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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

The International Seismological Summary.
1944 April, May, June.

INTERNATIONAL GEODETIC AND GEOPHYSICAL UNION.
ASSOCIATION OF SEISMOLOGY.
FORMERLY THE BULLETIN OF
THE BRITISH ASSOCIATION SEISMOLOGY COMMITTEE.

The Director of the I.S.S. wishes to express his thanks to U.N.E.S.C.O. and H.M. Treasury for financial support, which has covered the cost and preparation of this volume.

The second quarter of 1944 contains 72 epicentres, 43 of which are repetitions from previous determinations.

Cases of abnormal focal depth are noted below :—

April	7d.	13h.	11·5N.	86·3W.	0·020
	16d.	9h.	23·0N.	142·5E.	Suggested Deep
	23d.	10h.	21·0S.	178·0W.	0·030
	29d.	21h.	36·3N.	71·0E.	0·010
May	14d.	8h.	22·7S.	179·4E.	0·080
	14d.	10h.	14·6S.	175·1W.	0·010
	25d.	1h.	21·5S.	179·0W.	0·080
June	2d.	2h.	40·9N.	142·7E.	Base of Superficial Layers.
	3d.	4h.	30·6N.	139·7E.	0·060
	3d.	11h.	31·6N.	141·7E.	0·010
	4d.	13h.	Undetermined shock		Suggested Deep
	6d.	11h.	41·1N.	142·2E.	0·005
	7d.	10h.	33·3N.	132·1E.	0·005
	8d.	2h.	9·0S.	71·0W.	0·080
	20d.	12h.	41·4N.	143·9E.	0·005
	25d.	14h.	21·5S.	170·2E.	Suggested Deep

Thanks are also due to the Director of the Meteorological Office and the Superintendent of Kew Observatory for hospitality extended to the staff, and assistance in administration.

KEW OBSERVATORY,
RICHMOND, SURREY.

October, 1953.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

April 1d. 9h. Undetermined shock.

Wellington PZ =29m.40s., PP =31m.2s., S =35m.41s., Q =38·7m., RZ =41m..
Christchurch PEZ =31m.5s., SE =35m.52s., QE =38m.16s., REZ =39m.53s.
Auckland PP? =31m.30s.?, S =36m.20s., L =39·8m.
Riverview iPZ =32m.4s.a, iSN =40m.5s., iPS?E =40m.19s., iPS?N =40m.23s., eQE? =46·5m., eRZ =48·9m.
Bogota i =33m.52s.
Tucson iP =35m.3s., i =35m.12s., and 35m.28s.
Pasadena iPZ =35m.15s., eLE =58m.
Riverside ePZ =35m.15s.
Haiwee ePZ =35m.16s., eZ =35m.25s.
Tinemaha eZ? =35m.26s.
Huancayo eS =40m.33s., eL =47m.35s.
Helwan eZ =42m.9s.
Stuttgart eZ =42m.12s.
Long waves were also recorded at Arapuni.

April 1d. Readings also at 0h. (near Balboa Heights), 2h. (Tacubaya and Oaxaca), 3h. (Zürich), 8h. (Bogota), 10h. (near Tucson (2)), 11h. (Zürich, Stuttgart, Triest, Uccle, De Bilt, Prague, Cheb, Bucharest, and Belgrade), 13h. (Prague and Wellington), 15h. (Mizusawa, Stuttgart, Zürich, Bucharest, and Belgrade), 21h. (Tinemaha, Tucson, Haiwee, Riverside, and Pasadena).

April 2d. 4h. Gulf of California.

Tucson iP =41m.18s., i =41m.31s., eS =42m.11s., iL =42m.28s.
La Jolla ePN =42m.20s., eS =43m.36s.
Haiwee ePZ =42m.34s.
Riverside ePZ =42m.37s., eS =44m.5s.
Tinemaha ePZ =42m.46s.
Pasadena eZ =43m.3s., eSEN =44m.6s.
Berkeley eE =46m.54s., eZ =47m.0s., eN =47m.12s.
Salt Lake City e =47m.22s., eL =48m.33s.
Chicago eS =49m.27s., eL =53m.12s.
Long waves were also recorded at Logan, Rapid City, and St. Louis.

April 2d. Readings also at 4h. (Arapuni, Christchurch, Wellington, Auckland, Riverview, and Brisbane), 7h. (near Malaga), 8h. (near Alicante (2) and Malaga), 12h. (Stuttgart), 17h. (Wellington), 20h. (near Lick, Branner, and Berkeley).

April 3d. 17h. Undetermined shock.

Apia eP =53m.26s., eS =56m.0s.?, e =56m.17s., iL =56m.31s.
Auckland P? =54m.0s.?, Q =57·4m., R =58·8m.
Riverview eZ =55m.54s., eE =64m.14s.
Christchurch P?N =55m.56s., eNZ =57m.34s., Q =59m.30s., R =60m.50s.
Sydney e =57·4m., eL =64·2m.
Wellington S?Z =57m.28s., Q =59·8m., RZ =60·5m.
Brisbane eE =57m.29s. and 62m.5s., eN =62m.13s. and 64m.7s., eLN =64m.46s.
Granada PKP =62m.39s.k, iPP =71m.35s., eSKKS =77m.45s., eSKSP =81m.36s., eSSS =91m.15s., L =102·8m.
Pasadena ePZ =63m.1s., eLEN =85·5m.
Riverside ePZ =63m.2s.
Haiwee ePZ =63m.9s.
Tucson eP =63m.22s., e =78m.7s., eL =88m.27s.
Stuttgart eZ =70m.48s.
Huancayo eS =75m.35s., eSS =81m.46s., eL =90m.3s.
St. Louis eSN =76m.38s., eLN =96·1m.
Long waves were also recorded at Arapuni, Berkeley, Florissant, Uccle, Kew, Malaga, and Cheb.

April 3d. Readings also at 2h. (near Lick, Branner, and Berkeley), 5h. (Pasadena, Riverside, Tucson, Tinemaha, and Haiwee), 6h. (Brisbane), 12h. (Pasadena, Riverside, Tinemaha, Haiwee, and Tucson), 13h. (Pasadena, Riverside, Tinemaha, Haiwee, Tucson, and St. Louis (2)), 18h. (Berkeley), 19h. (near La Paz).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

April 4d. 22h. 45m. 52s. Epicentre 37°·6S. 100°·6W. (as on 1942 October 12d.).

$A = -·1461$, $B = -·7807$, $C = -·6076$; $\delta = +2$; $h = -1$;
$D = -·983$, $E = +·184$; $G = +·112$, $H = +·597$, $K = -·794$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Huancayo		34·0	49	e 6 50	+ 2	e 12 14	+ 1	e 7 42	PP	e 14·7
La Plata	N.	34·3	99	12 28	S	(12 28)	+11	—	—	15·8
La Paz	Z.	35·5	64	i 7 5	+ 5	i 12 48	+12	8 26	PP	17·1
Bogota		48·7	37	e 8 47	− 1	—	—	—	—	—
Tucson		70·1	352	e 11 13	− 3	—	—	e 15 59	PPP	e 36·9
Palomar		72·2	347	e 11 24	− 5	—	—	—	—	—
Riverside	Z.	72·9	346	e 11 29	− 4	—	—	—	—	—
Pasadena		73·2	346	i 11 34	− 1	—	—	—	—	e 30·5
Santa Barbara	Z.	73·8	345	e 11 38	0	—	—	—	—	—
Haiwee	Z.	75·1	347	e 11 46	0	—	—	—	—	—
Tinemaha	Z.	76·1	347	e 11 52	+ 1	—	—	—	—	—
St. Louis		76·5	10	e 11 54	0	e 21 30	− 9	—	—	—
Granada		116·3	62	—	—	31 2	PPS	i 46 0	?	—
Uccle		126·8	50	—	—	(37 8)	SS	—	—	37·1
Neuchatel		127·4	55	e 23 39	PPP	—	—	—	—	—
Basle		127·9	54	e 23 38	PPP	—	—	—	—	—
Zürich		128·5	55	e 23 32a	PPP	—	—	—	—	—
Stuttgart		129·3	54	e 23 32	PPP	—	—	e 33 33	PPS	—
Triest		131·5	58	—	—	e 27 34	{−55}	36 51	?	—
Cheb		131·6	52	e 24 8?	PPP	e 28 27	{− 3}	—	—	—
Prague		132·9	52	—	—	e 28 8?	{−29}	30 50	PS	—
Upsala		135·5	40	—	—	e 31 8?	PS	—	—	—
Helwan		139·7	87	i 20 20	[+50]	23 5	PKS	25 34	PPP	—
Bucharest		139·9	63	e 21 41	?	i 25 26	PPP	i 25 30	?	31·1
Ksara		144·7	83	e 19 39?	[0]	22 49?	PP	—	—	—
Kodaikanal	E.	152·7	176	e 24 2	PP	29 21	{−72}	—	—	—
Bombay	N.	160·5	161	e 22 23	?	i 27 6	[+ 1]	28 9	PPP	—
Calcutta	N.	163·1	210	—	—	e 30 29	{−59}	e 34 33	?	—
New Delhi	N.	170·8	167	e 22 16	?	e 26 40	[−32]	i 27 48	?	31·0

Additional readings :—
Huancayo e = 7m.53s.
Helwan PPZ = 20m.29s., eNZ = 23m.15s. and 24m.55s.
Bombay eEN = 22m.47s., PPN = 23m.9s., eSN = 27m.2s., eE = 29m.30s.
Long waves were also recorded at Christchurch and Wellington.

April 4d. Readings also at 4h. (near Bogota), 10h. (near Apia), 12h. (Zürich, Neuchatel, and Stuttgart), 17h. (Riverside and Tucson), 18h. (Riverside, Pasadena, Tucson, Wellington, and Brisbane), 21h. (La Paz and near Mizusawa).

April 5d. 4h. 40m. 40s. Epicentre 40°·6N. 30°·9E.

Felt at Bolu and Istanbul. Epicentre 40°·5N. 31°E.
Bulletin Météorologique, Séismique et magnétique de l'Observatoire d'Istanbul-Kandilli 1944, Istanbul 1944, p. 38.

$A = +·6534$, $B = +·3911$, $C = +·6482$; $\delta = +5$; $h = -2$;
$D = +·514$, $E = -·858$: $G = +·556$, $H = +·333$, $K = -·761$.

	Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
	°	°	m. s.	s.	m. s.	s.	m. s.		m.
Istanbul	1·5	287	0 32	+ 4	0 53	+ 4	1 8	SSS	—
Bucharest	5·2	318	i 1 19	− 2	i 2 17	− 5	i 1 32	P*	—
Campulung	6·3	319	e 1 35	− 1	—	—	—	—	3·6
Ksara	7·8	148	e 1 59	+ 1	e 3 57	S*	—	—	—
Belgrade	8·8	302	e 2 9	− 2	i 3 44	− 9	i 4 21	S*	—
Helwan	10·7	179	2 38	0	—	—	e 5 10	SSS	—
Triest	13·5	298	i 3 13	− 2	—	—	—	—	e 7·4
Prague	14·9	315	i 3 31	− 3	e 6 29	+ 9	e 6 40	SS	e 7·3
Cheb	16·1	312	e 3 49	0	e 7 3	SS	—	—	e 7·8
Chur	16·6	299	e 3 56	0	e 7 12	SS	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Milan		16·6	294	4 5	+ 9	7 17	SS	—	—	9·5
Jena	N.	16·9	314	e 3 58	− 1	—	—	—	—	9·2
Potsdam		17·0	320	i 4 0	− 1	e 7 14	+ 4	—	—	e 9·3
Stuttgart		17·4	305	e 4 4	− 2	e 7 26	+ 7	—	—	e 8·8
Zürich		17·4	300	e 4 5k	− 1	e 8 16	+57	—	—	—
Basle		18·1	300	e 4 12	− 2	e 7 44	+ 9	—	—	e 10·1
Strasbourg		18·3	305	4 19	+ 2	7 47	+ 8	—	—	—
Neuchatel		18·4	299	e 4 17	− 1	e 7 48	+ 7	—	—	—
Copenhagen		19·4	328	e 4 25	− 5	8 6	+ 2	i 4 28	?	10·3
Clermont-Ferrand		20·9	294	e 4 48	+ 2	e 8 51	SS	—	—	e 11·3
De Bilt		21·0	313	e 4 49	+ 2	i 8 44	+ 7	—	—	e 10·3
Upsala		21·0	341	i 4 43	− 4	8 39	+ 2	5 6	PP	e 10·6
Uccle		21·1	307	i 4 47k	− 1	i 8 42	+ 3	—	—	10·3
Barcelona		21·7	283	e 5 8	+13	e 8 58	+ 7	—	—	—
Paris		21·7	301	i 4 53	− 2	i 8 53	+ 2	—	—	e 11·8
Tortosa	N.	23·0	281	e 5 13	+ 6	i 9 50	SS	—	—	e 13·3
Kew		24·1	308	i 5 15k	− 3	i 9 42	+ 8	e 5 50	PP	e 12·3
Bergen		25·4	331	e 5 31	0	e 9 57	+ 1	—	—	e 12·3
Aberdeen		26·9	319	—	—	i 10 26	+ 6	i 10 56	?	14·2
Granada		27·0	275	i 5 46k	+ 1	10 37	+15	6 25	PP	14·8
Malaga		27·7	275	e 5 53	+ 1	e 12 20	?	6 17	pP	18·6
San Fernando		29·2	274	e 8 6	?	e 12 59	SSS	e 11 31	?	i 15·7
Lisbon		30·7	281	5 54	−25	11 47	+26	—	—	12·6
New Delhi	N.	39·5	93	e 7 32	− 2	i 13 30	− 7	—	—	—
Scoresby Sund		40·1	336	16 52	SS	—	—	—	—	21·3
Bombay		41·8	109	i 7 54	+ 1	i 14 14	+ 3	9 36	PP	—
Calcutta	N.	51·2	92	—	—	e 16 23	− 2	—	—	—
Weston		71·6	310	e 11 24	− 1	—	—	—	—	e 43·0
Ottawa		72·2	315	e 11 27	− 2	—	—	—	—	34·3
Fordham		74·0	310	i 11 39	0	—	—	—	—	e 37·3
St. Louis		84·6	318	i 12 34	− 2	e 22 59	− 4	i 12 41	P_cP	e 39·8
Tucson		99·4	328	i 13 44	− 2	—	—	—	—	—

Additional readings :—
Bucharest iP_gN =1m.43s., iS_gE =2m.44s.
Belgrade i =2m.18s. and 2m.28s., ePP =2m.58s., i =3m.16s., 4m.7s., 4m.30s., 4m.32s., and 4m.49s.
Helwan eZ =3m.11s. and 4m.5s.
Stuttgart iP =4m.7s., eS =7m.29s.
Upsala SN =8m.43s.
Kew eSSEN =9m.56s.
Granada PPP =6m.42s.
Malaga QN =15m.57s.
Bombay eN =14m.32s., iE =14m.38s.
Long waves were also recorded at Pasadena, Bozeman, Florissant, and Kodaikanal.

April 5d. 6h. Undetermined shock.

Ksara eP =52m.37s., sS_g =54m.49s.
Istanbul e =53m.0s.?.
Helwan PZ =53m.51s., eZ =54m.9s., 54m.51s., 55m.27s., 56m.3s., and 57m.24s., eNZ =57m.40s.
Bucharest EN =54m.0s.?.
Triest e =55m.48s. and 60m.2s.
Cheb eP? =56m.20s., e =60m.58s. and 61m.45s., eL =65m.
Chur eP =56m.26s.
Stuttgart ePZ =56m.27s., eZ =61m.20s., e =62m.35s., eQ =65·5m., eR =66·6m.
Zürich eP =56m.29s.
Copenhagen eP =56m.35s.
Neuchatel eP =56m.39s.
Granada eP =56m.42s., eS =62m.15s., L =67·2m.
Basle e =56m.47s.
Prague e =57m.37s., 60m.22s., and 61m.2s., eL =64m.
Long waves were also recorded at De Bilt, Uccle, Kew, and New Delhi.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

April 5d. 18h. 5m. 59s. Epicentre 36°·7N. 54°·5E.

Destructive at Gorgan. Epicentre as adopted.

S. Asfia.
Relevé des séismes observés en Iran, 1941-45 (Manuscript).

$A = +\cdot4667$, $B = +\cdot6543$, $C = +\cdot5951$; $\delta = +6$; $h = 0$;
$D = +\cdot814$, $E = -\cdot581$; $G = +\cdot345$, $H = +\cdot484$, $K = -\cdot804$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Ksara		15·5	264	e 3 43	+ 1	e 8 41	P_cP	—	—	—
Helwan		20·5	258	4 40	− 2	8 31	+ 4	5 7	PPP	e 11·5
New Delhi	N.	20·7	106	e 4 43	− 1	i 8 43	+12	8 29	P_cP	—
Bucharest		22·8	299	e 5 7	+ 2	e 9 15	+ 4	—	—	—
Bombay		23·9	134	i 5 18	+ 2	e 9 42	+12	e 10 25	SS	—
Calcutta		32·4	106	—	—	e 11 36	−12	—	—	e 15·8
Stuttgart	Z.	34·9	305	e 6 52	− 3	—	—	—	—	—
Granada		45·8	289	i 8 24	− 1	e 18 39	S_cS	—	—	29·8
Malaga		46·6	289	e 8 24	− 8	—	—	—	—	e 28·0

Additional readings :—
Helwan SSN = 9m.23s., eN = 10m.26s.
Bombay eN = 5m.26s.

April 5d. Readings also at 0h. (Ksara), 1h. (near Berkeley), 2h. (Bucharest, Istanbul, Helwan, and near Ksara), 4h. (La Plata), 7h. (Istanbul (3)), 9h. (Pasadena, Riverside, Tucson, Haiwee, and Palomar), 11h. (Istanbul), 16h. (Granada, De Bilt, Uccle, Stuttgart, Cheb, and Calcutta), 18h. (Tacubaya, Stuttgart, Ksara, Helwan, Bombay, and New Delhi), 20h. (Istanbul and San Francisco), 21h. (Istanbul), 23h. (near Istanbul).

April 6d. Readings at 1h. (Bucharest, Istanbul, Stuttgart, and Zürich), 2h. (Tacubaya, Palomar, Riverside, Tinemaha, Tucson, Florissant, and St. Louis), 4h.(Lick), 6h. (Mizusawa), 8h. (Bucharest), 9h. (near Apia and near Alicante), 10h. (Haiwee, Riverside, Tinemaha, Palomar, Pasadena, Tucson, and near Apia), 11h. (Riverview and Stuttgart), 12h. (Alicante, Malaga, Stuttgart, and near Reykjavik), 13h. (near Alicante), 16h. (Triest), 17h. (Malaga), 18h. (Mizusawa), 19h. (Tacubaya (3)), 20h. (Vera Cruz).

April 7d. 13h. 32m. 53s. Epicentre 11°·5N. 86°·3W. Depth of focus 0·020 (as on 1941 January 6d.).

$A = +\cdot0633$, $B = -\cdot9782$, $C = +\cdot1981$; $\delta = +13$; $h = +6$;
$D = -\cdot998$, $E = -\cdot065$; $G = +\cdot013$, $H = -\cdot198$, $K = -\cdot980$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Balboa Heights		7·0	109	i 1 41	0	i 2 54	− 6	—	—	—
Merida	E.	9·9	341	i 2 14	− 5	—	—	—	—	—
Bogota		13·9	119	i 3 12	+ 1	—	—	i 3 28	PP	—
Tacubaya	E.	14·7	304	i 3 34	PP	—	—	—	—	—
San Juan		20·6	68	e 4 24	− 4	e 8 2	− 2	e 5 17	PPP	e 8·1
Columbia		22·9	11	e 4 52	+ 2	e 8 47	+ 2	—	—	e 9·8
Huancayo		25·8	155	e 5 23	+ 5	i 9 36	+ 3	e 5 55	PP	e 11·4
Cape Girardeau	N.	25·9	355	e 5 20	+ 1	e 9 38	+ 3	e 10 43	SS	—
St. Louis		27·2	354	i 5 34	+ 3	e 9 58	+ 2	i 6 26	PP	—
Bermuda		28·6	41	e 5 38	− 5	—	—	e 6 31	PP	e 11·5
New Kensington		29·5	10	e 5 59	+ 8	—	—	—	—	e 11·8
Philadelphia		30·0	18	i 5 56	0	e 10 35	− 5	e 11 14	sS	11·7
Chicago		30·2	358	e 5 56	− 2	e 10 38	− 6	—	—	e 11·9
Tucson		30·6	317	e 6 5	+ 4	e 16 29	S_cS	e 7 38	pPP	e 12·9
Fordham		31·2	20	i 6 5	− 1	e 11 0	+ 1	e 12 0	sS	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
La Paz		33·1	147	7 38	PP	—	—	—	—	—
Weston		33·4	20	e 6 25	0	—	—	e 12 40	sS	—
Ottawa		35·0	13	6 38	− 1	11 55	− 3	e 7 16	pP	15·1
Palomar		35·4	314	i 6 49a	+ 7	i 12 15	+11	i 7 32	pP	—
Rapid City		35·6	340	e 6 49	+ 5	e 13 17	sS	e 7 22	pP	e 15·7
Riverside		36·1	315	i 6 54	+ 6	—	—	i 9 13	PcP	—
Mount Wilson	z.	36·7	315	i 7 0	+ 7	—	—	i 9 16	PcP	—
Pasadena		36·8	315	i 6 59	+ 5	—	—	e 7 38	pP	—
Shawinigan Falls		36·8	16	6 55	+ 1	12 25	− 1	—	—	—
Haiwee	z.	37·7	318	i 7 7	+ 5	—	—	i 9 19	PcP	—
Seven Falls		37·8	17	7 0	− 2	12 35	− 6	—	—	15·6
Tinemaha		38·4	318	i 7 13	+ 6	—	—	i 9 21	PcP	—
Berkeley	z.	41·5	316	i 7 38	+ 5	—	—	e 9 30	PcP	—
Malaga		76·8	55	i 11 34	− 2	e 22 6	PS	i 12 14	pP	40·1
Granada		77·4	55	i 11 43	+ 4	21 23	+ 9	12 26	pP	—
Kew	z.	78·6	39	e 11 43a	− 2	—	—	e 12 24	pP	e 40·1
Clermont-Ferrand		81·5	46	e 11 59	− 2	—	—	e 12 41	pP	—
De Bilt		81·9	38	e 12 1a	− 2	e 23 7?	PS	e 12 44	pP	—
Stuttgart		85·0	42	e 11 17	−61	e 22 27	− 5	e 11 59	pP	e 42·1
Copenhagen		85·5	34	e 13 3	pP	22 37	0	24 23	PPS	—
Triest		88·8	44	e 13 19	pP	—	—	—	—	—

Additional readings :—
Huancayo e =6m.32s., i =6m.51s., e =10m.59s.
St. Louis iPcPZ =8m.32s., eSN =10m.10s., esSN =10m.27s., eSSN =11m.8s.
Bermuda e =9m.28s.
Philadelphia e =6m.37s.
Tucson e =6m.48s., ePcP =8m.57s., eScP =12m.25s.
Ottawa PP =7m.35s., e =12m.51s.
Palomar iZ =8m.20s., iPcP =9m.12s., eScPZ =12m.45s.
Rapid City ePP =8m.15s.
Mount Wilson iZ =7m.13s.
Pasadena iZ =7m.14s., iPcP =9m.17s.
Haiwee eZ =8m.38s.
Malaga PKP,PKP =37m.40s.
Granada pPP =15m.53s., S =22m.32s.
De Bilt ePP =15m.13s.
Stuttgart ePPZ =15m.36s., e =23m.24s., esS? =23m.40s., eSS =29m.47s.
Long waves were also recorded at College.

April 7d. Readings also at 0h. (Mount Wilson, Pasadena, Riverside, Palomar, Haiwee, Tinemaha, Tucson, and near Lick), 2h. (Bucharest), 3h. (near Berkeley, Lick, and Branner), 5h. (Wellington and Christchurch), 6h. (near Mizusawa), 8h. (Riverview), 12h. (Riverview, Wellington, and Christchurch), 15h. (Bucharest, Triest, Stuttgart, and near Istanbul (2)).

April 8d. Readings at 2h. (Riverview), 3h. (Mount Wilson, Pasadena, Palomar, Riverside (2), Tucson (2), and Tinemaha (2)), 5h. (Haiwee, Mount Wilson, Pasadena, Palomar, Riverside, Tucson, and Tinemaha), 8h. (Brisbane and Riverview (2)), 9h. (Tucson, Mount Wilson, Pasadena, Palomar, Riverside, Haiwee, Tinemaha, Stuttgart, Brisbane, Riverview, Suva, near Apia and Alicante), 11h. (near Balboa Heights), 12h. (Bogota, Huancayo, and La Paz), 17h. (near Bogota).

April 9d. Readings at 1h. (New Delhi), 2h. (near Tortosa (2)), 5h. (Belgrade), 7h. (Tacubaya and Vera Cruz), 10h. (near Istanbul), 12h. (Harvard, Ottawa, Seven Falls, and Shawinigan Falls), 17h. (Tacubaya), 18h. (Bombay, Calcutta, New Delhi, Zi-ka-wei, Mizusawa, Riverview, Aberdeen, Bergen, Upsala, De Bilt, Prague, Uccle, Stuttgart, and Helwan), 19h. (Calcutta, New Delhi, Zi-ka-wei, Upsala, Cheb (2), Potsdam, Stonyhurst, Kew (2), De Bilt, Uccle, Stuttgart, and Granada), 22h. (Mizusawa).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

April 10d. 3h. Undetermined shock.

Dehra Dun ePN =36m.0s.?, iSN =37m.35s., iLN =39m.0s.
New Delhi iPEN =36m.10s., eP*N =36m.24s., P_gE =36m.38s., iSEN =37m.15s., S*N =37m.30s., S_gEN =37m.45s.
Bombay ePN =36m.59s., PPPEN =37m.13s., eSE =38m.45s., eSN =38m.48s., SSN =39m.6s., LEN =39m.27s.
Hyderabad eN =37m.26s., PN =37m.58s., SN =40m.57s.
Kodaikanal ePE =39m.6s., iSS?E =42m.51s.
Colombo P =39m.45s., S =45m.19s., LE =47m.8s.
Helwan PZ =41m.5s., PPZ =42m.6s., eSN =46m.40s., SSN =48m.25s., eN =49m.58s.
Ksara e =41m.10s., and 46m.7s.
Calcutta iSN =41m.43s.
Stuttgart eZ =43m.14s.
Malaga eP =44m.34s., e =45m.48s.
Upsala eE =47m.39s., eN =48m.0s.? and 54m.52s., eLN =60m.
Prague e =48m.36s. and 55m.24s., eL =62m.
Cheb e =50m.
Long waves were also recorded at other European stations.

April 10d. Readings also at 2h. (Huancayo, La Paz, St. Louis, and Potsdam), 5h. (New Delhi and near Lick), 6h. (Bombay and New Delhi), 8h. (near Balboa Heights), 9h. (near Alicante), 10h. (Bombay, New Delhi, Scoresby Sund, and near Alicante), 12h. (near Alicante), 14h. (Clermont-Ferrand), 16h. (near Mizusawa (2)), 18h. (near Chur), 19h. (near Mizusawa), 21h. (La Paz, La Plata, St. Louis, Tucson, Haiwee, Mount Wilson, Pasadena, Palomar, Riverside, and Tinemaha).

April 11d. Readings at 1h. (Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, Tucson, St. Louis, Kew, Clermont-Ferrand, and Stuttgart), 2h. (Mount Wilson (2), Pasadena (2), Palomar (2), Tinemaha (2), Tucson (2), Florissant, St. Louis, Triest, Kew, and Suva), 3h. (near Fort de France), 8h. (near Almeria), 10h. (near Malaga). 14h. (near Apia), 15h. (La Plata, Mount Wilson, Palomar, and Riverside), 20h, (Harvard), 22h. (Mizusawa), 23h. (Oaxaca, Puebla, Tacubaya, Vera Cruz, Tucson, Florissant, St. Louis, Mount Wilson, Pasadena, Palomar, Riverside, and near Tananarive).

April 12d. Readings at 0h. (near Harvard), 1h. (Auckland and Wellington), 2h. (Stuttgart Christchurch, and near Mizusawa), 4h. (near Mizusawa), 7h. (Mount Wilson and Tucson), 9h. (near Tananarive and near Alicante), 10h. (Auckland and near Bogota), 13h. (Auckland, Wellington, and Christchurch), 15h. (Brisbane, Riverview, Auckland, Christchurch, and Tucson), 16h. (New Delhi and near Mizusawa), 19h. (New Delhi).

April 13d. 13h. Off coast of Oregon.

Ferndale ePEN =51m.46s., iSEN =51m.59s., iEN =53m.17s.
Berkeley ePE =52m.10s., eSEN =53m.10s., EN =55m.10s.
Branner ePEN =52m.26s., eSN =53m.23s., iSN =53m.30s., iE =53m.56s., iN =54m.2s., eLEN =55m.0s.
Ukiah eP =52m.27s., e =52m.39s. and 53m.7s., iS =53m.28s.
Lick ePN =52m.34s., ePE =52m.41s., eSE =53m.28s., eSN =53m.32s.
Tinemaha ePZ =53m.3s., iZ =54m.41s.
Haiwee iPZ =53m.16s.
Mount Wilson ePZ =53m.24s., iZ =53m.36s.
Pasadena iPZ =53m.27s., iZ =53m.33s., eLE =55·9m.
Riverside ePZ =53m.36s.
Tucson eP =54m.46s., e =54m.52s. and 56m.14s., eL =58m.52s.
Rapid City e =55m.4s., eL =61m.36s.
Long waves were also recorded at Santa Clara, Bozeman, Seattle, Salt Lake City, and Chicago.

April 13d. Readings also at 0h. (Cheb, De Bilt, Uccle, Stuttgart, Granada, Malaga, Helwan, and La Paz), 6h. (La Jolla, Mount Wilson, Pasadena, Riverside, and Tucson), 7h. and 8h. (Istanbul), 11h. (Istanbul and Ksara), 12h. (Helwan), 13h. (Stuttgart), 15h. (Haiwee, Mount Wilson, Pasadena, Riverside, Tucson, Tinemaha, and St. Louis), 16h. (near Bogota), 19h. (Apia), 23h. (Istanbul).

April 14d. Readings at 0h. (near Branner, Lick, and near Ferndale), 4h. and 5h. (near Istanbul), 6h. (Triest (2)), 7h. (Belgrade, Bucharest, and Stuttgart), 9h. (near Alicante), 11h. (near Balboa Heights), 12h. (Berkeley, near Branner and Lick), 14h. (Mount Wilson, Palomar, Tinemaha, and Tucson), 16h. (Auckland, Christchurch, Wellington, Riverview, and La Paz), 17h. (near Mizusawa), 18h. (Brisbane, Mount Wilson, Tucson, Palomar, Riverside, and Tinemaha).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

April 15d. Readings at 0h. (near Branner), 10h. (Mount Wilson, Palomar, Tinemaha, and Tucson), 12h. (near Apia), 15h. (Istanbul).

April 16d. 9h. 44m. 4s. Epicentre 23°·0N. 142°·5E. (as on 1939 June 16d.).

Pasadena suggests deep focus.

$A = -·7310$, $B = +·5609$, $C = +·3885$; $\delta = -10$; $h = +4$;
$D = +·609$, $E = +·793$; $G = -·308$, $H = +·237$, $K = -·921$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Mizusawa		16·1	356	3 44	− 5	6 49	0	—	—	—
New Delhi	N.	58·4	291	—	—	i 17 49	−13	—	—	e 30·1
Bombay		64·7	281	e 11 8	+26	i 19 14	− 8	—	—	—
Santa Barbara	Z.	83·4	55	i 12 32	+ 2	—	—	—	—	—
Tinemaha		83·4	53	i 12 32	+ 2	—	—	—	—	—
Haiwee		84·0	53	i 12 35	+ 2	—	—	—	—	—
Mount Wilson	Z.	84·7	55	i 12 38	+ 1	—	—	—	—	—
Pasadena		84·7	55	i 12 37a	0	—	—	—	—	—
Riverside	Z.	85·3	55	i 12 41a	+ 1	—	—	—	—	—
La Jolla	Z.	85·9	56	e 12 46	+ 3	—	—	—	—	—
Palomar		86·0	56	i 12 44	+ 1	—	—	—	—	—
Copenhagen		90·9	334	13 5	− 2	—	—	—	—	—
Tucson		91·0	53	i 13 9	+ 2	—	—	e 16 29	PP	—
Stuttgart		97·3	331	e 13 36	0	e 24 46	−12	e 17 27	PP	e 47·9
La Paz	Z.	150·5	81	i 19 59	[+11]	—	—	—	—	—

Additional readings :—
Mizusawa PE = 3m.47s.
New Delhi iN = 19m.36s.
Bombay eN = 19m.46s., iN = 20m.26s.
Tinemaha iZ = 12m.59s.
Mount Wilson iZ = 13m.5s.
Pasadena iZ = 13m.4s.
Riverside iZ = 13m.2s.
Palomar iZ = 13m.11s.
Tucson i = 13m.36s., e = 14m.16s. and 15m.6s.
Stuttgart eSKS = 24m.1s., eSS = 31m.14s.
Long waves were also recorded at De Bilt and Kew.

April 16d. Readings also at 1h. (Mount Wilson, Riverside, Tinemaha, near Tucson, and La Paz), 7h. (near Lick), 8h. (near Mizusawa), 10h. (Copenhagen and Mizusawa), 11h. (Triest), 12h. (Stuttgart, Brisbane, Riverview, Arapuni, Auckland, Christchurch, Wellington, and near Apia), 13h. (Wellington), 14h. and 19h. (near Mizusawa), 20h. (Wellington), 22h. (near Granada (2), Malaga, Almeria, and Toledo).

April 17d. 17h. 37m. 28s. Epicentre 8°·7S. 107°·5E. (as given by Bombay).

$A = -·2973$, $B = +·9429$, $C = -·1503$; $\delta = +4$; $h = +7$;
$D = +·954$, $E = +·301$; $G = +·045$, $H = -·143$, $K = -·989$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Colombo		31·6	299	6 25	− 1	11 25	−10	—	—	16·0
Kodaikanal		35·3	302	e 7 2	+ 3	i 12 22	−11	—	—	—
Calcutta	N.	36·3	330	e 7 2	− 5	i 12 43	− 5	—	—	—
Bombay		43·8	309	e 8 7	− 2	14 31	− 9	9 54	PP	i 20·8
Brisbane		46·8	120	i 8 46	+13	i 15 41	+17	e 18 49	SS	i 24·9
New Delhi	N.	47·2	324	i 8 34k	− 2	i 15 17	−12	i 18 57	SS	—
Riverview		47·3	129	i 8 27a	−10	i 15 55	+24	i 18 40	SS	e 24·5
Christchurch		66·1	134	e 11 6	+15	19 49	+10	e 11 36	PcP	33·6
Wellington		67·3	132	11 12?	+13	21 7	ScS	—	—	40·0
Helwan		82·5	302	e 12 26	0	22 30	−12	15 26	PP	—
Prague		98·6	320	20 50	?	23 32	[−48]	—	—	—
Triest		98·8	315	—	—	e 24 17	[− 4]	—	—	—
Cheb		99·9	320	e 18 59	?	e 24 32?	[+ 5]	—	—	e 46·2
Stuttgart		102·0	318	e 18 12	PP	e 25 32	− 5	—	—	—
Paris		106·4	318	e 31 59	?	—	—	e 35 32?	?	72·5

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.			L.
		°	°	m. s.	s.	m. s.	s.	m.	s.		m.
Kew		107·8	322	e 18 54	PP	—	—	e 21	7	PPP	e 27·5
Florissant	z.	146·0	25	e 19 48	[+ 7]	—	—	e 20	11	PKP_2	—
St. Louis		146·2	25	i 19 48	[+ 7]	e 33 21	PS	i 20	10	PKP_2	—
La Paz	z.	154·6	191	e 20 3	[+ 9]	42 53	?	i 24	0	PP	76·5

Additional readings :—
Bombay iN =9m.3s., iEN =10m.54s., iE =14m.50s. and 17m.58s., iN =18m.1s., iE =20m.49s.
Brisbane iN =24m.20s.
New Delhi SSN =18m.12s., SSSN =19m.17s.
Riverview iSS?N =19m.25s., iE =19m.32s.
Christchurch eEN =26m.40s.
Wellington SS =25m.2s., PPP? =30m.47s., Q =37m.20s.
Helwan eZ =13m.20s.
Long waves were also recorded at Auckland, De Bilt, and Uccle.

April 17d. Readings also at 2h. (Wellington), 8h. (Stuttgart (2), New Delhi, Riverview, Wellington, and Christchurch), 11h. (near Mizusawa), 18h. (Stuttgart and Paris), 19h. (De Bilt, Potsdam, and Triest), 21h. (Palomar and Tucson), 22h. (near Apia).

April 18d. Readings at 3h. (near Malaga), 6h. (Riverview, Tinemaha, Riverside, Palomar, Pasadena, and Mount Wilson), 8h. (Riverview), 10h. (near Apia), 16h. (Riverside, Palomar, Tucson, and near La Paz), 17h. (Riverview), 21h. (near Fort de France).

April 19d. 22h. 32m. 8s. Epicentre 27°·0S. 113°·0W.

Rough.

$A = -·3486$, $B = -·8213$, $C = -·4516$; $\delta = 0$; $h = +3$;
$D = -·920$, $E = +·391$; $G = +·176$, $H = +·416$, $K = -·892$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.			L.
		°	°	m. s.	s.	m. s.	s.	m.	s.		m.
Huancayo		38·3	75	e 7 27	+ 3	e 16 53	S_cS	e 9	1	P_cP	e 18·2
Montezuma		40·2	94	—	—	(e 14 6)	+18	e 16	48	S_cS	e 14·1
La Paz		42·8	85	e 11 17	?	e 16 37	S_cS	—		—	20·9
La Plata		47·4	113	8 39	+ 1	15 40	+ 8	9	52	PP	19·2
Bogota		49·0	57	e 9 4	+14	—	—	e 11	10	PP	—
Tucson		59·0	2	e 10 2	− 2	e 18 15	+ 5	e 21	49	SS	e 26·1
La Jolla		59·7	356	e 10 10	+ 1	—	—	—		—	—
Arapuni		59·8	240	—	—	e 18 52?	+32	—		—	—
Wellington		59·9	237	—	—	18 34?	+13	25	52?	Q	27·4
Palomar		60·1	356	e 10 10	− 1	—	—	—		—	—
Auckland		60·8	241	—	—	18 39	+ 6	—		—	28·9
Riverside	z.	60·8	355	e 10 17	+ 1	—	—	—		—	—
Christchurch		61·0	233	10 38	+20	18 44	+ 9	25	22	Q	27·9
Pasadena		61·0	355	i 10 19	+ 1	e 18 46	+11	—		—	e 28·7
Mount Wilson	z.	61·1	355	e 10 18	0	—	—	—		—	—
Tinemaha	z.	63·9	356	e 10 37	0	—	—	—		—	—
San Juan		64·1	51	e 10 12	−26	e 19 16	+ 2	—		—	e 25·1
Santa Clara		64·6	353	e 10 42	+ 1	—	—	—		—	e 30·5
Berkeley		65·1	353	e 10 43	− 2	e 19 25	− 2	—		—	e 26·4
Ukiah		66·5	352	—	—	e 19 59	+15	—		—	e 31·3
Salt Lake City		67·4	2	e 11 3	+ 4	e 19 59	+ 4	—		—	e 33·4
Columbia		67·8	29	—	—	e 20 9	+ 9	—		—	e 29·7
Logan		68·4	2	e 11 25	+19	e 20 6	− 1	—		—	e 33·5
St. Louis		68·7	19	e 11 6	− 1	i 20 15	+ 5	i 13	5	PP	e 32·9
Florissant		68·8	19	e 11 11	+ 3	i 20 20	+ 9	e 28	10	SSS	e 32·9
Rapid City		71·3	8	e 11 29	+ 6	e 20 48	+ 7	—		—	e 32·5
Chicago		72·4	19	—	—	e 20 51	− 2	—		—	e 33·0
Bermuda		74·8	41	e 12 3	+19	e 21 30	+10	e 25	28	SS	e 36·5
Philadelphia		75·4	30	—	—	e 21 31	+ 4	e 26	22	SS	e 31·9
Victoria		75·7	353	—	—	e 21 40	+10	—		—	35·9

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Fordham		76·6	30	e 12 27	+33	e 21 47	+ 7	—	—	—
Ottawa		79·6	26	e 12 16	+ 6	e 22 16	+ 4	—	—	e 36·9
Sitka		86·3	348	—	—	e 23 18	[+ 9]	e 29 15	SS	e 40·3
College		95·5	345	e 22 13	?	e 27 6	PPS	—	—	e 45·0
Malaga		119·8	61	e 20 28	PP	e 24 40	[−69]	—	—	56·9
Granada		120·6	61	20 33k	PP	28 51	?	32 9	PPS	64·3
Uccle		127·5	45	—	—	e 27 52?	{−12}	—	—	e 59·9
Stuttgart		130·8	47	e 19 23	[+10]	—	—	—	—	e 63·4
Cheb		132·7	45	e 20 52?	?	e 23 7	PKS	e 28 56	{+20}	e 62·9
Helwan	N.	148·6	76	e 21 4	?	—	—	e 39 40	?	—
Bombay	N.	170·3	215	e 25 41	PP	—	—	—	—	—
New Delhi	N.	170·8	282	e 21 57	PKP_2	i 26 1	?	e 25 2	PP	—

Additional readings :—
La Plata E = 11m.10s., and 18m.58s.
Tucson e = 11m.19s., 11m.53s., 12m.37s., 19m.9s., and 25m.7s.
Palomar iZ = 10m.14s., 10m.18s., and 10m.28s.
Mount Wilson iZ = 10m.36s.
San Juan e = 11m.3s. and 23m.22s.
Berkeley eSN = 19m.31s.
Salt Lake City e = 29m.25s.
St. Louis eSSSE = 28m.5s.
Rapid City e = 11m.57s. and 24m.28s.
Bermuda e = 12m.21s. and 22m.4s.
Philadelphia e = 22m.28s.
Fordham e = 13m.13s.
Sitka e = 25m.44s.
College e = 29m.13s.
Granada SS = 38m.10s.
Long waves were also recorded at Honolulu, Bozeman, Riverview, Colombo, and other European stations.

April 19d. Readings also at 1h. (Tacubaya), 2h. (near Bogota), 8h. (Triest, Tinemaha, Tucson, and near Apia), 10h. (Malaga), 14h. (La Paz), 15h. (La Paz, Tinemaha, Tucson, and near Branner), 19h. (near Huancayo), 22h. (Granada, Malaga, San Fernando, Stuttgart, and Clermont-Ferrand), 23h. (Mount Wilson, Palomar, Riverside, Tucson, near Triest (2), and Stuttgart).

April 20d. Readings at 2h. (near Branner and Lick), 3h. (Pasadena, Tucson, and Riverside), 7h. and 8h. (near Mizusawa), 10h. (Triest (2)), 12h. (Helwan and Huancayo), 13h. (near Lick, Berkeley, and Branner), 15h. (near Fort de France), 22h. (Tinemaha, Mount Wilson, Pasadena, Riverside, Palomar, Tucson, La Plata, and near La Paz).

April 21d. 15h. 1m. 23s. Epicentre 4°·3N. 84°·5W.

$A = +·0956$, $B = -·9926$, $C = +·0745$; $\delta = -6$; $h = +7$;
$D = -·995$, $E = -·096$; $G = +·007$, $H = -·074$, $K = -·997$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Balboa Heights		6·8	46	e 1 43	− 1	—	—	—	—	—
Bogota		10·4	87	e 2 37	+ 3	—	—	e 3 57	?	—
Huancayo		18·6	150	e 4 20	− 1	e 7 57	+11	e 5 10	PPP	e 9·6
San Juan		22·8	50	e 5 5	0	e 9 18	+ 7	e 7 50	?	e 11·2
La Paz		26·3	142	5 39	0	11 5	SS	—	—	14·6
Columbia		29·7	7	—	—	e 10 48	−18	—	—	e 15·0
St. Louis		34·6	353	e 6 52	− 1	e 12 22	0	e 14 36	SS	—
Florissant		34·8	353	e 6 55	+ 1	e 12 25	0	e 14 47	SS	—
Philadelphia		36·5	14	—	—	e 12 44	− 7	—	—	e 15·5
Tucson		37·2	322	e 7 15	0	e 12 53	− 9	e 8 45	PP	e 19·7
Ottawa		41·6	9	7 51	0	14 13	+ 5	17 43	SSS	21·6
Palomar	z.	41·8	328	i 7 55	+ 2	—	—	—	—	—
Riverside	z.	42·5	328	e 8 0	+ 1	—	—	—	—	—
Tinemaha	z.	45·0	321	e 8 21	+ 2	—	—	—	—	—

Long waves were also recorded at Chicago and Pasadena.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

April 21d. Readings also at 3h. (Wellington), 4h. (Tinemaha and Tucson), 13h. (Riverview), 14h. (Ksara), 17h. (Auckland and Christchurch), 22h. (Berkeley (2) and near Branner).

April 22d. 3h. 35m. 45s. Epicentre 27°·0S. 113°·0W. (as on April 19d.).

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Huancayo		38·3	75	e 7 38	+14	e 13 29	+10	e 8 55	PP	e 16·5
La Paz		42·8	85	e 8 0	− 1	i 14 37	+11	—	—	20·5
Bogota		49·0	57	e 8 54	+ 4	—	—	—	—	—
Tucson		59·0	2	e 10 2	− 2	e 18 34	+23	e 12 40	PP	e 28·4
Palomar		60·1	356	e 10 11	0	—	—	—	—	—
Riverside	z.	60·8	355	i 10 18	+ 2	—	—	—	—	—
Christchurch		61·0	233	18 37	S	(18 37)	+ 2	26 45	Q	29·9
Pasadena		61·0	355	i 10 17	− 1	—	—	—	—	e 28·8
Mount Wilson	z.	61·1	355	e 10 17	− 1	—	—	—	—	—
Haiwee	z.	63·0	356	e 10 31	0	—	—	—	—	—
Tinemaha	z.	63·9	356	e 10 36	− 1	—	—	—	—	—
San Juan		64·1	51	e 13 41	PP	e 19 21	+ 7	—	—	e 26·9
Salt Lake City		67·4	2	e 11 46	+47	—	—	e 24 29	SS	e 33·5
Logan		68·4	2	—	—	e 22 22	?	—	—	e 34·5
St. Louis		68·7	19	e 11 4	− 3	e 20 13	+ 3	—	—	e 28·3
Florissant	E.	68·8	19	—	—	e 20 18	+ 7	—	—	—
Bermuda		74·8	41	e 12 31	+47	e 21 25	+ 5	—	—	e 36·0
Stuttgart	z.	130·8	47	e 19 17	[+ 3]	—	—	—	—	—
Helwan	z.	148·6	76	19 50	[+ 5]	—	—	—	—	—

Additional readings :—
Huancayo e = 8m.25s.
La Paz iPZ = 8m.3s.
Christchurch S_cSZ = 28m.4s.
Helwan eZ = 20m.17s.
Long waves were also recorded at La Plata, Auckland, Riverview, Wellington, Berkeley, Ukiah, College, and Malaga.

April 22d. Readings also at 1h. (Cheb, Helwan, Riverview, Brisbane, Colombo, and Calcutta), 2h. (La Plata, Bergen, Upsala, Kew, Uccle, De Bilt, Stuttgart (2), Paris, Clermont-Ferrand, Malaga, Granada, Helwan, Tucson, Tinemaha, Haiwee, Riverside, Palomar, Mount Wilson, Pasadena, Riverview, Brisbane, Christchurch, and near Fort de France), 3h. (near Mizusawa), 6h. (near Malaga, Granada, Toledo, and Almeria), 14h. (Palomar, Pasadena, Mount Wilson, Haiwee, and Tinemaha).

April 23d. 9h. 10m. 10s. Epicentre 8°·1N. 83°·2W. (as on 1944. March 24d).

A = +·1172, B = −·9832, C = +·1400 ; δ = +2 ; h = +6 ;
D = −·993, E = −·118 ; G = +·017, H = −·139, K = −·990.

		△	Az.	P.	O−C.	S.	O−C.	Supp.	
		°	°	m. s.	s.	m. s.	s.	m. s.	
Balboa Heights		3·7	78	i 0 55	− 5	i 1 32	−13	—	—
Bogota		9·7	110	i 2 22	0	—	—	—	—
Tucson		35·1	317	i 6 57	0	—	—	—	—
Palomar	z.	40·0	314	i 7 39	+ 1	—	—	i 7 55	?
Riverside	z.	40·7	315	i 7 43	− 1	—	—	—	—
Mount Wilson	z.	41·3	315	e 7 48	− 1	—	—	—	—
Pasadena	z.	41·3	315	i 7 49	0	—	—	—	—
Tinemaha	z.	42·9	318	i 8 2	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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

April 23d. 10h. 57m. 33s. Epicentre 21°·0S. 178°·0W. Depth of focus 0·030.
(as on 1942 July 7d.).

$A = -·9338$, $B = -·0326$, $C = -·3563$; $\delta = -1$; $h = +4$;
$D = -·035$, $E = +·999$; $G = +·356$, $H = +·012$, $K = -·934$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Apia		9·3	41	i 2 26	+15	i 4 3	+10	—	—	—
Auckland		17·0	200	5 20	?	i 6 34	−12	i 7 8	SS	—
Tuai		18·2	192	3 54	− 5	6 47	−24	i 7 0	sS	—
New Plymouth		19·3	199	4 9	− 1	7 23	− 8	—	—	—
Wellington		21·1	196	4 22	− 6	7 45	−19	8 9	P_cP	—
Kaimata		23·2	200	4 47	− 1	8 33	− 7	—	—	—
Christchurch		23·8	197	4 55	+ 1	8 41	− 9	—	—	—
Brisbane	N.	27·2	251	i 5 24	− 1	i 9 34	−12	(11 51)	SSS	i 11·9
Riverview		30·1	239	i 5 49k	− 2	i 10 18	−14	i 7 0	pP	—
Santa Barbara		78·1	47	i 11 37	+ 1	i 21 11	+ 1	i 13 4	pP	—
Berkeley		78·7	43	i 11 41	+ 2	e 21 7	− 9	i 13 5	pP	—
La Jolla		78·9	49	i 11 44	+ 4	—	—	e 13 10	pP	—
Pasadena		79·0	48	i 11 41a	+ 1	i 21 15	− 4	i 13 6	pP	—
Mount Wilson		79·2	48	i 11 42a	0	e 21 7	−14	i 13 6	pP	—
Palomar		79·5	49	i 11 44k	+ 1	e 21 20	− 4	i 13 9	pP	—
Riverside		79·5	48	i 11 44	+ 1	e 21 21	− 3	i 13 9	pP	—
Haiwee		80·3	46	i 11 48	+ 1	e 21 29	− 4	i 13 14	pP	—
Tinemaha		80·6	46	i 11 51k	+ 2	e 21 34	− 2	e 38 34	PKPPKP	—
Tucson		83·2	52	i 12 4	+ 2	e 21 59	− 3	i 13 29	pP	e 38·3
Logan		87·4	43	e 13 52	pP	i 22 35	− 7	—	—	—
College		88·7	13	—	—	e 22 43	−11	—	—	—
Rapid City		94·1	44	e 14 24	pP	e 29 39	SS	—	—	—
St. Louis		101·1	52	e 14 59	pP	e 24 37	− 4	e 23 27	SKS	—
Potsdam	N.	147·5	347	e 19 18	[+ 2]	—	—	—	—	—
De Bilt		148·9	355	i 19 21k	[+ 3]	—	—	i 20 56	pPKP	—
Jena	E.	149·1	347	e 19 19	[+ 1]	—	—	e 22 53	PP	—
Kew	Z.	149·5	2	e 19 20	[+ 1]	—	—	—	—	—
Cheb		149·8	347	e 22 27?	PP	—	—	—	—	—
Stuttgart		151·7	349	e 19 19	[− 2]	—	—	e 19 39	PKP_2	—
Helwan	Z.	152·1	293	19 19	[− 2]	i 23 12	PP	i 19 40	PKP_2	—
Basle		153·1	351	19 21	[− 2]	—	—	e 21 45	pPKP	—
Zürich		153·2	350	19 16	[− 7]	—	—	e 19 29	PKP_2	—
Chur		153·5	349	19 20	[− 3]	—	—	e 19 30	PKP_2	—
Granada		163·2	15	19 28	[− 7]	22 36	SKP	21 30	sPKP	—
Malaga		163·4	19	e 19 32	[− 3]	—	—	e 20 32	pPKP	—

Additional readings :—
Auckland i =5m.25s., i =6m.44s.
Wellington P_eS =11m.47s., S_eS =14m.57s.
Kaimata i =4m.58s.
Riverview iPPEZ =7m.9s., iZ =7m.45s., iP_ePE =8m.34s., iSSEN =12m.33s., iSSE = 12m.48s., iEN =12m.59s., iE =14m.7s., iN =14m.18s.
Berkeley pPE =13m.8s., eSN =21m.10s.
Pasadena ePKP PKPZ =38m.24s.
Mount Wilson ePKP PKPZ =38m.30s.
Palomar ePKP PKPZ =38m.34s.
Riverside ePKP PKPZ =38m.34s.
Haiwee ePKP PKPZ =38m.34s.
Tucson esP =14m.9s., eSP =22m.52s.
Logan i =14m.9s.
Rapid City e =28m.53s.
St. Louis iE =24m.8s., eSSE =31m.51s.
Jena eE =19m.24s., 20m.8s., eN =22m.49s.
Stuttgart i =19m.27s., e =20m.49s.
Helwan iZ =20m.59s., iZ =21m.33s.
Granada PP =25m.3s.
Malaga i =21m.59s.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

April 23d. Readings also at 0h. (Helwan), 1h. (Granada and Malaga), 3h. (La Paz, Ksara, Pasadena, Palomar, Mount Wilson, Riverside, Tucson, and Tinemaha), 4h. (La Paz), 6h. (Tinemaha, La Jolla, Haiwee, Mount Wilson, Riverside, Palomar, Pasadena, Santa Barbara, and Tucson), 8h. (Bogota (2), Tucson, Palomar, Mount Wilson, Riverside, Tinemaha, and St. Louis), 9h. (Bogota, Tinemaha (2), Riverside (2), Mount Wilson (2), Palomar (2), Pasadena (2), Tucson (2), Riverview, Wellington, Christchurch, Auckland, and Stuttgart), 15h. (Wellington, Christchurch, Auckland, and Riverview), 18h. (Wellington, Auckland, Christchurch, Riverview, and Stuttgart), 20h. (La Paz and near Mizusawa), 22h. (Palomar, Tucson, and near Malaga), 23h. (Granada).

April 24d. Readings at 1h. (Auckland), 2h. (Stuttgart, Upsala, Neuchatel, Chur, Basle, Zürich, Tucson (3), Tinemaha (3), Riverside (2), Palomar, Pasadena (2), Mount Wilson (2), St. Louis, Florissant, Sitka, La Plata, and Wellington), 5h. (Stuttgart), 11h. (Stuttgart, Ravensburg, Basle, and Zürich), 13h. (Wellington), 15h. (Tucson, Mount Wilson, Pasadena, Palomar, Riverside, and Tinemaha), 18h. (near Ksara), 22h. (near Branner).

April 25d. 6h. 5m. 32s. Epicentre 47°·7N. 8°·5E.
Intensity V in the region of Balingen-Ebingen and in the Canton of Schaffhouse.
Epicentre as adopted.

Dr. E. Wanner.
Jahresbericht des Erdbebendienstes der Schweiz im Jahre 1944, Zürich 1945, p. 2, carte 1, p. 17.

$A = +·6681$, $B = +·0998$, $C = +·7374$; $\delta = +8$; $h = -5$;
$D = +·148$, $E = -·989$; $G = +·729$, $H = +·109$, $K = -·676$.

	△	Az.	P.	O−C.	S.	O−C.	Supp.	
	°	°	m. s.	s.	m. s.	s.	m. s.	
Zürich	0·3	171	i 0 11	0	e 0 24	+ 6	—	—
Basle	0·7	255	i 0 16	− 1	e 0 32	+ 4	—	—
Strasbourg	1·0	331	(i 0 22)	+ 1	i 0 22	P	—	—
Chur	1·1	140	e 0 22	0	e 0 40	+ 1	—	—
Neuchatel	1·2	236	e 0 28	+ 4	e 0 52	S_g	—	—
Stuttgart	1·2	24	e 0 2	?	e 0 35	− 6	e 0 9	?

April 25d. Readings also at 4h. (Bogota), 9h. and 10h. (near Alicante), 13h. (San Francisco, near Lick, Branner, and Berkeley), 8h. (near Bogota), 18h. (Tucson, Tinemaha, Riverview, Auckland, Wellington, Arapuni, and near La Paz), 19h. (Kew), 21h. (Tucson, Tinemaha, Haiwee, Palomar, Riverside, Mount Wilson, and near Apia), 22h. (near Mizusawa), 23h. (Tinemaha, Riverside, Palomar, Mount Wilson, Tucson, and near La Paz).

April 26d. 1h. 54m. 11s. Epicentre 0°·8S. 133°·5E. (as on 1938 December 24d.).

$A = -·6883$, $B = +·7253$, $C = -·0138$; $\delta = +1$; $h = +7$;
$D = +·725$, $E = +·688$; $G = +·010$, $H = -·010$, $K = -1·000$.

	△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
	°	°	m. s.	s.	m. s.	s.	m. s.		m.
Brisbane	32·5	147	i 6 27	− 7	i 11 46	− 3	i 6 30	pP	i 14·0
Miyazaki	32·6	357	6 38	+ 3	—	—	—	—	e 14·3
Kôti	34·2	0	e 6 45	− 4	12 1	−15	—	—	—
Hukuoka	34·3	356	6 53	+ 3	—	—	e 11 35	?	e 14·6
Perth	35·2	207	7 5	+ 7	12 42	+11	8 12	PP	—
Kobe	35·3	4	e 6 55	− 4	12 38	+ 5	—	—	—
Kyoto	35·7	4	e 7 4	+ 2	12 43	+ 4	—	—	—
Nagoya	35·9	6	7 13	+ 9	12 42	0	—	—	—
Toyooka	36·2	3	7 2	− 4	12 45	− 2	—	—	—
Hunatu	36·5	8	7 6	− 3	12 31	−20	—	—	—
Yokohama	36·5	9	8 20	PP	16 11	L	—	—	(16·2)
Riverview	36·8	156	i 7 11a	0	i 12 52	− 4	i 8 38	PP	e 18·4
Sydney	36·8	156	—	—	e 12 7	−49	—	—	e 18·8
Tokyo	36·8	9	e 7 11	0	—	—	—	—	16·2
Kumagaya	37·2	8	e 7 20	+ 5	13 39	P_cS	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Nagano		37·5	6	7 17	0	13 39	PcS	—	—	—
Wazima		38·1	5	e 7 19	− 3	13 10	− 6	—	—	—
Hukusima		38·9	9	7 15	−14	13 27	− 1	—	—	—
Sendai		39·5	9	e 7 27	− 7	13 15	−22	—	—	—
Mizusawa		40·3	9	e 7 43	+ 3	13 53	+ 4	e 13 58	PPS	19·1
Hatinohe		41·8	9	7 52	− 1	14 7	− 4	—	—	—
Mori		43·2	8	e 7 55	− 9	e 14 31	− 1	—	—	21·3
Sapporo		44·2	8	8 13	+ 1	14 47	+ 1	—	—	—
Calcutta		49·5	302	i 8 51k	− 3	i 15 58	− 4	i 17 17	sS	—
Auckland		52·4	140	8 59?	−17	16 45	+ 3	17 17	sS	23·8
Arapuni		53·6	140	—	—	16 19	−39	21 49	Q	25·8
Colombo	E.	54·1	279	11 2	PcP	18 37	?	i 18 47	?	—
Wellington		54·9	144	9 32	− 3	17 9	− 7	9 49	pP	27·3
Christchurch		55·0	147	9 34	− 1	17 14	− 3	11 47	PP	29·5
Kodaikanal	E.	56·8	284	i 10 9	+21	i 18 9	+28	—	—	—
Hyderabad	E.	57·1	292	9 54	+ 4	19 22	ScS	11 50	PP	—
	N.	57·1	292	9 51	+ 1	17 44	− 1	10 59	PcP	27·4
Dehra Dun		61·1	306	e 9 57?	−21	i 18 17	−20	—	—	e 31·8
New Delhi		61·2	303	i 10 19k	0	i 18 38	0	12 38	PP	—
Bombay	N.	62·7	293	e 10 30	+ 1	i 18 58	+ 1	12 49	PP	—
Honolulu		70·5	67	e 11 21	+ 3	e 20 36	+ 4	e 15 36	PPP	e 32·2
College		85·9	26	e 12 43	0	e 23 12	− 4	e 15 58	PP	e 35·9
Tananarive		85·9	251	12 49	+ 6	23 16	0	16 20	PP	44·2
Sitka		91·3	33	i 13 8	− 1	i 24 8	+ 2	i 16 54	PP	e 37·9
Ksara		96·8	303	e 13 42	+ 8	e 24 27	{− 4}	—	—	—
Victoria		99·3	41	13 53	+ 8	25 15	+ 1	17 49	PP	44·8
Seattle		100·1	42	e 20 24	PPP	—	—	—	—	e 50·1
Ukiah		100·8	50	—	—	e 26 56	PS	e 32 44	SSP	e 46·9
Helwan		100·9	299	i 13 55k	+ 3	25 25	− 3	18 7	PP	—
Berkeley		101·7	52	i 13 57	+ 1	i 25 47	+12	i 18 7	PP	e 45·9
Santa Clara		102·0	52	i 14 4	+ 7	e 27 34	PS	e 18 6	PP	e 46·6
Bucharest		102·9	315	e 14 2	+ 1	e 27 29	PS	e 18 23	PP	38·8
Upsala		103·4	332	e 18 14	PP	e 25 49	0	e 33 18	SS	e 42·8
Tinemaha	z.	105·0	52	e 14 14	+ 3	—	—	e 30 16	PKKP	—
Haiwee	z.	105·4	53	e 14 15	+ 2	—	—	—	—	—
Pasadena		105·6	55	i 14 12	− 2	e 24 56	[+ 3]	i 18 31	PP	e 43·2
Mount Wilson	z.	105·7	55	e 14 12	− 2	—	—	—	—	—
Riverside		106·3	55	e 14 15	− 2	—	—	i 18 39	PP	—
Belgrade		106·8	316	e 18 36	[+ 9]	e 29 5	PPS	e 18 48	PP	e 57·2
Palomar		106·8	55	i 14 20	0	e 27 49	PS	i 18 44	PP	—
Copenhagen		107·7	329	14 27	P	25 5	[+ 3]	18 55	PP	49·8
Bozeman		108·1	41	e 14 25	P	e 25 14	[+10]	e 28 14	PS	e 49·6
Saskatoon		108·5	34	19 1	PP	26 36	S	28 20	PS	52·8
Bergen		108·6	336	e 19 5	PP	e 25 0	[− 6]	26 16	SKKS	e 53·8
Scoresby Sund		108·6	352	18 19	[−11]	25 7	[+ 1]	18 49	PP	53·8
Potsdam		108·7	326	i 19 7	PP	e 28 25	PS	e 21 19	PPP	e 50·8
Logan		108·8	46	e 18 51	PP	i 28 17	PS	e 34 12	SS	e 45·5
Prague		108·9	323	e 15 32	?	e 25 24	[+17]	19 6	PP	e 43·8
Salt Lake City		109·0	47	e 18 51	PP	e 28 19	PS	e 34 22	SS	e 44·2
Cheb		110·1	323	e 14 38	P	e 25 12	[− 1]	i 19 15	PP	e 55·8
Jena		110·2	324	e 19 0	PP	e 28 39	PS	—	—	—
Triest		111·0	319	i 19 6	PP	i 25 20	[+ 4]	i 21 42	PPP	e 54·8
Tucson		112·0	55	e 14 45	P	e 25 19	[− 1]	e 18 43	PKP	e 46·2
Stuttgart		112·5	323	e 14 44	P	e 27 18	S	i 19 29	PP	e 54·3
Chur		113·2	321	e 18 45	[+ 6]	e 29 5	PS	e 19 32	PP	—
De Bilt		113·2	328	e 14 52	P	i 25 29	[+ 4]	i 19 39	PP	e 51·8
Strasbourg		113·5	324	e 19 35	PP	e 25 28	[+ 2]	e 22 1	PPP	—
Zürich		113·5	323	e 17 52	?	—	—	e 19 36	PP	—
Aberdeen		113·6	335	i 19 43	PP	i 29 20	PS	i 35 45	SSP	55·6
Rapid City		113·9	40	e 19 43	PP	e 29 18	PS	e 35 49	SSP	e 53·8
Milan	E.	114·0	320	19 54?	PP	30 26	PPS	—	—	—
Basle		114·1	323	e 17 51	?	—	—	e 19 41	PP	—
Uccle		114·3	328	i 19 42a	PP	i 29 25	PS	i 35 53	SSP	e 52·8
Neuchatel		114·7	323	e 19 39	PP	—	—	—	—	—
Stonyhurst		115·9	333	i 19 55	PP	26 50	{+ 4}	i 22 22	PPP	e 52·8

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.			L.
		°	°	m. s.	s.	m. s.	s.	m. s.			m.
Kew		116·3	329	i 15 8k	P	e 26 4	[+27]	i 18 52	PKP		e 52·8
Paris		116·4	326	e 20 1	PP	e 29 49	PS	e 36 7	SSP		e 52·8
Clermont-Ferrand		117·6	323	e 19 39	PP	e 29 35	PS	—	—		e 62·6
Lincoln		119·7	42	—	—	e 30 26?	PS	e 41 42?	SSS		—
Barcelona		120·4	319	20 23	PP	e 33 22	?	—	—		—
Tortosa	E.	121·8	319	20 25	PP	30 27	PS	i 22 57	PPP		66·1
Chicago		124·9	37	e 20 45	PP	e 26 34	[+28]	e 30 40	PS		e 49·5
Florissant		124·9	41	e 19 3	[+ 1]	e 26 3	[− 3]	i 20 48	PP		—
St. Louis		125·1	41	i 19 3	[0]	e 22 14	SKP	i 20 50	PP		e 59·4
Granada		126·4	317	i 19 9	[+ 4]	—	—	i 21 9	PP		66·1
Malaga		127·2	317	i 19 8	[+ 1]	22 40	SKP	i 20 46	PP		56·8
Seven Falls		127·8	21	21 18	PP	22 35	SKP	33 19	PPS		63·8
San Fernando		128·5	318	19 16	[+ 7]	26 54	[+38]	21 31	PP		63·8
Ottawa		128·7	26	19 11	[+ 1]	28 19	{+ 8}	20 53	PP		e 58·8
Buffalo		129·0	30	e 19 2	[− 8]	e 22 40	SKP	e 21 8	PP		—
Lisbon		129·1	322	19 16a	[+ 6]	22 40	SKP	21 21	PP		60·3
New Kensington		130·3	33	—	—	e 22 42	SKP	—	—		e 67·1
Vermont		130·5	25	e 21 34	PP	e 22 40	SKP	e 38 40	SS		e 59·3
Fordham		133·0	30	i 19 18	[0]	i 22 50	SKP	i 21 38	PP		e 63·8
Weston		133·0	25	19 19	[+ 1]	22 48	SKP	21 40	PP		—
Philadelphia		133·1	30	e 21 38	PP	i 22 43	SKP	e 31 49	PS		e 57·4
Columbia		133·8	40	e 21 44	PP	e 22 53	SKP	e 32 4	PS		e 46·3
Halifax		133·8	16	e 23 49?	?	—	—	—	—		65·8
La Plata	E.	142·9	164	19 37	[+ 1]	29 37	{− 1}	22 49	PP		77·1
	N.	142·9	164	19 37	[+ 1]	29 31	{− 7}	23 19	SKP		79·8
Bermuda		144·2	26	e 19 35	[− 3]	e 41 26	SS	e 23 16	PP		e 67·3
Balboa Heights		146·1	74	e 19 44	[+ 3]	—	—	—	—		—
Huancayo		148·6	115	e 19 50	[+ 5]	e 26 23	[−29]	e 23 20	PP		e 54·1
Bogota		152·2	81	e 19 55	[+ 4]	—	—	e 23 43	PP		—
La Paz		152·6	130	i 19 57a	[+ 6]	i 26 39	[−18]	i 23 45	PP		73·5
San Juan		154·0	47	e 19 59	[+ 6]	i 27 25	[+26]	e 23 24	PP		e 64·2
Rio de Janeiro	N.	156·2	187	e 19 49	[− 7]	—	—	—	—		—
Fort de France		160·0	45	e 19 58	[− 3]	—	—	—	—		—

Additional readings :—
Brisbane iN =6m.33s., iPPN =7m.51s., iSN =11m.43s.
Perth PPP =8m.32s., SS =13m.53s., SSS =14m.27s.
Riverview iP_cP =9m.33s., iN =13m.50s., iSSE =15m.15s., iZ =15m.22s., iE =15m.37s. iN =16m.34s., iS_cSE =17m.22s., iZ =18m.9s.
Calcutta PPN =11m.11s., iSSN =20m.16s.
Auckland PPP? =12m.14s., sS_cS? =19m.24s., SS =21m.19s., sSS? =21m.54s.
Wellington sPZ =10m.9s., iZ =10m.37s., sP_cPZ =11m.12s., PP?Z =11m.51s., iZ = 12m.32s., PPPZ =12m.49s., pP_cSZ =14m.39s., i =15m.52s., sS_cS?Z =19m.56s., sS =21m.12s., Q =23·3m.
Christchurch PPPEZ =12m.56s., S_cSE =19m.33s., SSE =21m.22s., QEN =23m.27s.
Hyderabad SSE =21m.10s.
New Delhi eSE =18m.41s., PSN =19m.9s., S_cSN =20m.21s., SSN =22m.49s., SSSN = 24m.34s.
Bombay iPN =10m.33s., PPPE =14m.22s., iN =15m.11s., iN =19m.12s., S_cSN = 20m.22s., SSN =23m.10s.
Honolulu eSS =24m.51s.
College ePPS =24m.17s., eSS =28m.50s.
Tananarive S =23m.23s.?, PS =24m.5s., SS =29m.17s.
Sitka i =25m.30s., iSS =30m.34s.
Victoria SS =31m.25s.
Helwan eZ =16m.46s. and 17m.16s., PPPZ =20m.31s., PSN =27m.17s., PPSE = 28m.7s.
Berkeley iPE =14m.1s., ePSZ =26m.37s.?, iPSE =27m.11s., iPPSN =28m.3s., iPPSZ =28m.9s., iE =32m.46s., iN =32m.51s.
Santa Clara eSSE =33m.3s.
Bucharest eN =22m.31s., iEN =28m.30s.
Upsala eN =18m.23s., eE =20m.36s., 23m.49s., and 27m.31s.
Pasadena ePSE =27m.25s., ePPSZ =28m.31s., iSSN =33m.41s.
Belgrade e =26m.47s. and 28m.42s.
Copenhagen ePKP =17m.56s., 28m.14s., and 34m.30s.
Bozeman eS =26m.32s., eSS =34m.9s., eSSS =38m.9s.
Saskatoon SS =34m.23s.
Bergen PPN =23m.20s., PPPN =25m.20s., SKSN =26m.20s., eNZ =29m.27s., SSN = 37m.16s.
Scoresby Sund 21m.8s., 27m.0s., 28m.19s., and 29m.29s., SS =33m.49s.

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

Potsdam ePPPN =21m.11s.?, ePSE =28m.29s.
Logan e =38m.59s.
Prague ePKP =18m.8s., ePPP =21m.23s., eSKKS =26m.17s., PS =28m.29s., ePPS = 29m.30s., eSS =33m.49s., eSSS =38m.49s.
Salt Lake City eSSS =38m.34s.
Cheb ePPP =21m.27s., iPS =28m.39s., ePPS =29m.47s., eSS =35m.52s.
Jena eE =19m.3s., eZ =19m.6s., eN =19m.10s. and 19m.13s.
Triest iPS =28m.49s., eSS =35m.15s.
Tucson ePP =19m.20s., e =21m.3s., eS =27m.2s., ePS =28m.22s., eSS =35m.11s., eSSS =39m.14s.
Stuttgart ePKPZ =18m.4s., ePPP =22m.11s., ePS =29m.7s., ePKKPZ =29m.32s., ePPS =30m.10s., eSS =35m.13s.
De Bilt ePKP =18m.14s., ePS =29m.9s., eSS =35m.19s.
Strasbourg PS =29m.2s.
Aberdeen iEN =29m.43s. and 45m.56s.
Stonyhurst iSKSP =29m.42s., i =30m.11s., PPS =30m.31s., e =32m.7s., iP_cP,PKP = 33m.26s., iSS =35m.56s., eSSS =40m.16s.
Kew iPP =19m.57s., ePPPEZ =22m.26s., eSKKSEZ =27m.32s., ePS =29m.38s., ePPS =30m.50s., eSSNZ =36m.28s., eSSSNZ =41m.20s.
Tortosa PPPE =22m.16s., SSE =36m.15s., SSSE =41m.37s.
Chicago e =33m.7s., eSS =37m.38s., e =38m.19s., eSSS =42m.23s.
Florissant eSKPE =22m.14s., eSPE =30m.44s., eE =36m.24s., eSSE =37m.37s., iSSE =37m.41s., iPPSSE =38m.15s., iSSSE =42m.28s.
St. Louis ePPPZ =23m.49s., eSPE =30m.43s., iSSE =37m.44s., ePPSSE =38m.19s., eE =40m.42s., iSSSE =42m.32s.
Granada ePS =31m.59s., PPS =33m.8s.
Malaga iPPP =23m.28s., SS =36m.37s., Q =50·8m.
Seven Falls SS =38m.40s.
San Fernando SKPE =22m.36s., eE =24m.22s., PSE =31m.23s., SSE =37m.36s., SSSE =42m.19s.
Ottawa SKP =22m.29s., SS =38m.49s., SSS =42m.49s.
Lisbon PKPN =19m.22s., PKPE =19m.27s.?, SSE =38m.19s.?, SSN =39m.1s.?.
Vermont e =42m.43s. and 44m.0s.
Fordham i =22m.58s. and 32m.1s.
Weston 38m.48s.
Philadelphia eSS =39m.3s., ePKP,PKP =40m.19s., eSSS? =44m.23s.
Columbia e =40m.18s.
La Plata PPN =25m.1s., PPPN =27m.49s.?, PPSE =40m.1s., SKSP?E =41m.1s., PSSN =47m.49s.?, QE =62·8m., QN =69·8m.
Bermuda e =34m.40s.
Huancayo eS =29m.52s.
Bogota iP? =20m.1s.
La Paz iSKKS =30m.4s., iPSKS =33m.24s., iPPS? =37m.45s., SS =43m.49s.
San Juan e =33m.36s., ePKP,PKP =40m.22s., eSSS =49m.8s.

April 26d. Readings also at 1h. (Ksara), 5h. (near Mizusawa), 12h. (Kew, De Bilt, Stuttgart, Triest, Cheb, Prague, Helwan, and Bucharest), 18h. (St. Louis, Palomar, Riverside, Mount Wilson, Tucson, Tacubaya, Vera Cruz, and near Bogota), 23h. (near Mizusawa).

April 27d. 14h. 38m. 3s. Epicentre 1°·1S. 133°·1E.

$A = -·6831$, $B = +·7300$, $C = -·0190$; $\delta = -11$; $h = +7$;
$D = +·730$, $E = +·683$; $G = +·013$, $H = -·014$, $K = -1·000$.

	Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
	°	°	m. s.	s.	m. s.	s.	m. s.		m.
Brisbane	32·5	146	i 6 28a	− 6	i 11 41	− 8	i 6 35	pP	—
Miyazaki	32·9	357	e 5 59	−39	11 44	−12	—	—	—
Unzendake	33·8	355	6 37	− 9	12 14	+ 4	—	—	—
Zi-ka-wei	34·0	342	e 6 45	− 3	12 15	+ 2	i 8 9	PP	14·6
Muroto	34·2	1	6 44	− 5	12 23	+ 7	—	—	—
Hukuoka	34·6	356	e 6 54	+ 1	12 2	−20	14 28	Q	16·2
Perth	34·7	207	7 10	+16	12 42	+18	8 30	PPP	—
Kobe	35·7	4	e 7 2	0	12 39	0	—	—	—
Kyoto	36·0	4	e 7 9	+ 4	12 41	− 3	—	—	—
Riverview	36·7	155	i 7 8	− 2	i 13 7	+13	i 8 50	PPP	e 18·0
Sydney	36·7	155	i 7 3a	− 7	i 12 54	0	—	—	e 17·0
Toyooka	36·7	3	7 9	− 1	12 49	− 5	—	—	—
Yokohama	36·9	9	e 7 27	+15	—	—	e 15 43	SSS	—
Tokyo	37·1	9	e 7 20	+ 6	e 9 27	P_cP	—	—	10·4
Wazima	38·5	5	e 7 21	− 5	13 10	−12	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Hukusima		39·2	9	7 31	0	13 36	+ 4	—	—	—
Sendai		39·8	9	e 7 31	− 5	13 36	− 6	—	—	—
Mizusawa		40·7	9	7 47	+ 3	14 0	+ 5	—	—	16·9
Akita		41·1	9	7 56	+ 9	14 4	+ 3	—	—	—
Miyako		41·3	10	e 7 46	− 3	14 8	+ 4	—	—	—
Hatinohe		42·1	9	7 49	− 6	14 13	− 3	—	—	—
Mori		43·5	8	e 4 41	?	e 9 54	PP	—	—	e 14·1
Sapporo		44·6	8	e 8 14	− 2	14 59	+ 7	—	—	—
Calcutta	N.	49·6	302	e 8 50	− 5	i 16 11	+ 8	e 10 46	PP	—
Auckland		52·4	139	9 22	+ 6	16 51	+ 9	11 29	PP	24·3
Arapuni		53·6	139	9 57?	+32	17 33	+35	20 39	SS	25·5
Colombo	E.	53·7	279	9 27	+ 1	17 14	+15	—	—	29·8
Kaimata		53·7	146	9 42	+16	17 13	+14	—	—	—
Wellington		54·9	143	9 37	+ 2	17 12	− 4	11 41	PP	26·5
Christchurch		55·0	146	9 41	+ 6	17 13	− 4	11 41	PP	29·5
Tuai		55·0	139	9 38	+ 3	17 18	+ 1	—	—	—
Apia		56·0	106	e 9 48	+ 5	e 17 37	+ 7	—	—	—
Kodaikanal	E.	56·5	284	i 10 55	PcP	—	—	—	—	—
Hyderabad		56·9	292	9 59	+10	17 54	+12	11 50	PP	28·2
Dehra Dun		60·9	306	e 10 7	−10	i 18 3	−31	—	—	i 30·1
New Delhi		61·1	304	e 10 16k	− 2	i 18 46	+ 9	12 47	PP	i 30·7
Bombay		62·4	293	e 10 27	0	18 52	− 1	12 53	PP	28·3
Honolulu		71·0	67	e 11 29	+ 7	e 20 32	− 5	e 14 24	PP	e 27·9
Tananarive		85·4	251	e 12 50	+10	23 20	+ 9	16 19	PP	41·0
College		86·3	25	e 12 45	0	e 23 17	− 3	e 16 1	PP	e 35·7
Sitka		91·8	33	i 13 13	+ 2	i 23 52	[+ 8]	e 17 3	PP	e 40·2
Ksara		96·6	303	e 13 43?	+10	e 24 27	{− 3}	e 26 45	PPS	—
Victoria		99·7	41	e 17 57	PP	e 24 33	[+ 7]	e 29 0	?	42·0
Ferndale		100·3	49	—	—	e 26 47	PS	e 27 32	PPS	e 54·5
Helwan		100·7	299	14 0	+ 8	24 30	[0]	18 14	PP	—
Seattle		100·7	41	e 23 22	?	—	—	—	—	e 49·3
Istanbul		101·3	312	18 23	PKP	25 57	+26	28 15	PKP	e 64·0
Ukiah		101·3	50	e 16 35	?	e 24 37	[+ 4]	e 26 57	PS	e 41·4
Berkeley		102·2	52	i 17 59	?	i 24 37	[− 1]	i 18 11	PP	e 41·0
Santa Clara		102·5	52	e 13 54	− 6	e 26 59	PS	e 18 30	PP	e 46·3
Bucharest		102·9	315	i 18 32a	PP	i 24 53	[+12]	i 27 37	PS	42·0
Upsala		103·5	332	i 18 29	PP	e 25 56	+ 6	e 20 39	PPP	e 43·0
Tinemaha	Z.	105·5	52	i 14 11	P	—	—	—	—	—
Haiwee		105·9	53	e 14 19	P	—	—	—	—	—
Pasadena		106·1	55	i 14 16	P	i 25 0	[+ 5]	e 18 15	PKP	e 43·0
Mount Wilson	Z.	106·2	55	i 14 19	P	—	—	—	—	—
Belgrade		106·7	316	e 18 23	[− 3]	e 25 8	[+10]	i 19 2	PP	e 57·6
Riverside	Z.	106·8	55	e 14 18	P	—	—	—	—	—
Palomar	Z.	107·3	56	i 14 38	P	—	—	—	—	—
Copenhagen		107·7	329	e 14 32	P	25 11	[+ 8]	18 57	PP	44·0
Bozeman		108·6	41	e 19 14	PP	e 25 3	[− 3]	e 28 11	PS	e 44·2
Bergen		108·7	336	18 28	[− 2]	25 5	[− 2]	e 19 5	PP	e 45·0
Potsdam		108·8	326	i 19 9	PP	i 28 30	PS	e 29 45?	PPS	e 45·0
Scoresby Sund		108·8	352	19 14	PP	25 21	[+14]	28 32	PS	—
Prague		108·9	323	e 18 17	[−14]	e 25 18	[+10]	i 19 10	PP	e 48·0
Saskatoon		109·0	34	19 0	PP	25 18	[+10]	34 25	SS	45·0
Logan		109·3	46	e 18 49	[+17]	i 25 22	[+13]	i 28 21	PS	e 45·4
Salt Lake City		109·5	47	e 19 11	PP	e 25 20	[+10]	e 28 23	PS	e 45·3
Cheb		110·1	323	e 14 57?	P	e 25 29	[+17]	i 19 20	PP	e 52·0
Jena		110·2	324	e 14 48	P	e 25 25	[+12]	e 19 14	PP	e 38·8
Triest		110·9	319	i 19 29	PP	i 25 28	[+12]	i 28 54	PS	e 53·0
Stuttgart		112·5	323	e 14 52	P	e 25 21	[− 1]	e 19 24	PP	e 55·6
Tucson		112·5	55	e 14 41	P	i 28 55	PS	e 19 25	PP	e 44·5
Chur		113·2	321	e 18 38	[− 1]	—	—	e 29 24	PS	—
De Bilt		113·2	328	e 15 0	P	e 25 37	[+12]	i 19 45	PP	e 49·0
Strasbourg		113·5	324	19 38	PP	e 29 15	PS	e 22 27	PPP	56·0
Zürich		113·5	323	e 18 52	[+12]	e 29 19	PS	e 19 49	PP	—
Aberdeen		113·7	335	i 18 0	[−40]	i 29 24	PS	i 19 47	PP	51·7
Basle		114·0	323	e 19 13	[+32]	e 27 8	{+35}	e 19 39	PP	—
Milan		114·0	320	e 19 12	[+31]	29 20	PS	—	—	55·4

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.			L.
		°	°	m. s.	s.	m. s.	s.	m. s.			m.
Uccle		114·3	328	e 18 58?	[+16]	i 29 26	PS	19 46?	PP		52·0
Rapid City		114·4	40	e 19 34	PP	e 29 9	PS	e 35 42	SSP		e 48·7
Neuchatel		114·7	323	e 19 49	PP	e 29 28	PS	—	—		—
Stonyhurst		116·0	333	i 20 1	PP	27 2	{+15}	29 44	PS		52·0
Kew		116·4	329	i 15 11k	P	e 25 44	[+ 7]	i 19 0	PKP		e 54·0
Paris		116·4	326	i 20 4	PP	e 25 47	[+10]	e 29 27	PS		e 52·0
Clermont-Ferrand		117·6	323	e 19 47	PP	—	—	—	—		e 63·8
Lincoln		120·2	42	e 20 28	PP	e 31 45	PPS	e 41 25	SSS		e 57·8
Barcelona		120·4	319	20 33	PP	—	—	i 41 25	SSS		e 57·8
Tortosa		121·7	319	e 20 39	PP	26 11	[+16]	23 8	PPP		60·2
Chicago		125·4	37	e 20 49	PP	e 26 13	[+ 6]	e 32 25	PPS		e 52·6
Florissant		125·4	41	i 19 12	[+ 9]	i 26 19	{+12}	e 20 49	PP		—
St. Louis		125·5	41	e 19 4	[+ 1]	i 26 19	[+12]	i 20 58	PP		—
Tacubaya	E.	125·7	67	20 57	PP	—	—	—	—		—
Granada		126·3	317	i 19 11	[+ 6]	32 42	PPS	i 21 14	PP		62·1
Malaga		127·1	317	i 19 14	[+ 8]	25 59	[−13]	i 21 17	PP		63·0
San Fernando	E.	128·5	318	e 21 26	PP	25 46	[−30]	33 18	PPS		61·5
Vera Cruz	E.	128·5	66	—	—	e 26 17	[+ 1]	—	—		—
Lisbon		129·1	322	19 23	[+13]	22 44	PKS	21 29	PP		57·4
Ottawa		129·1	26	19 16	[+ 6]	26 27	[+ 9]	21 15	PP		e 61·0
Shawinigan Falls		129·4	22	19 23	[+12]	22 21	PKS	31 27	PS		59·0
Seven Falls		129·6	20	19 27	[+16]	28 27	{+10}	21 27	PP		62·0
New Kensington		130·7	33	e 21 24	PP	e 22 40	PKS	e 38 59	SS		e 54·2
Vermont		130·9	25	e 21 30	PP	26 41	[+19]	i 22 43	PKS		53·0
Harvard		133·2	25	i 20 7	[+49]	—	—	—	—		—
Weston		133·4	25	19 22	[+ 4]	e 28 54	{+13}	21 41	PP		—
Fordham		133·5	28	i 19 29	[+10]	i 40 11	SSP	i 21 42	PP		e 63·7
Philadelphia		133·5	30	e 21 45	PP	i 22 53	PKS	e 31 41	PS		54·0
Halifax		134·2	16	e 24 57?	PPP	—	—	—	—		62·0
Columbia		134·3	40	—	—	e 22 52	PKS	e 34 16	PPS		e 58·2
La Plata	E.	142·7	164	19 43	[+ 8]	27 33	[+50]	23 15	PKS		77·0
	N.	142·7	164	19 44	[+ 9]	26 51	[+ 8]	21 39	PP		77·0
Bermuda		144·7	26	—	—	i 23 19	PKS	e 42 1	SS		e 59·7
Balboa Heights		146·6	74	e 19 45	[+ 3]	—	—	—	—		—
Montezuma		148·2	138	e 20 2	[+17]	—	—	e 43 26	SSP		—
Huancayo		148·9	115	e 19 56	[+10]	e 30 19	{+ 7}	e 34 19	PS		e 62·5
Bogota		152·6	81	i 20 1	[+10]	—	—	—	—		—
La Paz		152·7	131	19 59	[+ 8]	i 26 50	[− 7]	i 23 46	PP		72·6
San Juan		154·5	47	e 20 3	[+ 9]	e 43 17	SS	i 24 2	PP		e 63·8
Rio de Janiero	N.	155·9	187	i 20 55	[+59]	i 31 2	{+11}	i 24 7	PP		i 44·8
Fort de France		160·4	45	e 20 10	[+ 9]	—	—	—	—		—

Additional readings :—
Brisbane ipP?E =6m.38s., iZ =6m.41s.
Zi-ka-wei iN =6m.57s. and 7m.15s.
Perth PPP =8m.46s.
Riverview iP =7m.15s., iN =8m.57s., iP$_c$PN =9m.31s., iE =9m.55s., iSN =13m.11s., eN =13m.36s., iE =13m.48s., iN =14m.10s., iE =15m.35s., iSSN =15m.49s., iN =16m.16s., eQE =16m.33s.
Calcutta iPPPN =11m.43s., PSN =16m.50s., iSSN =19m.18s., iSSSN =20m.48s.
Auckland i =9m.54s., PPP =12m.5s., i =17m.42s. and 18m.12s., S$_c$S =19m.22s., i =19m.45s., SS =20m.42s., Q =22m.57s.?.
Arapuni i =22m.57s.
Wellington iZ =10m.7s. and 10m.27s., P$_c$PZ =10m.39s., iZ =12m.42s., PPPZ =12m.52s., P$_c$S =14m.39s., i =17m.34s., iZ =18m.17s., i =18m.37s. and 18m.57s., S$_c$S =19m.23s., i =19m.50s., 20m.27s., and 20m.57s., SS =21m.30s., SSS =23m.50s., Q =24m.39s.
Christchurch iZ =9m.48s., iE =17m.26s., SSE =20m.46s., QEN =22m.43s.
Hyderabad P$_c$PE =10m.44s., S$_c$SN =19m.33s., SSE =21m.27s.
New Delhi iPEN =10m.25s., P$_c$PN =10m.55s., iSN =18m.50s., PSN =19m.10s., S$_c$SN =20m.20s., SSN =23m.10s., SSE =23m.13s., iN =26m.36s.
Bombay iN =27m.40s.
Bombay alone records two subsequent shocks for which the readings are (referred to the above T$_c$) :—II ePN =10m.37s., iSN =19m.2s., S$_c$SN =20m.25s. ; III iPN =10m.42s., iSN =19m.7s., PSE =19m.33s., S$_c$SE =20m.29s., SSN =23m.30s., SSSN =26m.2s.
Tananarive S =23m.25s., S$_c$S =23m.43s., PS =24m.10s., SS =28m.55s., SSS =32m.30s., Q =35m.31s.

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

College e =14m.55s., eSS =28m.58s., eSSS? =32m.31s.
Sitka iS =24m.12s., iPS =25m.14s., eSS =30m.21s.
Ferndale eEN =45m.1s., eE =50m.24s.
Helwan eZ =16m.54s., eN =25m.42s., PSN =27m.23s., PPSN =28m.9s.
Seattle e =30m.13s., 35m.35s., and 39m.2s.
Ukiah e =17m.19s., eSSS =36m.24s.
Berkeley iPPZ =18m.52s., iE =20m.45s., iZ =20m.48s., iE =24m.26s., iE =26m.43s., iZ =27m.15s., iE =27m.20s.
Santa Clara eE =33m.12s.
Upsala PP?N =18m.33s., ePPP?N =21m.22s., SKS?E =24m.52s., ePPS?E =27m.34s., eE =28m.52s., eSS?E =32m.59s.?, eSS?N =33m.30s., eSSSE =35m.57s.?, eSSS?N =36m.57s.?.
Pasadena ePSE =27m.33s.
Belgrade e =20m.31s. and 22m.4s., ePS =28m.12s., eQ =43m.35s.
Copenhagen 26m.10s., 26m.35s., 28m.17s., 34m.15s.?, and 38m.9s.?.
Bozeman eS =26m.32s., e =34m.19s., eSSS =38m.2s.
Bergen SKSN =25m.20s., SKSZ =25m.33s., PPS =28m.27s., PKKPZ =29m.10s., eEN =30m.4s., eE =33m.57s., eN =34m.12s., eNZ =34m.27s.
Potsdam iPSE =28m.33s., eSS?EN =33m.57s., eSSSN =38m.27s.?.
Scoresby Sund 34m.39s.
Prague ePPP =21m.27s., ePS =28m.27s., ePPS =29m.?9s. eSS =33m.57s., eSSS = 38m.27s.
Saskatoon S =26m.46s.
Logan eS? =26m.41s., e =33m.59s., eSS? =34m.30s., e =38m.20s.
Salt Lake City eS? =26m.55s., ePPS =29m.8s., eSS =34m.2s.
Cheb e =17m.57s., and 23m.3s., eSKKS =26m.29s., iPS =28m.47s., ePPS =30m.12s., eSS =34m.47s., eSSS =39m.43s., e =42m.32s.
Triest PPP =21m.57s., iSS =30m.7s., iSSS =39m.20s.
Jena ePP?E =19m.20s., eS?N =28m.41s. and 28m.46s., eSS?E =34m.28s.
Stuttgart eZ =17m.38s., ePKPZ =18m.28s., iPPZ =19m.37s., ePPPZ =21m.33s., ePPP =21m.39s., eS =27m.22s., iSPZ =29m.9s., ePKKPZ =29m.47s., ePPS = 30m.43s., eSS =35m.20s., eSSS =39m.37s., eQ =52·8m.
Tucson ePKP =18m.31s., eS =27m.5s., ePPS =29m.44s., e =35m.1s., eSSS =39m.19s.
De Bilt iPS =29m.17s., iSS =35m.37s.
Zürich ePPS =30m.43s.
Aberdeen iN =29m.44s., iE =35m.30s., iN =39m.30s., iEN =46m.23s.
Uccle iSSE =35m.43s.
Stonyhurst iPKS =22m.21s., iPPP =22m.28s., SKKKS =27m.42s., PKKS =33m.1s., SS =35m.51s., SSP =36m.8s., P_cS,PKP =37m.20s., PKP,PKP =38m.11s., Q = 47m.18s., SKS,SKS =51m.10s.
Kew iPP =19m.57s., ePPPE =22m.28s., eSKKS =26m.58s., ePS =29m.51s., ePPSEZ =31m.18s., eSSEN =36m.20s., eSSSEZ =40m.57s.?, eQN =46m.57s.?.
Paris eSS =35m.57s.
Tortosa PPSE? =32m.48s., SSE? =36m.36s., SSPE =37m.24s., SSSE =41m.59s.
Chicago e =27m.41s., iSS? =37m.53s., e =40m.57s.
Florissant iZ =21m.24s., ePPPZ =23m.8s., eSKKS?E =27m.44s., iSE =29m.23s., iSPE =30m.56s., eSSE =37m.33s., eE =37m.59s., eSSSE =42m.34s.
St. Louis iPZ =19m.9s., iZ =19m.14s., iPPPZ =23m.35s., eE =27m.48s., eSE = 29m.4s., iSPE =30m.54s., iE =33m.26s., iSSE =37m.50s.
Granada PPP =24m.20s., PS =31m.50s., SS =38m.2s., SSS =44m.11s.
Malaga PKS =22m.35s., PPP =23m.56s., PS =31m.25s., PKKP =32m.35s., SKKS = 36m.17s., iPKP,PKP =37m.37s., SS =38m.11s., Q =54·0m.
San Fernando PPPE =24m.14s., SKKSE =27m.30s., SSE =38m.55s.
Lisbon iPPZ =21m.32s.k, SSE =38m.45s., SSN =39m.9s.
Ottawa SKP =22m.37s., SKKS =28m.3s., PPS? =34m.3s., SS =38m.27s., SSS = 43m.57s.?, e =52m.57s.?.
Shawinigan Falls SS =37m.51s., SSS =43m.33s.
Seven Falls PPS =33m.13s., SS =38m.53s., e =53m.27s.
New Kensington e =32m.9s., eSSS =43m.45s.
Vermont ePP =21m.43s., e =24m.43s., and 38m.13s., eSSS =43m.40s.
Weston e =33m.40s., SS =39m.26s.
Fordham iSKP =23m.41s.
Philadelphia eSS? =39m.35s., eSSS =44m.17s.
Columbia eSS? =39m.5s.
La Plata PKSN =23m.27s., N =23m.57s., PPPN =25m.33s., SKKSEN =29m.27s., SKSP?E =31m.39s., PSE =33m.57s., PPSN =35m.15s., PPS?E =37m.27s., SSE = 41m.27s., PSSN =41m.51s., SSS?E =44m.27s., SSSN =46m.39s., E =49m.57s., QE =59·0m., Q?N =64·6m.
Bermuda e =32m.51s.
Huancayo e =21m.59s., eSS? =42m.37s.
Montezuma e =33m.45s., eSS? =42m.7s.
Bogota i =20m.12s. and 20m.31s., e =22m.48s. and 31m.52s.
La Paz iPKPZ =20m.4s.k, iPKP$_2$ =20m.37s., iSKP? =23m.16s., iPPZ =23m.52s., iSKKSN =30m.39s., PSKS? =34m.44s., PPSN =37m.11s., SSN =43m.7s., eN = 49m.57s., QN =65m.51s.
San Juan i =24m.38s., e =44m.56s., eSSS? =49m.28s.
Long waves were also recorded at Branner.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

April 27d. 19h. 5m. 1s. Epicentre 0°·8S. 133°·5E. (as on 26d.).

$A = -\cdot6883$, $B = +\cdot7253$, $C = -\cdot0138$; $\delta = +1$; $h = +7$;

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Brisbane		32·5	147	i 6 35 a	+ 1	i 11 53	+ 4	1 6 44	pP	i 15·9
Perth		35·2	207	i 8 24	PP	i 12 49	+18	—	—	—
Riverview		36·8	156	i 7 17 a	+ 6	i 13 4	+ 8	i 15 32	SS	—
Sydney		36·8	156	e 6 53	−18	e 12 59	+ 3	e 15 35	SS	e 18·2
Calcutta	N.	49·5	302	e 8 53	− 1	i 15 59	− 3	—	—	—
Auckland		52·4	138	10 19?	PcP	16 52	+10	—	—	24·4
Arapuni		53·6	140	6 59?	?	—	—	e 18 59?	ScS	26·0
Colombo	E.	54·1	279	9 31	+ 2	17 4	− 1	—	—	—
Wellington		54·9	144	9 39	+ 4	17 21	+ 5	10 44	PcP	26·0
Christchurch		55·0	147	9 34	− 1	17 19	+ 2	19 30	ScS	28·2
Kodaikanal	E.	56·8	284	e 10 37	PcP	—	—	—	—	—
Hyderabad	N.	57·1	292	e 9 37	−13	17 45	0	—	—	—
New Delhi	N.	61·2	303	e 10 20	+ 1	i 18 34	− 4	20 12	ScS	—
Bombay		62·7	293	e 10 28	− 1	18 55	− 2	i 13 2	PP	—
Sitka		91·3	33	—	—	e 23 46	[+ 6]	e 24 12	S	e 44·1
Helwan		100·9	299	e 18 43	?	e 25 29	+ 1	—	—	—
Berkeley		101·7	52	i 19 24	?	(24 59)	{− 8}	i 21 22	?	e 25·0
Tinemaha	z.	105·0	52	e 18 36	PP	—	—	—	—	—
Riverside	z.	106·3	55	e 18 32	PP	—	—	—	—	—
Prague		108·9	323	—	—	e 28 7	PS	e 34 33	SSP	e 57·0
Cheb		110·1	323	e 19 31	PP	e 28 38	PS	e 23 33	?	—
Tucson		112·0	55	e 19 8	PP	e 28 59	PS	e 35 19	SSP	e 51·5
Stuttgart		112·5	323	e 19 32	PP	e 27 17	S	e 28 59	PS	e 56·5
De Bilt		113·2	328	—	—	e 34 59	SS	—	—	e 52·0
Rapid City		113·9	40	e 15 24	P	e 25 35	[+ 7]	e 28 37	PS	e 56·2
Uccle		114·3	328	—	—	e 28 59?	PS	e 38 59?	?	e 59·0
St. Louis		125·1	41	e 19 12	[+ 9]	e 26 18	[+12]	e 21 0	PP	e 57·8
Malaga		127·2	317	e 20 24	?	—	—	—	—	73·0
Seven Falls		127·8	21	e 33 59?	?	—	—	—	—	66·0
Ottawa		128·7	26	e 33 59?	?	—	—	—	—	64·0
Philadelphia		133·1	30	—	—	e 22 42	SKP	—	—	e 60·1
Bermuda		144·2	26	e 22 22	?	e 23 57	SKP	e 41 57	SS	e 55·9
Huancayo		148·6	115	e 19 54	[+ 9]	—	—	e 42 59	SSP	e 72·6
La Paz		152·6	130	i 19 59 a	[+ 8]	—	—	i 21 4	pPKP	76·0
San Juan		154·0	47	e 20 8	[+15]	—	—	e 43 34	SS	e 76·4

Additional readings :—
Brisbane iSSN =13m.32s.
Riverview iE =13m.55s., iN =14m.4s., iE =15m.38s.
Wellington iZ =11m.3s., Q =23m.29s.?.
Christchurch SSEN =21m.21s., Q?N =23m.33s.
Bombay iE =13m.11s., eN =19m.2s., ScSN =20m.19s., SSE =22m.55s., eEN =23m.15s.
Sitka ePS =25m.15s., e =30m.52s. and 31m.17s.
Prague e =30m.59s., 37m.35s., and 43m.17s.
Stuttgart eSPP =30m.7s., eSS =35m.19s.
St. Louis eSPN =31m.0s., eSSN =37m.53s., eE =38m.39s., and 40m.48s., eSSSE = 42m.48s.
Philadelphia e =32m.43s. and 38m.24s.
Huancayo e =39m.2s.
La Paz iPKP$_2$ =20m.16s., sPKP =21m.46s., iPPZ =23m.46s., iZ =24m.19s.
San Juan e =24m.49s. and 34m.0s.
Long waves were also recorded at other American and European stations.

April 27d. Readings also at 6h. (Logan), 7h. (San Francisco), 15h. (La Paz (2) and near Branner), 17h. (Stuttgart (2)), 20h. (Riverview (2)), 21h. (Kew, Wellington, Christchurch, Sydney, Riverview, and Brisbane), 22h. (Wellington and Riverview).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

April 28d. 5h. 50m. 27s. Epicentre 8°·1N. 83°·2W. (as on 1944 March 23d.).

$A = +·1172$, $B = -·9832$, $C = +·1400$; $\delta = +2$; $h = +6$;
$D = -·993$, $E = -·118$; $G = +·017$, $H = -·139$, $K = -·990$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Balboa Heights		3·7	78	i 0 51	− 9	i 1 40	− 5	—	—	—
Bogota		9·7	110	e 1 16	−66	—	—	—	—	—
Tacubaya	E.	19·1	309	e 4 43	+16	—	—	—	—	—
San Juan		19·5	56	i 4 31	0	i 8 8	+ 2	—	—	e 9·9
Huancayo		21·5	159	e 4 48	− 4	e 8 39	− 8	—	—	e 10·9
Columbia		25·9	3	e 5 40	+ 5	e 10 9	+ 5	—	—	e 13·0
La Paz	Z.	28·6	148	e 6 2	+ 2	i 11 0	+12	—	—	16·6
Bermuda		29·5	33	e 6 28	+20	e 11 56	+54	—	—	e 14·2
St. Louis		31·1	349	i 6 20	− 2	e 11 24	− 4	i 7 18	PP	—
Florissant		31·3	349	i 6 22	− 2	e 11 30	− 1	i 7 20	PP	—
Philadelphia		32·5	13	e 11 10	?	e 11 53	+ 4	—	—	e 14·0
Chicago		33·8	353	e 7 58	PP	e 12 18	+ 8	—	—	e 14·1
Tucson		35·1	317	i 6 59	+ 2	—	—	—	—	e 20·5
Ottawa		37·7	9	7 17	− 2	e 13 11	+ 1	8 47	PP	19·6
Palomar		40·0	314	i 7 40a	+ 2	—	—	—	—	—
Seven Falls		40·3	13	—	—	e 14 3	+14	—	—	19·6
Riverside	Z.	40·7	315	i 7 45	+ 1	—	—	—	—	—
Pasadena	Z.	41·3	315	i 7 51	+ 2	—	—	—	—	—
Tinemaha	Z.	42·9	318	i 8 4a	+ 2	—	—	—	—	—
Bozeman		44·5	333	—	—	e 14 55	+ 4	—	—	e 29·0
Saskatoon		47·9	341	—	—	e 15 58	+19	—	—	29·6
Stuttgart		85·6	41	e 12 39	− 2	—	—	—	—	e 41·6
Bombay	N.	144·2	40	—	—	e 35 16	PPS	—	—	—
Kodaikanal	E.	153·5	45	—	—	33 24	PS	—	—	—
Colombo		157·5	48	—	—	e 32 33?	?	—	—	—

Additional readings :—
Balboa Heights i = 2m.46s.
Bogota i = 2m.25s. and 2m.31s., e = 6m.57s.
San Juan e = 5m.4s. and 7m.46s.
Huancayo e = 6m.13s.
St. Louis eE = 13m.15s.
Florissant eE = 13m.20s.
Tucson e = 10m.26s. and 11m.46s.
Bombay eN = 38m.54s., 39m.47s., 39m.58s., and 41m.53s.
Long waves were also recorded at New Kensington, Sitka, and other European stations.

April 28d. Readings also at 0h. (Bombay, New Delhi, and Riverview), 2h. (Ksara), 5h. (St. Louis, Tinemaha, Tucson, Wellington, Christchurch, Brisbane, Riverview, Sydney, and near Mizusawa), 6h. (Stuttgart, Kew, Haiwee, Mount Wilson (2), Pasadena (2), Tucson (2), Palomar (2), Riverside (2), and Tinemaha (2)), 7h. (Balboa Heights), 15h. (near Lick), 16h. (near Fort de France), 18h. (near La Paz), 23h. (Jena).

April 29d. 21h. 41m. 17s. Epicentre 36°·3N. 71°·0E. Depth of focus 0·010 (as on 1943 Dec. 28d.).

$A = +·2630$, $B = +·7638$, $C = +·5894$; $\delta = -5$; $h = 0$;
$D = +·946$, $E = -·326$; $G = +·192$, $H = +·557$, $K = -·808$.

		Δ	Az.	P.	O−C.	S.	O−C.
		°	°	m. s.	s.	m. s.	s.
New Delhi		9·3	144	2 22	+ 9	i 3 58	+ 2
Bombay		17·4	174	i 4 4	+ 6	i 7 13	+ 7
Hyderabad	N.	19·9	159	4 27	+ 1	8 7	+ 7
Calcutta	N.	20·4	127	e 4 28	− 3	i 8 1	− 8
Ksara		28·8	275	e 5 55	+ 4	e 11 59	SS

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.
		°	°	m. s.	s.	m. s.	s.
Stuttgart	z.	46·0	306	i 8 13	− 2	—	—
Basle		47·3	304	e 8 23	− 3	—	—
Tinemaha	z.	106·5	7	e 16 57	?	—	—
Mount Wilson	z.	109·3	7	e 16 39	?	—	—
Palomar	z.	110·5	6	i 16 27	?	—	—
Tucson		111·8	1	e 15 46	?	—	—

Additional readings :—
New Delhi iN = 2m.46s. and 4m.44s.
Bombay iN = 5m.2s., iSN = 7m.16s., iE = 7m.21s.

April 29d. Readings also at 1h. (Palomar and Tucson), 2h. (Bucharest, De Bilt, Kew, and Stuttgart), 3h. (near Triest), 6h. (Riverview, Chicago, Philadelphia, Florissant, St. Louis, Rapid City, Logan, Salt Lake City, Bozeman, Tucson, College, and Stuttgart), 7h. (De Bilt, Kew, and Uccle), 9h. (Bergen, Upsala, Helwan, Ksara, and New Delhi), 10h. (De Bilt, Kew, and near Apia), 11h. (Bucharest, Helwan, Ksara, and Stuttgart), 13h. (Mount Wilson, Pasadena, Palomar, Riverside, and Tinemaha), 16h. (Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, Tucson, St. Louis, and Stuttgart (2)), 17h. (De Bilt), 18h. (Stuttgart, St. Louis, Tucson, Mount Wilson, Pasadena, Tinemaha, San Juan, and near Balboa Heights), 19h. (Kew and near Fort de France), 20h. (near Branner), 21h. (Mount Wilson, Palomar, Tucson, and Tinemaha).

April 30d. Readings at 0h. (Palomar, Pasadena, Tinemaha, and Tucson), 11h. (near Mizusawa), 14h. (La Paz), 16h. (Seven Falls), 17h. (near Mizusawa), 20h. (La Paz), 22h. (Scoresby Sund), 23h. (Kew).

May 1d. Readings at 0h. (Kew), 6h. (Wellington), 11h. (Mount Wilson, Palomar, Tucson, and Stuttgart), 19h. (New Delhi), 22h. (Auckland, Christchurch (2), Wellington, and Riverview (2)), 23h. (Christchurch, Wellington, Brisbane, and Riverview).

May 2d. 11h.
Felt in Austria. Epicentre Hungary approx. 47°N. 18°E.
E. Trapp.
"Makros. Beobachtungen in den Jahren 1941-1945." Anhang 8 zum Jahrbuch für 1947 der Zentralanstalt fur Meteorolog. und Geodynam., Vienna. Macroseismic chart page D48.

Stuttgart eP?Z = 52m.43s., ePZ = 52m.47s., eP_g? = 53m.6s., e = 53m.12s., eZ = 53m.33s., e = 54m.14s., eS_g? = 54m.18s. and 54m.22s.
Zürich eP = 52m.48s., eS_g = 54m.13s.
Jena eEN = 52m.55s., eN = 53m.56s., eEN = 54m.3s., eE = 54m.13s., 57m.36s., and 58m.29s.
Basle eP = 54m.18s., eS_g = 55m.53s.
Strasbourg e = 54m.43s. and 55m.4s.

May 2d. Readings also at 0h. (Granada), 4h. (Mount Wilson, Pasadena, Palomar, Riverside, and Tinemaha), 10h. (near Bogota), 12h. (Bombay, Calcutta, Hyderabad, New Delhi, and Helwan), 13h. (Kew), 15h. (Kew and Ksara), 17h. (Kew, Mount Wilson, Palomar, Tinemaha, Tucson, and near Apia), 18h. (Riverview), 22h. (La Plata and near Branner).

41

May 3d. Readings at 2h. (Tucson, Mount Wilson, Palomar, and Tinemaha), 3h. (Oaxaca), 4h. (Pasadena, Mount Wilson, Palomar, Riverside, Tinemaha, Tucson, Lick, Santa Clara, near Berkeley, and Branner), 5h. (Tucson, Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, and Alicante), 9h. (La Paz, Palomar and Pasadena), 12h. (Palomar and Tucson), 13h. (Istanbul), 17h. (Bombay, Calcutta, and New Delhi), 19h. (Scoresby Sund and near Reykjavik), 20h. (Kew (2), De Bilt, Uccle, Clermont-Ferrand, Stuttgart, Scoresby Sund, and near Reykjavik (2)), 21h. (Kew, Scoresby Sund, Tucson, Mount Wilson, Tinemaha, near Reykjavik, and near Mizusawa), 22h. (near Branner).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

May 4d. 6h. 40m. 9s. Epicentre 6°·3S. 148°·2E. (as on 1942 Nov. 14d.).

$A = -·8449$, $B = +·5238$, $C = -·1090$; $\delta = +10$; $h = +7$;
$D = +·527$, $E = +·850$; $G = +·093$, $H = -·057$, $K = -·994$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Brisbane	.	21·5	170	i 4 49a	− 3	i 8 45	− 2	—	—	i 11·0
Riverview		27·5	175	e 5 51	+ 1	i 10 46	+16	i 6 54	PP	e 13·2
Sydney		27·6	175	—	—	e 10 51	+19	—	—	—
Auckland		38·9	145	—	—	13 46?	+18	—	—	17·8
Perth		39·5	226	13 46	S	(13 46)	+ 9	—	—	i 21·7
Wellington		42·1	150	7 56?	+ 1	14 11	− 5	9 41	PP	20·8
Christchurch		42·8	154	—	—	13 49	−37	17 25	Q	22·0
Mount Wilson	z.	96·6	56	e 13 35	+ 2	—	—	—	—	—
Tinemaha	z.	96·6	53	e 13 33	0	—	—	—	—	—
Riverside	z.	97·1	56	e 13 43	+ 8	—	—	—	—	—
Palomar	z.	97·5	57	e 13 42	+ 5	—	—	—	—	—

Additional readings :—
Brisbane eSE = 8m.53s.
Wellington PPPZ = 10m.13s., SS = 17m.26s.
Long waves were also recorded at Arapuni and other American and European stations.

May 4d. Readings also at 3h. (New Delhi), 6h. (Huancayo, St. Louis (2), Tucson (3), Haiwee, Mount Wilson (2), Pasadena, Palomar (3), Riverside, Tinemaha (3), and Brisbane), 7h. (Brisbane (3), Riverview, and Tinemaha), 8h. (Auckland, Christchurch, Wellington, Mount Wilson, Pasadena, Riverside, Tinemaha, and Tucson), 11h. (Bogota and Bombay), 17h. (near Mizusawa), 20h. (St. Louis, Mount Wilson, Pasadena, Riverside, Tinemaha, Tucson, San Francisco, near Berkeley, Branner, Lick, Santa Clara, and near Balboa Heights), 21h. (near Branner), 22h. (Basle).

May 5d. 5h. Undetermined shock.

Brisbane eZ = 54m.50s., eN = 54m.53s., 61m.6s., and 63m.33s.
Kodaikanal eE = 55m.25s.
Colombo PE = 56m.43s., SE = 63m.36s., LE = 72m.30s.
New Delhi ePN = 57m.8s., iSN = 64m.35s., iN = 64m.56s., S_cSN = 65m.3s.
Bombay ePE = 57m.16s., eSEN = 64m.57s., iEN = 65m.15s., iN = 67m.18s.
Tinemaha ePZ = 61m.44s., eZ = 65m.22s. and 65m.42s.
Hyderabad SN = 63m.42s.
Palomar iZ = 63m.51s., eZ = 66m.21s., iZ = 66m.43s.
Riverview iS?N = 64m.55s., iEZ = 64m.58s., eLE = 70m.12s.
Christchurch eN = 65m.40s., iN = 73m.4s., cEN = 74m.14s., e = 79m.36s., eZ = 82m.50s.
Auckland P? = 65m.56s.?, L = 73m.
Tucson e = 66m.21s., eL = 101m.28s.
Stuttgart eZ = 66m.23s., eQ = 104m.
Wellington P?Z = 66m.30s., P_cP?Z = 67m.37s., i = 70m.43s., S = 72m.7s.?, SS = 76m.20s., RZ = 80m.
Riverside eZ = 66m.39s.
Bogota e = 67m.49s. and 68m.14s.
Victoria eE = 71m.36s., L = 94m.
Long waves were also recorded at Pasadena, Huancayo, De Bilt, Uccle, and Kew.

May 5d. 8h. May be near Kermadec Islands and Deep.

Tuai P = 22m.41s., S = 24m.19s.
New Plymouth P = 23m.2s., S = 24m.59s.
Wellington P = 23m.14s., S = 25m.21s.
Christchurch P = 23m.49s., S = 26m.21s.
Kaimata S = 26m.12s., i = 26m.20s.
Mount Wilson iPZ = 32m.34s.
Pasadena iPZ = 32m.34s.
Palomar iPZ = 32m.36s.k.
Riverside ePZ = 32m.36s.
Tinemaha iPZ = 32m.43s.
Tucson iP = 32m.52s.k, e = 34m.2s.

May 5d. Readings also at 0h. (Mizusawa), 1h. (Colombo, Basle, Stuttgart, Bucharest, Ksara, and Helwan), 4h. (near Almeria, Granada, and Malaga), 5h. (Tucson, Palomar, Tinemaha, Auckland, Wellington, near Apia), 13h. (Tucson (3), near Stuttgart and Zurich), 16h. (New Delhi), 17h. (Bogota), 18h. (Tucson, Palomar, and Tinemaha), 19h. and 20h. (near Mizusawa), 22h. (Berkeley, Branner, and Lick).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

May 6d. 0h. 13m. 44s. Epicentre 22°·5N. 45°·0W.

$A = +\cdot6539$, $B = -\cdot6539$, $C = +\cdot3805$; $\delta = -5$; $h = +4$;
$D = -\cdot707$, $E = -\cdot707$; $G = +\cdot269$, $H = -\cdot269$, $K = -\cdot925$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Fort de France		17·1	246	i 4 1	− 1	e 7 11	− 1	—	—	e 3·4
Bermuda		20·0	304	i 4 13	−24	i 8 3	−14	e 4 32	P	i 9·1
San Juan		20·2	263	i 4 40	+ 1	i 8 30	+ 9	—	—	i 9·5
Halifax		26·8	330	e 6 16?	PP	—	—	—	—	13·3
Weston		29·6	319	e 6 6	− 3	e 11 43	+39	e 6 55	PP	—
Harvard		29·8	319	e 6 11	0	—	—	—	—	—
Fordham		30·4	314	i 6 17	+ 1	i 11 25	+ 9	i 7 6	PP	—
Philadelphia		30·9	311	i 6 20	0	e 11 23	− 1	e 7 37	PPP	13·0
Georgetown		31·9	309	i 6 29	0	i 11 41	+ 1	—	—	14·8
Vermont		31·9	320	6 28	− 1	e 11 39	− 1	e 7 53	PPP	e 13·5
Seven Falls		32·2	327	e 6 28	− 4	—	—	—	—	13·3
Shawinigan Falls		32·9	325	e 6 34	− 4	—	—	—	—	14·3
Bogota		33·3	242	e 8 44	?	—	—	—	—	—
Columbia		33·6	299	e 6 43	− 1	e 12 8	+ 2	e 7 51	PP	e 15·4
Ottawa		33·9	320	6 44	− 3	12 10	− 1	14 16	SS	15·8
Malaga		37·7	58	i 7 20a	+ 1	i 13 23	+13	i 15 29	SS	17·3
Granada		38·5	58	i 7 24a	− 2	i 13 26	+ 4	8 55	PP	22·3
Chicago		40·4	309	e 7 41	0	e 13 42	− 8	e 9 26	PP	e 16·5
St. Louis		41·7	304	e 7 51	− 1	i 14 15	+ 5	e 9 29	PP	e 19·6
Florissant		41·8	304	e 7 53	0	e 14 9	− 2	e 9 41	PP	e 19·6
Tortosa		42·3	54	i 7 59	+ 2	14 20	+ 1	9 45	PP	e 21·3
Stonyhurst		44·7	34	—	—	e 14 56	+ 2	e 18 46	SSS	—
Kew		44·9	38	e 8 21?	+ 3	e 15 1?	+ 5	e 10 41?	PPP	e 20·8
La Paz		44·9	212	8 21	+ 3	i 15 6	+10	10 4	PP	22·0
Clermont-Ferrand		45·2	47	e 8 23	+ 3	—	—	—	—	—
Rio de Janeiro	N.	45·2	178	e 8 20	0	i 15 6	+ 5	—	—	i 22·6
Huancayo		45·4	224	e 8 23	+ 1	e 15 5	+ 1	e 10 49	PPP	e 18·8
Paris		45·7	44	e 8 16?	− 8	—	—	—	—	21·3
Aberdeen		46·5	31	i 11 38	?	—	—	—	—	20·6
Uccle		47·4	41	e 8 40a	+ 2	e 15 33	+ 1	—	—	e 19·3
Neuchatel		48·1	46	e 8 44	+ 1	—	—	—	—	—
De Bilt		48·3	39	e 8 46	+ 1	e 15 48	+ 3	—	—	e 20·3
Basle		48·7	46	e 8 48	0	—	—	—	—	—
Strasbourg		49·0	44	e 8 59	+ 9	—	—	—	—	—
Zürich		49·3	46	e 8 52k	− 1	—	—	—	—	—
Stuttgart		50·0	45	e 8 56	− 2	e 16 6	− 3	e 10 51	PP	e 21·2
Bergen		51·4	29	—	—	e 16 34	+ 6	—	—	24·6
Jena		51·9	43	e 9 12	0	—	—	e 9 18	?	—
Rapid City		52·1	310	i 9 14	0	e 16 43	+ 5	e 10 56	PP	e 25·7
Cheb		52·2	44	e 9 26	+11	e 16 48	+ 9	e 10 37	PcP	e 24·3
Potsdam		53·1	40	e 9 22	+ 1	e 16 58	+ 7	e 10 10	?	—
Copenhagen		53·5	36	e 9 22	− 2	16 57	0	—	—	23·3
Prague		53·6	43	e 9 26	+ 1	e 16 59	+ 1	—	—	e 25·3
Saskatoon		55·2	318	9 32	− 5	17 40	PPS	—	—	24·3
Upsala		57·1	32	e 9 46	− 4	e 17 44	− 1	—	—	e 24·3
Bozeman		57·7	311	e 11 30	?	e 17 56	+ 3	e 21 58	SS	e 27·0
Logan		58·3	306	e 10 1	+ 2	e 17 48	−13	—	—	e 26·7
Salt Lake City		58·4	305	e 10 12	+12	e 17 56	− 6	—	—	e 26·6
Tucson		58·5	295	e 9 57	− 3	e 18 9	+ 6	e 11 0	PcP	e 27·8
Bucharest		61·3	50	e 10 22	+ 2	—	—	—	—	30·3
Palomar		63·3	298	e 10 32	− 1	—	—	—	—	—
Riverside		63·6	298	e 10 36	+ 1	—	—	e 39 38	P′P′	—
Haiwee	z.	63·7	301	e 10 38	+ 2	—	—	—	—	—
La Jolla	z.	63·7	296	e 10 44	+ 8	—	—	—	—	—
Tinemaha	z.	63·8	302	e 10 36	0	—	—	e 39 40	P′P′	—
Mount Wilson	z.	64·1	298	e 10 36	− 2	—	—	e 39 34	P′P′	—
Pasadena		64·2	298	e 10 40	+ 1	—	—	i 39 38	P′P′	e 30·3
Santa Barbara	z.	65·4	299	e 10 58	+11	—	—	—	—	—
Victoria		65·9	314	10 34	−16	19 29	− 8	—	—	29·3
Berkeley		66·8	303	i 10 52	− 4	i 19 57	+ 9	i 11 12	PcP	e 30·1

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Ukiah		67·3	305	—	—	e 19 46	− 8	—	—	e 31·2
Helwan		67·8	66	i 11 0k	− 2	e 20 4	+ 4	13 37	PP	—
Ksara		70·6	61	e 11 24	+ 5	e 20 44	+11	—	—	—
Sitka		71·5	326	e 11 34	+10	e 20 48	+ 5	—	—	e 28·7
College		75·1	334	e 15 31	?	e 21 32	+ 8	—	—	e 34·9
New Delhi	N.	104·6	50	e 15 23	?	—	—	—	—	—
Colombo		118·7	68	e 18 16?	[−34]	—	—	—	—	61·8

Additional readings :—
Bermuda i = 7m.55s.
Weston e = 6m.15s.
Philadelphia i = 7m.0s., e = 12m.16s.
Vermont e = 7m.9s., 11m.25s., and 12m.56s.
Columbia e = 9m.21s. and 13m.34s.
Granada PPP = 9m.44s., SS = 16m.8s., SSS = 16m.41s.
Chicago e = 11m.7s. and 15m.26s.
St. Louis iPZ = 7m.54s. and 7m.57s., iZ = 8m.45s., eS_cP?E = 13m.57s., eSS?N = 17m.13s., eE = 18m.5s.
Florissant eZ = 8m.38s., eSS?N = 16m.52s., eE = 18m.6s.
Tortosa PSE = 14m.30s., SSE = 16m.57s.
Kew eZ = 9m.31s.?, eSSNZ = 18m.31s.
Huancayo eP_cP = 9m.41s.
Stuttgart iPZ = 9m.2s., eP_cP?Z = 10m.19s.
Cheb e = 14m.36s.
Upsala eE = 9m.54s., iN = 17m.47s.
Logan i = 10m.9s., e = 19m.11s.
Tucson ePPP = 11m.44s.
Pasadena iZ = 10m.45s.
Berkeley iE = 11m.3s. and 15m.33s., iZ = 15m.36s., iN = 15m.40s and 20m.0s., iZ = 20m.3s.
Helwan eZ = 11m.46s. and 12m.19s.
Long waves were also recorded at La Plata, Tananarive, Riverview, and Wellington.

May 6d. Readings also at 2h. (Stuttgart, Tucson, Riverside, Haiwee, Tinemaha, Mount Wilson, and Pasadena), 6h. (Wellington, Riverview, and Alicante), 11h. (Alicante), 17h. (Pasadena, Palomar, Tinemaha, Haiwee, Riverside, Tucson, St. Louis, Stuttgart, and Auckland), 19h. (Huancayo, Stuttgart, and near Malaga).

May 7d. 15h. Aleutian Islands. The observations are all in nearly the same azimuth.

College eP? = 11m.49s., e = 12m.22s., eS = 13m.6s., eL = 13m.21s.
Victoria e = 16m.0s., L = 20m.
Tinemaha iP = 16m.28s.
Haiwee iP = 16m.34s.
Pasadena iPZ = 16m.46s., iZ = 17m.9s.
Mount Wilson iPNZ = 16m.47s.
Riverside iPZ = 16m.51s.
Palomar iP = 16m.58s.
Tucson eP = 17m.30s., eL = 31m.36s.
St. Louis iPZ = 18m.15s., ePP?Z = 20m.4s., eSE = 25m.1s., eS_cSN = 28m.23s., eLE = 32·7m.
Fordham e = 19m.8s., eL = 37m.18s.
Weston e = 19m.13s., eL = 35m.53s.
Saskatoon e = 21m., L = 25m.
Stuttgart eZ = 21m.27s. and 21m.33s.
Florissant eN = 25m.23s., eS_cSN = 28m.22s.
Philadelphia e = 26m.46s. and 29m.9s., eL = 35m.34s.
Bombay iN = 33m.43s.
Long waves were also recorded at Scoresby Sund, Kew, and other American stations.

May 7d. Readings also at 0h. and 3h. (Kew), 6h. (Alicante), 10h. (near Bucharest), 18h. (Riverview, Auckland, and Wellington), 20h. (near Bogota), 22h. (Stuttgart), 23h. (Tucson, Mount Wilson, Palomar, and Riverside).

May 8d. Readings at 0h. (near La Paz), 2h. (Stuttgart), 3h. (Scoresby Sund), 4h. (near Fort de France), 7h. (Riverview), 8h. (Tucson, Mount Wilson, Pasadena, Palomar, Riverside, and Tinemaha), 10h. (Bombay, Calcutta, New Delhi, De Bilt, Uccle, and Kew), 12h. (Bombay, Calcutta, New Delhi, De Bilt, and Upsala), 16h. (Christchurch, La Plata, Tucson, and Palomar), 18h. (Stuttgart), 21h. (Mizusawa).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

May 9d. 14h. 29m. 49s. Epicentre 3°·1N. 74°·8W.

Felt throughout Colombia, particularly at Sibunday, Poparjah, Cari, Pereira, Puerto Lopez, Acacia, Rorira, Ibague, Junin, Bogota.
Epicentre 3°·5N. 75°·5W. Magu VI (Gutenberg).
Mapa sismico y tectonico de Colombia (Banco de la República, Bol. gráfico 7, febrero de 1947).

$A = +\cdot2618$, $B = -\cdot9636$, $C = +\cdot0537$; $\delta = -5$; $h = +7$;
$D = -\cdot965$, $E = -\cdot262$; $G = +\cdot014$, $H = -\cdot052$, $K = -\cdot999$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Bogota		1·9	26	i 0 31	− 3	i 1 2	+ 3	—	—	—
Balboa Heights		7·5	322	e 1 58	+ 5	i 3 22	+ 2	—	—	—
Huancayo		15·1	184	e 3 35	− 1	i 6 14	−11	e 4 14	PP	i 7·7
San Juan		17·4	28	e 4 4	− 2	e 6 59	−20	e 5 49	?	e 7·5
Fort de France		17·7	52	e 4 4	− 6	—	—	—	—	—
La Paz		20·6	161	4 48	+ 5	i 8 36	+ 7	—	—	10·8
Philadelphia		36·7	0	e 7 8	− 2	e 12 52	− 2	e 7 54	PP	e 15·0
St. Louis		38·1	340	e 7 19	− 3	i 13 10	− 6	e 7 30	pP	—
Florissant	E.	38·3	340	—	—	i 13 13	− 6	e 16 14	SS	—
Rio de Janeiro		40·2	132	e 13 34	S	(e 13 34)	−14	—	—	i 20·2
Ottawa		42·1	359	—	—	e 14 11	− 5	e 17 11	SS	22·2
Tucson		44·5	315	e 8 15	0	—	—	e 9 1	PP	e 21·4
Palomar	z.	49·5	313	i 8 54	0	—	—	i 10 15	PP	—
Riverside	z.	50·1	313	e 8 59	0	—	—	—	—	—
Pasadena		50·8	313	i 9 4	0	—	—	i 9 38	?	e 22·0
Mount Wilson	z.	50·8	313	e 9 5	+ 1	—	—	—	—	—
Tinemaha	z.	52·3	316	e 9 16	+ 1	—	—	—	—	—
Berkeley		55·5	315	—	—	i 17 26	+ 2	—	—	e 23·7
Victoria		61·3	325	—	—	e 20 6	ScS	—	—	32·2
Scoresby Sund		75·3	16	—	—	21 23	− 3	—	—	—

Additional readings :—
Bogota iS? = 1m.6s.
Huancayo i = 4m.22s.
St. Louis eSS = 15m.33s.
Tucson e = 8m.26s. and 11m.18s.
Palomar iZ = 9m.6s.
Long waves were also recorded at Bermuda, La Plata, Kew, De Bilt, Cheb, Wellington, and Riverview.

May 9d. Readings also at 10h. (Tucson, Riverside, Mount Wilson, Tinemaha, Palomar, and Pasadena), 11h. (Riverside, Mount Wilson, Tinemaha, Palomar, Pasadena, Zürich, Stuttgart, and Ebingen), 13h. (Wellington, Calcutta, New Delhi, Bombay, and Colombo), 14h. (Ksara), 15h. (Wellington), 17h. (Alicante), 19h. (Stuttgart, Zürich, Neuchatel, Basle, and St. Louis), 21h. (Stuttgart, Helwan, Bucharest, and Ksara).

May 10d. Readings at 9h. (Mount Wilson, Pasadena, Palomar, Riverside, and Tinemaha), 14h. (Stuttgart), 15h. (Alicante), 17h. (Bombay and New Delhi), 18h. (De Bilt, Kew, and near Istanbul), 21h. (Tucson, Mount Wilson, Pasadena, Palomar, and Tinemaha), 22h. (Mount Wilson, Pasadena, Palomar, Riverside, Tucson, and near La Paz).

May 11d. Readings at 0h. (Tucson, Mount Wilson, Palomar, and Riverside), 4h. (near Mizusawa), 5h. (Calcutta and Almeria (2)), 7h. (Istanbul and Riverview), 8h. (Tucson, Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, St. Louis, Huancayo, and La Paz), 12h. (Istanbul), 14h. (Tucson, Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, and near La Paz).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

May 12d. 7h. 2m. 2s. Epicentre 10°·5S. 161°·5E. (as on 1937 Sept. 15d.).

$A = -\cdot9327$, $B = +\cdot3121$, $C = -\cdot1811$; $\delta = +13$; $h = +6$;
$D = +\cdot317$, $E = +\cdot948$; $G = +\cdot172$, $H = -\cdot057$, $K = -\cdot984$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Brisbane		18·7	204	i 4 24	+ 2	i 8 2	+14	—	—	i 9·8
Riverview		25·1	199	i 5 31a	+ 3	i 9 59	+ 8	1 10 57	SS	e 12·4
Sydney		25·1	199	e 7 46	?	—	—	—	—	—
Auckland		28·9	159	—	—	12 58?	Q	—	—	16·5
Wellington		32·8	161	6 35k	− 2	12 3	+ 9	7 28	sP	16·0
Christchurch		34·3	165	—	—	12 8	− 9	14 32	Q	17·4
Pasadena	z.	87·9	55	e 12 59	+ 6	—	—	—	—	e 39·0
Mount Wilson	z.	88·1	55	e 12 51	− 3	—	—	—	—	—
Riverside	z.	88·6	55	e 12 54	− 2	—	—	—	—	—
Tinemaha	z.	88·7	52	e 12 59	+ 2	—	—	—	—	—
Palomar	z.	88·8	56	i 12 58	+ 1	—	—	—	—	—

Additional readings :—
Riverview iN = 10m.41s.
Wellington iZ = 8m.38s., P_cP?Z = 9m.33s., sSZ = 12m.53s., Q = 15·0m.
Mount Wilson iZ = 12m.58s.
Palomar eZ = 13m.2s.
Long waves were also recorded at Arapuni, Tucson, and St. Louis.

May 12d. Readings also at 7h. (near Fort de France), 11h. (near Balboa Heights), 14h. (Tucson, Mount Wilson, and Tinemaha), 15h. (Istanbul), 20h. (Fresno, near Branner, Lick, and near Malaga), 21h. (De Bilt, Strasbourg, and Stuttgart).

May 13d. Readings at 2h. (La Paz, St. Louis, Tucson, Mount Wilson, and Palomar), 10h. (Bogota and near Balboa Heights), 14h. (Stuttgart, Helwan, and near Ksara), 15h. (Kew), 16h. (near Branner), 20h. (Mizusawa), 22h. (Florissant, St. Louis, Tucson, Palomar, Riverside, Tinemaha, Saskatoon, and Sitka), 23h. (La Paz, Rapid City, and near Malaga).

May 14d. 8h. 51m. 36s. Epicentre 22°·7S. 179°·4E. Depth of focus 0·080.

$A = -\cdot9234$, $B = +\cdot0097$, $C = -\cdot3837$; $\delta = -1$; $h = +4$;
$D = +\cdot010$, $E = +1\cdot000$; $G = +\cdot384$, $H = -\cdot004$, $K = -\cdot923$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.	
		°	°	m. s.	s.	m. s.	s.	m. s.	
Apia		12·2	45	i 2 38	− 3	—	—	—	—
Auckland		14·6	195	3 0?	− 5	5 40	+ 5	—	—
Arapuni		15·7	191	e 2 24?	?	—	—	—	—
New Plymouth		16·9	194	3 33	+ 5	6 24	+ 8	i 3 45	PP
Wellington		18·9	192	3 47k	0	6 44	− 6	14 4?	S_cS
Brisbane	N.	24·3	254	i 4 36	0	i 8 15	− 3	—	—
Riverview		27·1	239	i 5 1a	0	i 9 2	0	i 7 42	P_cP
Berkeley		81·4	44	i 11 22k	+ 1	e 20 36	−12	i 13 26	pP
La Jolla	z.	81·9	51	e 11 23	− 1	—	—	—	—
Pasadena		81·9	49	e 11 23k	− 1	i 20 55	+ 2	i 13 29	pP
Mount Wilson	z.	82·1	49	i 11 25k	0	—	—	i 13 30	pP
Palomar		82·4	50	i 11 27k	+ 1	—	—	i 13 31	pP
Riverside	z.	82·4	49	i 11 26	0	—	—	i 13 32	pP
Haiwee		83·2	47	i 11 29	− 1	—	—	e 13 35	pP
Tinemaha	z.	83·5	47	i 11 32k	0	—	—	i 13 37	pP
Tucson		86·2	53	i 11 46	+ 1	e 21 43	+ 9	e 13 52	pP
Copenhagen		145·7	347	i 18 37	[0]	—	—	—	—
Stuttgart	z.	152·9	346	e 18 46	[− 2]	—	—	e 21 7	pPKP

Additional readings :—
New Plymouth i = 7m.56s.
Wellington iZ = 6m.17s., 7m.22s., and 7m.32s.
Riverview isSEN = 12m.2s., iS_cSE = 14m.43s.
Berkeley eSE = 20m.48s., iZ = 21m.50s., iEN = 25m.24s.?.
Stuttgart eZ = 18m.54s.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

May 14d. 10h. 54m. 26s. Epicentre 14°·6S. 175°·1W. Depth of focus 0·010.

$A = -·9646$, $B = -·0827$, $C = -·2505$; $\delta = +4$; $h = +6$;
$D = -·085$, $E = +·996$; $G = +·250$, $H = +·021$, $K = -·968$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Apia		3·3	76	i 0 52a	+ 1	i 1 28	− 1	—	—	—
Auckland		23·9	200	5 11	+ 5	9 16	+ 4	—	—	—
Wellington		28·0	197	5 39	− 5	12 22?	SSS	—	—	—
Brisbane	N.	32·3	241	i 7 47	PPP	e 14 4	SSS	—	—	—
Riverview		36·0	231	i 6 54a	+ 1	e 12 31	+ 7	i 8 30	PP	e 15·7
Santa Barbara		71·7	46	i 11 14	+ 1	—	—	—	—	—
Berkeley		72·0	42	i 11 17k	+ 2	e 20 26	− 1	e 12 2	pP	e 30·2
Lick		72·1	42	e 10 15	−61	—	—	—	—	—
La Jolla		72·6	48	i 11 20	+ 1	—	—	—	—	—
Pasadena		72·6	46	i 11 18k	− 1	i 13 58	PP	e 11 57	pP	e 30·1
Mount Wilson	Z.	72·8	46	i 11 20k	0	—	—	i 13 58	PP	—
Fresno	N.	72·9	43	e 11 22	+ 2	—	—	—	—	—
Riverside		73·1	46	i 11 22	0	—	—	e 14 6	PP	—
Palomar		73·2	48	i 11 21k	− 1	—	—	i 14 4	PP	—
Haiwee		73·8	45	i 11 27	+ 1	—	—	—	—	—
Tinemaha		74·2	44	i 11 28k	0	—	—	—	—	—
Tucson		77·1	51	i 11 44	0	—	—	—	—	e 35·9
Victoria		77·8	32	e 13 13	?	e 22 58	PPS	—	—	—
Florissant		95·0	51	e 13 12	− 1	e 23 33	[− 5]	e 17 1	PP	—
St. Louis		95·0	51	i 13 12	− 1	e 23 33	[− 5]	e 17 0	PP	—
Strasbourg		145·0	356	e 19 28	[+ 2]	—	—	—	—	—
Stuttgart	Z.	145·7	354	i 19 32	[+ 5]	—	—	e 20 19	pPKP	—
Clermont-Ferrand		148·9	2	i 19 43	[+10]	—	—	—	—	—
Granada		156·3	17	i 20 20k	PKP_2	i 44 43	SS	20 43	pPKP	e 85·5
Malaga		156·4	18	i 20 3a	[+20]	e 26 50	[+12]	21 30	pPKP	—

Additional readings :—
Riverview iS_cSE = 17m.1s.
Tucson i = 11m.54s., e = 12m.46s.
Granada iPP = 23m.58s., pPP = 24m.19s.
Malaga PP = 23m.56s., i = 35m.20s., PPS = 37m.1s.

May 14d. Readings also at 4h. (Istanbul), 6h. (Haiwee, La Jolla, Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, Tucson, and Stuttgart), 8h. (Palomar, Pasadena, Riverside, Tinemaha, Tucson, Mount Wilson, and La Paz), 14h. (Rapid City), 17h. (Bogota, Huancayo, St. Louis, Tucson, Mount Wilson, Pasadena, Palomar, Riverside, and Tinemaha), 19h. (near Ksara).

May 15d. 19h. 18m. 36s. Epicentre 5°·1S. 153°·1E. (as on 1941 Jan. 24d.).

$A = -·8883$, $B = +·4507$, $C = -·0883$; $\delta = 0$; $h = +7$;
$D = +·452$, $E = +·892$; $G = +·079$, $H = -·040$, $K = -·996$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Brisbane		22·3	182	i 4 54a	− 7	i 9 3	+ 1	i 9 31	SS	i 11·1
Riverview		28·6	184	e 6 4	+ 4	e 11 4	+16	—	—	e 13·5
Sydney		28·6	184	—	—	e 10 0	−48	—	—	—
Auckland		37·3	152	7 9	− 7	12 59	− 5	15 54?	Q	—
Wellington		40·9	155	7 59	+13	13 54	− 4	9 39	PP	18·4
Christchurch		42·0	159	7 25	−29	14 0	−14	16 42	SS	20·6
Mizusawa	E.	45·4	348	(e 8 24)	+ 2	e 8 24	P	—	—	—
Honolulu		54·8	60	—	—	e 16 54	−20	e 23 29	SS	e 26·8
New Delhi	N.	80·1	299	—	—	e 22 11	− 7	—	—	—
Bombay		82·5	290	e 12 26	0	i 22 37	− 5	—	—	—
Sitka		84·4	32	—	—	e 23 2	+ 1	—	—	e 35·8
Berkeley		88·9	53	i 13 0a	+ 2	i 23 51	+ 7	i 29 52	SS	e 40·5
Victoria		89·5	42	—	—	e 23 33	[+ 3]	—	—	43·4
Pasadena		91·8	57	i 13 11	0	—	—	—	—	e 37·5
Mount Wilson	Z.	91·9	57	i 13 13	+ 2	—	—	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
La Jolla		92·4	58	e 13 17	+ 3	—	—	—	—	—
Riverside	Z.	92·4	57	e 13 14	0	—	—	—	—	—
Palomar		92·8	58	e 13 6	−10	—	—	e 16 55	PP	—
Tucson		97·8	58	e 14 7	+29	e 37 37	SSS	e 17 44	PP	e 45·3
Florissant	E.	113·8	50	—	—	e 26 43	{+11}	e 29 19	PS	e 52·4
Ottawa		121·6	38	e 18 55	[− 1]	—	—	—	—	61·4
Weston		125·9	40	19 5	[+ 1]	—	—	—	—	e 52·7
Stuttgart		126·8	331	e 19 4	[− 2]	e 27 54	{− 5}	e 21 5	PP	e 61·4
Kew		128·8	338	—	—	e 22 30	PKS	e 31 9?	PS	e 62·4
La Paz	Z.	133·9	120	i 22 53	PKS	—	—	—	—	68·4
San Juan		139·5	67	e 22 52	PKS	—	—	e 39 2	SS	e 67·2
Malaga		142·4	330	e 19 33	[− 2]	e 26 12	[−31]	—	—	e 78·4
Granada		142·5	330	19 35a	[0]	27 3	[+20]	23 24	PKS	74·5

Additional readings :—
Brisbane iPN =4m.57s., ePE =5m.0s., eSSN =9m.38s.
Riverview iE =10m.45s., 11m.58s., and 12m.33s.
Wellington Q =17m.6s.
Christchurch QEN =17m.32s.
Bombay eSN =22m.40s., iEN =22m.55s.
Berkeley iE =23m.3s.
Pasadena eZ =13m.37s.
Palomar i =13m.48s.
Stuttgart eSP? =30m.54s., eSP?Z =31m.2s., eSS =38m.18s., eSSS =43m.24s.
La Paz iZ =23m.7s.
Granada SKKS =29m.32s., SKSP =33m.20s.
Long waves were also recorded at Huancayo and other American and European stations.

May 15d. Readings also at 0h. (near Lick), 5h. (near Bogota), 21h. (Bucharest, Ksara, near Istanbul, and near Mizusawa), 23h. (near Mizusawa).

May 16d. Readings at 0h. (near Berkeley, Branner (2), Lick, and San Francisco), 1h. and 5h. (near Mizusawa), 7h. (Stuttgart and near Belgrade), 11h. (Istanbul), 12h. (Mizusawa), 19h. (near Apia), 22h. (Alicante (5) and near Tananarive).

May 17d. Readings at 0h. and 6h. (near Mizusawa), 5h. (Alicante (2)), 7h. (Tinemaha, Mount Wilson, Pasadena, Haiwee, Tucson, St. Louis, and Kew), 8h. (Harvard, San Juan and Fort de France), 16h. (near Mizusawa), 20h. (Tucson, Tinemaha, Mount Wilson, Pasadena, Haiwee, Riverside, Palomar, and near Malaga).

May 18d. 4h. 43m. 17s. Epicentre 2°·0S. 152°·3E.

A = −·8849, B = +·4646, C = −·0347 ; δ = +11 ; h = +7 ;
D = +·465, E = +·885 ; G = +·031, H = −·016, K = −·999.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Brisbane		25·3	179	e 5 25	− 5	i 10 2	+ 8	e 9 28	PcP	—
Riverview		31·7	182	i 6 27k	0	i 11 35	− 2	i 7 34	PP	i 15·2
Auckland		40·4	151	7 18	−23	i 13 38	−12	17 5	SSS	21·0
Arapuni		41·8	152	7 43?	−10	—	—	—	—	19·7
Wellington		44·0	156	8 8	− 3	17 18	SS	10 21	PPP	27·7
Christchurch		45·1	159	—	—	14 54	− 5	18 18	SS	23·5
Perth		45·4	225	—	—	—	—	i 19 31	SSS	—
Honolulu		54·0	62	e 10 1	+33	e 17 3	0	e 11 59	PP	e 24·4
Colombo	E.	72·8	278	11 43?	+11	—	—	—	—	—
Hyderabad		75·2	289	e 11 46	0	21 26	+ 1	21 58	PS	34·4
Kodaikanal	E.	75·4	282	i 11 59	+12	—	—	—	—	—
New Delhi	N.	77·9	299	e 12 1	0	i 21 54	0	22 21	PS	—
College		79·5	22	e 12 3	− 7	e 22 6	− 5	—	—	e 38·1
Bombay		80·7	289	i 12 17	+ 1	i 22 25	+ 1	e 23 22	PPS	—
Sitka		82·3	32	e 12 24	− 1	e 22 35	− 5	e 27 43	SS	e 34·2

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Ukiah		87·0	51	—	—	e 23 30	− 7	e 28 2	?	e 38·8
Berkeley		87·6	53	e 12 52a	+ 1	i 23 19	[+ 1]	i 16 13	PP	e 39·9
Victoria		87·7	42	—	—	e 23 19	[+ 1]	—	—	36·7
Santa Clara		87·8	53	e 12 52	0	e 23 19	[0]	—	—	e 41·3
Pasadena		90·7	56	e 13 0	− 6	i 23 38	[+ 1]	e 16 37	PP	e 40·7
Tinemaha	z.	90·7	54	e 13 9	+ 3	—	—	—	—	—
Mount Wilson	z.	90·8	56	i 13 8	+ 2	—	—	—	—	—
Riverside	z.	91·4	56	e 13 10	+ 1	—	—	—	—	—
Palomar	z.	91·8	57	i 13 13	+ 2	—	—	—	—	—
Butte		95·0	44	e 22 33	?	—	—	—	—	e 42·0
Logan		95·7	48	—	—	e 24 6	[+ 1]	e 24 34	SKKS	e 42·2
Salt Lake City		95·7	49	—	—	e 24 10	[+ 5]	—	—	e 43·8
Bozeman		96·1	44	e 17 13	PP	e 24 9	[+ 2]	e 26 2	PS	e 44·3
Tucson		96·9	58	e 13 30	− 4	e 26 16	PS	e 17 26	PP	e 38·5
Saskatoon		98·4	38	—	—	e 24 18	[− 1]	—	—	42·7
Rapid City		101·8	45	—	—	e 24 35	[− 1]	e 27 9	PS	e 52·0
Scoresby Sund		111·5	358	19 25	PP	—	—	28 50	PS	54·7
Florissant		112·3	49	e 19 21	PP	e 25 22	[0]	e 28 54	PS	—
St. Louis		112·5	49	e 19 22	PP	e 25 20	[− 2]	i 28 54	PS	e 51·7
Chicago		113·4	45	—	—	e 25 24	[− 2]	e 29 2	PS	e 52·2
Copenhagen		117·5	336	e 20 5	PP	—	—	36 18	SS	—
Ottawa		119·7	37	20 13	PP	25 49	[0]	29 51	PS	55·7
Seven Falls		121·6	33	—	—	e 25 37	[−18]	—	—	58·7
De Bilt		123·0	337	e 20 43	PP	—	—	—	—	e 56·7
Fordham		123·2	40	e 20 40	PP	e 25 50	[−10]	—	—	e 57·7
Stuttgart		123·7	331	e 19 0	[0]	e 27 49	{+10}	e 20 45	PP	e 63·7
Weston		124·0	37	e 19 6	[+ 5]	e 30 31	PS	e 20 40	PP	—
Uccle		124·4	337	e 20 43?	PP	e 30 43?	PS	e 37 43?	SS	e 56·7
Kew		125·6	339	e 19 5	[+ 1]	e 32 8?	PPS	e 21 19	PP	e 46·7
Clermont-Ferrand		128·7	332	e 21 12	PP	—	—	38 41	SS	—
Huancayo		130·7	107	—	—	e 22 45	SKP	e 39 10	SS	e 63·4
Bogota		133·6	85	e 19 22	[+ 3]	e 22 52	SKP	—	—	—
Tortosa		133·7	329	—	—	i 22 54	SKP	24 10	?	—
Bermuda		133·9	45	e 21 56	PP	e 28 34	{−10}	e 22 57	SKP	e 65·5
La Paz		136·1	116	i 19 25	[+ 2]	26 25	[− 8]	23 1	SKP	68·8
Granada		138·5	331	19 31a	[+ 3]	23 0	SKP	22 19	PP	68·2
San Juan		139·0	63	e 19 29	[0]	e 29 11	{− 4}	e 23 0	SKP	e 65·8
Malaga		139·3	331	e 19 13	[−16]	e 26 17	[−21]	19 28	pPKP	65·7
San Fernando		140·4	332	—	—	e 23 29	SKP	e 41 53	SSP	74·7
Fort de France		144·6	67	e 19 29	[−10]	—	—	—	—	—

Additional readings :—
Brisbane iPN =5m.28s.
Riverview iN =11m.28s., iE =13m.46s.
Auckland i =17m.48s.
Wellington P_gPZ =8m.31s., iZ =9m.5s., i =20m.18s., SS? =21m.18s., e =21m.43s.?, SSS? =23m.13s., Q =24·6m.
Christchurch QN =19m.58s.
New Delhi iN =12m.54s. and 23m.2s., SSN =27m.0s.
Bombay eN =26m.7s.
Sitka iS =22m.49s.
Berkeley iZ =16m.37s., iPPN =17m.11s., iZ =23m.23s., iE =35m.13s., iN =36m.27s., iE =38m.37s., iN =38m.49s., eZ =39m.39s.
Pasadena iZ =13m.7s., iPPPZ =19m.5s., iEZ =25m.7s., iZ =26m.7s.
Logan e =27m.39s.
Bozeman e =30m.27s.
Rapid City eSS =32m.27s.
Florissant eZ =19m.54s., eSKKSE =26m.27s., eSSSE =39m.14s.
St. Louis eSKKSE =26m.28s., eSSSE =39m.27s.
Copenhagen 20m.31s. and 30m.19s.
Ottawa SKKS =27m.13s., SS =36m.43s.
Stuttgart ePPPZ =23m.17s., eSS =37m.25s.
Uccle e =26m.43s.?.
Kew eS?Z =30m.17s., eSS?Z =39m.43s.?.
Huancayo e =23m.25s., ePS =32m.26s.
Granada iSS =40m.37s.
San Juan e =33m.50s. and 34m.57s.
Malaga PP =22m.22s., P_gP,PKP =27m.35s., e =31m.38s., PPS =34m.44s., SKKKS = 37m.36s., SS =40m.30s., SKS,SKS =42m.34s.
Long waves were also recorded at Sydney.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

May 18d. 19h. 55m. 6s. Epicentre 45°·08. 110°·7W.

A = −·2508, B = −·6637, C = −·7047 ; δ = 0 ; h = −4 ;
D = −·935, E = +·353 ; G = +·249, H = +·659, K = −·710.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Huancayo		44·6	54	e 8 17	+ 1	e 14 48	− 4	e 18 17	SS	e 20·4
La Paz	z.	45·6	66	8 26	+ 2	i 15 14	+ 8	—	—	21·4
Christchurch		53·0	242	—	—	i 17 23	+33	—	—	24·7
Tucson		76·9	0	e 11 55	− 1	—	—	—	—	e 37·0
Riverside	z.	78·9	354	e 12 5	− 2	—	—	—	—	—
Mount Wilson	z.	79·1	354	e 12 7	− 1	—	—	—	—	—
Pasadena		79·1	354	i 12 9	+ 1	i 22 17	+10	—	—	e 37·4
Haiwee		81·0	354	e 12 20	+ 2	—	—	—	—	—
Tinemaha		82·0	354	i 12 23	0	—	—	—	—	—
St. Louis		85·3	16	e 12 41	+ 1	e 23 2	− 8	e 28 31	SS	—
Florissant		85·4	16	e 12 41	+ 1	e 23 5	− 6	e 27 54?	SS	—
Fordham		91·6	28	—	—	e 23 41	[− 1]	e 30 41	SS	e 44·2
Kew		134·8	56	i 19 24	[+ 3]	i 22 58	PKS	e 40 24?	SS	e 60·9
Stuttgart	z.	139·7	62	e 19 26	[− 4]	—	—	—	—	—
Helwan	z.	146·6	104	i 19 50k	[+ 8]	—	—	—	—	—

Additional readings :—
La Paz iSZ? = 14m.46s.
Christchurch iEN = 23m.18s.
Kew eZ? = 35m.29s.
Helwan eZ = 20m.59s.
Long waves were recorded at Wellington.

May 18d. Readings also at 0h. (Ferndale, Tucson, Tinemaha, and near Bogota), 8h. (near Bogota), 11h. (near Granada, Malaga, Almeria, and Toledo), 12h. (Tacubaya), 14h. (Alicante), 17h. (near Bogota and near Branner).

May 19d. 0h. 19m. 17s. Epicentre 2°·0S. 152°·3E. (as on 18d.).

A = −·8849, B = +·4646, C = −·0347 ; δ = +11 ; h = +7.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Brisbane	E.	25·3	179	e 5 31	+ 1	i 9 53	− 1	i 9 28	PcP	—
		25·3	179	i 5 25k	− 5	i 10 2	+ 8	i 9 23	PcP	—
Riverview		31·7	182	i 6 27k	0	i 11 36	− 1	i 11 53	sS	e 14·8
Sydney		31·7	182	e 5 43	−44	i 11 40	+ 3	e 13 10	SS	e 15·2
Shizuoka		39·0	343	e 8 14	+44	14 14	+45	—	—	—
Miyazaki		39·1	332	7 51	+20	13 36	+ 5	—	—	—
Koti		39·5	335	e 7 37	+ 3	13 37	0	—	—	—
Auckland		40·4	151	7 28	−13	13 43	− 7	i 9 31	PP	20·7
Hukuoka		41·0	332	7 56	+10	13 54	− 5	—	—	—
Sendai		41·4	348	e 7 51	+ 1	13 59	− 6	—	—	—
Arapuni		41·8	152	—	—	13 43?	−28	—	—	19·7
Mizusawa	N.	42·2	348	8 17	+21	17 44	SS	—	—	—
Akita		43·0	347	8 20	+17	15 2	+33	—	—	—
Wellington		44·0	156	8 7k	− 4	14 33	−10	8 36	pP	21·7
Christchurch		45·1	159	8 17	− 3	14 50	− 9	10 11	PP	21·2
Perth		45·4	225	8 35	+13	15 5	+ 1	18 43	SS	—
Honolulu		54·0	62	e 9 24	− 4	e 16 51	−12	e 11 59	PP	e 24·2
Calcutta	N.	66·9	296	e 12 23	?	—	—	i 21 1	ScS	—
Colombo	E.	72·8	278	11 31	− 1	—	—	—	—	—
Hyderabad		75·2	289	11 45	− 1	21 25	0	21 58	PS	36·6
Kodaikanal	E.	75·4	282	e 13 39	?	—	—	—	—	—
New Delhi	N.	77·9	299	e 12 6	+ 5	i 21 54	0	22 25	PS	—
College		79·5	22	e 12 11	+ 1	e 22 3	− 8	e 27 34	SS	e 34·1
Bombay	E.	80·7	289	i 12 21	+ 5	e 22 22	− 2	23 12	PS	—
	N.	80·7	289	e 12 19	+ 3	e 22 23	− 1	23 18	PS	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Sitka		82·3	32	e 12 23	− 2	e 22 39	− 1	i 23 28	PS	e 34·2
Ukiah		87·0	51	e 12 51	+ 3	e 23 21	{+ 1}	e 16 16	PP	e 33·1
Berkeley		87·6	53	i 12 53a	+ 2	i 23 21	[+ 3]	i 18 7	PPP	e 39·7
Victoria		87·7	42	12 50	− 2	23 26	{+ 1}	—	—	38·7
Santa Clara		87·8	53	e 12 59	+ 7	e 23 28	{+ 2}	—	—	e 39·8
Seattle		88·4	43	—	—	e 24 40	PS	—	—	e 41·4
Pasadena		90·7	56	e 13 0	− 6	i 23 35	[− 2]	i 16 55	PP	e 39·6
Tinemaha	z.	90·7	54	e 13 3	− 3	—	—	—	—	—
Mount Wilson	z.	90·8	56	e 13 7	+ 1	—	—	—	—	—
Haiwee	z.	91·0	54	e 13 3	− 4	—	—	—	—	—
Riverside	z.	91·4	56	e 13 6	− 3	—	—	—	—	—
Palomar		91·8	57	e 13 12	+ 1	i 23 49	[+ 6]	—	—	—
Butte		95·0	44	e 22 31?	?	—	—	e 30 6?	SS	e 39·8
Logan		95·7	48	e 13 41	+12	e 23 59	[− 6]	e 17 12	PP	e 42·2
Salt Lake City		95·7	49	e 17 22	PP	e 24 10	[+ 5]	e 26 9	PS	e 41·3
Bozeman		96·1	44	e 17 13	PP	e 24 8	[+ 1]	e 26 5	PS	e 40·9
Tucson		96·9	58	e 13 32	− 2	e 24 16	[+ 5]	e 26 8	PS	e 44·0
Saskatoon		98·4	38	—	—	e 24 22	[+ 3]	—	—	45·7
Rapid City		101·8	45	e 18 10	PP	e 24 31	[− 5]	e 27 10	PS	e 32·8
Tananarive		103·3	250	—	—	—	—	e 27 23	PS	49·7
Lincoln		107·2	48	e 17 25	[−62]	—	—	e 23 12	?	e 51·1
Scoresby Sund		111·5	358	19 24	PP	25 20	[+ 2]	28 50	PS	52·7
Florissant		112·3	49	e 19 22	PP	e 25 26	[+ 4]	e 28 52	PS	e 52·7
St. Louis		112·5	49	e 19 24	PP	e 25 20	[− 2]	i 28 57	PS	e 52·7
Upsala		112·6	337	e 13 23	?	e 26 43?	{+20}	e 19 43?	PP	e 47·7
Chicago		113·4	45	e 19 29	PP	e 25 28	[+ 2]	e 29 0	PS	e 51·2
Copenhagen		117·5	336	e 20 7	PP	29 55	PS	36 19	SS	—
Helwan	z.	117·6	302	e 18 52	[+ 4]	—	—	e 20 4	PP	—
Potsdam		119·4	333	—	—	e 36 43	SSP	—	—	e 57·7
Ottawa		119·7	37	20 9	PP	25 51	[+ 2]	29 55	PS	e 55·7
Prague		120·3	330	e 19 19	[+26]	e 30 19	PS	e 20 43	PP	e 56·7
Aberdeen		121·3	344	i 22 1	?	—	—	—	—	—
Seven Falls		121·6	33	20 37	PP	25 45	[−10]	27 25	SKKS	54·7
Vermont		121·7	37	e 20 30	PP	i 25 55	[− 1]	e 30 22	PS	e 51·0
Philadelphia		122·8	42	e 20 35	PP	e 26 2	[+ 3]	e 30 17	PS	54·3
De Bilt		123·0	337	e 19 13	[+14]	—	—	e 37 13	SS	e 55·7
Fordham		123·2	40	e 20 40	PP	e 25 50	[−10]	e 30 30	PS	e 58·2
Stuttgart		123·7	331	e 18 53	[− 7]	e 37 18	SS	e 20 52	PP	e 59·4
Weston		124·0	37	e 20 42	PP	e 26 3	[0]	e 30 26	PS	—
Stonyhurst		124·3	343	e 20 28	PP	—	—	—	—	e 58·3
Uccle		124·4	337	e 19 4	[+ 3]	—	—	e 20 55	PP	e 55·7
Strasbourg		124·5	332	e 21 45	?	—	—	e 28 22	?	—
Zürich		125·0	331	e 19 0	[− 2]	—	—	—	—	—
Basle		125·3	331	e 19 40	[+37]	—	—	—	—	—
Kew		125·6	339	e 19 8?	[+ 4]	e 26 28	[+20]	e 32 8	PPS	e 61·7
Paris		126·7	335	—	—	—	—	e 36 43?	?	e 57·7
Clermont-Ferrand		128·7	332	e 21 18	PP	—	—	e 42 14	?	—
Huancayo		130·7	107	e 19 53	[+40]	e 31 54	PS	e 21 47	PP	e 62·8
Bogota		133·6	85	e 19 22	[+ 3]	—	—	e 23 54	?	—
Tortosa	E.	133·7	329	—	—	i 22 45	SKP	25 17	PPP	—
Bermuda		133·9	45	e 21 43	PP	e 28 47	{+ 3}	i 22 56	SKP	e 63·5
La Paz		136·1	116	i 19 24	[+ 1]	28 40	{−18}	i 22 9	PP	64·1
Granada		138·5	331	e 19 1	[−27]	26 33	[− 4]	i 21 53	PP	63·1
San Juan		139·0	63	e 19 32	[+ 3]	e 29 15	{ 0}	e 22 18	PP	e 61·6
Malaga		139·3	331	e 19 32	[+ 3]	41 38	SSP.	22 52	PP	66·7
San Fernando		140·4	332	e 22 32	PP	i 23 20	SKP	e 41 5	SS	68·7
Fort de France		144·6	67	e 19 39	[0]	—	—	—	—	—
Rio de Janeiro	N.	151·0	149	e 20 5	[+16]	—	—	(e 43 3)	SS	e 43·1

Additional readings :—
Riverview iPPNZ =7m.31s., iP_cPN =9m.12s., iSN =11m.33s., iZ =12m.13s., iSSSE = 13m.44s.
Auckland i =11m.28s., 15m.13s., and 16m.43s., sSS? =17m.43s., Q =19m.18s.
Wellington sP_cPZ =10m.33s., SS =17m.59s., pSS? =18m.23s., i =19m.33s., Q =20·4m.
Christchurch iZ =8m.53s., P_cSE =13m.58s., iEN =15m.46s., SSEN =18m.3s., QEN = 18m.50s.

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

Perth SSS =20m.8s.
Hyderabad SSN =25m.37s.
New Delhi iN =23m.3s., SSN =26m.55s.
College e =12m.37s., 16m.0s., and 26m.29s.
Bombay iSE =22m.27s., SSN =27m.42s., SSE =27m.47s.
Sitka e =12m.50s., iS =22m.43s., eSS =28m.5s.
Ukiah eSS =29m.8s.
Berkeley iE =13m.47s., iSZ =23m.6s.
Pasadena ePPZ =16m.21s., iZ =25m.5s., 29m.55s., and 33m.23s.
Logan e =24m.21s., ePS =25m.58s., eSS =31m.2s.
Salt Lake City e =27m.1s.
Bozeman ePP =17m.29s., eSSS =35m.27s.
Tucson e =13m.48s., ePP =17m.38s., eSS =31m.33s., eSSS =34m.43s.
Scoresby Sund SS =35m.11s.
Florissant eE =22m.36s., eSKKSE =26m.28s., eSSE =34m.51s., eSSSE =39m.30s.
St. Louis eSKKSE =26m.30s., eE =38m.46s., eSSSE =39m.31s.
Upsala e =34m.43s.?.
Chicago e =33m.58s., eSSS =38m.45s.
Copenhagen 20m.31s. and 27m.46s.
Helwan iN =27m.55s.
Ottawa SKKS =27m.15s., SS =36m.43s.
Prague ePPP? =23m.31s., e =32m.43s., eSS? =37m.1s., eSSS? =41m.19s.
Seven Falls SS =37m.37s.
Vermont e =27m.26s., eSS =36m.47s.
Philadelphia e =21m.17s., 27m.38s., and 35m.33s., eSS =36m.55s.
Fordham ePP =23m.45s., eSS =37m.40s.
Stuttgart ePPPZ =23m.53s., eSS =37m.23s.
Stonyhurst e =22m.3s., i =28m.49s.
Uccle eEN =19m.32s.
Kew ePPZ =21m.21s., ePPPZ =24m.53s., eSKKSZ =27m.46s., eSSZ =39m.28s.
Huancayo e =22m.28s., 23m.45s., 30m.6s., and 39m.8s.
Bermuda ePP =22m.3s., e =32m.6s., eSS =40m.9s.
La Paz iPKPZ =19m.30s., SKP =23m.2s., PPP =24m.33s., SSZ =33m.33s.
Granada S =30m.7s., PPS =34m.3s., iSS =40m.39s.
San Juan ePS =33m.1s., e =37m.1s.
Malaga PPP =26m.2s., PPP($\Delta > 180°$) =34m.22s., SKS,SKS =42m.37s.
San Fernando iE =23m.35s.
Long waves were also recorded at Lisbon and Bergen.

May 19d. Readings also at 0h. (near Mizusawa), 3h. (Bucharest), 9h. (near Bogota), 14h. (Harvard), 15h. (near Fort de France), 16h. (Tucson, Palomar, Haiwee, Tinemaha, Riverside, Mount Wilson, Pasadena, Riverview, Wellington, and Auckland), 18h. (Pasadena, Mount Wilson, Riverside, Tinemaha, Haiwee, Palomar and Tucson), 19h. (Tucson, Pasadena, Mount Wilson, Riverside, Tinemaha, Haiwee, and Palomar).

May 20d. 22h. 35m. 31s. Epicentre 50°·0N. 29°·0W. (small foreshock of 20d. 23h.).

$A = +·5644$, $B = -·3128$, $C = +·7639$; $\delta = -7$; $h = -5$;
$D = -·485$, $E = -·875$; $G = +·668$, $H = -·370$, $K = -·645$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.
		°	°	m. s.	s.	m. s.	s.	m.
Clermont-Ferrand		21·8	90	4 59	+ 3	—	—	—
Malaga		22·1	118	e 5 2	+ 3	—	—	10·5
Stuttgart		24·7	78	e 5 23	− 1	e 9 49	+ 5	—
Copenhagen		25·4	61	5 36	+ 5	—	—	13·5
St. Louis	z.	44·1	280	e 8 10	− 2	—	—	—
Tucson		61·1	287	i 10 16	− 2	—	—	—
Tinehama	z.	62·3	295	e 10 23	− 3	—	—	—
Palomar	z.	64·0	292	e 10 36	− 2	—	—	—

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

May 20d. 23h. 30m. 22s. Epicentre 50°·0N. 29°·0W. (as at 22h.).

$A = +\cdot5644$, $B = -\cdot3128$, $C = +\cdot7639$; $\delta = -7$; $h = -5$;
$D = -\cdot485$, $E = -\cdot875$; $G = +\cdot668$, $H = -\cdot370$, $K = -\cdot645$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Stonyhurst		16·8	67	i 4 1	+ 3	i 7 18	+13	i 4 11	PP	e 7·6
Aberdeen		17·4	56	i 4 5	− 1	—	—	—	—	e 8·7
Kew		18·2	75	i 4 16	0	—	—	—	—	e 9·3
Paris		20·5	83	e 4 38?	− 4	—	—	—	—	e 11·6
Scoresby Sund		20·8	7	4 48	+ 3	—	—	—	—	9·6
Uccle		21·2	76	e 4 48a	− 1	e 8 48	+ 7	—	—	e 10·6
San Fernando		21·3	123	4 59	+ 9	(9 1)	+18	—	—	e 11·4
De Bilt		21·5	71	i 4 52	0	e 9 3	+16	—	—	e 10·6
Clermont-Ferrand		21·8	90	e 4 57	+ 1	—	—	—	—	—
Malaga		22·1	118	i 4 59	0	e 8 36	−22	—	—	10·6
Granada		22·3	116	i 5 1k	0	i 9 13	+11	—	—	10·1
Strasbourg		23·9	79	e 5 15	− 1	—	—	—	—	—
Basle		24·1	83	e 5 19	+ 1	—	—	—	—	—
Stuttgart		24·7	78	e 5 24k	0	e 9 58	+14	—	—	e 12·5
Zürich		24·8	83	e 5 25	0	—	—	—	—	—
Copenhagen		25·4	61	e 5 32	+ 1	—	—	—	—	13·6
Prague		27·6	73	e 3 38	?	e 10 50	+18	—	—	e 13·6
Florissant		44·1	280	e 8 13	+ 1	—	—	—	—	e 24·1
St. Louis		44·1	280	e 8 11	− 1	e 14 56	+11	—	—	e 22·6
Helwan		49·0	91	i 8 51k	+ 1	e 16 8	PS	e 18 48	SS	—
Tucson		61·1	287	i 10 18	0	—	—	—	—	e 30·4
Tinemaha	z.	62·3	295	e 10 25	− 1	—	—	—	—	—
Palomar	z.	64·0	292	e 10 36	− 2	—	—	—	—	—
Mount Wilson	z.	64·1	294	e 10 38	0	—	—	—	—	—

San Fernando gives S as PPE.
Long waves were also recorded at Upsala and Pasadena.

May 20d. Readings also at 0h. (Tucson, Palomar, Pasadena, and Tinemaha), 1h. (Kew, Stuttgart, Florissant, St. Louis, Chicago, Philadelphia, Salt Lake City, Bozeman, and Tucson), 2h. (Hyderabad), 4h. (Bermuda), 5h. (Pasadena), 7h. (near Mizusawa), 12h. (Palomar, Tucson, Pasadena, Mount Wilson, Riverside, and Tinemaha), 13h. (Helwan), 16h. (Malaga and near Branner), 17h. (Riverview and Tortosa), 21h. (Ferndale, Tucson, Palomar, and Tinemaha), 22h. (De Bilt, Kew, Malaga, and Stuttgart), 23h. (Stuttgart).

May 21d. 0h. 15m. 20s. Epicentre 73°·5N. 9°·5W.

$A = +\cdot2819$, $B = -\cdot0472$, $C = +\cdot9583$; $\delta = +3$; $h = -13$;
$D = -\cdot165$, $E = -\cdot986$; $G = +\cdot945$, $H = -\cdot158$, $K = -\cdot286$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Scoresby Sund		4·9	238	1 17	0	—	—	—	—	2·7
Aberdeen		16·7	165	—	—	i 6 42	−21	—	—	—
Upsala		17·1	129	e 4 4	+ 2	i 7 13	+ 1	i 7 0	?	—
Copenhagen		20·0	142	i 4 33	− 4	8 5	−12	—	—	9·7
Stonyhurst		20·0	168	e 7 48	?	e 8 5	−12	—	—	e 9·2
De Bilt		22·4	155	i 4 58	− 4	e 8 45	−19	—	—	e 10·7
Potsdam		23·2	144	e 5 10	+ 1	e 9 20	+ 2	e 5 22?	PP	e 13·7
Uccle		23·6	159	e 5 18a	+ 5	e 9 12	−13	—	—	e 10·7
Jena	N.	24·4	146	e 5 19	− 2	—	—	—	—	—
Paris		25·3	162	e 5 16	−14	—	—	—	—	14·7
Prague		25·7	143	e 5 35	+ 2	e 10 1	0	—	—	e 13·7
Strasbourg		26·1	153	e 5 37	0	e 10 11	+ 4	—	—	—
Stuttgart		26·1	151	i 5 36a	− 1	e 10 8	+ 1	—	—	e 13·9
Basle		27·1	154	e 5 45	− 1	—	—	—	—	—
Zürich		27·4	153	e 5 50	+ 1	—	—	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Clermont-Ferrand		28·4	161	e 5 56	− 2	—	—	—	—	—
Philadelphia		45·3	260	—	—	e 15 12	+10	—	—	e 18·7
St. Louis		50·8	275	e 9 20	+16	—	—	e 21 27	SS	e 24·7
Tinemaha	z.	59·9	299	e 10 31	+21	—	—	—	—	—
Mount Wilson	z.	62·5	298	e 10 48	+20	—	—	—	—	—
Tucson		62·5	290	i 10 46	+18	—	—	—	—	—

Long waves were also recorded at other European and American stations.

May 21d. 4h. 42m. 0s. Epicentre 10°·9N. 43°·6W.

A = +·7114, B = −·6774, C. +·1874 ; δ = +8 ; h = +6 ;
D = −·690, E = −·724 ; G = +·136, H = −·129, K = −·982.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
San Juan		23·0	292	e 5 8	+ 1	e 9 16	+ 2	—	—	e 10·3
La Paz		36·4	222	i 7 10k	+ 2	i 12 58	+ 8	8 38	PP	20·0
Huancayo		38·9	235	e 7 16	−13	e 13 28	0	e 8 3	PP	e 19·1
Weston		39·6	328	—	—	e 13 43	+ 5	—	—	e 16·8
Fordham		40·0	324	i 7 41	+ 3	e 13 54	+10	—	—	—
Philadelphia		40·3	322	e 7 43	+ 3	e 13 56	+ 7	—	—	e 16·8
Columbia		41·2	311	—	—	e 14 5	+ 3	—	—	—
St. Louis		49·9	312	e 8 56	− 1	e 16 14	+ 7	e 19 34	SS	e 23·7
Florissant		50·0	312	e 8 59	+ 1	e 16 17	+ 8	—	—	e 24·0
De Bilt	z.	56·9	34	—	—	e 17 50	+ 8	—	—	—
Stuttgart		57·8	38	e 9 55	0	—	—	e 26 0	Q	—
Copenhagen		62·3	32	e 10 27	+ 1	—	—	—	—	28·0
Tucson		65·1	301	i 10 43	− 2	—	—	e 13 2	PP	e 38·6
Palomar		70·2	303	i 11 17	0	—	—	—	—	—
Mount Wilson	z.	71·2	303	e 11 22	− 1	—	—	—	—	—
Pasadena	z.	71·3	303	e 11 23	0	—	—	—	—	e 40·6
Tinemaha	z.	71·3	306	e 11 22	− 1	—	—	—	—	—
Helwan	z.	71·7	62	i 11 27	+ 1	—	—	e 14 6	PP	—

Additional readings :—
Huancayo e = 7m.42s.
St. Louis iPZ = 8m.59s.
Tucson i = 10m.50s.
Long waves were also recorded at Kew and Malaga.

May 21d. Readings also at 0h. (Stuttgart, Copenhagen, Tucson, Mount Wilson, Tinemaha, and St. Louis), 1h. (Tucson, Mount Wilson, Tinemaha, Palomar, Riverside, Pasadena, and Haiwee), 2h. (Bogota, New Delhi, Copenhagen, Potsdam, Stuttgart, Prague, Kew, Bergen, and Upsala), 3h. (Uccle and De Bilt), 5h. (Almeria (2)), 8h. (Scoresby Sund), 11h. (Stuttgart and Malaga), 14h. (La Paz), 16h. (near Balboa Heights), 17h. (Bogota, San Juan, Harvard, Florissant, Riverside, Palomar, Tinemaha, Mount Wilson, Tucson, and near Port au Prince), 19h. (Tucson, Tinemaha, Pasadena, Palomar, Riverside, Mount Wilson, La Plata, La Paz, and Huancayo), 21h. (near Zürich, Chur, and Basle), 22h. (near Stuttgart), 23h. (near Lick, Branner, and Berkeley).

May 22d. Readings at 2h. (Almeria), 3h. (Mizusawa), 9h. (Brisbane and Bucharest), 12h. (Riverview), 18h. (near Branner), 21h. (Mount Wilson, Pasadena, and Riverside).

May 23d. 10h. 38m. 26s. Epicentre 52°·1N. 171°·2W.

A = −·6096, B = −·0944, C = +·7871 ; δ = +5 ; h = −6 ;
D = −·153, E = +·988 ; G = −·778, H = −·120, K = −·617.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
College		17·5	34	e 4 6	− 1	e 7 35	+14	—	—	e 9·4
Sitka		21·2	93	e 4 51	+ 2	e 8 48	+ 7	—	—	e 11·8
Saskatoon		38·5	64	—	—	e 13 25	+ 3	—	—	19·6
Tinemaha	N.	39·7	91	e 7 36	0	—	—	—	—	—
Haiwee		40·4	91	i 7 40	− 1	—	—	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.	L.
		°	°	m. s.	s.	m. s.	s.	m. s.	m.
Santa Barbara	Z.	40·5	95	e 7 42	0	—	—	— —	—
Mount Wilson	Z.	41·6	93	i 7 51	0	—	—	— —	—
Pasadena		41·6	93	i 7 50	− 1	—	—	— —	e 17·6
Riverside	Z.	42·2	93	i 7 55	− 1	—	—	— —	—
Palomar		43·0	93	i 8 2k	− 1	—	—	— —	—
La Jolla	Z.	43·1	95	e 8 4	0	—	—	— —	—
Tucson		47·4	90	i 8 37	− 1	i 15 39	+ 7	— —	e 26·0
Florissant	N.	55·6	69	—	—	e 17 18	− 7	— —	—
St. Louis		55·6	69	i 9 39	− 1	e 17 21	− 4	— —	e 26·1
Ottawa		58·9	55	10 4	+ 1	18 6	− 2	— —	e 31·6
Seven Falls		60·1	50	—	—	e 18 28	+ 4	— —	31·6
Philadelphia		63·0	58	—	—	e 18 54	− 7	— —	e 29·7
Tacubaya	E.	63·9	92	20 37	S	(20 37)	+85	— —	—
Stuttgart		79·5	0	e 12 9	− 1	e 22 4	− 7	— —	—
Fort de France		90·3	65	—	—	e 24 5	+ 8	— —	—
Malaga		90·8	11	e 13 6	0	e 24 0	− 2	— —	48·6

Additional readings :—
College e = 4m.40s.
Tinemaha eN = 7m.41s.
Pasadena iZ = 7m.56s.
Tucson i = 8m.42s.
Philadelphia e = 20m.20s.
Long waves were also recorded at Berkeley, Chicago, De Bilt, Kew, and Uccle.

May 23d. Readings also at 2h. (near Fort de France), 3h. (Honolulu and near Mizusawa), 5h. (near La Paz), 6h. (near Lick), 7h. (near Malaga (5)), 8h. (Tucson, Mount Wilson, Pasadena, Palomar, and Riverside), 11h. (Auckland and Wellington), 14h. (Tucson and Palomar), 15h. (near Branner), 20h. (Istanbul), 22h. (Brisbane).

May 24d. 1h. 30m. 16s. Epicentre 19°·0N. 70°·0W. (as on 1942, July 5d.).

$A = +\cdot3236$, $B = -\cdot8891$, $C = +\cdot3236$; $\delta = -7$; $h = +5$;
$D = -\cdot940$, $E = -\cdot342$; $G = +\cdot111$, $H = -\cdot304$, $K = -\cdot946$.

		△	Az.	P.	O−C.	S.	O−C.	L.
		°	°	m. s.	s.	m. s.	s.	m.
Port au Prince		2·3	258	(i 0 50)	+10	(i 1 15)	+ 6	(i 1·8)
San Juan		3·7	92	e 1 22	P_g	i 1 55	S*	i 2·2
Bogota		14·8	196	i 3 54	+22	—	—	—
Philadelphia		21·3	352	i 4 52	+ 2	i 8 35	− 8	e 15·4
Harvard		23·5	359	i 4 12	−60	—	—	—
St. Louis		26·3	325	e 5 34	− 5	e 9 58	−13	e 12·0
Florissant		26·5	325	e 5 40	− 1	e 10 14	0	—
Ottawa		26·8	352	5 44	0	10 20	+ 1	13·7
Chicago		27·2	331	—	—	e 10 25	0	e 15·5
Seven Falls		28·1	0	6 29	+34	11 14	+34	13·7
Tucson		38·9	300	e 7 27	− 2	—	—	e 18·2
Palomar	Z.	44·1	300	e 8 11	− 1	—	—	—
Riverside	Z.	44·6	301	i 8 14	− 2	—	—	—
Pasadena		45·2	301	e 8 18	− 2	—	—	e 27·1
Tinemaha	Z.	45·7	304	i 8 24	0	—	—	—

Additional readings and notes :—
Port au Prince readings have been *increased* by 4m.
Bogota e = 5m.58s. and 6m.57s.
Harvard i = 4m.18s. and 8m.10s.
Long waves were also recorded at Bermuda and Kew.

May 24d. Readings also at 0h. (near Bogota), 1h. (Harvard), 8h. (Oaxaca), 15h. (La Paz), 16h. (Tucson, Palomar, Pasadena, Riverside, and Tinemaha), 17h. (Kew), 19h. (Balboa Heights and near Bogota), 20h. (Stuttgart).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

May 25d. 1h. 6m. 31s. Epicentre 21°·5S. 179°·0W. Depth of focus 0·080.
(as on 1943, May 28d.).

$A = -·9311$, $B = -·0163$, $C = -·3644$; $\delta = 0$; $h = +4$;
$D = -·017$, $E = +1·000$; $G = +·364$, $H = +·006$, $K = -·931$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Apia		10·3	44	i 2 29?	+ 7	i 4 29?	+14	—	—	—
Auckland		16·2	198	3 24	+ 3	i 5 46	−17	i 6 46	SS	—
Arapuni		17·1	195	3 23	− 7	5 56	−23	—	—	—
Tuai		17·6	191	3 37	+ 2	6 22	− 6	13 59	S_cS	—
New Plymouth		18·5	197	3 47	+ 4	i 6 45	+ 2	i 4 22	PP	—
Wellington		20·4	194	3 59a	− 2	6 39	−36	i 4 29	PP	—
Kaimata		22·5	199	4 22	+ 2	i 7 45	− 4	14 16	S_cS	—
Christchurch		23·0	195	4 25	0	7 7	−50	14 24	S_cS	—
Brisbane		26·1	252	i 4 51k	− 1	i 8 38	− 8	i 4 55	?	—
Riverview		29·0	238	i 5 18k	0	i 9 24	− 8	i 12 32	sS	e 13·1
Sydney		29·0	238	i 5 11	− 7	i 9 23	− 9	i 8 5	P_cP	—
Honolulu		47·3	27	e 7 48	+ 2	i 13 59	− 1	e 9 37	PP	i 20·9
Perth		58·4	245	9 12	+ 6	e 16 39	+12	11 14	PP	25·4
Mera		68·4	324	10 6	− 3	e 18 21	− 7	—	—	—
Tyosi		68·4	326	10 12	+ 3	18 22	− 6	—	—	—
Yokohama		68·9	325	10 9	− 3	18 30	− 4	—	—	—
Misima		69·0	324	i 10 10	− 3	18 27	− 8	12 28	PP	—
Tokyo		69·0	325	e 10 14	+ 1	i 18 29	− 6	—	—	—
Mito		69·1	326	10 13	0	18 30	− 6	—	—	—
Shizuoka		69·2	324	10 11	− 3	18 31	− 6	—	—	—
Onahama		69·3	327	i 10 13	− 2	18 34	− 4	—	—	—
Hamamatu		69·4	324	10 14	− 1	18 35	− 4	—	—	—
Hunatu		69·4	325	i 10 16	+ 1	18 36	− 3	11 13	pP	—
Kumagaya		69·5	326	10 16	0	18 33	− 7	—	—	—
Kohu		69·6	325	10 14	− 2	18 39	− 3	10 51	P_cP	—
Siomisaki		69·6	322	10 14	− 2	18 36	− 6	e 12 23	pP	—
Maebasi		69·9	326	10 15	− 3	18 37	− 8	—	—	—
Nagoya		70·1	323	10 17	− 2	18 39	− 8	—	—	—
Hukusima		70·2	328	10 18	− 2	18 30	−18	—	—	—
Kameyama		70·2	322	e 10 19	− 1	18 46	− 2	—	—	—
Gihu		70·4	323	i 10 20	− 1	18 47	− 4	—	—	—
Muroto		70·4	319	10 25	+ 4	18 52	+ 1	—	—	—
Sendai		70·4	328	i 10 17	− 4	18 44	− 7	12 52	PP	—
Hikone		70·6	323	i 10 22	0	18 49	− 4	e 11 11	pP	—
Nagano		70·6	325	10 20	− 2	18 47	− 6	—	—	—
Kobe		70·8	322	i 10 21	− 2	18 59	+ 4	e 11 48	pP	—
Sumoto		70·8	321	i 10 23	0	18 46	− 9	e 13 1	PP	—
Miyako		70·9	330	i 10 22	− 2	19 1	+ 5	—	—	—
Mizusawa	E.	70·9	328	10 23	− 1	18 51	− 5	—	—	—
Koti		71·1	319	i 10 23	− 2	18 53	− 6	i 10 40	P_cP	—
Miyazaki		71·2	317	10 20k	− 6	18 51	− 9	—	—	—
Toyooka		71·6	322	10 26	− 2	i 18 58	− 6	—	—	—
Wazima		71·8	325	10 27	− 2	18 59	− 7	—	—	—
Akita		71·9	329	11 2	+32	20 28	?	—	—	—
Kumamoto		72·3	318	e 10 31	− 1	19 5	− 7	—	—	—
Aomori		72·4	330	i 10 34	+ 1	19 11	− 2	—	—	—
Hukuoka		73·0	317	i 10 34	− 2	19 13	− 7	13 21	PP	—
Tomie		73·4	316	10 34	− 4	19 15	− 9	—	—	—
Mori		73·5	330	11 10	+31	19 51	+26	—	—	—
Sapporo		73·9	332	i 10 40k	− 1	19 25	− 4	—	—	—
Zi-ka-wei	N.	77·5	311	e 10 59	− 2	19 59	− 9	—	—	28·7
Santa Barbara		79·2	47	i 11 10	0	e 20 28	+ 3	i 13 24	pP	—
Branner		79·3	42	i 11 13	+ 3	i 20 29	+ 3	i 13 14	pP	e 24·3
San Francisco		79·4	42	e 11 13	+ 2	e 20 28	0	e 14 27	PP	—
Santa Clara		79·4	42	i 11 11	0	i 20 28	0	i 13 25	pP	—
Berkeley		79·5	42	e 11 12	0	e 20 29?	0	e 11 27	pP	—
Ukiah		79·7	41	e 11 11	− 2	e 20 31	0	e 13 21	pP	e 38·0
La Jolla		79·9	48	i 11 14	0	e 20 35	+ 2	i 13 29	pP	—
Ferndale		80·0	39	e 11 14	0	e 20 32	− 2	—	—	—
Pasadena		80·0	47	i 11 15k	+ 1	i 20 35	+ 1	i 13 23	pP	i 32·5

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Mount Wilson		80·2	47	e 11 16	+ 1	i 20 36	0	i 13 29	pP	—
Palomar		80·5	48	e 11 15	− 2	i 20 44	+ 5	i 13 30	pP	—
Riverside		80·5	47	i 11 17k	0	i 20 39	0	i 13 31	pP	—
Haiwee		81·3	45	i 11 22k	+ 1	e 20 48	+ 1	i 13 27	pP	—
Tinemaha		81·7	45	i 11 24k	+ 1	e 20 51	0	i 13 37	pP	—
Boulder City		83·3	47	i 11 32	+ 1	e 21 2	− 4	i 13 49	pP	—
Tucson		84·3	52	i 11 37	+ 1	i 21 4	−12	i 13 47	pP	e 37·9
Victoria		85·5	34	i 11 40	− 2	i 21 24	− 3	e 13 45	pP	33·5
Seattle		85·6	35	e 13 13	?	e 22 43	SP	e 15 52	?	e 37·0
Sitka		86·8	22	i 11 44	− 4	i 21 36	− 3	e 14 0	pP	e 38·6
Salt Lake City		87·8	44	e 11 53	+ 1	i 21 50	+ 2	e 14 11	pP	e 35·7
Logan		88·4	43	i 11 56	+ 1	i 22 0	+ 6	e 14 8	pP	e 36·9
College		89·4	12	e 11 57	− 3	i 21 55	− 8	e 14 13	pP	—
Vera Cruz	E.	90·6	70	e 11 56	− 9	—	—	—	—	—
Rapid City		95·0	43	e 12 29	+ 3	i 22 58	+ 7	i 14 45	pP	e 39·5
Saskatoon		96·5	36	12 33	+ 1	23 5	+ 1	14 56	pP	39·5
Huancayo		98·0	106	e 14 50	pP	i 22 21	[− 3]	i 16 56	PP	e 40·8
Lincoln		98·2	49	e 14 56	pP	e 22 17	[− 8]	e 16 52	PP	e 51·5
Calcutta	N.	100·3	289	i 17 3k	PP	i 22 28	[− 8]	i 23 7	SKKS	—
La Plata		100·8	134	17 9	PP	22 28	[−10]	23 11	SKKS	26·5
Florissant		102·1	53	e 12 58	+ 1	e 23 59	+ 9	e 15 13	pP	—
St. Louis		102·2	53	e 12 58	0	e 23 53	+ 2	15 11	pP	—
La Paz		102·4	114	i 13 3a	+ 4	i 22 39	[− 7]	i 15 15	pP	50·0
Colombo	E.	102·8	272	12 37	−23	17 4	?	—	—	29·3
Chicago		105·0	50	e 15 27	pP	i 24 18	+ 3	e 28 22	sS	e 46·8
Bogota		105·6	90	e 13 32	P	e 24 0	S	e 17 46	PP	—
Kodaikanal	E.	106·2	275	e 6 48	?	—	—	i 17 23	?	—
Hyderabad	N.	107·6	281	17 47	PP	i 22 54	[−14]	32 15	SS	49·1
Columbia		108·7	59	e 18 3	PP	e 23 1	[−12]	e 26 23	SP	e 45·7
New Kensington		110·5	53	e 17 3	[−27]	e 23 15	[− 4]	e 18 18	PP	—
Dehra Dun	N.	111·3	295	e 22 39?	?	—	—	e 32 49	?	43·5
New Delhi		111·7	292	e 18 2	[+30]	i 23 15	[− 9]	i 28 19	PS	—
Georgetown		112·2	55	i 18 32	PP	i 24 21	SKKS	—	—	—
Bombay	E.	113·1	282	i 18 25	PP	23 18	[−11]	i 20 41	pPP	—
Philadelphia		113·8	55	i 18 40	PP	i 23 25	[− 7]	i 27 32	SP	—
Ottawa		114·2	48	i 17 35	[− 2]	e 23 27	[− 7]	e 18 45	PP	47·5
Fordham		114·9	53	e 15 45	?	i 23 34	[− 5]	i 17 40	PKP	—
Vermont		115·8	50	e 18 28	?	i 23 24	[−16]	i 18 45	PP	—
Shawinigan Falls		116·3	47	e 17 41	[0]	i 23 38	[− 4]	e 30 5	PPS	41·5
Harvard		116·8	52	i 16 53	?	i 22 51	?	i 18 14	?	—
Weston		117·0	52	e 16 19	?	e 30 8	PPS	17 41	PKP	—
San Juan		117·3	79	e 19 3	PP	i 23 42	[− 3]	i 29 1	PS	e 46·7
Seven Falls		117·7	47	e 17 43	[− 1]	i 23 39	[− 8]	e 19 7	PP	36·5
Rio de Janeiro	N.	118·3	133	i 19 7	PP	i 27 47	SP	—	—	—
Tananarive		119·3	232	19 0	PP	26 14	S	30 20	sS	49·5
Bermuda		121·2	63	e 19 31	PP	e 23 54	[− 5]	i 28 55	SP	e 64·9
Scoresby Sund		129·2	10	i 18 5	[− 1]	32 25	PPS	i 20 21	PP	—
Upsala		139·9	347	e 18 3	[−25]	24 21	[−23]	18 17	PKP	e 46·5
Bergen		141·0	357	i 18 20	[−10]	e 31 29	SP	e 32 59	SSP	44·0
Aberdeen		144·3	3	i 18 26	[− 9]	i 32 6	SP	i 39 49	SS	61·1
Copenhagen		144·8	349	i 18 33k	[− 3]	25 8	[+16]	21 50	PP	—
Ksara		146·9	298	e 18 40	[0]	35 28	PPS	21 6	pPKP	—
Stonyhurst		147·6	4	e 18 42	[+ 1]	i 40 29	SS	22 20	PP	—
Potsdam		147·8	347	i 18 43	[+ 2]	e 24 29	[−27]	i 21 9	pPKP	e 53·5
Bucharest		149·1	323	e 18 38	[− 5]	(24 29?)	[−28]	e 22 33	PKS	24·5
Campulung		149·2	325	e 18 40	[− 3]	(25 29?)	[+32]	—	—	25·5
De Bilt		149·3	355	i 18 42k	[− 1]	e 28 59	SKKS	i 21 11	pPKP	—
Jena		149·5	345	e 18 41	[− 2]	e 31 53	?	e 21 9	pPKP	e 40·8
Prague		149·6	343	i 18 48	[+ 5]	e 24 31	[−27]	e 21 7	pPKP	e 50·5
Cheb		150·1	345	e 18 46	[+ 3]	e 25 46	[+47]	i 21 22	pPKP	—
Kew		150·1	1	i 18 42k	[− 1]	i 34 31	SPP	i 21 11	pPKP	—
Uccle		150·6	356	i 18 42k	[− 2]	i 40 57	SS	i 21 0	pPKP	e 50·5
Helwan		151·3	293	i 18 44a	[− 1]	32 46	PSKS	21 19	pPKP	—
Belgrade		151·8	329	e 18 45	[− 1]	—	—	e 21 17	pPKP	e 52·1
Stuttgart		152·0	348	i 18 44k	[− 2]	e 32 51	PSKS	i 21 13	pPKP	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

	△	Az.	P.	O−C.	S.	O−C.	Supp.	L.
	°	°	m. s.	s.	m. s.	s.	m. s.	m.
Strasbourg	152·4	349	e 18 45	[− 2]	e 41 18	SS	i 21 16 pPKP	—
Paris	152·7	357	e 18 47	[0]	e 41 11	SS	e 27 57 ?	—
Basle	153·5	350	e 18 46	[− 2]	—	—	e 21 30 pPKP	—
Zürich	153·5	349	e 18 47k	[− 1]	e 26 7	[+63]	e 21 18 pPKP	—
Chur	153·8	347	e 18 47	[− 2]	—	—	e 19 12 PKP_2	—
Neuchatel	154·1	350	e 18 48	[− 1]	—	—	— —	—
Milan	155·2	346	i 18 49	[− 1]	28 39	SKKS	— —	—
Clermont-Ferrand	155·8	356	e 18 51	[− 1]	e 41 59	SS	e 19 21 PKP_2	—
Lisbon	160·7	24	i 18 57a	[− 1]	36 2	SPP	21 28 pPKP	—
Tortosa	160·7	1	i 19 0	[+ 2]	—	—	23 34 PP	e 43·5
San Fernando	163·8	21	i 19 4	[+ 3]	26 7	[+54]	i 20 1 PKP_2	—
Granada	163·9	13	i 18 59a	[− 2]	30 40	SKKS	i 19 58 pPKP	77·3
Malaga	164·1	16	i 18 46k	[−15]	i 27 54	PPP	i 19 58 pPKP	43·2

Additional readings :—
Auckland S =5m.31s., P_cP? =8m.11s., i =9m.21s.
Tuai i =3m.46s.?, e =6m.4s., i =6m.34s.
New Plymouth i =5m.37s., S =6m.26s., i =7m.52s.
Wellington iZ =5m.40s., P_cP?Z =7m.49s., S_cP? =8m.54s.?, sP_cP? =11m.54s.?, i = 12m.59s., S_cS =14m.6s., i =15m.9s.?.
Kaimata S =7m.8s.
Riverview iP_cPZ =8m.8s., iP_cPEN =8m.12s., iN =9m.43s., iE =9m.57s. and 12m.19s.
Honolulu e =10m.7s. and 16m.38s.
Misima S_cS =20m.8s., SS =22m.53s.
Tokyo e =11m.22s. and 13m.39s.
Hunatu PP =13m.1s., SP =18m.57s.
Kohu PPP =11m.6s.
Sendai SS =22m.57s.
Hikone ePP =13m.8s., ePS =19m.38s., eSS =23m.5s.
Kobe eP_cP =11m.8s., esP =12m.27s., ePP =14m.37s., epS =19m.11s., eS_cS = 19m.35s., ePS =20m.7s., esS =21m.7s., eSS =23m.42s., eSSS =26m.21s. and 26m.48s., eSSSS =30m.8s.
Sumoto S_cS =19m.35s., eSS =23m.12s.
Kôti eS_cS =19m.27s.
Hukuoka SS =23m.9s.
Santa Barbara ePKP,PKP =38m.3s., eSKP,PKPZ =40m.32s.
Branner iE =12m.6s., iN =12m.17s., iE =13m.28s. and 14m.20s., iEN =20m.32s.
San Francisco eE =14m.31s., eSE =20m.30s., eEN =21m.32s., eN =25m.18s.
Santa Clara iPPZ =15m.25s., iE =24m.25s.
Ukiah e =11m.50s. and 13m.35s., i =20m.54s., e =24m.17s. and 25m.7s.
La Jolla ePKP,PKPZ =38m.1s., eSKP,PKPZ =40m.34s.
Ferndale eSN =20m.35s.
Pasadena isPZ =14m.28s., iZ =16m.59s., eSZ =19m.47s., iSPZ =21m.16s., iE = 21m.29s., isSPEN =24m.23s., iPKKPZ =29m.53s., ePKP,PKPZ =37m.56s., iPKP,PKPZ =38m.1s., ipPKP,PKPZ =40m.4s., iSKP,PKPZ =40m.27s.
Palomar i =11m.18s.k, isPZ =14m.33s., eEN =24m.25s., iZ =26m.48s., iPKKPNZ = 29m.51s., iPKP,PKPZ =38m.0s., ipPKP,PKPZ =40m.7s., iSKP,PKPZ = 40m.27s.
Riverside isPZ =14m.28s., ePKKPZ =29m.32s., iZ =29m.54s., ePKP,PKPZ = 37m.42s., iZ =37m.56s. and 38m.0s., ipPKP,PKPZ =40m.7s., iSKP,PKPZ = 40m.28s.
Haiwee iPKP,PKP =37m.59s., ipPKP,PKPZ =40m.12s., eSKP,PKPZ =40m.28s.
Tinemaha iPKKPZ =29m.52s., ePKP,PKPZ =37m.41s., iPKP,PKPZ =37m.58s., ipPKP,PKP =40m.14s., eSKP,PKPZ =40m.27s., ePKP,PKP,PKPZ =57m.49s.
Boulder City e =20m.58s., and 29m.46s., i =37m.45s.
Tucson isP =14m.42s.,' ePP =15m.0s., i =15m.31s., esPP =18m.0s., iSP =22m.20s., iSS =25m.29s., eSSS =30m.38s.
Victoria i =21m.4s., e =22m.29s. and 25m.21s.
Sitka esP =15m.3s., eSKS =21m.16s., iSP =22m.34s., esS =25m.26s., i =26m.57s., esSS =31m.0s.
Salt Lake City iS =21m.27s., iSP =23m.5s., isS =25m.53s.
Logan i =14m.12s., ePP? =15m.28s., iSKS =21m.29s., isS =25m.52s.
College e =15m.21s., eS =21m.31s., esS =25m.49s., e =30m.20s., 31m.33s., and 38m.29s.
Rapid City ePP =16m.14s., iSKS =22m.3s., esS =26m.29s., e =33m.10s.
Saskatoon PPP =16m.38s., S =22m.11s., SS =27m.16s.
Huancayo e =16m.2s., i =23m.36s., eSP =24m.55s., e =27m.30s. and 34m.22s.
Lincoln eSP =24m.56s., e =31m.37s.
Calcutta iN =24m.43s.
La Plata PPPN =18m.35s., SSE =23m.29s.?, sSS =25m.11s.
Florissant isPZ =16m.24s., iPPZ =17m.19s., eE =20m.23s., iSKSE =22m.37s., iSKKSE =23m.22s., iSPE =25m.37s., iE =26m.30s., esSE =28m.1s., eSSE = 31m.10s.

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

St. Louis sP = 16m.22s., PKP = 16m.50s., PP = 17m.19s., pPP = 19m.15s., pPPP = 19m.42s., SKS = 22m.36s., SKKS = 23m.21s., SP = 25m.30s., PS = 26m.54s., sS = 27m.58s., SS = 30m.58s., SSS = 34m.55s.
La Paz iPPZ = 17m.25s., PPPZ = 19m.25s., SKKS = 24m.25s., iZ = 25m.37s., iPSZ = 26m.17s., iSSZ = 32m.1s., iSSS = 36m.9s.
Chicago ePP = 17m.39s., epPP = 19m.46s., csPP = 20m.32s., e = 23m.40s., eSP = 26m.3s., eSS = 31m.27s., esSS = 35m.21s., e = 40m.21s.
Hyderabad iN = 23m.54s., SKSN = 24m.31s.
Columbia e = 24m.0s., eS = 24m.49s., ePS = 27m.37s., e = 28m.49s., eSS = 32m.36s., e = 40m.34s.
New Kensington e = 24m.16s., and 27m.11s., csSS = 35m.26s.
New Delhi iN = 25m.6s. and 30m.50s.
Georgetown i = 18m.35s., 21m.35s., and 25m.21s., e = 26m.34s.
Bombay iPPPE = 20m.56s., SKKSE = 24m.32s., iE = 25m.18s.
Philadelphia e = 21m.50s., i = 24m.36s., iS = 25m.36s., iPS = 28m.34s., isS = 29m.22s., i = 31m.14s., eSS = 33m.47s., esSS = 37m.19s.
Ottawa e = 27m.29s., 37m.29s., and 41m.29s.
Fordham i = 18m.55s., e = 22m.0s., i = 24m.51s., 25m.45s., 27m.31s., 28m.22s., and 29m.52s.
Vermont i = 24m.41s., iS = 25m.42s., iSP = 27m.34s., ePS = 28m.39s., e = 29m.45s., eSS = 33m.59s., isSS = 37m.29s., i = 41m.41s.
Shawinigan Falls e = 25m.59s. and 34m.17s.
Weston PP = 19m.4s., e = 26m.2s.
San Juan iSKS = 23m.38s., i = 24m.57s., eS = 26m.8s., csS = 29m.57s., eSS = 34m.12s., eSSS = 38m.4s.
Seven Falls i = 25m.4s., e = 27m.53s. and 30m.35s.
Tananarive SS = 34m.41s.
Bermuda e = 25m.30s., 31m.51s., and 36m.21s., eSSS = 38m.21s., e = 42m.39s. and 55m.49s.
Scoresby Sund 21m.29s., 22m.22s., 23m.36s., 24m.51s., 33m.42s., and 34m.59s.
Upsala eN = 21m.4s., iSKPE = 21m.13s., PKS?N = 21m.59s., iPKS?E = 22m.3s., eN = 27m.21s., ePSKS = 31m.31s.?, eN = 33m.49s., eE = 35m.53s., eSSE = 39m.3s., isSSE = 42m.51s., eN = 43m.29s.?.
Bergen eZ = 18m.59s., ePKPZ = 20m.57s., eN = 22m.3s., PPN = 23m.56s., eZ = 24m.15s., PPSZ = 35m.40s., eE = 36m.56s., eN = 39m.10s., eE = 43m.12s.
Aberdeen iN = 38m.46s., iE = 43m.36s., iN = 44m.43s.
Copenhagen 20m.53s. and 39m.59s.
Ksara PP = 22m.20s., pPP = 24m.28s.
Stonyhurst i = 18m.55s., 21m.22s., and 38m.51s., i = 44m.23s. and 49m.48s., e = 59m.46s.
Potsdam iE = 20m.57s., ipPKPE = 21m.12s.
Bucharest eN = 18m.42s., i = 18m.45s., iZ = 18m.59s.
De Bilt iPP = 22m.12s., eSS = 40m.29s.?, eSSS = 44m.29s.?.
Jena iPZ = 18m.45s., iPE = 18m.48s., ePPN = 21m.12s., eZ = 22m.17s.
Prague eSKP = 21m.50s., e = 32m.47s. and 34m.57s., eSS = 40m.53s., e = 44m.59s., eSSS = 46m.29s.
Cheb ePKP = 18m.52s., iSKP = 22m.22s., e = 28m.22s., eSKSP = 32m.46s., ePS? = 34m.39s., ePPS = 35m.58s., iSS = 40m.58s., e = 44m.41s.
Kew iPKP$_2$ = 19m.3s., isPKPNZ = 22m.11s., iPP?N = 22m.23s., epPPN = 24m.43s., isPPNZ = 25m.27s., ePPPNZ = 25m.51s., ePSKS?N = 32m.27s., eSS = 40m.55s., esSSE = 44m.29s.?, eSSSE = 46m.29s.?.
Uccle iEN = 18m.49s., iZ = 21m.13s., iPPN = 22m.24s., isSSE = 44m.52s.
Helwan PKP$_2$ = 19m.2s., PPZ = 22m.33s., eEZ = 24m.53s., PPPZ = 26m.8s., iE = 28m.26s.
Belgrade i = 18m.53s., ePKS = 25m.5s., eSKSP = 34m.40s., e = 41m.58s.
Stuttgart i = 18m.51s., iZ = 20m.25s., ipPKPZ = 21m.21s., esPKP = 22m.21s., iPPZ = 22m.37s., epPP = 25m.5s. and 25m.16s., iPPPZ = 25m.51s., iZ = 26m.23s., e = 28m.29s., epPPPZ = 28m.51s., ePSKS = 32m.55s., e = 33m.46s., ePPS = 36m.16s., iSS = 41m.18s., isSS = 44m.59s., eSSS = 47m.3s., eSSSS = 51m.57s., e = 54m.41s., and 58m.17s.
Strasbourg i = 18m.52s., ePP = 22m.38s., epPP = 24m.58s.
Basle e = 18m.55s. and 32m.54s.
Clermont-Ferrand e = 28m.10s.
Lisbon PKP$_2$ = 19m.41s., pPKP$_2$NZ = 22m.3s., sPKPE = 22m.16s., iPPZ = 23m.26s., PPPEN = 29m.16s., SSE = 42m.45s., SSN = 43m.35s., SSSZ = 47m.59s., SSSN = 48m.11s., E = 52m.35s., NZ = 53m.17s.
Tortosa iEN = 19m.42s., PPE = 20m.50s., iN = 24m.50s., and 34m.3s.
San Fernando PPZ = 23m.25s., eSKKSE = 30m.16s., ePPSE = 36m.56s., eSSE = 43m.58s.
Granada pPKP$_2$ = 22m.16s., iPP = 23m.42s., pPP = 26m.10s., PPP = 27m.10s., PPS = 38m.15s., iSS = 43m.29s., sSS = 46m.27s., SSS = 51m.28s., sSSS = 56m.29s., Q = 61·8m.
Malaga PP = 21m.50s., PPP = 23m.48s., S$_c$S = 28m.26s., PS = 28m.58s., sS = 29m.40s., SS = 32m.56s.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

May 25d. 12h. 58m. 7s. Epicentre 2°·5S. 152°·5E.

A = −·8862, B = +·4613, C = −·0433 ; δ = +2 ; h = +7 ;
D = +·462, E = +·887 ; G = +·038, H = −·020, K = −·999.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Brisbane		24·8	179	i 5 21a	− 4	i 10 15	+29	i 5 24	P	—
Riverview		31·2	182	i 6 23a	0	i 11 37	+ 8	i 7 32	PP	e 14·3
Sydney		31·2	182	e 6 23	0	i 11 26	− 3	e 9 29	PcP	—
Apia		37·0	109	i 7 13	0	e 12 38	−21	—	—	15·2
Shizuoka		39·5	343	e 7 34	0	14 11	+34	—	—	—
Miyazaki		39·6	332	7 29	− 6	e 13 26	−12	—	—	—
Yokohama		39·6	344	8 50	PP	20 37	?	—	—	23·6
Tokyo		39·8	344	e 7 34	− 2	14 56	+74	e 9 16	PP	e 21·8
Auckland		39·9	153	7 37	0	13 37	− 6	9 28	PP	19·2
Kobu		40·1	343	i 7 47	+ 8	13 49	+ 3	—	—	—
Nagoya		40·2	341	e 7 41	+ 1	13 51	+ 3	—	—	—
Sumoto		40·2	339	e 7 35	− 5	13 45	− 3	(i 17 1)	SSS	i 17·0
Kobe		40·4	339	7 38	− 3	13 37	−13	16 33	Q	—
Hikone		40·5	341	7 41	− 1	13 41	−11	—	—	e 20·0
Kumamoto		40·7	332	7 42	− 2	13 55	0	—	—	—
Arapuni		41·3	152	7 53	+ 4	14 5	+ 1	e 9 29	PP	19·9
Toyooka		41·3	339	e 7 48	− 1	14 4	0	(e 17 23)	SSS	e 17·4
New Plymouth		41·4	154	7 30?	−20	14 11?	+ 6	9 41	PcP	19·9
Hamada		41·9	334	7 52	− 2	14 4	− 9	—	—	20·4
Hukuoka		41·9	332	7 50k	− 4	14 2	−11	17 16	Q	18·6
Sendai		42·0	347	e 7 51	− 3	14 5	− 9	17 18	SS	—
Wazima		42·2	342	7 57	+ 1	14 23	+ 6	—	—	—
Mizusawa	E.	42·7	348	e 7 56	− 4	e 14 2	−22	(17 28)	SS	17·5
Miyako		43·1	349	e 8 0	− 4	14 15	−15	17 38	SS	—
Kaimata		43·3	160	8 32	+27	14 36	+ 3	18 8	Q	—
Morioka		43·3	348	i 8 1	− 4	14 32	− 1	—	—	—
Akita		43·5	347	e 8 20	+13	15 23	+47	—	—	—
Wellington		43·5	156	8 8k	+ 1	14 25	−11	9 24	PP	19·9
Tuai		43·6	151	10 13	PcP	—	—	17 53?	Q	—
Christchurch		44·6	159	8 15	− 1	14 48	− 4	10 11	PP	21·9
Zi-ka-wei	N.	44·7	321	e 8 19	+ 3	14 55	+ 1	—	—	—
Perth		45·2	226	8 28	+ 8	15 18	+17	10 18	PP	—
Mori		45·7	348	8 28	+ 4	i 14 35	−33	—	—	e 19·6
Sapporo		46·5	350	8 36	+ 5	15 6	−13	—	—	e 20·1
Honolulu		54·0	61	e 9 26	− 2	i 17 1	− 2	e 11 56	PP	e 22·2
Calcutta	N.	67·3	296	i 11 29k	+30	i 19 59	+ 5	i 20 31	PPS	—
Colombo	E.	73·1	278	11 33	− 1	(21 11)	+10	—	—	21·2
Hyderabad		75·6	289	11 49	+ 1	21 26	− 3	14 27	PP	36·9
Kodaikanal	E.	75·7	282	e 10 48	−61	i 20 48	−42	—	—	—
Dehra Dun		77·9	302	e 12 3	+ 2	i 21 44	−10	—	—	i 29·6
New Delhi		78·3	299	e 12 4	+ 1	i 21 58	− 1	14 53	PP	37·6
College		79·8	22	e 12 9	− 3	e 22 6	− 8	e 27 6	SS	e 32·0
Bombay	E.	81·1	289	i 12 19	+ 1	e 22 22	− 6	i 15 46	PP	—
Sitka		82·6	32	e 12 22	− 4	i 22 36	− 7	e 15 39	PP	e 34·8
Ferndale	E.	86·5	49	e 12 59	+13	e 23 16	{ 0}	e 29 10	SS	e 38·7
	N.	86·5	49	e 12 55	+ 9	e 23 23	+ 1	—	—	e 38·7
Ukiah		87·1	51	e 12 43	− 6	i 23 19	{− 2}	e 24 29	PS	e 38·6
San Francisco		87·6	53	—	—	e 23 20	[+ 2]	—	—	e 39·8
Berkeley	E.	87·8	53	e 12 59	+ 7	e 23 18	[− 1]	—	—	e 39·7
	N.	87·8	53	e 12 58	+ 6	e 23 21	[+ 2]	—	—	—
	Z.	87·8	53	e 12 54	+ 2	e 23 28	{+ 2}	—	—	—
Branner		87·8	53	—	—	e 23 20	[+ 1]	i 23 52	S	e 36·2
Victoria		87·9	42	12 54	+ 1	23 24	[+ 4]	29 24	SS	38·9
Santa Clara		88·0	53	e 12 52	− 1	e 23 21	[0]	—	—	e 39·8
Seattle		88·6	42	e 15 7	?	e 25 5	PPS	—	—	e 42·0
Santa Barbara		89·6	56	e 13 10	+ 9	—	—	—	—	—
Pasadena		90·8	56	i 13 4k	− 2	i 23 37	[− 1]	i 16 46	PP	e 36·9
Mount Wilson	z.	90·9	56	i 13 5k	− 2	—	—	—	—	—
Tinemaha	z.	90·9	54	e 13 6	− 1	—	—	—	—	—
Haiwee	z.	91·1	54	e 13 12	+ 4	—	—	—	—	—
La Jolla	z.	91·5	57	e 13 13	+ 3	—	—	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Riverside	Z.	91·5	56	e 13 7	− 3	—	—	—	—	—
Palomar		91·9	57	e 13 10	− 1	e 23 47	[+ 3]	i 16 47	PP	—
Boulder City		93·6	54	e 13 16	− 3	e 23 44	[− 9]	i 13 22	P_cP	—
Logan		95·9	48	e 13 31	+ 1	e 24 51	+ 5	e 17 19	PP	e 43·3
Salt Lake City		95·9	49	e 13 31	+ 1	e 24 6	[0]	e 25 56	PS	e 42·0
Tucson		97·0	58	e 13 30	− 5	e 25 1	+ 6	e 17 26	PP	e 39·9
Saskatoon		98·6	38	14 0	+18	24 18	[− 2]	17 53	PP	40·9
Rapid City		102·0	45	e 14 1	+ 4	e 24 34	[− 3]	e 18 6	PP	e 48·1
Tananarive		102·3	250	e 22 10	SKP	25 57	+17	27 33	PS	53·0
Lincoln		107·3	48	e 18 41	PP	e 24 53	[− 8]	e 34 9	SSP	e 50·9
Tacubaya	N.	108·1	70	e 19 4	PP	—	—	—	—	—
Scoresby Sund		112·0	358	19 41	PP	—	—	—	—	—
St. Louis		112·7	49	i 19 23	PP	i 25 23	[0]	i 28 54	PS	—
Upsala		113·2	337	i 19 30	PP	e 25 29	[+ 4]	e 34 51	SS	e 46·9
Ksara		113·4	306	e 18 38	[− 2]	—	—	—	—	—
Chicago		113·7	45	e 14 54	P	e 25 16	[−11]	e 19 38	PP	e 50·5
Bergen		117·0	342	19 55	PP	e 29 26	PS	22 53?	PPP	e 51·9
Bucharest		117·1	320	e 19 23	[+36]	e 29 19	PS	e 19 57	PP	40·9
Copenhagen		118·0	336	i 19 23	[+34]	26 9	[+26]	20 3	PP	49·9
Helwan		118·1	302	e 18 52	[+ 3]	e 27 38	{+37}	20 21	PP	—
New Kensington		119·7	43	e 20 11	PP	e 25 53	[+ 4]	e 29 49	PS	e 58·5
Ottawa		120·0	37	19 1	[+ 8]	25 53	[+ 3]	20 13	PP	55·9
Potsdam		120·0	333	e 20 40	PP	e 36 59	SSP	e 23 28	?	e 55·9
Belgrade		120·4	322	e 19 5	[+11]	27 29	{+13}	e 30 35	PS	e 59·9
Prague		120·8	330	e 20 23	PP	e 25 53	[− 1]	e 30 34	PS	e 50·9
Shawinigan Falls		121·1	33	19 5	[+10]	30 11	PS	20 35	PP	56·9
Columbia		121·2	51	e 20 21	PP	e 25 55	[+ 1]	e 30 14	PS	e 51·2
Jena		121·6	331	e 20 28	PP	—	—	e 36 59	SS	e 57·3
Cheb		121·8	331	e 20 36	PP	—	—	e 41 34	SSS	e 56·9
Aberdeen		121·9	344	i 19 20	[+23]	i 37 30	SSP	i 20 45	PP	57·4
Seven Falls		121·9	33	20 36	PP	26 0	[+ 4]	30 30	PS	47·9
Vermont		122·0	37	e 20 0	?	i 27 11	{−16}	e 20 32	PP	51·2
Philadelphia		123·0	42	e 19 25	[+26]	i 26 0	[0]	e 20 35	PP	i 52·0
Fordham		123·4	40	e 19 1	[+ 2]	e 26 10	[+ 9]	e 20 36	PP	i 58·3
De Bilt		123·6	337	e 19 13	[+13]	—	—	e 37 53?	SSP	e 52·9
Harvard		124·1	37	i 18 19	?	—	—	i 19 57	?	e 59·9
Stuttgart		124·2	331	e 15 41	?	e 27 53	{+11}	i 20 53	PP	e 63·4
Stonyhurst		124·8	342	e 21 2	PP	31 0	PS	38 26	SSP	57·9
Uccle		124·9	337	e 18 53?	[− 9]	i 38 16	SSP	e 21 5	PP	e 53·9
Strasbourg		125·0	332	e 21 1	PP	e 27 54	{+ 7}	—	—	58·9
Chur		125·4	330	e 19 3	[0]	—	—	—	—	e 58·6
Zürich		125·5	331	e 19 3	[0]	—	—	e 20 41	PP	—
Basle		125·9	331	e 19 5	[+ 1]	—	—	—	—	—
Kew		126·1	339	i 19 21	[+17]	e 27 55	{ 0}	i 21 3	PP	e 57·9
Milan		126·5	328	19 14	[+ 9]	—	—	21 26	PP	59·4
Neuchatel		126·5	331	e 19 5	[0]	—	—	—	—	—
Paris		127·2	335	e 21 5	PP	—	—	—	—	54·9
Halifax		127·3	31	e 21 5	PP	—	—	e 38 35	SSP	49·9
Balboa Heights		127·9	80	e 20 53?	PP	—	—	—	—	—
Clermont-Ferrand		129·3	332	e 19 12	[+ 1]	e 22 39	SKP	e 38 53?	SSP	—
Huancayo		130·3	107	e 19 27	[+14]	e 39 5	SS	e 21 34	PP	e 56·7
Montezuma		132·6	124	e 15 51	?	—	—	e 22 56	SKP	e 63·5
La Plata		133·1	145	22 29	?	22 45	SKP	25 5	PPP	65·9
Bermuda		134·2	45	e 19 31	[+11]	e 28 53	{+ 7}	e 21 57	PP	e 62·6
Tortosa		134·2	329	19 38	[+18]	22 51	SKP	39 23	SS	e 53·9
La Paz		135·7	116	e 17 1	?	i 28 23	{−32}	i 22 9	PP	57·9
San Juan		139·0	62	e 19 29	[0]	e 26 48	[+11]	e 23 8	SKP	e 61·4
Granada		139·1	331	i 19 32a	[+ 3]	26 14	[−24]	i 22 30	PP	74·7
Malaga		139·8	331	i 19 30a	[0]	26 26	[−13]	20 20	pPKP	62·9
Lisbon		140·2	337	19 33a	[+ 2]	23 23	SKP	22 33	PP	64·5
San Fernando		140·9	332	i 19 35	[+ 3]	26 40	[− 1]	22 40	PP	65·9
Fort de France		144·6	66	e 19 39	[+ 1]	—	—	—	—	—
Rio de Janeiro		150·5	149	i 19 53	[+ 5]	—	—	i 23 24	PP	i 41·9

For Notes see next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

NOTES TO MAY 25d. 12h. 58m. 7s.

Additional readings :—
Riverview iN =6m.28s., PPPN =7m.45s., iN =11m.58s., iSSE =13m.36s., iSSSE = 14m.4s.
Tokyo eSS =17m.45s.
Auckland SS =16m.32s., Q? =17m.12s.
Arapuni e =8m.35s.
New Plymouth i =8m.18s., Q =17·9m.
Mizusawa eSN =14m.5s.
Miyako PP =8m.20s.
Wellington i =8m.50s., P_cP? =10m.23s., i =11m.58s.?, i =15m.27s., SS =17m.3s., S_cS? =17m.58s., Q =19m.1s.
Christchurch P_cPEN =13m.53s., SSEN =18m.18s., QEN =18·9m.
Honolulu ePPP =12m.41s., eS =16m.35s., eSS =20m.38s.
Hyderabad PSE =22m.11s., SSN =26m.7s.
New Delhi P_cPEN =12m.17s., PPPN =16m.37s., SKSN =22m.17s., S_cSN =22m.24s., PSN =22m.27s., SSN =26m.51s.
College e =18m.17s. and 30m.57s.
Bombay iE =12m.36s., 12m.48s., and 22m.37s., SS?E =27m.11s., iE =28m.0s.
Sitka ePPP =17m.47s., e =18m.48s., i =23m.50s. and 24m.28s., iSS =27m.40s., i = 29m.49s. and 29m.53s., iSSS =31m.33s.
Ukiah eSS =29m.15s.
Branner eE =29m.11s.
Victoria SSS =32m.58s.
Seattle e =26m.17s. and 32m.36s.
Pasadena iEZ =13m.11s., iZ =13m.35s., iEN =25m.9s., iSSN =30m.13s.
Palomar iNZ =13m.17s., iEZ =13m.25s.
Logan e =20m.25s., iSKS =24m.8s., ePS =26m.3s., eSS =31m.33s., eSSS =34m.36s., e =37m.8s.
Salt Lake City e =14m.8s., 16m.34s., and 17m.56s., eSS =31m.37s.
Tucson e =14m.25s. and 21m.6s., eSKS =24m.8s., ePS =26m.8s., e =26m.30s. and 30m.22s., eSS =31m.39s., iSSS =35m.22s.
Saskatoon PS =26m.35s., SS =31m.38s.
Rapid City e =19m.2s., ePS =27m.10s., eSS =33m.49s., e =37m.36s.
Tananarive SKS =24m.54s., SS =33m.21s.
Lincoln eSSS =37m.36s., e =41m.20s.
St. Louis iZ =19m.46s., eE =20m.4s., iPPPE =21m.51s., iSKKSE =26m.25s., iSE = 27m.21s., iE =28m.11s.
Upsala eE =34m.55s.?.
Ksara e =20m.4s. and 27m.23s.
Chicago e =18m.15s., ePS =29m.13s., e =33m.46s., eSS =35m.27s., eSSS =39m.37s.
Bergen PPE =20m.14s., eN =27m.42s., SSN =35m.53s.?, eEN =39m.47s.
Bucharest eN =19m.31s., eE =27m.37s., eSSE =34m.31s.
Copenhagen e =15m.35s., 20m.30s., 27m.7s., PS =30m.0s., 32m.23s., and 35m.23s., SS =36m.16s., 38m.5s., and 39m.41s.
Helwan eSN =28m.23s., eN =32m.32s., 34m.17s., and 36m.35s.
New Kensington eSS =37m.5s.
Ottawa SKKS =27m.15s., PS =30m.13s., SS =36m.53s., SSS =40m.29s.
Belgrade e =20m.52s., 36m.53s., and 45m.37s.
Prague ePPP =23m.23s., ePPP($\triangle$ >180°) =35m.1s., eSS =36m.57s., eSSS =41m.35s.
Shawinigan Falls SS =37m.17s.
Columbia e =27m.27s., eSS =37m.15s.
Jena eN =36m.33s. and 36m.56s.
Cheb e =34m.39s.
Aberdeen iSEN =28m.35s., iE =50m.23s.
Seven Falls SKKS =27m.26s., PPS =31m.47s., SS =37m.6s.
Vermont e =20m.18s., i =25m.35s., 30m.2s., and 32m.58s., eSS =36m.21s., e = 36m.28s., i =40m.19s. and 44m.52s.
Philadelphia e =22m.1s., i =27m.31s., 30m.6s., and 32m.22s., iSS =36m.53s., iSSS = 41m.49s., e =44m.4s., and 48m.51s.
Fordham i =20m.54s., eSKKS =27m.39s., ePS =30m.49s., eSS =37m.39s.
Stuttgart ePKP =19m.1s., ePPPZ =23m.35s., eS =28m.32s., eSS =37m.27s. and 37m.32s., eSSS =42m.1s., eQ =57·7m.
Stonyhurst 27m.12s., i =28m.54s., 30m.20s., and 36m.58s., Q =51m.23s.
Uccle ePP =20m.36s., ePPSN =32m.53s.?.
Zürich ePPP =23m.47s.
Kew ePPPZ =23m.53s., ePS =30m.59s., eSSNZ =37m.39s., eQNZ =50·9m.
Milan SSE =36m.9s.
Paris e =21m.21s. and 37m.53s.?.
Huancayo e =20m.15s., 29m.37s., and 43m.55s.
La Plata SKSPN =31m.47s., SKSPE =32m.5s., Z =34m.29s., SKKSE =34m.53s.?, SSE =38m.53s., SSN =39m.26s., PSSE =41m.47s., SSS?E =44m.5s., QEN = 55·9m.
Bermuda i =22m.51s., e =38m.17s., eSS =39m.55s., e =51m.14s.
Tortosa SKPE? =23m.19s., iN =23m.44s., PPP?E =24m.5s.
La Paz iP?Z =19m.19s., iSKP =23m.5s., iZ =23m.25s., iSKSZ =25m.53s., iS?Z = 31m.5s., iPSKS =31m.59s., iSSN =40m.13s., SSSN =45m.6s.

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

San Juan e = 25m.19s., 29m.10s., 32m.15s., and 36m.10s., eSS = 41m.17s.
Granada iPPP = 24m.59s., PS = 32m.44s., Q = 63·0m.
Malaga PPE = 22m.28s., PKS = 23m.2s., PPP = 25m.4s., SKKS = 28m.52s., PS = 32m.24s., SS = 39m.23s.
Lisbon PKPN = 19m.41s., Z = 20m.0s., PPE = 22m.39s., PKSN = 23m.35s., N = 28m.35s., QEN = 59·6m.
San Fernando ePPPE = 25m.33s., SE = 31m.2s., PSE = 33m.14s., SSE = 40m.45s.
Long waves were also recorded at Johannesburg and Butte.

May 25d. 16h. 33m. 11s. Epicentre 48°·2N. 9°·0E. (as on 1944, February 8d.).

Intensity V in the Jura-Souabe, district of Balingen-Ebingen (Zürich).
Macroseismic epicentre 48°·1N. 8°·9E.
Annales de l'Institut de Physique du Globe de Strasbourg, 2e partie, Séismologie, tome IX 1944, p. 10, Strasbourg, 1951.

A = +·6609, B = +·1046, C = +·7432 ; δ = +8 ; h = −5 ;
D = +·156, E = −·988 ; G = +·734, H = +·116, K = −·670.

	△	Az.	P.	O−C.	S.	O−C.
	°	°	m. s.	s.	m. s.	s.
Ebingen	0·0	—	—	—	i 0 3	S*
Ravensburg	0·6	135	—	—	e 0 24	− 2
Stuttgart	0·6	13	i 0 11a	− 4	i 0 18	S_g
Strasbourg	0·9	295	—	—	i 0 30	S_g
Zürich	0·9	198	e 0 19	− 1	e 0 33	− 1
Basle	1·2	235	i 0 24	0	e 0 41	0
Chur	1·4	165	e 0 29	+ 2	e 0 48	+ 2
Neuchatel	1·8	229	e 0 36	+ 4	—	—

Stuttgart gives also iZ = 0m.16s.

May 25d. Readings also at 1h. (Tucson, Tinemaha, Palomar, Riverside, Pasadena, Mount Wilson, and La Paz), 4h. (Mount Wilson, Pasadena, Riverside, Tinemaha, Palomar, Wellington, and Auckland), 5h. (Mount Wilson, Riverside, and Tinemaha), 7h. (Pasadena and Auckland), 8h. (Bogota), 10h. (near Berkeley), 12h. (Pehpei and near Mizusawa), 13h. (Pasadena (2), Mount Wilson (2), Riverside (2), Tinemaha (2), Santa Barbara, Haiwee, La Jolla, Palomar (2), Tucson (2), and Stuttgart (2)), 14h. (Helwan, Stuttgart, Clermont-Ferrand, Zi-ka-wei, Pehpei, Tucson, Pasadena (2), Mount Wilson (2), Riverside (2), Tinemaha (2), Palomar (2), and near Ottawa), 15h. (Auckland and Alicante), 17h. (Wellington and Auckland), 18h. (near Branner), 19h. (La Paz, Istanbul, and Alicante), 20h. (Istanbul), 23h. (Bucharest and near Sofia).

May 26d. Readings at 6h. (near Mizusawa), 7h. (La Paz, Tucson, Mount Wilson, Riverside, and Tinemaha), 8h. (Tucson, Mount Wilson, Pasadena, Palomar, Riverside, and Tinemaha), 15h. (Riverview), 19h. (Mount Wilson, Pasadena, Riverside, and Tinemaha).

May 27d. 23h. 52m. 25s. Epicentre 37°·2N. 28°·3E. (as on 1943, January 11d.).

A = +·7031, B = +·3786, C = +·6020 ; δ = +9 ; h = −1 ;
D = +·474, E = −·880 ; G = +·530, H = +·285, K = −·799.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Istanbul		3·9	6	(0 57)	− 5	(1 54)	+ 4	(2 57)	SS	—
Ksara		7·0	116	e 1 55	+ 9	e 3 18	+10	—	—	—
Bucharest		7·4	347	e 2 8	PP	e 3 59	S_g	e 4 10	SS	—
Helwan		7·7	160	1 47	− 9	3 19	− 6	1 56	P	i 4·4
Belgrade		9·6	325	e 2 36	+15	e 5 33	?	—	—	—
Prague		16·3	327	e 4 2k	+10	e 7 7	+14	—	—	e 9·3
Milan	E.	16·5	306	i 3 56	+ 2	7 7	+ 9	—	—	—
Chur		16·9	311	e 4 0	+ 1	e 7 1	− 6	—	—	—
Cheb		17·2	324	e 4 9	+ 6	e 7 28	+14	e 7 41	SS	e 10·1
Zürich		17·7	311	e 4 9	− 1	e 7 29	+ 3	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Stuttgart		18·1	315	e 4 14	0	e 7 35	0	e 9 41	Q	—
Jena		18·2	326	e 4 17	+ 1	—	—	—	—	e 10·9
Basle		18·4	312	e 4 17	− 1	e 7 44	+ 3	—	—	—
Potsdam		18·6	330	e 4 27	+ 6	i 8 6	+20	—	—	e 10·6
Neuchatel		18·6	310	e 4 18	− 3	—	—	—	—	—
Strasbourg		18·8	314	e 4 23	0	e 8 7	+17	—	—	—
Copenhagen		21·4	335	e 4 54	+ 3	8 54	+ 9	9 3	SS	11·6
Uccle		21·8	316	4 55a	− 1	8 55	+ 3	—	—	11·1
Tortosa	N.	21·9	289	i 4 53	− 4	8 41	−13	5 11	PP	—
De Bilt		22·1	322	e 4 59	0	e 9 14	+16	—	—	e 11·6
Upsala		23·7	345	5 20	+ 6	—	—	e 8 35?	PcP	e 13·6
Kew		24·7	315	e 5 26	+ 2	i 10 3	+19	e 6 3	PP	e 12·6
Granada		25·3	280	i 5 25k	− 5	i 9 46	− 8	5 40	pP	12·2
Malaga		26·1	280	i 5 29a	− 8	i 9 51	−16	6 5	PP	12·6
Stonyhurst		26·9	319	—	—	i 10 45	+25	e 11 27	SS	—
Bergen		27·4	336	—	—	e 10 24	− 4	e 15 35?	?	17·6
San Fernando	E.	27·5	280	—	—	e 10 28	− 2	—	—	—
Aberdeen		28·4	325	—	—	i 10 55	+10	i 19 42	?	—
St. Louis	z.	85·7	317	i 12 39	− 3	—	—	—	—	—
Tucson		101·1	326	e 22 2	?	—	—	—	—	—
Mount Wilson	z.	102·3	332	i 21 59	?	—	—	—	—	—
Palomar	z.	102·7	330	i 21 42a	?	—	—	—	—	—

Additional readings :—
Istanbul readings decreased by 1 minute.
Bucharest eZ = 3m.2s., eE = 4m.16s.
Helwan PPPZ = 1m.59s., jE = 3m.4s., SSE = 3m.42s.
Belgrade e = 3m.15s., 5m.17s., and 6m.15s.
Potsdam ePN = 4m.30s.
Tortosa PPPN = 5m.18s., SSN = 9m.39s.
Kew eSSEZ = 10m.50s. ?
Granada sP = 5m.57s., iP_cP = 9m.20s., sS = 10m.3s., SS = 10m.52s.
Malaga P_cP = 8m.33s.
Stonyhurst 10m.53s., e = 13m.9s., 16m.58s., and 18m.38s.
Long waves were also recorded at Paris.

May 27d. Readings also at 1h. (near La Paz), 4h. (near Mizusawa), 5h. (Tucson, Tinemaha, Palomar, Mount Wilson, Riverside, and Pasadena), 7h. (near Mizusawa), 9h. (Pasadena, Riverside, Mount Wilson, Palomar, Tinemaha, Santa Barbara, La Jolla, Haiwee, Tucson, Riverview, and Stuttgart), 11h. (Stuttgart (5)), 14h. (near Mizusawa), 23h. (Zürich, Stuttgart, Tucson, Mount Wilson, Riverside, Pasadena, Strasbourg, and Istanbul).

May 28d. Readings at 4h. (Riverview and Jena), 5h. (Tucson, Tinemaha, and Palomar), 7h. (Mizusawa), 11h. (Tucson and Palomar), 12h. (Oaxaca), 13h. (near Mizusawa and near Bucharest), 14h. and 15h. (La Paz).

May 29d. 2h. 43m. 16s. Epicentre 5°·0N. 82°·5W. (as on 1943, September 26d.).

$A = +·1300$, $B = -·9877$, $C = +·0866$; $\delta = -5$; $h = +7$;
$D = -·991$, $E = -·131$; $G = +·011$, $H = -·086$, $K = -·996$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Balboa Heights		4·9	35	i 1 16	− 1	e 2 11	− 4	—	—	—
Bogota		8·4	90	i 2 7	+ 1	i 3 42	− 1	i 2 52	P_g	—
Huancayo		18·7	157	e 4 28	+ 6	e 8 4	+16	—	—	e 9·0
San Juan		20·8	48	e 4 40	− 5	e 8 39	+ 6	—	—	e 9·5
La Paz	z.	25·7	146	e 5 34	+ 1	10 57	+56	—	—	15·2
St. Louis		34·2	350	i 6 46	− 3	e 12 12	− 4	e 14 26	SS	—
Chicago		36·9	353	—	—	e 12 43	−15	—	—	e 15·3
Tucson		37·9	319	i 7 20	0	e 15 1	SS	e 8 54	PP	e 32·7
Ottawa		40·7	7	e 7 42	− 2	e 13 44	−11	—	—	19·7
La Jolla		42·6	315	e 7 59	0	—	—	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Palomar		42·6	316	i 8 0a	+ 1	—	—	—	—	—
Riverside	Z.	43·3	316	i 8 5	0	—	—	—	—	—
Mount Wilson		43·9	316	i 8 10a	0	—	—	—	—	—
Pasadena	Z.	44·0	316	i 8 10a	− 1	—	—	—	—	e 21·9
Haiwee		45·0	319	i 8 17	− 2	—	—	—	—	—
Santa Barbara	Z.	45·2	315	i 8 20	0	—	—	—	—	—
Tinemaha		45·7	319	i 8 24a	0	—	—	—	—	—
Rio de Janeiro	N.	47·3	127	e 19 7	SS	—	—	—	—	—
Berkeley		48·8	318	—	—	i 15 49	− 3	—	—	i 24·4
Malaga		77·5	54	i 11 57k	− 2	—	—	12 37	pP	—
Granada		78·2	54	10 30a	?	19 56	?	—	—	33·9
Stuttgart		87·4	42	e 11 51	−59	—	—	—	—	e 44·7

Additional readings :—
Bogota iS* = 4m.9s.
San Juan e = 5m.34s.
St. Louis eSSSE = 15m.4s.
Pasadena eZ = 8m.58s.
Berkeley iE = 15m.52s.
Granada PP = 12m.54s., SS = 24m.26s., SSS = 27m.53s., readings anomalous.
Long waves were also recorded at Kew and Uccle.

May 29d. Readings also at 2h. (La Paz, St. Louis, Tucson, Haiwee, Mount Wilson, Pasadena, Palomar, Riverside, and Tinemaha), 3h. (Huancayo (2), Haiwee, Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, Tucson, Stuttgart, Granada, Christchurch, Wellington (2), and Riverview), 7h. (Brisbane), 8h. (Strasbourg, Jena, near Basle, Chur, Zürich, Ravensburg, Ebingen, and Stuttgart), 11h. (near Apia), 15h. (La Paz, La Plata, Huancayo, St. Louis, Tucson, Mount Wilson, Palomar, Riverside, Tinemaha, Basle, Chur, Stuttgart, Kew, Uccle, Copenhagen, Bucharest, and Helwan), 16h. (Uccle), 20h. (Berkeley and Branner), 22h. (Berkeley), 23h. (near Ottawa, Shawinigan Falls, and Seven Falls).

May 30d. 9h. 56m. 2s. Epicentre 12°·4N. 92°·5E. (as on 1942, October 30d.).

$A = -\cdot0426$, $B = +\cdot9761$, $C = +\cdot2134$; $\delta = +13$; $h = +6$;
$D = +\cdot999$, $E = +\cdot044$; $G = -\cdot009$, $H = +\cdot213$, $K = -977$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Calcutta	N.	10·8	339	e 2 45	+ 6	i 4 41	− 1	—	—	—
Hyderabad		14·4	292	3 31	+ 4	6 0	− 9	—	—	7·1
Kodaikanal	E.	14·9	264	e 3 39	+ 5	—	—	—	—	7·7
Bombay		20·0	292	i 4 38	+ 1	e 8 19	+ 2	i 4 55	PP	—
New Delhi	N.	21·5	322	e 4 50	− 2	i 8 45	− 2	5 9	PP	—
Ksara		55·5	302	e 9 35	− 4	e 18 3	+39	—	—	—
Brisbane	Z.	70·8	125	i 11 3	−17	—	—	—	—	—
Potsdam	E.	73·8	322	e 11 54	+16	e 21 4?	− 5	—	—	—
Copenhagen		74·2	325	i 11 33	− 7	i 21 1	−13	—	—	—
Chur		76·3	316	e 11 43k	− 9	e 21 22	−15	—	—	—
Stuttgart		76·4	318	e 11 45	− 8	e 21 23	−15	i 12 6	pP	—
Zürich		76·9	316	e 11 51	− 5	e 21 26	−17	—	—	—
Strasbourg		77·3	317	e 12 14	+16	—	—	—	—	—
Basle		77·5	316	e 11 58	− 1	e 21 37	−13	—	—	—
De Bilt		78·7	321	e 12 20	+14	—	—	e 15 23	PP	e 42·0
Kew	Z.	82·2	321	i 12 16	− 8	e 22 12	−27	e 15 17	PP	e 46·0
Scoresby Sund		86·2	342	—	—	22 53	[−16]	—	—	—
Tinemaha	Z.	122·9	29	e 18 51	[− 7]	—	—	—	—	—
Haiwee	Z.	123·8	29	i 18 51	[− 9]	—	—	—	—	—
Mount Wilson	Z.	125·3	31	e 18 52	[−11]	—	—	e 20 54	PP	—
Pasadena	Z.	125·3	31	i 19 19	[+16]	—	—	i 21 24	PP	—
Riverside	Z.	125·8	31	i 18 54	[−10]	—	—	—	—	—
Palomar	Z.	126·6	31	e 18 56	[− 9]	—	—	—	—	—
La Jolla	Z.	126·8	32	e 19 22	[+16]	—	—	—	—	—
St. Louis	Z.	129·2	3	e 18 59	[−11]	—	—	e 21 29	PP	—
Tucson		130·7	26	i 19 2	[−11]	—	—	—	—	—
La Paz	Z.	160·8	256	e 20 13	[+11]	—	—	—	—	—

For Notes see next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

NOTES TO MAY 30d. 9h. 56m. 2s.

Additional readings :—
Hyderabad SN = 6m.6s.
Bombay iPPPE = 5m.6s., iPPPN = 5m.11s., iE = 8m.29s., iSSN = 8m.35s., iSSSN = 9m.2s., iE = 9m.10s.
New Delhi PPPN = 5m.22s., SSN = 9m.23s.
Potsdam eN = 11m.58s.?, eE = 12m.7s.
Copenhagen i = 11m.55s.
Chur i = 12m.7s.
Stuttgart ePPZ = 14m.37s., esS = 21m.58s.
Strasbourg e = 13m.47s.
Basle e = 12m.14s.
Kew iPPZ = 12m.38s., ePPPZ = 15m.17s., eSSS?Z = 33m.58s.? ; phases wrongly identified.
Tinemaha iZ = 19m.15s.
Haiwee iZ = 19m.15s.
Mount Wilson iZ = 19m.18s.
Riverside iZ = 19m.19s.
Palomar eZ = 19m.18s.
Tucson i = 19m.32s. and 19m.40s.

May 30d. Readings also at 3h. (Haiwee, La Jolla, Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, Tucson, and St. Louis), 5h. (Christchurch, Kaimata, Auckland, near Wellington, New Plymouth, and Tuai), 9h. (near Ksara), 12h. (near Mizusawa), 13h. (Tucson, Mount Wilson, Palomar, and Tinemaha), 14h. (Wellington), 18h. (Cheb, De Bilt, Stuttgart, Kew, Helwan, and Ksara).

May 31d. Readings at 3h. (Stuttgart), 5h. (near La Paz), 9h. (Wellington), 10h. (La Paz, La Plata, and Wellington), 11h. (Haiwee, Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, Tucson, St. Louis, and near Mizusawa), 13h. (Ksara), 15h. (La Plata, Kew, Jena, and Stuttgart), 17h. (New Delhi and near Istanbul), 23h. (near Berkeley).

June 1d. Readings at 7h. (La Paz), 15h. (Christchurch, Kaimata, Wellington, and Riverview), 20h. (La Paz), 21h. (near Bogota), 23h. (Tananarive).

June 2d. 2h. 26m. 36s. Epicentre 40°·9N. 142°·7E. Focus at base of superficial layers. (as on 1944, March 10d.).

Intensity V at Kadobetsu, Urehoro, and Hokkaido ; IV at Obihiro, Hatinohe, and Miyako. Epicentre 40°·9N. 147°·6E. Depth 50km. Macroseismic radius 200-300km.
Seismological Bulletin of Central Meteorological Observatory, Japan, 1944. Tokyo, 1951, with isoseismic chart.

$A = -\cdot6030$, $B = +\cdot4594$, $C = +\cdot6522$; $\delta = +2$; $h = -2$;
$D = +\cdot606$, $E = +\cdot795$; $G = -\cdot519$, $H = +\cdot395$, $K = -\cdot758$.

	△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
	°	°	m. s.	s.	m. s.	s.	m. s.		m.
Hatinohe	0·9	247	0 15k	− 1	0 26	− 2	—	—	—
Miyako	1·4	203	0 22	− 1	0 38	− 3	—	—	—
Morioka	1·7	224	0 29k	+ 1	0 49	0	—	—	—
Mizusawa	2·1	214	i 0 37	+ 4	i 1 ·1	+ 2	0 40	P_g	—
Akita	2·3	239	0 33	− 3	1 6	+ 2	—	—	—
Sapporo	2·4	235	0 37k	− 1	1 3	− 3	—	—	—
Sendai	3·0	208	0 45	− 1	1 19	− 3	—	—	—
Nemuro	3·2	41	0 50	+ 1	1 21	− 6	—	—	—
Hukusima	3·6	209	0 56	+ 1	1 31	− 6	—	—	—
Onahama	4·2	200	1 21	+18	2 6	+14	—	—	—
Mito	4·8	202	1 13	+ 1	—	—	—	—	—
Utunomiya	4·9	208	1 14	+ 1	—	—	—	—	—
Kakioka	5·1	204	1 14	− 2	2 25	+10	—	—	—
Tukubasan	5·1	204	1 17	+ 1	2 13	− 2	—	—	—
Maebasi	5·3	214	1 22	+ 3	2 39	+19	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Nagano		5·5	221	1 24	+ 2	2 54	+29	—	—	—
Tokyo		5·7	205	2 24	+60	—	—	—	—	—
Wazima		5·7	234	1 25	+ 1	2 34	+ 4	—	—	—
Yokohama		5·9	204	1 49	+22	2 55	+20	—	—	—
Hunatu		6·2	211	1 38	+ 6	2 58	+16	—	—	—
Misima		6·5	208	1 39	+ 3	3 23	+33	—	—	—
Shizuoka		6·8	211	1 49	+ 9	3 6	+ 9	—	—	—
Gihu		7·2	222	1 45	− 1	3 16	+ 9	—	—	—
Kobe		8·6	226	2 13	+ 8	3 45	+ 3	—	—	—
Sumoto		9·0	226	2 24	+13	—	—	—	—	—
Hukuoka		12·2	237	2 57	+ 3	—	—	—	—	—
Kumamoto		12·5	234	2 57	− 1	—	—	—	—	—
Brisbane	N.	68·7	170	—	—	e 28 32	?	e 29 6	Q	—
Mount Wilson	Z.	74·7	58	e 11 36	− 2	—	—	—	—	—
Pasadena	Z.	74·7	58	e 11 36	− 2	—	—	—	—	—
Riverview		74·8	173	—	—	—	—	e 31 44	?	i 34·5
Copenhagen		74·9	334	e 11 36	− 3	—	—	—	—	—
Riverside	Z.	75·3	58	e 11 40	− 2	—	—	—	—	—
Palomar	Z.	76·0	58	i 11 59	+13	—	—	—	—	—
Tucson		80·5	56	e 12 9	− 1	—	—	—	—	—
Stuttgart		81·7	331	e 12 13a	− 4	e 23 6	+41	—	—	e 43·4
St. Louis	E.	87·3	39	—	—	e 23 18	− 3	—	—	—
Granada		96·4	333	17 34k	PP	28 0	?	—	—	52·3

Additional readings :—
Mount Wilson iZ = 11m.52s., eZ = 12m.8s.
Pasadena eZ = 11m.51s.
Riverview iE = 32m.22s.
Copenhagen e = 11m.51s.
Riverside eZ = 11m.53s.
Tucson i = 12m.25s. and 12m.29s.
Stuttgart eZ = 12m.29s.
Long waves were also recorded at De Bilt, Uccle, and Kew.

June 2d. Readings also at 0h. (Bombay, Stuttgart, Granada, Palomar, and Tucson), 2h. (Ksara and near Berkeley), 3h. (Stuttgart), 4h. (Stuttgart, Scoresby Sund, and near Reykjavik), 5h. (Granada and Reykjavik), 6h. (Mount Wilson, Pasadena, Palomar, Riverside, and Tucson), 8h. (Mount Wilson (2), Pasadena (2), Palomar, Riverside, Tucson (2) and Stuttgart (2)), 9h. (Granada and Kew), 12h. (Bogota), 18h. (near Branner), 23h. (Clermont-Ferrand, De Bilt, Kew, Uccle, San Fernando, Granada, and Tortosa).

June 3d. 4h. 10m. 31s. Epicentre 30 ·6N. 139°·7E. Depth of focus 0·060.
(as on 1941, October 30d.).

Intensity II-III at Osima, Tukubasan, Kakioka. Macroseismic radius greater than 300km. Depth 330km.
Epicentre 30°·2N., 139°·6E.
See Seismological Bulletin of the Central Meteorological Observatory, Japan, for the year 1944, p. 10. Tokyo, 1951. Isoseismic chart, p. 10.

$A = -·6576$, $B = +·5577$, $C = +·5065$; $\delta = +1$; $h = +1$;
$D = +·647$, $E = +·763$; $G = -386$, $H = +·328$, $K = -·862$.

	△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
	°	°	m. s.	s.	m. s.	s.	m. s.		m.
Osima	4·2	357	1 15a	0	2 14	0	—	—	—
Omaesaki	4·2	342	1 16	+ 1	2 15	+ 1	—	—	—
Mera	4·3	2	1 16	0	2 18	+ 2	—	—	—
Siomisaki	4·4	311	1 15	− 2	2 12	− 6	—	—	—
Hamamatu	4·4	339	1 16	− 1	2 18	0	—	—	—
Shizuoka	4·5	344	1 18	0	2 19	− 1	—	—	—
Misima	4·6	352	1 19	0	2 20	− 2	—	—	—
Owase	4·6	320	1 18	− 1	2 17	− 5	—	—	—
Yokohama	4·8	359	1 24	+ 3	2 31	+ 6	—	—	—
Hunatu	4·9	351	1 2a	−20	2 6	−21	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Kameyama		5·0	328	1 47	+24	2 31	+ 2	—	—	—
Tokyo		5·1	1	1 24	0	2 30	0	—	—	—
Nagoya		5·1	334	1 25	+ 1	2 31	+ 1	—	—	—
Wakayama		5·3	315	1 24a	− 2	2 29	− 5	—	—	—
Muroto		5·4	301	1 23	− 4	2 26	−10	—	—	—
Gihu		5·4	334	1 28a	+ 1	2 38	+ 2	—	—	—
Hikone		5·5	329	1 28a	0	2 37	− 1	—	—	—
Sumoto		5·5	314	1 26	− 2	2 32	− 6	—	—	—
Kumagaya		5·5	357	1 56a	+28	3 2	+24	—	—	—
Tukubasan		5·6	4	1 29	− 1	2 40	0	—	—	—
Kobe		5·6	318	1 27a	− 3	2 36	− 4	—	—	—
Kakioka		5·6	4	1 35	+ 5	2 44	+ 4	—	—	—
Maebasi		5·8	355	1 39	+ 7	2 45	+ 1	—	—	—
Mito		5·8	6	1 32	0	2 46	+ 2	—	—	—
Utunomiya		5·9	2	1 31k	− 2	2 44	− 2	—	—	—
Koti		6·0	301	1 31a	− 3	2 41	− 6	—	—	—
Nagano		6·2	349	1 35a	− 1	2 52	+ 1	—	—	—
Toyooka		6·4	322	1 35	− 3	2 41	−14	—	—	—
Toyama		6·4	342	1 17	−21	2 59	+ 4	—	—	—
Miyazaki		7·2	283	1 42	− 5	3 4	− 8	—	—	—
Wazima		7·3	341	1 45	− 3	3 11	− 3	—	—	—
Aikawa		7·5	350	1 49	− 1	3 15	− 3	—	—	—
Hamada		7·5	305	1 46	− 4	3 17	− 1	—	—	—
Sendai		7·7	7	1 53	0	3 23	+ 1	—	—	—
Kagosima		7·9	279	1 48	− 7	3 19	− 7	—	—	—
Hukuoka		8·4	293	1 56	− 5	3 31	− 5	—	—	—
Mizusawa	E.	8·6	8	i 2 5	+ 2	i 3 42	+ 2	—	—	—
Tomie		9·6	285	2 5	− 9	3 46	−15	—	—	—
Sapporo		12·5	7	2 48	+ 1	5 4	+ 3	—	—	—
New Delhi		53·8	284	e 10 43	PP	21 35	SSS	i 18 4	?	—
Brisbane	Z.	59·1	165	i 9 18	− 3	—	—	—	—	—
Riverview	Z.	65·0	169	i 10 0	+ 1	—	—	—	—	—
Berkeley	Z.	77·6	54	i 11 16	+ 3	i 20 31	+ 2	—	—	—
Scoresby Sund		78·3	354	11 19	+ 2	20 43	+ 6	12 47	pP	—
Tinemaha		80·8	53	i 11 35	+ 5	e 21 11	+ 8	i 13 7	pP	—
Haiwee		81·5	53	i 11 39	+ 5	—	—	—	—	—
Mount Wilson	Z.	82·4	55	i 11 43k	+ 5	—	—	i 13 14	pP	—
Pasadena		82·4	55	i 11 42	+ 4	i 21 26	+ 7	e 13 15	pP	—
Riverside		83·0	55	i 11 45	+ 4	—	—	i 13 14	pP	—
Copenhagen		83·0	333	e 11 41	0	i 21 24	− 1	—	—	—
Palomar		83·7	54	i 11 49	+ 4	e 21 32	0	e 13 16	pP	—
Tucson		88·5	53	e 12 12	+ 4	e 22 6	−11	e 13 45	pP	e 47·9
De Bilt		88·5	334	i 12 7	− 1	e 23 23	+66	e 25 3	PPS	e 44·5
Stuttgart		89·5	329	e 12 10k	− 2	e 22 24	− 2	e 13 43	pP	—
Uccle	N.	89·9	334	—	—	e 22 5	−24	e 28 38	SS	44·5
Kew		91·0	36	—	—	i 23 51	?	e 26 32	PPS	e 45·5
Florissant		96·7	37	i 16 52	PP	i 22 47	[+ 6]	e 18 10	pPP	—
St. Louis	E.	96·9	37	—	—	i 22 47	[+ 4]	—	—	—
Ottawa		97·8	24	e 14 27	pP	(22 49)	[+ 2]	—	—	22·8
Granada		104·3	330	e 29 59	PS	35 29	SS	—	—	55·3
La Paz		151·0	66	19 19	[+21]	—	—	—	—	—

Additional readings :—
Berkeley iSE =20m.39s.
Tinemaha ePKPPKPZ =38m.45s.
Mount Wilson iZ =11m.51s., iPPZ =14m.32s.
Pasadena ePPZ =14m.33s., eZ =41m.53s.
Palomar esPZ =13m.49s.
Tucson ePP =15m.50s., e =23m.35s.
Stuttgart eSKS =22m.2s., eS =22m.29s., eSPZ =23m.29s., e =25m.5s., eSS =28m.29s.
Florissant eSE =23m.36s., eE =25m.43s.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 3d. 7h. 12m. 15s. Epicentre 20°·2N. 63°·3W.

A = +·4220, B = −·8391, C = +·3432; δ = −4; h = +5;
D = −·893, E = −·449; G = +·154, H = −·307, K = −·939.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
San Juan		3·2	237	i 0 49	− 3	i 1 23	− 9	—	—	i 2·0
Bermuda		12·2	353	e 2 45	−13	—	—	—	—	e 5·1
Bogota		18·7	217	e 4 18	− 4	i 7 54	+ 6	e 8 22	SSS	—
Philadelphia		22·2	337	i 5 2	+ 2	e 8 59	− 1	e 9 52	SSS	e 11·0
Fordham		22·5	339	e 5 3	+ 1	i 9 12	+ 7	i 5 13	PP	—
Weston		23·1	346	e 5 9	+ 1	e 9 15	− 1	—	—	—
Ottawa		27·1	341	e 5 46	0	(e 10 33)	+ 9	—	—	e 10·6
Chicago		29·4	322	—	—	e 11 6	+ 5	—	—	e 15·0
St. Louis		29·6	315	e 6 9	0	—	—	e 6 53	PP	e 14·1
Tucson		44·0	297	i 8 11	0	—	—	e 10 2	PP	e 24·6
Palomar		49·1	298	i 8 50k	− 1	—	—	—	—	—
Riverside	z.	49·5	299	i 8 54k	0	—	—	i 10 17	PcP	—
Mount Wilson	z.	50·1	299	i 8 58k	− 1	—	—	i 10 17	PcP	—
Pasadena		50·2	299	i 8 59	− 1	—	—	e 10 17	PcP	e 36·3
Tinemaha		50·4	302	i 9 1	0	—	—	i 10 18	PcP	—
Basle		62·5	47	e 10 35	+ 7	—	—	—	—	—
Stuttgart	z.	63·6	45	e 10 34	− 1	—	—	e 11 7	PcP	—
Chur		63·9	47	e 10 33	− 4	—	—	—	—	—

Additional readings :—
Bogota i = 4m.22s., e = 7m.39s.
Philadelphia eS = 9m.2s.
Tucson e = 8m.25s.
Long waves were also recorded at Florissant and De Bilt.

June 3d. 11h. 41m. 19s. Epicentre 31°·6N. 141°·7E. Depth of focus 0·010.
(as on 1942 Dec. 27d.).

A = −·6696, B = +·5289, C = +·5214; δ = −4; h = +1;
D = +·620, E = +·785; G = −·409, H = +·323, K = −·853.

		Δ	Az.	P.	O−C.	S.	O−C.	L.
		°	°	m. s.	s.	m. s.	s.	m.
Mera		3·7	335	1 20	+24	—	—	—
Osima		3·7	329	0 58	+ 2	2 2	+23	—
Misima		4·2	327	e 1 5	+ 2	1 59	+ 8	—
Yokohama		4·2	337	1 10	+ 7	2 3	+12	—
Shizuoka		4·3	321	e 0 45	−20	2 2	+ 8	—
Tokyo		4·4	339	e 1 4	− 2	—	—	—
Hunatu		4·6	328	0 45	−24	—	—	—
Tukubasan		4·8	344	e 1 6	− 5	—	—	—
Siomisaki		5·3	291	e 1 13	− 5	—	—	—
Onahama		5·4	353	e 1 37	+17	2 41	+20	—
Gihu		5·6	314	e 1 17	− 5	—	—	—
Nagano		5·8	331	1 28	+ 3	2 51	+20	—
Hikone		5·8	311	e 1 19	− 6	—	—	—
Hukusima		6·2	351	1 34	+ 4	2 41	0	—
Kobe		6·3	301	1 29	− 3	—	—	—
Toyama		6·3	325	1 34	+ 2	2 55	+12	—
Mizusawa	E.	7·5	357	e 1 47	− 1	3 8	− 4	—
Morioka		8·1	357	e 1 57	0	3 30	+ 3	—
Tinemaha	z.	78·8	53	e 11 54	0	—	—	—
Mount Wilson	z.	80·4	55	e 12 4	0	—	—	—
Pasadena	z.	80·4	55	e 12 4	+ 2	—	—	e 41·0
Riverside	z.	81·0	55	e 12 6	0	—	—	—
Palomar	z.	81·7	55	e 12 9	0	—	—	—
Tucson		86·6	53	e 12 33	− 1	e 24 20	PS	e 44·9
Stuttgart		89·4	330	e 12 46	− 1	e 23 37	+10	—
Helwan	N.	89·9	305	—	—	e 23 47	+16	—

Additional readings :—
Mizusaawa SN = 3m.3s.
Long waves were also recorded at New Delhi, De Bilt, Uccle, Kew, and Granada.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 3d. Readings also at 1h. (Riverside, Mount Wilson, Pasadena, Tucson (2), Florissant, and St. Louis), 2h. (Pasadena), 3h. (La Paz), 8h. (Riverside, Mount Wilson, Pasadena, Christchurch, Wellington, Sydney, Riverview, and Brisbane (2)), 9h. (Stuttgart), 10h. (Stuttgart, Pasadena, Mount Wilson, Riverside, Tinemaha, Palomar, and Tucson), 11h. and 13h. (Kodaikanal), 14h. (near Reykjavik), 15h. (Pasadena, Mount Wilson, Riverside, Tinemaha, Palomar, Tucson, Bogota, near La Paz, Huancayo, and near Alicante), 16h. (Kodaikanal and St. Louis), 18h. (Reykjavik), 19h. (near Apia), 20h. (New Delhi and Stuttgart), 22h. (Berkeley), 23h. (near Lick and Branner).

June 4d. 13h. Undetermined shock.

Pasadena suggests deep focus.
Tinemaha ePZ =35m.32s., iZ =35m.53s. and 36m.25s.
Mount Wilson ePZ =35m.45s.
Pasadena ePZ =35m.45s., iZ =35m.53s. and 36m.2s.
Riverside eP?Z =35m.56s., iZ =36m.6s.
Palomar iPZ =36m.3s., iZ =36m.11s.
Tucson eP =36m.24s., i =36m.44s.
College eS =36m.42s., eL =39m.33s.
Copenhagen eP =36m.51s., S =46m., L =64m.
Stuttgart eP?Z =37m.32s., eS? =47m.24s., eQ =65m.48s.?, eR =69m.48s.
Kew eZ =37m.35s.?, 45m.55s.?, and 57m.0s., eLNZ =66m.
Helwan ePZ =38m.28s., eN =49m.6s.
St. Louis iSE =46m.20s., eL?E =59m.
Granada i =49m.38s., e =57m.42s., L =75m.
New Delhi eN =60m.56s.
Prague e =62m.12s. and 65m.6s., eL =68m.
Upsala eE =63m.?, eN =64m.?, eE =67m.?.
Long waves were also recorded at De Bilt, Potsdam, Clermont-Ferrand, San Fernando, Florissant, and Bombay.

June 4d. 19h. Undetermined shock.

Mizusawa ePE =40m.44s., SE =44m.50s.
Sitka e =44m.12s. and 49m.34s., eL =57m.33s.
Tinemaha ePZ =46m.20s., i =46m.38s., iZ =47m.2s.
Scoresby Sund P =46m.25s., 53m.54s.
Mount Wilson ePZ =46m.39s., iZ =46m.44s.
Pasadena ePZ =46m.41s., eLZ =64·5m.
Riverside eP?Z =46m.47s.
Palomar iPNZ =47m.0s., iZ =47m.34s.
Tucson ePZ =47m.12s., i =47m.20s.
Copenhagen eP =47m.39s., L =72m.
Kew eZ =48m.16s., eLNZ =79m.
Stuttgart ePZ =48m.20s., eS?Z =58m.12s.?, eL =77m.0s.
Chur e =48m.30s.
Granada ePP =51m.11s.a, iS =60m.29s., SS =69m.36s., L =84·8m.
Columbia e =54m.4s., eL =64m.52s.
New Delhi eN =55m.36s., e =71m.41s.
Florissant iSE =57m.6s., eL?E =70m.
St. Louis iSE =57m.8s., eL?E =69·5m.
Uccle e =58m., eL =77m.
Prague e =58m.36s. and 71m.12s., eL =75m.
Long waves were also recorded at Wellington, Bombay, Calcutta, and at other European stations.

June 4d. Readings also at 0h. (Tinemaha, Riverside, Mount Wilson, Palomar, Tucson, Granada, and Stuttgart), 2h. (near Harvard), 6h. (Stuttgart), 7h. (Kew and Stuttgart), 8h. (Palomar, Tinemaha, Riverside, Mount Wilson, Pasadena, Tucson, and Stuttgart), 9h. (Stuttgart, Palomar, Tinemaha, Tucson, Riverside, Mount Wilson, Pasadena, Auckland, Wellington, and Riverview), 10h. (Granada), 12h. (Ksara, Bogota, and near La Paz), 16h. (Stuttgart), 17h. (Stuttgart, Chur, Copenhagen, Pasadena, Tucson, Mount Wilson, Riverside, Tinemaha, and Palomar), 19h. (College), 20h. (Stuttgart, Chur, Copenhagen, Pasadena, Tinemaha, Mount Wilson, Riverside, Tucson, and Palomar), 21h. (near Berkeley), 22h. (Palomar, Riverside, Tinemaha, Tucson, and Pasadena).

June 5d. Readings at 0h. (Mount Wilson, Tucson, Pasadena, Palomar, Riverside, Tinemaha, Copenhagen, and Stuttgart), 1h. (Granada, De Bilt, Uccle, Kew, Prague, St. Louis, Mount Wilson, Pasadena, Palomar, Tucson, Riverside, Tinemaha, Tacubaya, Bogota, and La Paz), 2h. (Stuttgart), 5h. (Mount Wilson, Palomar, Tucson, and Tinemaha), 6h. (Mount Wilson, Tinemaha, Tucson, and near Mizusawa), 7h. (Harvard, Mount Wilson, Palomar, Tucson, Tinemaha, and Mizusawa), 8h. (Mizusawa), 11h. (Bucharest), 12h. (Palomar and Tucson), 14h. (Palomar, Tucson, Riverside, and Tinemaha), 16h. (Tinemaha, Tucson, near Balboa Heights, and near Branner), 19h. (La Plata), 23h. (near Fort de France).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 6d. 3h. Undetermined shock.

Brisbane iPN =49m.11s., ePN =49m.14s., iN =49m.26s., iSN =53m.11s. and 53m.16s., iLN =55m.15s.
Riverview iPNZ =50m.31s.k, iPPNZ =51m.12s., iSN =54m.55s., iSZ =54m.59s., iN =55m.23s., iE =57m.41s., eLZ =58·3m.
Wellington PPZ =54m.4s., P_cS =58m.10s., S =58m.35s., SS =60m.50s., Q =61m.48s., RZ =64m.
Berkeley iPE =57m.11s., iLE =84·8m.
Santa Barbara ePZ =57m.20s.
Pasadena iPZ =57m.24s.a, iLEZ =86·3m.
Mount Wilson iP =57m.25s.a, iZ =57m.48s.
Tinemaha iP =57m.26s.a, iZ =57m.59s.
Riverside iPZ =57m.27s.a, iZ =57m.43s., and 58m.22s., eZ =61m.13s.
Palomar iPEZ =57m.29s.a.
Tucson eP =57m.53s., e =58m.31s., ePP =61m.48s., eL =89m.35s.
Arapuni P_cS? =58m.0s.
Christchurch SEZ =61m.59s., Q =63m.30s., RZ =65m.42s.
Stuttgart eP?Z =63m.22s., eZ =65m.11s., ePP?Z =68m.6s., eS? =75m.0s., eSP?Z =76m.48s.?, eSS? =83m.0s.
Granada iPKP =63m.43s.k, SKP =67m.17s., PP =67m.41s., PPS =80m.35s., eSS =107m.52s., L =117m.0s.
Sitka eS =67m.8s., eL =79m.22s.
New Delhi eN =67m.17s.
St. Louis eSKKSE =70m.55s., eSE =71m.41s., ePSE =73m.32s., eSE =98m.
Scoresby Sund 73m.49s., L =99m.
Long waves were also recorded at Auckland, Sydney, Bermuda, and other European stations.

June 6d. 11h. 48m. 10s. Epicentre 41°·1N. 142°·2E. Depth of focus 0·005.
(as on 1942 Feb. 23d.).

Scale V at Hatinohe; IV at Morioka; II-III at Hakodate, and Ohihiro. Epicentre 41°·3N. 142°·2E., depth 60 km. Radius of macroseismic area greater than 300 km. Seismological Bulletin of the Central Meteorological Observatory, Japan, for the year 1944, Tokyo 1951, p. 11, with isoseismic chart.

A = −·5972, B = +·4632, C = +·6548; δ = −3; h = −2;
D = +·613, E = +·790; G = −·517, H = +·401, K = −·756.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m.	s.	m.
Hatinohe		0·8	222	0 14k	− 3	0 24	− 5	—	—	—
Morioka		1·6	209	0 28k	+ 1	0 48	+ 1	—	—	—
Sapporo		1·8	342	0 34k	+ 4	1 1	+ 9	—	—	—
Akita		2·1	229	0 38	+ 4	1 5	+ 6	—	—	—
Mizusawa	E.	2·1	203	i 0 34	0	i 0 59	0	—	—	—
Sendai		3·0	199	0 44	− 3	1 19	− 3	—	—	—
Nemuro		3·3	48	0 18	−33	0 53	−36	—	—	—
Hukusima		3·6	203	0 53	− 2	1 30	− 7	—	—	—
Onahama		4·3	194	1 54	+49	2 52	+58	—	—	—
Aikawa		4·4	226	1 6	0	1 56	− 1	—	—	—
Mito		4·9	207	1 10	− 3	2 14	+ 5	—	—	—
Kakioka		5·1	198	1 14	− 2	—	—	—	—	—
Tukubasan		5·2	200	1 15	− 2	2 13	− 4	—	—	—
Maebasi		5·3	209	1 16	− 3	—	—	—	—	—
Kumagaya	*	5·4	205	1 19	− 1	2 28	+ 6	—	—	—
Nagano		5·4	217	1 22	+ 2	2 44	+22	—	—	—
Tyosi		5·5	191	1 20	− 1	2 13	−11	—	—	—
Wazima		5·6	230	1 25a	+ 2	2 34	+ 7	—	—	—
Tokyo		5·7	200	1 23	− 1	2 36	+ 7	—	—	—
Toyama		5·9	223	1 29	+ 2	2 27	− 7	—	—	—
Yokohama		6·0	201	1 33	+ 5	2 59	+22	—	—	—
Hunatu		6·2	207	1 34	+ 3	2 42	+ 1	—	—	—
Mera		6·4	198	1 32	− 2	3 7	+21	—	—	—
Misima		6·5	205	1 34	− 1	2 49	0	—	—	—
Osima		6·7	200	1 39	+ 1	2 51	− 3	—	—	—
Shizuoka		6·8	207	1 43	+ 4	2 56	0	—	—	—
Gihu		7·1	219	1 46	+ 2	3 16	+12	—	—	—
Hamamatu		7·3	210	1 49	+ 3	3 37	+28	—	—	—
Hikone		7·5	221	1 49	0	3 21	+ 7	—	—	—
Kameyama		7·7	219	1 55	+ 3	3 36	+17	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Kyoto		7·9	222	1 57	+ 2	—	—	—	—	—
Toyooka		8·0	229	1 58	+ 2	3 34	+ 8	—	—	—
Owase		8·4	216	2 14	+12	—	—	—	—	—
Kobe		8·5	223	2 1	− 2	3 43	+ 5	—	—	—
Wakayama		8·8	221	2 8	+ 1	—	—	—	—	—
Sumoto		8·9	223	2 9	+ 1	4 5	+17	—	—	—
Koti		10·2	225	2 25	− 1	5 7	L	—	—	(5·1)
Kumamoto		12·3	232	2 58	+ 4	—	—	—	—	—
Miyazaki		12·6	227	3 5	+ 7	6 0	L	—	—	(6·0)
Kagosima		13·4	228	3 9k	0	—	—	—	—	—
Tinemaha	z.	73·0	55	i 11 25	0	—	—	i 11 39	pP	—
Haiwee	z.	73·7	56	e 11 29	0	—	—	—	—	—
Copenhagen		74·6	334	11 34	0	—	—	i 11 49	pP	35·8
Mount Wilson	z.	74·9	58	e 11 35	− 1	—	—	i 11 50	pP	—
Pasadena	z.	74·9	58	e 11 37	+ 1	—	—	i 11 50	pP	e 34·4
Riverside	z.	75·5	58	e 11 38	− 1	—	—	e 11 53	pP	—
Palomar		76·2	57	i 11 44	+ 1	—	—	i 11 58	pP	—
Tucson		80·7	55	i 12 8	0	—	—	i 12 24	pP	—
Uccle	N.	81·3	335	e 12 12	+ 1	—	—	e 17 50?	PP	e 47·8
Stuttgart		81·4	331	i 12 12a	+ 1	—	—	i 12 27	pP	e 48·8
Chur		82·8	330	e 12 9	− 9	—	—	—	—	—
Zürich		82·8	331	e 12 16	− 2	—	—	—	—	—
Basle		83·0	331	e 12 20	0	—	—	e 14 18	?	—
Neuchatel		83·7	331	e 12 23	0	—	—	—	—	—
Helwan	z.	84·8	305	i 12 29k	0	—	—	i 12 44	pP	—
Granada		96·0	333	i 17 18k	PP	30 42	SS	17 33	pPP	53·2

Granada gives also SS =35m.0s., true SS reading being given as PS, phases wrongly identified.
Long waves were also recorded at Cheb, De Bilt, and Kew.

June 6d. Readings also at 0h. (Palomar, Pasadena, Riverside, Tinemaha, and near Berkeley), 2h. (near Lick), 7h. (Bucharest), 9h. (Tacubaya), 12h. (near Mizusawa), 13h. (Mount Wilson, Pasadena, Palomar, Riverside, Tucson, and Tinemaha), 15h. (Mount Wilson (2), Tucson (2), Pasadena, Palomar, Riverside, Tinemaha (2), La Paz, and Stuttgart), 18h. (Mount Wilson, Tucson, and Palomar), 19h. (Ksara), 21h. (near Ottawa), 22h. (near Mizusawa), 23h. (Mount Wilson (2), Pasadena (2), Palomar (2), Riverside (2), Tucson (2), Bermuda, San Juan, Bogota, Huancayo La Paz, and Granada).

June 7d. 10h. 15m. 3s. Epicentre 33°·3N. 132°·1E. Depth of focus 0·005.
(as on 1942 Oct. 26d.).

Intensity VI at Oita ; V at Izuka, Tokusima, Kôti ; IV at Okayama, Matsue, and Hamada.
Epicentre 33°·5N. 131°·9E. Macroseismic radius greater than 300 km. Shallow.
Seismological Bulletin of the Central Meteorological Observatory, Japan, for the year 1944, Tokyo 1951, p. 12, Isoseismic chart p.12.

$A = -·5615$, $B = +·6214$, $C = +·5464$; $\delta = -3$; $h = +1$;
$D = +·742$, $E = +·670$; $G = -·366$, $H = +·405$, $K = -·838$.

	Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
	°	°	m. s.	s.	m. s.	s.	m. s.		m.
Simidu	0·9	125	0 17	− 1	0 27	− 4	—	—	—
Hirosima	1·1	15	0 20	0	—	—	—	—	—
Izuka	1·2	287	0 17k	− 5	0 32	− 6	—	—	—
Kôti	1·2	78	0 23a	+ 1	0 40	+ 2	—	—	—
Hukuoka	1·4	281	0 22	− 2	0 45	+ 2	—	—	—
Miyazaki	1·5	202	0 22	− 4	0 42	− 3	—	—	—
Hamada	1·6	359	0 26k	− 1	0 47	0	—	—	—
Muroto	1·7	91	0 28a	0	0 50	0	—	—	—
Unzendake	1·7	250	0 25a	− 3	0 44	− 6	—	—	—
Kagosima	2·2	217	0 31k	− 4	1 12	+10	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Ituhara		2·5	291	0 34 a	− 5	0 55	−14	—	—	—
Sumoto		2·5	66	0 41 a	+ 2	1 10	+ 1	—	—	—
Wakayama		2·7	70	0 43 a	+ 1	1 15	+ 1	—	—	—
Kobe		2·9	62	0 45 a	0	1 18	− 1	—	—	—
Siomisaki		3·1	87	0 46 a	− 2	1 22	− 2	—	—	—
Toyooka		3·2	44	0 49 a	0	1 41	+14	—	—	—
Kyoto		3·5	59	0 53 k	− 1	1 48	+14	—	—	—
Owase		3·5	76	0 54 a	0	1 27	− 7	—	—	—
Hikone		4·0	58	1 2 a	+ 1	1 50	+ 3	—	—	—
Kameyama		4·0	66	1 1	0	1 45	− 2	—	—	—
Gihu		4·4	60	1 7 k	+ 1	—	—	—	—	—
Nagoya		4·4	64	1 9 a	+ 3	2 0	+ 3	—	—	—
Hamamatu		4·9	71	1 14	+ 1	2 11	+ 2	—	—	—
Omaesaki		5·2	74	1 19	+ 2	2 32	+15	—	—	—
Toyama		5·4	49	1 23	+ 3	2 28	+ 6	—	—	—
Shizuoka		5·5	70	1 21	0	2 35	+11	—	—	—
Wazima		5·6	42	1 26 k	+ 3	2 26	− 1	—	—	—
Hunatu		5·9	66	1 29	+ 2	2 38	+ 4	—	—	—
Misima		6·0	70	1 28	0	2 36	− 1	—	—	—
Nagano		6·0	54	1 32	+ 4	2 49	+12	—	—	—
Osima		6·2	74	1 32	+ 1	3 6	+25	—	—	—
Maebasi		6·5	59	1 37	+ 2	3 22	+33	—	—	—
Kumagaya		6·6	62	1 39 a	+ 2	2 55	+ 4	—	—	—
Mera		6·6	73	1 38	+ 1	2 4	−47	—	—	—
Yokohama		6·6	69	1 40	+ 3	3 2	+11	—	—	—
Tokyo		6·8	67	1 45	+ 6	—	—	—	—	—
Aikawa		6·9	45	1 41	0	3 2	+ 3	—	—	—
Kakioka		7·2	64	1 49	+ 4	—	—	—	—	—
Mito		7·5	63	1 48	− 1	—	—	—	—	—
Sendai		8·7	53	2 8	+ 2	3 50	+ 7	—	—	—
Akita		9·1	42	2 32	+21	3 52	− 1	—	—	—
Mizusawa	N.	9·3	49	e 2 20	+ 6	e 4 6	+ 8	—	—	—
Hatinohe		10·4	44	2 32	+ 3	4 30	+ 5	—	—	—
Sapporo		12·2	34	2 58	+ 5	5 1	− 7	—	—	—
New Delhi		46·9	280	—	—	e 15 3	− 8	i 15 38	PPS	—
College		56·2	30	—	—	e 17 20	+ 2	e 17 50	PPS	—
Brisbane		63·6	159	i 10 23 a	− 3	—	—	i 10 39	pP	—
Upsala		72·7	232	—	—	e 28 57?	SSS	e 30 57?	?	—
Bergen		77·0	337	—	—	e 21 31	+ 2	e 39 27	L	(e 39·4)
Copenhagen		77·5	330	i 11 47	− 3	21 32	− 3	—	—	—
Stuttgart		83·8	326	e 12 19 a	− 5	e 22 31	− 9	e 12 38	pP	e 42·7
Tinemaha		84·1	50	e 12 26	+ 1	—	—	e 12 46	pP	—
Uccle		84·4	331	e 10 57?	?	—	—	—	—	e 21·0
Santa Barbara	z.	84·7	52	i 12 50	pP	—	—	—	—	—
Haiwee	z.	84·9	50	i 12 28	− 1	—	—	i 12 47	pP	—
Pasadena	z.	85·9	52	e 12 33	− 1	—	—	i 12 53	pP	—
Mount Wilson	z.	86·0	52	i 12 33	− 2	—	—	i 12 51	pP	—
Riverside	z.	86·6	52	e 12 37	0	—	—	e 12 55	pP	—
La Jolla	z.	87·3	53	e 12 59	pP	—	—	—	—	—
Palomar		87·3	52	i 12 40	− 1	—	—	i 12 59	pP	—
Tucson		91·9	49	i 13 3	+ 1	—	—	e 13 21	pP	—
Granada		98·6	326	i 17 10 a	?	—	—	17 28	PP	50·6

Additional readings :—
New Delhi iN = 18m.4s.
College e = 29m.15s.
Stuttgart ePPZ = 15m.34s., epPP?Z = 15m.52s.
Pasadena ePPZ = 16m.9s.
Palomar ePPEZ = 16m.21s.
Tucson e = 16m.39s. and 17m.2s.
Granada ePP = 21m.29s., ePS = 29m.34s., readings wrongly identified.
Long waves were also recorded at other European stations.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 7d. 12h. 35m. 36s. I
12h. 38m. 24s. II
12h. 49m. 34s. III
} Epicentre 36°·6N. 121°·3W. (as given by Berkeley)

A = −·4181, B = −·6876, C = +·5936 ; δ = −4 ; h = 0 ;
D = −·855, E = +·519 ; G = −·308, H = −·507, K = −·805.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
I	Lick	0·8	339	i 0 18	0	i 0 29	− 2	—	—	i 0·6
II		0·8	339	i 0 17	− 1	i 0 29	− 2	i 0 33	S*	i 0·6
III		0·8	339	e 0 18	0	i 0 29	− 2	—	—	i 0·6
I	Santa Clara	0·9	325	i 0 20	0	i 0 32	− 2	—	—	—
II		0·9	325	e 0 19	− 1	i 0 30	− 4	—	—	—
I	Branner	1·1	319	i 0 23	+ 1	i 0 38	− 1	i 0 26	P*	—
II		1·1	319	i 0 23	+ 1	i 0 38	− 1	—	—	—
III		1·1	319	e 0 23	+ 1	i 0 37	− 2	—	—	—
I	Berkeley	1·5	329	i 0 28	0	e 0 47	− 2	e 0 31	P_g	—
II		1·5	329	i 0 27	− 1	e 0 47	− 2	e 0 30	P_g	—
III	z.	1·5	329	i 0 20	− 8	—	—	i 0 51	S_g	—
I	San Francisco	1·5	322	e 0 29	+ 1	i 0 49	0	—	—	—
II		1·5	322	e 0 30	+ 2	i 0 49	0	i 0 57	S_g	i 2·0

June 7d. Readings also at 0h. (Stuttgart and Kew (2)), 5h. (Mount Wilson, Tucson, Riverside, Pasadena, and Palomar), 6h. (Palomar, Pasadena, Riverside, Mount Wilson, Florissant, Tucson, St. Louis, Weston, Fordham, Bermuda, Bogota, near San Juan, and near Port au Prince), 15h. (Belgrade), 21h. (Tucson), 22h. (Palomar, Tucson, and Riverside).

June 8d. 2h. 38m. 7s. Epicentre 9°·0S. 71°·0W. Depth of focus 0·080.

A = +·3216, B = −·9341, C = −·1554 ; δ = +12 ; h = +7 ;
D = −·945, E = −·326 ; G = −·050, H = +·147, K = −·988.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Huancayo		5·2	235	e 1 30	− 2	i 2 43	− 1	i 2 11	pP	i 2·8
La Paz	z.	8·0	160	e 1 51	− 7	(3 20)	−12	—	—	3·3
Bogota		13·9	347	i 3 9	+11	e 5 47	SS	e 3 54	pP	—
San Juan		27·6	10	—	—	e 9 14	+ 4	—	—	e 12·4
St. Louis		50·7	341	i 8 12	0	i 14 46	0	e 10 4	pP	—
Florissant		50·9	341	i 8 16	+ 3	i 14 51	+ 2	e 17 1	ScS	—
Tucson		55·9	319	i 8 49	+ 1	—	—	i 10 44	pP	—
Palomar		60·6	317	i 9 20	0	—	—	i 11 18	pP	—
Riverside	z.	61·3	317	i 9 25	0	—	—	i 11 23	pP	—
Mount Wilson	z.	61·9	317	i 9 30k	+ 1	—	—	i 11 28	pP	—
Pasadena		62·0	317	i 9 29	0	e 17 13	+ 1	e 11 27	pP	—
Tinemaha		63·7	319	e 9 42	+ 2	—	—	—	—	—
Granada		77·9	49	i 11 4a	+ 1	21 13	+61	13 6	pP	—

Additional readings :—
Huancayo i = 2m.18s.
St. Louis iP_cPZ = 9m.16s., eS_cSN = 16m.59s., eE = 18m.32s.
Tucson iP_cP = 9m.36s., i = 10m.10s.
Palomar iP_cP = 9m.55s.
Riverside iP_cPZ = 9m.57s., iZ = 10m.40s.
Mount Wilson iP_cPZ = 10m.0s.
Pasadena iP_cPZ = 10m.1s., eS_cSE = 18m.19s.

June 8d. Readings also at 1h. (near Branner and Lick (2)), 3h. (Granada), 7h. (Riverview), 8h. (Huancayo, near Branner, Berkeley, and Lick), 10h. (Granada), 11h. (Kew, De Bilt, Potsdam, Strasbourg, Stuttgart, Cheb, Bucharest, Belgrade, and near Mizusawa), 14h. (Brisbane), 15h. (La Plata, Palomar, Riverside, Tucson, Mount Wilson, Pasadena, and St. Louis), 16h. (near Alicante), 17h. (near Ottawa), 18h. (near Branner), 21h. (Stuttgart (3), Riverview (2), Christchurch, near Apia and near Berkeley (2)), 22h. (Granada and Tananarive).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 9d. 20h. 34m. 39s. Epicentre 3°·2S. 143°·7E. (as on 1940 Sept. 19d.).

$A = -\cdot8047$, $B = +\cdot5911$, $C = -\cdot0555$; $\delta = +2$; $h = +7$;
$D = +\cdot592$, $E = +\cdot806$; $G = +\cdot045$, $H = -\cdot033$, $K = -\cdot998$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Riverview		31·3	168	(i 6 24)	0	(i 11 19)	−12	—	—	e 14·6
Sydney		31·3	168	—	—	e 11 15	−16	e 13 39	SS	19·4
Miyazaki		36·8	343	e 7 17	+ 6	e 13 2	+ 6	—	—	—
Muroto		37·2	347	e 6 53	−22	—	—	—	—	—
Mera		38·1	356	7 21	− 1	—	—	—	—	—
Shizuoka		38·3	354	e 6 39	−45	13 21	+ 2	—	—	—
Kobe		38·6	350	7 31	+ 5	13 9	−14	—	—	—
Yokohama		38·6	355	7 42	+16	13 23	0	—	—	21·4
Hukuoka		38·7	342	e 7 22	− 5	—	—	(e 15 3)	SS	e 15·0
Hunatu		38·8	354	e 7 24	− 4	13 20	− 6	—	—	—
Tokyo		38·8	355	e 7 45	+17	—	—	—	—	e 16·9
Perth		38·8	219	—	—	i 13 31	+ 5	—	—	—
Gihu		38·9	352	e 7 34	+ 5	13 33	+ 5	—	—	—
Hikone		38·9	352	e 6 55	−34	—	—	—	—	—
Kumagaya		39·3	355	7 27	− 5	13 16	−18	—	—	—
Toyooka		39·4	350	e 6 16	?	—	—	—	—	—
Nagano		40·0	354	7 39	+ 1	—	—	—	—	—
Sendai		41·3	358	e 7 44	− 5	13 59	− 5	17 9	SS	—
Aikawa		41·8	355	e 7 48	− 5	(14 6)	− 5	—	—	14·1
Mizusawa	E.	42·2	358	e 7 56	0	e 14 14	− 3	—	—	—
	N.	42·2	358	e 7 51	− 5	14 17	0	—	—	—
Auckland		44·0	143	8 21?	+10	14 51	+ 8	17 21	SS	21·0
Arapuni		45·4	144	—	—	15 21	+17	—	—	20·4
Sapporo		46·1	358	e 8 30	+ 2	15 19	+ 5	—	—	—
Wellington		47·1	148	8 26	− 9	15 6	−22	10 16	PP	21·4
Christchurch		47·6	152	—	—	15 14	−21	19 4	SS	22·8
Honolulu		62·2	64	e 10 28	+ 2	e 18 39	−12	e 19 59	PPS	e 25·8
Colombo	E.	64·5	279	10 42	+ 1	19 26	+ 7	—	—	—
Kodaikanal	E.	67·3	283	e 11 6	+ 7	i 20 16	+22	24 31	SS	—
Hyderabad	N.	67·5	291	—	—	20 10	+14	—	—	—
New Delhi	N.	71·1	302	e 11 26	+ 4	i 20 51	+13	21 23	PS	—
Bombay		73·0	291	e 11 39	+ 6	i 21 9	+ 9	21 48	PS	—
College		83·9	24	e 12 46	+13	e 22 47	− 9	28 8	SS	e 34·8
Sitka		87·7	32	e 12 53	+ 1	e 23 16	[− 3]	e 24 52	PS	e 36·2
Victoria		94·3	42	—	—	e 24 33	+ 1	e 39 21?	Q	—
Ukiah		94·4	50	—	—	e 25 43	PS	e 30 23	SS	e 42·6
Berkeley		95·1	52	i 12 41	−45	i 23 57	[− 5]	i 25 45	PS	e 42·4
Santa Clara		95·4	52	i 25 23	S	(i 25 23)	+41	e 31 22	SS	e 43·4
Tinemaha	z.	98·3	53	e 13 44	+ 3	—	—	—	—	—
Pasadena		98·5	56	e 13 42	0	—	—	—	—	e 43·2
Mount Wilson	z.	98·6	56	e 13 37	− 5	—	—	—	—	—
Riverside	z.	99·2	56	e 13 39	− 6	—	—	—	—	—
Palomar	z.	99·6	57	e 13 42	− 4	—	—	—	—	—
Salt Lake City		103·0	48	e 31 4	?	e 33 5	SS	e 44 10	Q	e 46·7
Saskatoon		104·5	37	—	—	e 25 27	{+ 1}	—	—	43·4
Tucson		104·8	58	e 14 36	+26	e 27 34	PS	e 18 18	PP	e 46·7
Ksara		106·6	303	e 18 26	PP	e 25 7	[+10]	—	—	—
Rapid City		108·7	44	e 18 47	PP	e 28 8	PS	—	—	e 55·0
Upsala		110·2	334	e 23 21?	?	e 26 21?	{+15}	—	—	e 50·4
Helwan	N.	110·9	300	e 23 27	?	e 29 57	PPS	e 34 45	SS	—
Bucharest		111·7	317	e 19 27	PP	e 25 25	[+ 6]	e 21 25	PPP	60·4
Scoresby Sund		112·2	355	19 21	PP	—	—	—	—	—
Copenhagen		114·7	332	19 43	PP	35 46	SS	—	—	—
Bergen		114·8	338	—	—	e 26 21?	{−18}	—	—	53·8
Potsdam		116·7	329	—	—	e 29 33	PS	—	—	e 57·4
Prague		116·7	326	e 19 23	PP	e 22 51	PKS	e 29 33	PS	e 47·4

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.			L.
		°	°	m. s.	s.	m. s.	s.	m. s.			m.
Cheb		117·9	326	e 20 13	PP	e 22 39	PKS	e 31 34		PPS	e 58·4
Florissant		119·5	46	e 20 4	PP	e 35 33	SS	e 31 13		PPS	—
St. Louis		119·7	46	e 20 5	PP	e 25 45	[− 4]	e 36 16		SS	—
Aberdeen		119·8	338	—	—	e 30 6	PS	54 51		Q	63·7
Chicago		120·2	42	—	—	e 27 31	{+16}	e 41 4		SSS	e 57·6
De Bilt		120·3	331	—	—	e 30 21?	PS	—		—	e 54·4
Stuttgart		120·3	326	e 19 11	[+18]	e 30 3	PS	e 20 23		PP	e 64·8
Uccle		121·6	331	e 20 32	PP	e 23 9	PPP	e 41 21?		SSS	—
Stonyhurst		122·4	336	—	—	—	—	e 48 21?		Q	e 59·4
Kew		123·3	333	e 20 25	PP	e 30 41	PS	20 46		pPP	e 56·4
Clermont-Ferrand		125·4	327	—	—	e 27 27	{−23}	—		—	e 57·4
Ottawa		125·7	32	e 20 51	PP	e 27 9	{−43}	e 37 51		SS	55·4
Seven Falls		127·0	27	e 24 3	PPP	—	—	—		—	56·4
Vermont		127·6	33	—	—	e 26 49	[+36]	—		—	e 56·5
Columbia		128·3	47	—	—	e 28 19	{+10}	e 37 53		SS	e 50·6
Philadelphia		129·3	37	e 19 35	[+24]	e 31 17	PS	e 38 9		SS	54·0
Fordham		129·5	35	e 21 2	PP	—	—	e 38 54		SS	e 62·4
Weston		130·0	32	—	—	e 38 37	SS	—		—	—
Tortosa		130·0	323	e 21 29	PP	—	—	e 23 6		PKS	e 69·4
Granada		134·8	322	i 24 9	PPP	44 11	SSS	67 9		Q	75·8
Lisbon		136·8	328	—	—	45 40	SSS	63 21?		Q	76·6
San Fernando		136·8	323	e 19 26	[+ 1]	—	—	e 23 44		PKS	63·4
Huancayo		138·6	111	e 23 16	PKS	—	—	e 40 59		SS	e 63·1
Bermuda		140·6	39	e 20 46	?	e 27 1	[+21]	e 22 21		PP	e 59·6
La Paz	z.	143·0	123	19 51	[+15]	—	—	23 1		PP	66·4
San Juan		147·1	60	e 19 40	[− 3]	e 41 59	SS	e 23 19		PP	e 67·6

Additional readings :—
Riverview iZ = 11m.49s., iN = 14m.39s.; phases wrongly identified and confused with earlier shock.
Sydney e = 16m.39s.
Auckland i = 15m.6s., i = 19m.41s.
Wellington pPP?Z = 10m.41s., iZ = 11m.53s., S_cP?Z = 13m.21s., iZ = 16m.24s., Q = 19m.3s.
Christchurch QN = 20m.4s.
New Delhi SSN = 25m.26s.
Bombay eSN = 21m.15s., SSN = 25m.48s.
College e = 23m.33s., eSSS = 31m.46s.
Sitka e = 14m.3s., eSS = 28m.54s., e = 29m.32s.
Ukiah e = 31m.26s.
Berkeley iE = 25m.49s. and 30m.57s.
Helwan eN = 32m.24s. and 33m.41s.
Prague e = 21m.47s., 32m.9s., and 34m.33s.
St. Louis ePPS?E = 31m.14s.
Chicago e = 32m.48s. and 34m.55s.
Stuttgart eQ = 60m.57s.
Kew esPP?Z = 21m.6s., eZ = 21m.51s., ePKPZ = 22m.24s., epPKP?Z = 23m.38s., esPKPZ = 23m.46s., eSKKSZ = 32m.31s., ePPS? = 37m.38s., eSSN = 42m.6s.?; phases wrongly identified.
Columbia e = 46m.15s.
Philadelphia e = 32m.34s. and 49m.37s.
Granada PPS? = 38m.18s.
Bermuda e = 31m.43s. and 34m.54s.
San Juan e = 30m.39s., 40m.13s., and 54m.26s.
Long waves were also recorded at Jena and Paris.

June 9d. Readings also at 10h. (Branner and near Lick), 14h. (near Almeria), 15h. (near Ottawa and Seven Falls), 20h. (Brisbane (2), Riverview, Perth, La Paz, Stuttgart, and near Berkeley), 22h. (Basle).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 10d. 11h. 11m. 47s. Epicentre 33°·9N. 116°·7W. (as on 1943, November 17d.).

Intensity V at Banning, Cabazon, and Keen Camp ; IV at Elsinore, Indio, and Wildmar.
Epicentre 33° 58′N. 116° 48′W.
R. R. Bodle.
United States Earthquakes, 1944, Washington, 1946, p. 16.

$A = -\cdot3737$, $B = -\cdot7431$, $C = +\cdot5552$; $\delta = +10$; $h = +1$;
$D = -\cdot893$, $E = +\cdot449$; $G = -\cdot249$, $H = -\cdot496$, $K = -\cdot832$.

	△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
	°	°	m. s.	s.	m. s.	s.	m. s.		m.
Riverside	0·5	280	i 0 13a	− 1	i 0 20	− 3	—	—	—
Palomar	0·6	194	i 0 16	+ 1	—	—	—	—	—
La Jolla	1·1	204	i 0 25k	+ 3	i 0 40	+ 1	—	—	—
Mount Wilson	1·2	287	i 0 23a	− 1	i 0 37	− 4	—	—	—
Pasadena	1·3	282	i 0 24a	− 1	i 0 40	− 4	—	—	—
Haiwee	2·5	335	i 0 41a	− 2	i 1 16	+ 2	—	—	—
Tinemaha	3·4	339	i 0 55	0	i 1 48	+11	—	—	—
Tucson	5·2	107	e 1 20	− 1	e 2 30	+ 8	i 1 44	P_g	i 2·8
Lick	5·3	312	e 1 25	+ 3	e 2 46	S*	—	—	—
Branner	5·7	310	e 1 57	P_g	i 3 7	S_g	—	—	—

Tucson gives also e = 1m.40s.

June 10d. 14h. 23m. 52s. Epicentre 1°·2N. 28°·4W. (as on 1937, August 24d.).

$A = +\cdot8795$, $B = -\cdot4755$, $C = +\cdot0208$; $\delta = +5$; $h = +7$;
$D = -\cdot476$, $E = -\cdot880$; $G = +\cdot018$, $H = -\cdot010$, $K = -1\cdot000$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
San Fernando	E.	40·7	27	e 10 18	PPP	—	—	—	—	—
San Juan		40·8	297	e 7 42	− 3	(e 13 50)	− 6	e 9 16	PP	e 13·8
La Paz	Z.	43·0	244	i 8 4k	+ 1	14 24	− 5	9 42	PP	21·1
La Plata	N.	45·3	215	—	—	14 44	−18	—	—	21·4
Huancayo		48·4	253	e 10 31	PP	e 15 26	−20	—	—	e 19·2
Clermont-Ferrand		52·3	28	—	—	e 16 57	+17	—	—	—
Kew		55·4	21	(e 9 43)	+ 5	(e 17 33?)	+11	(e 11 25)	PP	—
Stuttgart		57·3	29	e 9 53	+ 1	e 17 55	+ 8	e 21 44	SS	e 26·1
De Bilt		58·0	23	—	—	i 18 8	+11	—	—	e 25·1
Seven Falls		58·7	327	—	—	e 18 14	+ 8	—	—	24·1
Ottawa		60·5	323	—	—	e 18 28	− 1	—	—	25·1
Copenhagen		63·6	23	—	—	19 16	+ 8	—	—	28·1
Florissant	E.	67·7	311	—	—	e 20 17	+19	—	—	e 32·1
Tucson		83·0	302	e 12 20	− 8	—	—	—	—	—
Palomar	Z.	88·1	303	e 12 52	− 2	—	—	—	—	—
Tinemaha	Z.	89·2	307	e 13 21	+22	—	—	—	—	—
Victoria		92·4	318	—	—	e 24 8?	− 8	—	—	41·1

Additional readings :—
Huancayo e = 15m.31s.
Kew eSS?Z = 14m.12s., eL?E = 19·6m.; all phases wrongly identified.
Palomar eZ = 13m.15s.
Long waves were also recorded at Bermuda, Pasadena, Tortosa, Granada, Uccle, Bergen, and New Delhi.

June 10d. Readings also at 1h. (Riverview), 2h. (De Bilt, Kew, and near Harvard), 6h. (Campulung and Bucharest), 7h. (near Berkeley, Branner, and Lick), 8h. (Mount Wilson, Pasadena, Palomar, Tucson, Riverside, and Tinemaha), 11h. (New Delhi and Tucson), 14h. (near Toledo), 17h. (Tinemaha), 22h. (near Branner), 23h. (near Berkeley).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 11d. 19h. 18m. 57s. Epicentre 1°·4N. 85°·3W. (as on 1943, March 31d.).

$A = +·0819$, $B = -·9963$, $C = +·0243$; $\delta = -9$; $h = +7$;
$D = -·997$, $E = -·082$; $G = +·002$, $H = -·024$, $K = -1·000$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Balboa Heights		9·4	37	i 2 26	+ 8	e 4 10	+ 3	—	—	—
Bogota		11·7	74	e 3 0	+ 9	—	—	—	—	10·0
Huancayo		16·6	144	e 3 51	− 5	e 7 23	+23	i 4 38	PP	e 8·2
La Paz	z.	24·6	137	5 17	− 6	i 9 53	+11	—	—	13·7
San Juan		25·3	48	e 5 33	+13	e 10 0	+ 6	i 6 1	PP	e 11·2
Columbia		32·7	6	7 48	PP	e 11 35	−17	—	—	e 13·6
Bermuda		36·4	30	e 7 12	+ 4	e 12 53	+ 3	e 8 40	PP	e 15·4
Florissant		37·4	354	e 7 17	+ 1	i 13 10	+ 5	e 15 38	SS	—
St. Louis	E.	37·6	354	—	—	e 13 4	− 4	e 15 34	SS	—
Tucson		39·0	325	e 7 29	− 1	e 13 40	+11	e 9 9	PP	e 19·5
Philadelphia		39·5	13	e 6 53	−41	e 13 20	−17	e 8 19	PP	e 15·6
Chicago		40·3	357	e 7 38	− 2	e 13 43	− 6	—	—	e 16·7
Palomar		43·4	321	e 8 6	0	—	—	—	—	—
Riverside	z.	44·2	321	e 8 12	0	—	—	—	—	—
Ottawa		44·6	10	—	—	e 14 51	− 1	e 18 3	SS	e 20·0
Mount Wilson	z.	44·8	321	e 8 16	− 1	—	—	—	—	—
Pasadena		44·8	321	e 8 17	0	e 15 1	+ 6	—	—	e 21·7
Tinemaha		46·7	324	e 8 45	+13	—	—	—	—	—
Seven Falls		47·3	13	—	—	e 15 34	+ 3	—	—	20·0
Rio de Janeiro	N.	47·6	123	e 20 3	SSS	—	—	—	—	e 25·0
Berkeley		49·7	322	i 8 53	− 3	i 16 3	− 1	—	—	e 24·2
Sitka		68·5	333	—	—	e 20 6	− 2	—	—	e 36·4
Granada		82·5	53	i 12 26k	0	i 22 48	+ 6	28 40	SS	42·2
Kew		85·8	39	e 21 23	?	e 23 10	− 5	e 28 18	SS	e 35·0
Stuttgart		91·9	42	e 13 33	+22	e 24 15	+ 4	e 25 21	PS	e 43·6

Additional readings :—
San Juan e = 9m.41s.
Tucson e = 16m.31s.
Philadelphia e = 7m.36s.
Berkeley iSE = 16m.6s., iSZ = 16m.13s.
Kew phases wrongly identified.
Stuttgart eSS? = 30m.39s.
Long waves also recorded at Riverview and other European stations.

June 11d. Readings also at 7h. (Riverview), 11h. (Palomar, Pasadena, Tucson, Riverside, and Tinemaha), 16h. (Auckland, near Berkeley, Branner, and Lick), 17h. (Tinemaha and Tucson), 19h. (Berkeley and Riverview), 23h. (Stuttgart, near Basle, and Zürich).

June 12d. 10h. 45m. 31s. Epicentre 33°·9N. 116°·7W. (as on 10d.).

Intensity V at Pasadena and Los Angeles; IV at Long Beach, San Diego, and Warner Springs. Epicentre 33° 58′N. 116° 45′W. Macroseismic area 16,000 sq. miles.
R. R. Bodle.
United States Earthquakes, 1944, Washington, 1946, p. 16, with isoseismic chart.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Riverside		0·5	280	i 0 14a	0	i 0 21	− 2	—	—	—
Palomar		0·6	194	i 0 16a	+ 1	—	—	—	—	—
La Jolla		1·1	204	i 0 25k	+ 3	i 0 41	+ 2	—	—	—
Mount Wilson		1·2	287	i 0 24a	0	i 0 39	− 2	—	—	—
Pasadena		1·3	282	i 0 25a	0	i 0 41	− 3	—	—	—
Haiwee		2·5	335	i 0 42a	− 1	i 1 17	+ 3	—	—	—
Santa Barbara	z.	2·6	282	i 0 44a	0	—	—	—	—	—
Tinemaha		3·4	339	i 0 56a	+ 1	i 1 52	S_g	—	—	—
Tucson		5·2	107	i 1 20	− 1	i 2 14	− 8	i 1 46	P_g	i 2·7
Lick		5·3	312	e 1 21	− 1	i 2 6	−19	i 2 41	S_g	i 2·7

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Santa Clara		5·5	310	e 2 57	S_g	—	—	—	—	—
Branner	E.	5·7	310	e 1 28	0	e 2 38	+ 3	—	—	—
Berkeley		6·0	312	i 1 30	− 2	i 3 54	+71	—	—	—
San Francisco	E.	6·1	311	e 1 36	+ 2	e 2 19	−26	e 2 0	P_g	—
Florissant	E.	21·7	70	e 5 1	+ 6	—	—	—	—	—
St. Louis		21·8	70	e 5 3	+ 7	—	—	—	—	e 11·7

Additional readings :—
Branner iPN = 1m.31s., eE = 3m.5s., iN = 3m.28s., iE = 3m.32s.
Berkeley iPZ = 2m.0s.
Long waves were recorded at Philadelphia and Salt Lake City.

June 12d. 11h. 16m. 33s. Epicentre 33°·9N. 116°·7W. (as at 10h.).

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Riverside		0·5	280	i 0 13a	− 1	i 0 21	− 2	—	—	—
Palomar		0·6	194	i 0 15k	0	—	—	—	—	—
La Jolla		1·1	204	i 0 25k	+ 3	i 0 41	+ 2	—	—	—
Mount Wilson		1·2	287	i 0 24	0	i 0 39	− 2	—	—	—
Pasadena		1·3	282	i 0 25a	0	i 0 41	− 3	—	—	—
Haiwee		2·5	335	i 0 41	− 2	i 1 19	+ 5	—	—	—
Santa Barbara	Z.	2·6	282	i 0 44	0	—	—	—	—	—
Tinemaha		3·4	339	i 0 55k	0	—	—	—	—	—
Tucson		5·2	107	i 1 20	− 1	—	—	i 1 43	P_g	i 2·9
Lick		5·3	312	e 1 21	− 1	i 2 17	− 8	e 1 33	P*	—
Santa Clara	E.	5·5	310	e 1 40	P*	i 2 58	S_g	—	—	—
Branner		5·7	310	e 1 27	− 1	i 2 39	+ 4	i 1 57	P_g	—
Berkeley		6·0	312	i 1 30	− 2	i 2 49	+ 6	i 1 53	P_g	—
San Francisco		6·1	311	e 1 46	P*	e 3 17	S_g	e 1 57	P_g	—
Salt Lake City		7·9	28	e 2 6	+ 7	—	—	2 35	P_g	i 4·2
Saskatoon		19·6	18	—	—	e 7 45	−23	—	—	e 10·8
Florissant		21·7	70	e 4 56	+ 1	e 9 7	+16	—	—	e 11·5
St. Louis		21·8	70	e 4 57	+ 1	e 9 9	+17	—	—	i 11·7
Philadelphia		33·5	68	e 10 15	?	e 12 6	+ 1	—	—	e 15·6

Additional readings :—
Lick iSEN = 2m.40s.
Branner ePN = 1m.32s., iE = 1m.49s., iN = 2m.58s., iE = 3m.4s., iEN = 3m.27s.
Berkeley ePE = 1m.46s., iPN = 1m.49s., iSN = 2m.52s., iSEZ = 2m.55s., eSE = 3m.2s., eN = 3m.27s.
San Francisco iN = 3m.21s.
Florissant iPE = 5m.0s.
St. Louis iPE = 5m.1s.
Long waves were also recorded at Kew, De Bilt, Granada, and other American stations.

June 12d. Readings also at 1h. (Haiwee, Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, Tucson, Auckland, Wellington, and near Apia), 2h. (Riverview and Stuttgart), 3h. (Granada), 4h. (La Plata), 5h. (Brisbane and Riverview), 9h. (near Tortosa), 11h. (Tucson (2)), 12h. (near Malaga), 13h. (Tucson), 16h. (Auckland, Christchurch, Wellington, and Riverview), 20h. (Tucson), 22h. (Mount Wilson, Pasadena, Riverside, and Tucson), 23h. (Reykjavik (3)).

June 13d. 8h. 27m. 31s. Epicentre 34°·7N. 120°·5W.

Intensity VI at Los Alamos and Santa Maria.
R. R. Bodle.
United States Earthquakes 1944, Washington 1946, p. 17. Epicentre 34° 40′N. 120° 30′W.

$$A = -\cdot4182,\ B = -\cdot7099,\ C = +\cdot5667;\quad \delta = 0;\quad h = 0;$$
$$D = -\cdot862,\ E = +\cdot508;\quad G = -\cdot288,\ H = -\cdot488,\ K = -\cdot824.$$

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Santa Barbara		0·7	112	i 0 16a	− 1	i 0 25	− 3	—	—	—
Pasadena		2·0	106	i 0 35	0	i 0 56	− 6	—	—	—
Haiwee		2·5	55	i 0 44k	+ 1	i 1 12	− 2	—	—	—
Lick	N.	2·8	341	e 0 47	0	i 1 17	− 5	—	—	—
Santa Clara	N.	2·9	336	e 1 3	P_g	i 1 52	?	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Branner	N.	3·0	336	e 0 50	0	i 1 23	− 4	i 1 1	P_g	i 1·8
Tinemaha	N.	3·0	37	i 0 51	+ 1	i 1 28	+ 1	—	—	—
Palomar		3·3	114	i 0 53a	0	i 1 29	− 6	—	—	—
San Francisco		3·4	335	e 1 5	P_g	e 1 51	S_g	—	—	—
Berkeley		3·5	337	0 55	− 2	i 1 43	+ 3	i 1 57	S_g	—
Tucson		8·4	104	e 2 3	− 3	e 3 44	+ 1	e 2 21	P*	e 4·2

Additional readings :—
Lick iEN = 1m.4s.
San Francisco iE = 1m.13s., iEN = 1m.19s.
Berkeley eN = 2m.2s., iZ = 2m.29s., iEN = 2m.33s.

June 13d. Readings also at 0h. and 1h. (3) (near Reykjavik), 4h. (near Bogota), 7h. (San Juan), 8h. (Branner and Tucson), 9h. (College), 10h. (Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, Tucson, Florissant, St. Louis, Granada, and Stuttgart), 11h. (Berkeley, near Branner, Lick, Santa Clara, and Tucson), 13h. (near Almeria), 14h. (near Mizusawa), 15h. (Kew), 17h. (Tucson), 18h. (Haiwee, Mount Wilson, Pasadena, Palomar, Riverside, Tinemaha, Florissant, St. Louis, Tucson, La Paz, and near Stuttgart), 20h. (Granada), 22h. (near Ottawa), 23h. (near Mizusawa).

June 14d. Readings at 0h. (Tucson), 1h. (Helwan, Tucson, and near Mizusawa), 9h. (Tucson), 12h. (Kew), 16h. (Mount Wilson, Pasadena, Tucson, Riverside, Tinemaha, near La Paz, and near San Francisco), 20h. (near Berkeley), 23h. (Jena, Strasbourg, Zürich, and near Stuttgart).

June 15d. Readings at 1h. (Ksara, Belgrade, Basle, Chur, Neuchatel, Zürich, Prague, Cheb, Strasbourg, Stuttgart, Potsdam, De Bilt, Uccle, Copenhagen, and Kew), 2h. (near Mizusawa), 3h. (near La Paz), 4h. (Auckland), 6h. (near Tananarive), 9h. (Jena), 13h. (Cheb, Stuttgart, Mount Wilson, Riverside, Tinemaha, Tucson, and near Mizusawa), 16h. (Oaxaca, Mount Wilson, Palomar, Riverside, Tinemaha, Tucson, St. Louis, and near Malaga), 17h. (Brisbane, Riverview, Sydney, and near Bogota), 18h. (Berkeley and Granada), 19h. (near Basle, Neuchatel, Zürich, and Stuttgart), 20h. (Tucson and near Almeria), 22h. (near Berkeley, Branner, Lick, and San Francisco), 23h. (near Fort de France).

June 16d. 4h. 17m. 13s. Epicentre 35°·9N. 140°·3E. (as on 1938 June 5d.).

Scale VII-VIII at Hiraishi, Tochigi, Prefecture, and Naruto, Chiba prefecture ; VI at Kakioka and Tukubasan ; V at Mito, Tokyo, and Osima ; IV at Tyosi, Kohu, and Hukusima. Epicentre 36°·0N. 140°·5E. Macroseismic radius exceeding 300 km. Seismological Bulletin of the Central Meteorological Observatory of Japan for 1944, Tokyo 1951, p. 14, with isoseismic chart.

A = −·6241, B = +·5181, C = +·5850 ; δ = +15 ; λ = 0 ;
D = +·639, E = +·769 ; G = −·450, H = +·374, K = −·811.

	Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
	°	°	m. s.	s.	m. s.	s.	m. s.		m.
Kakioka	0·3	344	0 16a	+ 5	0 24	+ 6	—	—	—
Tukubasan	0·3	333	0 17a	+ 6	0 24	+ 6	—	—	—
Mito	0·4	16	0 0a	−13	0 9	−12	—	—	—
Tokyo	0·5	245	0 17k	+ 3	0 26	+ 3	—	—	—
Tyosi	0·5	110	0 21	+ 7	—	—	—	—	—
Kumagaya	0·8	289	0 19k	+ 1	0 30	− 1	—	—	—
Yokohama	0·8	229	0 20k	+ 2	0 30	− 1	—	—	—
Maebasi	1·1	297	0 24	+ 2	0 37	− 2	—	—	—
Mera	1·1	201	0 25	+ 3	0 39	0	—	—	—
Onahama	1·1	25	0 21a	− 1	0 37	− 2	—	—	—
Hunatu	1·4	252	0 28k	+ 1	0 44	− 2	—	—	—
Misima	1·4	235	0 27k	0	0 43	− 3	—	—	—
Osima	1·4	213	0 28	+ 1	0 43	− 3	—	—	—
Shizuoka	1·8	239	0 33k	+ 1	0 54	− 2	—	—	—
Hukusima	1·9	4	0 35	+ 1	0 50	− 9	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Nagano		1·9	294	0 34k	0	0 57	− 2	—	—	—
Omaesaki		2·2	233	0 38k	0	1 21	S_g	—	—	—
Sendai		2·4	11	0 43k	+ 2	1 11	− 1	—	—	—
Hamamatu		2·5	241	0 42k	− 1	1 7	− 7	—	—	—
Aikawa		2·6	322	0 45	+ 1	1 27	S_g	—	—	—
Toyama		2·6	287	0 45k	+ 1	1 35	S_g	—	—	—
Nagoya		2·8	255	0 48k	+ 1	1 23	S*	—	—	—
Gihu		3·0	260	0 49	− 1	1 23	− 4	—	—	—
Wazima		3·1	299	0 51k	0	1 46	S_g	—	—	—
Kameyama		3·2	251	0 55k	+ 3	1 51	S_g	—	—	—
Miznsawa		3·2	13	i 0 56	+ 4	i 1 33	+ 1	—	—	—
Hikone		3·4	259	0 55k	0	1 47	S*	—	—	—
Morioka		3·8	11	1 0k	− 1	1 43	− 4	—	—	—
Kyoto		3·9	256	1 1k	− 1	2 10	S_g	—	—	—
Miyako		3·9	20	1 3	+ 1	2 45	?	—	—	—
Owase		3·9	241	1 0	− 2	1 29	P_g	—	—	—
Kobe		4·4	255	1 8k	− 2	—	—	—	—	—
Siomisaki		4·5	237	1 10k	− 1	2 37	S_g	—	—	—
Toyooka		4·5	266	1 9k	− 2	2 12	+ 7	—	—	—
Hatinohe		4·6	12	1 14k	+ 2	2 6	− 1	—	—	—
Sumoto		4·7	252	1 14k	0	2 22	S*	—	—	—
Muroto		5·7	243	1 28	0	2 56	S*	—	—	—
Kôti		6·1	248	1 31	− 3	2 54	+ 9	—	—	—
Hirosima		6·6	258	1 40	− 1	3 35	S_g	—	—	—
Hamada		6·8	263	1 41	− 3	—	—	—	—	—
Sapporo		7·1	6	1 47	− 1	3 22	+12	—	—	—
Izuka		8·3	255	1 59	− 5	4 12	S*	—	—	—
Miyazaki		8·4	244	2 3k	− 3	3 47	+ 4	—	—	—
Hukuoka		8·5	256	2 5	− 2	4 35	S_g	—	—	—
Kumamoto		8·5	251	2 7	0	2 50	P_g	—	—	—
Ituhara		9·2	258	2 15	− 1	4 35	S*	—	—	—
Kagosima		9·3	244	2 16	− 1	4 59	S_g	—	—	—
Scoresby Sund		73·1	355	11 29	− 5	20 56	− 5	—	—	—
Branner		74·4	56	e 11 44	+ 2	—	—	—	—	—
Tinemaha	z.	77·1	55	i 11 55	− 2	—	—	—	—	—
Santa Barbara	z.	77·7	57	e 12 4	+ 4	—	—	—	—	—
Haiwee	z.	77·9	54	i 12 3	+ 2	—	—	—	—	—
Copenhagen		78·4	334	i 11 59a	− 5	21 47	−13	—	—	38·8
Mount Wilson	z.	78·9	56	i 12 3	− 4	—	—	—	—	—
Pasadena	z.	78·9	56	i 12 3	− 4	—	—	—	—	e 35·5
Riverside	z.	79·5	56	i 12 6	− 4	—	—	—	—	—
La Jolla	z.	80·3	57	e 12 17	+ 3	—	—	—	—	—
Palomar		80·3	56	i 12 10	− 4	—	—	—	—	—
Ksara		81·0	305	e 12 14	− 4	e 22 24	− 3	—	—	—
Tucson		84·9	54	i 12 34	− 4	e 23 0	− 6	e 15 50	PP	e 41·3
Stuttgart		85·1	330	i 12 32a	− 7	e 22 55	−13	e 16 17	PP	e 40·1
Strasbourg		85·8	331	e 13 12	+30	—	—	—	—	—
Kew		86·3	337	i 12 38	− 7	e 23 9	[− 1]	e 16 2?	PP	e 44·8
Züirch		86·4	330	e 12 43	− 2	—	—	—	—	—
Basle		86·7	330	e 12 38	− 9	—	—	e 17 14	PP	—
Chicago		91·0	35	e 14 6	+59	e 22 24	?	e 20 13	?	—
Florissant	E.	92·1	38	—	—	e 23 34	[−11]	e 24 6	sSKS	—
St. Louis		92·3	38	i 13 8	− 5	e 23 35	[−11]	i 13 27	pP	—
Granada		99·9	332	—	—	i 28 21	PPS	—	—	52·7
La Paz		148·1	60	19 50	[+ 6]	—	—	—	—	—

Additional readings :—
Santa Barbara iZ = 12m.16s.
Mount Wilson iZ = 12m.19s.
Pasadena iZ = 12m.20s.
Riverside iZ = 12m.21s. and 12m.30s.
La Jolla eZ = 12m.40s.
Palomar iZ = 12m.28s., iN = 12m.38s.
Tucson i = 12m.52s., e = 15m.21s.
Kew ePPPZ = 19m.7s.?, eS = 23m.39s., ePS = 24m.32s.?.
St. Louis esSE = 24m.7s.
Long waves were also recorded at Cheb and De Bilt.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 16d. 21h. 51m. 31s. Epicentre 19°·1N. 105°·7W.

Slight at Cihuatlan and Acatlan de Juarez, Mexico.
Universidad nacional de Mexico.
" Instituto de Geologia, Catalogue compendiado de tremblores durante el periodo Enero 1941, Diciembre 1944." Mexico 1945, p. 59. Epicentre as adopted, near borders of Colima.

$A = -\cdot2559$, $B = -\cdot9104$, $C = +\cdot3252$; $\delta = +7$; $h = +5$;
$D = -\cdot963$, $E = +\cdot271$; $G = -\cdot088$, $H = -\cdot313$, $K = -\cdot946$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Manzanillo	E.	1·3	92	0 21	− 4	—	—	—	—	—
Guadalajara	E.	2·7	55	0 40	− 5	—	—	—	—	—
Tacubaya	E.	6·2	86	e 1 33	− 2	—	—	—	—	—
Oaxaca	N.	8·7	102	2 5	− 5	—	—	—	—	—
Vera Cruz	N.	9·0	88	2 11	− 2	—	—	—	—	—
Tucson		13·9	342	i 3 24	+ 3	i 6 9	+12	i 3 55	PP	i 7·0
La Jolla		17·2	327	e 4 10	+ 7	e 7 43	+29	—	—	—
Palomar		17·3	328	i 4 11	+ 7	—	—	—	—	—
Riverside		18·1	327	i 4 21a	+ 7	—	—	—	—	—
Pasadena		18·6	327	i 4 27a	+ 6	i 8 5	+19	—	—	i 9·0
Boulder City		18·6	339	i 4 25	+ 4	e 8 12	+26	i 4 29	PP	i 10·4
Mount Wilson		18·7	327	i 4 26a	+ 4	—	—	—	—	—
Mobile		19·6	50	i 4 32	0	i 8 14	+ 6	—	—	—
Santa Barbara		19·7	325	i 4 38	+ 4	—	—	—	—	—
Haiwee		20·1	332	i 4 41a	+ 3	e 8 38	+19	—	—	—
Tinemaha		21·0	332	i 4 51a	+ 4	e 8 57	+20	—	—	—
Salt Lake City		22·2	329	i 5 3	+ 3	e 9 12	+12	—	—	e 11·5
Lick		22·9	326	e 5 13	+ 7	e 9 24	+11	—	—	e 12·3
Santa Clara		23·1	326	i 5 16	+ 8	e 9 35	+19	—	—	e 11·6
Branner		23·2	326	e 5 17	+ 8	i 9 47	+29	i 5 51	PP	e 12·9
Berkeley		23·6	326	i 5 18	+ 5	e 9 41	+16	—	—	e 13·0
San Francisco		23·7	326	e 5 21	+ 7	e 9 55	+28	—	—	e 12·9
Florissant		23·7	32	i 5 11	− 3	i 9 28	+ 1	—	—	e 11·5
St. Louis		23·7	32	i 5 10	− 4	i 9 24	− 3	i 10 22	SS	e 11·2
Rapid City		25·0	5	e 5 31	+ 4	e 10 0	+11	e 6 9	PP	i 13·1
Ukiah		25·1	327	e 5 33	+ 5	e 9 59	+ 8	e 6 34	PP	e 11·9
Columbia		26·5	50	e 5 35	− 6	e 10 6	− 8	e 6 29	PP	e 12·5
Ferndale		26·7	328	—	—	e 10 34	+17	—	—	e 14·5
Chicago		27·4	30	e 5 45	− 4	e 10 41	+13	e 6 36	PP	e 12·2
New Kensington		30·9	40	e 7 7	PP	e 11 36	+12	—	—	e 17·6
Seattle		31·5	339	e 9 6	?	—	—	—	—	e 13·8
Georgetown		31·7	46	i 6 23	− 4	i 11 44	+ 7	i 7 15	PP	16·5
Victoria		32·7	338	6 39	+ 3	12 1	+ 9	14 41	SSS	16·5
Saskatoon		33·0	358	6 41	+ 2	12 5	+ 8	7 59	PP	15·5
Philadelphia		33·5	46	e 6 34	− 9	i 12 5	0	e 7 24	PP	i 14·4
Bogota		34·0	111	e 6 44	− 4	—	—	—	—	—
Fordham		34·8	44	e 6 53	− 1	e 12 41	+16	e 7 59	PP	i 19·2
Ottawa		36·1	37	7 0	− 5	e 12 39	− 5	8 13	PP	19·0
Harvard		37·1	43	e 7 9	− 5	—	—	—	—	e 20·0
Vermont		37·1	40	e 7 6	− 8	e 13 2	+ 1	i 8 35	PP	15·5
San Juan		37·4	84	e 7 15	− 1	e 13 7	+ 2	—	—	e 14·9
Shawinigan Falls		38·5	37	e 7 23	− 3	—	—	e 8 55	PP	16·5
Bermuda		39·0	62	e 7 25	− 5	e 13 35	+ 6	e 8 50	PP	e 15·8
Seven Falls		39·9	37	7 32	− 5	13 30	−13	9 20	PPP	20·5
Huancayo		43·0	134	e 8 6	+ 3	e 14 38	+ 9	—	—	e 18·0
Sitka		44·2	337	e 8 14	+ 2	e 14 48	+ 2	e 9 31	PP	21·0
Honolulu		48·8	283	e 10 19	PP	e 15 45	− 7	e 18 52	S_eS	e 20·9
La Paz		51·1	131	9 12	+ 6	—	—	—	—	—
College		53·6	339	e 9 3	−22	e 16 57	− 1	e 11 33	PP	e 25·4
Scoresby Sund		70·1	21	11 14	− 2	20 59	+32	—	—	—
Rio de Janeiro	N.	73·9	121	e 20 29	S	(e 20 29)	−41	—	—	—
Aberdeen		81·3	32	e 18 29?	?	i 22 36	+ 6	—	—	46·9
Stonyhurst		82·3	35	12 18	− 7	e 22 39	− 1	12 25	P_eP	—
Lisbon		83·2	51	12 24	− 5	—	—	—	—	46·9
Bergen		83·5	27	12 34	+ 3	22 53	+ 1	17 42	PPP	38·9

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Kew		84·4	38	i 12 33 a	− 3	e 23 8	+ 7	e 15 49	PP	e 41·5
San Fernando		86·2	53	12 50	+ 6	—	—	—	—	44·5
De Bilt		87·2	35	i 12 51 a	+ 2	e 23 24	− 4	e 16 9	PP	e 43·5
Paris		87·2	39	—	—	e 22 29?	+59	—	—	e 41·5
Uccle		87·4	37	e 12 50 a	0	i 23 23	− 7	e 16 19	PP	e 42·5
Granada		87·9	51	i 12 55 a	+ 2	23 30	− 5	13 6	P_cP	48·6
Clermont-Ferrand		88·9	42	—	—	e 23 30	[+ 4]	—	—	e 42·5
Upsala		88·9	25	—	—	e 23 31?	[+ 5]	e 29 11	SS	e 49·5
Copenhagen		89·1	30	e 12 59	+ 1	23 35	[+ 8]	16 26	PP	—
Tortosa	E.	89·3	47	—	—	23 35	[+ 7]	—	—	e 50·5
Stuttgart		91·1	37	e 13 8	0	e 23 36	[− 3]	e 16 36	PP	e 49·0
Potsdam		91·3	33	—	—	e 23 47	[+ 7]	—	—	e 48·5
Zürich		91·5	38	e 13 9	− 1	e 23 15	[−27]	—	—	—
Cheb		92·2	34	—	—	e 25 33	PS	e 19 55	PP	e 45·5
Chur		92·3	38	e 13 11	− 2	—	—	—	—	e 52·4
Prague		93·3	33	e 16 34	?	e 23 57	[+ 5]	e 31 29	SS	—
Riverview		111·0	240	—	—	e 28 59	PS	—	—	e 51·5
Ksara		115·9	36	e 19 41	PP	e 25 45	[+10]	—	—	—
Helwan	N.	116·1	41	—	—	e 25 41	[+ 5]	e 29 33	PS	—
New Delhi	N.	132·5	357	e 21 44	PP	26 35	[+ 9]	i 22 44	PKS	—

Additional readings :—
Boulder City e =8m.8s.
Salt Lake City iP =5m.9s., e =5m.49s.
Branner eN =10m.54s.
Berkeley eSN =9m.48s., iN =7m.19s.
San Francisco eN =5m.30s., iE =5m.37s.
Florissant iE =5m.43s. and 6m.2s.
St. Louis iZ =5m.45s. and 6m.0s., eSN =9m.18s., iE =9m.43s.
Ferndale eSN =10m.45s.
Chicago i =11m.21s.
Georgetown iSS =13m.52s.
Philadelphia iP =6m.39s., iP_cP =8m.58s.
Bogota e =6m.51s.
Ottawa PPP =8m.29s.
Vermont e =14m.51s.
Seven Falls SS =16m.19s.
Huancayo e =17m.11s.
Sitka iS =14m.52s., eSS =18m.1s.
Stonyhurst PPP =17m.14s., S_cS =22m.44s., PS =23m.33s., PPS =23m.56s., i =30m.4s., PKKP =30m.44s., PKP,PKP =39m.1s., i =44m.32s., PKP,SKS =46m.29s.
Lisbon PE =12m.28s.
Bergen eE =15m.16s., eSN =22m.59s., SSN =28m.6s.
Kew iP_cP =12m.39s., eZ =17m.14s.?, eSKS =22m.53s., ePSZ =23m.53s., eZ =26m.29s., eSSEZ =29m.33s., eSSS =32m.29s.
De Bilt eSS =28m.29s.?, eSSS =32m.59s.
Uccle ePPPE =18m.4s., eSKSEN =23m.9s., eSS =29m.29s.?, eSSS =32m.29s.?
Granada PS =24m.45s., SS =27m.34s.
Upsala eN =36m.29s.?
Copenhagen 24m.53s.
Stuttgart eSP =25m.5s., eSS =30m.11s., eQ =43m.59s.
Prague ePP =17m.13s., ePS =25m.44s.
Helwan eN =26m.56s.
New Delhi PPPN =24m.44s., SKKSN =28m.23s., PPSN =33m.38s.
Long waves were also recorded at Puebla, Auckland, Wellington, Christchurch, and Bombay.

June 16d. Readings also at 0h. (Auckland, Wellington, Christchurch, Riverview, Kew, St. Louis, Florissant, Mount Wilson, Pasadena, Palomar, Riverside, Tucson, and near Berkeley (2)), 1h. (Kew, Granada, and Bucharest), 5h. (near Lick and near Reykjavik), 6h. (Kew), 14h. (Bucharest, near Istanbul, and near Apia), 15h. (Bogota), 17h. (Brisbane), 18h. (near Bogota), 19h. (Bucharest), 22h. (Granada, and near La Paz), 23h. (Stuttgart, Haiwee, Mount Wilson, Pasadena, Palomar, Riverside (2), Tinemaha, Tucson (2), Guadalajara, Manzanillo, Tacubaya, and Vera Cruz).

June 17d. Readings at 1h. (Tacubaya), 12h. (near Lick), 16h. (near Branner), 17h. (Ksara), 18h. (Stuttgart, Pasadena, Mount Wilson, Tucson, Riverside, Tinemaha, Palomar, and near Branner), 22h. (Bucharest and near Lick), 23h. (Tucson).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 18d. Readings at 1h. (Jena, Stuttgart, near Basle, Zürich, and Chur), 2h. (Clermont-Ferrand, Copenhagen, St. Louis, Tucson, Tinemaha, Palomar, Riverside, Mount Wilson, Pasadena, Brisbane, Riverview, Christchurch, Wellington, Auckland, and Arapuni), 3h. (Stuttgart, Granada, and Kew), 9h. (San Juan), 11h. (Scoresby Sund), 12h. (Ksara), 14h. (Pasadena, Mount Wilson, Tucson, Riverside, Tinemaha, Haiwee, Santa Barbara, and Palomar), 16h. (Riverside, Tinemaha, Tucson, and San Juan), 17h. (Pasadena, Tucson, Mount Wilson, Riverside, Tinemaha, Palomar, and Scoresby Sund), 19h. (Apia), 21h. (near Bogota), 22h. (Chicago, St. Louis, Berkeley, Mount Wilson, Pasadena, Riverside, Palomar, La Jolla, and Tucson).

June 19d. 0h. 3m. 32s. Epicentre 33°·8N. 118°·1W. (as on 1941, November 14d.).

Intensity VI at Compton, Hollywood, and Southgate ; V at Long Beach and Los Angeles IV at Montebello and San Pedro.
Epicentre 33° 52′N. 118° 13′W. Macroseismic area 12,000 square miles.

R. R. Bodle.
United States Earthquakes, 1944, Washington, 1946, p. 17. Macroseismic chart, p. 18.

S. T. Martner.
The Dominquez Hills, Ca., Earthquake of June 18, 1944, Bull. Seismolog. Soc. of America, vol. 38, No. 2, 1948, pp. 105-119.
Much damage in the region of Compton and Gardena. Destruction to the borings in the petrol-bearing country of Roseirans, on the Roseirans fault-line.
Epicentre 33° 51′N. 118° 14′W.

$A = -·3922$, $B = -·7345$, $C = +·5537$; $\delta = -11$; $h = +1$;
$D = -·882$, $E = +·471$; $G = -·261$, $H = -·488$, $K = -·833$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Pasadena		0·3	350	i 0 8k	P*	i 0 12	S*	—	—	—
Mount Wilson		0·4	5	i 0 10k	− 3	—	—	—	—	—
Riverside		0·6	72	i 0 16a	+ 1	i 0 27	+ 1	—	—	—
Palomar		1·1	114	i 0 25	+ 3	—	—	—	—	—
La Jolla	Z.	1·2	143	e 0 26	+ 2	—	—	—	—	—
Lick		4·6	322	e 2 15	S	(e 2 15)	+ 8	—	—	—
Branner		4·9	319	e 1 22	+ 5	i 2 18	+ 3	i 2 34	S*	—
Berkeley	E.	5·3	321	e 1 45	P_g	e 2 23	− 2	i 3 2	S_g	i 3·9
	N.	5·3	321	e 1 38	P*	e 2 17	− 8	i 3 34	?	i 4·1
	Z.	5·3	321	e 1 42	P_g	e 2 20	− 5	i 3 18	?	i 4·2
Tucson		6·3	102	i 1 26	0	—	—	i 1 53	P*	i 3·6
Salt Lake City		8·5	33	—	—	e 3 35	−10	—	—	e 4·6

Additional readings :—
Branner iSE = 2m.2s., iN = 2m.23s., iE = 2m.51s.
Tucson i = 2m.10s.
Long waves were also recorded at Chicago.

June 19d. 3h. 6m. 2s. Epicentre 33°·8N. 118°·1W. (as at 0h.).

Intensity VI at Gardena, Maywood, and South Gate ; V at Long Beach and Los Angeles.
Epicentre 33° 52′N. 118° 13′W.
R. R. Bodle.
United States Earthquakes, 1944, Washington, 1946, p. 19. Isoseismic chart, p. 19.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Pasadena		0·3	350	i 0 11k	0	i 0 15	− 3	—	—	—
Riverside		0·6	72	i 0 20a	+ 5	i 0 31	+ 5	—	—	—
Lick		4·6	322	e 1 21	P*	—	—	—	—	—
Santa Clara	E.	4·8	319	—	—	e 2 14	+ 2	—	—	e 2·9
Branner		4·9	319	e 1 17	0	i 2 18	+ 3	i 2 26	S*	—
Berkeley	N.	5·3	321	e 1 42	P_g	e 2 21	− 4	—	—	—
	Z.	5·3	321	e 1 22	0	e 2 31	+ 6	—	—	—
Tucson		6·3	102	e 1 45	+ 9	e 2 35	−15	e 2 2	P_g	e 3·8

Additional readings :—
Branner iE = 2m.44s.
Berkeley ePE = 1m.53s.
Tucson e = 3m.27s.
Long waves were also recorded at Salt Lake City and Chicago.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 19d. Readings also at 0h. (near Mizusawa), 1h. (Tucson, Palomar, Tinemaha, Haiwee, Riverside, Mount Wilson, Pasadena, Wellington, Christchurch, and Auckland), 2h. (Strasbourg, Stuttgart, Kew (2), Granada, Riverview, and near Apia), 4h. (Tinemaha and Tucson), 5h. (Granada and near Apia), 9h. (Wellington), 13h. (Clermont-Ferrand and Stuttgart), 16h. (Tinemaha and Tucson), 18h. (near Malaga), 19h. (Helwan, New Delhi, Bombay, Calcutta, Stuttgart, and Copenhagen), 20h. (Granada, De Bilt, Uccle, Kew, and Cheb), 22h. (near Berkeley).

June 20d. 12h. 16m. 33s. Epicentre 41°·4N. 143°·9E. Depth of focus 0·005.

Intensity V at Honbetsu, Hokkaido ; II-III at Hatinohe and Miyako.
Epicentre as adopted. Depth 40 km. Macroseismic radius between 200-300 km.
Seismological Bulletin of the Central Meteorological Observatory, Japan, for the year 1944, Tokyo 1951, p. 15, isoseismic chart p. 15.

$A = -\cdot 6079$, $B = +\cdot 4433$, $C = +\cdot 6588$; $\delta = +7$; $h = -2$;
$D = +\cdot 589$, $E = +\cdot 808$; $G = -\cdot 532$, $H = +\cdot 388$, $K = -\cdot 752$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Hatinohe		2·0	234	0 31 a	− 1	0 55	− 2	—	—	—
Miyako		2·3	220	0 33	− 4	1 1	− 3	—	—	—
Sapporo		2·5	312	0 34 a	− 5	1 7	− 2	—	—	—
Morioka		2·7	231	0 48 a	+ 6	1 23	+ 9	—	—	—
Mizusawa	N.	3·1	225	e 0 48	0	e 1 27	+ 3	—	—	—
Akita		3·3	240	0 51	0	1 40	+11	—	—	—
Sendai		3·9	218	0 58	− 1	—	—	—	—	—
Hukusima		4·5	217	1 7	0	1 54	− 5	—	—	—
Aikawa		5·5	234	1 21	0	2 24	0	—	—	—
Mito		5·6	209	1 31	+ 8	2 29	+ 2	—	—	—
Utunomiya		5·8	214	1 26	+ 1	2 34	+ 2	—	—	—
Kakioka		5·9	210	1 39	+12	2 46	+12	—	—	—
Tukubasan		6·0	211	1 26	− 2	2 31	− 6	—	—	—
Maebasi		6·3	219	2 6	+34	—	—	—	—	—
Nagano		6·5	225	1 43	+ 8	3 35	?	—	—	—
Wazima		6·7	236	1 38	0	3 24	+30	—	—	—
Yokohama		6·8	210	2 5	+26	2 57	+ 1	—	—	—
Toyama		7·0	230	1 50	+ 8	—	—	—	—	—
Hunatu		7·1	216	1 47	+ 3	3 9	+ 5	—	—	—
Misima		7·4	214	1 51	+ 3	3 10	− 1	—	—	—
Shizuoka		7·7	215	1 59	+ 7	3 21	+ 2	—	—	—
Gihu		8·2	226	2 12	+13	4 46	+75	—	—	—
Hikone		8·6	227	2 0	− 4	—	—	—	—	—
Kameyama		8·8	224	2 36	+29	—	—	—	—	—
Kyoto		9·0	228	2 11	+ 1	—	—	—	—	—
Toyooka		9·2	234	1 11	−61	—	—	—	—	—
Wakayama		9·9	227	2 22	0	—	—	—	—	—
Sumoto		10·0	228	3 15	+52	—	—	—	—	—
College		44·4	35	—	—	e 14 36	+ 1	—	—	e 21·1
Sitka		51·7	44	—	—	e 15 8	−70	—	—	e 26·1
New Delhi	N.	54·9	279	—	—	e 17 7	+ 6	—	—	—
Tinemaha	Z.	71·7	57	i 11 19	+ 2	—	—	—	—	—
Haiwee		72·5	57	e 11 24	+ 2	—	—	—	—	—
Mount Wilson	Z.	73·6	59	e 11 30	+ 2	—	—	—	—	—
Pasadena	Z.	73·6	59	e 11 26	− 2	—	—	—	—	e 34·0
Riverside	Z.	74·2	59	e 11 33	+ 1	—	—	—	—	—
Copenhagen		74·9	334	i 11 35k	− 1	—	—	—	—	36·5
Palomar	Z.	75·0	59	i 11 37	+ 1	—	—	i 11 48	PcP	—
Prague		78·7	330	e 12 56	+59	e 21 45	− 3	—	—	e 40·5
Tucson		79·5	56	e 12 3	+ 2	—	—	—	—	e 40·3
Stuttgart		81·7	332	e 12 11	− 2	—	—	—	—	e 40·0
Florissant	E.	86·1	40	—	—	e 23 5	+ 2	—	—	—
St. Louis		86·3	40	e 12 35	− 1	e 23 3	− 1	—	—	—

Palomar gives also eZ = 12m.15s.
Long waves were also recorded at other European stations.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 20d. Readings also at 1h. (Manzanillo, Guadalajara, Tacubaya, and New Delhi), 2h. (Vera Cruz, Tucson, Pasadena, Mount Wilson, Riverside, Tinemaha, Rapid City, Salt Lake City, St. Louis, and Florissant), 3h. (near Lick), 4h. (Stuttgart and Strasbourg), 9h. (Tinemaha, Mount Wilson, Tucson, and Palomar), 10h. (Kew and Stuttgart), 11h. (Tinemaha, Palomar, Tucson, Bergen, Stuttgart, Hyderabad, New Delhi, Bombay, Calcutta, and near Pehpei), 12h. (La Paz, Cheb, Prague, Granada, De Bilt, Kew, and Upsala), 13h. (Granada and Tucson), 14h. (Harvard and near Mizusawa), 15h. (Prague).

June 21d. 10h. 58m. 15s. Epicentre 21°·4S. 169°·3E.

$A = -\cdot 9157$, $B = +\cdot 1730$, $C = -\cdot 3628$; $\delta = +6$; $h = +4$;
$D = +\cdot 186$, $E = +\cdot 983$; $G = +\cdot 356$, $H = -\cdot 067$, $K = -\cdot 932$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Brisbane		16·0	244	i 3 46	− 2	i 7 44	+58	i 4 13	PP	i 8·3
Auckland		16·1	164	3 50	+ 1	7 9	+20	i 4 10	PP	8·2
Arapuni		17·5	163	—	—	7 15	− 2	4 45?	PP	9·4
New Plymouth		18·1	168	4 45?	PPP	—	—	—	—	—
Tuai		18·6	162	4 45?	PPP	—	—	—	—	—
Apia		19·5	72	i 4 30	− 1	(8 10)	+ 4	—	—	9·4
Riverview		20·2	229	i 4 40	+ 1	i 8 21	0	i 4 50	pP	e 9·4
Sydney		20·2	229	i 4 36k	− 3	i 8 27	+ 6	—	—	—
Wellington		20·4	169	4 39	− 2	8 20	− 5	5 4	PP	9·8
Christchurch		22·2	173	5 0	0	9 1	+ 1	—	—	11·1
Honolulu		53·2	39	e 8 54	−28	e 16 59	+ 7	e 12 14	PPP	e 21·0
Mizusawa	N.	65·7	337	10 11	−37	19 47	+13	—	—	28·9
Branner	E.	87·0	48	e 12 58	+10	i 23 18	− 9	—	—	e 41·2
Santa Clara		87·1	48	e 13 1	+12	e 22 58	−30	e 24 40	PPS	e 40·8
Berkeley	E.	87·2	48	i 12 54	+ 5	i 23 23	− 5	—	—	e 36·2
	N.	87·2	48	i 13 1	+12	i 23 30	+ 2	—	—	e 36·6
Ukiah		87·2	46	e 12 48	− 1	e 23 20	− 8	e 15 50	PP	e 36·6
Lick		87·3	48	e 12 53	+ 3	—	—	—	—	e 40·4
Santa Barbara	Z.	87·3	52	e 12 52	+ 2	—	—	—	—	—
Pasadena		88·3	52	i 12 55a	0	e 23 19	[− 3]	e 29 19	SS	e 37·2
Mount Wilson	Z.	88·4	52	e 12 54	− 1	—	—	—	—	—
La Jolla	E.	88·4	54	e 12 52	− 3	—	—	—	—	—
Riverside	Z.	88·8	52	e 12 56	− 1	—	—	—	—	—
Palomar		88·9	53	i 12 57	− 1	i 23 32	[+ 6]	—	—	—
Haiwee		89·4	51	e 13 1	+ 1	—	—	—	—	—
Tinemaha	Z.	89·6	50	i 13 0	− 1	—	—	—	—	—
Calcutta	N.	90·2	294	e 19 45	?	e 24 33	+37	—	—	—
Sitka		91·2	26	e 13 7	− 1	e 23 41	[+ 1]	e 16 57	PP	e 38·2
Boulder City		91·6	51	e 13 10	0	e 23 44	[+ 2]	—	—	—
Victoria		91·8	38	13 5	− 6	23 35	[− 9]	30 15	SS	37·8
Colombo	E.	92·0	276	17 3	PP	—	—	—	—	50·6
College		92·1	16	e 16 11	PP	e 23 35	[−10]	e 25 21	PS	e 37·6
Tucson		93·1	57	e 13 17	0	e 24 0	[+ 9]	e 17 20	PP	e 43·0
Salt Lake City		95·7	48	e 13 10	−19	e 24 8	[+ 3]	e 18 23	?	e 41·1
Hyderabad		97·0	286	e 13 49	+14	24 19	[+ 7]	17 13	PP	47·1
New Delhi	N.	101·7	296	—	—	i 25 38	+ 3	i 24 38	SKS	—
Bombay		102·5	285	18 26	PP	24 44	[+ 5]	27 37	PS	—
Rapid City		102·8	47	—	—	e 24 42	[+ 2]	e 27 30	PS	e 51·3
Saskatoon		103·1	38	—	—	e 24 45	[+ 3]	e 27 25	PS	47·8
Huancayo		108·4	111	e 19 28	PP	e 26 2	S	e 33 3	SS	e 45·3
Florissant		110·9	56	e 14 41	P	e 25 22	[+ 6]	e 19 14	PP	—
St. Louis	E.	111·0	56	e 14 43	P	e 25 22	[+ 6]	e 19 14	PP	—
Chicago		113·5	53	e 19 33	PP	e 25 1	[−25]	e 35 12	SS	e 49·9
Ottawa		122·3	49	19 6	[+ 9]	26 5	[+ 8]	20 34	PP	45·8
Philadelphia		122·7	56	e 20 37	PP	e 25 45	[−14]	e 36 52	SS	e 49·5
Fordham		123·7	55	—	—	e 25 10	[−52]	e 37 12	SS	—
Vermont		124·2	50	—	—	e 26 8	[+ 5]	e 37 54	SS	65·1
Seven Falls		125·6	47	20 56	PP	26 9	[+ 1]	38 9	SS	58·8
Rio de Janeiro	N.	125·8	142	e 20 45	PP	—	—	—	—	—
San Juan		128·0	83	e 19 41	[+33]	e 22 19	PKS	e 39 11	SS	e 75·8
Scoresby Sund		130·5	5	19 16	[+ 3]	22 40	PKS	21 33	PP	61·8

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Halifax		131·0	49	—	—	e 26 45?	[+23]	—	—	57·8
Bermuda		131·1	65	e 21 30	PP	e 22 41	PKS	e 31 51	PS	e 61·6
Upsala		136·7	340	e 18 0	?	e 22 25	PKS	e 40 9	SS	e 54·8
Ksara		137·2	297	e 19 33	[+ 8]	—	—	e 22 41	PP	—
Bergen		139·4	348	—	—	e 27 43	[+65]	e 58 11	Q	64·8
Helwan	N.	141·3	291	e 19 36	[+ 3]	23 9	PKS	41 9	SS	—
Copenhagen		141·7	339	e 19 39	[+ 6]	22 38	PP	31 45	PS	63·8
Bucharest		142·0	316	e 19 45?	[+11]	—	—	—	—	77·8
Aberdeen		143·7	352	e 19 57	[+20]	i 41 31	SS	i 60 56	Q	e 79·8
Potsdam	E.	144·0	336	e 19 45?	[+ 8]	—	—	—	—	e 59·8
Prague		145·2	331	e 20 3	[+24]	e 26 53	[+ 6]	e 23 30	PKS	e 58·8
Belgrade		145·3	319	i 19 43	[+ 3]	e 27 10	[+23]	e 25 11	PPP	e 82·2
Jena		145·7	334	e 19 48	[+ 8]	—	—	—	—	—
Cheb		146·1	334	i 20 18	[+37]	e 42 12	SS	e 23 24	PP	e 67·8
De Bilt		147·0	342	e 19 45	[+ 2]	—	—	e 42 35	SS	e 61·8
Stonyhurst		147·0	351	e 19 1	[−42]	—	—	—	—	e 67·8
Stuttgart		148·4	335	e 19 47	[+ 2]	e 42 35	SS	e 22 48	PKP	e 74·2
Uccle		148·4	343	e 19 46?	[+ 1]	e 42 35	SS	—	—	e 70·8
Kew		148·9	347	e 19 47k	[+ 1]	e 42 45	SS	e 23 47	PP	e 68·8
Strasbourg		149·1	336	e 19 45	[− 1]	—	—	—	—	—
Chur		149·8	333	e 19 49	[+ 2]	—	—	—	—	—
Zürich		149·8	334	e 19 49	[+ 2]	—	—	—	—	—
Basle		150·0	335	e 19 50	[+ 3]	—	—	—	—	—
Neuchatel		150·7	335	e 19 58	[+10]	—	—	—	—	—
Paris		150·7	342	e 19 45?	[− 3]	—	—	—	—	e 61·8
Milan	N.	150·9	330	19 46	[− 3]	—	—	—	—	—
Clermont-Ferrand		153·2	338	e 20 15	[+23]	e 43 27	SS	e 24 5	PP	—
Tortosa		158·4	336	20 14	[+15]	26 49	[−14]	24 15	PP	e 74·8
Lisbon		162·7	357	20 6	[+ 2]	e 35 12	PS	23 35	PP	76·2
Granada		163·1	340	i 20 8a	[+ 4]	31 22	{− 6}	i 24 44	PP	83·6
San Fernando		164·5	347	20 12	[+ 7]	30 54	{−41}	25 14	PP	—

Additional readings :—
Brisbane iZ =4m.27s.
Auckland i =6m.40s., P_cS? =13m.15s.?.
Apia iS =7m.13s., true S is given as Q.
Riverview iPPEN =5m.2s., iEN =5m.21s., isSN =8m.34s., isSE =8m.39s., iSSE = 8m.48s., iP_cPN =8m.55s., SSSE =9m.4s., iN =9m.22s.
Wellington i =5m.30s., iZ =5m.43s., 6m.15s., 6m.40s., 7m.45s., and 8m.47s., P_cP? = 9m.5s., Q =9m.21s.
Honolulu e =18m.8s.
Branner ePN =13m.2s.
Berkeley iE =13m.28s., iN =13m.45s., iZ =23m.38s.
Pasadena iZ =13m.3s.
Tinemaha iZ =13m.9s.
Sitka e =15m.38s., ePS =25m.2s., e =29m.11s., and 30m.5s., eSSS =34m.12s.
Boulder City iP =13m.17s.
College eSS =30m.18s.
Tucson e =20m.26s., ePS =25m.38s., eSS =30m.52s., eSSS =34m.29s.
Salt Lake City e =26m.9s. and 26m.18s.
Hyderabad SN =25m.0s., SSN =31m.46s.
Bombay SKSE =24m.48s., SSE =32m.30s.
Rapid City eSS =34m.50s.
Saskatoon e =33m.9s.
Huancayo e =22m.37s.
Florissant eSKKSE =26m.16s., ePSE =28m.44s., eSSE =35m.24s.
St. Louis iSKKSE =26m.19s., ePS =28m.43s., eSSE =35m.13s.
Chicago ePS =29m.8s., e =32m.38s., eSSS =39m.18s.
Ottawa PS =30m.10s., eE =32m.27s., SS =37m.45s.
Philadelphia e =24m.35s., 27m.50s., 29m.53s., and 37m.40s.
Vermont e =55m.2s.
Seven Falls SKP =22m.9s., PS =31m.15s., SSS =42m.9s.
Scoresby Sund 31m.20s., 34m.52s., and 38m.51s.
Bermuda e =33m.25s.
Upsala eN =36m.13s., eE =40m.17s.
Helwan eN =20m.35s., 32m.21s., and 34m.27s.
Prague eSS =41m.45s.?, eSSS =46m.57s.?.
Belgrade e =20m.13s. and 43m.28s.
Jena eE =19m.52s., eN =20m.3s.
Cheb eSKSP =33m.26s., ePPS? =37m.11s., eSSS =47m.24s.
De Bilt iPKP =19m.50s.k.

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

Stonyhurst PKP = 20m.12s., 21m.23s.
Stuttgart iPKP$_2$?Z = 20m.12s., eSS = 42m.45s., eQ = 67m.3s.
Uccle PKP$_2$N = 19m.52s.
Kew iPKPNZ = 19m.53s., iZ = 22m.57s., eEZ = 25m.0s.?, ePSS?Z = 36m.19s., eEZ = 38m.9s., eQN = 48·8m.
Tortosa PKP$_2$N = 20m.45s., iE = 21m.18s., SKKSN = 31m.1s., PSE = 35m.13s., SSE = 44m.22s.
Lisbon N = 28m.31s.
Granada SKSP = 35m.13s., iSS = 45m.13s., SSS = 51m.29s.
San Fernando PKP$_2$Z = 20m.40s., PPPZ = 28m.55s., PPSE = 39m.5s., SSE = 45m.39s., SSSE = 51m.2s.
Long waves were also recorded at La Plata and Tananarive.

June 21d. Readings also at 1h. (near Apia), 2h. (near Fort de France), 4h. (near Berkeley, Branner, Lick, and San Francisco), 7h. (Clermont-Ferrand and Kew), 13h. (near Mizusawa), 15h. (Haiwee, Mount Wilson, Tucson, Pasadena, Palomar, Riverside, and Tinemaha), 17h. (Florissant, St. Louis, Tucson, and Tinemaha), 18h. (Berkeley), 22h. (Kew).

June 22d. Readings at 0h. (Bogota, St. Louis, Tucson, Palomar, Tinemaha, and near Berkeley), 2h. (Wellington), 4h. (Palomar, Tucson, and Tinemaha), 5h. (near Berkeley, Branner, Lick, and San Francisco), 6h. (Lick and Wellington), 9h. (Palomar, Riverside, Tinemaha, Tucson, Pasadena, and near Mizusawa), 12h. (La Paz), 18h. (Kew, Pasadena, Palomar, and Riverside).

June 23d. Readings at 1h. (near Granada), 2h. (Brisbane, Haiwee, Mount Wilson, Pasadena, Palomar, Riverside, and Tinemaha), 6h. (St. Louis, Ottawa, near Seven Falls, and Shawinigan Falls), 7h. (St. Louis, Tucson, Riverside, and Tinemaha), 10h. (Helwan and Ksara), 12h. (Palomar, Riverside, Tinemaha, and Tucson), 16h. (Auckland, Wellington, Christchurch, Brisbane, Riverview, Tucson, Palomar, Riverside, Tinemaha (2), and Stuttgart), 21h. (Tucson).

June 24d. Readings at 5h. (Bogota and new Mizusawa), 7h. (near Berkeley (2), Branner (2), Lick (2), and San Francisco), 9h. (Ksara), 16h. (New Delhi), 22h. (near Berkeley), 23h. (near Ottawa, Seven Falls, and Shawinigan Falls).

June 25d. 1h. 8m. 12s. Epicentre 13°·8N. 93°·1W. (as on 1941 Sept. 3d.).

$A = -·0525$, $B = -·9701$, $C = +·2370$; $\delta = +2$; $h = +6$;
$D = -·999$, $E = +·054$; $G = -·013$, $H = -·237$, $K = -·972$.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Oaxaca	E.	4·7	313	1 13	− 1	—	—	—	—	—
Vera Cruz	N.	6·1	333	1 32	− 2	—	—	—	—	—
Tacubaya	E.	8·1	315	1 56	− 6	—	—	—	—	—
Mobile		17·4	14	e 4 12	+ 6	i 7 48	+29	i 4 22	PP	—
Bogota		20·9	114	i 4 51	+ 5	—	—	—	—	—
Columbia		22·9	26	e 5 4	− 2	e 9 9	− 4	—	—	e 12·3
Tucson		24·5	322	i 5 23	+ 1	i 9 52	+12	i 6 2	PP	e 13·1
St. Louis		24·9	5	e 5 23	− 3	e 9 48	+ 1	i 5 32	?	—
Florissant		25·0	5	e 5 23	− 4	e 9 57	+ 9	e 10 7	S	e 17·6
San Juan		26·3	76	e 6 10	PP	e 10 32	+21	e 11 37	SS	e 14·4
Chicago		28·4	7	e 6 11	+13	e 10 25	−20	e 8 38	PcP	e 10·9
Palomar	Z.	29·1	316	i 6 6a	+ 2	—	—	i 9 0	PcP	—
Riverside	Z.	29·8	317	i 6 11	0	—	—	—	—	—
Mount Wilson	Z.	30·4	317	i 6 17	+ 1	—	—	—	—	—
Pasadena		30·4	317	i 6 17a	+ 1	—	—	i 9 18	PcP	e 14·0
Philadelphia		30·4	28	e 6 36	+20	e 11 12	− 4	e 7 15	PP	e 11·5
Huancayo		31·1	144	—	—	e 11 47	+19	—	—	e 15·3
Salt Lake City		31·5	333	e 6 26	0	e 11 35	+ 1	—	—	e 17·3
Haiwee	Z.	31·5	320	i 6 26	0	—	—	—	—	—
Fordham		31·7	29	e 7 29	PP	—	—	—	—	—
Bermuda		31·9	50	e 6 26	− 3	e 11 49	+ 9	e 10 44	?	e 13·3
Tinemaha		32·3	320	i 6 34a	+ 1	—	—	i 9 24	PcP	—
Weston		34·1	30	—	—	(e 12 26)	+12	—	—	e 12·4
Ottawa		34·8	21	6 51	− 3	12 18	− 7	8 18	PPP	16·8
Berkeley		35·3	318	i 6 56	− 3	—	—	8 18	PP	e 17·0

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Seven Falls		38·1	24	—	—	e 13 24	+ 8	e 8 24	PP	20·8
Saskatoon		39·8	347	—	—	—	—	e 17 48	?	25·8
Victoria		42·7	331	e 7 48	−12	—	—	—	—	22·8
Stonyhurst		79·4	37	—	—	—	—	36 15	$SKKS_2$	e 39·8
Kew		81·1	39	e 12 16	− 2	e 24 1?	PPS	e 31 18	SS	e 37·8
Granada		81·4	54	e 12 48k	+28	e 22 58	+27	—	—	41·1
Uccle		84·1	39	—	—	e 22 48?	−10	—	—	e 39·8
De Bilt		84·2	38	i 12 39	+ 5	—	—	i 12 51	P	e 39·8
Stuttgart		87·7	40	e 12 51	− 1	e 23 30	− 3	e 24 36	PS	e 45·2
Cheb		89·2	38	—	—	e 23 48?	+ 1	—	—	e 48·8

Additional readings :—
Berkeley eZ = 7m.2s., iZ = 8m.21s., iE = 8m.32s., 9m.5s., and 12m.21s., iN = 10m.35s.
Florissant eSZ = 10m.0s.
Long waves were also recorded at Puebla, Ukiah, La Paz, College, Aberdeen, Clermont-Ferrand.

June 25d. 4h. 16m. 19s. Epicentre 38°·9N. 29°·3E. (as given by Strasbourg).
Scale VII at Uzak and Gediz (Aegean Sea).
Renseignements de l'Observatoire de Kandilli.

$A = +·6805$, $B = +·3819$, $C = +·6254$; $\delta = +5$; $h = -1$;
$D = +·489$, $E = -·872$; $G = +·545$, $H = +·306$, $K = -·780$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Istanbul		2·2	355	0 50	P_g	1 31	S_g	1 4	P_g	—
Sofia		5·9	312	e 1 35	+ 4	i 3 10	+30	i 2 3	P_g	—
Bucharest		6·0	337	e 1 30	− 2	i 2 49	+ 6	i 2 6	P_g	—
Campulung		7·1	335	e 1 49	+ 1	e 3 16	+ 6	e 2 28	P_g	—
Ksara		7·3	132	1 53?	+ 3	3 31?	+16	—	—	—
Belgrade		8·9	314	i 2 13	+ 1	i 4 10	+15	i 2 24	PP	—
Helwan		9·2	169	2 11	− 5	3 55	− 8	5 5	S_g	—
Prague		15·4	321	i 3 43	+ 3	e 6 54	+22	—	—	e 7·7
Milan	E.	16·3	300	e 3 54	+ 2	7 10	+17	—	—	—
Cheb		16·4	318	i 3 55	+ 2	e 7 8	+12	4 30	?	e 8·7
Chur		16·5	305	e 3 56	+ 2	e 7 11	+13	—	—	—
Ravensburg		16·8	308	e 4 2	+ 4	e 7 16	+11	—	—	e 8·7
Jena	N.	17·3	320	e 4 5	+ 1	e 7 29	+13	7 51	SSS	e 9·4
Zürich		17·3	306	e 4 4	0	e 7 29	+13	—	—	—
Ebingen		17·4	309	e 4 9	+ 3	e 7 27	+ 8	—	—	e 9·2
Stuttgart		17·5	311	i 4 9	+ 2	e 7 28	+ 7	i 4 33	PP	—
Basle		18·0	306	e 4 11	− 2	e 7 41	+ 9	—	—	e 10·2
Neuchatel		18·3	304	e 4 15	− 2	e 7 45	+ 6	—	—	—
Strasbourg		18·3	309	4 17	0	7 48	+ 9	i 4 37	PP	9·9
Copenhagen		20·2	332	i 4 36	− 3	8 20	− 1	i 4 39	?	9·7
Clermont-Ferrand		20·5	297	i 4 40	− 2	e 8 31	+ 4	i 8 37	?	11·0
Barcelona		20·9	286	4 48	+ 2	e 8 42	+ 7	—	—	e 10·2
Uccle		21·2	312	i 4 50a	+ 1	i 8 45	+ 4	—	—	9·7
De Bilt		21·3	317	i 4 51?	+ 1	i 8 45	+ 2	—	—	e 9·7
Paris		21·6	306	i 4 59	+ 5	8 59	+10	6 0	?	10·2
Tortosa		22·2	283	i 4 58	− 2	9 15	+15	5 30	PP	e 12·7
Upsala		22·2	344	e 4 56	− 4	9 0	0	—	—	e 11·9
Kew		24·2	312	5 16k	− 3	e 9 36	+ 1	5 56	PP	e 12·2
Granada		25·9	277	i 5 24k	−11	i 10 11	+ 7	8 40	PcP	14·1
Bergen		26·3	334	5 40	+ 1	10 3	− 8	6 33	PPP	12·8
Stonyhurst		26·3	316	e 5 36	− 3	e 10 17	+ 6	i 10 24	SS	13·8
Aberdeen		27·5	322	i 5 58	+ 8	i 10 56	+26	i 10 28	S	16·0
San Fernando		28·1	276	5 55	0	10 59	+19	6 41	PP	16·2
Lisbon		30·0	282	6 9a	− 3	11 19	+ 9	10 41	?	15·8
New Delhi	N.	40·7	89	i 7 44	0	i 13 54	− 1	17 2	SSS	—
Scoresby Sund		41·1	337	7 49	+ 2	—	—	9 19	PP	—
Bombay		42·5	106	8 0	+ 1	i 14 23	+ 1	9 41	PP	23·7
Kodaikanal	E.	51·2	110	9 13	+ 6	i 16 43	+18	11 10	PP	—
Tananarive	E.	60·0	160	—	—	24 26	SSS	—	—	36·4
Seven Falls		68·7	314	e 11 5	− 2	e 20 5	− 5	—	—	24·7

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Ottawa		72·5	315	11 28	− 2	20 59	+ 5	17 56	?	25·7
Bermuda		73·3	298	—	—	e 21 11	+ 7	—	—	e 33·3
Fordham		74·2	309	e 11 40	0	e 21 22	+ 8	—	—	e 33·7
Philadelphia		75·5	309	e 12 0	+12	e 21 34	+ 6	e 14 42	PP	e 34·2
College		76·5	359	—	—	e 21 34	− 5	—	—	e 30·0
Chicago		81·3	318	—	—	e 22 32	+ 2	e 27 47	SS	e 38·6
Saskatoon		81·6	334	—	—	e 22 41?	+ 8	—	—	37·7
San Juan		82·8	288	e 12 26	− 1	e 22 49	+ 4	e 28 31	SS	34·2
Sitka		83·0	352	—	—	e 23 1	+14	e 23 40	PS	e 40·0
Florissant		84·9	317	e 12 35	− 3	e 23 6	0	i 12 38	P	—
St. Louis		85·0	317	e 12 37	− 1	e 23 2	− 5	i 12 41	P	—
Victoria		89·7	342	—	—	e 22 41?	[−50]	—	—	44·7
Salt Lake City		93·1	331	—	—	—	—	e 25 39	PS	e 47·3
Tinemaha	z.	98·7	334	e 13 41	− 1	—	—	e 30 41	PKKP	—
Berkeley		99·2	337	i 17 49	PP	—	—	i 32 15	SSP	e 54·5
Tucson		100·6	326	e 13 47	− 4	—	—	17 48	PP	47·7
Mount Wilson	z.	101·2	333	i 13 53	− 1	—	—	e 30 30	PKKP	—
Riverside		101·2	333	i 13 51	− 3	—	—	e 30 30	PKKP	—
Pasadena		101·3	333	e 13 57	+ 3	—	—	e 36 23	SSS	e 48·4
Palomar	z.	101·6	331	e 13 55	− 1	—	—	e 30 26	PKKP	—

Additional readings :—
Istanbul P_g =0m.53s.
Sofia iEN =2m.48s.
Bucharest i =1m.34s., iZ =1m.47s., iS*Z =3m.9s., iS*EN =3m.12s., iS_g =3m.31s.
Campulung eP*N =2m.10s., iN =3m.44s., iS_gN =4m.8s., iE =4m.16s.,
Belgrade i =2m.46s., e =3m.19s., iS =4m.26s., i =4m.54s.
Helwan eNZ =2m.31s., eN =3m.17s., S?E =5m.29s., P_cP?N =6m.5s., eN =6m.53s., and 8m.23s.
Milan ePN =3m.59s.
Jena iPZ =4m.10s.
Stuttgart iS =7m.32s., eQ =8m.29s.
Tortosa PPPEN =5m.42s.
Upsala iPN =5m.0s., iPE =5m.5s., SN =9m.7s.
Kew iS =9m.49s., eSS? =10m.26s.?.
San Fernando PPPE =7m.22s., SSE =13m.11s.
Lisbon PE =6m.13s., SE =11m.40s.
Bombay SE =14m.30s., S_cSN =17m.54s., iE =18m.5s.
Tananarive N =27m.51s., EN =33m.3s.
Ottawa eE =22m.41s.?.
Philadelphia eSS =26m.12s., e =27m.2s.
Chicago eSSS =31m.8s.
San Juan e =14m.48s.
Berkeley iE =17m.59s., iN =21m.48s., eE =47m.29s.?.
Tucson e =30m.9s.
Palomar eZ =29m.52s.
Long waves were also recorded at Colombo, Riverview, and La Paz.

June 25d. 6h. 57m. 44s. Epicentre 39°·0N. 29°·8E.

A = +·6762, B = +·3872, C = +·6268 ; δ = +5 ; h = −1 ;
D = +·497, E = −·868 ; G = +·544, H = +·312, K = −·779.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Istanbul		2·1	344	0 52	P_g	1 33	S_g	—	—	—
Bucharest		6·1	333	e 1 32	− 2	i 2 51	+ 6	i 1 55	P*	—
Sofia		6·1	309	e 1 57	P_g	3 11	S_g	—	—	—
Ksara		7·1	135	e 1 48	0	e 3 24	+14	—	—	—
Campulung		7·2	332	e 1 51	+ 2	—	—	—	—	3·8
Belgrade		9·1	313	e 2 43	+29	4 4	+ 4	e 3 35	PP	—
Helwan		9·2	173	e 2 14	− 2	4 21	SS	e 2 24	PP	—
Prague		15·5	321	e 3 40	− 2	e 6 53	+18	—	—	e 7·8
Milan		16·4	299	3 56	+ 3	7 16	+20	—	—	9·2
Cheb		16·6	318	e 3 56	0	e 7 11	+11	—	—	e 9·3
Chur		16·7	304	e 3 57	0	e 7 11	+ 8	—	—	—
Zürich		17·6	305	e 4 5	− 3	—	—	—	—	—
Stuttgart		17·7	310	e 4 9	− 1	e 7 34	+ 8	14 13	P	e 8·6
Basle		18·2	305	e 4 17	+ 1	e 7 26	−11	—	—	e 9·4
Neuchatel		18·5	303	e 4 17	− 2	e 7 48	+ 4	—	—	e 10·2

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Strasbourg		18·5	308	4 20	+ 1	7 50	+ 6	—	—	—
Copenhagen		20·3	331	e 4 39	− 1	8 27	+ 4	—	—	10·3
Uccle		21·4	311	e 4 50	− 1	8 47	+ 2	—	—	e 10·3
De Bilt		21·5	316	i 4 53	+ 1	e 8 52	+ 5	—	—	e 10·3
Paris		21·9	305	e 5 2	+ 5	e 9 0	+ 6	—	—	e 11·3
Upsala		22·3	343	e 4 58	− 3	e 9 2	0	e 10 51	SSS	e 11·3
Tortosa	E.	22·5	283	5 11	+ 9	9 11	+ 6	5 33	PP	—
Kew		24·4	311	i 5 19k	− 2	9 44	+ 5	e 5 59	PP	e 11·3
Bergen		26·3	333	—	—	e 10 1	−10	10 21	?	11·8
Stonyhurst		26·4	315	—	—	i 10 22	+10	—	—	e 13·8
Aberdeen	E.	27·6	321	—	—	i 10 30	− 2	—	—	16·8
San Fernando	E.	28·5	276	—	—	e 10 50	+ 4	—	—	—
Scoresby Sund		41·2	337	7 51	+ 3	14 16	+14	17 4	SS	23·3
Florissant		85·1	317	e 12 37	− 2	e 23 7	− 1	—	—	—
St. Louis		85·2	317	e 12 39	0	e 23 10	+ 1	—	—	—

Additional readings :—
Bucharest iP_gN =2m.6s., iS*Z =3m.15s. and 3m.18s., iS_g?N =3m.39s., iS_gE =3m.44s.
Belgrade i =4m.41s.
Helwan eN =3m.45s.
Upsala eSE =9m.5s., eE =10m.56s.
Tortosa P_cPE =8m.34s., SSE =10m.15s.
Kew eSZ =9m.54s.

June 25d. 8h. 6m. 52s. Epicentre 51°·5N. 173°·5W. (as on 1942 July 4d.).

A = −·6211, B = −·0708, C = +·7806 ; δ = +11 ; h = −6 ;
D = −·113, E = +·994 ; G = −·776, H = −·088, K = −·625.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
College		18·8	35	e 4 22	− 1	e 7 30	−20	—	—	e 9·0
Tinemaha	Z.	41·1	89	i 7 49a	+ 2	e 16 55	SS	i 11 1	?	21·2
Mount Wilson	Z.	43·0	92	i 8 2	− 1	—	—	i 11 18	?	—
Pasadena		43·0	92	i 8 4	+ 1	—	—	i 11 16	?	e 17·1
Riverside	Z.	43·6	92	e 8 8	0	—	—	i 11 21	?	—
Palomar		44·4	92	e 8 14	0	i 14 40	− 9	i 11 29	?	—
Tucson		48·9	88	i 8 50	0	e 15 47	− 6	i 12 3	?	e 20·8
Florissant	E.	56·9	68	—	—	e 17 26	−16	—	—	—
St. Louis		57·1	68	e 9 51	+ 1	e 17 28	−17	—	—	—
Stuttgart	Z.	80·1	358	e 15 39	PP	—	—	—	—	—

Additional readings :—
Tinemaha iZ =11m.17s. and 13m.9s.
Long waves were also recorded at Kew and Granada.

June 25d. 14h. 17m. 26s. Epicentre 21°·5S. 170°·2E. (as on 1943 March 11d.).

Pasadena suggests deep focus.

A = −·9177, B = +·1585, C = −·3644 ; δ = +8 ; h = +4 ;
D = +·170, E = +·985 ; G = +·359, H = −·062, K = −·931.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Auckland		15·8	167	3 49	+ 4	6 37	− 5	i 7 3	SS	7·7
Brisbane	N.	16·7	246	i 3 52	− 5	i 7 3	0	i 7 53	Q	—
Arapuni		17·2	167	3 58	− 5	7 34?	+20	—	—	—
Apia		18·8	70	i 4 26	+ 3	8 14	+24	c 4 33	PP	—
Wellington	Z.	20·1	172	4 37	− 1	8 35	+16	4 55	pP	10·1
Riverview		20·8	230	i 4 42k	− 3	i 8 33	0	i 5 10	PP	e 9·5
Sydney		20·8	230	e 4 34	−11	e 8 28	− 5	—	—	e 10·2
Christchurch		22·1	177	i 4 59	0	8 52	− 6	i 5 9	PP	10·8
Perth		49·2	246	—	—	i 15 52	− 6	i 19 44	SS	—
Honolulu		52·8	38	13 46	?	e 16 50	+ 3	—	—	e 21·9
Ukiah		86·6	46	e 13 54	+68	—	—	e 24 38	PPS	e 35·9
Santa Clara	Z.	86·6	48	i 12 48	+ 2	—	—	—	—	—
Berkeley		86·6	48	i 12 46	0	i 23 22	− 1	i 16 18	PP	e 40·0
Pasadena		87·7	52	i 12 53a	+ 1	—	—	i 13 14	pP	e 36·2
Mount Wilson	Z.	87·8	52	e 12 52	0	—	—	—	—	—

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
La Jolla	Z.	87·8	53	e 12 52	0	—	—	—	—	—
Riverside	Z.	88·2	52	i 12 54	0	—	—	i 13 16	pP	—
Palomar		88·3	54	12 56	+ 1	—	—	i 13 16	pP	—
Haiwee		88·8	50	e 12 59	+ 2	—	—	—	—	—
Tinemaha		89·0	50	i 13 0	+ 2	—	—	i 13 13	pP	—
Sitka		90·9	26	e 23 3	?	23 34	[− 4]	e 24 1	SKKS	e 38·0
Victoria		91·4	37	—	—	e 23 46	[+ 6]	—	—	37·6
College		91·9	16	—	—	e 23 31	[−13]	—	—	e 38·9
Tucson		92·4	56	13 16	+ 2	e 24 37	?	e 25 17	PS	e 43·1
Colombo	E.	92·8	276	—	—	23 37	[−12]	—	—	—
Salt Lake City		95·1	48	—	—	e 24 4	[+ 2]	—	—	e 40·6
Kodaikanal	E.	96·2	278	—	—	i 23 51	[−17]	e 25 41	PS	—
Rapid City		102·3	47	—	—	e 24 16	[−22]	e 27 11	S	e 57·6
New Delhi	N.	102·5	296	—	—	i 24 33	[− 6]	i 25 33	SKKS	—
Bombay		103·4	285	—	—	i 24 37	[− 7]	i 24 40	SKS	—
Huancayo		107·6	111	—	—	—	—	e 28 13	PS	e 50·3
La Paz		111·5	119	19 21	PP	—	—	29 44	PPS	52·6
Chicago		112·9	52	e 29 3	PS	—	—	e 34 24	SS	e 46·9
Columbia		116·8	61	29 48	PS	—	—	e 36 46	SSS	e 58·7
Ottawa		121·8	48	e 18 55	[− 1]	—	—	e 36 34?	SS	61·6
Seven Falls		125·0	46	e 21 58	?	—	—	e 38 10	SSP	61·6
San Juan		127·2	82	e 21 6	PP	—	—	e 34 44	S_cSPKP	e 43·9
Bermuda		130·4	65	e 22 39	PKS	—	—	34 36	S_cSPKP	—
Scoresby Sund		130·5	6	22 32	PKS	—	—	—	—	—
Upsala		137·0	340	22 49	PKS	—	—	e 32 8	PS	e 62·6
Ksara		138·0	296	e 19 36	[+ 9]	—	—	e 22 53	PP	—
Copenhagen		142·0	340	e 19 34	[0]	27 35	[+53]	22 45	PP	62·6
Helwan	E.	142·2	291	e 21 16	?	—	—	e 23 16	PP	—
Potsdam		144·5	337	e 19 46?	[+ 8]	e 29 34	{−13}	e 23 19	PP	e 77·6
Prague		145·7	333	e 19 58	[+18]	e 26 34?	[−14]	e 34 58	S_cSPKP	70·6
Belgrade		145·9	320	e 19 55	[+14]	—	—	23 57	PP	—
Jena	Z.	146·2	335	e 19 42	[+ 1]	—	—	e 19 53	?	—
Cheb		146·5	335	e 19 45	[+ 3]	—	—	e 28 33	PKKP	e 71·6
De Bilt		147·3	343	i 19 46k	[+ 3]	e 31 34?	?	i 19 58k	PKP	e 65·6
Uccle		148·7	344	19 47	[+ 1]	e 29 34?	{−37}	e 27 34?	PPP	e 73·6
Stuttgart		148·9	336	19 43	[− 3]	e 42 22	SS	e 23 28	PP	67·6
Kew		149·2	349	i 19 49	[+ 3]	e 34 17	PS	28 27	PKKP	e 72·6
Triest		149·2	327	i 19 58	[+12]	—	—	i 26 22	PPP	—
Strasbourg		149·5	337	e 19 46	[− 1]	e 29 34	{−41}	—	—	—
Zürich		150·2	335	e 20 12	[+24]	—	—	—	—	—
Chur		150·2	334	e 19 51	[+ 3]	—	—	—	—	—
Basle		150·5	336	e 19 53	[+ 5]	—	—	e 28 36	PKKP	—
Neuchatel		151·2	336	e 19 50	[+ 1]	—	—	—	—	—
Milan		151·5	331	e 20 2	[+12]	—	—	—	—	—
Granada		163·5	343	i 20 5k	[+ 1]	45 18	SS	i 24 51	PP	i 83·5
San Fernando	E.	164·8	349	e 25 5	PP	—	—	—	—	88·6

Additional readings :—
Apia i = 5m.22s., e = 6m.34s.
Wellington iZ = 4m.44s., PPZ = 5m.15s., iZ = 5m.33s., 5m.44s., and 6m.14s., i = 8m.29s., pP_cPZ = 8m.57s., SS?Z = 9m.19s., pS_cPZ = 16m.8s.
Riverview iE = 5m.14s. and 8m.36s., iZ = 8m.46s., iSSN = 9m.4s., iN = 9m.18s.
Christchurch eE = 8m.36s., iNZ = 9m.6s.
Berkeley iN = 23m.12s. and 24m.30s., iE = 24m.38s., iZ = 24m.40s., eE = 29m.10s.?, eN = 29m.28s.?, iE = 31m.28s., iZ = 36m.28s., iN = 36m.36s., iE = 37m.32s.
Tucson e = 13m.31s.
Kodaikanal e = 32m.26s. and 36m.1s.
Columbia e = 39m.43s.
San Juan e = 22m.26s.
Scoresby Sund 22m.46s.
Upsala eE = 22m.53s., eN = 28m.12s., eE = 31m.12s., and 33m.36s., eN = 46m.34s.
Helwan iE = 42m.55s.
Potsdam eN = 30m.40s.
Belgrade e = 20m.23s. and 24m.44s.
Kew eZ = 20m.42s.?, ePPN?Z = 21m.57s.?, ePPP?Z = 23m.57s.?, eZ = 31m.2s.?, ePS?N = 32m.47s.
Basle e = 23m.23s.
Granada PPS = 37m.27s.
Long waves were also recorded at Philadelphia, Aberdeen, Clermont Ferrand, and Paris.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 25d. 17h. 42m. 6s. Epicentre 1°·5S. 23°·4W.

$A = +\cdot9175$, $B = -\cdot3970$, $C = -\cdot0260$; $\delta = +9$; $h = +7$;
$D = -\cdot397$, $E = -\cdot918$; $G = -\cdot024$, $H = +\cdot010$, $K = -1\cdot000$.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Rio de Janeiro	E.	28·7	221	i 5 57	− 4	i 10 51	+ 1	—	—	i 13·6
	N.	28·7	221	i 5 58	− 3	i 10 54	+ 4	—	—	i 13·5
San Fernando	E.	41·0	21	7 50	+ 4	14 7	+ 8	9 54	PP	21·4
Lisbon		42·1	17	7 56k	+ 1	i 14 16	0	9 38	PP	19·3
Granada		42·7	23	8 7a	+ 7	i 14 26	+ 2	8 17	pP	20·3
La Plata	E.	46·2	221	—	—	15 18	+ 3	—	—	22·0
San Juan		46·4	298	8 29	− 1	15 6	−12	10 2	PP	18·3
La Paz		46·5	249	i 8 31a	0	i 15 18	− 1	i 10 34	PP	24·5
Tortosa		47·4	25	i 8 38	0	15 34	+ 2	10 28	PP	23·0
Barcelona		48·6	25	8 44	− 3	15 50	+ 1	—	—	—
Bermuda		51·6	315	e 9 9	− 1	e 16 33	+ 2	—	—	e 21·4
Huancayo		52·5	256	i 9 17	0	i 16 44	+ 1	e 20 29	SS	e 21·4
Clermont-Ferrand		52·6	23	e 9 20	+ 2	i 16 47	+ 3	e 11 17	PP	e 25·6
Paris		54·9	21	e 9 38	+ 3	e 17 19	+ 3	e 11 41	PP	26·9
Milan		55·0	28	9 31	− 4	16 53	−24	—	—	—
Neuchatel		55·1	25	e 9 35	− 1	—	—	—	—	—
Basle		55·8	25	e 9 40	− 1	e 17 30	+ 2	—	—	—
Zürich		56·1	25	e 9 43k	0	e 17 33	+ 1	e 11 42	PP	—
Chur		56·1	26	e 9 42	− 1	e 17 33	+ 1	—	—	—
Kew		56·3	18	i 9 42k	− 3	i 17 33	− 1	e 11 54?	PP	e 26·4
Strasbourg		56·7	24	9 47	− 1	17 44	+ 4	i 10 12	?	—
Uccle		57·2	20	9 50k	− 1	i 17 47	+ 1	e 21 47	SS	e 26·9
Triest		57·3	30	i 9 44	− 8	i 17 41	− 6	—	—	—
Stuttgart		57·5	25	i 9 51k	− 2	i 17 50	0	e 11 54	PP	—
Stonyhurst		57·8	14	i 9 54	− 1	i 18 2	+ 8	21 57	SS	27·6
De Bilt		58·6	20	i 10 1k	0	i 18 8	+ 4	e 21 54	SS	e 27·9
Cheb		59·8	26	e 10 10	+ 1	e 18 32	+12	e 12 20	PP	e 28·9
Jena		60·1	26	e 10 10	− 1	e 18 24	0	e 12 18	PP	—
Belgrade		60·3	35	e 10 13	0	18 28	+ 2	e 13 50	PPP	36·6
Prague		60·7	27	e 10 15	0	e 18 34	+ 2	e 13 54	PPP	—
Helwan		60·8	55	10 17	+ 1	18 38	+ 5	12 32	PP	—
Aberdeen	E.	60·9	14	16 57	?	—	—	27 14	?	38·0
Potsdam		61·8	25	e 10 24	+ 1	i 18 49	+ 3	i 12 42	PP	e 26·9
Fordham		62·2	320	i 10 28	+ 2	i 18 54	+ 3	e 25 30	SSS	—
Philadelphia		62·7	318	i 10 37	+ 8	e 19 4	+ 7	e 22 55	SS	e 25·4
Bucharest		63·4	37	e 7 18	?	—	—	e 12 57	PP	29·9
Seven Falls		63·7	327	10 35	− 1	19 9	− 1	—	—	25·9
Copenhagen		64·1	22	i 10 38	0	19 12	− 2	12 59	PP	—
Columbia		64·5	310	e 10 42	+ 1	e 19 19	0	e 20 27	S_eS	e 28·3
Bergen		65·6	15	e 10 44	− 4	19 27	− 6	—	—	30·0
Ksara		65·7	52	e 10 52	+ 4	e 19 56?	+22	—	—	—
Ottawa		65·7	323	e 10 44	− 4	19 30	− 4	e 22 54	?	26·9
Upsala	E.	69·0	21	e 10 56a	−13	e 20 13	− 1	13 46	PP	31·9
	N.	69·0	21	11 7	− 2	e 24 21	SS	e 15 19	PPP	e 30·9
Mobile		69·2	304	e 11 16	+ 6	i 20 18	+ 2	—	—	—
Tananarive		71·5	109	e 11 30	+ 6	—	—	—	—	36·2
Scoresby Sund		71·9	1	i 11 27	0	20 52	+ 4	25 36	SS	32·9
Chicago		72·1	315	e 11 24	− 4	e 20 33	−17	e 21 26	PPS	e 29·4
St. Louis		73·0	312	i 11 30	− 3	20 54	− 6	i 11 44	P_eP	e 34·1
Rapid City		83·7	314	i 13 9?	+37	e 23 22?	+28	27 5?	SS	e 42·9
Tucson		88·6	302	e 12 56	0	e 23 46	+ 4	e 28 53	SS	e 42·4
Salt Lake City		89·8	311	e 13 3	+ 1	e 23 33	[+ 1]	—	—	e 41·3
Palomar	Z.	93·7	303	e 13 17	− 3	—	—	i 17 3	PP	—
La Jolla	Z.	94·0	302	e 13 23	+ 2	—	—	—	—	—
Riverside	Z.	94·1	304	i 13 23	+ 1	—	—	—	—	—
Mount Wilson	Z.	94·7	304	e 13 24	0	—	—	i 13 27	?	—
Pasadena		94·8	304	i 13 23	− 2	—	—	—	—	e 43·7
Tinemaha		94·8	306	e 13 25	0	—	—	—	—	—
Bombay		96·4	71	17 33	PP	26 16	PS	i 17 58	?	—
Victoria		97·8	318	—	—	e 24 18	[+ 2]	—	—	43·9

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Berkeley		97·9	307	i 13 40	+ 1	i 24 22	[+ 6]	i 17 36	PP	e 48·3
New Delhi	N.	100·0	62	e 17 39	PP	—	—	—	—	—
Kodaikanal	E.	101·0	79	e 18 21	PP	—	—	—	—	—
Sitka		102·9	329	—	—	e 24 46	[+ 5]	e 32 58	SS	e 47·0
Colombo	E.	103·3	83	—	—	27 40	PS	—	—	—
College		105·4	339	—	—	e 24 48	[− 4]	e 27 25	PS	e 43·8
Riverview	Z.	144·5	172	i 19 41	[+ 3]	—	—	i 23 3	PP	e 69·2

Additional readings :—
San Fernando PPPE =10m.40s., SSE =17m.11s.
Lisbon PZ =8m.0s., PPZ =9m.35s., E =10m.53s., N =11m.24s.
Granada P_cP =9m.43s.
La Paz iSZ? =15m.12s., SSZ =18m.54s.
Tortosa PPPE =11m.11s., SSE? =18m.45s.
Huancayo e =10m.34s. and 11m.20s.
Kew ePPPNZ =12m.59s.?, eP_cS?Z =14m.19s.?, eN =17m.18s., eS_cSNZ =19m.37s.?, eSSNZ =21m.54s.?, eSSSZ =24m.24s.?
Uccle eSSS? =24m.3s.
Stuttgart eP_cPZ =10m.34s., cPPPZ =13m.19s., eS_cS =19m.54s., cSS =21m.29s.
Stonyhurst 19m.0s.
Cheb ePPP =13m.54s., e =20m.5s., eSS =22m.14s., eSSS =25m.2s.
Jena eN =12m.13s., 18m.27s., and 20m.13s.
Belgrade e =22m.12s.
Prague eSS =22m.36s.
Helwan eN =25m.2s.
Fordham i =20m.24s.
Philadelphia e =15m.0s.
Bucharest eEN =7m.59s.
Copenhagen 11m.56s. and 20m.45s.
Columbia e =25m.12s.
Upsala ePPPE =15m.22s., eN =21m.15s., eE =21m.22s., eSSSE =27m.54s.
Scoresby Sund 21m.47s.
Chicago e =12m.51s. and 24m.8s.
St. Louis iZ =11m.34s., eZ =12m.29s., iZ =13m.12s., eE =21m.31s., eN =26m.34s.
Tucson e =12m.59s., 13m.22s., and 15m.32s.
Palomar i =13m.24s.
Berkeley iE =17m.50s., iZ =26m.32s. and 45m.22s., iN =45m.28s., eE =46m.48s.?.
College eSS =33m.30s.
Riverview iZ =21m.24s.
Long waves were also recorded at Wellington and Auckland.

June 25d. Readings also at 2h. (near Balboa Heights), 3h. (near Stuttgart), 4h. (Istanbul and Bucharest), 5h. (Bucharest (2) and Istanbul (3)), 7h. (Ksara, Sofia, Belgrade, Stuttgart, Bucharest, and near Istanbul (3)), 8h. (Bucharest, St. Louis, Tucson, and Tinemaha), 9h. (Bucharest, Sofia, Triest, Belgrade, Stuttgart (2), Cheb, De Bilt, and near Istanbul), 10h. (Bogota, Bucharest, and near Istanbul), 11h. (near Istanbul), 14h. (San Fernando, Sofia, Stuttgart, Bucharest, and near Istanbul), 15h. (Bogota, Bucharest, and Uccle), 16h. (Ksara, Helwan, Bucharest, and Lick), 17h. (Bogota), 18h. (Kodaikanal, La Paz, and Berkeley), 19h. (Berkeley and New Delhi).

June 26d. Readings at 4h. (Palomar, Riverside, Mount Wilson, Pasadena, Riverview, and Brisbane), 5h. (Kew, Stuttgart, Tucson, and Christchurch), 9h. (Pasadena, Mount Wilson, Riverside, Palomar, Tucson, and near Mizusawa), 14h. (Florissant, St. Louis, Pasadena, Mount Wilson, Riverside, Palomar, Santa Barbara, Tucson, Tinemaha, Haiwee, La Paz, and La Plata), 16h. (Pasadena, Mount Wilson, Riverside, Tinemaha, Tucson, near Berkeley, Branner, and Lick), 19h. (San Juan), 20h. (Kaimata, Christchurch, near Wellington, New Plymouth, and Tuai), 22h. (Stuttgart).

June 27d. Readings at 2h. (Vermont), 3h. (St. Louis, Palomar, Tinemaha, Riverside, Mount Wilson, Pasadena, Tucson, Oaxaca, and Tacubaya), 5h. (Vermont), 6h. (Bucharest (2)), 7h. (Sofia), 12h. (Copenhagen, Stuttgart, Palomar, Riverside, Mount Wilson, Pasadena, Tucson, and Suva), 16h. (Vermont), 16h. (near Stuttgart, Ravensburg, Neuchatel, Chur, Basle, and Zürich), 18h. (near Branner), 23h. (St. Louis, Palomar, Tinemaha, Tucson, Riverside, Mount Wilson, Pasadena, and Vera Cruz).

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

June 28d. 5h. 31m. 45s. Epicentre 13°·8N. 93°·1W. (as on 25d.).

A = −·0525, B = −·9701, C = +·2370; δ = +2; h = +6;
D = −·999, E = +·054; G = −·013, H = −·237, K = −·972.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Oaxaca	N.	4·7	313	—	—	i 1 56	−14	—	—	—
Vera Cruz	N.	6·1	333	e 1 28	− 6	—	—	—	—	—
Tacubaya	E.	8·1	315	e 2 4	+ 2	—	—	—	—	—
Bogota		20·9	114	i 4 54	+ 8	—	—	e 12 39	PcS	e 15·1
Columbia		22·9	26	e 5 3	− 3	e 9 7	− 6	e 5 39	PP	e 13·9
Tucson		24·5	322	i 5 22	0	e 9 55	+15	e 5 38	PP	e 12·3
St. Louis		24·9	5	e 5 20	− 6	e 9 46	− 1	—	—	—
San Juan		26·3	76	e 6 11	PP	e 10 27	+16	e 6 40	PPP	e 11·8
Chicago		28·4	7	e 6 20	+22	—	—	—	—	e 11·7
Palomar		29·1	316	i 7 2a	+58	—	—	—	—	—
Riverside	Z.	29·8	317	i 6 12	+ 1	—	—	e 9 17	PcP	—
Mount Wilson	Z.	30·4	317	i 6 16	0	—	—	—	—	—
Pasadena		30·4	317	i 6 17	+ 1	—	—	e 9 16	PcP	e 14·3
Philadelphia		30·4	28	e 7 6	PP	e 11 15	− 1	—	—	—
Huancayo		31·1	144	—	—	e 11 40	+12	e 11 43	?	e 15·1
Haiwee	Z.	31·5	320	e 6 26	0	—	—	—	—	—
Bermuda		31·9	50	—	—	e 11 12	−28	—	—	e 14·8
Tinemaha		32·3	320	e 6 35	+ 2	—	—	—	—	—
Ottawa		34·8	21	e 6 51	− 3	e 12 15	−10	e 16 15?	?	20·3
Vermont		35·0	25	—	—	e 12 33	+ 5	—	—	e 20·3
Berkeley		35·3	318	i 6 59	0	i 12 39	+ 6	i 8 23	PP	e 16·3
Shawinigan Falls		36·9	24	e 7 45	+33	—	—	—	—	23·3
Seven Falls		38·1	24	e 8 45	PP	—	—	—	—	21·3
La Paz	Z.	38·9	139	e 7 37	+ 8	—	—	—	—	19·8
Granada		81·4	54	9 23k	?	e 18 56	?	—	—	38·2
Stuttgart		87·7	40	e 12 51	− 1	—	—	—	—	e 44·3

Additional readings :—
San Juan e = 7m.48s.
Berkeley iZ = 9m.57s., iE = 14m.27s.
Long waves were also recorded at Ukiah, Kew, and De Bilt.

June 28d. 5h. 46m. 18s. Epicentre 13°·8N. 93°·1W. (as at 5h. 31m.).

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Vera Cruz	N.	6·1	333	—	—	i 2 48	+ 3	—	—	—
Tacubaya	N.	8·1	315	e 2 4	+ 2	—	—	—	—	—
Bogota		20·9	114	e 4 52	+ 6	—	—	—	—	—
Tucson		24·5	322	i 5 22	0	e 9 48	+ 8	—	—	e 13·2
St. Louis	Z.	24·9	5	e 5 15	−11	—	—	—	—	—
Palomar		29·1	316	i 6 4	0	—	—	—	—	—
Riverside	Z.	29·8	317	e 6 10	− 1	—	—	—	—	—
Mount Wilson	Z.	30·4	317	i 6 15	− 1	—	—	—	—	—
Pasadena	Z.	30·4	317	e 6 15	− 1	—	—	e 9 16	PcP	—
Haiwee	Z.	31·5	320	e 6 24	− 2	—	—	—	—	—
Tinemaha		32·3	320	e 6 33	0	—	—	—	—	—

June 28d. 7h. 58m. 48s. Epicentre 13°·8N. 93°·1W. (as at 5h.).

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Oaxaca	N.	4·7	313	1 20	+ 6	—	—	—	—	—
Vera Cruz	N.	6·1	333	i 1 38	+ 4	—	—	—	—	—
Puebla	N.	7·1	318	1 53	+ 5	—	—	—	—	—
Tacubaya	E.	8·1	315	e 2 3	+ 1	—	—	—	—	—
Guadalajara	N.	11·9	306	3 1	+ 7	—	—	—	—	—
Manzanillo	N.	12·0	297	e 2 58	+ 3	—	—	—	—	—
Balboa Heights		14·1	108	e 3 27	+ 4	—	—	e 6 57	SSS	e 8·1
Mobile		17·4	14	i 4 7	+ 1	—	—	—	—	—
Port au Prince		20·5	74	e 4 49	+ 7	i 8 44	SS	5 14	PPP	e 10·8
Bogota		20·9	114	i 4 54	+ 8	i 9 5	SS	i 5 23	PPP	13·2

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Columbia		22·9	26	i 5 3	− 3	e 9 10	− 3	—	—	e 11·6
Cape Girardeau	N.	23·6	6	e 5 7	− 6	e 9 18	− 7	—	—	—
Tucson		24·5	322	i 5 23	+ 1	i 9 45	+ 5	i 6 0	PP	e 11·8
St. Louis		24·9	5	i 5 22	− 4	i 9 47	0	i 8 26	?	e 12·4
San Juan		26·3	76	i 5 35	− 4	i 10 13	+ 2	i 6 25	PP	i 10·5
Chicago		28·4	7	e 5 50	− 8	i 9 54	−51	e 8 47	PcP	e 11·7
Georgetown		28·7	27	i 5 57	− 4	—	—	i 11 33	?	—
New Kensington		29·1	21	e 6 20	+16	—	—	e 7 4	PPP	e 11·2
La Jolla		29·1	315	e 6 4	0	e 10 47	− 9	—	—	—
Palomar		29·1	316	i 6 4	0	i 11 9	+13	—	—	—
Boulder City		29·5	325	i 6 8	0	e 12 45	SSS	i 15 53	?	i 19·1
Riverside		29·8	317	i 6 10a	− 1	e 11 5	− 2	i 9 17	PcP	—
Mount Wilson		30·4	317	i 6 16	0	—	—	i 9 21	PcP	—
Pasadena		30·4	317	i 6 16a	0	i 11 17	+ 1	i 9 16	PcP	e 13·3
Philadelphia		30·4	28	i 6 13	− 3	i 11 7	− 9	e 7 7	PP	e 14·2
Fort de France		31·0	85	e 7 12?	PP	—	—	e 12 12	?	e 15·7
Huancayo		31·1	144	e 6 28	+ 6	i 11 40	+12	i 7 32	PP	e 13·7
Rapid City		31·4	346	i 7 14?	PP	i 12 7?	+35	i 13 57?	SS	—
Haiwee		31·5	320	i 6 27	+ 1	e 11 33	− 1	i 9 21	PcP	—
Salt Lake City		31·5	333	e 6 25	− 1	i 11 33	− 1	e 7 34	PP	e 14·4
Santa Barbara		31·6	316	e 6 26	0	e 11 38	+ 3	i 9 21	PcP	—
Fordham		31·7	29	i 6 23	− 4	i 11 37	0	—	—	—
Bermuda		31·9	50	i 6 27	− 2	i 11 49	+ 9	e 11 5	?	e 13·0
Tinemaha		32·3	320	e 6 33	0	—	—	—	—	—
Lick		34·6	318	e 6 55	+ 2	—	—	—	—	e 16·5
Ottawa		34·8	21	6 49	− 5	12 17	− 8	8 19	PP	15·5
Santa Clara		34·8	318	i 6 55	+ 1	e 12 21	− 4	—	—	e 16·6
Branner		35·0	318	e 6 58	+ 2	e 12 26	− 2	i 8 42	PPP	e 16·3
Vermont		35·0	25	i 6 55	− 1	i 12 17	−11	i 8 14	PP	i 15·2
Berkeley		35·3	318	i 6 58	− 1	i 12 20	−13	i 8 22	PP	e 17·5
San Francisco		35·3	318	e 6 44	−15	e 12 20	−13	e 6 59	P	e 15·0
Butte		36·1	338	i 6 56?	− 9	e 13 33?	PcS	i 8 26?	PP	e 16·3
Ukiah		36·5	320	i 7 12	+ 3	e 12 40	−11	e 8 32	PP	e 15·9
Shawinigan Falls		36·9	24	7 8	− 4	13 3	+ 5	8 40	PP	17·5
Ferndale		38·1	321	e 7 16	− 6	e 12 52	−24	e 12 42	?	e 18·9
Seven Falls		38·1	24	7 19	− 3	13 26	+10	8 43	PP	19·2
La Paz		38·9	139	i 7 35a	+ 6	i 13 50	+22	i 9 12	PP	19·9
Halifax		39·7	33	7 33?	− 3	13 34	− 6	9 12	PP	19·2
Saskatoon		39·8	347	7 38	+ 2	13 47	+ 5	9 13	PP	18·2
Seattle		41·6	331	e 8 18	+27	e 14 24	+16	(e 17 29)	SS	e 17·5
Victoria		42·7	331	7 58	− 2	14 22	− 2	9 42	PP	19·2
Montezuma		43·3	146	e 9 50	PP	17 12	SS	e 13 30	PcS	e 20·0
Sitka		54·0	334	i 9 25	− 3	i 16 57	− 6	e 11 26	PP	e 22·6
La Plata	E.	58·8	146	10 12	+10	18 10	+ 3	12 30	PP	29·5
	N.	58·8	146	9 36	−26	18 18	+11	12 18	PP	29·8
	Z.	58·8	146	9 48	−14	23 36	SSS	—	—	30·2
Rio de Janeiro		60·9	126	i 10 13	− 4	i 18 37	+ 3	—	—	29·0
Honolulu		61·8	288	e 10 26	+ 3	i 18 50	+ 4	e 12 54	PP	e 25·5
College		63·0	337	e 10 26	− 5	e 18 54	− 7	e 12 43	PP	e 29·4
Reykjavik		69·5	26	e 15 24	PPP	e 20 24	+ 4	e 26 36	?	e 30·2
Scoresby Sund		70·8	19	i 11 17	− 3	20 30	− 5	21 20	PPS	—
Lisbon		76·8	53	11 54k	− 1	21 40	− 2	22 13	ScS	32·2
Aberdeen		79·1	33	—	—	i 22 1	− 6	i 22 43	PS	36·3
Stonyhurst		79·4	37	12 6	− 3	22 11	+ 1	22 28	ScS	37·8
San Fernando		79·5	55	12 7	− 3	21 50	−21	22 25	ScS	36·2
Kew		81·1	39	i 12 16a	− 2	e 22 23	− 5	e 15 19	PP	e 39·2
Granada		81·4	54	i 12 21k	+ 1	i 22 40	+ 9	23 11	sS	36·9
Bergen		82·2	29	12 16	− 8	22 31	− 8	e 15 28	PP	28·1
Paris		83·4	42	e 12 35	+ 5	e 22 48	− 3	—	—	e 31·2
Tortosa	E.	83·8	50	12 29	− 3	23 6	+11	e 28 33	SS	e 38·2
Uccle		84·1	39	i 12 32a	− 2	e 23 0	+ 2	i 23 8	ScS	e 38·2
De Bilt		84·2	38	i 12 35a	+ 1	i 22 51	− 8	i 28 41	SS	e 40·2
Clermont-Ferrand		84·5	44	e 12 34	− 2	e 23 4	+ 2	—	—	e 39·8
Barcelona		84·9	49	e 12 26	−12	e 23 6	0	—	—	—
Neuchatel		86·8	42	e 12 46	− 1	—	—	—	—	—
Strasbourg		86·8	40	e 12 47	0	23 12	[− 1]	—	—	39·2

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

		△	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Basle		87·0	42	e 12 48	0	e 23 21	{+ 1}	—	—	—
Copenhagen		87·3	33	e 12 50a	0	23 36	+ 7	29 30	SS	36·2
Stuttgart		87·7	40	i 12 51a	− 1	e 23 19	[+ 1]	e 16 15	PP	e 40·1
Zürich		87·7	42	e 12 50a	− 2	e 23 26	− 7	—	—	—
Upsala		88·2	28	e 12 48	− 6	e 23 14?	[− 8]	e 16 12?	PP	e 39·8
Jena		88·4	38	e 12 53	− 2	e 23 21	[− 2]	e 29 37	SS	e 44·8
Chur		88·5	42	e 12 54	− 2	e 23 30	{− 1}	—	—	—
Milan	E.	88·7	44	12 59?	+ 2	23 21	[− 4]	—	—	—
Potsdam	E.	88·8	36	e 12 59?	+ 2	e 23 37?	{+ 4}	e 16 18	PP	e 40·2
	N.	88·8	36	e 13 4	+ 7	i 23 52	+ 8	i 25 3	PS	e 37·2
Cheb		89·2	38	e 13 6	+ 7	e 23 33	[+ 4]	e 16 28	PP	e 47·2
Prague		90·4	38	e 13 6	+ 2	e 23 50	− 8	e 16 42	PP	e 38·2
Triest		91·6	42	i 13 8	− 2	i 24 9	0	i 25 12	PS	—
Suva		92·8	252	e 14 37?	?	i 20 36?	?	—	—	—
Belgrade		96·3	42	e 13 46	+14	e 24 17	[+ 9]	e 17 43	PP	e 41·2
Arapuni		99·3	235	e 22 12?	?	25 36	+22	32 36	SSP	46·2
Bucharest		100·0	39	e 13 47	− 1	24 51	{− 3}	—	—	42·2
Wellington		100·5	230	18 4	PP	24 42	[+13]	27 7	PS	46·7
Christchurch		102·4	228	21 42	?	24 50	[+11]	27 29	PS	47·6
Helwan		111·1	51	e 14 42	P	25 18	[+ 1]	19 12	PP	—
Ksara		112·2	45	e 19 24	PP	—	—	e 28 54	PS	—
Riverview		118·8	239	e 20 20	PP	i 25 50	[+ 5]	e 30 0	PS	e 55·4
Dehra Dun	N.	135·3	10	e 23 12	SKP	—	—	—	—	—
New Delhi	N.	136·8	12	i 19 31	[+ 6]	22 58	SKP	22 5	PP	65·2
Tananarive		142·0	103	19 38	[+ 4]	35 30	PPS	22 40	PP	71·6
Bombay	N.	144·7	23	19 33?	[− 6]	29 58?	{+10}	22 59	PP	—
Hyderabad	N.	147·9	15	19 50	[+ 6]	30 18	{+11}	20 6	PKP,	—
Perth		148·0	231	i 22 17	?	i 30 35	{+28}	—	—	i 73·4
Kodaikanal		154·4	22	19 10	[−44]	29 50	{−52}	1 27 10	PPP	—

Additional readings :—
Port au Prince PPP =5m.28s., SS =9m.44s.
Bogota i =4m.58s.
Tucson ePcP =9m.5s.
Chicago e =7m.48s., i =9m.30s.
Pasadena iZ =6m.33s.
Philadelphia e =8m.4s., i =11m.39s.
Huancayo ePPP =7m.53s.
Rapid City i =8m.31s.?.
Branner eSE =12m.30s.
Vermont e =7m.45s., i =12m.43s.
Berkeley iZ =8m.4s., 9m.33s., and 10m.2s., iN =10m.6s., iZ =12m.26s., iNZ =15m.20s.
Butte e =15m.1s.?.
La Paz PPP =9m.35s., iSSZ =16m.31s., ScS =18m.0s.
Halifax SSS =16m.36s.?.
Saskatoon SS =16m.48s., SSS =17m.30s.
Victoria e =14m.0s., SSS =17m.48s.
Montezuma e =16m.19s.
Sitka e =11m.20s., i =12m.12s., e =20m.3s. and 20m.45s.
La Plata E =15m.54s., N =22m.12s., E =22m.18s. and 24m.36s., N =24m.42s.
Honolulu e =10m.40s.
College e =13m.57s., 22m.20s. and 24m.59s.
Scoresby Sund 25m.24s.
Lisbon SSN =26m.29s., SSE =26m.32s.
Aberdeen iN =30m.29s., iE =30m.36s., iN =32m.48s.
Stonyhurst ScS =22m.45s., PS =23m.5s., SS =27m.7s., SSS =30m.41s.
San Fernando SSSE =27m.24s.
Kew e =14m.59s., ePPPZ =17m.14s., ePPPE =17m.29s., eSKSE =22m.30s., eScSE = 22m.44s., ePSE =22m.53s., eN =23m.12s.?, eEZ =23m.24s.?, eSSEZ =28m.12s.?, eSSSEZ =31m.42s., eQ =34m.42s.
Granada pPcP =12m.43s., PP =15m.47s., Q =35m.6s.
Tortosa QE? =32m.6s.
Uccle eSS =28m.12s.?, e =35m.12s.?.
De Bilt eSSSS =35m.12s.?.
Copenhagen 23m.15s. and 33m.6s.
Stuttgart eS =23m.25s., ePSZ =24m.32s., eSS =29m.37s., iSSS =33m.17s., eQ = 36m.6s., ePKP, PKP =38m.20s.
Upsala ePN =12m.52s., PS?E =24m.6s., eSSN =28m.12s.?, eSSE =29m.12s.?, eN = 31m.12s.?, eSSSE =33m.42s., eN =36m.12s.?.

Continued on next page.

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.
These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

Jena ePN =12m.59s., eSN =23m.35s., eE =33m.32s., eN =40m.12s., 40m.23s., and 44m.2s., eZ =44m.5s., eE =44m.12s.
Potsdam ePS?E =25m.0s.
Cheb eS =29m.46s., eSSS =33m.49s.
Prague eSKS =23m.12s., ePS =24m.29s., ePPS =24m.57s., eSS =40m.0s., eSSS = 43m.42s.
Triest eSKS =23m.43s., iSS =30m.24s., iSSS =34m.8s.
Suva i =27m.17s. and 33m.24s., iSS =35m.47s.
Belgrade ePS =26m.16s.
Arapuni e =28m.36s.
Wellington SSZ =32m.42s., Q =43m.0s.
Christchurch PZ =24m.55s., PPP =29m.30s.?, e =32m.12s., iEN =33m.12s., eEN = 36m.52s.?, e =40m.3s., Q =43m.4s., readings wrongly identified.
Helwan PSN =28m.36s., PPSN =29m.38s.
Riverview iZ =20m.28s., iSKKSEZ =27m.21s., iPSE =30m.9s., iZ =30m.18s., iPPSE =31m.26s., ePPSN =31m.29s., iZ =36m.30s., iSSN =36m.46s., iSSP?Z = 36m.57s., iSSP?E =37m.0s., iSSSN =40m.24s., iSSSE =40m.28s., eQN =48m.54s.
New Delhi SS =35m.14s., PPS =36m.18s.
Tananarive SS =41m.57s., SSS =47m.6s.
Bombay iN =23m.27s., e =48m.12s.
Hyderabad PKSN =23m.9s., SKSPN =33m.27s.
Perth i =43m.57s.
Kodaikanal PP =22m.10s., e =31m.40s.

June 28d. Readings also at 2h. (Bucharest and Ksara), 3h. (Granada, Uccle, De Bilt, Kew, Bergen, Upsala, Stuttgart, Cheb, and Helwan), 4h. (Pasadena, Mount Wilson, Riverside, Tinemaha, Palomar, Tucson, and Wellington), 5h. (Suva), 6h. (Tucson), 8h. (Istanbul, St. Louis, Palomar (5), Haiwee, Tinemaha, Riverside, Mount Wilson (3), Pasadena, Tucson (5), Tacubaya, Oaxaca, and La Paz), 9h. (Brisbane, St. Louis, Palomar (7), Haiwee (2), Tinemaha, Riverside (4), Mount Wilson (5), Pasadena (2), Tucson (7), Bogota (2), Vera Cruz, Oaxaca (2), Tacubaya (4), and near Triest), 10h. (Vera Cruz, Tacubaya (3), Bogota (2), Columbia (2), Tucson (5), St. Louis (2), Palomar (6), Riverside (3), Mount Wilson (5), Pasadena (4), Haiwee (2), Tinemaha (3), La Jolla, Ottawa (2)), 11h. (Ottawa), 12h. (Palomar, Tucson), 13h. (Tacubaya (3), Tucson (2), Palomar (2), Mount Wilson, Kew, near Christchurch, Kaimata, Wellington, Tuai, and New Plymouth), 16h. and 18h. (Palomar and Tucson), 19h. (Palomar, Tucson, and Philadelphia), 21h. (near Apia), 22h. (Istanbul, Palomar, and Tucson).

June 29d. 11h. 29m. 48s. Epicentre 11°·0S. 79°·0W.

A = +·1873, B = −·9638, C = −·1896 ; δ = −6 ; h = +6 ;
D = −·982, E = −·191 ; G = −·036, H = +·186, K = −·982.

		Δ	Az.	P.	O−C.	S.	O−C.	Supp.		L.
		°	°	m. s.	s.	m. s.	s.	m. s.		m.
Huancayo		3·8	107	e 1 2	+ 1	i 1 50	+ 3	i 1 16	P_g	—
La Paz		11·9	119	2 52	− 2	6 6	+57	—	—	7·5
Bogota		16·3	18	e 3 56	+ 4	6 58	+ 5	e 7 22	SSS	—
San Juan		31·9	23	e 6 25	− 4	e 11 32	− 8	—	—	e 12·5
Rio de Janeiro	N.	36·1	113	e 15 12	SS	—	—	—	—	i 19·6
St. Louis		50·5	349	e 8 56	− 6	e 16 11	− 5	—	—	—
Philadelphia		50·8	5	—	—	e 16 26	+ 6	—	—	e 19·0
Tucson		52·7	326	e 9 20	+ 2	—	—	—	—	—
Mount Wilson	Z.	58·3	322	i 9 58	− 1	—	—	—	—	—
Pasadena	Z.	58·3	322	e 10 1	+ 2	—	—	—	—	—
Granada		85·2	51	i 12 43a	+ 4	i 23 17	+ 8	—	—	44·4

Long waves were also recorded at Kew, De Bilt, and Riverview.

June 29d. Readings also at 1h. (Mount Wilson, Pasadena, Palomar (2), Tucson (2), St. Louis, Philadelphia, Columbia, and Montezuma), 3h. (Palomar and Tucson), 6h. (St. Louis, Mount Wilson, Riverside, Palomar, and Tucson), 7h. (Jena), 9h. (Riverview), 10h. (near Tucson), 12h. (Stuttgart), 13h. (La Paz and near Huancayo), 14h. (Mount Wilson, Tucson, and Pasadena), 15h. (Tucson, Mount Wilson, Riverside, and near Malaga), 17h. (Palomar and Tucson), 20h. (near Zürich, Stuttgart, and Ravensburg), 23h. (Istanbul).

June 30d. Readings at 2h. (Bucharest), 11h. (near Zürich and Stuttgart), 19h. (Ksara and Helwan), 21h. (near Berkeley, Lick, and Branner), 23h. (near La Paz).

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained as part of a global earthquake relocation project (Villaseñor et al., 1997) initiated with funding from the US National Science Foundation through grant EAR-9725140 and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of Euroseismos project.

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/

These data are considered public domain and may be freely distributed or copied for non-profit purposes provided the previous references are quoted.

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.