ROCK	19.10	14.6	4	14	-3							
TUCSON	19.63	326.2	4	21	-2							
TULSA	19.63	5.6	4	22	-1	8	5	11				
TUCSON TELE.	19.64	326.6	4	21	-2							
FAYETTEVILLE	20.01	9.3	4	24A	-3						11	17
HOPE	20.48	82.2	4	32	0							
ROLLA	22.19	13.1	4	48A	-1	9	0	19				
LAWRENCE	22.71	5.8	4	53	-1						6	33
MANHATTEN	22.85	3.1	4	54	-1	9	10	17				
FLORISSANT	23.41	15.4	5	0A	-1	9	15	12				
GOLDEN	24.15	346.2	5	9	1	9	37	22				
BOULDER CITY	24.61	325.9	5	13	1						12	57
CHINCHINA	24.77	114.6	5	6	-8	9	59	33				
BLOOMINGTON	24.96	21.8	5	16A	0							
PASADENA	25.31	318.3	5	19	0	9	59	24				
PRICE	25.73	337.0	5	23A	0							
LARAMIE	25.74	347.0	5	24	1						13	56
CHAPEL HILL	25.88	37.4	5	25	1							
BLACKSBURG	26.04	33.5	5	26	0	10	8	21				
BOGOTA	26.30	113.6	5	32	4							
FLAMING GRGE	26.41	340.5	5	30	1						13	34
DUGWAY	27.02	334.7	5	35A	0							
SALT LAKE C.	27.13	336.7	5	36	0							
EUREKA	27.86	329.5	5	43	1						14	38
MORGANTOWN	28.12	30.7	5	45K	0							
PRIEST	28.15	318.8	5	45K	0							
CLEVELAND	28.87	26.4	5	50A	-1	10	54	22				
LICK	29.51	319.8	5	47A	-10							
RENO	29.90	325.0	6	1K	0							

PENNSYLVANIA	30.04	31.6	6	1A	-1						
BERKELEY	30.23	320.0	6	3A	0	11	15	21			
LONDON ONT.	30.31	25.0	6	4	0						
CARACAS	30.85	96.8	6	9	0	11	15	11			
CALISTOGA	30.91	320.8	6	3A	-6						
BOZEMAN	31.22	342.4	6	13	1						
MINERAL	31.46	324.3	6	15K	1					7	11
BUTTE	31.99	340.8	6	19	0					6	55
PALISADES	32.30	35.5	6	23	2	11	44	18			
BLUE MTS.	32.73	334.4	6	25A	0	11	47	14		7	46 PP
HUNGRY HORSE	34.52	341.2	6	41	0						
SPOKANE	35.11	337.3	6	45	-1	12	9	-1			
BREBEUF	35.61	30.0	6	50A	0	12	41	24		8	16 PP
FORT FRANCE	35.61	87.4	6	46	-4					12	26
HUANCAYO	36.07	140.0	6	55	1						
TRINIDAD	36.10	94.2	6	52	-2						
SHAWINIGAN	36.78	29.6	7	0A	0						
SEATTLE	37.07	332.6	6	54	-8					18	11
PENTICTON	37.29	336.7	7	4A	0						
AREQUIPA	41.83	139.9	7	43	2						
LA PAZ	44.01	136.4	8	0	1						
SCHEFFERVLLE	45.39	25.0	8	10	0						
RESOLUTE	58.40	1.0	9	47A	0						
COLLEGE	58.84	337.6	9	50	0					32	29
MOULD BAY	60.96	354.3	10	5A	0	18	29	16			
ALERT	67.71	4.8	10	49	0						
NORD	72.72	8.8	11	20	1						
FOLINIERE	82.82	41.4	12	17	2						
MALAGA	83.32	53.8	12	20A	3	22	51	23		15	31 PP
GRANADA	83.82	53.2	12	22A	2						
SKALSTUGAN	84.26	24.9	12	27	5						
KONGSBERG	84.73	29.1	12	27	3						
KIRUNA	85.18	19.5	12	28K	2						
GARCHY	85.55	42.1	12	30	2					12	46
SODANKYLA	87.39	18.6	12	38	1						
UPPSALA	88.26	27.1	12	42K	1						
JENA	89.35	36.6	12	49	3						
COLLMBERG	89.99	35.9	12	51	2					16	28
KASPERSKE H.	91.30	37.6	12	58	3						
PRUHONICE	91.47	36.6	12	58	2						
BRATISLAVA	93.81	37.4								16	54
WARSAK DAM	129.01	11.1	18	59	3						
QUETTA	131.59	17.4	19	5	4					21	21 PP
POONA	144.49	13.2	19	26A	1						
MUNDARING	145.20	237.1	19	28	2				19 33		
TANANARIVE	147.19	99.7	19	37	8					20	51

NOVEMBER 17 14.H 21.M 33.S EPICENTRE 2.85 121.87 DEPTH= 636.KM

A=-0.52734 B= 0.84822 C= 0.04931 D= 0.8493 E= 0.5280
G=-0.0260 H= 0.0419 K=-0.9988 HT= 7.1

DEPTH OF FOCUS= 0.095R

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	
MANILA	11.78	356.3	2	35	-1	4	45	3					
LEMBANG	17.17	235.9	3	26	-2	6	14	-1					
DJAKARTA	17.49	239.1	3	32	1	6	23	3					
DARWIN	17.55	149.7	3	33	2	6	23	2					
TANGERANG	17.66	239.5	3	32A	0	6	25	2					
HONG KONG	20.73	339.5				7	15	2			14	6	SCS
CANTON	21.76	338.4				7	29	-1					
PORT MORESBY	27.97	116.1	5	3A	-1						10	43	SCP
ZO-SE	28.11	358.7	5	6A	1	9	9	0			14	36	SCS
KUNMING	28.81	321.9				9	22	2			14	40	SCS
NANKING	29.21	354.6	5	15A	1	9	28	2			14	42	SCS
PORT BLAIR	30.19	288.4				9	32	-9			14	44	
RABAUL	31.08	102.9	5	29	-1								
CHARTERS TS.	33.06	134.6	5	47	0	10	25	0					
SIAN	33.50	340.3	5	52	2	10	32	1					
ABUYAMA	34.32	20.2	5	57A	0								
MUNDARING	35.04	188.4	6	2	-1	10	51	-3					
SHILLONG	36.64	310.8	6	18K	2	11	18	0					
MATUSIRO	36.76	22.2	6	6A	-11	11	12	-8					

LANCHOW	37.01	335.4	6	22A	3	11	24	0			15	21 SCS
PEKING	37.37	352.8	6	22	0	11	28	-1			15	25 SCS
CALCUTTA	37.92	303.9									11	37
PAOTOW	39.06	345.6	6	37	1	11	53	0				
HONIARA	39.85	108.3	6	40	-2							
VISHAKHAPTNM	40.60	294.1	6	51	3	12	18	3				
ADELAIDE	40.81	158.6	6	49K	-1	12	17	-1				
CHATRA	40.90	309.0	6	51K	0							
CHANGCHUN	40.92	3.8	6	50	-1	12	15	-5			15	46 SCS
BRISBANE	42.32	137.3	7	3	1	12	42	2				
MADRAS	42.44	286.1	7	2K	-1	12	40	-1			8	53
CANBERRA	45.69	148.6	7	28K	0	13	29	2	9	21	8	53 PCP
RIVERVIEW	45.74	145.4	7	31	3	13	32	5				
TOOLANGI	45.80	153.6	7	29A	0	13	31	3			8	53 PCP
Y.-SAKHLINSK	47.58	19.3	7	41K	-1							
KOUMAC	47.64	121.2	7	43K	1						11	59
POONA	49.50	291.9	7	54A	-2	14	16	-3			16	39
NEW DELHI	49.59	305.7	7	54K	-3	14	17	-3			16	39
SAVANNAH	49.97	155.3	8	1	1							
PORT VILA	50.14	115.8	8	1	0							
TARRALEAH	50.15	156.3	8	2	1							
NOUMEA	50.19	122.2	8	1K	0	14	34	6				
LAHORE	53.03	308.0	8	20K	-2	15	5	-1			9	19 PCP
WARSAK DAM	56.13	309.6	8	43K	0							
ALMATA-2	56.36	322.1	8	45	0							
FRUNSE	57.85	320.4	8	56	1	16	12	4				
PETROPAVLOVK	58.50	25.1	9	0A	1							
QUETTA	58.55	303.8	8	59K	0	16	16	0	11	3		
YAKUTSK	59.33	4.3	9	6K	1	16	27	1				
DUZHANBE	59.95	313.6	9	8	-1	16	35	1				
TASHKENT	60.69	316.7	9	14A	1	16	46	3				
TARATA	63.81	136.6	9	35	2							
MACQUARIE I.	64.87	157.1	9	41K	1							
WELLINGTON	65.06	138.5	9	39	-2							
TUAI	65.56	135.1	9	44	0							
ASHKABAD	67.53	310.0	9	57	1							
VANNOVSKAYA	67.72	310.0	9	58	1							
TIKSI	68.83	2.4	10	3K	-1	18	19	-1				
WILKES	69.51	184.9	10	7	-1							
DUMONT	70.56	172.4	10	13	-1							
SHIRAZ	70.68	300.3	11	14K	59	18	38	-2			12	31 PP
SVERDLOVSK	72.22	329.6	10	23K	-1	18	56	-1				
MIRNY	72.25	191.7	10	22	-2							
TANANARIVE	76.13	249.8	10	47	1							
GORIS	77.04	309.8	10	51	1	19	49	0				
TIFLIS	78.46	311.9	11	0	2	20	6	2				
MAWSON	81.28	199.4	11	12	-1				13	22		
HAWAII V.OB.	82.33	70.9	11	21	3							
KSARA	85.10	303.5	10	34	-57	21	15	6				
JERUSALEM	85.67	301.5	11	35	1				13	54		
COLLEGE	87.58	25.3	11	42	-1				13	52	15	20 PP
KAJAANI	89.29	334.0	11	50	-1							
SODANKYLA	89.42	337.3	11	51A	-1							
SOUTH POLE	92.83	180.0	12	7	0							
MOULD BAY	93.86	12.1	12	12	0							
BROKEN HILL	93.99	255.8	12	12	-1							
BYRD STATION	97.58	171.1	16	35	246							
MINERAL	108.01	46.0	17	12	777							
LICK	108.98	49.0	18	1	777							
BLUE MTS.	109.23	40.3	17	19	777						20	23 SKP
WOODY	111.64	49.8	17	24	1						28	22 PKKP
EUREKA	112.35	45.1	17	27	2				20	4	18	12 PP
FLAMING GRGE	116.19	41.2	17	44	12							
GOLDEN	119.46	40.6	17	41	2						20	20
ALBUQUERQUE	121.16	45.8	17	45	3							
WICHITA MTS.	126.73	41.8	17	55	2				18	17	19	51 PP
TULSA	127.81	38.9									20	20 SKP
PENNSYLVANIA	132.97	20.5									20	38

NOVEMBER 18 6.H 43.M 18.S EPICENTRE 0.02 124.62 DEPTH= 121.KM

A=-0.56808 B= 0.82298 C= 0.00037 D= 0.8230 E= 0.5681
G=-0.0002 H= 0.0003 K=-1.0000 HT= 7.2

DEPTH OF FOCUS= 0.014R

SE= 3.33

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
DARWIN	13.78	153.6	2 58	-13				
MANILA	14.97	346.6	3 27	1	6 41	32		
LEMBANG	18.27	247.8	4 8	2	7 43	20		
DJAKARTA	18.79	250.5	4 12	0				9 40
TANGERANG	18.98	250.8	4 13K	-1	7 58	20		
PORT MORESBY	24.31	113.3	4 58K	-9	8 59	-15		
HONG KONG	24.37	336.0	5 8	0				
CANTON	25.42	335.2	5 19	1				
RABAUL	27.85	99.0	5 31	-9				6 10
CHARTERS TS.	29.13	134.6	5 44	-7				
ZO-SE	31.08	354.3	6 8	0				
NANKING	32.34	350.7	6 18	-1				
KUNMING	32.71	321.3	6 24A	1				
MUNDARING	32.80	193.3	6 14	-9				
SIAN	37.09	338.2	7 1K	1				
ADELAIDE	37.22	160.7	6 55K	-6				8 16 PP
BRISBANE	38.40	137.5	7 5	-6				
MATUSIRO	38.46	17.7	7 8A	-3				
CHITTAGONG	38.90	307.0	7 16	1	13 15	11	7 28	8 45 PP
SHILLONG	40.55	311.3	7 29A	0				
PEKING	40.56	350.0	7 28	-1				
LANCHOW	40.72	333.8	7 31A	1	13 21	-10		
CANBERRA	41.87	149.6	7 34K	-5			7 50	9 31 PCP
RIVERVIEW	41.88	146.1	7 36	-3				7 55
TOOLANGI	42.08	155.0	7 36K	-5			7 52	9 14 PP
LHASA	43.49	315.6	7 55	3				
KOUMAC	43.84	120.3	7 49K	-6				
CHATRA	44.80	309.5	8 4A	1				
NOUMEA	46.38	121.4	8 10K	-5				
Y.-SAKHLINSK	49.41	16.3	8 36A	-3				
POONA	53.11	293.2	9 5	-2				
NEW DELHI	53.47	306.3	9 7A	-2				
DEHRA DUN	53.51	308.6	9 11K	1				
LAHORE	56.93	308.4	9 34	0	17 26	9	9 49	
PETROPAVLOVK	59.94	23.0	9 53	-2				
WARSAK DAM	60.04	310.0	9 55	-1				
KARAPIRO	60.12	134.9	10 11	14				
ALMATA-2	60.26	321.9	9 57	-1				
TUAI	61.63	135.2	10 1	-6				
FRUNSE	61.76	320.2	10 9	1				
QUETTA	62.40	304.3	10 11A	-1	18 34	7	10 22	12 34 PP
DUZHANBE	63.88	313.7	10 22	0				
TASHKENT	64.62	316.7	10 26	0				
WILKES	66.98	186.1	10 38	-3				
DUMONT	67.44	173.4	10 44	0				
MIRNY	70.09	192.9	10 58	-3				
VANNOVSKAYA	71.62	310.2	11 10	0				
SHIRAZ	74.47	300.7	11 26A	0	20 57	7		
SVERDLOVSK	76.03	329.4	11 35K	0				
TEHERAN	76.41	306.7	11 40	3				
TANANARIVE	77.77	250.7	11 49A	4				12 17
MAWSON	79.56	200.1	11 53A	-2				
GORIS	80.95	309.9	12 2A	0				
TIFLIS	82.38	312.0	12 12	3				
MOSCOW	88.28	325.6	12 38A	-1				
KSARA	88.94	303.6	12 44	2				
COLLEGE	88.94	25.3	12 40	-2				15 55 PP
JERUSALEM	89.47	301.6	12 46	2				
APATITY	90.44	337.4	12 49	0				
KEVO	92.62	339.8	12 57	-2				
SODANKYLA	93.06	337.4	13 1	0				
BYRD STATION	94.39	170.9	13 6	-1				
HELSINKI	94.79	330.4	13 7	-2				
NURMIJARVI	94.89	330.7	13 7	-2				
KIRUNA	95.32	338.3	13 9A	-2				
BROKEN HILL	95.97	255.6	13 16	1				
NORD	96.57	354.7	13 15	-2				
UPPSALA	98.46	330.8	13 24	-1				
ATHENS	98.58	308.3	13 25A	-1				

RESOLUTE	101.81	10.0	13	39	-1						
COLLMBERG	103.36	323.1	13	49	2				18	7	PP
ROSELEND	109.19	319.1	18	51	777						
BLUE MTS.	109.54	41.8	18	16	777				29	35	PKKP
WOODY	111.30	51.4	19	21	62				29	18	PKKP
EUREKA	112.33	46.8	18	23	2						
FLAMING GRGE	116.43	43.2	18	31	2						
TUCSON	118.71	52.7	18	35	2						
TUCSON TELE.	118.77	52.6	18	35	1						
GOLDEN	119.72	42.9	18	37	2						
ALBUQUERQUE	121.06	48.2	18	40	2						
WICHITA MTS.	126.88	44.8	18	50	1				19	29	
DUBUQUE	127.10	32.4	18	50	0						
TULSA	128.17	42.0	19	4	12						
FAYETTEVILLE	129.12	40.9	18	54	0						
ROLLA	129.46	37.6	18	55	1						
FLORISSANT	129.79	35.7	18	56	1						
LITTLE ROCK	131.11	41.1	18	57	0						
BLOOMINGTON	131.69	32.5	19	0	2						
AREQUIPA	157.22	136.6	19	19	-22						
LA PAZ	159.36	143.1	18	47	-56						

NOVEMBER 20 7.H 32.M 39.S EPICENTRE 56.24 159.28 DEPTH= 18.KM

A=-0.52223 B= 0.19751 C= 0.82962 D= 0.3537 E= 0.9353
G=-0.7760 H= 0.2935 K=-0.5583 HT= -7.7

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	
PETROPAVLOVK	3.25	186.8	0	51A	-1								
MAGADAN	5.61	309.8	1	26	1						1	54	
Y.-SAKHLINSK	13.79	234.9									4	31	
YAKUTSK	16.14	303.2	3	48	0								
TIKSI	20.04	332.1	4	35K	0						4	54	PP
VLADIVOSTOK	21.87	244.7	4	58	4	8	55	5					
MATUSIRO	24.30	224.7	5	16	-2	9	35	2					
COLLEGE	26.62	49.5	5	41	1						7	31	
IRKUTSK	31.63	286.4	6	26	1								
PEKING	32.39	258.4	6	33	2								
MOULD BAY	34.36	24.8	6	50K	2								
PAOTOW	35.40	265.0	7	3	6								
KHEYS	36.82	344.4	7	13	4								
ALERT	39.87	7.9	7	37	2								
RESOLUTE	40.60	23.1	7	42K	1								
LANCHOW	42.04	265.4	7	52	-1								
THULE	44.18	14.5	8	12	2								
PENTICTON	46.85	62.4	8	33A	2								
BANFF	47.61	58.1	8	38K	1								
KEVO	49.68	340.3	8	51	-2								
SVERDLOVSK	49.70	314.6	8	53A	0								
BLUE MTS.	51.05	65.3	9	5	1				9	30			
ALMATA-2	51.39	292.3	9	6	0						10	27	PCP
ALMATA	51.61	292.5	9	6	-2								
SODANKYLA	51.79	338.8	9	11	2								
KIRUNA	52.56	341.7	9	17	2								
BUTTE	52.58	61.3	9	16	1						9	55	PCP
FRUNSE	53.12	293.7	9	19	0						11	23	PP
BOZEMAN	53.58	60.6	9	22	-1								
KAJAANI	54.38	336.1	9	28	-1								
EUREKA	55.60	69.1	9	39	1						14	25	SCP
DUGWAY	56.70	66.3	9	47K	2								
SALT LAKE C.	56.77	65.2	9	47	1								
TASHKENT	56.93	296.0	9	50	3								
PULKOVO	57.46	332.2	9	55	4								
SKALSTUGAN	57.83	343.3	9	55	2								
PRICE	58.16	65.4	9	58	2								
NURMIJARVI	58.20	335.5	9	56	U						18	33	PS
PASADENA	58.42	74.8	9	59	1								
KHOROG	58.66	291.5	10	0	1								
MOSCOW	58.78	325.7	10	0A	0						12	7	PP
BOULDER CITY	58.82	71.0	9	47	-13								
CHITTAGONG	59.21	264.4	10	2	-1						10	19	*SP
DUZHANBE	59.26	294.2									18	29	PS
LARAMIE	59.48	60.6	10	7	2								

UPPSALA	60.32	338.9	10	9	-2						
GOLDEN	60.81	61.6	10	16	2						
KONGSBERG	61.97	343.1	10	22	0						
SCHEFFERVLLE	63.11	27.9	10	29	0						
GOTEBORG	63.41	341.1	10	29	-2						
TUCSON TELE.	63.79	70.7	10	35	1						
TUCSON	63.80	70.8	10	35	1						
ALBUQUERQUE	63.96	65.8	10	21	-14						
ASHKABAD	64.89	301.0	10	44	3						
MANHATTEN	65.40	56.0	10	44	0						
LAWRENCE	66.20	55.2	10	49	0						
QUETTA	66.72	289.6	10	53	0						
LUBBOCK	67.36	63.3	10	57	0						
TIFLIS	67.86	312.6	11	0	0						
WICHITA MTS.	68.05	60.3	11	2	1					13	28 PP
TULSA	68.43	57.5	11	4	1						
FLORISSANT	68.53	51.9	11	3	-1						
ROLLA	68.59	53.5	11	4	0						
FAYETTEVILLE	69.03	56.3	11	7K	0						
GORIS	69.08	310.3	11	11K	4	20	19	8			
SIMFEROPOL	69.16	321.6	11	10	2						
COLLMBERG	69.26	338.1	11	8	-1						
HALLE	69.28	338.9	11	8	-1						
BREBEUF	69.33	36.8	11	9A	0						
BLOOMINGTON	69.87	49.0	11	14	2						
JENA	69.90	338.9	11	12	0						
TEHERAN	69.95	304.5	11	12	-1						
PRUHONICE	70.17	336.7	11	15K	1					11	40
RENSBERG	70.70	341.7	11	21K	4						
LITTLE ROCK	70.96	55.7	11	18	-1						
KASPERSKE H.	71.18	337.0	11	21K	1						
PENNSYLVANIA	71.94	42.1	11	24K	-1						
STUTTGART	72.41	339.7	11	28	0						
AFIAMALU	73.96	150.7	11	39	2						
SHIRAZ	74.45	300.1	11	38K	-1						
ROSELEND	75.87	340.6	11	49	1					12	29
CHARTERS TS.	76.82	192.6	11	54	1						
KSARA	78.25	314.8	12	4	3					18	15
ATHENS	78.86	325.7	12	7	3						
JERUSALEM	80.30	314.3	12	13	1						
MAWSON	142.20	218.4	19	40	8						
SOUTH POLE	146.06	180.0	19	38	-1						

NOVEMBER 23 0.H 30.M 3.S EPICENTRE -15.12 -75.40 DEPTH= 22.KM

A= 0.24349 B=-0.93460 C=-0.25928 D=-0.9677 E=-0.2521
G=-0.0654 H= 0.2509 K=-0.9658 HT= 5.7

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	
HUANCAYO	3.06	1.2	0	55	7	1	39	14					
SALINAS	9.64	146.7	2	19	-2								
ANTOFAGASTA	9.74	151.9	2	19	-3	4	2	-10			5	28	
SANTA LUCIA	18.74	167.5	4	21	1	7	37	-8					
BOGOTA	19.66	3.9	4	33A	3	8	19	14					
CHINCHINA	19.97	359.4	4	35A	1	8	23	11	4	48			
BALBOA HTS.	24.28	350.0	5	19	2								
GALERAZAMBA	25.74	0.3	5	42	11	10	23	27					
CARACAS	26.81	18.7	5	41A	0	10	16	2					
GRENADA	30.20	27.4	6	12	1								
FORT FRANCE	32.84	26.0	6	32	-2	11	56	7					
HOPE	32.94	357.6									7	4	
ST. CLAUDE	33.78	24.2	6	44	1	12	23	19					
SAN JUAN	34.52	15.7	6	50	1						8	18	PP
ST. KITTS	34.59	21.6	6	59	9								
FAYETTEVILLE	53.95	341.2	9	25A	1								
WICHITA MTS.	54.25	336.4	9	25	-2	17	3	2			10	32	PCP
TULSA	54.30	339.6	9	27	0	17	5	3					
LUBBOCK	54.61	332.9	9	29	0						23	27	
ROLLA	54.97	344.1	9	30A	-2	17	8	-3					
BLOOMINGTON	55.02	349.5	9	30	-2	17	10	-2					
ST. LOUIS 1	55.26	345.9	9	33	-1	17	13	-2					
FLORISSANT	55.44	345.8	9	33A	-2	17	15	-2					
PALISADES	55.86	1.4	8	46	-52	17	26	3					
LAWRENCE	56.92	341.6	9	44	-2						10	34	

MANHATTEN	57.55	340.6	9	49	-1							
ALBUQUERQUE	57.88	330.0	9	37	-16						10	43 PCP
TUCSON	58.05	324.6	9	54	0							
TUCSON TELE.	58.06	324.8	9	53	-1							
BREBEUF	60.36	1.4	10	10A	0	18	25	3			11	4 PCP
GOLDEN	61.28	333.9	10	1	-15							
SHAWINIGAN	61.43	2.1	10	16A	-1							
GLEN CANYON	62.03	327.6	10	21	0							
LARAMIE	62.71	334.8	10	29	3							
BOULDER CITY	63.04	324.7	10	26	-2							
PRICE	63.68	330.0	10	35	3						25	17
PASADENA	63.70	321.1	10	33	1	19	5	1				
FLAMING GRGE	64.05	331.9	10	34	-1							
SALT LAKE C.	65.08	330.2	10	41	0							
DUGWAY	65.11	329.1	10	42A	1							
EUREKA	66.20	326.6	10	49	1							
PRIEST	66.55	321.2	10	52A	1							
BYRD STATION	67.90	187.5	11	0	1							
LICK	67.93	321.6	11	1K	2							
RENO	68.34	324.4	11	3A	1							
BERKELEY	68.65	321.7	11	5A	1	20	15	11			24	39
CALISTOGA	69.34	322.1	11	11K	3							
MINERAL	69.90	324.0	11	12K	1							
SCHEFFERVLLE	70.05	5.3	11	12	0							
BLUE MTS.	70.79	329.8	11	17A	0	20	35	6	11	24	25	15 SS
BANFF	74.73	335.1	11	39	-1							
SOUTH POLE	74.97	180.0	11	43	1							
PENTICTON	75.12	331.8	11	43A	1							
SEATTLE	75.22	329.3	11	39	-4							
VICTORIA	76.36	329.4	11	47	-2							
CAPE HALLETT	82.82	196.3	12	32	8							
SERRA PILAR	83.25	44.4	12	28A	2						15	40 PP
MALAGA	84.36	49.8	12	34A	2	23	5	10			15	51 PP
BANDEIRA	84.99	104.0	11	39A	-56							
GRANADA	85.13	49.6	13	3K	27							
TOLEDO	85.86	47.0	12	41A	2	23	20	10			24	19 PS
BAGNERES	89.99	45.2									20	0
RESOLUTE	90.45	354.9	13	2	1							
THULE	91.46	1.7	13	6	0							
KIMBERLEY	91.48	120.2	13	7	1							
MAWSON	92.11	165.2	13	19K	10							
KEW	92.68	37.2									25	31 PS
SCORESBY SD.	92.91	15.7	13	13	0							
DURHAM	93.17	33.9	13	16A	2						17	3 PP
GARCHY	93.35	41.9	13	15	0							
DUMONT	94.34	193.4	13	20	1							
WELLINGTON	94.39	225.3									25	57 PS
MOULD BAY	94.88	350.4	13	22A	0							
BANGUI	95.00	86.8	13	23	1						17	10 PP
DOURBES	95.18	39.6	13	30	7							
KARAPIRO	95.21	228.6	13	25	2							
ROXBURGH	96.08	219.8									26	9 PS
DE BILT	96.12	37.7									24	45
COLLEGE	96.31	335.8	13	28	0						17	18 PP
ALERT	97.65	1.7									24	51
STUTTGART	97.77	41.7	13	35	0							
FLORENCE X.	97.92	46.9									24	24
ROME	98.38	48.9									24	27
WILKES	98.65	182.4									31	47 SS
JENA	99.70	39.9				24	15	-5			25	15 S
KASPERSKE H.	100.61	41.9	13	49	1						14	32
COLLMBERG	100.65	39.7	13	49	1							
PRUHONICE	101.39	41.2	13	53	2	24	48	20				
UPPSALA	104.45	31.4				25	59	77			27	38 PS
UMEA	105.93	27.3				25	1	12			27	55 PS
ATHENS	106.25	54.4									24	51
KSARA	115.81	59.5									19	46 PP
CHARTERS TS.	126.13	230.7	19	5	4							
SHIRAZ	130.11	63.9	19	7	-2						22	34 SKP
PORT MORESBY	131.30	242.6	19	15	4						22	39 PP
QUETTA	142.36	60.0	19	31	0				19	38	22	40 PP
MATUSIRO	143.27	311.8	19	34	1							
LAHORE	147.90	54.1	19	47	6				19	55		
BOMBAY	149.40	78.4	19	56	13						26	54
POONA	150.39	79.1	19	55A	10							
LEMBANG	157.98	188.0									20	33
NANKING	158.76	325.0									24	24 PP
LANCHOW	159.15	1.8	20	4	8						24	17 PP
LHASA	160.90	38.6	20	3	5						24	26 PP

SHILLONG	164.18	46.9	20	3A	1								
CHENGTU	164.53	1.9	20	5	3							24	45 PP
CHITTAGONG	165.92	57.4	20	7	4							24	55 PP
KUNMING	169.90	9.7	20	9	3							25	10 PP

NOVEMBER 23 23.H 5.M 47.5 EPICENTRE -21.63-179.24 DEPTH= 603.KM

A=-0.93035 B=-0.01242 C=-0.36646 D=-0.0133 E= 0.9999
G= 0.3664 H= 0.0049 K=-0.9304 HT= 4.3

DEPTH OF FOCUS= 0.090R

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
SUVA	4.10	327.2	1	28	1							
RAOUL ISLAND	7.68	171.4	1	56	-1	3	30	0				
AFIAMALU	10.45	44.0	2	22	-1	4	15	-4				
PORT VILA	12.35	286.1	2	43K	1	4	59	7				
NOUMEA	13.30	264.5	2	43K	-9							
ONERAHI	15.16	200.3	3	13	3							
KOUMAC	15.42	271.0	3	13	1	5	53	6				
KARAPIRO	16.86	194.4	3	26A	0	6	18	7			4	49
TUAI	17.39	189.5	3	26	-5	6	14	-6			13	50 SCS
TARATA	18.34	195.9	3	50	10							
WELLINGTON	20.24	193.2	3	54	-3	6	57	-10				
GEBBIES PASS	23.02	195.2	4	19	-3	7	43	-9				
CANBERRA	30.93	236.9									10	54
CHARTERS TS.	32.24	266.4	5	41	-1						11	0
TOOLANGI	34.30	234.5	5	59	0						7	30
PORT MORESBY	34.51	285.4	6	OK	-1	10	46	-4			7	41 PP
HAWAII V.OB.	47.06	31.6	7	40	0							
HONOLULU	47.39	27.2	7	43	0							
KIPAPA	47.54	27.2	7	43	-1							
DARWIN	48.46	272.5	7	50	-1							
MUNDARING	57.80	245.1	8	55	-2							
SOUTH POLE	68.50	180.0	10	5	0							
MATUSIRO	70.44	324.7	10	15	-1							
PRIEST	79.78	44.6	11	9A	1							
BERKELEY	79.79	42.4	11	9K	1							
LICK	79.86	43.1	11	9K	1							
CALISTOGA	80.06	41.6	11	10A	1							
ARGENTINE I.	80.38	157.2	11	11	0							
WOODY	80.71	45.8	11	13	0							
MINERAL	81.70	40.7	11	19A	1							
TUCSON TELE.	84.64	52.3	11	34	2							
EUREKA	84.73	44.0	11	33	0							
VICTORIA	85.77	33.5	11	38K	0							
GLEN CANYON	86.33	47.9	11	41	1							
BLUE MTS.	86.91	38.9	11	43K	0				14	1	15	22 PP
SALT LAKE C.	88.09	44.5	11	49	0							
PRICE	88.19	46.0	11	50	1							
PENTICTON	88.23	34.4	11	50K	1							
ALBUQUERQUE	89.01	51.7	11	53	0							
COLLEGE	89.56	12.9	11	53	-2				14	8	15	31 *SP
FLAMING GRGE	89.79	45.3	11	56	0							
HUNGRY HORSE	90.73	37.3	11	59	-2							
BANFF	91.44	34.4	12	2K	-2							
GOLDEN	91.93	47.9	12	6	0							
WICHITA MTS.	94.77	54.6	12	18	-1						15	26
RESOLUTE	109.20	16.3	17	20	777							
NEW DELHI	111.49	293.2	17	24K	-2							
QUETTA	120.57	293.1	17	45K	1							
KEVO	129.34	348.5	18	0	-1						20	26 SKP
APATITY	129.73	344.4	18	1A	-1							
BULAWAYO	130.36	215.2									20	30
TROMSOE	130.75	351.7	18	2	-2							
SODANKYLA	131.45	347.0	18	4	-1						20	34 SKP
KIRUNA	132.19	350.1	18	0	-7						20	36 SKP
SHIRAZ	132.98	290.9	18	4	-4						20	39
KAJAANI	133.92	343.9	18	8	-2						20	42 SKP
UMEA	135.85	347.7	18	1	-12						20	47 SKP
SKALSTUGAN	137.36	352.4	18	5	-11							
NURMIJARVI	137.68	342.7	18	5	-12						20	53 SKP
HELSINKI	137.87	342.2	18	6	-11							

UPPSALA	139.98	346.8	18 12	-9				20 59	SKP	
KONGSBERG	141.49	352.8	18 18	-7				21 4	SKP	
GOTEBORG	143.05	350.0	18 23	-4						
LWIRO	143.74	232.6	18 29	1						
KARLSKRONA	143.80	346.0	18 25	-3						
KSARA	146.79	299.0	18 36	3						
DURHAM	146.86	2.5	18 36A	3						
JERUSALEM	147.72	295.5	18 38K	4						
SKALNATE PL.	148.44	335.3	18 37	2						
RACIBORZ	148.45	338.4	18 40	5				18 45	PKP2	
WITTEVEEN	148.53	353.1	18 41	6						
HALLE	148.94	346.4	18 36	0				18 47	PKP2	
ISTANBUL UN.	149.30	315.5	18 41	5						
JENA	149.55	346.4	18 42	5	21	4		22 37	PP	
PRUHONICE	149.68	342.3	18 43K	6	21	4				
KEW	150.20	1.4	18 43	5						
BENSBERG	150.30	351.8	18 44K	6						
HURBANOVO	150.30	336.0	18 37	-1						
BRATISLAVA	150.45	337.6	18 44	6				18 54	PKP2	
VIENNA-H.	150.64	338.5	18 45K	7						
KASPERSKE H.	150.72	342.7	18 45K	7				19 55		
DOURBES	151.43	354.8	18 51	12						
STUTTGART	152.08	347.9	18 41	1						
FOLINIERE	152.90	1.8	18 49	7						
LJUBLJANA	153.18	338.5	18 50	8				19 5	PKP2	
GARCHY	154.34	356.4	18 34	-10				19 15		
ATHENS	154.38	314.5	19 10A	26						
ROSELEND	155.52	350.0	18 55	10				19 26		

NOVEMBER 24 10.H 34.M 8.S EPICENTRE -24.68 179.83 DEPTH= 499.KM

A=-0.90972 B= 0.00270 C=-0.41520 D= 0.0030 E= 1.0000
G= 0.4152 H=-0.0012 K=-0.9097 HT= 3.4

DEPTH OF FOCUS= 0.073R

SE= 2.09

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
SUVA	6.63	348.4				3	7	1			3	57
ONERAHI	12.02	201.8	2	40	0	4	55	7				
NOUMEA	12.50	278.2	2	46A	1	5	5	8				
PORT VILA	12.76	300.6	2	49	1	5	8	6				
AFIAMALU	13.31	38.0	2	49	-4	5	3	-10				
KARAPIRO	13.71	194.5	2	55	-2	5	27	7	3	38	3	27
TUAI	14.26	188.5	3	8	5	5	35	4			5	59
KOUMAC	14.93	282.8	3	14A	4	5	58	15				
TARATA	15.18	196.4	3	13	1							
WELLINGTON	17.09	193.1	3	30	-1	6	23	1				
GEBBIES PASS	19.87	195.5				7	13	3				
HONIARA	24.26	305.3	4	37K	-1							
BRISBANE	24.44	257.8	4	39	-1	8	26	1				
CANBERRA	28.62	241.0	5	16	-1							
CHARTERS TS.	31.33	271.6	5	41	1	11	18	66				
TOOLANGI	31.90	238.0	5	45K	0							
MOORLANDS	32.20	228.5	5	47	-1							
TARRALEAH	32.64	229.2	5	52	1							
RABAUL	33.51	303.0	5	56	-3							
PORT MORESBY	34.62	290.3	6	8K	0	11	2	-1				
DARWIN	47.81	275.6	7	54	1	12	14	-1				
CAPE HALLETT	47.97	183.9	7	54	0							
DUMONT	48.76	199.8	7	58	-2							
MUNDARING	55.78	247.0	8	49	-2						9	41
BYRD STATION	60.88	170.0	9	25	0							
SOUTH POLE	65.47	180.0	9	58	3							
MIRNY	66.38	205.9	9	58	-2							
LEWBANG	71.03	271.1	10	22K	-6							
MATUSIRO	72.45	325.9	10	36	-1	19	22	2				
NANKING	81.11	311.2	11	25K	1							
LICK	82.66	43.3	11	33K	1							
WOODY	83.44	45.9	11	35	0				13	25		
CHANGCHUN	84.51	323.7	11	41K	0							
MINERAL	84.56	40.9	11	42K	1							
TUCSON	87.05	52.6	11	54	1							
TUCSON TELE.	87.18	52.5	11	55	2							
PEKING	87.48	316.5	11	56K	1							

EUREKA	87.51	44.2	11	56	1			13	8	14	35 PP
BLUE MTS.	89.81	39.3	12	6	0						
SALT LAKE C.	90.85	44.9	12	12	1						
CHENGTU	91.07	303.3	12	14K	2						
COLLEGE	92.71	13.2	12	17	-2						
WICHITA MTS.	97.22	55.2								14	32
WAPSAK DAM	117.91	296.8	17	50	1						
QUETTA	120.93	291.6	17	58	3						
BULAWAYO	127.38	214.7	18	9	1						
BROKEN HILL	132.11	218.7								20	59
SHIRAZ	133.18	288.3	18	27A	8					20	56 PP
SODANKYLA	134.19	345.9								21	3 SKP
KAJAANI	136.58	342.6	18	24	-1					21	11 SKP
NURMIJARVI	140.29	341.0	18	25	-7					21	22 SKP
UPPSALA	142.72	345.2	18	33	-4					19	12
GOTEBORG	145.87	348.4	18	43	1						
KARLSKRONA	146.51	344.0	18	43	0						
KSARA	147.39	294.6	18	49K	5						
JERUSALEM	148.13	290.9	18	51	6						
ISTANBUL UN.	150.75	311.0	18	55K	6						
COLLMBERG	151.56	342.5	18	58K	8					22	3
PRUHONICE	152.27	339.4	19	0	9			21	10		
JENA	152.27	343.9	18	58	7			20	57		
BANGUI	152.91	224.8	18	51	-1						
VIENNA-H.	153.09	335.1	18	54	2					19	27 PKP2
KASPERSKE H.	153.32	339.7	18	53	0					19	18
GARCHY	157.30	354.3	19	34	36					19	58
ROSELEND	158.33	347.0	19	38	39						

NOVEMBER 24 15.H 52.M 19.S EPICENTRE 49.63 155.97 DEPTH= 65.KM

A=-0.59389 B= 0.26482 C= 0.75971 D= 0.4073 E= 0.9133
G=-0.6939 H= 0.3094 K=-0.6503 HT= -5.3

DEPTH OF FOCUS= 0.005R

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	3.79	25.3	0	58	0	1	41	-1				
KURILSK	7.04	234.3	1	44	1	3	5	3			2	44
UGLEGORSK	9.09	271.8	2	15A	4						4	22
Y.-SAKHLINSK	9.21	258.6	2	15A	2	3	59	3				
TUKUBASAN	17.69	226.7	4	1K	-3							
VLADIVOSTOK	17.80	257.7	3	59	-6	7	23	5				
MATUSIRO	18.36	231.2	4	9K	-3	7	35	4				
YAKUTSK	19.10	320.4	4	17A	-3							
ABUYAMA	21.01	233.1	4	40A	0							
CHANGCHUN	21.71	266.2	4	59	12							
TIKSI	25.30	340.2	5	21K	-1						5	44
PEKING	29.50	266.3	6	13	13							
COLLEGE	32.71	41.0	6	29	0							
LANCHOW	39.78	270.3	7	28	0							
MOULD BAY	41.24	21.2	7	40A	0							
ALERT	46.69	6.5	8	26A	2							
RESOLUTE	47.49	19.9	8	30A	-1							
THULE	51.09	12.2	8	58	0				9	15		
SVERDLOVSK	53.03	316.8	9	10	-3							
RABAUL	53.71	184.7	9	18	0							
HUNGRY HORSE	55.53	54.0	9	30	-1							
BLUE MTS.	55.92	59.0	9	34A	0				9	48		
MINERAL	56.26	65.6	9	36A	0							
CHATRA	56.55	273.2	9	39K	1							
CHITTAGONG	56.64	265.8	9	40	1						9	58
CALISTOGA	56.76	67.8	9	40K	0							
SODANKYLA	57.25	339.2	9	39	-4							
LICK	58.17	68.4	9	50A	0							
KIRUNA	58.22	341.8	9	47	-3							
BOZEMAN	58.81	54.9	9	55	1						10	8
PORT MORESBY	59.28	190.1	9	56	-1							
PRIEST	59.55	68.9	9	57K	-2							
EUREKA	60.13	63.1	10	4	1							
DUGWAY	61.46	60.7	10	13A	1							
WARSAK DAM	61.61	290.0	10	12	-1							
SALT LAKE C.	61.62	59.6	10	13	0							
FLAMING GRGE	62.88	58.1	10	23	1							

BOULDER CITY	63.15	65.4	10	22	-2			10	35		
NURMIJARVI	63.40	335.4	10	23	-2						
SKALSTUGAN	63.57	342.8								11	3 PCP
GLEN CANYON	64.36	62.6	10	31	0						
LARAMIE	64.68	55.5	10	35	1						
UPPSALA	65.76	338.4	10	39	-1						
GOLDEN	65.93	56.6	10	26	-16						
QUETTA	67.07	289.9	10	48	-1						
ALBUQUERQUE	68.72	60.9	11	1	2						
SCHEFFERVLLE	69.93	24.7	11	6	0						
CHARTERS TS.	69.94	189.7	11	6	0						
TIFLIS	70.86	312.4	11	19	7						
TEHERAN	72.02	304.1	11	20	1						
WICHITA MTS.	73.26	56.0	11	26	0					11	40 PCP
ROLLA	74.28	49.6	11	32A	0						
FLORISSANT	74.33	48.0	11	32	0						
ST. LOUIS 1	74.52	48.0	11	33	-1						
FAYETTEVILLE	74.53	52.2	11	32	-2						
COLLMBERG	74.61	336.9	11	35	1					13	26
JENA	75.30	337.6	11	37	-1					12	12
PRUHONICE	75.40	335.4	11	40	1					12	14
BREBEUF	75.90	33.5	11	41K	0						
SHIRAZ	75.98	299.2	11	42A	0					12	9
KASPERSKE H.	76.44	335.6	11	43	-2					12	33
STUTTGART	77.87	338.2	11	52	0						
BLACKSBURG	80.21	42.4	12	5	0						
GARCHY	80.66	341.7	12	12	4						
ROSELEND	81.39	338.8	12	13	2					12	49
KSARA	81.40	313.2	12	12	1						
FLORENCE X.	81.99	335.0								12	57
ROME	83.38	333.4								13	1
JERUSALEM	83.39	312.5	12	23A	1						
MUNDARING	88.59	212.9	12	48	1						
KARAPIRO	88.89	164.6	12	50A	1						
MAWSON	135.65	213.2	19	15K	2					23	6 PKS
SOUTH POLE	139.44	180.0	19	17	-3						

NOVEMBER 24 16.H 19.M 54.S EPICENTRE 9.96 -40.96 DEPTH= 96.KM
A= 0.74393 B=-0.64578 C= 0.17184 D=-0.6555 E=-0.7552
G= 0.1298 H=-0.1126 K=-0.9851 HT= 6.5

DEPTH OF FOCUS= 0.010R

SE= 3.07

	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
TRINIDAD	20.12	273.8	4	31	2							
FORT FRANCE	20.28	285.5	4	30	0	8	15	8				
ST. CLAUDE	21.08	288.8	4	41	2	8	34	11				
ST. KITTS	22.38	291.5	4	52	1							
CARACAS	25.56	273.5	4	56	-26	9	14	-26				
SAN JUAN	25.76	291.7	5	26	2							
BOGOTA	33.25	263.2	6	33A	3	11	56	14				
CHINCHINA	34.71	264.4	6	45A	2	12	18	13				
LA PAZ	37.60	225.9	7	10	3	13	4	15				
AREQUIPA	40.02	229.3	7	28	1							
HUANCAYO	40.55	238.1	7	31	-1							
SERRA PILAR	42.17	37.0	7	41	-4				7	51		
MALAGA	42.43	45.2	7	47A	0	14	12	11			17	22 SS
PALISADES	42.44	322.4				14	23	22				
GRANADA	43.21	45.1	8	0	6							
ALMERIA	43.85	46.1	7	57A	-2	14	27	5			13	50
TOLEDO	44.29	41.4	8	1	-1	14	40	12			9	53 PP
BLACKSBURG	44.71	313.8	8	5	-1							
BREBEUF	45.13	327.6	8	10	1							
SHAWINIGAN	45.40	329.3	8	10	-1							
BAGNERES	48.64	39.9	8	36	0						9	11
SCHEFFERVLLE	49.21	340.6	8	39A	-2							
BLOOMINGTON	49.88	313.5	8	45	-1							
SANTA LUCIA	51.58	211.9	8	50	-9							
ST. LOUIS 1	52.39	311.5	9	4	-1							
GARCHY	52.55	36.6	9	5	-1						9	45 PP
FLORISSANT	52.55	311.6	9	4A	-2							
ROLLA	53.40	310.1	9	11A	-1							
ROSELEND	53.97	39.8	9	16	-1						10	28

FAYETTEVILLE	54.66	307.3	9	20	-2					
WELSCHBRUCH	55.03	36.7	9	28	4					
TULSA	55.88	306.7	9	29	-1			9	36	
STRASBOURG	55.94	37.0	9	29	-2				10	8
DE BILT	56.20	32.4	9	42	9					
CHUR	56.28	39.5	9	32	-1					
EBINGEN	56.49	37.9	9	32	-3					
BENSBERG	56.71	34.3	9	36K	0					
RAVENSBURG	56.72	38.6	9	36	0					
HEIDELBERG	56.87	36.5	9	36	-2					
STUTTGART	56.93	37.4	9	36	-2					
FELDBERG	57.08	35.5	9	28	-11					
MUNSTER	57.44	33.4	9	48	7					
WICHITA MTS.	57.87	304.8	9	41	-3	17	53	18	21	29 SS
BANDEIRA	59.18	114.0	10	7A	13					
JENA	59.19	35.8	9	52	-2	17	46	-6	21	21 SS
LJUBLJANA	59.20	41.9	9	52	-2					
BANGUI	59.31	90.8	9	52	-2				10	42 PCP
HALLE	59.64	35.3	9	56	-1				10	51 PCP
KASPERSKE H.	59.67	38.3	9	54	-3					
COLLMBERG	60.16	35.8	10	0	0				12	40
LUBBOCK	60.35	302.9	10	2	0					
PRUHONICE	60.57	37.7	10	1	-2				10	21
VIENNA-H.	61.10	40.0	10	3	-4				11	22
BRATISLAVA	61.54	40.3	10	6	-4					
SCORESBY SD.	61.65	7.1	10	9	-1					
GOTEBORG	62.37	28.9	10	20	5					
BUDAPEST	62.58	41.4	10	15	-2				10	44 PCP
RACIBORZ	62.82	38.4	10	17	-1				10	45 PCP
BELGRADE	62.86	44.6	10	20K	2					
ATHENS	64.01	52.6	10	27	1					
GOLDEN	64.05	309.3	10	26	0				20	33
SOFIA	64.46	47.4	10	29	0					
LARAMIE	64.46	311.0	10	32	3					
UZHGOROD	65.00	40.8	10	32	0					
SKALSTUGAN	65.33	23.2	10	40	5					
FLAMING GRGE	67.26	310.2	10	46	-1					
TUCSON TELE.	67.67	300.8	10	49	0					
TUCSON	67.76	300.7	10	50	0					
THULE	68.05	353.3	10	50	-2					
PRICE	68.21	308.6	10	52	-1					
ISTANBUL UN.	68.42	49.8	10	54K	0	19	56	10		
GLEN CANYON	68.62	305.8	11	56	61					
KISHINEV	69.01	43.4	11	3K	5					
BOZEMAN	69.04	315.1	10	57	-1					
SALT LAKE C.	69.10	309.8	10	57	-1				12	35
DUGWAY	69.79	309.1	11	2A	0					
BUTTE	70.13	315.3	11	4	0					
KIRUNA	70.24	20.7	11	11	6					
LWIRO	70.50	96.0	10	57	-10					
BOULDER CITY	71.19	304.6	11	9	-2				13	52 PP
HUNGRY HORSE	71.37	317.7	11	10	-2					
KAJAANI	71.83	25.5	11	13	-2					
EUREKA	72.18	308.3	11	17	0					
SODANKYLA	72.31	22.1	11	15	-2					
NORD	72.42	3.6	11	15	-3					
BANFF	72.64	320.5	11	18	-1					
BROKEN HILL	72.98	108.5	11	23	2					
ALERT	73.07	357.1	11	20	-2					
JERUSALEM	73.11	59.8	11	23	1					
KEVO	73.16	19.7	11	26	4					
BLUE MTS.	73.37	313.8	11	22	-2				21	4
KSARA	73.63	57.7	11	26A	1				14	7 PP
PASADENA	73.93	302.7	11	34	7	21	2	12		
KIMBERLEY	74.15	123.7	11	28	0					
BULAWAYO	74.68	114.1	11	32	1					
PENTICTON	75.13	318.4	11	33	-1					
RENO	75.15	308.3	11	36K	2					
MOSCOW	75.41	35.0	11	36	1					
PRIEST	75.91	304.8	11	39K	1					
MINERAL	76.51	309.2	11	42K	0					
LICK	76.65	306.1	11	44K	2					
ARGENTINE I.	77.00	189.8	11	39	-5					
BERKELEY	77.12	306.6	11	45A	0					
CALISTOGA	77.33	307.4	11	47K	1					
MOULD BAY	77.62	346.1	11	46	-2					
CHANGALANE	79.59	119.1	12	0	1				12	8
TIFLIS	80.30	49.2	12	3	1					

GORIS	81.67	51.4	12	10	0					
TEHERAN	86.15	54.6	12	33	1					
SVERDLOVSK	88.01	32.6	12	42	1					
COLLEGE	88.09	335.9	12	41	0					
SHIRAZ	88.14	60.4	12	51A	9					
KIZYL-ARVAT	89.32	50.4	12	51A	4					
VANNOVSKAYA	91.00	51.3	12	57	2					
ASHKABAD	91.19	51.3	12	58	2					
QUETTA	100.16	56.8	13	37	0					
MOORLANDS	146.87	191.1	19	44	14					
TARRALEAH	147.13	190.2	19	43	13					
TANGERANG	147.70	85.8	19	38	7					
LEMBANG	148.77	86.8	19	35	2					
MUNDARING	149.57	139.4	19	43	9				19	49

NOVEMBER 25 17.H 34.M 50.S EPICENTRE 16.86 -93.93 DEPTH= 125.KM

A=-0.06566 B=-0.95531 C= 0.28822 D=-0.9976 E= 0.0686

G=-0.0198 H=-0.2875 K=-0.9576 HT= 5.4

DEPTH OF FOCUS= 0.015R

SE= 1.90

	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	1.83	109.0	0	29	-3	0	57	1					
OAXACA	2.72	273.8	0	29	-14	0	57	-20					
PUEBLA	4.60	298.6				2	6	5			1	42	
SAN SALVADOR	5.55	124.0	1	25	4								
MERIDA	5.76	44.4	1	10	-14	2	40	10			2	28	
SANTIAGO MA.	6.25	121.7	1	32	1	2	43	2					
DALLAS	16.13	351.3	3	41	1								
LUBBOCK	18.11	338.3	4	4	0								
WICHITA MTS.	18.27	347.7	4	5	-1								
FAYETTEVILLE	19.16	359.4	4	15A	0	7	47	6					
ROLLA	21.04	4.5	4	35	0	8	30	13					
ALBUQUERQUE	21.21	330.5	4	16	-20				5	5			
TUCSON TELE.	21.65	318.5	4	41	0								
ST. LOUIS 1	21.94	7.8	4	45	1								
LAWRENCE	22.06	357.3	4	45	0						9	24	
FLORISSANT	22.08	7.4	4	45	0								
MANHATTEN	22.38	354.6	4	48	0								
BOGOTA	22.96	119.8	4	54	0	8	57	6					
BLOOMINGTON	23.18	14.8	4	56	0								
BLACKSBURG	23.52	27.9	5	3	4	9	32	32					
GOLDEN	24.84	338.6	5	12	0						5	32	
GLEN CANYON	25.40	325.5	5	16	-1								
LARAMIE	26.35	340.0	5	27	1								
BOULDER CITY	26.60	319.7	5	28	0				5	46			
CARACAS	26.97	100.1	5	26	-5						6	5	
FLAMING GRGE	27.45	334.0	5	36	0								
EUREKA	29.60	324.0	5	54	-1				6	13	9	1	PP
LICK	31.82	315.3	6	18K	4								
BOZEMAN	32.09	337.1	6	18	1				6	41			
BUTTE	32.97	335.8	6	25	1				6	46			
BREBEUF	33.23	26.5	6	26	-1				6	50			
BLUE MTS.	34.13	329.8	6	33	-1				6	54	9	32	
BANFF	38.33	338.0	7	9A	-1								
PENTICTON	38.50	332.9	7	11K	0								
RESOLUTE	57.83	359.7	9	38A	-2								
COLLEGE	59.89	336.5	9	52	-2				10	14			
MOULD BAY	60.85	353.2	9	59A	-2								
ALERT	66.84	4.3	10	38	-2								
NORD	71.57	8.7	11	7	-2								
FOLINIERE	79.75	42.2	11	25	-30								
BAGNERES	81.60	47.6	12	4	-1								
SKALSTUGAN	82.06	25.7	12	8	1								
DOURBES	82.59	40.0	12	15	5								
CLERMONT-FD.	82.90	44.4	12	9	-3								
KIRUNA	83.30	20.4	12	14	0								
BENSBERG	83.88	38.6	12	17	1								
GOTEBORG	84.13	31.3	12	18	0								
WELSCHBRUCH	84.20	41.2	12	22	4								
KEVO	84.33	17.5	12	19	0								
STRASBOURG	85.04	40.7	12	22	0								

UMEA	85.16	24.0	12 22	-1
ROSELEND	85.27	43.7	12 29	6
HEIDELBERG	85.34	39.8	12 24	0
SODANKYLA	85.56	19.5	12 24	-1
TUBINGEN	85.86	40.5	12 26	0
STUTTGART	85.91	40.2	12 26	0
UPPSALA	85.92	28.1	12 26	-1
MONACO	86.46	45.4	12 28	-1
JENA	86.50	37.7	12 29	0
COLLMBERG	87.18	37.0	12 32K	-1
KAJAANI	87.82	22.0	12 34	-2
KASPERSKE H.	88.39	38.8	12 37	-1

NOVEMBER 26 1.H 41.M 6.S EPICENTRE 36.16 70.23 DEPTH= 123.KM

A= 0.27374 B= 0.76153 C= 0.58749 D= 0.9411 E=-0.3383
G= 0.1987 H= 0.5529 K=-0.8092 HT= -0.3

DEPTH OF FOCUS= 0.014R

SE= 2.03

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
KHOROG	1.68	38.1	0 33	3	0 57	4			
KULYAB	1.78	347.7	0 32	1	0 55	0			
WARSAK DAM	2.41	153.0	0 39K	0	1 7	-2			
OBI-GARM	2.57	350.7	0 42K	1	1 13	0			
DUZHANBE	2.67	334.6	0 42K	-1	1 12	-3			
GARM	2.83	1.1	0 45K	0				1 15	
DZERGETAL	3.15	14.3	0 50	1	1 26	-1			
SAMARKAND	4.34	324.7	1 4K	-1	1 49	-6			
FERGANA	4.38	15.7	1 6	0				1 49	
ANDIJAN	4.88	19.5	1 13	1				2 17	
NAMANGAN	4.94	12.8	1 15A	2				2 13	
TASHKENT	5.20	352.1	1 15K	-2					
LAHORE	5.73	142.3	1 24	0	2 24	-5		1 54	*SP
TCHIMKENT	6.15	355.6	1 28	-1				2 32	
QUETTA	6.57	205.7	1 34A	-1	2 44	-5		2 9	*SP
NARYN	6.92	38.8	1 38	-2				2 4	
FRUNSE	7.47	25.7	1 47A	0	3 16	5			
FABRICHNAYA	8.44	32.6	2 0	0					
DEHRA DUN	8.76	129.4	2 3	-2	3 39	-3		2 10	PP
ALMATA	8.78	34.0	2 6	1	3 41	-2			
PRZHEVALSK	8.93	42.6	2 7A	0	3 49	3			
ALMATA-2	8.98	35.6	2 6K	-2	3 41	-6			
NEW DELHI	9.58	140.1	2 12K	-4	3 51	-11		3 29	
ASHKABAD	9.66	284.2	2 14	-3	3 55	-9			
CHILIK	9.70	37.9	2 16	-1				4 22	
KIZYL-ARVAT	11.47	289.5	2 37	-4	4 41	-6			
TEHERAN	15.27	274.0	3 31	1	6 33	18			
SEMIPALATNSK	15.97	23.9	3 36	-2					
SHIRAZ	16.22	251.4	3 42K	0					
BOMBAY	17.35	171.7			7 9	7		4 29	
POONA	17.85	168.7	4 2A	1	7 9	-4		4 23	PPP
BOKARO	18.22	128.2	4 7K	1	7 17	-4		4 58	
EREVAN	20.60	289.0	4 35	4				5 33	
SHILLONG	21.32	113.6	4 39K	1	8 25	3			
SVERDLOVSK	21.66	345.6	4 41K	0					
VISHAKHAPTNM	21.71	144.4	4 44A	2	8 42	13		5 14	PP
CHITTAGONG	23.25	120.4	5 0	3	9 6	10	5 37		
MADRAS	24.74	156.3						9 52	
KSARA	28.15	275.4	5 37	-5			6 8	6 33	PP
HELSINKI	37.48	324.3	7 2	-1			7 30		
APATITY	37.69	337.9					7 34		
NURMIJARVI	37.74	324.7	7 4	-1			7 33	8 40	PP
KAJAANI	37.83	331.0	7 5	-1					
KRAKOW	38.52	307.2	7 14	2				9 30	PCP
SODANKYLA	39.78	335.3	7 21	-1				8 50	PP
UPPSALA	40.95	322.3	7 31	-1			7 59		
KARLSKRONA	41.50	316.5					8 5		
PRUHONICE	41.99	307.2					8 10	10 42	
KIRUNA	42.12	334.4					8 8		
KASPERSKE H.	42.68	306.0					8 16	8 58	
COLLMBERG	42.92	309.2					8 16	11 22	
HALLE	43.57	309.5					8 22	11 23	
GOTEBORG	43.59	318.5					8 22		

JENA	43.84	308.7						8	24	11	10
YAKUTSK	44.62	35.3	8	7A	6			8	35		
KHEYS	44.82	357.2	8	2	-1			8	32	8	51
STUTTGART	45.53	305.9						8	38		
TIKSI	46.31	22.0	8	14	-1			8	43	9	5
ROSELEND	47.84	302.1	8	30	3					9	10
FOLINIERE	51.87	307.5						9	26		
MATUSIRO	53.66	68.0	9	10	-1						
BANGUI	56.93	248.8	9	32	-2			9	54		
ALERT	59.33	353.5						10	20		
BROKEN HILL	63.95	225.9								10	22
MOULD BAY	67.71	2.5	10	45	-1					11	16
BULAWAYO	68.45	222.1								10	51
COLLEGE	74.98	15.8	11	28	-1					11	56
PENTICTON	94.44	6.4								13	40

NOVEMBER 26 5.H 29.M 35.S EPICENTRE 39.85 77.31 DEPTH= 49.KM
A= 0.16913 B= 0.75108 C= 0.63818 D= 0.9756 E=-0.2197
G= 0.1402 H= 0.6226 K=-0.7699 HT= -1.6

DEPTH OF FOCUS= 0.003R

SE= 2.41

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
NARYN	1.87	328.2	0	31	1								
KURMENTY	3.23	12.7	0	50	0								
FABRICHNAYA	3.35	348.9	0	53	2	1	42	12					
ALMATA-2	3.42	0.7	0	53K	1						1	42	S*
ALMATA	3.43	355.6	0	54	1						1	42	S*
FRUNSE	3.60	326.7	0	57A	2						1	50	S*
CHILIK	3.80	12.2	0	58	0						1	53	S*
ANDIJAN	3.88	285.0	1	4	5						2	15	
FERGANA	4.27	278.9	1	4	0								
NAMANGAN	4.45	286.5									2	29	SG
DZERGETAL	4.74	264.4	1	11	0								
KHOROG	5.10	244.2	1	18	2						2	43	
GARM	5.49	263.4	1	20A	-1						1	40	
OBI-GARM	6.01	261.4	1	27A	-2						3	18	SG
KULYAB	6.21	254.2	1	30	-1						3	21	
TASHKENT	6.29	286.1	1	31	-2						1	58	
TCHIMKENT	6.32	295.3	1	32	-1						2	55	
DUZHANBE	6.75	261.8	1	36A	-3						3	30	
WARSAK DAM	7.44	220.1	1	47A	-2	3	9	-3					
SAMARKAND	7.96	272.0	1	52	-4						2	21	
LAHORE	8.62	197.2	2	3	-2	3	35	-7					
DEHRA DUN	9.52	176.1	2	15	-2	3	57	-7			2	22	PP
SEMIPALATNSK	10.75	10.1	2	31	-3	4	33	-1					
NEW DELHI	11.24	180.5	2	33K	-8	4	28	-18			4	39	SS
QUETTA	12.84	224.5	2	56A	-6	5	14	-10					
LHASA	15.18	127.9	3	32K	-1	6	25	5					
CHATRA	15.36	144.7	3	29K	-6	6	12	-12					
KIZYL-ARVAT	16.25	274.5	3	44	-2								
SEHORE	16.63	180.7				6	39	-14			8	42	
BOKARO	17.51	153.3	4	5	3	7	21	8					
SHILLONG	18.75	135.0	4	5K	-12	7	44	3			4	38	PPP
CALCUTTA	19.66	148.2	4	37	10	8	6	5					
SVERDLOVSK	20.20	332.8	4	32K	-1								
TEHERAN	20.86	266.9	4	41	1	8	55	30			9	30	
LANCHOW	21.23	91.8	4	42A	-2	8	38	6					
BOMBAY	21.23	191.8	4	42	-2	8	26	-6			8	59	SS
CHITTAGONG	21.36	140.4	4	45	0	8	36	2			5	6	PP
POONA	21.45	189.0	4	45A	-1	8	44	8			5	9	PP
IRKUTSK	22.34	47.3	4	54	-1								
VISHAKHAPTNM	22.65	165.0	4	58	0	9	8	10			10	6	SS
SHIRAZ	22.70	251.0	4	59A	1	9	17	18					
KYAKHTA	22.96	53.1	5	2	1								
CHENGTU	23.58	104.6	5	9K	2	9	24	10					
GROZNY	23.79	288.7	5	12	3						9	48	
GORIS	23.79	279.2	5	10A	1						9	29	
TIFLIS	24.61	285.0	5	19	2						6	13	PPP
PAOTOW	24.92	77.7	5	21	1								
BAKURIANA	25.56	285.3	5	28	2						10	9	
SIAN	25.76	92.5	5	28K	0								
KUNMING	25.88	116.9	5	29	0	9	58	5					

MADRAS	26.86	173.8			10	16	7				
KODAIKANAL	29.49	179.7							10	58	
PEKING	29.64	77.0	6	2	-1	10	59	5			
MOSCOW	30.52	314.7	6	11K	0				6	55	
SIMFEROPOL	32.01	293.5	6	30	6				7	35	PP
KSARA	33.48	272.9	6	38K	1	12	7	13	7	50	PP
JERUSALEM	34.81	270.0	6	50	2						
PULKOVO	35.30	320.2	6	52	0				14	43	SS
HONG KONG	35.78	108.2	6	58	2	12	38	9			
VIBORG	36.25	321.5	6	59	-1						
ISTANBUL UN.	36.42	287.9	7	2	0						
APATITY	36.64	333.5	7	3A	-1				9	9	
KAJAANI	37.58	326.7	7	11	0				8	33	PP
HELSINKI	38.01	320.0	7	16	1						
NURMIJARVI	38.22	320.5	7	17	0				15	49	SS
LWOW	38.34	303.2							8	45	PP
YAKUTSK	38.35	37.0	7	23	5						
SODANKYLA	38.99	331.6	7	23	0				8	21	
UZHGOROD	39.61	301.5	7	29	1				9	23	
KEVO	39.70	335.2	7	29	0						
UMEA	40.75	325.2	7	37	-1						
TIKSI	40.80	22.3	7	36A	-2	13	50	5			
KRAKOW	40.94	304.0	7	40	1						
ATHENS	41.22	285.2	7	42A	0						
KIRUNA	41.40	331.3	7	42A	-1						
KHEYS	41.52	355.3	7	44	0	14	7	11		9	23 PP
UPPSALA	41.66	319.0	7	45	0						
TROMSOE	42.34	333.7	7	51	0						
VIENNA-H.	43.56	302.0	8	6	5				9	46	
BAGUIO CITY	44.17	109.2	8	13	7						
SKALSTUGAN	44.26	324.5	8	6A	0						
PRUHONICE	44.37	304.8	8	7A	0					9	51 PP
PRAGUE	44.42	305.0							24	35	
COPENHAGEN	44.67	313.2	8	11	1						
COLLMBERG	45.07	307.0	8	12	-1					9	53 PP
TARANTO	45.11	291.1	8	40	27				13	10	
KASPERSKE H.	45.17	303.8	8	14	0					9	59 PP
KONGSBERG	45.71	319.0	8	18	0				10	2	PP
ABUYAMA	45.88	76.9	8	19A	0						
JENA	46.02	306.7	8	19	-2				10	3	PP
MESSINA	47.15	288.8	8	27	-2	15	24	7		10	23 PP
MATUSIRO	47.17	73.7	8	28	-2	15	22	4			
STUTTGART	48.00	304.4	8	36	0				19	30	SS
ROME	48.01	294.6	8	40K	4	15	40	10	19	20	SS
FLORENCE X.	48.22	297.4	8	42	4	15	45	13	19	15	SS
BENSBERG	48.72	307.7	8	44	2				27	15	
STRASBOURG	49.02	304.5	8	42	-2				19	46	
WELSCHBRUCH	49.97	304.7	8	46	-5						
DOURBES	50.54	307.2	8	55	-1						
ROSELEND	50.68	301.2	8	55	-2				10	15	
MONACO	50.83	298.6	8	58	0						
ISOLA	50.93	299.3	8	58	-1						
ABERDEEN	52.25	317.4							27	45	
GARCHY	52.43	304.2	9	9	-1				10	21	
CLERMONT-FD.	52.94	302.4							9	38	
KEW	53.05	310.1	9	13	-1				20	59	
FOLINIERE	54.11	307.0	9	21	-1						
BAGNERES	55.97	300.4	9	33	-3						
ALERT	56.27	354.1	9	36	-2						
TOLEDO	60.23	298.8	10	5K	-1						
ALMERIA	60.62	295.0	10	8K	0						
LWIRO	61.00	238.8	10	10	-1						
GRANADA	61.24	295.9				18	35	8	11	22	
THULE	61.97	351.3	10	16	-1						
MALAGA	62.02	295.8	10	18	0	19	11	34			
MOULD BAY	63.71	4.4	10	27A	-2	19	7	9			
BENI ABBES	63.88	288.4	9	59	-31				10	30	PCP
TANANARIVE	64.72	211.3	10	37	2						
RESOLUTE	65.64	357.7	10	39	-2						
COLLEGE	69.81	18.8	11	4	-3						
BROKEN HILL	70.57	230.7	11	12A	0						
BANDEIRA	80.61	241.7	12	9A	0						
SCHEFFERVLLE	80.82	339.9	12	10	0						
PORT MORESBY	80.89	110.3	12	11K	0						
CHARTERS TS.	87.59	118.6	12	43	-1						
PENTICTON	89.96	11.0	12	55	0						
BUTTE	94.06	6.9	13	14	0				17	1	PP
BOZEMAN	94.54	5.9	13	17	1				17	9	PP
BLUE MTS.	94.67	10.4	13	20	3				17	5	PP

EUREKA	100.12	10.4								17	10 PP
TULSA	104.35	354.2								18	16 PP
WICHITA MTS.	105.71	356.5	14	18	777					18	12 PP
SAN JUAN	112.78	322.1	19	2	31						

NOVEMBER 26 13.H 28.M 35.S EPICENTRE 42.01 144.48 DEPTH= 47.KM

A=-0.60652 B= 0.43300 C= 0.66682 D= 0.5810 E= 0.8139
G=-0.5427 H= 0.3874 K=-0.7452 HT= -2.4

DEPTH OF FOCUS= 0.002R

SE= 2.43

	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
MIZUSAWA	3.85	222.6	0	59	1	1	44	1				
KURILSK	4.05	36.3	1	3	2							
Y.-SAKHLINSK	5.16	346.5	1	15A	-2							
TUKUBASAN	6.71	211.9	1	35A	-4	2	49	-6				
MATUSIRO	7.31	223.7	1	47	0	3	9	0				
VLADIVOSTOK	9.35	281.0	2	16A	1							
ABUYAMA	9.98	227.3	2	23A	-1							
CHANGCHUN	14.16	283.8	3	19	-1							
PETROPAVLOVK	14.56	36.0	3	29	4							
PEKING	21.41	274.2	4	45	-1							
LANCHOW	31.91	272.9	6	26A	3							
KUNMING	38.22	257.3	7	19	2							
COLLEGE	43.64	34.9	8	0	-2							
ALMATA-2	48.15	295.4	8	39K	2							
MOULD BAY	51.09	17.8	8	58	-2							
DEHRA DUN	53.66	280.3	9	22	3							
ALERT	55.01	4.2	9	27	-2							
NEW DELHI	55.21	279.0	9	29A	-1							
RESOLUTE	57.19	15.8	9	42A	-3							
APATITY	59.14	335.3	9	58	0							
KEVO	59.63	339.0	10	0	-2							
SODANKYLA	61.31	337.0	10	12	-1							
QUETTA	61.78	286.4	10	17	1						10	29
TROMSOE	61.78	341.1	10	14	-2							
KIRUNA	62.71	339.3	10	34	12							
KAJAANI	63.16	333.9	10	24	-1							
VANNOVSKAYA	63.54	298.2	10	29	1							
VIBORG	65.04	330.7	10	37	-1							
UMEA	65.69	336.3	10	40	-2							
NURMIJARVI	66.66	332.1	10	47	-1							
BLUE MTS.	66.86	50.0	10	48	-1							
BUTTE	68.79	46.8	11	1	0							
UPPSALA	69.51	334.5	11	5K	-1							
TIFLIS	69.62	308.1	11	8	2							
BOZEMAN	69.83	46.3	11	13	5							
EUREKA	70.94	53.8	11	14	0							
WOODY	71.52	58.5	11	16	-2							
SHIRAZ	72.18	294.0	11	23A	1							
DUGWAY	72.36	51.6	11	23A	0							
COLLMBERG	77.93	331.2	11	54A	-1							
PRUHONICE	78.44	329.6	11	57A	-1							
JENA	78.74	331.8	11	58	-1						15	1
KASPERSKE H.	79.50	329.7	12	4	1							
ALBUQUERQUE	79.61	52.1	12	6	2							
KSARA	80.12	306.8	12	8	1							
STUTTGART	81.36	331.9	12	13	0							
JERUSALEM	81.94	305.7	12	19	3							
WICHITA MTS.	84.26	47.6	12	28	0						16	0 PP
FAYETTEVILLE	85.57	43.9	12	34	-1							

NOVEMBER 26 15.H 58.M 44.S EPICENTRE -23.62-176.03 DEPTH= 0.KM

A=-0.91499 B=-0.06355 C=-0.39845 D=-0.0693 E= 0.9976
G= 0.3975 H= 0.0276 K=-0.9172 HT= 3.7

SE= 2.91

	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

RAOUL ISLAND	5.86	196.4	1	30	0	2	36	-3				
AFIAMALU	10.46	23.3	2	28	-6	4	17	-16				
ONERAHI	14.69	212.3	3	42	11							
PORT VILA	15.77	288.9	3	54A	9	7	7	26				
KARAPIRO	15.98	204.9	3	45	-2						5	33
NOUMEA	16.19	271.2	3	59A	9	7	37	46				
TUAI	16.21	199.4	3	48	-2	6	34	-17				
KOUMAC	18.50	275.7	4	24	5							
WELLINGTON	19.22	201.5	4	27	-1	7	38	-21				
COBB RIVER	19.80	205.8				7	55	-17				
KAIMATA	21.54	206.0				8	49	2				
GEBBIES PASS	22.09	202.3	4	59	1	8	41	-16				
HONIARA	26.95	297.6									12	22
BRISBANE	28.36	255.8	5	57A	0	10	8	-36				
RIVERVIEW	30.41	243.0									13	33 SSS
CANBERRA	32.44	240.9	6	34K	0							
CHARTERS TS.	35.11	268.3	6	57	0						12	25
TOOLANGI	35.67	238.0	7	1	0				7	8		
RABAUL	36.25	297.3	7	10	4							
PORT MORESBY	37.90	285.7	7	20	0						8	52 PP
KIPAPA	48.08	22.8	8	42	-1							
CAPE HALLETT	49.33	185.5	8	53	1							
DUMONT	51.06	200.8	9	5	-1						9	47
DARWIN	51.51	272.8	9	9	0							
MUNDARING	59.67	245.7	10	7	-1				10	13		
BYRD STATION	61.27	170.5	10	17	-2							
WILKES	61.97	206.0	10	30	6	18	45	-2				
MIRNY	68.97	205.4	11	9	0	20	12	-1				
MATUSIRO	73.79	323.1	11	37	-1	21	55	46				
PRIEST	79.16	42.7	12	9K	1							
MAWSON	79.25	199.5	12	8K	0						30	44 PKKP
BERKELEY	79.31	40.5	12	10K	1							
LICK	79.34	41.2	12	9K	0							
PETROPAVLOVK	79.44	344.8	12	9	0							
Y.-SAKHLINSK	79.56	332.7	12	11A	1							
CALISTOGA	79.63	39.8	12	10K	0							
CHINA LAKE	80.90	44.5	12	16	-1							
MINERAL	81.33	39.0	12	20A	1							
RENO	81.85	40.5	12	23A	1							
BOULDER CITY	82.80	45.8	12	28	1				12	42		
EUREKA	84.15	42.4	12	34	0							
GLEN CANYON	85.50	46.4	12	42	1							
CHANGCHUN	85.97	321.7	12	44K	1							
DUGWAY	86.54	43.2	12	45K	-1							
BLUE MTS.	86.63	37.5	12	46	0						16	7 PP
SALT LAKE C.	87.46	43.2	12	50	0							
PRICE	87.48	44.6	12	51K	1							
PENTICTON	88.24	33.0	12	54K	0							
FLAMING GRGE	89.11	44.1	12	58	0							
PEKING	89.38	314.7	13	0K	1							
BUTTE	90.01	38.6	13	2	0				13	15		
HUNGRY HORSE	90.55	36.1	13	4	-1							
BOZEMAN	90.69	39.5	13	6	0				13	14		
COLLEGE	90.87	11.6	13	5	-1							
GOLDEN	91.10	46.7	13	8	1							
BANFF	91.44	33.2	13	8K	-1							
SIAN	91.56	306.8	13	13	3							
LARAMIE	91.76	45.3	13	11	1							
KUNMING	92.38	296.3	13	15K	2							
WICHITA MTS.	93.53	53.7	13	18K	-1						15	38
CHENGTU	93.69	301.8	13	21	2							
LANCHOW	96.10	306.6	13	33K	3							
TULSA	96.11	53.6	13	31	1							
AREQUIPA	96.24	110.9	13	33	2							
FAYETTEVILLE	97.36	53.9	13	37K	1							
MOULD BAY	105.44	12.0	18	24A	777							
NEW DELHI	114.99	291.7	18	42K	-1							
LAHORE	118.08	294.3	18	48	-1							
QUETTA	124.07	291.4	19	2	2						20	40 PP
KIMBERLEY	124.21	202.2	19	1	0							
BULAWAYO	130.31	210.9	19	13	1							
VANNOVSKAYA	131.98	300.5	19	17	2							
BROKEN HILL	135.22	214.8	19	23	2							
SHIRAZ	136.44	288.8	19	25A	1							
KAJAANI	136.63	345.1	19	23	-1							
TEHERAN	137.44	297.7	19	27	2							
NURMIJARVI	140.43	344.1	19	25	-6							
HELSINKI	140.64	343.6	19	25	-6							
GORIS	140.97	304.1	19	26	-6							

TIFLIS	141.60	308.0	19	30	-3						
UPPSALA	142.55	348.7	19	30	-5						
KONGSBERG	143.78	355.1	19	36	-1						
LWIRO	144.71	226.6	19	40K	2						
GÖTEBORG	145.47	352.4	19	40	0						
KARLSKRONA	146.40	348.3	19	41	0						
DURHAM	148.62	6.2	19	50K	5						
KSARA	150.34	297.2	19	53	5						
WITTEVEEN	150.77	356.6	19	55	7						
KRAKOW	150.82	338.7	19	48	0					19	59 PKP2
JERUSALEM	151.24	293.3	19	51	2						
RACIBORZ	151.34	340.7	19	57	8					20	2 PKP2
HALLE	151.50	349.5	19	56	7					20	11 PKP2
COLLMBERG	151.50	348.1	19	50A	1						
KEW	152.00	5.7	19	55	5						
JENA	152.11	349.7	19	51	1					23	35 PP
PRAGUE	152.36	345.4	19	59	8						
PRUHONICE	152.42	345.2	19	51	0					21	1
BENSBERG	152.60	355.6	19	59K	8						
KASPERSKE H.	153.44	345.8	19	53	1					23	42 PP
VIENNA-H.	153.52	341.2	19	48	-4					19	54 PKP2
STUTTGART	154.55	351.8	19	54	0						
FOLINIERE	154.66	6.9	20	4	10						
STRASBOURG	154.91	354.0								20	19
BANGUI	156.21	218.7	19	56	0			20	6		
BESANCON	156.37	356.6								20	25
GARCHY	156.38	1.5	19	57	1					20	39
BENI ABBES	171.51	39.0	20	14	4					21	34

NOVEMBER 27 6.H 53.M 0.S EPICENTRE 25.11 123.00 DEPTH= 170.KM

A=-0.49375 B= 0.76038 C= 0.42194 D= 0.8387 E= 0.5446
G=-0.2298 H= 0.3539 K=-0.9066 HT= 3.3

DEPTH OF FOCUS= 0.022R

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
TAIPEI	1.34	267.1	0	32A	2	0	53	-1				
HWALIEN	1.69	228.3	0	34K	0	0	59	-1				
TAICHUNG	2.31	246.2	0	42	1	1	11	-1				
YUSHAN	2.47	229.5	0	43	0	1	14	-1				
HSINKONG	2.49	217.0	0	41A	-2	1	10	-6				
ALISHAN	2.55	232.2	0	41	-3	1	12	-5				
TAITUNG	2.89	216.2	0	48A	0	1	23	-1				
TAINAN	3.29	231.0	0	55	2	1	32	-1				
TAWU	3.35	215.4	0	52	-2	1	31	-4				
PENGHU	3.51	244.2	0	48	-8	1	25	-13				
KAOHSIUNG	3.51	225.8	1	12	16	1	38	0				
HENGCHUN	3.72	214.2	1	OK	2	1	44	1				
ZO-SE	6.18	345.4	1	33K	3							
NANKING	7.86	332.8	1	55A	2	3	24	4				
HONG KONG	8.56	252.8	1	57	-5	3	30	-7				
BAGUIO CITY	8.93	195.1	2	6	-1	3	46	0				
CANTON	9.05	259.2				3	46	-2				
ABUYAMA	14.59	45.3	3	21A	1							
SIAN	15.24	310.0	3	30A	2	6	22	10				
PEKING	15.95	340.6	3	38A	2	6	37	9			4	26 *SP
MATUSIRO	17.31	45.2	3	51	-2	7	12	14				
CHENGTU	17.67	292.5	3	57A	0	7	9	3			4	51 *SP
KUNMING	18.35	274.4	4	6A	2	7	28	8				
TUKUBASAN	18.39	48.9	4	OK	-5	7	19	-2				
CHANGCHUN	18.78	5.2	4	8A	-1	7	32	4			4	58 *SP
PAOTOW	18.86	328.1	4	11A	1	7	41	11			5	2 *SP
VLADIVOSTOK	19.40	19.9	4	15A	0							
LANCHOW	19.75	308.0	4	19A	0	7	51	4			5	12 *SP
MIZUSAWA	20.72	43.2	4	29	0	8	0	-5				
GUAM	23.53	115.5	4	56	0						5	28 PP
Y.-SAKHLINSK	26.92	30.7	5	25K	-2							
SHILLONG	28.11	277.7	5	38A	0	10	11	2				
CHITTAGONG	28.64	271.0	5	43	0	10	19	1				
LHASA	28.68	286.3	5	45A	2	10	20	2			16	10 SCS
IRKUTSK	30.61	337.3	5	59A	-1							
CHATRA	32.19	281.0	6	14K	0	11	13	0			16	25

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BOKARO	33.81	275.8	6	29	1	11	39	0				
DJAKARTA	34.85	209.0	6	38K	1	11	48	-6				
TANGERANG	34.93	209.3	6	37K	-1	11	55	-1				
LEMBANG	35.09	207.3	6	37	-2	12	0	2				
YAKUTSK	37.18	5.2	6	54A	-2							
VISHAKHAPTNM	37.58	266.7	7	4K	4	12	41	5			16	58 SCS
DARWIN	38.03	167.5	7	2	-2	12	38	-5				
PETROPAVLOVK	38.62	34.3	7	8K	-1							
MAGADAN	39.50	21.9	7	15	-1							
DEHRA DUN	39.93	287.9	7	21A	2	13	14	3				
RABAUL	40.64	131.7	7	26K	1						13	22
NEW DELHI	40.82	285.3	7	25A	-2	13	21	-3			9	5 PP
ALMATA-2	41.30	307.7	7	32K	2							
SEMIPALATNSK	41.38	318.9	7	30A	-1							
PORT MORESBY	41.60	142.5	7	34K	1	13	37	1	8	9		
MADRAS	42.05	261.5	7	38A	1	13	46	4			17	11
LAHORE	43.04	290.1	7	45	0	13	56	-1				
FRUNSE	43.21	306.6	7	47K	1							
WARSAK DAM	45.23	293.8	8	3A	1	14	30	2				
POONA	45.90	272.0	8	8A	1	14	38	0			9	34 PCP
TIKSI	46.68	2.6	8	12A	-1							
BOMBAY	46.72	272.8	8	14	0	14	52	2			10	14 PP
TASHKENT	47.03	303.9	8	17A	1							
QUETTA	49.50	289.1	8	36	1	15	30	2	9	15		
CHARTERS TS.	50.30	151.2	8	41K	0	15	41	2				
SVERDLOVSK	54.29	323.1	9	9K	-2							
VANNOVSKAYA	55.77	300.0	9	22	0							
MUNDARING	57.12	186.9	9	29	-2	17	10	-1				
BRISBANE	59.56	149.2	9	49	1						14	48
KHEYS	61.37	350.3	9	59K	-1							
TEHERAN	61.44	298.5	9	57	-4	18	26	19			12	10 PP
ADELAIDE	61.58	165.3	10	1K	-1	18	11	3			10	39 PCP
SHIRAZ	61.87	291.5				18	12	0				
RIVERVIEW	64.43	154.2	10	21K	0	18	47	3	10	59		
GORIS	64.59	303.5	10	21K	-1							
CANBERRA	64.94	156.7	10	23K	-1				11	3	12	48 PP
TIFLIS	65.26	306.2	10	26	0							
TOOLANGI	65.83	160.5	10	29K	-1				11	8	12	54 PP
APATITY	66.91	335.3	10	35A	-1							
MOSCOW	67.09	322.3	10	36	-1							
COLLEGE	67.23	27.6	10	38	0							
KEVO	68.74	338.2	10	46	-2							
SODANKYLA	69.50	335.8	10	51	-1				11	35	11	13 PCP
PULKOVO	69.97	327.5	10	54	-1							
KAJAANI	69.98	332.2	10	54	-1				11	38		
VIBORG	70.44	328.6	10	57	-1							
TROMSOE	71.45	339.0	11	2	-2							
KIRUNA	71.61	337.0	11	3	-2				11	48		
KIPAPA	71.66	74.5	11	6	1							
SIMFEROPOL	71.96	311.7	11	6A	-1							
MOULD BAY	72.01	12.9	11	6A	-1	20	12	-1				
HELSINKI	72.41	328.7	11	8	-2				11	52		
NURMIJARVI	72.44	329.1	11	9	-1				11	52	11	25 PCP
UMEA	73.18	333.1	11	13A	-1				11	56		
KSARA	74.23	300.2	11	20A	0	20	43	5	11	44		
KISHINEV	74.77	315.0	11	23	0							
HAWAII V.OB.	74.78	75.4	11	25	2							
JERUSALEM	75.46	298.5	11	28A	1							
UPPSALA	75.94	329.9	11	29A	-1				12	12	14	21 PP
SKALSTUGAN	76.47	334.5	11	32A	-1							
RESOLUTE	77.49	9.6	11	37A	-2							
UZHGOROD	78.23	318.2	11	43	0							
KARLSKRONA	78.58	327.0	11	38A	-6							
GOTEBORG	79.55	329.4	11	49A	-1				12	32		
KONGSBERG	79.58	331.7	11	49	-1							
KARAPIRO	79.76	140.4	11	51	0						12	31
TARATA	79.97	141.9	11	54	2							
RACIBORZ	80.01	320.8	11	52	0						12	2 PCP
COPENHAGEN	80.36	327.5	11	54A	0							
BELGRADE	81.01	315.3	12	0A	3						13	6
TUAI	81.28	140.1	11	59A	0						12	41
YELLOW KNIFE	81.48	23.4	11	59	-1							
SCORESBY SD.	81.49	348.7	12	1	1							
ATHENS	81.78	308.0	12	0K	-1							
VIENNA-H.	81.93	319.7	12	3A	1						15	13 PP
PRUHONICE	82.12	321.8	12	4A	1						12	48
COLLMBERG	82.31	323.5	12	4A	0						17	7
KASPERSKE H.	83.10	321.4	12	8A	0						15	5 PP
MUNSTER	84.77	325.9	12	19	2							

TRIESTE	84.77	318.3	12	16	-1						
TANANARIVE	85.43	246.8	12	23A	3					13	4
BENSBERG	85.58	325.2	12	20A	-1			13	7		
VICTORIA	85.76	37.7	12	23A	2						
CHUR	86.61	320.9	12	26A	0					15	45
STRASBOURG	86.63	323.0	12	25A	-1					12	58
SEATTLE	86.86	38.0	12	30	3						
PENTICTON	87.35	35.6	12	30A	1						
DURHAM	87.38	331.5	12	28K	-1						
DOURBES	87.41	325.5	12	35	6					16	4 PP
CHIAVARI	88.14	318.9	12	45	12					33	22
BANFF	88.29	32.5	12	34A	0						
BESANCON	88.38	322.6	12	33	-1						
ROSELEND	88.93	321.1	12	36	-1					15	57 PP
KEW	88.98	328.5	12	36A	-1			13	25	16	7 PP
MONACO	89.60	319.2	12	38	-2						
FOLINIERE	90.83	326.5	12	45	0					16	22
CLERMONT-FD.	90.85	322.6	12	46A	0						
HUNGRY HORSE	90.85	34.0	12	48	2						
BLUE MTS.	91.31	38.2	12	49A	1	23	36 7			24	58 PS
MINERAL	91.44	43.7	12	48A	0						
CALISTOGA	91.79	45.5	12	52K	2						
BERKELEY	92.43	46.0	12	54A	1						
RENO	93.03	43.5	12	58A	2						
BUTTE	93.13	35.1	12	58	2			13	40		
LICK	93.14	46.2	12	58A	2						
BOZEMAN	94.15	34.7	13	2	1			13	39		
MIRNY	94.15	191.6	13	42	41	23	16 -38			23	57
BAGNERES	94.20	321.9	13	1	0						
PRIEST	94.47	46.7	13	4A	2						
LWIRO	94.75	269.7	13	4A	1						
EUREKA	95.42	41.8	13	9	3			13	51	16	57 PKP
DUGWAY	96.83	39.6	13	14A	1					17	3 PP
SALT LAKE C.	97.01	38.7	13	15	1						
PASADENA	97.29	47.1	13	16	1						
FLAMING GRGE	98.27	37.3	13	21	2						
BOULDER CITY	98.32	43.9	13	21	1			14	8	17	21 PKP
PRICE	98.37	39.1	13	22A	2						
SCHEFFERVLLE	99.96	5.7	17	29A	242						
LARAMIE	100.04	35.0	13	28	1						
CAPE HALLETT	102.33	166.7	17	52	254						
TUCSON	103.26	44.6	13	43	1					17	54 PKP
TUCSON TELE.	103.27	44.5	13	43	1					17	54 PKP
BENI ABBES	104.00	313.1	17	47	242					18	6 PP
ALBUQUERQUE	104.09	40.1	13	47	2					18	4 PKP
WICHITA MTS.	108.62	35.2	14	6	777	24	21 -6			18	36 PP
TULSA	109.11	32.6	18	12	777						
FAYETTEVILLE	109.73	31.3	18	10	777						
SOUTH POLE	114.96	180.0	18	28	7						
BYRD STATION	119.24	169.8								19	51
SAN JUAN	135.88	12.5	19	3	2					22	18 PP
FORT FRANCE	140.20	6.3	19	2	-7					22	30
CARACAS	143.31	16.5	19	13A	-1					22	38 PP
CHINCHINA	145.05	33.7	19	17A	-1						
BOGOTA	146.12	31.7	19	23A	4						
HUANCAYO	158.35	56.5	19	42	5						
AREQUIPA	163.96	60.3	19	46	3						
SANTA LUCIA	165.50	128.1	19	46	2	29	22 173			20	47 PP

NOVEMBER 27 12.H 7.M 14.6 EPICENTRE 14.90 120.20 DEPTH= 45.KM
A=-0.48625 B= 0.83560 C= 0.25560 D= 0.8643 E= 0.5030
G=-0.1286 H= 0.2209 K=-0.9668 HT= 5.8

DEPTH OF FOCUS= 0.002R

SE= 3.25

	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
MANILA	0.89	105.2	0	23	6	0	42	13				
BAGUIO CITY	1.55	13.7	0	26	0							
HONG KONG	9.31	323.1	1	55	-19							
CHENGTU	21.60	319.3	4	49	1	8	43	4				
SIAN	21.79	334.1	4	50	0	8	43	0				
TANGERANG	24.89	213.7	5	20K	0							
LEMBANG	24.94	210.9	5	16	-4							

PEKING	25.28	352.7			9	38	-6						
LANCHOW	25.65	328.2	5	27	0	9	50	0					
MATUSIRO	26.88	33.4	5	40	2	10	19	9					
CHITTAGONG	27.86	289.7	5	48	1								
SHILLONG	28.56	296.3	5	51	-3						10	46	
DARWIN	29.08	158.2	5	59	1								
LHASA	30.60	303.6	6	16	4								
CHATRA	32.96	296.5	6	30	-3								
PORT MORESBY	36.01	130.5	7	0A	1								
RABAUL	36.93	118.5	7	10A	4						13	5	
POONA	44.44	281.4	8	10	2								
BOMBAY	45.40	281.9	8	14	-2	14	51	-2			10	11	PP
ALMATA-2	46.17	316.5	8	21	-1								
MUNDARING	46.76	184.7	8	26	-1								
YAKUTSK	47.54	6.1	8	31A	-2								
WARSAK DAM	47.71	302.5	8	34	0								
PETROPAVLOVK	48.62	30.0	8	42	1								
QUETTA	51.04	296.8	8	58	-2				9	8			
BRISBANE	52.60	142.9	9	13A	2								
ADELAIDE	52.63	160.8	9	11	-1				9	23			
CANBERRA	56.93	152.0	9	44	1				10	9			
TOOLANGI	57.36	156.2	9	46	0				9	58			
VANNOVSKAYA	59.06	305.5	9	57	-1								
SVERDLOVSK	61.14	327.2	10	9	-3								
SHIRAZ	63.55	295.9	10	30	2								
KHEYS	70.96	351.2	11	13	-2								
KARAPIRO	73.84	137.4	11	31	-1								
APATITY	75.11	336.6	11	37A	-2								
TUAI	75.38	137.4	11	53	12								
KSARA	77.21	301.8	11	58	7								
COLLEGE	77.48	25.9	11	52	0								
SODANKYLA	77.74	336.7	11	52	-2								
KAJAANI	77.81	333.3	11	54	0								
JERUSALEM	78.11	299.9	12	3	7								
TANANARIVE	79.01	247.0	12	13	12								
NURMIJARVI	79.86	330.0	12	5	0								
KIRUNA	79.97	337.7	12	6	0								
NORD	81.43	354.2	12	13	-1								
MOULD BAY	82.49	12.0	12	19A	0								
UPPSALA	83.43	330.3	12	22	-2								
MIRNY	83.69	190.6	12	26	1								
UZHGOROD	84.08	318.6	12	27	0								
SKALSTUGAN	84.52	334.7	12	24	-5								
KARLSKRONA	85.67	327.1	12	40	5								
RESOLUTE	87.93	8.8	12	47	1								
PRUHONICE	88.46	321.5	13	0A	11								
COLLMBERG	88.88	323.1	12	51	0								
KASPERSKE H.	89.36	321.0	12	47A	-6								
MAWSON	92.06	198.8	13	8	2				13	18			
STUTTGART	92.10	321.8	13	14	8								
BLUE MTS.	100.94	37.7	13	48	2								
WICHITA MTS.	118.41	35.9	18	46	3						29	15	PKKP

NOVEMBER 27 16.H 50.M 31.S EPICENTRE 12.48 143.75 DEPTH= 45.KM

A=-0.78763 B= 0.57753 C= 0.21471 D= 0.5913 E= 0.8064
G=-0.1732 H= 0.1270 K=-0.9767 HT= 6.2

DEPTH OF FOCUS= 0.002R

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
GUAM	1.37	44.7	0	23	0							
RABAUL	18.56	152.7	4	8	-7	7	18	-19			8	34
PORT MORESBY	22.00	171.0	4	43	-9	8	42	-5			5	55
BAGUIO CITY	22.77	282.7	4	42	-17	9	19	19				
MATUSIRO	24.47	349.2	5	15K	-1	9	29	-1				
HONIARA	27.07	142.8				10	34	13				
DARWIN	27.83	207.9	5	47	0							
CHARTERS TS.	32.46	175.6	6	22	-6							
PEKING	36.65	323.5	7	4	0							
KOUMAC	38.54	148.2	7	16A	-4							
BRISBANE	40.59	167.6	7	33	-4	13	38	-5				
KUNMING	40.65	294.0	7	39	2							
LEMBANG	40.71	243.8	7	36	-2							

PAOTOW	40.72	319.6	7	39	1								
CHENGTU	40.88	302.7	7	40	1								
TANGERANG	41.29	245.4	7	42A	0								
LANCHOW	42.88	310.2	7	56K	1								
RIVERVIEW	46.59	171.5									18	48	
ADELAIDE	47.43	185.6	8	28	-4	15	17	-5			18	43	SS
CANBERRA	47.80	174.2	8	31	-4						23	33	
TOOLANGI	49.81	178.2	8	46	-4				8	58			
SHILLONG	50.45	292.9	8	55K	0								
MUNDARING	51.47	210.2	8	59	-4	16	11	-7					
LHASA	51.63	297.9	9	5K	1	16	29	9					
PERTH	51.64	210.5	9	7	3	16	39	19			20	19	SS
CHATRA	54.75	294.0	9	10K	-17								
KARAPIRO	58.33	150.7	9	49	-4								
TUAI	59.79	150.1	9	58	-5								
TIKSI	59.81	354.6	10	3	0								
DEHRA DUN	62.91	297.7	10	25	1								
NEW DELHI	63.64	295.8	10	26K	-3								
ALMATA-2	64.37	312.1	10	35	2								
POONA	67.28	285.0	10	51K	-1								
WARSAK DAM	68.43	301.7	10	59	0								
COLLEGE	69.67	25.1	11	5	-2								
TASHKENT	70.23	309.5	11	10	0								
QUETTA	72.51	297.9	11	25K	1	20	50	7					
VANNOVSKAYA	79.04	306.6	12	2	1								
MOULD BAY	79.61	14.0	12	1K	-3	22	4	3					
WILKES	82.34	192.9				22	36	7			33	45	
SEATTLE	83.53	42.8	12	26	2								
YELLOW KNIFE	84.34	27.2	12	26A	-2								
TEHERAN	84.71	305.3	12	31	1								
PENTICTON	84.92	40.7	12	31	0								
SHIRAZ	84.98	299.1	12	32K	0								
CALISTOGA	85.15	51.7	12	33K	1								
MINERAL	85.53	49.8	12	34K	0								
BERKELEY	85.56	52.4	12	35K	1						34	53	
NORD	85.58	357.2	12	34	-1								
RESOLUTE	85.88	13.2	12	36K	0								
APATITY	86.10	338.8	12	37K	0								
LICK	86.15	52.8	12	38K	1								
CAPE HALLETT	86.40	172.2	12	36	-2								
MIRNY	87.10	198.1	12	49	7	23	7	-9					
PRIEST	87.19	53.8	12	43K	1								
BLUE MTS.	87.54	44.7	12	44	0						25	49	
GORIS	87.80	309.8	12	44K	-1	23	29	6					
TIFLIS	88.36	312.3	12	50	2								
SODANKYLA	88.53	339.8	12	48A	-1								
MOSCOW	88.64	327.1	12	48	-1								
PASADENA	89.65	55.2	12	54	0								
KAJAANI	89.75	336.7	12	53	-2								
EUREKA	89.94	49.6	12	56	1								
KIRUNA	90.28	341.5	12	56	-1								
BUTTE	90.40	42.6	12	59	1								
PULKOVO	90.65	332.3	12	57	-2								
VIBORG	90.89	333.5	12	59	-1								
BOZEMAN	91.52	42.6	13	4	1						16	40	PKP
BOULDER CITY	91.79	52.7	13	6	2								
DUGWAY	92.05	48.2	13	5K	0								
SALT LAKE C.	92.57	47.4	13	8	0								
UMEA	92.68	338.3	13	7	-1								
NURMIJARVI	92.77	334.3	13	7	-2								
HELSINKI	92.82	334.0	13	8A	-1								
FLAMING GRGE	94.27	46.6	13	16	1								
UPPSALA	96.04	335.8	13	21	-2								
WICHITA MTS.	104.58	48.9									18	19	PP
TULSA	106.06	46.7									27	41	PS
BROKEN HILL	117.21	260.1	18	43	3								
BENI ABBES	126.42	322.9	19	11	13								

NOVEMBER 28 2.H 35.M 44.S EPICENTRE 12.12 143.81 DEPTH= 0.KM

A=-0.78936 B= 0.57741 C= 0.20856 D= 0.5904 E= 0.8071
G=-0.1683 H= 0.1231 K=-0.9780 HT= 6.2

SE= 1.84

	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

GUAM	1.61	34.0	0	16	-14						
RABAUL	18.21	152.4	4	4	-12					8	40
PORT MORESBY	21.63	171.0	4	53K	-1	8	49	0			
MANILA	22.26	279.1	4	46	-14					6	52
ABUYAMA	23.86	343.0	5	16K	0						
TUKUBASAN	24.23	352.7	5	20A	1						
MATUSIRO	24.84	349.2	5	24	-1	9	46	0			
CHARTERS TS.	32.09	175.7	6	30	-1						
VLADIVOSTOK	32.57	343.7	6	34	-1	11	47	-4			
PEKING	36.98	323.7	7	12	-1						
KOUMAC	38.20	148.0	7	22K	-1						
BRISBANE	40.22	167.6	7	41	1	13	40	-8			
LEMBANG	40.62	244.3	7	47A	4						
NOUMEA	40.77	146.9	7	44A	-1						
KUNMING	40.85	294.4	7	47	2	14	3	6			
CHENGTU	41.13	303.0	7	48	1						
TANGERANG	41.20	245.8	7	49A	1	13	48	-14			
LANCHOW	43.16	310.4	8	4A	0	14	33	2			
RIVERVIEW	46.22	171.5	8	29A	0					18	42 PP
ADELAIDE	47.08	185.7	8	35K	0	15	27	-1			
CANBERRA	47.43	174.2	8	37K	-1					10	9 PCP
TOOLANGI	49.45	178.2	8	54K	0				9 6	10	17 PCP
YAKUTSK	50.85	351.5	9	2A	-3						
AFIAMALU	51.05	119.1	9	7	1						
MUNDARING	51.19	210.4	9	7	0	16	24	-1			
LHASA	51.85	298.2	9	14	2	16	37	3			
CALCUTTA	53.68	289.1								17	2
CHATRA	54.96	294.3	9	35A	0					17	21
KARAPIRO	57.98	150.6	9	56K	-1						
TUAI	59.45	150.1	10	5	-2						
TIKSI	60.17	354.6	10	10	-2						
DEHRA DUN	63.13	297.9	10	32	0						
NEW DELHI	63.85	295.9	10	34A	-3						
SEMIPALATNSK	63.97	320.4	10	37	0						
ALMATA-2	64.66	312.2	10	42	0						
LAHORE	66.35	299.2	10	53	0						
POONA	67.43	285.1	10	59K	-1						
BOMBAY	68.37	285.6								19	57
WARSAK DAM	68.68	301.8	11	7	0						
COLLEGE	69.97	25.0	11	13	-2						
TASHKENT	70.51	309.6	11	19	0						
DUZHANBE	70.89	306.7	11	22	1						
QUETTA	72.74	298.0	11	34A	2	21	0	3	11 43	11	53 PCP
KHEYS	77.43	350.4	11	58	-1						
DUMONT	78.62	181.5	12	5	0					15	4 PP
VANNOVSKAYA	79.31	306.7	12	10	1						
MOULD BAY	79.95	14.0	12	12K	0						
WILKES	82.00	192.9	12	24	1	22	35	-2			
VICTORIA	82.85	42.0	12	29	1						
SEATTLE	83.75	42.7	12	35	3						
YELLOW KNIFE	84.63	27.2	12	34	-3						
ALERT	84.77	3.4	12	37K	0						
TEHERAN	84.97	305.3	12	40	2						
PENTICTON	85.15	40.7	12	40K	1						
SHIRAZ	85.22	299.2	12	39	-1	22	52	-17			
CALISTOGA	85.32	51.6	12	41K	1						
MINERAL	85.71	49.8	12	42A	0						
BERKELEY	85.73	52.3	12	44K	2	23	4	-10			
NORD	85.94	357.2	12	43	0						
CAPE HALLETT	86.03	172.2	12	43	-1						
RESOLUTE	86.21	13.2	12	44K	-1						
LICK	86.32	52.8	12	47K	2						
APATITY	86.46	338.9	12	46A	0						
MIRNY	86.78	198.1	12	48	1	23	22	-3			
BANFF	87.23	38.3	12	49	-1						
RENO	87.23	50.3	12	52A	2						
PRIEST	87.35	53.8	12	52A	2						
KEVO	87.59	341.9	12	51	0						
BLUE MTS.	87.75	44.7	12	52	0	23	37	3		24	43 PS
GORIS	88.08	309.9	12	54	0						
TIFLIS	88.65	312.3	12	56	0						
SODANKYLA	88.89	339.9	12	56K	-2						
HUNGRY HORSE	88.97	40.7	13	0	2						
PASADENA	89.80	55.2	13	4	2	24	0	7			
KAJAANI	90.10	336.8	13	3	0						
EUREKA	90.12	49.6	13	4	1						
BUTTE	90.62	42.6	13	6	0						
KIRUNA	90.65	341.5	13	4	-2						
PULKOVO	91.00	332.3	13	6	-1						

VIBORG	91.24	333.5	13 7	-1	
BOZEMAN	91.74	42.6	13 13	2	16 43 PKP
BOULDER CITY	91.96	52.7	13 11	-1	
DUGWAY	92.25	48.2	13 14A	1	
UMEA	93.04	338.3	13 15	-2	
NURMIJARVI	93.12	334.4	13 16	-1	
HELSINKI	93.17	334.0	13 16	-1	
FLAMING GRGE	94.47	46.7	13 24	1	
TUCSON	96.24	55.3	13 34	3	
TUCSON TELE.	96.30	55.2	13 34	2	
UPPSALA	96.40	335.8	13 30	-2	
LARAMIE	97.02	45.3	13 38	3	
KSARA	97.77	306.9	13 34	-4	
ALBUQUERQUE	98.76	51.5	13 44	1	17 44 PKP
UZHGOROD	100.55	324.9	13 51	0	
KRAKOW	101.07	327.0	13 53	0	
COLLMBERG	103.83	330.7	14 5A	0	18 20
PRUHONICE	103.91	329.0	14 6	0	
WICHITA MTS.	104.77	49.0	14 12	2	18 20 PP
KASPERSKE H.	104.93	328.7	14 9	-1	
BROKEN HILL	117.21	259.9	18 51	4	
BULAWAYO	117.56	253.5	18 51	3	
CHINCHINA	137.27	68.9	19 32	6	
SAN JUAN	137.69	44.7	19 30	4	
BOGOTA	138.83	68.4	19 34	6	
SANTA LUCIA	142.07	129.7	19 30	-4	
FORT FRANCE	143.63	43.5	19 36	-1	
ST. VINCENT	144.64	45.5	19 39	0	

NOVEMBER 28 15.H 26.M 4.S EPICENTRE 10.04 93.57 DEPTH= 91.KM

A=-0.06135 B= 0.98297 C= 0.17323 D= 0.9981 E= 0.0623
G=-0.0108 H= 0.1729 K=-0.9849 HT= 6.5

DEPTH OF FOCUS= 0.009R

SE= 1.76

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
PORT BLAIR	1.82	332.8						0 31	PG
CHITTAGONG	12.36	352.4	2 52K	-2	5 3	-7		3 3	PP
VISHAKHAPTNM	12.55	308.6	2 58K	2	5 7	-7			
CALCUTTA	13.38	338.8	3 1	-6					
MADRAS	13.45	283.9	3 8A	0	5 29	-6		3 20	PP
SHILLONG	15.53	354.3	3 33A	-2	6 30	6			
BOKARO	15.59	332.6	3 33	-2	6 28	3		7 49	
KUNMING	17.34	29.0	4 2K	5	7 16	11			
CHATRA	17.76	340.9	4 3K	1	7 21	7			
LHASA	19.64	353.4	4 24	0	7 56	1			
POONA	20.87	296.0	4 37A	1	8 34	15		5 1	PP
BOMBAY	21.92	296.0	4 48	1	8 49	11		9 31	SS
CHENGTU	22.70	23.9	4 56	2	8 55	3			
HONG KONG	23.20	55.8	5 21	22	9 16	16			
NEW DELHI	24.00	322.5	5 8K	1	9 17	3		5 36	PP
DEHRA DUN	24.83	326.6	5 17K	2	9 32	4		5 49	PP
LANCHOW	27.52	18.2	5 41A	1	10 13	1			
LAHORE	27.86	323.0	5 43	0	10 18	0		6 21	PP
WARSAK DAM	31.25	323.1	6 14K	1	11 28	17			
QUETTA	31.89	312.7	6 20	2	11 26	4		7 18	PP
PEKING	35.99	30.1	6 56	2					
SHIRAZ	42.96	303.0	7 52K	1	14 9	0		13 22	SCP
DARWIN	43.20	120.2	7 53	0					
TEHERAN	46.01	310.6	8 17	1				13 36	PCP
MUNDARING	47.05	153.5	8 21	-3					
MATUSIRO	48.16	49.4	8 33	0	15 26	3			
TANANARIVE	53.73	237.7	9 20K	5				9 48	
PORT MORESBY	56.71	108.2	9 37K	1					
KSARA	57.71	303.7	9 48	5			10 25	12 2	PP
JERUSALEM	57.93	301.2	9 45K	0					
CHARTERS TS.	59.87	120.2	9 58	0				10 44	
RABAUL	60.05	100.8	10 0	1					
ADELAIDE	61.86	138.7	10 11A	-1				10 51	PCP
ISTANBUL UN.	64.34	310.7	10 26	-2				10 47	
TOOLANGI	67.82	137.5	10 50A	0					
BRISBANE	68.34	124.7	10 55	2				11 26	

HONIARA	68.83	104.2	10 58K	2			
BROKEN HILL	68.98	250.3	10 58	1			11 24 PCP
CANBERRA	69.06	133.9	10 57	-1			11 21 PCP
APATITY	69.62	339.2	11 1K	0			
RIVERVIEW	69.91	131.6	11 3A	0			
KAJAANI	70.57	334.8	11 6	-1			
HELSINKI	70.75	330.5	11 7	-1			11 28 PCP
NURMIJARVI	70.98	330.8	11 8	-1			
KRAKOW	71.87	319.4	11 15	0			11 39 PCP
SODANKYLA	72.00	338.0	11 15K	0			
KEVO	72.62	340.5	11 19	0			11 48
BRATISLAVA	73.57	317.3	11 23	-2			11 42 PCP
UMEA	73.71	333.7	11 25	0			
VIENNA-H.	74.06	317.3	11 28K	0	11 53		
UPPSALA	74.32	329.4	11 28K	-1			11 49
KIRUNA	74.41	337.8	11 29K	-1			
KARLSKRONA	75.03	325.5	11 29	-4			
LJUBLJANA	75.25	315.0	11 35K	1	12 2		11 52 PCP
TROMSOE	75.31	339.6	11 34	-1			
PRUHONICE	75.32	319.1	11 35K	0			14 28 PP
KASPERSKE H.	75.93	318.2	11 37	-1			12 11
COLLMBERG	76.34	320.4	11 40	-1			12 44
MIRNY	76.39	180.2	11 40	-1			
GÖTEBORG	77.09	327.0	11 44	-1			
WILKES	77.19	173.1	11 43	-2			
SKALSTUGAN	77.19	333.0	11 45	0			
JENA	77.23	320.0	11 44	-2			14 35 PP
MAWSON	80.53	191.4	12 3A	0			
NORD	83.04	352.0	12 15	-1			
GARCHY	83.05	316.7	12 17	1			
BANDEIRA	83.29	253.6	12 19A	1	12 29		
DUMONT	83.61	163.1	12 17	-2			
FOLINIERE	85.19	318.5	12 28	1			
ALERT	86.95	356.9	12 36	0			12 57
MOULD BAY	91.71	7.5	12 58A	0			
COLLEGE	92.56	22.0	13 2	0			
RESOLUTE	95.28	2.3	13 16K	2			
BLUE MTS.	118.65	24.6	18 37	0			28 55 PKKP
EUREKA	123.60	27.3	18 50	3			
FLAMING GRGE	125.03	21.2	18 52	2			
WOODY	125.17	32.3	18 51	1			
BOULDER CITY	126.97	28.9	18 57	4			
ALBUQUERQUE	131.40	22.0	19 5	3	42 20		
TULSA	133.45	10.5					22 27 SKP
WICHITA MTS.	134.02	14.0	19 5	-2			21 28 PP
SAN JUAN	145.37	324.6	19 29	2			

NOVEMBER 29 9.H 3.M 58.5 EPICENTRE -22.32-175.80 DEPTH= 87.KM

A=-0.92348 B=-0.06786 C=-0.37759 D=-0.0733 E= 0.9973
G= 0.3766 H= 0.0277 K=-0.9260 HT= 4.1

DEPTH OF FOCUS= 0.009R

SE= 2.75

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SUVA	6.82	306.4	1 45	6				3 16
RAOUL ISLAND	7.16	195.0	1 40	-4	3 1	-3		
AFIAMALU	9.19	25.2	2 1A	-11	3 36	-18		
PORT VILA	15.61	284.2	3 42K	6	7 0	34		
ONERAHI	15.91	210.4	3 47	7				
NOUMEA	16.43	266.7	3 50	4	/ 13	28		
KARAPIRO	17.25	203.7	3 55	-1				7 18
TUAI	17.50	198.6	3 56	-4	6 57	-12		
WELLINGTON	20.51	200.6	4 30	-3	8 6	-6		
KAIMATA	22.80	205.0			9 3	9		
GEBBIES PASS	23.37	201.5			9 7	3		
BRISBANE	28.91	253.5	5 50	-3				
RIVERVIEW	31.21	241.2						11 20
CANBERRA	33.27	239.2	6 29	-2				
CHARTERS TS.	35.38	266.4	6 48	-1				
RABAUL	35.87	295.5	6 50	-3				12 46
TOOLANGI	36.55	236.6	6 57	-2				7 11 *SP
TARRALEAH	37.21	228.7	7 4	0				
PORT MORESBY	37.77	283.9	7 8K	-1				

ADELAIDE	41.53	242.0	7	38	-2			7	48	
CAPE HALLETT	50.64	185.5	8	52	0					
DARWIN	51.67	271.7	8	59	-1					
MUNDARING	60.40	245.0	10	0	-2					
BYRD STATION	62.52	170.6	10	36	19					
WILKES	63.23	205.7	10	20	-1					18 40
MIRNY	70.23	205.2	11	6	1					
MATUSIRO	72.89	322.7	11	19K	-2					
TANGERANG	76.21	268.9	11	39	-1					12 59
PRIEST	78.07	42.8	11	55K	4					
BERKELEY	78.19	40.6	11	52A	1					
LICK	78.22	41.3	11	52K	0					
PASADENA	78.45	45.6	11	52	-1					
ARGENTINE I.	78.49	156.4	11	57	4					
CALISTOGA	78.50	39.8	11	53K	0					
MINERAL	80.18	39.0	12	1A	-1					
MAWSON	80.55	199.4	12	5A	1					
RENO	80.73	40.5	12	6A	1					
BOULDER CITY	81.74	45.8	12	11	1					
TUCSON	82.44	50.8	12	15	1					
TUCSON TELE.	82.57	50.7	12	16	1					
EUREKA	83.05	42.4	12	16	-1					
GLEN CANYON	84.46	46.4	12	25	1					
SEATTLE	84.59	33.1	12	23	-2					
DUGWAY	85.45	43.2	12	29K	0					
BLUE MTS.	85.48	37.5	12	28	-1					23 16
PRICE	86.41	44.5	12	34	0					
ALBUQUERQUE	86.96	50.3	12	37	1					
PENTICTON	87.03	33.0	12	37K	0					
FLAMING GRGE	88.03	44.0	12	42	0					
BUTTE	88.86	38.5	12	46	0					13 18
BOZEMAN	89.55	39.4	12	49	0					
COLLEGE	89.56	11.6	12	47	-2					
GOLDEN	90.05	46.6	12	51	0					
BANFF	90.24	33.1	12	51	-1					
WICHITA MTS.	92.59	53.5	13	2	-1	24 11	14			25 22 SP
TULSA	95.17	53.4	13	14	-1	23 42	1			24 27 S
QUETTA	123.78	292.2	18	50	2					
KIMBERLEY	125.49	202.3	18	52A	1					
BULAWAYO	131.53	211.2	19	5	2					
SODANKYLA	132.80	348.4	18	45	-20					
KAJAANI	135.43	345.5	19	9	-1					
SHIRAZ	136.21	290.0	19	13A	2					
NURMIJARVI	139.24	344.6	19	12	-5					
GOTEBORG	144.21	352.9	19	23	-3					
KARLSKRONA	145.17	348.8	19	25	-2					
LWIRO	145.75	227.6	19	25K	-3					
KRAKOW	149.68	339.7	19	40	5					19 45 PKP2
KSARA	149.91	299.3	19	43	8					
RACIBORZ	150.19	341.7	19	42	7					19 53 PKP2
HALLE	150.26	350.2	19	42	7					
MUNSTER	150.28	355.7	19	43	7					
JENA	150.87	350.4	19	42	6					22 37
JERUSALEM	150.90	295.5	19	44	8					
PRUHONICE	151.22	346.1	19	44K	7					
BENSBERG	151.32	356.1	19	44	7					
ISTANBUL UN.	151.99	317.5	19	46	8					
KASPERSKE H.	152.23	346.7	19	47K	9					20 14
STUTTGART	153.30	352.5	19	48	8					
FOLINIERE	153.34	6.9	19	49	9					
STRASBOURG	153.64	354.7	19	50	10					
LJUBLJANA	154.88	342.9	19	52	10					19 57 PKP2
GARCHY	155.08	1.8	19	53	11					20 22
ROSELEND	156.60	355.7								20 14
BANGUI	157.35	220.1	19	46	1			20	26	

NOVEMBER 29 19.H 6.M 34.S EPICENTRE -17.25 168.29 DEPTH= 0.KM

A=-0.93568 B= 0.19402 C=-0.29472 D= 0.2030 E= 0.9792
G= 0.2886 H=-0.0598 K=-0.9556 HT= 5.3

SE= 2.53

	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 VILA	0.48	176.1	0	12A	-2							

NOUMEA	5.31	198.7	1	22A	-1	2	25	-1						
SUVA	9.71	96.8									2	42		
HONIARA	11.23	312.7	2	45K	0									
RAOUL ISLAND	17.40	135.8	4	8	2									
BRISBANE	17.52	232.1	4	8	0	7	31	9						
ONERAHI	19.22	164.8	4	38	10						8	9		
AFIAMALU	19.49	83.0	4	30	-1	8	1	-5						
AUCKLAND	20.37	164.9									5	1	PP	
RABAUL	20.44	307.6	4	39K	-3						8	39		
CHARTERS TS.	21.06	258.8	4	49	1	8	49	10						
KARAPIRO	21.57	164.2	4	52A	-1									
PORT MORESBY	21.98	288.1	4	59A	1	9	2	6						
TARATA	22.50	167.5	5	6	3						6	31		
RIVERVIEW	22.56	219.7	5	4A	1	9	18	11			9	47	SS	
TUAI	22.83	161.9	5	5	-1									
WELLINGTON	24.59	168.2	5	22	-1	9	42	0						
CANBERRA	24.88	219.9	5	27K	1	9	53	6	5	36	6	4	PP	
KAIMATA	25.33	174.6	5	29	-1									
GEBBIES PASS	26.62	172.9	5	41	-1									
ROXBURGH	28.16	178.5				10	42	1						
TOOLANGI	28.49	220.2	5	59	0	10	54	8			17	2	SCS	
ADELAIDE	31.71	230.4	6	28K	0	11	42	5	6	39	13	15		
DARWIN	36.49	272.4	7	10	1									
MUNDARING	49.12	242.5	8	51	-1	15	58	1						
PERTH	49.44	242.5	8	59	5	16	5	4			20	1	SS	
HONOLULU	50.53	42.0				16	18	2			11	18	PP	
KIPAPA	50.67	41.9				16	23	5						
DUMONT	52.73	193.7	9	17	-2	16	47	0	9	28				
CAPE HALLETT	55.07	179.3	9	33	-3									
TUKUBASAN	59.49	333.7	10	10	2	19	14	58			10	30	PCP	
LEMBANG	60.02	272.0	10	10K	-1	18	28	5						
MATUSIRO	60.58	332.4	10	12A	-3	18	18	-12						
DJAKARTA	60.95	272.5	10	11A	-7						18	19		
TANGERANG	61.15	272.4	10	18A	-1	17	41	-57						
WILKES	61.62	202.8	10	20K	-2	18	44	0			12	45		
HONG KONG	65.95	304.7				19	44	6						
BYRD STATION	70.05	169.8	11	14	-2						18	3		
PETROPAVLOVK	70.47	353.8	11	16	-3									
CHANGCHUN	72.39	328.8	11	27	-3	20	50	-4						
PEKING	74.83	321.1	11	45	1	21	19	-2						
SIAN	76.22	312.8	11	54	2									
KUNMING	76.46	301.9	11	57	3	21	42	3						
CHENGTU	78.00	307.5	12	4	2	21	56	0						
PAOTOW	78.93	318.7	12	8	1									
MAWSON	79.93	202.0	11	52	-21									
LANCHOW	80.72	312.2	12	18A	1	22	27	3						
CHITTAGONG	84.52	295.3	12	42	6									
YAKUTSK	84.69	342.8	12	38A	1									
UKIAH	85.00	46.6	12	39	0									
BERKELEY	85.11	48.1	12	42A	3	23	10	1			24	8		
CALISTOGA	85.22	47.3	12	39A	-1									
LICK	85.32	48.7	12	39K	-1									
PRIEST	85.52	50.2	12	42A	1									
SHILLONG	85.63	298.3	12	43A	1									
PASADENA	86.57	52.8	12	47	0									
MINERAL	86.66	46.0	12	46A	-1									
RENO	87.56	47.4	12	54A	3									
LHASA	87.78	301.8	12	55A	2									
COLLEGE	88.42	17.2	12	53	-3									
IRKUTSK	88.55	326.5	12	56	0									
SEATTLE	89.43	39.3				23	50	0			25	2	PS	
BOULDER CITY	89.80	52.2	13	1	-1						19	51		
EUREKA	90.26	48.6	13	3	-1									
BLUE MTS.	91.40	43.3	13	7	-3						14	49		
TUCSON	91.62	56.8	13	14	3									
TUCSON TELE.	91.74	56.8	13	14	3									
PENTICTON	91.75	38.5	13	13A	2									
TIKSI	92.60	348.4	13	12	-3									
ALBUQUERQUE	95.92	55.4	13	32	2									
LUBBOCK	99.23	57.8									26	47	PS	
YELLOWKNIFE	99.32	27.3	13	44	-2									
WICHITA MTS.	102.12	57.3				24	41	3			18	3	PP	
FRUNSE	104.16	310.8									18	50	PP	
TULSA	104.61	56.6				24	42	-7			27	38	PS	
DUZHANBE	107.87	305.7	18	32	777									
QUETTA	108.06	296.7	18	36	777									
SVERDLOVSK	113.92	325.0	18	43	2									
ASHKABAD	115.98	304.2	18	47	2									
SHIRAZ	120.44	294.6	18	57A	3									

BREBEUF	121.74	46.8								37	26	SS
PALISADES	122.00	52.1								20	32	PP
APATITY	122.07	341.3								37	11	SS
GORIS	125.31	306.4	19	5	2							
KIRUNA	125.43	345.7	19	5	1							
BULAWAYO	125.71	228.5	19	5	1							
KAJAANI	126.10	339.8	19	5	0							
SCORESBY SD.	126.42	4.3	19	8	3							
MOSCOW	126.53	327.7	19	4	-2							
PULKOVO	127.83	334.6								21	4	PP
VIBORG	127.86	336.1	19	8	0							
UMEA	128.59	342.5	19	10	0							
NURMIJARVI	129.55	337.6	19	10	-2					22	35	PKS
KSARA	134.41	300.6	19	27	6					23	21	
JERUSALEM	135.25	297.9	19	30	8							
BANDEIRA	139.63	219.1								22	27	PP
BUDAPEST	140.69	326.8				26	9	-32		35	3	SKKS
COLLMBERG	140.75	335.5	19	28	-4							
HALLE	141.00	336.5	19	29	-4							
PRUHONICE	141.11	332.9	19	33	0					22	38	PP
BRATISLAVA	141.21	329.0	19	33	0					23	12	PKS
JENA	141.59	336.2	19	34	0					22	12	PP
KASPERSKE H.	142.16	332.8	19	32A	-3					26	19	PP
ATHENS	142.74	310.8	19	39	3							
BENSBERG	143.14	340.0	19	43	7							
HEIDELRERG	143.91	337.2	19	38	0							
LJUBLJANA	143.95	328.5	19	36	-2					22	59	PP
STUTTGART	144.22	336.1	19	38	0					21	31	
TUBINGEN	144.49	336.0	19	39	0							
KEW	144.67	347.7	19	41	2							
DOURBES	144.69	341.8	19	48	9							
RAVENSBURG	144.88	334.8	19	40	1							
STRASBOURG	144.94	337.3	19	38	-1					21	26	
PARIS	146.46	342.9	19	45	3							
BESANCON	146.72	337.8	19	46	4							
PAVIA	147.12	332.3	19	53	10							
FLORENCE X.	147.19	328.6	20	32	49					23	46	PKS
FOLINIERE	147.26	346.2	19	46	3							
BANGUI	147.64	250.2	19	47	3				19 58			
GARCHY	147.67	341.0	19	46	2							
ROSELEND	147.78	335.6	19	49	5							
ROME	147.87	324.9	19	53	9					23	36	PKS
MESSINA	148.29	316.6	19	51	6					23	22	PKS
BAGNERES	152.35	341.1	20	10	19							
TOLEDO	156.49	345.1	20	28	31					23	59	PP
BENI ABBES	164.51	327.5	21	2	56					24	48	PP

NOVEMBER 30 16.H 53.M 26.S EPICENTRE 3.24 127.29 DEPTH= 62.KM

A=-0.60494 B= 0.79429 C= 0.05614 D= 0.7955 E= 0.6059
G=-0.0340 H= 0.0447 K=-0.9984 HT= 7.1

DEPTH OF FOCUS= 0.005R

SE= 2.77

	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
MANILA	12.90	332.0	3	4	2							
DARWIN	15.91	167.3	3	41	0	6	46	11				
LEMBANG	22.04	243.0	4	51	1	8	59	14				
TANGERANG	22.65	245.6	4	55K	-1	9	4	8				
HONG KONG	22.83	327.2	4	58	0							
PORT MORESBY	23.44	122.6				9	18	9				
RABAUL	25.93	106.4	5	26	-2						9	52
CHARTERS TS.	29.74	142.0	6	1	-1							
MATUSIRO	34.63	15.6	6	44	-1	12	18	9				
SIAN	35.28	333.1	6	52	2							
MUNDARING	36.57	195.9	7	0	-1							
PEKING	37.98	346.1	7	14K	1	13	4	4				
LANCHOW	39.19	329.3	7	24K	1							
CHITTAGONG	39.29	302.0	7	24	0							
ADELAIDE	39.49	165.2	7	25K	-1				7	36		
PAOTOW	40.31	339.5	7	34	1							
SHILLONG	40.63	306.5	7	31	-4							
RIVERVIEW	43.20	150.5	7	59	3						17	33 SS
LHASA	43.23	311.3	7	57K	0	14	22	3				

CANBERRA	43.43	153.9	7	57	-1			8	12			
TOOLANGI	43.98	159.1	8	2	-1					9	48	PCP
DEHRA DUN	53.71	305.7	9	19	1							
NEW DELHI	53.84	303.3	9	15K	-4							
POONA	54.41	290.4	9	20K	-3							
LAHORE	57.14	305.8	9	47	5							
YAKUTSK	58.67	1.3	9	53K	0							
ALMATA-2	59.48	319.5	9	59	0							
WARSAK DAM	60.12	307.6	10	2	-1							
KARAPIRO	60.57	137.4	10	9	3			10	20			
SEMIPALATNSK	61.41	327.8	10	11	-1							
WELLINGTON	61.85	141.0	10	17	2							
TUAI	62.10	137.5	10	14	-2							
QUETTA	62.88	302.3	10	20	-2			10	41	10	55	PCP
DUZHANBE	63.67	311.8	10	28	1							
TASHKENT	64.20	314.8	10	30	0							
TIKSI	68.30	0.5	10	55A	-1	19	54	3				
VANNOVSKAYA	71.65	308.9	11	18	1							
SHIRAZ	75.17	299.7	11	36K	-1							
CAPE HALLETT	80.21	167.8	12	5	0							
GORIS	80.97	309.3	12	7K	-2							
TANANARIVE	81.36	250.4	12	15	4							
TIFLIS	82.25	311.5	12	17	1							
KHEYS	83.49	351.1	12	23	1							
MAWSON	83.49	200.4	12	19A	-3			12	34			
COLLEGE	84.91	25.3	12	31	2							
KSARA	89.39	303.7	12	50	-1							
JERUSALEM	90.08	301.7								14	56	
KEVO	90.54	340.0	13	7	11							
SODANKYLA	91.13	337.6	13	1	2							
KAJAANI	91.30	334.3	12	58	-2							
MOULD BAY	92.31	12.7	12	57	-7							
SOUTH POLE	93.22	180.0	13	16	7							
KIRUNA	93.32	338.7	13	8	-1							
UZHGOROD	97.43	319.7	12	30	-58							
RESOLUTE	98.20	10.4	13	33	2							
BROKEN HILL	99.34	256.0	13	38A	2							
BLUE MTS.	105.37	41.8	14	11	777					17	51	
GOLDEN	115.56	42.8	18	45	10							
BENI ABBES	121.46	308.4	18	49	3					19	58	
WICHITA MTS.	122.73	44.7	18	53	4					28	44	PKKP

NOVEMBER 30 21.H 51.M 25.S EPICENTRE 17.48 -99.92 DEPTH= 46.KM

A=-0.16447 B=-0.94012 C= 0.29852 D=-0.9850 E= 0.1723
G=-0.0514 H=-0.2941 K=-0.9544 HT= 5.3

DEPTH OF FOCUS= 0.002R

SE= 4.35

	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
TACUBAYA	2.03	19.7	0	32	-1	1	4	7				
PUEBLA	2.25	46.5	0	43	7							
OAXACA	3.05	98.1	0	43	-4							
LEON	3.98	335.8	1	24	24	2	20	34				
VERA CRUZ	3.99	64.0	1	7	7	1	59	12				
MANZANILLO	4.47	291.1	0	50	-17							
GUADALAJARA	4.52	315.3	1	15	7	2	15	15				
COMITAN	7.56	98.2	1	55	5	3	25	9				
MAZATLAN	8.31	314.1	1	47	-14	3	19	-15				
MERIDA	10.33	68.8	2	32	4	4	41	17			3	50
SAN SALVADOR	11.00	108.6	2	30	-8						6	9
SANTIAGO MA.	11.73	108.2	2	45	-2						6	5
CHIHUAHUA	12.46	334.1									2	45
DALLAS	15.57	9.9	3	34	-4							
LUBBOCK	16.13	354.2	3	44	-1	6	56	14			3	57 PP
WICHITA MTS.	17.21	3.7	3	55	-4	7	18	11				
TUCSON	17.71	328.2	4	7	2	7	37	19				
TUCSON TELE.	17.72	328.6	4	7	2	7	37	19				
ALBUQUERQUE	18.35	342.7	4	13	0	7	51	18				
LITTLE ROCK	18.51	20.0	4	11A	-4	7	44	A				
TULSA	18.72	10.5	4	15	-2	7	51	10				
ROLLA	21.53	17.5	4	44K	-3	8	45	7				
LAWRENCE	21.80	9.8	4	47	-3						5	37
MANHATTEN	21.84	7.0	4	48	-2	8	52	8				

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GOLDEN	22.64	349.0	4	57	-1	9	14	16				
BOULDER CITY	22.68	327.2	4	57	-1						12	5 SCP
ST. LOUIS 1	22.72	20.0	4	56	-3	9	5	5				
FLORISSANT	22.82	19.5	4	56	-4	9	7	6				
PASADENA	23.29	318.9	5	6	2	9	22	12				
PRICE	24.00	339.0	5	13	2							
LARAMIE	24.24	349.6	5	15	1						13	17
BLOOMINGTON	24.59	25.7	5	14	-3	9	43	11				
FLAMING GRGE	24.75	342.7	5	5	-14				5	17	10	49
GALERAZAMBA	24.80	102.3	5	11	-8						10	11 SS
DUGWAY	25.24	336.4	5	22K	-1							
SALT LAKE C.	25.39	338.5	5	25	0						6	25 PP
EUREKA	25.98	330.8	5	30	0				5	40	5	46 *SP
CHAPEL HILL	26.08	41.1	5	29	-2						6	26
PRIEST	26.13	319.4	5	32A	0							
DUBUQUE	26.17	15.6	5	29	-3	10	14	16				
CHICAGO JSA.	26.51	20.8	5	34	-1							
CHINCHINA	26.84	114.7	5	37	-1	10	11	2				
LICK	27.50	320.3	5	44A	0							
RENO	27.96	325.9	5	50A	-1							
MORGANTOWN	28.07	34.1	5	47A	-2							
BERKELEY	28.22	320.5	5	57K	6	10	43	11			6	47
BOGOTA	28.36	113.8	5	50	-2	10	38	4	6	6		
CLEVELAND	28.66	29.6	5	51A	-4				6	1	11	52 SS
CALISTOGA	28.91	321.4	5	49K	-8							
MINERAL	29.50	325.0	6	2K	0							
BOZEMAN	29.60	344.1	6	2	-1				6	17	7	12 PP
PENNSYLVANIA	30.02	34.7	6	0	-7							
BUTTE	30.34	342.4	6	9	-1				6	23	7	25 PP
BLUE MTS.	30.94	335.6	6	13K	-2	11	27	12			7	35 PP
SAN JUAN	32.15	83.1	6	30	5							
FORDHAM	32.33	38.5	6	23	-4	11	41	5				
PALISADES	32.41	38.3	6	24K	-4	11	42	4	6	33	11	54 *SS
CARACAS	32.72	97.8	6	41	11	11	41	-2				
WESTON	34.78	38.5	6	45	-3							
ST. KITTS	35.45	84.5	7	1	7							
BREBEUF	35.52	32.4	6	50K	-4	12	29	3			8	19 PP
PENTICTON	35.54	337.7	6	54A	-1							
BANFF	35.84	343.2	6	56	-1							
VICTORIA	36.40	333.5	7	0	-2							
SHAWINIGAN	36.67	31.8	7	1	-3							
FORT FRANCE	37.31	88.5	7	13	3	12	0	-53				
TRINIDAD	37.93	95.1	7	15	0						13	25
HUANCAYO	38.09	138.7	7	12	-4							
HALIFAX	40.70	40.4	7	35	-3							
AREQUIPA	43.84	138.7	7	59	-4							
SCHEFFERVLLE	45.09	26.5	8	10	-3							
YELLOW KNIFE	46.12	350.6	8	17K	-5							
HONOLULU	54.75	284.0				17	13	10				
COLLEGE	57.10	337.8	9	41	-3							
RESOLUTE	57.28	1.6	9	41K	-4							
SANTA LUCIA	57.84	151.1	9	29	-20	17	55	11			10	7 PCP
GODHAVN	59.10	17.5	9	56K	-2	18	6	6				
MOULD BAY	59.64	354.7	9	59K	-3	18	10	3				
THULE	61.18	8.1	10	9	-3				10	19		
ALERT	66.69	5.0	10	45	-3							
SCORESBY SD.	69.64	20.5	11	7	0	20	18	8				
NORD	71.83	8.8	11	16	-4							
ABERDEEN	79.66	33.3				22	2	1			22	51 PS
DURHAM	80.62	35.5	12	8A	-1							
KEW	82.34	38.5	12	29A	11	22	40	11			22	32 SKS
FOLINIERE	83.09	41.1	12	20	-2							
TROMSOE	83.20	18.0	12	23	0							
TOLEDO	83.37	50.4	12	23	-1	22	45	5			15	33 PP
SKALSTUGAN	83.94	24.6	12	25	-1							
GRANADA	84.51	52.9	12	34K	5	22	54	3			12	44 PCP
KONGSBERG	84.55	28.7	12	29	-1	22	57	6	12	44		
KIRUNA	84.66	19.2	12	30	0	22	46	-6			15	32
PARIS	84.93	40.4	12	30K	-1						12	50
DE BILT	85.32	36.7	12	43	10	23	7	8			15	50 PP
BAGNERES	85.37	46.4	12	32	-2						12	51
KEVO	85.40	16.2	12	44	10	23	5	5			15	51 PP
ALMERIA	85.47	52.9	12	31A	-3	22	51	-9			15	49 PP
DOURBES	85.74	38.7	12	43	8						23	12
GARCHY	85.84	41.7	12	34	-2							
GOTEBORG	86.52	29.9	12	48	9							
SODANKYLA	86.83	18.1	12	38	-3						15	59 PP
UMEA	86.86	22.6	12	48	7	23	16	2			22	58 SKS

BENSBERG	86.91	37.3	12	50	9							
BESANCON	87.69	41.0	12	56	11							
COPENHAGEN	87.69	31.6	12	54	9	23	35	13				
BENI ABBES	87.84	59.2	12	44	-2						16	19 PP
UPPSALA	88.00	26.6	12	51	5	23	9	-15			16	5
STRASBOURG	88.25	39.3	12	45	-3	23	18	-9			16	11 PP
APATITY	88.63	16.2									31	25
ROSELEND	88.72	42.2	12	46	-4							
KARLSKRONA	89.00	30.3	12	56	5							
STUTTGART	89.07	38.7	12	49	-3						16	20 PP
JENA	89.44	36.1	12	52	-1						16	24 PP
COLLMBERG	90.06	35.3	12	55	-1						16	49
NURMIJARVI	90.49	24.0	12	59	1	23	26	-21			16	27 PP
KASPERSKE H.	91.43	37.1	12	59	-4						16	38 PP
PRUHONICE	91.56	36.0	13	1	-2	23	34	-23			25	11 PS
FLORENCE X.	92.51	42.5				23	58	-7			18	55
LJUBLJANA	93.49	39.4									16	53
ROME	94.18	43.8				23	45	-35			16	39 PP
BYRD STATION	97.88	183.4	13	44	12							
TARANTO	98.02	43.3									24	19
MESSINA	98.02	45.9									17	41
MATUSIRO	103.23	315.4									32	50 SS
ATHENS	103.59	42.6									24	26
ISTANBUL UN.	104.97	37.5									18	33 PP
RIVERVIEW	115.03	240.3				25	27	7			29	35 PS
CANBERRA	116.90	238.8									29	52 PS
TEHERAN	120.50	27.0							20	1		
SHIRAZ	126.13	29.9	18	56	-2							
WILKES	127.24	194.9									32	58
WARSAK DAM	128.17	9.0	19	2	0							
QUETTA	130.96	15.1	19	6	-1				19	18	21	19 PP
NEW DELHI	134.13	3.5	19	12A	-1							
BOMBAY	143.15	11.5									22	37
MUNDARING	144.33	239.3	19	26	-5							
TANANARIVE	149.09	97.8	19	45	6						21	4

DECEMBER 1 1.H 50.M 15.S EPICENTRE 52.46-170.21 DEPTH= 0.KM

A=-0.60296 B=-0.10409 C= 0.79095 D=-0.1701 E= 0.9854
G=-0.7794 H=-0.1346 K=-0.6119 HT= -6.3

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	
COLLEGE	16.90	34.0	4	0	0	7	11	3			4	31	PP
VICTORIA	29.61	78.7	6	10	0								
YELLOW KNIFE	30.57	48.9	6	17	-1								
MOULD BAY	30.64	21.4	6	18	-1								
PENTICTON	31.53	75.1	6	26	0								
KIPAPA	32.39	158.5	6	29	-5	11	53	5			7	36	PP
TIKSI	32.39	328.8	6	34	0	11	46	-2					
YAKUTSK	32.71	310.9	6	36A	-1								
BANFF	33.14	70.0	6	40	-1								
HAWAII V.OB.	34.97	154.9	6	56	0						8	11	PP
MINERAL	34.98	90.5	6	56K	0								
BLUE MTS.	35.07	80.9	6	56A	-1						8	28	PPP
HUNGRY HORSE	35.27	73.7	6	58	-1						9	29	PCP
CALISTOGA	35.43	93.7	7	0K	0								
BERKELEY	36.11	94.4	7	5K	-1	12	45	-1			7	57	
RESOLUTE	36.51	25.6	7	9K	0								
RENO	36.57	90.2	7	11A	1								
LICK	36.83	94.6	7	12A	0						7	33	
BUTTE	37.29	76.3	7	16	0	13	54	50			8	35	PP
PRIEST	38.21	95.2	7	26K	2								
BOZEMAN	38.38	75.8	7	23	-2						8	7	
EUREKA	38.95	87.3	7	30	0	13	25	-4					
VLADIVOSTOK	39.03	280.0	7	28	-3								
MATUSIRO	39.19	267.0	7	31A	-1	13	29	-4					
DUGWAY	40.44	84.1	7	42A	0								
ALERT	40.59	11.1	7	43	0						9	21	
PASADENA	41.05	95.4	7	47	0	13	59	-2					
BOULDER CITY	41.87	90.6	7	53	-1								
PRICE	42.02	83.4	7	54A	-1								
FLAMING GRGE	42.08	80.8	7	54	-2								
CHANGCHUN	42.56	285.1	7	58	-2								

KHEYS	44.49	349.9	8	15A	0							
GOLDEN	45.26	79.5	8	21	0	15	2	0				
NORD	45.43	5.3	8	42	19							
TUCSON	46.83	91.3	8	33	-1							
TUCSON TELE.	46.84	91.1	8	33	-1							
ALBUQUERQUE	47.67	85.2	8	39	-1						10	37 PP
GODHAVN	50.12	24.5	9	1	2	16	28	17				
PEKING	50.27	286.7	9	0	-1	16	8	-5				
MANHATTEN	50.81	74.1	9	3	-2							
LUBBOCK	51.40	83.1	9	7	-2							
LAWRENCE	51.74	73.5	9	9	-3						10	21
DUBUQUE	52.07	67.2	9	12	-2							
WICHITA MTS.	52.60	79.7	9	16	-2						16	52 SP
ZO-SE	53.28	274.8	9	23A	0	16	51	-3	9	39		
PAOTOW	53.46	291.1	9	24	-1	16	56	-1				
TULSA	53.47	76.7	9	22	-3	16	54	-3				
NANKING	54.07	277.4	9	27	-2	17	3	-2				
CHICAGO JSA.	54.17	65.9	9	27	-3							
CHICAGO CGS.	54.27	66.0	9	27	-4							
ROLLA	54.41	72.3	9	27	-5	16	53	-16				
FLORISSANT	54.69	70.5	9	30	-4	17	7	-6				
ST. LOUIS 1	54.88	70.5	9	33	-2							
DALLAS	54.98	80.1	9	33	-3							
SCORESBY SD.	55.25	12.4	9	37	-1							
SCHEFFERVLLE	55.75	42.9	9	39	-2							
KEVO	57.45	353.0	9	52	-1	17	55	5			10	47 PCP
TROMSOE	58.04	356.2	9	56	-2							
SIAN	58.43	286.3	9	59A	-1	18	0	-3				
SHAWINIGAN	58.82	53.1	10	1A	-2							
APATITY	59.00	349.7	10	2	-2	18	6	-4				
BREBEUF	59.14	54.5	10	2K	-3	18	15	3	10	13		
KIRUNA	59.77	355.3	10	7	-3							
SODANKYLA	59.82	352.6	10	8	-2						12	10
MORGANTOWN	59.98	63.1	10	10K	-1							
LANCHOW	60.11	291.2	10	10	-2							
PENNSYLVANIA	60.27	60.9	10	11A	-2							
BLACKSBURG	61.44	65.4	10	20	-1	18	45	4				
PALISADES	62.21	58.2	10	25	-1	18	52	1			11	6 PCP
WESTON	62.54	55.6	10	27	-1							
KAJAANI	62.96	351.3	10	29	-2							
SVERDLOVSK	63.37	331.5	10	33	-1							
COLUMBIA	63.41	68.3	10	34	0							
UMEA	63.77	354.9	10	34	-2							
CANTON	63.87	274.3				19	9	-3				
CHENGTU	63.89	286.9	10	36	-1							
SKALSTUGAN	64.28	358.8	10	38	-2						11	13 PCP
HALIFAX	64.61	49.2	10	41	-1							
RABAUL	64.80	222.3				19	13	-10				
VIBORG	66.15	349.9	10	49	-3							
NURMIJARVI	66.75	352.1	10	54	-2	19	59	12			24	17 SS
PULKOVO	66.91	348.9	10	55	-2							
HELSINKI	67.06	351.8	10	52	-6							
UPPSALA	67.87	355.7	11	1	-2	20	3	2				
KONGSBERG	68.24	0.1	11	4	-1	20	37	32				
ALMATA-2	68.30	313.4	11	3	-2							
KUNMING	68.75	283.7	11	8A	0	20	11	0	11	24		
MOSCOW	69.75	343.6	11	11	-3							
FRUNSE	69.86	314.8	11	14	-1							
GOTEBORG	70.19	358.8	11	17	0							
LHASA	72.06	295.3	11	29	1							
COPENHAGEN	72.20	358.4	11	29A	0							
DURHAM	72.72	6.9	11	13K	-19							
TASHKENT	73.37	317.4	11	36	0							
DE BILT	75.74	2.9	11	45	-5							
HALLE	76.40	358.6	11	48	-5						12	49
COLLMBERG	76.58	357.9	11	54A	0						12	6 PCP
BENSBERG	76.93	1.7	11	56	0							
JENA	76.97	358.8	11	56	-1						13	5
CHITTAGONG	77.26	290.0	11	59A	1							
LWOW	77.38	350.6	11	58	-1							
KRAKOW	77.50	353.3	11	59	-1						12	13 PCP
DOURBES	77.72	3.4	12	0	-1	22	7	14				
PRAGUE	77.77	356.9	12	1	0							
PRUHONICE	77.86	356.9	12	0	-1	21	52	-2			22	33 PS
DEHRA DUN	78.39	304.9	12	5	1							
WARSAK DAM	78.48	311.7	12	3	-2							
UZHGOROD	78.73	351.6	12	5	-1							
KASPERSKE H.	78.74	357.5	12	5	-1							
FOLINIERE	78.77	6.9	12	6	0							

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PARIS	78.92	4.9	12	7	0				12	45
STUTTGART	79.15	0.3	12	8	-1					
STRASBOURG	79.32	1.4	12	9	-1				12	37
VIENNA-H.	79.51	355.5	12	11	0					
KISHINEV	79.57	346.9	12	9	-2					
GARCHY	80.47	4.6	12	15	-1				12	45
ASHKABAD	80.55	323.1	12	16	0					
BESANCON	80.61	2.6	12	17	1					
VANNOVSKAYA	80.64	323.3	12	17	0					
SIMFEROPOL	80.74	342.8	12	17A	0	22	26	1		
TIFLIS	81.42	334.3	12	20	-1	22	32	0		
CHARTERS TS.	81.56	220.9	12	18	-3					
LJUBLJANA	81.78	356.7	12	21	-2					
ROSELEND	82.19	2.2	12	25	0					
QUETTA	83.79	313.0	12	32	-1	22	56	0	12 44	23 35 SCS
SAN JUAN	83.89	67.9	12	32	-1					
FLORENCE X.	84.13	358.9	12	36	2	23	9	11		
BAGNERES	84.48	7.1	12	36	0					12 57
TEHERAN	84.97	327.2	12	38	-1	22	45	-22		
ROME	85.99	358.0	12	43	-1	23	5	-12		24 38 PS
TOLEDO	87.25	10.6	12	50	0					28 55 SS
CHINCHINA	88.89	83.4	13	3	5	23	50	5		
ATHENS	89.13	349.0	12	58K	-1					
MESSINA	89.57	355.5				23	38	-13		
CARACAS	89.71	73.2	13	2K	0	23	45	-7		
BOGOTA	90.11	82.3	13	4	0	23	51	-5		29 53 SS
SHIRAZ	90.11	323.8	13	3	-1					
POONA	90.24	301.4	13	4A	0					
BOMBAY	90.46	302.5	13	3	-2	23	59	0		
KARAPIRO	90.87	191.2	13	6	-1					
KSARA	91.11	338.5	13	9K	1					25 3
TRINIDAD	92.79	68.7	13	1	-15					
JERUSALEM	93.22	338.5	13	19	1					
BANGUI	122.88	349.5	18	59	0				19 8	
LWIRO	127.51	335.8	19	10	2					
BULAWAYO	144.58	328.5	19	37A	-2					
MAWSON	150.62	218.7	19	53A	4					20 6 PKP2
KIMBERLEY	153.83	329.0	19	54	1					

DECEMBER 1 4.H 17.M 3.S EPICENTRE -29.54-177.68 DEPTH= 74.KM

A=-0.87074 B=-0.03531 C=-0.49047 D=-0.0405 E= 0.9992
G= 0.4901 H= 0.0199 K=-0.8715 HT= 2.0

DEPTH OF FOCUS= 0.006R

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	
RAOUL ISLAND	0.36	323.5	0	7	-7								
ONERAHI	9.14	225.1	2	15	4								
KARAPIRO	10.09	212.2	2	22	-2								
TUAI	10.18	203.5	3	17	52	5	6	47					
SUVA	11.88	341.7	3	4	16								
WELLINGTON	13.23	205.6	3	11	5	5	14	-18					
COBB RIVER	13.91	211.6				5	30	-18					
NOUMEA	15.99	293.1	3	48K	6	7	2	26					
PORT VILA	17.38	309.5	4	3	4	7	23	15					
KOUMAC	18.61	294.6	4	16A	2								
RIVERVIEW	26.81	252.8	5	35	0								
CANBERRA	28.62	249.7	5	51A	-1								
MOORLANDS	30.98	235.8	6	11	-1						9	6	
TOOLANGI	31.57	245.5	6	16	-2	11	51	31			9	7	PCP
CHARTERS TS.	33.94	277.7	6	38	0						12	55	
ADELAIDE	37.05	250.1	7	4K	0						9	22	PCP
RABAUL	38.07	305.7	7	10	-3								
PORT MORESBY	38.51	294.1	7	15	-2								
CAPE HALLETT	43.32	185.4	7	55	-1								
DUMONT	45.04	202.3	8	6	-4						8	37	
DARWIN	50.61	278.4	8	54	1								
HAWAII V.OB.	53.26	26.7	9	12	-1								
HONOLULU	53.95	22.7	9	18	0								
KIPAPA	54.08	22.8	9	18	-1								
BYRD STATION	55.73	169.7	9	41	10								
WILKES	56.04	207.5	9	29A	-5						9	59	
MUNDARING	56.06	249.5	9	30	-4				9	49			

MIRNY	63.02	206.7	10 17	-5						
MAWSON	73.21	200.4	11 22A	-3					11 40	PP
MATUSIRO	77.69	325.0	11 48K	-2					22 24	
Y.-SAKHLINSK	84.16	334.0	12 24	0						
PRIEST	84.49	43.0	12 27A	1						
PASADENA	84.68	45.9	12 27	0						
LICK	84.73	41.6	12 28A	1						
BERKELEY	84.74	40.9	12 28A	1						
CALISTOGA	85.10	40.1	12 29A	0						
NANKING	85.95	310.4	12 35	2						
SANTA LUCIA	86.82	126.8			22 56	-11				
MINERAL	86.83	39.4	12 38K	1						
RENO	87.28	41.0	12 38K	-2						
BOULDER CITY	87.95	46.2	12 44	1						
TUCSON	88.29	51.2	12 46	2			13	3		
TUCSON TELE.	88.42	51.2	12 46	1						
EUREKA	89.48	43.0	12 50	0			13	7	30 21	PKKP
CHANGCHUN	89.72	322.6	12 50	-1						
DUGWAY	91.83	43.9	13 1A	0						
BLUE MTS.	92.19	38.2	13 2	-1					16 42	PP
PEKING	92.50	315.3	13 4	0						
SALT LAKE C.	92.75	43.9	13 6	1			13	22		
ALBUQUERQUE	92.82	51.1	13 6	0						
FLAMING GRGE	94.35	44.9	13 12	0						
AREQUIPA	95.45	112.2	13 19	1						
BUTTE	95.52	39.4	13 18	0			13	36	14 17	
BOZEMAN	96.16	40.3	13 21	0						
GOLDEN	96.18	47.7	13 21	0					17 14	
COLLEGE	96.94	12.4	13 23	-1					17 17	PP
WICHITA MTS.	98.17	54.8	13 29	-1	25	9 69			26 27	SP
YAKUTSK	100.54	337.6	13 39	-2						
TULSA	100.75	54.9			24	4 -9				
MOULD BAY	111.51	12.7	18 25A	-1						
NEW DELHI	115.68	289.6	18 33A	-1						
RESOLUTE	116.34	17.1	18 34K	-1						
FRUNSE	121.81	304.4	18 46	0						
WARSAK DAM	121.99	293.7	18 46	0						
ALERT	122.36	8.1	18 46	-1						
KHEYS	124.36	350.5	18 49	-2						
BULAWAYO	124.49	210.3	18 51A	0						
QUETTA	124.66	288.0	18 52A	1						
DUZHANBE	125.28	298.3	18 53	0						
TASHKENT	125.42	301.7	18 53	0						
SCHEFFERVLLE	125.44	41.6	18 52	-1						
NORD	127.32	3.5	18 56	0						
BROKEN HILL	129.51	213.6	19 2	1						
SVERDLOVSK	131.41	321.4	19 3	-1						
VANNOVSKAYA	133.46	295.8	19 6	-2					22 43	PKS
SHIRAZ	136.64	283.1	19 14A	0						
KEVO	137.34	347.6	19 10	-5						
APATITY	137.68	342.9	19 9	-7						
TEHERAN	138.56	291.8	19 17	0						
TROMSOE	138.75	351.3	19 10	-8						
SODANKYLA	139.43	345.8	19 11	-8						
LWIRO	139.49	223.3	19 21	2						
KIRUNA	140.19	349.4	19 9	-11						
KAJAANI	141.87	342.2	19 18	-5						
MOSCOW	143.78	326.4	19 23	-4						
UMEA	143.84	346.6	19 23	-4						
VIRORG	144.15	338.0	19 15	-12						
PULKOVO	144.33	336.0	19 25A	-3						
SKALSTUGAN	145.35	352.2	19 28A	-1						
NURMIJARVI	145.59	340.6	19 29	-1						
HELSINKI	145.78	340.0	19 30A	0						
UPPSALA	147.96	345.4	19 35A	1						
BERGEN	149.07	357.1	19 40	4						
KONGSBERG	149.48	352.7	19 41	5						
BANGUI	150.60	214.8	19 38	0			20	17		
GOTEBORG	151.05	349.3	19 44A	6						
KSARA	151.20	287.2	19 46	7						
JERUSALEM	151.67	282.9	19 47	8						
KARLSKRONA	151.77	344.2	19 41A	2						
COPENHAGEN	152.89	347.4	19 49A	8						
LWOW	153.91	327.0	19 52	9						
UZHGOROD	155.55	326.8							19 49	PPP
KRAKOW	155.56	331.9	19 46	1					20 13	PKP2
SKALNATE PL.	156.09	330.1	19 47	2						
COLLMBERG	156.84	342.8	19 47A	1					23 47	PP

HALLE	156.91	344.5	19	52	5			20	17	PKP2
JENA	157.53	344.6	19	46	-1			21	11	
KEW	158.00	4.4	20	21	33					
BENSBERG	158.29	351.7	19	47	-1			20	23	PKP2
KASPERSKE H.	158.63	339.4	19	48	-1			24	18	
DOURBES	159.39	355.8	20	29	39					
STUTTGART	160.07	346.4	19	50	0			20	31	PKP2
STRASBOURG	160.53	349.1						20	33	
FOLINIERE	160.67	5.6	19	51	0			20	33	PKP2
PARIS	160.75	359.7	19	53	2			20	35	
LJUBLJANA	160.94	333.2	19	51	0			20	35	
BESANCON	162.09	351.9						20	39	
GARCHY	162.27	358.3	19	53	0			20	41	
ROSELEND	163.52	349.3						20	26	
CLERMONT-FD.	163.78	358.0						20	45	
BAGNERES	166.38	6.8	19	57	1					

DECEMBER 1 21.H 2.M 49.S EPICENTRE -17.94-178.56 DEPTH= 585.KM
A=-0.95168 B=-0.02395 C=-0.30616 D=-0.0252 E= 0.9997
G= 0.3061 H= 0.0077 K=-0.9520 HT= 5.2

DEPTH OF FOCUS= 0.087R

SE= 1.22

	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	
RAOUL ISLAND	11.27	177.1	2	29	-3	4	26	-7					
PORT VILA	12.50	269.0	2	45K	1	5	4	9					
NOUMEA	14.73	250.4	3	8K	2								
HONIARA	22.51	289.2	4	17	-1	7	21	-25					
RIVERVIEW	31.36	233.8	5	37A	2								
RABAUL	31.73	292.0	5	35	-4								
CHARTERS TS.	33.29	260.6	5	52	0						11	8	
CANBERRA	33.57	232.5	5	54K	0								
PORT MORESBY	34.33	279.7	6	2K	2						13	51	
TOOLANGI	37.04	230.8	6	23K	0								
ADELAIDE	41.49	237.2	6	59K	1								
HONOLULU	43.85	28.1	7	17	0								
KIPAPA	43.99	28.1	7	17	-1								
DARWIN	49.05	269.0	7	58	2						10	25	
MUNDARING	59.98	243.0	9	12	-1								
MATUSIRO	67.85	323.4	10	2K	0								
TANGERANG	73.70	268.7	10	33K	-3								
BERKELEY	76.65	42.6	10	53A	0								
PRIEST	76.72	44.8	10	54A	1								
LICK	76.75	43.3	10	54A	1								
UKIAH	76.78	41.1	10	54	1								
CALISTOGA	76.89	41.8	10	54A	0								
PASADENA	77.35	47.6	10	56	0								
MINERAL	78.51	40.8	11	3K	0								
RENO	79.18	42.3	11	7A	1								
BOULDER CITY	80.64	47.5	11	15	1								
EUREKA	81.64	44.0	11	18	-1				13	28	14	33	*SP
TUCSON	81.77	52.4	11	21	2								
BLUE MTS.	83.65	38.9	11	29	0						29	39	PKKP
MAWSON	83.78	199.8	11	29K	0								
DUGWAY	84.11	44.6	11	31A	0								
PENTICTON	84.84	34.3	11	35A	0								
SALT LAKE C.	85.02	44.4	11	35	-1								
PRICE	85.18	45.9	11	36	0								
COLLEGE	85.84	12.6	11	38	-2	21	22	-2	13	50	15	17	PP
FLAMING GRGE	86.75	45.2	11	44	0								
BUTTE	87.11	39.6	11	45	-1								
HUNGRY HORSE	87.42	37.1	11	47	0								
GOLDEN	88.99	47.6	11	55	1								
LARAMIE	89.51	46.1	11	57	0								
WICHITA MTS.	92.12	54.3	12	8	-1						32	1	PKKS
TULSA	94.67	53.9	12	21	1								
MANHATTEN	95.13	50.6	12	23	1								
MOULD BAY	100.40	12.1	12	45K	-1								
BULAWAYO	133.71	216.4									20	49	PP
BROKEN HILL	138.21	221.3									21	3	PP
COLLMBERG	145.47	347.2	18	34A	1						18	39	PKP2
JENA	146.11	348.5	18	35	2						18	57	
PRUHONICE	146.34	344.7	18	38A	4								

LWIRO	146.40	236.1	18 35K	1
JERUSALEM	146.55	300.8	18 39	5
BENSBERG	146.74	353.4	18 38	4
KASPERSKE H.	147.37	345.2	18 40A	5
VIENNA-H.	147.41	341.4	18 40	5
DOURBES	147.82	356.2	18 42	6
STUTTGART	148.60	350.0	18 43	6
PARIS	149.20	358.6	18 45	7
FOLINIERE	149.21	2.5	18 44	6
GARCHY	150.71	357.7	18 48	8
BANGUI	158.45	233.3	19 31	40

DECEMBER 4 7.H 23.M 4.5 EPICENTRE -21.64 -65.42 DEPTH= 295.KM

A= 0.38694 B=-0.84609 C=-0.36662 D=-0.9094 E=-0.4159
G=-0.1525 H= 0.3334 K=-0.9304 HT= 4.3

DEPTH OF FOCUS= 0.041R

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	
ANTOFAGASTA	5.05	245.1	1	16	-2	2	0	-20					
LA PAZ	5.72	333.0	1	29	3	2	35	1					
COPIAPO	7.24	217.3	1	44	-1	3	1	-6					
AREQUIPA	7.71	310.9	1	50	0								
SANTA LUCIA	12.63	200.3	2	49A	-2	5	5	-2	3	1			
HUANCAYO	13.44	313.6	3	3	2	5	31	7					
BOGOTA	27.44	341.0	5	22	1	9	40	2	6	23	11	24	*SS
CHINCHINA	28.27	338.1	5	22	-6	9	40	-11	6	30			
CARACAS	31.97	357.2	6	0	0	10	46	-3					
GALERAZAMBA	33.64	342.3									14	28	SSS
FORT FRANCE	36.39	7.0	6	37	-1	11	54	-3					
ST. CLAUDE	37.61	5.9	6	54	6								
SAN JUAN	39.78	359.0	7	4	-2				8	10			
ARGENTINE I.	43.60	179.3	7	37	0								
M.BOUR	59.50	57.3	9	32	-2	17	16	-3					
LITTLE ROCK	61.66	334.9	9	46	-3								
PALISADES	62.82	352.8				18	1	0					
FAYETTEVILLE	63.54	334.2	10	0K	-1								
TULSA	64.05	332.8	10	4	0	18	16	0			20	15	*SS
ROLLA	64.24	336.9	10	4	-1	18	15	-3					
WICHITA MTS.	64.30	330.0	10	5	-1	18	17	-2	11	14	12	30	PP
FLORISSANT	64.51	338.6	10	5	-2								
LUBBOCK	64.97	326.8	10	4K	-6						11	17	PCP
HALIFAX	65.96	1.4	10	16	0								
LAWRENCE	66.45	335.0	10	19	0						11	32	
MANHATTEN	67.18	334.1	10	22	-2	18	50	-4					
BREBEUF	67.23	353.8	10	24K	0								
DUBUQUE	67.95	340.1	10	28	-1								
SHAWINIGAN	68.19	354.5	10	30	0								
ALBUQUERQUE	68.44	324.6	10	32	0				11	43			
SOUTH POLE	68.49	180.0	10	38	6						19	8	
TUCSON TELE.	68.97	319.9	10	35	0								
TUCSON	68.97	319.7	10	36	1				11	45			
GOLDEN	71.52	328.5	10	51	1								
LARAMIE	72.87	329.4	11	1	3								
BOULDER CITY	73.94	320.1	11	6	1				12	17			
PRICE	74.22	325.1	11	7A	1								
FLAMING GRGE	74.45	326.9	11	8	1								
PASADENA	74.80	316.8	11	10	1				12	22			
SALT LAKE C.	75.61	325.4	11	15	1				12	28			
DUGWAY	75.71	324.4	11	15K	0								
SCHEFFERVLLE	76.15	359.2	11	17K	0								
EUREKA	76.97	322.2	11	23	1				12	36			
PRIEST	77.63	317.1	11	26K	1								
BOZEMAN	78.76	329.3	11	32	1				12	45			
LICK	78.99	317.6	11	34K	2						12	49	
RENO	79.25	320.2	11	35	1								
BERKELEY	79.71	317.7	11	37K	1						12	52	
BUTTE	79.75	328.7	11	38	2				12	51	12	20	
GRAHAMSTOWN	80.02	121.8	11	37A	-1								
CALISTOGA	80.38	318.1	11	41K	1								
MINERAL	80.83	320.0	11	32K	-10								
BLUE MTS.	81.33	325.5	11	45K	0	21	36	7	12	59	29	29	PKKP
HUNGRY HORSE	82.11	329.7	11	50	1								

BANFF	84.79	331.0	12	2K	0					
LONGMIRE	84.95	324.9	12	3	U					
PENTICTON	85.47	327.8	12	6K	U					
BANGUI	86.07	83.8	12	8	U				15	30 PP
BULAWAYO	86.33	110.1	12	10A	0					
VICTORIA	86.91	325.6	12	13K	1					
BAGNERES	88.14	41.9	12	18	0				13	32
BROKEN HILL	88.30	104.8	12	21	2					
FOLINIERE	90.82	36.8	12	30	-1					
CLERMONT-FD.	91.35	40.7	12	33	0				13	25
GARCHY	92.08	39.3	13	36A	59				16	18
KEW	92.35	34.6	12	36	-2					
YELLOW KNIFE	92.43	339.4	12	38K	U					
DOURBES	94.35	37.4	12	47	0					
KASPERSKE H.	99.20	40.8	13	9	0					
COLLMBERG	99.68	38.6	13	11	0					
PRUHONICE	100.10	40.2	13	14	1					
KARLSKRONA	102.86	34.5							18	47
COLLEGE	106.20	333.8	13	40	777				18	4 PP
CANBERRA	114.62	210.6							28	46
CHARTERS TS.	128.24	218.9	19	24	53					
PORT MORESBY	135.57	229.4	18	41A	-4					
QUETTA	136.58	68.5	18	38	-9					
WARSAK DAM	140.27	62.5	18	47	-7					
DARWIN	142.62	206.8	18	55	-3					
NEW DELHI	145.56	70.7	19	4A	1					
CHATRA	154.51	72.9							20	28
MATUSIRO	154.66	311.0	19	27A	11				19	43 PKP2
SHILLONG	158.83	74.9	19	8A	-14				19	44

DECEMBER 4 16.H 40.M 1.S EPICENTRE -16.62-172.60 DEPTH= 0.KM

A=-0.95075 B=-0.12354 C=-0.28428 D=-0.1289 E= 0.9917
G= 0.2819 H= 0.0366 K=-0.9587 HT= 5.4

SE= 2.86

	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	2.81	16.4	0	41A	-6	1	11	-11				
PORT VILA	18.27	263.8	4	30	13							
NOUMEA	20.54	250.7	4	44	1							
KOUMAC	22.26	256.3	5	4	4							
ONERAHI	22.33	208.9	5	2	1							
TUAI	23.85	200.1	5	15	-1							
RABAUL	36.71	285.7	7	7	-4						8	33
RIVERVIEW	36.76	235.3	7	13	2	12	58	3			15	38
CANBERRA	38.92	234.0	7	27	-2						8	45
CHARTERS TS.	39.13	258.5	7	28	-3							
PORT MORESBY	39.81	275.2	7	35A	-2	13	17	-25				
KIPAPA	40.42	21.2	7	44	2							
TOOLANGI	42.31	232.0	7	55	-2				8	7		
ADELAIDE	47.00	237.5	8	33K	-2							
DARWIN	54.79	266.4	9	32	-2							
DUMONT	58.71	200.1	10	1	-1	18	7	1				
MUNDARING	65.64	242.0	10	47	-1	19	36	3				
PERTH	65.96	242.0	10	53	3	19	44	7			27	45
BYRD STATION	67.64	171.3	11	2	1							
WILKES	69.64	204.8	11	4	-9	20	21	0				
MATUSIRO	70.36	319.7	11	16	-2	20	37	7				
PRIEST	71.85	42.1	11	29A	2							
BERKELEY	71.91	39.9	11	28A	1	20	39	-9			21	27
LICK	71.96	40.6	11	29K	2						11	48
CALISTOGA	72.20	39.1	11	26A	-3							
PASADENA	72.32	45.1	11	30	1	20	54	2				
MINERAL	73.87	38.2	11	40K	2							
BOULDER CITY	75.61	45.1	11	41	-8							
EUREKA	76.81	41.6	11	55	0							
BLUE MTS.	79.13	36.5	12	7	-1	22	10	3			27	21 55
DUGWAY	79.24	42.4	12	8K	-1							
ZO-SE	79.31	307.0				22	17	8				
TANGERANG	79.44	266.7	12	11	1							
SALT LAKE C.	80.16	42.3	12	19	5							
PENTICTON	80.63	32.0	12	16	0							
ALBUQUERQUE	81.00	49.5	12	19	1							
HONG KONG	81.44	296.3	12	6	-14	22	41	10				

NANKING	81.57	306.9	12	21	0	22	45	12			
CANTON	82.44	296.7	12	29	3	22	55	13			
BUTTE	82.54	37.5	12	27	1						
CHANGCHUN	82.61	319.8	12	26A	0	22	51	8			
BOZEMAN	83.25	38.4	12	29	-1						
COLLEGE	83.42	10.4	12	30	-1						
GOLDEN	83.95	45.7	12	35	2						
WICHITA MTS.	86.77	52.5	12	46	-1	23	27	3	13	6	
PEKING	86.86	313.3	12	48A	0	23	33	8	23	18	SKS
MAWSON	86.89	198.4	12	47K	-1						
TULSA	89.33	52.2				23	35	-13	29	53	SS
SIAN	90.04	305.7	13	4	1	24	8	13	23	44	SKS
SANTA LUCIA	90.58	125.1				23	38	-22	15	49	
PAOTOW	91.41	312.0	13	10	1	24	20	13	23	42	SKS
KUNMING	92.25	295.4	13	15	2	24	29	15	23	54	SKS
CHENGTU	92.82	301.0	13	23	7	24	31	12	23	52	SKS
LANCHOW	94.57	306.1				24	53	18	24	3	SKS
MOULD BAY	97.97	11.2	13	44	5						
PALISADES	107.18	51.5	14	36	777	25	14	14			
CARACAS	107.82	84.1	18	45	777				39	19	SSS
BROKEN HILL	142.77	215.1	19	29	-6						
COLLMBERG	145.12	353.9	19	40	1				19	59	
KRAKOW	145.15	345.8	19	39	0				19	47	PKP2
RACIBORZ	145.50	347.7	19	40	0				19	52	PKP2
JENA	145.61	355.3	19	39	-1				22	47	
BENSBERG	145.74	0.3	19	42	2						
PRAGUE	146.16	351.9	19	44	3						
PRUHONICE	146.23	351.7	19	43	2				20	43	
DOURBES	146.53	3.3	19	49	7						
KASPERSKE H.	147.19	352.5	19	46	3				20	14	
FOLINIERE	147.30	9.7	19	46	3						
BRATISLAVA	147.55	347.9	19	47	3						
VIENNA-H.	147.61	348.8	19	47	3				19	53	PKP2
PARIS	147.65	6.1							20	9	
BUDAPEST	147.77	345.2	19	51	7				20	9	
STUTTGART	147.90	357.7	19	57	13						
STRASBOURG	148.13	359.5	19	52	8				20	12	
KSARA	149.22	309.1	19	49	3				23	19	PP
ISTANBUL UN.	149.35	326.9	19	56	10						
BESANCON	149.44	1.9	20	1	14						
LJUBLJANA	150.06	350.0	20	6	18						
JERUSALEM	150.59	306.0	19	56	8						
CLERMONT-FD.	150.72	6.1	19	56	7						
ROSELEND	151.01	1.1	19	56	7						
LWIRO	151.75	230.4	19	59	9				23	38	
CHIAVARI	152.34	357.0							23	49	PP
BANGUI	163.59	223.4	20	10	6				20	21	

DECEMBER 6 4.H 4.M 13.S EPICENTRE 49.03 154.57 DEPTH= 109.KM

A=-0.59438 B= 0.28258 C= 0.75290 D= 0.4294 E= 0.9031
G=-0.6800 H= 0.3233 K=-0.6581 HT= -5.1

DEPTH OF FOCUS= 0.012R

SE= 1.42

	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	4.75	31.3	1	8K	-2	2	1	-4				
KURILSK	5.95	232.7	1	26	0							
Y.-SAKHLINSK	8.20	260.2	2	0K	3							
UGLEGORSK	8.22	275.0	2	1	4							
MAGADAN	10.76	349.7	2	32	0							
MATUSIRO	17.28	229.8	3	53	-2						5	7
YAKUTSK	18.99	322.5	4	14K	-1							
TIKSI	25.57	341.4	5	18A	-2				5	42		
COLLEGE	33.76	40.5	6	33	0							
MOULD BAY	42.12	20.9	7	43K	1							
KHEYS	43.08	346.2	7	49K	-1							
ALERT	47.38	6.2	8	24	0							
RESOLUTE	48.36	19.5	8	32K	0							
YELLOW KNIFE	48.51	38.3	8	34	1							
PRZHEVALSK	51.47	293.3	8	57A	1							
THULE	51.86	11.8	8	57	-2							
RABAUL	53.06	183.0	9	4	-4							
PENTICTON	53.07	54.7	9	7A	-1							

SHILLONG	53.43	267.9	9 10K	0				
KEVO	55.51	340.4	9 24	-1				
APATITY	55.64	336.5	9 25K	-1				
CHITTAGONG	55.69	265.1	9 29K	2				
BLUE MTS.	57.01	58.0	9 37A	1		9 56		
UKIAH	57.14	66.6	9 37	0		9 57		
TROMSOE	57.28	343.1	9 36	-2				
MINERAL	57.34	64.5	9 38A	0				
SODANKYLA	57.48	338.8	9 37	-2				
CALISTOGA	57.83	66.6	9 42A	0				
KIRUNA	58.49	341.4	9 45A	-1				
BERKELEY	58.52	67.1	9 47A	0				
PORT MORESBY	58.55	188.6	9 45A	-2				
BUTTE	58.86	54.4	9 51	2		10 10		
RENO	58.92	64.2	9 49A	0				
LICK	59.24	67.2	9 51A	-1				
KAJAANI	59.82	336.0	9 57	1			10 43 PCP	
BOZEMAN	59.90	53.9	9 57	1		10 17		
PRIEST	60.62	67.7	10 1A	0				
NEW DELHI	61.00	281.1	10 37K	33				
EUREKA	61.21	62.0	10 5	0		10 25		
UMEA	61.92	338.9	10 8	-2				
VIBORG	62.19	333.2	10 10	-2				
PULKOVO	62.49	331.9	10 13A	-1				
DUGWAY	62.55	59.6	10 14A	0				
SALT LAKE C.	62.71	58.5	10 16	1				
PASADENA	63.46	67.8	10 19	-1		10 38		
NURMIJARVI	63.55	334.9	10 19	-2			10 55 PCP	
HELSINKI	63.75	334.6	10 21	-1			10 57 PCP	
SKALSTUGAN	63.87	342.3	10 21	-2				
FLAMING GRGE	63.97	57.0	10 24	1			11 3	
PRICE	64.08	58.9	10 24	0				
BOULDER CITY	64.23	64.2	10 26	1		10 45		
UPPSALA	65.97	337.8	10 35A	-1				
QUETTA	66.41	289.3	10 39	0				
GOLDEN	67.02	55.6	10 44	1				
KONGSBERG	67.97	341.7	10 48	-1				
TUCSON	69.20	64.6	10 57	1				
CHARTERS TS.	69.21	188.4	10 55A	-1			11 24	
KARLSKRONA	69.74	337.0	10 59	-1				
ALBUQUERQUE	69.81	59.8	11 1	1		11 21		
POONA	70.21	275.7	11 3A	0				
SCHEFFERVLLE	70.85	23.9	11 6K	0				
MANHATTEN	72.02	50.6	11 14	1				
KRAKOW	73.89	331.5	11 25	1			11 46 PCP	
WICHITA MTS.	74.35	55.0	11 27	0		11 47		
RACIBORZ	74.40	332.5	11 27	0				
TULSA	74.93	52.4	11 30	0				
FLORISSANT	75.40	47.0	11 33	0				
SHIRAZ	75.47	298.4	11 29K	-4				
PRAGUE	75.51	334.8	11 36	2				
PRUHONICE	75.56	334.6	11 35	1			14 7 PP	
ST. LOUIS 1	75.60	47.0	11 37	3				
FAYETTEVILLE	75.61	51.2	11 34A	0				
SHAWINIGAN	76.29	31.5	11 39	1				
BENSBERG	76.55	339.5	11 39	0				
VIENNA-H.	76.58	332.7	11 41	1			11 56 PCP	
KASPERSKE H.	76.60	334.8	11 39	-1			12 5	
FELDBERG	76.94	338.4	11 57	15				
KEW	77.60	344.2	11 45	0				
HEIDELBERG	77.63	337.9	11 47	2				
DOURBES	77.93	340.8	11 49	2				
STUTTGART	78.08	337.4	11 49A	1				
TUBINGEN	78.35	337.4	11 51	2				
STRASBOURG	78.63	338.2	11 53	2		12 13		
LJUBLJANA	79.11	332.9	11 54	1				
WELSCHBRUCH	79.13	339.1	11 54	0				
PARIS	79.60	341.7	11 58	2			12 19	
FOLINIERE	80.22	343.6	12 16	17				
BESANCON	80.30	338.9	12 0	0				
GARCHY	80.93	340.8	12 4K	1			12 53	
ROSELEND	81.60	337.9	12 5	-2			12 33	
CLERMONT-FD.	82.35	340.3	12 10	-1				
BAGNERES	85.57	341.5	12 28	1				
TOOLANGI	86.60	187.2	12 33	1		12 53		
BULAWAYO	128.38	284.0	18 55	2				
SOUTH POLE	138.84	180.0	19 10	-3				
N-LAZARVSKYA	152.12	205.4	19 43	8				

DECEMBER 7 9.H 35.M 58.S EPICENTRE 38.20 106.26 DEPTH= 0.KM

A=-0.22055 B= 0.75640 C= 0.61580 D= 0.9600 E= 0.2799
G=-0.1724 H= 0.5912 K=-0.7879 HT= -1.0

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	
LANCHOW	2.89	222.9	0	48K	0	1	24	0			0	51	PG
PAOTOW	3.77	49.7	1	1	1	1	47	1			1	16	PG
SIAN	4.49	150.5	1	9	-2	2	5	1			1	25	PG
CHENGTU	7.74	194.5									2	26	PG
PEKING	7.92	73.6	1	59	0						2	28	PG
ULAN-BATOR	9.73	2.6	2	24	0								
ESEN BULAK	11.04	321.1	2	39	-3								
NANKING	11.94	117.1	2	51	-3	5	4	-5					
KUNMING	13.38	193.9	3	10	-3	5	34	-10					
IRKUTSK	14.14	355.1	3	24	1								
ZO-SE	14.17	115.5	3	20	-4								
CHANGCHUN	15.43	62.6	3	41	1								
HONG KONG	17.24	154.5	4	8	5	7	41	26					
SHILLONG	17.51	228.2	4	4A	-3	7	33	12					
TAIPEI	18.44	131.0									9	49	
TAICHUNG	18.63	134.6									9	30	
HWALIEN	19.31	132.9	4	32	3						10	28	
CHATRA	19.65	240.4	4	31A	-2								
TAITUNG	20.00	136.1	4	38	1						10	17	
VLADIVOSTOK	20.03	67.7	4	37	0								
CHITTAGONG	20.07	222.3	4	36	-1	8	10	-8					
CALCUTTA	21.89	229.6				8	55	1					
BOKARO	22.57	236.5	5	3	0	9	8	2					
FRUNSE	24.41	291.0	5	22	1								
MATUSIRO	25.39	83.8	5	28A	-2	10	20	25					
NEW DELHI	26.00	257.0	5	31A	-5								
LAHORE	26.93	265.4	5	48	4								
YAKUTSK	27.89	23.7	5	55A	2								
WARSAK DAM	28.25	272.2	5	56	0								
TASHKENT	28.46	288.1	6	0	2								
QUETTA	33.29	268.1	6	40K	-1								
POONA	34.34	244.3	6	52A	2								
TIKSI	35.45	12.1	7	0A	0						7	29	
SHIRAZ	44.86	275.8	8	17A	0								
TIFLIS	46.36	294.7	8	32	3								
APATITY	48.86	330.8	8	49	0								
PULKOVO	51.09	320.9	9	10A	4								
SODANKYLA	51.48	330.9	9	9K	0						9	39	
KAJAANI	51.54	326.6	9	9	0						9	30	
HELSINKI	53.63	322.1	9	24	-1						9	46	
NURMIJARVI	53.69	322.6	9	24	-1						9	55	
KIRUNA	53.74	332.0	9	25	-1								
TROMSOE	53.86	334.3	9	27	0								
UMEA	54.82	327.2	9	33	-1								
NORD	56.90	351.5	9	48	-1								
UPPSALA	57.24	323.1	9	49	-2						10	11	
UZHGOROD	58.95	309.6	10	2	-1								
ALERT	59.43	358.3	10	8	2								
KARLSKRONA	59.65	319.6	10	5	-3								
KRAKOW	59.78	311.9	10	8	-1								
PORT MORESBY	60.81	132.3	10	14A	-2								
MOULD BAY	62.24	11.1	10	26A	0								
COLLEGE	62.32	27.6	10	26	0						10	53	PCP
VIENNA-H.	62.67	311.2	10	30	2						11	7	PCP
PRUHONICE	62.93	313.6	10	30	0						10	52	
PRAGUE	62.95	313.7									10	55	
COLLMBERG	63.18	315.4	10	30K	-2						12	52	PP
HALLE	63.66	315.9	10	33	-2								
KASPERSKE H.	63.89	313.1	10	35	-1						12	8	
JENA	64.14	315.5	10	37	-1	18	42	-33			23	32	SS
LJUBLJANA	64.83	309.7	10	42	-1						11	20	PCP
STUTTGART	66.52	314.3	10	56	3								
BENSBERG	66.53	317.1	10	47	-6								
RESOLUTE	66.53	6.0	10	54K	1								
CHARTERS TS.	69.09	139.7	11	8	-1								
KEW	70.13	320.4	11	19	3								
FOLINIERE	71.84	318.2	11	25	-1								
YELLOW KNIFE	74.41	18.4	11	40	-1								
TOLEDO	79.46	312.8	12	10	1								
GRANADA	80.98	310.5	12	45A	27								

LWIRO	81.55	260.4	12 29A	9			
CANBERRA	83.18	146.0	12 28A	-1			
BANGUI	85.46	272.0	12 40	0			12 44 PCP
HUNGRY HORSE	86.68	25.6	12 48	1			
BLUE MTS.	88.47	29.4	12 56	1		16 25	
BUTTE	89.20	25.9	13 0	1			
BROKEN HILL	89.50	251.2	13 3	3			
MINERAL	90.40	34.5	13 5A	1			
EUREKA	93.53	31.4	13 20	1			
FLAMING GRGE	94.78	26.3	13 26	2			
SOUTH POLE	128.01	180.0	19 13	5			

DECEMBER 7 14.H 3.M 40.S EPICENTRE 29.22 139.38 DEPTH= 439.KM

A=-0.66350 B= 0.56919 C= 0.48559 D= 0.6511 E= 0.7590
G=-0.3686 H= 0.3162 K=-0.8742 HT= 2.1

DEPTH OF FOCUS= 0.064R

SE= 2.00

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
TORISIMA	1.49	32.3	0 55	-3	1 37	-6		
HATIDYOZIMA	3.89	5.1	1 14	0	2 10	-3		
SIOMISAKI	5.23	324.8	1 27	0	2 29	-6		
OMAESAKI	5.46	349.9	1 30	1	2 40	0		
OSIMA	5.54	0.0	1 28	-2	2 35	-6		14 3 SCS
OWASE	5.54	331.6	1 31A	1	2 43	2		
HAMAMATU	5.67	346.1	1 31K	0	2 45	2		
MERA	5.70	3.8	1 30	-2	2 40	-4		
SHIZUOKA	5.80	352.0	1 33A	0	2 45	-1		
AJIRO	5.82	357.8	1 32A	-1	2 44	-2		
MISIMA	5.90	356.6	1 32	-2	2 39	-9		
TU	5.98	336.8	1 39	4	2 53	4		
MUROTO	6.00	313.4	1 35	0	2 50	1		
KAMEYAMA	6.13	337.0	1 38A	2	2 44	-8		
WAKAYAMA	6.15	325.4	1 38	2	2 53	1		
YOKOHAMA	6.20	2.1	1 35	-2	2 51	-2		
NARA	6.22	332.0	1 39	2	2 57	3		
NAGOYA	6.28	341.7	1 38K	0	2 56	1		14 8 SCS
HUNATU	6.29	355.5	1 38	0	2 54	-1		
OSAKA	6.33	329.9	1 40K	2	2 46	-10		
TOKUSIMA	6.33	321.0	1 40K	2	2 58	2		
SUMOTO	6.37	324.5	1 40K	1	2 59	2		
IIDA	6.42	348.7	1 38	-1	2 57	-1		
TOKYO C.M.O.	6.45	2.7	1 38K	-2	2 55	-3		
KOHU	6.47	354.1	1 38A	-2	2 58	-1		
ASHIZURI	6.49	304.1	1 40A	0	2 57	-2		
ABUYAMA	6.50	331.2	1 39A	-1	2 58	-1		
TSURUGISAN	6.50	316.6	1 41	1	3 2	3		
KOBE	6.51	327.9	1 41	1	3 1	2		
GIHU	6.55	341.0	1 40K	-1	3 1	1		
KYOTO	6.56	332.8	1 42K	1	2 53	-7		
HIKONE	6.59	337.1	1 43	2	3 2	1		
TYOSI	6.60	10.5	1 41	0	2 54	-7		
KOTI	6.61	312.3	1 43	2	3 0	-1		
TITIBU	6.75	358.0	1 43	0	3 0	-4		
HIMEJI	6.76	322.5	1 45	2	3 7	3		
TAKAMATU	6.81	319.7	1 44	1	3 3	-2		
KUMAGAYA	6.91	0.0	1 42	-3	3 3	-4		
TSURUGA	7.00	337.3	1 40	-5	3 10	1		
TUKUBASAN	7.01	4.8	1 42A	-4	2 52	-17		2 26 *SP
KAKIOKA	7.03	5.3	1 45	-1	3 4	-5		
UWAZIMA	7.08	306.1	1 46	0	3 8	-2		
MAIZURU	7.09	332.6	1 49K	3	3 12	1		
MATUMOTO	7.11	350.8	1 47A	0	3 12	1		
OIWAKE	7.13	354.6	1 47	0	3 4	-7		
TAKAYAMA	7.14	346.0	1 47	0	3 14	2		
OKAYAMA	7.15	321.0	1 48	1	3 17	5		
MAEBASI	7.17	358.0	1 46A	-1	3 10	-2		
MITO	7.20	7.1	1 47A	-1	3 9	-4		
MATUYAMA	7.27	311.0	2 0K	12	3 27	13		
HUKUI	7.31	339.6	1 46K	-3	3 16	1		
UTUNOMIYA	7.33	3.1	1 46	-3	3 9	-6		
MATUSIRO	7.37	352.7	1 46A	-4	3 2	-14		
MIYAZAKI	7.37	293.4	1 52	2	3 17	1		

TOYOOKA	7.38	329.7	1	50K	0	3	18	2			
NAGANO	7.50	352.7	1	51K	0	3	17	-2			
KANAZAWA	7.64	343.3	1	51	-2	3	29	7			
TOTTORI	7.66	326.3	1	54K	1	3	25	3			
TOYAMA	7.68	346.8	1	54	1	3	22	0			
OOITA	7.75	303.0	1	56K	2	3	22	-2			
YAKUSIMA	7.81	281.2	1	54A	0	3	27	2			
ONAHAMA	7.82	9.0	1	53A	-1	3	20	-5			
HIROSIMA	7.83	312.8	1	55K	0	3	29	4			
SHIRAKAWA	7.91	4.9	1	54	-2	3	24	-3			
TAKADA	7.92	353.5	1	55	-1	3	22	-5			
KAGOSIMA	7.98	289.3	1	59K	3	3	34	6			
ASOSAN	8.01	299.4	1	58	1	3	35	6			
YONAGO	8.02	322.1	1	58K	1	3	26	-3			
MATSUE	8.19	321.0	2	0	1	3	26	-6			
KUMAMOTO	8.27	297.9	2	0K	1	3	27	-7			
HAMADA	8.40	314.3	2	2K	1	3	29	-8			
WAZIMA	8.40	346.4	2	0K	-1	3	34	-3			
HUKUSIMA	8.56	5.8	2	1	-2	3	37	-3			
UNZENDAKE	8.58	296.4	2	11	8	3	48	8			
SIMONOSEKI	8.61	305.4	1	54K	-9	3	30	-11			
SAIGO	8.63	325.4	2	5	2	3	44	3			
NIIGATA	8.69	358.3	2	7K	3	3	44	2			
SAGA	8.75	299.6	2	7K	2	3	51	7			
AIKAWA	8.83	354.2	2	6	0	3	42	-3			
HUKUOKA	8.83	301.8	2	7K	1	3	45	0			
NAGASAKI	8.90	295.8	2	6K	-2	3	40	-6			
YAMAGATA	9.05	4.9	2	8A	0	3	48	-2			
SENDAI	9.12	7.6	2	8A	-1	3	49	-2			
ISINOMAKI	9.33	9.5	2	9A	-2	3	54	-1			
SAKATA	9.67	2.1	2	16	1	4	4	2			
HUKUE	9.70	293.6	2	16	1	3	24	-39			
ITUHARA	9.93	302.6	2	18A	0	4	5	-3			
MIZUSAWA	10.00	7.9	2	19	0	4	8	-1			
AKITA	10.50	3.1	2	23K	-1	4	23	4			
MORIOKA	10.56	7.6	2	25A	0	4	21	0			
MIYAKO	10.63	10.9	2	25A	-1	4	20	-2			
MAWASHI	10.77	256.7	2	28	1	4	29	4			14 15 SCS
HATINOHE	11.42	8.3	2	34A	-1	4	37	-1			
AOMORI	11.63	5.3	2	37A	0	4	44	2			
HAKODATE	12.62	4.7	2	28A	-20	5	1	-1			
MORI	12.89	4.0	2	52A	1	5	10	3			
MURORAN	13.14	5.2	2	53A	0	5	12	0			
URAKAWA	13.20	11.2	2	54K	0	5	16	3			
HIROO	13.42	12.7	2	55	-1	5	19	1			
TOMAKOMAI	13.50	7.0	2	57A	0	5	22	3			
SUTTSU	13.57	2.7	2	59A	1	5	22	1			
SAPPORO	13.92	6.0	3	1A	-1	5	29	2			
OBIHIRO	14.02	11.7	3	4K	1	5	34	5			
KUSIRO	14.32	15.1	3	6A	0	5	38	3			
ISIGAKIZIMA	14.42	253.8	3	7K	0	5	44	7			
ASAHIGAWA	14.73	8.6	3	10A	0	5	45	2			
RUMOE	14.81	6.4	3	11A	0	5	49	4			
NEMURO	14.94	17.8	3	13A	1	5	50	3			
VLADIVOSTOK	15.12	338.6	3	13K	-1	5	49	-1			4 56
ABASHIRI	15.29	13.5	3	16	0	5	58	4			
ZO-SE	15.85	281.3	3	19K	-2	5	58	-6			
WAKKANAI	16.28	5.8	3	29A	3	6	21	9			
TAIPEI	16.43	259.5	3	25	-2	6	13	-2			
HWALIEN	16.71	255.9	3	30	0	6	30	10			
HSINKONG	17.27	253.5	3	2	-34						
TAICHUNG	17.45	257.6	3	36	-1	6	22	-11			
YUSHAN	17.47	255.2	3	40	2						
ALISHAN	17.58	255.5	3	40	1						
TAITUNG	17.60	252.7	3	40K	1						
NANKING	17.95	284.2	3	40K	-2	6	42	0			
Y.-SAKHLINSK	17.97	7.4	3	43	0						6 59
TAWU	17.98	251.9	3	42	-1	6	44	1			
HENGCHUN	18.26	251.1	3	50	5	6	52	4			
TAINAN	18.27	254.6	3	47	1						
CHANGCHUN	18.41	326.2	3	47K	0	6	52	2			
UGLEGORSK	19.94	5.2	4	4A	2						
PEKING	21.87	305.7	4	19	-1	7	50	1			6 17 *SP
MANILA	22.26	233.3	4	21	-3	7	51	-5			
HONG KONG	23.69	258.9	4	35K	-2				5	58	6 37 PCP
CANTON	24.13	261.4	4	40K	-1	8	27	1			6 41 *SP
SIAN	26.33	288.8	4	58	-2						
PAOTOW	26.49	303.2	5	1K	-1	9	4	0	6	17	7 2 *SP

PETROPAVLOVK	27.69	25.4	5	13A	1	9	24	1					
LANCHOW	30.58	292.2	5	37K	0								
CHENGTU	30.61	281.6	5	36K	-2	10	6	-2	6	55			
ULAN-BATOR	31.20	315.8	5	43K	0	10	14	-3					
MAGADAN	31.32	11.2	5	44A	0	10	18	-1			7	7	PP
KUNMING	32.76	271.7	5	55K	-1	10	37	-4					
YAKUTSK	33.42	351.7	6	1K	-1	10	46	-5					
IRKUTSK	34.63	321.6	6	12	0	11	11	1			13	33	*SS
RABAUL	35.42	157.6	6	18A	0						7	31	
ESEN BULAK	37.62	309.2	6	38K	1	11	53	-2					
PORT MORESBY	39.12	167.8	7	3K	14	12	15	-2	8	3	8	54	
SHILLONG	42.11	276.8	7	11K	-2	12	56	-4			8	26	PP
TIKSI	42.86	355.1	7	17	-2	13	9	-2			7	46	
CHITTAGONG	43.13	272.3	7	21K	0	13	15	0	8	43	9	5	PCP
HONIARA	43.24	149.6	6	42K	-40								
CHATRA	45.84	280.2	7	41K	-1	13	9	-44			16	48	
CALCUTTA	46.08	274.0	7	45	1	14	2	5			8	49	PP
PORT BLAIR	46.73	258.0	7	50K	1	14	6	0			9	15	PP
DJAKARTA	47.10	226.9	7	51	-1	14	5	-6					
TANGERANG	47.22	227.1	7	51K	-2	14	4	-8					
BOKARO	47.90	276.7	7	57K	-1	14	22	0	9	20	9	55	PP
CHARTERS TS.	49.47	171.5	8	8K	-2	14	42	-1					
VISHAKHAPTNM	52.27	270.4	8	31K	0	15	25	4	9	57	10	21	PP
FRUNSE	52.90	303.5	8	34K	-1	15	32	2			10	42	PP
NEW DELHI	53.85	285.6	8	39K	-3	15	40	-2	10	3	10	49	*SP
PORT VILA	54.40	145.4	8	46K	0	15	52	3					
KOUMAC	55.01	151.2	8	49A	-1	16	3	6					
LAHORE	55.41	289.9	8	53	0	16	2	-1	10	20	11	7	PP
SEHORE	55.67	279.4	8	54	-1								
KHOROG	56.19	297.5	8	59	0	16	15	2					
HONOLULU	56.53	82.6	9	3A	2	16	20	3					
KIPAPA	56.56	82.5	9	1	0								
HYDERABAD	56.63	272.4	9	1	-1	16	21	2	10	27	11	10	*SP
COLLEGE	56.67	29.2	9	1K	-1	16	17	-2			18	4	SCS
MADRAS	56.98	266.8	9	3K	-1	16	24	1	10	29	11	13	*SP
WARSAK DAM	57.02	293.5	9	3K	-1								
TASHKENT	57.07	302.5	9	5K	0	16	25	1			9	31	
NOUMEA	57.48	150.0	9	8A	1	16	34	4					
BRISBANE	57.73	165.9	9	9A	0	16	36	3					
KHEYS	59.96	349.2	9	24A	0	17	3	2	10	46	10	5	PCP
POONA	60.20	275.6	9	24K	-2	17	7	3	10	52	11	44	PP
BOMBAY	60.95	276.5	9	29	-2	17	13	0	10	58	11	42	*SP
QUETTA	61.87	290.6	9	36K	-1	17	27	2	11	3	12	10	PP
KARACHI	63.65	284.9	9	42	-6								
RIVERVIEW	63.69	169.1	9	49K	1	17	49	2	11	18	19	5	SCS
AFIAMALU	63.73	125.4	9	51A	2	17	52	4			12	7	PP
ADELAIDE	63.84	180.6	9	49K	0	18	4	15	11	25	12	5	PP
MUNDARING	64.71	201.7	9	54	-1	18	0	0					
PERTH	64.81	202.0	9	55	-1	18	2	1			12	10	PP
CANBERRA	64.83	171.3	9	55K	-1	18	2	1	11	25	19	11	SCS
ASHKABAD	66.10	301.3	10	4	0	18	22	6			25	26	SSS
TOOLANGI	66.68	174.7	10	6K	-1	18	25	2	11	38	10	34	PCP
ALERT	68.01	3.0	10	16	1	18	40	1					
NORD	68.73	356.3	10	22A	2	18	48	1					
APATITY	69.14	336.7	10	21K	-1	18	51	-1	11	50	10	42	PCP
KEVO	70.15	340.0	10	28A	0	19	4	0			19	48	SP
RESOLUTE	70.59	13.2	10	30K	-1								
RAOUL ISLAND	71.01	141.2	10	35K	2								
YELLOW KNIFE	71.45	28.1	10	33	-3								
SODANKYLA	71.52	337.9	10	36	0	19	20	1			19	56	SCS
TEHERAN	72.10	301.3	10	41	1	19	26	1					
ONERAHI	72.55	150.7	10	46	4								
TROMSOE	72.56	341.6	10	42	0								
KAJAANI	72.88	334.7	10	43	-1	19	33	-1			13	46	PP
VICTORIA	73.15	43.6	10	48	2								
THULE	73.21	6.6	10	46K	0								
KIRUNA	73.22	339.7	10	45	-1	19	39	1			13	37	PP
SHIRAZ	73.70	295.1	10	48K	-1	19	39	-4					
PULKOVO	74.07	330.2	10	52K	1	19	46	-1	12	24	22	30	*SS
SEATTLE	74.21	44.0	10	55	3								
GORIS	74.23	306.6	10	53K	1	19	50	1	12	26			
TIFLIS	74.35	309.2	10	53	0	19	50	0					
PENTICTON	75.05	41.7	10	56A	-1								
UMEA	75.74	336.4	10	59	-1	20	3	-2			13	56	PP
CHATEAU	75.95	151.8	11	3	1	20	15	7	12	36			
NURMIJARVI	76.05	332.4	11	1A	-1	20	7	-2			13	58	PP
HELSINKI	76.12	332.0	11	2	-1	20	10	1					
TUAI	76.30	150.5	11	3	-1				12	41			

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.

BANFF	76.46	38.7	11	7	3								
WELLINGTON	77.41	153.4	11	9A	-1	20	20	-3	12	43	22	52	*SS
UKIAH	77.43	52.2	11	12A	2	20	28	5	12	42	14	13	PP
CALISTOGA	78.10	52.4	11	14K	1						12	46	
SKALSTUGAN	78.56	338.6	11	15	-1	20	36	1			14	18	PP
BLUE MTS.	78.57	44.9	11	16A	0	20	37	2	12	47	14	24	PP
BERKELEY	78.69	53.0	11	15K	-1	20	39	3			11	39	PP
HUNGRY HORSE	78.74	40.7	11	18A	1	20	45	8	12	50	13	52	
ROXBURGH	79.17	159.0	11	20	1	20	42	1			23	34	*SS
UPPSALA	79.22	334.1	11	17K	-2	20	39	-3			14	24	PP
LICK	79.37	53.2	11	20A	0						12	54	
RENO	79.57	50.6	11	22	1	20	48	2					
SIMFEROPOL	79.71	315.9	11	22K	0	20	46	-1	12	56	23	34	*SS
PRIEST	80.64	53.9	11	27A	0						12	2	
BUTTE	80.82	42.2	11	27A	-1	21	0	2	13	2	14	34	PP
EUREKA	82.16	49.1	11	35A	1	21	16	4	13	10	14	49	PP
KONGSBERG	82.27	336.8	11	35K	0	21	11	-2			26	33	SS
KARLSKRONA	82.50	332.0	11	35	-1						14	49	PP
LWOW	82.67	323.8	11	37K	0	21	14	-3			13	45	
WARSAW	82.67	326.9	11	38K	1	21	23	6			14	55	PP
GOTEBORG	82.84	334.5	11	37K	-1	21	12	-7					
BACAU	83.05	320.0	11	39	0	21	20	-1			12	14	
BERGEN	83.13	338.9	11	41	2						21	22	
FOCSANI	83.39	319.2				21	23	-1			12	48	
PASADENA	83.40	54.6	11	42	1	21	24	0	12	35	15	1	PP
DUGWAY	83.84	47.2	11	44A	1	21	28	0	13	20			
COPENHAGEN	84.10	332.9	11	44K	0	21	28	-3					
SALT LAKE C.	84.14	46.3	11	45K	1	21	28	-3	13	20	15	8	PP
KSARA	84.31	305.6	11	43	-2	21	28	-5	14	4	15	7	PP
KRAKOW	84.60	325.7	11	48	1	21	37	1			15	9	PP
BUCHAREST	84.77	318.6	11	50	3	21	30	-7			15	12	PP
BOULDER CITY	84.78	51.6	11	48A	0	21	32	-5	13	22	15	10	PP
CAMPULUNG	84.87	319.8	11	51A	3	21	35	-3			12	20	
ISTANBUL UN.	84.99	314.6	11	49	0						15	26	
SKALNATE PL.	85.00	324.9	11	51	2	21	44	5	12	46	15	34	PP
RACIBORZ	85.42	326.4	11	50	-1	21	46	3			15	17	PP
PRICE	85.44	46.8	11	52K	1								
FLAMING GRGE	85.58	45.1	11	52	1	21	36	-9	13	30			
REYKJAVIK	85.81	351.9	11	55A	3								
JERUSALEM	85.85	304.1	11	54K	1						15	24	PP
TIMISOARA	86.68	321.8	11	50	-7	21	55	0			21	41	SKS
BUDAPEST	86.72	324.1	11	56	-1	21	42	-14			14	40	PP
HURBANOVO	86.88	324.8	11	59	1	21	48	-9	13	19	24	45	*SS
SZEGED	86.95	322.7									21	9	
COLLMBERG	86.99	329.6	11	58K	0	21	54	-4					
PRAGUE	87.21	328.1	12	0	1	22	46	46			15	32	PP
PRUHONICE	87.22	328.0	11	59A	0	21	43	-17			15	27	PP
BRATISLAVA	87.23	325.5	12	0	1	22	3	3			15	31	PP
HALLE	87.31	330.2	11	59	-1	21	44	-17					
KALOCSA	87.37	323.4	12	1	1								
VIENNA-H.	87.54	325.9	12	1K	0	21	50	-13	13	43	15	30	PP
BELGRADE	87.70	321.4	12	2	1	22	7	2			15	36	PP
JENA	87.88	330.0	12	3	1	21	44	-22	13	41	15	32	PP
ABERDEEN	88.01	340.2				22	9	1			25	2	PS
CHEB	88.14	329.0	12	3	-1	21	49	-20			15	37	PP
KASPERSKE H.	88.26	327.8	12	3	-1						15	36	PP
WITTEVEEN	88.50	333.5	12	7	2						15	40	PP
MUNSTER	88.78	332.5	12	7	0								
SKOPJE	88.96	318.8	11	57	-10	22	10	-6			25	15	
ZAGREB	89.39	324.3	12	10K	1	21	57	-23			15	48	PP
TUCSON	89.60	52.9	12	11	1	22	7	-15	13	47	15	50	PP
TUCSON TELE.	89.62	52.7	12	13	3	22	5	-17	13	48	15	51	PP
DE BILT	89.64	333.8	12	10K	-1	22	20	-2	13	48	15	51	PP
BENSBERG	89.73	332.1	12	10A	-1	22	17	-6	13	49	15	52	PP
FELDBERG	89.75	331.0	12	20	9						16	6	PP
DURHAM	89.87	338.6	12	14K	2	22	23	-1	13	36	15	51	PP
TITOGRAD	89.90	320.2	12	13K	1	22	26	2			17	36	PPP
LJUBLJANA	89.97	325.1	12	11A	-1	22	17	-8	13	51	15	55	PP
ATHENS	90.09	314.6	12	12K	-1						21	58	
HEIDELBERG	90.25	330.3	12	13	0						15	48	PP
STUTTGART	90.48	329.6	12	14K	0	22	29	-1	13	50	15	57	PP
TRIESTE	90.63	325.2	12	15K	0	22	28	-3			15	59	PP
TUBINGEN	90.75	329.5	12	16	0						15	59	PP
ALBUQUERQUE	90.98	48.6	12	16A	-1						15	58	PP
STRASBOURG	91.28	330.2	12	18A	0	22	36	-1	13	54	16	4	PP
DOURBES	91.43	332.8	12	19	0	22	9	-29					
PADOVA	91.73	326.0	12	23	3	22	40	-1			17	20	PP
CHUR	91.79	328.2	12	20	-1	22	36	-5			15	46	PP
WELSCHBRUCH	92.02	330.8	12	19	-3				13	56	18	40	

BASLE	92.16	329.6	12	22	0	22	41	-3					
KEW	92.18	336.1	12	23K	1	22	42	-2	14	0	16	10	PP
NEUCHATEL	92.84	329.6	12	26	1						16	16	
BESANCON	93.08	330.3	12	28	2				14	6	16	16	PP
PAVIA	93.20	327.2	12	28	1						16	21	PP
FLORENCE X.	93.22	325.2	12	15	-12	22	28	-25			15	59	PP
PARIS	93.30	333.1	12	28	1				14	48	16	19	PP
SCHEFFERVLLE	93.33	14.8	12	29	1								
CHIAVARI	93.77	326.6	12	25	-5	23	0	2			16	25	PP
ROME	93.94	323.2	12	32	2	22	24	-35			16	26	PP
GARCHY	94.28	331.9	12	31A	-1	22	26	-36	14	11	16	24	PP
FOLINIERE	94.47	334.7	12	32	-1								
JERSEY	94.72	335.8				23	2	-4					
LUBBOCK	94.82	47.3	12	36	2						16	30	PP
MESSINA	94.84	318.9	12	33A	-1	23	6	-1	13	57	16	30	PP
MONACO	95.11	327.2	12	50	14						16	50	PP
CLERMONT-FD.	95.47	330.9	12	38A	1						16	36	PP
DUMONT	95.58	179.7	12	38	0	23	16	46			16	35	PP
WICHITA MTS.	96.12	44.6	12	42	2	22	35	2	14	15	16	37	PP
TULSA	97.00	42.2	12	46	2	22	46	-2	14	16	16	44	PP
WILKES	97.78	191.3	12	47	-1	23	30	48	14	26	16	50	PP
FAYETTEVILLE	97.80	41.1	12	49	1	22	43	1			14	23	PP
ST. LOUIS 1	98.15	37.0	12	51	2								
LITTLE ROCK	99.79	41.0	12	57	0								
BREBEUF	99.81	22.9				22	54	2			25	22	SP
TANANARIVE	100.54	254.2	13	2	2	23	2	7	14	40	17	22	PP
TORTOSA	100.58	329.5									17	15	PP
MIRNY	101.75	197.2	13	5	0	24	2	61			17	23	PP
ALICANTE	103.02	328.6	13	11	0	23	8	1			17	34	PP
TOLEDO	103.30	331.9	13	14A	2	23	13	5			17	29	PP
PALISADES	103.63	25.3				23	11	1			24	23	S
SERRA PILAR	103.99	335.6	13	16	1						17	41	PP
COIMBRA	104.74	335.0									17	43	PP
ALMERIA	105.16	329.1	13	21A	777	23	19	2			17	49	PP
GRANADA	105.38	330.1	13	23K	777	23	21	3			17	53	PP
MALAGA	106.11	330.4	13	25A	777	23	23	2			17	33	PP
LWIRO	109.02	278.3	13	39K	777						15	58	
MAWSON	111.73	203.7	17	44A	1						18	32	PP
RANGUI	114.14	290.1	17	50	2						18	55	PP
BROKEN HILL	115.00	266.9	17	52	2								
BULAWAYO	117.22	261.1	17	56A	2								
SOUTH POLE	119.05	180.0	18	4	6								
BYRD STATION	120.50	168.5	18	2	2						19	39	
GRAHAMSTOWN	123.31	247.5	18	8A	2								
KIMBERLEY	123.49	253.2	18	2	-4								
LUANDA	125.72	280.6	18	15A	5						20	11	PP
LOME	126.59	304.3	18	16	4						20	20	PP
SAN JUAN	126.66	30.6	18	15	3				19	55	20	51	*SPKP
GALERAZAMBA	128.06	45.2									20	42	PP
BANDEIRA	128.44	273.9	18	3	-13						20	59	SKP
ST. CLAUDE	130.63	27.1	18	27	7	24	51	5					
M.BOUR	131.01	329.0	18	23	2						19	43	PP
FORT FRANCE	132.02	27.2	18	25	2						21	11	
CHINCHINA	132.20	50.5									27	4	
CARACAS	133.06	36.6	18	30	5						21	15	PP
BOGOTA	133.49	49.2	18	30	5						21	4	PP
TRINIDAD	135.59	29.9	18	11	-18								
ARGENTINE I.	141.04	164.4	18	35	-5						21	35	
HUANCAYO	143.49	69.4	18	44	0								
ANTOFAGASTA	152.81	85.4	19	1	3				19	24	20	45	
SANTA LUCIA	154.06	107.0	19	3	3	26	36	14	19	27	22	18	PP

DECEMBER 7 23.H 55.M 4.S EPICENTRE 13.98 120.85 DEPTH= 183.KM

A=-0.49781 B= 0.83338 C= 0.24013 D= 0.8585 E= 0.5128
G=-0.1231 H= 0.2061 K=-0.9707 HT= 5.9

DEPTH OF FOCUS= 0.024R

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
MANILA	0.72	18.0	0	23	-4	0	40	-8				
BAGUIO CITY	2.44	353.9	0	42	-1	1	12	-4				
HONG KONG	10.42	323.5	2	24	-2	4	12	-8				
ZO-SE	17.04	1.0	3	49K	1							

NANKING	18.09	354.3	4	1	1						
KUNMING	20.32	305.8	4	27	4	8	0	5			
CHENGTU	22.71	319.7	4	47	0	8	40	2			
SIAN	22.89	333.9	4	49K	1	8	45	4			
LANCHOW	26.76	328.2	5	25	1	9	47	2			
MATUSIRO	27.31	31.6	5	21	-8						
CHITTAGONG	28.77	291.0	5	41	-2	10	19	2			
LHASA	31.63	304.4	6	9	1	11	4	2			
CHATRA	33.94	297.4	6	28K	1						
PORT MORESBY	34.94	130.2	6	37A	1						
CHARTERS TS.	42.09	143.0	7	37A	2	13	44	4			
MUNDARING	45.91	185.5	8	4	-2						
ALMATA-2	47.27	316.8	8	18	2						
YAKUTSK	48.39	5.6	8	25A	0						
WARSAK DAM	48.74	303.1	8	28	0						
QUETTA	52.02	297.4	8	52A	0						
TASHKENT	52.24	311.7	8	55	1						
SAMARKAND	53.53	309.2	9	4	0						
CANBERRA	55.82	152.2	9	20	0				10	1	
TIKSI	57.82	3.0	9	33A	-1						
ASHKABAD	59.91	305.9	9	49	0						
SVERDLOVSK	62.25	327.4	10	3K	-1						
SHIRAZ	64.52	296.3	10	18A	-1	18	37	-5			
GORIS	69.36	307.2	10	49A	0						
APATITY	76.20	336.7	11	28	-1						
COLLEGE	78.02	25.9	11	40	1						
SODANKYLA	78.83	336.8	11	44	0						
KAJAANI	78.91	333.4	11	44	0						
VIBORG	78.93	330.0	11	42A	-2						
UMEA	82.19	333.9	12	0	-2						
MOULD BAY	83.25	12.1	12	7A	0						
UPPSALA	84.54	330.4	12	13	0						
UZHGOROD	85.19	318.8	12	17	0						
RESOLUTE	88.74	8.9	12	34	0						
COLLMBERG	90.00	323.3	12	39	-1						
BROKEN HILL	95.66	256.6	13	6	0						
WICHITA MTS.	118.78	36.7	18	28	2						
AREQUIPA	167.84	103.2	20	58	74						
LA PAZ	170.98	107.2	21	13	88						

DECEMBER 8 9.H 2.M 51.S EPICENTRE 36.67 54.86 DEPTH= 0.KM

A= 0.46284 B= 0.65747 C= 0.59457 D= 0.8177 E=-0.5756
G= 0.3423 H= 0.4862 K=-0.8040 HT= -0.5

SE= 2.43

	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	
KIZYL-ARVAT	2.76	23.4	0	44	-2						1	23	S*
TEHERAN	2.95	252.8	0	49	0	1	31	6					
ASHKABAD	3.07	64.3	0	53	3						1	35	S*
SHIRAZ	7.27	196.3	1	48	-2						2	27	PG
GORIS	7.29	295.4	1	46	-4						4	49	
MAKHACH-KALA	8.46	320.3	2	6	-1	3	40	-4					
EREVAN	8.85	296.5	2	18	6								
STEPANAVAN	9.25	301.1	2	14	-3								
TIFLIS	9.29	305.9	2	16	-2								
DUZHETI	9.54	307.6	2	18	-3								
SAMARKAND	10.01	68.9	2	24	-4								
ABASTUMANJ	10.62	302.2	2	37	1								
QUETTA	11.99	119.2	2	56	1				3	5	5	21	SS
TASHKENT	12.14	63.1	2	54	-3						5	32	
WARSAK DAM	13.89	96.1	3	20	0								
ANDIJAN	14.27	68.1	3	25	0						7	50	
KARACHI	15.76	135.1	3	48	3								
KSARA	15.76	265.2	3	44	-1	6	56	15			7	16	SS
FRUNSE	16.38	61.9	3	53K	0								
JERUSALEM	16.95	259.0	4	1	1								
SIMFEROPOL	17.71	304.3	4	10	1								
ALMATA-2	18.45	62.1	4	18	0								
PRZHEVALSK	19.03	65.0	4	26A	0						8	33	SS
SVERDLOVSK	20.54	9.1	4	41	-1								
ISTANBUL UN.	20.58	290.2	4	42	-1								
MOSCOW	22.37	333.9	4	59	-2						9	15	SS
BOMBAY	23.72	133.4									9	47	

POONA	24.61	132.1	5 26A	3				
ATHENS	24.74	282.5	5 24A	0				
LWOW	25.81	310.3	5 35	1				
UZHGOROD	26.56	307.0	5 42	1				6 23 PP
KRAKOW	28.42	309.1	5 57	-1			6 7	
CHATRA	29.06	100.4	6 4K	0				
HELSINKI	30.29	330.4	6 19	4				
NURMIJARVI	30.62	330.8	6 18	0				7 19 PP
KAJAANI	31.95	337.7	6 31	2				
KARLSKRONA	32.75	319.1						7 29 PP
COLLMBERG	32.99	309.7	6 39A	0				7 12
APATITY	33.23	345.2	6 44	3				7 30
UPPSALA	33.23	326.1	6 43	2				7 47 PP
SHILLONG	33.38	98.7	6 40	-2				
UMEA	34.27	333.4	6 54	4				
SODANKYLA	34.67	341.2	6 51	-2				7 43
GOTEBORG	35.12	320.6	6 55	-2				
KEVO	36.41	344.1	7 8	0				
KIRUNA	36.70	339.0	7 16	6				8 21
KONGSBERG	36.89	323.1	7 18	6				
ROSELEND	36.92	299.5	7 11	-1				
SKALSTUGAN	37.19	330.0	7 16	2				
TROMSOE	38.29	340.6	7 26	2				
FOLINIERE	41.55	304.9	7 50	-1				
KHEYS	44.09	0.8	8 11	0				
TOLEDO	45.63	292.8	8 22	-2				
BANGUI	46.23	234.7	8 24	-4			8 32	
TIKSI	50.65	23.2	9 2A	-1				
YAKUTSK	51.44	35.6	9 7A	-2				
ALERT	57.26	352.0	9 50	-1				
MOULD BAY	67.32	358.5	10 57	-2				
COLLEGE	77.24	9.7	11 56	-1				12 19
PORT MORESBY	97.37	96.2						15 30
WICHITA MTS.	104.79	337.6						18 35
LA PAZ	126.00	275.9	19 14	10				

DECEMBER 8 18.H 18.M 25.S EPICENTRE -15.40-173.35 DEPTH= 0.KM

A=-0.95807 B=-0.11173 C=-0.26385 D=-0.1158 E= 0.9933
G= 0.2621 H= 0.0306 K=-0.9646 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
AFIAMALU	2.12	46.0	0 35A	-2	0 54	-11		
SUVA	8.34	249.7	2 15	10				
PORT VILA	17.73	259.9	4 13K	3	7 45	19		
NOUMEA	20.30	247.2	4 39	-1	8 30	6		
KOUMAC	21.88	253.1	4 53A	-4				
ONERAHI	23.07	206.2	5 11	3				
TUAI	24.77	197.9	5 27	2				
CHATEAU	25.64	200.2	5 32	-1				
HONIARA	26.73	279.7	5 44	1				
WELLINGTON	27.77	199.5	5 52	-1	10 39	4		
BRISBANE	33.61	243.5	6 39	-5	12 14	7		
RABAUL	35.69	284.6	6 57	-5				12 31
RIVERVIEW	36.88	233.7	7 10A	-2				8 40 PP
CHARTFRS TS.	38.69	257.0	7 25	-3				16 45
HAWAII V.OB.	38.91	27.8	7 27	-2				
PORT MORESBY	38.99	274.0	7 28	-2	13 23	-7		
CANBERRA	39.07	232.4	7 29	-2	13 29	-2	7 43	9 3 PP
HONOLULU	39.42	22.7	7 34	0				
KIPAPA	39.56	22.8	7 34K	-1				
TOOLANGI	42.51	230.7	7 57	-2				10 7 PPP
ADELAIDE	47.05	236.4	8 33A	-2	15 31	3	8 46	8 50 *SP
DUMONT	59.61	199.6	10 7	-1				11 21
MUNDARING	65.58	241.6	10 46	-2	19 23	-10		
PERTH	65.90	241.6	10 49	-1	20 10	33		13 20 PP
TUKUBASAN	67.59	320.6	10 59K	-2	19 53	-4		27 21 SSS
MIZUSAWA	68.91	323.5	11 19	10				
BYRD STATION	68.95	171.3	11 8	-1				
MATUSIRO	68.97	319.8	11 8K	-1	20 5	-9		
ABUYAMA	69.63	317.0	11 10	-3				
KURILSK	69.84	331.9	11 26	11				
WILKES	70.44	204.6	11 17A	-1	20 26	-5		20 48 SP

MANILA	71.36	291.6	11	8	-16	19	58	-44				
PRIEST	71.44	42.8	11	24K	0							
BERKELEY	71.45	40.5	11	24K	-1	20	43	0	11	45	29 47	PKKP
LICK	71.52	41.3	11	24K	-1						11 36	
UKIAH	71.63	39.0	11	25K	-1						14 3	PP
CALISTOGA	71.72	39.7	11	25K	-1				11	45		
PASADENA	71.98	45.7	11	26	-2	20	52	3				
PETROPAVLOVK	72.29	342.7	11	27	-3	20	47	-5				
MINERAL	73.37	38.8	11	34K	-2							
Y.-SAKHLINSK	73.57	330.3	11	44	7							
RENO	73.98	40.3	11	39K	0							
SOUTH POLE	74.70	180.0									16 27	
BOULDER CITY	75.27	45.7	11	46K	-1						14 34	PP
TUCSON	76.29	50.7	11	53K	0						12 14	
EUREKA	76.39	42.1	11	51K	-2							
TUCSON TELE.	76.41	50.7	11	53K	0							
VLADIVOSTOK	76.83	322.1	12	6K	10							
MIRNY	77.45	204.2	11	47	-12	21	44	-6				
VICTORIA	77.54	31.4	11	58	-2							
ZO-SE	78.00	307.1	12	1	-1	21	50	-6	12	15	22 15	*SS
BLUE MTS.	78.59	37.0	12	4K	-1	21	59	-3			15 17	PP
TANGERANG	78.79	266.6	12	5	-2							
DUGWAY	78.83	42.8	12	5K	-2							
SALT LAKE C.	79.75	42.7	12	10K	-2							
PRICE	79.86	44.1	12	12K	0							
PENTICTON	79.99	32.4	12	11K	-2							
MAGADAN	80.15	342.4	12	6K	-8	22	13	-5				
HONG KONG	80.25	296.4	12	43	29	22	42	23				
NANKING	80.26	307.1	12	14	0	22	20	0	12	28	22 45	*SS
ALBUQUERQUE	80.76	49.9	12	16K	-1	22	23	-2			13 57	
CHANGCHUN	81.22	320.0	12	17A	-2	22	27	-2	12	30	22 49	*SS
CANTON	81.25	296.8	12	19	-1				12	34	12 42	*SP
BUTTE	82.02	37.9	12	22K	-2	22	32	-6			15 20	PP
COLLEGE	82.35	10.7	12	23K	-2	22	22	-19				
HUNGRY HORSE	82.43	35.4	12	23K	-3							
BANFF	83.19	32.5	12	26K	-4							
GOLDEN	83.62	46.0	12	31	-1						21 53	
LUBBOCK	83.67	52.8	12	31	-1						12 45	PCP
ARGENTINE I.	83.88	156.4	11	36	-57							
LARAMIE	84.18	44.5	12	41	6							
PEKING	85.50	313.5	12	41A	0	23	11	-2	12	54	23 36	*SS
WICHITA MTS.	86.60	52.8	12	45	-2	23	15	-8			16 10	PP
DALLAS	87.35	55.0	12	51	1							
MAWSON	87.81	198.6	12	53A	0				13	6		
SIAN	88.74	305.9	12	57A	0				13	12	13 20	*SP
TULSA	89.16	52.5	12	59	0	23	46	-1	13	11	23 30	SKS
MANHATTEN	89.69	49.1	13	3	1							
PAOTOW	90.06	312.2	13	5	2	23	58	3	13	18	24 23	*SS
YELLOW KNIFE	90.07	23.4	12	59	-4							
FAYETTEVILLE	90.45	52.7	13	4K	-1							
LAWRENCE	90.58	49.7	13	5	-1						24 17	
KUNMING	91.07	295.6	13	8	0				13	24		
LITTLE ROCK	91.47	54.4	13	10	0							
CHENGTU	91.57	301.2	13	10A	0	24	9	0	13	25	24 36	*SS
SANTA LUCIA	91.87	125.3	13	13	1						13 29	
ROLLA	92.75	51.6	13	15	-1							
LANCHOW	93.26	306.4	13	18	0							
N-LAZARVSKYA	93.98	181.7	13	21	0							
FLORISSANT	94.16	51.0	13	20	-2							
ST. LOUIS 1	94.22	51.2	13	22	0							
ULAN-BATOR	94.58	318.4	13	22	-2							
TIKSI	95.00	344.4	13	23	-3							
MOULD BAY	96.92	11.3	13	32	-3							
BLOOMINGTON	97.17	51.5	13	35	-1							
IRKUTSK	97.42	322.1									14 48	
ESEN BULAK	101.25	315.1	14	2	8							
RESOLUTE	101.71	15.4	13	55	-1							
PALISADES	106.99	51.3	14	24	777	24	58	-2				
BREBEUF	107.59	46.7				24	59	-3			28 8	PS
NEW DELHI	114.08	294.7	18	4A	-38							
POONA	115.98	283.4	19	10K	25							
WARSAK DAM	119.13	300.5	19	1	10							
TASHKENT	120.50	309.1	18	54	0	25	52	0				
SVERDLOVSK	122.16	328.3	18	56	-1							
SCORESBY SD.	122.22	11.0	19	14	17							
QUETTA	123.08	296.1	19	14	15							
KEVO	124.20	351.6	19	0	-1						19 24	
APATITY	125.05	347.8	19	1	-2							
TROMSOE	125.25	354.8	19	2	-1							

SODANKYLA	126.45	350.5	19	4	-2					19	28
KIRUNA	126.85	353.5	19	5	-1						
TANANARIVE	127.24	231.1	19	10	3					21	21 PP
KAJAANI	129.24	348.2	19	12	1					22	43 PKS
UMEA	130.72	352.1	19	31	17					21	39 PP
SKALSTUGAN	131.71	356.6	19	17	1						
VIBORG	131.99	345.6	19	8	-8						
KIMBERLEY	132.74	201.8	19	17K	-1						
NURMIJARVI	133.09	347.9	19	18	0					21	55 PP
HELSINKI	133.34	347.5	19	19	0					19	35
UPPSALA	134.89	352.2								23	4 PKS
TEHERAN	135.30	305.5	19	23	1						
SHIRAZ	135.60	296.7	19	21	-2					22	53 SKP
GOTEBORG	137.58	355.8	19	43	17						
TIFLIS	137.97	316.3	19	29	2						
BULAWAYO	138.61	212.1	19	29	1						
KARLSKRONA	138.75	352.4	19	48	19						
SIMFEROPOL	142.51	327.4	19	42	7						
LWOW	142.87	341.3	19	34	-2						
BROKEN HILL	143.33	217.1	19	35	-2						
KISHINEV	143.47	334.3	19	47	10						
MUNSTER	143.51	359.0	19	37	0						
HALLE	143.74	354.4	19	37	0			19	59		
KRAKOW	143.79	345.5	19	38	1						
COLLMBERG	143.83	353.2	19	35	-2					22	38 PP
RACIBORZ	144.16	347.3	19	39	1						
JENA	144.34	354.6	19	35	-3					22	52 PP
UZHGOROD	144.45	342.1	19	37	-2						
SKALNATE PL.	144.52	344.6	19	48	9						
RENSBERG	144.53	359.4	19	36	-3					19	55
PRAGUE	144.85	351.3	19	35	-4						
PRUHONICE	144.92	351.1	19	41	2					29	42 SKKS
FELDBERG	145.24	358.0	19	49	9						
DOURBES	145.35	2.3	19	40	0			19	52		
KASPERSKE H.	145.88	351.9	19	41	0					20	55
HEIDELBERG	146.05	357.6	19	42	1						
BRATISLAVA	146.20	347.4	19	43	1					19	54 PKP2
FOLINIERE	146.21	8.5	19	42	0						
HURBANOVO	146.24	346.0	19	49	7						
VIENNA-H.	146.27	348.3	19	43	1					23	48 PKS
BUDAPEST	146.40	344.8	19	45	3					21	58 PP
STUTTGART	146.65	356.8	19	44	2					20	7
BUCHAREST	146.70	334.2								20	7
STRASBOURG	146.90	358.6	19	45	2					23	17 PP
TURINGEN	146.90	357.1	19	46	3					20	9
WELSCHBRUCH	147.08	0.4	19	46	3						
SZEGED	147.24	342.6	19	35	-8					23	27 PPP
KALOCSA	147.30	344.2								20	4
TIMISOARA	147.36	340.9	19	54	10						
RAVENSBURG	147.62	356.3	19	47	3					19	59
KSARA	147.88	310.1	19	43	-1					23	25 PP
ISTANBUL UN.	147.94	327.2	19	51A	7					23	28 PP
BASLE	147.95	358.8	19	48	4						
GARCHY	148.07	4.6	19	48A	3						
BESANCON	148.24	0.9	19	48	3					23	31 PP
BELGRADE	148.43	341.1	19	52K	7					21	12 PKP2
NEUCHATEL	148.49	359.6	19	53	8						
ZAGREB	148.67	347.4	19	48A	2					20	6 PKP2
LJUBLJANA	148.74	349.4	19	48	2					23	26 PP
BANDEIRA	149.19	192.6	19	52A	6					23	23 PP
SOFIA	149.25	335.6	19	52	5					20	7 PKP2
TRIESTE	149.26	350.2	19	52	5					20	15 PKP2
JERUSALEM	149.29	307.1	19	54K	7						
CLERMONT-FD.	149.58	4.9	19	53	6						
PADOVA	149.76	352.7	19	54	7	26	55	1	20 7	20	20 PKP2
ROSELEND	149.80	0.0	19	53	6					20	16
PAVIA	150.24	356.4	19	58	10					21	3
SKOPJE	150.61	337.2	19	57	8						
TITOGRAD	150.96	340.6	20	4	15					23	5 PP
SERRA PILAR	151.15	24.3								20	12
FLORENCE X.	151.44	353.0	19	52	2					42	5 SS
MONACO	151.75	358.8	19	59	9					20	20
LWIRO	151.94	233.2	19	53A	2						
COIMBRA	152.00	25.1	20	1	10					23	39 PP
ATHENS	152.92	329.4	19	59K	7						
ROME	153.12	350.3	20	4A	12				20 24	23	48 PP
TARANTO	153.37	341.8	19	15	-38					27	35 PPP
TOLEDO	153.88	18.9	19	57	4					23	55 PP
TORTOSA	154.11	10.7								20	20 PKP2

MESSINA	155.97	342.6	20	20	24	26	53	-8			23	56 PP
ALICANTE	156.29	14.0	19	59	2						24	2 PP
GRANADA	156.47	20.9	20	27	30						24	8 PP
MALAGA	156.60	22.8	20	15A	18						24	25 PP
ALMERIA	157.14	19.1	20	1K	3						24	8 PP
M.BOUR	157.15	89.4	20	25	27						20	49 PKP2
BANGUI	163.92	228.3	20	6	1						25	9 PP

DECEMBER 8 21.H 27.M 20.S EPICENTRE -25.78 -63.13 DEPTH= 582.KM

A= 0.40746 B=-0.80431 C=-0.43250 D=-0.8921 E=-0.4519
G=-0.1955 H= 0.3858 K=-0.9016 HT= 3.1

DEPTH OF FOCUS= 0.087R

SE= 2.55

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
CALAMA	6.31	300.1	1	43	0								
COPIAPO	6.65	254.8	1	45	-1	3	10	-1					
ANTOFAGASTA	6.94	285.8	1	48	-1								
MICHILLA	7.18	293.4	1	50	-1								
SANTA LUCIA	10.04	218.8	2	17A	-2	4	12	2					
AREQUIPA	12.11	318.3	2	41	2								
CONCEPCION	13.39	212.5	2	56	4	5	20	9					
BOGOTA	32.03	339.1	5	41A	0	10	11	-3	7	42	10	0	
CHINCHINA	32.88	336.6	6	1A	13	10	36	9	7	42	9	39	
TRINIDAD	36.25	2.9	6	7	-9	11	3	-14			15	18	
CARACAS	36.25	353.7	6	4K	-12	11	10	-7					
GALERAZAMBA	38.21	340.5	6	41	9	11	41	-5	8	37			
ARGENTINE I.	39.48	180.8	6	44	2						12	5 PP	
FORT FRANCE	40.31	3.0	6	48	-1	12	10	-6					
ST. CLAUDE	41.58	2.1	6	59	0	12	30	-5					
ANTIGUA	42.68	1.8	7	6	-1								
SAN JUAN	43.99	355.9	7	15K	-3	13	5	-4	9	7	11	43 SCP	
HOPE	45.48	341.7	7	29	0						8	56	
SANTIAGO MA.	46.17	324.8	7	35	1						9	38 PP	
SAN SALVADOR	46.72	324.1	7	38	-1	13	45	-2					
COMITAN	50.41	322.8	8	9	3	14	36	-1					
MERIDA	53.09	328.6	8	25	0	15	7	-6			10	28 PP	
OAXACA	53.67	318.9	8	32	3	15	20	0	10	24	15	52	
PUEBLA	56.08	319.1				15	46	-6					
TACUBAYA	56.97	318.5	8	56	4	16	2	-1			11	14 PP	
BYRD STATION	59.14	189.7	9	6	-1								
MANZANILLO	59.91	313.9	9	16	4	16	40	0					
M#ROUR	60.10	53.7	9	13	0	16	16	-26					
GUADALAJARA	60.45	316.0	9	16	0						16	56	
COLUMBIA	61.83	343.2	9	24K	-1								
CHAPEL HILL	63.18	345.6	9	33	0								
SOUTH POLE	64.37	180.0				17	36	1					
BLACKSBURG	64.73	344.8	9	43	0	17	38	-1					
WASHINGTON	65.65	348.1	9	48	-1	17	4	-46					
LITTLE ROCK	66.29	334.0	9	51	-2								
DALLAS	66.53	329.4	9	54	0								
FORDHAM	67.03	351.2	9	56	-1	17	58	-8					
PALISADES	67.20	351.2	9	59K	1	18	7	-1	11	41	14	17 PCP	
PENNSYLVANIA	67.64	347.9	10	1K	0								
CHIHUAHUA	68.04	319.8	10	25	22	18	34	17					
FAYETTEVILLE	68.16	333.2	10	3A	-1	18	17	-2	12	9	37	27	
TULSA	68.67	331.9	10	6	-1	18	22	-3	12	7	21	54 *SS	
ROLLA	68.86	335.9	10	7	-1	18	22	-5					
WICHITA MTS.	68.91	329.2	10	7A	-1	18	26	-2	12	16	12	51 PP	
ST. LOUIS 1	68.92	337.5	10	6	-3	18	23	-5					
CLEVELAND	69.05	345.3	10	10A	1	18	27	-2	12	9			
FLORISSANT	69.11	337.5	10	7	-3	18	24	-6					
LUBBOCK	69.56	326.1	10	11	-1	19	20	45			13	55 PP	
HERMANUS	69.98	119.3	10	13	-2	18	40	0			13	14 PP	
LOME	69.99	72.6	10	17	2	18	46	6					
HALIFAX	70.05	359.6	10	16A	1								
LONDON ONT.	70.46	346.1	10	16	-2	18	48	3					
CHICAGO CGS.	70.93	340.9	10	21	1								
CHICAGO JSA.	71.05	340.9	10	21	0								
LAWRENCE	71.07	334.0	10	17	-4						12	22	
BREBEUF	71.57	352.2	10	24K	0	18	58	1	12	26	23	24 55	
ANDEIRA	71.65	98.0	10	25K	0	18	51	-7	12	26	13	13 PP	

MANHATTEN	71.80	333.2	10	26	1								
PONTA DELGDA	72.30	30.4	10	29K	1	19	10	4			13	25	PP
SHAWINIGAN	72.51	353.0	10	30K	1								
ALBUQUERQUE	73.01	323.9	10	32A	0	19	20	7					
TUCSON TELE.	73.47	319.3	10	35A	0	19	18	0	12	39			
TUCSON	73.47	319.2	10	35A	0	19	20	2	12	37			
GRAHAMSTOWN	76.09	120.4	10	19K	-30								
GOLDEN	76.12	327.7	10	49	-1	19	49	2					
KIMBERLEY	76.36	115.4	10	50K	-1								
LARAMIE	77.48	328.6	11	5	8						13	11	
BOULDER CITY	78.44	319.5	11	3A	1	20	14	3	13	6	14	14	PP
MAWSON	78.68	161.6	11	3K	0	20	12	-2	13	7	23	54	*SS
PRICE	78.79	324.4	11	4A	0								
PASADENA	79.23	316.2	11	6	0	20	21	2	13	7	37	26	PKPPKP
DUGWAY	80.28	323.7	11	12A	0	20	32	2	13	20			
SCHEFFERVLLE	80.33	357.9	11	11K	-1								
EUREKA	81.51	321.4	11	7	-11								
PRIEST	82.07	316.4	11	21A	0				13	27	20	50	
BULAWAYO	82.98	108.9	11	25K	0								
COIMBRA	83.05	39.0	11	26K	0	20	52	-5	13	36	26	30	SS
MALAGA	83.19	43.8	11	27K	1	21	1	2			14	30	PP
LICK	83.44	316.8	11	28A	0						13	39	
SERRA PILAR	83.58	38.3	11	28A	0	20	57	-5	13	38	14	57	PP
RENO	83.75	319.5	11	30A	1								
GRANADA	83.98	43.8	11	31A	1	20	57	-9	13	42	15	12	PP
BERKELEY	84.16	316.9	11	31A	0	20	58	-10	13	34	29	41	PKKP
BUTTE	84.36	327.9	11	32A	0	21	9	-1	13	40	14	49	PP
BANGUI	84.48	82.5	12	33	60						20	57	
ALMERIA	84.49	44.6	11	32K	-1	21	0	-11	13	40	15	5	PP
CALISTOGA	84.84	317.4	11	34A	0				13	36			
BROKEN HILL	85.25	103.7	11	39K	3								
MINERAL	85.33	319.2	11	36A	-1						11	57	
TOLEDO	85.40	41.5	11	38K	1	21	10	-9	13	45	14	43	PP
UKIAH	85.53	317.5	11	39A	1	21	24	3	13	49	15	11	PP
BLUE MTS.	85.91	324.7	11	39A	-1	21	13	-11	13	46	18	9	*PPP
DUMONT	86.18	189.0	11	39	-2	21	14	-13			13	45	
MIRNY	86.19	170.7	11	39	-2	21	7	-20	13	45			
ALICANTE	86.65	44.4	11	42	-1	21	15	-16	13	49	15	16	PP
HUNGRY HORSE	86.72	328.8	11	43A	0	20	42	-50	13	45	25	7	
SPOKANE	87.88	326.8	11	48	-1	21	17	-25					
WILKES	88.05	177.4	11	50K	0	21	44	0	13	54	27	52	SS
TORTOSA	88.72	42.9	11	56	3	21	27	-23					
BANFF	89.41	330.1	11	55	-1								
PENTICTON	90.07	326.9	11	58A	-1								
LWIRO	90.78	92.9	12	5	3						14	14	
VICTORIA	91.49	324.7	12	5	-1								
JERSEY	92.28	35.1				21	52	-29					
FOLINIERE	92.88	36.0	12	12	0								
CLERMONT-FD.	93.14	39.9	12	13	0						16	19	PP
GARCHY	93.96	38.6	12	16	-1				14	25	16	11	*SP
WELLINGTON	94.41	219.8	12	19	0	21	56	-43	14	26			
ROXBURGH	94.54	214.0				21	58	-42	14	29	29	5	
KEW	94.58	33.9	12	18	-2	22	32	-8			16	16	PP
MONACO	94.61	43.3	12	20	0				14	33			
GODHAVN	95.01	3.4	12	22A	0	22	5	4					
ROSELEND	95.16	41.3	12	23K	1	22	0	-2	14	37			
REYKJAVIK	95.23	16.9	12	25K	2								
CHATEAU	95.28	221.8	12	23	0	22	6	3	14	30	29	12	PKKP
BESANCON	95.60	39.8	12	24	0								
DURHAM	95.95	30.8	12	28K	2	22	7	1			30	9	SS
SIDA	96.01	18.4	12	28K	2						14	41	
NEUCHATEL	96.03	40.3	12	27	1						16	27	
KARAPIRO	96.08	222.8	12	29	3				14	33	29	13	PKKP
CHIAVARI	96.09	43.5	12	10	-16	21	54	-13			26	37	
DOURBES	96.37	36.8	12	27	-1								
PAVIA	96.43	42.7									16	33	PP
WELSCHBRUCH	96.43	38.9	12	31	3						13	35	
BASLE	96.67	40.1	12	28	-1						22	16	
ROME	96.92	46.8	12	31K	1	22	14	2	14	41	16	38	PP
YELLOW KNIFE	97.02	338.5	12	27	-4								
ABERDFEN	97.17	28.7				22	13	0			25	2	PS
STRASBOURG	97.32	39.2	12	33	1	22	16	2	14	45	16	36	PP
DE BILT	97.75	35.3	12	40	6								
RAVENSBURG	97.99	40.6	12	35	0				14	46			
TUBINGEN	98.04	39.7	12	36	1						16	42	PP
BENSBERG	98.21	37.0	12	35K	-1				14	42	16	44	PP
HEIDELBERG	98.28	38.9	12	36	0				14	50			
STUTTGART	98.28	39.6	12	36	0	22	20	-2	14	48	16	42	PP

FELDBERG	98.54	38.0	12	36	-1			14	47	
WITTEVEEN	98.91	35.2	12	40	1			14	50	16 48 PP
MUNSTER	98.97	36.2	12	39	0					16 50
TANANARIVE	99.33	116.2	12	46	5	22 28	5	14	55	16 56 PP
TARANTO	99.48	49.7	12	20	-22	22 20	-4			
TRIESTE	99.48	43.8	12	42	0	22 24	0			16 53 PP
LJUBLJANA	100.14	43.7	12	46	1	22 46	19	14	57	16 57 PP
AFIAMALU	100.17	249.2	12	45	0	22 30	2	14	55	17 2 PP
SCORESBY SD.	100.33	13.0	12	48	2					
JENA	100.63	38.4	12	46	-1	22 28	-2	14	58	17 0 PP
CHEB	100.69	39.4	12	45	-2	22 31	1			23 41 S
KASPERSKE H.	100.95	40.6	12	49	1					17 0 PP
ZAGREB	100.96	44.4				22 31	0			17 4 PP
HALLE	101.10	38.0	12	49	0	22 33	1			
COLLMBERG	101.59	38.5	12	52	1					17 8 PP
TITOGRAD	101.68	48.5	13	12	21					24 19 SKKS
PRAGUE	101.87	40.0				22 41	5	15	8	17 11 PP
PRUHONICE	101.90	40.1	12	53	1	22 41	5	15	2	17 10 PP
THULE	102.01	358.8	12	58	5					
BERGEN	102.17	28.2	12	55	1					
VIENNA-H.	102.23	42.3	12	55	1	22 39	2			
RESOLUTE	102.31	351.8	12	55	1					
BRATISLAVA	102.65	42.5	13	3	7					17 14 PP
SKOPJE	102.98	49.6				22 34	-7			16 7 PP
ATHENS	103.05	54.1	12	58K	0					
KALOCSA	103.15	44.6	16	59	241					17 40
HONOLULU	103.24	287.4	13	11	13	22 46	4	15	20	
COPENHAGEN	103.26	34.3	17	20	262	22 49	7			
BELGRADE	103.42	46.6	13	5K	6					17 22 PP
BUDAPEST	103.55	43.7	12	59	-1					17 6
KONGSBERG	103.70	29.9	17	5	245	23 58	74			31 31 SS
SZEGED	103.77	45.2	16	57	236					18 1
GOTEBORG	103.92	32.3	13	2	1					17 30 PKP
RACIBORZ	104.08	41.0								17 34 PP
TIMISOARA	104.28	46.0								17 28
SOFIA	104.55	49.5	16	36	212	22 27	-21			17 12 PP
SKALNATE PL.	104.96	42.4								17 38 PP
KARLSKRONA	105.06	34.6	17	29	777					29 11 PKKP
KRAKOW	105.10	41.5	13	9	777					
WARSAW	106.53	39.7				23 3	7			17 54 PP
SKALSTUGAN	106.57	26.9	13	15	777					17 12 PKP
BUCHAREST	107.04	48.5	13	46A	777					18 58
MOULD BAY	107.44	348.0	13	17	777					
UPPSALA	107.48	31.5	13	18	777	24 28	88			28 57 PKKP
LWOW	107.49	42.7	13	20	777					22 58
ISTANBUL UN.	107.95	52.6	13	21K	777					18 2 PP
ALERT	108.06	0.1	13	20	777					
NORD	109.66	6.5	13	28	777					
JERUSALEM	109.77	63.6								18 10 PP
UMEA	109.97	28.0	13	31	777	23 10	-1			18 5 PP
COLLEGE	110.82	332.9	13	32	-235	24 55	101			28 44 PKKP
KSARA	110.93	61.7	13	35	-232			15	50	18 15 PP
NURMIJARVI	111.02	32.0	17	27	0	23 13	-2			18 15 PP
HELSINKI	111.08	32.4	17	28	1					28 30 PKKP
TROMSOE	111.19	21.8	13	37	-230					
KIRUNA	111.21	23.9	17	29	2	23 16	0			28 40 PKKP
TOOLANGI	111.49	204.1				25 2	105	15	54	18 22 PP
CANBERRA	112.05	208.0	17	32	3	23 24	5			18 30 PP
RIVERVIEW	112.36	210.5				23 21	1			18 24 PP
SIMFEROPOL	112.67	49.8	17	32	2	23 21	0			18 38 PP
KAJAANI	113.22	28.6	17	34	3	23 24	0			18 34 PP
SODANKYLA	113.41	24.9	17	32	0	23 25	1			18 26 PP
PULKOVO	113.61	33.5	17	34	2	23 24	-1			13 44 P
KEVO	113.97	22.4	17	34	1	23 26	0			18 30 PP
APATITY	116.03	25.1								28 9
ADELAIDE	116.14	199.9	17	38	1	23 36	2			18 54 PP
BRISBANE	116.83	215.8	17	43	5	23 37	0			
TIFLIS	119.64	55.0	17	45	1					21 17 PKS
KHEYS	120.21	9.3	17	42	-3	23 52	3			19 17 PP
GORIS	120.43	57.8	17	46	1					21 20 PKS
MUNDARING	122.57	179.3	17	41	-9					26 36 SKKS
PERTH	122.59	179.0	13	35	-255					19 38 PP
SHIRAZ	123.55	70.3	17	52	1					14 40
TEHERAN	123.78	62.9	17	33	-19					19 45 PP
HONIARA	125.40	235.8	18	1	6					19 55
CHARTERS TS.	126.20	214.9	17	45	-12	24 8	1			
ASHKABAD	129.58	61.0	18	5	2					20 33 PP
PORT MORESBY	134.27	224.0	18	4	-8					20 28 PP
RABAUL	134.62	234.1	18	5	-8					

KARACHI	135.16	80.0	18	3	-11						
QUETTA	135.98	72.4	18	5	-10				20 15	20 55	PP
TASHKENT	137.95	56.1	18	9	-10					22 0	PKS
PETROPAVLOVK	138.66	322.5	18	15	-5				20 37	21 1	
BOMBAY	138.83	90.4	18	22	2	25	15	41	20 43	21 59	PKS
MAGADAN	138.87	334.4	18	18	-2				20 41		
POONA	139.65	91.3	18	17A	-5				20 49		
KODAIKANAL	139.65	105.2	19	14	52					23 2	
KHOROG	140.02	61.7	18	16	-6					21 7	PP
WARSAK DAM	140.13	67.1	18	19K	-4						
FRUNSE	141.63	52.8	18	22	-5				20 42		
MADRAS	143.27	103.2	18	26	-3					21 46	PKS
HYDERABAD	143.43	95.3	18	29	0					21 13	
NEW DELHI	144.71	76.4	18	30A	-1				20 50	21 43	PKS
TANGERANG	146.72	161.2	18	36A	2					20 54	
DJAKARTA	146.77	161.6	18	37A	3					39 44	
VISHAKHAPTNM	147.88	97.6	18	42A	6					20 10	
Y.-SAKHLINSK	150.53	322.7	18	42	2				21 2	22 28	PP
BOKARO	151.76	87.2	18	45	3					28 15	SKKS
IRKUTSK	151.89	16.5	18	43	1				21 2	22 11	PKS
PORT BLAIR	153.24	117.1	18	48K	4					22 14	PKS
CHATRA	153.38	81.1	18	45K	1					28 40	
ESEN BULAK	153.67	33.3	18	44K	0						
CALCUTTA	153.82	91.0	18	49	5					22 34	
LHASA	156.83	74.6	18	51	3					23 5	PP
CHITTAGONG	156.89	93.2	18	52K	3	25	3	5	21 15	23 11	PP
SHILLONG	157.48	85.1	19	24	35					21 8	
TUKUBASAN	157.58	303.2	18	51	2					18 53	PP
MATUSIRO	158.86	305.6	18	51	0					19 30	PKP2
TOCKLAI	160.16	82.3	19	8	16						
CHANGCHUN	160.72	341.2	18	53K	0				21 10	23 31	PP
ABUYAMA	161.51	303.8	18	46A	-8						
PAOTOW	164.18	19.4	18	58K	2				21 18	23 41	PP
LANCHOW	164.85	44.4	18	59K	2				22 14	23 49	PP
PEKING	165.77	2.2	18	59K	1				22 17	23 50	PP
KUNMING	167.22	89.9	19	1K	2				22 19	24 0	PP
CHENGTU	167.67	63.8	19	1K	2					24 3	PP
MANILA	168.27	200.5	19	2	2					24 2	PP
SIAN	169.11	37.3	19	3	3				22 24	24 4	PP
ZO-SE	173.48	325.4	19	4	2				22 48	24 34	PP
NANKING	173.52	345.4	19	4K	2				21 20	24 28	PP
TAWU	174.98	228.1	19	10	8						
TAITUNG	175.06	233.3	19	5	2						
HWALIEN	175.32	248.4							21 13		
HONG KONG	175.75	144.0	19	4	1	24	52	-18		24 34	PP
CANTON	175.82	129.0	19	5K	2				21 23	24 39	PP

DECEMBER 8 22.H 54.M 57.S EPICENTRE 50.43-176.65 DEPTH= 0.KM

A=-0.63846 B=-0.03732 C= 0.76875 D=-0.0584 E= 0.9983
G=-0.7674 H=-0.0449 K=-0.6396 HT= -5.6

SE= 2.48

	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	15.50	289.2	3	41	0								
MAGADAN	20.58	308.8	4	49	6								
COLLEGE	20.87	35.3	4	45	-1	8	31	-3			7	39	
SITKA	25.01	58.6	5	24	-2								
YAKUTSK	31.04	312.6	6	18A	-3								
TIKSI	32.12	331.0	6	27	-4	11	40	-3					
KIPAPA	32.46	146.3	6	35	1								
HONOLULU	32.54	146.5	6	36	2								
MOULD BAY	34.00	21.1	6	46A	-1								
VICTORIA	34.03	72.1	6	48	1								
MATUSIRO	35.01	264.2	6	54K	-2						13	14	
VLADIVOSTOK	35.37	278.4	7	1	2	12	23	-10					
PENTICTON	36.00	69.1	7	5K	1								
BANFF	37.65	64.5	7	18	0								
ABUYAMA	37.73	264.3	7	18K	-1								
UKIAH	38.78	85.8	7	29	1						9	34	PCP
MINERAL	39.13	83.1	7	31A	1						9	41	
CHANGCHUN	39.15	283.4	7	29K	-2	13	25	-6					
BLUE MTS.	39.44	74.4	7	34	1	13	31	-5			31	39	PKKP
CALISTOGA	39.47	86.0	7	35K	2						9	41	

HUNGRY HORSE	39.75	67.9	7	36	0					9	42	
RESOLUTE	40.05	24.1	7	38	0							
BERKELEY	40.13	86.7	7	30A	-9	13	39	-7	7	55	9	16 PP
RENO	40.72	82.9	7	46K	2							
LICK	40.84	86.9	7	45A	0							
BUTTE	41.74	70.3	7	52	0						9	42 PCP
PRIEST	42.19	87.7	7	50K	-6						9	48
EUREKA	43.18	80.4	8	5	1							
ALERT	43.33	10.1	8	4	-1							
DUGWAY	44.75	77.6	8	17K	1							
SALT LAKE C.	45.02	76.3	8	19	0						9	39 PCP
PASADENA	45.02	88.0	8	19	0							
THULE	45.62	18.3	8	22	-1							
KHEYS	45.76	349.2	8	24K	0	15	4	-4				
BOULDER CITY	46.01	83.6	8	27	1						10	17 PP
PRICE	46.34	77.0	8	30	1							
PEKING	46.92	284.3	8	33	-1	15	25	0				
IRKUTSK	47.06	304.5	8	33	-2							
NORD	47.78	3.9	8	39	-1							
ULAN-BATOR	47.96	298.3	8	42	0							
LARAMIE	48.56	71.9	8	53	7							
ZO-SE	49.36	271.6	8	53K	0	15	58	-1				
GOLDEN	49.65	73.5	8	55	0						9	18
NANKING	50.26	274.3	8	58K	-2	16	10	-2				
PAOTOW	50.36	288.7	9	1K	1	16	15	2				
TUCSON	50.92	84.5	9	5	0						9	33
TUCSON TELE.	50.95	84.4	9	6	1						9	29
ALBUQUERQUE	51.95	79.0	9	8	-4						10	27 PCP
ESEN BULAK	54.74	302.2	9	33	0	17	14	1				
SIAN	55.05	283.2	9	35K	0	17	16	-1				
MANHATTEN	55.28	68.6	9	37	0							
LUBBOCK	55.73	77.1	9	39	-1							
LAWRENCE	56.22	68.0	9	42	-2							
WICHITA MTS.	56.99	74.0	9	48	-1	17	45	2			11	59 PP
LANCHOW	56.99	288.2	9	48K	-1	17	41	-2				
TULSA	57.91	71.1	9	54	-2	17	55	0			39	47 PKPPKP
SCORESBY SD.	58.02	9.7	9	57	1							
FAYETTEVILLE	58.75	69.9	11	OK	58							
CHICAGO CGS.	58.79	61.0	10	0	-2							
KEVO	58.88	350.6	10	0	-2							
ROLLA	58.90	66.9	9	59	-4							
FLORISSANT	59.20	65.2	10	4	-1							
ST. LOUIS 1	59.38	65.3	10	4	-2							
TROMSOE	59.71	353.7	10	6	-2							
CANTON	59.92	270.5	10	9	-1	18	19	-2				
SCHEFFERVLLE	59.93	39.0	10	9	-1							
HONG KONG	59.96	269.2	10	9	-1							
APATITY	60.18	347.2	10	10A	-1	18	21	-3				
CHENGTU	60.52	283.4	10	13	-1	18	26	-3				
RABAUL	60.67	216.3	10	13	-2							
BLOOMINGTON	61.15	62.5	10	17	-1							
SODANKYLA	61.22	349.9	10	17	-1						39	34 PKPPKP
KIRUNA	61.37	352.7	10	17A	-3	18	37	-3	10	32		
SVERDLOVSK	63.12	328.8	10	30	-1							
SHAWINIGAN	63.23	48.6	10	31	-1							
BREBEUF	63.57	49.9	10	33A	-1	19	7	0				
KAJAANI	64.25	348.4	10	39	0						12	52 PP
MORGANTOWN	64.49	58.2	10	41A	1							
PENNSYLVANIA	64.77	56.0	10	41K	-1							
KUNMING	65.22	279.9	10	44	-1	19	27	-1				
UMEA	65.32	351.8	10	44A	-2				10	58		
BLACKSBURG	65.96	60.4	10	49	-1							
SKALSTUGAN	66.12	355.6	10	50	-1				11	3		
ALMATA-2	66.64	310.1	10	53A	-1							
PALISADES	66.69	53.5	10	55	1	19	48	2				
PORT MORESBY	67.38	219.1	10	57	-2							
CHAPEL HILL	67.65	60.5									11	1
COLUMBIA	67.93	63.1	11	2	0	20	0	-1				
PULKOVO	68.00	345.7	11	3	0	20	0	-1				
NURMIJARVI	68.08	348.8	11	2K	-1	19	58	-4				
FRUNSE	68.30	311.4	11	3K	-2							
HELSINKI	68.38	348.6	11	4	-1							
HALIFAX	68.95	44.8	11	8A	0							
LHASA	69.15	291.4	11	11	1	20	16	1				
UPPSALA	69.47	352.4	11	11A	-1				11	24	39	13 PKPPKP
BERGEN	69.51	359.0	11	14	2							
KONGSBERG	70.16	356.6	11	16	0				11	30		
TASHKENT	71.99	313.7	11	27K	0							
GOTEBORG	72.00	355.1	11	26A	-1				11	40		

KARLSKRONA	73.29	352.9	11	39	4				11	52	
CHATRA	73.52	292.1	11	25K	-11	21	4	-2			
KHOROG	73.94	309.8	11	39	1	21	9	-1			
COPENHAGEN	73.99	354.6	11	43	4	21	15	4			
CHITTAGONG	74.04	285.7	11	39	0	21	9	-2	11	49	16 12 PPP
DUZHANBE	74.41	312.3	11	42	1	21	15	0			
BOKARO	76.59	291.0	12	5	11	21	38	-2			
WARSAK DAM	76.67	307.6	11	53	-1						
WITTEVEEN	77.09	357.9	11	58K	2						
CHARTERS TS.	77.46	215.5	11	58	0						
NEW DELHI	77.91	300.2	11	58A	-3						
MUNSTER	77.91	357.3	12	1	0						
HALLE	78.18	354.5	12	2	0	21	56	-1			
COLLMBERG	78.31	353.8	12	3	0						14 58 PP
KEW	78.43	2.3	12	6	2						
LWOW	78.57	346.5	12	4	0						
JENA	78.77	354.7	12	5	-1	22	1	-2			15 6 PP
KRAKOW	78.90	349.2	12	6	0				12	11	12 18 PCP
BENSBERG	78.94	357.5	12	6K	0	22	7	2	12	20	12 11 PCP
RACIBORZ	79.07	350.3	12	7	0				12	12	12 23 PCP
PRAGUE	79.43	352.8	12	10	1						
PRUHONICE	79.51	352.7	12	9	-1	22	10	-1			27 45 SS
CHEB	79.57	354.1	12	12	2						14 1
ASHKABAD	79.58	318.8	12	10	0						
FELDBERG	79.63	356.7	12	27	17						
VANNOVSKAYA	79.69	319.0	12	10	-1						
SKALNATE PL.	79.72	348.8	12	15	4						
DOURBES	79.84	359.2	12	12	1						
UZHGOROD	79.98	347.4	12	12	0						
KASPERSKE H.	80.43	353.2	12	14	-1						15 24
HEIDELBERG	80.44	356.4	12	15	0						
KISHINEV	80.47	342.6	12	15	0						
STUTTGART	81.05	356.0	12	17	-1						
VIENNA-H.	81.06	351.2	12	19	1						14 28
BRATISLAVA	81.07	350.7	12	19	1						12 34 PCP
FOLINIERE	81.13	2.6	12	18	0						
STRASBOURG	81.30	357.0	12	20	1	22	31	2	12	35	15 15 PP
TUBINGEN	81.30	356.2	12	21	2						
SIMFEROPOL	81.31	338.4	12	19K	0	22	29	-1			
TIFLIS	81.33	329.9	12	20	1	22	32	2			
WELSCHBRUCH	81.51	358.0	12	21	1						12 36 *SP
RAVENSBURG	82.02	355.7	12	24	1						
QUETTA	82.05	308.4	12	23	0	22	39	2	12	34	15 31 PP
BRISBANE	82.08	207.2	12	23K	0						
BASLE	82.35	357.1	12	21	-4						21 22
HOPE	82.45	71.0	12	27	2						
GARCHY	82.67	0.2	12	26K	0						12 41
BESANCON	82.67	358.2	12	26	0						12 42 *SP
GORIS	82.82	327.9	12	29	2	22	39	-6			
NEUCHATEL	82.90	357.5	12	29	2						
TIMISOARA	82.96	347.5	12	30	2						
ZAGREB	83.51	351.1	12	31	0						
TRIESTE	83.88	352.7	12	34	2				12	48	
BELGRADE	83.97	347.8	12	33K	0	22	56	-1			
CLERMONT-FD.	84.18	0.2	12	35	1						
ROSELEND	84.22	357.7	12	35	1						12 49 *SP
PADOVA	84.26	354.0	12	43	9						
TEHERAN	84.31	322.6	12	35	0	23	1	1			
SOFIA	85.62	345.4	12	43	2						12 50 PCP
FLORENCE X.	85.92	354.3	12	53	10	23	28	12			
MONACO	86.15	357.0	12	48	4						
TANGERANG	86.33	255.9	12	43K	-2						
KARACHI	86.36	305.3	12	45	0						
SKOPJE	86.63	346.6	12	49	3	23	14	-9			
POONA	87.69	296.5	12	51K	0						
ROME	87.70	353.2	12	53A	2	23	37	4			24 33 PS
BOMBAY	87.98	297.5	12	51	-2	23	24	-11			
SERRA PILAR	88.22	9.0	12	48	-6				12	57	
KARAPIRO	88.25	186.2	12	52	-2						
SAN JUAN	88.40	62.8	12	55	0						13 35
RIVERVIEW	88.59	206.3	12	56K	0						13 0 PCP
TARANTO	88.66	349.4				23	47	5			
COIMBRA	89.16	9.0	12	59K	1				13	12	
SHIRAZ	89.17	318.8	12	57	-1	23	46	0			
CHATEAU	89.52	186.1	12	57	-3						
TOLEDO	89.83	5.7	13	1A	0	23	36	-16			29 23 SS
CANBERRA	90.61	207.5	13	5K	0						13 10 PCP
MESSINA	91.09	350.4	13	4	-3	24	1	-3			25 9

KSARA	91.32	333.4	13	11	3	24	11	5		25	14 PS
ALICANTE	91.53	3.0	13	9	0	24	7	-1			
WELLINGTON	91.64	186.5	13	7	-3						
ANTIGUA	91.80	60.3	13	9	-2						
GRANADA	92.55	5.5	13	22A	8						
ALMERIA	92.94	4.7	13	14	-2					14	0
MALAGA	92.95	6.2	13	17A	1	24	17	-3			
ADELAIDE	93.71	215.3	13	19K	0						
TOOLANGI	93.76	209.3	13	19K	-1					13	40
RANGUI	123.84	341.6	18	59	-1					19	40 PP
LWIRO	127.37	327.3	19	9K	3					21	14
WILKES	128.84	209.7	19	15	6						
TANANARIVE	132.98	295.6	19	19	2					21	40 PP
BYRD STATION	134.14	168.2	19	18	-1						
MIRNY	134.91	214.4	19	20	-1						
BROKEN HILL	138.73	321.4	19	25	-3						
SOUTH POLE	140.24	180.0	19	30	0						
BANDEIRA	143.65	343.6	19	35K	-1					22	52 PP
BULAWAYO	143.76	317.3	19	34A	-3						
MAWSON	146.55	216.8	19	40	-1						
KIMBERLEY	152.95	315.1	19	53	2						
N-LAZARVSKYA	159.21	187.9	19	57	-2						

DECEMBER 10 4.H 56.M 15.S EPICENTRE -28.25 62.65 DEPTH= 0.KM

A= 0.40531 B= 0.78364 C=-0.47078 D= 0.8882 E=-0.4594
G=-0.2163 H=-0.4182 K=-0.8823 HT= 2.4

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	
TANANARIVE	16.65	300.6	3	58A	2	6	56	-5			4	9	PP
BULAWAYO	32.00	277.0	6	28K	-2								
KIMBERLEY	33.20	259.9	6	39K	-1								
BROKEN HILL	34.53	286.2	6	51K	-1								
HERMANUS	37.38	249.4				13	7	3					
MAWSON	39.38	179.9	7	31K	-2								
LWIRO	41.37	302.6	7	52	3						17	18	
MADRAS	44.38	24.8	8	17	3	14	55	6			10	0	PP
MUNDARING	46.09	108.4	8	27	0	15	17	4					
TANGERANG	47.04	70.6	8	36	1								
POONA	47.74	14.4	8	42K	2								
BOMBAY	47.89	13.0	8	17	-24	15	40	1					
WILKES	47.96	156.2	8	44	2	15	40	0			10	36	PP
N-LAZARVSKYA	51.03	199.3	9	3	-3	16	20	-2					
BANGUI	53.36	300.3	9	23	0				9	32			
NEW DELHI	58.20	15.1	9	56K	-2								
QUETTA	58.24	4.4	9	59K	1	18	5	6			12	7	PP
SHIRAZ	58.38	349.6	9	59	0								
DUMONT	59.42	153.2	10	5	-1								
CHATRA	59.61	25.5	10	7K	-1								
LAHORE	60.49	11.5	10	13	-1								
SOUTH POLE	61.92	180.0	10	28	5								
WARSAK DAM	62.48	8.3	10	27	0								
LHASA	63.64	27.5	10	35K	0								
ADELAIDE	63.70	117.2	10	35K	0				10	45			
TEHERAN	64.52	349.9	10	40	-1	19	23	4					
DARWIN	65.12	91.1	10	44	0								
KUNMING	65.60	39.9	10	48K	0								
ASHKABAD	65.97	356.3	10	50	0								
KSARA	66.74	335.9	10	50	-5	19	32	-14					
TOOLANGI	68.09	121.8	11	3	0				11	14			
GORIS	69.09	346.5	11	10K	0								
TASHKENT	69.49	5.3	11	13K	1								
CHENGTU	70.62	37.1	11	17K	-2								
CANTON	70.66	49.0	11	20K	1								
MANILA	70.82	60.8	10	38	-42	19	34	-61					
CANBERRA	71.52	120.6	11	24K	0				11	34	11	48	PCP
TIFLIS	71.54	346.0	11	24	0								
FRUNSE	71.58	9.3	11	29A	4								
BYRD STATION	71.95	179.6	11	26	-1								
LANCHOW	74.79	33.6	11	43K	0								
ATHENS	75.29	329.1	11	46K	0								
CHARTERS TS.	75.34	105.1	11	46	-1								
ISTANBUL UN.	75.67	334.4	11	48K	0	21	21	-9					
SIAN	76.03	38.1	11	50K	-1								

SIMFEROPOL	77.35	339.7	11	59	1						
ARGENTINE I.	78.23	200.1	12	3	0						
SOFIA	79.34	331.6	12	13	4						
MESSINA	79.44	324.0	12	3	-6					13	5
NANKING	80.28	45.7	12	13K	-1						
TARANTO	80.32	326.6				22	47	28			
PORT MORESBY	80.80	95.7	12	17K	0	22	24	-1			
KISHINEV	80.90	337.3	12	16K	-1						
ZO-SE	81.19	47.8	12	18K	-1						
PAOTOW	81.37	34.5	12	19K	-1						
PEKING	84.19	38.4	12	34K	0						
UZHGOROD	84.62	334.4	12	37	1						
SVERDLOVSK	84.75	358.9	12	37A	0						
FLORENCE X.	85.75	325.4	12	43	1						
TRIESTE	85.91	328.0	12	42	-1						
MOSCOW	86.33	346.1	12	45K	0						
KRAKOW	86.68	334.0	12	46	-1						
VIENNA-H.	86.71	331.1	12	46	-1						
RACIBORZ	87.38	333.2	12	49	-1						
MONACO	87.68	323.4	12	51	0						
M.BOUR	87.83	287.5	12	53	1	23	45	11			
IRKUTSK	88.07	24.1	12	53	0						
PRUHONICE	88.81	331.3	12	57K	0						
ALMERIA	89.05	313.3	12	59K	1					16	33 PP
ROSELEND	89.44	324.5	12	58	-2					13	23
GRANADA	89.97	313.0	13	5K	3						
MALAGA	90.22	312.3	13	4K	1	24	5	9		30	1 SS
STUTTGART	90.27	327.9	13	3	-1						
COLLMBERG	90.45	331.4	13	4K	0					15	8
JENA	90.79	330.5	13	4	-2					13	26
BESANCON	90.82	325.3	13	7	1						
STRASBOURG	90.86	327.1	13	7	1						
HEIDELBERG	90.98	328.1	13	5	-2						
HALLE	91.04	331.1	13	7	0			13	16		
BAGNERES	91.25	319.4	13	7	-1						
WELSCHBRUCH	91.43	326.3	13	7	-2						
TOLEDO	91.84	315.0	13	12K	1					29	57 SS
GARCHY	92.33	324.0	13	13	0						
BENSBERG	92.78	328.6	13	23	8						
VIBORG	92.85	344.1	13	13	-3						
DOURBES	93.41	326.8	13	19	1						
FOLINIERE	95.12	323.7	13	26	0						
MATUSIRO	95.85	51.6	13	28	-1						
KAJAANI	96.03	345.3	13	28	-2						
SODANKYLA	99.09	346.7	13	40	-4						
NORD	116.21	350.7	18	44	-1						
ALERT	122.24	352.7	18	56K	-1						
CARACAS	129.65	259.9	19	12A	1						
MOULD BAY	131.93	0.6	19	14	-1						
RESOLUTE	132.12	352.1	19	15	-1						
SAN JUAN	132.24	269.7	19	16	0						
BOGOTA	132.68	248.4	19	18	1					23	6 PKS
SCHEFFERVLLE	135.09	320.7	19	21	0						
SHAWINIGAN	140.75	310.0	19	28	-4						
BREBEUF	141.54	308.6	19	28K	-5						
PALISADES	142.42	301.4				26	34	-9			
HAWAII V.OB.	144.34	95.8	19	38	0						
PENNSYLVANIA	145.43	301.7	19	39K	-1						
YELLOW KNIFE	145.71	357.7	19	39K	-1						
CHAPEL HILL	146.82	293.2	19	44	2						
MORGANTOWN	147.18	300.1	19	44A	1						
LONDON ONT.	147.39	306.6	19	47	4						
COLUMBIA	148.50	289.7	19	47	2						
BANFF	157.06	357.1	19	55	-2						
PENTICTON	158.88	4.1	20	0A	1						
FAYETTEVILLE	158.93	297.6	19	59	0					24	0
VICTORIA	159.22	11.4	20	5	5					20	39
HUNGRY HORSE	159.76	353.6	20	4	4					24	19 PP
TULSA	160.22	298.2	20	2	1					20	43 PKP2
BUTTE	161.86	349.3	20	3	1					24	32 PP
WICHITA MTS.	162.76	296.7	20	4	1					24	38 PP
BLUE MTS.	163.43	359.9	20	3	-1					20	55 PKP2
LARAMIE	163.79	326.6	20	4	0					24	41
GOLDEN	164.88	322.1	20	6	1					21	2
LUBBOCK	165.68	295.6	20	8	2					21	7
SALT LAKE C.	166.71	341.5	20	9	2					24	56 PP
MINERAL	167.43	15.1	20	9A	2					21	14
PRICE	167.44	336.1	20	8	1						
DUGWAY	167.50	343.7	20	9	2					21	16 PKP2

RENO	168.5[5]	9.6	20	6A	-2							
ALBUQUERQUE	168.57	308.5	20	10	2					25	9	PP
EUREKA	168.74	354.5	20	10	2					25	5	PP
CALISTOGA	168.75	21.5								21	20	
BERKELEY	169.56	22.0								21	24	
LICK	170.24	20.6	20	12A	3					21	27	
PRIEST	171.64	18.8	20	12A	2					21	33	
BOULDER CITY	172.00	345.2	20	13	3					25	8	PP
TUCSON TELE.	172.97	307.1	20	13	2					26	33	PP
TUCSON	173.09	306.9	20	13	2					21	40	
PASADENA	174.07	6.6	20	13	2					25	36	PP

DECEMBER 10 16.H 56.M 11.S EPICENTRE -27.12-177.18 DEPTH= 148.KM

A=-0.89025 B=-0.04385 C=-0.45335 D=-0.0492 E= 0.9988
G= 0.4528 H= 0.0223 K=-0.8913 HT= 2.7

DEPTH OF FOCUS= 0.018R
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	
RAOUL ISLAND	2.22	196.9	0	29A	-9	0	59	-8					
SUVA	9.80	334.7	2	20	2	4	24	18					
CHATEAU	13.50	205.0	3	6	0								
AFIAMALU	14.07	22.1	2	58	-16	5	24	-22					
WELLINGTON	15.61	203.1	3	28	-5	6	7	-14					
NOUMEA	15.63	284.3	3	36	3	6	57	35					
PORT VILA	16.33	301.9	3	46K	4								
KOUMAC	18.16	287.1	4	5K	1	8	1	43					
BRISBANE	26.68	262.5	5	29	2						10	4	
HONIARA	27.86	304.9	5	36	-2								
RIVERVIEW	28.03	248.4	5	25	-14						11	21	
CANBERRA	29.95	245.8	5	59	3								
TOOLANGI	33.03	242.1	6	25	2						9	5	PCP
CHARTERS TS.	34.14	273.9	6	34	1						8	7	
PORT MORESBY	37.99	290.8	7	7	2						13	31	
ADELAIDE	38.34	247.1	7	10	2						13	31	
DUMONT	47.44	201.6	8	21	0						8	46	
DARWIN	50.74	276.1	8	48	1								
MUNDARING	57.34	247.9	9	35	0								
BYRD STATION	58.02	170.0	9	39	-1								
MIRNY	65.38	206.1	10	29	0								
MAWSON	75.63	200.1	11	31A	1				11	46			
MATUSIRO	75.98	324.3	11	33A	1								
PRIEST	82.43	42.9	12	7A	0								
BERKELEY	82.63	40.8	12	8K	0						12	27	
LICK	82.64	41.5	12	9K	1								
PASADENA	82.69	45.8	12	8	0	22	29	17					
CALISTOGA	82.97	40.0	12	8K	-2								
MINERAL	84.68	39.3	12	17A	-1								
RENO	85.17	40.8	11	51K	-30								
BOULDER CITY	85.97	46.1	12	25	0								
TUCSON	86.43	51.0	12	28	1				12	40			
TUCSON TELE.	86.56	51.0	12	28	1								
EUREKA	87.41	42.8	12	31	-1								
SANTA LUCIA	87.91	126.7	12	48	14	22	56	-6					
VICTORIA	89.33	32.4	12	41	0								
BLUE MTS.	90.02	38.0	12	43	-1	23	36	14	13	3	29	44	SS
SALT LAKE C.	90.71	43.6	12	46	-1								
ALBUQUERQUE	90.96	50.9	12	48	0								
PENTICTON	91.72	33.5	12	52K	0								
BUTTE	93.37	39.1	12	59	0								
COLLEGE	94.49	12.1	13	4	0								
BANFF	94.91	33.8	13	5	-1								
WICHITA MTS.	96.42	54.3	13	12	-1	23	52	18			24	37	S
TULSA	99.00	54.4				24	57	69			31	39	SS
KIMBERLEY	120.59	202.4	18	37	3								
WARSAK DAM	121.40	294.9	18	38	2								
QUETTA	124.30	289.4	18	45	4								
BULAWAYO	126.79	210.7	18	56	10								
BROKEN HILL	131.76	214.2	19	1	5								
SHIRAZ	136.47	285.4	19	9	5								
KIRUNA	137.89	350.1	19	14	7								
KAJAANI	139.69	343.4	19	12	2								
UMEA	141.59	347.7	19	16	2								

SKALSTUGAN	143.01	353.0	19	13	-3							
NURMIJARVI	143.45	342.0	19	16	-1							
HELSINKI	143.65	341.5	19	15	-2							
UPPSALA	145.73	346.8	19	22	1							
KONGSBERG	147.14	353.6	19	27	4							
GOTEBORG	148.75	350.5	19	31	5							
KARLSKRONA	149.55	345.9	19	30	3							
BANGUI	152.82	216.5	19	35	3			20	3			
KRAKOW	153.60	334.7	19	43	10					19	55	PKP2
RACIBORZ	154.21	336.9	19	47	13					19	59	PKP2
COLLMBERG	154.64	345.0	19	37K	3					19	59	PKP2
JENA	155.30	346.7	19	47	12					20	4	
PRUHONICE	155.46	341.6								20	5	
VIENNA-H.	156.40	337.0	19	39	2					20	9	PKP2
KASPERSKE H.	156.49	342.1	19	39	2					20	8	PKP2
STUTTGART	157.81	348.6	19	41	3							
GARCHY	159.87	359.5	19	57	16					20	33	
ROSELEND	161.21	351.7								20	41	
MALAGA	168.63	30.8	20	5	16							

DECEMBER 12 0.H 3.M 1.S EPICENTRE 32.98 136.21 DEPTH= 437.KM

A=-0.60672 B= 0.58164 C= 0.54183 D= 0.6920 E= 0.7219
G=-0.3911 H= 0.3750 K=-0.8405 HT= 0.8

DEPTH OF FOCUS= 0.064R

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
SIOMISAKI	0.59	321.7	0	40	-14	1	39	2				
NARA	1.72	349.5	0	58	0	1	42	-2				
OSAKA	1.75	341.4	0	56	-2	1	40	-4				
KAMEYAMA	1.87	6.6	0	59K	0	1	43	-2				
ABUYAMA	1.95	344.4	0	57A	-2	1	42	-4				
KYOTO	2.07	349.0	0	59	-1	1	44	-3				
HAMAMATU	2.14	35.6	0	59	-1	1	46	-2				
NAGOYA	2.27	15.9	1	0A	-1	1	47	-3				
HIKONE	2.28	0.8	1	1	0	1	47	-3				
KOTI	2.31	284.8	1	2	1	1	49	-1				
GIHU	2.45	10.8	1	2	0	1	48	-4				
MAIZURU	2.57	344.9	1	0	-3	1	48	-5				
TSURUGA	2.66	357.6	1	7	3							
TOYOOKA	2.79	336.0	1	3	-2	1	53	-3				
IIDA	2.86	27.5	1	5	0	1	55	-2				
MATUYAMA	2.99	287.5	1	5	-1	2	5	7				
HATIDYOZIMA	3.01	86.8	1	5	-1							
TOTTORI	3.03	326.9	1	5	-1	1	56	-3				
HUKUI	3.06	0.3	1	8	1	1	57	-2				
AJIRO	3.16	48.6	1	6K	-1	1	58	-3				
OSIMA	3.18	55.1	1	7	-1	1	58	-3				
TAKAYAMA	3.27	14.9	1	7	-1							
HUNATU	3.29	39.5	1	12	4	2	1	-2				
KOHU	3.31	35.3	1	7	-2	2	0	-3				
YONAGO	3.40	316.6	1	18	9	2	2	-3				
HIROSIMA	3.44	294.7				2	3	-2				
KANAZAWA	3.56	5.7									1	57
MATUMOTO	3.57	23.5	1	12	1	2	5	-2				
MERA	3.58	56.3	1	8K	-3	2	3	-4				
MATSUE	3.58	314.3	1	8	-3	2	5	-2				
YOKOHAMA	3.75	48.5	1	12	0	2	5	-5				
TOYAMA	3.80	12.1	1	26	13	2	9	-1				
OIWAKE	3.86	29.4	1	12	-1	2	7	-4				
OOITA	3.86	274.9	2	13	60							
MATUSIRO	3.91	24.3	1	11K	-3	2	6	-6				
TOKYO C.M.O.	3.98	46.5	1	13	-1	2	8	-5				
HONGO	4.01	46.3	1	17	2	2	9	-5				
NAGANO	4.03	23.4	1	15	0	2	8	-6				
KUMAGAYA	4.10	38.8	1	13K	-2	2	10	-5				
MAEBASI	4.14	33.9	1	13K	-3	2	9	-7				
MIYAZAKI	4.19	256.6	1	19	3	2	21	4				
TAKADA	4.43	21.6	1	13	-6	2	15	-6				
SIMONOSEKI	4.52	283.8	1	19	0							
TUKUBASAN	4.55	43.8	1	16A	-4	2	9	-14				
KAKIOKA	4.60	44.2	1	17	-3	2	17	-7				

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KUMAMOTO	4.64	269.5	1	21	U	2	26	2				
TYOSI	4.71	53.3	1	18	-3	2	20	-6				
MITO	4.88	44.8	1	19K	-4	2	22	-6				
HUKUOKA	4.92	278.5				2	29	0				
SHIRAKAWA	5.28	37.4	1	23	-4	2	29	-7				
AIKAWA	5.29	17.8	1	25	-2	2	29	-7				
NAGASAKI	5.33	269.0	1	28K	1	2	38	1				
ONAHAMA	5.52	42.9	1	25K	-4	2	33	-7				
HUKUSIMA	5.89	35.0	1	30	-3	2	39	-8				
YAMAGATA	6.24	31.5	1	33	-4	2	47	-7				
SENDAI	6.51	34.6	1	37	-3	2	50	-9				
SAKATA	6.59	25.4	1	56	15							
ISINOMAKI	6.84	36.0	1	39K	-4	2	55	-10				
MIZUSAWA	7.31	31.6	1	48	U	3	6	-9				
AKITA	7.42	23.9				3	11	-7				
MORIOKA	7.80	29.4	1	53	-1	3	18	-6				
MIYAKO	8.11	33.3	2	20	23	3	20	-10				
AOMORI	8.63	23.8				3	35	-8				
HATINOHE	8.65	28.0				3	27	-17				
HAKODATE	9.52	21.0				3	47	-14				
MORI	9.73	19.6									4	2
MURORAN	10.06	20.7									4	4
TOMAKOMAI	10.52	22.2									4	11
URAKAWA	10.53	27.8	2	23	-1	4	17	-2				
SAPPORO	10.85	20.4									4	25
HIROO	10.85	29.2	2	25	-3							
OBIHIRO	11.34	27.0	2	32	-1	4	31	-5				
ASAHIGAWA	11.81	22.3	2	36K	-3	4	39	-7				
KUSIRO	11.88	30.5	2	37	-2	4	41	-6				
NEMURO	12.68	32.8									5	3
CHANGCHUN	13.78	324.9	2	58	-2	5	24	0				
NANKING	14.74	271.1	3	9	-1							
PEKING	17.56	299.3	3	37	-1	6	39	4				
HONG KONG	22.19	246.9	4	20	-3							
PAOTOW	22.24	297.4	4	23	U	7	58	3				
SIAN	22.74	280.7	4	27K	-1							
LANCHOW	26.79	285.7	5	4K	0							
CHENGTU	27.40	273.9	5	9	-1							
CHITTAGONG	40.45	266.4	7	1	1				8	21	9	4 SP
PORT MORESBY	43.42	164.2	7	24A	1							
LAHORE	51.66	286.3	8	25	-1							
WARSAK DAM	53.10	290.1	8	35	-2							
CHARTERS TS.	53.64	168.2	8	41	1							
COLLEGE	54.76	30.5	8	48	0							
QUETTA	58.08	287.4	9	11K	0	16	39	2	10	40		
MOULD BAY	61.59	15.3	9	34	-1							
APATITY	64.60	335.5	9	53	-1							
KEVO	65.68	338.9	10	0	-1							
SODANKYLA	67.01	336.7	10	10K	1							
RESOLUTE	67.54	12.9	10	12	0							
KAJAANI	68.32	333.4	10	17	0							
KIRUNA	68.74	338.5	10	20	0							
SHIRAZ	69.69	292.7	10	26K	1							
UMEA	71.20	335.1	10	34A	0							
NURMIJARVI	71.45	331.0	10	35	-1							
HELSINKI	71.52	330.6	10	36	0							
VICTORIA	72.29	43.4	10	42	1							
PENTICTON	74.03	41.3	10	52K	1							
SKALSTUGAN	74.06	337.3	10	51	0							
UPPSALA	74.65	332.6	10	54	0							
BANFF	75.21	38.2	10	58	1							
BLUE MTS.	77.81	44.3	11	13A	1						13	1
EUREKA	81.72	48.1	11	34	2				13	10		
COLLMBERG	82.37	328.0	11	37A	2							
PRUHONICE	82.59	326.3	11	38	2							
JENA	83.26	328.4									12	42
WICHITA MTS.	95.27	42.5	12	37	1							

DECEMBER 12 10.H 8.M 57.S EPICENTRE -4.58 152.85 DEPTH= 124.KM

A=-0.88704 B= 0.45481 C=-0.07936 D= 0.4563 E= 0.8899
G= 0.0706 H=-0.0362 K=-0.9968 HT= 7.1

DEPTH OF FOCUS= 0.014R

SE= 4.73

	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	
RABAUL	0.78	299.1	0	21K	-1								
PORT MORESBY	7.41	229.5	1	44K	-3	3	14	4					
HONIARA	8.53	124.8	1	44K	-18	2	33	-64					
CHARTERS TS.	16.70	202.1	3	45	-3	6	57	9					
KOUMAC	19.38	146.0									5	8	
PORT VILA	20.00	132.0	4	31K	6	7	56	-2					
NOUMEA	21.99	144.5	4	36K	-9	8	31	-4					
BRISBANE	22.68	180.2	4	44	-8	8	42	-5					
DARWIN	23.10	249.0	5	1	5	9	17	23					
RIVERVIEW	29.14	182.9	5	45A	-7	10	30	-3	6	6	6	42	PP
CANBERRA	30.79	186.2	5	59	-7	10	59	0	6	21	12	45	SS
ADELAIDE	32.95	201.6	6	20K	-5	11	31	-2			7	28	PP
TOOLANGI	33.52	190.6	6	23	-7	11	44	2	6	46	12	17	*SS
AFIAMALU	36.07	107.3	7	3	12	12	11	-10					
ONERAHI	36.84	150.2	7	12	14								
MANILA	36.85	301.8	7	3	5	13	7	34					
RAOUL ISLAND	36.98	134.8	7	13	14								
BAGUIO CITY	38.13	303.9	7	10	1	12	59	7					
KARAPIRO	39.12	151.1	7	28	11								
CHATEAU	40.13	152.3	7	37	12	13	44	22					
TUAI	40.58	150.4	7	42	13								
WELLINGTON	41.48	154.9	7	49	13	13	19	-23			16	38	SS
TUKUBASAN	42.31	344.6				13	54	0			16	20	SS
ABUYAMA	42.48	338.8	7	43	-2								
MATUSIRO	43.14	342.7	7	48A	-2	13	59	-7					
ROXBURGH	43.20	163.1				14	1	-6			17	50	SS
PERTH	44.08	227.4	7	58	1	14	29	9			10	18	PPP
DJAKARTA	45.84	265.9	8	14A	3	14	39	-6					
TANGERANG	46.04	265.9	8	15K	2	15	18	30					
HONG KONG	46.31	306.8	8	18K	3	15	8	16	8	41	10	17	PP
NHATRANG	46.49	291.5	8	19	2								
ZO-SE	46.61	321.7	8	19A	1	15	5	9	8	40	15	42	*SS
CANTON	47.37	307.2	8	28	5	15	23	16	8	49	9	2	*SP
NANKING	48.76	320.8	8	37A	3	15	38	12	8	58	9	12	*SP
VLADIVOSTOK	51.13	340.3	8	52	0	16	2	3			9	?8	
Y.-SAKHLINSK	52.16	351.2	8	58	-2								
CHANGCHUN	54.20	335.6	9	14A	-1	16	51	10	9	36	17	24	*SS
HONOLULU	54.50	59.9	9	14	-3	16	47	2	9	32			
KIPAPA	54.62	59.8	9	11	-7				9	34			
PEKING	55.74	326.3	9	26	0	17	10	9	9	48	10	3	*SP
HAWAII V.OB.	56.32	63.1				17	12	3			9	24	PCP
SIAN	56.62	316.5	9	34A	2	17	28	15	9	56			
KUNMING	56.91	303.9	9	38A	3	17	33	16	9	59			
PETROPAVLOVK	57.60	4.1	9	37	-2	17	31	5			10	1	
CHENGTU	58.33	310.3	9	46	2	17	45	10	10	8			
PAOTOW	59.64	323.1	9	54	1	18	2	10	10	15			
LANCHOW	61.10	315.7	10	5	2	18	24	13	10	28			
DUMONT	62.62	185.7	10	6	-8	18	32	2					
CHITTAGONG	65.36	297.0	10	33	2	19	12	8	11	5	13	3	PP
SHILLONG	66.26	300.4	10	47K	10	19	41	26					
LHASA	68.23	304.3	10	53A	4	19	54	16					
WILKES	68.28	197.0	10	45A	-5	19	33	-6	11	13	20	33	
CALCUTTA	68.48	296.2	10	55	4	19	55	14					
HOWRAH	68.53	296.3	10	54	3						14	3	
YAKUTSK	68.75	348.5	10	51A	-2								
IRKUTSK	69.94	330.6	11	2	2						11	20	PCP
CHATRA	70.66	300.3	11	4	0	20	17	10			17	25	
BOKARO	71.10	297.0	11	9K	2	20	28	16			13	52	PP
VISHAKHAPTNM	72.07	290.2	11	24K	11	20	48	25			14	14	
MIRNY	74.15	201.1	11	19	-6				11	44	21	24	SCS
MADRAS	74.24	284.8	11	26	1	21	2	15			14	14	PP
HYDERABAD	76.57	289.0	11	39	1	21	28	15			12	0	PCP
TIKSI	77.67	352.4	11	40	-5						22	17	PS
DEHRA DUN	79.28	301.9	11	51A	-2	21	53	11			16	46	PPP
NEW DELHI	79.66	300.0	11	53K	-2	20	49	-57			12	3	PCP
POONA	81.06	289.5	12	3A	0	22	11	11			22	33	
COLLEGE	81.64	21.8	11	58	-8	21	42	-24	12	23			
SEMIPALATNSK	82.55	322.0	12	9	-2								
LAHORE	82.65	302.5	12	11A	0	22	26	10	12	39	23	4	*SS
FRUNSE	84.50	313.7	12	19A	-1				12	48	22	50	SCS
WARSAK DAM	85.35	304.5	12	24	-1				12	54			
MAWSON	85.79	202.6	12	21A	-6	22	47	0	12	46	23	24	PS
KHOROG	85.90	308.0	12	26	-1				13	0	23	3	SCS
KARACHI	88.11	294.9	12	38	0				13	8			
TASHKENT	88.18	311.5	12	39A	1						23	26	SCS
CALISTOGA	88.59	51.2	12	36A	-4						13	4	

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QUETTA	88.74	300.2	12	39	-2	23	19	4	13	5	16	12 PP
BERKELEY	88.75	52.0	12	44K	3	23	1	-14			28	15 SS
LICK	89.18	52.6	12	44K	1						13	4
VICTORIA	89.25	41.4							13	7		
MINERAL	89.54	49.6	12	32A	-13						13	5
PRIFST	89.84	53.9	12	53K	7							
LONGMIRE	90.11	43.3				23	3	-25			13	11 PP
RENO	90.83	50.6	13	15A	24							
PASADENA	91.69	56.1	13	14	19	23	18	-24				
PENTICTON	91.83	40.9	12	50	-5							
BLUE MTS.	93.08	45.4	12	56K	-5	23	26	-28			16	57 PP
EUREKA	93.79	50.8	12	59	-5				13	21	16	57 PP
MOULD BAY	93.90	13.9	13	0	-5				13	30		
BOULDER CITY	94.54	54.4	13	3	-5				13	29		
BANFF	94.54	39.1	13	2	-6							
SVERDLOVSK	95.02	326.5	13	6K	-4							
YELLOW KNIFE	95.21	27.8	13	2	-9				13	33		
KHEYS	95.28	350.6									19	5 PPP
HUNGRY HORSE	95.47	42.0	13	5	-7						13	36 *SP
DUGWAY	96.24	50.2	13	11A	-4							
ASHKABAD	96.34	307.5									17	23 PP
BUTTE	96.45	44.3							13	40	14	13
SALT LAKE C.	96.98	49.6							13	42		
BOZEMAN	97.52	44.7							13	45	17	51
TUCSON	97.76	58.2							13	43		
TUCSON TELE.	97.86	58.1	13	39	16							
RESOLUTE	100.19	14.5							13	59		
ALERT	100.71	4.4							14	1		
ALBUQUERQUE	101.37	55.4	13	38	-1				14	1		
LARAMIE	101.70	48.9	14	0	20							
TEHERAN	101.97	305.4	13	45	4						18	0
GOLDEN	101.97	50.5	13	54	13							
NORD	102.86	358.4	14	10	25							
TANANARIVE	102.91	249.5							14	15		
APATITY	105.15	339.7	14	20K	777	25	42	80				
GORIS	105.64	309.6									18	22 PP
KEVO	106.11	342.9									18	29 PP
SODANKYLA	107.53	340.9	14	27	777						19	1 PP
MOSCOW	107.80	327.5									18	51 PP
WICHITA MTS.	107.84	55.1				24	40	6	14	27	18	24 PP
MANHATTEN	108.79	50.2	18	38	777							
KAJAANI	108.87	337.7	14	33	777							
KIRUNA	109.19	342.7									18	39 PP
LAWRENCE	109.85	50.3									19	5
PULKOVO	109.86	333.0							18	47	18	56 PP
TULSA	109.94	53.5				24	47	4			19	1 PP
FAYETTEVILLE	111.19	53.1									19	4 PP
UMEA	111.75	339.4									19	8 PP
NURMIJARVI	111.96	335.2									19	1 PP
LITTLE ROCK	112.90	54.2	18	49	27							
SIMFEROPOL	113.34	317.3									19	18 PP
KSARA	114.86	305.1									19	31 PP
UPPSALA	115.20	336.9									19	29 PP
CHILEKA	115.32	250.4	18	25	-2							
JERUSALEM	115.81	303.1									19	41 PP
BLOOMINGTON	116.41	48.3	18	54	25							
ISTANBUL UN.	118.17	314.6									19	57
BROKEN HILL	121.72	250.0	18	39	0							
BUDAPEST	121.78	324.9	19	12	32						20	14 PP
BELGRADE	122.29	321.6	18	3	-38						20	23
BRATISLAVA	122.48	326.4	19	11	30						23	16 PPP
BREBEUF	122.63	37.3	18	37	-4						36	47 SS
COLLMBERG	122.69	331.3	18	40	-1						19	12
PRUHONICE	122.76	329.3	18	41	0						20	22 PP
PRAGUE	122.77	329.4									19	37
VIENNA-H.	122.83	326.8	19	11	29						21	4 PP
JENA	123.61	331.6	19	12	29				19	25	20	51 PP
LWIRO	123.69	264.3	18	46	3						20	32
KASPERSKE H.	123.78	329.0	18	42	-1						19	11
SANTA LUCIA	124.14	135.9	19	15	31						28	27
PALISADES	124.66	42.1	15	44	-181	25	44	9				
MUNSTER	124.68	334.6									19	14
LJUBLJANA	125.14	325.5	18	46	0						19	15 PKP2
RENSBERG	125.60	334.0	19	13	26							
WESTON	125.66	39.5	19	14	27							
TRIESTE	125.81	325.5	19	7	20						20	57 PP
STUTTGART	126.17	330.9	18	58	10						19	30
PADOVA	127.01	326.3	19	18	28						21	48
STRASBOURG	127.02	331.6	19	19	29							

CHUR	127.33	329.0	19	13	23						
DOURBES	127.35	334.8	19	20	30						
WELSCHBRUCH	127.81	332.3	19	19	28						
FLORENCE X.	128.36	325.0	19	7	15					20	57 PP
ROME	128.76	322.4								21	5 PP
MESSINA	128.76	316.7								21	7
BESANCON	128.82	331.5	19	22	29						
HALIFAX	128.91	33.0						19	20		
HUANCAYO	129.32	109.5	18	52	-2						
ROSELEND	129.60	329.6	19	25	30					21	24
FOLINIERE	130.46	337.0	19	25	29						
CLERMONT-FD.	131.25	332.0								19	28
AREQUIPA	131.43	116.6	18	55	-3						
CHINCHINA	131.70	87.4	18	56	-3					22	24 PKS
BOGOTA	133.23	88.0	18	55	-7					21	28 PP
BANGUI	134.38	271.6	18	46	-18					21	32 PP
BAGNERES	134.68	331.8	19	40	36						
BANDEIRA	135.48	243.5	18	11	-55			18	51		
TOLEDO	139.14	332.5	19	6	-6	26	21 13	19	24	22	14 PP
SAN JUAN	139.53	67.0	19	10	-3					22	21
CARACAS	140.15	79.2	19	3	-11					22	35 PP
MALAGA	141.81	329.8	19	15	-2					22	27 PP
ST. KITTS	142.92	67.2	20	7	48						
ST. CLAUDE	144.22	68.9	19	22	1					22	28 PP
FORT FRANCE	145.05	70.8	19	6	-17						
TRINIDAD	145.54	77.9	19	17	-7					19	46
PONTA DELGDA	146.98	357.9	19	28A	2						
M.BOUR	166.03	314.9	19	56	6			21	24		

DECEMBER 12 22.H 56.M 44.S EPICENTRE 4.41 96.56 DEPTH= 149.KM

A=-0.11399 B= 0.99105 C= 0.06951 D= 0.9934 E= 0.1143
G=-0.0079 H= 0.0691 K=-0.9976 HT= 7.1

DEPTH OF FOCUS= 0.018R

SE= 2.34

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
PORT BLAIR	8.51	333.7	2	5	4	3	54	18				
TANGERANG	14.26	135.1	3	6K	-10						7	1
NHATRANG	14.93	56.2	3	25	1							
MADRAS	18.48	299.9	4	7	0	7	14	-10			4	19 PP
CHITTAGONG	18.81	346.3	4	6	-4	7	22	-9	4	25	4	29 PP
VISHAKHAPTNM	18.82	317.3	4	12K	2	7	44	12				
KUNMING	21.81	15.2	4	43A	2	8	44	17				
SHILLONG	21.90	348.6	4	49A	7	8	48	19				
HYDERABAD	22.20	308.2	4	42	-2	9	9	35			8	51
BOKARO	22.27	333.2	4	42	-3	8	28	-7				
CHATRA	24.40	339.3	5	5K	-1	9	31	19				
HONG KONG	24.93	41.6	5	12	1	9	38	18	5	22		
LHASA	26.02	349.0	5	21A	0							
BAGUIO CITY	26.61	60.7	5	25	-1						13	12
CHENGTU	27.42	14.0	5	31	-3	10	8	7				
SIAN	32.21	19.4	6	15	-1							
LANCHOW	32.58	11.0	6	18A	-1							
LAHORE	34.46	325.2	6	33A	-2	11	54	3				
NANKING	34.83	34.2	6	37	-1	12	4	7				
ZO-SE	35.54	37.9	6	44	0							
WARSAK DAM	37.84	325.1	7	3	-1							
QUETTA	38.21	316.2	7	6	-1	12	56	7	7	35	8	42 PP
PAOTOW	38.38	16.6	7	10	2	13	1	10				
PEKING	40.00	23.6	7	23A	2							
KHOROG	40.43	328.7	7	25	0	13	26	4				
ESEN BULAK	42.22	359.7	7	39	-1							
FRUNSE	43.30	336.4	7	48	0						13	23
TASHKENT	44.48	330.5	7	56	-2	14	29	8	8	24		
ULAN-BATOR	44.64	9.9	7	59	0							
SEMIPALATNSK	48.23	346.1	8	26	-1	15	21	7				
ASHKABAD	48.53	319.3	8	33	3	15	29	11				
MATUSIRO	50.09	44.7	8	42A	0						10	0 PCP
PORT MORESBY	52.15	105.1	8	56K	-2	16	15	9				
TANANARIVE	53.34	243.0	9	6K	0						9	35
ADELAIDE	55.41	138.0	9	20K	-1				9	41		
GORIS	57.47	315.1	9	33	-2							
TIFLIS	59.45	316.9	9	49	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.

TOOLANGI	61.41	137.0	10 2A	0					10 26	
BRISBANE	62.52	123.6	10 10	0					10 44	
CANBERRA	62.79	133.2	10 11K	-1						
YAKUTSK	62.92	16.8	10 12A	-1						
JERUSALEM	63.65	303.5	10 17	0						
CHILEKA	63.98	250.5	10 21A	2						
HONIARA	64.56	102.3	10 21K	-2						
SIMFEROPOL	67.87	317.2	10 43	-1						
LWIRO	68.00	266.0	10 46A	1						
MOSCOW	69.60	328.9	10 54	-1	19 54	5	11 27		11 9	PCP
BROKEN HILL	69.92	253.1	10 57K	0						
PETROPAVLOVK	70.28	34.5	10 59	0						
MIRNY	70.44	181.5	10 58	-2						
ISTANBUL UN.	70.53	312.1	11 0A	0	20 7	7				
KOUMAC	70.72	113.3	11 2K	1						
BULAWAYO	70.85	247.2	11 1K	-1						
WILKES	70.91	174.1	11 0	-3						
NOUMEA	73.06	114.6	11 16K	1						
ATHENS	74.03	308.2	11 20K	-1						
PULKOVO	74.73	331.3	11 25	0					11 39	PCP
MAWSON	75.29	192.7	11 27K	-1						
GRAHAMSTOWN	75.65	234.3	11 30	0						
LWOW	75.70	320.4	11 30	0						
KIMBERLEY	76.08	239.2	11 32	-1						
APATITY	76.27	339.3	11 33A	-1						
DUMONT	77.02	163.7	11 36	-2						
KAJAANI	77.25	335.1	11 39	0						
HELSINKI	77.43	330.9	11 40	0						
NURMIJARVI	77.66	331.2	11 40	-1						
BANGUI	77.70	273.6	11 42	0			12 17			
KRAKOW	78.36	320.2	11 46	1					12 3	PCP
KHEYS	78.66	354.0	11 46A	-1	21 36	6	12 20		12 4	PCP
SODANKYLA	78.66	338.2	11 48K	1						
KEVO	79.25	340.6	11 50	0					12 31	
UMEA	80.39	334.1	11 57	1						
VIENNA-H.	80.49	318.1	11 58A	1			12 31			
UPPSALA	80.99	329.9	11 59	0						
KIRUNA	81.08	338.1	12 0	0						
LJUBLJANA	81.60	315.8	12 4A	2			12 38			
KARLSKRONA	81.65	326.1	12 6	3						
PRUHONICE	81.80	319.8	12 5A	2					12 54	*SP
TROMSOE	81.96	339.8	12 4	0						
KASPERSKE H.	82.39	318.9	12 7	1						
COLLMBERG	82.86	321.0	12 9	0					14 35	
GOTEBORG	83.73	327.5	12 23	10						
JENA	83.74	320.6	12 31	18						
KARAPIRO	83.78	128.7	12 14	0						
SKALSTUGAN	83.88	333.4	12 15	1						
BANDEIRA	84.52	254.7	11 37K	-40			11 55			
KONGSBERG	85.01	329.4	12 21	1						
CHUR	85.07	316.5	12 21	1						
TUAI	85.18	129.3	12 20	0						
STUTTGART	85.21	318.5	12 21	0						
BERGEN	87.17	330.2	12 39	9						
DOURBES	88.21	319.9	12 54	19						
NORD	89.38	352.2	12 41	0						
FOLINIERE	91.65	318.9	12 53	2						
ALERT	93.08	357.3	12 58	0						
COLLEGE	96.97	22.8	13 19	4					16 30	PP
MOULD BAY	97.24	8.1	13 18	1						
PENTICTON	118.32	26.0	18 33A	4						
BLUE MTS.	122.71	28.1	18 40	2					28 33	PKKP
MINERAL	123.69	34.6	17 43K	-57						
CALISTOGA	124.24	36.7	18 45A	4						
BERKELEY	124.93	37.2	18 47K	5						
LICK	125.65	37.3	18 47K	3						
PRIEST	127.03	37.8	18 52A	6						
EUREKA	127.37	31.6	18 51	4						
DUGWAY	128.40	28.6	18 53K	4						
PRICE	129.81	27.5	18 56	4						
PASADENA	129.87	38.0	18 57	5						
BREBEUF	129.94	351.0	18 56K	4					22 12	
BOULDER CITY	130.55	33.8	18 57	4					22 15	SKP
GOLDEN	132.05	22.8	18 59	3						
TUCSON	135.53	33.8	19 7	5					22 31	SKP
ALBUQUERQUE	135.61	27.3	18 57	-5					22 32	SKP
TULSA	138.64	15.2	19 4	-4					22 40	SKP
FAYETTEVILLE	138.86	13.3	18 51	-17					22 36	

WICHITA MTS.	138.92	19.1	19 1	-8	22 0 PP
SANTA LUCIA	148.38	200.7	19 29	4	
ANTIGUA	150.05	315.2	19 36	9	
SAN JUAN	151.96	323.0	19 36	6	19 58
TRINIDAD	153.66	303.8	19 39	6	20 0 PKP2
CARACAS	158.14	311.4	19 43A	4	
AREQUIPA	162.95	222.6	19 49	5	
HUANCAYO	168.68	224.7	19 55	7	

DECEMBER 13 4.H 21.M 22.S EPICENTRE 63.29-149.60 DEPTH= 48.KM

A=-0.38981 B=-0.22867 C= 0.89205 D=-0.5060 E= 0.8625
G=-0.7694 H=-0.4514 K=-0.4519 HT= -9.9

DEPTH OF FOCUS= 0.002R

SE= 1.91

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
COLLEGE	1.77	25.5	0 30	1	0 55	5		
YELLOW KNIFE	15.85	77.1	3 39	-2				
MOULD BAY	16.35	25.4	3 46	-1				
VICTORIA	20.61	123.6	4 42A	5				
PENTICTON	21.45	116.6	4 46	0				
RESOLUTE	21.66	36.0	4 47K	-1				
BANFF	21.75	107.9	4 48	-1				
LONGMIRE	22.69	123.8	4 59	1	9 8	10		
HUNGRY HORSE	24.53	110.8	5 11	-5				
BLUE MTS.	26.01	119.9	5 29A	-1	10 21	26		
ALERT	27.48	16.6	5 44	1				
BOZEMAN	27.89	110.9	5 47	0				
MINERAL	28.33	130.9	5 51A	0				
CALISTOGA	29.54	133.8	6 1K	-1				6 44
RENO	29.67	129.1	5 55A	-8				
TIKSI	29.87	321.0	6 3	-2				
BERKELEY-S.	30.34	133.9	6 9A	0				6 31
LICK	31.03	133.5	6 0A	-15				6 25
EUREKA	31.12	124.0	6 16	0				
SALT LAKE C.	31.61	117.5	6 20	0				
DUGWAY	31.71	119.2	6 22K	1				
PRIEST	32.44	133.1	6 28K	1				
PRICE	33.01	117.3	6 33	1				
NORD	33.17	11.3	6 34	0				
BOULDER CITY	34.63	125.5	6 46	0				
PASADENA	35.09	131.2	6 54	4				
ALBUQUERQUE	38.78	116.2	7 22	1				
MANHATTEN	39.40	102.0	7 27	1			7 32	
TUCSON TELE.	39.40	123.2	7 27	1				
TUCSON	39.44	123.4	7 27	0				
KIPAPA	42.23	191.7	7 49	-1				
WICHITA MTS.	42.27	107.8	7 50	0				9 42 PCP
HONOLULU	42.36	191.8	7 49	-2				
TULSA	42.48	104.0	7 51	-1				
ROLLA	42.55	98.6	7 52	0			7 58	
ST. LOUIS 1	42.69	96.3	7 53	0			7 59	
FAYETTEVILLE	43.03	102.3	7 54	-2				
BLOOMINGTON	43.92	92.4	8 3	0				
HAWAII V.OB.	44.00	187.7	8 2	-2				
SHAWINIGAN	44.23	74.5	8 6	0				
BREBEUF	44.67	76.1	8 9K	0				
MORGANTOWN	46.52	86.2	8 24K	0				
KEVO	47.21	1.6	8 29	-1				
WESTON	48.16	76.9	8 36	-1				
KIRUNA	48.98	5.0	8 43	0				
APATITY	49.44	358.5	8 47A	0				
SODANKYLA	49.61	1.9	8 48	0				
MATUSIRO	50.20	273.6	8 52A	-1				10 9
SKALSTUGAN	52.72	10.1	9 12	0				
ABUYAMA	52.78	274.7	9 11A	-1				
KAJAANI	52.92	1.5	9 12	-1				
UMEA	52.98	5.6	9 12	-2				
NURMIJARVI	56.45	3.4	9 38	-1				
HELSINKI	56.80	3.2	9 40	-1				
UPPSALA	56.80	7.7	9 40	-1				
PULKOVO	57.27	0.0	9 45K	0				
GOTEBORG	58.51	11.5	9 53K	0				

KARLSKRONA	60.33	9.5	10	8	2					
COPENHAGEN	60.55	11.6	10	7K	0					
MOSCOW	61.18	355.3	10	12	0					
HALLE	64.64	12.6	10	35	0				11	18 PCP
COLLMBERG	64.94	12.0	10	37	1					
JENA	65.17	13.0	10	39	1					
FOLINIERE	65.65	21.9	10	45	4					
PRUHONICE	66.39	11.1	10	46K	0					
KASPERSKE H.	67.14	11.9	10	50	0					
ALMATA	67.53	325.0	10	52A	-1					
UZHGOROD	68.25	5.8	10	57	0					
FRUNSE	68.53	326.5	11	0A	1					
SAN JUAN	70.84	87.2	11	12	-1					
DUZHANBE	73.97	329.6	11	31	-1					
ASHKABAD	76.66	337.6	11	48	1					
WARSAK DAM	77.65	326.0	11	51	-2					
SHILLONG	79.17	306.1	12	9A	8					
DEHRA DUN	79.35	319.4	12	6K	4					
NEW DELHI	81.23	319.6	12	10A	-2				12	54
CHITTAGONG	82.11	304.8	12	17	0	22 28	2		15	30 PP
QUETTA	82.42	328.7	12	18	0					
PORT MORESBY	86.79	241.9	12	39K	-1					
HUANCAYO	93.74	109.3	13	13	1					
CHARTERS TS.	96.85	238.4	13	26	-1					
BROKEN HILL	131.21	2.5	19	7	0					
WILKES	147.94	228.5	19	39K	2					

DECEMBER 13 14.H 57.M 24.S EPICENTRE 61.45-146.89 DEPTH= 30.KM

A=-0.40238 B=-0.26245 C= 0.87704 D=-0.5463 E= 0.8376
G=-0.7346 H=-0.4791 K=-0.4804 HT= -9.4

* SE= 2.76

	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	3.46	353.4	0	57	4	1	39	6				
SITKA	7.39	121.5	1	46	-2							
YELLOW KNIFE	15.12	71.9	3	30	-3							
MOULD BAY	17.53	21.6	4	4	1							
PENTICTON	19.50	116.1	4	28	1							
BANFF	20.00	106.7	4	33A	0							
LONGMIRE	20.61	124.1	4	39	0	8 36	13					
RESOLUTE	22.46	33.2	4	58	0							
HUNGRY HORSE	22.69	110.3	5	2	2							
BLUE MTS.	23.99	120.3	5	14A	1	9 26	2		5 29		12	18
BUTTE	25.10	112.2	5	23	0						13	14
BOZEMAN	26.05	110.8	5	34	2							
MINERAL	26.16	132.2	5	35A	2							
CALISTOGA	27.34	135.4	5	44K	0							
RENO	27.52	130.4	5	47A	1							
BERKELEY-S.	28.14	135.6	5	52A	1						12	30
LICK	28.83	135.2	5	58A	1							
ALERT	28.90	15.7	5	58	0							
EUREKA	29.03	125.0	6	0	1							
SALT LAKE C.	29.63	118.1	6	5	0							
PRIEST	30.25	134.8	6	12K	2							
TIKSI	32.11	323.6	6	25	-1							
BOULDER CITY	32.52	126.8	6	26	-4							
PASADENA	32.91	132.8	6	34	0							
ALBUQUERQUE	36.82	117.3	7	8	1						9	28 PCP
YAKUTSK	36.92	308.8	7	6K	-2							
TUCSON TELE.	37.32	124.5	7	13	2							
TUCSON	37.36	124.7	7	13	2							
KHEYS	37.47	353.5	7	14	2							
MANHATTEN	37.77	102.5	7	15	0							
SCHEFFERVLLE	40.27	61.9	7	35A	-1							
WICHITA MTS.	40.49	108.7	7	38	1						9	39 PCP
TULSA	40.79	104.8	7	40	0	14 24	35					
ROLLA	41.01	99.1	7	41	-1							
FLORISSANT	41.03	96.9	7	42	0							
ST. LOUIS 1	41.22	96.9	7	42	-1							
BLOOMINGTON	42.57	92.9	7	54	-1							
LITTLE ROCK	43.33	102.3	7	59	-2							
SHAWINIGAN	43.50	74.7	8	2	0							
BREBEUF	43.88	76.3	8	4	-1							

MORGANTOWN	45.37	86.8	8	17A	0					
KEVO	49.01	2.8	8	45	-1					
HALIFAX	49.15	69.7	8	46	-1					
KIRUNA	50.69	6.2	8	58	-1					
APATITY	51.30	359.8	9	3A	0					
SODANKYLA	51.39	3.2	9	3A	-1					
MATUSIRO	51.64	277.4	9	5K	-1					
ABUYAMA	54.24	278.4	9	24K	-1					
SKALSTUGAN	54.30	11.3	9	25	0					
UMEA	54.67	7.0	9	27	-1					
KAJAANI	54.72	2.9	9	28	-1					
KONGSBERG	57.87	13.8	9	51	0					
VIBORG	58.11	2.5	9	52	-1					
NURMIJARVI	58.19	4.9	9	53A	0					
UPPSALA	58.44	9.1	9	44	-11				10	3
HELSINKI	58.55	4.8	9	55	-1					
GOTEBORG	60.05	12.9	10	6	0					
SVERDLOVSK	60.10	343.0	10	5	-2					
KARLSKRONA	61.92	11.0	10	23	4					
MOSCOW	63.11	357.1	10	26	-1					
BENSBERG	66.04	17.6	10	58	12					
HALLE	66.14	14.3	10	46	0				10	58
COLLMBERG	66.46	13.6	10	48	0					
JENA	66.65	14.7	10	48	-2				11	15 PCP
PRUHONICE	67.93	12.8	10	58K	0				11	22
KRAKOW	68.35	9.1	11	11	11				11	15
STUTTGART	68.47	16.7	11	12	11					
KASPERSKE H.	68.66	13.6	11	2	0					
ALMATA-2	69.65	327.1	11	7	-1					
UZHGOROD	69.93	7.6	11	11	1					
FRUNSE	70.77	328.9	11	15K	0					
ROSELEND	71.09	19.3	11	18	1				11	36
SIMFEROPOL	73.95	359.3	11	41	7					
TIFLIS	76.75	351.0	11	50	0					
ASHKABAD	78.84	339.9	12	1	-1					
WARSAK DAM	79.89	328.4	12	4K	-3					
SHILLONG	81.29	308.6	12	23K	8					
LAHORE	81.48	325.3	12	14	-2				12	26
DEHRA DUN	81.58	321.9	12	19K	3					
CHATRA	81.85	313.0	12	18K	0					
TEHERAN	82.02	345.1	12	18	0					
NEW DELHI	83.46	322.0	12	24K	-2					
CHITTAGONG	84.22	307.3	12	30K	0	22	49 -2	12	53	15 49 PP
QUETTA	84.66	331.0	12	33	1					15 57 PP
PORT MORESBY	87.09	244.5	12	42K	-2					
CHARTERS TS.	97.01	240.5	13	29	-1					
BROKEN HILL	132.95	6.2	19	14	2					
KIMBERLEY	146.83	13.5	19	37	0					
MAWSON	165.91	231.4	21	1	60					

DECEMBER 13 22.H 45.M 29.S EPICENTRE 34.91 27.92 DEPTH= 45.KM

A= 0.72615 B= 0.38480 C= 0.56976 D= 0.4682 E=-0.8836
G= 0.5034 H= 0.2668 K=-0.8218 HT= 0.2

DEPTH OF FOCUS= 0.002R

SE= 2.96

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
ATHENS	4.56	313.2	1	5K	-4	1	57	-4			2	19 SG
ISTANBUL UN.	6.17	7.6	1	32	1	2	55	13				
ISTANBUL KA.	6.21	8.1	1	30	-2							
JERUSALEM	6.86	115.1	1	37K	-4	2	54	-5				
SOFIA	8.56	336.6	2	2	-3	3	35	-6			3	56 SSS
SKOPJE	8.68	326.1				4	16	-33			5	56
BUCHAREST	9.60	352.2									2	43
MESSINA	10.48	291.8				4	7	-20				
SIMFEROPOL	11.09	23.5	2	36	-3							
EREVAN	14.16	63.3	3	22	2							
BUDAPEST	14.21	334.7	3	16	-5						6	6
UZHGOROD	14.32	344.8	3	22	0							
TIFLIS	14.88	57.8	3	34	5	6	30	17				
LJUBLJANA	15.06	321.6	3	32	0							
LWOW	15.17	350.3	3	41	8							
GORIS	15.36	67.3	3	36	0	6	39	14				

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KRAKOW	16.22	341.3	3 43	-4		3 54	4 12	PPP
MAKHACH-KALA	17.20	56.3	4 1	2				
KASPERSKE H.	17.71	327.7	4 1	-4			4 32	
PRUHONICE	17.96	331.0	4 6	-2			7 34	
PRAGUE	18.07	331.0	4 13	3				
CHUR	18.26	316.3	4 11	-1				
RAVENSBURG	18.75	318.8	4 19	1				
TEHERAN	19.16	80.8	4 22	-1	7 59 8			
ROSELEND	19.42	310.1	4 28	2	8 1 4			
STUTTGART	19.54	320.8	4 25	-2				
COLLMBERG	19.60	331.2	4 26	-2			6 9	
JENA	19.91	328.5	4 31	0	8 16 9		11 31	
HALLE	20.18	330.1	4 38	4			4 50	PP
STRASBOURG	20.23	318.6	4 38	4			4 59	
BESANCON	20.54	313.5	4 37	0				
WELSCHBRUCH	20.92	316.7	4 39	-2				
SHIRAZ	21.43	97.3	4 47	0	8 55 18			
CLERMONT-FD.	21.71	307.5	4 49	0				
MOSCOW	21.86	14.8	4 48	-3	8 51 6			
BENSBERG	21.97	323.2	4 58	6				
GARCHY	22.33	311.1	4 52	-3				
KARLSKRONA	22.87	342.1	5 3	2				
PARIS	23.34	314.2	5 5	0				
ASHKABAD	24.62	74.0	5 16	-2				
PULKOVO	24.92	2.9	5 21	0	9 45 7			
FOLINIERE	25.11	312.1	5 20	-2				
NURMIJARVI	25.70	356.3	5 26	-2	9 57 6			
VIBORG	25.83	1.0	5 26	-3				
UPPSALA	25.84	348.1	5 26	-3	9 59 5			
MALAGA	26.21	283.4			10 11 11			
KONGSBERG	27.49	339.8	5 42	-3				
SKALSTUGAN	30.28	346.2	6 5	-4				
SVERDLOVSK	31.12	35.1	6 14	-3				
BANGUI	31.58	197.9	6 22	1		6 31		
SODANKYLA	32.51	359.1	6 26	-3				
QUETTA	33.09	87.1	6 34	0				
KIRUNA	33.24	354.8	6 32	-3				
WARSAK DAM	35.78	78.7	6 55	-2				
ALMATA	38.49	62.4	7 21	1				
LAHORE	38.70	81.5	7 22	0				
SEMIPALATNSK	40.61	51.1	7 42	5				
NEW DELHI	42.04	84.5	7 49A	0				
CHATRA	50.86	81.9	8 59A	0				
CALCUTTA	53.72	86.2					19 26	
SHILLONG	55.21	81.1	9 39A	8				
KIMBERLEY	63.39	183.1	10 28	0				
YAKUTSK	64.97	30.6	10 34A	-4				
MOULD BAY	67.19	351.9	10 49	-3				
COLLEGE	80.49	358.2	12 8	-1				
BLUE MTS.	94.57	336.0	13 16	-1		13 28	14 15	

DECEMBER 14 16.H 52.M 45.S EPICENTRE 50.45 90.75 DEPTH= 0.KM

A=-0.00832 B= 0.63925 C= 0.76896 D= 0.9999 E= 0.0130
G=-0.0100 H= 0.7689 K=-0.6393 HT= -5.6

SE= 1.58

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
SEMIPALATNSK	6.71	273.6	1 43	1				2 4	
IRKUTSK	8.69	72.7	1 36	-34				2 36	
KABANSK	10.10	74.8	2 29	0				3 12	
ALMATA-2	11.63	237.0	2 48	-2					
PRZHEVALSK	11.65	231.6	2 54K	3				4 28	
ALMATA	11.85	238.0	2 57	4				5 35	
ANDIJAN	16.07	239.9	3 48A	-1				8 31	
PAOTOW	16.69	118.9	4 1	4					
LANCHOW	17.22	141.7	4 1	-3					
TASHKENT	17.46	246.7	4 10A	3				7 33	SS
GARM	18.43	239.4	4 17A	-2					
SVERDLOVSK	18.85	301.4	4 23A	-1					
DUZHANBE	19.58	241.1	4 30A	-2					
SAMARKAND	19.86	246.3	4 34	-2					
PEKING	20.61	110.6	4 43	0					
LHASA	20.79	179.3	4 45	0					

SIAN	20.94	133.7	4 47	0					
WARSAK DAM	21.63	227.8	4 52A	-2					
CHENGTU	22.12	148.3	4 59	0					
DEHRA DUN	22.25	210.1	5 0K	0				9 2	
LAHORE	22.49	219.1	5 1	-1					
CHATRA	23.74	188.0	5 15A	0					
NEW DELHI	24.14	210.2	5 17A	-2					
SHILLONG	24.86	177.6	5 25K	0					
ASHKABAD	26.15	254.0	5 37	-1					
KIZYL-ARVAT	26.68	258.4	5 44	1				16 50	PPP
KUNMING	26.94	155.4	5 44	-1					
QUETTA	26.98	230.4	5 45	0	10 21	-1	5 53	6 29	PP
TIKSI	27.28	25.3	5 47	-1				14 10	
CHITTAGONG	28.05	177.9	5 43	-12					
MOSCOW	31.66	300.5	6 26	-1				7 49	PPP
KHEYS	32.13	350.4	6 32A	1					
TIFLIS	32.58	272.5	6 36	1					
GORIS	32.81	267.9	6 37	0					
HONG KONG	33.55	138.2						17 7	SCS
BOMBAY	34.57	210.9						18 24	
PULKOVO	34.62	309.2						15 3	SSS
KAJAANI	35.10	317.1	6 56	-1					
SODANKYLA	35.21	322.9	6 58	0					
SHIRAZ	35.35	248.6	6 59A	0					
HELSINKI	37.15	311.0	7 17	3					
NURMIJARVI	37.21	311.6	7 14	-1				8 42	PP
KIRUNA	37.52	324.1	7 17	0					
UMEA	38.39	317.7	7 24	-1					
UPPSALA	40.75	312.3	7 43K	-1					
KARLSKRONA	43.20	307.8	8 6	2					
JERUSALEM	44.67	267.1	8 17	1					
BUDAPEST	45.49	295.4						22 31	
PRUHONICE	46.71	300.5	8 32	0				10 0	
COLLMBERG	46.87	302.8	8 33	-1				11 7	PPP
SCORESBY SD.	50.11	336.2	8 58	-1					
MOULD BAY	52.12	8.7	9 13	-1					
COLLEGE	56.43	25.9	9 46	0					
BANGUI	75.29	258.9	11 47	0					
PENTICTON	77.26	19.8	12 2	4					
LONGMIRE	79.18	22.1						24 23	PP
CHILEKA	81.96	233.5	12 26	3					
BLUE MTS.	82.00	19.7	12 23	0					
SHAWINIGAN	82.34	348.6	12 25	0					
BROKEN HILL	84.41	239.5	12 36	0					
CHARTERS TS.	85.55	129.0	12 41	0					
EUREKA	87.42	20.4	12 52	1					
BULAWAYO	88.99	236.2	12 56	-2					
ALBUQUERQUE	93.62	14.1	13 20	1					
WICHITA MTS.	94.80	7.7	13 25	0					

DECEMBER 17 11.H 0.M 20.S EPICENTRE 2.08 122.99 DEPTH= 433.KM

A=-0.54409 B= 0.83825 C= 0.03612 D= 0.8388 E= 0.5444
G=-0.0197 H= 0.0303 K=-0.9993 HT= 7.2

DEPTH OF FOCUS= 0.063R

SE= 2.52

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
MANILA	12.65	351.5	2	48	0	5	8	5				
BAGUIO CITY	14.44	350.7	3	5	-2	5	34	-4				
DARWIN	16.35	151.7	3	25	-1	6	12	-2				
NHATRANG	16.96	307.1	3	31	-2							
DJAKARTA	18.10	242.9	3	42K	-2	6	36	-9				
TANGERANG	18.27	243.2	3	44	-2	6	48	0				
HENGCHUN	19.92	353.9	4	5	3							
TAWU	20.25	354.4	3	59	-6							
TAITUNG	20.62	355.2	4	11	3	7	40	11				
HSINKONG	20.95	355.8	4	12	1							
ALISHAN	21.41	354.5	4	14	-2							
HWALIEN	21.80	356.6	4	23	4	8	0	11				
HONG KONG	21.85	337.6	4	19A	-1	7	50	1			6	13 *SP
ISIGAKIZIMA	22.14	2.9				7	55	1				
TAIPEI	22.86	356.6	4	30	1							
CANTON	22.88	336.6	4	30A	1							

PORT MORESBY	26.64	115.7	5	1	-2					5	8			
ZO-SE	28.91	356.8	5	24A	1	9	44	2						
RABAUL	29.82	102.1	5	22	-9									
NANKING	30.08	352.9	5	34A	1	10	3	3						
KUNMING	30.09	321.3	5	35A	2	10	7	6						
KAGOSIMA	30.18	12.9	5	47	13							6	52	
NAGASAKI	31.17	11.3	5	42A	-1	10	16	-1						
SAGA	31.75	11.7	5	59	11									
ASHIZURI	31.89	16.1	5	49	0	10	29	0						
OOITA	32.02	13.7	5	48	-2									
KOTI	32.82	16.4	5	57	0	10	43	0						
HIROSIMA	33.31	14.3	6	0	-1									
CHENGTU	33.63	329.6	6	3A	-1	10	55	0						
OSAKA	34.45	18.5	6	10	0	11	30	22						
MUNDARING	34.47	190.2	6	9	-2	11	6	-2						
PERTH	34.52	190.8	6	23	12	11	10	1				14	14	SS
SIAN	34.59	339.2	6	13A	1									
HATIDYOZIMA	34.65	25.3										11	8	
ABUYAMA	34.66	18.4	6	11	-1	11	10	-1						
KYOTO	34.85	18.5										11	13	
KAMEYAMA	34.93	19.6	6	15	0	11	15	0						
HIKONE	35.25	19.0	6	18	1	11	19	-1						
HAMAMATU	35.25	21.3	6	17	0	11	21	1						
OMAESAKI	35.33	22.0	6	18	0									
NAGOYA	35.39	20.0	6	19A	1	11	21	-1						
GIHU	35.54	19.6	6	20	0	11	22	-2						
SHIZUOKA	35.73	22.0	6	21	0							12	27	
HUKUI	35.95	18.4										11	29	
IIDA	36.01	20.8	6	23	-1									
AJIRO	36.06	22.8	6	22	-2	11	28	-4						
MISIMA	36.07	22.5	6	22	-2	11	28	-4						
HUNATU	36.33	22.0	6	27	1	11	33	-3						
CHITTAGONG	36.37	306.1	6	27A	0	11	37	0	7	44		8	6	PP
KOHU	36.41	21.6	6	27	0	11	36	-1						
TOCKLAI	36.53	314.7	6	31	3									
YOKOHAMA	36.61	23.1	6	37	8									
MATUMOTO	36.72	20.5	6	30	1									
TOKYO C.M.O.	36.87	23.0										11	39	
OIWAKE	36.99	21.1	6	31	-1	11	42	-4						
MATUSIRO	37.06	20.5	6	31A	-1	11	43	-4						
KUMAGAYA	37.14	22.2	6	32K	-1	11	45	-3						
NAGANO	37.17	20.4	6	33	0	11	47	-2						
MAEBASI	37.24	21.7	6	31	-3									
TUKUBASAN	37.48	23.0	6	32A	-4	11	44	-9				15	12	SS
KAKIOKA	37.52	23.1	6	28	-8									
UTUNOMIYA	37.68	22.5	6	34	-3	11	48	-8						
MITO	37.76	23.3	6	37K	-1	11	51	-7						
SHILLONG	37.98	310.7	6	41A	1	12	2	1						
LANCHOW	38.17	334.5	6	43A	2	12	5	1				16	5	SCS
PEKING	38.27	351.5	6	42A	0	12	5	0						
SHIRAKAWA	38.31	22.5	6	43	0	12	3	-3						
ONAHAMA	38.43	23.4	6	44A	1	12	6	-1						
HONIARA	38.56	107.9										15	3	
HUKUSIMA	38.96	22.3	6	48	0	12	5	-10						
CALCUTTA	39.27	303.9	6	54	4	12	28	8				8	54	
YAMAGATA	39.35	21.7	6	51	0	12	21	0						
SENDAI	39.58	22.3	6	53	0	12	23	-1						
ADELAIDE	39.70	159.6	6	53	-1	12	27	1				15	32	SS
ISINOMAKI	39.88	22.7	6	55	0	12	26	-3						
PAOTOW	40.08	344.6	6	56A	-1									
MIZUSAWA	40.42	21.9	6	58	-2	12	32	-5						
LHASA	40.89	315.3	7	6A	2	12	47	4				16	21	SCS
MORIOKA	40.93	21.6	6	34	-30	12	45	1						
BRISBANE	41.01	137.7	7	6	1	12	47	2						
CHANGCHUN	41.62	2.5	7	7A	-2									
AOMORI	41.78	20.4	7	11	0									
HATINOHE	41.79	21.3	7	11	0									
VISHAKHAPTNM	41.93	294.4	7	18A	6	13	10	12				8	10	PPP
ROKARO	41.96	304.1	7	12	0	13	1	2				8	38	PP
CHATRA	42.24	308.9	7	15A	1	13	11	8						
URAKAWA	43.66	21.4	7	26	0									
MADRAS	43.72	286.6	7	26K	0	13	24	0				9	20	PPP
SAPPORO	43.98	19.4	7	28	0									
CANBERRA	44.47	149.2	7	32K	0	13	38	3				9	8	PCP
OBIHIRO	44.49	21.2	7	33	1									
RIVERVIEW	44.49	145.9	7	34	2	13	42	7	8	53		16	47	SCS
TOOLANGI	44.63	154.3	7	34K	1	13	40	3	8	52		9	24	PP
KUSIRO	44.98	22.3	7	36A	0									
NEMURO	45.74	23.0	7	43	1	13	52	0						

KOUMAC	46.29	121.2	7	47K	1					9	7
HYDERABAD	46.31	292.2	7	46A	0	14	2	2		16	52 SS
ULAN-BATOR	47.73	345.4	7	57A	0						
Y.-SAKHLINSK	47.94	18.1	7	58	-1						
PORT VILA	48.80	115.7	8	6K	1						
NOUMEA	48.84	122.2	8	6	0					9	42
TARRALEAH	49.02	157.0	8	7	0					9	24
SEHORE	49.15	299.1	8	7	-1	14	41	1			
MOORLANDS	49.42	156.4	8	10	0						
ESEN BULAK	49.93	336.0	8	15A	1						
POONA	50.82	292.2	8	18A	-2	15	1	-1			
NEW DELHI	50.94	305.7	8	19A	-2	15	2	-2		10	21
DEHRA DUN	50.96	308.2	8	20A	-1	15	4	0		15	45
BOMBAY	51.85	292.4	8	26	-2	15	15	1		10	31 PP
IRKUTSK	52.39	345.6	8	31A	-1	15	24	1		10	34 PP
LAHORE	54.38	308.0	8	44A	-2	15	49	-1	10 12	18	27 *SS
WARSAK DAM	57.48	309.6	9	7A	-1	16	33	3			
PETROPAVLOVK	58.72	24.3	9	16A	0	16	48	2			
KHOROG	58.85	313.4	9	18A	1	16	53	5			
FRUNSE	59.14	320.2	9	19A	0	16	57	5	10 38		
QUETTA	59.90	303.9	9	23	-1	17	2	1	11 3	11	30 PP
SEMIPALATNSK	60.17	330.0	9	24A	-2						
MAGADAN	61.23	15.7	9	33	0	17	20	2			
TASHKENT	62.01	316.6	9	38A	0	17	31	3			
KARAPIRO	62.72	135.1	9	43	0				11 11		
CHATEAU	63.29	136.3	9	47	1				10 17		
MACQUARIE I.	63.74	157.5	9	49	0						
WELLINGTON	63.75	138.7	9	48	-1	17	41	-8	11 17	19	1
AFIAMALU	66.55	106.0	10	10A	3						
WILKES	68.85	185.4	10	20	-1	18	49	0	11 46	19	38
ASHKABAD	68.87	310.0	10	22A	1	18	52	2		23	34 SS
TIKSI	69.55	2.0	10	23A	-2	18	56	-1	11 58	13	3 PP
MIRNY	71.74	192.2	10	36	-2	19	23	1			
SHIRAZ	72.02	300.4	10	39A	-1	19	14	-11		38	17 PKPPKP
SVERDLOVSK	73.44	329.5	10	47K	-1						
TEHERAN	73.88	306.5	10	52	2	19	50	4			
TANANARIVE	76.92	250.2	11	10	3				12 42		
GORIS	78.39	309.8	11	15A	0						
HONOLULU	78.92	68.8	11	22	4						
KIPAPA	78.99	68.7	11	21	3						
TIFLIS	79.80	311.9	11	24	1	20	52	3		14	31 PP
MAWSON	80.94	199.7	11	28K	-1	21	2	2	13 4	11	40 PCP
HAWAII V.OB.	81.52	70.8	11	34	2						
MOSCOW	85.67	325.6	11	51A	-1	21	47	0		15	17 PP
KSARA	86.45	303.6	11	56A	0	22	3	9			
JERUSALEM	87.01	301.6	12	0	1						
COLLEGE	87.78	25.3	12	1	-1				13 48	15	37 PP
APATITY	87.92	337.4	12	1A	-2	22	9	1		21	52 SKS
CHILEKA	88.64	254.4	12	12	6						
PULKOVO	89.56	329.6	12	9A	-2	22	22	0		21	54 SKS
KEVO	90.13	339.7	12	12	-1					15	54 PP
KAJAANI	90.46	334.0	12	13	-2	22	2	-28	13 54	15	47 PP
SODANKYLA	90.55	337.4	12	14K	-1					15	59 PP
SOUTH POLE	92.07	180.0	12	24	2					22	12
HELSINKI	92.20	330.3	12	22	-1						
NURMIJARVI	92.31	330.7	12	23K	0	22	44	-2		16	2 PP
KIRUNA	92.81	338.2	12	24	-2					16	16 PP
TROMSOE	92.93	340.1	12	18	-8						
UMEA	93.75	334.3	12	29	-1					16	19 PP
LWOW	94.20	320.1	12	31	-1					16	27 PP
MOULD BAY	94.37	12.3	12	32A	-1						
BROKEN HILL	94.89	255.8	12	36K	1						
ALERT	95.47	0.7	12	37	-1						
UPPSALA	95.88	330.7	12	39	-1					16	39 PP
KRAKOW	96.77	320.8	12	44	0					16	48 PP
SKALSTUGAN	97.23	335.1	12	44	-2						
RACIBORZ	97.86	321.0	12	48	-1					16	49 PP
BRATISLAVA	98.99	319.3	12	53	-1					17	7 PPP
VIENNA-H.	99.45	319.5	12	54	-2					16	59 PP
RESOLUTE	100.07	9.5	12	57	-1						
PRUHONICE	100.16	321.5	12	58	-1					17	9 PP
COLLMBERG	100.74	323.1	13	2K	1					17	16
KASPERSKE H.	101.00	320.9	13	2	-1					16	21 PP
LJUBLJANA	101.22	317.7	13	1	-3					17	13 PP
HALLE	101.31	323.5								17	21
JENA	101.70	323.0	13	5	-1					17	23 PP
HERMANUS	102.52	235.3				23	13	7		25	56
MUNSTER	103.68	324.9								17	25
STUTTGART	103.81	321.4	13	14	-1					17	49 PP

VICTORIA	103.82	38.9	13	17	2					
BENSBERG	104.32	324.0						17	46	PP
STRASBOURG	104.82	321.6						17	48	
LONGMIRE	105.45	40.2						14	23	PP
PENTICTON	105.88	37.2	13	26	777					
DOURBES	106.16	323.9						17	58	PP
BESANCON	106.42	320.7	17	54	777			18	28	
ROSELEND	106.57	319.1	17	21	777			18	4	
MINERAL	107.73	46.4	17	39A	777					
GARCHY	108.23	321.6	17	54	777			18	32	
LICK	108.63	49.5	17	41K	777					
CLERMONT-FD.	108.82	320.1	18	5	777					
BLUE MTS.	109.08	40.8	17	40A	777			18	23	PP
BUTTE	111.59	38.2	13	52	-231			18	27	PP
EUREKA	112.08	45.7	13	54	-230			18	35	PP
CHINA LAKE	112.20	49.9	17	47	2			18	36	
BOZEMAN	112.69	38.0	17	48	2			18	38	PP
DUGWAY	114.02	43.9	17	51A	3					
BOULDER CITY	114.24	48.8	17	53	4			18	49	
SALT LAKE C.	114.43	43.0	17	52	3			18	53	PP
TUCSON	118.73	51.3	18	0	3			19	22	PP
TUCSON TELE.	118.78	51.1	18	0	3			19	22	PP
ALBUQUERQUE	120.87	46.7	18	4	2			19	34	PP
SCHEFFERVLLE	122.72	6.7	18	6	1					
LUBBOCK	124.87	45.8	18	12	3			27	58	
MANHATTEN	125.16	37.3	18	10	0					
WICHITA MTS.	126.54	42.9	18	14	2	19	59	20	11	PP
TULSA	127.69	40.0	18	16	1	20	3	20	22	PP
FAYETTEVILLE	128.59	38.8	18	28	12	20	37			
ROLLA	128.78	35.5	18	20	3					
FLORISSANT	129.03	33.6	18	18	1					
ST. LOUIS 1	129.22	33.6	18	19	1					
SHAWINIGAN	129.62	14.1	18	20	2					
LONDON ONT.	130.08	23.1	18	20	1			21	4	
BREBEUF	130.38	15.3	18	21K	1	20	2	21	5	SKP
LITTLE ROCK	130.58	38.8	18	7	-13					
BLOOMINGTON	130.79	30.3	18	24	3					
MORGANTOWN	133.46	24.5						21	17	SKP
PALISADES	134.43	17.9	18	24	-3			18	33	PKP2
SAN SALVADOR	144.45	62.9	18	47	1					
SANTA LUCIA	146.30	159.2	18	53	4					
HUANCAYO	159.32	119.5	19	13	6					
CHINCHINA	160.13	69.3	19	15	7			20	0	PKP2
BOGOTA	161.70	68.6	19	13	4			24	42	
CARACAS	164.07	38.1	19	14	2			23	47	PP
TRINIDAD	166.62	19.0	19	18	4					

DECEMBER 17 17.H 25.M 36.S EPICENTRE 37.97 106.25 DEPTH= 0.KM

A=-0.22121 B= 0.75874 C= 0.61268 D= 0.9600 E= 0.2799
G=-0.1715 H= 0.5882 K=-0.7903 HT= -0.9

SE= 2.55

	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	
LANCHOW	2.73	226.1	0	48K	2	1	22	2			0	51	PG
PAOTOW	3.92	47.2	1	2	-1						1	16	PG
SIAN	4.29	149.0	1	10A	2	2	4	4			1	27	PG
CHENGTU	7.52	194.9	1	55	1	3	21	0					
PEKING	7.99	72.0									2	28	PG
NANKING	11.84	116.1	2	52	-1								
KUNMING	13.16	194.1	3	10	-1								
ZO-SE	14.08	114.7	3	24	1								
IRKUTSK	14.36	355.2	3	27K	0								
LHASA	15.12	241.2	3	35	-2								
CHANGCHUN	15.54	61.9	3	41	-1								
CANTON	16.03	155.7				6	56	9					
HONG KONG	17.04	154.2	4	2	1	7	16	5					
SHILLONG	17.36	228.7	4	3A	-2	7	22	4					
TAIPEI	18.29	130.5									9	40	
TAICHUNG	18.47	134.1									9	53	
HWALIEN	19.16	132.4	4	37	9						10	46	
CHATRA	19.53	240.9	4	31A	-1	8	16	9					
CHITTAGONG	19.90	222.7	4	35	-1	8	11	-4			4	54	PP
VLADIVOSTOK	20.12	67.1	4	44A	5	8	27	7					

SEMIPALATNSK	22.28	312.3	5 1	1							
BOKARO	22.44	237.0	5 1	-1	9 6	1			12 21		
ABUYAMA	23.75	88.5	5 15A	0							
FRUNSE	24.49	291.4	5 22A	0					9 52		
DEHRA DUN	24.49	260.3	5 30	8	9 44	3					
MATUSIRO	25.41	83.3	5 29	-2	10 6	10					
NEW DELHI	25.95	257.5	5 34K	-2							
LAHORE	26.91	265.9	5 44	-1							
KHOROG	27.38	279.8	5 52	3							
WARSAK DAM	28.26	272.6	5 57	0							
TASHKENT	28.53	288.5	6 1K	1							
QUETTA	33.28	268.4	6 41	0	11 57	-5	6 48		7 50	PP	
POONA	34.25	244.6	6 49K	-1							
ROMRAY	34.75	246.2							12 23		
SVERDLOVSK	35.35	317.2	6 58	-1							
TIKSI	35.67	12.1	7 0	-2					8 18	PP	
ASHKABAD	37.43	285.2	7 16	-1					15 54	SSS	
TEHERAN	43.42	284.6	8 26	20							
SHIRAZ	44.89	276.0							10 18		
KHEYS	46.31	350.3	8 32A	3					10 22	PP	
APATITY	49.06	330.9	8 51	0							
KEVO	51.27	334.0	9 6	-2							
PULKOVO	51.27	321.0	9 8	0					16 35	PS	
SODANKYLA	51.68	331.0	9 10	-1					11 14	PP	
KAJAANI	51.73	326.7	9 20	9							
HELSINKI	53.81	322.2	9 26	-1							
NURMIJARVI	53.87	322.7	9 25A	-2							
KIRUNA	53.94	332.1	9 29A	1							
TROMSOE	54.07	334.4	9 26	-3							
DARWIN	55.13	150.3	9 37	0							
JERUSALEM	57.33	286.9	9 53	1							
UPPSALA	57.42	323.2	9 51A	-2							
KRAKOW	59.93	312.0	10 12	2							
PORT MORESBY	60.65	132.2	10 14K	-1							
MOULD BAY	62.46	11.1	10 27	-1							
COLLEGE	62.52	27.6	10 27	-1					11 16	PCP	
PRUHONICE	63.08	313.6	10 30	-2					11 49		
COLLMBERG	63.34	315.5	10 31A	-2					10 54	PP	
HALLE	63.82	316.0	10 37	0							
KASPERSKE H.	64.04	313.1	10 37	-1					11 4		
JENA	64.30	315.6	10 38	-2					12 49	PP	
STUTTGART	66.68	314.3	10 55	0							
RESOLUTE	66.76	6.0	10 55	0							
CHARTERS TS.	68.91	139.6	11 9	0							
CANBERRA	82.99	146.0	12 29	0							
TOOLANGI	83.43	149.6	12 36	5							
CHILEKA	85.42	246.2	12 47	6							
BANGUI	85.47	272.0	12 41	0					12 45	PCP	
BLUE MTS.	88.67	29.4	12 57	0					16 25	PP	
BROKEN HILL	89.42	251.2	13 1	1							
EUREKA	93.73	31.4	13 21	1							
WICHITA MTS.	104.09	20.9							18 30	PP	
SOUTH POLE	127.78	180.0	19 13	5							

DECEMBER 18 2.H 54.M 45.S EPICENTRE 21.68 143.15 DEPTH= 285.KM

A=-0.74422 B= 0.55786 C= 0.36733 D= 0.5998 E= 0.8002
G=-0.2939 H= 0.2203 K=-0.9301 HT= 4.3

DEPTH OF FOCUS= 0.040R

SE= 2.08

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
GUAM	8.32	169.2	1 59	1	3 35	4		
TUKUBASAN	14.73	350.3	3 16K	-1				5 51
ABUYAMA	14.73	334.8	3 17K	0				
MATUSIRO	15.41	344.9	3 23A	-2	6 4	-4		
MIZUSAWA	17.48	354.8	3 48	1	6 57	8		
ZO-SE	21.76	300.1	4 30	0				
VLADIVOSTOK	23.35	338.9	4 45K	0	8 37	3		
Y.-SAKHLINSK	25.28	359.3	5 1A	-1				
HONG KONG	26.86	276.8	5 26	9				
PORT MORESBY	31.14	172.3	5 53A	-1				8 42
PETROPAVLOVK	33.47	17.0	6 15K	1				
DARWIN	35.94	200.8	6 34	-1	12 14	22		

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LANCHOW	37.03	301.5	6 45A	1				
CHARTERS TS.	41.63	175.6	7 22A	0			12 37	
SHILLONG	46.91	285.2	8 4A	0				
LHASA	47.31	290.8	8 9	2				
BRISBANE	49.67	168.7	8 25	0			9 43	
CHATRA	50.95	287.5	8 34A	-1			9 47	
AFIAMALU	56.63	124.6	9 16K	0				
CANBERRA	56.96	174.3	9 17A	-1	10 29		10 9	PCP
ALMATA-2	58.02	308.3	9 26K	1				
TOOLANGI	58.98	177.8	9 32A	0			10 18	PCP
MUNDARING	59.26	206.6	9 33	-1				
NEW DELHI	59.45	291.2	9 33A	-2				
COLLEGE	61.69	26.9	9 49	-1	10 57			
TARRALEAH	63.73	177.3	10 4	1				
MOORLANDS	63.91	176.7	10 4	-1				
KARAPIRO	66.66	152.5	10 22A	0				
CHATEAU	67.73	153.3	10 29K	0				
QUETTA	67.92	294.8	10 30A	0			11 42	
KHEYS	67.95	349.8	10 30	0				
SVERDLOVSK	68.07	324.0	10 31	0				
WELLINGTON	69.18	155.0	10 36	-1				
MOULD BAY	70.89	84.6	10 47K	-1				
ALERT	75.31	3.4	11 13K	-1				
VICTORIA	76.27	43.1	11 19	0				
RESOLUTE	77.10	13.4	11 23K	-1				
APATITY	77.37	338.3	11 24K	-1				
LONGMIRE	77.85	44.5	11 28A	0				
KEVO	78.36	341.4	11 30	0				
PENTICTON	78.40	41.5	11 31	0				
SODANKYLA	79.75	339.4	11 37K	-1		12 44		
CALISTOGA	79.97	52.5	11 39K	0				
SHIRAZ	80.10	297.9	11 40A	0				
MINERAL	80.11	50.6	11 40K	0			12 43	
BERKELEY	80.47	53.1	11 43K	1				
TROMSOE	80.74	342.9	11 44	1				
LICK	81.11	53.5	11 56K	11			12 51	
KAJAANI	81.12	336.3	11 44A	-1		12 52		
KIROVOBAD	81.12	310.1	11 45	0				
KIRUNA	81.43	341.2	11 46K	-1		12 52		
BLUE MTS.	81.46	45.2	11 47K	0	21 41	8	12 51	
RENO	81.68	50.9	11 49A	1				
PRIEST	82.27	54.3	11 52K	1				
VIBORG	82.45	333.1	11 56	4				
UMEA	83.97	338.0	11 58K	-1	13 5			
BUTTE	84.06	42.8	12 1	1	13 14			
NURMIJARVI	84.28	334.1	12 1A	0				
HELSINKI	84.34	333.7	12 1A	0				
EUREKA	84.45	49.8	12 3	1				
PASADENA	84.91	55.4	12 4	0				
BOZEMAN	85.17	42.6	12 2	-3			15 25	PP
DUGWAY	86.37	48.1	12 12K	1				
BOULDER CITY	86.69	52.6	12 14	1			15 5	PP
SKALSTUGAN	86.77	340.2	12 11	-2				
SALT LAKE C.	86.79	47.3	12 14	1				
UPPSALA	87.46	335.7	12 15	-1				
GOTEBORG	91.08	336.2	12 32	-1				
WICHITA MTS.	98.89	47.3	13 9	0			17 6	PP
AREBEUF	105.24	25.9	19 1	777				
SOUTH POLE	111.55	180.0	18 1	1				
LWIRO	113.42	277.2	18 7K	3				
BULAWAYO	119.25	258.4	18 17A	2				
BANGUI	119.85	288.7					18 2	
N-LAZARVSKYA	123.37	197.3	18 23	0				
CARACAS	136.47	45.7					21 53	PP
HUANCAYO	142.05	81.7	18 56	-3				
SANTA LUCIA	147.98	118.7	19 13	5				

DECEMBER 18 10.H 33.M 59.S EPICENTRE -28.49-178.12 DEPTH= 223.KM

A=-0.87980 B=-0.02890 C=-0.47446 D=-0.0328 E= 0.9995
G= 0.4742 H= 0.0156 K=-0.8803 HT= 2.3

DEPTH OF FOCUS= 0.030R

SE= 2.19

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
RAOUL ISLAND	0.78	167.2	0 32	0				
SUVA	10.76	342.2			4 36	9		
KARAPIRO	10.81	207.8	2 41	11				
CHATEAU	11.91	204.6	2 42	-2	4 55	2		
WELLINGTON	14.03	202.6	3 8	-2	5 33	-8		
NOUMEA	15.24	290.4	3 27K	2	6 19	11		
AFIAMALU	15.65	23.4	3 23	-7	6 0	-17		
PORT VILA	16.42	307.8	3 39	0	6 40	6		
KOUMAC	17.84	292.3	3 55K	0	7 15	11		
RIVERVIEW	26.78	250.8	5 23A	2				11 18 SS
HONIARA	28.00	308.3						6 17
CANBERRA	28.64	247.8	5 39	1				12 25 SSS
TOOLANGI	31.67	243.9	6 5	1			6 43	7 27 PP
CHARTERS TS.	33.43	276.5	6 19	-1	11 23	-1		
ADELAIDE	37.06	248.8	6 51K	1			7 41	15 25
PORT MORESBY	37.74	293.3	6 55	-1				
DARWIN	50.08	277.8	8 34	0				
HAWAII V.OB.	52.51	27.5	8 51	-1				
HONOLULU	53.13	23.5	8 55	-2				
KIPAPA	53.27	23.5					9 44	
MUNDARING	56.07	249.0	9 16	-2				
BYRD STATION	56.83	169.8	9 25	2				
SOUTH POLE	61.68	180.0	9 57	1				
MIRNY	63.79	206.5	10 10	0				
ARGENTINE I.	73.71	156.3	11 12	1				
MAWSON	74.06	200.4	11 13A	0			11 59	
TANGERANG	74.13	271.6	11 12A	-2				
MATUSIRO	76.61	325.1	11 26A	-2	20 50	-4		
N-LAZARVSKYA	80.77	183.3	11 46	-4				
HONG KONG	82.52	300.2	12 0	1				
ZO-SE	82.78	311.1	12 0	0				
Y.-SAKHLINSK	83.05	334.2	12 0	-2				
PRIEST	83.99	43.3	12 7	1				12 58
BERKELEY	84.21	41.2	12 9K	1				13 0
LICK	84.21	41.9	12 8A	0				13 1
PASADENA	84.23	46.2	12 7	-1			12 59	
CALISTOGA	84.55	40.4	12 9A	0				13 1
NANKING	84.98	310.5	12 12A	1			13 5	
MINERAL	86.26	39.7	12 17A	-1				13 10
RENO	86.75	41.2	12 21K	1				
BOULDER CITY	87.51	46.5	12 25	1			13 17	
SANTA LUCIA	87.76	127.0	12 26	1				
TUCSON	87.94	51.5	12 27	1			13 20	12 50
CHANGCHUN	88.65	322.8	12 28A	-1	22 57	3	13 21	
EUREKA	88.98	43.2	12 31	1			13 23	
LONGMIRE	90.50	34.9	12 37	-1			13 30	
VICTORIA	90.93	32.9	12 40	0				
DUGWAY	91.34	44.1	12 41A	0				
PEKING	91.49	315.6	12 42	0	23 25	6		22 53 SKS
BLUE MTS.	91.61	38.4	12 42A	-1	23 5	-15	13 35	17 8 PPP
SALT LAKE C.	92.27	44.1	12 46	0			13 37	
ALBUQUERQUE	92.47	51.3	12 47	0			13 39	
KUNMING	92.86	297.0	12 51	2			13 43	
PENTICTON	93.31	34.0	12 50	-1				
CHENGTU	94.67	302.3	12 58A	1			13 54	
BUTTE	94.96	39.5					13 51	
GOLDEN	95.76	47.8	13 2	0				13 55
COLLEGE	96.00	12.5	13 1	-2			13 56	
LARAMIE	96.49	46.3	13 6	1				
WICHITA MTS.	97.89	54.9	13 10	-1	23 31	5	14 6	15 4
MOULD BAY	110.57	12.6	18 5	-1				
RESOLUTE	115.45	17.0	18 14K	-1				
KIMBERLEY	119.01	203.0	18 25A	3				
ALMATA-2	119.02	306.0	18 22K	0				
ALERT	121.38	8.0	18 25	-2				
QUETTA	123.96	288.8	18 33	1				
BULAWAYO	125.19	211.1	18 36A	2				
BROKEN HILL	130.16	214.6	18 47K	3				
SVERDLOVSK	130.34	321.9	18 43	-1				
ASHKABAD	132.45	296.7	18 48	0				
TEHERAN	137.81	292.9	18 59	1				
SODANKYLA	138.32	345.9	18 53	-6				
KIRUNA	139.09	349.4	19 1	1				
LWIRO	139.98	224.7	19 0	-2				22 1
KAJAANI	140.75	342.4	18 57	-6				
KIROVOBAD	141.82	300.5	19 0	-5				

MOSCOW	142.69	327.0	19	7	0							
UMEA	142.73	346.7	19	6	-1							
TIFLIS	142.86	302.4	19	5	-2							
VIBORG	143.04	338.3	19	3K	-4						22	18 PP
SKALSTUGAN	144.26	352.1	19	6	-4						20	24 *SPKP
NURMIJARVI	144.48	340.7	19	8A	-2	20	3				20	33
HELSINKI	144.66	340.2	19	10A	0							
UPPSALA	146.85	345.5	19	15A	1	20	9				20	32 *SPKP
GOTEBORG	149.95	349.2	19	23A	4							
KSARA	150.51	289.0	19	24	5							
KARLSKRONA	150.66	344.3	19	23A	3	20	17					
JERUSALEM	151.04	284.8	19	29	9							
RANGUI	151.23	216.6	19	22	2	20	11					
KRAKOW	154.46	332.4	19	34	9							
COLLMBERG	155.72	342.9	19	28	1						19	54
HALLE	155.80	344.5	19	37	10							
PRUHONICE	156.46	339.2	19	28	0						19	52
STUTTGART	158.96	346.3	19	32	1							
GARCHY	161.21	357.5	19	24	-9						20	18

DECEMBER 19 12.H 56.M 22.S EPICENTRE -4.81 153.84 DEPTH= 112.KM

A=-0.89446 B= 0.43933 C=-0.08323 D= 0.4409 E= 0.8976
G= 0.0747 H=-0.0367 K=-0.9965 HT= 7.0

DEPTH OF FOCUS= 0.013R

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	
RABAUL	1.77	289.8	0	29	-2								
HONIARA	7.60	127.5	1	52	2	3	26	11					
PORT MORESBY	8.06	235.1	1	55K	-1	3	25	-1					
CHARTERS TS.	16.89	205.3	3	52	1	7	2	9					
KOUMAC	18.66	148.0	4	11	0								
GUAM	20.27	333.6	4	31	3						9	15	
NOUMEA	21.25	146.1	4	25	-13								
BRISBANE	22.48	182.5	4	52	2	8	44	-1					
DARWIN	23.95	250.2	5	6	1	9	21	11					
RIVERVIEW	28.99	184.6	5	50A	-1	10	37	5			6	41	
CANBERRA	30.69	187.8	6	5A	-1	11	3	4	6	30	8	26	PPP
TOOLANGI	33.49	192.1	6	30	0						7	44	PP
AFIAMALU	35.06	107.4				12	8	1					
MANILA	37.81	301.3	7	7	0								
TARRALEAH	37.91	188.9	7	9	1								
MOORLANDS	37.94	188.0	7	9	1								
BAGUIO CITY	39.07	303.4	7	18	1	13	10	2					
CHATEAU	39.48	153.1	7	21	0						7	42	
WELLINGTON	40.87	155.7				13	44	9					
ROXBURGH	42.71	163.9				14	38	36			17	38	SS
MATUSIRO	43.65	341.7	7	54	-1								
MUNDARING	44.39	227.9	8	0	-1	14	22	-4					
PERTH	44.66	228.1	8	8	5	14	50	20			10	28	PPP
TANGERANG	47.00	266.1	8	20K	-1								
HONG KONG	47.24	306.4	8	24	1	15	12	5					
ZO-SE	47.40	321.0	8	25	0	15	10	1	9	4			
CANTON	48.29	306.8	8	33	1	15	26	4					
NANKING	49.56	320.1	8	42A	1	15	44	5	9	21			
MACQUARIE I.	49.72	176.1	8	41	-1								
CHANGCHUN	54.82	335.0	9	19	-1	16	49	-2					
PEKING	56.47	325.7	9	31	-1	17	14	1					
SIAN	57.46	316.1	9	39A	0	17	27	1					
PETROPAVLOVK	57.75	3.4	9	41	0	17	29	-1					
KUNMING	57.85	303.6	9	44	2								
CHENGTU	59.22	310.0	9	52	0								
PAOTOW	60.41	322.7	9	59	-1				10	39			
LANCHOW	61.95	315.3	10	11A	1	18	29	6	10	52			
DUMONT	62.50	186.2	10	12	-2	19	15	45					
CHITTAGONG	66.34	296.8	10	39	0	19	21	3			13	10	PP
SHILLONG	67.22	300.2	10	43	-1								
WILKES	68.36	197.3	10	44	-7	19	44	2					
LHASA	69.17	304.1	10	58A	2	19	56	5					
YAKUTSK	69.17	348.1	10	52	-4								
CHATRA	71.62	300.2	11	32A	21								
DEHRA DUN	80.23	301.7	11	59A	0						12	28	
NEW DELHI	80.63	299.9	12	1A	-1								

COLLEGE	81.48	21.6	12	4	-2				12	31		
POONA	82.07	289.4	12	9A	0						12	38
BOMBAY	83.08	289.6	12	13	-1	22	27	4			23	8 PS
BYRD STATION	84.71	169.9	12	24	2							
SOUTH POLE	85.23	180.0	12	24	-1							
FRUNSE	85.37	313.5	12	27	1							
MAWSON	85.96	202.6	12	28A	-1				12	52		
WARSAK DAM	86.29	304.4	12	30	0							
ANDIJAN	86.67	311.2	12	33A	1	23	5	7				
BERKELEY	88.11	51.9	13	0A	21	23	2	-9			29	20
QUETTA	89.70	300.2	12	47	1	23	28	2	13	16		
PASADENA	91.00	56.0	13	20	27							
BLUE MTS.	92.54	45.4	13	0	0	23	28	-23	13	27	25	20 PS
EUREKA	93.17	50.8	13	5	3							
MOULD BAY	93.88	13.9	13	5	-1				13	35		
WICHITA MTS.	107.16	55.3				24	48	15			18	34 PP
TULSA	109.28	53.7				24	38	-4			25	48 SKKS
PALISADES	124.16	42.6									21	5 PP
LJUBLJANA	125.88	325.9	19	24	35							
STUTTGART	126.84	331.4	19	40	50							
RANGUI	135.37	271.4	18	52	-15						22	17 SKP
CARACAS	139.23	79.6									22	43

DECEMBER 20 8.H 47.M 27.S EPICENTRE -23.15 179.25 DEPTH= 543.KM

A=-0.92037 B= 0.01198 C=-0.39086 D= 0.0130 E= 0.9999
G= 0.3908 H=-0.0051 K=-0.9204 HT= 3.9

DEPTH OF FOCUS= 0.080R

SE= 2.91

	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	5.03	351.0	1	33	3	2	46	4				
RAOUL ISLAND	6.59	157.9	1	43	-2	3	5	-3				
AFIAMALU	12.51	44.3	2	43A	-1	4	55	-1				
ONERAHI	13.27	197.6	2	51	-1	5	13	3				
KARAPIRO	15.08	191.4	3	8	-2	5	48	5				
CHATEAU	16.31	190.3	3	18	-4	6	3	-2				
WELLINGTON	18.47	190.7	3	38	-5	6	35	-7				
BRISBANE	24.29	254.5	4	33K	-3						6	52
CANBERRA	28.94	238.4	5	14	-3	9	28	-2	6	45		
CHARTERS TS.	30.79	269.3	5	31A	-2	9	55	-4				
TOOLANGI	32.29	235.8	5	43A	-3	10	16	-6			8	15 *SP
PORT MORESBY	33.61	288.7	5	56K	-1						11	15
DUMONT	50.02	199.2	7	1	-65							
MUNDARING	55.90	246.2	8	45	-3							
WILKES	60.50	205.6	9	14	-5							
BYRD STATION	62.47	170.1	9	29	-3							
MATUSIRO	70.89	326.0	10	23	-1							
MAWSON	78.21	200.5	11	2K	-3							
ARGENTINE I.	79.53	157.5	11	20	8							
CHINA LAKE	83.67	46.8	11	33	0						13	38
TUCSON	86.54	52.9	11	46	0							
EUREKA	86.79	44.5	11	48	0							
BLUE MTS.	88.96	39.5	11	58	0						29	31 PKKP
PENTICTON	90.27	35.0	12	4	0							
COLLEGE	91.35	13.4	12	6	-3				14	5		
WICHITA MTS.	96.78	55.3									16	36 PP
FAYETTEVILLE	100.63	55.3									13	25
MOULD BAY	105.90	12.6	17	21	777							
QUETTA	119.87	292.5	17	49	0							
BULAWAYO	128.32	216.0	18	5	0							
SODANKYLA	132.59	346.0									20	50 SKP
BROKEN HILL	132.95	220.2									20	51
TEHERAN	133.39	297.9									20	53
KIRUNA	133.42	349.1									20	52 SKP
KAJAANI	134.97	342.8	18	17	0						20	57 SKP
UMEA	137.01	346.5	18	22	1						21	3 SKP
SKALSTUGAN	138.65	351.2									21	18 SKP
NURMIJARVI	138.68	341.2	18	18	-6						21	8 SKP
HELSINKI	138.86	340.7									21	9 SKP
LWIRO	141.71	232.7	18	27A	-4							
GOTEBORG	144.27	348.3	18	33	-2						21	21 SKP
KARLSKRONA	144.90	344.1	18	31	-5							
LWOW	147.05	330.1	18	41	2						20	53

RACIBORZ	149.30	335.8	18 44	2					20 57	PP	
COLLMBERG	149.95	342.7	18 49K	6							
HALLE	150.04	344.0	18 49	6							
PRUHONICE	150.65	339.7	18 51K	7			20 57				
JENA	150.66	344.0	18 44	0					21 3	PP	
BENSBERG	151.56	349.5							21 5	SKP	
DOURBES	152.77	352.5							21 10	PP	
STUTTGART	153.22	345.2	18 48	0							
BANGUI	153.58	228.0	18 47	-1					19 11		

DECEMBER 21 0.H 44.M 20.S EPICENTRE -9.19 112.38 DEPTH= 66.KM

A=-0.37596 B= 0.91294 C=-0.15870 D= 0.9247 E= 0.3808
G= 0.0604 H=-0.1467 K=-0.9873 HT= 6.6

DEPTH OF FOCUS= 0.005R

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	
DJAKARTA	6.26	298.1	1	32A	0	2	37	-6					
TANGERANG	6.44	297.4	1	34	0	2	51	4					
DARWIN	18.40	101.6	4	11	0	7	18	-13					
PERTH	22.87	172.4	4	59	1	9	4	5			5	24	PP
MUNDARING	22.94	171.6	4	58	-1	8	58	-2					
MANILA	25.23	20.1	5	42	21	9	44	5					
BAGUIO CITY	26.71	17.7	5	38	3	10	0	-3					
PORT BLAIR	28.49	316.3	5	48K	-3	10	27	-5			6	34	PP
HONG KONG	31.34	3.2	6	16	0	11	14	-3	6	36	7	16	PP
CANTON	32.10	1.7	6	22	-1	11	31	2			6	43	*SP
PORT MORESBY	34.30	93.2	6	42A	0	12	4	1					
KUNMING	35.37	344.8	6	53K	2	12	27	7			7	12	*SP
CHITTAGONG	37.28	327.5	7	8	1	12	51	2	7	28	8	41	PP
MADRAS	38.85	304.1	7	21K	1	13	15	2			8	54	PP
VISHAKHAPTNM	39.25	312.9	7	23K	0	13	19	0			9	21	PPP
CALCUTTA	39.34	323.6	7	26	2	13	23	3					
KODAIKANAL	39.74	298.2	7	50	23	14	6	40			14	50	
SHILLONG	39.91	330.4	7	29K	0	13	29	0			8	53	PP
CHENGTU	40.43	348.8	7	33	0	13	40	4			7	53	*SP
ZO-SE	40.94	11.5	7	36K	-1	13	44	0			7	57	*SP
TOOLANGI	41.11	138.7	7	40K	1	13	52	6			9	51	PPP
NANKING	41.47	8.2	7	44K	2	13	57	5			8	2	*SP
BOKARO	41.86	322.1	7	48	3	13	59	1			9	46	PCP
BRISBANE	42.17	120.9	7	50K	3	13	39	-23					
CANBERRA	42.32	133.6	7	49	0	14	2	-2	8	6	9	30	PP
HYDERABAD	42.71	308.2	7	54K	2	14	10	0			17	8	SS
RIVERVIEW	43.22	130.4	7	57K	1	14	18	1	8	13	9	48	PP
LHASA	43.74	332.7	8	2	2	14	29	4			8	22	*SP
LANCHOW	45.71	350.3	8	17K	1	14	58	5			8	36	*SP
HONIARA	46.91	94.3	8	25K	0						16	15	
POONA	46.95	306.0	8	25K	-1	15	12	1			18	35	SS
BOMBAY	47.97	305.7	8	33	-1	15	24	-1			10	19	PP
ABUYAMA	49.01	25.4	8	41K	-1								
PEKING	49.10	3.8	8	43	1	15	44	3			9	1	*SP
PAOTOW	49.57	357.6	8	46	0	15	52	4			9	5	*SP
NEW DELHI	50.64	319.0	8	51K	-3	15	56	-7			19	30	SS
KOUMAC	51.22	108.9	8	58K	-1								
MATUSIRO	51.56	26.6	8	59K	-2	16	12	-3					
TUKURASAN	52.16	28.4	9	3K	-3	16	16	-7			11	52	PPP
NOUMEA	53.38	110.9	9	17K	2								
CHANGCHUN	54.06	11.5	9	18	-2	16	48	-1			9	37	*SP
LAHORE	54.47	319.7	9	19	-4	16	52	-3					
PORT VILA	54.89	105.2	9	27K	1								
MIZUSAWA	55.00	27.2	9	30	3	17	4	2					
VLADIVOSTOK	55.02	17.4	9	25K	-2	17	3	1			9	45	
ULAN-BATOR	57.07	355.6	9	41K	0								
WILKES	57.08	180.9	9	39	-2	17	27	-2	9	52	21	6	SS
ESEN BULAK	57.19	346.8	9	42K	0								
WARSAK DAM	57.84	320.1	9	44K	-3	17	35	-4					
QUETTA	58.63	313.7	9	50K	-2	17	48	-2	10	12	12	1	PP
KHOROG	60.13	323.1	10	2	-1	18	8	-1					
DUMONT	60.40	167.7	10	2	-2	18	11	-2					
ROXBURGH	60.54	137.4				18	18	4			19	7	
IRKUTSK	61.61	354.4	10	12K	-1	18	25	-3			20	1	SCS
Y.-SAKHLINSK	62.14	23.0	10	15A	-1								

FRUNSE	62.18	329.4	10	16K	0	18	39	4				
KARAPIRO	63.28	127.8	10	26A	2						19	47
WELLINGTON	63.31	131.6	10	23	-1						10	45 PCP
TANANARIVE	63.34	253.5	10	26K	2							
CHATEAU	63.49	129.2	10	25	0							
TASHKENT	63.98	325.1	10	27K	-1	18	56	-2			20	19 SCS
SEMIPALATNSK	65.60	338.1	10	37K	-2	19	18	1				
MAWSON	66.90	198.5	10	44K	-3							
ASHKABAD	68.82	316.7	10	58	-1	19	57	1			13	28 PP
SHIRAZ	69.30	306.4	11	1K	-1	19	52	-10			39	11 PKPPKP
CAPE HALLETT	71.83	164.2	11	17	0							
YAKUTSK	72.27	8.5	11	18K	-2							
TEHERAN	72.71	311.8	11	22	0	20	45	4				
PETROPAVLOVK	73.39	27.1	11	26	0							
AFIAMALU	74.19	101.9	11	35A	4							
GORIS	77.90	313.7	11	53K	1	21	40	2			14	49 PP
SVERDLOVSK	78.26	333.8	11	53A	-1	21	42	0				
TIFLIS	79.82	315.3	12	3	1	22	1	2			12	25
TIKSI	81.39	5.2	12	11K	0	22	13	-2				
GRAHAMSTOWN	81.54	237.6	12	13A	1							
LWIRO	83.31	268.8	12	22K	1	22	43	8				
KIMBERLEY	83.56	242.0	12	22K	0							
KSARA	84.03	305.5	12	24K	0	22	51	9	12	44	15	35 PP
JERUSALEM	84.05	303.4	12	29	5							
BYRD STATION	87.13	172.1	12	41	1							
HERMANUS	87.45	235.7				23	11	-4			23	39
SIMFEROPOL	88.23	315.9	12	46K	1	23	27	5			23	8 SKS
MOSCOW	89.08	326.9	12	49K	0						24	22 PS
ISTANBUL KA.	90.97	311.3	12	58	0							
ISTANBUL UN.	91.02	311.3	12	58A	0	23	53	6				
KHEYS	93.56	352.3	13	9A	-1						17	20 PP
PULKOVO	93.89	329.8	13	12	1	23	45	-27				
APATITY	94.24	337.8	13	13A	0	24	15	0			23	44 SKS
BANGUI	94.40	273.7	13	14	1						17	0 PP
ATHENS	94.53	307.6									23	28
KAJAANI	95.87	333.9	13	20	0							
BANDEIRA	96.31	253.8	13	22K	0				13	40		
HELSINKI	96.61	329.8	13	23	0							
SODANKYLA	96.78	337.1	13	22	-2				17	18		
NURMIJARVI	96.81	330.1	13	24	0						17	25 PP
KEVO	96.95	339.5	13	23	-2	23	56	1			26	0 PS
KRAKOW	98.54	319.4	13	33	1				13	48		
UMEA	99.13	333.3	13	35	0	24	58	52			32	17 SS
KIRUNA	99.18	337.4	13	34K	-1							
UPPSALA	100.27	329.3	13	40K	0	24	14	2			17	54 PP
BRATISLAVA	100.30	317.4									17	45
PRUHONICE	102.01	319.2				24	27	7			18	0 PP
COLLEGE	102.43	25.5	13	51	1							
SKALSTUGAN	102.67	333.2	13	51	0							
COLLMBERG	102.98	320.5									14	11
ROME	103.44	310.9									17	14
JENA	103.89	320.2	17	47	231						21	43 PP
FLORENCE X.	104.33	312.8									17	14
NORD	104.39	353.2	13	58	0							
STUTTGART	105.49	318.0	14	12	777						18	23 PP
STRASBOURG	106.50	317.9	18	34	777							
MOULD BAY	107.49	11.4	14	11	777							
ROSELEND	107.52	315.0	18	30	777						19	0
GARCHY	109.79	316.9	18	57	777							
PARIS	109.95	318.6	18	28	777							
FOLINIERE	111.89	318.9	18	0	-27							
RESOLUTE	112.72	7.6	18	30A	1							
TOLEDO	116.08	309.9	18	38	3	25	53	34			19	44 PP
GRANADA	116.17	306.9									19	30 PP
MALAGA	116.87	306.5	15	3	-214						19	49 PP
YELLOW KNIFE	116.95	22.4	18	37	0							
VICTORIA	119.18	39.0	18	44	3							
LONGMIRE	120.83	40.5	18	47	3						29	57 PS
PENTICTON	121.18	37.1	18	48A	3							
BANFF	122.67	33.7	18	49	1							
CALISTOGA	122.86	49.8	18	51K	3							
MINERAL	123.10	47.6	18	51A	2						19	44
BERKELEY	123.31	50.6	18	52K	3						20	32
LICK	123.93	51.0	18	44	-6							
BLUE MTS.	124.46	41.1	18	54A	3	26	13	26			20	42 PP
RENO	124.66	48.0	18	51K	-1							
PRIEST	125.01	52.2	18	56K	3							
BUTTE	126.92	38.0	18	58	2							
EUREKA	127.47	46.8	18	59	2						32	1 SKKP

PASADENA	127.51	53.8	19	1	4				20	40
BOZEMAN	128.02	37.7	19	2	4					
DUGWAY	129.42	44.7	19	5K	4					
BOULDER CITY	129.55	50.5	19	6	5	19	28		21	14 PP
SALT LAKE C.	129.83	43.6	19	5	3					
M.BOUR	130.23	281.0	19	5	2				21	19 PP
PRICE	131.06	44.5	19	7	3					
TUCSON	133.95	53.7	19	14	4				19	54
TUCSON TELE.	134.00	53.5	18	57	-13	19	15			
SCHEFFERVLLE	134.49	359.3	19	14	3					
ALBUQUERQUE	136.24	48.1	19	4	-10	19	19		22	49 SKP
LUBBOCK	140.25	47.3	19	18	-3					
MANHATTEN	140.46	36.2	19	14	-7					
DUBUQUE	141.13	27.5	19	26	3					
WICHITA MTS.	141.93	43.4	19	22	-2				22	29 PP
SHAWINIGAN	142.51	5.8	19	26	1					
TULSA	143.06	39.6	19	26	0				22	32 PP
OTTAWA	143.25	9.6	19	26	U					
BREBEUF	143.46	7.1	19	27A	0				22	24 PP
FAYETTFVILLE	143.93	38.0	19	27K	-1					
ROLLA	144.00	33.6	19	27	-1					
FLORISSANT	144.14	31.1	19	27	-1					
DALLAS	144.23	44.6	19	28	0					
LONDON ONT.	144.25	17.1	19	28A	0					
ST. LOUIS 1	144.34	31.1	19	29	1					
HALIFAX	144.53	355.1	19	30A	1					
ANTOFAGASTA	147.20	175.3	19	38	5					
PENNSYLVANIA	147.23	14.5	19	37K	4					
PALISADES	147.82	9.0	19	38	4	20	1		20	27 PKP2
AREQUIPA	154.23	171.4	19	49	5					
HUANCAYO	157.55	159.9	19	54	6					
BALBOA HTS.	168.20	90.2	20	0	2					
SAN JUAN	170.75	351.1	20	4	4				25	14 PP
CHINCHINA	171.02	117.3	20	7K	7				25	16 PP
BOGOTA	172.15	124.9	20	5K	4				25	20 PP
GALERAZAMBA	172.30	77.5	20	11	10					
CARACAS	178.53	332.5	20	5K	3				21	54 PKP2

DECEMBER 21 6.H 27.M 44.S EPICENTRE 52.58-168.71 DEPTH= 0.KM

A=-0.59840 B=-0.11949 C= 0.79223 D=-0.1958 E= 0.9806
G=-0.7769 H=-0.1551 K=-0.6102 HT= -6.4

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
COLLEGE	16.30	32.9	3	52	0							
SITKA	19.62	63.6	4	34	1							
YELLOW KNIFE	29.80	49.2	6	11	0							
MOULD BAY	30.19	21.2	6	14	U							
PENTICTON	30.62	76.1	6	20	2							
TIKSI	32.76	328.7	6	37A	U							
YAKUTSK	33.32	311.0	6	42	U							
UKIAH	33.83	95.0	6	49	3							
MINERAL	34.07	91.9	6	49A	1							
BLUE MTS.	34.14	82.1	6	49K	0	12	16	1			8	23 PP
CALISTOGA	34.53	95.1	6	52A	0							
BERKELEY	35.21	95.9	6	59K	1	12	40	8			7	21
RENO	35.66	91.6	7	54K	52							
LICK	35.93	96.0	6	54A	-10							
RESOLUTE	36.01	25.7	7	4	-1							
BUTTE	36.38	77.3	7	9	1							
PRIEST	37.31	96.7	7	16A	0							
BOZEMAN	37.46	76.9	7	18	1							
EUREKA	38.04	88.6	7	23	1							
DUGWAY	39.52	85.3	7	34K	U							
SALT LAKE C.	39.76	83.9	7	37	1							
MATUSIRO	40.11	268.1	7	39A	0						16	32
PASADENA	40.15	96.8	7	40	1						8	5
ALERT	40.29	11.3	7	41	0							
BOULDER CITY	40.96	91.9	7	47	1						8	10
PRICE	41.10	84.6	7	48K	1							
THULE	41.95	20.3	7	54	U							
ABUYAMA	42.82	268.3	8	3A	2							
CHANGCHUN	43.41	285.9	8	5A	-1							

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GOLDEN	44.33	80.6	8	13	-1	14	48	0				
KHEYS	44.53	350.2	8	15	0							
NORD	45.22	5.6	8	19	-2							
TUCSON	45.92	92.6	8	27	1							
TUCSON TELE.	45.93	92.4	8	27	1							
ALBUQUERQUE	46.75	86.5	8	32	-1						10	24 PP
MANHATTEN	49.89	75.2	8	55	-2							
PEKING	51.11	287.6	9	7	0							
DUBUQUE	51.17	68.2	9	7	0							
ULAN-BATOR	51.22	300.8	9	6	-1							
WICHITA MTS.	51.67	80.9	9	8	-3	16	29	-3			20	9 SS
TULSA	52.55	77.8	9	16	-1	16	40	-4				
FAYETTEVILLE	53.38	76.6	9	22A	-2							
ROLLA	53.50	73.4	9	21	-3							
FLORISSANT	53.79	71.5	9	24	-3							
ST. LOUIS 1	53.98	71.6	9	27	-1							
DALLAS	54.05	81.3	9	28	-1							
ZO-SE	54.18	275.8	9	29A	0	17	8	2				
PAOTOW	54.27	292.0	9	31A	1							
NANKING	54.96	278.4	9	33	-2	17	18	2				
SCHEFFERVLLE	55.03	43.7	9	36	0							
BLOOMINGTON	55.74	68.7	9	38	-3							
LONDON ONT.	56.08	62.0	9	42	-1							
OTTAWA	57.33	56.7	9	50	-2							
KEVO	57.43	353.6	9	51	-2						21	56 SS
ESEN RULAK	57.67	305.3	9	55	0							
TROMSOE	57.97	356.9	9	56	-1							
SHAWINIGAN	58.01	54.0	9	56	-1							
BREBEUF	58.32	55.4	9	58A	-1				10	9		
APATITY	59.04	350.3	10	4	0	18	1	-9				
PENNSYLVANIA	59.41	61.9	10	6A	-1							
KIRUNA	59.72	356.0	10	8	-1							
SODANKYLA	59.82	353.2	10	9	-1							
LANCHOW	60.92	292.1	10	16A	-1							
PALISADES	61.36	59.2	10	20	0	18	39	-1				
KAJAANI	62.98	352.0	10	30	-1							
SVERDLOVSK	63.69	332.3	10	35	-1							
UMEA	63.73	355.6	10	34	-2							
SKALSTUGAN	64.18	359.5	10	38A	-1							
CHENGTU	64.73	287.9	10	42A	0	19	25	3				
CANTON	64.77	275.4	10	43A	0	19	26	3				
HONG KONG	64.86	274.2	10	45	2							
VIBORG	66.18	350.7	10	51A	-1							
NURMIJARVI	66.75	352.8	10	55K	0	19	47	0				
PULKOVO	66.96	349.7	10	57	0	19	46	-3				
HELSINKI	67.07	352.6	10	56K	-1							
UPPSALA	67.81	356.5	11	1	-1							
KONGSBERG	68.12	0.9	11	5	1							
ALMATA	69.06	314.6	11	9K	-1							
KUNMING	69.61	284.8	11	13A	0	20	23	2				
MOSCOW	69.88	344.5	11	14	-1							
GOTERORG	70.08	359.6	11	16A	0							
FRUNSE	70.42	315.8	11	19A	1							
KARLSKRONA	71.57	357.5	11	26	1							
PORT MORESBY	72.33	226.2	11	28	-2	20	48	-5				
ANDIJAN	73.09	316.0	11	35A	1							
TASHKENT	73.89	318.3	11	35	-4							
SHILLONG	75.53	293.0	11	46A	-2							
COLLMBERG	76.48	358.9	11	54A	0							
BENSBERG	76.78	2.7	11	57K	2							
LWOW	77.41	351.6	12	0	1							
KRAKOW	77.48	354.3	12	0	1						12	18 PCP
DOURBES	77.54	4.4	12	2	3							
PRUHONICE	77.78	357.8	12	3K	2						12	30
CHITTAGONG	78.07	291.1	12	2	0	21	55	-1			14	18 PP
FOLINIERE	78.53	7.9	12	7	2							
KASPERSKE H.	78.65	358.5	12	6	1						13	14
UZHGOROD	78.73	352.6	12	9	3							
STUTTGART	79.01	1.4	12	9	2							
WARSAK DAM	79.08	312.7	12	8	0							
STRASBOURG	79.17	2.4	12	10	2							
VIENNA-H.	79.45	356.6	12	11	1						12	23 PCP
BRATISLAVA	79.51	356.0	12	12	2						12	28 PCP
GARCHY	80.27	5.7	12	15	1							
BESANCON	80.44	3.7	12	16	1							
SIMFEROPOL	80.88	343.8	12	16	-1							
NEW DELHI	80.91	305.6	12	16A	-2						16	8
ASHKABAD	81.00	324.1	12	18	0							

VANNOVSKAYA	81.08	324.3	12	16	-3						
TIFLIS	81.70	335.3	12	18	-4						
CLERMONT-FD.	81.78	5.8	12	25	3						
ROSELEND	82.03	3.3	12	26	3					12	58
KIROVOBAD	82.30	333.8	12	25A	0						
DARWIN	82.81	239.0	12	29	1						
SAN JUAN	82.99	69.0	12	29	1						
GORIS	83.38	333.4	12	32A	2						
MONACO	84.01	2.8	12	36	2						
BAGNERES	84.24	8.2	12	32	-3						
QUETTA	84.37	314.1	12	36A	1	23	1	0	12 47	15	49 PP
TEHERAN	85.36	328.3	12	42	2						
ISTANBUL UN.	85.50	346.7	12	44	3						
TOLEDO	86.96	11.8	12	50	2						
CARACAS	88.80	74.4	12	57A	0					29	46 SS
GRANADA	89.67	11.8	13	51A	50						
SHIRAZ	90.55	325.0	13	6A	1						
POONA	90.95	302.6	13	8K	1						
BOMBAY	91.17	303.7	13	8	0	24	13	8		24	3 SCS
BANGUI	122.91	351.3	18	59	1					20	32
LWIRO	127.76	337.7	19	12A	4						
SOUTH POLE	142.39	180.0	19	29	-6						
MAWSON	151.29	218.7	19	55K	6				20 3		
KIMBERLEY	154.18	332.0								20	55

DECEMBER 21 8.H 42.M 43.S EPICENTRE 52.47-168.54 DEPTH= 0.KM

A=-0.59961 B=-0.12152 C= 0.79101 D=-0.1986 E= 0.9801
G=-0.7753 H=-0.1571 K=-0.6118 HT= -6.3

SE= 2.18

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
COLLEGE	16.34	32.5	3	52	-1								
SITKA	19.59	63.3	4	33	0	8	21	13					
PETROPAVLOVK	19.78	284.7	4	35K	0	8	2	-11			6	25	
VICTORIA	28.61	79.7	6	0	0								
YELLOW KNIFE	29.79	49.1	6	10	-1								
MOULD BAY	30.26	21.1	6	14A	-1								
LONGMIRE	30.38	81.9	6	17	1	11	17	0					
PENTICTON	30.55	76.1	6	18	0								
UGLEGORSK	30.93	283.8	6	22K	1						10	26	
NEMURO	31.61	271.8	6	24	-3								
KIPAPA	32.04	161.3	6	30	-1								
HONOLULU	32.14	161.5	6	30	-2	11	35	-9					
BANFF	32.18	70.7	6	32	0								
KUSIRO	32.52	272.1	6	33K	-2	12	2	12					
TIKSI	32.91	328.8	6	37	-1						8	3	PPP
OBIHIRO	33.29	272.9	6	41	-1								
ASAHIGAWA	33.32	274.9	6	41	-1								
UKIAH	33.72	95.0	6	46	1	12	14	5			7	51	PP
MINERAL	33.97	91.9	6	48A	0						7	11	
BLUE MTS.	34.06	82.0	6	49	1	12	11	-3			8	1	PP
SAPPORO	34.33	274.5	6	49	-2	12	27	9					
CALISTOGA	34.42	95.1	6	52A	1								
HAWAII V.OP.	34.56	157.5	6	51	-2	12	43	21					
BERKELEY	35.10	95.9	6	57A	0	12	34	4					
MORI	35.36	273.7	6	56	-3								
HAKODATE	35.41	273.1	7	1	1								
RENO	35.55	91.5	7	1K	0								
HATINOHE	35.68	270.8	7	1	-1								
MIYAKO	35.95	269.2									7	29	
AOMORI	35.97	271.8	7	4	-1								
RESOLUTE	36.06	25.7	7	4	-1								
BUTTE	36.30	77.3	7	9	2						9	38	PCP
MORIOKA	36.41	269.9	7	9	1	12	47	-3					
MIZUSAWA	36.78	269.2	7	13	2								
PRIEST	37.20	96.7	7	15A	0								
BOZEMAN	37.39	76.9	7	18	1								
SENDAI	37.45	268.3	7	16	-1								
YAMAGATA	37.80	268.7	7	20	0								
EUREKA	37.94	88.6	7	22	1								
ONAHAMA	38.30	266.6	7	26	2								
UTUNOMIYA	39.18	267.0	7	32	0								
TUKUBASAN	39.26	266.4	7	32A	0	13	38	4			8	45	PP

SALT LAKE C.	39.67	83.9	7	37	1	13	37	-3	9	22 PP
KUMAGAYA	39.74	266.9	7	38	2					
MAEBASI	39.77	267.5	7	22	-15					
TOKYO C.M.O.	39.83	266.1	7	52	15	14	10	28		
VLADIVOSTOK	40.03	281.0	7	36A	-3	13	37	-8		
PASADENA	40.04	96.8	7	46	7	13	55	10		
YOKOHAMA	40.05	265.9	6	47	-52					
NAGANO	40.13	268.5	7	42	3	13	50	3		
OIWAKE	40.13	267.8	7	41	1	13	43	-4		
MATUSIRO	40.21	268.4	7	39A	-1	13	45	-3		
ALERT	40.38	11.3	7	42	0	13	59	8		
MATUMOTO	40.54	268.2	7	45	2					
KOHU	40.56	267.1	7	55	12					
MISIMA	40.69	266.1	7	48	4					
BOULDER CITY	40.86	91.9	7	44	-1	13	58	0	9	29 PP
IIDA	41.11	267.5	7	47	-1					
SHIZUOKA	41.12	266.4	7	48	0	14	14	12		
GIHU	41.83	268.2	7	53	0					
NAGOYA	41.86	267.8	7	52	-2					
THULE	42.02	20.3	7	54	-1					
HIKONE	42.24	268.5							8	25
KAMEYAMA	42.38	267.9							8	22
KYOTO	42.72	268.6	8	4	3	14	38	13		
ABUYAMA	42.92	268.6	8	2A	0	14	44	16		
OSAKA	43.09	268.4	8	3	-1	14	53	22	25	33
CHANGCHUN	43.54	286.1	8	6A	-1				8	16 *SP
SUMOTO	43.68	268.6	8	9	0					
SIOMISAKI	43.75	266.9	8	5	-4	14	48	8		
YONAGO	43.91	271.0	8	12	2					
TAKAMATU	44.22	269.2	8	14	1	14	44	-3		
KHEYS	44.66	350.2	8	17	1				10	13 PP
HAMADA	45.04	271.4	8	27	7	14	58	-1		
KOTI	45.06	268.8	8	22	2	15	3	4		
HIROSIMA	45.18	270.6							15	15
TUCSON	45.82	92.6	8	25	-1					
TUCSON TELE.	45.82	92.5	8	26	0					
ASHIZURI	45.95	268.4	8	26	-1					
SIMONOSEKI	46.38	271.3	8	37	7					
OOITA	46.44	270.0	8	28	-3	15	40	21		
ALBUQUERQUE	46.66	86.5	8	32	0				10	27 PP
HUKUOKA	46.96	271.4	8	37	2	15	25	-1		
ASOSAN	47.00	270.1	8	35	0					
KUMAMOTO	47.29	270.4	8	35	-2	15	46	15		
MIYAZAKI	47.46	268.9	8	41	2					
NAGASAKI	47.85	270.9	8	41K	-1	15	39	0		
YAKUSIMA	49.05	268.2							16	7
GODHAVN	49.69	25.1	8	55A	-1					
MANHATTEN	49.83	75.2	8	55	-2					
IRKUTSK	50.00	306.8	8	57A	-1				10	54 PP
LUBBOCK	50.39	84.4	9	1	0					
DUBUQUE	51.12	68.2	9	7	0	16	20	-4		
PEKING	51.24	287.7	9	7A	-1	16	36	10	9	17 *SP
CHIHUAHUA	51.27	92.2	8	50	-18	16	2	-24		
ULAN-BATOR	51.37	301.0	9	7A	-2	16	49	21		
WICHITA MTS.	51.59	80.9	9	9	-1	16	28	-3	12	2 PPP
TULSA	52.47	77.9	9	16	-1	16	41	-2		
FAYETTEVILLE	53.31	76.6	9	22	-1				13	14
ROLLA	53.44	73.4	9	20	-4					
FLORISSANT	53.73	71.6	9	24	-2	16	57	-3		
ST. LOUIS 1	53.92	71.6	9	26	-2	16	58	-5		
DALLAS	53.97	81.3	9	27	-1					
ZO-SE	54.29	276.0	9	29A	-1	17	15	7	9	39 *SP
SCORESBY SD.	55.02	13.1	9	36	0					
SCHEFFERVLLE	55.05	43.7	9	35A	-1					
NANKING	55.07	278.6	9	34	-2	17	26	8	9	44 *SP
BLOOMINGTON	55.69	68.7	9	39	-2					
LONDON ONT.	56.04	62.0	9	42A	-1					
CLEVELAND	56.91	63.6	9	49K	-1	17	33	-10		
OTTAWA	57.31	56.7	9	40	-12					
KEVO	57.56	353.7	9	52	-2					
ESEN BULAK	57.82	305.5	9	55A	-1					
SHAWINIGAN	58.00	54.1	9	55K	-2					
TROMSOE	58.09	356.9	9	57	-1					
BREBEUF	58.31	55.4	9	57	-2	17	59	-2	10	9 19 45 SCS
GUADALAJARA	58.82	96.4							10	17
APATITY	59.17	350.4	10	5K	0	18	4	-8	12	14 PP
PENNSYLVANIA	59.38	61.9	10	6K	-1					
SIAN	59.41	287.4	10	2A	-5					

MANZANILLO	59.44	98.5				18	26	10		16	41
KIRUNA	59.84	356.1	10	9A	-1	18	28	7			
SODANKYLA	59.94	353.3	10	10	-1						
LANCHOW	61.05	292.3	10	17A	-1	18	49	13		10	27 *SP
PALISADES	61.34	59.3	10	19	-1	18	38	-2		19	52 SCS
FORDHAM	61.47	59.4	10	20	-1	18	55	13			
SIDA	61.82	14.4	10	26A	3						
SEMIPALATNSK	62.21	317.6	10	24	-2					19	0 PS
TACUBAYA	62.30	94.0	10	27	0	18	47	-5		23	2 SS
KAJAANI	63.10	352.1	10	31	-1						
HALIFAX	63.83	50.2	10	37	0						
SVERDLOVSK	63.84	332.4	10	35K	-2					19	21 PS
UMEA	63.85	355.7	10	35	-2	19	8	-4			
SKALSTUGAN	64.29	359.6	10	38	-2						
CHENGTU	64.86	288.0	10	43A	0	19	37	13			
CANTON	64.88	275.6	10	43A	-1					10	53 *SP
HONG KONG	64.97	274.4	10	44	0	19	26	1			
AFIAMALU	66.16	183.4	10	46	-6	19	39	-1			
MANILA	66.55	263.5	10	53	-1						
NURMIJARVI	66.88	352.9	10	55	-1	19	47	-2		12	28
MERIDA	66.98	85.3	11	13	16	20	9	19			
PULKOVO	67.09	349.8	10	56A	-2					13	22 PP
HELSINKI	67.19	352.7	10	57	-1						
HONIARA	67.30	214.0	10	58	-1	19	51	-3			
BERGEN	67.38	3.3	11	1	1						
UPPSALA	67.93	356.6	11	2	-1					21	14 SCS
KONGSBERG	68.23	1.0	11	5	0					20	19 SCS
COMITAN	69.02	90.5				20	17	3		25	53
KUNMING	69.74	285.0	11	15A	1	20	25	2			
MOSCOW	70.02	344.6	11	14A	-2					20	35 PS
ABERDEEN	70.16	7.8				20	41	13		24	43 SS
GOTEBORG	70.19	359.7	11	17	0						
FRUNSE	70.57	315.9	11	19A	0					20	51 PS
KARLSKRONA	71.69	357.6	11	25	-1						
PORT MORESBY	72.32	226.3	11	28K	-2	20	49	-4	11 36		
LHASA	72.97	296.4	11	35A	1	21	16	16		11	45 *SP
TASHKENT	74.05	318.5	11	39A	-1					21	28 PS
WARSAW	75.37	353.9	11	47A	0	21	35	8		14	46 PP
SHILLONG	75.67	293.2	11	47A	-2	21	32	2		11	57 PCP
MUNSTER	75.89	2.4	11	53	3						
KEW	75.96	7.6	11	51A	0	21	38	4			
KHOROG	76.32	314.8	11	54A	1	21	53	16		12	42
HALLE	76.41	359.7	11	53	0	21	47	9			
KOUMAC	76.48	206.1	11	53K	-1						
COLLMBERG	76.60	359.0	11	54	0	21	52	12			
BENSBERG	76.89	2.8	11	56A	0	22	8	24			
JENA	76.98	359.9	11	56	-1	21	39	-6		22	6 PS
HOPE	77.01	77.5	11	57	0						
CHATRA	77.28	297.4	11	58	0					22	21
NOUMEA	77.58	203.6	12	0K	0						
KRAKOW	77.61	354.4	12	0	0	22	4	13		12	12 PCP
RACIBORZ	77.67	355.6	12	0	0					12	12 PCP
PRAGUE	77.81	358.0				22	24	30			
CHEB	77.83	359.4	12	0	-1	22	7	13			
PRUHONICE	77.90	358.0	12	2A	0	22	8	13		27	16 SS
CHITTAGONG	78.21	291.2	12	3	0	21	53	-5	12 13	15	2 PP
SKALNATE PL.	78.46	354.1	12	6	1					12	36
HEIDELBERG	78.48	1.8	12	5	0						
FOLINIERE	78.63	8.0	12	8	2						
KASPERSKE H.	78.76	358.6	12	7A	1					13	24
PARIS	78.81	6.0	12	3	-4						
STUTTGART	79.12	1.5	12	7	-1	22	16	8		12	20 PCP
WARSAK DAM	79.23	312.9	12	7	-2						
STRASBOURG	79.28	2.5	12	11	2	22	9	0		28	7 SS
TUBINGEN	79.36	1.6	12	11	1						
WELSCHBRUCH	79.41	3.5	12	12	2						
VIENNA-H.	79.57	356.7	12	11A	0	22	29	17			
BRATISLAVA	79.63	356.2	12	11A	0					12	28 PCP
LAHORE	80.00	309.5	12	15	2	22	17	0		22	28 SKS
CALCUTTA	80.02	293.9	12	14	1	22	22	5			
RAVENSBURG	80.12	1.3	12	15	1						
BUDAPEST	80.22	354.8	12	14	0					12	24 PCP
BASLE	80.33	2.7	12	15	0					16	6
GARCHY	80.37	5.8	12	15	0					12	48
BOKARO	80.41	296.6	12	17A	2	22	24	3		23	15 PS
BESANCON	80.55	3.8	12	17	1					12	48
NEUCHATEL	80.84	3.1	12	18	1						
SIMFEROPOL	81.02	343.9	12	19A	1					12	27 PCP
NEW DELHI	81.06	305.7	12	18A	-1	22	27	-1		19	34

ASHKABAD	81.15	324.3	12 19	0					22 44	SCS
TIMISOARA	81.80	353.1	12 25	2	22 31	-5				
LJUBLJANA	81.83	357.8	12 23	0					15 35	PP
TIFLIS	81.85	335.4	12 23K	0					22 53	
CLERMONT-FD.	81.88	5.9	12 24	1					12 56	
ZAGREB	82.02	356.8	12 23	-1	22 57	19				
CHARTERS TS.	82.24	222.3	12 23	-2	22 34	-6				
TRIESTE	82.24	358.4	12 23	-2	22 46	6			28 33	SS
BALBOA HTS.	82.35	85.3	12 22	-3						
PADOVA	82.50	359.7	12 31	5	23 2	19			23 49	PPS
PAVIA	82.71	1.6	12 29A	2					23 16	PS
BELGRADE	82.78	353.6	12 29K	1					23 9	SCS
DARWIN	82.84	239.1	12 28	0						
SAN JUAN	82.94	69.1	12 28	0						
GORIS	83.53	333.6	12 32A	1					15 57	PP
CHIAVARI	83.58	1.5	12 39	7	23 14	21			25 12	SPP
MONACO	84.12	2.9	12 35	1						
FLORENCE X.	84.13	0.2	12 43	9	23 24	25	13 11		29 14	SS
BAGNERES	84.34	8.3	12 36	0					13 8	
QUETTA	84.52	314.2	12 37A	1	23 2	-1			15 50	PP
PONTA DELGDA	84.53	28.7	12 39	3	23 7	4			15 58	PP
SERRA PILAR	85.17	15.1	12 39K	-1	23 8	-1	12 50		15 59	PP
TITOGRAD	85.24	354.2	12 54	14	23 3	-7			24 2	PS
TEHERAN	85.51	328.4	12 42	1						
ISTANBUL UN.	85.64	346.8	12 43A	1	23 18	4				
ROME	86.01	359.2	12 45A	1	23 24	7	13 13		29 14	SS
PORT BLAIR	86.10	284.0	12 46	2					16 16	PP
COIMBRA	86.11	15.1	12 46K	2					24 37	
ANTIGUA	86.36	66.6	12 47	1						
BRISBANE	86.40	213.8	12 45	-1	23 12	-9				
TORTOSA	86.61	8.3	12 39	-8	23 10	-13				
VISHAKHAPTNM	86.70	294.9	12 47K	0	23 16	-8				
TOLEDO	87.05	11.9	12 51K	2	23 35	8			16 23	PP
ST. CLAUDE	87.33	67.1	13 18	28	23 58	28				
LISBON	87.43	16.0			23 22	-9			14 3	
CHINCHINA	87.88	84.7	12 51	-2	23 37	2				
FUQUENE	88.64	82.9	12 57	0						
FORT FRANCE	88.69	67.5	12 58	1	23 35	-8				
CARACAS	88.73	74.5	12 57K	0	23 25	-18				
BOGOTA	89.10	83.7	12 59	0	23 33	-14				
HYDERABAD	89.59	298.5	13 2A	1	23 29	-22			28 56	SS
MESSINA	89.64	356.8			23 19	-32				
GRANADA	89.76	12.0	13 4A	2	24 3	10			16 0	PP
ALMERIA	90.23	11.1	13 3K	-1					16 32	PP
SHIRAZ	90.70	325.1	13 5A	-1	23 36	-25				
KARAPIRO	91.09	192.5	13 7	-1						
POONA	91.10	302.8	13 7	-1	24 9	4			16 52	PP
BOMBAY	91.31	303.8	13 9	0					23 52	SKKS
KSARA	91.46	339.9	13 8	-2	24 6	-2			16 44	PP
TRINIDAD	91.84	70.0	13 12	1						
MADRAS	92.27	294.6	13 23	10	23 58	-17			30 51	SS
RIVERVIEW	92.86	212.6	13 18	2	24 22	2			16 59	PP
JERUSALEM	93.57	339.9	13 23	4						
WELLINGTON	94.48	192.5	13 25	1	24 24	-10			25 37	
CANBERRA	94.94	213.6	13 25	-1	24 6	-32			24 35	S
KODAIKANAL	96.04	295.3	13 5	-26	23 32	-35			25 41	
TOOLANGI	98.18	215.2	13 44	4						
ROXBURGH	99.41	195.6			24 22	-2			25 18	S
HUANCAYO	101.40	94.9							18 32	
PERTH	106.71	239.3	13 16	777	26 21	83			32 36	SS
AREQUIPA	107.15	94.7	18 52	777						
M.BOUR	109.04	29.2	14 30	777	26 47	99				
SANTA LUCIA	120.28	106.5							19 23	
BANGUI	123.04	351.5	18 59	0					20 34	PP
DUMONT	125.01	202.3	18 58	-5					20 21	
LWIRO	127.91	337.8	19 11K	3					31 14	
WILKES	133.22	213.2	19 25	7					21 48	PP
TANANARIVE	136.30	306.2	19 30	6					22 9	PP
LUANDA	136.49	357.5	19 28K	4						
SOUTH POLE	142.28	180.0	19 28	-7						
BANDEIRA	142.49	357.1	19 27	-8					22 46	PP
MAWSON	151.26	218.5	19 55K	5						
KIMBERLEY	154.32	332.2	19 55K	1						

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.

DECEMBER 21 9.H 0.M 38.S EPICENTRE 52.62-168.44 DEPTH= 6.KM

A=-0.59736 B=-0.12218 C= 0.79261 D=-0.2004 E= 0.9797
G=-0.7765 H=-0.1588 K=-0.6097 HT= -6.4

SE= 2.23

	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	16.18	32.7	3	50	0							
SITKA	19.46	63.7	4	32	1	8	29	24				
PETROPAVLOVK	19.80	284.3	4	34K	U							
YELLOWKNIFE	29.65	49.3	6	9K	0							
MOULD BAY	30.10	21.2	6	12	-1						12	54
PENTICTON	30.45	76.4	6	16	0							
Y.-SAKHLINSK	31.50	279.7	6	25	0							
BANFF	32.07	71.0	6	30	0							
KIPAPA	32.16	161.5	6	27	-4							
UKIAH	33.67	95.3	6	49	5	12	39	32				
MINERAL	33.91	92.2	6	46A	0							
BLUE MTS.	33.98	82.3	6	46	-1	12	12	1	6	55	8	4 PP
CALISTOGA	34.37	95.4	6	50A	0							
HAWAII V.OB.	34.68	157.8	6	49	-4							
BERKELEY	35.05	96.2	6	55K	-1							
RENO	35.49	91.8	7	0K	0							
RESOLUTE	35.90	25.8	7	2	-1							
BUTTE	36.21	77.5	7	9	3						7	50
MIZUSAWA	36.84	269.1	7	13	2						16	23
PRIEST	37.15	97.0	7	13A	-1							
BOZEMAN	37.30	77.1	7	15	0							
EUREKA	37.87	88.8	7	20	0							
SALT LAKE C.	39.59	84.1	7	34	0						8	17
PASADENA	40.00	97.1	7	41	3							
ALERT	40.23	11.3	7	40	0							
MATUSIRO	40.27	268.3	7	38A	-2							
BOULDER CITY	40.80	92.2	7	45	1							
THULE	41.86	20.4	7	52	-1							
ABUYAMA	42.99	268.5	8	2A	0							
CHANGCHUN	43.56	286.0	8	5A	-2							
KHEYS	44.52	350.2	8	15	0							
NORD	45.17	5.6	8	18	-2							
TUCSON	45.76	92.9	8	26	1							
TUCSON TELE.	45.76	92.7	8	28	3							
ALBUQUERQUE	46.58	86.7	8	31	0							
MANHATTEN	49.73	75.4	8	52	-3							
LUBBOCK	50.31	84.6	8	58	-2							
DUBUQUE	51.01	68.4	9	3K	-2							
PEKING	51.25	287.7	9	7A	U							
ULAN-BATOR	51.34	300.9	9	8	U							
WICHITA MTS.	51.51	81.1	9	7	-2	16	28	0				
TULSA	52.38	78.0	9	14	-2							
ROLLA	53.34	73.6	9	19	-4							
FLORISSANT	53.62	71.7	9	22	-3							
ST. LOUIS 1	53.81	71.8	9	23	-3							
DALLAS	53.89	81.5	9	25	-2							
ZO-SF	54.34	276.0	9	29A	-1							
SCORESBY SD.	54.86	13.1	9	34	U							
MAZATLAN	55.02	97.2									10	30
NANKING	55.11	278.6	9	34A	-2							
BLOOMINGTON	55.58	68.9	9	37K	-2							
OTTAWA	57.17	56.9	9	48	-3							
KEVO	57.42	353.7	9	50	-2							
ESEN BULAK	57.78	305.5	9	55	U							
TROMSOE	57.95	357.0	9	56	U							
BREBEUF	58.17	55.6	9	56K	-2						10	15
APATITY	59.04	350.4	10	3K	-1							
PENNSYLVANIA	59.25	62.0	10	4K	-1							
SIAN	59.42	287.4	10	5A	-1							
KIRUNA	59.69	356.1	10	7	-1						10	54 PCP
SODANKYLA	59.80	353.3	10	7	-2						10	54 PCP
LANCHOW	61.06	292.3	10	16A	-1							
PALISADES	61.21	59.4	10	17	-1							
KAJAANI	62.96	352.1	10	29	-1							
UMEA	63.71	355.7	10	33	-2							
SVERDLOVSK	63.73	332.4	10	35K	0							
SKALSTUGAN	64.14	359.6	10	35	-3							
CHENGTU	64.87	288.0	10	42A	-1							
CANTON	64.93	275.6	10	43A	0							
HONG KONG	65.02	274.4	10	38	-6							

VIBORG	66.17	350.8	10	50A	-1						
NURMIJARVI	66.74	353.0	10	53A	-2	19	46	0			
HELSINKI	67.05	352.8	10	56	-1						
UPPSALA	67.78	356.7	11	0	-1						
KONGSBERG	68.08	1.1	11	3	0						
KUNMING	69.76	285.0	11	14A	1	20	25	3			
MOSCOW	69.89	344.6	11	13A	-1						
GOTEBORG	70.04	359.8	11	15	0						
FRUNSE	70.51	315.9	11	19A	1						
KARLSKRONA	71.54	357.6	11	22	-2						
PORT MORESBY	72.47	226.4	11	27K	-3						
LHASA	72.96	296.5	11	34A	1						
ANDIJAN	73.17	316.1	11	35A	1						
TASHKENT	73.97	318.5	11	47A	8						
WITTEVEEN	74.86	3.1								21	7
SHILLONG	75.67	293.2	11	46A	-2						
MUNSTER	75.73	2.5	11	50	1						
COLLMBERG	76.45	359.1	11	53	0					21	46 55
KOUMAC	76.64	206.2	12	1	7						
BENSBERG	76.73	2.9	11	54A	0						
JENA	76.83	360.0	11	54	-1						
LWOW	77.39	351.8	11	58	0						
KRAKOW	77.46	354.5	11	59	1					12	15 PCP
DOURBES	77.49	4.6	11	59	0						
RACIBORZ	77.53	355.6	11	59	0					12	21 PCP
NOUMEA	77.74	203.7	12	11	11						
PRUHONICE	77.75	358.0	12	1A	1					19	55
CHITTAGONG	78.21	291.2	12	2	-1	21	54	-3	12 12	15	2 PP
HEIDELBERG	78.33	1.9	12	4	1						
FOLINIERE	78.47	8.1	12	5	1						
UZHGOROD	78.72	352.8	12	6	1						
STUTTGART	78.97	1.5	12	6	-1						
STRASBOURG	79.13	2.6	12	8	0						
WARSAK DAM	79.17	312.9	12	6	-2						
TUBINGEN	79.21	1.7	12	9	1						
WELSCHBRUCH	79.25	3.5	12	10	2						
VIENNA-H.	79.43	356.7	11	50A	-19					15	10 PP
BRATISLAVA	79.48	356.2	12	9A	0					13	18
HURBANOVO	79.73	355.5	11	54	-17					14	40 PP
LAHORE	79.95	309.6	12	13	1						
RAVENSBURG	79.97	1.3	12	13	1						
GARCHY	80.22	5.9	12	13A	0						
BESANCON	80.40	3.9	12	15	1					13	2
BOKARO	80.40	296.6	12	14	0					21	35
NEUCHATEL	80.68	3.2	12	17	1						
SIMFEROPOL	80.89	344.0	12	18A	1						
NEW DELHI	81.02	305.8	12	15A	-3						
VANNOVSKAYA	81.15	324.5	12	19	1						
LJUBLJANA	81.68	357.9	12	21A	0					15	17 PP
CLERMONT-FD.	81.73	6.0	12	23	2					12	48
TIFLIS	81.74	335.5	12	22	1						
ZAGREB	81.87	356.9	12	22	0	21	42	-53		32	17 SSS
ROSELEND	81.98	3.5	12	24	1					12	44
TRIESTE	82.09	358.4	12	24A	1	22	58	21			
KIROVOBAD	82.34	334.0	12	24A	-1						
PADOVA	82.35	359.8	12	27	2	22	42	2			
CHARTERS TS.	82.39	222.4	12	22	-3						
PAVIA	82.56	1.7	12	38	12					23	45 PS
BELGRADE	82.64	353.6	12	28	2	22	45	2		12	40 PCP
SAN JUAN	82.83	69.2	12	26	-1						
DARWIN	82.97	239.2	12	27	-1						
GORIS	83.42	333.6	12	32	2						
CHIAVARI	83.42	1.6	12	29	-1						
MONACO	83.97	3.0	12	33	0						
FLORENCE X.	83.98	0.2	12	24	-9	22	50	-6			
RAGNERES	84.18	8.4	12	35	1					13	6
QUETTA	84.46	314.3	12	36A	1						
SERRA PILAR	85.01	15.1	12	39K	1					15	57 PP
TEHERAN	85.41	328.5	12	41	1						
ISTANBUL UN.	85.50	346.9	12	42	1					22	2
ROME	85.86	359.3	12	44A	2					23	25 SCS
COIMBRA	85.95	15.2	11	45K	-58						
BRISBANE	86.56	213.9	12	44	-2						
TOLEDO	86.89	12.0	12	49A	2					16	6 PP
LISBON	87.27	16.1	12	46	-3	23	34	6			
CHINCHINA	87.80	84.8	12	50K	-2						
CARACAS	88.63	74.6	12	55K	-1	23	38	-3			
BOGOTA	89.02	83.7	12	57	-1						
GRANADA	89.60	12.1	13	5A	5	23	47	-3		17	13 PP

ALMERIA	90.07	11.2	13	OK	-3							
SHIRAZ	90.61	325.2	13	4A	-1	23	36	-23				
POONA	91.07	302.8	13	6A	-1							
BOMBAY	91.28	303.9	13	6	-2							
KSARA	91.34	339.9	13	9	1							
TRINIDAD	91.73	70.1	13	9	-1							
RIVERVIEW	93.02	212.7	13	19	3	23	48	-32				
TOOLANGI	98.34	215.3	13	57	17							
BANGUI	122.90	351.6	18	57	-1						20	41 PP
LWIRO	127.79	338.0	19	8A	1							
TANANARIVE	136.26	306.4	19	28	5						22	7 PP
LUANDA	136.34	357.6	19	22	-1							
BANDEIRA	142.35	357.2	19	31K	-3							
MAWSON	151.42	218.7	19	53K	4				20	1		
KIMBERLEY	154.22	332.5	19	54K	1							

DECEMBER 21 9.H 9.M 57.S EPICENTRE 52.48-168.38 DEPTH= 0.KM
A=-0.59909 B=-0.12317 C= 0.79115 D=-0.2014 E= 0.9795
G=-0.7749 H=-0.1593 K=-0.6116 HT= -6.3

SE= 2.57

	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	16.27	32.4	4	50	58							
SITKA	19.49	63.3	4	33	2	8	14	8				
PETROPAVLOVK	19.87	284.7	4	36	0							
YELLOWKNIFE	29.71	49.1	6	10A	0							
MOULD BAY	30.22	21.1	6	12	-3						12	58
PENTICTON	30.45	76.2	6	14	-3							
KIPAPA	32.02	161.6	6	30	-1							
BANFF	32.09	70.8	6	30	-1							
UKIAH	33.62	95.1	6	47	3							
MINERAL	33.87	92.0	6	46A	-1							
BLUE MTS.	33.96	82.2	6	48	1	12	15	3			8	9 PP
CALISTOGA	34.32	95.3	6	52K	2							
HAWAII V.OB.	34.54	157.8	6	52	0							
BERKELEY	35.00	96.0	6	58A	2							
RENO	35.45	91.7	7	1	1							
RESOLUTE	36.01	25.7	7	5K	0							
BUTTE	36.20	77.4	7	7	0						8	54 PP
MIZUSAWA	36.88	269.3	7	12	0	13	0	3				
PRIEST	37.10	96.8	7	15	1							
BOZEMAN	37.29	77.0	7	15	-1							
EUREKA	37.84	88.7	7	22	2							
SALT LAKE C.	39.57	84.0	7	38	3						8	5
PASADENA	39.94	97.0	7	39	1							
VLADIVOSTOK	40.12	281.1	7	40	1							
MATUSIRO	40.30	268.5	7	37	-4	13	33	-16				
ALERT	40.35	11.3	7	41	0							
BOULDER CITY	40.76	92.1	7	46	1							
THULE	41.97	20.4	7	53	-1							
ABUYAMA	43.02	268.7	8	4K	1							
CHANGCHUN	43.63	286.2	8	7A	-1							
KHEYS	44.66	350.3	8	17	1							
NORD	45.30	5.6	8	20	-2							
TUCSON	45.72	92.8	8	24	-1							
TUCSON TELE.	45.72	92.6	8	24	-1							
ALBUQUERQUE	46.56	86.6	8	32	1							
MANHATTEN	49.73	75.3	8	53	-3							
LUBBOCK	50.29	84.5	9	1	1							
DUBUQUE	51.03	68.3	9	6	0							
PEKING	51.33	287.8	9	10	2							
ULAN-BATOR	51.44	301.1	9	9	0							
WICHITA MTS.	51.49	81.1	9	6	-4	16	30	1				
TULSA	52.37	78.0	9	15	-1							
FAYETTEVILLE	53.21	76.7	9	20	-2							
ROLLA	53.34	73.5	9	20	-3							
FLORISSANT	53.63	71.7	9	21	-5							
ST. LOUIS 1	53.82	71.7	9	24	-3							
DALLAS	53.87	81.5	9	26	-1							
ZO-SE	54.39	276.2	9	31A	0							
SCHEFFERVLLE	54.97	43.8	9	35K	0							
SCORESBY SD.	54.98	13.1	9	35	0							
NANKING	55.17	278.7	9	37	0							

BLOOMINGTON	55.60	68.8	9	37	-3						
CLEVELAND	56.82	63.7	9	51K	2						
OTTAWA	57.22	56.8	9	49	-3						
KEVO	57.56	353.7	9	50	-4						
ESEN BULAK	57.89	305.6	10	34	38						
SHAWINIGAN	57.91	54.2	9	53A	-3						
TROMSOE	58.09	357.0	9	57	-1						
BREBFUF	58.22	55.5	9	56	-3						
APATITY	59.18	350.4	10	5A	0						
PENNSYLVANIA	59.28	62.0	10	4A	-2						
SIAN	59.50	287.5	10	6	-1						
KIRUNA	59.83	356.1	10	6	-4						
SODANKYLA	59.94	353.3	10	6	-5						
LANCHOW	61.14	292.4	10	18	-1						
PALISADES	61.25	59.4	10	19	0						
SIDA	61.79	14.5	10	24A	1						
KAJAANI	63.10	352.1	10	28	-4						
UMEA	63.84	355.8	10	36	-1						
SVERDLOVSK	63.87	332.5	10	37K	0						
VERA CRUZ	64.23	91.8								11	43
SKALSTUGAN	64.28	359.7	10	39	-1						
CHENGTU	64.95	288.1	10	44	0						
CANTON	64.98	275.7	10	45A	1						
HONG KONG	65.07	274.5	10	45	0						
VIBORG	66.31	350.9	10	48A	-5						
NURMIJARVI	66.88	353.0	10	52	-4	19	49	0			
PULKOVO	67.09	349.9	10	57A	-1						
HELSINKI	67.19	352.8	10	54	-4						
BERGEN	67.36	3.4	11	0	1						
UPPSALA	67.92	356.7	11	2	-1						
KONGSBERG	68.21	1.1	11	5	0						
ALMATA	69.27	314.8	11	7	-4						
KUNMING	69.83	285.1	11	16A	1	20	30	6			
MOSCOW	70.03	344.7	11	15A	-1						
GOTEBORG	70.18	359.8	11	17	0						
FRUNSE	70.63	316.0	11	21A	2						
KARLSKRONA	71.68	357.7	11	23	-3						
PORT MORESBY	72.40	226.5	11	28	-2						
LHASA	73.05	296.5	11	35A	1	21	4	3			
DE BILT	75.65	4.1								14	33
MUNSTER	75.87	2.5	11	52	2						
KEW	75.94	7.7	11	52A	1	21	32	-1			
HALLE	76.39	359.8	12	54	61	22	18	40			
KOUMAC	76.53	206.3	12	3K	9						
COLLMBERG	76.59	359.1	11	54	0	22	3	23			
DUZHANBE	76.63	317.4	11	50A	-4						
BENSBERG	76.87	2.9	11	56A	0						
HOPE	76.91	77.6	12	3	7						
JENA	76.97	0.0	11	56	0						
LWOW	77.53	351.8	12	1	2						
KRAKOW	77.60	354.5	12	0	0						
DOURBES	77.62	4.6	12	2	2						
NOUMEA	77.63	203.8	11	55K	-5						
RACIBORZ	77.66	355.7	12	1	1					12	15 PCP
CHEB	77.81	359.5	12	0	-1						
PRUHONICE	77.89	358.1	12	2A	1					14	37
CHITTAGONG	78.29	291.3	12	4	0	21	56	-3	12 13	15	3 PP
SKALNATE PL.	78.45	354.2	12	9	5						
HEIDELBERG	78.47	1.9	12	5	0						
KASPERSKE H.	78.75	358.7	12	7	1						
UZHGOROD	78.86	352.8	12	7	0						
STUTTGART	79.11	1.6	12	9	1						
STRASBOURG	79.27	2.6	12	11	2					13	14
WARSAK DAM	79.29	313.0	12	8A	-1						
TUBINGEN	79.35	1.7	12	11	2						
WELSCHBRUCH	79.39	3.6	12	12	2						
VIENNA-H.	79.57	356.8	12	12	1					12	20 PCP
BRATISLAVA	79.62	356.3	12	12A	1					12	22 PCP
HURBANOVO	79.87	355.5	12	17	5					13	13
LAHORE	80.06	309.6	12	14	1	22	30	13			
RAVENSBURG	80.10	1.4	12	15	2						
BASLE	80.31	2.8	12	16	1						
GARCHY	80.35	5.9	12	15A	0						
BOKARO	80.49	296.7								20	18
BESANCON	80.53	3.9	12	17	1					12	51
NEUCHATEL	80.82	3.2	12	19	2						
SIMFEROPOL	81.04	344.0	12	19A	1						
NEW DELHI	81.13	305.9	12	17K	-2						
VANNOVSKAYA	81.28	324.6	12	18	-2						

TIMISOARA	81.80	353.2							22 46	
LJUBLJANA	81.82	358.0	12	25A	3				15 2	PP
CLERMONT-FD.	81.86	6.0	12	26	3				12 58	
TIFLIS	81.88	335.6	12	24	1					
ROSELEND	82.12	3.5	12	23	-1				13 28	
TRIESTE	82.23	358.5	12	25A	0	22 47	7		24 45	SPP
CHARTERS TS.	82.31	222.4	12	21	-4	22 36	-5			
KIROVOBAD	82.48	334.1	12	24	-2					
PADOVA	82.49	359.8	12	27	1	22 43	1		15 23	PP
BELGRADE	82.78	353.7	12	29	2	22 51	6		15 44	PP
SAN JUAN	82.84	69.3	12	26	-2					
DARWIN	82.93	239.2	12	28	0					
GORIS	83.56	333.7	12	33A	2					
CHIAVARI	83.56	1.7	12	43	12	23 3	10			
MONACO	84.10	3.1	12	35	1					
FLORENCE X.	84.12	0.3	12	26	-8	22 48	-11			
BAGNERES	84.31	8.4	12	36	1				13 12	
QUETTA	84.58	314.3	12	35	-2	23 4	1			
SOFIA	84.66	351.4							23 5	
SERRA PILAR	85.13	15.2	12	39K	0	22 58	-11		15 58	PP
TITOGRAD	85.24	354.3	12	41	1	23 38	28		15 38	PP
TEHERAN	85.55	328.5	12	44	3					
ISTANBUL UN.	85.65	346.9	12	43K	1			12 57		
ROME	86.00	359.4	12	46	2	23 14	-3		23 2	
COIMBRA	86.07	15.3	12	46A	2					
TOLEDO	87.01	12.0	12	51A	2				16 11	PP
LISBON	87.39	16.1	12	36	-14	23 35	4			
CHINCHINA	87.78	84.8	12	51K	-1				23 32	SKKS
CARACAS	88.64	74.6	12	56	0	23 39	-3			
BOGOTA	89.00	83.8	12	59	1					
GRANADA	89.73	12.1	13	4A	2	23 58	6		16 31	PP
ALMERIA	90.20	11.3	13	4K	0				16 33	PP
SHIRAZ	90.75	325.2	13	6A	0	23 38	-23			
POONA	91.17	302.9	13	8A	0					
BOMBAY	91.39	303.9	13	9	0					
KSARA	91.48	340.0	13	10	0					
TRINIDAD	91.74	70.1	13	12	1					
MADRAS	92.35	294.8							14 28	
RIVERVIEW	92.93	212.7	13	28	12	24 17	-4		23 49	SKS
BANGUI	123.04	351.7	18	59	0				20 34	PP
LWIRO	127.93	338.0	19	11	3					
TANANARIVE	136.37	306.4	19	28	4				22 9	PP
LUANDA	136.48	357.7							19 43	
SOUTH POLE	142.29	180.0	19	24	-11					
BANDEIRA	142.49	357.3	19	32K	-3				22 45	PP
MAWSON	151.33	218.6	19	53A	3			20 0		

DECEMBER 21 9.H 33.M 19.5 EPICENTRE 42.11 142.46 DEPTH= 71.KM

A=-0.59005 B= 0.45335 C= 0.66807 D= 0.6093 E= 0.7930
G=-0.5298 H= 0.4070 K=-0.7441 HT= -2.5

DEPTH OF FOCUS= 0.006R

SE= 2.17

	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
URAKAWA	0.24	80.3	0	12A	-1	0	21	-1				
HIROO	0.66	74.8	0	15	-1	0	26	-3				
TOMAKOMAI	0.84	308.7	0	17K	-1	0	31	0				
OBIHIRO	0.97	33.7	0	21	2	0	35	1				
MURORAN	1.12	281.3	0	20K	-1	0	35	-2				
SAPPORO	1.26	319.7	0	23K	0	0	40	0				
HAKODATE	1.31	257.3	0	23K	-1	0	41	0				
MORI	1.41	270.2	0	25	0	0	41	-2				
ASAHIGAWA	1.67	357.7	0	29A	1	0	51	2				
KUSIRO	1.67	58.1	0	28K	-1	0	48	-2				
HATINOHE	1.73	204.3	0	28K	-1	0	49	-2				
SUTTSU	1.79	293.4	0	30	0	0	52	0				
AOMORI	1.81	225.0	0	30	0	0	50	-3				
RUMOE	1.94	341.7	0	33A	1	0	57	1				
ABASHIRI	2.33	34.3	0	40K	3	0	57	-8				
MIYAKO	2.49	188.8	0	38A	-2	1	5	-4				
NEMURO	2.60	61.0	0	41	0	1	9	-3				
MORIOKA	2.60	202.6	0	41A	0	1	11	-1				
AKITA	2.99	217.7	0	45A	-2	1	20	-2				

MIZUSAWA	3.15	199.3	0	46	-3	1	22	-4			
WAKKANAI	3.36	350.5	0	54A	2	1	43	12			
ISINOMAKI	3.78	193.8	0	56A	-2	1	37	-4			
SAKATA	3.78	212.9	0	59	1	1	42	1			
SENDAI	4.02	197.9	1	0A	-1	1	45	-2			1 34
YAMAGATA	4.18	203.5	1	3A	0	1	51	0			
HUKUSIMA	4.62	200.0	1	8A	-1	1	59	-3			
Y.-SAKHLINSK	4.91	2.0	1	14	1						
NIIGATA	4.94	213.2	1	16K	2	2	14	4			
AIKAWA	5.21	219.7	1	19A	1	2	14	-3			
SHIRAKAWA	5.28	199.9	1	17	-1	2	23	4			
ONAHAMA	5.29	193.7	1	16A	-3	2	15	-4			
UTUNOMIYA	5.91	200.7	1	25	-2	2	29	-5			
MITO	5.93	195.8	1	24K	-3	2	32	-3			
TAKADA	5.97	214.4	1	29	1	2	36	0			
KAKIOKA	6.13	197.6	1	27	-3	2	32	-8			
TUKUBASAN	6.16	198.1	1	27K	-4	2	21	-20			
MAEBASI	6.28	205.9	1	32A	0	2	51	7			
NAGANO	6.36	212.7	1	35	2	2	53	8			
WAZIMA	6.38	224.0	1	36	2	2	47	1			
KUMAGAYA	6.42	202.9	1	32	-2	2	46	-1			
MATUSIRO	6.47	212.0	1	34	-1						
TYOSI	6.50	191.7	1	31K	-4	2	40	-9			
OIWAKE	6.52	209.0	1	37	1	2	52	3			
TITIBU	6.66	204.4	1	39	1	2	52	-1			
HONGO	6.73	199.1				2	50	-4			
TOKYO C.M.O.	6.76	199.1	1	37	-2	2	47	-8			
TOYAMA	6.77	218.7	1	42	3	3	2	6			
MATUMOTO	6.81	212.3	1	42	2	3	5	8			
UGLEGORSK	6.98	357.9	1	43	1						
YOKOHAMA	7.02	199.1	1	41	-2	2	59	-3			
KOHU	7.11	206.6	1	46	2	3	6	2			
KANAZAWA	7.17	220.9	1	44	-1						
TAKAYAMA	7.20	215.9	1	47	2						
HUNATU	7.20	204.8	1	51	6	3	38	32			
MERA	7.47	196.9	1	47	-2	3	7	-6			
MISIMA	7.50	202.6	1	47	-2	3	13	-1			
IIDA	7.51	210.3	1	50	1	3	20	6			
AJIRO	7.52	201.6	1	46	-4	3	7	-7			
OSIMA	7.72	199.3	1	49	-3	3	9	-10			
HUKUI	7.75	220.7	1	55	2						
SHIZUOKA	7.81	205.4	2	0A	7	3	22	1			
VLADIVOSTOK	7.86	280.9	1	53	-1						
GIHU	8.04	215.4	1	57	0	3	27	0			
TSURUGA	8.15	219.8	1	58	0						
NAGOYA	8.15	213.6	1	58A	0	3	37	7			
OMAESAKI	8.20	205.3	1	58	-1	3	53	22			
HAMAMATU	8.26	208.3	1	59	-1	3	49	17			
HIKONE	8.38	217.4	2	3A	2	3	38	3			
MAIZURU	8.63	222.1	2	6	1	3	44	3			
KAMEYAMA	8.64	214.9	2	7	2	3	46	4			
KYOTO	8.82	218.9	2	8A	1	3	41	-5			
TOYOOKA	8.87	224.7	2	10A	2	3	53	6			
ABUYAMA	9.02	219.0	2	9	-1	4	3	12			
NARA	9.06	217.2	2	11	0						
OSAKA	9.22	218.4	2	18	5	4	9	13			
SAIGO	9.22	233.2	2	15	2						
TOTTORI	9.23	227.1	2	16	3						
HATIDYOZIMA	9.24	194.1	2	8	-5	3	45	-11			
KOBE	9.36	220.0	2	16	1						
WAKAYAMA	9.74	218.5	2	12	-8						3 30
YONAGO	9.75	229.8	2	23	3						
SUMOTO	9.77	219.9	2	20	0	4	32	23			
HIMEJI	9.89	222.4	2	16	-6						5 23
MATSUE	9.90	230.9	2	27	5	4	18	6			
SIOMISAKI	10.14	213.6	2	23	-2	4	31	13			
TOKUSIMA	10.15	220.3	2	26	1						
TAKAMATU	10.21	223.1	2	25	-1						
TSURUGISAN	10.60	221.7	2	28	-4						
HAMADA	10.86	231.9	2	38	3	4	39	3			
MUROTO	11.01	219.2	2	37	0						5 34
HIROSIMA	11.04	228.8	2	40	3	4	43	3			
KOTI	11.08	222.4	2	30	-8						5 16
UWAZIMA	11.84	224.7	2	48	0						
ASHIZURI	12.01	221.8	2	36	-14	5	50	47			
SIMONOSEKI	12.20	231.9	2	55	2						
OOITA	12.33	227.6	2	56	1						4 27
CHANGCHUN	12.68	283.6									5 1

HUKUOKA	12.78	232.2	3	3	2	5	35	13				
ASOSAN	12.89	228.2	3	0	-2							
SAGA	13.07	231.4	3	15	11	6	25	56				
KUMAMOTO	13.15	229.0	3	6	0	5	41	10				
MIYAZAKI	13.45	224.4	3	11	2	5	53	15				
NAGASAKI	13.69	230.9	3	13K	1	5	33	-10				
KAGOSIMA	14.19	226.0	3	21	2	6	6	11				
HUKUE	14.32	233.4	3	22	1							
YAKUSIMA	15.10	223.4	3	30	-1						6	47
PETROPAVLOVK	15.40	39.4	3	32	-3							
PEKING	19.91	272.8	4	26	-3							
ZO-SE	20.26	244.1	4	30	-2							
NANKING	21.33	249.7	4	41	-2							
TAIPEI	24.28	232.0	5	23	11							
ULAN-BATOR	25.64	295.3	5	25A	0							
SIAN	27.38	264.5	5	41	0							
TIKSI	30.35	351.5	6	4	-4							
LANCHOW	30.41	271.5	6	7	-1							
CANTON	30.79	241.1	5	39	-32							
HONG KONG	30.82	239.0	6	13K	1							
CHENGTU	32.74	262.2	6	27	-1							
ESEN BULAK	33.01	293.5	6	57	26							
KUNMING	36.79	255.3	7	4K	1							
NHATRANG	41.51	234.0	7	43	1							
SEMIPALATNSK	42.66	303.3	7	51	-1							
LHASA	42.89	270.3	7	56	3							
COLLEGE	44.42	34.9	8	5	-1							
SHILLONG	44.49	264.8	8	5K	-1							
CHITTAGONG	46.41	261.2	8	22	0	15	6	3	8	32	10	11 PP
ALMATA-2	46.75	294.6	8	25K	1							
CHATRA	47.27	269.5	8	29K	1							
KHEYS	47.86	347.3	8	32	-1							
FRUNSE	48.78	295.1	8	40K	0							
ANDIJAN	51.18	293.5	8	59K	1							
PORT MORESBY	51.44	174.1	9	0K	0							
MOULD BAY	51.45	17.6	8	59	-1	16	12	-1				
SVERDLOVSK	51.96	316.3	9	4	0							
SITKA	52.08	43.3	9	6	1						12	41
KIPAPA	53.54	93.3	9	18	2							
NEW DELHI	53.72	277.7	9	15K	-2							
LAHORE	54.24	282.5	9	22	1	16	51	0				
WARSAK DAM	54.97	286.5	9	26	0							
ALERT	55.02	3.9	9	25K	-2							
DARWIN	55.27	193.9	9	29	0							
NORD	56.04	356.4	9	31	-3							
HAWAII V.OB.	56.79	93.2	9	40	1							
RESOLUTE	57.50	15.4	9	42K	-2							
TANGERANG	58.10	223.3	9	48K	-1							
APATITY	58.42	334.8	9	50K	-1							
KEVO	59.00	338.5	9	53	-2							
THULE	60.13	8.0	9	56	-7							
QUETTA	60.31	285.2	10	3	-1	18	13	2	12	12		
SODANKYLA	60.62	336.4	10	4	-2							
MADRAS	60.88	261.0	10	9K	1							
TROMSOE	61.19	340.5	10	8	-2							
CHARTERS TS.	61.98	176.0	10	14K	-1							
POONA	62.07	270.3	10	15K	-1							
KIRUNA	62.08	338.6	10	14K	-2							
VANNOVSKAYA	62.17	297.2	10	16	0							
VICTORIA	62.39	48.5	10	18K	0							
KAJAANI	62.41	333.2	10	17A	-1	18	38	0				
BOMBAY	62.60	271.3	10	19	0							
MOSCOW	63.70	322.4	10	26	-1							
PENTICTON	64.02	46.1	10	28K	-1							
VIBORG	64.22	330.0	10	29K	-1							
PULKOVO	64.26	328.6	10	29K	-1							
UMEA	64.99	335.5	10	34K	-1							
BANFF	65.06	42.8	10	36	1							
KOUMAC	65.54	157.5	10	39	1							
NURMIJARVI	65.87	331.3	10	39	-2	19	20	0			11	8 PCP
HELSINKI	65.99	331.0	10	40	-1							
SCORESBY SD.	67.15	354.4	10	48	-1							
SKALSTUGAN	67.50	338.3	10	49K	-2						13	15 PP
NOUMEA	67.82	156.0	10	55K	2							
TEHERAN	67.84	298.6	10	53	0							
UKIAH	67.89	56.8	10	55	2						11	27 PCP
BLUE MTS.	67.94	49.1	10	54A	0						39	5 PKPPKP
KIROVOBAD	68.10	305.4	10	54	-1							

MINERAL	68.16	55.0	10	55K	0					
TIFLIS	68.37	307.0	10	57	1					
CALISTOGA	68.59	56.9	10	59K	1					
UPPSALA	68.77	333.6	10	58K	-1					
BERKELEY	69.25	57.4	11	3K	1					
RENO	69.74	54.8	11	5	0					
BUTTE	69.80	45.8	11	6	1				12	54
BRISPANE	69.80	170.2	11	6	1				11	26
SHIRAZ	70.77	292.8	11	10K	-1	20	18	-1		
BOZEMAN	70.84	45.4	11	12	1					
PRIEST	71.33	58.0	11	16K	2					
KONGSBERG	71.42	336.9	11	15	0					
BERGEN	72.00	339.2	11	17	-1					
EUREKA	72.09	52.8	11	20	1					
GOTEBORG	72.29	334.6	11	19K	-1					
KARLSKRONA	72.31	332.0	11	17	-3					
KISHINEV	73.55	319.2	11	28	1					
SALT LAKE C.	73.63	49.7	11	29	1				12	49
PASADENA	74.16	58.3	11	32	1				11	53
BOULDER CITY	75.05	55.0	11	37	1				12	0
KRAKOW	75.36	325.8	11	38	0	21	12	2		
SKALNATE PL.	75.89	325.1	11	44	3					
RIVERVIEW	75.99	172.6	11	42A	1				12	4
RACIBORZ	76.05	326.7	11	40	-2				11 45	11 50 PCP
LARAMIE	76.72	45.9	11	47	1					
ADELAIDE	76.78	183.2	11	46K	0				34	31
COLLMBERG	77.11	330.2	11	47K	-1				14	33 PP
CANBERRA	77.29	174.5	11	49K	0					
HALLE	77.33	330.9	11	48	-1	21	34	2		
MUNDARING	77.57	202.6	11	50	0				12	11 PCP
PRUHONICE	77.58	328.6	11	51K	1				12	27
ISTANBUL UN.	77.72	314.8	11	52A	1				12 5	
HURBANOVO	77.77	325.3	11	47	-4					
JENA	77.93	330.7	11	51	-1				12	11
BRATISLAVA	77.99	326.1	11	52K	-1					
WITTEVEEN	78.04	334.4	11	54A	1					
VIENNA-H.	78.23	326.5	11	54K	0					
KASPERSKE H.	78.64	328.6	11	57K	1				12	25
BELGRADE	79.13	322.1	11	59	0				12	15 PCP
TOOLANGI	79.35	177.6	12	1K	1				12 21	15 15 PP
RENSBERG	79.45	333.1	12	0K	-1				12	40
TUCSON	80.01	55.5	12	5	1					
TUCSON TELE.	80.01	55.4	12	5	1					
HEIDELBERG	80.23	331.4	12	5	0					
SCHEFFERVLLE	80.27	16.7	12	5K	0					
STUTTGART	80.56	330.7	12	6	0					
JERUSALEM	80.66	304.5	12	15	8					
ALBUQUERQUE	80.73	51.0	12	9	2				20	12
LJUBLJANA	80.75	326.2	12	7K	0				12	29
TUBINGEN	80.83	330.7	12	9	1					
DOURBES	81.04	334.1	12	10	1					
STRASBOURG	81.26	331.5	12	10	0				13	22
KEW	81.34	337.5	12	12K	1					
TRIESTE	81.39	326.4	12	11K	0					
WELSCHBRUCH	81.90	332.2	12	12	-2				12	39
PADOVA	82.35	327.3	12	1	-15	22	11	-14	23	1 PS
MANHATTEN	82.93	42.2	12	18K	-1					
BESANCON	83.03	331.8	12	19	0					
DUBUQUE	83.12	36.6	12	19K	-1					
SAVANNAH	83.56	176.4	12	23	1					
LAWRENCE	83.76	41.5	12	24	1				20	0
FOLINIERE	83.80	336.4	12	24	1					
FLORENCE X.	83.94	326.8	12	11	-13					
GARCHY	83.99	333.5	12	24	0				13	2
TARRALEAH	84.10	177.0	12	26	1					
ROSELEND	84.13	330.6	12	25	0				12	47
MOORLANDS	84.27	176.5	12	27	1					
LUBBOCK	84.35	49.1	12	27	1					
WICHITA MTS.	85.29	46.3	12	31	0				30	36 PKKP
CLERMONT-FD.	85.30	332.8	12	31	0					
MONACO	85.50	329.1	12	31	-1					
TULSA	85.86	43.8	12	35	2					
ROLLA	86.23	40.1	12	35	0					
FLORISSANT	86.24	38.6	12	36	1					
SHAWINIGAN	86.33	23.5	12	35	-1					
CHATEAU	86.33	154.9	12	36	0					
ST. LOUIS 1	86.43	38.6	12	36	0					
OTTAWA	86.44	25.9	12	35K	-1					
FAYETTEVILLE	86.53	42.7	12	37	0					

BREBEUF	87.02	24.5	12	39K	0					
BLOOMINGTON	87.66	35.9	12	43K	1					
DALLAS	87.69	46.4	12	43	1					
CLEVELAND	87.79	31.5	12	43K	0					
BAGNERES	88.68	333.4	12	48	1					
PENNSYLVANIA	89.76	29.4	12	53K	1					
PALISADES	90.96	26.7	12	58	0					
TOLEDO	92.92	334.8	13	8	1				16 45	PP
ALMERIA	95.14	332.4	13	15K	-2					
GRANADA	95.23	333.4	13	36A	19				17 32	PP
LWIRO	108.93	284.6							18 53	PP
BANGUI	111.26	297.3	18	27	1				19 12	PP
SAN JUAN	114.27	29.9	18	31	-1					
FORT FRANCE	119.40	26.4							22 2	
MAWSON	124.44	207.2	18	52A	1					
KIMBERLEY	128.55	263.9	18	51A	-8					

DECEMBER 21 18.H 20.M 39.S EPICENTRE 15.45 121.87 DEPTH= 5.KM

A=-0.50921 B= 0.81890 C= 0.26478 D= 0.8492 E= 0.5281
G=-0.1398 H= 0.2248 K=-0.9643 HT= 5.7

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	
MANILA	1.09	224.7	0	23	1	0	38	0					
HONG KONG	9.98	314.2	2	28	0	4	28	7					
ZO-SE	15.59	357.8				7	4	28					
NANKING	16.77	350.9				7	29	25					
SIAN	22.06	330.4	4	55	-3	9	1	4					
CHENGTU	22.30	315.8	4	59	-1	9	7	6					
PEKING	24.99	349.6	5	25	-1								
MATUSIRO	25.55	31.7	5	33	1								
LANCHOW	26.08	325.2	5	36	-1								
TANGERANG	26.26	216.2	5	37A	-1								
DARWIN	29.04	161.7	6	2	-2								
CHITTAGONG	29.21	288.2	6	2	-3	10	51	-6	7	0			
PORT MORESBY	35.17	133.0	6	57A	0				7	6			
CHARTERS TS.	42.69	145.1	7	58	-2								
POONA	45.93	281.0	8	24A	-2								
LAHORE	46.08	299.0	8	26	-1								
YAKUTSK	46.84	5.1	8	31A	-2								
ALMATA-2	46.91	315.5	8	33	-1								
SEMIPALATNSK	48.34	325.3	8	43	-2								
WARSAK DAM	48.79	301.8	8	48	0								
TASHKENT	52.02	310.6	9	12A	-1								
BRISBANE	52.08	144.6	9	12	-1						18	35	
QUETTA	52.25	296.3	9	13	-2								
ADELAIDE	52.63	162.6	9	15A	-3						9	24	
TIKSI	56.32	2.7	9	42A	-3								
RIVERVIEW	56.39	150.7	9	44	-1								
CANBERRA	56.67	153.5	9	45	-2								
TOOLANGI	57.23	157.8	9	49A	-2				10	3	10	33	PCP
ASHKABAD	59.87	305.1	10	9	0								
SVERDLOVSK	61.56	326.8	10	19K	-2								
TARPALEAH	61.77	159.5	10	28	6								
SHIRAZ	64.77	295.8	10	41A	-1	19	23	1			39	40	PKPPKP
KIROVOBAD	69.21	308.0	11	8	-2								
GORIS	69.27	306.8	11	10	-1								
KHEYS	70.67	351.0	11	18	-1								
CHATEAU	73.90	139.3	11	38	0								
WELLINGTON	74.67	141.4	11	40	-3								
APATITY	75.25	336.6	11	44	-2								
COLLEGE	76.28	26.1	11	51	-1								
PULKOVO	77.58	328.8	11	58	-1								
SODANKYLA	77.88	336.8	11	59	-2								
KAJAANI	78.05	333.4	12	0	-2								
VIBORG	78.16	329.9	12	2A	0								
JERUSALEM	79.24	300.1	12	14	6								
KIRUNA	80.08	337.8	12	11A	-2								
HELSINKI	80.13	329.7	12	12	-1								
NURMIJARVI	80.20	330.1	12	12	-1								
TANANARIVE	80.72	247.4	11	18	-58								
MOULD BAY	81.62	12.3	12	19	-2								
WILKES	81.99	184.6	12	20	-3						12	29	

DUMONT	82.99	172.8	12 25	-3	
UPPSALA	83.75	330.5	12 30	-2	
UZHGOROD	84.74	318.9	12 37	0	
KRAKOW	85.77	320.8	12 41	-1	12 52 PCP
RACIBORZ	86.81	321.2	12 47	0	12 57 PCP
RESOLUTE	87.14	9.2	12 47A	-2	
VIENNA-H.	88.59	319.9	12 56	0	
PRUHONICE	89.04	321.9	12 58K	0	13 55
COLLMBERG	89.41	323.6	12 58	-2	
KASPERSKE H.	89.95	321.4	13 1	-1	
LJUBLJANA	90.59	318.3	13 4K	-1	
ROSELEND	95.71	320.4	13 27	-2	
BLUE MTS.	99.51	38.3	13 46	0	20 38
WICHITA MTS.	117.01	36.9	18 47	0	29 16 PKKP
SAN JUAN	145.47	13.5	19 40	0	
BALBOA HTS.	147.76	42.6	19 45	2	

DECEMBER 21 21.H 27.M 51.S EPICENTRE -1.08 -80.93 DEPTH= 25.KM
A= 0.15770 B=-0.98731 C=-0.01879 D=-0.9875 E=-0.1577
G=-0.0030 H= 0.0186 K=-0.9998 HT= 7.2

SE= 2.47

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
QUITO	2.57	70.5	0 41	0	1 3	-9		
CHINCHINA	8.02	41.3	1 55	-3	3 33	5		
BOGOTA	8.89	50.4	2 7	-3	4 6	16		
BALBOA HTS.	10.07	7.7	2 21	-5				
HUANCAYO	12.23	153.2	2 52	-3				
GALERAZAMBA	13.06	25.4	3 11	5	5 44	12		
AREQUIPA	17.88	149.2	4 9	1				
CARACAS	18.06	50.1	4 9A	-2	7 39	10		
HOPE	19.40	12.0	4 29	2				
TRINIDAD	22.65	58.5	4 59A	-1	9 17	15		10 15
SAN JUAN	24.21	36.3	5 15	0	9 54	25		6 33
ANTOFAGASTA	24.68	156.4	5 19	-1				
FORT FRANCE	25.10	50.5	5 21	-3	10 5	21		
ST. CLAUDE	25.49	47.4	5 29	1	10 1	10		
SANTA LUCIA	33.60	164.4	6 39	-1				
BLACKSBURG	38.10	0.7	7 15	-3				
WICHITA MTS.	39.28	336.7	7 27	-1				8 51 PP
TULSA	39.33	340.8	7 28	-1	13 31	3		
ROLLA	40.09	346.5	7 33	-2	13 37	-2		
BLOOMINGTON	40.40	353.3	7 35	-2	13 38	-6		
ST. LOUIS 1	40.45	348.7	7 35	-3	13 43	-2		
FLORISSANT	40.63	348.6	7 36	-3	13 43	-4		
PENNSYLVANIA	41.78	3.5	7 47K	-2				
LAWRENCE	41.98	343.2	7 49	-1	14 10	3		
PALISADES	42.38	7.9	7 51	-3	14 27	14		
MANHATTEN	42.59	342.0	7 53	-2	14 9	-7		
TUCSON TELE.	43.57	322.4	8 3	0				
LONDON ONT.	43.92	359.7	8 2	-4				
DUBUQUE	44.28	349.7	8 6	-3				
GOLDEN	46.35	333.8	8 25	-1				23 29
OTTAWA	46.51	5.1	8 23	-4				
BREBEUF	46.83	7.0	8 29K	0	15 15	-3		
BOULDER CITY	48.54	322.9	8 43	0				
PASADENA	49.49	318.7	8 51	1				
SALT LAKE C.	50.27	329.5	8 55	-1				
EUREKA	51.57	325.4	9 5	-1				
PRIEST	52.31	319.2	9 16A	5				
BOZEMAN	53.63	334.1	9 22	1				
RENO	53.85	323.0	9 23K	0				
BERKELEY	54.36	320.0	9 30K	3				
CALISTOGA	55.02	320.6	9 35A	4				
MINERAL	55.43	322.8	9 39K	5				
BLUE MTS.	55.99	329.4	9 36	-2				11 34 PP
SCHEFFERVLLE	56.92	9.7	9 41	-4				
LONGMIRE	59.59	328.5	10 8	4	18 21	10		
PENTICTON	60.24	331.9	10 7	-1				
M.BOUR	65.12	73.7	10 39	-2	19 27	7		
YELLOW KNIFE	68.30	343.9	10 56A	-5				
RESOLUTE	76.12	356.2	11 44	-3				
MALAGA	79.86	52.5	12 11	3	22 14	6		15 12 PP

MOULD BAY	80.24	351.3	12	8	-2							
GRANADA	80.57	52.2	13	4K	52						17	4 PP
TOLEDO	80.64	49.4	12	16K	4	22	19	3			15	16 PP
COLLEGE	81.34	336.6	12	14	-2						15	45 PP
ALERT	83.90	2.4	12	27	-2							
BAGNERES	84.21	46.7	12	29	-1						13	26
FOLINIERE	84.51	41.0	12	31	-1							
KEW	84.98	38.3	12	33	-1	23	2	2				
PARIS	86.46	41.1	12	41	0							
CLERMONT-FD.	86.61	44.2	12	44	2							
GARCHY	86.71	42.7	12	42	-1							
DOURBES	87.94	40.0	12	47	-2							
ROSELEND	89.05	44.5	12	54	0							
STUTTGART	90.94	41.4	13	0	-3						13	25
JENA	92.42	39.3	13	25	15							
COLLMBERG	93.30	38.9	13	13	-1						13	53
KASPERSKE H.	93.77	41.0	13	16	0							
PRUHONICE	94.36	40.1	13	19A	1							
KIRUNA	95.28	21.9				23	56	1				
ISTANBUL UN.	105.66	47.6	17	42	777						24	47 PP
LWIRO	109.66	92.8	19	1A	777							
WILKES	112.23	185.0									15	2
RIVERVIEW	120.07	229.4									30	11 PS
SHIRAZ	127.43	52.7	19	2	-1							
QUETTA	137.95	43.4	19	25	3						22	9 PP
PEKING	138.23	340.2	19	23	0							
WARSAK DAM	138.34	35.3	19	15	-8							
LAHORE	141.72	35.2	19	29	0							
ZO-SE	143.54	327.1	19	28	-4							
LANCHOW	144.93	353.3	19	34	-1						22	51 PP
NEW DELHI	145.59	35.4	19	34A	-2							
SIAN	145.74	345.4	19	36A	0							
DARWIN	145.76	246.0	19	39	3							
BOMBAY	148.76	53.9	19	45	4						23	26
POONA	149.78	53.5	19	50K	7							
CHENGTU	150.22	351.4	19	53	10							
LHASA	150.59	14.3	19	47	3							
SHILLONG	154.68	15.4	19	49	-1							
CHITTAGONG	157.71	17.9	19	52	-2						23	42 PP

DECEMBER 22 0.H 52.M 20.S EPICENTRE -22.01 170.07 DEPTH= 0.KM

A=-0.91409 B= 0.16006 C=-0.37258 D= 0.1725 E= 0.9850
G= 0.3670 H=-0.0643 K=-0.9280 HT= 4.2

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
NOUMEA	3.37	264.4	0	54A	0							
PORT VILA	4.56	338.6	1	12A	1							
KOUMAC	5.59	283.9	1	25A	-1							
SUVA	8.74	65.4	2	14	4							
RAOUL ISLAND	13.01	126.1	3	10	2	5	17	-18				
HONIARA	15.84	320.6	3	44A	-1	6	50	8				
KARAPIRO	16.55	164.7	3	54	-1							
BRISBANE	16.59	247.7	3	52	-3	6	55	-5				
CHATEAU	17.76	165.9	4	10	0							
AFIAMALU	19.04	68.0	4	25	-1	7	55	0				
WELLINGTON	19.62	169.4	4	32A	0							
RIVERVIEW	20.41	230.7	4	43K	2						8	53
CHARTERS TS.	22.30	270.5	5	0	0	9	8	7				
CANBERRA	22.69	229.6	5	5K	1	9	14	6	5	18	9	26 *SS
ROXBURGH	23.42	181.3	5	14	3	9	28	7				
PORT MORESBY	25.33	296.1	5	29A	0	9	56	2				
TOOLANGI	26.26	228.3	5	38	0	10	11	2	5	51	6	26 PP
SAVANNAH	27.49	219.1	5	49	0							
MOORLANDS	27.94	217.9	5	54	0							
TARRALEAH	28.28	218.8	5	58	1							
ADELAIDE	30.29	237.9	6	15K	0	11	11	-3	6	26		
DARWIN	38.59	277.8	7	26	0							
DUMONT	48.57	195.4	8	45	-2	15	43	-5				
MUNDARING	48.59	246.2	8	45	-2	15	44	-4				
PERTH	48.91	246.2	8	50	1	15	55	2			10	47 PP
HONOLULU	53.08	38.0	9	23	2	16	54	4				
KIPAPA	53.22	37.9	9	23	1							
HAWAII V.OB.	53.33	42.0	9	20	-3	16	59	5				

WILKES	57.95	204.2	9	54K	-2	17	51	-4		21 39 SS
DJAKARTA	62.92	274.4	10	28	-2					32 7
TANGERANG	63.10	274.3	10	32A	1	19	3	1		
TUKUBASAN	64.47	333.4	10	40A	0	19	21	2		13 3 PP
ABUYAMA	65.37	329.2	10	45A	-1					
MATUSIRO	65.55	332.2	10	46A	-1	19	34	2		
SOUTH POLE	68.12	180.0	11	0	-3					
HONG KONG	70.04	305.3	11	17	2	20	28	2		
ZO-SE	70.61	316.8	11	18A	-1	20	33	1		
CANTON	71.12	305.5	11	23A	1	20	41	3		
NANKING	72.78	316.1	11	32A	0	20	59	2		
Y.-SAKHLINSK	73.01	340.8	11	33	0	21	0	0		
VLADIVOSTOK	73.71	331.9	11	36	-1	21	9	1		
PETROPAVLOVK	75.37	352.9	11	47	0	21	22	-4		
CHANGCHUN	77.30	328.5	11	57A	-1	21	48	1	12 11	
PEKING	79.56	320.9	12	11A	1	22	14	3		
KUNMING	80.39	302.0	12	17A	3	22	26	6		
SIAN	80.66	312.7	12	18A	2	22	28	5		
CHENGTU	82.21	307.4	12	25A	1	22	41	2		12 44 *SP
PORT BLAIR	82.86	285.6	12	28	1	22	45	-1		15 38 PP
LANCHOW	85.14	311.9	12	40	1	23	13	5	12 55	23 3 SKS
BERKELEY	87.06	47.1	12	48K	0					13 41
UKIAH	87.07	45.7	12	50	2					
CALISTOGA	87.24	46.4	12	48K	-1					
PRIEST	87.30	49.3	12	48K	-1					
CHITTAGONG	88.05	294.9	12	55	2	23	41	5		16 26 PP
PASADENA	88.13	52.0	12	52	-1	23	34	-3		
SHILLONG	89.34	297.9	12	59A	0					
BOULDER CITY	91.40	51.6	13	8	-1					13 26
LHASA	91.69	301.2	13	12A	2					
LONGMIRE	91.88	39.7	13	10	-1					
EUREKA	92.15	48.1	13	11	-1					
COLLEGE	92.46	16.7	13	12	-2					30 26 PKKP
TUCSON	92.82	56.4	13	13	-2					
TUCSON TELE.	92.94	56.4	13	18	2					
BLUE MTS.	93.71	42.9	13	17	-2	24	27	0		17 3 PP
CHATRA	93.71	297.3	13	14	-5	23	54	-33		
BOKARO	93.72	294.1	13	39	20					17 14 PP
PENTICTON	94.43	38.2	13	21	-2					
MADRAS	94.68	282.1	13	30	6	24	35	0		16 59 PP
TIKSI	97.58	347.8	13	35	-2					
GOLDEN	99.74	51.2	13	45	-2					14 44
SANTA LUCIA	100.10	132.2								25 17
POONA	102.30	285.1	14	0	2					
NEW DELHI	102.60	295.8								17 23
WICHITA MTS.	103.25	57.8	14	5	3	24	40	-2		18 15 PP
BOMBAY	103.34	285.1	14	9	6	24	44	1		
TULSA	105.78	57.3	17	40	777	24	52	-2		27 46 PS
MANHATTEN	106.06	53.8	18	35	777					
MOULD BAY	106.73	13.6	14	16	777					18 26 PKP
HUANCAYO	107.50	111.2	18	52	777					
ROLLA	109.30	56.1	19	6	777					
LA PAZ	111.35	118.9	14	43	-232					28 48
QUETTA	111.64	294.9	18	43	7					
TASHKENT	112.08	307.0	18	39	2					30 10
RESOLUTE	112.38	16.6	18	35	-2					
CHINCHINA	114.38	94.6	18	41	0					
BOGOTA	115.68	95.6								19 50 PP
ALERT	116.35	6.7	18	44	-1					
HERMANUS	117.41	207.0								27 1 SKKS
PENNSYLVANIA	120.47	54.7	18	51K	-2					
OTTAWA	122.18	49.4	18	53	-3					
CHILEKA	122.21	233.5	19	3	6					
BREBEUF	123.65	49.2	18	56	-3					
BULAWAYO	123.67	224.7	19	1K	2					
SHIRAZ	123.85	291.7	19	0	0					
SHAWINIGAN	124.19	47.9	18	58	-2					
CARACAS	124.37	92.2	19	2	1					20 46 PP
TEHERAN	125.38	298.9	19	0	-3					20 54 PP
SCHEFFERVLLE	126.69	37.2	19	3	-2					
APATITY	127.10	340.7	19	6	0	26	20	8		22 42 PKS
SAN JUAN	127.38	83.2	19	5	-2					22 22 SKP
BROKEN HILL	127.75	229.6	19	10	3					
SODANKYLA	129.20	342.7	19	9	-1					
GORIS	129.41	303.6	18	58	-12	26	6	-12		23 48 PPP
TRINIDAD	129.54	94.3	19	10	-1					21 20 PP
TIFLIS	130.40	306.6	19	11	-1					22 39 PKS
KIRUNA	130.44	345.4	19	8	-4					22 34 PKS

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.

HALIFAX	130.80	49.5	19	13K	0						
FORT FRANCE	131.04	89.3	19	14	0					22	41 SKP
KAJAANI	131.12	339.1	19	12	-2					22	37 SKP
MOSCOW	131.41	326.2	19	35	21					23	7 PKS
PULKOVO	132.82	333.5	19	20	3					21	45 PP
NURMIJARVI	134.57	336.8	19	13	-7					22	48 SKP
HELSINKI	134.68	336.3	19	12	-8						
SKALSTUGAN	135.85	345.9	19	15	-7						
SIMFEROPOL	137.39	313.2	19	27	2	26	41	7		22	11 PP
UPPSALA	137.47	339.8								22	42 PKS
KSARA	138.15	296.5	19	29	2	26	39	3		22	26 PP
JERUSALEM	138.82	293.5	19	38	10						
GOTEBORG	140.95	341.5	19	26	-6						
LUANDA	141.83	219.0	19	34	1						
ISTANBUL UN.	142.17	309.2	19	29A	-5					22	35 PP
COPENHAGEN	142.47	339.3	19	35	1						
KRAKOW	143.48	327.4	19	34	-2					19	42 PKP2
RACIBORZ	144.31	328.6	19	36	-2						
SOFIA	145.47	314.5	19	42	2						
BUDAPEST	145.55	324.5	19	42	2					20	47
HURBANOVO	145.74	325.7	19	44	4					22	12
COLLMBERG	145.75	334.2	19	40K	0					22	7 PP
HALLE	146.01	335.4	19	45	5					23	10 PKS
PRUHONICE	146.08	331.4	19	42A	1					41	34 SS
BRATISLAVA	146.11	326.9	19	43A	2					19	52 PKP2
BELGRADE	146.25	319.6	19	44	3					23	6 PP
VIENNA-H.	146.43	327.6	19	45	4						
JENA	146.60	335.1	19	44	3					23	14 PP
DURHAM	146.69	351.2	19	46K	4						
WITTEVEEN	146.70	341.6	19	45	3						
CHEB	146.94	333.4	19	44	2					20	9
ATHENS	147.01	306.4	19	44A	2					20	6
KASPERSKE H.	147.13	331.1	19	45	3					22	4
MUNSTER	147.15	339.9	19	46	4						
BANGUI	147.25	241.8	19	43	0				19 56		
DE BILT	147.77	342.5	19	51	8						
BENSBERG	148.16	339.4	19	48A	4						
FELDBERG	148.35	337.3	19	56	12						
LJUBLJANA	148.84	326.1	19	49A	4						
STUTTGART	149.22	334.8	19	49	3					23	40
TUBINGEN	149.50	334.8	19	52	6						
TRIESTE	149.51	326.3	19	52A	6						
KEW	149.66	348.1	19	48	2						
RAVENSBURG	149.87	333.3	19	52	5						
STRASBOURG	149.96	336.2	19	52	5					22	32
WELSCHBRUCH	150.62	337.6	19	53	5					20	20
PADOVA	150.62	327.8								20	20
PARIS	151.48	342.7	19	57	8						
BESANCON	151.73	336.8	19	56	6					21	4
PAVIA	152.08	330.4	19	53	3					29	55 SKKS
FLORENCE X.	152.08	326.0	19	53A	3					23	37 PP
FOLINIERE	152.25	346.5	19	56	6						
ROME	152.67	321.7	19	53K	2	26	53	-4		23	37 PP
GARCHY	152.69	340.5	19	58	7					23	50 PP
ROSELEND	152.78	334.1	19	59	8					20	40
MESSINA	152.81	312.1	19	50	-1	26	52	-5	19 58	23	38 PP
BAGNERES	157.38	340.5	20	14	17					21	1
PONTA DELGDA	159.26	37.4	20	4	4						
TOLEDO	161.49	345.6	20	1	-1					24	31 PP
ALMERIA	163.86	338.0	20	8K	4					24	44 PP
GRANADA	163.92	341.5								20	42
MALAGA	164.57	343.1	20	4A	-1	27	6	-2		24	49 PP
M.BOUR	169.89	137.4	20	12	3					21	27 PKP2

DECEMBER 22 1.H 28.M 45.S EPICENTRE -21.98 170.05 DEPTH= 0.KM

A=-0.91424 B= 0.16039 C=-0.37207 D= 0.1728 E= 0.9850
G= 0.3665 H=-0.0643 K=-0.9282 HT= 4.2

SE= 2.17

	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
NOUMEA	3.35	263.8	0	54A	0							
PORT VILA	4.53	338.6	1	12	1							
KOUMAC	5.56	283.6	1	25K	-1	2	34	3				
KARAPIRO	16.59	164.6	3	58	3							

BRISBANE	16.59	247.6	3	53	-2					5	46
CHATEAU	17.80	165.9	4	11	1						
AFIAMALU	19.04	68.1	4	25	-1						
WELLINGTON	19.65	169.4	4	34	1						
RIVERVIEW	20.42	230.6	4	42K	1					5	1 PP
CANBERRA	22.70	229.6	5	6	2	9	13	5		5	21 *SP
PORT MORESBY	25.30	296.0	5	29	0						
TOOLANGI	26.27	228.3	5	38K	0					6	24 PP
SAVANNAH	27.50	219.0	5	50	1						
MOORLANDS	27.96	217.8	5	54	0						
TARRALEAH	28.29	218.8	5	49	-8						
DARWIN	38.57	277.7	7	26	0						
DUMONT	48.60	195.4	8	45	-2						
MATUSIRO	65.51	332.2	10	45K	-2					12	1 PCP
SOUTH POLE	68.16	180.0	11	2	-2						
HONG KONG	70.01	305.3	11	22	7						
ZO-SE	70.58	316.8	11	18	0						
CHANGCHUN	77.27	328.5	11	56A	-1						
PEKING	79.53	320.9	12	10	0						
KUNMING	80.36	302.0	12	16	2						
SIAN	80.63	312.7	12	30A	14						
CHENGTU	82.18	307.4	12	25	1						
LANCHOW	85.11	311.9	12	40	1						
CHITTAGONG	88.02	294.9	12	54	1	23	17	-19	13 4	16	22 PP
MINERAL	88.75	45.3	12	56	0						
SHILLONG	89.31	297.9	12	58A	-1						
CHINA LAKE	89.32	50.8	12	58	-1						
BOULDER CITY	91.39	51.6	13	9	0						
LHASA	91.66	301.2	12	42	-28						
EUREKA	92.14	48.1	13	12	0						
COLLEGE	92.43	16.7	13	11	-2					30	27 PKKP
BLUE MTS.	93.70	42.9	13	18	-1					30	24 PKKP
WICHITA MTS.	103.24	57.8								30	3 PKKP
FAYETTEVILLE	107.08	57.5								19	20
OTTAWA	122.17	49.4	18	56	0						
BULAWAYO	123.69	224.7	19	1	2						
SHIRAZ	123.82	291.7	19	0A	0						
SHAWINIGAN	124.19	47.9	18	59	-1						
SAN JUAN	127.40	83.2	19	7	0						
TRINIDAD	129.56	94.3	19	12	1						
LWIRO	135.14	242.5	19	27	6						
RACIBORZ	144.27	328.6	19	36	-1						
COLLMBERG	145.71	334.2	19	40	0						
HALLE	145.97	335.4	19	42	2					21	36
PRUHONICE	146.04	331.4	19	42K	2						
BRATISLAVA	146.08	326.9	19	42	1					20	5 PKP2
BELGRADE	146.22	319.6	19	42K	1					20	1 PKP2
VIENNA-H.	146.39	327.6	19	45	4					21	23
JENA	146.56	335.1	19	44	3					21	31
DURHAM	146.65	351.2	19	46A	4						
WITTEVEEN	146.67	341.6	19	45	3						
CHEB	146.90	333.4	19	45	3					20	20
ATHENS	146.98	306.5	19	43K	1						
KASPERSKE H.	147.09	331.1	19	45	3					21	36
MUNSTER	147.12	339.9	19	46	4						
BANGUI	147.25	241.8	19	43	0			19	54		
BENSBERG	148.13	339.4	19	48A	4						
LJUBLJANA	148.80	326.2	19	50A	5						
STUTTGART	149.19	334.8	19	50	4						
TURINGEN	149.46	334.8	19	52	6						
DOURBES	149.68	341.3	19	55	9						
STRASBOURG	149.92	336.2	19	49	2						
WELSCHBRUCH	150.58	337.6	19	54	6						
PARIS	151.45	342.7	19	45	-4						
BESANCON	151.70	336.8	19	56	7						
FOLINIERE	152.22	346.5	19	58	8						
GARCHY	152.65	340.5	19	58	7						
ROSELEND	152.74	334.1	20	1	10					20	41
TOLEDO	161.46	345.6	20	2	0					20	47 PKP2

DECEMBER 22 1.H 59.M 49.S EPICENTRE -9.20 112.46 DEPTH= 47.KM

A=-0.37711 B= 0.91244 C=-0.15886 D= 0.9242 E= 0.3820
G= 0.0607 H=-0.1468 K=-0.9873 HT= 6.6

DEPTH OF FOCUS= 0.002R

SE= 2.16

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
DJAKARTA	6.33	297.9	1 34	1	2 44	-1		
TANGERANG	6.51	297.1	1 36	0	2 53	3		
DARWIN	18.32	101.6	4 13	1	7 25	-7		
NHATRANG	21.52	351.3	4 39	-8				
PERTH	22.85	172.6	5 6	6	9 17	15		5 50 PP
MUNDARING	22.92	171.8	4 59	-2	8 59	-4		
MANILA	25.21	19.9	5 27	4	9 43	1		
CANTON	32.10	1.5			11 34	1		
PORT MORESBY	34.23	93.2	6 44A	1				
CHARTERS TS.	34.38	112.2	6 45K	0				
KUNMING	35.40	344.7	6 56	3	12 29	5		7 18 *SP
CHITTAGONG	37.32	327.4	7 10	1	12 52	-1	6 30	8 43 PP
MADRAS	38.91	304.0	7 23K	0	13 16	-1		
SHILLONG	39.95	330.4	7 30K	-1				
CHENGTU	40.45	348.8	7 36	1	13 40	-1		
ZO-SE	40.93	11.5	7 41K	2	13 50	2		8 0 *SP
TOOLANGI	41.05	138.7	7 42A	2			7 57	9 41 PCP
NANKING	41.47	8.1	7 45K	1	13 58	2		
BRISBANE	42.10	120.9	7 52	3				
CANBERRA	42.26	133.6	7 50K	0			8 6	
RIVERVIEW	43.16	130.5	7 59K	1			8 14	
SIAN	43.34	355.7	8 0	1	14 25	2		8 22 *SP
LHASA	43.78	332.6	8 5K	2	14 31	2		
LANCHOW	45.74	350.2	8 20	2	15 0	2		8 43 *SP
POONA	47.01	306.0	8 28K	0	15 13	-3		
PEKING	49.10	3.8	8 45	0	15 45	0		
NEW DELHI	50.69	319.0			16 1	-6		
MATUSIRO	51.54	26.5	9 2	-1	16 25	6		
CHANGCHUN	54.06	11.5	9 21K	-1	16 51	-2		
LAHORE	54.52	319.7	9 23	-2	16 51	-8		
KARACHI	55.71	308.4	8 32	-62				
WILKES	57.07	180.9	9 41	-3	17 30	-3	9 52	17 55
ULAN-BATOR	57.08	355.6	9 43	-1				
ESEN BULAK	57.22	346.7	9 44	-1				
WARSAK DAM	57.89	320.0	9 48K	-2				
QUETTA	58.69	313.7	9 53K	-2	17 25	-29	10 8	12 1 PP
KHOROG	60.19	323.1	10 4K	-1	18 11	-3		
DUMONT	60.38	167.8	10 3	-4				
ANDIJAN	61.93	326.3	10 16K	-1	18 33	-3		
Y.-SAKHLINSK	62.12	23.0	10 20	2				
KARAPIRO	63.21	127.8	10 26	0				
TANANARIVE	63.41	253.5	10 28K	1				11 1
CHATEAU	63.43	129.2	10 27	0				
TASHKENT	64.03	325.0	10 30K	-1	19 0	-2		
SEMIPALATNSK	65.63	338.0	10 40	-1				
ASHKABAD	68.88	316.6	11 2	0				
VANNOVSKAYA	69.05	316.5	11 2	-1				
SHIRAZ	69.37	306.4	11 4K	-1	19 49	-18		39 13 PKPPKP
TEHERAN	72.77	311.8	11 24	-1	20 44	-2		
PETROPAVLOVK	73.36	27.1	11 29A	0				
CHILEKA	75.59	256.1	11 46	4				
GORIS	77.96	313.7	11 54K	-1	21 41	-2		
SVERDLOVSK	78.30	333.8	11 57A	0				
KIROVOBAD	78.41	314.7	11 57	0	21 46	-2		
TIFLIS	79.88	315.3	12 6	1	22 4	0		
SOUTH POLE	80.86	180.0	12 9	-2				
BULAWAYO	81.15	251.0	12 12K	0				
TIKSI	81.39	5.2	12 12K	-1				
BROKEN HILL	81.97	256.6	12 17K	1				
LWIRO	83.38	268.8	12 25K	2				
KIMBERLEY	83.62	242.0	12 24	-1				
SOTCHI	84.04	315.8	12 27A	0	22 45	-1		
KSARA	84.10	305.5	12 26	-1				
JERUSALEM	84.12	303.4	12 35K	8				
SIMFEROPOL	88.29	315.9	12 48	0	23 28	1		
MOSCOW	89.13	326.9	12 51K	-1	23 35	0		
ISTANBUL UN.	91.08	311.3	13 2K	1				
PULKOVO	93.94	329.8	13 14K	0				
APATITY	94.27	337.8	13 19	4				

BANGUI	94.47	273.7	13	17	1				14	13
VIBORG	94.86	330.6	13	17	-1	24	2P	3		
KAJAANI	95.91	333.9	13	23	0					
LWOW	95.94	319.4							18	24
HELSINKI	96.66	329.8	13	27	1					
SODANKYLA	96.82	337.1	13	26	-1					
NURMIJARVI	96.85	330.1	13	28A	1					
KEVO	96.99	339.5	13	27	-1					
KRAKOW	98.60	319.4	13	34	-1			13 43	17	34 PP
UMEA	99.17	333.3	13	38	0					
KIRUNA	99.22	337.4	13	38A	0					
UPPSALA	100.31	329.3	13	43A	0					
VIENNA-H.	100.84	317.4							17	11
PRUHONICE	102.06	319.2							18	0 PP
COLLEGE	102.41	25.5	13	51	-1				18	8 PP
KASPERSKF H.	102.70	318.3							17	58 PP
SKALSTUGAN	102.72	333.2	13	54A	0					
JENA	103.94	320.2							18	14 PP
STUTTGART	105.55	318.0	18	27	777					
MOULD BAY	107.49	11.4	14	15	777					
ROSELEND	107.58	315.0	18	42	777					
RESOLUTE	112.72	7.6	18	33A	2					
YELLOW KNIFE	116.94	22.4	18	40A	0					
LONGMIRE	120.79	40.5	18	49	2					
PENTICTON	121.15	37.1	18	50	2					
BANFF	122.64	33.8	18	52A	1					
CALISTOGA	122.81	49.8	18	54K	3					
MINERAL	123.05	47.6	18	54K	3					
BERKELEY	123.26	50.6	18	55A	3					
BLUF MTS.	124.42	41.2	18	55	1				20	47 PP
RENO	124.61	48.0	18	59A	5					
PRIEST	124.96	52.2	18	59K	4					
BUTTE	126.88	38.0	19	2	3				19	24
EUREKA	127.42	46.8	19	3	3					
PASADENA	127.46	53.9	19	3	3					
BOZEMAN	127.98	37.8	19	3	2					
BOULDER CITY	129.50	50.6	19	8	4				22	18 SKP
SALT LAKE C.	129.79	43.7	19	7	3					
M.BOUR	130.30	281.0	19	8	3				21	23 PP
TUCSON	133.90	53.7	19	16	4					
TUCSON TELE.	133.95	53.6	19	18	6					
SCHEFFERVLLE	134.50	359.4	19	16	3					
MANHATTEN	140.42	36.3	19	19	-5					
WICHITA MTS.	141.89	43.5	19	24	-3			19 49	22	28 PP
SHAWINIGAN	142.52	5.9	19	26	-2					
TULSA	143.02	39.7	19	28	-1					
OTTAWA	143.25	9.6	19	28	-1					
BREBEUF	143.46	7.2	19	29K	0					
FAYETTEVILLE	143.89	38.1	19	30	0					
ROLLA	143.97	33.7	19	29	-1					
FLORISSANT	144.12	31.1	19	30	-1					
DALLAS	144.19	44.6	19	32	1					
LONDON ONT.	144.24	17.2	19	32A	1					
ST. LOUIS 1	144.31	31.2	19	31	0					
HALIFAX	144.55	355.1	19	32K	1					
CLEVELAND	145.56	18.7	19	36	3					
BLOOMINGTON	145.65	26.6	19	36K	3					
ANTOFAGASTA	147.18	175.1	19	41	5					
PENNSYLVANIA	147.22	14.6	19	39A	3					
PALISADES	147.82	9.1	19	43	6					
FORDHAM	147.98	9.1	19	43	6					
GEORGETOWN	149.22	14.6	19	42	3					
BLACKSBURG	149.78	20.7	19	42	2					
AREQUIPA	154.21	171.3	19	50	4					
SAN JUAN	170.77	351.5	20	5	3				21	23
CHINCHINA	170.95	117.1	19	54K	-9					
BOGOTA	172.08	124.7	20	7	4					
TRINIDAD	173.78	283.9	20	8	4				25	47 PP
CARACAS	178.57	334.9	20	3A	-2				25	51 PP

DECEMBER 22 15.H 20.M 25.S EPICENTRE 52.46-168.83 DEPTH= 0.KM

A=-0.60029 B=-0.11853 C= 0.79095 D=-0.1937 E= 0.9811
G=-0.7760 H=-0.1532 K=-0.6119 HT= -6.3

SE= 2.46

	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	16.44	32.8	3	54	1	7	7	11				
PETROPAVLOVK	19.61	284.6	4	32K	0						8	23 SS
SITKA	19.75	63.3	4	36	2	8	21	10				
MAGADAN	23.35	303.7	5	11A	1							
VICTORIA	28.79	79.5	6	2	1							
YELLOWKNIFE	29.93	49.0	6	9	-3							
MOULD BAY	30.33	21.1	6	14	-1							
LONGMIRE	30.56	81.7	6	17	0	11	5	-14				
PENTICTON	30.72	75.9	6	18	0							
UGLEGORSK	30.76	283.6	6	19K	0	11	22	0			7	16 PP
Y.-SAKHLINSK	31.29	279.7	6	23	-1						7	26 PP
KIPAPA	32.09	160.8	6	31	0				6	42		
HONOLULU	32.19	161.0	6	30	-1	11	43	-1	6	43		
BANFF	32.35	70.6	6	33	0							
TIKSI	32.83	328.8	6	36A	-1	11	40	-14				
UKIAH	33.90	94.7	6	42	-4	12	14	3				
MINERAL	34.14	91.6	6	49K	1							
BLUE MTS.	34.23	81.8	6	47	-2	12	17	1			8	10 PP
CALISTOGA	34.59	94.8	6	51K	-1							
HAWAII V.OR.	34.62	157.1	6	53	1	12	27	5				
BERKELEY	35.27	95.6	6	57K	-1	12	33	1			8	11 PP
RENO	35.73	91.3	6	4A	-58							
RESOLUTE	36.15	25.7	7	5	0							
BUTTE	36.47	77.1	6	58	-10	12	48	-3			9	19 PCP
MIZUSAWA	36.60	269.0	7	10	1	12	51	-2				
PRIEST	37.37	96.4	7	17K	1							
BOZEMAN	37.56	76.7	7	18	1	13	3	-4				
EUREKA	38.11	88.3	7	24	2							
TUKUBASAN	39.08	266.2	7	28A	-2	13	26	-4			8	56 PP
SALT LAKE C.	39.85	83.7	7	34	-2	13	49	7				
VLADIVOSTOK	39.86	280.9	7	35A	-2							
MATUSIRO	40.03	268.1	7	37A	-1	13	44	-1				
PASADENA	40.21	96.6	7	40	1	13	37	-10				
ALERT	40.43	11.2	7	41A	0	13	33	-17				
BOULDER CITY	41.03	91.7	7	49	3							
THULE	42.09	20.3	7	55	0							
ABUYAMA	42.74	268.4	8	0A	0						8	25
CHANGCHUN	43.37	285.9	8	4A	-1							
KHEYS	44.63	350.2	8	16A	0						18	41 SSS
NORD	45.35	5.5	8	21	0							
TUCSON	45.99	92.4	8	28	2	15	23	11				
TUCSON TELE.	46.00	92.2	8	27	1							
ALBUQUERQUE	46.83	86.3	8	32	-1						10	11 PP
GODHAVN	49.77	25.0	8	57K	1							
IRKUTSK	49.86	306.6	8	56A	-1						10	50 PP
MANHATTEN	50.00	75.0	9	0K	2	16	5	-3				
LUBROCK	50.57	84.2	9	5	3							
PEKING	51.07	287.6	9	5A	-1	16	25	2			16	37 *SS
ULAN-BATOR	51.22	300.8	9	6A	-1							
CHIHUAHUA	51.44	92.0	9	11	2						14	50
WICHITA MTS.	51.77	80.7	9	10	-1	16	31	-2			10	52 PP
TULSA	52.65	77.7	9	16	-2	16	37	-8				
FAYETTEVILLE	53.48	76.4	9	21K	-3	16	56	0				
ROLLA	53.61	73.2	9	22	-3	16	50	-8				
GUAM	53.61	241.1	9	23	-2							
ST. LOUIS 1	54.09	71.4	9	26	-2	16	59	-5				
ZO-SE	54.12	275.8	9	28A	0	17	6	1			17	19 *SS
DALLAS	54.15	81.1	9	30	1							
PAOTOW	54.25	292.0	9	29A	0	17	8	2				
NANKING	54.90	278.4	9	33A	-1	17	15	0			17	29 *SS
SCORESBY SD.	55.06	12.9	9	35	0	17	28	11				
SCHEFFERVLLE	55.17	43.6	9	35K	-1							
BLOOMINGTON	55.86	68.5	9	39	-2	17	23	-5				
LONDON ONT.	56.20	61.8	9	42K	-2							
OTTAWA	57.46	56.6	9	50	-3							
KEVO	57.54	353.5	9	52	-1	17	58	8			12	3 PP
ESEN BULAK	57.68	305.3	9	54	0							
TROMSOE	58.09	356.8	9	56	-1							
SHAWINIGAN	58.14	53.9	9	55	-2							
BREBEUF	58.45	55.3	9	57K	-3	17	58	-4			13	32 PPP
APATITY	59.15	350.2	10	4K	0	18	7	-4			12	17 PP
SIAN	59.24	287.2	10	4A	-1	18	14	2			18	27 *SS
PENNSYLVANIA	59.53	61.7	10	6K	-1							
KIRUNA	59.83	355.9	10	8	-1	18	22	2				
SODANKYLA	59.93	353.2	10	10	0	18	54	33			39	38 PKPPKP
BLACKSBURG	60.67	66.3	10	13	-2	18	28	-3				

LANCHOW	60.89	292.1	10	16A	0	18	40	6			
PALISADES	61.49	59.1	10	25	5	18	41	0	20	9	SCS
FORDHAM	61.62	59.2	10	25	4	18	43	0			
SEMIPALATNSK	62.10	317.4	10	23A	-2				19	2	PS
TACUBAYA	62.47	93.7	10	21	-6				10	58	
KAJAANI	63.09	351.9	10	30	-1				39	33	PKPPKP
SVERDLOVSK	63.76	332.2	10	35K	-1						
UMEA	63.84	355.5	10	35A	-1	19	8	-3			
HALIFAX	63.97	50.1	10	37A	0						
SKALSTUGAN	64.30	359.4	10	38	-1				11	10	PCP
VERA CRUZ	64.50	91.4	10	35	-5				20	41	
CHENGTU	64.69	287.8	10	41A	-1	19	21	0	19	35	*SS
CANTON	64.71	275.4	10	41A	-1	19	23	1	19	36	*SS
HONG KONG	64.79	274.2	10	42	0	19	25	2	11	12	PCP
RABAUL	65.37	223.7	10	37	-9						
AFIAMALU	66.14	183.1	11	0	9	19	29	-10	22	47	SS
MANILA	66.38	263.3	10	52	0				25	55	
NURMIJARVI	66.86	352.8	10	54	-2	19	50	2	20	54	SCS
PULKOVO	67.06	349.6	10	56A	-1				11	24	PCP
HELSINKI	67.18	352.6	10	57	-1						
HONIARA	67.20	213.7	11	0	2	19	48	-4			
BERGEN	67.39	3.2	11	0	1						
UPPSALA	67.92	356.5	11	1	-1	20	2	1	11	28	PCP
KONGSBERG	68.24	0.8	11	4	0						
KUNMING	69.57	284.8	11	12A	0	20	22	2	20	35	*SS
MOSCOW	69.98	344.4	11	14A	-1				20	34	PS
ABERDEEN	70.19	7.6				20	42	15	28	51	
GOTEBORG	70.20	359.5	11	16A	0						
FRUNSE	70.45	315.7	11	18A	0				13	59	PP
KARLSKRONA	71.68	357.4	11	20	-5						
PORT MORESBY	72.19	226.1	11	26K	-2	20	46	-5			
COPENHAGEN	72.22	359.2	11	31	3	20	58	7			
DURHAM	72.61	7.7	11	35K	4	20	49	-6	11	57	PCP
LHASA	72.81	296.2	11	33A	1	21	0	2	21	14	*SS
ANDIJAN	73.12	315.9	11	34A	0						
TASHKENT	73.93	318.3	11	37A	-1				14	22	PP
WITTEVEEN	75.02	2.8	11	47	2						
WARSAW	75.35	353.8	11	46A	-1	21	38	12	11	57	PCP
DE BILT	75.69	3.8	11	49	0	21	35	5			
MUNSTER	75.90	2.3	11	50	0						
KEW	75.99	7.4	11	50	0	21	41	8	22	19	
KHOROG	76.20	314.6	11	52A	1						
HALLE	76.41	359.5	11	53	0	21	47	9			
COLLMBERG	76.60	358.8	11	53	-1	21	56	16			
BENSBERG	76.90	2.6	11	56A	1	22	10	27			
JENA	76.98	359.7	11	56	0	21	54	10		27	25 SS
CHATRA	77.13	297.2	11	57A	0	21	46	1			
HOPE	77.19	77.2	12	1	4						
KRAKOW	77.60	354.2	12	0	1	21	54	3		12	15 PCP
RACIBORZ	77.66	355.4	11	59	-1					15	5 PP
DOURRES	77.66	4.3	12	1	1	22	7	16			
FELDBERG	77.67	1.8	12	13	13						
CHEB	77.83	359.2	12	1	1	22	9	16		14	33
PRUHONICE	77.90	357.8	12	1A	0	21	59	5		15	9 PP
CHITTAGONG	78.05	291.0	12	2	0	21	51	-4	12 17	15	2 PP
HEIDELBERG	78.50	1.6	12	5	1						
FOLINIERE	78.66	7.8	12	4	-1						
KASPERSKE H.	78.77	358.4	12	6	0						
PARIS	78.84	5.8	12	6	0						
DEHRA DUN	79.07	305.9	12	10A	3	22	18	12			
WARSAK DAM	79.11	312.7	12	6	-1						
STUTTGART	79.13	1.3	12	8	0	22	10	3			
STRASBOURG	79.30	2.3	12	9K	0	22	16	7		27	55 SS
TUBINGEN	79.37	1.4	12	10	1						
WELSCHBRUCH	79.42	3.3	12	12	3						
VIENNA-H.	79.57	356.5	12	11	1	22	28	16			
BRATISLAVA	79.62	356.0	12	10A	0					12	24 PCP
EBINGEN	79.72	1.5	12	12	1						
KISHINEV	79.75	347.8	12	11	0					22	34
LAHORE	79.87	309.3	12	13	1	22	12	-3		22	17 SKS
HURBANOVO	79.87	355.2	12	4	-8					14	55 PP
RAVENSBURG	80.13	1.1	12	14	1						
BUDAPEST	80.21	354.6	12	14	1					15	30 PP
BASLE	80.34	2.5								27	15
GARCHY	80.40	5.6	12	13A	-1					17	29
BESANCON	80.57	3.6	12	15	0					12	43
KIZYL-ARVAT	80.66	326.1	12	18A	2					12	25 PCP
NEUCHATEL	80.85	2.9	12	19	2						
NEW DELHI	80.92	305.5	12	15A	-2	22	28	2		15	17 PP

SIMFEROPOL	80.98	343.7	12	18A	0	22	36	10	12	20 PCP
CHUR	81.06	1.1	12	19	1				24	35
TIFLIS	81.78	335.2	12	23	1				22	44 SCS
LJURLJANA	81.83	357.6	12	22A	0				12	36 PCP
CLERMONT-FD.	81.91	5.7	12	22	0					
ZAGREB	82.01	356.6	12	26	3	22	50	13		
CHARTERS TS.	82.11	222.1	12	21	-2	22	32	-6		
ROSELEND	82.15	3.2	12	27	3					
TRIESTE	82.24	358.2	12	24A	0	22	52	13	32	14 SSS
PADOVA	82.51	359.5	12	25	0					
RALROA HTS.	82.53	85.1	12	30	4					
DARWIN	82.68	238.9	12	26	0					
PAVIA	82.72	1.4							37	0
BELGRADE	82.77	353.4	12	28	1				12	41 PCP
SAN JUAN	83.11	68.9	12	27	-2	22	48	0		
GORIS	83.45	333.4	12	32A	2				15	44 PP
CHIAVARI	83.59	1.3				23	11	18	13	40
GALERAZAMBA	83.71	80.6				22	54	0		
MONACO	84.13	2.7	12	35	1					
FLORENCE X.	84.14	359.9	12	24A	-10				24	1
BAGNERES	84.37	8.1	12	34	-1				14	21
QUETTA	84.40	314.0	12	35	0	23	1	0	12 50	15 46 PP
PONTA DELGDA	84.62	28.5	12	38	2	23	11	8		28 55 SS
SOFIA	84.64	351.0	11	37	-59					14 29 PP
SERRA PILAR	85.22	14.9	12	40A	1	23	0	-9	12 51	16 0 PP
TITOGRAD	85.23	354.0	12	39	0					15 37 PP
TEHERAN	85.42	328.2	12	41	1	23	8	-3		
ISTANBUL UN.	85.60	346.6	12	42A	1	23	15	2		
PORT BLAIR	85.94	283.7	12	46K	3	23	6	-10		15 52 PP
ROME	86.01	359.0	12	45A	2					24 43 PPS
COIMBRA	86.16	14.9	12	45K	1	23	24	6	12 55	
BRISBANE	86.30	213.6	12	49	4	23	10	-10		
ANTIGUA	86.52	66.4	12	52	6					
TOLEDO	87.09	11.7	12	49A	1	23	23	-4		16 14 PP
LISBON	87.49	15.8	12	59	9	24	1	30		
ST. CLAUDE	87.49	66.9	13	5	15	23	33	2		
CHINCHINA	88.06	84.4	12	46K	-7	23	27	-9		
FUQUENE	88.81	82.6	12	55	-2					22 39
FORT FRANCE	88.85	67.2	12	58	1	23	47	3		
CARACAS	88.90	74.3	12	57A	0	23	23	-21		
ALICANTE	89.00	9.1	13	1	3					
ATHENS	89.28	350.1	12	59	0	23	27	-21		
HYDERABAD	89.44	298.3	12	58A	-2	23	23	-26		27 51 SS
GRANADA	89.81	11.7	13	1K	0	24	1	9		17 0 PP
MALAGA	90.16	12.5	13	3A	0	23	51	-5		16 41 PP
SHIRAZ	90.60	324.9	13	4A	-1	23	40	-20	13 18	16 42 PP
POONA	90.95	302.5	13	7A	0	23	38	-25		16 46 PP
KSARA	91.41	339.6	13	6	-3					25 25 PS
TRINIDAD	92.00	69.8	13	11	-1					
MADRAS	92.11	294.4	13	13	1	23	45	-28		25 35
RIVERVIEW	92.76	212.4	13	16A	1	23	48	-31		25 33 PS
WELLINGTON	94.44	192.3				23	59	-34		30 3 PKKP
CANBERRA	94.84	213.4	13	32	7	24	38	2		13 35 PCP
KODAIKANAL	95.88	295.0				24	3	-3		
ADELAIDE	98.34	221.2	13	46	6	24	15	-3		31 49 SS
ROXBURGH	99.35	195.4				24	19	-4		25 15 S
AREQUIPA	107.32	94.5								18 50 PP
M.BOUR	109.13	28.9				25	16	8		19 1 PP
BANGUI	123.02	351.1								20 38 PP
DUMONT	124.93	202.2	18	42	-20					20 46
LWIRO	127.85	337.5	19	10	2					15 55 P
WILKES	133.12	213.1	19	44	26					22 4
TANANARIVE	136.16	305.8	19	28	5					22 8 PP
CHILEKA	138.74	323.9	19	27	-1					
BROKEN HILL	139.65	333.6	19	24	-5					
SOUTH POLE	142.27	180.0	19	32	-2					
BANDEIRA	142.49	356.6	19	35	1				19 52	22 48 PP
BULAWAYO	145.01	330.6	19	39A	0					
KIMBERLEY	154.25	331.6	19	47	-6					
HERMANUS	161.06	339.1								25 0 PP

DECEMBER 26 8.H 58.M 9.S EPICENTRE 39.32 -10.74 DEPTH= 10.KM

A= 0.76216 B=-0.14450 C= 0.63105 D=-0.1863 E=-0.9825
G= 0.6200 H=-0.1175 K=-0.7757 HT= -1.4

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	
LISBON	1.37	115.3									0	32	P*
COIMBRA	1.98	62.9	0	37A	2	1	0	0					
SERRA PILAR	2.44	41.4	0	41K	0	1	9	-2					
TOLEDO	5.19	81.7	1	21A	1	2	16	-5			1	33	P*
MALAGA	5.63	115.4	1	26K	0								
GRANADA	6.01	108.6	1	33K	1	2	33	-9			2	12	PS
AVERROES	6.57	155.0	1	37	-3	2	45	-11					
ALMERIA	6.97	108.1	1	47	2	3	8	2			2	25	PG
ALICANTE	8.06	93.7	1	58	-2	3	24	-9			2	31	PG
TORTOSA	8.75	76.5	2	6	-4	3	44	-6					
BAGNERES	9.02	62.0	2	12	-2	3	47	-10					
JERSEY	11.63	29.2									3	44	
PONTA DELGDA	11.82	267.0	2	48	-4	4	52	-13					
FOLINIERE	11.98	34.6	2	53	-1								
CLERMONT-FD.	12.08	53.2	2	56	0	5	5	-7					
GARCHY	12.81	47.1	3	3K	-2	5	17	-12					
PARIS	13.42	40.7	3	9	-4						8	0	
KEW	14.17	27.5	3	24	1	5	51	-11					
BESANCON	14.51	51.5	3	27	-1						3	57	
NEUCHATEL	15.00	53.5	3	34	0								
WELSCHBRUCH	15.28	48.0	3	45	7						4	53	
DOURBES	15.30	40.2	3	36	-2	6	13	-15					
BASLE	15.61	52.3	3	42	0						7	43	
CHIAVARI	15.75	65.0	3	51	7	6	43	4			8	11	
PAVIA	15.85	61.9									9	3	
STRASBOURG	16.19	49.1	3	49	-1	6	41	-8			4	3	PP
CHUR	16.58	56.4	3	56	1	7	30	32					
DURHAM	16.65	18.8	4	6K	11	7	6	6			7	35	
EBINGEN	16.73	51.6	3	59	3								
DE BILT	16.89	35.6	3	51	-7	7	12	7					
TUBINGEN	16.94	50.6	4	1A	2								
FLORENCE X.	17.04	67.7	4	21	21						7	31	
BENSBERG	17.13	41.3	4	1	0	6	50	-21			4	18	PP
HEIDELBERG	17.13	47.6	4	1	-1								
STUTTGART	17.17	50.1	4	2	0	7	21	9					
ROME	17.81	74.2				7	40	14			8	45	
WITTEVEEN	18.05	35.9	4	15	2								
ABERDEEN	18.74	14.7				7	53	6			8	29	SS
TRIESTE	19.10	62.7	4	27	1	8	5	10					
JENA	19.48	46.1	4	30	0	8	9	5			4	45	PP
CHEB	19.56	49.1	4	36	5								
LJUBLJANA	19.70	61.8	4	33A	0	8	14	5			4	56	PP
KASPERSKE H.	19.92	52.6	4	41	6								
HALLE	19.95	44.9	4	35	-1	8	26	12					
MESSINA	20.51	84.8	4	41K	0				4	50	5	5	PP
ZAGREB	20.66	63.0	4	46	3						12	24	
PRUHONICE	20.81	50.9	4	44A	0						8	34	
VIENNA-H.	21.42	56.5	4	50	-1						5	13	PP
BRATISLAVA	21.87	57.0	4	53A	-2								
COPENHAGEN	22.49	35.7	5	2	1	9	21	18					
BUDAPEST	23.00	59.5	5	6	0						5	25	PP
RACIBORZ	23.07	52.7	5	6	-1								
GOTEBORG	23.57	31.2	5	13	1	9	32	10					
BELGRADE	23.71	66.4	5	14	1						9	10	PCP
KONGSBERG	24.08	25.7	5	14	-3	9	46	15			5	56	PP
KRAKOW	24.14	53.5	5	17	0								
KARLSKRONA	24.21	37.2	5	31	13								
SIDA	24.88	352.3	5	29	4								
UZHGOROD	25.36	57.6	5	29	0								
M.BOUR	25.44	194.2	5	39	9	9	57	3					
REYKJAVIK	25.71	348.7	5	37K	4								
SOFIA	25.83	71.4	5	34	0						6	13	PP
ATHENS	26.85	81.9									10	21	
UPPSALA	27.21	31.6	5	45	-1	10	33	10					
SKALSTUGAN	27.90	22.0	5	57	4								
ISTANBUL UN.	30.22	73.8	6	14K	1	11	43	31					
NURMIJARVI	30.54	34.3	6	15	-1								
UMEA	30.62	26.6	6	16	-1								
VIBORG	32.47	35.7	6	32A	-1								
KIRUNA	33.30	21.0	6	41	1								
KAJAANI	33.50	29.7	6	42	0								
SODANKYLA	34.87	24.3	6	53	-1								
MOSCOW	35.72	46.4	7	0	-1								
KEVO	36.38	21.0	7	6	-1								
APATITY	37.21	26.3	7	14K	0								
KSARA	37.51	83.5	7	17	1	12	33	-32			8	24	PP

JERUSALEM	37.81	86.9	7	21	2						
TIFLIS	41.67	68.2	7	52	1						
EREVAN	41.89	70.5	7	53A	0						
NORD	42.47	358.7	7	56	-1						
KIROVOBAD	43.08	69.2	8	2A	0						
GORIS	43.44	70.8	8	6	1	14	33	0			
BANGUI	43.78	135.0	8	7	-1				8	17	
BREBEUF	45.79	299.2	8	25A	1						
ALERT	46.45	351.8	8	29	0						
PALISADES	47.36	293.4				15	36	7			
KHEYS	48.04	11.9	8	43	1						
SVERDLOVSK	48.44	44.1	8	43	-2						
GEORGETOWN	50.38	291.9	9	1	1						
RESOLUTE	51.00	340.1	9	5K	0						
SAN JUAN	51.96	262.9	9	13	1						
SHIRAZ	52.09	80.2	9	13A	0	16	34	-1	9	30	11 23 *PPP
VANNOVSKAYA	52.56	68.2	9	15	-1						
LWIRO	55.03	129.1	9	24K	-10						
MOULD BAY	56.40	344.2	9	44	0						
BLOOMINGTON	56.95	296.0	9	48A	0						
DUBUQUE	58.33	301.2	9	58A	0						
RANDEIRA	58.42	352.5	9	59K	0						
TASHKENT	58.91	60.0	10	3	1						
ST. LOUIS 1	59.79	297.0	10	6	-2						
FLORISSANT	59.81	297.2	10	7	-1						
DUZHANBE	59.83	63.1	10	9	1						
ROLLA	61.30	297.0	10	18	0						
SEMIPALATNSK	61.55	46.7	10	20	0						
YELLOW KNIFE	61.80	329.2	10	19	-3						
QUETTA	62.68	72.2	10	27K	-1				11	5	PCP
MANHATTEN	63.84	300.3	10	33	-2						
WARSAK DAM	64.04	66.3	10	35	-2						
BROKEN HILL	64.79	137.4	10	40	-2						
TULSA	64.99	296.8	10	17	-26						
TIKSI	65.72	13.0	10	46A	-1						
LAHORE	67.32	67.2	10	58	0						
WICHITA MTS.	67.56	297.1	10	59	0				39	41	PKPPKP
GOLDEN	69.32	304.7	11	10	0						
BOZEMAN	69.36	312.5	11	11	1						
BUTTE	70.02	313.5	11	15	1						
COLLEGE	70.85	342.1	11	20	1						
NEW DELHI	71.04	68.3	11	11K	-10						
PENTICTON	71.77	319.3	11	25A	0						
ESEN BULAK	72.62	43.9	11	31	1						
SALT LAKE C.	72.73	308.7	11	31	0						
ALBUQUERQUE	72.76	301.2	11	32	1						
BLUE MTS.	73.37	314.6	11	33	-1						
YAKUTSK	74.08	18.2	11	38A	0						
EUREKA	76.00	309.7	11	51	1						
ULAN-BATOR	77.00	37.7	11	58	3						
TUCSON TELE.	77.17	301.2	11	58	2						
TUCSON	77.30	301.2	11	59	2						
RENO	78.22	311.7	12	1K	-1						
MINERAL	78.71	313.3	12	4K	-1				12	36	
HUANCAYO	78.77	244.3	12	7	2						
CALISTOGA	80.42	312.5	12	16A	2						
PASADENA	80.80	306.7	12	17	1						
PRIEST	80.99	309.6	12	19A	2						
SHILLONG	83.22	62.6	12	28K	0						
SOUTH POLE	129.13	180.0	19	14	5						
PORT MORESBY	144.25	39.5	19	37	0						
CHARTERS TS.	152.45	52.6	19	59	9						

DECEMBER 26 22.H 25.M 11.5 EPICENTRE 54.11 168.78 DEPTH= 0.KM

A=-0.57763 B= 0.11460 C= 0.80821 D= 0.1946 E= 0.9809
G=-0.7928 H= 0.1573 K=-0.5889 HT= -6.9

SE= 2.75

	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
KLYUCHI	5.04	299.3	1	21	2	2	17	-2				
PETROPAVLOVK	6.13	263.9	1	33A	-1	2	40	-6			2	19
MAGADAN	11.24	306.2	2	46A	1						5	14
OKHA	15.25	278.4	3	43	5							
UGLEGORSK	17.29	264.0	4	6A	1						7	25 SS

Y.-SAKHLINSK	17.94	257.4	4	13A	0	7	32	1	8	41	PCP
NEMURO	18.63	244.1	4	17	-4	7	41	-6			
ABASHIRI	18.87	247.7	4	21A	-3	7	58	6			
WAKKANAI	19.44	254.5	4	31A	0	8	11	6			
KUSIRO	19.50	245.2	4	28	-3	8	2	-4			
ASAHIGAWA	20.07	249.8	4	40	2				5	59	
OBIHIRO	20.19	246.8	4	36	-3						
RUMOE	20.38	251.2	4	32	-9						
URAKAWA	20.94	245.8	4	45	-2						
SAPPORO	21.10	249.7	4	47A	-2	8	41	2			
TOMAKOMAI	21.26	248.5	4	46	-4						
MURORAN	21.80	248.6	4	54	-2						
YAKUTSK	21.82	306.9	4	54A	-2	8	48	-5			
SUTTSU	21.90	250.6	4	55	-2						
MORI	22.17	248.8	4	57	-2	9	3	3			
HAKODATE	22.27	247.9	4	59	-1						
AOMORI	22.94	246.1	5	6	-1	9	18	4			
MIYAKO	23.15	242.3	5	9	0	9	18	1			
MORIOKA	23.54	243.5	5	12A	-1	9	25	1			
MIZUSAWA	23.98	242.6	5	17	0	9	34	2			
COLLEGE	24.00	46.2	5	19	2	9	34	2	38	50	PKPPKP
AKITA	24.09	245.1	5	34	16	9	40	6			
ISINOMAKI	24.40	241.2	5	21A	0	9	38	-1			
TIKSI	24.53	330.7	5	25A	3	9	40	-1	9	8	PCP
SENDAI	24.74	241.6	5	24	0	9	42	-3	16	25	SCS
SAKATA	24.83	244.1	5	30	5						
YAMAGATA	25.04	242.3	5	27	0	10	14	24			
HUKUSIMA	25.35	241.4	5	29	-1						
ONAHAMA	25.74	239.6	5	30	-4	10	36	34			
SHIRAKAWA	25.96	240.8	5	39	3						
NIIGATA	25.97	243.6	5	22	-14						
AIKAWA	26.32	244.8	5	32	-7						
MITO	26.40	239.4	5	42	2						
UTUNOMIYA	26.58	240.5	5	42	0	10	23	8			
KAKIOKA	26.67	239.6	5	43	0	9	17	-60			
TUKUBASAN	26.72	239.7	5	41A	-2	10	14	-4	6	20	PP
TAKADA	27.00	243.5	5	30	-16						
MAEBASI	27.10	241.4	5	44	-3	11	3	39			
KUMAGAYA	27.14	240.6	5	55	8	11	4	39			
TOKYO C.M.O.	27.31	239.4	5	49	1	10	25	-2			
NAGANO	27.35	242.9	5	49	0	11	4	36			
TITIBU	27.42	240.8	5	48	-1						
OIWAKE	27.43	242.0	5	49	-1	10	56	27			
MATUSIRO	27.44	242.7	5	49A	-1	10	19	-10			
WAZIMA	27.51	245.6	6	1	11	11	0	29			
YOKOHAMA	27.56	239.2	5	52	1	11	18	47			
MATUMOTO	27.79	242.6	5	53	0						
TOYAMA	27.86	244.3	5	57	4	11	12	36			
MERA	27.87	238.3							6	26	
KOHU	27.93	241.0	6	8	14	11	19	42			
HUNATU	27.95	240.5	6	5	11	11	20	42			
AJIRO	28.14	239.5	5	55	-1						
MISIMA	28.16	239.8	5	53	-3	11	23	42			
IIDA	28.42	241.8	6	1	2				6	32	
SHIZUOKA	28.56	240.3	6	9	9	9	54	-53			
GIHU	29.07	243.0	5	59	-5						
NAGOYA	29.14	242.5	6	17	12				7	0	PP
TSURUGA	29.25	244.3	6	17	11						
HIKONE	29.44	243.5	6	28	20	11	13	11			
KAMEYAMA	29.65	242.7	6	26	16	11	45	40			
CHANGCHUN	29.88	267.9	6	10A	-2	11	5	-4			
KYOTO	29.91	243.9	6	25	13	11	54	45			
ABUYAMA	30.11	243.9	6	13A	-1	11	10	-2			
NARA	30.11	243.3	6	15	1						
OSAKA	30.29	243.6	6	16	1	11	18	3			
OWASE	30.39	242.1	5	57	-19	11	17	0			
WAKAYAMA	30.81	243.6	6	26	6						
SUMOTO	30.86	244.0	6	15	-5	11	22	-2			
YONAGO	30.87	247.3	6	29	9						
SITKA	30.99	61.5	6	22	1	11	30	4	7	51	
MATSUE	31.01	247.7	6	35	13						
SIOMISAKI	31.10	241.9	6	23	1	11	28	0			
TAKAMATU	31.33	245.1	6	26	2	11	29	-2			
HAMADA	31.97	248.1	6	27	-3	11	53	12			
MUROTO	32.09	243.6	6	17	-14				15	55	
HIROSIMA	32.17	247.1	6	31	-1						
KOTI	32.20	244.8	6	32	0	11	44	-1			
ASHIZURI	33.12	244.4	6	47	7	11	53	-6			
OOITA	33.47	246.6	6	45	2						

FUKUOKA	33.88	248.5	6	53	6	12	11	0		
MOULD BAY	34.05	24.0	6	49A	1	12	14	0		
SAGA	34.17	248.2	6	32	-17					
KUMAMOTO	34.28	247.2	6	49	-1					
NAGASAKI	34.79	248.1	6	55A	0	12	26	1		
KAGOSIMA	35.32	246.0	6	47	-12	12	50	17		
YAKUSIMA	36.22	244.9	7	6	-1	12	47	0		
IRKUTSK	37.47	294.3	7	17A	0				8	43 PP
PEKING	37.59	270.0	7	17A	-1	13	5	-3	8	44 PP
ULAN-BATOR	38.30	286.8	7	25A	1					
YELLOW KNIFE	38.82	46.1	7	27K	-2					
KHEYS	40.26	346.3	7	42A	1	13	47	-2	9	25 PP
RESOLUTE	40.37	24.1	7	42K	1					
PAOTOW	40.85	275.5	7	45A	0				17	51 SCS
ZO-SE	40.88	255.4	7	45A	-1	13	57	-1		
KIPAPA	41.19	129.2	7	48	0					
ALERT	41.19	9.0	7	49	1	14	0	-2		
HONOLULU	41.25	129.4	7	49	0	14	6	3		
VICTORIA	41.27	69.0	7	50K	1					
NANKING	41.55	258.7	7	50A	-1	14	3	-5	17	52 SCS
PENTICTON	42.88	65.9	8	2K	0					
LONGMIRE	43.18	70.2	8	4K	0	14	30	-2		
BANFF	43.98	61.5	8	10K	-1					
HAWAII V.OB.	44.18	127.3	8	13	1	14	55	9		
NORD	44.50	1.1	8	14A	-1					
ESEN BULAK	45.11	291.3	8	20A	0					
SIAN	45.76	269.5	8	24A	-1					
BLUE MTS.	46.83	69.6	8	33K	-1	15	24	0	10	29 PP
UKIAH	47.19	79.4	8	37	1	15	32	3	10	22 PP
MINERAL	47.32	77.1	8	37K	0					
TAITUNG	47.38	247.9	8	52	14				11	48
LANCHOW	47.50	275.3	8	39A	0	15	33	-1	10	31 PP
CALISTOGA	47.89	79.5	8	42K	0					
BERKELEY	48.60	80.0	8	47K	0	15	49	0	8 55	10 40 PP
BUTTE	48.67	65.5	8	41	-7	15	49	-1	10	49 PP
LICK	49.32	80.1	8	53K	0				9	13
BOZEMAN	49.71	64.9	8	56	0	16	4	-1	11	6 PP
PRIEST	50.71	80.5	9	2K	-2					
SEMIPALATNSK	50.90	304.5	9	3A	-2	16	18	-3		
EUREKA	51.11	74.1	9	7	0	16	21	-3		
CHENGTU	51.21	270.1	9	7A	0	16	24	-2	18	55 SCS
CANTON	51.48	255.8	9	9A	0	16	28	-1	18	59 SCS
HONG KONG	51.63	254.4	9	10A	-1	16	25	-6	11	13 PP
SALT LAKE C.	52.54	70.1	9	18	1	16	44	0	11	26 PP
GODHAVN	53.13	17.4	9	21	-1					
KEVO	53.37	344.4	9	23A	-1	16	53	-2	11	29 PP
PASADENA	53.56	80.4	9	24	-1	16	57	-1		
MANILA	54.06	242.1	9	29	0	17	9	5		
APATITY	54.17	340.6	9	29A	-1	17	5	-1		
BOULDER CITY	54.19	76.4	9	30	0	17	8	2	10	1
TROMSOE	54.64	347.5	9	33	0					
SVERDLOVSK	54.95	320.4	9	35K	0	17	16	0	11	37 PP
SCORESBY SD.	55.48	4.4	9	41	2	17	18	-5		
SODANKYLA	55.58	343.3	9	40	0	17	22	-3	11	31 PP
KUNMING	56.08	266.6	9	43A	0	17	30	-2	19	22 SCS
KIRUNA	56.12	346.1	9	43A	-1	17	30	-2	19	35 SCS
GOLDEN	56.83	66.8	9	49	0	17	44	3		
ALMATA-2	57.22	299.7	9	51K	-1					
KAJAANI	58.36	341.1	9	59	-1	17	59	-3		
FRUNSE	58.93	301.1	10	3A	-1	18	9	0	13	43 PPP
TUCSON TELE.	59.17	76.5	10	5	0					
TUCSON	59.17	76.6	10	5	0	18	16	4		
LHASA	59.57	279.4	10	8A	0	18	18	1	19	55 SCS
ALBUQUERQUE	59.66	71.4	10	9	0					
RABAUL	59.73	199.3	10	14	5					
UMEA	59.90	344.5	10	9A	-1	18	18	-4	10	51 PCP
SKALSTUGAN	61.23	348.3	10	18A	-1					
PULKOVO	61.70	337.6	10	22A	-1	18	43	-2	10 30	12 42 PP
REYKJAVIK	61.81	5.3	10	24A	1					
MANHATTEN	61.85	61.4	10	23	-1	19	40	54		
SHILLONG	62.13	275.7	10	23A	-2	18	46	-4	13	23 PP
SCHEFFERVLLE	62.20	32.7	10	25K	-1					
NURMIJARVI	62.21	340.9	10	25A	-1	18	49	-2	12	40 PP
DUBUQUE	62.32	55.2	10	26	-1					
HELSINKI	62.46	340.6	10	29	1					
LAWRENCE	62.71	60.7	10	27	-2	18	54	-3		
TASHKENT	62.72	303.3	10	30A	1	18	57	0	10 39	12 47 PP
LUBBOCK	63.24	69.2	10	32	-1	19	5	1		

MOSCOW	63.43	331.6	10 33A	-1					11 8	PCP
HONIARA	63.73	189.7	10 34	-2						
CHATRA	63.92	280.2	10 34A	-3	19 8	-4			12 51	PP
UPPSALA	64.07	344.3	10 37A	-1	19 11	-3				
WICHITA MTS.	64.15	66.1	10 38K	-1	19 16	1			19 34	PS
KHOROG	64.50	299.0	10 41A	0	19 18	-2				
CHIHUAHUA	64.59	75.9	11 13	31	19 49	28			23 3	
CHITTAGONG	64.61	273.4	10 41	-1	19 18	-3	10	51	13 5	PP
TULSA	64.74	63.3	10 41	-2	19 21	-2			20 32	
DUZHANRE	65.07	301.6	10 42A	-3	19 22	-5				
BERGEN	65.08	351.0	10 45	0						
ROLLA	65.23	59.3	10 42K	-4	19 25	-4				
FLORISSANT	65.31	57.6	10 44K	-2	19 26	-4				
KONGSBERG	65.37	348.5	10 47	0	19 41	11			13 27	PP
FAYETTEVILLE	65.44	62.1	10 45K	-2	19 21	-10				
ST. LOUIS 1	65.50	57.7	10 46	-1						
PORT MORESBY	65.86	203.5	10 50A	0	19 31	-5				
LONDON ONT.	66.32	48.8	10 52	-1						
DEHRA DUN	66.45	289.4	10 52A	-2	19 37	-7			13 14	PP
OTTAWA	66.74	43.8	10 53	-2						
BLOOMINGTON	66.90	54.8	10 56K	0	19 48	-1				
SHAWINIGAN	66.97	41.3	10 55A	-2						
GOTEBORG	66.97	346.7	10 56A	-1						
ROKARO	67.01	279.1	10 57A	0	19 48	-2				
WARSAK DAM	67.15	296.6	10 55A	-3						
CLEVELAND	67.41	50.0	10 59K	-1	19 52	-3				
BREBEUF	67.50	42.4	10 59K	-1	19 52	-4			20 57	SCS
LAHORE	67.55	292.9	10 59	-2	19 53	-4	11	9	13 33	PP
KARLSKRONA	67.92	344.2	11 0A	-3						
NEW DELHI	68.26	288.8	11 0A	-5	19 56	-9			24 2	SS
ABERDEEN	68.84	354.7	11 10A	1	20 15	3			13 49	PP
COPENHAGEN	68.86	345.9	11 9A	0	20 13	1				
PENNSYLVANIA	69.58	48.0	11 12K	-1						
HOUSTON	69.72	67.3	11 21	7						
AFIAMALU	69.75	159.8	10 58	-16	20 19	-4			24 43	SS
ASHKABAD	70.58	308.2	11 21	2						
WARSAW	70.68	339.7	11 20A	0	20 32	-2			13 56	PP
PALISADES	71.11	45.3	11 20	-2	20 32	-7			21 20	SCS
DURHAM	71.20	354.1	11 24K	1	20 39	-1			21 28	SKS
FORDHAM	71.25	45.4	11 22	-1	20 39	-1				
BLACKSBURG	71.36	52.0	11 23	-1	20 39	-3				
LWOW	72.29	336.9	11 30	1	20 53	1			16 4	PPP
WITTEVEEN	72.41	348.7	11 32A	2						
PORT BLAIR	72.46	265.6	11 30A	0	20 50	-4			13 57	PP
SEHORE	72.53	285.3	11 30	-1						
QUETTA	72.56	297.3	11 30A	-1	20 51	-4	11	40	14 10	PP
KRAKOW	72.96	339.6	11 33	0	20 59	-1			14 16	PP
HALLE	73.00	345.1	11 35	1	21 0	0				
CHAPEL HILL	73.04	51.8	11 33	-1						
MUNSTER	73.13	347.9	11 35	1						
TIFLIS	73.18	319.6	11 36	1	21 3	1			14 18	PP
RACIBORZ	73.28	340.7	11 35	0	21 7	3			14 20	PP
DE BILT	73.28	349.5	11 36A	1	21 7	3			21 49	PS
JENA	73.61	345.2	11 37	0	21 6	-1			14 22	PP
DARWIN	73.65	218.8	11 36	-1						
KISHINEV	73.68	332.7	11 38A	0	21 8	0			14 15	PP
PRAGUE	73.98	343.1	11 39	0					14 35	PP
SIMFEROPOL	74.03	328.3	11 40A	0	21 12	0			14 27	PP
PRUHONICE	74.05	343.0	11 41	1	21 10	-2			14 27	PP
BENSBERG	74.18	348.0	11 41A	1	21 7	-7			14 24	PP
CHEB	74.31	344.5	11 48	7						
KEW	74.40	352.9	11 42A	0	21 16	0			14 28	PP
KOUMAC	74.46	184.4	11 41A	-1						
GORIS	74.48	317.3	11 43A	1	21 19	2			14 29	PP
FELDBERG	74.74	347.0	11 59	15						
KASPERSKE H.	75.03	343.4	11 46A	1						
DOURBES	75.32	349.5	11 41	-6	21 23	-3				
BRATISLAVA	75.32	340.8	11 47A	0	21 29	3			14 47	PP
VIENNA-H.	75.38	341.3	11 28A	-19						
HURBANOVO	75.39	340.0	11 51	4	21 12	-15			12 7	PCP
HEIDELBERG	75.51	346.7	11 49	1						
TEHERAN	75.55	311.8	11 49	1	21 29	0				
BUDAPEST	75.60	339.3	11 48	-1	21 33	4			13 48	
TACUBAYA	75.69	76.8	11 50	1	21 29	-1				
STUTTGART	76.05	346.2	11 52	1	21 34	0			14 40	PP
HYDERABAD	76.27	280.7	11 52A	0	21 33	-4			14 41	PP
TUBINGEN	76.31	346.3	11 53	0						
CHARTERS TS.	76.39	201.7	11 52	-1	21 34	-4				

STRASBOURG	76.44	147.2	11	54	1	21	39	0			14	48 PP
EBINGEN	76.67	346.3	11	55	0							
TIMISOARA	76.76	337.3	11	56	1	21	47	5			22	2 PS
KARACHI	76.78	294.0	11	53	-2							
WELSCHBRUCH	76.79	348.1	11	56	1							
PARIS	76.81	350.7	11	57	2						12	53
RAVENSBURG	76.97	345.7	11	57	1							
BASLE	77.49	347.1	11	59A	0	22	16	26				
VERA CRUZ	77.60	74.5	12	3	3	21	53	2			40	10
ZAGREB	77.79	340.9	12	4	3	21	49	-4				
BELGRADE	77.82	337.5	12	3K	2	21	55	1			15	10 PP
LJUBLJANA	77.85	342.0	12	2A	1						15	3 PP
CHUR	77.89	345.6	12	3	2	21	51	-3				
BESANCON	77.97	348.1	12	2	0						12	23
POONA	78.04	284.9	12	0A	-2	21	50	-6			15	0 PP
NEUCHATEL	78.10	347.4	12	3	0							
GARCHY	78.27	350.1	12	4A	1	22	26	28			12	42
BOMBAY	78.33	285.9	12	2	-2	21	52	-7			14	58 PP
TRIESTE	78.37	342.4	12	5	1	21	56	-4			15	3 PP
PADOVA	78.93	343.6	12	9A	2	22	6	1			15	6 PP
DJAKARTA	79.11	243.3	12	17K	9	21	34	-33				
SOFIA	79.13	334.8	12	7	-1	22	1	-7			15	6 PP
ISTANBUL UN.	79.14	330.2	12	9A	1	22	11	3				
PAVIA	79.57	345.5	12	10A	-1	22	28	16				
CLERMONT-FD.	79.75	349.9	12	13	1	22	17	3				
MERIDA	79.83	68.5	12	19	7	22	13	-2				
SHIRAZ	80.15	307.6	12	13A	-1	22	15	-3			15	16 PP
TITOGRAD	80.35	337.6	12	15	0	22	21	1			12	49
CHIAVARI	80.39	345.2				22	12	-9				
FLORENCE X.	80.62	343.7	12	8	-8	22	9	-14			15	6 PP
MONACO	81.24	346.4	12	20	0							
COMITAN	82.22	73.2				22	49	9			13	4
ROME	82.23	342.4	12	26A	1	22	45	5	13	1	15	37 PP
BRISBANE	82.33	194.3	12	24	-1	22	42	1				
TARANTO	82.67	338.5	12	35	8	22	49	5				
BAGNERES	82.71	351.6	12	27	0						12	59
KSARA	83.45	322.1	12	30A	-1	23	0	8			15	45 PP
ATHENS	83.47	332.9	12	31A	0	22	49	-3			19	6
TORTOSA	84.91	351.1	12	40	2							
SERRA PILAR	85.11	358.0	12	40	1						15	59 PP
MESSINA	85.21	339.1	12	37K	-3	23	2	-8	12	47	15	57 PP
JERUSALEM	85.53	321.8	12	43A	2	23	19	6				
TOLEDO	86.18	354.5	12	46K	1	23	20	1			16	5 PP
ALICANTE	87.45	351.6	12	51	0	23	34	3			16	14 PP
GRANADA	88.85	353.9	13	10K	13	23	49	5			15	56 PP
RIVERVIEW	88.89	194.6	12	58	0	23	46	1			23	24 SKS
ALMERIA	89.10	353.0	12	57	-2	23	43	-3			16	32 PP
MALAGA	89.35	354.5	13	1A	1	23	45	-4			16	31 PP
CANBERRA	90.69	196.1	13	5	-1	24	2	1	13	15	30	5 SS
KARAPIRO	91.85	174.7	13	20	9							
ADELAIDE	92.44	204.3	13	21	7	24	14	-2			30	21 SS
TOOLANGI	93.49	198.3	13	22	3	24	28	2	13	33	16	52
SAN JUAN	93.91	51.1	13	21	0							
BALBOA HTS.	95.15	67.2	13	33	6						26	19
WELLINGTON	95.15	175.5				23	56	-6			24	36 S
PERTH	97.12	223.1	13	39	3	24	54	41			31	34 SS
ROXBURGH	99.21	179.6				24	19	-4			25	19 S
CARACAS	100.37	55.7	14	1	11	25	19	50				
CHINCHINA	100.60	66.1	13	56	5	24	26	-4			18	3 PP
FUQUENE	101.19	64.2				24	33	0			18	4 PP
BOGOTA	101.72	64.9				24	35	-1			18	18 PP
M.BOUR	111.61	6.0				25	24	5			19	22 PP
HUANCAYO	114.78	75.8									19	51
BANGUI	116.62	326.3	18	44	-2						19	53 PP
LWIRO	118.83	312.8	18	53	2						15	7 P
DUMONT	122.39	193.1									27	23
TANANARIVE	123.33	284.3	19	14	15							
CHILEKA	127.57	298.7	19	11	3							
WILKES	127.91	205.8									37	55 SS
BROKEN HILL	129.75	306.4	19	14K	2							
LUANDA	130.79	327.3									21	29 PP
BANDEIRA	136.42	324.4	19	19	-5						22	7 PP
BYRD STATION	139.78	165.1									23	5
KIMBERLEY	143.62	299.5	19	36K	-1							
SOUTH POLE	143.92	180.0	19	33	-5							
MAWSON	143.93	218.8	19	35A	-3						22	51 PP
GRAHAMSTOWN	146.26	292.5	19	14A	-28							
HERMANUS	150.98	300.3	20	10	21						38	57
ARGENTINE I.	151.90	134.4	19	57	7							

DECEMBER 26 23.H 25.M 11.S EPICENTRE 23.70 65.21 DEPTH= 0.KM

A= 0.38429 B= 0.83220 C= 0.39971 D= 0.9079 E=-0.4192
G= 0.1676 H= 0.3629 K=-0.9166 HT= 3.7

SE= 2.74

	DELTA DEG.	AZ. DEG.	P M	P O-C S	S M	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KARACHI	2.01	55.7	0	39 4							
QUETTA	6.64	13.1	1	40A -1							
BOMBAY	8.55	122.5	2	8 0					5	14	
POONA	9.56	120.9	2	19A -3							
SEHORE	10.91	90.4	2	20 -20	4	3 -41			2	48	PPP
LAHORE	11.24	43.9	2	42 -3	4	41 -11			2	51	*SP
WARSAK DAM	11.66	27.0	2	49 -1	4	55 -8					
NEW DELHI	11.81	63.2	2	49K -3	4	59 -7			2	59	PP
SHIRAZ	12.80	300.3	3	3K -3	5	20 -10			12	24	PCS
DEHRA DUN	13.20	57.3	3	9K -2	5	33 -7			3	14	PP
HYDERABAD	13.87	114.3	3	19K -1					6	18	SSS
TEHERAN	16.95	318.2	4	5 5							
KODAIKANAL	17.78	136.8	4	1 -9					9	11	
TASHKENT	17.90	10.0	4	12 0							
BOKAPO	18.85	85.5	4	29K 6	8	13 22			4	46	PP
CHATRA	20.10	76.5	4	37K -1	8	18 -1			4	59	PP
FRUNSE	20.61	20.0	4	44A 1							
GORIS	22.44	319.0	5	6 4					10	7	SSS
LHASA	23.80	70.0	5	18K 3	9	49 21					
SHILLONG	24.29	80.1	4	58A -22					9	44	
CHITTAGONG	24.51	87.8	5	24 2	9	41 1	5	33	6	1	PP
TIFLIS	24.75	321.4	5	28 4							
KSARA	27.54	298.1	5	55 5	11	27 57					
JERUSALEM	27.67	293.6	5	55 4							
SIMFEROPOL	32.98	317.7	6	40 2							
SVERDLOVSK	33.26	355.4	6	40 -1							
ESEN BULAK	33.69	40.0	7	10 25							
KUNMING	34.13	79.8	6	50A 2							
ISTANBUL KA.	34.79	308.6	6	55 0							
ISTANBUL UN.	34.83	308.5	6	56 2					7	3	
LANCHOW	35.45	60.7	7	0K 0							
MOSCOW	37.89	334.8	7	21A 1							
ATHENS	38.04	301.8	7	23A 1							
SOFIA	39.36	309.1	7	32 -1	13	31 -4			9	5	PP
SIAN	39.39	64.4	7	33K 0							
ULAN-BATOR	40.87	43.1	7	48 3							
PAOTOW	41.04	54.9	7	47 1							
BELGRADE	41.93	311.4	8	0 6					8	26	
NHATRANG	43.22	97.4	8	12 8							
PULKOVO	43.51	335.1	8	7 0					9	53	PP
LWIRO	43.82	238.9	8	13K 4							
KRAKOW	43.83	318.6	8	10 1							
MESSINA	44.47	301.0	7	43A -31					9	24	PP
RACIBORZ	44.90	318.1	8	16 -2					10	35	PPP
HONG KONG	44.91	81.6	8	18 0							
BRATISLAVA	45.04	315.2	8	19 0							
PEKING	45.62	56.6	8	25 1							
TANANARIVE	45.73	203.6	8	40 16					10	5	PCP
HELSINKI	45.89	333.3	8	25 -1							
NURMIJARVI	46.21	333.5	8	29 1					10	22	PP
LJUBLJANA	46.27	311.8	8	29 0			8	39	10	20	PP
PRUHONICE	47.13	317.1	8	36 1					9	58	
KAJAANI	47.26	338.6	8	36 -1					10	25	PP
KASPERSKE H.	47.54	315.7	8	39 0							
NANKING	47.67	67.5	8	40 0							
APATITY	48.06	344.2	8	43A 0					10	34	
KARLSKRONA	48.43	325.3	8	44 -2							
RANGUI	48.82	254.2	8	48 -1					10	37	PP
UPPSALA	48.92	330.4	8	48 -1					8	58	
CHILEKA	49.04	220.0	8	53 3							
JENA	49.20	317.7	8	52 0	16	13 16			10	37	PP
UMEA	49.77	335.8	8	54 -2					10	50	PP
SODANKYLA	49.77	341.6	8	56 0					10	56	PP
ZU-SE	49.80	68.6	8	55 -1							
CHUR	49.81	312.1	8	56A 0	15	43 -23					
RAVENSBURG	49.88	313.3	8	57 0							
COPENHAGEN	49.94	323.9	9	8K 11							
STUTTGART	50.25	314.5	9	0 0							
EBINGEN	50.37	313.7	9	0 -1							
HEIDELBERG	50.71	315.3	9	3 0							

GOTEBORG	50.82	326.3	9	3	-1						
FELDBERG	51.02	316.3	9	6	1						
BASLE	51.21	312.7	9	7A	0						
STRASBOURG	51.21	314.1	9	6	-1			9	14	10	12
KEVO	51.29	344.0	9	7A	-1						
NEUCHATEL	51.58	312.0	9	10	0						
MUNSTER	51.83	318.4	9	13	1						
KIRUNA	51.92	340.1	9	13	1						
BENSBERG	51.94	317.0	9	13A	0					9	45
WELSCHBRUCH	52.13	313.7	9	9	-5			9	17		
BROKEN HILL	52.23	227.2	9	15K	0						
BESANCON	52.26	312.2	9	14	-1			9	23		
KONGSBERG	52.60	328.2	9	18	1			9	21	10	53 PP
CHANGCHUN	52.66	52.1	9	17	-1						
SKALSTUGAN	52.80	333.4	9	19	0						
MANILA	53.25	89.0	9	29	7						
TROMSOE	53.40	341.6	9	23	0						
DOURBES	53.45	315.7	9	24	0						
CLERMONT-FD.	54.14	310.3	9	29	0					9	52
GARCHY	54.24	312.1	9	29A	-1			9	37	10	4
PARIS	54.72	314.0	9	32	-1			9	41	10	0
BAGNERES	56.28	307.0	9	47	3				9 57		
KEW	56.68	317.1	9	46	-1						
KHEYS	57.08	358.6	9	50	0					10	43 PCP
YAKUTSK	57.42	30.3	9	51A	-1						
DURHAM	57.65	320.9	10	3K	9	17	45 -7				
TOLEDO	59.67	303.5	10	7A	-1					12	16 PP
MATUSIRO	63.08	59.7	10	30K	-1					11	16 PCP
BANDEIRA	63.60	238.2	10	36A	1				10 44		
KIMBERLEY	65.08	218.9	10	44K	0						
NORD	65.52	350.8	10	45	-2						
GRAHAMSTOWN	67.61	214.4	10	30	-30						
ALERT	71.18	353.7	11	22	0						
MUNDARING	73.76	136.5	11	36	-2				11 45		
M.BOUR	77.32	280.2	11	52	-6						
MOULD BAY	80.26	1.1	12	13K	-1						
RESOLUTE	81.02	354.7	12	18K	0						
PORT MORESBY	86.44	101.8	12	47A	2						
COLLEGE	88.09	13.5	12	53	0						
CHARTERS TS.	90.14	111.8	13	3	0						
ADELAIDE	90.82	128.0	13	7	1				13 15		
YELLOW KNIFE	94.11	359.9	13	20	-1						
TOOLANGI	96.87	127.9	13	43	9						
BUTTE	110.58	358.4	19	5	31						
BLUE MTS.	111.74	1.9	14	49	-227					19	21 PP
MINERAL	115.96	5.8	18	47K	2						
SAN JUAN	116.72	307.0	19	19	33						
EUREKA	117.14	1.0	18	50	3						
WICHITA MTS.	119.90	344.6	18	54	2					20	6 PP
BOULDER CITY	120.64	0.0	19	1	7						
TUCSON TELE.	124.14	355.8	19	4	3						
TUCSON	124.24	355.9	19	4	3						

DECEMBER 26 23.H 46.M 15.S EPICENTRE 53.99 168.81 DEPTH= 44.KM

A=-0.57926 B= 0.11463 C= 0.80704 D= 0.1941 E= 0.9810
G=-0.7917 H= 0.1567 K=-0.5905 HT= -6.9

DEPTH OF FOCUS= 0.002R

SE= 1.68

	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	
KLYUCHI	5.11	300.3	1	16	0						2	24	
PETROPAVLOVK	6.14	265.0	1	28A	-2	2	33	-7					
MAGADAN	11.32	306.7									2	50	
OKHA	15.28	278.9	3	34	0						6	30	
UGLEGORSK	17.29	264.4	4	2A	2						7	21	SS
Y.-SAKHLINSK	17.93	257.8	4	37	29	7	21	-2					
YAKUTSK	21.90	307.1	4	50A	-1						8	52	PCP
MIZUSAWA	23.94	242.9	5	14	3	9	27	6					
COLLEGE	24.07	46.0	5	14	2								
TIKSI	24.64	330.8	5	20A	2						8	44	
MATUSIRO	27.41	242.9	5	44A	1	10	51	32					
CHANGCHUN	29.89	268.1	6	4	-2	11	0	1					
ABUYAMA	30.07	244.1	6	7A	0								

MOULD BAY	34.15	23.9	6 43	U	12	9	4		
PEKING	37.61	270.2	7 12	U	13	1	3		
ULAN-BATOR	39.35	287.0	7 20A	2					
KHEYS	40.38	346.3	7 38A	3				9 39	PPP
RESOLUTE	40.47	24.0	7 37A	1					
ZO-SF	40.87	255.6	7 40A	1					
PAOTOW	40.88	275.6	7 40A	1					
MIPAPA	41.10	129.1	7 43	2					
HONOLULU	41.17	129.3	7 43	1	13	53	1		
VICTORIA	41.29	68.8	7 45A	2					
ALERT	41.30	9.0	7 44A	1					
NANKING	41.55	258.8	7 45A	U					
PENTICTON	42.91	65.8	7 57A	1					
LONGMIRE	43.20	70.1	8 0	2				11	59
BANFF	44.02	61.4	8 5A	U					
HAWAII V.OB.	44.10	127.3	8 7	1					
NORD	44.62	1.1	8 9	-1					
ESEN BULAK	45.17	291.4	8 15	1					
SIAN	45.77	269.6	8 20A	1					
BLUE MTS.	46.86	69.5	8 28A	1	15	18	4	10	11 PCP
UKIAH	47.20	79.3	8 34	4					
MINERAL	47.33	77.0	8 32A	1				8	46
LANCHOW	47.53	275.4	8 34A	1	15	28	4		
CALISTOGA	47.90	79.4	8 36A	U					
BERKELEY	48.60	79.9	8 42A	1				10	18
BUTTE	48.70	65.4	8 45	3				10	47 PP
RENO	48.89	76.6	8 45A	2					
LICK	49.32	80.0	8 47A	0				10	20
BOZEMAN	49.74	64.9	8 51	1					
PRIEST	50.72	80.4	8 58A	1					
EUREKA	51.13	74.0	9 1	1					
CHENGTU	51.23	270.3	9 2	1					
CANTON	51.47	255.9	9 4A	1					
HONG KONG	51.61	254.5	9 5	1	16	26	6		
KEVO	53.48	344.5	9 17A	-1					
PASADENA	53.56	80.4	9 19	0					
BOULDER CITY	54.20	76.4	9 24	1					
APATITY	54.29	340.6	9 23K	-1					
TROMSOE	54.75	347.6	9 28	1					
SVERDLOVSK	55.05	320.4	9 30	1					
SCORESBY SD.	55.59	4.4	9 34	1					
SODANKYLA	55.69	343.3	9 33A	-1					
KUNMING	56.09	266.7	9 38A	1	17	26	5		
KIRUNA	56.23	346.1	9 38A	0					
GOLDEN	56.86	66.8	9 44	1					
ALMATA-2	57.29	299.8	9 47K	1					
KAJAANI	58.47	341.1	9 54A	0					
FRUNSE	59.01	301.1	9 58A	0					
TUCSON TELE.	59.18	76.4	10 0	1					
TUCSON	59.18	76.6	9 59	0					
LHASA	59.60	279.5	10 4A	2	18	14	7		
ALBUQUERQUE	59.69	71.4	10 3	1				11	1 PCP
UMEA	60.01	344.5	10 4A	0					
SKALSTUGAN	61.35	348.3	10 13	-1					
PULKOVO	61.81	337.6	10 17A	0					
MANHATTEN	61.89	61.4	10 20A	3					
REYKJAVIK	61.92	5.3	10 19K	2					
SHILLONG	62.16	275.8	9 59A	-20					
SCHEFFERVLLE	62.29	32.6	10 19A	-1					
NURMIJARVI	62.32	340.9	10 20A	0				12	12
DUBUQUE	62.38	55.1	10 20A	0					
NHATRANG	62.49	251.9	10 22	1					
HELSINKI	62.57	340.6	10 22A	0					
LAWRENCE	62.75	60.7	10 20	-3					
TASHKENT	62.79	303.4	10 25A	2					
LUBBOCK	63.26	69.2	10 27	1	19	1	8		
MOSCOW	63.54	331.6	10 30	2				10	38
CHATRA	63.96	280.3	10 29A	-2	19	3	1		
UPPSALA	64.18	344.3	10 32A	0					
WICHITA MTS.	64.18	66.1	10 32A	0				39	20 PKPPKP
CHITTAGONG	64.64	273.5	10 36	1	19	12	2	10 45	12 59 PP
TULSA	64.78	63.3	10 36	0	19	14	2		20 28
DUZHANBE	65.14	301.7	10 37A	-1	19	17	1		
BERGEN	65.20	351.1	10 40	1					
ROLLA	65.28	59.3	10 38A	-1					
FLORISSANT	65.36	57.6	10 39	-1					
FAYETTEVILLE	65.48	62.1	10 40A	-1					
KONGSBERG	65.48	348.6	10 42	1				11	12 PCP

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ST. LOUIS 1	65.55	57.6	10 41	0						
PORT MORESBY	65.76	203.5	10 42K	0						
LONDON ONT.	66.38	48.8	10 46	0						
OTTAWA	66.81	43.8	10 47	-2						
BLOOMINGTON	66.95	54.8	10 51	1						
SHAWINIGAN	67.04	41.2	10 50A	-1						
GOTEBORG	67.08	346.7	10 51A	0						
WARSAK DAM	67.22	296.6	10 51A	-1						
BREBEUF	67.58	42.4	10 53A	-1						
LAHORE	67.61	293.0	10 54	0	19 49	3	11 4			
KARLSKRONA	68.04	344.2	10 56A	-1						
NEW DELHI	68.31	288.9	10 52A	-7						
COPENHAGEN	68.98	345.9	11 4A	1						
PENNSYLVANIA	69.65	48.0	11 7A	0						
PALISADES	71.17	45.3	11 15	-1						
BLACKSBURG	71.41	52.0	11 17	0						
LWOW	72.40	336.9	11 25	2						
WITTEVEEN	72.52	348.7	11 27	3						
QUETTA	72.63	297.4	11 25	0	20 48	3	11 36	14	5	PP
KRAKOW	73.08	339.6	11 29	2				14	10	PP
CHAPEL HILL	73.10	51.8	11 28	1						
HALLE	73.11	345.1	11 29	2				14	3	PP
MUNSTER	73.25	348.0	11 30	2						
TIFLIS	73.27	319.6	11 31	3						
RACIBORZ	73.40	340.7	11 29	0				11	50	PCP
JENA	73.72	345.2	11 32	1				14	10	PP
KISHINEV	73.79	332.7	11 33A	2				13	9	
SIMFEROPOL	74.14	328.3	11 35A	2						
PRUHONICE	74.16	343.1	11 35	1				14	15	PP
BENSBERG	74.29	348.1	11 35	1				12	25	
KEW	74.52	353.0	11 37A	1						
GORIS	74.58	317.4	11 37A	1				14	25	PP
FELDBERG	74.86	347.1	11 54	16						
KASPERSKE H.	75.15	343.5	11 40	1						
DOURBES	75.43	349.6	11 42	1						
BRATISLAVA	75.44	340.9	11 43A	2						
VIENNA-H.	75.50	341.4	11 44	3				12	13	
HEIDELBERG	75.62	346.7	11 43	1						
TEHERAN	75.63	311.8	11 45	3	21 27	8				
STUTTGART	76.16	346.2	11 44	-1						
CHARTERS TS.	76.29	201.8	11 46K	0				12	7	
STRASBOURG	76.55	347.2	11 49	2				12	30	
EBINGEN	76.78	346.3	11 51	2						
KARACHI	76.84	294.0	11 50	1						
PARIS	76.92	350.8	11 51	2						
RAVENSBURG	77.08	345.8	11 51	1						
BELGRADE	77.93	337.6	12 3K	8				22	56	PPS
LJUBLJANA	77.96	342.0	11 57A	2				12	17	
CHUR	78.00	345.6	12 0	5						
POONA	78.08	285.0	11 55A	-1						
BESANCON	78.09	348.1	11 56	0				12	37	
GARCHY	78.38	350.1	11 59A	2				12	27	
SOFIA	79.24	334.8	12 3	1						
ISTANBUL UN.	79.25	330.2	12 4K	2						
CLERMONT-FD.	79.87	349.9	12 8	2						
SHIRAZ	80.24	307.6	12 9A	2	22 11	3				
MONACO	81.36	346.5	12 15	2						
BRISBANE	82.22	194.3	12 19	1						
BAGNERES	82.83	351.6	12 23	2				12	56	
ATHENS	83.58	332.9	12 25K	0						
SERRA PILAR	85.23	358.0	12 34K	1				12	38	PCP
JERUSALEM	85.63	321.8	12 37	2						
TOLEDO	86.30	354.5	12 41	3						
CANBERRA	90.58	196.1	13 0A	1			13 11			
ADELAIDE	92.34	204.3	13 9	2			13 19			
TOOLANGI	93.39	198.4	13 13	1						
BANGUI	116.72	326.3	18 37	-2						
LWIRO	118.92	312.8	18 59K	15						
AREQUIPA	120.53	75.4						20	18	PP
MAWSON	143.85	218.7	19 30K	3						
ARGENTINE I.	151.81	134.6	19 52	9						

DECEMBER 27 14.H 2.M 2.S EPICENTRE -5.00 145.06 DEPTH= 28.KM

A=-0.81664 B= 0.57062 C=-0.08655 D= 0.5728 E= 0.8197
G= 0.0710 H=-0.0496 K=-0.9962 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
PORT MORESBY	4.84	154.7	1 13K	0	2 6	-3		
RABAUL	7.14	83.9	1 45	0				
CHARTERS TS.	15.05	175.6	3 33	1				
HONIARA	15.41	107.4	3 38	1	6 31	4		
DARWIN	15.85	241.5	3 37	-6	6 37	-1		
BRISBANE	23.45	162.5	5 10	2	9 20	4		
KOUMAC	24.26	131.3	5 14A	-1				
PORT VILA	26.04	121.0	5 31	-1				
NOUMEA	26.91	131.7	5 37A	-4				
RIVERVIEW	29.24	169.6			10 56	5		
CANBERRA	30.39	173.6	6 11K	-1				
ADELAIDE	30.39	190.3	6 12	0				9 10 PCP
TOOLANGI	32.42	179.4	6 30	0				9 16 PCP
SAVANNAH	36.61	177.3	7 6	1				
TARRALEAH	37.16	178.3	7 10	0				9 31
MOORLANDS	37.33	177.4	7 13	1				9 31
MUNDARING	38.07	221.7	7 18	0				9 32 PCP
PERTH	38.31	222.0	7 29	9	13 17	5		9 18 PPP
HONG KONG	40.61	313.1	7 40	1	13 50	3		9 25 PP
ABUYAMA	40.65	348.0	7 40A	1				
CANTON	41.70	313.3	7 49	1	14 26	23		
MATUSIRO	41.81	351.7	7 49A	0	13 58	-6		
ZO-SE	42.53	329.1	7 55	0				
CHATFAU	43.81	145.3	8 6A	1				
MIZUSAWA	44.06	355.5	8 9	2				8 30
WELLINGTON	44.84	148.0	8 12	-1				
KUNMING	50.86	308.1	9 2	2				
CHANGCHUN	51.77	341.9	9 5	-2				
SIAN	51.83	321.6	9 8	0				
Y.-SAKHLINSK	51.83	358.0	9 7	-1				
PEKING	52.10	332.0	9 9A	-1				
CHENGTU	52.88	314.8	9 15	0				
PAOTOW	55.58	328.0	9 35	0				
LANCHOW	56.19	320.0	9 40A	0				
CHITTAGONG	58.72	299.8	9 59	1	17 59	0	10 8	12 10 PP
PETROPAVLOVK	58.93	9.5	9 59K	0				
SHILLONG	59.87	303.3	10 5A	0				
HONOLULU	61.52	62.6	10 18	1				
DUMONT	61.66	182.3	10 17	-1				
LHASA	62.16	307.2	10 22	1				
ULAN-BATOR	62.43	332.0	10 23A	0				
CHATRA	64.25	302.8	10 35A	0				
FSEN RULAK	66.95	325.5	10 52A	0				
NEW DELHI	73.20	301.7	11 26A	-4				
LAHORE	76.37	304.0	11 47	-1				
TIKSI	77.22	354.8	11 51A	-2				
ALMATA-2	77.46	316.2	11 55K	1				
WARSAK DAM	79.23	305.8	12 4	0				
FRUNSF	79.24	315.1	12 4A	0				
QUETTA	82.27	301.2	12 21	1			12 30	12 28 PCP
MAWSON	82.42	202.5	12 20	-1				
DUZHANBE	82.45	309.8	12 22A	1				
TASHKENT	82.68	312.6	12 22A	0				
SAMARKAND	84.04	310.6	12 29	0				
COLLEGE	85.00	23.3	12 32	-2				
VANNOVSKAYA	90.64	307.9	12 59	-2				
SVERDLOVSK	91.10	326.8	13 1	-2				
SHIRAZ	94.64	299.2	13 19A	0				17 56
CALISTOGA	94.93	51.8	13 21K	0				
BERKELEY	95.15	52.5	13 22K	0				19 14
TANANARIVE	95.47	250.5	13 26	3				
LICK	95.63	53.1	13 23A	-1				
MINERAL	95.75	50.1	13 24A	0				
MOULD BAY	96.16	13.9	13 24	-2				
WOODY	97.83	54.8	13 31	-3				
BLUE MTS.	98.92	45.5	13 38A	-1				26 41 PS
YELLOWKNIFF	99.19	27.6	13 38	-2				
EUREKA	100.08	50.9	13 44	0				
BROKEN HILL	114.23	251.8	18 39	2				
WICHITA MTS.	114.42	54.2	18 37	0				19 30 PP

PRUHONICF	118.94	325.9	18 48	2	20 9 PP
COLLMBERG	119.10	327.8	18 48	2	20 28
KASPERSKE H.	119.91	325.4	18 49	1	19 11
BANGUI	126.62	271.7	19 3	2	21 0 PP
BANDEIRA	128.26	246.7	19 7K	3	
HUANCAYO	136.42	113.2	19 14	-5	
AREQUIPA	138.04	121.3	19 13	-9	
SAN JUAN	146.78	63.8	19 38	0	20 2

DECEMBER 27 18.H 18.M 44.S EPICENTRE 39.77 142.10 DEPTH= 60.KM

A=-0.60815 B= 0.47340 C= 0.63721 D= 0.6143 E= 0.7891
G=-0.5028 H= 0.3914 K=-0.7707 HT= -1.6

DEPTH OF FOCUS= 0.004R

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
MIYAKO	0.16	219.4	0	9A	-1	0	14	-4				
MORIOKA	0.72	264.4	0	12K	-4	0	22	-6				
HATINOHE	0.87	330.0	0	16	-1							
MIZUSAWA	0.99	229.8	0	15	-3	0	24	-8				
AOMORI	1.45	316.4	0	25K	0	0	37	-6				
ISINOMAKI	1.47	204.6	0	22K	-3	0	34	-10				
AKITA	1.54	266.6	0	26	0	0	41	-4				
SENDAI	1.77	212.3	0	27K	-2	0	40	-11				
SAKATA	1.97	244.4	0	34	2							
YAMAGATA	2.04	222.4	0	31K	-2	0	57	0				
HAKODATE	2.27	333.8	0	37K	1	1	6	3				
HUKUSIMA	2.39	212.8	0	36K	-2	1	3	-3				
URAKAWA	2.43	12.0	0	40	2	1	11	4				
MORI	2.60	334.0	0	43	3	1	19	8				
HIROO	2.67	19.8	0	42	1	1	13	0				
MURORAN	2.68	341.9	0	41	-1	1	12	-1				
TOMAKOMAI	2.88	352.3	0	46K	2	1	21	3				
ONAHAMA	2.97	198.9	0	43	-3	1	20	-1				
NIIGATA	3.02	233.1	0	47	1	1	23	1				
SHIRAKAWA	3.03	209.7	0	45	-2	1	21	-1				
OBIHIRO	3.25	14.4	0	50	0	1	29	1				
SUTTSU	3.34	335.6	0	51A	0	1	31	1				
SAPPORO	3.34	350.5	0	52K	1	1	31	1				
AIKAWA	3.48	241.0	0	52K	-1	1	42	9				
MITO	3.63	201.3	0	53	-2	1	40	3				
KUSIRO	3.64	27.6	0	54K	-1	1	34	-3				
UTUNOMIYA	3.67	209.4	0	55	-1	1	38	0				
KAKIOKA	3.85	203.8	0	57	-1	1	18	-25				
TUKURASAN	3.88	204.6	0	55A	-4							
ASAHIGAWA	4.01	2.8	1	2K	2	1	48	1				
TAKADA	4.03	229.8	0	59	-2	1	49	2				
MAEBASI	4.13	216.3	1	2A	0	1	52	2				
TYOSI	4.17	194.2	1	1	-1	1	55	4				
RUMOE	4.19	355.2	1	4	1	1	54	3				
KUMAGAYA	4.21	211.6	1	3	0	1	55	3				
NAGANO	4.36	226.0	1	7A	2	1	43	-12				
NEMURO	4.41	35.2	1	3	-3	1	50	-7				
OIWAKE	4.44	220.3	1	7	1	1	57	0				
MATUSIRO	4.45	224.7	1	6K	0	1	57	-1				
HONGO	4.46	205.2	1	5	-2							
TITIBU	4.48	213.2	1	5	-2	2	0	2				
TOKYO C.M.O.	4.49	205.3	1	5K	-2	2	2	3				
ABASHIRI	4.54	20.3	1	6	-2	1	58	-2				
WAZIMA	4.73	241.3	1	9	-1							
YOKOHAMA	4.75	204.9	1	9A	-2	2	9	4				
MATUMOTO	4.80	224.1	1	12	1	2	7	1				
TOYAMA	4.93	233.0	1	13	0	1	48	-22				
KOHU	4.97	215.5	1	13	-1	2	15	4				
HUNATU	5.02	212.8	1	14	0	2	11	-1				
MERA	5.17	201.2	1	19	2							
MISIMA	5.28	209.3	1	16	-2	2	14	-4				
AJIRO	5.29	207.8	1	15	-3	2	14	-4				
KANAZAWA	5.38	234.7	1	19	0							
IIDA	5.43	219.9	1	20	0						1	47
OSIMA	5.45	204.3	1	19	-1	2	20	-2				
SHIZUOKA	5.63	212.7	1	21	-2	2	29	2				
WAKKANAI	5.65	357.0	1	28	5	2	32	4				

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.

HUKUI	5.95	233.1	1	28	1	2	18	-17			
OMAESAKI	6.02	212.2	1	34	6						
GIHU	6.08	225.8	1	29	0	2	45	7			
HAMAMATU	6.14	216.1	1	28	-2	2	43	3			
NAGOYA	6.15	223.2	1	29	-1	2	44	4			
TSURUGA	6.31	231.2	1	33	1						
HIKONE	6.47	227.8	1	36	1	2	55	7			
KAMEYAMA	6.65	224.1	1	37	0	2	56	4			
TU	6.74	223.0	1	40	2						
KYOTO	6.94	228.9	1	41	0	3	6	6			
NARA	7.13	226.5	1	45	1						
ABUYAMA	7.14	228.8	1	43A	-1	3	9	4			
TOYOOKA	7.16	236.0	1	45A	1	3	10	5			
Y.-SAKHLINSK	7.26	3.3	1	45A	-1	3	5	-2			
OSAKA	7.32	227.8	1	46	0	3	6	-3			
OWASE	7.40	221.5	1	53	6	3	31	20			
KOBE	7.50	229.5	2	3	14						
TOTTORI	7.59	238.4	1	50	0						
SAIGO	7.79	245.5	1	54	1	3	24	3			
WAKAYAMA	7.83	227.2	1	56	3						2 31
SUMOTO	7.90	228.9	1	52	-2	3	27	4			
HIMEJI	8.09	231.8	1	54	-3						
SIOMISAKI	8.11	220.8	1	57	0	3	41	13			
YONAGO	8.19	240.8	2	0	2						
TOKUSIMA	8.29	228.9	2	4	4						
MATSUE	8.37	241.8	1	54	-7						
TAKAMATU	8.43	232.3	2	1	-1	3	51	15			
MUROTO	9.11	226.8	2	9	-2	3	58	5			
KOTI	9.27	230.6	2	12	-1	3	58	1			
UGLEGORSK	9.30	359.9	2	13K	-1	4	5	7			2 36
HAMADA	9.35	241.8	2	16	2	3	56	-3			
HIROSIMA	9.42	238.1	2	16	1	4	6	5			
ASHIZURI	10.17	229.0	2	28	3	4	24	5			
OOITA	10.66	235.5	2	30	-2	4	50	19			
SIMONOSEKI	10.67	240.5	2	36	4						
ASOSAN	11.23	235.8	2	45	5						
HUKUOKA	11.26	240.3	2	52	12	4	39	-6			
SAGA	11.51	239.2	2	44	0	4	37	-14			
KUMAMOTO	11.52	236.5	2	42	-2	4	53	1			
NAGASAKI	12.11	238.3	2	50	-2	5	19	13			
CHANGCHUN	13.17	293.4	3	5	-1						
PETROPAVLOVK	17.43	35.1	4	2	2						
ZO-SE	19.09	249.5	4	16	-4				4	34	
PEKING	19.88	279.1	4	24A	-5	8	1	-3	4	44	
NANKING	20.36	255.1	4	31	-3				4	47	
MAGADAN	20.55	12.7	4	35	-1	8	26	9			
PAOTOW	24.45	282.3	5	11A	-3				5	29	
TAITUNG	24.58	232.5	5	17	2	9	41	12			
HENGCHUN	25.38	232.0	5	27	4						
ULAN-BATOR	26.48	299.6	5	47A	14						
SIAN	26.97	268.7	5	35A	-3				5	52	
IRKUTSK	28.72	308.4	5	52A	-1	10	38	1			
HONG KONG	29.43	242.0	5	59A	-1	10	40	-8			7 12 PPP
CANTON	29.47	244.2	5	59A	-1	10	51	2	6	16	
LANCHOW	30.27	275.3	6	3	-4						
MANILA	31.06	222.3	6	16	2	11	34	20			
CHENGTU	32.22	265.6	6	21A	-3						
TIKSI	32.63	352.3	6	26A	-2	11	38	0			7 54 PPP
ESEN BULAK	33.75	296.6	6	37A	-1						
KUNMING	35.99	258.1	6	56A	-1				7	13	
LHASA	42.68	272.6	7	54A	2				8	11	
SEMIPALATNSK	43.75	305.3	7	59A	-2	14	24	-2			
SHILLONG	44.05	266.9	8	5	2						
COLLEGE	46.50	33.6	8	24	1						8 56
CHATRA	47.02	271.5	8	25A	-2	15	2	-11			
PORT MORESBY	49.15	173.4	8	48	5						
FRUNSE	49.55	296.7	8	47A	1	15	53	4			
BOKARO	49.64	268.9	8	39	-8						
KHEYS	50.08	347.7	8	51A	0	15	57	1			10 49 PP
SVERDLOVSK	53.48	317.4	9	16K	0	16	44	1			
MOULD BAY	53.76	17.1	9	18A	0	16	50	4			
NEW DELHI	53.79	279.2	9	13A	-5						9 30
TASHKENT	53.80	296.9	9	18A	0						17 16 PS
KHOROG	53.84	291.7	9	19A	0	16	52	5			
LAHORE	54.50	283.9	9	22	-2	16	55	-1			10 25 PCP
WARSAK DAM	55.40	287.9	9	29	-1						
TANGERANG	56.22	224.0	9	33A	-3						
ALERT	57.37	3.7	9	45A	1						

NORD	58.36	356.4	9	50A	-1							
CHARTERS TS.	59.68	175.5	9	58	-2							
RESOLUTE	59.82	14.9	10	0A	-1							
MADRAS	60.26	262.1	10	6	2	18	18	6				
APATITY	60.42	335.3	10	3A	-2							
QUFTTA	60.68	286.3	10	6A	-1	18	28	11	10	16	12 16	PP
KEVO	61.08	338.9	10	8	-2							
YELLOW KNIFE	61.18	31.1	10	9A	-1							
POONA	61.82	271.3	10	13A	-2							
BOMBAY	62.40	272.2	10	22	3	18	37	-2			14 23	
THULE	62.48	7.7	10	16	-3							
SODANKYLA	62.66	336.8	10	19A	-1						12 36	PP
TROMSOE	63.31	340.8	10	24	-1							
KARACHI	63.47	281.1	10	24	-2							
KIRUNA	64.15	339.0	10	29A	-1							
KAJAANI	64.37	333.6	10	31A	-1							
MOSCOW	65.39	323.0	10	37A	-1	19	15	-1				
PENTICTON	65.84	45.2	10	40	-1							
LONGMIRE	66.02	48.4	10	43	1	19	16	-8				
PULKOVO	66.11	329.1	10	42	-1							
BANFF	66.97	41.9	10	48	0							
UMEA	67.01	335.8	10	47A	-1							
NURMIJARVI	67.79	331.7	10	52A	-1							
HELSINKI	67.91	331.3	10	53A	-1						13 23	
TEHERAN	68.73	299.2	10	59	0							
SCORESBY SD.	69.45	354.3	11	3	-1							
TIFLIS	69.57	307.6	11	4	0							
SKALSTUGAN	69.57	338.5	11	3A	-1						13 28	PP
BLUE MTS.	69.69	48.2	11	6A	1	20	14	6			39 0	PKPPKP
MINERAL	69.74	54.1	11	6A	1							
GORIS	69.90	304.9	11	6A	0						20 51	PS
CALISTOGA	70.10	56.0	11	10A	2							
UPPSALA	70.74	333.8	11	10A	-1							
BERKELEY	70.76	56.5	11	8A	-3	20	10	-10	11	25	24 40	SS
RENO	71.33	53.9	11	15K	0							
SHIRAZ	71.43	293.3	11	15A	0	20	26	-2			13 56	PP
LICK	71.46	56.7	11	13K	-3							
BUTTE	71.63	45.1	11	18	1						12 20	
BOZEMAN	72.68	44.7	11	24	1							
PRIEST	72.81	57.2	11	25K	1							
KONGSBERG	73.46	337.0	11	27	0							
EUREKA	73.73	52.1	11	30	1							
SIMFEROPOL	73.76	315.3	11	29A	0							
BERGEN	74.08	339.3	11	31	0							
KARLSKRONA	74.24	332.1	11	31A	-1							
GOTEBORG	74.28	334.8	11	31A	-1							
ADELAIDE	74.44	182.9	11	32A	-1							
CANBERRA	74.99	174.2	11	36	0							
MUNDARING	75.31	202.6	11	36	-2							
SALT LAKE C.	75.36	49.0	11	40	2							
SIDA	75.59	351.0	11	42A	2							
PASADENA	75.64	57.5	11	41	1	21	20	5				
COPENHAGEN	75.72	333.3	11	41A	0							
TOOLANGI	77.03	177.2	11	48	0						12 1	PCP
KRAKOW	77.14	326.0	11	49	0						11 57	PCP
RACIBORZ	77.85	326.8	11	53	1						12 6	PCP
COLLMBERG	79.00	330.2	11	59	0						18 32	
ISTANBUL UN.	79.17	314.9	12	0A	0							
PRUHONICE	79.43	328.6	12	2	1						12 38	
BUDAPEST	79.46	324.7									12 9	PCP
GOLDEN	79.77	46.4	12	4	1						27 26	
BRATISLAVA	79.78	326.1	12	1	-2							
JENA	79.83	330.7	12	3	0						14 55	
KSARA	79.99	305.7	12	7	3							
WITTEVEEN	80.03	334.4	12	5	1							
CHEB	80.21	329.8	12	0	-5							
MUNSTER	80.41	333.4									12 7	
KASPERSKE H.	80.49	328.6	12	7A	0							
BELGRADE	80.80	322.1	11	50K	-18						21 29	
DURHAM	80.82	339.7	12	9A	0							
SAVANNAH	81.24	176.1	12	11	0							
BENSBERG	81.41	333.1	12	11A	-1						12 31	
FELDBERG	81.57	332.0	12	24	12							
TUCSON TELE.	81.57	54.8	12	13	1							
JERUSALEM	81.76	304.6	12	14A	1							
TARRALEAH	81.79	176.7	12	15	1							
HEIDELBERG	82.15	331.4	12	16	1							
ALBUQUERQUE	82.42	50.5	12	18	1				12	32		
STUTTGART	82.46	330.7	12	18A	1							

LJUBLJANA	82.54	326.2	12	16A	-1						15	28 PP
SCHEFFERVLLE	82.58	16.4	12	18A	0							
TUBINGEN	82.74	330.7	12	19A	1							
DOURBES	83.02	334.0	12	19	-1							
EBINGEN	83.06	330.5	12	22	2							
RAVENSBURG	83.14	329.9	12	22	2							
STRASBOURG	83.18	331.4	12	22A	1							
TRIESTE	83.18	326.4	12	21	0							
KEW	83.39	337.4	12	21	-1	22	49	13				
WELSCHBRUCH	83.84	332.1	12	23	-1							
CHUR	83.94	329.4	12	25A	0							
BESANCON	84.95	331.7	12	29	-1							
DUBUQUE	85.16	36.2	12	32	1	22	57	3				
FLORENCE X.	85.75	326.7	12	16A	-17						15	28
FOLINIERE	85.82	336.2	12	34	0							
GARCHY	85.96	333.4	12	35A	0						12	56
LUBBOCK	86.09	48.7	12	36	1							
WICHITA MTS.	87.10	46.0	12	41	1	23	16	3	12	54	30	31 PKKP
CLERMONT-FD.	87.24	332.6	12	43	2						13	3
MONACO	87.36	328.9	12	40	-1							
ROLLA	88.20	39.8	12	46A	1							
FLORISSANT	88.23	38.3	12	46A	0							
ST. LOUIS 1	88.43	38.3	12	47A	1							
FAYETTEVILLE	88.44	42.4	12	46	0							
OTTAWA	88.67	25.6	12	47	-1							
BLOOMINGTON	89.72	35.7	12	54K	1							
PALISADES	93.17	26.5	13	11	2	23	59	-9				
LWIRO	109.24	283.6									18	47 PP
BANGUI	112.06	296.2	18	30	2						19	14 PP
BROKEN HILL	117.21	273.6	18	40	2							
KIMBERLEY	127.99	261.8	19	0	1							
BANDEIRA	129.02	284.1	19	4K	3							

DECEMBER 28 21.H 39.M 3.S EPICENTRE -16.98 -14.18 DEPTH= 0.KM

A= 0.92778 B=-0.23447 C=-0.29026 D=-0.2450 E=-0.9695
G=-0.2814 H= 0.0711 K=-0.9569 HT= 5.4

SE= 1.01

	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
BANDEIRA	26.51	89.4	5	42K	1							
MBOUR	31.28	354.8	6	24	0							
KIMBERLEY	37.60	115.2	7	17K	-1							
BANGUI	38.74	59.7	7	26	-2				7	34		
BROKEN HILL	41.08	92.7	7	48	1							
LWIRO	44.70	75.6	8	18K	1							
LA PAZ	51.52	262.2	9	10	0							
AREQUIPA	54.71	261.6	9	34	0							
TANANARIVE	58.50	102.1	10	2	1							
CARACAS	58.86	293.8				18	17	9				
HUANCAYO	59.21	265.9	10	6	1							
BAGNERES	61.19	11.9	10	19	0							
ATHENS	65.23	32.3	10	46K	0							
GARCHY	65.82	12.8	10	50	1						10	58
BESANCON	66.45	14.8	10	53	-1							
PARIS	67.16	11.9	10	59	1							
TRIESTE	67.28	20.9	11	0	1							
WELSCHBRUCH	67.63	14.6	11	1	0							
JERUSALEM	67.78	44.3	11	1	-1							
LJUBLJANA	67.90	21.2	11	2	-1							
RAVENSBURG	67.90	17.1	11	3	0							
STRASBOURG	68.14	15.5	11	3	-1						11	25
STUTTGART	68.71	16.4	11	7	-1							
BELGRADE	69.12	25.7	11	10K	0						11	34
KSARA	69.47	43.0	11	14	2							
MAWSON	69.50	156.5	11	11K	-2							
BENSBERG	70.20	14.2	11	18	1							
KASPERSKE H.	70.28	19.0	11	16	-1						13	47
VIENNA-H.	70.43	21.1	11	19	1							
BUDAPEST	70.74	23.2	11	20	0							
JENA	71.30	16.9	11	22	-2						14	18 PP
PRUHONICE	71.33	19.1	11	24	0						11	44
HALLE	71.91	16.8	11	26	-1							
COLLMBERG	72.03	17.5	11	27	-1						14	21

RACIBORZ	72.62	21.2	11 31	0				
KRAKOW	73.21	22.2	11 34	-1			12 10	PP
BYRD STATION	76.02	190.0	11 50	-1				
KARLSKRONA	77.05	16.6	11 54	-3				
SHIRAZ	79.25	54.5	12 9A	0	12 22			
UPPSALA	80.80	15.6	12 17	0				
TEHERAN	81.19	48.6	12 21	2				
PENNSYLVANIA	82.35	316.6	12 26K	1				
SKALSTUGAN	82.90	11.6	12 29	1				
HELSINKI	83.13	18.5	12 29	0				
NURMIJARVI	83.31	18.2	12 30K	0				
UMEA	84.84	14.6	12 38	0				
KAJAANI	87.00	17.1	12 49	0				
SCORESBY SD.	87.40	357.4	12 53	2				
BLOOMINGTON	87.52	312.2	12 51K	0				
SODANKYLA	89.28	14.7	13 0K	0				
ST. LOUIS 1	89.99	310.5	13 3	0				
FLORISSANT	90.15	310.6	13 3	-1				
ROLLA	90.95	309.4	13 8	1				
QUETTA	91.00	58.8	13 9A	1	13 19		13 25	*SP
MANHATTEN	94.84	309.4	13 25	0				
WICHITA MTS.	95.03	304.6	13 26	0			13 53	
BLUE MTS.	111.01	312.1	18 32	-3				
PORT MORESBY	147.94	143.5	19 50A	6				
MATUSIRO	148.76	46.0	19 47	1				

DECEMBER 29 4.H 12.M 15.S EPICENTRE 2.33 127.35 DEPTH= 89.KM

A=-0.60617 B= 0.79431 C= 0.04039 D= 0.7950 E= 0.6067
G=-0.0245 H= 0.0321 K=-0.9992 HT= 7.2

DEPTH OF FOCUS= 0.009R

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	
MANILA	13.73	333.6	3 11	-1	5 52	9			
DJAKARTA	22.16	247.5	5 4	14				8 48	
TANGERANG	22.34	247.7	4 54	2	8 54	8			
PORT MORESBY	22.91	120.8	4 57K	0	9 1	4			
HONG KONG	23.62	328.2	5 3K	-1	9 13	4		5 30	PP
CANTON	24.70	327.8	5 14K	-1	9 32	5			
CHARTERS TS.	29.00	141.1	5 53	-1				12 38	
ZO-SE	29.20	349.1	5 57K	1	10 44	4			
NANKING	30.65	345.6	6 10K	1					
KUNMING	32.80	315.8	6 28K	1	11 41	4			
ABUYAMA	33.27	12.4	6 31K	0					
HONIARA	34.52	110.3						14 55	
MATUSIRO	35.49	15.2	6 51	1				9 22	
MUNDARING	35.71	196.3	6 51	-1					
CHENGTU	35.80	324.3	6 51K	-2					
SIAN	36.11	333.6	6 56	0	12 33	5			
BRISBANE	38.38	142.1	7 16A	1	12 47	-15			
ADELAIDE	38.61	165.0	7 16A	0	13 13	7		13 11	SCP
PEKING	38.87	346.3	7 20	1	13 14	4		17 25	SCS
CHITTAGONG	39.82	302.9	7 27	1	13 26	2	7 36	9 4	PP
LANCHOW	39.99	329.8	7 29K	1	13 29	2			
PAOTOW	41.17	339.9	7 39K	1					
SHILLONG	41.22	307.3	7 34	-4					
CHANGCHUN	41.36	357.8	7 38	-1					
RIVERVIEW	42.39	150.1	7 50	2				17 23	SS
CANBERRA	42.59	153.5	7 50A	1				13 27	SCP
KOUMAC	42.75	124.0	7 50A	0					
TOOLANGI	43.12	158.8	7 54	0				9 37	PP
LHASA	43.88	311.9	8 1K	1	14 26	2		17 52	SCS
NOUMEA	45.34	124.8	8 11A	0					
BOKARO	45.49	301.6	8 12	-1					
CHATRA	45.55	306.1	8 16K	3					
MADRAS	47.85	285.4	8 29	-2				8 50	
ULAN-BATOR	48.73	341.8	8 38K	0					
ESEN BULAK	51.59	332.9	9 1	1					
DEHRA DUN	54.29	306.2	8 46K	-34					
POONA	54.78	291.0	9 21K	-2					
PETROPAVLOVK	56.77	22.0	9 37A	-1					
LAHORE	57.71	306.2	9 42	-2	17 35	1			
ALMATA-2	60.20	319.9	10 3A	2					

WARSAK DAM	60.72	308.0	10	5K	0						
TUAI	61.40	137.2	10	9	0						
FRUNSF	61.80	318.4	10	13K	1						
KARACHI	62.19	296.8	10	15	0						
SEMIPALATNSK	62.20	328.0	10	14K	-1						
MACQUARIE I.	62.38	159.8	10	10	-6						
AFIAMALU	62.44	106.9	10	19	3						
ANDIJAN	62.49	315.5	10	17K	0	18	43	8			
QUFTTA	63.41	302.7	10	23K	0	18	51	4	10 31	12	45 PP
TIKSI	69.21	0.5	10	58	-2	19	55	-2			
VANNOVSKAYA	72.27	309.1	11	20	2						
HONOLULU	74.76	68.7	11	36	3						
KIPAPA	74.85	68.6	11	35	2						
SVERDLOVSK	75.47	328.6	11	37A	0						
SHIRAZ	75.67	299.9	11	38K	0	21	12	2		12	1
TEHERAN	77.25	306.0	11	48	1						
HAWAII V.OB.	77.33	70.7	11	50	3						
CAPE HALLETT	79.31	167.8	11	59	1						
GORIS	81.59	309.4	12	10K	0						
KIROVORAD	81.67	310.6	12	11	1	22	19	5			
MAWSON	82.66	200.4	12	1A	-14						
TIFLIS	82.89	311.6	12	18	1						
KHEYS	84.39	351.1	12	24K	0						
COLLEGE	85.70	25.2	12	32	1						
MOSCOW	87.93	325.5	12	41K	0						
APATITY	89.37	337.5	12	39	-9						
JERUSALEM	90.60	301.7	12	58	4						
KEVO	91.41	340.0	12	57	-1						
PULKOVO	91.55	329.8	12	59	1	23	55	7			
SODANKYLA	91.99	337.6	12	59	-1					16	43 PP
KAJAANI	92.13	334.3	13	0	-1						
SOUTH POLE	92.31	180.0	13	2	0						
MOULD BAY	93.18	12.7	13	6	0						
HELSINKI	94.14	330.7	13	9	-1						
KIRUNA	94.19	338.6	13	10	0					17	0 PP
NURMIJARVI	94.21	331.1	13	10	-1						
UMEA	95.40	334.8	13	15A	-1	23	44	2		17	5 PP
BYRD STATION	96.21	170.7	13	21	1						
UPPSALA	97.78	331.3	13	31	4						
UZHGOROD	98.16	319.7	13	29	1						
SKALSTUGAN	98.82	335.8	13	30	-2					17	32 PP
RESOLUTE	99.07	10.4	13	33K	0						
BROKEN HILL	99.17	255.8	13	33	0						
YELLOW KNIFE	100.51	24.6	13	40	1						
PRUHONICE	102.66	322.4	13	55	6					18	3 PP
COLLMBERG	103.13	324.0	13	56	5					18	9
KASPERSKE H.	103.54	321.8	13	53	0					17	59
JENA	104.10	324.0	14	0	5						
BLUE MTS.	106.01	42.0	14	11	777					18	42 PP
EUREKA	108.76	46.9	18	23	777					29	35 PKKP
ROSELEND	109.21	320.3								18	45
MANHATTEN	122.26	39.6	18	48	3						
WICHITA MTS.	123.33	45.1	18	50	3					28	40 PKKP
DUBUQUE	123.70	33.2	18	50	2						
TULSA	124.63	42.4	18	53	3						
FAYETTEVILLE	125.60	41.3	18	54	2						
ROLLA	125.97	38.2	18	55	3						
FLORISSANT	126.33	36.4	18	55	2						
PENNSYLVANIA	131.30	25.5	19	5A	3						
SANTA LUCIA	144.77	153.4	19	28	1						
HOPE	148.83	48.6	19	40	6						
ANTOFAGASTA	152.67	142.5	19	50	11						
SAN JUAN	155.52	32.3	20	14	31						
HUANCAYO	155.54	114.4	19	50	7						
AREQUIPA	156.75	128.3	20	0	15						

DECEMBER 29 8.H 4.M 26.S EPICENTRE 23.57 65.26 DEPTH= 37.KM

A= 0.38403 B= 0.83331 C= 0.39763 D= 0.9082 E=-0.4185
G= 0.1664 H= 0.3611 K=-0.9175 HT= 3.8

DEPTH OF FOCUS= 0.001R

SE= 3.37

	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

KARACHI	2.05	52.1	0	35	2					
QUETTA	6.75	12.6	1	35A	-4	2	48	-8		
BOMBAY	8.45	122.0	2	0	-3	3	34	-4	4	51 SS
POONA	9.46	120.4	2	15	-2				5	20 SS
LAHORE	11.31	43.4	2	38	-4	4	39	-9		
WARSAK DAM	11.76	26.5	2	45	-3					
NEW DELHI	11.83	62.6	2	43A	-6	4	52	-9		
DEHRA DUN	13.24	56.7	2	34	-34				5	49 SS
TEHERAN	17.07	318.4	3	58	1	7	9	5		
MADRAS	17.63	124.0	4	3	-1	7	19	2	4	20 PP
ANDIJAN	18.14	17.6	4	9	-1	7	38	9		
BOKARO	18.82	85.1	4	19	0	7	46	2	8	15 SS
CHATRA	20.09	76.1	4	36	3	8	16	4	5	1 PP
FRUNSE	20.72	19.8	4	39	0	8	32	8		
PRZHEVALSK	21.79	26.9	4	51A	1	8	51	7		
ALMATA-2	22.05	24.1	4	51K	-2					
LHASA	23.81	69.7	5	13	3	9	39	19		
EREVAN	24.09	318.3	5	16K	3					
SHILLONG	24.27	79.8	5	14K	-1	9	43	15		
TIFLIS	24.88	321.5	5	22	2					
KSARA	27.63	298.3	5	57	11	10	38	15	6	40 PP
JERUSALEM	27.76	293.8	5	46	-1					
PORT BLAIR	28.66	109.6							12	23
SIMFEROPOL	33.11	317.8	6	33	-1					
SVERDLOVSK	33.39	355.4	6	36	-1					
ESEN BULAK	33.76	39.9	6	40	0					
ISTANBUL UN.	34.95	308.6	6	49	-1					
LANCHOW	35.48	60.5	6	55	0					
MOSCOW	38.02	334.8	7	22	6	13	21	15		
SIAN	39.41	64.3	7	27	-1					
ULAN-BATOR	40.93	43.0	7	42	2					
PAOTOW	41.08	54.7	7	43	1					
LWOW	41.42	319.8	7	48	4					
UZHGOROD	42.01	317.5	7	53	4					
BUDAPEST	43.73	314.9							14	45 PPS
LWIRO	43.79	239.1							8	7
MESSINA	44.57	301.1							14	47
PEKING	45.66	56.4	8	11	-8					
NURMIJARVI	46.35	333.6	8	19	-5	15	16	8	10	0 PP
KAJAANI	47.40	338.7	8	30	-2				10	24 PP
KASPERSKE H.	47.66	315.8	8	33	-1					
APATITY	48.20	344.2	8	37	-2	15	39	5	10	33
CHILEKA	48.97	220.1	8	47	2					
UPPSALA	49.05	330.4	8	43	-2	15	48	2		
UMEA	49.90	335.8	8	49	-3				10	54 PP
SODANKYLA	49.91	341.6	8	50	-2				10	57 PP
STUTTGART	50.37	314.6	8	54	-1					
STRASBOURG	51.33	314.2	9	1	-2					
KEVO	51.42	344.0	9	0	-3					
ROSELEND	51.80	310.4	9	4	-2					
KIRUNA	52.06	340.2	9	6	-2	16	36	8	11	11 PP
BROKEN HILL	52.17	227.3	9	9	0					
WELSCHBRUCH	52.25	313.8	9	5	-4					
KONGSBERG	52.73	328.2	9	12	-1					
SKALSTUGAN	52.93	333.4	9	13	-2					
MANILA	53.21	88.9							13	21
TROMSOE	53.54	341.6	9	17	-2					
DOURBES	53.58	315.8	9	30	11				16	40
GARCHY	54.36	312.2	9	31	6					
BULAWAYO	56.25	222.4	9	38	-1					
KEW	56.80	317.1	9	51	8					
KHEYS	57.21	358.6	9	45	-1					
MATUSIRO	63.11	59.7	10	25	-1	19	19	26		
MUNDARING	73.64	136.5	11	31	0				11	40
MOULD BAY	80.39	1.1	12	8	-1					
COLLEGE	88.21	13.5	12	49	1					
CHAPTERS TS.	90.05	111.8	12	58	1					
ADELAIDE	90.71	128.1	13	1	1				13	10
YELLOW KNIFE	94.24	359.9	13	15	-1					
BLUE MTS.	111.87	2.0							19	15 PP
EUREKA	117.27	1.1	18	48	7					
WICHITA MTS.	120.04	344.7	18	48	1					

DECEMBER 29 10.H 41.M 5.S EPICENTRE -20.13 -70.28 DEPTH= 49.KM

A= 0.31703 B=-0.88459 C=-0.34204 D=-0.9414 E=-0.3374
G=-0.1154 H= 0.3220 K=-0.9397 HT= 4.6

DEPTH OF FOCUS= 0.002R

SE= 1.89

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
ANTOFAGASTA	3.56	182.0	0	49	-5							
AREQUIPA	3.82	342.3	0	58	0							
LA PAZ	4.15	29.9	1	8	6							
COPIAPO	7.19	180.5	1	47	2	3	27	21				
HUANCAYO	9.38	328.1	2	15	0							
SANTA LUCIA	13.27	181.3	3	8K	0	5	31	-3				
CONCEPCION	16.72	184.9	3	49	-3							
BOGOTA	24.87	351.0	5	21A	2	9	35	-1				
CHINCHINA	25.48	347.6	5	29A	4	8	55	-51				
FUQUENE	25.66	352.1	5	25	-2							
BALBOA HTS.	30.31	341.6	6	10	1							
CARACAS	30.61	6.5	6	11A	0	11	19	10				
GRENADA	33.06	15.5	6	33	0							
FORT FRANCE	35.78	15.2	6	55	-1	12	28	-1				
ST. CLAUDE	36.91	13.8	7	4	-2	12	42	-4				
HOPE	38.42	350.1	7	19	1							
SAN JUAN	38.48	6.4	7	17	-2	13	6	-4				
ARGENTINE I.	45.28	176.4	8	15	1							
VERA CRUZ	46.57	325.4				15	11	2			8	55
TACUBAYA	48.43	322.4	8	44	5	15	42	7			18	32 SCS
COLUMBIA	54.79	349.1	9	27	0	17	1	-1				
BLACKSBURG	57.82	350.4	9	48	-1	17	43	0				
DALLAS	58.45	333.9	9	53	0							
GEORGETOWN	59.06	353.8	9	56	-1	18	2	3				
CHIHUAHUA	59.54	323.4				18	29	24			10	23
FAYETTEVILLE	60.31	337.8	10	5	-1	18	16	1				
TULSA	60.74	336.4	10	8	-1	18	23	3			39	34 PKPPKP
FORDHAM	60.75	356.9	10	8	-1	18	21	0				
WICHITA MTS.	60.82	333.4	10	7	-2	18	22	1			12	21 PP
PALISADES	60.91	356.9	10	9A	-1	18	22	-1			11	20 PCP
BLOOMINGTON	60.92	345.6	10	8A	-2							
PENNSYLVANIA	61.02	353.4	10	10A	-1							
ROLLA	61.19	340.6	10	10A	-2	18	25	-1				
LUBBOCK	61.31	330.1	10	11	-2	18	30	2				
ST. LOUIS 1	61.38	342.3	10	11	-2	18	27	-2				
FLORISSANT	61.56	342.2	10	12	-2	18	30	-1				
CLEVELAND	62.17	350.5	10	16A	-2	18	36	-3				
M.BOUR	62.64	61.0	10	19	-3	18	45	1				
LAWRENCE	63.27	338.4	10	24	-2	18	52	0				
LONDON ONT.	63.65	351.1	10	27A	-1							
BYRD STATION	63.65	188.5	10	28	0							
MANHATTEN	63.94	337.5	10	28A	-2	19	1	0				
ALBUQUERQUE	64.66	327.6	10	35	0							
HALIFAX	64.72	5.3	10	34A	-1							
TUCSON	64.95	322.6	10	37	0	19	17	4				
TUCSON TELE.	64.95	322.7	10	37	0							
DUBUQUE	65.10	343.5	10	36A	-2	19	13	-2				
ARFREUF	65.38	357.4	10	39A	0	19	21	3	13	16		
OTTAWA	65.40	355.8	10	39A	0							
SHAWINIGAN	66.40	358.1	10	46A	0							
GOLDEN	67.94	331.4	10	55	-1	19	55	6				
BOULDER CITY	69.93	322.7	11	9	1							
SOUTH POLE	70.00	180.0	11	7	-1							
PASADENA	70.64	319.3	11	13	1	20	29	8				
SALT LAKE C.	71.85	328.0	11	20	1	20	40	5			12	31
EUREKA	73.05	324.6	11	27	0	20	56	7				
PRIEST	73.49	319.4	11	31A	2	21	4	10			12	9
SCHEFFERVLLE	74.70	2.1	11	35A	-1							
LICK	74.86	319.8	11	38A	1							
BERKELEY	75.58	319.9	11	43A	2	21	25	8			14	25 PP
BUTTE	76.17	331.1	11	45	1	21	27	4			15	19 PP
CALISTOGA	76.27	320.4	11	46A	1							
MINERAL	76.80	322.2	11	48A	0							
UKIAH	76.97	320.4	11	51	2						13	15
BLUE MTS.	77.57	327.8	11	53A	1						15	15 PP
HERMANUS	78.52	122.5				21	56	7			22	12 SCS
PANDORA	79.12	101.9	12	1A	0				12	14	22	25 SP
CAPE HALLETT	79.39	195.7	12	8	6							
LONGMIRE	81.16	327.0	12	12	0	22	23	7				

RANFF	81.33	333.1	12	11A	-2						
PENTICTON	81.83	329.9	12	16A	1						
VICTORIA	83.15	327.6	12	22	0						
MALAGA	83.98	47.5	12	27A	1	23	4	19		15	38 PP
GRAHAMSTOWN	84.66	123.4	12	31	1						
GRANADA	84.76	47.4	12	33K	3	23	15	22		24	15 PS
KIMBERLEY	84.79	118.6	12	30	0						
ALMERIA	85.39	48.2	12	32A	-1					15	51 PP
TOLEDO	85.81	44.9	12	36A	1	23	22	19		15	53 PP
MAWSON	86.01	163.7	12	35A	-1	23	4	-1	12 50		
ALICANTE	87.49	47.6	12	51	8	23	31	12			
YELLOW KNIFE	89.47	341.1	12	52A	-1						
BAGNERES	90.12	43.7	12	56	0					16	22 PP
BANGUI	90.46	85.5	12	56	-1					16	16 PP
DUMONT	90.54	191.6	12	58	0					23	52
BULAWAYO	91.11	111.8	13	1A	0						
CHANGALANE	91.81	118.7	13	5A	1				13 17		
FOLINIERE	92.40	38.4	13	6	0						
BROKEN HILL	93.08	106.5	13	10	0						
CLERMONT-FD.	93.23	42.2	13	10	0						
KEW	93.75	36.1	13	12	-1	24	4	-11		16	53 PP
WILKES	93.80	180.3	13	14	1	24	17	2		17	7 PP
GARCHY	93.85	40.8	13	11	-2					13	47
PARIS	94.17	39.3	13	13	-1					16	55 PP
WELLINGTON	94.24	223.3	13	17	2	24	27	8		25	39 PS
DURHAM	94.65	32.8	13	17K	0	24	10	-13		17	12 PP
CHATEAU	94.80	225.3	13	19	2						
HONOLULU	95.17	290.7	13	25	6	23	59	10			
ROXBURGH	95.25	217.5				24	0	10		31	23 SSS
ROSELEND	95.44	43.3	13	21	1					13	45
ABERDEEN	95.54	30.5								37	4
AFIAMALU	95.75	253.0				23	55	3		26	9 PS
RESOLUTE	95.89	353.6	13	24	2						
DOURBES	95.96	38.7	13	21	-2	24	20	26			
SCORESBY SD.	96.44	14.6	13	15	-10	24	14	8		17	16 PP
CHIAVARI	96.69	45.3	12	59	-27	24	25	28		17	5 PP
PAVIA	96.90	44.5								17	42 PP
DE BILT	97.11	37.0	13	27	-1	23	57	-3		17	21 PP
STRASBOURG	97.27	40.9	13	27	-2	24	14	14		17	19 PP
LWIRO	97.75	95.2	13	32A	1						
FLORENCE X.	97.79	46.3	13	13	-18					17	29 PP
RENSBERG	97.81	38.5	13	24	-7					17	27 PP
ROME	98.00	48.4	13	33A	1	24	33	29		17	29 PP
HEIDELBERG	98.15	40.4	13	31	-2						
STUTTGART	98.27	41.1	13	31	-2					31	55 SS
PADOVA	98.77	44.9				24	15	7			
MESSINA	99.02	52.7	13	37	0	24	55	46		17	33 PP
TRIESTE	100.09	45.1				24	22	7		17	45 PP
JENA	100.41	39.6	13	43	0	24	40	24		17	45 PP
MOULD BAY	100.63	349.4	13	43	-1						
LJUBLJANA	100.73	44.9								17	48 PP
HALLE	100.81	39.1	13	43	-2	24	37	19			
KASPERSKE H.	101.06	41.7								17	49
COLLMBERG	101.37	39.5	13	47A	0					18	18
ZAGREB	101.63	45.4								17	55 PP
PRUHONICE	101.92	41.1	13	49	-1	24	29	5		17	58 PP
KONGSBERG	102.19	30.8	17	48	237	25	48	83		32	25 SS
ALERT	102.50	1.1	13	51	-1						
COLLEGE	102.87	334.7	13	54	0					17	38 PP
BRATISLAVA	103.02	43.3								18	7
BUDAPEST	104.10	44.4								18	4 PP
BELGRADE	104.41	47.3				24	43	8		18	18 PP
KRAKOW	105.29	41.9	18	11	777					24	32
UPPSALA	106.14	31.7	14	8	777	25	49	66		18	29 PKP
WARSAW	106.43	39.9								18	47 PP
UMEA	108.08	27.8	14	17	777	25	14	23		34	3 SS
KIRUNA	108.72	23.6	18	46	777	25	16	22		28	15 PS
NURMIJARVI	109.71	31.6	14	23	777	25	17	19		18	57 PP
ISTANBUL UN.	109.77	52.5	14	24A	777					19	11 PP
KEVO	111.23	21.7	14	33	-235	25	7	3		19	5 PP
PULKOVO	112.49	32.6	14	37	-233					28	47 PS
JERUSALEM	113.15	63.2								19	19 PP
RIVERVIEW	113.39	216.9				25	16	3		29	5 PS
CAMBERRA	113.45	214.4								29	6 PS
APATITY	113.63	24.0	18	47	14	25	12	-1		29	4
SIMFEROPOL	114.00	48.8								19	29 PP
KSARA	114.03	61.1	18	37	3	25	21	6		19	24 PP
MOSCOW	116.46	37.0	18	39	1	25	29	5		22	12 SKP

BRISBANE	117.00	222.9								25	24	
TIFLIS	121.67	52.8								20	20	PP
GORIS	122.85	55.4	18	52	1	25	52	6		20	29	PP
CHARTERS TS.	126.36	224.0	19	0	3							
TEHERAN	126.89	60.0	19	0	2				20	46		
TIFSI	127.29	352.5	18	59	0					23	43	PPP
SHIRAZ	127.70	67.6	19	1A	1	26	5	4		21	1	PP
MUNDARING	127.83	187.0	19	2	2				19	14		
SVERDLOVSK	128.61	32.1	19	3	1							
MAGADAN	130.93	333.7								22	34	SKP
RABAUL	131.81	244.6								22	35	
ASHKABAD	132.32	56.6	19	11	2					24	17	PPP
PORT MORESBY	132.91	235.0	19	13	3					22	37	PKS
TASHKENT	139.79	49.2	19	16	-7					23	2	PKS
QUETTA	140.21	66.8	19	15	-8				19	25	22	20 PP
Y.-SAKHLINSK	142.06	322.7	19	25	-2							
KHOROG	142.64	54.1	19	25	-3						22	38 SKP
FRUNSE	142.87	44.5	19	24	-4						22	36
WARSAK DAM	143.53	59.7	19	27	-2							
BOMBAY	145.24	85.6	19	31	-1						29	57 SKKS
POONA	146.16	86.5	19	37A	3						22	58
LAHORE	146.32	63.1	19	37	3						23	9
KODAIKANAL	147.42	102.8	19	39	3						30	15
IRKUTSK	147.64	6.2	19	38	2							
TOKUBASAN	148.95	307.5	19	37A	-1						23	16 PP
NEW DELHI	149.28	67.7	19	37A	-2						20	20 PP
DEHRA DUN	149.70	64.1	19	16A	-23							
MATUSIRO	150.21	309.3	19	45	5						23	17 PP
MADRAS	150.85	99.5	18	49A	-52						36	45 SSP
ESEN BULAK	151.56	19.8	19	44	2						23	10 PP
ULAN-BATOR	152.18	4.1	19	46A	3						23	32
CHANGCHUN	153.01	334.6	19	45A	1						23	36 PP
TANGERANG	153.69	173.1	19	47K	2							
DJAKARTA	153.71	173.5	19	45	0							
BOKARO	157.52	76.2	19	56	6						24	8
CHATRA	158.29	67.8	19	56A	5						23	50
PEKING	159.40	345.8	19	55	2						24	13 PP
PAOTOW	159.61	359.3	19	56	3						24	14 PP
CALCUTTA	159.97	79.3	20	7	14							
LHASA	160.61	57.1	19	58	4						24	21 PP
PORT BLAIR	161.63	114.7	20	3	8						33	53
SHILLONG	162.69	68.5	19	57A	1							
CHITTAGONG	163.17	79.2	20	35	39						24	32 PP
LANCHOW	163.31	16.8	19	59A	2						24	33 PP
ZO-SE	164.97	318.9	20	1A	3						24	42 PP
NANKING	165.60	327.5	20	1A	2						24	43 PP
SIAN	165.91	2.7	20	2A	3						24	46 PP
MANILA	167.88	245.2	20	3	3						25	9
CHENGTU	168.31	25.0	20	4A	3						24	59 PP
KUNMING	171.86	51.1	20	5A	2						25	17 PP
HONG KONG	175.32	298.3	20	7	3						25	35 PP
CANTON	175.52	311.8	20	6A	2						25	34 PP

DECEMBER 29 14.H 47.M 36.S EPICENTRE -31.42-177.76 DEPTH= 0.KM

A=-0.85429 B=-0.03334 C=-0.51872 D=-0.0390 E= 0.9992
G= 0.5183 H= 0.0202 K=-0.8549 HT= 1.4

SE= 2.42

	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
RAOUL ISLAND	2.17	356.4	0	36	-2							
TUAI	8.46	208.1	2	3	-4	3	41	-3				
CHATEAU	9.49	213.3	2	18	-3						2	42
WELLINGTON	11.53	209.3	2	48	-1	4	45	-14				
SUVA	13.65	344.5	2	19	-58							
NOUMEA	16.74	299.0	4	4	7	7	34	31				
ROXBURGH	17.27	212.0	4	2	-2							
AFIAMALU	18.27	18.8	4	12	-4	7	29	-9				
PORT VILA	18.57	314.0	4	26	6							
BRISBANE	25.94	271.4	5	35	0	10	12	8				
RIVERVIEW	26.24	256.4	5	41A	3						10	34
CANBERRA	27.95	253.0	5	55K	1	10	47	10			8	50
MOORLANDS	29.90	238.5	6	9	-2						9	14
HONIARA	30.12	311.8	6	11	-2							
TOOLANGI	30.76	248.3	6	19	0				6	32	7	42 PPP

CHARTERS TS.	34.17	280.5	6	48	-1	12	19	4				
ADELAIDE	36.38	252.4	7	7	-1	12	50	1	7	20	8	33 PP
RABAUL	39.13	307.7	7	30	-1							
PORT MORESBY	39.24	296.3	7	32A	0	13	46	13				
DUMONT	43.28	203.0	8	6	1	14	35	2				
BYRD STATION	53.90	169.4	9	29	2							
WILKES	54.35	208.1	9	29	-1	17	0	-8			19	17 SCS
HAWAII V.OB.	54.97	26.2	9	36	1	17	21	5				
MUNDARING	55.35	250.7	9	38	0	17	21	0				
PERTH	55.66	250.6	9	42	2	17	31	5			13	11 PP
HONOLULU	55.71	22.3	9	44	4	17	33	7				
KIPAPA	55.84	22.4	9	43	2							
SOUTH POLE	58.75	180.0	10	10	8							
ARGENTINE I.	70.91	155.9	11	23	2							
MAWSON	71.43	200.6	11	22K	-2				11	38		
MANILA	74.42	298.3	11	42	1	21	12	-4				
N-LAZARVSKYA	77.87	183.2	10	59	-62							
TUKUBASAN	78.02	326.3	12	1A	-1	21	51	-4			27	9 SS
MATUSIRO	79.19	325.3	11	56	-12	22	10	2				
HONG KONG	84.26	300.3	12	35	0	23	7	7			23	17 SCS
ZO-SE	84.93	311.1	12	40K	2	23	6	0				
CANTON	85.34	300.5	12	40	0	23	6	-4				
SANTA LUCIA	85.76	126.7	12	42	0	23	5	-9				
PRIEST	85.91	43.0	12	43K	0							
PASADENA	86.04	45.8	12	42	-2	23	12	-5				
LICK	86.19	41.5	12	44K	0							
BERKELEY	86.21	40.8	12	44K	0	23	14	-5				
CALISTOGA	86.58	40.1	12	45A	-1							
NANKING	87.11	310.5	12	49	0	23	18	-9				
UGLEGORSK	87.78	334.9	13	21K	29							
MINERAL	88.32	39.4	12	42K	-13							
BOULDER CITY	89.31	46.2	13	0	1							
TUCSON	89.52	51.2	13	1	1							
TUCSON TELE.	89.65	51.2	13	1	0							
EUREKA	90.90	43.0	13	5	-2							
CHANGCHUN	91.16	322.7	13	6	-2	24	10	5			23	38 SKS
LONGMIRE	92.72	34.8				24	54	36			24	24 PP
BLUE MTS.	93.71	38.3	13	16	-4							
PEKING	93.78	315.3	13	20	0	24	36	8			23	56 SKS
ALBUQUERQUE	94.05	51.3	13	19	-2							
SALT LAKE C.	94.15	44.0	13	35	13							
HUANCAYO	94.16	106.7	13	25	3							
KUNMING	94.46	296.6				24	47	13			24	2 SKS
AREQUIPA	94.81	112.4	13	26	1							
SIAN	95.01	307.2	13	28	2	24	5	4			24	52 S
PENTICTON	95.57	33.9	13	26	-2							
PORT BLAIR	95.58	280.2	14	33	65						17	54
CHENGTU	96.48	301.9	13	34	2	24	11	2				
LA PAZ	97.42	114.3	13	40	3	24	18	4				
PAOTOW	97.88	312.9				24	17	1				
WICHITA MTS.	99.31	55.1	13	45	0	24	26	3			17	49 PP
LANCHOW	99.48	306.4	13	46	0	24	24	0				
TULSA	101.89	55.2				24	36	0			17	52 PP
CALCUTTA	104.53	287.6									19	16
ROLLA	105.58	55.0	18	36	777							
LHASA	105.71	295.3				24	57	3				
MADRAS	106.86	275.1	14	44	777						25	4
BOMBAY	115.85	277.2									19	57
RESOLUTE	118.15	17.4	18	49	0							
ALMATA-2	120.96	304.6	18	55	1							
WARSAK DAM	122.66	292.6	19	1	3							
ALERT	124.23	8.3	18	59	-2							
QUETTA	125.15	286.8	19	3	0	26	14	8			20	51 PP
DUZHANBE	126.08	297.2	19	12	8							
KHEYS	126.19	350.3	19	3	-2							
TASHKENT	126.32	300.6	19	8	3	26	16	6				
BROKEN HILL	127.90	212.9									28	31
BANDEIRA	132.74	194.6	19	18	1						21	44 PP
SVERDLOVSK	132.81	320.3	19	17	0							
VANNOVSKAYA	134.18	294.2	19	21	1							
SHIRAZ	136.96	281.2	19	26	1						22	57 PKS
LWIRO	138.06	222.0	19	34	7							
KEVO	139.15	347.1	19	28	-1						22	18 PP
TEHERAN	139.16	289.8	19	36	7						22	35 PP
SODANKYLA	141.23	345.2	19	29	-4							
KIRUNA	142.02	348.9	19	29	-5						22	37 PP
GORIS	143.48	295.2	19	35	-1							
KAJAANI	143.63	341.4	19	31	-6							
SIDA	145.18	15.7	19	42K	3							

MOSCOW	145.29	324.9	19	39K	-1						
UMEA	145.65	345.9	19	38A	-2					41	54 SS
PULKOVO	146.00	334.8	19	41A	0						
SKALSTUGAN	147.20	351.7	19	43	0						
NURMIJARVI	147.33	339.5	19	44	1					30	0 SKKS
HELSINKI	147.51	338.9	19	44	1						
BANGUI	149.00	213.1	19	49	3	20	0				
UPPSALA	149.75	344.6	19	52	5					23	4
BERGEN	150.94	356.9								20	7
KONGSBERG	151.33	352.2	19	55	6					23	34 PP
KSARA	151.63	283.9	19	51K	1					23	37 PP
SIMFEROPOL	151.73	307.6	19	51	1						
JERUSALEM	151.96	279.5	19	54	4						
GOTEBORG	152.88	348.5	20	2	11						
KISHINEV	154.34	315.0	19	54	1						
LWOW	155.42	324.7	19	56	1						
M.BOUR	155.56	129.6	20	6	11					20	30 PKP2
ISTANBUL UN.	156.46	301.5	19	55	-1					23	32 PKS
DURHAM	156.50	5.5	20	41K	45						
KRAKOW	157.16	329.7	20	10	13					24	2 PP
COLLMBERG	158.60	341.3	20	20	21					20	36
HALLE	158.69	343.1	20	35	36					23	43 SKP
DE BILT	159.22	354.9	20	0	0					24	14
PRUHONICE	159.29	337.1	20	12	12					20	40 PKP2
JENA	159.31	343.1				27	30	26		31	0 SKKS
BUDAPEST	159.45	326.1	20	2	2					30	28
KEW	159.88	4.6								20	53 PKP2
KASPERSKE H.	160.34	337.4	20	14	13					20	42
ATHENS	161.18	296.2								32	19
STUTTGART	161.87	344.9	20	16	13					31	24
STRASBOURG	162.35	347.8	20	5	2					24	0 PP
FOLINIERE	162.55	6.0								20	53
LJUBLJANA	162.56	330.4	20	17	14						
GARCHY	164.15	357.9								21	12
FLORENCE X.	165.75	332.5	20	7	1					25	15 PP
ROME	166.71	324.7	20	8	1					25	16 PP
MESSINA	167.14	305.4	20	5	-2	27	4	-6		24	46 PP
TOLEDO	170.13	29.4	20	44	35					25	28 PP
MALAGA	172.37	44.4								25	34

DECEMBER 30 18.H 16.M 21.S EPICENTRE -4.78 153.82 DEPTH= 101.KM

A=-0.89433 B= 0.43968 C=-0.08277 D= 0.4412 E= 0.8974
G= 0.0743 H=-0.0365 K=-0.9966 HT= 7.0

DEPTH OF FOCUS= 0.011R

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	
RABAUL	1.74	289.2	0	29	-1								
HONIARA	7.64	127.6	1	51	1	3	13	-2					
PORT MORESBY	8.05	234.9	1	55K	-1	3	27	1					
CHARTERS TS.	16.90	205.2	3	52	1	7	1	7					
PORT VILA	19.16	133.3	4	19	2	7	44	0					
NOUMEA	21.28	146.1	4	42K	3	8	32	7					
BRISBANE	22.51	182.4	4	52	1	8	45	-2					
RIVERVIEW	29.01	184.6	5	53A	1	10	37	3			6	28	*SP
CANBERRA	30.72	187.7	6	6K	-1	11	2	1	6	32	12	50	SS
ADELAIDE	33.13	203.0	6	25	-3	11	36	-3	6	55	13	53	SS
TOOLANGI	33.51	192.0	6	29	-2	11	48	3	6	58	7	9	*SP
AFIAMALU	35.09	107.4	6	41K	-4	12	11	2					
SAVANNAH	37.26	188.2	7	2	-1						7	54	
TARRALEAH	37.93	188.9	7	9	0								
MOURLANDS	37.96	188.0	7	11	2								
CHATEAU	39.51	153.1	7	23	1				7	44			
TUAI	39.94	151.2	7	29	4								
WELLINGTON	40.90	155.7	7	29	-4	13	32	-5			9	13	PP
ROXBURGH	42.74	163.9				13	59	-5			17	31	SS
MATUSIRO	43.62	341.7	7	55	-1	14	11	-6					
MUNDARING	44.39	227.9	7	59	-3	14	27	-1					
PERTH	44.66	228.1	8	5	1	14	45	13			9	59	PP
HONG KONG	47.20	306.4	8	24	0	15	22	14			10	22	PP
ZO-SE	47.37	321.0				15	20	10			18	15	SCS
CANTON	48.26	306.8				15	36	13			18	25	SCS

NANKING	49.53	320.1	8	42	0	15	50	9	18	30	SCS
MACQUARIE I.	49.74	176.1	8	45	1						
PEKING	56.44	325.7	9	30	-3	17	21	7	19	19	SCS
SIAN	57.43	316.1	9	40	0	17	38	11	9	47	*SP
PETROPAVLOVK	57.73	3.4	9	42	0	17	45	14			
KUNMING	57.82	303.6	9	43	0	17	44	12	9	50	*SP
CHENGTU	59.19	310.0	9	51	-1	18	0	10	9	59	*SP
PAOTOW	60.38	322.7				18	16	11			
LANCHOW	61.92	315.3	10	11A	0	18	37	12	20	1	SCS
DUMONT	62.52	186.1	10	14	-1	18	37	4	19	15	
PORT BLAIR	62.92	285.6	10	21	3				18	48	
ULAN-BATOR	66.63	327.6	10	39	-2						
SHILLONG	67.19	300.1	10	44A	-1						
WILKES	68.38	197.3	10	50	-2	19	40	-4	11	29	
LHASA	69.14	304.1	10	58A	1	20	5	12	11	5	*SP
YAKUTSK	69.14	348.1	10	55A	-2	20	1	8			
CALCUTTA	69.43	296.1							12	44	
CHATRA	71.59	300.2	11	11A	-1				20	30	
FSEN RULAK	71.93	322.1	11	12	-2						
MADRAS	75.22	284.7	11	42	9				21	9	
DEHRA DUN	80.20	301.7							13	27	
NEW DELHI	80.59	299.9	11	57A	-5				12	28	
COLLEGE	81.47	21.6	12	5	-2			12	35		
POONA	82.04	289.4	12	8	-2						
BOMBAY	83.05	289.6	12	21	6	23	7	42	22	31	SKS
SEMIPALATNSK	83.29	321.8	12	15	-1						
ALMATA-2	83.45	314.4	12	18K	1						
LAHORE	83.56	302.4	12	16	-2			12	47		
BYRD STATION	84.74	169.9	12	24	0						
SOUTH POLE	85.25	180.0	12	26	0						
FRUNSF	85.34	313.5	12	27	0	22	59	12			
MAWSON	85.98	202.6	12	27A	-3						
ANDIJAN	86.63	311.2	12	34	1						
TASHKENT	89.03	311.4	12	43	-1	23	29	7			
QUETTA	89.67	300.2	12	46A	-1	23	25	-3	13	17	16 25 PP
PASADENA	91.01	56.0	12	55	1	23	44	4			17 3
BLUE MTS.	92.53	45.4	13	2	1	23	29	-24			25 20 SP
EUREKA	93.17	50.8	13	5	1						
MOULD BAY	93.86	13.9	13	5	-2						
ALERT	100.83	4.5									24 11
GORIS	106.51	309.7									18 27 PP
WICHITA MTS.	107.16	55.3							14	29	19 10 PP
TULSA	109.28	53.7				24	49	4			28 9 SP
UMEA	112.27	339.7	18	20	-3				19	1	
UPPSALA	115.75	337.2									19 37 PP
KSARA	115.76	305.3									19 37 PP
ISTANBUL UN.	118.99	314.8									20 6 PP
BULAWAYO	120.77	243.3	18	42	2						
PALISADES	124.15	42.6				25	45	6			
LWIRO	124.63	264.0									20 39 PP
STUTTGART	126.81	331.4	19	34	42						
BOGOTA	132.28	88.1									21 49 PP
FUQUENE	132.64	87.0									22 27 PKS
LA PAZ	133.45	118.0	19	6	2						22 36
BANGUI	135.35	271.4	18	56	-12						22 21
CARACAS	139.24	79.5									22 13 PP
TOLEDO	139.75	333.3	19	16	0						22 17 PP
MALAGA	142.45	330.7	19	12	-9						22 37 PP
TRINIDAD	144.64	78.4	19	27	3						
M.BOUR	166.84	317.1	19	56	3						24 52 PP

DECEMBER 31 8.H 0.M 22.S EPICENTRE 52.50 160.76 DEPTH= 38.KM

A=-0.57726 B= 0.20149 C= 0.79131 D= 0.3295 E= 0.9441
G=-0.7471 H= 0.2608 K=-0.6114 HT= -6.3

DEPTH OF FOCUS= 0.001R

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	
PETROPAVLOVK	1.39	293.1	0	25	2	0	44	3					
KLYUCHI	3.83	0.9	0	35	-23						1	47	
MAGADAN	9.00	325.7	2	10	0	4	54	62					
OKHA	10.79	282.7	2	37	2						7	11	
UGLEGORSK	12.31	261.3									5	24	PPP

YAKUTSK	19.12	312.1	4 20	-2							
MATUSIRO	22.51	233.8	4 57	0	9 7	10					
CHANGCHUN	24.97	263.9	5 18	-3	9 40	0					
COLLEGE	28.56	44.3	5 54	0							
PEKING	32.72	265.6	6 29	-2							
ULAN-BATOR	34.10	284.3	6 46	3							
NANKING	36.49	252.7	7 3	0							
MOULD BAY	37.45	22.8	7 11	0							
ESEN BULAK	41.12	288.2	7 43	1							
LANCHOW	42.78	270.7	7 55	-1							
YELLOW KNIFE	43.33	42.4	7 59	-1							
ALERT	43.48	7.5	8 1	0							
RESOLUTE	43.73	21.9	8 4K	1							
NORD	46.14	359.5	8 21	-2							
THULE	47.61	14.0	8 38	4							
SEMIPALATNSK	47.73	301.5	8 34	-1							
PENTICTON	47.90	60.2	8 35	-1							
BLUE MTS.	51.89	63.5	9 7	0					9 22	20	9 SCS
MINERAL	52.39	70.5	9 11A	0							
CALISTOGA	52.95	72.7	9 7K	-8							
SVERDLOVSK	52.99	317.3	9 13	-2							
KEVO	53.51	341.8	9 17	-2							
RUTTE	53.68	59.7	9 20	0							
ALMATA-2	53.71	295.8	9 20K	0							
APATITY	53.97	337.8	9 22K	0							
LICK	54.37	73.3	9 26A	1							
TROMSOE	55.05	344.7	9 30	0							
FRUNSE	55.51	297.1	9 33A	-1							
SODANKYLA	55.60	340.3	9 34	0							
PRIEST	55.76	73.7	9 36K	1							
EUREKA	56.18	67.7	9 40	2							
KIRUNA	56.39	343.1	9 39	-1					9 50		
DUGWAY	57.46	65.1	9 48K	0							
KAJAANI	58.17	337.8	9 52	-1							
PASADENA	58.61	73.7	9 55	-1							
BOULDER CITY	59.26	69.9	10 1	1							
CHATRA	59.36	275.0	9 59A	-2							
TASHKENT	59.43	299.0	10 1	0							
UMEA	60.01	341.0	10 4	-1					10 15		
PULKOVO	61.19	333.9	10 12A	-1						18 44	PS
DUZHANBE	61.66	297.1	10 16	0						18 49	PS
SKALSTUGAN	61.67	344.6	10 16	0							
GOLDEN	61.86	60.8	10 19	1							
NURMIJARVI	61.99	337.1	10 18K	-1							
HELSINKI	62.21	336.8	10 20	0							
DEHRA DUN	62.32	284.4								12	1
MOSCOW	62.39	327.7	10 20A	-1	18 47	3			10 32		
WARSAK DAM	63.42	291.7	10 26	-2							
NEW DELHI	64.09	283.7	10 27	-6							
UPPSALA	64.14	340.3	10 32	-1					10 42		
ALBUQUERQUE	64.73	65.1	10 37	0							
KONGSBERG	65.81	344.4	10 44	0							
MANHATTEN	66.80	55.6	10 53	3							
GOTEBORG	67.24	342.4	10 52	-1							
ASHKABAD	67.62	303.4	10 54	-1							
QUETTA	68.86	292.1	11 3	0							
WICHITA MTS.	69.17	60.0	11 3	-2						13 42	PP
TULSA	69.72	57.3	11 8	0							
ABERDEEN	69.80	350.1								25 12	SS
ROLLA	70.13	53.4	11 10	0							
FLORISSANT	70.17	51.8	11 9	-2							
FAYETTEVILLE	70.40	56.1	11 11	-1							
TIFLIS	71.08	314.6	11 17	1						13 52	PP
GORIS	72.20	312.3	11 24A	1							
KISHINEV	72.69	327.8	11 26K	0							
TEHERAN	72.83	306.6	11 28	1							
HALLE	73.10	340.2	11 28	0						14 16	PP
CHARTERS TS.	73.37	194.2	11 40	10							
POONA	73.67	279.2	11 31	-1							
JENA	73.71	340.3	11 32	0	21 5	6				11 53	
PRUHONICE	73.96	338.1	11 34	1							
BOMBAY	74.00	280.2	11 34	0							
KASPERSKE H.	74.98	338.4	11 39	0							
BUDAPEST	75.18	334.2	11 48	8							
STUTTGART	76.23	341.0	11 48	2							
STRASBOURG	76.71	341.9	11 50	1						12 15	
SHIRAZ	77.12	302.0	11 52A	1	21 39	3	12	3			
BELGRADE	77.23	332.2	12 4A	12						12 11	PCP
LJUBLJANA	77.65	336.7	11 55	1							

ROSELFND	79.70	341.9	12	6	1					12	32	
KSARA	81.53	316.3	12	24	9							
JERUSALEM	83.57	315.8	12	26	0							
SOUTH POLE	142.31	180.0	19	33	4							

DECEMBER 31 11.H 1.M 5.S EPICENTRE 0.43 99.90 DEPTH= 57.KM

A=-0.17189 B= 0.98509 C= 0.00740 D= 0.9851 E= 0.1719
G=-0.0013 H= 0.0073 K=-1.0000 HT= 7.2

DEPTH OF FOCUS= 0.004R

SE= 3.01

	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	
TANGERANG	9.39	134.4	2	15	0	4	53	53					
DJAKARTA	9.54	133.6	2	16	-1	4	58	55					
NHATRANG	14.92	37.9	3	28	0								
CHITTAGONG	23.18	340.7	5	2	0	9	10	5	5	11	5	22	PP
MADRAS	23.19	303.4	5	5A	3	9	21	15			5	38	PP
KODAIKANAL	24.34	294.3				9	1	-24					
CALCUTTA	24.67	333.7									9	41	
KUNMING	24.70	6.2	5	20	4								
HOWRAH	24.71	333.6	5	23	6								
MANILA	25.28	55.0	5	22	0						14	6	
HONG KONG	25.80	31.6	5	32	5	10	6	16					
CANTON	26.04	29.2				10	19	25					
SHILLONG	26.17	343.4	5	29K	-1	10	3	7					
ROKAPO	26.99	330.6	5	37	-1	10	11	2					
HYDERABAD	27.04	309.8	5	49	11	10	29	19					
CHATRA	28.97	336.0	5	53K	-3								
LHASA	30.25	344.6	6	8	1	11	11	10					
POONA	31.27	306.6	6	16	0								
BOMBAY	32.29	306.2	6	27	2	11	44	11			13	54	SS
NEW DELHI	35.42	324.2	6	46A	-6	12	18	-4			15	2	SSS
LANCHOW	35.63	5.5	6	52	-2	12	32	7					
MUNDARING	35.73	155.9	6	54	-1	12	33	6					
DEHRA DUN	36.27	327.0									8	42	
LAHORE	39.29	324.4	7	21	-3	13	19	-2					
PEKING	42.11	18.7	7	47	-1								
WARSAK DAM	42.67	324.4	7	51	-1								
QUETTA	43.09	316.4	7	55	-1	14	19	2	8	2	9	33	PP
KHOROG	45.21	327.8	8	13	0								
ESEN BULAK	45.89	356.5	8	17	-4								
ANDIJAN	47.27	331.4	8	30	1								
ALMATA	47.34	337.2	8	32	3								
DUZHANBE	47.50	326.7	8	30	-1	15	21	1					
ULAN-BATOR	47.69	6.4	8	31	-1								
FRUNSE	47.92	335.0	8	34	0								
PORT MORESBY	48.04	103.0	8	34A	-1	15	31	3					
TASHKENT	49.23	329.6	8	43	-1								
CHARTERS TS.	49.75	117.0	8	46	-2								
MATUSIRO	50.48	40.3	8	58	4								
ADELAIDE	50.54	138.2	8	57K	3								
SEMIPALATNSK	52.53	344.3	9	9	0								
SHIRAZ	53.62	307.3	9	14A	-3	16	45	0					
TOOLANGI	56.53	137.1	9	37	-1						10	17	
TEHERAN	57.09	313.5	9	38	-4								
BRISBANE	57.78	123.1	9	51	4	17	44	4					
CANBERRA	57.92	133.2	9	46K	-2						10	42	PCP
RIVERVIEW	58.88	130.7	9	49	-6						17	55	
GORIS	62.34	315.3	10	15	-3								
TIFLIS	64.33	317.1	10	30	-1								
CHILEKA	66.02	252.7	10	44	2								
WILKES	67.05	175.4									20	1	
KSARA	68.36	306.4	10	59	2								
JERUSALEM	68.40	304.1	10	56	-1								
LWIRO	71.13	267.5	11	10	-4						37	40	
BROKEN HILL	72.14	254.8	11	20	0								
BULAWAYO	72.61	248.8	11	25	2								
MOSCOW	74.38	328.7	11	32	-1								
KIMBERLEY	77.18	240.5	11	52A	3								
WELLINGTON	78.94	132.2	11	57	-2								
CHATEAU	79.16	130.0	11	59	-1								
PULKOVO	79.46	331.2	12	0	-1								

APATITY	80.78	339.1	12 11	3			
BANGUI	81.27	274.3	12 11	0			12 18 PCP
KAJAANI	81.89	335.0	12 13	-1			
HELSINKI	82.16	330.8	12 15	-1			
NURMIJARVI	82.39	331.1	12 16	-1			
KHEYS	82.56	353.7	12 15	-3			
SODANKYLA	83.21	338.1	12 19	-2			
KEVO	83.72	340.5	12 25	1			
UMEA	85.05	334.0	12 29	-1	22 56	3	28 34 SS
KIRUNA	85.63	338.0	12 30	-3	23 0	1	
UPPSALA	85.74	329.9	12 34	0			
TROMSOE	86.45	339.7	12 35	-2			
LJUBLJANA	86.48	315.9	12 36A	-1			13 36
PRUHONICE	86.67	319.9	12 49	11			13 23
KASPERSKE H.	87.26	319.0	12 45	4			
HALLE	88.39	321.3	12 26	-20			12 57
SKALSTUGAN	88.56	333.4	12 51	4			
JENA	88.61	320.7	12 52	5			13 28
N-LAZARVSKYA	89.76	199.3	12 55	2			
SOUTH POLE	90.42	180.0	12 59	3			
ROSELEND	91.99	315.6	13 5	2			
BLUE MTS.	124.15	31.3	18 54	2			21 47
EUREKA	128.50	35.4	19 7	7			
DUGWAY	129.77	32.6	19 6K	3			
ALBUQUERQUE	137.[illegible]	32.4	19 13	-3			22 55 SKP
WICHITA MTS.	140.99	24.5	19 18	-5			35 23 PCSPKP

DECEMBER 31 19.H 40.M 11.S EPICENTRE -22.81 171.42 DEPTH= 45.KM

A=-0.91241 B= 0.13764 C=-0.38545 D= 0.1492 E= 0.9888
G= 0.3811 H=-0.0575 K=-0.9227 HT= 4.0

DEPTH OF FOCUS= 0.002R

SE= 1.33

	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	275.3	1 7K	-3	2 5	2		
PORT VILA	5.83	329.5	1 27	0	2 45	12		
SUVA	8.04	56.1	1 57	0	3 39	11		
CHATEAU	16.71	168.8	3 54	1				
HONIARA	17.26	318.6	4 3	3				
BRISBANE	17.49	251.1	4 1	-1	7 23	9		
AFIAMALU	18.22	63.8	4 11	-1	7 29	-1		
WELLINGTON	18.63	172.1	4 17	0	7 55	16		
RIVERVIEW	20.91	233.9	4 42K	1				8 46
ROXBURGH	22.68	183.8	5 1	2	9 15	16		
CANBERRA	23.16	232.5	5 5K	1				5 20 *SP
CHARTERS TS.	23.57	271.8	5 8	0	9 43	8		
TOOLANGI	26.70	230.7	5 37K	0				6 19 PP
PORT MORESBY	26.80	295.9	5 37K	-1	10 11	2		
SAVANNAH	27.69	221.4	5 46	0				
MOORLANDS	28.11	220.1	5 50	0				
TARRALEAH	28.47	221.1	5 53	0				
ADELAIDE	30.95	239.6	6 15K	0	11 33	18		
DARWIN	39.94	278.0	7 31	-1				
MUNDARING	49.42	246.8	8 46	-2	15 51	1		
MATUSIRO	66.84	331.3	10 48	-2				
SOUTH POLE	67.33	180.0	10 51	-2				
HONG KONG	71.53	304.8						12 37
CHANGCHUN	78.64	327.9	11 58	-1				
PEKING	80.97	320.3	12 12	0				
LANCHOW	86.60	311.4	12 41	1	23 17	5		23 5 SKS
BERKELEY	86.69	46.5	12 43K	2				39 31
LICK	86.83	47.3	12 41K	0				
PRIEST	86.88	48.7	12 42K	0				
MINERAL	88.44	44.7	12 48A	-1				
CHINA LAKE	88.86	50.2	12 51	0				
BOULDER CITY	90.92	51.1	13 1	0				
EUREKA	91.76	47.6	13 4	-1				
LHASA	93.18	300.7	13 14	3				
BLUE MTS.	93.45	42.4	13 11	-1	23 46	-28		30 1 SS
QUETTA	113.11	294.3	18 35	2				
KIMBERLEY	119.49	213.7	18 48A	3				
NURMIJARVI	135.79	337.1	19 16	0				
JERUSALEM	140.28	292.7	19 26	1				

KRAKOW	144.82	327.7	19 28	-5	19 33	PKP2
RACIBORZ	145.64	329.0	19 35	1	19 44	PKP2
HALLE	147.25	336.1	19 39	2	19 48	PKP2
PRUHONICE	147.37	331.9	19 39	2	21 21	
DURHAM	147.65	352.4	19 55K	18		
BELGRADE	147.67	319.8	19 46K	9	20 5	
VIENNA-H.	147.77	328.1	19 41	4		
JENA	147.84	335.8	19 37	-1	20 8	
PANGUI	147.95	239.2	19 38	0		
KASPERSKE H.	148.43	331.8	19 42	3	20 2	
ATHENS	148.49	306.1	19 41	2		
BENSBERG	149.34	340.3	19 44	4		
LJUBLJANA	150.19	326.7	19 42	1	19 46	PKP2
STUTTGART	150.47	335.7	19 42	0		
TRIESTE	150.86	326.8	19 49	7		
DOURBES	150.86	342.4	19 47	5		
STRASBOURG	151.18	337.2	19 55	12	20 38	
WELSCHBRUCH	151.82	338.7	19 58	14		
FLORENCE X.	153.44	326.7	19 41	-5		
GARCHY	153.85	341.8	20 7	24	20 27	
ROSELEND	154.03	335.2	20 4	17		

TO APRIL 1962 THE STATION FELDBERG IN SCHWARZWALD
HAS BEEN INCLUDED IN THE I.S.S. WITH THE POSITION 49.88N 8.02E

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.

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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.