

Original 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 have been scanned and collected by SGA Storia Geofisica Ambiente (Bologna) thanks to funding provided by the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

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The International Seismological Summary for 1929 January, February, March.

FORMERLY THE BULLETIN OF THE
BRITISH ASSOCIATION SEISMOLOGY COMMITTEE.

The present quarter deals with 149 epicentres, 64 being new and 86 repetitions from old epicentres.

Cases of abnormal focus are as follows :—

Date, 1929.				Epicentre.		Focal Depth.
d.	h.	m.	s.	°	°	(Below normal).
Jan.	13	0	3	3	49·7N. 154·8E.	+0·015
Feb.	1	17	14	12	36·5N. 70·5E.	+0·025
Feb.	26	9	0	41	53·7N. 163·0W.	+0·005
Mar.	3	3	10	50	36·5N. 70·5E.	+0·035
Mar.	7	1	34	34	49·5N. 170·0W.	+0·010
Mar.	7	5	45	6	49·5N. 170·0W.	+0·010
Mar.	10	14	34	40	18·5N. 145·0E.	+0·025
Mar.	17	12	14	10	49·0N. 144·0E.	+0·050

Observers are earnestly requested to send their readings as soon as possible (either in MS. or print) to the

**University Observatory,
OXFORD.**

1928 March 29d. 5h. I.S.S. pages 94 and 95.—At the end of the Melbourne readings for 1930 a note is given that a correction of plus 10 minutes is to be applied to the readings for each phase of the above earthquake. They now read $i = +19m.7s. = S + 9s.$, $i = +20m.0s.$, $i = +21m.57s. = \Sigma + 12s.$, $i = +26m.2s. = SR_2 - 6s.$, $i = +29m.22s. = L.$

University Observatory,
Oxford.

1982 October 29.

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1929 JANUARY, FEBRUARY, MARCH.

Jan. 1d. 13h. 38m. 5s. Epicentre 9°·5N. 60°·0E. (as on 1925 Feb. 2d.).

A = +·493, B = +·854, C = +·165; D = +·866, E = -·500;
G = +·083, H = +·143, K = -·986.

Very rough.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Bombay	15·6	52	(3 43)	- 4	5 19	-87	13·3	17·9
Hyderabad	19·6	64	5 8	+32	—	—	17·3	22·7
Colombo	19·8	96	4 16	-23	15 46	?	24·9	27·2
Entebbe	29·0	252	6 25	+ 7	11 15	- 2	15·2	16·4
Calcutta	E. 30·1	61	e 11 0	†S	(e 11 0)	-36	—	—
Tananarive	30·9	204	12 14	†S	(12 14)	+24	i 14·6	15·3
Baku	32·7	346	e 6 50	- 4	i 12 31	+12	16·7	28·9
Tashkent	32·8	14	—	—	(e 11 25)	-56	e 11·4	45·0
Ksara	32·9	322	e 6 54	- 2	—	—	e 13·7	—
Ekaterinburg	47·3	0	e 8 51	+ 2	e 15 27	-18	18·9	—
Pulkovo	55·0	342	e 11 31	†PR ₁	e 17 1	-20	26·9	—
Irkutsk	55·8	31	—	—	—	—	e 33·9	—
Cape Town	58·6	220	—	—	—	—	—	32·9
Lund	59·0	331	—	—	—	—	27·9	—
Copenhagen	59·2	331	—	—	15 55?	?	—	—
De Bilt	61·4	325	—	—	e 18 25	- 16	e 22·9	—
Uccle	61·5	324	—	—	e 18 43	+ 1	e 26·9	—
Rio de Janeiro	N. 105·7	250	—	—	—	—	e 50·2	—
Sucre	126·3	253	—	—	—	—	69·9	77·9

Additional readings and note: Bombay P has been *increased* by 5m.
Calcutta ePN = +10m.12s. Tananarive e = +13m.47s., i = +14m.6s. and
+14m.23s., MN = +15·6m. Baku iPR₁ = +8m.30s., e = +11m.38s.
Tashkent e = +2m.55s.† Ekaterinburg e = +10m.32s. = PR₁ - 17s.
Irkutsk eL = +46·9m.

Jan. 1d. 16h. 40m. 6s. Epicentre 32°·9N. 130°·8E.

A = -·549, B = +·636, C = +·543; D = +·757, E = +·653;
G = -·355, H = +·411, K = -·840.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki	0·8	258	0 12	0	0 25	+ 3	—	0·6
Hukuoka	0·8	335	0 12	0	0 22	0	—	0·4
Matuyama	1·9	60	i 0 28	- 1	—	—	i 0·9	1·1
Koti	2·4	74	i 0 36	- 1	1 2	- 4	—	1·4
Muroto	2·8	83	i 0 50	+ 6	i 1 27	+10	—	—
Sumoto	3·7	65	i 0 58	0	(e 1 36)	- 6	e 1·6	2·2
Kobe	4·1	62	1 0	- 4	—	—	2·0	2·1
Osaka	4·3	64	1 8	+ 1	(2 8)	+10	2·1	2·7
Toyooka	4·3	49	i 1 4	- 3	(1 58)	0	2·0	2·8
Nagoya	5·6	64	e 1 24	- 3	—	—	2·8	3·6
Zi-ka-wei	N. 8·1	261	—	—	—	—	e 4·4	—
Hong Kong	18·0	238	9 39	†L	—	—	(9·6)	11·2
Phu-Lien	24·7	247	7 54?	?	—	—	—	—
Irkutsk	27·2	323	—	—	e 10 54	+ 9	16·9	—
Tashkent	48·8	300	—	—	—	—	e 25·4	28·9
Copenhagen	77·1	330	—	—	—	—	37·9	—
De Bilt	82·7	330	—	—	—	—	e 43·9	—
Uccle	84·0	330	—	—	—	—	e 44·9	—

Additional readings and note: Koti iP*E = +42s., IS*NZ = +1m.10s., MZ = +1·3m., MN = +1·5m. Muroto P and S are given as P* and S*. Sumoto MN = +1·9m. Kobe iP = +1m.8s., MN = +2·2m. Osaka MN = +4·6m. Toyooka MN = +2·1m. Nagoya MN = +3·3m. Zi-ka-wei SN = +4m.43s. Irkutsk e = +14m.33s.

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Jan. 1d. Readings also at 0h. (near La Paz), 5h. (near Tacubaya), 6h. (Taihoku), 7h. (Baku and Bombay), 8h. (Ekaterinburg, Irkutsk, Tashkent, near Tacubaya (2), and near Manila), 9h. (Lick and near Ksara), 11h. (Adelaide, Melbourne, and Riverview), 12h. (Perth), 13h. (La Paz), 14h. (Kodaikanal and La Paz), 16h. (Baku and Ekaterinburg), 19h. (La Paz), 20h. (Barcelona), 23h. (Malabar).

Jan. 2d. 2h. 26m. 56s. Epicentre 23°·2N. 120°·6E. (as on 1927 Aug. 24d.).

A = -·468, B = +·791, C = +·394; D = +·861, E = +·509;
G = -·201, H = +·339, K = -·919.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	2·0	25	0 32	+ 1	0 40	-15	0·8	0·9
Hong Kong	6·0	262	1 49	+17	—	—	3·0	4·5
Zi-ka-wei	N. 8·0	5	e 1 59	- 2	4 3	+26	—	4·4
Manila	8·6	178	e 2 43	+33	—	—	—	—
Phu-Lien	13·2	262	e 3 31	+15	—	—	6·1	—
Irkutsk	31·6	342	e 6 35	- 8	—	—	e 14·8	20·2
Bombay	44·6	275	—	—	—	—	e 21·1	—
Tashkent	46·3	308	1 8 36	- 6	15 23	- 9	24·1	32·0
Ekaterinburg	54·4	326	9 36	+ 1	e 17 12	- 2	25·1	—
Baku	60·9	307	—	—	e 18 47	+12	e 35·7	—
Pulkovo	70·3	329	—	—	—	—	e 36·1	44·8
Lund	80·2	328	—	—	—	—	45·1	—
Copenhagen	80·6	328	—	—	—	—	39·1	—
De Bilt	86·1	326	—	—	—	—	e 47·1	—
Kew	89·2	329	—	—	—	—	e 54·1	—
La Paz	169·4	52	e 20 24	[+10]	—	—	—	—

Additional readings: Irkutsk L = +17·1m.
SR₁ - 2s. and +25m.53s. = SR₁ + 26s.

Baku e = +23m.22s. =

Jan. 2d. 6h. 3m. 0s. Epicentre 41°·5N. 142°·7E.

Given by Tokyo in Geophys. Mag., Vol. IV, No. 4.

A = -·596, B = +·454, C = +·663.

	Δ	P.	O-C.	S.	O-C.
	°	m. s.	s.	m. s.	s.
Muroran	1·5	0 14	- 9	0 31	-11
Sapporo	1·9	0 25	- 4	0 42	-11
Mizusawa	2·7	—	—	1 25	+11
Sendai	3·6	1 9	+13	1 45	+ 6
Kakioka	5·8	1 29	- 1	2 49	+10

Jan. 2d. Readings also at 0h. (Azores), 1h. (Apia, near Malabar, and Tashkent), 2h. (Ksara), 6h. (near Belgrade), 7h. (near Batavia and Malabar), 8h. (near Lick), 12h. (Wellington), 14h. (near Batavia), 15h. (Irkutsk and Lick), 16h. (Baku, Ekaterinburg, and Tashkent), 17h. (near Algiers), 18h. (Tashkent), 19h. (Ekaterinburg), 20h. (Batavia and near Reykjavik), 22h. (Nagoya and near Mizusawa).

Jan. 3d. Readings at 4h. (near Malabar), 7h. (La Paz), 8h. (Wellington), 10h. (Zagreb (2)), 18h. (Lick and near Nagasaki).

Jan. 4d. 2h. 9m. 25s. Epicentre 33°·8N. 132°·5E.

A = -·561, B = +·613, C = +·556.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Matuyama	0·2	81	1 0 5	+ 1	—	—	1 0·3	0·4
Koti	0·9	106	e 0 13	- 1	e 0 25	0	—	0·5
Huknoka	1·7	263	0 26	0	0 45	- 3	—	0·8
Kobe	2·4	68	e 1 5	1S	(e 1 5)	- 1	1·5	1·5
Toyooka	2·7	48	1 1 39	1L	—	—	(1 1·6)	—

Koti gives also eP = +18s.

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Jan. 4d. 20h. 58m. 24s. Epicentre 34°·5N. 1°·5W. (as on 1922 May 9d.).

A = +·324, B = -·022, C = +·566; D = -·026, E = -1·000;
G = +·566, H = -·015, K = -·824.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Granada	3·2	328	i 0 42	- 8	1 29	+ 1	—	2·2
Malaga	3·3	315	0 33	-19	(1 21)	-10	1·4	2·5
Alicante	3·9	11	e 1 22	+21	e 2 48	+61	e 3·8	—
San Fernando	4·3	299	1 11	+ 4	2 17	+19	—	3·2
Algiers	4·4	57	e 1 59	+51	3 19	+78	—	3·9
Toledo	5·7	340	e 1 16	-12	e 2 59	+23	e 3·4	4·1
Moncalieri	12·7	31	e 3 10	+ 1	—	—	6·7	—
Florence	13·6	43	e 8 11	?L	—	—	(e 8·2)	12·1
Neuchatel	14·0	24	i 3 31	+ 5	—	—	—	—
Strasbourg	15·7	23	e 3 50	+ 2	—	—	e 9·6	—
Uccle	16·9	13	—	—	—	—	e 8·6	—
Kew	17·0	4	—	—	—	—	e 11·6	—
De Bilt	18·2	13	—	—	—	—	e 10·6	—

Additional readings: Granada iP = +50s., iPS = +1m.20s., MN = +2·3m.
De Bilt eLNZ = +12·6m.

Jan. 4d. Readings also at 2h. (Wellington), 6h. and 8h. (Phu-Lien), 15h. (Phu-Lien and near Taihoku), 17h. (Scoresby Sund), 18h. (Florissant), 19h. (Feldberg), 20h. (Wellington and Sucre), 22h. (Wellington).

Jan. 5d. Readings at 0h. (Toronto, Florissant, Tucson, Berkeley, near Lick, and near Malabar), 1h. (Sebastopol, Simferopol, Theodosia, Yalta, and Ksara (2)), 3h. (La Plata and near Santiago), 4h. (near Reykjavik), 10h. (Ekaterinburg, Tashkent, Baku, Irkutsk, Hong Kong, Bombay and Phu-Lien), 14h. (near Taihoku), 16h. (Bombay and near Calcutta), 17h. (La Paz, near Sebastopol (2), Simferopol (2), Theodosia (2), and Yalta (2)), 23h. (near Reykjavik).

Jan. 6d. 0h. 1m. 45s. Epicentre 62°·7N. 22°·0W. (as on 1928 Aug. 1d.).

A = +·425, B = -·172, C = +·389; D = -·375, E = -·927;
G = +·824, H = -·333, K = -·459.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Reykjavik	1·5	1	0 24	+ 1	0 33	- 9	—	0·9
Scoresby Sund	7·8	0	—	—	3 25	- 6	—	—
Edinburgh	11·7	117	—	—	—	—	e 7·2	—
Ivigtut	12·3	275	—	—	—	—	6·2	—
Stonyhurst	13·5	122	—	—	e 5 45	-11	e 7·6	12·2
Oxford	15·6	125	—	—	—	—	e 8·2	—
Kew	16·1	124	—	—	—	—	e 8·2	—
De Bilt	17·9	114	—	—	—	—	e 9·2	13·1
Uccle	18·5	117	—	—	—	—	e 10·2	—
Copenhagen	18·7	96	—	—	(7 15?)	-40	7·2	—
Lund	19·1	95	—	—	—	—	10·2	—
Paris	19·4	124	—	—	—	—	e 11·2	12·2
Strasbourg	21·6	117	—	—	—	—	e 10·2	—
Moncalieri	24·5	122	e 3 24	-129	7 42	-132	14·7	—
Pulkovo	24·6	73	—	—	e 10 21	+26	13·2	—
Florence	26·9	119	—	—	—	—	e 11·3	18·5
Zagreb	27·3	110	—	—	—	—	e 17·6	—
Granada	27·9	147	—	—	—	—	e 13·8	17·0
Kucino	30·3	77	—	—	—	—	e 9·4	—
Ottawa	34·6	267	—	—	—	—	e 16·0	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Toronto	37.6	269	—	—	—	—	18.2	—
Ekaterinburg	39.1	61	—	—	e 12 4	-109	16.2	22.8
Georgetown	Z. 40.3	260	5 58	-121	13 10	-61	e 19.6	28.4
Baku	46.9	84	—	—	e 16 24	+44	25.8	31.2
Victoria	E. 52.8	305	—	—	—	—	28.1	32.1
Tashkent	54.7	68	—	—	e 16 39	-38	e 27.6	38.8

Additional readings: Reykjavik MN = +1.0m. De Bilt eLNZ = +10.2m.,
 MN = +12.7m., MZ = +13.0m. Baku e = +12m.50s. and +19m.42s.
 Tashkent e = +22m.45s.

Jan. 6d. Readings also at 1h. (Vienna, Chur, Neuchatel, Strasbourg, Baku, Ekaterinburg, Pulkovo, near Helwan, and near Reykjavik), 11h. (Almata, Tashkent, and near Frunse), 14h. (near Irkutsk and near Santiago), 17h. (Charlottesville), 18h. (near Reykjavik), 19h. (Phu-Lien), 20h. (Florissant, Irkutsk, and Tashkent).

Jan. 7d. 14h. 45m. 48s. Epicentre 0° 7S. 119° 7E. (as on 1927 Dec. 1d.).

A = - .495, B = + .869, C = - .012; D = + .869, E = + .495;
 G = + .006, H = - .011, K = - 1.000.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Batavia	13.9	246	e 3 12?	-13	—	—	i 7.5	—
Manila	15.3	5	e 3 41	-2	(i 6 33)	-6	i 6.6	7.2
Hong Kong	23.6	347	5 19	-5	e 9 31	-5	—	10.8
Phu-Lien	25.0	330	4 12?	-86	—	—	—	—
Riverview	44.4	142	—	—	e 17 38	?	—	—
Tashkent	61.9	320	i 10 31	+7	18 54	+7	—	38.9
Ekaterinburg	74.2	331	i 11 40	-3	—	—	35.2	—
La Paz	161.2	156	20 3	[-6]	—	—	—	—

Additional readings: Batavia iN = +8m.10s. Manila MN = +6.6m.
 Tashkent i = +19m.55s. = [S] - 14s.

Jan. 7d. Readings also at 0h. (Florissant, Simferopol, near Sebastopol, Theodosia, and Yalta), 2h. (La Plata), 5h. (La Paz), 7h. (Simferopol, Yalta, Wellington, Ekaterinburg, and Florissant, and La Paz), 8h. (Baku, Irkutsk, Tashkent, and San Fernando), 11h. (near Lick (2)), 12h. (near Lick (2)), 16h. (Wellington and Zagreb), 17h. (Sucre), 18h. (near Tacubaya), 20h. (near La Paz).

Jan. 8d. 7h. 23m. 20s. Epicentre 34° 0S. 57° 0E. (as on 1928 Nov. 11d.).

A = + .452, B = + .695, C = - .559; D = + .839, E = - .545;
 G = - .305, H = - .469, K = - .829.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tananarive	17.3	329	14 17	+8	—	—	i 8.0	9.4
Cape Town	31.7	262	—	—	—	—	—	21.2
Entebbe	41.1	321	8 0	-4	14 20	-2	—	23.7
Colombo	46.3	32	8 29	-13	15 14	-18	21.3	22.7
Kodaikanal	48.3	26	15 34	?	(15 34)	-24	—	—
Batavia	53.7	70	i 9 31	0	i 17 8	+3	e 25.7	—
Bombay	55.0	19	9 44	+5	17 17	-4	27.8	30.4
Hyderabad	55.4	25	9 37	-5	17 17	-9	26.7	30.7
Calcutta	E. 63.9	33	e 10 56	+19	19 22	+10	—	—
	N. 63.9	33	e 10 43	+6	19 23	+11	—	—
Dehra Dun	67.3	20	10 40	-20	—	—	32.7	34.7
Melbourne	68.6	122	—	—	e 20 20	+11	32.3	34.7
Ksara	70.6	341	e 10 40?	-41	—	—	—	—
Phu-Lien	72.3	49	11 10	-22	e 20 49	-5	—	—
Baku	74.7	355	i 11 48	+1	e 21 27	+5	37.3	48.0

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview	74.9	121	—	—	e 21 40	+15	e 34.8	38.3
Tashkent	76.1	10	i 10 2	—	—	—	34.7	40.3
Manila	77.8	64	e 12 21	? 15	—	—	—	—
Hong Kong	78.3	53	21 57	? S	(21 57)	- 7	e 38.7	48.3
Frunse	78.6	14	12 9	- 2	—	—	—	—
Almata	79.4	16	e 12 10	- 5	—	—	—	—
Wellington	E. 85.5	139	—	—	i 23 10	-15	e 42.6	—
	N. 85.5	139	—	—	i 23 9	-16	e 43.0	—
Algiers	86.8	320	i 23 30	? S	(i 23 30)	- 9	e 47.7	55.7
La Plata	88.0	229	—	—	—	—	42.8	—
Florence	88.2	330	e 37 33	?	—	—	50.7	60.5
Zi-ka-wei	89.0	50	e 12 52	-18	—	—	46.5	55.3
Vienna	89.8	335	13 6	- 9	—	—	—	—
Moncalieri	90.7	328	—	—	e 38 37	?	47.7	—
Granada	90.8	317	i 13 10	-10	—	—	e 51.7	55.7
Ekaterinburg	90.9	3	i 13 11	-10	i 23 49	[+16]	38.7	55.1
Kucino	91.2	350	13 13	- 9	24 22	- 4	41.0	51.0
Strasbourg	93.5	330	—	—	—	—	54.7	—
Irkutsk	95.6	27	13 31	-16	i 24 15	[+15]	49.7	56.6
Pulkovo	96.3	348	13 44	- 7	—	—	51.7	57.6
Uccle	96.6	330	—	—	e 24 40?	? Σ	e 50.7	—
Lund	97.1	339	—	—	—	—	48.7	—
De Bilt	97.3	332	—	—	e 25 22	- 7	e 51.7	—
Copenhagen	97.4	338	18 40?	?	—	—	—	—
Helsingfors	97.8	344	—	—	25 6	-28	e 52.7	—
Kew	99.1	328	—	—	—	—	e 51.7	—
Stonyhurst	101.7	329	—	—	—	—	e 66.0	69.0
Sucre	103.6	235	e 18 44	? PR ₁	e 27 49	? PS	46.7	53.0
La Paz	107.4	235	e 18 18	[+ 5]	e 30 1	?	53.7	58.2
Scoresby Sund	118.3	338	—	—	—	—	65.7	—
Ottawa	142.5	302	—	—	—	—	e 74.7	—
Georgetown	Z. 143.1	291	—	—	—	—	i 76.8	—
Chicago	E. 151.2	296	—	—	—	—	86.5	—
Florissant	E. 153.4	290	—	—	e 37 10	?	e 76.7	—
Victoria	E. 165.6	1	—	—	—	—	97.2	98.5

Additional readings and notes: Tananarive PR₁ = +4m.23s., iEN = +7m.44s. = SR₁ - 5s., MN = +8.1m., PcPEN = +10m.6s., ScS = +13m.59s. Batavia iZ = +9m.28s. and +10m.24s. Tashkent i = +18m.0s. and +18m.31s. Algiers S = +24m.40s. = PS + 12s. given with P as for a local shock, MN = +50.2m. Zi-ka-wei readings have been increased by 1h. Granada i = +13m.13s. and +13m.37s. Ekaterinburg iPR₁ = +16m.45s., iPS = +25m.20s. Kucino PR₁ = +16m.50s., ScPcS = +23m.53s., PS = +25m.21s. Irkutsk ePR₁ = +17m.26s., PS = +26m.15s. Pulkovo PS = +26m.18s. Helsingfors ScPcS = +24m.8s., PS = +26m.26s., PPS = +27m.22s. Sucre e = +17m.37s. = [P] - 23s. La Paz eP = +19m.5s. = PR₁ + 3s., MN = +60.1m. Georgetown eLZ? = +77.7m. Florissant eE = +43m.40s. = SR₁ + 10s. and +56m.40s.

Jan. 8d. 18h. 7m. 12s. Epicentre 36°·5N. 141°·5E. (as on 1928 Sept. 29d.).

A = -·629, B = +·500, C = +·595; D = +·623, E = +·783;
G = -·466, H = +·370, K = -·804.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	2.6	354	—	—	1 13	+ 1	—	—
Akita	3.4	342	e 0 52	- 1	—	—	1.7	2.1
Nagoya	4.0	252	e 1 3	+ 1	—	—	1.9	2.4
Osaka	5.3	252	1 37	+15	—	—	2.7	3.4
Kobe	5.5	253	1 32	+ 7	—	—	2.7	3.0

Additional readings: Mizusawa SN = +1m.12s. Akita MZ = +1.8m., MN = +2.3m, Nagoya MN = +2.3m, Osaka MN = +3.5m,

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Jan. 8d. Readings also at 2h. (Ekaterinburg, Irkutsk, Tashkent, Phu-Lien, Hong Kong, near Zi-ka-wel, and Nagasaki), 3h. (Lick and near Sucre), 5h. (near Ksara), 7h. (Ekaterinburg, Baku, Ksara, Florence, Wellington, and Tananarive), 8h. (Alicante, Malaga, Toledo, San Fernando, and near Tacubaya), 9h. (Copenhagen and Scoresby Sund), 10h. (Wellington), 11h. (near Nagasaki), 17h. (Alicante), 22h. (Ekaterinburg and Irkutsk).

Jan. 9d. Readings at 0h. (Apia), 2h. (Suva), 3h. (Apia and Sumoto), 4h. (near Sumoto), 10h. (near Tacubaya), 11h. (Tashkent and near Almata), 16h. (near Santiago), 18h. (near Manila), 19h. (Suva and near Manila), 20h. (Suva), 21h. (Algiers), 23h. (near Toyooka).

Jan. 10d. 22h. 52m. 0s. Epicentre 42°·2N. 143°·0E. (given by Tokyo in Geophys. Mag., Vol. IV, No. 4).

$$A = -592, B = +446, C = +672; \quad D = +602, E = +799;$$

$$G = -536, H = +404, K = -741.$$

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Sapporo	1·5	306	0 27	+ 4	0 46	+ 4	—	—
Nemuro	2·2	59	0 47	+13	1 10	+10	—	—
Morioka	2·9	209	0 42	- 3	1 14	- 6	—	—
Akita	3·3	223	e 0 58	+ 6	(1 31)	- 0	1·5	1·8
Mizusawa	3·4	205	0 51	- 2	1 29	- 5	—	—
Hakusima	4·9	205	1 9	- 7	2 3	-11	—	—
Kakioka	6·4	201	1 29	- 9	2 35	-20	—	—
Ekaterinburg	52·0	316	i 9 4	-16	e 16 23	-21	24·0	—

Mizusawa gives also PN = +53s.

Jan. 10d. Readings at 1h. (near Tananarive), 2h. (Ekaterinburg, Tashkent, Manila, and near Tananarive), 7h. (near Ksara (2)), 11h. (near Almata and Frunse), 15h. (Toyooka, near Kobe, and Sumoto), 16h. (near Akita and Mizusawa), 17h. (Akita and near Mizusawa), 19h. (near Kobe), 22h. (near Toyooka).

Jan. 11d. 1h. 52m. 0s. Epicentre 35°·5N. 0°·5W.

$$A = +814, B = -007, C = +581; \quad D = -009, E = -1000;$$

$$G = +581, H = -005, K = -814.$$

The Bulletin of "Servicio Sismologico Espana" gives epicentre 30 km. S.E. of Oran, Algeria.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Almeria	2·0	310	0 31	0	1 45	+50	—	—
Alicante	2·8	0	e 1 7	+23	e 1 56	+39	e 2·4	—
Granada	3·0	304	i 0 50	+ 3	1 1 28	+ 5	—	1·7
Algiers	3·1	66	e 0 44	- 5	1 1 47	+21	—	2·2
Malaga	3·4	292	0 59	+ 6	1 33	- 1	—	—
Toledo	5·2	328	e 1 15	- 5	2 22	0	—	3·5
Tortosa	5·3	9	1 15	- 7	2 44	+19	3·7	—
Paris	13·5	9	—	—	—	—	e 8·0	—
Strasbourg	14·4	22	—	—	—	—	e 8·0	—
Uccle	15·7	12	—	—	—	—	e 8·0	—
Kew	15·9	0	—	—	—	—	e 9·0	—
De Bilt	17·0	12	—	—	—	—	e 9·0	—
Stonyhurst	18·4	356	—	—	—	—	e 9·1	11·0
Edinburgh	20·5	356	—	—	—	—	—	13·0
Copenhagen	22·0	20	—	—	—	—	12·0	—

Additional readings: Granada i = +52s., +57s., and +1m.20s., MZ = +1·9m.
 Algiers P = +53s., iPS = +1m.28s. Toledo P = +1m.32s., S = +2m.46s., MNW = +3·7m. Tortosa ePN = +1m.18s.

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Jan. 11d. 8h. 25m. 14s. Epicentre 36°·0S. 71°·5W. (as on 1928 Dec. 11d.).

A = +·257, B = -·767, C = -·588; D = -·948, E = -·317;
G = -·187, H = +·557, K = -·809.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago	2·6	14	e 1 38	+57	1 58	+46	2·2	—
La Plata	11·1	88	2 47	+ 1	e 5 16	+19	6·3	—
Sucre	17·9	20	e 4 2	-14	17 24	-14	9·2	11·8
La Paz	19·7	10	4 30	- 1	1 8 13	- 4	10·5	12·2
Rio de Janeiro	E. 27·8	70	—	—	e 10 42	-13	e 17·4	—
	N. 27·8	70	—	—	e 10 43	-12	e 17·2	—

La Paz gives also SN = +8m.21s. Sucre gives epicentre 34°·7S. 71°·3W.

Jan. 11d. 13h. 37m. 20s. Epicentre 5°·0S, 155°·0E. (given by the Russian Station, and as on 1920 April 6d.).

A = -·903, B = +·421, C = -·087; D = +·423, E = +·906;
G = +·079, H = -·037, K = -·996.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview	29·0	186	e 6 52	+34	11 28	+11	e 14·6	16·1
Sydney	E. 29·0	186	11 10	?S	(11 10)	- 7	15·1	17·1
Adelaide	33·6	205	—	—	—	—	e 18·8	19·7
Melbourne	34·1	192	—	—	e 12 10	-32	27·2	29·7
Zi-ka-wei	Z. 48·3	321	e 8 56	0	15 40	-18	24·5	27·1
Irkutsk	71·5	330	e 11 36	+ 9	e 20 54	+10	e 32·7	—
Victoria	88·3	41	—	—	—	—	44·7	—
Tashkent	90·1	311	e 13 3	-14	23 34	[+ 5]	e 41·7	51·2
Ekaterinburg	96·5	327	—	—	—	—	46·2	56·9
Baku	104·7	310	—	—	—	—	46·2	—
Kucino	109·1	328	—	—	—	—	52·7	—
Pulkovo	111·2	334	—	—	—	—	57·7	—
Copenhagen	121·2	336	—	—	—	—	59·7	—
Georgetown	Z. 122·1	45	—	—	—	—	e 67·2	—
De Bilt	126·7	337	—	—	—	—	e 60·7	—
La Paz	132·2	118	e 19 47	[+24]	i 23 52	?	—	—

Additional readings and note: Riverview MN = +17·2m., P and S are given without phase. Melbourne i? = +17m.25s. Ekaterinburg PR₂ = +17m.47s., PS = +26m.28s., SR₁ = +31m.40s. Georgetown eZ = +38m.28s. and +45m.56s.

Jan. 11d. Readings also at 1h. (Kobe), 2h. (La Paz), 5h. (Zagreb and near Sumoto), 6h. (La Paz, Sucre, near Kobe, and Sumoto), 8h. (Lick), 9h. (Baku, Ekaterinburg, Toledo, and near Granada), 10h. (near Malabar), 13h. (Baku and Tashkent), 15h. (near Hukuoka), 18h. (near Sumoto), 19h. (near Nagasaki), 23h. (Tashkent).

Jan. 12d. Readings at 9h. (La Paz and Tashkent), 10h. (near Sumoto), 14h. (near Manila), 16h. (near Batavia, near Sucre, and La Paz), 20h. (Lick), 22h. (Ksara and Samarkand), 23h. (near Sebastopol, Simferopol, and Yalta).

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Jan. 13d. 0h. 3m. 3s. Epicentre 49°·7N. 154°·8E.

A = -·585, B = +·275, C = +·763; D = +·426, E = +·905;
G = -·690, H = +·325, K = -·647.

A depth of focus 0·015 has been assumed.

	Corr. for Focus	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari	-0·1	8·6	254	2 16	+ 7	3 53	+ 3	—	—
Nemuro	-0·1	9·0	229	2 29	+14	4 1	0	—	—
Mizusawa	E. -0·4	14·4	228	3 31	+ 5	6 24	+16	10·8	—
	N. -0·4	14·4	228	3 27	+ 1	6 10	+ 2	10·0	—
Akita	-0·4	14·5	232	i 3 33	+ 6	(i 6 21)	+11	i 6·4	6·5
Kakioka	-0·5	17·2	223	4 5	+ 4	6 47	-24	—	—
Tokyo	-0·5	17·8	223	4 13	+ 4	7 35	+10	—	—
Nagoya	-0·6	19·5	229	i 4 34	+ 6	8 10	+10	—	8·3
Kyoto	-0·6	20·2	231	4 37	+ 1	8 37	+22	—	—
Toyouka	-0·6	20·3	233	i 4 40	+ 3	(i 8 30)	+13	8·5	9·4
Osaka	-0·6	20·7	231	4 43	+ 1	(8 45)	+20	8·7	8·8
Kobe	-0·6	20·8	231	i 4 43	0	8 36	+ 9	8·6	8·7
Sumoto	-0·6	21·2	231	4 46	- 2	(8 18)	-18	8·3	8·8
Hamada	-0·7	22·3	237	4 59	- 1	8 58	+ 1	—	—
Koti	-0·7	22·5	232	i 5 0	- 3	i 9 2	+ 1	—	—
Muroto	-0·7	22·5	230	5 4	+ 1	—	—	—	—
Hukuoka	-0·8	24·1	237	5 16	- 4	9 31	0	—	10·5
Nagasaki	-0·8	25·1	237	5 27	- 4	9 42	- 8	—	10·8
Zi-ka-wei	N. -1·0	31·0	249	6 21	- 7	12 15	+41	—	29·0
Irkutak	-1·0	31·3	297	e 6 16	-15	e 10 50	-49	13·0	—
Taihoku	E. -1·2	35·7	240	6 57	-12	12 30	-18	15·5	23·1
Sitka	E. -1·3	40·4	51	e 7 36	-11	i 13 38	-15	i 16·7	—
	N. -1·3	40·4	51	e 8 1	+14	i 13 35	-18	i 16·6	—
Hong Kong	-1·3	42·0	245	7 54	- 7	(13 55)	-22	17·4	18·4
Manila	-1·4	44·6	231	i 8 13	- 7	i 11 22	?	i 12·9	—
Honolulu T.H.	E. -1·4	46·8	110	i 8 30	- 6	i 15 19	- 1	i 20·2	—
	N. -1·4	46·8	110	i 8 25	-11	i 15 15	- 5	i 20·6	—
Phu-Lien	-1·5	47·7	252	e 8 35	- 6	15 24	- 7	22·0	24·6
Victoria	E. -1·5	50·9	58	8 56	- 7	16 5	- 6	19·6	21·4
	N. -1·5	50·9	58	8 56	- 7	16 3	- 8	19·6	20·0
Almata	-1·6	51·5	296	9 4	- 2	16 59	+41	e 25·5	—
Ekaterinburg	-1·6	52·2	317	i 9 2	- 9	i 16 14	-12	—	—
Saskatoon	-1·7	57·1	47	i 9 41	- 1	i 17 23	- 3	e 26·0	30·4
Tashkent	-1·7	57·2	299	i 10 27	+44	—	—	—	—
Berkeley	-1·8	57·9	69	i 9 49	+ 2	17 40	+ 5	e 27·3	—
Calcutta	E. -1·8	58·0	270	9 55	+ 8	18 23	+47	30·6	34·6
	N. -1·8	58·0	270	9 53	+ 6	18 25	+49	—	42·7
Lick	-1·8	58·6	69	e 9 51	0	e 17 47	+ 3	25·3	—
Dehra Dun	-1·8	59·1	282	9 37	-17	17 37	-13	28·0	36·0
Sarnakand	-1·8	59·6	299	i 11 3?	?	e 18 50?	+54	e 26·7?	—
Scoresby Sund	-1·8	59·8	359	i 10 0	+ 1	i 18 1	+ 2	22·0	—
Pulkovo	-1·8	61·7	333	i 10 11	0	18 20	- 2	28·0	36·2
Kucino	-1·8	62·2	326	i 10 16	+ 1	18 27	- 1	27·2	45·2
Helasingsfors	-1·8	62·9	335	e 10 18	- 2	i 18 37	0	e 29·0	—
Upsala	-1·9	65·1	340	i 10 34	+ 1	i 19 3	0	e 32·0	37·3
Reykjavik	-1·9	66·1	359	10 47	+ 8	19 27	+12	31·2	—
Bergen	-1·9	67·1	345	10 50	+ 4	20 22	+55	28·4	29·0
Ivigut	-1·9	67·5	12	10 37	-12	i 19 20	-11	—	—
Hyderabad	-2·0	68·0	273	10 57	+ 6	20 4	+27	37·6	49·6
Baku	-2·0	68·5	309	e 10 57	+ 2	e 19 57?	+13	—	—
Tucson	-2·0	68·5	65	i 11 0	+ 5	i 19 53	+ 9	32·2	—
Batavia	-2·0	69·7	233	i 11 9	+ 7	20 6	+ 8	52·0	—
Lund	-2·0	69·8	339	i 11 5	+ 2	20 2	+ 2	—	—
Copenhagen	-2·0	70·0	339	i 11 6	+ 2	i 20 6	+ 4	33·4	—
Malabar	-2·0	70·2	231	i 11 39	+34	i 20 39	+35	25·0	—

Continued on next page.

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	Corr. for Focus _i	Δ	Az. _o	P.		O-C.		S.		O-C.		L. m.	M. m.
				m.	s.	s.	m.	s.	s.				
Bombay	-2.0	70.6	277	i	11	9	+ 1	20	9	0	36.1	38.1	
Suva	-2.0	71.0	158	i	11	3	- 8	i	19	33	-41	31.0	
	-2.0	71.0	158	i	11	15	+ 4	i	19	39	-35	33.0	
Theodosia	-2.0	71.6	320	i	11	21	+ 6	20	31	+10			
Lemberg	-2.0	71.9	330	e	10	45	-31	e	21	3	+38	e 33.6	43.8
Simferopol	-2.0	72.2	320	e	11	19	+ 1	e	20	29	+ 1	e 29.0	
Yalta	-2.0	72.5	320	e	11	20	0	e	20	35	+ 3		
Hamburg	-2.0	72.6	340	e	11	22	+ 1	i	20	37	+ 4	e 34.0	40.0
Sebastopol	-2.0	72.7	321	e	11	23	+ 2	20	38	+ 4	e 29.0		
Edinburgh	-2.0	72.8	349	i	11	22	0	20	37	+ 1	35.0		
Chicago	-2.0	73.1	45	i	11	33	+ 9	i	20	45	+ 6	34.8	
	-2.0	73.1	45	i	11	36	+12	i	20	43	+ 4	35.0	
Chihuahua	-2.0	74.0	65	i	11	45	+15	21	6	+16	34.0	39.6	
Kodaikanal	-2.0	74.1	270	i	10	3	-88	(20	33)	-18	20.6	54.6	
Göttingen	-2.0	74.4	339	i	11	32	0	i	20	56	+ 1		42.6
	-2.0	74.4	339	i	11	32	0	i	20	54	- 1	e 36.2	41.2
	-2.0	74.4	339	i	11	32	0					e 36.0	47.6
Florissant	-2.0	74.5	48	e	11	33	0	i	20	57	+ 1		
Jena	-2.0	74.6	338	i	11	32	- 2	e	20	57	0	e 35.0	41.4
Stonyhurst	-2.0	74.6	347	i	11	36	+ 2	i	20	57	- 7	36.2	50.4
Ann Arbor	-2.0	74.7	41	i	11	33	- 1	i	20	51	0	35.4	36.0
Colombo	-2.0	75.0	265	i	11	37	+ 1	21	1	- 1	31.8		
De Bilt	-2.0	75.0	341	i	11	37	+ 1	i	21	3	+ 1	e 36.0	36.2
Bidston	-2.0	75.1	347	i	11	35	- 2	(21	47)	[- 2]	21.8	37.3	
Ottawa	-2.0	75.3	35	e	11	38	0	i	21	0	- 6	e 35.0	
Toronto	-2.0	75.3	38	e	11	33	- 5	i	21	1	- 5	i 36.3	37.5
Budapest	-2.0	75.6	331	i	11	34	- 6	21	3	- 6	36.4	44.4	
Vienna	-2.0	75.7	334	e	11	37	- 3	i	21	9	- 1	e 31.4	52.0
West Bromwich	-2.0	75.9	346	e	11	44	+ 3	21	6	- 7			
Feldberg	-2.0	76.0	340	e	11	41	- 5	e	21	7	- 7		43.0
	-2.0	76.0	340	i	11	37	- 5					e 36.6	45.0
Uccle	-2.0	76.4	342	i	11	43	- 2	i	21	16	- 3	37.0	55.7
Oxford	-2.0	76.5	346	i	11	43	- 3	21	20	0	e 25.4	38.0	
Kew	-2.0	76.6	346	i	11	45	- 1	21	18	- 3	32.9	34.0	
Cincinnati	-2.0	76.9	44	e	11	44	- 4	i	21	21	- 4	35.0	40.0
Graz	-2.0	77.0	334	i	11	53	+ 4	i	21	26	0	i 41.7	53.3
Hohenheim	-2.0	77.2	339	i	11	47	- 3	21	12	-16	e 36.0	43.4	
Belgrade	-2.0	77.5	330	e	11	45	- 7	e	21	55	+23	31.6	42.9
	-2.0	77.5	330	e	11	44	- 8	e	21	44	+12	36.8	43.9
Ithaca	-2.0	77.5	36			54	+ 2	21	24	- 8			
Strasbourg	-2.1	77.7	340	i	11	51	- 2	i	21	30	- 3	35.0	48.0
Ravensburg	-2.1	77.9	339	i	11	54	0	21	37	+ 2	31.0	43.3	
Zagreb	-2.1	78.0	332	e	11	47	- 7	e	21	36	0	e 38.0	46.4
	-2.1	78.0	332	e	11	49	- 5	e	21	34	- 2	e 38.0	47.1
Innsbruck	-2.1	78.0	337	e	11	49	- 5	i	21	29	- 7	31.6	43.4
Laibach	-2.1	78.2	334	e	11	47	- 9	e	21	33	- 5	e 37.6	49.5
Zurich	-2.1	78.6	338	i	11	54	- 4	e	21	42	- 1		
Paris	-2.1	78.6	343	i	11	57	- 1	i	21	39	- 4	37.0	41.0
Chur	-2.1	78.9	338	i	11	58	- 2	i	21	43	- 4		
Besançon	-2.1	79.4	340	i	12	5	+ 2	i	21	49	- 3	38.0	44.0
Neuchâtel	-2.1	79.4	338	i	11	57	- 6	i	21	47	- 5		
Venice	-2.1	79.4	335	e	12	3	0	i	22	52	+60	38.3?	42.0
Harvard	-2.1	79.5	33	i	11	57	- 6	i	21	48	- 5		
Fordham	-2.1	79.8	36	i	12	5	0	i	21	50	- 7	25.8	40.0
Halifax	-2.1	79.9	27	e	12	9	+ 3	i	21	53	- 5	e 38.0	46.0
Georgetown	-2.1	80.2	39	e	12	9	+ 1	i	22	2	+ 1	e 36.2	45.1
	-2.1	80.2	39	e	12	11	+ 3	e	22	5	+ 4	38.8	49.1
	-2.1	80.2	39	i	12	8	0	22	5	+ 4			
Charlottesville	-2.1	80.5	40	i	12	10	+ 1	i	22	0	- 5	41.0	
Kaara	-2.1	80.5	313	i	12	11	+ 2	22	4	- 1	38.9	55.3	
Moncalieri	-2.1	81.0	339	i	12	6	- 6	22	0	-11	33.0		
	-2.1	81.0	339	i	12	7	- 5	i	22	1	-10	39.3	52.0
Florence	-2.1	81.2	335	i	12	10	- 4	22	7	- 6	37.0		

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	Corr. for Focus	Δ	Az.	P.		O-C.		S.	O-C.		L.	M.
				m.	s.	m.	s.		m.	s.		
Grenoble	-2.1	81.4	340	i 12	14	-1	22	22	+7	30.0	—	
Guadalajara	-2.1	81.5	69	(12 27)		+12	(22 42)		+26	(38.1)	—	
N. N.	-2.1	83.0	331	i 11	27	-57	e 21	52	-42	37.0	53.0	
Pompeii	-2.1	83.0	331	e 11	20	-64	e 21	50	-44	42.0	49.0	
Riverview	-2.1	83.6	184	i 12	26	-2	i 22	32	-9	e 38.6	39.6	
Sydney	E. -2.1	83.6	184	—	—	—	22	21	-20	49.2	50.8	
Bagnères	-2.1	84.6	343	i 12	33	0	22	43	-9	30.0	—	
Tacubaya	-2.1	85.1	67	12	29	-7	22	38	-19	37.4	—	
Barcelona	-2.1	85.7	340	e 12	33	-7	i 22	57	-8	35.2	45.4	
Adelaide	-2.1	85.9	193	i 12	44	+3	i 22	47	-20	37.4	46.3	
Helwan	-2.1	86.0	314	i 12	38	-3	i 22	47	-21	—	—	
Tortosa	E. -2.1	86.7	341	12	40	-6	23	5	-10	—	57.1	
N. N.	-2.1	86.7	341	12	35	-11	22	52	-23	41.0	49.8	
Vera Cruz	-2.1	87.0	64	13	3	+16	23	15	-3	37.3?	—	
Melbourne	-2.1	88.0	188	i 12	50	-3	i 23	22	-7	i 35.9	64.0	
Oaxaca	-2.1	88.4	65	(13 16?)		+21	(23 33)		0	(38.0)	—	
Toledo	-2.1	88.5	345	e 12	43	-12	i 23	7	-27	e 37.8	44.9	
Perth	-2.1	88.7	213	12	52	-5	23	32	-5	42.3	—	
Merida	-2.1	89.3	58	(12 57)		-3	(23 14)		[-10]	46.9	—	
Alicante	-2.1	89.3	341	i 12	49	-11	e 23	25	-18	e 36.4	58.6	
Algiers	-2.1	90.0	338	12	51	-13	i 23	31	-20	43.0	47.0	
Granada	-2.1	91.0	345	i 12	59	-11	i 23	41	-21	37.4	55.9	
Almeria	-2.1	91.1	344	12	56	-14	23	15	[-20]	32.2	62.8	
Malaga	-2.1	91.6	345	13	3	-10	23	21	[-17]	31.0	52.1	
San Fernando	-2.1	92.2	346	13	9	-8	23	25	[-16]	39.0	60.6	
Wellington	E. -2.2	92.7	166	i 13	1	-18	i 23	57	-22	44.8	45.1	
N. N.	-2.2	92.7	166	—	—	—	i 24	1	-18	43.5	44.1	
Christchurch	-2.2	94.6	168	—	—	—	24	21	-18	—	—	
Balboa Heights	N. -2.2	104.6	57	17	40	[-23]	27	4	+45	29.7	33.1	
Ettelbe	-2	110.2	297	14	17	-41	18	57?	?PR ₁	61.0	—	
Tananarive	—	115.4	270	19	41	?PR ₁	—	—	—	57.0	67.1	
La Paz	—	132.1	61	i 19	13	[-10]	26	9	[-7]	64.2	67.6	
Johannesburg	—	133.1	280	22	57?	?PR ₁	—	—	—	—	—	
Sucre	—	135.7	61	e 19	14	[-17]	—	—	—	63.0	74.0	
Cape Town	—	144.5	280	i 19	27	[-20]	33	31	?	63.2	82.0	
Rio de Janeiro	E. —	149.7	35	i 19	49	[-6]	—	—	—	42.0	84.4	
N. N.	—	149.7	35	i 19	52	[-3]	—	—	—	41.7	42.4	
La Plata	—	151.9	70	19	49	[-10]	—	—	—	63.6	—	

Additional readings and notes: Akita iPEN = +3m.37s., MZ = +6.8m.
 Nagoya iP = +4m.39s., MN = +8.4m. Toyooka MN = +8.8m. Kobe
 P = +4m.45s. Sumoto S = +6m.34s. Koti i = +5m.8s., PR₁ =
 +5m.38s., SR₁E? = +9m.45s., eSR₁Z = +9m.52s., iSR₁N = +9m.54s.
 Muroto i = +5m.10s. = PR₁ - 16s. Hukuoka MN = +10.8m. Nagasaki
 PR₁ = +6m.0s. and +6m.1s., PR₂ = +6m.15s., SR₁ = +10m.39s. Zi-ka-wei
 PR₁N = +7m.31s., ME = +29.1m. Irkutsk iP = +6m.19s. Taihoku
 PR₁E = +9m.1s., PR₂ = +11m.16s. Sitka ePR₁E = +9m.18s., ePR₁N =
 +9m.37s., iSR₁E = +14m.12s., iSR₁N = +14m.25s. Hong Kong PR₁ =
 +8m.32s., S? = +12m.17s., and +13m.5s., MN = +31.4m. Manila iN =
 +8m.20s., iPR₁E = +8m.25s., iPR₂N = +8m.34s., iPR₂N = +8m.38s.,
 iSR₁N = +12m.16s., iSR₂N = +12m.25s., P₀P = +12m.27s., iSR₁N =
 +12m.29s., P₀S = +16m.12s. Honolulu T.H. ePR₁N = +10m.15s., iPR₁E
 +10m.17s., iN = +14m.46s., iSR₁N = +19m.27s. Phu-Lien MN =
 +33.9m. Ekaterinburg iP = +9m.5s. Saskatoon iN = +13m.35s.,
 i = +18m.19s., SR₁ = +21m.21s.; T₀ = 0h.3m.7s. Tashkent iP =
 +10m.30s. Berkeley iEZ = +10m.20s., iN = +10m.27s., iE = +11m.18s.,
 eN = +11m.26s., iSN = +17m.42s., iE = +19m.25s. = [S] - 14s., iN =
 +19m.28s., iE = +21m.26s., iEN = +24m.16s., iZ = +24m.51s., iE =
 +26m.28s. Lick iEZ = +9m.55s., +10m.26s., and +10m.33s., iE =
 +13m.27s., iSE = +17m.50s., iE = +19m.23s. = [S] - 21s., +21m.43s. and
 +22m.5s. Scoresby Sund +12m.27s. Helsingfors P₀P = +11m.8s.,
 PR₁ = +12m.53s., PR₂ = +14m.6s., PS = +19m.0s., SR₁ = +23m.13s., SR₂ =
 +25m.38s., Upsala PR₁N = +14m.41s., iPS = +19m.54s., SR₁E =
 +24m.10s., SR₂ = +26m.10s., MN = +40.0m. Reykjavik i = +21m.16s. =
 E - 3s. Ivigtut i = +20m.17s. = PS - 13s. Tucson iPN =
 +11m.1s., eE = +15m.29s., eN = +27m.43s., eE = +27m.57s. Batavia
 i = +40m.0s. Lund +20m.40s. = PS - 19s. and +25m.21s. = SR₁ + 3s.

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Copenhagen $i = +14m.14s. = PR_1 + 4s.$, $PR_2 = +15m.29s.$, $SR_1 = +25m.15s.$, $SR_2 = +28m.15s.$ Malabar $i = +21m.27s. = [S] + 14s.$ and $+39m.45s.$; all readings are given without phase. Suva $iPR_1E = +13m.39s.$, $PR_1N = +13m.57s.$, $T_0E = 0h.3m.30s.$, $T_0N = 0h.3m.54s.$ Hamburg $PR_1Z = +15m.57s.$, $PSZ = +21m.23s.$, $MN = +42.0m.$, $MZ = +43.0m.$ Edinburgh $i = +21m.35s. = [S] + 2s.$, $SR_1 = +26m.18s.$, $SR_2 = +29m.53s.$ Chicago $PR_1E = +14m.44s.$, $SR_1E = +25m.27s.$, $SR_1N = +25m.37s.$, $SR_1S = +28m.41s.$, $SR_1E = +28m.57s.$ Gottingen $iN = +12m.6s.$, $iZ = +12m.10s.$ and $+13m.22s.$, $eN = +14m.25s.$, $ePR_1N = +15m.11s.$, $ePR_1E = +15m.12s.$, $iPR_1N = +16m.16s.$, $ePS = +21m.56s.$, $eN = +22m.31s. = Z + 17s.$, $iSR_1E = +26m.48s.$, $iSR_1N = +26m.51s.$, $eSR_1N = +29m.38s.$, $eSR_1E = +30m.28s.$, $eSR_1N = +30m.31s.$ Florissant $iEZ = +12m.4s.$, $iN = +12m.7s.$ Jena $iPEN = +11m.33s.$, $ePE = +11m.37s.$, $iZ = +12m.10s.$, $eZ = +12m.57s.$, $iPR_1Z = +14m.50s.$, $ePE_1N = +16m.9s.$, $eE = +17m.25s.$, $eZ = +17m.27s.$, $eN = +17m.39s.$, $ePSN = +21m.51s.$, $ePSEZ = +21m.57s.$, $eN = +26m.23s.$, $iE = +26m.51s.$ and $+26m.53s.$, $eKZ = +29m.57s.$, $iN = +30m.49s.$, $eE = +30m.51s.$, $eLN = +35.4m.$, $MN = +36.4m.$, $MZ = +42.4m.$ Stonyhurst $PR_1? = +17m.11s.$, $PS = +21m.22s.$, $i? = +21m.33s.$, $+21m.57s.$ and $+22m.2s.$, $SR_1 = +26m.36s.$, $SR_2? = +29m.22s.$, $SR_3? = +30m.26s.$, $? = +31m.27s.$ Ann Arbor $ePR_1 = +14m.51s.$, $ePR_2 = +16m.33s.$, $iPS = +21m.51s.$, $iE = +25m.27s.$, $iSR_2 = +29m.33s.$ De Bilt $MN = +39.1m.$, $MZ = +54.8m.$ Bidston $S = +17m.8s. = PR_2 - 14s.$ Ottawa $iZ = +12m.11s.$, $e = +16m.57s.$, $iE = +21m.53s. = [S] + 2s.$, $eSR_1 = +26m.31s.$, $eSR_2 = +29m.27s.$; $T_0 = 0h.3m.17s.$ Toronto $iPSN = +21m.31s.$; $T_0 = 0h.3m.6s.$ Budapest $PR_1 = +14m.42s.$, $PR_2 = +17m.29s. = PR_1 + 1s.$, $SR_1 = +22m.19s. = Z + 4s.$, $SR_2 = +26m.19s. = SR_1 - 33s.$, $MN = +52.0m.$ Vienna $iP = +11m.39s.$, $i = +13m.48s.$, $PR_1 = +14m.39s.$, $PR_2 = +16m.29s.$, $PS = +21m.44s.$, $SR_1 = +26m.5s.$, $SR_2 = +30m.16s.$ Feldberg $iPN = +11m.45s.$, $iPE = +11m.47s.$, $eE = +16m.57s. = PR_2 + 13s.$, $ePSE = +21m.57s.$, $ePSN = +22m.3s.$, $iPSN = +22m.13s.$, $eE = +25m.51s.$ and $+29m.45s. = SR_1 - 4s.$, $iE = +26m.57s. = SR_1 + 9s.$, $eN = +31m.32s.$ and $SR_2 + 8s.$, $iE = +31m.42s. = SR_2 + 18s.$ Uccle $iPR_1 = +14m.46s.$, $iPR_2 = +16m.39s.$, $iPR_3 = +17m.51s.$, $iPS = +22m.22s.$, $SR_1 = +26m.14s.$, $i = +30m.38s.$, $MN = +50.5m.$, $MZ = +55.6m.$ Kew $i = +12m.36s.$, $PR_1 = +14m.41s.$, $i = +15m.33s.$, $PR_2 = +16m.34s.$, $PR_1NZ = +18m.30s.$, $iPS = +22m.22s.$, $iN = +24m.7s.$, $iSR_1EN = +27m.15s.$, $LN = +37.6m.$, $MN = +38.2m.$, $MZ = +38.7m.$ Cincinnati $iP = +11m.52s.$, $iPPN = +12m.17s.$, $iN = +13m.21s.$ and $+15m.41s.$, $iPSN = +21m.51s.$, $iPPSN = +22m.17s.$, $eE = +22m.11s.$ and $+24m.32s.$, $iSR_1EN = +26m.11s.$ Graz $iPS = +22m.32s.$, $iSR_1 = +27m.17s.$, $iSR_2 = +32m.13s.$, $MN = +56.9m.$ Hohenheim $PR_1 = +13m.44s.$, $PR_2 = +16m.25s.$, $SR_1 = +26m.29s.$, $SR_2 = +29m.37s.$, $MN = +46.4m.$ Belgrade $iPN = +11m.59s.$, $eE = +24m.36s.$, $eN = +24m.57s.$ and $+27m.31s.$, $eE = +27m.38s.$ Ithaca $SR_2 = +29m.45s.$ Strasbourg $PR_1 = +15m.0s.$, $PR_2 = +17m.51s.$, $PS = +22m.18s.$, $SR_1 = +27m.15s.$, $SR_2 = +29m.39s.$, $SR_3 = +31m.21s.$, $MZ = +56.6m.$ Ravensburg $PR_1 = +13m.48s.$, $PR_2 = +16m.27s.$, $MN = +53.6m.$ Zagreb $eNE = +11m.53s.$ and $+13m.11s.$, $eNW = +11m.55s.$, $+12m.7s.$, $+13m.9s.$, $+13m.41s.$, $+13m.51s.$ and $+14m.14s.$, $ePR_1NW = +15m.12s.$, $ePR_1NE = +15m.27s.$, $eNW = +16m.23s.$, $eNE = +16m.43s.$, $ePR_1 = +17m.44s.$, $ePR_1NE = +18m.49s.$, $ePR_1NW = +18m.50s.$, $PSNE = +22m.17s.$, $PSNW = +22m.31s.$, $eSR_1NE = +27m.29s.$, $eSR_1NW = +27m.35s.$, $eSR_2 = +30m.53s.$, $eSR_1NW = +32m.29s.$ Innsbruck $i = +22m.34s.$ and $+27m.34s. = SR_1 + 19s.$, $MNW = +39.0m.$ Laibach $eN = +11m.58s.$, $+14m.15s.$, $+17m.1s. = PR_2 - 4s.$, $+18m.10s. = PR_2 + 13s.$ and $+27m.41s. = SR_1 + 10s.$ Paris $SR_1 = +27m.35s.$, $MN = +40.0m.$ Besançon $PS = +22m.44s.$, $SR_1 = +27m.36s.$ Neuchâtel $i = +12m.1s.$ Venice $ePE = +12m.12s.$ Fordham $i = +15m.5s.$, $+16m.5s.$, $+17m.20s.$, $+18m.50s.$, $+18m.57s.$ and $+22m.3s.$ Halifax $iN = +22m.53s.$, $iE = +30m.23s.$; $T_0 = 0h.3m.26s.$ Georgetown $PSE = +22m.47s.$, $SR_1E = +31m.27s.$ Charlottesville $ePN = +12m.9s.$, $ePR_1N = +17m.17s.$, $ePR_1E = +17m.27s.$, $SR_1N = +27m.21s.$, $SR_1E = +27m.22s.$, $SR_1E = +30m.49s.$, $SR_1N = +31m.21s.$ Ksar $+13m.2s.$ and $+14m.12s.$, $PR_1 = +15m.24s.$, $PR_2 = +17m.31s.$, $PR_3? = +18m.56s.$, $SR_1 = +27m.35s.$; $T_0 = 0h.3m.7s.$ Florence $PR_1 = +15m.25s.$, $PR_2 = +17m.17s.$, $PR_3 = +18m.32s.$, $PS = +22m.37s.$, $SR_1 = +24m.57s.$ Grenoble $PR_1 = +16m.3s.$ Guadalajara readings have been *increased* by 1m. Riverview $iZ = +12m.59s.$, $SR_1 = +28m.10s.$, $e = +34m.21s. = SR_2 + 14s.$ and $+35m.11s.$, $MZ = +60.8m.$; $T_0 = 0h.3m.24s.$ Bagnères $PS = +25m.43s.$ Barcelona $PS = +23m.48s.$, $? = +24m.46s.$ Adelaide $iSR_1 = +28m.47s.$, $MN = +42.4m.$ Melbourne $PR_1 = +16m.32s.$, $PR_2 = +18m.37s.$, $PS = +24m.42s.$, $SR_1 = +29m.2s.$ Oaxaca readings have been *increased* by 1m. Toledo $iP = +12m.47s.$, $PR_1NE = +16m.17s.$, $PR_1NW = +18m.3s.$, $SR_1NE = +28m.38s.$ Perth $S = +23m.2s.$ and $+24m.27s.$, $SR_1 = +29m.47s.$ Merida P and S have been *diminished* by 20m. Alicante $MN = +47.5m.$

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Algers SR₂ = +34m.57s. ? Granada i = +23m.19s. = [S]-15s., PS =
 +23m.59s., MZ = +65.5m. Almeria MN = +59.7m. Malaga MN =
 +51.9m., MZ = +60.2m. San Fernando PR₂ = +17m.34s., MN =
 +61.1m. Wellington PR₁N = +16m.48s., PR₁E = +17m.5s., [S]N =
 +23m.21s., [S]E = +23m.22s., SR₁N = +30m.18s., T₀E = 0h.2m.51s. Christ-
 church PR₂ = +19m.28s., SR₁ = +30m.57s. Tananarive PR₁ =
 +20m.32s., PR₂ = +22m.14s., iPR₁ = +25m.16s., iPR₂ = +26m.29s., iPS =
 +29m.8s., PPS = +30m.8s., SR₁ = +36m.38s., eLN = +56.1m., MN =
 +69.6m. La Paz PR₁ = +21m.41s., i = +23m.15s., PR₂ = +24m.33s.,
 PSN = +31m.33s., PSE = +31m.46s., iE = +33m.8s., iN = +33m.57s.,
 SR₁ = +38m.57s., iE = +39m.54s., iN = +41m.17s., iSR₂ = +44m.7s., LN =
 +57.3m., MN = +68.4m. Sucre PR₁ = +21m.36s., i = +22m.35s. and
 +23m.35s., S_{CP}P_{CS} = +28m.36s. = Σ -11s., PS = +32m.44s., PPS =
 +34m.4s., SR₁ = +39m.47s., i = +40m.58s., SR₂ = +44m.50s.

Jan. 13d. 18h. 44m. 39s. Epicentre 40°8'N. 110°3'E. (deduced by comparison with 40°0'N. 110°0'E. of 1927 May 27d.).

A = -263, B = +710, C = +653; D = +938, E = +347;
 G = -227, H = +613, K = -757.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	m.	s.	m.	s.	m.	s.	m.	m.
Irkutsk	12.2	342	3 7	+ 5	5 34	+10	6.5	7.8
Zinsen	12.9	99	3 7	- 5	6 21	?L	(6.4)	—
Zi-ka-wei	z. 13.1	133	e 3 18	+ 4	e 6 26	+40	(6.4)	8.5
Nagasaki	17.5	111	e 4 11	0	e 11 14	?	—	—
Taihoku	E. 18.3	146	—	—	—	—	e 9.3	—
Hong Kong	18.7	169	4 26	+ 1	7 59	+ 4	e 9.8	10.6
Koti	19.8	104	e 4 7	-32	i 8 7	-12	—	—
Phu-Lien	20.2	190	e 4 50	+ 7	e 8 38	+11	—	11.4
Sumoto	20.4	101	e 8 26	?S	(e 8 26)	- 6	e 11.8	—
Kobe	20.5	99	e 8 24	?S	(e 8 24)	-10	e 12.6	—
Osaka	20.7	99	5 18	+29	(8 37)	- 1	8.6	13.9
Calcutta	E. 26.0	232	e 9 6	?	14 50	?L	—	—
	N. 26.0	232	e 6 36	+48	11 36	+74	—	—
Manila	27.8	157	e 6 21?	+15	—	—	—	—
Tashkent	30.7	285	6 33	- 2	—	—	i 16.7	20.4
Samarkand	32.8	284	e 6 56	+ 1	—	—	—	—
Ekaterinburg	35.4	315	e 8 13	+56	e 13 3	+ 2	i 18.8	22.8
Bombay	38.7	249	13 46	?S	(13 46)	- 2	22.0	22.2
Baku	45.0	291	e 8 32	- 1	e 15 14	- 1	24.8	—
Kucino	48.0	315	—	—	—	—	26.5	30.2
Pulkovo	50.9	321	—	—	—	—	e 30.4	32.4
Helsingfors	53.3	322	—	—	—	—	e 33.4	—
Upsala	56.9	325	—	—	—	—	—	36.4
Lund	60.9	321	—	—	—	—	—	27.4
Copenhagen	61.2	321	—	—	—	—	—	27.4
Scoresby Sund	63.6	346	—	—	—	—	—	42.4
Hamburg	63.6	320	—	—	—	—	e 36.4	—
Feldberg	66.3	318	—	—	—	—	—	37.0
De Bilt	66.8	320	—	—	—	—	—	35.4
Strasbourg	67.7	317	—	—	—	—	—	36.4
Uccle	68.0	320	—	—	—	—	e 33.4	—
Edinburgh	68.2	327	—	—	—	—	e 37.4	—
Reykjavik	68.5	341	—	—	26 28	?	—	—
Florence	68.5	311	—	—	—	—	e 34.6	43.8
Stonyhurst	69.2	325	—	—	—	—	e 37.8	45.8
Kew	69.8	322	—	—	—	—	e 36.4	—
Paris	70.2	319	—	—	—	—	e 37.4	44.4
Granada	81.4	314	—	—	—	—	e 42.5	53.2
San Fernando	E. 83.3	315	—	—	—	—	—	52.4
St. Louis	N. 98.4	17	—	—	—	—	e 54.1	—
Georgetown	Z. 100.1	7	—	—	e 21 59	?	e 61.6	—

Additional readings: Taihoku LE = +9.8m. Hong Kong MN = +11.9m.
 Osaka MN = +13.7m. Tashkent i = +8m.49s., e = +11m.12s. = S - 34s.
 Ekaterinburg IP = +8m.14s. = PR₁ - 12s. Bombay S = +18m.28s. Baku
 e = +19m.8s. Kucino e = +0m.27s. De Bilt MN = +38.5m.
 Florence eS = +39m.36s., L is given as simply e. Paris MN = +39.4m.
 San Fernando MN = +61.0m. Georgetown eZ = +29m.45s., +45m.7s.,
 +49m.28s., and +58m.57s.

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Jan. 13d. Readings also at 2h. (Samarkand), 5h. (Samarkand and near Almata), 6h. (La Paz), 11h. (near Oaxaca and Tacubaya), 12h. (Matuyama), 15h. (Georgetown, Tucson, near Merida, and Tacubaya), 16h. (Baku, Scoresby Sund, Ekaterinburg, De Bilt, Uccle, Kew, Tacubaya, and Toronto), 17h. (Batavia), 18h. (Florissant and near Reykjavik), 19h. (Neuchatel), 21h. (Georgetown).

Jan. 14d. 9h. 45m. 21s. Epicentre $31^{\circ}7'N$, $77^{\circ}0'E$.

A = +.191, B = +.829, C = +.525; D = +.974, E = -.225;
G = +.118, H = +.512, K = -.851.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		o	o	m. s.	s.	m. s.	s.	m.	m.
Dehra Dun		1.6	158	0 19	- 5	—	—	1.0	—
Tashkent		11.4	329	2 50	0	i 4 42	-22	16.2	6.6
Bombay		13.3	197	6 41	?L	7 47	?	8.1	8.9
Calcutta	E.	13.6	130	e 6 7	?S	(6 7)	+ 9	(7.7)	—
	N.	13.6	130	5 39	?S	(5 39)	-19	(7.6)	—
Hyderabad		14.3	174	6 18	?S	(6 18)	+ 3	8.6	10.4
Baku		23.5	299	e 5 26	+ 3	i 9 39	+ 4	—	—
Ekaterinburg		27.6	340	1 5 59	- 5	10 44	- 8	13.6	16.2
Irkutsk		28.6	36	e 6 13	0	e 11 22	+12	18.6	18.8
Kucino		36.3	323	—	—	—	—	19.6	—
Zi-ka-wei	Z.	37.6	79	—	—	—	—	e 16.2	23.0
Pulkovo		41.6	328	—	—	—	—	e 24.6	26.4
Lund		49.8	320	—	—	—	—	26.6	—
Copenhagen		50.2	320	—	—	—	—	26.6	—
De Bilt	E.	54.8	314	—	—	—	—	e 32.6	—

Additional readings and notes: Tashkent, only P is given with definite phase. Calcutta gives S as P and L as S. Hyderabad S = +8m.11s. Irkutsk e = +15m.45s. De Bilt eLN = +30.6m.

Jan. 14d. 17h. 29m. 40s. Epicentre $17^{\circ}0'N$, $120^{\circ}6'E$. (see 16d. 8h.).

A = -.487, B = +.823, C = +.292; D = +.861, E = +.509;
G = -.149, H = +.252, K = -.956.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		o	o	m. s.	s.	m. s.	s.	m.	m.
Manila		2.4	171	i 0 31	- 6	(i 0 56)	-10	i 0.9	—
Hong Kong		8.1	313	e 2 15	+12	—	—	—	5.7
Taihoku	E.	8.1	6	e 2 18	+15	2 44	-56	—	—
Phu-Lien		13.8	288	e 3 23	0	—	—	7.3	—
Zi-ka-wei	Z.	14.2	3	e 3 29	0	e 6 29	+16	—	—
Irkutsk		37.6	345	e 7 0	-35	—	—	20.3	—
Tashkent		50.1	311	—	—	—	—	e 26.3	32.1
Ekaterinburg		59.6	327	i 10 8	- 1	—	—	28.8	—
Baku		64.6	308	—	—	—	—	e 38.3	—
Pulkovo		75.6	330	—	—	—	—	e 45.3	—
Copenhagen		85.8	327	—	—	—	—	48.3	—
De Bilt		91.3	325	—	—	—	—	e 51.3	—

Additional readings: Irkutsk e = +8m.52s. = PR₁ - 2s. and +17m.17s. Ekaterinburg e = +22m.54s. = SR₁ - 8s.

Jan. 14d. Readings also at 0h. (La Paz and Taihoku), 2h. (La Paz, Rio de Janeiro, Sucre, Florissant, Granada, Uccle, and Strasbourg), 3h. (Baku, Ekaterinburg, Tashkent, Copenhagen, Scoresby Sund, De Bilt, Oxford, Kew, Stonyhurst, and Edinburgh), 4h. (Venice, Zagreb, Florence, near Naples, and Pompeii), 5h. (Baku, Ekaterinburg, Irkutsk, Pulkovo, Tashkent, Copenhagen, Lund, Zagreb, Florence, De Bilt, Uccle, Kew, Granada, and near Lick), 6h. (Neuchatel and near Sumoto), 8h. (near Mizusawa), 12h. (Ekaterinburg, Tashkent, Zi-ka-wei, and near Reykjavik (3)), 13h. (Baku and near Reykjavik), 14h. (near Reykjavik (4)), 16h. (Baku, Ekaterinburg, Irkutsk, Hong Kong, Phu-Lien, and near Taihoku), 17h. (Taihoku (3) and near Kobe), 18h. (Apia), 19h. (Copenhagen, De Bilt, Ekaterinburg, Hong Kong, Irkutsk, Phu-Lien, Tashkent, Zi-ka-wei, and near Taihoku), 22h. (near Reykjavik), 23h. (La Paz).

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Jan. 15d. Readings at 0h. (Ekaterinburg, Irkutsk, and near Reykjavik), 2h. (Suva), 3h. and 4h. (2) (near Reykjavik), 8h. (Taihoku, near Batavia, and near Reykjavik), 14h. (near Tacubaya), 15h. (near Wellington), 16h. (Kobe, near Sumoto, near Tacubaya, and near Lick), 17h. (near La Paz).

Jan. 16d. 8h. 6m. 0s. Epicentre 17°-0N. 120°-6E.
(as on 14d.).

A = -487, B = +823, C = +292; D = +861, E = +509;
G = -149, H = +252, K = -956.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°		m. s.	s.	m. s.	s.	m.	m.
Manila	2.4	171	i 0 41	+ 4	(1 1 4)	- 2	i 1.1	—
Hong Kong	8.1	313	2 13	+10	3 40	0	4.0	7.8
Taihoku	8.1	6	2 15	+12	3 49	+ 9	—	—
Phu-Lien	13.8	288	3 32	+ 9	6 23	+20	7.0	9.3
Zi-ka-wei	14.2	3	3 0	-29	6 6	- 7	9.4	11.8
Nagasaki	17.8	26	4 20	+ 5	7 49	+13	—	—
Hukuoka	18.8	26	i 4 32	+ 5	i 8 11	+13	—	—
Koti	20.3	33	i 4 45	0	i 8 36	+ 7	—	—
Muroto	20.3	35	e 4 48	+ 3	—	—	—	—
Sumoto	21.6	34	e 4 54	- 6	(8 54)	- 3	8.9	—
Kobe	21.9	34	i 5 5	+ 1	(9 11)	+ 8	9.2	11.1
Osaka	22.1	34	5 10	+ 4	(9 17)	+10	9.3	10.3
Toyooka	22.5	32	1 5 11	0	(9 30)	+15	9.5	—
Nagoya	23.3	36	i 5 18	- 2	9 34	+ 3	—	15.8
Batavia	26.9	211	5 45	-12	11 8	+29	—	—
Malabar	27.4	208	5 55	- 7	11 29	+41	—	—
Akita	28.3	33	e 6 28	+17	12 32	+88	—	—
Mizusawa	28.4	35	6 7	- 5	10 59	- 7	—	—
Calcutta	28.4	35	6 8	- 4	10 53	-13	—	—
	30.8	285	6 18	-18	11 44	- 4	16.0	—
	30.8	285	6 33	- 3	12 19	+31	—	—
Irkutsk	37.6	345	i 7 27	- 8	13 33	+ 1	20.0	24.1
Hyderabad	40.2	278	7 17	-40	14 3	- 7	21.6	24.7
Dehra Dun	40.9	299	7 40	-22	16 0	?	24.7	31.0
Colombo	41.0	264	7 49	-14	14 29	+ 8	20.2	23.8
Kodaikanal	42.4	269	13 0	?	—	—	24.8	26.6
Bombay	45.3	281	8 35	0	15 23	+ 4	24.0	31.4
Perth	49.1	185	e 8 40	-21	e 15 50	-17	—	—
Tashkent	50.1	311	19 9	+ 1	e 16 30	+10	26.3	30.1
Samarkand	51.4	309	i 9 21	+ 5	16 42	+ 6	—	—
Adelaide	54.7	163	e 9 33	- 4	i 16 58	-19	22.9	31.8
Riverview	58.6	150	—	—	i 17 59	- 7	e 28.2	30.2
Melbourne	59.4	159	—	—	i 18 17	+ 1	—	34.4
Ekaterinburg	59.6	327	i 10 15	+ 6	i 18 28	+10	28.0	33.3
Baku	64.6	308	i 10 49	+ 7	i 19 33	+13	32.7	40.8
Kucino	72.0	325	i 11 0?	-30	e 21 0?	+10	e 40.0	43.0
Theodosia	74.7	315	11 55	+ 8	21 34	+12	—	—
Pulkovo	75.6	330	i 11 56	+ 3	i 21 42	+ 9	37.0	47.8
Simferopol	75.6	314	11 57	+ 4	e 21 43	+10	—	—
Yalta	75.7	314	e 12 0	+ 7	—	—	—	—
Sebastopol	76.1	314	e 11 52	- 4	—	—	—	—
Honolulu T.H. E.	76.3	72	—	—	—	—	e 39.0	—
Kara	76.4	301	e 12 4	+ 7	e 21 50	+ 8	—	—
Wellington	76.8	142	i 11 52	- 8	e 21 16	-31	—	—
Helsingfors	78.0	330	e 12 8	+ 1	e 22 8	+ 8	e 44.0	—
Helwan	81.0	299	i 12 25	0	22 36	+ 1	—	55.2
Upsala	81.7	330	—	—	e 22 46	+ 3	e 43.0	45.6
Budapest	85.1	320	12 42	- 7	—	—	e 48.0	55.0
Lund	85.4	327	—	—	23 18	- 5	43.0	—
Copenhagen	85.8	327	12 48	- 4	23 21	- 7	42.0	—
Vienna	86.5	319	e 12 53	- 3	23 21	-15	e 46.5	50.0

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Bergen	87.0	334	—	—	—	—	e 47.0	—
Graz	87.5	320	e 12 56	- 6	e 23 40	- 7	47.0	56.4
Zagreb	87.6	318	e 12 54	- 9	e 23 29	- 19	e 48.6	55.8
Hamburg	88.0	326	e 13 1	- 4	e 23 12	[- 3]	e 45.5	55.0
Entebbe	88.2	271	13 0?	- 6	—	—	—	—
Jena	88.2	324	e 13 0	- 6	e 23 50	- 4	e 48.0	57.0
Scorsby Sund	88.8	350	16 18	?PR ₁	23 30	[+ 9]	—	—
Gottingen	88.9	325	e 13 7	- 3	e 23 44	- 18	e 46.0	49.7
Ravensburg	90.2	322	e 19 30	?	—	—	—	—
Venice	90.2	319	—	—	24 0?	- 16	—	—
Chur	91.3	321	e 13 17	- 6	e 23 44	[+ 8]	—	—
De Bilt	91.3	325	—	—	e 26 0?	?	e 45.0	49.9
Strasbourg	91.6	323	(i 13 18)	- 7	(e 24 22)	- 9	34.0	52.3
Zurich	91.6	321	e 13 19	- 6	e 23 46	[+ 8]	—	—
Uccle	92.4	331	e 19 0?	?	—	—	e 45.0	50.1
Neuchatel	92.8	321	e 13 24	- 7	i 23 59	[+14]	—	—
Moncalieri	93.2	320	12 49	- 44	24 57	+ 10	34.5	60.8
Besançon	93.3	321	—	—	—	—	50.0	—
Edinburgh	93.3	333	—	—	—	—	48.0	55.5
Stonyhurst	94.1	330	i 17 25	?PR ₁	i 24 10	[+18]	50.0	55.5
Paris	94.4	324	e 13 0?	- 40	e 26 5	?PS	49.0	51.0
Kew	94.5	327	e 13 36	- 5	e 24 11	[+17]	47.0	51.6
Oxford	94.8	327	—	—	—	—	e 45.0	52.3
Tortosa	N. 99.9	319	—	—	25 0	?E	—	54.4
Algiers	100.3	314	—	—	25 43	- 16	—	64.0
Ivigtut	101.3	355	—	—	—	—	54.0	—
Alicante	102.0	317	e 18 30	?PR ₁	e 28 54	?	e 39.9	40.8
Toledo	103.3	320	e 18 29	?PR ₁	e 29 47	?	e 41.2	58.7
Almeria	104.0	317	e 18 34	?PR ₁	e 28 54	?	e 37.4	—
Granada	104.6	317	i 17 33	[-30]	—	—	e 56.0	61.2
Malaga	105.4	317	18 20	?PR ₁	28 8	?PS	34.2	—
San Fernando	106.7	318	—	—	—	—	—	62.2
Toronto	N. 116.7	15	e 20 0?	?PR ₁	e 29 45	?PS	69.0	—
Florissant	117.1	26	e 20 5	?PR ₁	—	—	e 62.0	80.0
St. Louis	117.4	26	i 20 16	?PR ₁	—	—	e 65.0	74.5
Georgetown	121.7	15	20 32	?PR ₁	—	—	71.0	79.6
La Paz	171.6	87	20 22	[+ 6]	—	—	73.8	89.6
Sucre	174.0	110	i 20 26	[+10]	i 26 29	?PR ₁	—	—

Additional readings and notes : Hong Kong MN = +9.0m. Phu-Lien MN = +13.6m. Zi-ka-wei IPN = +3m.6s., iE = +6m.46s. MN = +12.8m. Koti iPR₁ = +5m.16s. Sumoto S = +6m.54s. Kobe PR₁ = +5m.31s. eS = +7m.8s., MN = +10.4m., MZ = +10.6m. Osaka MN = +11.4m. Batavia iP = +5m.48s. Perth eS = +15m.25s. Riverview PS = +18m.15s., MN = +32.9m. Melbourne i = +21m.25s. Kucino e = +14m.0s. and +16m.0s. ?; all readings are given to the nearest minute only. Wellington iN = +11m.31s. Upsala MN = +52.5m. Copenhagen i = +24m.34s. = PS + 17s. Vienna iPZ = +12m.55s., iN = +14m.38s., PR₁ = +16m.22s., PS = +24m.18s., SR₁? = +23m.0s. Zagreb e = +15m.58s. and +18m.39s. = PR₁ - 21s., eNE = +20m.0s., eNW = +20m.28s., e = +23m.48s., eNW = +24m.50s., eNE = +25m.55s., eLNW = +47.8m. Hamburg MN = +47.0m. Jena eSN = +23m.52s., eN = +24m.40s. = PS - 5s., eE = +24m.48s. = PS + 3s., eLN = +47.0m., MN = +56.0m. Gottingen eLN = +44.2m., MZ = +56.2m. De Bilt MN = +49.7m., MZ = +56.1m.; T₀ = 8h.6m.9s. Strasbourg iSR₁? = +25m.35s. = PS + 8s., MN = +53.8m., MZ = +59.5m., P and S are given as PR₁ and SR₁ respectively. Uccle MN = +51.6m. Moncalieri MN = +60.7m. Stonyhurst i? = +26m.3s. = PS + 7s., Kew iPS = +26m.8s. Alicante MN = +41.1m. Toledo MNW = +59.5m. Granada i = +18m.38s. = PR₁ - 6s. Florissant iPNZ = +20m.9s. = PR₁ + 4s., ePSEN = +29m.51s., iPSEN = +29m.56s., eSR₁EN = +36m.27s. St. Louis eE = +26m.30s. = E - 28s., eN = +29m.0s., +35m.25s., eE = +36m.40s. = SR₁ + 26s., and +61m.40s. Georgetown PR₁Z? = +23m.9s., PSZ? = +31m.25s. La Paz PR₁ = +25m.42s.

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Jan. 16d. 14h. 3m. 28s. Epicentre 17°-0N. 120°-6E. (as at 8h.).

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		2-4	171	i 0 41	+ 4	(i 1 4)	- 2	i 1-1	3-7
Hong Kong	E.	8-1	313	e 2 43?	+40	—	—	—	7-2
Phu-Lien		13-8	288	e 3 32	+ 9	—	—	e 6-5	—
Irkutsk		37-6	345	e 7 52	+17	—	—	e 21-5	—
Tashkent		50-1	311	e 8 27	-41	—	—	e 26-5	30-0
Ekaterinburg		59-6	327	i 10 15	+ 6	19 29	+71	28-0	33-1
Baku		64-6	308	—	—	—	—	e 33-8	—
Kucino		72-0	325	—	—	—	—	e 37-8	39-7
Pulkovo		75-6	330	—	—	—	—	e 44-5	—
Copenhagen		85-8	327	—	—	—	—	e 44-5	—
Moncalieri		93-2	320	—	—	—	—	e 69-6	—
Georgetown	z.	121-7	15	e 18 10	[-47]	—	—	e 64-9	68-0

Additional readings and note: Hong Kong MN = +6.0m. Tashkent e = +10m.26s. and +20m.26s. = SR, +18s. Georgetown eZ = +23m.58s. and +56m.22s.; all readings have been reduced by 1h.

Jan. 16d. Readings also at 2h. (Ekaterinburg, near Almata, Samarkand, and Tashkent, Tucson, near Oaxaca, Tacubaya, and Vera Cruz), 7h. (near Samarkand), 9h. (2) and 12h. (5) (near Manila), 14h. (near Taihoku), 15h. (Manila), 16h. (Manila, Florissant, St. Louis, La Paz, La Plata, and near Santiago), 17h. and 18h. (near Manila), 19h. (Manila, Tucson, and near Zagreb), 20h. (near Manila), 21h. (Ekaterinburg, Tashkent, and Manila), 23h. (Manila).

Jan. 17d. 0h. 6m. 40s. Epicentre 39°-3N. 18°-0E. (as on 1928 Sept. 16d.).

A = +.736, B = +.239, C = +.633; D = +.309, E = -.951; G = +.602, H = +.196, K = -.774.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taranto		1-3	334	e 0 45	+25	—	—	—	—
Naples	E.	3-3	298	e 1 27	+35	e 1 38	+ 7	—	3-3
Belgrade		5-8	18	e 2 21	+51	3 27	+48	—	3-6
Zagreb		6-7	348	i 1 37	- 5	—	—	i 3-3	4-3
Florence		6-8	314	e 2 31	+47	3 30	+25	(3-5)	7-2
Laibach	N.	7-2	340	e 2 31	+42	e 3 54	+39	(e 3-9)	4-1
Venice		7-4	327	e 2 20	+28	4 20?	?L	(14-3)	—
Graz		8-0	347	e 1 55	- 6	i 4 15	?L	(14-2)	4-5
Budapest		8-2	5	e 2 10	+ 6	—	—	4-1	5-0
Vienna		9-0	353	e 2 20	+ 4	4 57	?L	(5-0)	5-3
Innsbruck	N.E.	9-3	331	e 2 20?	0	4 26	+16	—	5-5
Moncalieri		9-5	310	—	—	e 4 11	- 5	7-7	—
Ohur		9-8	324	e 2 28	+ 1	e 4 3	-20	—	—
Ravensburg		10-5	327	e 2 50	+13	e 4 44	+ 1	6-0	6-8
Zurich		10-6	323	e 2 36	- 2	e 5 2	+17	—	—
Neuchatel		11-1	317	i 2 47	+ 1	i 4 43	-14	—	—
Strasbourg		11-8	325	—	—	e 5 8	- 6	10-3	—
Besançon		11-8	316	e 4 51	?S	(e 4 51)	-23	—	—
Jena		12-4	341	—	—	—	—	e 6-3	7-2
Feldberg	N.	12-8	331	—	—	—	—	e 6-3	—
Göttingen		13-4	338	—	—	—	—	e 9-3	9-4
Alicante		14-4	272	—	—	—	—	e 11-2	—
Paris		14-6	316	—	—	—	—	e 8-9	—
Uccle		15-0	325	—	—	—	—	e 8-8	—
Hamburg		15-3	342	—	—	—	—	e 7-3	9-3
De Bilt		15-6	329	—	—	—	—	e 8-3	11-4
Lund		16-7	351	5 20?	?	—	—	—	—
Copenhagen		16-8	349	—	—	7 20?	+ 7	—	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Granada	17.0	270	4 23	+18	17 57	+39	9.8	12.1
Toledo	17.0	279	e 4 24	+19	e 7 51	+33	e 8.7	—
Kew	17.6	320	—	—	—	—	e 9.3	—
Oxford	18.3	320	—	—	—	—	e 8.6	10.6
Upsala	N. 20.6	0	—	—	—	—	e 12.3	—
Kucino	21.1	32	e 3 34	-80	e 7 17	-89	e 8.9	11.7
Helsingfors	21.3	10	e 5 13	+17	—	—	e 10.8	—
Pulkovo	21.9	17	4 42	-22	8 39	-24	11.3	12.8
Baku	24.4	77	—	—	e 9 32	-20	—	—
Ekaterinburg	32.7	43	e 6 25	-29	e 12 50	+31	15.3	—
Tashkent	38.6	70	—	—	e 15 50	?SR ₁	i 23.0	26.3
Irkutsk	57.9	46	—	—	—	—	34.3	35.7

Additional readings and notes: Belgrade ePN = +2m.23s. Zagreb eNE = +1m.44s. and +2m.10s., eNW = +1m.57s., iNE = +2m.33s. Florence P is given as "e" simply. Laibach ePR₁N = +3m.13s. Vienna PR₁ = +3m.24s., PR₂ = +4m.9s. Moncalieri S? = +6m.20s., true S is given as "e" simply; also a second set of readings for which eP = +41s., S = +4m.49s. Strasbourg i = +7m.8s. Jena eE = +6m.34s. and +6m.53s., iN = +6m.55s., iZ = +6m.59s., and +7m.8s., MNZ = +7.3m. Feldberg eN = +7m.0s. and +7m.48s., iN = +7m.19s. Gottingen eEN = +6m.26s., eZ = +7m.14s. eLN = +9.2m.

Jan. 17d. 11h. 45m. 34s. Epicentre 10°·6N. 65°·6W.

(as on 1926 Feb. 1d.).

A = +.406, B = -.395, C = +.184; D = -.911, E = -.413;
G = +.076, H = -.168, K = -.983.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Fort de France	5.9	48	0 22	-69	—	—	—	—
Port au Prince	10.3	322	e 2 56	+22	1 4 54	+17	7.5	—
Balboa Hts. N.	13.9	265	3 28	+3	6 12	+6	7.2	8.7
La Paz E.	27.2	185	i 5 54	-6	i 10 38	-7	13.4	14.5
N.	27.2	185	—	—	e 10 45	0	13.4	17.4
Sucre	29.2	179	6 15	-5	11 33	+13	15.6	18.2
Charlottesville	29.8	339	e 6 26	0	11 10	-21	12.4	—
Georgetown	30.1	344	6 22	-7	11 27	-9	e 13.4	27.9
Fordham	31.1	348	i 3 0	?	i 8 0	?	9.4	—
Harvard N.	32.1	354	e 6 23	-25	i 11 49	-21	—	—
Cincinnati	33.1	334	e 6 56	-1	e 12 13	-13	13.9	15.3
Ithaca	33.2	348	e 6 51	-7	—	—	13.8	—
Tacubaya	33.6	290	6 58	-3	12 46	+14	15.9	—
Toronto N.	35.1	344	e 7 4	-10	e 12 41	-16	15.6	25.0
Ann Arbor E.	35.4	337	7 8	-9	e 12 50	-11	e 15.2	16.0
N.	35.4	337	7 14	-3	—	—	15.6	—
St. Louis	35.6	327	e 7 19	+1	e 12 53	-11	e 15.7	—
Florissant	35.8	327	7 12	-8	i 12 55	-12	16.5	—
Ottawa	35.8	350	e 6 41	-39	(e 12 44)	-23	21.4	—
Chicago	36.0	333	7 33	+11	13 15	+5	16.0	—
Río de Janeiro	40.1	147	e 7 26	-30	(13 26)	-42	13.4	20.8
Santiago	44.3	187	e 8 4	-24	14 43	-23	24.0	—
Azores	44.9	46	8 44	+12	—	—	—	—
La Plata	46.1	171	8 23	-18	14 54	-35	19.7	—
Tucson E.	46.9	306	8 47	+1	e 15 31	-9	e 22.7	—
N.	46.9	306	8 49	+3	e 16 5	+25	e 24.0	—
Ivigtut	52.2	11	—	—	16 44	-2	—	—
Lick	56.8	309	e 10 0	+9	e 18 3	+19	—	—
Berkeley	57.4	309	e 10 20	+25	e 18 10	+19	e 33.1	—
San Fernando	59.2	55	10 4	-2	18 12	-1	26.2	38.7
Malaga	60.7	54	10 12	-5	18 34	+2	25.8	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	o	o	m. s.	s.	m. s.	s.	m.	m.
Victoria	60.9	321	10 39	+21	18 56	+21	29.6	41.8
Granada	61.4	54	i 10 21	0	i 18 46	+5	29.0	34.6
Toledo	61.5	51	10 20	-2	18 42	0	e 28.5	36.8
Almeria	62.3	54	10 19	-8	18 37	-15	e 25.4	37.3
Alicante	63.9	52	e 10 55	+18	e 19 31	+19	e 26.4	36.4
Tortosa	65.1	50	e 10 50	+4	e 19 25	-1	26.8	32.8
Bidston	65.3	37	—	—	19 32	+3	26.8	38.9
Scoresby Sund	65.7	15	11 2	+13	—	—	—	—
Stonyhurst	65.8	37	e 10 58	+8	e 19 51	+16	30.2	34.2
Oxford	65.9	39	—	—	e 19 36	0	e 27.1	33.4
Edinburgh	66.0	34	—	—	i 20 12	?PS	30.4	36.9
Kew	66.4	39	e 11 2	+8	e 19 44	+2	30.4	31.9
Barcelona	66.4	50	—	—	—	—	e 27.6	38.7
Algiers	66.6	55	—	—	(20 26?)	?PS	20.4	31.4
Paris	67.7	41	e 11 1	-1	—	—	23.4	30.4
Uccle	69.2	40	e 11 9	-3	e 19 56	-20	29.4	40.0
De Bilt	69.8	39	e 12 26?	+70	e 20 18	-6	e 32.4	34.2
Besançon	69.8	45	e 11 48	+32	e 21 24	+60	30.4	—
Neuchatel	70.4	45	e 11 14	-5	e 20 54	+23	—	—
Moncalieri	70.8	47	e 10 41	-41	20 46	+10	33.5	50.3
Strasbourg	71.1	43	e 11 13	-11	e 20 58	+19	31.4	35.9
Bergen	71.4	30	e 13 11	?	—	—	e 33.4	—
Zurich	71.5	45	e 11 14	-13	e 20 41	-3	—	—
Feldberg	71.7	40	e 11 26	-2	—	—	—	41.4
Ravensburg	72.2	44	—	—	—	—	e 33.4	—
Chur	72.2	45	e 11 27	-4	e 20 51	-1	—	—
Göttingen	72.8	39	e 11 56	+21	e 20 32	-28	e 29.4	34.4
Hamburg	73.0	38	e 11 35	-1	21 26	[-8]	e 29.4	34.4
Florence	73.2	47	11 41	+4	21 33	[-3]	29.4	40.4
Innsbruck N.E.	73.4	44	11 39	+1	—	—	29.4	—
Jena	73.7	40	e 12 13	+33	—	—	e 29.4	37.8
Copenhagen	74.5	35	11 44	-2	21 15	-5	—	—
Lund	74.9	35	—	—	21 28	+3	—	—
Laibach	75.6	45	—	—	e 22 54	+81	e 36.1	43.7
Graz	76.2	44	(e 11 57)	+1	(e 22 18)	?PS	(34.4)	(48.0)
Zagreb	76.6	46	e 12 21	+22	e 22 3	+19	e 35.4	40.4
Vienna	76.8	42	11 55	-5	—	—	e 31.9	41.9
Budapest	78.6	43	e 12 46	+35	22 23	+16	31.4	42.9
Helsingfors	81.1	30	—	—	e 22 46	+10	e 35.4	—
Pulkovo	83.8	30	12 36	-5	23 4	-3	35.4	42.3
Honolulu T.H. E.	88.2	291	—	—	23 40	-14	e 62.4	—
Kucino	88.8	34	12 56	-13	23 44	-17	38.0	49.4
Sebastopol	88.9	45	—	—	—	—	e 51.4	—
Simferopol	89.2	45	—	—	—	—	e 51.4	—
Yalta	89.4	45	—	—	—	—	e 51.4	—
Theodosia	90.1	44	—	—	—	—	e 51.4	—
Helwan	90.7	60	e 12 56?	-24	23 55	-26	—	58.3
Cape Town	91.1	125	e 14 3	+41	23 46	[+11]	43.6	51.7
Ksara	93.4	55	—	—	e 23 26?	[-22]	e 37.4	—
Entebbe	97.9	89	—	—	34 26?	?	—	54.9
Ekaterinburg	99.5	27	e 15 2	+54	i 24 36	[+15]	42.4	50.3
Baku	101.7	45	17 56	[+3]	25 39	?S	43.4	—
Tashkent	113.6	35	e 15 50	+36	25 56	[+32]	53.4	70.7
Tananarive	115.1	105	—	—	—	—	54.6	63.6
Irkutsk	116.5	6	—	—	—	—	50.4	66.0
Dehra Dun	126.2	40	28 26?	?	42 26?	?SR ₁	59.4	73.4
Bombay	129.5	52	21 18	?PR ₁	34 55	?	73.9	85.4
Kodalkanal	137.7	61	74 2	?L	—	—	(74.0)	—
Riverview	139.2	229	e 18 56	[-42]	—	—	e 67.6	94.8
Melbourne	141.4	220	—	—	i 33 30	?	66.4	70.9

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Colombo	141.4	65	15 16	?	—	—	67.3	81.8
Hong Kong E.	147.1	1	—	—	e 42 19	?SR ₁	e 58.4	66.1
Adelaide	147.2	219	—	—	e 48 31?	?SR ₂	71.2?	77.1
Phu-Lien	147.7	14	—	—	31 26?	?	—	—
Batavia	171.3	60	i 22 2	?	i 25 43	?PR ₁	72.4	—

Additional readings and notes: Port au Prince i = +3m.23s. La Paz PR₁E = +6m.26s., iN = +10m.57s., iE = +11m.25s., SR₁N = +11m.57s.; T₁ = 11h.45m.20s. Sucre PR₂ = +6m.22s., SR₁ = +13m.0s. Charlottesville SN = +11m.11s., LN = +13.1m. Georgetown ePE = +6m.24s., PR₁N = +7m.9s., PR₁E = +7m.10s., PR₂Z = +7m.24s., PR₂N = +7m.25s., PR₂E = +7m.27s., PR₂Z = +7m.37s., eZ = +10m.26s., SZ = +11m.31s., eZ = +12m.12s., eN = +12m.16s., eE = +12m.22s., SR₁Z = +12m.48s., SR₂Z = +13m.14s. Cincinnati iPR₁N = +7m.45s. Toronto LE = +14.4m., ME = +16.5m. Ann Arbor eE = +7m.50s., eN = +7m.56s., eE = +10m.2s. St. Louis eSN = +12m.49s. Florissant PR₂E = +8m.34s., SR₁EN = +15m.19s. Ottawa LN = +27.4m., S is given as eL? Chicago PR₁N = +8m.55s., PR₁E = +9m.16s., SR₁N = +15m.37s., LN = +17.0m. Rio de Janeiro MN = +22.7m. Tucson PR₁E = +10m.16s., PR₁N = +10m.39s., eSR₁E = +18m.43s., eSR₂N = +19m.25s. Lick eE = +10m.36s. and +15m.53s., eN = +18m.41s., +34m.10s., and +36m.26s.? Berkeley ePZ = +10m.25s., eE = +28m.2s., eLZ = +35.0m. San Fernando MN = +42.4m. Victoria LN = +28.2m., MN = +29.6m. Granada i = +12m.31s., +15m.27s., iS = +20m.3s. = [S] - 2s., PS = +23m.44s. = SR₁ + 12s., MZ = +31.5m. Toledo MNW = +36.3m. Almeria MN = +45.3m. Alicante MN = +39.6m. Stonyhurst iSR₁? = +23m.45s. Kew PSE = +20m.13s., eE = +22m.50s., SR₁E = +23m.56s., SR₂E = +27m.22s., LN = +27.8m., MN = +31.8m., MZ = +33.5m. Barcelona MN = +39.6m. Uccle i = +23m.30s., MN = +41.0m. De Bilt eN = +21m.19s. = [S] + 9s., eLN = +29.4m., MN = +33.7m., MZ = +34.4m. Moncalieri MN = +50.2m. Strasbourg ePR₁ = +14m.39s., ePS = +21m.33s. Göttingen ePZ = +12m.2s., eN = +21m.26s. = [S] - 7s., eE = +24m.2s., eLN = +31.4m., MN = +33.9m., MZ = +34.8m. Hamburg eSN = +20m.44s., MN = +32.4m. Jena ePZ = +12m.11s., eN = +22m.5s. = Σ - 5s., eE = +22m.14s. = Σ + 4s., eLE = +26.4m., MZ = +39.9m., ME = +40.0m. Graz all readings have been increased by 9m. Zagreb e = +13m.1s., eSNE = +22m.10s. = [S] + 10s., eNE = +23m.1s. and +27m.41s., eNW = +26m.26s. and +30m.1s. Budapest MN = +45.4m. Helsingfors SR₁ = +31m.1s. Honolulu T.H. PSE = +25m.5s. Kucino S₁P₁S = +23m.14s., iPS = +24m.44s. Ksara readings have been increased by 1h. Ekaterinburg iPR₁ = +17m.56s., iPS = +26m.51s., iSR₁ = +32m.26s. Bakú e = +15m.4s. = P + 45s., S₁P₁S = +24m.39s., SR₁ = +33m.2s. Tashkent iPR₁ = +19m.53s., PPS = +30m.56s. Tananarive ePR₁ = +20m.53s., ePS = +29m.50s., SR₁ = +35m.48s., eN = +46m.11s., LN = +56.6m., MN = +67.1m. Irkutsk ePR₁ = +20m.1s., S₁P₁S = +26m.39s., PPS = +29m.49s., SR₁ = +34m.8s. Riverview MN = +104.3m. Melbourne i = +42m.26s. and +46m.38s. Hong Kong MN = +96.8m.

Jan. 17d. 22h. 28m. 40s. Epicentre 12°·2N. 142°·0E.

A = -·770, B = +·602, C = +·211; D = +·616, E = +·788;
G = -·167, H = +·130, K = -·977.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	E.	20.6	279	e 4 52	+ 4	10 11	?L (10.2)	—
Kofu		22.7	342	e 5 16	+ 3	e 9 36	+17	—
Tahoku	E.	23.2	306	—	—	e 9 20?	- 9	—
Osaka		23.3	346	5 16	- 4	(9 30)	- 1	9.5 10.8
Kobe		23.3	346	e 5 17	- 3	(e 9 45)	+14	e 9.8
Nagasaki		23.4	334	e 5 21	0	e 9 55	+22	—
Mizusawa	E.	27.0	359	(6 50)	+52	(10 32)	- 9	10.5
Hong Kong		28.4	294	e 6 16	+ 4	e 11 18	+12	—
Phu-Lien		34.9	288	6 20?	- 52	—	—	22.7
Batavia		39.5	245	7 48	- 3	13 52	- 7	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview	46.8	170	e 8 32	-14	i 18 52	?SR ₁	e 25.4	27.9
Adelaide	47.2	185	—	—	e 15 0	-44	e 25.2	31.5
Melbourne	50.1	177	—	—	i 16 20	0	i 27.4	34.8
Irkutsk	50.2	331	9 7	- 1	i 16 28	+ 7	24.3	—
Wellington	E. 61.4	153	—	—	e 18 22	-19	—	—
Bombay	66.6	286	e 10 56	+ 1	—	—	—	—
Tashkent	69.0	310	i 11 20	+ 9	i 20 31	+17	e 33.3	45.4
Ekaterinburg	75.1	327	i 11 54	+ 4	i 21 38	+11	35.8	48.8
Baku	83.7	310	i 12 41	+ 1	i 23 8	+ 2	41.3	45.6
Kucino	87.7	328	—	—	e 23 32	-17	41.6	55.5
Pulkovo	90.0	333	e 12 59	-17	e 23 36	[+ 8]	44.3	55.2
Helsingfors	92.1	334	—	—	—	—	e 59.3	—
Lund	99.8	335	—	—	—	—	55.3	—
Copenhagen	100.2	335	—	—	27 20?	?PS	—	—
Graz	104.0	327	—	—	—	—	e 64.3	—
De Bilt	105.8	335	—	—	e 34 8	?SR ₁	e 54.3	68.4
Edinburgh	106.0	341	—	—	—	—	—	76.3
Strasbourg	107.0	331	—	—	—	—	e 57.3	—
Uccle	107.0	335	—	—	e 34 20?	?SR ₁	e 55.3	—
Kew	108.5	336	—	—	—	—	e 57.3	—
Paris	109.3	333	—	—	—	—	e 68.3	71.3
Florissant	109.4	40	—	—	—	—	e 59.4	—
Moncalleri	109.5	327	—	—	e 46 56	?	59.5	—
St. Louis	109.7	40	—	—	—	—	e 61.3	—
Toronto	N. 112.6	30	—	—	—	—	e 53.5	—
Cincinnati	Z. 112.9	37	—	—	—	—	e 59.8	—
Georgetown	Z. 117.3	33	e 20 6	?PR ₁	—	—	e 61.1	72.7
Granada	121.0	328	—	—	—	—	e 61.3	67.0
La Paz	150.5	102	e 19 57	[0]	—	—	78.3	92.0
Sucre	152.9	108	e 20 1	[+ 1]	—	—	—	95.6

Additional readings and note : Osaka MN = +10.2m. Kobe iP = +5m.50s. = PR₁ + 2s. Mizusawa gives P as S and S as L. Batavia iE = +9m.6s. = PR₁ - 10s. Riverview MN = +35.7m. Melbourne i = +25m.27s. Kucino PS = +24m.59s., SR₁ = +29m.56s. Pulkovo SR₁ = +30m.26s. De Bilt MN = +67.7m. Georgetown eZ = +6m.11s., +31m.45s., +47m.19s., and +55m.14s. La Paz PR₁N? = +24m.23s.

Jan. 17d. Readings also at 1h. (Manila), 4h. (La Paz), 5h. (Almata), 6h. and 10h. (near Manila), 11h. (near Tacubaya), 12h. (La Paz, near Tacubaya, Oaxaca, and Vera Cruz), 13h. (Manila (2), Tucson, near Oaxaca, Tacubaya, and Vera Cruz), 15h. and 16h. (Manila), 18h. (Suva), 19h. (Wellington and near Manila), 21h. (near Manila (2)), 22h. (Wellington).

Jan. 18d. 21h. 27m. 30s. Epicentre 0°0 18°0W. (as on 1928 May 12d.).

A = +.951, B = -.309, C = .000; D = -.309, E = -.951; G = .000, H = .000, K = -1.000.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Rio de Janeiro E.	33.5	226	e 12 25	?S	(e 12 25)	- 7	e 15.8	17.7
N.	33.5	226	e 12 23	?S	(e 12 23)	- 9	e 15.8	17.8
San Fernando	38.0	16	6 50	-48	13 20	-18	18.8	27.1
Malaga	38.8	18	e 7 42	- 2	—	—	—	—
Granada	39.5	18	i 7 52	+ 1	i 14 5	+ 6	i 19.7	21.6
Almeria	39.6	20	e 7 43	- 8	e 13 55	- 5	e 20.0	21.6
Alicante	41.6	20	e 7 34	-34	—	—	20.0	22.4
Toledo	41.8	16	e 8 5	- 4	e 14 17	-15	e 16.8	25.2
Tortosa	N. 44.2	20	e 7 54	-33	—	—	e 21.5	26.9
Sucre	50.1	245	e 9 20	+12	16 27	+ 7	26.2	27.3

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Moncalieri	50.4	24	—	—	e 13 45	?	16.7	—
Entebbe	50.5	90	—	—	—	—	—	29.5
Florence	51.0	28	e 9 13	0	15 50	-41	20.5	31.8
Paris	51.9	17	e 12 30?	?	—	—	26.5	30.5
La Paz	52.1	251	i 9 36	+15	16 48	+ 3	24.3	30.2
Strasbourg	53.4	21	e 9 30?	+ 1	—	—	e 22.5	—
Ravensburg	53.5	23	—	—	—	—	e 28.5	—
Kew	53.6	13	—	—	e 17 10	+ 6	e 25.5	—
Uccle	54.2	19	—	—	e 17 30?	+19	e 23.5	—
Zagreb	54.7	30	e 9 47	+10	—	—	—	29.2
Stonyhurst	55.4	12	—	—	—	—	e 23.7	36.1
De Bilt	55.6	19	—	—	e 17 42	+13	e 23.5	30.8
Hamburg	58.4	19	—	—	—	—	e 30.5	—
Copenhagen	60.9	20	—	—	17 48	-47	—	—
Lund	61.2	20	—	—	—	—	32.5	—
Pulkovo	70.4	24	—	—	e 13 42	?	28.5	44.2
Kucino	71.6	30	—	—	—	—	33.2	45.2
Baku	73.4	48	—	—	e 21 21	+14	e 33.5	50.2
Florissant	76.3	310	—	—	—	—	e 40.5	42.5
Ekaterinburg	83.8	33	e 13 1	+20	23 17	+10	34.0	45.3
Tashkent	88.0	50	i 13 6	+ 1	23 30	-22	e 43.5	51.9
Bombay	90.8	71	—	—	—	—	e 37.5	—
Irkutsk	109.1	35	—	—	e 28 30?	?PS	56.5	—

Additional readings: San Fernando MN = +24.3m. Granada SR₁ = +16m.35s., MZ = +24.4m. Toledo MNW = +25.3m. La Paz SE₁ = +16m.55s. Kew LEZ = +28.5m. Zagreb eNW = +9m.54s., e = +13m.51s. De Bilt MNZ = +34.2m. Ekaterinburg SR₁ = +29m.30s. Tashkent SR₁ = +30m.0s.

Jan. 18d. Readings also at 0h. (Georgetown, Samarkand, and near Matuyama), 1h. (Florissant, St. Louis, Gottingen, Irkutsk, Pulkovo, near Merida, and near Manila), 4h. (Ekaterinburg and Tashkent), 5h. (Ekaterinburg and near Samarkand), 6h. (Irkutsk, Tashkent, and Manila), 7h. (Manila), 11h. (near Manila and near Matuyama), 12h. (Manila), 16h. (near Matuyama, Hukuoka, and Nagasaki), 18h. (Florissant), 23h. (Florissant, near Samarkand, and Tashkent).

Jan. 19d. 0h. 42m. 6s. Epicentre 5°.4N. 125°.2E. (as on 1925 March 26d.).

A = - .574, B = + .813, C = + .094; D = + .817, E = + .576;
G = - .054, H = + .077, K = - .996.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	10.1	336	1 2 41	+10	—	—	14.7	—
Hong Kong	20.0	329	—	—	—	—	—	8.6
Batavia	21.7	238	1 5 6	+ 5	1 9 40	?SR ₁	1 10.9	—
Phu-Lien	23.7	312	3 54	?	—	—	—	—
Tashkent	61.3	316	—	—	i 18 39	- 1	e 26.0	34.7
Samarkand	62.4	314	e 10 20	+ 2	e 18 52	- 1	—	—
Ekaterinburg	71.8	329	e 11 28	—	e 20 29	-19	35.9	—
Baku	75.4	311	—	—	—	—	—	e 40.9

Batavia and Tashkent readings are given without phase. Batavia gives epicentre 5°N. 125°36'E.

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Jan. 19d. 3h. 17m. 39s. Epicentre 9°·5N. 82°·0W.

A = +·137, B = -·977, C = +·165; D = -·990, E = -·139;
G = +·023, H = -·163, K = -·986.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Merida	13·6	323	(3 9)	-12	(5 51)	-7	(6·5)	(8·2)
Charlottesville N.	28·7	6	e 6 21	+ 6	e 11 21	+ 9	e 18·4	—
La Paz	29·4	152	e 6 19	- 3	e 11 24	0	14·4	19·2
Cincinnati	29·7	356	i 6 23	- 2	e 11 26	- 3	14·8	17·4
Georgetown z.	29·8	8	6 29	+ 3	10 47	-44	e 12·6	19·8
St. Louis N.	30·0	347	e 6 33	+ 5	(e 11 42)	+ 8	e 11·7	—
Florissant	30·3	347	i 6 27	- 4	e 11 20	-19	e 16·4	19·4
Chicago E.	32·6	354	—	—	—	—	e 13·4	14·9
Ann Arbor	32·8	358	i 6 51	- 4	12 9	-12	16·6	—
Sucre	33·0	150	e 6 56	0	i 12 23	- 1	18·0	21·6
Ithaca	33·3	9	e 7 1	+ 2	—	—	18·4	—
Toronto N.	34·2	4	e 7 6	- 1	12 21?	-22	19·7	22·4
Tucson	35·1	315	e 7 35	-21	—	—	22·7	—
La Plata	49·9	155	9 7	+ 1	—	—	32·4	—
Rio de Janeiro E.	50·0	134	e 16 21	?S	(e 16 21)	+ 2	e 28·6	31·6
Victoria E.	52·0	327	—	—	—	—	35·1	38·6
Scoresby Sund	71·4	19	—	—	—	—	39·4	—
San Fernando E.	73·0	55	—	—	—	—	—	45·4
Toledo	74·8	51	e 11 47	- 1	—	—	—	—
Granada	75·1	55	(e 11 54)	+ 4	(21 8)	-19	e 42·8	47·8
Stonyhurst	76·2	39	—	—	—	—	e 42·4	—
Alicante	77·5	53	—	—	—	—	22·8	—
Kew	77·5	40	—	—	—	—	e 37·4	—
Paris	79·3	42	—	—	—	—	e 39·4	40·4
Uccle	80·4	40	—	—	e 28 21?	?SR ₁	e 38·4	—
De Bilt E.	80·8	39	—	—	—	—	e 40·4	45·1
Strasbourg	82·7	42	e 12 21?	-13	—	—	e 36·4	—
Copenhagen	84·6	35	—	—	22 21?	[-33]	—	—
Lund	85·1	35	—	—	—	—	48·4	—
Zagreb	88·7	45	—	—	—	—	e 44·4	48·8
Pulkovo	92·6	28	e 13 25	- 5	—	—	44·4	52·4
Ekaterinburg	106·9	20	e 15 26	+42	25 17	[+21]	50·4	65·8
Baku	113·2	38	—	—	—	—	e 57·4	—
Irkutsk	118·0	355	e 19 50	?PR ₁	26 14	[+35]	64·4	73·6
Tashkent	122·7	25	—	—	—	—	e 57·4	78·2

Additional readings and note: Merida readings have been increased by 10m. Charlottesville eLE = +16·4m. Cincinnati eSR₁Z = +12m.6s., eZ = +13m.6s. Georgetown ePEN = +6m.30s., PR₁Z = +7m.0s., PR₂Z = +8m.14s., eSE? = +10m.55s., SR₁Z = +11m.40s., SR₂Z = +11m.55s. St. Louis IP = +6m.37s., eN = +7m.25s., and +9m.33s. Florissant iNZ = +7m.21s., iE = +12m.44s. = SR₁ - 27s. Chicago eLN = +15·0m., MN = +21·2m. Ann Arbor i?N = +8m.3s., eE = +14m.9s. = SR₁ + 1s., eLN = +19·8m. Sucre IP = +6m.58s., SR₁ = +14m.39s. Toronto IPN = +7m.13s., iN = +8m.24s., eN = +13m.11s.; T₁ = 3h.18m.7s. Rio de Janeiro eLN = +29·2m. San Fernando MN = +45·2m. Granada i = (+21m.15s.) and (+23m.26s.); all readings have been increased by 9m. De Bilt eLN = +42·4m., MN = +45·4m. Pulkovo PR₁ = +17m.9s., PS = +25m.56s. Ekaterinburg PR₁ = +19m.9s., PS = +28m.25s., SR₁ = +34m.57s. Irkutsk PS = +30m.8s. Tashkent PR₁ = +20m.58s., PR₂ = +23m.31s., PS = +30m.51s., PPS = +32m.15s.

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Jan. 19d. 11h. 19m. 33s. Epicentre 25°·5N. 98°·0E.

A = -·126, B = +·894, C = +·431; D = +·990, E = +·139;
G = -·060, H = +·426, K = -·903.

		△	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Phu-Lien		9·2	119	e 2	19	0	—	4·9	—
Calcutta	E.	9·3	254	4	1	?S	(4 1)	- 9	7·4
	N.	9·3	254	3	49	?S	(3 49)	-21	7·3
Hong Kong		15·1	99	6	39	?S	(6 39)	+ 5	i 8·0
Hyderabad		19·9	250	4	48	+ 8	8 36	+15	10·5
Zi-ka-wei	N.	21·3	69	—	—	—	—	—	e 10·3
Manila		24·1	112	—	—	e 8	27?	-79	—
Bombay		24·2	259	e 5	20	-10	10 0	+12	13·5
Irkutsk		27·2	8	e 6	2	+ 2	10 42	- 3	14·4
Tashkent		28·5	311	e 6	5	- 8	i 10 55	-13	16·2
Ekaterinburg		41·1	330	i 7	55	- 9	i 14 7	-15	19·9
Pulkovo		57·0	326	i 9	59	+ 7	e 17 14	-32	30·4
De Bilt		71·8	320	—	—	—	—	—	e 39·4

Calcutta gives also SE = +5m.41s., SN = +5m.49s.

Jan. 19d. Readings also at 1h. (Ekaterinburg), 2h. (Fordham), 6h. (La Paz and Wellington), 9h. (La Paz), 10h. (Frunse, Samarkand, Tashkent, and Ekaterinburg), 12h. and 14h. (La Paz), 16h. (Theodosia, near Sebastopol, Simferopol, and Yalta), 18h. (near Granada), 21h. (near Santiago), 22h. (Manila), 23h. (Ekaterinburg, Frunse, Samarkand, Irkutsk, and Tashkent).

Jan. 20d. 14h. 54m. 14s. Epicentre 2°·3N. 127°·2E. (as given by Batavia).

A = -·604, B = +·796, C = +·040; D = +·797, E = +·605;
G = -·024, H = +·032, K = -·999.

		△	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		13·8	334	i 3	40	+17	i 7 6	+63	8·7
Malabar		21·8	244	i 5	0	- 3	9 1	0	—
Batavia		22·0	246	i 5	6	+ 1	i 9 10	+ 5	—
Taihoku		23·4	347	5	22	+ 1	(9 36)	+ 3	9·6
Hong Kong		23·7	329	5	26	+ 1	(9 41)	+ 3	9·7
Phu-Lien		27·3	314	i 6	0	- 1	10 39	- 7	—
Zi-ka-wei		29·6	350	i 5	16	-68	10 2	-85	—
Koti		31·8	10	i 6	33	-12	—	—	—
Sumoto		32·8	13	e 6	7	-48	—	—	—
Kobe		33·2	13	6	45	-13	—	—	—
Nagoya		34·1	15	e 6	53	-13	(12 10)	-32	12·2
Adelaide		38·8	166	i 7	18	-26	i 12 53	-56	i 15·5
Mizusawa		39·0	19	(7 30)	—	-16	(13 34)	-18	(19·3)
Riverview		42·6	150	e 8	16	+ 1	i 13 50	-53	i 19·9
Calcutta	E.	42·7	303	8	9	- 7	—	—	—
Melbourne		43·3	160	e 8	19	- 1	i 14 3	-49	—
Colombo		47·4	278	8	41	- 9	15 31	-15	—
Hyderabad		50·2	291	9	6	- 2	16 13	- 8	25·2
Irkutsk		53·5	345	—	—	—	—	—	29·8
Bombay		55·7	292	9	44	0	(17 34)	+ 4	17·6
Frunse		61·9	320	10	28	+ 4	—	—	—
Tashkent		64·8	316	i 10	48	+ 4	i 19 23	0	e 32·8
Ekaterinburg		75·4	330	i 11	50	- 1	i 21 18	-12	34·8
Baku		78·9	312	i 12	12	0	22 9	- 2	40·8
Kucino		87·7	326	12	54	- 9	23 29	-20	41·2

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	\circ	\circ	m. s.	s.	m. s.	s.	m.	m.
Pulkovo	91.5	330	13 10	-14	24 1	-28	42.8	53.1
Lund	101.3	330	17 46?	?PR ₁				
Copenhagen	101.7	330	18 10	?PR ₁	25 29	? Σ		
Vienna	101.9	320	i 13 57	-23	25 25	? Σ		45.8
Zagreb	102.9	319	e 16 52	?	e 25 31	? Σ		
Florence	106.7	318	i 18 48	?PR ₁				
Chur	106.8	320	18 48	?PR ₁	e 25 46?	? Σ		
De Bilt	107.1	326	i 18 56	?PR ₁	e 25 53	? Σ	e 51.8	
Strasbourg	107.2	323	i 19 4	?PR ₁	e 28 46?	? Σ	40.8	
Uccle	108.2	325	i 19 4	?PR ₁	e 25 46?	? Σ	50.8	
Neuchatel	108.3	320	i 18 28	[+12]	e 19 5	?PR ₁		
Moncalieri	108.9	319	19 4	?PR ₁	(27 10)	- 8	27.2	
Paris	110.1	324	e 19 15	?PR ₁			63.8	
Kew	110.3	329	20 55	?			63.8	
Alicante	117.0	315	e 20 55	?				
Toledo	118.7	319	e 20 16	?PR ₁	e 30 55	?PS	e 47.0	
Granada	119.7	315	i 20 28	?PR ₁			63.8	68.6
Malaga	120.5	315	e 20 12	?PR ₁	30 32	?PS	37.2	
San Fernando E.	121.9	314						72.8
La Plata	147.1	172	19 36?	[-15]			29.1?	
La Paz	159.3	134	20 0	[- 7]	e 27 49	?	38.8	44.2
Sucre	159.3	145	19 56	[-11]				

Additional readings and note: Manila PR₁ = +3m.57s., PR₂ = +4m.0s., SR₁ = +7m.37s., P_cP = +8m.8s., P_cS = +15m.21s. Batavia i = +5m.2s.
 Hong Kong e = +5m.56s., i = +6m.8s. Koti i = +7m.2s. and +7m.51s.
 Kobe e = +7m.59s., eN = +9m.11s. Adelaide i = +7m.43s. and +13m.41s., MN = +17.3m. Mizusawa SN = (+13m.31s.): readings have been increased by 6m. Riverview iS = +13m.57s., SR₁ = +17m.18s., MN = +23.8m. Calcutta PN = +8m.11s. Melbourne i = +9m.25s., +14m.58s., and +17m.8s. Bombay S = +14m.14s. Baku PR₁ = +15m.18s. Kucino PR₁ = +16m.23s., PS = +24m.24s. Pulkovo PR₁ = +16m.57s., SR₁ = +30m.46s. Vienna PR₁ = +18m.19s. Zagreb e = +18m.27s. = PR₁ - 6s., +19m.15s., +20m.43s., and +22m.25s. Strasbourg iPR₁? = +21m.19s. Moncalieri S? = +22m.42s. Kew ePR₁Z = +19m.17s., PSE = +28m.45s., SR₁N = +40m.27s. = SR₂ + 25s. Granada PR₁ = +23m.32s. = PR₂ - 10s., PSP = +30m.54s.

Jan. 20d. Readings also at 0h. (Ekaterinburg, Irkutsk, Tashkent, and near Mizusawa), 1h. (Samarkand and near Akita), 3h. (Manila (2)), 4h. (near Sumoto), 5h. (Manila), 6h. (near Tacubaya), 10h. (Mizusawa), 13h. (Adelaide), 15h. (Manila), 16h. (La Paz), 21h. (near La Paz), 23h. (Manila).

Jan. 21d. 2h. 22m. 28s. Epicentre 33°5N. 133°2E. (as on 1913 April 2d.).

A = -571, B = +608, C = +552.

	Δ	P.	O-C.	S.	O-C.	L.	M.
	\circ	m. s.	s.	m. s.	s.	m.	m.
Sumoto	1.6	e 0 15	- 9				
Kobe	2.0	0 35	+ 4	(e 1 5)	+10	e 1.1	1.1
Osaka	2.2	e 0 34	0	(e 0 43)	-17	0.7	1.5
Toyooka	2.5	i 0 38	- 1			1.4	1.5

Additional readings and note: Kobe MNZ = +1.3m. "Upper reaches of Sagami river." Osaka MN = +1.9m.

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1929

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Jan. 21d. 4h. 55m. 25s. Epicentre 51°0S. 137°0E.

A = -460, B = +429, C = -777; D = +682, E = +731;
G = +568, H = -530, K = -629.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	o.	o.	m. s.	s.	m. s.	s.	m.	m.
Melbourne	14.4	26	i 3 28	- 4	i 6 3	-15	—	10.1
Adelaide	16.1	5	i 4 0	+ 7	i 7 9	+12	i 7.7	7.9
Riverview	20.0	37	i 4 36	- 5	e 8 19	- 4	e 9.6	10.2
Sydney	20.0	37	2 11	?	8 23	0	11.0	11.6
Christchurch	25.0	87	4 23	-75	9 32	-31	12.8	—
Wellington	27.5	84	i 6 16	+13	i 10 15	-35	—	—
Batavia	51.3	320	e 8 35?	-40	17 47	+72	28.6	—
Manila	67.1	344	e 11 35?	+36	—	—	—	—
Tananarive	75.1	260	—	—	e 21 55	[+ 6]	36.8	40.6
Phu-Lien	76.7	331	—	—	e 22 3	[+ 2]	—	—
Kodaikanal	79.9	300	47 11	?L	—	—	(47.2)	—
Calcutta	85.0	316	19 24	?PR ₂	—	—	—	—
Hyderabad	85.4	305	23 32	?S	(23 32)	+ 9	—	47.9
Kobe	85.7	359	—	?	—	—	e 37.4	—
Bombay	89.5	302	22 40	?	30 44	?SR ₁	43.5	52.0
Honolulu T.H.	92.1	59	—	—	—	—	e 44.6	—
La Plata	93.1	192	—	—	—	—	48.1	—
Entebbe	99.1	259	—	—	—	—	49.6	—
Rio de Janeiro N.	106.1	179	—	—	—	—	e 43.6	—
Irkutsk	107.0	340	e 20 49	?	—	—	—	59.6
Sucre	107.3	157	18 40	?PR ₁	—	—	61.2	67.0
La Paz	109.0	153	e 19 45	?PR ₁	—	—	51.6	58.9
Tashkent	109.4	313	—	—	i 28 49	?PS	e 52.6	61.3
Baku	118.6	300	—	—	e 31 44	?	e 54.6	76.9
Ekaterinburg	124.7	320	—	—	e 28 1	?Z	e 55.6	66.6
Victoria	130.6	60	—	—	—	—	60.6	61.7
Kucino	134.3	309	—	—	e 46 49	?	64.2	78.1
Pulkovo	139.7	312	—	—	e 25 27	?	67.6	72.1
Florence	143.4	280	e 19 35	[-11]	30 5	?Z	—	49.6
Florisant	144.7	90	—	—	—	—	e 60.6	71.6
St. Louis	145.0	90	—	—	—	—	e 61.1	—
Chur	145.7	281	e 44 10	?	—	—	—	—
Zurich	146.8	281	e 20 3	[+12]	—	—	—	—
Lund	147.1	300	—	—	—	—	70.6	—
Copenhagen	147.5	300	—	—	40 35?	?	64.6	—
Neuchatel	147.7	281	i 20 0	[+ 8]	(e 44 12)	?SR ₁	—	—
Strasbourg	147.8	285	—	—	—	—	e 64.6	—
Alicante	147.8	262	—	—	—	—	75.3	—
Cincinnati	148.8	95	—	—	—	—	77.6	—
Granada	149.0	257	20 14	[+20]	—	—	73.6	78.9
San Fernando	150.1	255	—	—	—	—	—	89.5
De Bilt	150.6	291	—	—	e 41 59	?	e 72.6	92.5
Uccle	150.7	288	—	—	—	—	e 73.6	—
Paris	151.1	284	—	—	—	—	e 78.6	92.6
Georgetown	153.4	104	—	—	e 61 51	?	80.2	—
Kew	153.6	288	—	—	—	—	e 76.6	—
Toronto	154.5	93	—	—	—	—	72.6	—

Additional readings and note: Adelaide MN = +9.5m. Riverview PS = +8m.26s., MZ = +10.3m., MN = +12.6m.; T₁ = 4h.55m.18s. Christchurch SR₁? = +10m.56s. Wellington iP₁N = +6m.15s. Batavia i = +12m.34s. Tananarive +26m.46s. = SR₁ -18s. and +33m.35s.?, eLN = +36.3m., MN = +38.6m. Irkutsk i = +25m.8s. = [S] +11s., e = +28m.12s. = PS -12s. and +48m.0s. Baku e = +37m.0s. = SR₁ +30s. Ekaterinburg e = +38m.14s. = SR₁ +29s. Kucino e = +49m.40s. and +51m.44s. Chur reading and Neuchatel SR₁ are given as P's of another shock. Granada PR₁ = +24m.4s., SR₁ = +44m.1s. San Fernando MN = +85.2m. De Bilt MZ = +100.4m., MN = +100.7m. Paris L = +89.6m.

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Jan. 21d. 10h. 30m. 45s. Epicentre 62°-6N. 147°-6W.

A = -389, B = -247, C = +888; D = -536, E = +844;
G = -750, H = -476, K = -460.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		o	o	m. s.	s.	m. s.	s.	m.	m.
Sitka		8-2	127	—	—	—	—	e 5-1	—
Victoria		19-5	126	4 56	+21	(8 54)	+41	8-9	11-4
Berkeley		29-1	136	6 26	+7	e 11 30	+11	e 15-4	—
Lick		29-8	136	i 6 32	+6	e 11 36	+5	—	—
Denver		34-2	114	—	—	—	—	e 18-2	—
Tucson	E.	38-2	127	7 46	+6	13 56	+15	e 18-6	—
	N.	38-2	127	7 45	+5	14 13	+32	e 19-0	—
Chicago	E.	40-3	94	e 7 55	-2	—	—	e 24-2	—
	N.	40-3	94	e 7 58	+1	14 4	-7	20-6	—
Florissant		41-3	100	i 8 2	-3	i 14 19	-6	—	22-1
Ann Arbor	E.	41-6	90	—	—	e 15 45	+76	e 21-8	23-4
St. Louis		41-6	100	i 8 2	-6	i 14 20	-9	—	22-0
Scoresby Sund		41-7	26	9 27	+78	17 27	‡SR ₁	—	—
Honolulu T.H.		41-9	195	—	—	e 14 33	-1	21-1	—
Ivigtut		42-1	47	—	—	14 19	-17	17-6	—
Toronto		42-6	85	7 22	-53	14 30	-13	—	23-1
Ottawa		42-9	80	e 10 3	‡PR ₁	e 14 57	+10	e 21-2	25-8
Cincinnati		43-8	93	i 9 35	+71	e 15 10	+11	24-0	26-7
Ithaca		44-8	84	—	—	—	—	23-2	—
Fordham		47-3	84	i 13 50	?	18 11	?	22-2	—
Georgetown	Z.	47-4	88	8 52	+2	16 0	+14	e 21-2	28-7
Charlottesville	N.	47-5	89	8 47	-4	15 43	-5	28-4	—
Irkutsk		52-1	314	i 9 17	-4	i 16 36	-9	27-2	34-4
Helsingfors		57-1	4	—	—	e 17 36	-11	e 29-3	—
Upsala	N.	57-1	10	e 9 21	-32	e 17 31	-16	—	33-8
Dyce		57-3	24	i 9 57	+3	i 17 44	-6	26-9	36-2
Pulkovo		57-7	1	e 9 53	-4	i 17 44	-11	27-2	35-4
Edinburgh		58-4	25	—	—	—	—	e 22-2	—
Ekaterinburg		58-6	344	i 10 2	-1	i 17 58	-8	31-2	39-2
Stonyhurst		60-4	25	—	—	—	—	e 24-2	38-9
Copenhagen		60-7	13	8 52	-85	17 27	-65	—	—
Lund		60-8	12	—	—	18 27	-6	35-2	—
Lucino		61-6	357	—	—	i 18 42	-1	30-2	47-0
Hamburg		62-5	16	e 10 30	+1	—	—	—	41-2
Kew		63-1	24	10 33	0	i 19 0	-2	30-2	—
Oxford		63-1	25	10 31	-2	i 18 52	-10	—	40-2
De Bilt		63-4	19	i 10 35	+1	19 5	-1	e 29-2	41-2
Uccle		64-5	20	e 10 40	-2	19 18	-1	e 30-2	—
Göttingen	N.	64-6	16	e 10 44	+2	e 19 44	‡PS	e 36-2	40-4
Paris		66-1	23	e 10 55	+3	—	—	—	38-2
Strasbourg		67-2	19	i 11 3	+4	e 19 56	+4	e 27-2	—
Almata		68-3	328	—	—	—	—	39-2	—
Taihoku	E.	68-3	284	—	—	—	—	e 39-2	—
Vienna		68-5	11	i 11 7	-1	20 32	‡PS	—	54-2
Neuchatel		68-6	19	e 11 10	+2	—	—	e 41-8	—
Innsbruck		68-9	16	11 9	-1	—	—	—	—
Frunse		69-3	330	—	—	—	—	39-6	—
Budapest		69-5	10	e 11 5	-9	19 55	-25	e 45-2	—
Moncalieri		70-7	20	e 9 47	?	20 15?	-19	—	—
Zagreb		70-8	13	e 11 21	-1	e 20 9	-27	e 40-2	43-0
Tashkent		72-0	333	i 11 30	0	i 20 46	-4	29-2	42-6
Toledo		73-5	29	e 11 41	+2	22 8	+60	e 32-6	47-1
Tortosa	N.	73-6	25	—	—	—	—	e 29-7	45-2
Hong Kong		74-0	288	11 45	+3	21 20	+6	e 31-2	49-4
Pompeii		75-7	15	e 12 15?	+22	21 15?	-19	—	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Alicante	75.7	27	e 12 0	+ 7	e 21 36	+ 2	e 30.4	—
Granada	76.1	30	i 11 57	+ 1	i 21 18	-20	32.8	40.9
Baku	76.1	34.7	i 11 59	+ 3	21 33	- 5	36.2	51.6
San Fernando E.	76.3	31	—	—	—	—	—	47.4
Malaga	76.4	30	11 55	- 2	21 47	+ 5	28.8	—
Manila	77.8	278	e 11 15?	-51	—	—	e 25.6	41.4
Algiers	77.9	24	12 5	- 1	21 53	- 6	31.2	38.2
Phu-Lien	78.6	295	e 12 13	+ 2	—	—	39.2	—
Hyderabad	92.2	319	—	—	—	—	—	57.8
Bombay	92.5	325	13 17	-13	24 19	-21	47.2	61.0
La Paz	99.8	105	i 18 23	?PR ₁	30 23	?	52.2	60.6
Sucre	103.3	106	—	—	—	—	54.9	64.5
Adelaide	113.7	240	—	—	—	—	e 54.8?	64.8
Melbourne	113.8	232	—	—	—	—	49.2	—
Rio de Janeiro N.	116.8	87	—	—	—	—	e 56.2	—

Additional readings and note: Sitka eN = +4m.38s., eE = +4m.55s. Victoria PN = +4m.55s. Berkeley eZ = +6m.32s., eE = +7m.17s., eZ = +7m.26s., eN = +13m.11s. Lick eE = +7m.47s. and +9m.20s., eN = +13m.43s., +18m.44s., and +20m.26s. Denver iE = +18m.17s., eE = +18m.38s., +22m.30s., and +24m.15s. Chicago PR₁N = +9m.25s., PR₁E = +9m.27s., SR₁ = +16m.27s. Tucson ePR₁ = +8m.25s., eSR₁N = +17m.10s. Florissant iPR₁N = +9m.45s., iSR₁E = +17m.31s. Ann Arbor eE = +17m.45s., +19m.33s., and +20m.39s., eN = +17m.51s., +19m.51s., and +21m.33s., eLN = +22.6m., MN = +25.4m. St. Louis ePR₁N = +9m.40s., iSN = +14m.17s., eSR₁ = +17m.24s. Honolulu T.H. ePR₁N = +10m.3s., iE = +15m.4s., SR₁E = +17m.59s. Toronto e = +9m.51s. = PR₁ - 1s., eE = +17m.30s. = SR₁ - 10s., eN = +17m.52s. = SR₁ + 12s., MN = +25.6m. Ottawa e = +17m.45s. = SR₁ - 3s. and +20m.27s., MN = +26.8m. Cincinnati ePR₁Z = +11m.27s., eZ = +15m.15s., SR₁Z = +22m.16s., eZ = +23m.0s. Ithaca e = +20m.15s. ? Fordham SN = +18m.39s., e = +19m.55s. Georgetown PR₁Z = +10m.44s., PR₁Z = +11m.14s., PR₁Z = +11m.48s., SR₁Z = +19m.37s. Charlottesville SR₁ = +19m.27s., iL = +25.0m. Kucino iPR₁ = +14m.18s., e = +20m.8s. = [S] + 1s. Hamburg MN = +45.2m. Kew SR₁N = +23m.33s., eE = +26m.3s. = SR₁ - 11s. Oxford PR₁ = +12m.47s., SR₁ = +23m.12s. De Bilt eSR₁ = +23m.23s., MNZ = +41.0m. Gottingen eLE = +33.2m., ME = +39.8m. Paris MN = +40.2m. Strasbourg ePR₁ = +13m.15s. ? Vienna PR₁ = +14m.1s. Zagreb ePS = +20m.35s., eSR₁NE = +28m.49s. = SR₁ + 1s. Toledo MNW = +40.2m. Granada PR₁ = +17m.6s. San Fernando MN = +45.2m. La Paz LN = +54.2m., MN = +63.0m. Rio de Janeiro eLN = +85.4m.

Jan. 21d. 15h. 48m. 5s. Epicentre 30°·5N, 54°·5E. (given by the Russian stations)

A = +.500, B = +.701, C = +.508; D = +.314, E = -.581;
G = +.295, H = +.413, K = -.862.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Baku	10.5	341	e 4 10	?S	(e 4 10)	-33	6.9	10.7
Samarkand	13.7	45	i 3 16	- 6	—	—	—	—
Tashkent	16.0	44	3 46	- 6	6 49	- 6	e 8.0	—
Ksara	16.1	287	—	—	—	—	e 10.5	—
Frunse	20.2	47	—	—	—	—	i 10.6	—
Bombay	20.3	121	(4 52)	+ 7	4 52	?P	12.0	16.2
Almata	21.9	48	—	—	—	—	e 11.4	—
Ekaterinburg	26.6	8	e 5 59	+ 5	e 10 34	+ 1	12.9	17.0
Kucino	27.8	340	—	—	—	—	16.0	—
Pulkovo	33.4	338	—	—	e 13 37	+67	19.9	23.9
Copenhagen	38.7	323	—	—	—	—	23.9	—
Irkutsk	42.1	44	—	—	e 13 55?	-41	22.9	27.2

Additional readings: Baku eS = +6m.15s. Bombay eP = 15h.46m.33s.
Irkutsk e = +17m.13s. = SR₁ - 17s.

Jan. 21d. Readings also at 1h. (La Paz), 2h. (near Mizusawa), 3h. (near Akita and Mizusawa), 5h. (Ekaterinburg, Tashkent, and Neuchatel), 8h. (near Manila), 9h. (near Nagoya), 10h. (near Tacubaya), 22h. (La Paz), 23h. (near Samarkand).

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Jan. 22d. 10h. 6m. 50s. Epicentre 42°·8N. 12°·3E. (as on 1928 Sept. 22d.).

A = +·717, B = +·156, C = +·679; D = +·213, E = -·977;
G = +·664, H = +·145, K = -·734.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Pompeii	2·6	142	e 1 10	+29	—	—	—	—
Venice	2·7	0	0 0?	-42	—	—	—	—
Moncalieri	3·9	306	e -0 3	-64	—	—	2·2	—
Zagreb	4·0	40	1 5	+ 3	i 1 54	+ 4	—	2·1
Chur	4·5	334	e 1 5	- 5	i 2 3	- 1	—	—
Innsbruck	4·6	352	1 16	+ 5	i 2 23	+17	—	—
Graz	4·9	26	e 1 37	+21	e 2 24	+10	—	2·6
Zurich	5·2	332	e 1 23	+ 3	e 2 22	0	—	—
Neuchatel	5·7	320	e 1 25	- 3	i 2 29	- 7	—	—
Vienna	6·2	26	2 34	?S	(2 34)	-15	—	3·7
Besançon	6·2	317	—	—	e 2 49	0	—	—
Strasbourg	6·6	333	—	—	—	—	e 3·2	—

Zagreb gives also i = +1m.10s., +1m.30s., +1m.47s., +1m.54s. =S, +1m.57s., +2m.2s., and +2m.8s.

Jan. 22d. 14h. 43m. 0s. Epicentre 11°·5N. 43°·5E. (as on 1926 Oct. 31d.).

A = +·711, B = +·675, C = +·199; D = +·688, E = -·725;
G = +·145, H = +·137, K = -·980.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Entebbe	15·8	225	i 3 54	+ 5	e 6 30	-20	8·2	9·7
Helwan	21·6	330	5 0	0	9 0	+ 3	—	13·5
Kaara	23·4	344	i 10 38	?S	(i 10 38)	+65	15·5	16·5
Bombay	29·2	72	e 7 38	+78	11 18	- 2	e 13·5	15·1
Baku	29·5	10	e 6 25	+ 2	i 11 14	-12	17·0	21·3
Tananarive	30·6	174	7 0?	+26	13 0?	?SR ₁	—	21·0
Kodaikanal	33·3	89	17 48	?L	—	—	(17·8)	—
Hyderabad	34·3	75	—	—	—	—	—	18·8
Samarkand	35·0	32	—	—	—	—	21·0	—
Tashkent	37·4	32	7 49	+16	i 13 17	-13	20·0	23·8
Frunse	41·4	35	—	—	—	—	24·0	—
Budapest	41·4	336	—	—	e 14 0?	-27	e 24·0	—
Zagreb	41·6	331	—	—	e 16 57	?SR ₁	e 24·8	—
Florence	42·6	325	(e 8 0)	-15	(e 15 0)	+17	(22·0)	(31·0)
Graz	42·7	333	—	—	—	—	e 25·0	—
Vienna	43·2	335	—	—	—	—	e 27·5	—
Algiers	44·2	314	—	—	—	—	21·0	28·0
Kacino	44·5	356	e 8 33	+ 3	15 1	- 8	22·5	28·2
Moncalieri	45·4	325	e 9 20	+44	14 57	-23	24·2	—
Barcelona	46·9	318	—	—	—	—	e 24·2	—
Ekaterinburg	47·3	12	8 37	-12	15 37	- 8	22·0	28·0
Strasbourg	47·5	329	—	—	—	—	e 10·0	—
Alicante	47·5	315	—	—	e 19 6	?SR ₁	25·9	—
Tortosa	47·8	316	—	—	e 19 39	?SR ₁	26·7	33·9
Almeria	48·3	311	—	—	—	—	e 27·8	30·9
Gottingen	48·4	334	—	—	—	—	e 31·0	33·6
Pulkovo	49·3	352	8 54	- 8	16 0	-10	24·0	31·6
Granada	49·3	310	i 8 54	- 8	16 18	+ 8	25·2	33·0
Malaga	49·8	310	(9 34)	+28	(15 38)	-38	(19·6)	—
Hamburg	49·8	335	—	—	—	—	e 28·0	33·0
Lund	50·1	340	—	—	16 0?	-20	—	—
Copenhagen	50·4	340	—	—	15 42	-42	—	—
Paris	50·5	326	—	—	—	—	e 28·0	29·0
Helingsfors	50·6	348	—	—	—	—	e 30·0	—
Toledo	50·6	314	—	—	—	—	e 23·4	32·1

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Uccle	50.6	328	—	—	15 0?	-86	—	—
De Bilt	51.0	330	—	—	16 29	-2	e 28.0	37.4
San Fernando	51.1	308	—	—	—	—	—	29.9
Cape Town	51.3	209	e 20 35	?SR ₁	e 26 33	?L	(e 26.6)	29.0
Uppsala	52.1	345	—	—	—	—	31.0	—
Kew	53.4	327	—	—	—	—	e 24.0	—
Stonyhurst	55.8	329	—	—	—	—	e 22.0	42.0
Edinburgh	57.2	331	—	—	—	—	e 34.0	—
Irkutsk	63.3	37	—	—	19 14	+ 9	33.0	39.4
Rio de Janeiro N.	91.5	248	—	—	—	—	e 44.0	—

Additional readings and notes : Ksara iP = +13m.39s., S = +14m.49s. Baku e = +4m.48s. Tashkent e = +8m.37s. = PR₁ -13s. and +16m.36s. = SR₁ +3s. Zagreb e = +33.0m. Florence readings have been increased by 4m. Algiers MN = +24.0m. Almeria MN = +32.7m., MZ = +34.6m. Barcelona eL = +26.0m. Gottingen eLN = +33.0m., MN = +34.1m. Granada SR₁ = +24m.5s., MZ = +33.2m. Malaga readings have been decreased by 10m. Toledo MNE = +34.1m. Irkutsk e = +23m.29s. and +26m.29s. = SR₁ +11s.

Jan. 22d. Readings also at 1h. (Azores), 4h. (near Zagreb), 8h. (near La Plata), 9h. (near La Paz), 16h. (near Matuyama, Kobe, and Sumoto), 17h. (Samarkand), 18h. (near Sucre and La Paz), 19h. (Georgetown, Balboa Heights, La Paz, and Rio de Janeiro), 20h. (Azores and Samarkand), 22h. (Samarkand), 23h. (Lick (8)).

Jan. 23d. 11h. 14m. 12s. Epicentre 34°-8N. 24°-9E.

A = +.745, B = +.346, C = +.571; D = +.421, E = -.907;
G = +.518, H = +.240, K = -.821.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Athens	3.3	343	i 0 58	+ 6	i 1 31	0	—	—
Ksara	9.1	393	—	—	e 4 8	+ 2	—	—
Pompeii	10.1	309	e 2 55	+24	e 5 45	+73	(e 5.8)	—
Naples	E. 10.4	309	e 2 48	+12	e 3 13	-87	—	5.8
Belgrade	E. 10.6	343	e 2 38	0	e 4 27	-18	e 5.4	—
Yalta	12.0	34	e 4 5	+66	—	—	—	—
Simferopol	12.3	32	2 35	-28	—	—	—	—
Zagreb	12.9	331	3 11	-1	5 38	-4	e 6.3	8.8
Budapest	13.4	343	3 21	+ 3	—	—	8.0	9.0
Laibach	E. 13.7	328	e 3 12	-10	e 4 9	?	5.1	5.3
Florence	13.8	315	4 18	+55	—	—	—	10.6
Graz	14.2	333	e 3 33	+ 4	e 7 27	+74	7.8	9.5
Venice	14.3	322	3 34	+ 4	e 8 22	+127	—	11.1
Vienna	14.8	338	e 3 39	+ 3	6 40	+13	i 8.5	9.8
Innsbruck	16.1	325	3 54	+ 1	7 1	+ 4	e 9.2	—
Moncalieri	16.6	313	3 36	-24	6 11	-58	9.8	12.1
Chur	16.6	313	e 2 50	-70	6 29	-40	9.8	—
Ravensburg	16.7	321	e 4 3	+ 2	e 7 1	-10	—	—
Zurich	17.3	323	e 4 12	+ 3	7 26	+ 1	i 9.8	—
	17.5	321	e 4 12	+ 1	i 7 30	+ 1	e 9.9	—
Algiers	17.8	283	4 17	+ 2	e 7 41	+ 5	9.0	18.8
Neuchatel	18.2	317	e 4 20	+ 1	e 7 42	- 2	—	—
Jena	E. 18.7	333	e 4 32	+ 7	e 8 12	+17	e 10.8	12.2
	N. 18.7	333	e 4 32	+ 7	e 8 12	+17	e 10.8	12.3
	Z. 18.7	333	e 4 30	+ 5	e 8 2	+ 7	e 10.8	12.3
Strasbourg	18.7	323	4 27	+ 2	e 7 58	+ 3	e 10.8	—
Besançon	18.8	317	4 29	+ 2	—	—	—	—
Feldberg	N. 19.5	327	i 4 40	+ 5	e 8 13	0	—	—
Gottingen	E. 19.9	332	e 4 45?	+ 5	e 8 33	+12	e 11.4	11.9
	N. 19.9	332	e 4 43	+ 3	e 8 32	+11	e 10.9	13.9
	Z. 19.9	332	e 4 40	0	—	—	—	13.9

Continued on next page.

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		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tortosa	N.	20-1	295	e 4 46	+ 4	e 7 25	-60	8.4	—
Baku		20-5	67	15 0	+13	18 54	+20	11.6	—
Alicante		20-6	287	—	—	e 8 39	+ 3	—	—
Hamburg	N.	21-5	335	e 5 2	+ 3	18 55	+ 0	—	13.8
Paris		21-7	317	e 5 0	- 1	e 9 4	+ 5	12.8	—
Uccle		21-8	323	5 1	- 2	9 1	0	e 11.8	—
De Bilt		22-3	327	15 8	- 1	9 11	0	e 11.8	15.2
Lund		22-4	342	5 9	- 1	9 7	- 6	12.8	—
Copenhagen		22-6	341	5 10	- 2	19 10	- 7	12.8	—
Kucino		22-8	19	e 5 15	0	9 20	- 1	11.8	15.6
Granada		23-1	284	i 5 18	0	19 26	- 1	—	—
Toledo		23-5	291	e 5 19	- 4	e 9 35	- 0	e 11.0	18.6
Malaga		23-8	283	5 19	- 7	9 33	- 7	13.0	—
Kew	E.	24-6	320	—	—	19 54	- 1	11.8	16.8
	Z.	24-6	320	i 5 28	- 6	19 58	+ 3	15.6	16.8
Pulkovo		25-2	6	i 5 37	- 3	19 55	-12	13.8	16.3
San Fernando	E.	25-2	283	—	—	—	—	—	21.3
Oxford	E.	25-3	320	i 5 36	- 5	i 10 3	- 6	e 15.2	—
	N.	25-3	320	i 5 42	+ 1	i 10 6	- 3	—	—
Helsingfors		25-4	1	e 5 37	- 5	e 9 58	-13	e 15.8	—
Upsala		25-5	352	e 5 48	+ 5	e 10 2	-11	—	17.9
Stonyhurst		27-0	323	—	—	(10 48?)	+ 7	—	10.8
Dyce		28-9	329	—	—	—	—	—	17.8
Ekaterinburg		32-6	37	—	—	i 11 57	-21	15.3	—
Tashkent		35-2	66	7 8	- 7	i 12 48	-10	19.8	25.7
Frunse		38-9	63	e 7 44	- 1	—	—	—	—
La Paz		101.7	260	—	—	—	—	62.8	66.0

Additional readings: Belgrade eE = +5m.51s. and +6m.36s. Zagreb e = +3m.19s., eNE = +4m.40s. and +5m.17s., eNW = +7m.24s. Laibach ePE = +2m.12s. Florence e = +2m.28s. Vienna iPZ = +3m.44s. Innsbruck i = +4m.3s. Jena iPZ = +4m.34s. Feldberg eN = +6m.28s., iN = +8m.32s. Hamburg ME = +16.8m. Granada PR₁ = +6m.49s. Toledo MNW = +19.3m. San Fernando MN = +20.8m. Ekaterinburg iPR₁ = +7m.44s., i = +11m.59s. and +12m.56s.

Jan. 23d. Readings also at 0h. (Ekaterinburg, Sucre, La Paz, Balboa Heights, Rio de Janeiro, and near Tacubaya), 1h. (Tashkent), 2h. (near Taihoku), 3h. (near Kobe and Sumoto), 4h. (La Paz and Sucre), 7h. (La Paz and Sucre), 9h. (near Tacubaya and Vera Cruz), 14h. (Ekaterinburg, Ksara, Tashkent, Tananarive, and Wellington), 15h. (Entebbe, Tashkent, Irkutsk (2), and San Fernando), 18h. (near Kobe, Sumoto, and Toyooka (2)), 19h. (near Samarkand), 21h. (Cape Town), 23h. (near Samarkand and near Taihoku).

Jan. 24d. 20h. 36m. 28s. Epicentre 12° 8'N. 91° 0'W.

A = -017, B = -0975, C = +022; D = -1.000, E = +017;
G = -004, H = -0222, K = -0975.

Felt by s.s. Manhattan at 12° 50' N. 91° 2' W.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Vera Cruz		8-1	323	1 43	-20	3 23	-17	3.5	6.2
Merida		8-3	9	(1 56)	-10	(3 43)	- 2	(3.9)	(4.7)
Puebla		9-3	313	(1 59)	-21	(3 56)	-14	(4.0)	(4.7)
Tacubaya		10-3	311	2 44	+10	4 50	+13	5.0	5.6
Balboa Hts.	E.	11-9	108	2 53	- 5	5 9	- 8	6.0	8.4
	N.	11-9	108	2 57	- 1	5 9	- 8	5.9	9.0

Continued on next page.

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		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°		m. s.	s.	m. s.	s.	m.	m.
Manzanillo		14.2	298	(3 20)	-9	(6 1)	-12	(6.4)	(15.9)
Mazatlan		17.9	308	(4 1)	-15	(7 29)	-9	(8.0)	(14.2)
Port au Prince		18.9	70	e 4 37	+9	i 7 57	-3	9.2	14.6
Chihuahua		21.1	321	(4 41)	-13	(8 42)	-4	(9.6)	(20.7)
St. Louis		25.8	1	i 5 39	-7	e 10 7	-11	i 12.4	14.8
Florissant		26.0	1	i 5 40	-8	i 10 7	-15	13.3	15.0
Tucson	E.	26.6	320	i 5 52	-2	10 35	+2	13.9	—
	N.	26.6	320	i 5 53	-1	10 28	-5	13.8	—
Cincinnati		26.9	11	e 5 55	-2	e 10 28	-11	13.0	15.5
Charlottesville	E.	27.5	22	e 5 32	-31	10 36	-14	14.5	—
	N.	27.5	22	e 5 58	-5	10 32	-18	15.6	—
Georgetown	E.	28.9	23	6 21	+4	10 41	-34	e 12.0	17.4
	N.	28.9	23	6 21	+4	10 45	-30	e 12.0	18.7
	Z.	28.9	23	6 11	-6	10 44	-31	e 11.9	17.5
Chicago	E.	29.1	5	e 6 26	+7	11 22	+3	13.8	—
	N.	29.1	5	6 12	-7	11 9	-10	13.8	—
Denver		29.6	338	e 5 18	-66	e 10 12	-75	e 13.0	13.9
Ann Arbor		30.2	11	e 6 26	-4	e 11 44	+7	e 15.1	19.2
Fordham		31.8	26	e 6 40	-5	i 11 54	-11	13.9	15.8
Toronto	E.	32.4	16	e 6 40	-12	i 11 55	-19	—	21.0
	N.	32.4	16	e 6 37	-15	i 11 52	-22	—	20.3
Harvard		34.2	26	e 6 56	-11	i 12 24	-19	—	—
Ottawa		35.0	20	e 7 2	-11	i 12 34	-21	e 16.8	20.9
Lick		36.7	319	e 7 21	-7	e 13 10	-10	e 17.5	20.5
La Paz	E.	37.0	142	e 7 28	-2	i 13 13	-11	i 19.1	23.3
Berkeley		37.5	319	i 7 31	-3	e 13 23	-8	e 18.1	24.0
Sucre		40.7	142	i 7 58	-3	i 14 19	+2	19.4	24.5
Victoria		44.5	330	8 27	-3	18 27	?SR	23.0	36.8
Sitka	E.	55.6	334	—	—	e 17 52	+23	e 27.8	35.1
La Plata		57.1	147	10 14	+21	17 50	+3	25.5	—
Rio de Janeiro	E.	58.9	128	e 10 15	+11	i 18 14	+4	28.9	36.5
	N.	58.9	128	e 10 14	+10	i 18 21	+11	29.0	37.3
Honolulu T.H.	E.	64.0	289	—	—	i 19 32	+19	27.2	—
	N.	64.0	289	—	—	i 19 29	+16	29.8	—
Reykjavik		69.4	25	—	—	—	—	e 37.8	—
Scoresby Sund		71.0	20	11 30	+7	20 26	-12	33.5	—
Edinburgh		78.2	35	e 12 14	+6	22 26	+24	36.5	47.6
San Fernando		78.3	54	i 12 32	+23	22 12	+8	33.0	39.5
Bidston		78.5	38	e 13 26	+76	e 22 46	+40	30.9	47.4
Stonyhurst		78.8	38	12 16	+4	22 25	+15	36.5	48.1
Dyce		79.0	33	12 46?	+33	22 8	-4	e 34.5	42.1
Toledo		79.5	51	e 12 19	+3	e 22 26	+8	e 33.8	38.6
Malaga		79.7	54	11 54	-23	22 30	+10	27.7	—
Oxford	E.	79.8	40	e 12 16	-2	e 22 26	+5	e 31.1	49.2
	N.	79.8	40	—	—	e 22 54	?Z	e 33.9	49.0
Granada		80.2	54	i 12 18	-2	i 22 45	+20	—	—
Kew		80.4	40	12 22	+1	22 29	+1	37.5	49.7
Almeria		81.3	54	12 22	-5	22 52	+14	30.5	49.9
Bergen		82.0	30	13 55	+85	24 5	+79	40.5	—
Alicante		82.4	52	e 12 25	-7	e 22 29	[-10]	e 34.1	40.6
Paris		82.7	42	e 12 38	+4	e 23 8	+14	36.5	49.5
Tortosa	E.	82.8	49	—	—	e 23 8	+13	—	54.1
	N.	82.8	49	—	—	e 22 44	[+2]	34.3	50.6
Uccle		83.4	40	e 12 38	0	23 7	+6	38.5	51.6
De Bilt		83.6	38	12 41	+1	e 23 7	+2	e 39.5	51.8
Barcelona		83.9	49	e 11 55	-46	e 22 38	[-11]	e 32.9	46.6
Algiers		85.6	53	e 12 54	+3	e 23 23	-3	36.5	44.0
Neuchatel		86.0	43	e 12 52	-1	e 23 21	-9	—	—
Strasbourg		86.1	41	i 12 53	-1	i 23 36	+5	39.5	54.0
Feldberg	N.	86.1	40	e 13 26	+32	—	—	—	51.5
Hamburg		86.1	36	e 12 54	0	e 23 24	-7	e 39.5	49.5
Göttingen	E.	86.7	37	e 12 55	-2	e 23 30	-8	e 40.6	43.6
	N.	86.7	37	e 13 0	+3	e 23 32?	-6	e 40.6	43.6
	Z.	86.7	37	e 12 53	-4	—	—	e 40.1	48.6

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Copenhagen	86.8	33	12 57	-1	23 25	-14	39.5	—
Moncalieri	87.0	45	12 2	-57	23 29	-12	40.7	51.1
Zurich	87.0	43	e 12 41	-18	e 23 29	-12	—	—
Lund	87.2	33	13 2	+2	24 55	+72	41.5	—
Ravensburg	87.4	42	e 12 56	-5	e 23 32	-13	e 29.5	54.6
Chur	87.7	43	e 13 5	+2	e 23 34	-15	e 41.5	—
Jena	87.8	39	e 12 32	-32	e 23 32	-18	e 38.5	44.5
Upsala	88.0	28	e 13 1	-4	e 23 32	-10	e 41.5	49.6
Innsbruck	88.8	41	—	—	—	—	—	46.9
Florence	89.8	45	i 13 11	-4	23 32	[+5]	34.5	60.3
Venice	89.9	43	12 32?	-43	—	—	—	—
Helsingfors	91.2	27	e 13 17	-5	24 24	-2	e 40.5	—
Laibach	N. 91.2	42	—	—	—	—	e 49.1	—
Graz	91.5	40	e 13 28	+4	e 23 58	[+21]	33.5	59.0
Vienna	Z. 91.7	39	e 13 8	-17	i 17 11	?PR ₁	—	57.0
Zagreb	92.3	43	e 13 27	-2	e 23 59	[+17]	e 37.4	43.5
Naples	E. 92.8	47	—	—	e 24 32	-11	49.5	—
Budapest	93.5	39	e 14 2	+27	e 24 2	[+13]	e 44.5	54.0
Pulkovo	93.6	25	i 13 28	-8	24 20	?Σ	43.5	56.6
Belgrade	E. 95.5	42	e 16 58	?	e 22 1	?	e 47.0	—
Kucino	99.2	26	e 13 58	-8	24 33	[+13]	47.7	59.2
Wellington	E. 101.5	230	—	—	i 24 52	[+21]	—	—
Christchurch	103.4	228	—	—	—	—	—	61.5
Sebastopol	103.8	38	e 25 1	?[S]	(e 25 1)	[+19]	e 52.5	—
Simferopol	103.9	37	—	—	—	—	e 38.5	—
Yalta	104.2	37	—	—	—	—	e 52.5	—
Theodosia	104.6	37	(e 17 56)	[-7]	—	—	—	—
Ekaterinburg	106.5	16	e 14 28	-14	i 25 11	[+17]	48.5	61.1
Kelwan	110.0	50	e 13 57	-60	25 32	[+22]	—	—
Ksara	111.2	45	e 17 32?	—	29 6	?PS	45.5	—
Cape Town	113.3	121	—	—	—	—	e 55.0	61.3
Irkutsk	113.6	350	e 15 3	-11	27 7	-52	54.5	68.9
Riverview	120.1	237	e 14 32	-71	—	—	e 55.9	70.7
Entebbe	122.5	81	—	—	—	—	—	63.5
Frunse	122.7	12	e 19 2	[+2]	—	—	e 66.5	—
Almata	122.9	10	—	—	—	—	e 66.5	—
Tashkent	122.9	17	e 15 33	-24	—	—	55.5	73.2
Samarkand	123.7	20	e 19 30	[+28]	—	—	e 63.5	—
Melbourne	124.6	232	—	—	i 26 22	[+24]	e 58.0	101.8
Adelaide	130.2	235	e 13 17?	?	e 22 57	?	—	87.8
Dehra Dun	135.6	13	20 32?	[+61]	34 32?	?	63.4	78.5
Hong Kong	137.0	325	22 40	?PR ₁	32 42	?	50.4	87.3
Manila	E. 138.1	310	e 19 31	[-5]	—	—	e 66.4	76.8
Tananarive	139.7	102	—	—	—	—	e 63.4	77.9
Phu-Lien	142.2	332	19 32	[-11]	e 41 44	?SR ₁	60.5	89.8
Bombay	144.5	26	19 51	[+3]	33 8	?	69.2	75.8
Calcutta	E. 144.6	1	19 47	[-1]	34 7	?	—	—
	N. 144.6	1	19 45	[-3]	31 8	?	—	—
Hyderabad	148.0	19	19 57	[+4]	—	—	—	55.7
Perth	148.8	226	e 20 32	[+38]	—	—	—	—
Kodaikanal	154.2	27	24 32	?PR ₁	—	—	—	—
Colombo	158.3	25	19 53	[-13]	—	—	72.9	92.9
Batavia	161.2	289	e 20 16	[+7]	e 32 44	?	e 46.5	97.5

Additional readings and notes: Merida and Puebla readings have been *diminished* by 2m. Manzanillo readings have been *diminished* by 1m. Mazatlan readings have been *increased* by 5m. Chihuahua readings have been *diminished* by 2m. Port au Prince MNW = +13.2m. St. Louis iPN = +5m.41s., iE = +6m.19s., MN = +14.4m. Florissant iSEN = +10m.17s., Tucson PR₁N = +7m.18s., PR₁E = +7m.19s., SR₁N = +12m.6s., SR₁E = +12m.32s. Cincinnati iPZ = +5m.58s., iPR₁Z = +6m.54s., iSNZ = +10m.42s., iSR₁N = +12m.14s. Charlottesville ePR₁N = +7m.0s., eE = +12m.56s., eN = +13m.8s. Georgetown

Continued on next page.

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PR₁EN = +6m.45s., SR₁N = +11m.24s., SR₁E = +11m.27s., SR₂N = +11m.47s., SR₂E = +11m.48s. Denver ePR₁E = +6m.14s., eLN = +13.5m. Ann Arbor ePR₁ = +7m.14s., iSR₁ = +13m.26s., MN = +20.5m.; T₀ = 20h.36m.18s. Fordham readings are given as for 23h. Toronto iN = +12m.24s.; T₀ = 20h.36m.27s. Ottawa MN = +22.2m.; T₀ = 20h.36m.31s. Lick iZ = +7m.26s. and +7m.38s., eN = +8m.40s. = PR₁ - 3s., and +10m.40s. La Paz PR₁N = +9m.10s., iPS = +13m.46s., SR₁N = +15m.53s., iSR₁E = +16m.0s., iLN = +17.7m., MN = +20.2m.; T₀ = 20h.36m.19s. Berkeley eZ? = +7m.24s., ePR₁E = +9m.15s., ePR₂Z = +9m.16s., iN = +13m.33s., iE = +13m.37s., eSR₁N = +16m.1s., eSR₂N = +16m.45s., eSR₃E = +17m.9s., eLZ = +19.0m., MN = +26.7m. Sucre PR₁ = +9m.39s., PR₂ = +9m.57s., SR₁ = +16m.20s. Victoria LN = +21.3m., MN = +32.4m. Sitka eSE = +19m.3s. = [S] - 18s., eN = +22m.46s., eLN = +28.9m. Reykjavik eL = +41.6m. Scoresby Sund +21m.7s. = [S] - 12s. San Fernando eN = +50.0m. Toledo MNW = +42.3m. Oxford eE = +27m.57s. = SR₁ - 13s. Kew i = +12m.33s., PR₁E = +15m.34s., iN = +27m.6s., SR₁E = +27m.44s., SR₂EN = +31m.20s., eN = +34m.20s., MN = +47.8m., MZ = +49.8m. Alicante MN = +44.4m. Paris MN = +38.5m. Uccle ePR₁ = +15m.56s., MN = +51.7m. De Bilt ePR₁EZ = +15m.54s., eN = +23m.1s., eSR₁E = +28m.33s., eSR₂E = +32m.6s., MN = +45.4m. Barcelona MN = +45.0m. Algiers PS = +24m.32s. ? Neuchatel ePR₁ = +16m.16s. Strasbourg PR₁ = +16m.10s., ePS = +24m.34s., iSR₁ = +29m.32s. Ham-burg SR₁ = +29m.9s., SR₂ = +33m.8s., MZ = +42.5m., MN = +52.5m. Gottingen eEN = +16m.38s. = PR₁ - 3s., eE = +33m.5s. Copenhagen PR₁ = +16m.2s., PS = +24m.45s., SR₁ = +29m.32s., SR₂ = +33m.2s. Moncalieri MN = +53.8m. Jena eZ = +13m.1s., eN = +15m.45s., ePSN = +25m.2s., ePSE = +25m.3s., eE = +29m.32s. = SR₁ - 30s., and +33m.32s. = SR₂ - 32s., eLZ = +42.5m., MZ = +49.1m. Upsala MN = +51.9m. Helsingfors PR₁ = +16m.59s., PR₂ = +19m.18s., ScPcS = +23m.53s. = [S] + 18s. Laibach eN = +56m.42s. Zagreb eNE = +24m.13s. = E - 2s., e = +29m.17s. Pulkovo PR₁ = +17m.16s., ScPcS = +24m.6s. Belgrade eLE = +39.9m. Kucino PR₁ = +17m.58s., PS = +26m.47s., SR₁ = +32m.20s. Ekaterinburg iPR₁ = +18m.46s., iPS = +27m.33s. Irkutsk eP' = +18m.34s. = [P] + 1s., iScPcS = +25m.47s. = [S] + 23s., iPS = +29m.27s., SR₁ = +35m.44s. Ir-view-ePR₁ = +21m.8s., ePS = +30m.30s., and +30m.44s., eSR₁ = +36m.59s., +37m.51s. and +41m.13s., MN = +73.5m. Tashkent P' = +19m.11s. = [P] + 10s., iPR₁ = +20m.41s., PS = +30m.20s., SR₁ = +36m.44s. Melbourne iPR₁? = +21m.2s., iPS = +31m.6s., eSR₁ = +37m.47s. Adelaide MN = +70.7m. Hong Kong e? = +23m.24s. Tananarive ePR₁ = +22m.36s., PS = +33m.32s. ?, PPS = +35m.45s., SR₁ = +41m.9s., SR₂ = +46m.32s. ? Phu-Lien MN = +91.6m.

Jan. 24d. 23h. 29m. 0s. Epicentre 12°-8N. 91°-0W. (as at 20h.).

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Merida	N.	8.3	323	—	—	—	—	4.7	4.9
Tacubaya		10.3	311	(2 25)	- 9	(4 33)	- 4	(4.6)	(5.2)
St. Louis	N.	25.8	1	e 4 30	-76	1 10 20	+ 2	e 13.9	17.3
Florissant		26.0	1	e 5 57	+ 9	1 10 22	0	e 15.0	18.0
Cincinnati		26.9	11	—	—	e 11 0	+21	14.0	18.0
Charlottesville		27.5	22	—	—	e 9 0	?	e 15.0	—
Ann Arbor	E.	30.2	11	e 10 18	?	e 11 24	-13	e 15.5	—
Toronto		32.4	16	—	—	e 14 13	?SR ₁	18.0	21.2
Ottawa		35.0	20	—	—	—	—	e 14.8	—
La Paz		37.0	142	e 7 28	- 2	—	—	16.4	18.4
Sucre		40.7	142	—	—	—	—	24.7	29.8
De Bilt		53.6	38	—	—	—	—	e 47.0	50.5
Samarkand		123.7	20	—	—	—	—	e 59.0	—

Additional readings and note: Tacubaya readings have been increased by 1m. St. Louis iE = +11m.16s. Florissant eN = +7m.5s. Ann Arbor e?N = +10m.48s., e?E = +12m.36s., eE = +14m.24s. De Bilt eLZ = +49.0m.

Jan. 24d. Readings also at 4h. (near Tacubaya), 6h. (near Mirusawa), 7h. (Copenhagen and Tashkent), 9h. (Almata, Samarkand, near Frunse, and near Sumoto), 10h. (Wellington), 11h. (near Granada), 12h. (near Sumoto) 16h. (Bagnères and Tortosa), 19h. (near Malabar, near Chur, Neuchatel, and Zurich), 22h. (Almata and near Frunse).

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Jan. 25d. 1h. 28m. 12s. Epicentre 12°8N. 91°0W. (as on 24d.).

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Vera Cruz	8.1	323	2 3?	0	(3 51)	+11	3.8	6.1
Merida	8.3	9	(1 54)	-12	(3 44)	-1	(3.7)	(4.0)
Tacubaya	10.3	311	2 42	+8	4 43	+6	4.9	5.2
St. Louis	E. 25.8	1	—	—	e 10 48	+30	e 15.8	21.5
	N. 25.8	1	e 5 56	+10	e 10 43	+25	e 16.8	21.0
Florissant	26.0	1	—	—	e 10 48	+26	—	18.3
Cincinnati	N. 26.9	11	—	—	(e 10 28)	-11	e 10.5	—
Charlottesville N.	27.5	22	—	—	e 10 35	-15	e 16.7	19.1
Toronto	N. 32.4	16	—	—	—	—	e 16.8	22.4
Ottawa	35.0	20	—	—	—	—	e 18.8	—
La Paz	37.0	142	e 7 26	-4	e 13 21	-3	17.8	23.1
Sucre	40.7	142	e 7 58	-3	14 43	+26	24.0	29.9
Kew	80.4	40	—	—	—	—	e 40.8	—
Paris	82.7	42	—	—	—	—	e 41.8	—
Uccle	83.4	40	—	—	—	—	e 42.8	—
De Bilt	83.6	38	—	—	—	—	e 46.8	51.2
Neuchatel	86.0	43	e 51 45	?L	—	—	(e 51.8)	—
Strasbourg	86.1	41	—	—	—	—	e 48.8	—
Copenhagen	86.8	33	—	—	23 54	+15	43.8	—
Zurich	87.0	43	—	—	—	—	e 51.9	—
Chur	87.7	43	—	—	—	—	e 52.5	—
Florence	89.8	45	—	—	—	—	e 52.0	53.3
Vienna	Z. 91.7	39	e 55 42	?L	—	—	(e 55.7)	—
Pulkovo	93.6	25	—	—	—	—	e 46.8	56.2
Kucino	99.2	26	—	—	—	—	e 56.6	—
Irkutsk	113.6	350	—	—	—	—	e 45.7	—
Tashkent	122.9	17	51 33	?	1 58 27	?	e 66.8	—
Samarkand	123.7	20	—	—	—	—	e 76.8	—

Additional readings and note : Merida readings have been *diminished* by 2m.
 St. Louis eN = +11m.48s. Cincinnati eEN = +12m.8s. Charlottesville
 eLE = +15.8m. Ottawa eL = +19.8m. Paris L = +46.8m. De Bilt
 eLZ = +49.8m. Neuchatel e = +52m.28s. Zurich e = +52m.37s.
 Chur e = +52m.52s. Florence i = +52m.33s. Irkutsk e = +49m.6s.

Jan. 25d. Readings also at 1h. (Florissant, Sebastopol, Yalta, and near Simferopol), 2h. (Batavia, Manila, Riverview, Sydney, Melbourne, Adelaide, Perth, and near Suva), 3h. (Florissant and St. Louis), 4h. (Ksara, near Chur, and Zurich), 7h. (Samarkand), 8h. (Manila (2), Ekaterinburg, and near Taihoku), 9h. (Irkutsk), 12h. (near Kobe (2) and Sumoto), 13h. (Ekaterinburg, Charlottesville, and St. Louis), 14h. (Tashkent), 18h. (Ekaterinburg, Tashkent, and near Tananarive), 21h. (Ksara, Sucre, and La Paz), 22h. (Tacubaya (2) and Tucson), 23h. (Tacubaya and Tucson).

Jan. 26d. 2h. 30m. 40s. Epicentre 12°8N. 91°0W. (as on 25d.).

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Vera Cruz	8.1	323	2 24	+21	(3 52)	+12	3.9	—
Merida	8.3	9	—	—	3 11?	-34	—	4.8
Tacubaya	10.3	311	2 16	-18	4 2	-35	4.2	5.0
St. Louis	25.8	1	e 5 28	-18	e 10 20	+2	e 15.3	18.6
Florissant	26.0	1	—	—	e 9 56	-26	e 13.8	18.4
Tucson	26.6	320	5 45	-9	—	—	16.1	—
Charlottesville	N. 27.5	22	—	—	e 10 20	-30	e 14.3	18.3
Georgetown	Z. 28.9	23	—	—	—	—	e 13.1	19.2
La Paz	37.0	142	e 7 34	+4	—	—	18.3	21.6
Victoria	E. 44.5	330	—	—	—	—	26.2	29.7
Scoresby Sund	71.0	20	—	—	—	—	35.3	—
San Fernando	E. 78.3	54	—	—	—	—	—	46.4

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Uccle	83.4	40	—	—	—	—	e 43.3	—
De Bilt	83.6	38	—	—	—	—	e 41.3	50.9
Copenhagen	86.8	33	—	—	—	—	41.3	—
Pulkovo	93.6	25	—	—	—	—	e 48.3	—
Kucino	99.2	26	—	—	—	—	e 51.2	—
Ekaterinburg	106.5	16	—	—	e 38.2	?	47.8	—
Tashkent	122.9	17	—	—	—	—	52.3	70.4

Additional readings and note : Tuscon SR₁N = +13m.12s., SR₁E = +13m.16s., LN = +16.2m. Charlottesville eLE = +13.3m. La Paz MN = +25.8m. San Fernando MN = +44.4m. De Bilt eLZ = +45.3m., P for La Paz is the only reading given with a definite phase.

Jan. 26d. 23h. 33m. 52s. Epicentre 47° 0N. 9° 0E. (as on 1926 Nov. 30d.).

A = +.674, B = +.107, C = +.731; D = +.156, E = -.988;
G = +.722, H = +.114, K = -.682.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Chur	0.4	112	i 0.3	- 3	i 0.8	- 3	—	—
Zurich	0.5	329	i 0.7	- 1	i 0.15	+ 1	—	—
Neuchatel	1.4	270	i 0.27	+ 6	i 0.49	+ 10	—	—
Strasbourg	1.8	332	e 0.29	+ 1	i 0.56	+ 5	—	—
Hohenheim	1.8	5	0.28	0	0.44	- 7	0.9	—
Besançon	2.1	277	—	—	—	—	11.2	—

No additional readings.

Jan. 26d. Readings also at 1h. (La Paz and Georgetown), 2h. (Frunse, near Samarkand and near Santiago), 4h. (Suva), 6h. (near Manila), 7h. (near Batavia and Malabar), 9h. (near Sumoto), 13h. (Georgetown and near Manila), 14h. (Florissant, St. Louis, Toronto, near Tacubaya, Merida, and Vera Cruz), 15h. (Copenhagen, Ekaterinburg, Scoresby Sund, and Tashkent), 17h. (Hyderabad), 19h. (Suva), 20h. (Georgetown, Tucson (2), near Manila, near Oaxaca, Merida, Tacubaya, and Vera Cruz), 21h. (Ottawa, Toronto, Victoria, Ekaterinburg, and Tashkent).

Jan. 27d. 16h. 6m. 57s. Epicentre 6° 0N. 36° 5W.

A = +.799, B = -.592, C = +.105; D = -.595, E = -.804;
G = +.084, H = -.062, K = -.995.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Rio de Janeiro	E. 29.6	193	—	—	11.33	+ 6	15.6	18.6
	N. 29.6	193	—	—	11.29	+ 2	15.0	16.3
Azores	33.4	15	—	—	—	—	15.1	17.6
Sucre	37.8	230	7.40	+ 4	i 13.40	+ 5	18.3	21.8
La Paz	38.5	235	17.41	- 1	i 13.46	+ 1	21.0	23.4
San Fernando	41.2	39	8.33	+ 28	16.48	SR ₁	24.6	27.0
Malaga	42.4	40	7.51	- 23	13.51	- 49	15.2	—
Granada	43.2	40	18.10	- 10	i 14.35	- 16	18.2	26.7
Almeria	43.8	40	8.11	- 13	14.43	- 16	21.2	—
Toledo	44.7	37	e 8.18	- 13	14.50	- 21	e 19.0	23.0
La Plata	45.6	205	e 8.45	+ 8	15.30	+ 8	22.6	—
Alicante	45.9	40	e 8.35	- 4	e 15.12	- 15	e 21.6	—
Algiers	47.4	45	8.48	- 2	i 15.36	- 10	22.0	29.0
Tortosa	N. 48.0	39	—	—	16.41	+ 47	21.2	26.0
Georgetown	Z. 49.1	320	—	—	e 16.37	- 4	e 22.0	—
Paris	54.0	31	e 9.32	- 1	e 17.3	- 6	23.0	26.0
Oxford	N. 54.2	26	—	—	i 16.59	- 12	e 23.2	29.2
Kew	54.4	27	—	—	i 17.5	- 9	22.8	26.2
Moncalleri	54.7	38	e 9.56	+ 19	17.8	- 9	27.2	33.8
Besançon	54.9	35	e 9.55	+ 17	17.16	- 4	25.0	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Stonyhurst	55.2	25	—	—	e 16 57	-27	—	26.0
Neuchatel	55.3	37	i 9 39	-2	e 17 19	-6	—	—
Uccle	56.2	30	e 9 47	0	i 17 29	-7	e 23.0	29.2
Florence	56.3	42	9 45	-3	17 33	-5	26.0	32.6
Edinburgh	56.4	23	—	—	—	—	e 24.0	—
Zurich	56.5	37	i 9 50	+1	e 17 40	0	—	—
Strasbourg	56.6	35	i 9 51	+1	i 17 37	-4	e 26.0	—
Chur	56.7	37	i 9 52	+2	—	—	e 27.8	—
De Bilt	57.4	30	e 10 2	+7	17 46	-5	e 24.0	33.0
Chicago	E. 57.6	318	—	—	—	—	e 27.0	—
Dyce	57.8	21	—	—	e 17 50	-6	e 24.2	30.0
Göttingen	59.5	31	e 10 28	+19	—	—	e 27.2	33.2
Jena	60.0	34	—	—	—	—	e 26.0	30.6
Graz	60.4	39	—	—	—	—	e 31.0	32.0
Hamburg	60.6	30	e 10 19	+3	—	—	e 27.0	33.0
Vienna	61.5	38	10 22	0	—	—	—	39.8
Budapest	62.8	40	10 51	+20	19 3?	+5	32.6	—
Copenhagen	62.9	29	—	—	19 3	+3	25.0	—
Lund	63.3	29	—	—	19 9	+4	29.0	—
Cape Town	65.5	132	—	—	e 20 27	[+10]	31.4	—
Uppsala	E. 67.5	27	—	—	—	—	e 33.0	—
Helsingfors	70.9	28	e 11 26	+4	e 20 32	-5	e 33.0	—
Ksara	72.1	57	e 11 44	+13	21 5	+14	25.7	—
Simferopol	72.1	45	e 11 8	-23	—	—	—	—
Pulkovo	73.3	29	11 42	+4	21 2	-4	33.0	39.4
Lick	82.4	310	e 12 33	+1	—	—	—	—
Berkeley	E. 83.0	310	e 13 58	+82	—	—	e 42.0	—
Victoria	E. 83.4	320	—	—	—	—	43.3	44.4
Baku	83.4	50	12 45	+7	i 23 21	+20	41.0	51.8
Ekaterinburg	88.8	33	i 13 5	-4	i 23 48	-13	36.0	51.8
Tashkent	97.7	47	e 14 3?	+5	e 26 26	?PS	e 44.0	51.0
Bombay	106.2	68	—	—	—	—	e 44.0	—
Irkutsk	112.9	25	e 21 52	?	e 29 2	?PS	52.0	64.2

Additional readings: Sucre $PR_1 = +9m.7s.$, $SR_1 = +16m.15s.$ La Paz $PR_1E = +9m.2s.$, $PR_1N = +9m.7s.$, $PSN = +14m.11s.$, $SR_1E = +16m.47s.$, $SR_1N = +17m.35s.$, $LN = +20.7m.$, $MN = +25.1m.$; $T_1 = 16h.6m.53s.$ San Fernando $MN = +26.6m.$ Granada $I = +8m.43s.$, $+10m.4s. = PR_1 + 4s.$, and $+11m.7s.$, $MZ = +28.2m.$ Algiers $MN = +25.0m.$ Georgetown $eZ = +20m.3s.?$ Paris $MN = +28.0m.$ Kew $LZ = +24.8m.$, $MN = +25.8m.$ Moncalieri $MN = +30.3m.$ Florence $PR_1 = +12m.3s.$ De Bilt $eLZ = +26.0m.$, $MN = +28.5m.$ Chicago $eLN = +28.6m.$ Göttingen $eLZ = +28.2m.$, $MN = +30.2m.$, $MZ = +34.2m.$ Uppsala $eLN = +31.0m.$ Berkeley $eE = 16h.2m.10s.$ and $16h.11m.11s.$ Ekaterinburg $iS_cP_cS = +23m.33s.$ Irkutsk $e = +37m.11s.$

Jan. 27d. Readings also at 0h. (Lick), 2h. (Tanarive), 3h. (Lick), 5h. (Mizusawa, Sucre, and near La Paz), 23h. (Baku, Ekaterinburg, and Tashkent).

Jan. 28d. 21h. 56m. 42s. Epicentre $12^\circ 8'N. 91^\circ 0'W.$ (as on 26d.).

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca	7.0	308	1 56	+10	3 1	-9	3.1	3.5
Vera Cruz	8.1	323	2 34	+31	3 50	+10	—	5.2
Merida	8.3	9	(1 47)	-19	(3 22)	-23	(3.5)	(4.2)
Tacubaya	10.3	311	2 35	+1	4 25	-14	4.5	5.1
St. Louis	25.8	1	e 5 48	+2	e 10 20	+2	—	19.1
Florissant	N. 26.0	1	e 5 48	0	e 10 13	-9	—	18.8
Tucson	26.6	320	5 49	-5	10 32	-1	15.2	—
Charlottesville	N. 27.5	22	—	—	e 10 18	-32	e 16.3	18.8
Georgetown	Z. 28.9	23	—	—	—	—	18.3	19.4
Ottawa	E. 35.0	20	e 9 48	?	e 14 42	?SR ₁	21.3	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz	37-0	142	e 8 0	+30	—	—	20-3	23-7
Berkeley	E. 37-5	319	—	—	—	e 21-9	—	—
Sucre	40-7	142	i 7 55	-6	—	—	21-0	23-0
Victoria	E. 44-5	330	—	—	—	—	27-3	30-9
Scoresby Sund	71-0	20	—	—	—	—	42-3	—
Granada	80-2	54	—	—	—	e 42-3	46-3	—
Uccle	83-4	40	—	—	—	—	—	47-3
De Bilt	E. 83-6	38	—	—	—	e 46-3	—	—
Strasbourg	86-1	41	—	—	—	e 45-3	—	—
Copenhagen	86-8	33	—	—	—	—	45-3	—
Pulkovo	93-6	25	—	—	—	e 53-3	—	—
Ekaterinburg	106-5	16	—	—	—	—	56-3	—
Irkutsk	113-6	350	—	—	—	e 66-3	—	—
Baku	115-6	32	—	—	—	e 56-3	—	—
Tashkent	122-9	17	—	—	e 25 4	?	—	74-0

Additional readings and notes: Merida readings have been *diminished* by 2m. St. Louis iPN = +5m.49s., Charlottesville eLE = +17-3m., Georgetown eZ? = 21h.50m. and 21h.53m., eZ = 22h.10m., La Paz e = +7m.30s. Berkeley eZ = +22m.6s., eE = +22m.30s. Baku eL = +64-7m., Tashkent e = +38m.49s.

Jan. 28d. Readings also at 0h. (Nagoya, near Kobe, and Sumoto), 3h. (Ekaterinburg, Toronto, Tucson, Lick, near Merida, Tacubaya, Sucre, and La Paz), 4h. (Baku, De Bilt, Nagoya, Tashkent, and near Tacubaya), 6h. (Batavia), 10h. (near Granada), 12h. (Lick), 13h. (near Ksara), 16h. (near La Paz, near Kobe, and Toyooka), 18h. (near La Paz), 23h. (near Malabar and near Sucre).

Jan. 29d. Readings at 2h. (Ekaterinburg, Irkutsk, Tashkent, and Manila), 3h. (Wellington and near Kobe), 13h. (near Taihoku), 14h. (Wellington), 20h. (La Paz), 22h. (Matuyama, Koti, Kobe, and Sumoto).

Jan. 30d. 16h. 53m. 56s. Epicentre 2°-3N. 127°-2E. (as on 20d.).

A = -.604, B = +.796, C = +.040; D = +.797, E = +.605;
G = -.024, H = +.032, K = -.999.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	13-8	334	e 3 27	+ 4	i 8 11	?	i 11-5	—
Batavia	22-0	246	i 4 42	-23	i 8 55	-10	—	—
Hong Kong	23-7	329	5 20	- 5	(9 25)	-13	9-4	—
Phu-Lien	27-3	314	6 4	+ 3	e 10 24	-22	12-1	—
Zi-ka-wei	z. 29-6	350	e 6 25	+ 1	—	—	18-5	23-1
Koti	31-8	10	e 6 40	- 5	e 11 51	-14	—	—
Sumoto	32-8	13	e 6 49	- 6	—	—	—	—
Kobe	33-2	13	7 16	+18	—	—	—	—
Nagoya	34-1	15	e 6 59	- 7	12 26	-16	—	—
Perth	35-9	197	e 6 4	-77	12 34	-35	18-9	—
Riverview	42-6	150	e 5 28	?	e 14 17	-26	e 24-0	25-0
Sydney	42-6	150	8 46	+31	17 22	?SR ₁	28-1	29-3
Calcutta	42-7	303	7 48	-28	—	—	—	—
Melbourne	43-3	160	e 8 8	-12	i 14 31	-21	i 21-0	29-3
Colombo	47-4	278	8 25	-25	15 15	-31	23-3	26-5
Hyderabad	50-2	291	8 55	-13	15 58	-23	24-4	29-7
Irkutsk	53-5	345	19 30	0	i 16 59	- 4	28-1	—
Bombay	55-7	292	12 53	+189	19 33	+123	27-9	32-6
Amata	60-4	321	e 10 23	+ 8	—	—	—	—
Wellington	61-3	141	—	—	i 18 33	- 7	27-1	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Frunse	61.9	320	e 10 35	+11	e 18 44	- 3	—	—
Tashkent	64.8	316	i 10 44	0	i 19 19	- 4	e 29.1	40.6
Samarkand	65.9	315	e 10 53	+ 3	e 19 37	+ 1	—	—
Ekaterinburg	75.4	330	i 11 52	+ 1	i 21 24	- 6	37.6	44.0
Baku	78.9	312	i 12 14	+ 2	i 22 10	- 1	e 38.1	53.5
Kucino	87.7	326	12 55	- 8	23 33	-16	40.3	53.6
Pulkovo	91.5	330	13 12	-12	24 9	-20	44.1	56.7
Lund	101.3	330	—	—	24 36	[+ 6]	54.1	—
Copenhagen	101.7	330	—	—	24 41	[+ 9]	48.1	—
Vienna	z. 101.9	320	13 58	-22	—	—	—	—
Scoresby Sund	104.4	351	—	—	28 4?	?PS	54.1	—
De Bilt	107.1	326	—	—	—	—	e 56.1	68.6
Strasbourg	107.2	323	—	—	—	—	e 59.1	—
Uccle	108.2	325	—	—	—	—	e 56.1	—
Kew	110.3	329	—	—	—	—	56.1	—
Granada	119.7	315	—	—	—	—	e 62.1	67.1
Ottawa	E. 128.2	19	—	—	—	—	e 59.1	—
La Paz	159.3	134	20 11	[+ 4]	—	—	—	—

Additional readings: Manila $PR_1E = +4m.15s.$, $PR_2N = +4m.28s.$ Batavia $i = +6m.16s.$, $iE = +6m.44s.$ Koti $ePR_2Z = +7m.54s.$ Kobe $PR_1 = +8m.16s.$ Riverview $iPR_1? = +8m.5s.$ $eS = +14m.23s.$ MN = +27.7m. Melbourne $i = +17m.30s. = SR_1 - 26s.$ and +25m.14s. Kucino $ScPcS = +23m.17s. = [S] + 4s.$ PS = +24m.19s. Pulkovo $eScPcS = +23m.41s. = [S] + 4s.$ $SR_1 = +30m.4s.$ De Bilt MN = +62.4m.

Jan. 30d. Readings also at 1h. (Sucre and La Paz (2)), 11h. (near Manila), 13h. (near Sucre), 14h. (Melbourne and Wellington), 15h. (Sucre and near La Paz), 18h. (Frunse and Samarkand), 21h. (Akita and near Mizusawa), 22h. (Lick, Manila, and near Tananarivo).

Jan. 31d. 18h. 5m. 17s. Epicentre $12^\circ 8'N. 91^\circ 0'W.$ (as on Jan. 28d.).

A = -017, B = -975, C = +222; D = -1000, E = +017; G = -004, H = -222, K = -975.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca	7.0	308	2 12	+26	(3 18)	+ 8	3.3	3.7
Merida	8.3	9	(2 4)	- 2	(3 28)	-17	(3.6)	(4.4)
Puebla	9.3	313	(2 58)	+38	(3 58)	-12	(4.1)	(4.3)
Tacubaya	10.3	311	2 50	+16	4 22	-15	4.5	5.0
St. Louis	25.8	1	e 5 52	+ 6	e 10 30	+12	—	—
Tucson	26.6	320	5 56	+ 2	10 41	+ 8	14.0	16.8
Cincinnati	26.9	11	e 5 53	- 4	e 11 1	+22	15.4	18.3
Charlottesville	27.5	22	—	—	e 10 43	- 7	e 17.9	18.7
Georgetown	z. 28.9	23	e 6 19	+ 2	e 11 37	+22	e 15.7	19.5
Chicago	29.1	5	e 6 19	0	e 10 37	-42	e 16.3	19.9
Ann Arbor	30.2	11	e 6 31	+ 1	e 12 1	+24	e 16.1	—
Fordham	31.8	26	e 8 55	+130	—	—	17.3	18.4
Ithaca	32.2	20	—	—	e 11 56	-15	18.6	—
Toronto	E. 32.4	16	—	—	e 12 13	- 1	20.5	—
	N. 32.4	16	—	—	e 11 56	-18	19.7	21.9
Ottawa	35.0	20	i 7 33	+20	e 12 43	-12	e 19.7	22.7
Lick	36.7	319	e 7 25	- 3	—	—	e 21.9	—
La Paz	37.0	142	e 7 30	0	e 13 25	+ 1	19.2	27.6
Berkeley	37.5	319	e 7 31	- 3	—	—	e 23.2	—
Sucre	40.7	142	e 8 16	+15	—	—	17.7	—
Victoria	E. 44.5	330	8 30	0	—	—	23.6	27.6
Rio de Janeiro	58.9	128	—	—	e 18 43	+33	e 30.1	—
Scoresby Sund	E. 71.0	20	—	—	—	—	36.7	—
San Fernando	E. 78.3	54	—	—	—	—	—	46.4
Granada	80.2	54	—	—	—	—	e 42.7	45.7

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Kew	80.4	40	—	—	—	—	e 41.7	—
Paris	82.7	42	—	—	—	—	e 42.7	48.7
Uccle	83.4	40	—	—	—	—	e 40.7	—
De Bilt	83.6	38	—	—	—	—	e 43.7	48.4
Strasbourg	86.1	41	—	—	—	—	e 38.7	—
Copenhagen	86.8	33	—	—	24 43?	?PS	42.7	—
Moncalieri	87.0	45	—	—	—	—	e 42.1	—
Lund	87.2	33	—	—	—	—	48.7	—
Florence	89.8	45	—	—	e 37 28	? E	47.7	52.2
Pulkovo	93.6	25	—	—	e 24 19	?	42.7	55.5
Kucino	99.2	26	—	—	e 24 45	[+25]	47.8	59.0
Wellington	E. 101.5	230	—	—	—	—	e 47.3	—
Ekaterinburg	106.5	16	—	—	e 25 18	[+24]	48.2	62.0
Irkutsk	113.6	350	e 19 46	?PR ₁	e 29 20	?PS	e 62.7	69.2
Baku	115.6	32	—	—	—	—	58.7	69.6
Tashkent	122.9	17	e 20 53	?PR ₁	e 28 44	-27	e 57.7	72.6
Bombay	144.5	26	—	—	—	—	e 77.7	—

Additional readings and note : Merida and Puebla readings have been increased by 1m. St. Louis iPEN = +5m.53s., iN = +6m.20s. = PR₁-4s. Cincinnati iSNZ = +11m.20s. = SR₁-28s., iP₀SNZ = +12m.23s. Charlottesville eE = +15m.25s., eN = +15m.43s., eLN = +18.2m., MN = +19.0m. Georgetown ePEN = +6m.22s., PR₁Z = +7m.4s., eSZ = +11m.41s., eSN = +11m.42s., iZ = +12m.3s., SR₁Z = +13m.27s., SR₁E = +13m.34s., SR₁Z = +13m.57s., SR₁E = +14m.3s. Chicago eE = +11m.43s., eLN = +17.8m. Ann Arbor eN = +9m.1s., eE = +12m.55s. = SR₁-13s., e = +13m.55s., eE = +15m.43s., eLE = +19.3m., eLN = +20.5m. Fordham e = +13m.51s. = SR₁+5s. and +14m.33s. Ottawa i = +16m.3s. La Paz P = +7m.51s., eSN = +14m.8s. Berkeley eN = +7m.45s., eZ = +24m.37s. eNZ? = +28m.7s. Scoresby Sund +30m.43s. San Fernando MN = +45.6m. De Bilt eLN = +41.7m., MZ = +51.4m. Pulkovo e = +26m.7s. = PS +17s. and +31m.23s. = SR₁+7s. Kucino e = +25m.35s. = Z +32s., +27m.11s. = PS +16s., and +32m.55s. = SR₁+27s. Ekaterinburg e = +28m.16s. = PS -3s. and +34m.29s. = SR₁+30s. Tashkent e = +26m.24s. = [S]+31s. and +48m.43s. ?

Jan. 31d. Readings also at 3h. (near Santiago), 6h. (Samarkand and Frunse), 11h. (Sucre), 12h. (Nagoya and Sucre), 13h. (Rio de Janeiro, La Paz, Sucre, La Plata, and near Santiago), 14h. (Ekaterinburg, Manila, and near Santiago), 15h. (Ekaterinburg, Irkutsk, Tashkent, Almata, Frunse, and near Samarkand, also Suva (2) and Wellington), 16h. (Bagnères, Nagoya, Yalta, Mizusawa, and near Akita), 17h. (near Samarkand).

Feb. 1d. 17h. 14m. 12s. Epicentre 36°5N. 70°5E.

(as on 1928 Aug. 10d.).

A = +.268, B = +.758, C = +.595; D = +.943, E = -.334;
G = +.199, H = +.561, K = -.804.

A depth of focus 0.025 has been assumed.

	Corr. for Focus	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	s.	m. s.	s.	m.	m.
Samarkand	0.0	4.2	320	(1 19)	+14	—	—	(e 2.1)	—
Tashkent	0.0	4.9	350	2 26	?L	—	—	(2.4)	11.8
Frunse	-0.1	7.1	25	1 55	+9	—	—	—	3.4
Dehra Dun	-0.2	8.8	133	2 8	-2	(3 28)	-25	3.5	3.8
Baku	-0.8	16.6	290	4 0	+11	6 58	+8	—	24.9
Bombay	-0.9	17.7	173	4 9	+7	(7 29)	+16	7.5	13.6
Calcutta	E. -1.0	20.8	127	4 33	-6	(8 9)	-10	8.2	8.6
	N. -1.0	20.8	127	4 36	-3	(8 12)	-7	8.2	—
Ekaterinburg	-1.1	21.4	345	4 47	+2	i 8 34	+5	25.8	—
Kodaikanal	-1.5	27.0	165	8 12	?	—	—	11.1	17.9

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	Corr. for Focus	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	$^{\circ}$	$^{\circ}$	$^{\circ}$	m. s.	s.	m. s.	s.	m.	m.
Theodosia	-1.5	27.7	299	5 47	-3	—	—	—	—
Ksara	-1.6	28.3	275	5 54	-1	10 28	-7	—	—
Yalta	-1.6	28.5	298	5 52	-5	—	—	—	—
Simferopol	-1.6	28.6	298	5 57	-1	—	—	—	—
Sebastopol	-1.6	29.0	298	6 2	0	—	—	—	—
Kucino	-1.7	29.2	322	5 48	-15	—	—	—	—
Colombo	-1.7	30.8	164	6 9	-10	(12 29)	+70	12.5	19.4
Helwan	-1.8	33.2	270	6 36	-6	i 11 39	-18	—	14.7
Pulkovo	-1.9	34.6	327	i 6 46	-8	i 12 0	-19	15.3	17.3
Phu-Lien	-2.0	35.1	110	6 48	-9	i 12 2	-24	14.8	18.3
Lemberg	E. -2.0	35.7	308	e 7 9	+7	e 12 18	-18	—	15.2
	N. -2.0	35.7	308	e 7 2	0	e 12 0	-36	—	15.5
Helsingfors	-2.0	37.2	324	i 7 8	-7	i 12 40	-18	16.3	—
Belgrade	-2.0	38.3	301	e 8 13	+49	e 13 53	+39	i 17.1	17.4
Konigsberg	-2.0	38.4	316	i 7 17	-8	i 12 56	-20	e 14.8	17.3
Budapest	-2.1	39.0	305	7 28	-1	13 8	-14	e 16.3	22.1
Hong Kong	-2.1	40.2	100	i 7 28	-11	i 13 28	-11	—	—
Upsala	-2.1	40.7	323	i 7 37	-6	i 13 30	-16	—	22.0
Vienna	-2.1	40.8	307	e 7 36	-8	i 13 29	-19	—	17.8
Zagreb	-2.2	41.3	301	e 7 44	-3	i 13 42	-11	e 18.8	—
Graz	-2.2	41.5	305	i 7 44	-5	i 13 44	-12	18.8	19.8
Zi-ka-wei	-2.2	42.1	84	i 7 32	-22	i 13 34	-31	—	32.8
Laibach	E. -2.2	42.3	304	e 8 50	+54	e 14 58	+50	e 17.2	17.5
Lund	-2.2	42.6	316	i 7 54	-4	i 14 1	-12	16.8	26.8
Copenhagen	-2.2	43.1	316	i 7 57	-5	i 14 8	-12	—	—
Naples	E. -2.2	43.4	293	e 8 1	-4	e 14 41	+17	22.8	—
Jena	E. -2.3	43.7	310	i 8 2	-4	i 14 14	-13	e 16.3	18.7
	N. -2.3	43.7	310	i 8 2	-4	i 14 16	-11	e 16.3	18.8
	Z. -2.3	43.7	310	i 8 1	-5	—	—	e 17.3	18.3
Venice	-2.3	43.8	301	i 8 4	-3	14 35	+7	—	—
Innsbruck	-2.3	44.2	305	i 8 2	-8	i 14 21	-13	—	19.3
Hamburg	-2.3	44.5	315	i 8 9	-3	i 14 31	-7	—	18.5
Gottingen	-2.3	44.6	311	i 8 8	-5	i 14 31	-8	e 16.4	21.1
Taihoku	E. -2.3	44.8	91	e 8 10	-5	(e 14 46)	+4	e 14.8	—
Florence	-2.3	44.9	299	i 8 13	-2	i 14 48	+5	21.8	22.5
Ravensburg	-2.4	45.3	306	i 8 15	-2	14 45	-2	—	17.8
Chur	-2.4	45.5	305	e 8 14	-5	—	—	—	—
Feldberg	-2.4	45.7	309	i 8 19	-1	i 14 48	-4	—	19.7
Zurich	-2.5	46.1	305	e 8 19	-4	i 14 52	-4	—	—
Strasbourg	-2.5	46.5	309	i 8 24	-2	i 14 57	-5	18.8	19.8
Bergen	-2.5	46.9	325	8 31	+2	15 18	+11	18.8	23.7
Moncalieri	-2.5	47.1	302	i 8 23	-7	i 15 2	-8	24.8	33.7
Neuchatel	-2.5	47.3	305	e 8 28	-4	i 15 7	-5	—	—
De Bilt	-2.5	47.6	312	i 8 32	-2	i 15 13	-3	e 18.8	19.8
Besançon	-2.5	47.8	305	i 8 33	-2	i 15 16	-3	18.8	—
Uccle	-2.6	48.2	310	8 37	0	i 15 23	+1	19.5	31.7
Grenoble	-2.6	48.5	303	i 8 8	-31	i 14 56	-31	23.8	—
Paris	-2.6	49.8	309	i 8 40	-8	i 15 41	-3	18.8	19.8
Manila	-2.6	49.8	103	i 8 48	0	i 15 42	-2	i 23.4	—
Entebbe	-2.6	50.7	235	(8 48)	-7	15 55	0	—	—
Koti	-2.6	50.7	75	i 8 56	+1	16 5	+10	—	—
Dyce	-2.6	51.0	318	9 0	+4	i 16 5	+6	—	—
Kew	-2.6	51.0	312	i 8 58	+2	i 15 59	0	e 23.7	28.5
Oxford	-2.7	51.5	313	i 8 58	-1	i 16 3	-1	e 19.3	28.7
Kobe	-2.7	51.5	74	9 1	+2	e 16 15	+11	e 28.0	—
Sumoto	-2.7	51.5	73	e 8 58	-1	—	—	—	—
Sonyhurst	-2.7	51.7	315	i 9 3	+3	i 16 1	-5	—	—
W. Bromwich	-2.7	51.7	314	—	—	16 13	+7	—	—
Edinburgh	-2.7	51.8	318	9 2	+1	16 10	+3	20.8	31.2
Osaka	-2.7	51.8	74	9 3	+2	(16 24)	+17	16.4	18.3

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	Corr. for Focus	Δ	Az.	P.		O-C.		S.		O-C.		L.	M.
				m.	s.	s.	s.	m.	s.	s.	m.		
Barcelona	-2.7	52.0	299	9	6	+4		i 16	13	+3		20.5	27.2
Bideton	-2.7	52.2	315	9	13	+9		i 16	17	+4			20.6
Nagoya	-2.7	52.7	70	e 9	9	+2		e 10	25	?			
Bagnères	-2.7	52.8	302	e 9	17	+9		e 16	30	+10		17.8	
Algiers	-2.7	52.9	292	9	11	+3		i 16	23	+2		21.8	26.8
Tortosa	E. -2.8	53.4	299	i 9	16	+5		i 16	35	+9		22.6	
	N. -2.8	53.4	299	i 9	15	+4		i 16	34	+8		21.3	22.9
Akita	-2.8	53.4	65	i 9	12	+1		i 16	42	+16			
Mirusawa	-2.8	54.4	66	e 9	22	+5		i 16	50	+11			
Batavia	-2.8	54.6	135	e 9	18	-1		i 16	8	-33			
Alicante	-2.8	55.0	296	i 9	31	+10		i 16	58	+12		e 24.4	25.2
Scoreby Sund	-2.9	56.7	338	i 9	40	+8							
Almeria	-2.9	56.9	296	12	18	+165		i 20	18	+189		23.8	
Toledo	-2.9	57.0	299	e 9	39	+5		i 17	20	+10		e 26.0	30.0
Granada	-3.0	57.6	295	i 9	43	+6		i 17	35	+19		e 20.8	26.1
Malaga	-3.0	58.5	296	i 9	48	+5		i 17	35	+7		21.8	
Tananarive	-3.0	59.5	207	10	1	+12		i 17	50	+10		27.8	32.8
San Fernando	-3.0	59.9	296	i 9	59	+8		i 17	49	+4		24.2	27.0
Perth	-3.4	80.5	143	(12 13)		+11		i 12	13	?P		22.0	
Cape Town	-3.4	85.5	221	e 12	36	+5		i 22	33	-14			42.6
Ottawa	-3.6	92.7	338	11	13	?		e 23	18	-46		e 38.3	43.8
Harvard	-3.6	93.7	334	e 16	56	?PR ₃		i 23	20	[-30]			
Victoria	-3.6	94.3	10	13	25	+5						38.1	54.4
Toronto	-3.6	95.3	340						23	31		38.8	45.3
Adelaide	-3.6	95.4	130	e 14	6	+40		e 23	27	[-32]			
Ithaca	-3.6	95.5	337	e 19	6	?						e 38.8	
Ann Arbor	-3.7	97.8	342	i 17	30	[-8]		i 27	6	?PS		e 40.6	
Georgetown	-3.7	98.9	336	e 13	39	-5		e 23	59	[-19]			48.3
Chicago	-3.7	99.2	345					i 24	45	[-25]		40.0	45.0
Charlottesville	-3.7	100.1	335					i 23	56	[-28]		e 40.4	
Cincinnati	-3.7	101.0	341	e 13	48	-8		i 23	58	[-31]		41.8	49.5
Melbourne	-3.7	101.2	130	e 14	50	+53		i 23	56	[-34]		51.0	58.2
Florissant	-3.8	102.6	346	i 14	18	+14		i 25	48	+4		44.3	48.8
St. Louis	-3.8	102.8	346	i 14	50	+45		e 24	4	[-33]		e 43.4	
Riverview	-3.8	102.9	124					e 24	6	[-32]		e 42.3	45.1
Berkeley	-3.8	104.8	10	e 13	53	-22		e 28	23	?PS		e 43.2	
Lick	N. -3.8	105.2	10	e 14	16	-1		e 29	0	?			
Honolulu T.H.		106.4	47					i 25	42			44.1	
Tucson	N. -	111.2	1	e 17	54	?		i 24	50	[-25]		e 62.7	
Rio de Janeiro		122.0	264	e 18	48	[-10]		28	0	?Σ		41.2	
Sucre		137.6	282	e 19	18	[-17]				?		63.8	74.3
La Paz		138.4	290	i 19	17	[-20]		i 24	1	?		62.8	72.1
La Plata		138.6	256									39.9	

Additional readings and notes: Samarkand e = (+1m.25s.), readings having been diminished by 3m. Frunse i = +1m.57s. Dehra Dun S = +2m.48s. Bombay S = +6m.24s. Ekaterinburg i = +8m.24s. Colombo S = +7m.9s. = PR₁ + 2s. Helsingfors P₂P = +7m.56s., PR₁ = +8m.11s., iPR₂ = +8m.39s., SR₂ = +14m.48s. Belgrade ePR₂N = +9m.57s., eE = +9m.59s., iSN = +13m.54s., eE = +15m.22s. = SR₁ - 4s., iN = +15m.27s. = SR₁ + 1s. Kongsberg iPEN = +7m.18s., iPR₁EZ = +8m.9s., iN = +8m.19s., iEZ = +8m.32s., iZ = +8m.49s., iPR₂E = +8m.57s., iE = +9m.34s. +9m.49s., +11m.46s., and +12m.58s., iN = +14m.10s. and +14m.20s., iE = +14m.24s., MN = +17.6m., MZ = +18.2m. Budapest PR₁ = +8m.18s., PR₂ = +9m.15s., SR₁ = +14m.33s., MN = +19.8m. Hong Kong i = +8m.48s. = PR₁ - 11s., and +10m.28s. Upsala PR₁ = +9m.19s., SR₁ = +16m.11s., MN = +16.9m. Vienna iP = +7m.38s., PR₁? = +8m.28s., PR₂ = +9m.20s., iEN = +10m.35s., SR₁? = +15m.26s., SR₂ = +16m.46s. Zagreb i = +7m.52s., ePR₁NE = +8m.35s., iPR₁NW = +8m.37s., iPR₂ = +9m.9s., iNW = +9m.48s., iNE = +10m.6s., iPR₂NW = +10m.43s., iPR₁NE = +10m.45s., iPSNE = +13m.45s., eSR₁NE = +15m.6s., iSR₁NW = +15m.7s., eSR₂ = +17m.6s., iSR₂NW = +18m.23s., eSR₂NE = +18m.28s. Graz iPR₁ = +8m.36s., iPR₂ = +10m.35s., i = +15m.8s.

Continued on next page.

iSR₁ = +16m.58s., iSR₂ = +17m.21s. Zi-ka-wei PR₁E = +8m.52s., iE = +13m.46s. and +15m.10s., iZ = +16m.20s. = SR₁ - 24s., SR₂N = +17m.14s. = SR₂ - 19s., iZ = +18m.52s. Laibach eE = +11m.39s. Copenhagen i = +15m.28s. and +17m.27s. = SR₁ - 21s. Jena iPE = +8m.3s., eEZ = +8m.48s., ePR₁NZ = +9m.38s., ePR₁E = +9m.47s., and +9m.48s., eEZ = +10m.48s., eN = +12m.2s., and +15m.32s., eE = +15m.36s. Innsbruck iPR₁ = +9m.31s., iPR₂ = +10m.2s., i = +10m.36s., iSR₁? = +17m.37s. Hamburg eSR₁EZ = +17m.54s., MN = +23.7m. Gottingen iPEN = +8m.10s., eEZ = +9m.1s., eN = +9m.2s., ePR₁EZ = +9m.54s., eE = +10m.31s., and +10m.34s., iSN = +14m.33s., eLNZ = +17.9m., MZ = +19.7m., MN = +21.7m. Florence PR₁ = +9m.48s., PR₂ = +10m.28s., PR₃ = +11m.18s., SR₁ = +18m.9s., SR₂ = +19m.18s. Ravensburg PR₁ = +9m.58s., PR₂ = +10m.34s., SR₁ = +17m.27s., MN = +19.4m. Chur i = +8m.19s., +9m.3s., and +13m.21s. Feldberg iE = eN = +8m.18s., iN = +8m.45s., +9m.14s., and +9m.34s., iE = +9m.10s., eE = +16m.12s., ME = +24.4m. Strasbourg iP = +9m.18s., iPR₁ = +10m.33s., iS = +16m.21s., MZ = +19.0m., MN = +21.1m. Moncalieri MN = +35.4m. De Bilt i = +9m.26s., eE = +16m.5s., eN = +16m.30s., MN = +26.5m. Uccle i = +9m.30s., +9m.54s., iPR₁ = +10m.38s., iPR₂ = +11m.18s., i = +16m.39s., MN = +20.4m. Grenoble SR₁ = +16m.17s. Paris PR₁ = +11m.35s. Manila iP₀P = +10m.13s., iPR₁? = +10m.58s. Entebbe +8m.28s. : P is given as S, and S without phase. Koti e = +9m.59s. and +10m.15s. Kew i = +9m.4s., iEZ = +9m.50s., and +10m.13s., ePR₁ = +11m.7s., iPR₂ = +11m.43s., eE = +14m.15s., iE = +17m.22s., iNZ = +17m.26s., iEN = +18m.24s., SR₁EN = +20m.7s., SR₂E = +20m.48s., iLN = +21.2m., iLZ = +23.4m., MZ = +24.1m., MN = +28.1m. Kobe iSR₁N = +17m.41s. Stonyhurst SR₁? = +21m.23s. Edinburgh i = +17m.30s. Osaka MN = +20.4m. Barcelona ? = +17m.34s., SR₁ = +19m.55s., LN = +26.3m. Algiers PR₁ = +11m.24s., MN = +22.3m. Akita iPEN = +9m.16s. Batavia i = +11m.45s. = PR₁ - 11s. Alicante MN = +28.2m. Almeria iP = +12m.28s. Toledo iP = +9m.41s., i = +10m.36s. and +13m.29s., SR₁NE = +18m.44s., MNW = +30.1m. Granada i = +10m.26s. Tananarive iP₀P = +10m.53s., ePR₁ = +12m.20s., ePR₂ = +13m.26s., PS = +18m.5s., SR₁ = +22m.2s., SR₂ = +25m.29s. San Fernando MN = +32.0m. Ottawa ePR₁ = +16m.48s. Toronto e = +3m.13s., iPR₁N = +17m.14s., MN = +53.0m. Ann Arbor e = +23m.42s. = [S] - 31s., and +25m.30s., eSR₁ = +32m.54s. Georgetown iZ = +17m.38s., iN = +17m.39s., iE = +17m.42s., iZ = +18m.36s., and +19m.52s., SZ = +23m.58s. Chicago PR₁ = +17m.35s., iPR₂N = +19m.55s., iSN? = +24m.55s., iN = +25m.33s., ePSN = +28m.24s., SR₁N = +32m.0s. Charlottesville PR₁N = +17m.48s., PSN = +25m.24s., eN = +27m.38s., SR₁E? = +33m.28s., SR₂E = +36m.6s. Cincinnati eP' = +17m.49s. = [P] - 1s., iPSNZ = +26m.38s., iPPS = +27m.43s. Melbourne i = +17m.52s. = PR₁ - 6s., +18m.53s., and +32m.20s. = SR₁ +14s. Florissant ePZ = +17m.57s., iZ = +19m.0s., +19m.51s., and +20m.19s., S₀P₀SEN = +24m.3s., iPS = +26m.48s., PPSNZ = +27m.51s., SR₁N = +33m.9s., SR₂N = +37m.28s., SR₂E = +37m.48s., LN = +44.8m. St. Louis eN = +17m.56s. = [P] - 1s., i = +25m.55s. = E + 28s., iN = +26m.29s., iPSE = +26m.50s., ePSN = +26m.55s., iN = +28m.4s., and +28m.23s., eSR₁N = +33m.33s. Riverview eSR₁ = +32m.37s. and +32m.53s., MN = +46.7m. Berkeley eZ = +18m.7s., eN = +18m.8s., iZ = +19m.22s., eZ = +21m.49s., eNZ = +22m.39s., iEN = +26m.7s., eN = +29m.24s., eLNZ = +44.2m. Lick eN = +18m.25s. Honolulu T.H. SR₁ = +33m.36s. Tucson PR₁E = +18m.1s., PR₁N = +18m.5s., ePSN = +28m.21s., ePPSN = +29m.53s., SR₁N = +34m.3s., eSR₂N = +40m.0s., eL₀E = +45.1m. Rio de Janeiro SN = +27m.59s. Sucre iPZ = +19m.22s., PR₁N = +22m.8s., i = +25m.2s., iSR₁N = +39m.56s., SR₂N = +44m.56s., SR₂N = +49m.49s. La Paz PR₁N = +22m.12s., PR₂N = +25m.18s., SR₁N = +39m.55s., SR₂E = +45m.26s.

Feb. 1d. Readings also at 6h. (near Manila), 14h. (Samarkand), 15h. (near Batavia), 18h. (Samarkand and San Fernando), 19h. (3) and 20h. (2) (Samarkand), 21h. (La Paz, Sucre, and Tacubaya), 22h. (Samarkand, Florissant, St. Louis, Lick, Victoria, and Ekaterinburg), 23h. (Samarkand and Tashkent).

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Feb. 2d. 0h. 0m. 14s. Epicentre 1°5S. 21°8W.

(Deduced from the epicentre 1°5S. 23°0W. of 1923 Aug. 12d.).

A = +.928, B = -.371, C = -.026; D = -.371, E = -.928;
G = -.024, H = +.010, K = -1.000.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Rio de Janeiro E.	29.8	223	i 6 14	-12	11 7	-24	13.7	14.8
N.	29.8	223	i 6 16	-10	11 13	-18	13.7	16.8
Azores	39.4	355	e 9 34	?PR ₁	18 10	?L	(18.2)	20.1
San Fernando	40.6	20	e 7 48	-12	12 58	-77	18.3	25.0
Malaga	41.5	22	7 56	-11	14 34	+ 6	19.8	—
Granada	42.2	22	i 8 2	-10	—	—	21.7	26.9
Almeria	42.4	23	10 50	+156	16 24	+104	—	31.6
Alicante	44.4	24	e 8 6	-23	i 14 18	-49	e 23.5	39.9
Toledo	44.4	20	e 8 10	-19	i 14 35	-32	e 19.6	40.4
Algiers	44.7	30	i 8 20	-11	15 11	0	e 21.8	28.3
Sucre	46.0	245	e 8 35	- 5	i 15 40	+12	20.8	23.4
Tortosa	46.9	23	8 38	- 8	e 15 17	-23	21.2	35.4
La Plata	47.4	222	8 41	- 9	i 15 35	-11	21.8	—
La Paz	48.0	250	i 8 43	-11	i 16 0	+ 6	i 24.1	24.9
Barcelona	48.1	25	8 47	- 8	e 15 33	-22	e 23.4	26.2
Bagnères	48.8	21	i 8 53	- 6	e 19 14	?PR ₁	20.8	—
Cape Town	49.6	136	e 9 12	+ 8	16 18	+ 4	—	36.1
Grenoble	52.7	25	e 9 28	+ 4	e 16 58	+ 6	24.8	—
Moncalieri	53.3	26	i 9 26	- 2	i 16 50	-10	25.0	33.6
Naples E.	53.5	35	e 9 42	+12	e 16 50	-13	29.8	39.8
Florence	54.1	30	i 9 29	- 5	17 2	- 8	28.8	49.8
Entebbe	54.3	89	9 44	+ 9	—	—	—	—
Besançon	54.4	24	i 9 35	0	e 17 14	0	28.8	—
Neuchâtel	54.6	26	e 9 27	-10	i 17 22	+ 6	—	—
Chur	55.5	26	e 9 35	- 8	—	—	—	—
Zurich	55.6	26	e 9 44	+ 1	i 17 28	- 1	—	—
Paris	55.7	20	e 9 35	- 9	e 17 10	-20	25.8	33.8
Santiago	55.7	230	e 9 40	- 4	17 40	+10	28.5	—
Venice	55.8	29	i 9 46	+ 1	e 17 37?	+ 6	—	—
Kew	56.0	16	i 9 45	- 1	i 17 33	- 1	i 23.6	24.1
Oxford	56.0	15	e 9 54	+ 8	i 17 36	+ 2	e 22.0	34.7
Strasbourg	56.2	23	i 9 48	+ 1	e 17 37	+ 1	25.8	30.5
West Bromwich	56.5	15	9 48	- 1	16 8	-92	—	—
Innsbruck	56.7	27	9 42	- 8	17 42	0	28.7	—
Uccle	56.8	20	i 9 52	+ 1	i 17 44	0	e 23.8	32.8
Bidston	57.1	14	10 1	+ 8	17 46	- 1	23.8	32.8
Laibach E.	57.3	30	e 9 56	+ 2	e 18 10	+20	e 19.9	21.0
Stonyhurst	57.7	15	e 9 53	- 4	i 17 55	0	—	35.8
Feldberg	57.8	23	10 0	+ 2	e 17 58	+ 2	—	31.8
Zagreb	57.8	30	e 10 0	+ 2	e 17 42	-14	e 30.5	—
De Bilt	58.2	20	i 10 2	+ 2	18 5	+ 4	e 28.8	34.4
Balboa Hts. E.	58.5	282	e 9 52	-10	17 50	-15	25.8	32.7
N.	58.5	282	e 9 50	-12	17 46	-19	24.1	35.2
Graz	58.5	29	i 10 5	+ 3	i 18 15	+10	24.8	37.8
Halifax	59.2	328	e 10 12	+ 6	e 18 19	+ 6	e 26.8	—
Edinburgh	59.3	13	—	—	i 18 22	+ 7	26.8	41.6
Göttingen E.	59.4	23	i 10 13	+ 5	e 18 22	+ 6	e 26.9	34.9
N.	59.4	23	i 10 12	+ 4	e 18 30	+14	e 26.5	34.9
Z.	59.4	23	i 10 8	0	—	—	e 30.9	34.9
Helwan	59.5	55	i 10 16	+ 7	e 18 25	+ 8	—	42.6
Belgrade	59.6	35	e 10 12	+ 3	e 18 13	- 5	—	32.7
Jena E.	59.6	25	i 10 14	- 5	i 19 21	+63	e 27.3	33.5
N.	59.6	25	i 10 13	+ 4	i 19 17	+59	e 27.3	33.1
Z.	59.6	25	i 10 13	+ 4	i 19 32	+74	e 30.8	33.3
Vienna	59.7	29	10 11	+ 1	18 29	+10	e 28.8	32.8

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Budapest	60.5	31	10 19	+ 3	18 49	+19	31.8	38.3
Dyce	60.8	12 e	10 20	+ 2	18 33	0	e 25.8	30.2
Hamburg	61.1	21 e	10 21	+ 1	e 18 46	+ 9	e 28.8	30.8
Harvard	62.4	321	i 10 45	+17	i 18 54	+ 1	—	—
Copenhagen	63.6	21	i 10 39	+ 3	19 13	+ 5	—	—
Lund	63.9	21	10 42	+ 5	19 24	+12	—	—
Georgetown	64.7	316	10 49	+ 6	19 32	+11	e 29.8	—
Charlottesville	65.4	315 e	10 46	- 1	i 19 34	+ 4	e 31.7	—
Bergen	65.4	15	—	—	e 17 46?	?	—	—
Ithaca	65.9	320	10 48	- 2	19 34	- 2	29.8	—
Konigsberg	66.1	26	i 10 56	+ 4	—	—	e 30.8	36.3
Ottawa	66.8	323	i 11 1	+ 4	i 19 48	0	e 32.8	34.8
Sebastopol	67.2	40 e	11 3	+ 4	—	—	—	—
Yalta	67.6	40	i 11 6	+ 4	—	—	43.8	—
Simferopol	67.8	40	11 8	+ 5	—	—	31.8	—
Toronto E.	68.3	320	10 56	-10	i 20 11	+ 5	—	36.8
Theodosia	68.6	40	11 14	+ 6	21 43	+94	—	—
Uppsala	68.6	20 e	11 11	+ 3	e 20 7	- 2	e 29.8	38.4
Merida	70.0	295	(10 46)	-31	(20 7)	-19	(32.4)	—
Tananarive	70.0	110	—	—	19 26	-60	—	37.2
Cincinnati	70.2	314	i 11 20	+ 2	e 20 26	- 2	32.8	37.8
Ann Arbor	70.7	318	i 11 22	+ 1	e 20 28	- 6	e 34.4	41.7
Helsingfors	71.4	22 e	11 30	+ 4	e 20 48	+ 5	e 32.8	—
Scoresby Sund	72.0	0	11 49	+19	21 19	+29	31.8	—
Chicago E.	73.2	316	i 11 36	- 1	i 21 3	- 1	30.9	—
Pulkovo	73.3	25	11 40	+ 2	21 5	- 1	34.8	39.9
St. Louis	74.2	311 e	11 51	+ 8	i 21 19	+ 3	131.0	35.0
Florissant	74.4	311	i 11 49	+ 4	i 21 21	+ 4	30.4	34.6
Kucino	74.8	30	i 11 58	+10	21 22	- 2	34.3	44.2
Vera Cruz	76.4	290	(11 58)	+ 1	—	—	(32.2)	(46.8)
Baku	77.2	48	12 7	+ 5	—	—	—	—
Tacubaya	78.6	290	12 23	+12	22 22	+15	34.6	—
Ekaterinburg	87.1	33	i 12 58	- 2	i 23 32	-10	36.8	46.9
Tucson	90.0	303	13 16	0	e 23 3	[-25]	40.8	—
Tashkent	91.8	49	13 4	-22	—	—	41.8	52.5
Bombay	94.9	71	14 30	+47	23 50	[- 6]	40.7	42.4
Erzurum	95.7	47 e	13 35	-12	—	—	—	—
Victoria E.	98.7	320	14 34	+30	26 9	+26	46.6	51.6
Lick N.	98.7	310 e	13 57	- 7	—	—	e 42.0	—
Berkeley	99.2	310 e	17 32	[-11]	e 25 20	-28	e 50.1	—
Dehra Dun	99.2	60	—	—	—	—	—	48.8
Kodaikanal	99.3	80	24 4	?[S]	(24 4)	[-16]	—	—
Colombo	101.7	84	14 8	-11	28 48	?	51.6	54.3
Sitka E.	103.9	330	—	—	e 26 29	- 3	e 49.3	60.2
Phu-Lien	126.1	64 e	20 18	?	—	—	—	—
Perth	127.8	132 e	22 46?	?	—	—	—	—
Batavia	128.1	96 e	19 58	[+44]	i 36 44	?	—	—
Hong Kong	132.4	60	22 38	?	—	—	e 65.8	115.3
Honolulu T.H. E.	132.8	297	—	—	—	—	60.7	—
Christchurch	133.2	193 e	21 40	?PR ₁	e 39 20	?SR ₁	—	—
Wellington E.	134.6	196 e	23 29	?	i 40 29	?SR ₁	62.9	78.8
N.	134.6	196 e	22 11	?PR ₁	e 40 31	?SR ₁	62.2	83.3
Melbourne	138.8	163	20 21	[+43]	—	—	e 56.5	94.3
Adelaide	139.2	153	—	—	e 23 14	?	e 37.1	94.9
Manila	141.0	66 e	21 11	?	i 23 39	?	e 102.8	—
Riverview	144.1	169 e	19 56	[+ 9]	—	—	e 71.5	95.8
Sydney	144.1	169	41 22	?SR ₁	55 34	?	81.0	84.3
Suva E.	152.1	225 e	19 46	[-13]	—	—	62.8	—

Additional readings and notes: San Fernando MN = +25.1m. Almeria
P = +10m.54s. Alicante MN = +42.1m. Toledo IP = +8m.20s.,
INE = +11m.45s., MNW = +24.8m. Algiers PR₁ = +10m.2s., SR₁ =

Continued on next page.

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+18m.20s., SR₂ = +19m.32s., Sucre iP = +8m.43s., PR₁ = +10m.2s., SR₁ = +18m.54s., La Paz iE = +8m.52s., PR₁N = +10m.0s., PR₁E = +10m.2s., PR₁E = +10m.32s., PSE = +16m.24s., SR₁N = +19m.49s., SR₁E = +19m.52s., SR₁N = +21m.14s., iLN = +23.9m., MN = +25.2m.; T₀ = 23h.59m.44s., Barcelona MN = +31.4m., Moncalieri MN = +32.5m., Florence PR₁ = +11m.16s., PR₂ = +12m.46s., PR₂ = +13m.56s., SR₁ = +18m.46s., [S] - 23s., SR₂ = +22m.16s., SR₂ = +23m.36s., Neuchatel iZ = +9m.37s., Chur i = +9m.43s., Paris MN = +34.8m., Kew iZ = +10m.47s., iSEN = +17m.37s., MZ = +36.5m., Strasbourg PR₁ = +12m.18s., ePS = +18m.4s., MNZ = +36.8m., Innsbruck PR₁? = +11m.31s., PR₁? = +13m.17s., PS = +18m.10s., SR₁? = +24m.42s., Uccle MN = +29.3m., Laibach eE = +15m.10s., Feldberg MN = +37.8m., Zagreb eNW = +10m.4s., iNE = +10m.18s., eNW = +10m.42s., iNE = +11m.1s., eNE = +11m.36s., eNW = +11m.51s., eNE = +12m.12s., iNE = +13m.5s., eNW = +13m.35s., eNE = +14m.12s., and +15m.53s., ePSNE = +17m.55s., eNW = +18m.26s., iNE = +19m.30s., e = +21m.40s., eNW = +23m.38s., and +24m.34s., De Bilt MN = +30.0m., MZ = +40.7m., Graz PS = +19m.1s., Edinburgh i = +19m.32s., [S] - 18s., i = +21m.56s., Belgrade eN = +17m.21s., and +19m.22s., Jena eZ = +14m.40s., eEN = +14m.46s., iN = +20m.46s., Vienna iPZ = +10m.12s., PR₁ = +12m.21s., PR₁ = +13m.45s., iEN = +16m.36s., PS = +18m.57s., SR₁ = +23m.33s., Budapest P₀P = +11m.23s., PR₂ = +13m.56s., P₀S = +15m.16s., S₀S = +20m.5s., iPR₁? = +22m.26s., Hamburg iPZ = +10m.22s., eP₀SZ = +15m.15s., MN = +37.2m., Copenhagen P₀P? = +11m.28s., Georgetown iSN = +19m.31s., PS = +20m.6s., Charlottesville eN = +20m.46s., [S] +10s., iSR₁N = +23m.28s., eSR₁E = +25m.24s., iSR₁N = +26m.22s., eSR₁E = +26m.38s., LN = +32.1m., Ithaca e = +27m.1s., SR₁ - 12s., Konigsberg ePEN = +10m.57s., iZ = +11m.11s., iP₀PZ = +11m.54s., eE = +13m.16s., iPR₁EN = +15m.6s., eE = +16m.5s., eEN = +17m.6s., eN = +19m.6s., and +19m.49s. = S + 11s., iE = +20m.10s. = PS - 2s., and +21m.7s. = Z - 12s., iN = +22m.5s., iE = +22m.24s., iN = +24m.11s., eN = +25m.22s., MN = +35.8m., Ottawa i = +16m.46s., SR₁N = +24m.56s., SR₁ = +27m.16s.; T₀ = 0h.0m.28s., Toronto iE = +11m.25s., eE = +13m.55s., iN = +20m.1s., iE = +20m.22s., MN = +32.8m., Upsala MN = +35.3m., Merida readings have been increased by 1m., Tananarive eP₀P = +11m.39s., e = +12m.53s., PR₂ = +15m.14s., PR₂ = +16m.5s., S₀S = +21m.32s., e = +22m.56s., and +27m.1s., Cincinnati iPR₁Z = +14m.13s., iPR₁Z = +15m.38s., iPR₁Z = +16m.46s., iZ = +19m.34s., eSZ = +20m.22s., ePS?Z = +20m.46s., ePPPSZ = +20m.56s., S₀SZ = +21m.58s., iZ = +24m.3s., SR₁Z = +25m.16s., P₀SS₀PZ = +27m.15s., iSR₁Z = +27m.42s., SR₁Z = +28m.42s., Ann Arbor eE = +13m.46s., ePR₂ = +16m.4s., ePS = +21m.16s., iE = +22m.46s., eSR₂ = +28m.40s., MN = +38.5m.; T₀ = 0h.0m.24s., Helsingfors PR₁ = +14m.35s., PR₁ = +16m.6s., PS = +21m.18s., Chicago iE = +13m.9s., iN = +13m.11s., iSN = +21m.1s., SR₁N = +24m.5s., SR₁E = +25m.22s., LN = +29.2m., St. Louis iPE = ePN = +11m.53s., eSE? = +21m.2s., iLN = +30.6m., Vera Cruz readings have been increased by 1m., Florissant iPSE = +21m.54s., LN = +28.9m., Baku i = +13m.31s., and +16m.48s., PS = +22m.35s., Tucson eS₀P₀SN = +22m.52s., eSR₁E = +28m.38s., eSR₁N = +29m.10s., LN = +36.0m., Tashkent i = +14m.38s., +16m.0s., +18m.56s., and +21m.28s., Lick eN = +18m.8s. = PR₁ + 3s., and +30m.58s., Berkeley eE = +17m.42s., eEN = +27m.22s. = PS + 27s., iE = +32m.18s. = SR₁ - 10s., eN = +39m.16s., Sitka eSR₁E = +33m.32s., eSR₁E = +38m.55s., Honolulu T.H. ePR₁E = +22m.27s., eN = +23m.40s., SR₁E = +39m.17s., eSR₁N = 39m.46s., LN = +55.0m., Melbourne PR₁ = +23m.31s., SR₁ = +41m.21s., SR₁ = +46m.11s., Adelaide MN = +94.3m., Manila iEN = +25m.21s., Riverview PR₁ = +23m.18s., PR₂ = +26m.58s., PR₂ = +29m.26s., PR₁ = +31m.8s., PPS = +35m.57s., SR₁ = +42m.28s., SR₁ = +47m.52s., SR₂ = +52m.21s., eL₀ = +59.9m., and +63.0m., MN = +92.6m., Suva eN = +16m.40s., LN = +74.8m.

Feb. 2d. 14h. 41m. 58s. Epicentre 5° 5S. 130° 0E. (as on 1927 July 14d.).

A = -.640, B = +.763, C = -.096; D = +.766, E = +.643;
G = +.062, H = -.073, K = -.995.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	m.	s.	m.	s.	m.	s.	m.	m.
Manila	22.0	336	e 5 4	- 1	1 9 2†	- 3	-	-
Adelaide	30.5	166	e 6 38	+ 5	1 11 50	+ 7	18.6	23.1
Hong Kong N.	31.9	331	—	—	—	—	—	17.4
Riverview	34.5	148	—	e 13 8	—	+ 20	e 20.5	25.9
Sydney	34.5	148	11 32	†S	(11 32)	- 76	19.5	23.5

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Melbourne	35.1	160	—	—	i 12 54	- 3	28.5	30.4
Wellington	53.6	140	—	—	—	—	27.6	—
Irkutsk	61.8	342	e 10 20	- 4	i 18 40	- 6	31.0	—
Ekaterinburg	83.6	330	e 12 39	- 1	22 53	-12	38.0	45.5
Baku	86.1	311	e 12 59	+ 5	23 35	+ 4	43.0	47.8
Copenhagen	109.8	329	—	—	—	—	60.0	—

Additional readings and note: Adelaide eS = +12m.38s., true S is given as i simply. Riverview eS? = +18m.8s., MN = +22.6m. Melbourne i = +17m.7s. and +19m.32s., e = +26m.17s.

Feb. 2d. Readings also at 0h. (Samarkand), 1h. (Kobe), 2h. (Apia), 3h. (Samarhand), 7h. and 8h. (La Paz), 11h. (near Sucre), 14h. and 19h. (Samarkand), 23h. (Nagoya).

Feb. 3d. 2h. 44m. 18s. Epicentre 29°0N. 130°0E. (as on 1925 June 28d.).

A = -562, B = +670, C = +485; D = +766, E = +643.
G = -312, H = +371, K = -875.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Hukuoka	4.6	4	1 8	- 3	2 12	+ 6	2.5	2.6
Matuyama	5.4	25	i 1 26	+ 3	—	—	—	2.6
Koti	5.5	33	e 1 17	- 8	2 4	-27	3.1	—
Sumoto	6.7	36	i 1 36	- 6	2 42	-20	3.5	4.0
Kobe	7.2	36	1 40	- 9	—	—	e 4.0	4.7
Osaka	7.3	38	2 3	+12	—	—	4.5	6.2
Toyooka	7.7	30	i 1 58	+ 1	—	—	i 3.9	4.6
Zi-ka-wei	7.7	289	e 1 48	- 9	3 44	+15	5.0	5.9
Nagoya	8.5	42	e 2 6	- 3	—	—	—	—
Taihoku	8.5	244	e 2 31	+22	—	—	4.3	—
Hong Kong	15.7	249	3 42	- 6	e 7 25	+37	—	10.5
Manila	16.7	212	i 4 5	+ 4	i 7 19	+ 8	—	—
Phu-Lien	22.7	254	0 42?	?	—	—	—	—
Batavia	41.7	217	i 7 9	-60	i 14 13	-28	—	—
Bombay	52.7	273	—	—	e 17 42?	+50	—	—
Ekaterinburg	54.9	322	e 9 29	- 9	e 17 14	- 6	24.7	35.5
Baku	64.7	305	e 10 41	- 2	19 31	+10	34.2	45.1
Kucino	67.5	323	—	—	e 20 0	+ 4	33.9	43.0
Pulkovo	69.9	330	—	—	—	—	37.7	45.8
Helsingfors	72.1	330	—	—	—	—	e 45.7	—
Lund	79.7	330	—	—	—	—	40.7	—
Copenhagen	80.0	330	—	—	22 18	- 5	42.7	—
Budapest	81.9	321	—	—	—	—	e 42.7	—
Vienna	82.6	323	e 12 21	-13	—	—	—	52.7
Zagreb	84.3	320	—	—	—	—	e 52.4	—
De Bilt	85.6	329	i 12 40	-11	e 22 50	-36	e 45.7	50.6
Uccle	86.9	329	—	—	—	—	e 46.7	—
Strasbourg	86.9	325	—	—	—	—	e 45.7	56.2
Stonyhurst	87.5	333	—	—	—	—	e 52.7	58.2
Florence	88.2	321	—	—	—	—	e 50.9	55.7
Kew	88.4	332	—	—	—	—	e 47.6	57.8
Paris	89.2	329	—	—	—	—	e 51.7	57.7
Moncalleri	89.3	324	—	—	—	—	e 48.8	—
Tortosa	95.9	324	—	—	—	—	e 56.7	62.7
Alicante	98.3	324	—	—	—	—	e 63.4	—
Toledo N.W.	99.0	326	—	—	—	—	e 53.3	65.6
Granada	100.9	325	—	—	—	—	e 59.2	64.9
Florissant	102.4	31	e 12 12	?	e 20 12	—	—	61.7
San Fernando	102.7	325	—	—	—	—	—	66.9
Georgetown	107.6	21	—	—	e 23 42	[-77]	65.6	—
Charlottesville	107.9	24	—	—	—	—	e 74.7	—

For Notes see next page.

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NOTES TO FEB. 3d. 2h. 44m. 18s.

Additional readings and note: Hukuoka MN = +3.2m. Matuyama iPR₁N = +1m.54s. Sumoto MN = +4.1m. Osaka MN = +6.6m. Zi-ka-wei eZ = +3m.28s. Kucino e = +20m.54s. = [S] + 1s. and +24m.42s. Helsingfors eLN = +41.7m. Budapest eL = +51.0m. Zagreb e = +53m.32s. De Bilt MNZ = +55.8m. Florence L = +54.7m. Moncalieri e = +41m.38s. San Fernando MN = +66.0m. Georgetown eZ = +32m.32s., +37m.37s., +48m.59s., and +55m.34s.

Feb. 3d. 7h. 4m. 55s. Epicentre 29°0N. 130°0E. (as at 2h.).

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Hukuoka	4.6	4	e 1 10	- 1	—	—	—	—
Koti	5.5	33	—	—	e 2 35	+ 4	—	—
Sumoto	6.7	36	e 2 46	?S	(e 2 46)	-16	—	—
Kobe	7.2	36	3 38	?L	—	—	(3.6)	—
Osaka	7.3	38	1 4	-47	—	—	3.4	6.4
Hong Kong	15.7	249	—	—	—	—	e 8.6	11.4
Irkutsk	30.0	330	e 6 5?	-23	e 11 5?	-29	17.1	19.5
Tashkent	50.1	302	—	—	e 21 47	?SR _a	27.1	32.7
Ekaterinburg	54.9	322	e 9 36	- 2	—	—	26.1	35.6
Baku	64.7	305	—	—	—	—	e 37.2	—
Kucino	67.5	323	—	—	—	—	37.0	42.3
Pulkovo	69.9	330	—	—	—	—	e 35.4	45.4
Copenhagen	80.0	330	—	—	—	—	43.1	—
De Bilt	85.6	329	—	—	—	—	e 50.1	—
Uccle	86.9	329	—	—	—	—	55.6	—
Strasbourg	86.9	325	—	—	—	—	e 53.1	—
Kew	88.4	332	—	—	—	—	e 56.1	—
Paris	89.2	329	—	—	—	—	e 57.1	57.1

Additional readings: Osaka MN = +7.1m. Irkutsk e = +15m.5s.?
Pulkovo L = +43.1m.

Feb. 3d. 18h. 0m. 40s. Epicentre 12°8N. 91°0W. (as on 1929 Jan. 31d.).

A = -.017, B = -.975, C = +.222; D = -1.000, E = +.017;
G = -.004, H = -.222, K = -.975.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Vera Cruz	8.1	323	(1 50)	-13	(3 18)	-22	(3.4)	(6.1)
Merida	8.3	9	(2 24?)	+18	(3 53)	+ 8	(4.0)	(4.5)
Tacubaya	10.3	311	2 32	- 2	4 27	-10	4.6	5.3
St. Louis	25.8	1	e 5 57	+11	e 10 20	+ 2	e 16.2	18.2
Florissant	26.0	1	1 5 58	+10	i 10 20	- 2	e 16.8	18.3
Tucson	E. 26.6	320	5 37	-17	e 10 10	-23	e 14.0	16.8
Cincinnati	Z. 26.9	11	—	—	e 10 30	- 9	16.3	—
Georgetown	Z. 28.9	23	e 5 55	-22	e 10 41	-34	e 13.1	19.6
Chicago	E. 29.1	5	—	—	11 20?	+ 1	20.4	—
Ann Arbor	E. 30.2	11	—	—	e 11 50	+13	e 15.1	—
Toronto	N. 32.4	16	—	—	e 11 43	-31	19.0	21.8
Ottawa	35.0	20	—	—	i 12 20	-35	e 19.3	—
La Paz	37.0	142	7 20?	-10	—	—	—	—
Sucre	40.7	142	7 44	-17	e 14 29	+12	24.3	29.3
Scoresby Sund	71.0	20	—	—	—	—	38.3	—
Kew	80.4	40	—	—	—	—	e 42.3	—
Uccle	83.4	40	—	—	—	—	e 43.3	—
De Bilt	83.6	38	—	—	—	—	e 45.3	51.3
Strasbourg	86.1	41	—	—	—	—	e 46.3	—
Copenhagen	86.8	33	—	—	—	—	48.3	—
Pulkovo	93.6	25	—	—	e 23 51	[+ 1]	54.3	56.0
Ekaterinburg	106.5	16	—	—	e 24 56	[+ 2]	56.3	—
Irkutsk	113.6	350	—	—	—	—	e 66.3	—
Tashkent	122.9	17	—	—	e 25 43	[-11]	e 56.3	72.0

For Notes see next page.

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NOTES TO FEB. 3d. 18h. 0m. 40s.

Additional readings and notes : Vera Cruz readings have been *increased* by 1m. Merida readings have been *increased* by 2m. Florissant iSEN = +10m.54s. Tucson LE = +15.1m., MN = +18.8m. Cincinnati eZ = +11m.20s., iZ = +13m.0s., eZ = +13m.50s. Georgetown ePR₁Z? = +6m.29s. Chicago eE = +11m.56s., LN = +18.3m. Ann Arbor eE = +13m.38s., +14m.32s., +15m.8s. (entered as eLE) and +16m.50s. Ottawa iE = +15m.32s. Tashkent e = +40m.38s.

Feb. 3d. Readings also at 0h. (Alicante, near Barcelona, and Tortosa), 4h. (near Kobe and Sumoto), 6h. (Samarkand (2)), 8h. (Florissant and near Tacubaya), 13h. (Hamburg, Strasbourg, Vienna, and Suva), 14h. (Florissant), 15h. (near Sucre), 16h. (Ekaterinburg, Irkutsk, and Tashkent), 17h. (Copenhagen and Pulkovo), 18h. (Paris), 20h. (Samarkand and near Tacubaya), 23h. (near Samarkand and Tashkent).

Feb. 4d. 10h. 19m. 34s. Epicentre 14°-0N. 88°-0W. (as on 1927 Oct. 2d.).

A = +.034, B = -.970, C = +.242 ; D = -.999, E = -.035 ; G = +.008, H = -.242, K = -.970.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Merida	7.2	347	(1 30)	-19	(3 18)	+ 3	(3.4)	(4.5)
Tacubaya	12.1	298	2 54	- 6	5 8	-13	5.3	5.9
St. Louis	N. 24.7	356	e 5 39	+ 4	e 10 21	+24	e 15.0	—
Florissant	24.9	355	e 5 36	- 1	i 10 22	+21	e 17.0	20.0
Cincinnati	z. 25.3	6	—	—	e 10 41	+32	14.4	18.8
Georgetown	z. 26.7	19	e 5 51	- 4	—	—	e 14.3	20.4
Tucson	27.7	315	5 46	-19	—	—	14.4	16.8
Chicago	N. 27.8	1	—	—	9 26?	-89	15.4	—
Toronto	N. 30.5	14	—	—	—	—	19.8	—
Ottawa	33.1	18	—	—	e 11 26?	-60	e 15.4	—
La Paz	36.3	147	e 7 37	+13	—	—	18.4	—
Sucre	39.9	146	7 46	- 8	13 22	-43	20.4	25.8
Victoria	E. 45.1	328	—	—	—	—	24.8	30.6
Scoresby Sund	69.0	20	—	—	—	—	37.4	—
Kew	77.7	40	—	—	—	—	e 41.4	—
Paris	79.9	43	—	—	—	—	e 48.4	—
Uccle	80.6	40	—	—	—	—	e 42.4	—
De Bilt	80.9	39	—	—	—	—	e 41.4	—
Strasbourg	83.3	43	—	—	—	—	e 43.4	—
Copenhagen	84.2	35	—	—	—	—	43.4	—
Ekaterinburg	104.6	18	—	—	e 25 9	[+24]	50.4	—
Irkutsk	112.9	351	—	—	—	—	e 69.4	—
Baku	113.0	33	—	—	—	—	e 62.4	—
Tashkent	120.8	20	—	—	—	—	e 62.4	74.8

Additional readings and note : Merida readings have been *increased* by 1m. St. Louis eLE = +14.3m. Georgetown eZ = +6m.42s. and +12m.13s. Tucson PR₁N? = +6m.32s., MN = +17.9m. Chicago LE = +15.8m. Toronto eN = +13m.26s. = SR₁ +10s. Ottawa eLN = +17.4m. Victoria LN = +26.5m.

Feb. 4d. Readings also at 0h. (Sebastopol, near Yalta, and near Tananarive), 2h. (La Paz and Manila), 5h. (Cincinnati), 6h. (Georgetown, Cincinnati, Florissant, St. Louis, Ottawa, and Toronto), 7h. (near Samarkand), 8h. (near Batavia and near Mizusawa), 9h. (Baku, Ekaterinburg, Batavia, and Bombay), 10h. (Mizusawa), 11h. (Samarkand), 16h. and 20h. (Suva), 22h. (Rio de Janeiro and Samarkand), 23h. (Samarkand).

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Feb. 5d. 1h. 57m. 13s. Epicentre 31°·5N. 47°·5E.

A = +·576, B = +·629, C = +·522; D = +·737, E = -·676;
G = +·353, H = +·385, K = -·853.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Baku	9·1	12	e 2 41	+23	3 51	-15	—	6·4
Ksara	10·1	287	3 38	3S	(3 38)	-54	—	—
Simferopol	17·0	326	e 4 13	+ 8	—	—	—	—
Samarkand	17·8	57	i 4 32	+17	—	—	—	—
Tashkent	20·0	55	i 4 41	0	i 8 23	0	e 20·8	22·8
Ekaterinburg	27·0	16	5 58	0	e 10 40	- 1	14·8	—
Pulkovo	30·5	343	—	—	—	—	17·8	—
Copenhagen	34·5	325	—	—	—	—	20·8	—

Ekaterinburg gives also e = +10m.34s. Pulkovo e = +12m.47s.?

Feb. 5d. Readings also at 0h. (Samarkand), 1h. (La Paz, Tacubaya (2), Sebastopol, Simferopol, and near Yalta), 3h. (Ottawa, Toronto, Florissant, Tucson, St. Louis, Cincinnati, Georgetown, and near Tacubaya), 4h. (Victoria, De Bilt, Strasbourg, Kew, Scoresby Sund, Copenhagen, Pulkovo, Ekaterinburg, and Tashkent), 5h. (near Santiago), 6h. (near Samarkand and Tashkent), 9h. (Ekaterinburg, Tashkent, near Frunse, and Samarkand), 12h. (near Honolulu T.H.), 14h. (Samarkand), 15h. (Tashkent), 16h. (Ekaterinburg and Irkutsk), 17h. (Frunse and near Samarkand), 19h. (near Kobe, Toyooka, and near Samarkand), 20h. (near Barcelona, Tortosa, and near Lick).

Feb. 6d. 6h. 49m. 7s. Epicentre 49°·7N. 149°·3E.

A = -·556, B = +·330, C = +·763; D = +·511, E = +·860;
G = -·656, H = +·389, K = -·647.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Akita	12·0	217	e 3 2	+ 3	(5 12)	- 7	5·2	—
Mizusawa	12·1	212	3 0	0	5 15	- 6	—	—
Nagoya	12·1	212	3 1	+ 1	5 17	- 4	—	—
Toyooka	17·1	216	e 4 7	+ 1	e 7 28	+ 8	—	—
Osaka	17·6	222	i 4 15	+ 3	(7 38)	+ 7	7·6	7·8
Kobe	18·1	219	4 0	-18	(7 47)	+ 5	7·8	8·1
Sumoto	18·3	220	i 4 19	- 2	(7 48)	+ 1	7·8	—
Koti	18·7	220	e 4 24	- 1	(e 7 49)	- 6	e 7·8	—
Hukuoka	19·9	222	i 4 40	0	e 8 21	0	—	—
Zi-ka-wei	21·3	228	4 56	- 1	8 57	+ 7	—	—
Irkutsk	27·9	239	e 5 55	-12	—	—	—	—
Hong Kong	28·0	293	i 6 10	+ 2	e 11 4	+ 5	—	16·3
Manila	38·8	238	7 33	-11	—	—	e 17·4	17·5
Phu-Lien	42·0	225	i 7 53	-18	i 14 8	-27	—	—
Ekaterinburg	44·4	245	e 8 19	-10	—	—	—	—
Frunse	49·7	315	i 9 6	+ 1	16 19	+ 4	—	—
Honolulu T.H.	49·9	293	9 10	+ 4	—	—	—	—
Victoria	50·2	105	—	—	e 15 5	-76	19·3	—
Tashkent	53·8	55	9 40	+ 8	(16 29)	-37	16·5	18·8
Samarkand	54·0	295	i 9 36	+ 3	i 17 9	0	—	30·3
Pulkovo	56·4	295	i 10 39	+51	18 33	+54	31·7	—
Helsingfors	59·9	330	i 10 13	+ 2	18 25	+ 3	30·9	34·4
Uppsala	61·3	832	e 10 23	+ 2	e 18 43	+ 3	e 30·9	—
Hyderabad	63·7	336	e 10 38	+ 2	e 20 14	[+ 9]	—	—
Baku	64·5	270	10 36	- 6	20 6	+47	—	—
Batavia	65·6	305	i 10 55	+ 6	e 19 49	+17	35·4	—
Bombay	67·0	228	i 10 53	- 5	i 19 38	-12	—	—
Lund	67·0	274	11 11	+13	20 11	+21	36·2	37·8
Copenhagen	68·4	336	11 8	+ 1	20 10	+ 3	34·9	—
	68·6	336	i 11 9	+ 1	20 9	0	28·9	—

Continued on next page.

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		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Theodosia		69-2	318	e 11 18	+ 6	—	—	—	—
Simferopol		69-9	318	e 11 6	-10	—	—	—	—
Yalta		70-2	318	e 11 22	+ 4	—	—	—	—
Sebastopol		70-4	318	e 11 53†	+34	—	—	—	—
Hamburg		71-2	337	e 11 22	- 2	e 20 40	0	—	—
Jena	Z.	73-1	334	i 11 34	- 3	—	—	—	—
De Bilt		73-8	338	i 11 40	- 1	21 10	- 2	e 34-9	—
Budapest		73-8	329	11 43	+ 2	—	—	—	—
Vienna	Z.	74-0	330	11 40	- 2	—	—	—	—
Feldberg	N.	74-6	335	11 44	- 2	—	—	—	—
Uccle		75-1	339	i 11 46	- 4	e 21 20	- 7	e 32-9	—
Kew		75-6	341	11 48	- 5	21 28	- 5	35-9	45-9
Chicago	E.	75-8	40	—	—	i 20 56	-39	e 34-9	—
Strasbourg		76-3	335	11 51	- 6	e 21 32	- 9	29-9	—
Innsbruck		76-4	332	i 12 47	+50	—	—	—	—
Florissant		77-1	44	e 11 41	-21	i 21 15	-35	—	—
Zurich		77-2	334	i 11 57	- 5	—	—	—	—
Ottawa		77-2	30	—	—	i 20 53†	-58	e 38-9	—
St. Louis		77-3	44	11 42	-21	21 14	-38	—	—
Toronto		77-4	34	—	—	(21 16)	-37	—	—
Chur		77-4	334	e 12 2	- 1	—	—	—	—
Paris		77-4	339	i 12 2	- 1	e 21 52	- 1	43-9	—
Neuchatel		77-9	334	e 12 0	- 6	—	—	—	—
Besançon		78-0	335	e 12 2	- 5	—	—	—	—
Cincinnati	Z.	79-3	40	—	—	e 21 53†	-22	70-9	—
Moncalieri		79-6	334	12 3	-14	16 2	?	18-6	—
Florence		79-6	330	i 12 13	- 4	e 22 8	-11	—	40-9
Grenoble		80-0	336	i 11 51	-28	—	—	—	—
Harvard		81-4	29	—	—	i 22 32	- 7	—	—
Georgetown	Z.	82-4	35	12 53	+21	i 22 17	-33	e 33-0	—
San Fernando	E.	91-1	340	—	—	—	—	—	56-0
La Paz		135-1	56	19 7	[-23]	22 26	?PR ₁	—	—
Sucre		138-7	55	e 19 29	[- 8]	22 6	?PR ₁	—	—

Additional readings and notes: Toyooka eLN = +7.7m. Osaka MN = +3.6m. Kobe LN = +8.0m. Ekaterinburg i = +9m.8s., +9m.30s., +11m.5s. = PR₁ - 8s., +11m.29s., +11m.42s., and +13m.58s. Baku i = +20m.35s. = [S] - 3s., e = +28m.2s. = SR₁ - 14s. Copenhagen +15m.35s. = PR₁ - 12s., and +20m.58s. = [S] - 4s. Jena iPEN = +11m.36s. De Bilt e = +22m.12s. = Σ + 1s. Vienna iPZ = +11m.42s., iE = +12m.22s. and +22m.44s. Kew iZ = +11m.49s., iPEN = +11m.50s., PSE = +22m.34s. Chicago SR₁E† = +26m.33s. Innsbruck i = +12m.53s. and +13m.14s. Florissant iNZ = +12m.20s., iE = +22m.19s. = [S] + 16s. Ottawa eE = +30m.53s. = SR₁ + 3s. Harvard i = +21m.27s. San Fernando MN = +54.8m.

Feb. 6d. Readings also at 2h. (Riverview, Sydney, Melbourne, Christchurch, Wellington, La Paz, Sucre, Georgetown, Pulkovo, Ekaterinburg, and Tashkent), 3h. (De Bilt, Kew, Copenhagen, Baku, Irkutsk, Bombay, Honolulu T.H., and Ottawa), 4h. (Rio de Janeiro), 5h. (La Paz, Frunse, near Tashkent, and Samarkand), 6h. (La Paz, Akita, and near Mizusawa), 7h. (Sucre), 12h. (La Plata, Sucre, and La Paz), 14h. (Aimata, Frunse, Sucre, La Paz, and near Tacubaya), 18h. (Ekaterinburg, Tashkent, Nagoya, near Akita, and Mizusawa), 23h. (Entebbe).

Feb. 7d. Readings at 1h. (Entebbe), 2h. (Manila), 3h. (Entebbe (2)), 5h. (Entebbe, Tashkent, near Manila, and near Toyooka), 6h. (Ekaterinburg), 7h. (Entebbe and near Toyooka), 9h. (Entebbe), 11h. (Entebbe and Wellington), 12h. (Entebbe), 13h. (Apia, Entebbe (2), and Ekaterinburg), 14h. (Entebbe), 19h. (near Batavia and near Granada), 20h. (La Paz), 21h. (Port au Prince), 23h. (Entebbe, near Batavia, and Malabar).

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Feb. 8d. 2h. 4m. 36s. Epicentre 12°-3N. 93°-8W.

A = -065, B = -975, C = +213; D = -998, E = +066;
G = -014, H = -213, K = -977.

	Δ o	Az.	P. m. s.	O-C. s.	S. m. s.	O-C. s.	L. m.	M. m.
Vera Cruz	7.3	342	(1 26)	-25	(2 55)	-23	(3.0)	(4.6)
Tacubaya	8.8	324	(2 12)	-1	(4 2)	+4	(4.1)	(4.4)
Merida	9.6	24	(2 48)	+24	(4 12)	-6	(4.4)	(5.5)
Tucson	25.4	325	6 11	+29	10 59	+45	14.4	—
St. Louis	26.5	6	i 5 54	+1	e 10 30	-2	(e 15.0)	—
Florissant	26.7	6	e 5 51	-4	e 10 35	0	e 15.0	19.4
Cincinnati	28.1	15	e 6 10	+1	e 11 0	-1	e 15.5	18.4
Charlottesville N.	29.1	25	—	—	11 12	-7	15.4	17.9
Chicago N.	30.0	9	—	—	11 26	-8	16.6	—
Fordham	33.5	29	e 11 8	+247	e 17 9	+277	18.8	19.8
Toronto	33.7	20	—	—	e 12 24?	-12	18.4	22.4
Lick E.	35.3	321	—	—	—	—	e 25.4	—
Ottawa	36.5	22	—	—	e 12 41	-37	e 18.4	—
La Paz	38.4	139	7 41	0	14 26	+42	19.5	23.7
Sucre	42.1	139	e 8 6	-6	—	—	20.3	24.6
Victoria	43.6	332	—	—	—	—	25.0	30.7
Rio de Janeiro N.	60.5	126	—	—	e 18 24?	-6	e 35.4	—
Scoresby Sund	72.4	20	—	—	25 54	?SR ₁	37.4	—
San Fernando E.	80.8	55	—	—	—	—	—	49.6
Kew	82.6	39	—	—	—	—	e 39.4	—
Granada	82.8	53	—	—	—	—	e 40.4	43.6
Paris	84.9	41	—	—	—	—	e 43.4	—
Uccle	85.6	39	—	—	—	—	e 43.4	—
De Bilt	85.7	38	—	—	—	—	e 41.4	51.8
Strasbourg	88.3	40	—	—	—	—	e 42.4	—
Copenhagen	88.7	33	—	—	e 24 24?	+24	42.4	—
Pulkovo	95.2	25	—	—	—	—	47.4	56.4
Ekaterinburg	107.7	15	—	—	e 25 29	[+29]	50.4	66.9
Irkutsk	113.6	348	—	—	—	—	e 30.4	—
Baku	117.5	30	—	—	—	—	e 55.4	—
Tashkent	124.2	15	e 20 57	?PR ₁	e 33 18	?	e 63.4	77.6

Additional readings and notes: Vera Cruz and Tacubaya readings have been diminished by 1m. Merida readings have been increased by 1m. St. Louis gives L as eSN. Florissant iNZ = +6m.15s. Charlottesville eN = +10m.24s., SR₁N? = +13m.30s. Chicago eE = +11m.43s. San Fernando MN = +49.2m. De Bilt MZ = +52.0m. Ekaterinburg e = +31m.27s. and +35m.10s. Tashkent e = +47m.24s.?

Feb. 8d. 7h. 41m. 0s. Epicentre 25°-0N. 119°-5E. (as on 1926 Aug. 20d.).

A = -446, B = +789, C = +423; D = +870, E = +492;
G = -208, H = +368, K = -906.

	Δ o	Az.	P. m. s.	O-C. s.	S. m. s.	O-C. s.	L. m.	M. m.
Taihoku	1.9	89	0 28	-1	—	—	0.6	—
Hong Kong	5.5	242	—	—	e 2 35	+4	3.5	4.4
Zi-ka-wei N.	6.4	15	e 1 43	+5	—	—	—	—
Manila	10.5	172	e 4 32	?S	(e 4 32)	-11	—	—
Phu-Lien	12.6	253	3 0?	-7	—	—	—	—
Irkutsk	29.5	341	i 6 20	-3	i 11 17	-9	19.0	20.2
Tashkent	44.4	305	i 8 17	-12	i 15 19	+12	—	31.5
Samarkand	46.0	303	e 9 0	+20	—	—	—	—
Ekaterinburg	52.4	324	i 9 32	+10	i 17 1	+12	26.0	—
Pulkovo	68.2	327	—	—	—	—	38.0	—
Copenhagen	78.5	327	—	—	—	—	—	49.0

Pulkovo e = +30m.41s. and +33m.56s.

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Feb. 8d. Readings also at 0h. (Entebbe (2)), 1h. (Georgetown and La Paz), 5h. (Entebbe (2) and Bombay), 7h. (Entebbe and near Toyooka), 8h. (Entebbe), 9h. (Entebbe (2) and near Batavia), 11h. (Entebbe, near Chur, Neuchatel, and Zurich), 12h. (Entebbe (4), near La Paz (2), and near Ksara), 14h. (Almata and Samarkand), 15h. (Entebbe), 18h. (Andijan and Samarkand), 20h. (Andijan, Samarkand, and near Manila).

Feb. 9d. 1h. 55m. 40s. Epicentre 23°·5N. 102°·5E.

A = -·198, B = +·895, C = +·399; D = +·976, E = +·216;
G = -·086, H = +·389, K = -·917.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Phu-Lien	4·7	125	1 39	+26	2 16	+ 7	—	—
Hong Kong	10·9	94	e 5 44	?L	—	—	e 5·7	6·9
Calcutta	N. 13·0	268	e 5 59	?S	(e 5 59)	+15	—	—
Taihoku	E. 17·4	81	—	—	—	—	e 9·5	—
Zi-ka-wei	N. 18·4	61	—	—	—	—	e 9·6	—
Manila	E. 19·6	113	—	—	—	—	e 9·3	—
Bombay	27·9	266	11 10	?S	(11 10)	+13	e 13·3	—
Irkutsk	28·8	2	e 6 16	0	e 11 15	+ 2	16·3	17·8
Batavia	30·0	171	i 8 56	?	—	—	—	—
Tashkent	32·9	311	—	—	e 12 14	- 8	e 17·3	21·3
Ekaterinburg	44·9	329	i 8 34	+ 2	e 15 17	+ 3	23·3	—
Copenhagen	70·8	323	—	—	—	—	37·3	—

Additional readings: Hong Kong $i = +5m.58s.$, Calcutta $ePE = +6m.18s.$
Batavia $i = +9m.48s.$, $+10m.39s.$, and $+17m.39s.$ Ekaterinburg $e = +18m.58s. = SR_1 + 30s.$

Feb. 9d. 12h. 27m. 50s. Epicentre 32°·9N. 130°·8E. (as on 1929 Jan. 1d. and given in the Geophys. Mag. Vol. IV, No. 4).

A = -·549, B = +·636, C = +·543; D = +·757, E = +·653;
G = -·355, H = +·411, K = -·840.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Kumanoto	0·1	230	0 2	0	0 3	0	—	—
Hukuoka	0·8	335	0 8	- 4	0 21	- 1	—	0·4
Nagasaki	0·8	258	0 9	- 3	0 19	- 3	—	—
Miyazaki	1·1	152	0 13	- 4	0 29	- 2	—	—
Matuyama	1·9	60	i 0 1	-28	—	—	10·5	0·6
Hamada	2·3	28	0 35	- 1	1 3	0	—	—
Koti	2·4	74	e 0 36	- 1	1 10	+ 4	e 1·6	—
Muroto	2·8	83	e 0 52	+ 8	1 29	+12	—	—
Sumoto	3·7	65	1 3	+ 5	—	—	1·9	2·0
Kobe	4·1	62	1 11	+ 7	—	—	2·1	2·3
Osaka	4·3	64	1 32	+25	—	—	2·7	4·7
Toyooka	4·3	49	1 16	+ 9	(2 6)	+ 8	2·1	2·7
Nagoya	5·6	64	e 1 45	+18	e 3 0	?L	(e 3·0)	—

Additional readings: Koti $P^* = +41s.$ Kobe $MZ = +2·4m.$

Feb. 9d. Readings also at 3h. (Cincinnati), 5h. (near La Paz, Sucre, and near Samarkand), 6h. (Phu-Lien, Adelaide, Melbourne, Riverview, Wellington, Sucre, and La Paz), 7h. (near Sucre), 8h. (near Sucre and La Paz), 10h. (near Mizusawa), 11h. (Zi-ka-wei), 12h. (Ekaterinburg, Irkutsk, and Tashkent), 13h. (La Paz, Sucre, and Muroto), 14h. (Zi-ka-wei), 15h. (Ekaterinburg, Irkutsk, Tashkent, Taihoku, Phu-Lien, and Zinsen), 16h. (De Bilt, Ekaterinburg, and Tashkent), 18h. (Andijan, Apia, Samarkand, Sucre, and La Paz), 19h. (Bombay, Rio de Janeiro, La Plata, and Florissant), 20h. (Ekaterinburg, Tashkent, and near Malabar), 22h. (Bombay, Ekaterinburg, and Tashkent).

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Feb. 10d. 3h. 37m. 4s. Epicentre 12°-3N. 93°-8W. (as on Feb. 8d.).

A = -065, B = -975, C = +213; D = -998, E = +066;
G = -014, H = -213, K = -977.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		5.5	329	(1 26)	+ 1	(2 39)	+ 8	(2.8)	(3.0)
Tacubaya		8.8	324	(2 9)	- 4	(4 5)	+ 7	(4.2)	(4.8)
Merida		9.6	24	(2 8)	-16	(3 44?)	-34	(4.4)	(4.6)
Tucson		25.4	325	6 12	+30	10 55	+44	14.7	—
St. Louis		26.5	6	e 5 51	- 2	e 10 39	+ 7	e 15.2	17.8
Florissant		26.7	6	e 5 53	- 2	e 10 36	+ 1	e 15.6	—
Chicago	N.	30.0	9	—	—	12 18	+44	18.9	20.9
Georgetown	Z.	30.5	26	e 6 17	-16	—	—	e 12.9	20.7
Fordham		33.5	29	e 7 16	+15	11 42	-50	14.2	15.6
Toronto		33.7	20	—	—	e 13 4	+28	18.9	22.4
Ottawa		36.5	22	—	—	e 12 44	-33	e 17.9	21.9
La Paz		38.4	139	—	—	—	—	25.4	27.6
Victoria	E.	43.6	332	—	—	—	—	25.1	30.8
Scoresby Sund		72.4	20	—	—	—	—	37.7	—
Kew		82.6	39	—	—	—	—	e 42.9	—
Granada		82.8	53	—	—	—	—	e 34.9	36.9
Uccle		85.6	39	—	—	—	—	43.9	—
De Bilt	E.	85.7	38	—	—	—	—	e 44.9	—
Strasbourg		88.3	40	—	—	—	—	e 44.9	—
Pulkovo		95.2	25	—	—	—	—	e 55.9	—
Ekaterinburg		107.7	15	—	—	—	—	54.9	—
Baku		117.5	30	—	—	—	—	e 68.9	—
Tashkent		124.2	15	—	—	—	—	e 64.9	71.6

Additional readings and notes: Oaxaca readings have been *increased* by 8m. Tacubaya readings have been *diminished* by 1m. Merida readings have been *increased* by 1m. Tucson LN = +14.5m. Florissant eSE = +10m.52s. Chicago eN = +11m.36s. = S +2s.; readings have been increased by 2h. Toronto LN = +18.5m. Victoria LN = +27.4m. Scoresby Sund L = +38.9m.

Feb. 10d. 15h. 39m. 4s. Epicentre 13°-9N. 91°-2W.

A = -020, B = -971, C = +240; D = -1000, E = +021;
G = -005, H = -240, K = -971.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		6.2	302	(2 8)	+33	—	—	(3.3)	(3.6)
Vera Cruz		7.1	319	(2 21)	+33	(3 32)	+19	—	(6.5)
Merida		7.2	12	(1 41)	- 8	(3 6)	- 9	(3.2)	(4.1)
Puebla		8.5	309	(2 24)	+15	(3 50)	0	(3.9)	(4.0)
Tacubaya		9.5	307	2 41	+18	4 23	+ 7	4.5	5.1
Balboa Hts.		12.4	112	3 8	+ 3	5 40	+11	6.4	7.9
Manzanillo		13.6	294	(3 17)	- 4	(5 8)	-50	(5.1)	—
Port au Prince		18.7	73	e 4 30	+ 5	1 8 48	+53	e 9.8	12.3
St. Louis		24.8	2	e 5 36	0	1 10 5	+ 6	i 13.4	18.7
Florissant		25.0	2	i 5 35	- 3	1 10 6	+ 3	13.4	15.4
Tucson	N.	25.7	319	5 46	+ 1	—	—	13.9	—
Cincinnati		25.9	12	i 5 46	- 1	e 10 34	+14	15.3	18.9
Charlottesville		26.6	23	i 5 54	0	10 23	- 5	14.5	—
Georgetown	E.N.	28.0	24	e 6 11	+ 3	11 19	+20	—	—
	Z.	28.0	24	i 6 3	- 5	11 18	+19	e 14.0	19.1
Chicago	E.	28.1	6	6 9	0	10 53	- 8	12.8	—
	N.	28.1	6	6 6	- 3	10 45	-16	13.6	—
Ann Arbor		29.2	11	e 6 14	- 6	e 11 26	+ 6	e 14.7	17.9
Fordham		30.9	26	e 7 12	+35	12 35	+45	16.3	19.5
Ithaca		31.4	23	6 29	-13	11 46	-12	15.8	—

Continued on next page.

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		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		\circ	\circ	m. s.	s.	m. s.	s.	m.	m.
Toronto	E.	31.4	17	—	—	1 11 49	— 9	17.4	22.4
	N.	31.4	17	1 6 34	— 8	1 11 34	— 24	14.5	22.2
Harvard		33.4	28	1 6 49	— 11	1 12 6	— 24	—	—
Ottawa		34.1	20	1 6 58	— 8	1 12 20	— 22	e 16.5	19.7
Lick	N.	35.8	319	1 7 16	— 4	e 12 57	— 10	e 18.0	—
Berkeley E. or Z.		36.5	319	7 22	— 4	e 13 7	— 10	e 18.5	22.1
	N.	36.5	319	e 7 16	— 10	e 13 8	— 9	—	22.5
La Paz		38.0	143	7 25	— 13	1 13 25	— 13	18.1	23.0
Sucre		41.7	143	1 8 10	+ 1	1 14 19	— 12	21.4	24.8
Victoria		43.5	330	8 18	— 4	14 53	— 2	21.6	27.6
La Plata		58.1	148	—	—	—	—	29.8	—
Rio de Janeiro E.		59.7	129	e 10 12	+ 2	1 18 20	+ 1	29.2	35.4
	N.	59.7	129	e 10 13	+ 3	1 18 18	— 1	29.3	35.9
Honolulu T.H. E.		63.5	289	—	—	1 19 23	+ 16	29.9	—
Scoresby Sund		70.1	20	11 26	+ 8	20 32	+ 5	32.9	—
Edinburgh		77.5	35	—	—	e 20 56?	— 59	38.9	47.6
San Fernando		77.9	55	12 4	— 2	22 28	+ 29	34.4	49.1
Stonyhurst		78.1	39	e 12 18	+ 10	—	—	—	44.5
Toledo		79.0	51	e 12 16	+ 3	e 22 15	+ 3	e 34.1	45.3
Oxford		79.1	40	—	—	—	—	e 34.9	45.5
Malaga		79.2	54	e 12 20	+ 6	e 22 16	+ 2	29.9	—
Kew		79.7	40	e 12 19	+ 2	e 22 56	+ 36	36.9	45.8
Granada		79.8	54	1 12 21	+ 3	1 22 26	+ 5	31.1	44.6
Alicante		82.0	52	e 12 10	— 20	e 22 2	— 44	e 35.0	—
Paris		82.0	42	e 12 30	0	—	—	39.9	42.9
Tortosa	N.	82.3	50	—	—	—	—	e 30.9	47.6
Uccle		82.7	40	e 12 32	— 2	e 22 47	— 7	e 34.9	52.8
De Bilt		82.9	39	12 38	+ 3	e 23 4	+ 8	e 35.9	48.8
Barcelona		83.3	49	—	—	—	—	e 40.9	48.0
Hamburg		85.4	36	e 13 6	+ 16	—	—	e 40.9	49.9
Strasbourg		85.4	41	1 12 49	— 1	e 23 22	— 1	38.9	53.4
Algiers		85.5	53	e 12 48	— 3	e 23 12	— 13	41.9	47.4
Copenhagen		86.0	34	12 43	— 10	23 28	— 2	38.9	—
Göttingen		86.0	38	—	—	(e 23 2)	[0]	e 34.9	50.5
Zurich		86.3	44	e 12 53	— 2	e 23 20	— 13	—	—
Lund		86.5	34	—	—	23 44	+ 8	40.9	—
Moncalieri		86.7	45	12 23	— 34	23 20	— 18	35.3	54.1
Chur		87.0	44	e 12 56	— 3	—	—	e 21.2	—
Jena		87.1	39	—	—	—	—	e 43.9	51.4
Upsala		87.2	29	—	—	e 23 18	[+ 8]	e 41.9	49.5
Graz		90.8	40	e 23 48	?S	(e 23 48)	[+ 15]	47.9	59.8
Vienna		91.0	39	13 14	— 7	1 25 44	?PS	—	48.9
Zagreb		91.6	43	e 13 21	— 4	e 23 52	[+ 14]	e 40.9	48.6
Pulkovo		92.7	25	13 26	— 5	e 24 34	— 8	42.9	56.2
Budapest		92.9	40	e 17 26	[+ 7]	—	—	e 45.9	—
Kucino		98.3	26	—	—	24 24	[+ 9]	43.6	57.5
Wellington	E.	102.1	230	—	—	e 24 53	[+ 19]	e 46.9	50.1
Theodosia		103.8	38	—	—	—	—	e 64.9	—
Ekaterinburg		105.5	15	1 14 24	— 13	1 25 5	[+ 15]	44.9	60.9
Helwan		109.4	50	e 15 31	+ 36	28 41	?PS	—	71.0
Irkutsk		112.5	350	e 14 35	— 34	—	—	50.9	70.4
Cape Town		113.9	121	—	—	e 29 27	?PS	—	62.4
Baku		114.8	31	(19 53)	?PR ₁	—	—	—	—
Sydney		120.5	239	—	—	55 56	?	63.7	66.2
Tashkent		121.9	16	1 19 8	[+ 10]	1 26 10	[+ 20]	e 54.9	71.0
Samarkand		122.7	19	e 19 16	[+ 16]	—	—	—	71.9
Melbourne		125.1	232	—	—	e 23 41	?PR ₂	58.4	61.7
Hong Kong		136.1	325	23 11	?	—	—	—	94.8
Manila	E.	137.3	311	e 21 56?	?L	—	—	—	—
Tananarive		140.1	101	1 23 26	?L	—	—	74.9	79.9
Phu-Lien		141.2	333	21 56?	?L	—	—	—	—
Bombay		143.6	25	19 49	[+ 3]	33 13	?L	70.6	91.1
Calcutta	E.	143.6	1	19 47	[+ 1]	—	—	—	—
Perth		149.4	229	73 56?	?L	—	—	(73.9)	—
Colombo		157.4	24	13 47	?L	—	—	76.3	93.8

For Notes see next page.

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NOTES TO FEB. 10d. 15h. 39m. 4s.

Additional readings and notes: Oaxaca readings have been increased by 9m. Vera Cruz readings have been increased by 2m. Merida and Puebla readings have been increased by 1m. Balboa Heights LN = +7.9m. Manzanillo readings have been increased by 1m. Port au Prince i = +5m.5s. St. Louis IPN = +5m.35s. Florissant iPR₁Z = +6m.19s., iP₀PZ = +8m.32s., ISZ = +10m.5s., ISN = +10m.10s., iZ = +11m.6s., and +11m.14s., MN = +19.1m., MZ = +20.1m. Cincinnati iPR₁Z = +6m.42s., iP₀PZ = +8m.18s., P₀S or SR₁ = +12m.56s. Charlottesville SN = +10m.24s., eSR₁E = +12m.52s., eSR₁N = +13m.40s., LN = +16.9m. Georgetown PR₁Z = +7m.3s., PR₁EN = +7m.9s., PR₁Z = +7m.24s., SR₁Z = +12m.54s., SR₁Z = +13m.9s., SR₁E = +13m.11s. Chicago PR₁N = +6m.56s. Ann Arbor ePR₁ = +7m.14s., eSR₁ = +13m.8s., MN = +21.1m.; T₀ = 15h. 38m.42s. Toronto ISR₁N = +13m.13s.; T₀ = 15h.39m.19s. Ottawa iN = +8m.24s. = PR₁ + 13s., SR₁ = +14m.34s. = SR₁ - 4s., MN = +23.4m.; T₀ = 15h.39m.15s. Berkeley ePR₁Z = +7m.44s., eE = +16m.23s. La Paz ISR₁N = +15m.55s., ISR₁E = +16m.5s., MN = +26.3m. Sucre iP = +8m.10s., PR₁ = +9m.34s., SR₁ = +16m.58s.; epicentre 12° 7'N. 93° 2'W.; T₀ = 15h.39m.4s. Victoria SN = +14m.3s., MN = +30.6m.; T₀ = 15h.39m.3s. Honolulu T.H. SN = +19m.22s., eSR₁N = +26m.50s. Scoresby Sund +14m.2s. = PR₁ - 25s., and +25m.8s. San Fernando MN = +45.1m. Stonyhurst e = +23m.2s. = PS + 20s. Toledo MNW = +51.0m. Kew eSR₁N = +26m.44s., eSR₁N = +31m.8s., MZ = +45.9m. Granada PR₁ = +14m.11s., PS = +24m.16s., MZ = +44.5m. Paris MN = +44.9m. De Bilt eSR₁ = +28m.33s., eSR₁ = +32m.12s., MZ = +48.6m., MN = +59.3m. Barcelona MN = +49.0m. Hamburg MN = +52.9m. Strasbourg ePR₁? = +16m.8s. Copenhagen PR₁ = +16m.9s., (no phase) +24m.54s. = PS + 35s., SR₁ = +28m.50s. Gottingen eLZ = +47.0m. MN = +51.0m.; S is give as eLE. Moncalieri MN = +55.3m. Upsala MZ = +53.1m. Graz e = +32m.51s. Vienna iPZ = +13m.16s. Jena eLN = +46.9m. Zagreb ePNE = +13m.31s., e = +14m.16s., +17m.25s. = PR₁ + 7s., and +24m.14s. = 2 + 4s., eLNW = +43.6m. Pulkovo PR₁ = +17m.9s., ScPcS = +23m.59s., PS = +25m.52s. Kucino ePR₁ = +17m.4s., PS = +26m.51s., eSR₁ = +32m.26s. Wellington iE = +33m.13s. = SR₁ + 9s. Ekaterinburg iPR₁ = +18m.44s., PS = +28m.3s., eSR₁ = +34m.5s. Irkutsk iPR₁ = +19m.35s., PS = +29m.3s., eSR₁ = +35m.2s. Cape Town PR₁ = +19m.44s. Baku PPS = +30m.47s., i = +33m.24s. and +37m.56s. Tashkent iPR₁ = +20m.39s., SR₁ = +37m.50s. Melbourne i = +26m.23s. = (S) + 24s., +31m.9s. = PS + 26s., +38m.34s., and +43m.9s. Calcutta ePN = +19m.29s. = (P) - 17s.

Feb. 10d. 17h. 20m. 10s. Epicentre 43° 6'N. 43° 6'E.

A = +.524, B = +.499, C = +.690; D = +.690, E = -.724;
G = +.499, H = +.476, K = -.724.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	m.	s.	m.	s.	m.	s.	m.	m.
Baku	5.7	122	i 1 39	+11	—	—	13.0	—
Theodosia	6.0	286	e 2 26	+54	(e 2 26)	-18	—	—
Yalta	6.8	281	1 43	-1	—	—	—	—
Simferopol	6.9	284	1 52	+7	—	—	—	—
Sebastopol	7.3	281	1 58	+7	(3 30)	+12	3.5	—
Kucino	12.7	346	—	—	e 5 33	-4	e 6.1	—
Ekaterinburg	17.0	33	1 4 2	-3	7 4	-14	8.8	13.7
Budapest	17.5	291	4 12	+1	7 46	+17	13.3	—
Samarkand	17.9	95	e 4 6	-10	—	—	—	—
Pulkovo	18.0	338	4 18	+1	7 50	+10	9.8	11.2
Tashkent	19.0	88	1 4 23	-6	7 48	-14	—	12.8
Vienna	19.4	293	1 4 34	0	(8 20)	+10	—	—
Zagreb	19.6	286	e 4 37	+1	—	—	e 12.7	—
Frunse	22.4	81	e 5 3	-7	—	—	—	—
Upsala	22.6	325	e 5 13	+1	e 9 18	+1	—	14.6
Innsbruck	22.7	291	e 5 2	-11	—	—	—	—
Jena	22.7	300	—	—	—	—	e 12.5	13.8
Lund	22.8	313	—	—	9 20	-1	13.8	—
Copenhagen	23.2	312	—	—	9 47	+18	12.8	—
Florence	23.2	282	e 4 50	-29	—	—	—	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Gottingen	23.8	301	—	—	e 7 26	?	—	14.4
Chur	24.0	290	e 5 18	-10	e 10 0	+16	—	—
Hamburg	24.1	306	e 5 23	-6	e 10 20	+34	—	15.0
Feldberg	N. 24.6	298	—	—	—	—	e 13.4	14.3
Zurich	24.6	291	e 5 25	-9	—	—	—	—
De Bilt	26.8	302	—	—	—	—	e 14.8	17.1
Irkutsk	40.3	56	—	—	—	—	e 22.0	—

Additional readings and note : Kucino e = +7m.7s. Vienna S? = +12m.21s.
 SR₁? = +15m.26s.; true S is given as PR₁? Zagreb eNW = +13m.46s.
 Upsala MN = +13.9m. Lund +12m.44s. Hamburg MZ = +14.0m.,
 MN = +16.8m. Irkutsk e = +16m.50s.? = SR₁ -2s., +22m.1s. (entered
 as eL), and +25m.47s., L = +35.8m.

Feb. 10d. Readings also at 2h. (Andijan, Frunse, and near Samarkand), 3h. (Baku, Ekaterinburg, Tashkent, Granada, and near Entebbe (4)), 4h. (Entebbe (2), Granada (2)), 5h. (Andijan, Samarkand, and Entebbe (7)), 6h. (Entebbe (4), Baku, Ekaterinburg, Tashkent, and Granada), 7h. (8h. (2), 9h. (6), 10h., and 11h. (2) (Entebbe), 12h. (Entebbe (2) and Suva), 13h. (Entebbe (3) and near La Paz), 14h. (Baku and Entebbe (7)), 15h. (Entebbe (2), Riverview, Ekaterinburg, La Paz, Sucre, and near Santiago), 17h. (2) and 20h. (Entebbe), 21h. (Entebbe, La Paz, near Osaka, Kobe, Sumoto, Muroto, Matuyama, and Nagoya, but the readings are rather irregular), 22h. (Entebbe (4) and Wellington), 23h. (Entebbe).

Feb. 11d. Readings at 0h. (Entebbe, La Paz, Sucre, Cincinnati, Samarkand, and near Frunse), 2h. (Entebbe (2)), 4h. (Bombay, Entebbe, and Cincinnati), 5h. (Entebbe), 7h. (Entebbe and La Paz), 11h. (Entebbe and near Hukuoka), 13h. (Baku, Ekaterinburg, Irkutsk, and Tashkent), 14h. (Georgetown and Sydney), 15h. (Ekaterinburg and Irkutsk), 16h. (Andijan and Samarkand), 22h. (Andijan and Samarkand).

Feb. 12d. Readings at 1h. (Andijan and Samarkand (2)), 3h. (La Paz), 6h. (Baku, Ekaterinburg, and Tashkent), 7h. (Entebbe, Phu-Lien, and Wellington), 10h. (Entebbe), 11h. (near Ksara), 12h. (Baku, Sucre, Ekaterinburg, La Paz, and near Frunse), 13h. (Entebbe and near Tacubaya), 14h. (Entebbe (3) and Ksara), 15h. (Baku and Tashkent), 18h. (Wellington), 19h. (La Paz), 21h. (near Samarkand), 22h. (near Malabar).

Feb. 13d. 22h. 13m. 20s. Epicentre 13°-9N. 91°-2W. (as on Feb. 10d.).

A = -020, B = -971, C = +240; D = -1000, E = +021;
 G = -005, H = -240, K = -971.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca	6.2	302	(1 20)	-15	(2 25)	-24	(2.4)	(2.9)
Vera Cruz	7.1	319	(2 20)	+32	(3 34)	+21	—	(7.4)
Merida	7.2	12	(1 52)	+3	(3 17)	+2	(3.4)	(5.0)
Puebla	8.5	309	—	—	—	—	4.6	5.2
Tacubaya	9.5	307	2 35	+12	4 10	-6	4.3	4.9
St. Louis	E. 24.8	2	—	—	e 10 6	+7	e 13.7	16.3
	N. 24.8	2	e 5 40	+4	e 10 4	+5	e 13.7	18.0
Florissant	25.0	2	1 5 35	-3	1 10 4	+1	e 13.7	15.7
Tucson	25.7	319	5 45	0	10 20	+4	14.0	17.2
Cincinnati	Z. 25.9	12	—	—	—	—	14.3	18.0
Charlottesville	N. 26.6	23	—	—	i 10 26	-7	e 14.4	18.8
Georgetown	Z. 28.0	24	6 7	-1	10 47	-12	e 13.0	19.2
Chicago	N. 28.1	6	—	—	11 10	+9	e 17.1	19.4
Ann Arbor	E. 29.2	11	—	—	e 12 22	+62	e 18.4	—
Fordham	30.9	26	e 11 32	?S	(e 11 32)	-18	17.9	19.1

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		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		\circ	\circ	m. s.	s.	m. s.	s.	m.	m.
Toronto	N.	31.4	17	—	—	e 11 40?	-18	18.8	21.7
Ottawa		34.1	20	—	—	e 12 18	-24	e 17.7	20.7
Lick	N.	35.8	319	e 7 16	- 4	e 12 57	-10	e 17.4	—
Berkeley		36.5	319	e 7 58	+32	—	—	e 21.7	—
La Paz		38.0	143	e 7 44	+ 6	e 13 49	+11	20.7	27.0
Sucre		41.7	143	8 12	+ 3	—	—	21.0	25.0
Victoria	E.	43.5	330	11 56	?	—	—	23.5	26.8
La Plata		58.1	148	—	—	—	—	22.3	—
Rio de Janeiro	E.	59.7	129	—	—	e 18 30	+11	e 30.2	—
San Fernando	E.	77.9	55	—	—	—	—	—	52.4
Kew		79.7	40	—	—	—	—	e 36.7	—
Granada		79.8	54	—	—	—	—	e 41.7	45.2
Uccle		82.7	40	—	—	—	—	42.7	—
Pulkovo		92.7	25	e 9 40?	?	—	—	39.7	—
Kucino		98.3	26	—	—	—	—	e 47.7	57.9
Ekaterinburg		105.5	15	—	—	e 24 25	[-25]	48.7	—
Irkutsk		112.5	350	—	—	e 28 40	1PS	—	—
Baku		114.8	31	—	—	e 29 42	1PS	e 52.7	70.7
Tashkent		121.9	16	—	—	—	—	e 62.7	71.7

Additional readings and notes: Oaxaca and Vera Cruz readings have been increased by 1m. Merida readings have been diminished by 2m. Florissant MNZ = +18.4m. Tucson eN = +9m.52s., iSE = +10m.32s., LN = +13.9m. Georgetown PR₁Z = +6m.59s., PR₂Z = +7m.5s., SR₁Z = +11m.57s., SR₂Z = +12m.22s. Chicago eE = +11m.28s., ME = +17.3m. Ann Arbor eE = +15m.28s., eL?N = +20.2m. Fordham S = +15m.58s. Ottawa e = +14m.22s. = SR₁ -16s. Berkeley e?Z = +15m.53s., eE = +18m.33s. La Paz SR₁E = +18m.5s., MN = +24.9m.; T₀ = 22h.13m.23s., epicentre 13°-2N. 91°-5W. Victoria LN = +24.9m. San Fernando MN = +52.3m. Ekaterinburg e = +34m.19s. = SR₁ -33s., e = +38m.31s. = SR₂ -22s.

Feb. 13d. Readings also at 2h. (Entebbe (2) and La Paz), 4h. (Berkeley and Lick), 7h. (2) and 10h. (3) (Entebbe), 14h. (near Santiago), 17h. (Suva, Wellington, Melbourne, Perth, Georgetown, Florissant, St. Louis, Ekaterinburg, and Tashkent), 18h. (Baku), 22h. (Sucre), 23h. (near La Paz).

Feb. 14d. 14h. 39m. 21s. Epicentre 30°-5N. 126°-5E.

A = -513, B = +693, C = +508; D = +804, E = +595;
G = -302, H = +408, K = -862.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		\circ	\circ	m. s.	s.	m. s.	s.	m.	m.
Zi-ka-wel	N.	4.4	281	e 1 39	+31	3 11	+70	(3.1)	3.8
Hukuoka		4.5	46	e 1 13	+ 3	—	—	2.7	3.4
Kofu		6.7	62	e 1 33	- 9	e 2 43	-19	3.6	—
Taihoku		7.0	220	e 1 53	+ 7	(3 21)	+11	7.9	—
Sumoto		8.0	59	e 0 39	?	(e 3 14)	-23	e 3.2	—
Kobe		8.4	58	1 55	-12	e 3 16	-31	e 4.5	4.9
Osaka		8.6	58	1 24	-46	(4 17)	+24	4.2	5.8
Nagoya		9.9	59	e 2 15	-14	e 6 15	?	—	—
Hong Kong		13.7	237	13 21	- 1	6 29	+28	7.9	9.1
Manila		16.7	199	3 39?	-22	16 45	-26	1 10.0	—
Phu-Lien		20.4	246	4 39?	- 7	(8 39?)	+ 7	8.6	—
Irkutsk		27.2	330	e 6 2	+ 2	e 10 42	- 3	14.6	19.5
Almata		41.0	305	—	—	—	—	e 26.6	—
Dehra Dun		41.5	284	11 39	?	—	—	—	28.6
Andijan		44.6	300	e 8 39?	+ 9	—	—	—	—
Tashkent		46.8	302	18 44	- 2	e 15 48	+10	e 26.5	28.9
Samarkand		48.7	300	—	—	—	—	e 29.6	—
Bombay		49.7	272	(9 29)	+24	(16 9)	- 6	(24.4)	(29.0)

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	m. s.	m. s.	m. s.	s.	m. s.	s.	m.	m.
Ekaterinburg	51.9	321	9 25	+ 6	e 16 48	+ 5	27.6	34.3
Baku	61.3	305	—	—	—	—	e 26.4	45.6
Kucino	64.5	323	—	—	—	—	32.0	37.4
Pulkovo	67.0	329	e 10 0	-58	e 19 15	-35	35.6	42.9
Helsingfors	69.2	328	—	—	—	—	e 39.6	—
Lund	76.9	329	—	—	—	—	41.6	—
Copenhagen	77.2	329	—	—	—	—	41.6	—
Jena	80.5	326	—	—	—	—	e 45.6	47.1
Göttingen	E. 81.0	326	—	—	—	—	e 46.7	48.2
De Bilt	82.8	329	—	—	—	—	e 44.6	50.6
Strasbourg	84.0	325	—	—	—	—	e 45.6	—
Uccle	84.1	329	—	—	—	—	e 45.6	—
Kew	85.7	330	—	—	—	—	e 46.8	51.4
Paris	86.3	328	—	—	—	—	e 48.6	49.6
San Fernando	E. 99.7	324	—	—	—	—	—	59.7
Florissant	N. 102.6	29	—	—	—	—	e 52.7	—
St. Louis	N. 102.8	29	—	—	—	—	e 58.1	—

Additional readings and notes : Taihoku SE = +5m.6s., true S is given as P.
 Osaka MN = +5.2m. Manila PR_s = +4m.16s. Bombay readings have
 been *diminished* by 4m. Pulkovo P and S are given without phase.
 Göttingen eLN = +46.2m., MN = +47.7m. De Bilt MN = +49.1m.
 San Fernando MN = +58.2m. St. Louis eN = +64m.9s. and +67m.39s.

Feb. 14d. Readings also at 1h. (near Samarkand), 7h. and 8h. (near Tacubaya),
 10h. (Florissant), 11h. (near Manila), 13h. (Suva), 14h. (La Paz), 19h.
 (Florissant and Taihoku), 21h. (Andijan and near Samarkand), 22h.
 (Florence).

Feb. 15d. 5h. 40m. 49s. Epicentre 9°8'N. 126°2'E. (as on 1928 Jan. 5d.).

A = -582, B = +795, C = +170; D = +807, E = +591;
 G = -101, H = +137, K = -985.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	m. s.	m. s.	m. s.	s.	m. s.	s.	m.	m.
Manila	7.0	314	i 2 24	+38	i 4 7	+57	15.2	—
Taihoku	E. 15.9	344	—	—	—	—	e 7.3	—
Hong Kong	17.0	319	4 21	+16	—	—	8.0	8.4
Phu-Lien	21.8	302	i 5 7	+ 4	e 9 10	+ 9	10.7	—
Zi-ka-wel	21.9	349	5 18	+14	e 9 32	+29	—	—
Koti	24.7	15	e 5 45	+10	e 10 13	+16	—	—
Batavia	25.0	231	i 5 3	-35	i 10 22	+19	—	—
Malabar	25.2	228	i 5 3	-37	—	—	—	—
Sumoto	25.8	17	e 5 53	+ 7	(e 10 35)	+17	e 10.6	—
Kobe	26.2	17	5 58	+ 8	10 38	+12	—	—
Osaka	26.3	17	6 35	+44	(10 44)	+16	—	—
Nagoya	27.2	20	e 6 7	+ 7	—	—	—	—
Mizusawa	E. 32.2	23	6 50	0	12 9	- 2	16.9	—
Calcutta	N. 38.4	295	7 4	-37	13 34	-10	—	—
Perth	42.9	193	8 11?	- 6	—	—	—	—
Colombo	45.9	271	8 14	-25	14 43	-44	21.5	28.6
Irkutsk	46.1	343	i 8 42	+ 1	i 15 29	0	28.2	—
Adelaide	46.3	166	—	—	—	—	13.7	17.7
Riverview	49.6	153	—	—	e 15 6	-68	—	25.7
Melbourne	50.7	161	—	—	i 15 16	-71	18.7	19.8
Bombay	52.3	287	9 15	- 7	16 29	-19	26.3	30.4
Amata	54.2	319	e 9 43	+ 9	—	—	—	—
Tashkent	58.9	314	i 10 6	+ 2	i 13 9	- 1	e 29.2	35.7
Samarkand	60.2	312	10 15	+ 2	—	—	—	—
Ekaterinburg	68.6	328	i 10 54	-14	i 19 56	-13	30.2	37.6

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Ku	73.3	310	i 11 37	- 1	i 21 5	- 1	36.7	50.2
Podosia	83.6	316	e 12 33	- 7	e 22 50	-15	—	—
Nkovo	84.5	330	e 12 39	- 6	i 22 59	-15	43.2	48.2
Nferopol	84.5	316	e 13 22	+37	—	—	—	—
Nta	84.6	316	e 13 22	+36	—	—	—	—
Nara	84.9	304	12 48	+ 1	22 57	[+ 2]	—	—
Nnd	94.4	329	—	—	24 59	- 1	37.2	—
Nopenhagen	94.8	329	—	—	24 29	? Σ	49.2	—
NBilt	N. 100.3	326	—	—	e 25 23	? Σ	e 49.2	56.8
Nasbourg	100.6	325	—	—	—	—	e 42.2	—
Ntele	101.4	327	—	—	—	—	e 40.2	—
Nlw	103.4	330	—	—	—	—	e 41.2	—
Nris	103.4	325	—	—	—	—	e 47.2	—
Nrissant	120.7	31	e 20 1	?PR ₁	e 31 26	?	—	—
Nrgetown	Z. 126.7	20	i 21 21	?PR ₁	—	?	e 32.4	—
NPaz	164.5	117	e 17 31	?	—	—	—	—
Npre	165.6	131	20 4	[- 8]	e 25 23	?PR ₁	—	—

Additional readings: Zi-ka-wei iE = +9m.38s., SR₁N = +10m.36s. Kobe
 iPN = +5m.59s. Osaka MN = +13.1m. Mizusawa SN = +12m.15s.
 Calcutta PE = +7m.22s. Adelaide MN = +17.6m. Riverview ePR₁ =
 +10m.56s., SR₁? = +18m.47s., MN = +24.7m. Melbourne iPR₁? =
 +11m.6s., iSR₁? = +16m.24s., S = -3s. Ekaterinburg i = +21m.54s.
 Pulkovo S₀P₀S = +22m.48s., iPS = +24m.5s., PPS = +24m.17s. De
 Bilt eLE = +52.2m. Florissant e = +37m.11s. = SR₁ + 16s. George-
 town iZ = +22m.15s.

M. 15d. 8h. 4m. 24s. Epicentre 12°-8N. 91°-0W. (as on 1929 Feb. 3d.).

A = -.017, B = -.975, C = +.222; D = -1.000, E = +.017;
 G = -.004, H = -.222, K = -.975.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Naca	7.0	308	(1 58)	+12	(3 25)	+15	—	(3.7)
Na Cruz	8.1	323	(2 6)	+ 3	(3 45)	+ 5	—	(6.8)
Nada	8.3	9	(2 48)	+42	(4 19)	+34	(4.4)	(5.3)
Nabaya	10.3	311	3 3	+29	—	—	5.3	6.2
Nboa Heights	11.9	108	2 52	- 6	5 2	-15	6.8	8.2
Nt au Prince	18.9	70	e 4 32	+ 4	e 8 13	+13	e 11.0	12.7
NLouis	25.8	1	15 51	+ 5	e 10 20	+ 2	e 13.3	16.7
Nrissant	26.0	1	15 49	+ 1	i 10 21	- 1	e 13.6	—
Nson	E. 26.6	320	6 10	+16	11 30	+57	15.2	—
	N. 26.6	320	6 21	+27	11 28	+55	15.0	—
Ninnati	26.9	11	i 6 1	+ 4	i 10 48	+ 9	14.1	16.3
Nclottesville	N. 27.5	22	6 0	- 3	11 1	+ 1	17.6	—
Nrgetown	Z. 28.9	23	6 18	+ 1	11 28	+13	e 14.0	23.2
Nago	N. 29.1	5	6 17	- 2	11 18	- 1	15.2	—
NArbor	N. 30.2	11	e 7 0	+30	e 11 30	- 7	e 18.1	—
Nham	31.8	26	e 4 51	-114	9 35	-150	14.3	17.5
Nhca	32.2	20	e 7 40	+50	—	—	18.3	—
Nhonto	N. 32.4	16	e 6 44	- 8	e 11 59	-15	18.6	24.1
Nhvard	34.2	26	e 7 1	- 6	e 12 40	- 3	—	—
Nhwa	35.0	20	e 7 10	- 3	i 12 38	-17	e 16.6	20.1
Nit	36.7	319	e 7 39	+11	e 13 41	+21	e 20.1	—
NPaz	37.0	142	e 7 24	- 6	e 13 11	-13	e 17.1	21.7
Nteley	37.5	319	e 7 40	+ 6	e 11 9	?	e 20.6	—
Ntre	40.7	142	i 7 53	- 8	13 51	-26	19.6	25.7
Ntoria	44.5	330	—	—	18 40	?SR ₁	24.9	32.8
NPlata	57.1	147	9 55	+ 2	17 49	+ 2	27.8	—
Nde Janeiro	E. 58.9	128	e 10 6	+ 2	18 8	- 2	28.9	36.1
	N. 58.9	128	e 10 6	+ 2	18 6	- 4	28.8	36.2
Nolulu T.H.	E. 64.0	289	—	—	—	—	e 38.8	—
Nesby Sund	71.0	20	—	—	28 36	?SR ₁	37.6	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Edinburgh	78.2	35	—	—	—	—	e 46.6	—
San Fernando	78.3	54	11 44	-25	22 24	+20	38.9	51.7
Stonyhurst	78.8	38	—	—	—	—	e 43.6	57.6
Toledo	N.E. 79.5	51	—	—	—	—	e 33.7	43.3
Granada	80.2	54	—	—	—	—	e 36.6	46.7
Kew	80.4	40	—	—	—	—	e 35.6	42.6
Paris	82.7	42	—	—	—	—	e 39.6	43.6
Tortosa	N. 82.8	49	—	—	—	—	e 39.6	46.4
Uccle	83.4	40	—	—	—	—	e 39.6	—
Hamburg	86.1	36	—	—	—	—	e 45.6	57.6
Strasbourg	86.1	41	—	—	—	—	e 44.6	—
Gottingen	E. 86.7	37	—	—	—	—	e 43.7	53.6
Copenhagen	86.8	33	—	—	23 30	-9	37.6	—
Lund	87.2	33	—	—	—	—	e 43.6	—
Upsala	88.0	28	—	—	—	—	e 45.6	—
Florence	89.8	45	—	—	e 12 11	?	38.6	50.6
Graz	91.5	40	—	—	—	—	e 51.6	60.5
Pulkovo	93.6	25	13 40	+ 4	24 7	[+17]	40.6	57.1
Kucino	99.2	26	—	—	24 38	[+18]	43.7	54.2
Ekaterinburg	106.5	16	—	—	25 0	[+ 6]	53.6	65.8
Irkutsk	113.6	350	—	—	e 28 36?	+37	54.6	74.2
Baku	115.6	32	—	—	—	—	55.6	76.3
Sydney	120.1	237	—	—	—	—	64.9	67.1
Tashkent	122.9	17	19 25	[+24]	—	—	55.6	69.7
Melbourne	124.6	232	—	—	—	—	58.8	—
Zi-ka-wei	z. 126.1	324	e 19 27	[+19]	—	—	—	84.9
Adelaide	130.2	235	—	—	—	—	e 65.8	71.1
Bombay	144.5	26	e 19 59	[+11]	—	—	—	98.6

Additional readings and notes: Oaxaca readings have been *increased* by 1m. Vera Cruz and Merida readings have been *diminished* by 1m. Balboa Heights LN = +6.0m. St. Louis ePE = +5m.56s. Florissant iPN = +5m.50s., iNZ = +6m.18s., iPCZ = +9m.2s., iSR₁N = +11m.46s., eSR₁N = +12m.10s. Cincinnati PR₁Z = +6m.56s., iSR₁Z = +12m.36s. Charlottesville eE = +10m.4s., SR₁E = +12m.36s., eN = +14m.2s., LE = +17.4m. Georgetown PR₁Z = +7m.2s., SR₁Z = +13m.1s., SR₂Z = +13m.41s. Chicago ePR₁N = +6m.54s., SE = +11m.4s., LE = +14.1m. Ann Arbor eN = +7m.30s., eE = +9m.24s., eE = +10m.30s. and +12m.48s., eN = +13m.36s. eE = +14m.0s., eN = +15m.12s., eLE = +15.7m.; all readings are given without phase. Ottawa MN = +24.6m.; T₀ = 8h.4m.40s. Lick eN = +11m.8s.; all readings are given without phase. La Paz PR₁E = +8m.56s., iSE? = +13m.4s., SR₁ = +14m.36s., MN = +24.8m.; T₀ = 8h.4m.28s. Berkeley eEN = +7m.44s. and +17m.52s. Sucre PR₁ = +9m.26s.; epicentre 12° 0'N, 90° 3'W. Victoria LN = +27.3m., MN = +33.2m. San Fernando MN = +42.7m. Toledo MNW = +45.0m. Paris MN = +48.6m. Hamburg MZ = +53.6m., MN = +58.6m. Pulkovo iPS = +26m.2s. Kucino PS = +27m.2s., SR₁ = +32m.48s. Ekaterinburg PR₁ = +18m.38s., PS = +27m.55s., SR₁ = +33m.48s. Irkutsk PR₁ = +19m.36s. ? Tashkent iPR₁ = +20m.50s., e = +29m.36s. ? and +30m.6s. Melbourne i = +31m.51s. = PS + 21s., and +38m.44s. Adelaide MN = +73.6m.

Feb. 15d. Readings also at 0h. (near Almata, Andijan, and Frunse), 4h. (Ksara), 5h. (Taihoku), 6h. (near Akita and Mizusawa), 7h. (Ekaterinburg, Tashkent, and near La Paz), 8h. (La Plata and Oaxaca), 12h. (Adelaide, Melbourne, Perth, Riverview, near Algiers, and near Huknoka), 13h. (near Tacubaya), 20h. (Ekaterinburg), 21h. (Andijan, Frunse, Tashkent, Samarkand, Irkutsk, and near Toyooka), 22h. (Andijan and Samarkand).

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Feb. 16d. 9h. 13m. 45s. Epicentre 41°·5N. 153°·0E. (as on 1928 March 4d.).

A = -·667, B = +·340, C = +·663 ; D = +·454, E = +·891 ;
G = -·590, H = +·301, K = -·749.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	9·4	259	2 19	- 3	4 6	- 7	—	—
Akita		10·0	264	e 3 23	+53	(4 38)	+ 9	4·6	4·9
Irkutsk		34·2	308	e 7 53	+46	e 12 10	-33	17·2	20·0
Ekaterinburg		57·4	321	e 9 52	- 3	e 17 49	- 2	27·2	35·0
Andijan		58·6	298	e 10 9	+ 6	—	—	—	—
Tashkent		60·1	300	i 10 14	+ 1	—	—	e 30·2	35·8
Samarkand		62·4	300	10 34	+ 6	18 33	-20	37·2	—
Pulkovo		68·3	334	—	—	—	—	e 36·2	—
Kucino		68·3	328	—	—	—	—	e 35·2	41·0
Baku		72·5	310	—	—	—	—	e 39·8	45·0

Additional readings: Mizusawa SN = +4m.7s. Tashkent e = +22m.15s. ?
and +29m.21s.

Feb. 16d. 19h. 23m. 16s. Epicentre 55°·0S. 121°·5W.

A = -·300, B = -·489, C = -·819 ; D = -·853, E = +·522 ;
G = +·428, H = +·698, K = -·574.

Very doubtful identification.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Christchurch		42·7	260	—	—	—	—	—	24·4
Wellington	E.	43·0	265	—	—	i 13 10	-98	i 18·7	27·6
La Plata		47·3	93	8 36	-13	15 38	- 7	20·7	—
Sucre		55·4	75	e 9 42	0	19 36	[+17]	—	—
La Paz		55·9	69	9 41	- 4	e 17 39	+ 6	29·7	48·0
Apia		56·5	299	25 2	?L	—	—	(25·0)	30·0
Riverview		61·4	253	—	—	e 18 44	+ 3	e 25·8	32·0
Sydney		61·4	253	18 26	?S	(18 26)	-15	30·7	33·2
Melbourne		61·7	245	—	—	i 18 44	0	e 26·6	29·3
Rio de Janeiro		64·8	95	e 10 44	0	(e 19 34)	+11	e 19·5	—
Adelaide		67·1	243	—	—	e 27 22	?SR ₂	e 29·5	35·2
Perth		80·2	227	36 44?	?L	—	—	(36·7)	—
Honolulu T.H.	E.	82·3	328	—	—	—	—	37·7	39·7
Lick		92·3	0	—	—	—	—	e 42·7	—
Berkeley	Z.	92·9	0	—	—	—	—	e 44·4	—
St. Louis		97·4	25	—	—	e 25 29	- 1	e 42·7	—
Florissant		97·5	25	—	—	e 25 14	-17	e 42·2	—
Victoria	E.	103·4	359	—	—	—	—	49·9	50·4
Tananarive		105·5	170	—	—	—	—	55·7	61·7
Zi-ka-wei	Z.	130·3	268	e 21 22	?PR ₁	—	—	63·7	70·4
San Fernando	F.	133·1	84	—	—	—	—	—	113·3
Bombay		142·3	202	23 31	?	—	—	67·0	71·0
Kow		145·7	70	—	—	—	—	e 73·7	—
Stonyhurst		145·7	65	—	—	—	—	e 81·7	—
Paris		145·9	77	—	—	—	—	e 76·6	78·7
Neuchatel		147·4	83	e 19 40	[-12]	—	—	—	—
Uccle		147·9	73	—	—	—	—	e 80·7	—
Florence		148·0	88	e 20 14	[+21]	25 44	?	66·7	85·9
Strasbourg		148·7	79	—	—	—	—	e 43·7	—
De Bilt		149·0	71	—	—	—	—	e 75·7	110·5
Zagreb		151·9	91	e 19 44?	[-15]	—	—	—	—
Irkutsk		153·2	284	e 20 4	[+ 4]	—	—	e 64·7	88·4
Copenhagen		154·3	69	19 44?	[-17]	—	—	78·7	—
Lund		154·7	70	—	—	—	—	90·7	—
Konigsberg	N.	158·5	75	—	—	—	—	e 31·7	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	\circ	\circ	m. s.	s.	m. s.	s.	m.	m.
Andijan	162.6	218	e 21 14	[+64]	—	—	—	—
Samarkand	163.6	204	e 20 44	[+33]	—	—	—	—
Frunse	164.0	228	e 21 2	[+51]	—	—	—	—
Pulkovo	164.2	61	e 20 32	[+21]	—	—	80.7	102.6
Baku	164.3	155	—	—	e 25 4	?PR ₁	71.7	107.7
Tashkent	164.5	212	i 20 2	[- 9]	—	—	66.7	112.4
Kucino	168.3	77	—	—	e 25 20	?PR ₁	73.2	101.2
Ekaterinburg	177.8	327	e 20 5	[- 12]	—	—	70.7	91.2

Additional readings and note : Wellington eLN = +18.4m. La Paz PR₁ = +12m.11s., iSN = +17m.49s. Riverview MN = +29.0m., MZ = +31.6m. Sydney S = +26m.2s., SR₁ = +29m.8s. Rio de Janeiro eLE = +19.7m. Berkeley eN = +44m.56s., eE = +46m.1s., eKZ = +50m.1s., eE? = +53m.46s. St. Louis eEN = +32m.14s. = SR₁ + 10s. Florissant eNZ = +32m.14s. = SR₁ + 8s. Tananarive LN = +59.7m. San Fernando MN = +115.1m. De Bilt MN = +112.0m. Irkutsk e = +23m.14s. = PR₁ - 44s., and +43m.2s. = SR₁ - 26s. Baku e = +36m.45s., +40m.16s., and +49m.11s. Tashkent e = +24m.38s. = PR₁ - 25s., +31m.46s. = E - 14s., and +37m.44s. Kucino e = +34m.11s., +36m.26s., and +46m.16s. = SR₁ - 3s. Ekaterinburg iPR₁ = +21m.58s., iScPcPcS = +29m.5s., P8 = +32m.40s., eScPcSP = +32m.54s.

Feb. 16d. Readings also at 1h. (near Bombay), 3h. (Andijan, Frunse, and near Samarkand), 10h. (Entebbe and Zi-ka-wei), 12h. (Azores), 15h. (Andijan, Frunse, and near Samarkand), 18h. (near Amboina), 19h. (Andijan), 21h. (near Wellington).

Feb. 17d. 20h. 44m. 12s. Epicentre 8°.5S. 67°.0E. (as on 1928 June 28d.).

A = +.386, B = +.910, C = -.148; D = +.920, E = -.391;
G = -.058, H = -.136, K = -.989.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	\circ	\circ	m. s.	s.	m. s.	s.	m.	m.
Colombo	20.0	40	4 40	- 1	8 25	+ 2	11.2	11.9
Tananarive	21.6	239	8 58	?S	(8 58)	+ 1	e 10.6	12.7
Bombay	28.0	12	6 5	- 3	—	—	13.9	21.5
Tashkent	49.8	3	i 9 3	- 3	i 16 15	- 1	e 22.8	28.7
Perth	50.9	125	e 20 38	?SR ₁	—	—	—	—
Baku	51.4	345	—	—	i 16 51	+ 15	20.8	—
Ekaterinburg	65.5	356	10 51	+ 3	19 37	+ 6	28.8	—
Irkutsk	68.6	24	e 11 14	+ 6	e 20 14	+ 5	32.8	40.1
Kucino	68.7	344	—	—	e 20 17	+ 7	35.0	41.7
Pulkovo	74.2	343	e 13 48	?	—	—	—	—
Copenhagen	78.4	333	—	—	—	—	27.0	—

Additional readings : Tananarive P = +9m.22s., e = +10m.7s., MN = +11.6m. Baku e = +12m.56s. Kucino SR₁ = +24m.43s., e = +28m.19s. = SR₁ + 10s.

Feb. 17d. Readings also at 2h. (Andijan, Frunse, and near Samarkand), 3h. (La Paz and Entebbe), 5h. (Samarkand and near Frunse), 9h. (San Fernando and near Tacubaya), 10h. (Neuchatel), 13h. and 16h. (Entebbe), 17h. (La Paz), 18h. (Andijan, Frunse, Samarkand, Alicante, near Kobe, Matuyama, and Sumoto), 20h. (Florissant), 22h. (Mizusawa and near Wellington).

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Feb. 18d. 18h. 59m. 27s. Epicentre 42°·1N. 2°·1W. (given by De Bilt).

A = +·741, B = -·027, C = +·670; D = -·037, E = -·999;
G = +·670, H = -·025, K = -·742.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Bagnères	2·0	62	i 1 3	+32	i 1 22	+27	—	—
Tortosa	2·3	123	0 34	- 2	1 7	+ 4	1·2	1·7
Toledo	2·7	213	0 43	+ 1	1 27	+13	—	—
Barcelona	3·2	102	0 50	0	1 32	+ 4	1·6	2·0
Alicante	3·9	162	e 1 4	+ 3	e 2 12	+25	e 2·6	—
Granada	5·1	194	i 1 21	+ 2	—	—	—	3·5
Almeria	5·2	183	1 34	+14	2 48	+26	—	3·1
Malaga	5·7	199	1 44	+16	2 56	+20	3·1	3·2
San Fernando	6·5	210	i 2 59	?S	(i 2 59)	+ 2	(4·2)	5·0
Algiers	6·6	141	e 1 50	+ 9	i 3 25	+25	6·8	7·4
Paris	7·4	24	e 1 53	+ 1	e 3 33	+12	4·6	4·6
Besançon	7·7	46	—	—	e 3 24	- 5	i 4·4	—
Moncalieri	7·7	65	e 2 31	+34	3 47	+18	4·6	—
Neuchatel	8·0	49	i 2 1	0	i 3 43	+ 6	—	—
Zurich	9·2	51	e 2 12	- 7	e 4 2	- 6	—	—
Kew	9·4	7	—	—	e 3 57	-16	5·3	5·4
Strasbourg	9·4	43	—	—	e 3 58	-15	i 5·1	—
Chur	9·5	56	e 2 16	- 7	e 4 38	+22	—	—
Oxford	E. 9·7	3	—	—	i 3 58	-23	i 5·4	6·0
	N. 9·7	3	—	—	4 1	-20	e 6·0	6·7
Uccle	9·8	25	e 2 58	+31	—	—	i 4·9	—
Florence	9·9	76	i 3 49	?S	(i 3 49)	-37	(5·4)	7·2
Feldberg	N. 10·6	38	e 3 9†	+31	e 3 53	-52	—	6·1
De Bilt	11·1	24	e 3 0	+14	e 4 44	-13	—	6·3
Stonyhurst	11·8	359	—	—	i 4 57	-17	i 6·8	8·0
Gottingen	12·5	37	—	—	—	—	e 6·1	9·2
Jena	E. 12·8	42	—	—	—	—	e 6·5	7·6
Hamburg	E. 14·0	31	—	—	e 6 25	+17	—	7·8
Vienna	14·4	58	e 6 50	?L	—	—	(e 6·8)	9·8
Copenhagen	16·5	30	—	—	—	—	9·0	—
Lund	16·8	31	—	—	—	—	8·8	—
Konigsberg	N. 19·5	41	—	—	—	—	e 10·9	24·2
Pulkovo	26·5	37	—	—	—	—	e 13·6	—
Ekaterinburg	41·7	47	e 7 52	-17	—	—	22·6	—
Frunse	54·4	61	—	—	—	—	e 57·6	—
Irkutsk	66·3	40	—	—	—	—	e 38·6	—

Additional readings and note: Tortosa PN = +38s., PE = +40s., SN = +1m.8s. Toledo P = +50s., iPR = +53s. Barcelona ? = +1m.2s. Granada IP = +1m.37s., I = +1m.45s., +1m.49s., +2m.7s., +2m.26s., +2m.33s., and +2m.40s., MNZ = +3·7m. Malaga MZ = +3·1m. San Fernando gives S as P and L as S. Moncalieri e = +3m.27s. and +3m.47s. Strasbourg i = +6m.16s. Uccle i = +4m.58s., +5m.17s., and +5m.22s. De Bilt MN = +6·2m., MZ = +6·4m. Gottingen MN = +10·6m. Jena MNZ = +7·3m. Hamburg MN = +8·0m., MZ = +8·4m. Vienna iN = +7m.46s., iZ = +7m.49s., iE = +8m.18s., iZ = +8m.30s., iN = +8m.53s., iE = +8m.58s. Konigsberg eN = +12m.8s., eE = +12m.40s. Irkutsk e = +35m.33s.†

Feb. 18d. Readings also at 0h. (Florissant, St. Louis, Entebbe, Taihoku, and near Wellington), 3h. (Lick), 4h. (near Manila), 6h. (near Neuchatel and Zurich), 7h. (Almata, Andijan, Samarkand, near Lick, and near Manila), 9h. and 12h. (Neuchatel), 13h. (La Plata, near Sucre (3), and La Paz), 14h. (Andijan and Samarkand), 16h. (near Simferopol, Sebastopol, Theodosia, and Yalta), 17h. (Entebbe), 20h. (Kodaikanal, Samarkand, near Sucre, and La Paz), 21h. (Entebbe, Andijan, Frunse, near Samarkand, near Sucre, and La Paz), 22h. (Samarkand), 23h. (near Sucre and La Paz).

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Feb. 19d. Readings at 0h. (Andijan, Samarkand, Entebbe, and Ottawa), 1h. (Samarkand), 2h. (Nagoya, Entebbe, and Samarkand), 4h. (Nagoya and near Kobe), 5h. (Andijan, Samarkand, Florissant, St. Louis, Georgetown, Ottawa, Rio de Janeiro (2), La Plata (2), Sucre (7), and near La Paz (3)), 6h. (La Paz, Sucre (5), and near Yalta), 7h. (Lick), 8h. (La Plata and near Sucre), 9h. (La Paz (2), Sucre, Neuchatel, near Santiago, and near Tacubaya), 10h. (Neuchatel), 11h. (near Sucre (2) and La Paz (2)), 12h. (Batavia and Sucre), 13h. (Sucre and near La Paz (2)), 14h. (La Paz, Sucre, and near Wellington), 15h. (La Paz), 16h. (La Paz and Sucre (2)), 17h. (near La Paz (2), Sucre, and near Manila), 18h. and 19h. (near La Paz and Sucre), 20h. (Sucre), 21h. (near Taihoku), 23h. (Zagreb).

Feb. 20d. 13h. 27m. 9s. Epicentre 35°·7N. 134°·8E. (as on 1928 June 9d.).

$$A = -.572, B = +.576, C = +.584.$$

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
			m. s.	s.	m. s.	s.	m.	m.
Toyooka	0.2	175	i 0 4	0	(i 0 8)	+ 2	i 0.1	0.1
Kobe	1.1	163	0 16	- 1	(0 27)	- 4	0.4	0.5
Osaka	1.2	154	0 22	+ 4	(0 36)	+ 3	0.6	0.9
Sumoto	1.4	177	i 0 21	0	(0 38)	- 1	0.6	0.7
Nagoya	1.8	107	e 0 28	0	(0 48)	- 3	0.8	—

No additional readings.

Feb. 20d. 21h. 3m. 15s. Epicentre 19°·0S. 177°·0W. (as on 1926 July 2d.).

$$A = -.944, B = -.049, C = -.326; \quad D = -.052, E = +.999;$$

$$G = +.325, H = +.017, K = -.946.$$

Very rough.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
			m. s.	s.	m. s.	s.	m.	m.
Suva	4.5	281	i 2 3	+53	i 3 3	+59	—	—
Apta	7.3	45	i 2 3	+12	—	—	—	3.4
Wellington	E. 23.3	196	i 4 10	-70	i 9 4	-27	—	—
Riverview	31.9	236	e 6 40	- 6	e 11 35	-32	e 14.0	15.3
Melbourne	38.5	232	7 28	-14	—	—	18.7	21.6
Adelaide	42.2	238	e 10 53	?	—	—	i 17.7	24.3
Perth	60.7	243	16 45?	?	—	—	—	—
Manila	69.7	294	i 11 26	+11	—	—	—	—
Osaka	70.2	320	(11 36)	+18	(20 7)	-20	20.1	22.0
Kobe	70.3	320	i 11 26	+ 7	e 22 37	+127	—	—
Batavia	74.9	269	i 11 52	+ 4	21 13	-12	—	—
Lick	N. 76.8	42	e 11 52	- 8	e 21 27	-20	—	—
Zi-ka-wei	Z. 77.5	310	i 12 14	+10	—	—	i 34.5	—
Hong Kong	78.9	299	12 14	+ 2	(22 10)	- 1	—	22.2
Tucson	81.4	51	—	—	e 22 8	-31	—	—
Victoria	E. 82.7	33	—	—	—	—	16.4	16.6
Phu-Lien	84.7	293	12 45?	- 1	—	—	—	—
Irkutsk	98.3	322	e 13 44	-18	24 2	[-13]	—	—
Florissant	99.3	52	e 18 45	?PR ₁	i 23 57	[-23]	—	—
St. Louis	99.4	52	e 15 2	+55	e 24 30	[+ 9]	e 30.8	—
La Paz	101.6	112	e 13 42	-36	i 24 11	[-21]	41.8	—
Chicago	E. 102.3	50	i 20 37	?PR ₁	i 24 13	[-22]	30.0	—
Ottawa	111.0	48	—	—	e 24 45?	[-23]	—	32.8
Bombay	114.4	283	19 43	?PR ₁	24 25	[-62]	e 27.9	—
Almata	114.4	310	e 22 15	?	—	—	—	—
Frunse	116.1	310	e 18 15	[-26]	—	—	—	—
Andijan	117.7	306	e 18 3	[-43]	—	—	—	—
Rio de Janeiro	N. 118.5	130	—	—	e 25 17	[-24]	—	—
Tashkent	120.0	308	i 18 55	[+ 3]	—	—	—	61.4
Samarkand	121.8	306	e 18 58	[+ 1]	e 25 38	[-13]	—	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Ekaterinburg	123.3	326	i 19 0	[- 2]	27 23	? Σ	51.8	—
Baku	134.7	309	—	—	—	—	62.8	69.2
Pulkovo	134.8	340	19 22	[- 8]	—	—	68.8	—
Kucino	134.9	333	—	—	28 37	? Σ	—	—
Copenhagen	142.6	350	19 32	[- 12]	—	—	—	—
Theodosia	142.6	321	e 19 39	[- 5]	—	—	—	—
Simferopol	143.4	321	i 19 37	[- 9]	—	—	—	—
Yalta	143.6	321	i 19 40	[- 6]	—	—	—	—
Sebastopol	144.0	321	i 19 40	[- 7]	—	—	—	—
Hamburg	145.0	352	i 19 40	[- 8]	—	—	e 52.8	—
De Bilt	146.9	358	i 19 44	[- 7]	e 41 57	?SR ₁	—	—
Kew	z. 147.5	4	e 19 48	[- 4]	—	—	—	—
Uccle	148.2	358	i 19 48	[- 5]	—	—	—	—
Budapest	148.7	339	e 19 45?	[- 9]	—	—	—	—
Vienna	149.0	343	19 46	[- 8]	—	—	—	—
Strasbourg	150.2	352	e 19 49	[- 7]	—	—	—	—
Zagreb	151.1	341	e 19 59	[+ 2]	—	—	—	—
Zurich	151.4	352	e 19 59	[+ 1]	—	—	—	—
Neuchatel	151.9	354	e 19 50	[- 9]	—	—	—	—
Florence	154.3	346	19 52	[- 9]	—	—	—	—

Additional readings and notes: Suva iSE = +3m.51s. Wellington iSN = +9m.9s. Riverview ePR₁ = +7m.58s., and +8m.10s., MN = +14.4m. Melbourne PR₁ = +9m.10s., SR₁ = +16m.23s., SR₂ = +17m.17s. Adelaide i = +14m.8s. = S - 30s. and +15m.40s., MN = +20.2m. Osaka P = +2m.51s., MN = +21.6m.: P is given as S and S as L. Batavia iZ = +11m.51s., i = +13m.36s., SE = +21m.17s., iE = +22m.5s. = PS + 2s. Lick eN = +12m.48s. Zi-ka-wei iPZ = +13m.36s. Irkutsk PR₁ = +17m.24s., iPS = +24m.58s. = Z + 2s. Florissant iN = +24m.55s. = Z - 9s., iE = +24m.56s. = Z - 8s. St. Louis eSE = +23m.40s., eE = +23m.55s., and +24m.51s. = Z - 13s., iN = +24m.55s. = Z - 9s. La Paz i = +18m.16s. = PR₁ - 8s., iPS = +25m.21s. = Z + 1s. Chicago LN = +29.8m. Tashkent i = +20m.28s. = PR₁ + 4s. and +20m.47s., PR₂ = +21m.49s., i = +25m.35s. = [S] - 10s., and +27m.4s. = Z - 10s. Ekaterinburg SeCoS = +25m.43s., iPS = +29m.9s. = S - 5s., iPPS = +30m.20s. Baku PR₁ = +22m.4s., PR₂ = +25m.5s., i = +34m.14s. and +41m.22s. Pulkovo P₁CoS = +22m.33s., PR₂ = +24m.19s., e = +30m.16s. = S - 16s., and +33m.51s. Kucino PR₁ = +22m.1s., e = +34m.49s., and +41m.21s. De Bilt iZ = +20m.47s. Kew iZ = +20m.52s., eE = +42m.3s. and +43m.42s. Uccle e = +20m.47s. Vienna iPZ = +19m.51s., iNZ = +20m.34s., and +20m.56s. Strasbourg i = +20m.1s. Neuchatel ePR₁ = +20m.56s.

Feb. 20d. Readings also at 0h. (near Belgrade), 1h. (Samarkand), 4h. (Andijan, near Frunse, and near Manila), 5h. (Ekaterinburg, Entebbe, Samarkand, Tashkent, La Paz (2), and Sucre), 6h. (near La Paz (2)), 7h. (La Paz and Zurich), 8h. (Baku, Ekaterinburg, Pulkovo, Samarkand, and Tashkent), 10h. (Entebbe), 12h. (Innsbruck and near Manila), 20h. (Tananarive), 22h. (Florissant).

Feb. 21d. Readings at 1h. (Samarkand), 3h. (near La Paz, near Taihoku, and near Toyooka), 4h. (near Manila), 5h. (near Taihoku), 7h. (near La Paz), 9h. (Mizusawa), 12h. (Mizusawa, Akita, Ekaterinburg, Irkutsk, Samarkand, near Andijan, and Frunse), 13h. (Irkutsk, Tashkent, and La Paz), 17h. (near La Paz), 18h. (Kobe, near Nagoya, Akita, and Mizusawa), 20h. and 21h. (Entebbe), 22h. (Sydney).

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Feb. 22d. 4h. 0m. 16s. Epicentre 37°·5N. 141°·3E. (given in Geophys. Mag., Tokyo, Vol. IV, No. 4.)

A = -·619, B = +·496, C = +·609.

	Δ	P.	O-C.	S.	O-C.	L.	M.
	°	m. s.	s.	m. s.	s.	m.	m.
Onahama	0·6	0 7	- 2	0 16	- 1	—	—
Sendai	0·8	0 12	0	0 23	+ 1	—	—
Mizusawa	1·6	0 24	0	0 43	- 2	—	—
Tokyo	2·2	0 34	0	0 58	- 2	—	—
Akita	2·4	e 0 37	0	(1 5)	- 1	1·1	1·4
Nagano	2·6	0 38	- 3	1 22	+10	—	—
Nagoya	4·2	e 1 6	+ 1	(2 5)	+10	2·1	2·2
Kobe	5·7	e 2 50	?S	(e 2 50)	+14	e 3·9	—

Akita gives also MNZ = +1·3m.

Feb. 22d. 19h. 38m. 36s. Epicentre 42°·0N. 46°·0E. (as on 1928 May 13d.).

A = +·516, B = +·535, C = +·669; D = +·719, E = -·695;
G = +·465, H = +·481, K = -·743.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	m. s.	m. s.	s.	m. s.	s.	m.	m.
Baku	3·3	119	e 1 3	+11	i 1 30	- 1	1·7	—
Ksara	11·4	227	e 4 18	?	e 5 21	+17	e 6·0	—
Samarkand	16·0	91	e 4 54	+62	—	—	—	—
Ekaterinburg	17·6	27	e 4 16	+ 4	e 7 40	+ 9	10·4	—
Andijan	19·3	86	e 4 29	- 4	—	—	—	—
Pulkovo	20·2	337	4 43	0	—	—	e 13·1	—
Frunse	21·0	78	e 4 42	-11	—	—	—	—

Ksara, Samarkand, Andijan, and Frunse readings are given without phase.
Ekaterinburg e = +8m.9s.

Feb. 22d. 20h. 41m. 39s. Epicentre 10°·6N. 42°·5W.

(Determined by comparison with the epicentre 10°·2N. 42°·8W. of 1925 Oct. 13d.).

A = +·725, B = -·664, C = +·184; D = -·676, E = -·737;
G = +·136, H = -·124, K = -·983.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	m. s.	m. s.	s.	m. s.	s.	m.	m.
Fort de France	18·6	284	4 32	+ 8	—	—	—	—
Port au Prince	29·9	289	e 6 35	+ 8	e 11 36	+ 4	13·8	—
Azores	31·0	26	e 7 9	+31	13 21	?SR ₁	—	14·8
Rio de Janeiro E.	33·5	183	e 6 53	- 7	12 11	-21	16·1	19·2
N.	33·5	183	e 6 57	- 4	i 12 12	-20	16·3	17·7
Balboa Hts. N.	36·6	271	7 23	- 4	13 11	- 7	15·9	16·1
La Paz	37·1	226	1 7 26	- 5	i 13 16	- 9	17·9	21·6
Sucre	37·2	219	1 7 25	- 7	i 13 15	-12	18·4	22·5
Halifax	38·6	337	e 7 38	- 5	i 13 32	-14	e 18·0	—
Harvard	40·4	329	1 7 52	- 6	i 14 1	-12	—	—
Fordham	41·0	323	(e 8 37)	+34	(e 14 41)	+29	(17·8)	(19·8)
San Fernando	41·7	47	1 7 56	-13	14 6	-25	18·8	24·8
Georgetown E.N.	41·8	320	8 7	- 2	14 31	- 1	e 18·7	—
Z.	41·8	320	8 5	- 4	14 28	- 4	e 19·9	24·1
Charlottesville	42·3	318	e 8 7	- 6	i 14 27	-12	19·2	—
Malaga	43·1	47	1 8 8	-11	i 14 30	-19	17·4	—
Ithaca	43·5	324	8 16	- 6	14 44	-11	20·2	—
Granada	43·9	47	1 8 13	-12	i 14 44	-17	20·4	25·4
Almeria	44·6	48	8 39	+ 9	15 2	- 8	20·4	25·8
Toledo	44·9	43	e 8 18	-14	i 14 58	-16	i 19·5	22·6
Ottawa	44·9	329	1 8 29	- 3	i 15 6	- 8	e 21·0	23·6

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		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		o	o	m. s.	s.	m. s.	s.	m.	m.
Toronto	E.	45-9	324	18 36	- 3	i 15 21	- 6	22-0	23-6
	N.	45-9	324	18 34	- 5	i 15 21	- 6	21-4	22-4
Alicante		46-6	46	18 41	- 3	i 15 25	- 11	e 21-2	24-8
Cincinnati		47-0	316	18 50	+ 3	e 15 23	- 18	22-0	23-4
La Plata		47-8	198	8 46	- 7	15 41	- 10	e 20-8	—
Ann Arbor		47-9	320	18 51	- 2	i 15 51	- 2	e 23-0	27-8
Tortosa	E.	48-4	44	18 50	- 6	i 15 50	- 9	21-5	24-4
	N.	48-4	44	18 50	- 6	i 15 53	- 6	21-5	24-9
Algiers		48-6	50	e 8 48	- 10	15 50	- 11	21-8	25-4
Bagnères		49-3	40	18 57	- 5	i 15 56	- 14	23-4	—
Barcelona		49-8	45	19 2	- 4	i 16 5	- 11	e 19-0	24-1
Chicago	E.	50-2	317	19 8	0	i 16 17	- 4	23-7	—
	N.	50-2	317	19 8	0	i 16 24	+ 3	23-4	—
St. Louis		50-8	313	e 9 15	+ 3	i 16 35	+ 6	e 24-0	26-0
Florissant		51-0	313	19 13	0	16 36	+ 5	—	24-8
Santiago		51-6	211	e 9 9	- 8	16 41	+ 2	28-9	—
Oxford		53-0	30	19 27	+ 1	i 16 48	- 8	e 21-4	25-6
Bidston		53-1	29	9 24	- 3	15 47	- 10	20-9	26-9
Kew	E.	53-3	31	19 30	+ 2	i 16 56	- 4	21-9	25-5
	N.	53-3	31	19 30	+ 2	i 16 58	- 2	21-9	24-8
	Z.	53-3	31	e 9 25	- 3	i 17 1	+ 1	—	28-1
Paris		53-4	36	9 25	- 4	i 16 58	- 3	24-4	26-4
Grenoble		53-7	40	e 9 21	- 10	i 17 4	- 1	22-4	27-4
Stonyhurst		53-7	29	19 30	- 1	i 17 7	+ 2	22-4	29-8
Edinburgh		54-6	26	9 41	+ 4	17 17	+ 1	22-4	27-1
Besançon		54-7	40	19 40	+ 3	i 17 17	0	25-4	—
Moncalieri		54-9	42	19 40	+ 2	i 17 22	+ 2	26-6	33-7
Neuchatel		55-2	40	e 9 39	- 1	i 17 23	+ 1	—	—
Tacubaya		55-3	287	9 43	+ 2	17 34	+ 9	25-2	—
Uccle		55-4	35	e 9 39	- 3	i 17 25	- 1	23-4	26-3
Reykjavik	E.	55-5	11	—	—	—	—	25-5	—
Dyce		56-0	25	19 48	+ 2	i 17 35	+ 1	i 23-3	24-8
Zurich		56-4	40	9 47	- 1	i 17 31	- 8	—	—
Strasbourg		56-4	38	19 48	0	i 17 39	0	26-4	31-4
De Bilt		56-5	34	19 53	+ 4	i 17 42	+ 2	e 23-4	27-4
Florence		56-9	46	9 49	- 2	17 56	+ 11	26-4	29-4
Hohenheim		57-4	38	e 9 53	- 2	17 53	+ 2	e 25-4	33-6
Feldberg	N.	57-5	37	e 9 59	+ 3	e 17 54	+ 1	—	—
Naples	E.	58-1	50	e 9 46	- 14	e 17 41	- 19	28-4	38-4
Venice		58-1	43	19 59	- 1	18 1	+ 1	—	—
Pompeii		58-3	50	e 10 16	+ 15	e 18 11	+ 8	28-4	35-4
Göttingen		58-9	36	e 10 8	+ 4	i 18 25	+ 15	e 27-4	32-4
Jena		59-6	37	e 10 11	+ 2	i 18 21	+ 3	e 26-4	32-8
Laibach	E.	59-7	42	e 10 10	0	e 18 21	+ 2	e 27-4	28-5
Hamburg	E.	59-8	34	—	—	e 18 20	- 1	e 27-4	32-8
	N.	59-8	34	—	—	i 18 24	+ 3	—	32-2
	Z.	59-8	34	e 10 10	- 1	e 18 18	- 3	e 27-4	29-6
Graz		60-7	41	e 10 13	- 4	i 18 30	- 2	e 28-4	32-2
Zagreb		60-7	44	e 10 20	+ 3	e 18 13	- 19	e 29-6	30-9
Bergen		61-0	25	10 12	- 7	18 42	+ 6	24-7	26-4
Scoresby Sund		61-3	8	10 28	+ 7	18 41	+ 1	24-4	—
Vienna		61-6	40	e 10 22	- 1	18 46	+ 3	e 26-4	32-4
Chihuahua		61-8	298	10 27	+ 3	18 52	+ 6	26-8	—
Copenhagen		61-9	32	10 25	+ 1	18 53	+ 6	28-4	—
Denver	E.	62-2	310	i 10 27	+ 1	e 19 0	+ 9	e 29-8	32-0
Lund		62-4	32	10 30	+ 2	18 59	+ 6	26-4	—
Budapest		63-1	42	10 41	+ 8	19 11	+ 9	28-8	36-8
Belgrade	E.	63-5	45	e 10 35	0	e 19 12	+ 5	e 31-0	—
	N.	63-5	45	e 10 36	+ 1	e 19 9	+ 2	e 34-1	—
Upsala		65-3	28	e 10 53	+ 6	i 19 40	+ 11	e 27-4	32-8
Königsberg	E.	66-0	35	e 10 53	+ 2	e 19 39	+ 2	e 30-4	38-5
	N.	66-0	35	e 10 57	+ 6	e 19 39	+ 2	e 27-4	34-6

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		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tucson	E.	66:1	301	11 2	+10	19 56	+18	31:3	—
	N.	66:1	301	11 8	+16	20 43	+65	—	—
Lemberg	E.	66:9	40	e 11 9	+12	e 20.15	+26	e 32:8	36:2
	N.	66:9	40	e 11 3	+6	e 19 51	+2	e 32:6	34:4
Helsingfors		69:7	30	11 21	+6	20 22	0	e 28:4	—
Helwan		70:8	63	11 26	+4	20 39	+3	—	44:6
Pulkovo		72:2	30	e 11 32	+1	i 20 56	+4	30:4	36:4
Sebastopol		72:6	46	e 11 39	+5	—	—	—	—
Cape Town		73:0	130	e 11 49	+13	i 21 3	+1	33:4	35:0
Simferopol		73:1	46	e 11 40	+3	—	—	48:4	—
Yalta		73:1	46	i 11 21?	-16	—	—	—	—
Theodosia		74:0	46	11 48	+6	21 14	0	47:4	—
Ksara		74:5	58	11 48	+2	21 23	+3	27:8	—
Lick		75:0	309	e 10 28	-81	e 21 31	+5	—	—
Entebbe		75:2	93	i 11 53	+3	i 21 27	-1	39:4	46:4
Berkeley		75:6	309	e 11 56	+3	e 21 46	+13	e 36:4	40:4
Kucino		75:9	35	i 12 1	+7	21 43	+7	32:6	42:8
Victoria	E.	76:0	319	12 1	+6	21 45	+8	36:3	42:6
	N.	76:0	319	12 8	+13	21 50	+13	36:1	38:5
Baku		85:0	50	e 12 50	+2	i 23 22	+3	42:4	51:2
Ekaterinburg		88:2	32	i 12 59	-7	i 23 25	[+9]	35:4	51:6
Tananarive		93:4	109	e 13 28	-6	i 24 1	[+13]	42:0	49:1
Samarkand		97:7	47	e 13 45	-13	e 24 24	[+13]	—	—
Tashkent		98:7	45	e 12 48	?	24 15	[-2]	e 48:4	58:6
Andijan		101:3	45	e 14 9	-8	e 24 44	[+14]	—	—
Erunse		101:6	41	e 14 0	-18	—	—	—	—
Honolulu T.H.E.		109:0	297	—	—	e 25 15	[+9]	57:8	—
Bombay		109:8	65	14 40	-16	25 25	[+16]	47:6	65:8
Dehra Dun		109:8	51	20 21	?	32 21	?	52:4	62:4
Irkutsk		110:9	20	e 16 50	+108	27 27	-9	52:4	70:6
Columbo		120:0	75	19 41	[+49]	30 6	?PS	55:9	69:5
Calcutta	E.	121:5	54	20 1	?PR ₁	—	—	58:5	—
Kobe		134:7	3	22 19	?PR ₁	—	—	e 31:4	82:4
Wellington	E.	135:1	220	—	—	i 40 49	?SR ₁	—	72:9
Zi-ka-wei	Z.	135:4	19	e 19 35	[+4]	—	—	65:7	79:4
Phu-Lien		136:3	44	e 22 14	?PR ₁	—	—	—	—
Hong Kong		139:9	35	22 39	?PR ₁	—	—	41:0	69:8
Taihoku	N.	141:1	23	—	—	—	—	58:4	—
Batavia		149:3	84	i 20 4	[+9]	i 21 54	?	e 75:4	—
Manila		149:9	33	i 20 7	[+11]	—	—	e 67:6	82:7
Perth		150:8	140	20 21?	[+24]	—	—	—	—
Melbourne		152:0	193	e 20 43	[+44]	—	—	—	87:8
Riverview		153:6	206	e 20 34	[+33]	—	—	e 74:4	78:4
Adelaide		155:6	182	e 21 41?	?	e 35 26?	?	67:8	89:0
Amboina		168:4	54	i 20 25	[+11]	—	—	48:4	—

Additional readings: Port au Prince $i = +7m.34s.$ La Paz $iP = +7m.21s.$, $PR_1E = +8m.33s.$, $PR_1N = +8m.46s.$, $PR_2E = +8m.51s.$, $iN = +10m.1s.$, $iSN = +13m.14s.$, $SR_1N = +15m.24s.$, $iSR_1E = +16m.1s.$, $iE = +19m.16s.$, $iN = +19m.39s.$, $MN = +22.0m.$; $T_0 = 20h.41m.32s.$; epicentre $10^\circ 7'N$, $40^\circ 3'W$, Halifax $PR_1 = +9m.7s.$, $PR_1 + 1s.$, $SR_1E = +15m.40s.$, $SR_1 = +16m.17s.$; $T_1 = 20h.41m.50s.$ Fordham readings have been *diminished* by 7m. San Fernando $MN = +21.4m.$ Georgetown $PR_1EN = +9m.43s.$, $PR_1E = +10m.8s.$, $PR_1N = +10m.10s.$, $SR_1Z = +17m.55s.$, $SR_1Z = +18m.15s.$, Charlottesville $ePR_1N = +9m.56s.$, $ePR_1E = +9m.57s.$, $iSN = +14m.21s.$, $eSR_1E = +16m.8s.$, $SR_1E = +17m.16s.$, $SR_1N = +17m.36s.$, $LN = +20.0m.$ Ithaca $e = +15m.2s.$, $SR_1 + 2s.$ Toledo $iP = +8m.21s.$, $PR_1NE = +10m.5s.$, $PR_1NE = +10m.32s.$, $PR_2 = +10m.59s.$, $SR_1NE = +18m.5s.$, $SR_1NE = +18m.47s.$, $MNW = +24.2m.$ Ottawa $iPR_1N = +10m.36s.$, $eN = +15m.36s.$, $SR_1 = +18m.9s.$, $iSR_1N = +18m.54s.$, $MN = +26.4m.$; $T_1 = 20h.41m.47s.$ Toronto $iPR_1N = +10m.26s.$, $SR_1N = +18m.47s.$; $T_0 = 20h.41m.39s.$ Alicante $MN = +34.0m.$ Cincinnati $iPeZ = +10m.16s.$, $iPR_1Z = +10m.39s.$, $iPR_2Z = +11m.12s.$, $iPR_2 = +11m.27s.$, $iPSEZ = +15m.43s.$, $iSR_1Z = +18m.49s.$, $iSR_2Z = +19m.21s.$ Ann Arbor $iPR_1 = +10m.45s.$, $iPR_2 = +11m.21s.$, $iSR_1 = +19m.15s.$, $eSR_1 =$

Continued on next page.

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+20m.21s.; $T_0 = 20h.41m.48s.$ Algiers $iP = +8m.55s.$, $PR_1 = +10m.43s.$
 Barcelona $PR_1 = +9m.32s.$, $MN = +24.4m.$ Chicago $PR_2N = +11m.34s.$,
 $SR_1E = +19m.6s.$, $SR_2N = +20m.50s.$ St. Louis $iP = +9m.17s.$, $iSN =$
 $+16m.34s.$, $eSR_1E = +19m.56s.$, $eSR_2N = +20m.11s.$, $eSR_2N = +22m.4s.$,
 $eSR_2E = +22m.10s.$ Florissant $iPN = +9m.15s.$, $iSZ = +16m.39s.$,
 $iPSN = +16m.51s.$; epicentre $8^{\circ}.7'N. 42^{\circ}.2'W.$ Oxford $PR_1 = +12m.15s.$
 Kew $iPR_2 = +12m.18s.$, $IZ = +13m.50s.$, $SR_1 = +20m.24s.$ Paris $MN =$
 $+28.4m.$ Edinburgh $PR_2 = +12m.43s.$, $SR_2 = +22m.58s.$ Moncalleri
 P = +9m.41s., S = +17m.20s. Uccle $iP = +9m.44s.$, $iPR_1 = +12m.46s.$,
 $MN = +24.4m.$ Reykjavik $eN = +19m.35s.$, $[S] = +15s.$, $eE = +21m.44s.$
 $=SR_1 - 5s.$, $LN = +26.2m.$ Dyce $PR_1 = +12m.47s.$ Strasbourg
 $MN = +28.0m.$, $MZ = +30.8m.$ De Bilt $eZ = +9m.48s.$, $MZ = +35.5m.$
 Hohenheim $iP = +9m.59s.$, $PR_2 = +13m.11s.$, $MN = +28.2m.$ Feldberg
 $eN = +10m.42s.$ and $+11m.22s.$ Göttingen $iPEN = +10m.11s.$, $iPZ =$
 $+10m.18s.$, $eE = +12m.15s.$, $iPR_2E = +13m.34s.$, $eN = +18m.9s.$, $eZ =$
 $+13m.12s.$, $eE = +18m.16s.$, $eLZ = +27.0m.$, $eLN = +28.2m.$, $MN =$
 $+30.4m.$, $MZ = +32.2m.$ Jena $iPE = ePN = +10m.13s.$, $eE =$
 $+12m.21s.$ and $+13m.39s.$, $eEN = +22m.13s.$ Hamburg $iPZ =$
 $+10m.15s.$, $ePR_2E = +13m.45s.$, $ePSZ = +18m.51s.$ Graz $iP = +10m.15s.$
 Zagreb $e = +10m.24s.$, $eNW = +10m.36s.$, $iNE = +10m.39s.$, $iNW =$
 $+11m.14s.$, $eNW = +11m.48s.$, $eNE = +12m.11s.$, $iNW = +12m.43s.$, $eNE =$
 $+13m.40s.$, $+14m.3s.$ and $+18m.28s.$, $iNE = +18m.37s.$, $eNW = +18m.44s.$
 and $+20m.17s.$, $[S] = +17s.$, $eNE = +20m.21s.$, $eNW = +22m.6s.$, $eNE =$
 $+22m.8s.$, $eLNW = +26.4m.$ Scoresby Sund $+13m.18s.$ = PR_1 , $PR_2 =$
 Vienna $iPZ = +10m.28s.$, $iN = +10m.59s.$, $PR_1 = +12m.39s.$, $PR_2 =$
 $+13m.54s.$, $SR_1 = +23m.3s.$ Copenhagen $+19m.51s.$, $+20m.26s.$ and
 $+20m.51s.$ Denver $iPR_2E = +13m.0s.$ Lund $+21m.21s.$? Budapest
 $PcP = +11m.0s.$, $PR_1 = +12m.45s.$, $PPS = +19m.33s.$, $S_0S = +20m.21s.$?,
 $MN = +35.6m.$ Upsala $iP = +10m.56s.$, $MN = +31.2m.$ Königsberg
 $ePR_1E = +13m.39s.$, $ePSE = +20m.28s.$, $eScPcSN = +20m.49s.$, $eScPcSE =$
 $+20m.59s.$, $eSR_2N = +24m.27s.$, $eSR_2N = +26m.52s.$, $ePcPcP = +31m.19s.$
 Tucson $iSR_1E = +24m.12s.$, $iSR_2 = N = +27m.23s.$ Helsingfors $ScPcS =$
 $+21m.21s.$ Ksara $i = +12m.5s.$ and $+12m.57s.$, $PR_1 = +14m.59s.$;
 $T_0 = 20h.41m.40s.$ Lick $eZ = +10m.43s.$, $eE = +11m.53s.$, $eN =$
 $+11m.54s.$, $eE = +17m.38s.$ Berkeley $iPZ = +12m.0s.$, $ePE = +12m.2s.$,
 $ePN = +12m.4s.$, $eSR_2E = +30m.22s.$, $eSR_2Z = +32m.13s.$, $eLNZ = +37.0m.$
 Baku $iPS = +24m.20s.$ Ekaterinburg $iPR_1 = +16m.17s.$, $iScPcS =$
 $+23m.9s.$ Tananarive $e = +18m.11s.$, $PR_2 = +18m.59s.$, $PR_2 =$
 $+20m.36s.$, $e = +24m.45s.$, $PS = +25m.10s.$, $i = +25m.58s.$, $SR_1 =$
 $+30m.40s.$, $SR_2 = +34m.16s.$ Tashkent $PR_2 = +17m.20s.$, $PS =$
 $+26m.33s.$ Honolulu T.H. $PSE = +28m.43s.$, $SR_2EN = +34m.33s.$,
 $eLN = +45.2m.$ Irkutsk $iPR_1 = +21m.24s.$, $iPS = +30m.47s.$, $iSR_1 =$
 $+36m.57s.$ Calcutta $PN = +20m.8s.$ Kobe $MNW = +87.4m.$ Zi-ka-wei
 $IZ = +23m.13s.$, $+31m.27s.$, $+36m.31s.$, $+40m.13s.$ = $SR_1 + 17s.$, $+47m.1s.$,
 $+50m.47s.$ = $SR_1 + 13s.$, $+53m.7s.$ and $+55m.25s.$ Manila $iEN =$
 $+22m.7s.$, $iScPcP = +23m.38s.$, $iPR_1 = +23m.45s.$, $iPR_2 = +26m.52s.$,
 $iPS = +35m.5s.$; $T_0 = 20h.41m.36s.$ Melbourne $i = +26m.21s.$
 $+28m.21s.$, $iSR_1 = +43m.6s.$, $iSR_2 = +48m.56s.$ Riverview $ePPS =$
 $+37m.34s.$, $eSR_1 = +43m.40s.$, $eSR_2 = +49m.59s.$, $eL_0 = +66.2m.$ Adelaide
 $MN = +87.3m.$ Amboina $i = +20m.36s.$

Feb. 22d. Readings also at 0h. (Andijan (2), Samarkand (2), Tashkent, Ekaterinburg, and near Irkutsk), 1h. (Andijan, Frunse, Samarkand, Tashkent, Baku, Ekaterinburg, Pulkovo, and near Irkutsk), 2h. (Andijan and Samarkand), 4h. (Samarkand (2)), 6h. (Florissant, Ottawa, Sucre, and La Paz), 9h. (Kodaikanal), 11h. (near Manila), 13h. (Florissant, La Paz, and near Manila), 14h. (Frunse), 17h. (Port au Prince), 19h. (La Paz), 22h. (La Paz (2) and Sucre (2)), 23h. (Sucre and La Paz).

Feb. 23d. 11h. 10m. 18s. Epicentre $31^{\circ}.0'S. 71^{\circ}.0'W.$

A = +.279, B = -.811, C = -.515; D = -.946, E = -.326;
 G = -.168, H = +.487, K = -.857.

	Δ	Az.	P.		O-C.		S.	O-C.		L.	M.
			m.	s.	s.	m. s.		s.	m.		
Santiago	2.5	171	0	54	+15	1	8	-	1	5	-
La Plata	11.7	113	2	55	0	5	8	-	4	5	9
Sucre	13.0	25	3	13	0	5	58	+14	-	-	8.0
La Paz	14.7	11	3	36	+1	1	6	21	-	4	7.7
Rio de Janeiro E.	26.0	79	-	-	-	e	10	12	-10	-	-

Additional readings: Santiago $SR_1 = +1m.15s.$

Rio de Janeiro $eN =$

+10m.2s.; readings given without phase,

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Feb. 23d. Readings also at 1h. (Sucre and near Manila), 4h. (La Paz (2)), 6h. (Apia and near Taihoku), 7h. (La Paz and Sucre), 8h. (near Tacubaya), 9h. (near Malabar), 10h. (near Manila), 11h. (Andijan and near Belgrade), 12h. (La Paz, near Oaxaca, Tacubaya, and near Tashkent), 13h. (Florence, Pompeii, Zagreb, and near Port au Prince), 14h. (Sucre and near La Paz), 15h. (near Manila), 16h. (near La Paz), 21h. (Florissant and near Andijan), 22h. (Frunse, near Samarkand, and Andijan).

Feb. 24d. 3h. 36m. 33s. (I) } Epicentre 44°-5N. 34°-5E.
15h. 55m. 12s. (II) } (as on 1928 Dec. 7d.).

A = +.588, B = +.404, C = +.701.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
I Yalta	0.2	270	0 3	- 7	—	—	10.0	0.0
II	0.2	270	0 2	- 6	—	—	e 0.0	—
I Simferopol	0.5	326	e 0 8	—	(0 16)	+ 2	0.3	—
II	0.5	326	e 0 7	—	(0 16)	+ 2	0.3	—
I Sebastopol	0.7	279	e 0 14	+ 3	—	—	0.3	0.4
II	0.7	279	e 0 11	0	(0 20)	0	0.3	0.4
I Theodosia	0.8	48	—	—	—	—	e 0.5	—
II	0.8	48	e 0 19	+ 7	—	—	0.5	—

Epicentres given by the Crimean stations: 44°25'N. 34°35'E. for shock (I); 44°23'N. 34°30'E. for shock (II).

Feb. 24d. Readings also at 2h. (Hukuoka and Samarkand), 4h. (near Kobe and Sumoto), 11h. (near Sucre and La Paz), 12h. (Matuyama, near Kobe, Sumoto, and near Hukuoka), 17h. (near La Paz, Nagoya, near Akita, and Mizusawa), 21h. (Florissant, Tucson, near Oaxaca, and Puebla), 22h. (Adelaide, Melbourne, Riverview, Ekaterinburg, Irkutsk, and Pulkovo), 23h. (near Wellington).

Feb. 25d. Readings at 0h. (Suva, Frunse, Andijan, near Samarkand, and near La Paz), 2h. (La Paz), 7h. (near Sumoto), 8h. (Andijan and Frunse), 12h. (near Toyooka), 14h. (Samarkand), 17h. (Andijan, Samarkand, Ekaterinburg, near Akita, and Mizusawa), 18h. (Andijan and Samarkand), 20h. (Baku, Ekaterinburg, Samarkand, Andijan, Nagoya, and La Paz), 21h. (Tashkent), 22h. (Andijan and Samarkand), 23h. (La Paz).

Feb. 26d. 3h. 29m. 45s. Epicentre 20°-6S. 168°-8E. (as on 1928 Nov. 19d.).

A = -.918, B = +.182, C = -.352; D = +.194, E = +.981;
G = +.345, H = -.068, K = -.936.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview	20.5	226	1 4 48	+ 1	1 8 45	+11	e 10.0	11.7
Sydney	20.5	226	(4 45)	- 2	4 45	?P	10.2	12.4
Wellington	E. 21.3	168	1 4 57	0	1 8 44	- 6	10.0	11.7
	N. 21.3	168	1 4 58	+ 1	1 8 45	- 5	10.5	—
Melbourne	26.8	225	1 5 25	-31	1 10 12	-25	13.0	14.8
Adelaide	30.1	235	e 9 3?	?	13 27	?	15.8	18.1
Manila	58.7	304	e 10 9	+ 6	1 18 16	+ 9	—	—
Batavia	61.6	275	1 10 27	+ 4	1 18 50	+ 7	—	—
Irkutsk	91.8	326	e 13 14	-12	23 7	[-32]	e 40.2	—
Bombay	102.2	286	—	—	—	—	e 61.2	—
Tashkent	110.4	308	—	—	e 26 57	-35	—	78.4
Florissant	111.0	55	—	—	—	—	e 52.2	57.8
St. Louis	E. 111.1	55	—	—	—	—	e 58.2	—
Ekaterinburg	117.0	324	e 18 49	[+ 5]	e 27 51	-35	46.2	—
Toronto	119.7	50	—	—	—	—	58.2	—
Georgetown	Z. 121.3	55	e 11 13	?	—	—	e 61.5	—
Ottawa	E. 122.3	47	—	—	—	—	e 58.2	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Baku	124.9	307	—	—	—	—	60.2	91.6
Kucfno	129.5	328	—	—	—	—	e 56.2	—
Pulkovo	131.1	334	i 22 40	?	—	—	50.2	79.2
Copenhagen	140.7	339	—	—	—	—	60.2	—
Vienna	z. 144.6	329	e 19 39	[- 9]	—	—	—	—
De Bilt	146.1	340	i 19 46	[- 4]	—	—	e 77.2	78.8
Zagreb	146.4	325	e 19 47	[- 3]	—	—	—	—
Uccle	147.4	341	—	—	—	—	e 74.2	—
Innsbruck	147.6	331	19 15?	[-37]	—	—	—	—
Paris	149.7	342	—	—	—	—	e 80.2	—

Additional readings: Riverview MN = +11.9m. Batavia iE = +20m.28s. =
 (S) +21s. Tashkent i = +28m.51s. = PS -12s., e = +32m.21s. Ekaterin-
 burg e = +29m.48s. = PS -25s., and +36m.1s. = SR₁ -9s. Georgetown
 eZ = +32m.12s. and +51m.50s. Vienna iPZ = +19m.42s. De Bilt
 iZ = +18m.57s., eLN = +76.2m., MN = +80.1m., MZ = +83.8m.

Feb. 26d. 9h. 0m. 41s. Epicentre 53°·7N. 163°·0W.

A = -.566, B = -.173, C = +.806; D = -.292, E = +.956.
 G = -.771, H = -.236, K = -.592.

A depth of focus 0.005 has been assumed.

	Corr. for Focus	A	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	m. s.	s.	m.	m.
Sitka	e. -0.1	15.9	67	e 4 0	+11	e 7 1	+11	e 7.9	15.1
Victoria	-0.3	25.2	86	5 44	+ 7	(9 54)	- 7	9.9	12.5
Berkeley	e. -0.4	31.9	103	e 6 34	- 9	e 11 46	-14	—	—
Lick	-0.4	32.6	103	e 6 38	-12	e 11 58	-13	e 15.7	—
Honolulu T.H.	e. -0.4	32.7	172	—	—	e 12 9	- 4	e 13.6	—
	n. -0.4	32.7	172	—	—	12 7	- 6	e 14.3	—
Tucson	e. -0.4	42.5	99	8 7	- 5	e 14 25	-11	17.8	—
	n. -0.4	42.5	99	8 8	- 4	e 14 24	-12	18.0	—
Nagoya	-0.5	45.1	274	e 8 26	- 4	—	—	—	—
Kobe	-0.5	46.5	274	8 36	- 4	—	—	e 22.6	—
Sumoto	-0.5	46.9	274	e 8 39	- 4	—	—	—	—
Chicago	e. -0.5	49.6	72	8 57	- 4	i 15 58	- 9	e 22.3	—
	n. -0.5	49.6	72	8 56	- 5	i 15 59	- 8	e 22.3	—
Florisant	-0.5	50.0	77	i 8 59	- 5	i 16 5	- 8	e 23.3	27.4
St. Louis	e. -0.5	50.2	77	e 9 1	- 4	i 16 7	- 8	e 21.9	—
	n. -0.5	50.2	77	e 9 2	- 3	i 16 10	- 5	e 22.9	28.4
Ann Arbor	e. -0.5	51.4	69	—	—	i 16 25	- 5	e 28.0	—
	n. -0.5	51.4	69	—	—	e 16 31	+ 1	e 26.9	—
Irkutsk	-0.5	51.7	310	9 13	- 1	16 32	- 2	28.3	34.2
Scoresby Sund	-0.5	52.7	16	9 7	-14	16 37	- 9	27.3	—
Toronto	-0.5	52.8	65	e 9 22	0	i 16 42	- 6	25.3	31.2
Cincinnati	-0.5	53.1	73	i 9 24	0	i 16 49	- 2	25.8	29.3
Ottawa	-0.5	53.6	61	i 9 23	- 4	i 16 54	- 3	e 25.3	33.7
Ithaca	-0.6	55.2	64	9 32	- 5	17 13	- 3	e 26.3	32.2
Zi-ha-wei	n. -0.6	57.1	280	9 52	+ 3	—	—	—	—
Charlottesville	e. -0.6	57.2	70	—	—	i 17 43	+ 2	e 25.3	—
	n. -0.6	57.2	70	—	—	i 17 47	+ 6	e 28.0	—
Georgetown	z. -0.6	57.4	68	9 54	+ 3	17 42	- 2	e 28.5	38.3
Fordham	-0.6	57.7	65	e 15 35	?	e 24 53	?	—	31.5
Harvard	-0.6	58.1	61	i 9 56	0	i 17 51	- 2	—	—
Tshoku	n. -0.6	61.6	275	—	—	—	—	29.3	—
Ekaterinburg	-0.6	63.9	335	i 10 36	+ 2	i 19 8	+ 3	29.3	39.1

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	Corr. for Focus	Δ	Az.	P. m. s.	O-C. s.	S. m. s.	O-C. s.	L. m.	M. m.
Helingsfors	-0.6	66.0	356	i 10 51	+ 4	i 19 33	+ 3	e 26.8	—
Pulkovo	-0.6	66.0	354	i 10 52	+ 5	i 19 28	- 2	e 27.3	39.1
Uppsala	-0.6	66.4	0	i 10 51	+ 1	e 19 33	- 2	e 29.3	45.8
Apia	-0.6	67.9	190	—	—	—	—	e 29.3	—
Hong Kong	-0.6	68.0	279	11 8	+ 8	20 5	+ 10	e 28.3	39.8
Dyce	-0.6	68.0	11	e 10 48	- 12	19 58	+ 3	29.8	44.4
Edinburgh	-0.6	69.2	13	—	—	e 20 19 ²	+ 10	39.3	41.3
Kucino	-0.6	69.2	348	11 11	+ 3	20 10	+ 1	32.4	43.3
Manila	-0.6	70.1	270	11 19 ²	+ 5	i 20 30	+ 10	—	48.3
Copenhagen	-0.6	70.5	3	11 20	+ 4	i 20 30	+ 5	31.3	—
Lund	-0.6	70.6	2	11 20	+ 3	20 28	+ 2	30.3	68.3
Stonyhurst	-0.6	71.2	12	e 11 30	+ 9	20 39	+ 6	34.3	40.9
Bidston	-0.6	71.6	12	—	—	—	—	35.6	46.2
Frunse	-0.6	71.6	320	i 11 31	+ 8	—	—	38.8	—
Hamburg	-0.6	72.6	5	i 11 32	+ 2	i 20 55	+ 5	e 31.3	48.3
Oxford	-0.6	73.4	11	i 11 37	+ 2	20 47	- 13	e 35.8	47.4
Phu-Lien	-0.6	73.6	283	e 11 39	+ 3	e 21 9	+ 7	e 35.3	—
Da Bilt	-0.6	73.7	7	e 11 40	+ 3	21 4	+ 1	e 31.3	37.7
Kew	-0.6	73.9	10	i 11 39	+ 1	i 21 7	+ 1	e 32.3	43.0
Göttingen	e. -0.6	74.6	5	i 11 48	+ 6	—	—	e 31.4	41.4
	n. -0.6	74.6	5	i 11 47	+ 5	e 21 14	0	e 30.2	52.4
	z. -0.6	74.6	5	e 11 44	+ 2	—	—	e 44.9	52.4
Andijan	-0.6	74.7	320	i 11 47	+ 4	—	—	38.3	—
Uccle	-0.6	74.9	9	i 11 44	+ 0	21 20	+ 2	e 30.3	46.2
Tashkent	-0.6	75.0	323	i 11 49	+ 5	i 21 24	+ 5	—	46.7
Jena	-0.7	75.3	4	i 11 48	+ 2	e 21 19	- 2	e 37.3	51.8
Paris	-0.7	76.8	10	i 11 57	+ 1	—	—	31.3	62.3
Samarqand	-0.7	77.2	324	12 0	+ 2	—	—	41.3	—
Strasbourg	-0.7	77.4	7	i 11 59	0	—	—	29.3	48.8
Vienna	-0.7	78.0	0	e 12 3	0	(22 0)	+ 8	e 33.3	57.3
Besançon	-0.7	78.7	8	e 12 9	+ 2	—	—	47.3	—
Budapest	-0.7	78.8	358	12 19 ²	+ 11	—	—	—	—
Innsbruck	-0.7	78.9	4	e 12 7	- 1	—	—	e 33.2	55.8
Neuchâtel	-0.7	78.9	6	e 12 6	- 2	e 22 11	+ 9	—	—
Graz	-0.7	79.2	1	i 12 6	- 4	i 22 15	+ 9	45.3	54.2
Chur	-0.7	79.3	6	e 12 11	0	—	—	—	—
Theodosia	-0.7	80.0	348	i 12 18	+ 3	e 22 44	+ 29	53.3	—
Simferopol	-0.7	80.3	349	e 12 18	+ 1	—	—	—	—
Zagreb	-0.7	80.5	1	e 12 15	- 3	e 22 3	- 18	e 36.2	47.2
Sebastopol	-0.7	80.6	349	e 12 21	+ 3	—	—	—	—
Yalta	-0.7	80.7	349	e 12 16	- 3	—	—	—	—
Venice	-0.7	80.7	3	i 12 19	0	22 24	+ 1	—	—
Dehra Dun	-0.7	80.8	311	12 19	- 1	22 19	- 5	32.6	53.3
Moncalieri	-0.7	81.0	7	12 5	- 16	22 27	0	32.6	50.6
Belgrade	e. -0.7	81.4	357	e 12 21	- 2	e 22 28	- 3	e 42.5	—
	n. -0.7	81.4	357	e 12 19	- 4	e 22 27	- 4	e 41.8	—
Baku	-0.7	81.8	335	e 12 25	- 1	i 22 40	+ 4	41.3	54.3
Calcutta	e. -0.7	82.3	299	11 55	- 33	22 55	+ 13	46.0	—
	n. -0.7	82.3	299	12 29	+ 1	22 44	+ 7	—	—
Florence	-0.7	82.4	5	12 26	- 3	22 50	+ 7	42.3	57.0
Barcelona	-0.7	84.0	11	12 36	- 2	22 56	- 4	e 28.1	53.8
Tortosa	e. -0.7	84.4	13	12 51	+ 11	—	—	e 37.3	—
	n. -0.7	84.4	13	e 12 30	- 10	e 22 55	- 11	e 38.3	51.5
Toledo	-0.7	84.7	16	e 12 43	+ 1	e 23 14	+ 6	e 37.5	64.2
Naples	-0.7	85.4	2	e 12 44	- 2	—	—	—	—
Pompeii	-0.7	85.5	2	e 12 29	- 18	e 23 19	+ 2	—	—
Alicante	-0.7	86.7	14	e 12 51	- 2	e 23 25	- 5	e 45.7	—
Granada	-0.7	87.4	17	i 12 47	- 10	i 23 33	- 5	42.3	53.2
Malaga	-0.7	87.6	18	12 51	- 7	23 36	- 4	30.3	—
San Fernando	-0.7	87.6	20	13 3	+ 5	23 33	- 7	41.0	56.3
Algiers	-0.7	88.7	11	12 58	- 7	23 42	- 10	47.3	54.3
Ksara	-0.8	91.0	346	e 13 8	- 9	23 40	[+ 11]	47.3	—
Hyderabad	-0.8	91.6	305	13 14	- 6	24 10	- 12	47.1	54.9

Continued on next page.

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	Corr. for Focus	Δ	Az.	P.		O-C.	S.		O-C.	L.	M.
				m.	s.		m.	s.			
Bombay	-0.8	93.1	310	13	21	- 8	24	7	[+20]	46.1	57.3
Batavia	-0.8	95.1	268	i 13	36	- 4	i 24	40	-19	—	—
Riverview	-0.8	96.1	217	—	—	—	24	53	-16	45.7	54.7
Wellington	-0.8	96.9	197	—	—	—	—	—	—	e 44.3	—
Colombo	-0.8	99.9	296	6	22	?	25	37	-10	46.4	64.6
Melbourne	-0.8	101.9	220	—	—	—	e 25	26	? E	49.6	51.0
Adelaide	-0.8	102.0	226	—	—	—	e 24	10	[-24]	e 43.4?	56.3
La Paz	-0.8	106.1	97	e 19	42	?	29	50	?	52.3	62.6
Sucre	-0.9	109.8	97	e 20	24	?	—	—	—	54.3	—
Rio de Janeiro	E.	—	125.8	80	e 25	54	? S	(e 25 54)	- 7	—	—
Cape Town	—	160.2	356	—	—	—	—	—	—	87.3	—

Additional readings and notes : Berkeley eEN = +6m.50s., ePR₁N = +7m.30s., eSN = +11m.48s., eEN = +14m.7s., and +15m.2s., iS₁S₂N = +16m.52s., iEN = +17m.24s., eE = +24m.30s., Lick eZ = +6m.50s., iE = +7m.49s., PR₁+3s., eLZ = +15.1m., eS₁S₂E = +17m.2s. Chicago SR₁E = +18m.36s., SR₁N = +18m.44s., SR₂E = +19m.41s., Florissant iPEN = +9m.0s., ePR₁EZ = +11m.0s., iZ = +11m.32s., iPS₁EN = +16m.18s., iE = +16m.20s., iN = +16m.25s., iE = +18m.45s., iN = +18m.47s., S₁S₂E = +19m.7s., iSR₁N = +19m.51s., iSR₂EN = +20m.59s., eLN = +23.3m., MNZ = +28.2m. St. Louis iP = +9m.3s., i = +16m.29s., and +18m.50s. Ann Arbor eE = +19m.1s. and +23m.31s., eN = +25m.19s. and +29m.31s. Scoresby Sund +12m.49s. Toronto iN = +19m.4s. = [S] +6s., MN = +33.2m.; T₁ = 9h.0m.50s. Cincinnati S₁S = +19m.9s. Ottawa iN = +19m.7s. = [S] +2s., MN = +30.3m.; T₁ = 9h.0m.39s. Charlottesville eSR₁N = +19m.38s. = [S] +5s. Georgetown PEN = +9m.58s., iZ = +12m.2s., PR₁Z = +13m.46s., iZ = +23m.6s. Upsala MN = +36.4m. Dyce alternative eP = +11m.1s. = P + 1s. Manila iP₁P = +11m.54s., i = +12m.13s., iPS = +20m.57s., i = +22m.56s.; T₁ = 9h.0m.44s. Copenhagen +21m.16s. = [S] + 1s. and +21m.33s. Hamburg MZ = +50.3m. De Bilt eSR₁ = +26m.3s., eLNZ = +38.3m., MZ = +46.7m., MN = +46.9m. Kew SR₁ = +26m.4s. Uccle e = +25m.19s.?, MN = +49.7m. Vienna iPZ = +12m.4s., S = +21m.13s.; true S is given as PS. Innsbruck iE = +12m.8s., i = +12m.18s. Zagreb ePNE = +12m.17s., eNW = +12m.37s., iNE = +12m.39s., eNE = +13m.6s., ePS = +22m.24s. Toledo MNW = +64.3m. Granada PR₁ = +16m.16s. San Fernando MN = +53.8m. Batavia iE = +16m.52s. Riverview ePR₁ = +17m.17s., eS = +24m.59s. and +25m.16s., eSR₁ = +31m.51s., MN = +57.1m. Melbourne i = +27m.45s. = PS + 19s. Adelaide iSR₁ = +33m.1s. La Paz L = +47.3m. Sucre PR₁? = +25m.16s. = [S] +7s.

Feb. 26d. Readings also at 0h. (Rio de Janeiro, Sucre, Cincinnati, and Florissant), 1h. (near Kobe and Sumoto), 3h. (near Manila), 11h. (Taihoku and Uccle), 13h. (near Amboina), 14h. (Jena and near La Paz), 18h. (near Amboina), 21h. (near Sucre).

Feb. 27d. 9h. 34m. 41s. Epicentre 33°-1N. 141°-2E. (given by Tokyo in Geophys. Mag., Vol. IV, No. 4).

A = - .653, B = + .525, C = + .546; D = + .627, E = + .779 :
G = - .426, H = + .342, K = - .838.

	z.	Δ	Az.	P.		O-C.	S.		O-C.	L.	M.
				m.	s.		m.	s.			
Hatidyojima		1.1	270	0	16	- 1	0	28	- 3	—	—
Mera		2.1	328	0	35	+ 2	0	57	- 1	—	—
Tokyo		2.8	335	0	45	+ 1	1	14	- 3	—	—
Nagoya		4.1	302	e 1	2	- 2	—	—	—	—	—
Hukusima		4.7	352	1	10	- 3	1	57	-12	—	—
Kobe		5.2	290	1	19	- 1	—	—	—	e 2.2	2.8
Sumoto		5.4	285	e 1	23	0	—	—	—	—	—

Nagoya ePE = +1m.6s.

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Feb. 27d. 17h. 20m. 57s. Epicentre 47°·4N. 9°·5E.

A = +·668, B = +·112, C = +·736 ; D = +·165, E = -·986 ;
G = +·726, H = +·121, K = -·677.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Chur	0·6	177	i 0 8	- 1	i 0 16	- 1	—	—
Zurich	0·6	267	i 0 6	- 3	0 14	- 3	—	—
Innsbruck	1·3	96	e 0 39	+19	(e 0 39)	+ 3	—	—
Strasbourg	1·7	315	e 0 26	0	i 0 48	0	—	—
Neuchatel	1·8	257	i 0 27	- 1	i 0 49	- 2	—	—
Besançon	2·4	266	e 0 40	+ 3	—	—	—	—
Gottingen	4·2	4	e 1 15	+10	—	—	e 2·2	2·3
Vienna	4·7	77	2 31	?L	—	—	(2·5)	2·8

Feb. 27d. Readings also at 0h. (near Mizusawa), 2h. (Ekaterinburg), 3h. (Baku, Irkutsk, Tashkent, La Paz, and near Toyooka), 5h. (Andijan, Frunse, and Samarkand), 6h. (Adelaide, Riverview, Wellington, and near Suva), 8h. (near Manila), 14h. (near Sucre and La Paz), 17h. (near Lick), 18h. (Jena), 20h. (Baku, Ekaterinburg, Kucino, Pulkovo, Tashkent, Copenhagen, Lund, De Bilt, Uccle, Strasbourg, Kew, Dyce, Granada, San Fernando, Scoresby Sund, Georgetown, Ottawa, Toronto, and Florissant).

Feb. 28d. 0h. 12m. 54s. Epicentre 0°·0 122°·4E. (as on 1927 Aug. 3d.).

A = -·536, B = +·844, C = 000 ; D = +·844, E = +·536 ;
G = 000, H = 000, K = -1·000.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	14·7	354	e 2 6?	-89	—	—	—	—
Batavia	16·7	248	i 4 14	+13	—	—	i 8·1	—
Hong Kong	23·7	341	4 9	-76	—	—	e 10·4	11·8
Phu-Lien	25·9	324	e 5 47	0	—	—	—	—
Perth	32·5	190	e 7 6?	+13	—	—	—	—
Adelaide	38·0	158	—	—	—	—	e 19·4	22·4
Melbourne	43·1	153	—	—	—	—	e 17·3	27·7
Riverview	43·3	143	—	—	e 18 0	?SR ₁	e 23·6	26·3
Hyderabad	46·6	295	—	—	—	—	—	36·1
Bombay	52·2	295	e 10 6?	+45	—	—	—	—
Irkutsk	54·4	347	e 9 51	+16	17 39	+25	e 36·1	—
Frunse	60·6	324	e 10 36	+20	—	—	—	—
Wellington	62·7	139	—	—	—	—	—	47·1
Tashkent	63·2	319	e 10 31	- 2	19 0	- 3	29·1	42·7
Samarkand	64·1	317	e 10 36	- 3	—	—	—	—
Ekaterinburg	75·0	331	e 11 48	- 1	e 21 29	+ 3	34·1	—
Baku	76·8	312	—	—	e 21 17	-30	e 44·1	—
Kucino	86·9	326	—	—	—	—	e 44·2	48·4
Pulkovo	91·1	330	—	—	—	—	e 47·1	—
Copenhagen	101·1	328	—	—	—	—	65·1	—
Sucre	159·5	159	e 19 38	[-29]	—	—	—	—
La Paz	180·4	148	20 1	[- 7]	—	—	—	—

Additional readings : Batavia i = +8m.55s,
Baku SR₂ = +30m.19s.

Riverview e = +14m.12s.

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Feb. 28d. 1h. 43m. 50s. Epicentre 46°·5N. 6°·5E. (as on 1928 Dec. 30d.).

A = +·684, B = +·078, C = +·725; D = +·113, E = -·994;
G = +·721, H = +·082, K = -·688.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Neuchatel	0·6	31	i 0 2	- 7	i 0 6	- 11	—	—
Besançon	0·8	335	i 0 11	- 1	i 0 22	0	—	—
Chur	2·1	80	e 0 34	+ 1	i 0 58	0	—	—
Strasbourg	2·2	22	e 0 33	- 1	e 1 0	0	—	—
Hohenheim	2·9	40	0 46	+ 1	e 1 12	- 8	1·3	1·4
Innsbruck	3·4	75	e 1 28	?S	(e 1 28)	- 6	—	—

No additional readings.

Feb. 28d. Readings also at 0h. (Wellington), 1h. (Taihoku and La Paz), 2h. (near Neuchatel), 4h. (Alicante), 5h. (near Malaga), 6h. (near Hukuoka), 7h. (Andijan, Samarkand, and near Frunse), 9h. (Andijan, Samarkand, Frunse, St. Louis, and La Paz), 10h. (Suva, Sucre, and Florissant), 14h. (Mizusawa and near Neuchatel), 15h. (Baku, Ekaterinburg, Irkutsk, and Tashkent), 19h. (Andijan), 20h. (Ekaterinburg, Irkutsk, and near Neuchatel).

Mar. 1d. 7h. 31m. 0s. Epicentre 50°·2N. 130°·7W.

A = -·417, B = -·485, C = +·768; D = -·758, E = +·652;
G = -·501, H = -·582, K = -·640.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria	5·1	108	1 23	+ 4	—	—	3·0	5·1
Sitka	7·4	340	(e 1 50)	- 2	(1 3 10)	- 11	3·2	—
Berkeley	13·7	151	e 3 47	+25	e 6 46	+45	e 8·6	—
Lick	E. 14·4	150	e 3 57	+25	e 7 17	+59	e 9·2	—
	N. 14·4	150	e 3 53	+21	e 7 14	+56	e 9·0	—
Saskatoon	15·1	74	e 3 38	- 2	e 6 18	- 16	i 8·1	9·7
Tucson	E. 23·2	133	5 28	+ 9	9 57	+28	13·4	—
	N. 23·2	133	5 26	+ 7	9 53	+24	e 12·6	—
Florissant	30·5	96	e 6 30	- 3	e 11 29	- 14	i 15·5	16·2
Chicago	E. 30·6	89	6 13	-21	11 23	-21	16·6	—
	N. 30·6	89	—	—	11 32	-12	16·5	—
St. Louis	30·7	96	e 6 30	- 5	e 11 30	-16	—	16·4
Ann Arbor	E. 32·8	85	—	—	e 13 54	?SR ₁	e 16·4	20·4
Cincinnati	34·0	91	e 6 54	-11	e 12 20	-20	17·0	19·1
Toronto	34·9	81	e 8 35	?PR ₁	e 12 30	-24	i 18·5	19·3
Honolulu T.H.	E. 35·9	229	—	—	—	—	16·1	—
Ottawa	36·4	76	e 8 42	?PR ₁	e 13 0	-16	e 16·0	19·8
Ithaca	37·3	80	—	—	—	—	18·0	20·6
Charlottesville	N. 38·5	88	—	—	13 40	- 5	20·6	—
Georgetown	E.N. 38·9	86	7 42	- 3	13 35	-16	e 18·2	—
	Z. 38·9	86	7 44	- 1	13 25	-26	e 19·2	25·3
Fordham	39·8	82	e 13 0	?S	(e 13 0)	-63	18·7	25·2
Harvard	40·8	78	—	—	e 14 8	-10	e 18·5	—
Scoresby Sund	49·0	25	11 30	?PR ₁	—	—	26·0	—
Dyce	64·5	28	—	—	—	—	e 30·5	37·6
Edinburgh	65·3	30	—	—	e 31 0?	?	36·0	39·0
Upsala	67·0	17	—	—	—	—	e 33·0	42·4
Stonyhurst	67·2	30	—	—	e 23 46	?	e 35·0	39·0
Irkutsk	67·4	329	e 11 7	+ 7	20 1	+ 6	40·0	41·4
Helsingfors	67·9	12	e 11 4	+ 1	e 20 2	+ 1	—	—
Pulkovo	68·9	10	11 16	+ 6	20 18	+ 3	29·0	41·4
Oxford	E. 69·4	31	—	—	—	—	e 34·3	39·7
Copenhagen	69·7	21	11 18	+ 3	20 30	+ 8	33·0	—
Lund	69·9	20	—	—	—	—	31·0	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Kew	69.9	30	—	—	—	—	33.0	40.9
De Bilt	71.1	27	—	—	e 20 50	+11	e 33.0	43.4
Hamburg	71.1	24	e 11 30	+ 6	—	—	e 35.0	47.0
Uccle	71.9	29	—	—	e 21 0†	+11	e 33.0	41.6
Ekaterinburg	72.5	355	e 11 33	0	e 20 56	0	28.0	49.0
Gottingen	72.9	24	e 11 23	-12	—	—	e 37.0	46.4
Paris	73.1	30	—	—	—	—	e 38.0	42.0
Kucino	73.6	6	e 11 56	+16	e 21 12	+ 3	32.3	42.1
Jena	73.9	24	—	—	—	—	e 39.0	44.0
Strasbourg	75.0	27	—	—	—	—	e 40.0	45.5
Besançon	75.6	29	—	—	—	—	41.0	—
Vienna	77.5	22	12 18	+14	—	—	e 39.0	45.0
Moncalieri	78.1	29	25 38	?	32 25	?	41.6	49.9
Toledo	78.5	39	—	—	—	—	e 33.9	47.6
Budapest	78.9	20	—	—	—	—	e 41.0	—
Zagreb	79.7	24	—	—	—	—	—	46.0
Florence	80.3	26	e 26 0	?	—	—	45.8	46.5
San Fernando	80.5	43	—	—	—	—	—	48.0
Granada	80.9	40	—	—	—	—	e 44.5	49.5
Alicante	81.1	37	—	—	—	—	e 50.1	—
La Paz	86.3	122	e 13 0	+ 5	—	—	44.0	53.0
Tashkent	86.8	346	e 12 48	-10	i 23 28	-11	39.0	54.7
Hong Kong	87.6	304	23 30	†S	(23 30)	-18	39.7	58.5
Baku	89.4	0	e 13 34	+22	23 59	- 8	41.5	57.7
Sucre	89.9	121	13 25	+10	e 24 3	-10	49.0	55.2
Wellington	E. 103.2	220	—	—	—	—	49.0	—
Rio de Janeiro	E. 105.9	108	—	—	—	—	e 54.4	—
Hyderabad	E. 107.6	331	—	—	—	—	—	63.6
Bombay	107.8	336	e 25 7	†S	(e 25 7)	[+ 7]	—	—
Melbourne	114.9	240	—	—	—	—	e 63.6	67.5
Colombo	117.1	325	29 47	†PS	—	—	—	71.5

Additional readings and note : Sitka gives S as L and P as S. Berkeley iPZ = +3m.48s., eE = +3m.59s., 1NZ = +4m.0s., eSZ = +6m.47s., iSR₁N = +7m.8s., eSR₂Z = +7m.42s., iE = +8m.0s., eLN = +3.5m. Saskatoon MN = +8.8m.; T₀ = 7h.31m.21s. Tucson ePR₁E = +7m.1s., ePR₂N = +7m.5s. Florissant eSN = +11m.30s., eP₁PE = +13m.11s., eSR₁Z = +13m.21s., MNZ = +16.5m. Chicago SR₁E = +14m.46s., SR₂N = +15m.13s. Ann Arbor eN = +14m.12s. = SR₁ + 4s., MN = +18.5m. Cincinnati eSR₁EZ = +14m.35s., eSR₂Z = +15m.30s. Toronto MN = +19.4m. Honolulu T.H. SR₁E = +15m.42s., LN = +16.3m. Ottawa eN = +14m.54s. Charlottesville eE = +16m.0s. = SR₁ - 14s., eN = +19m.24s., eE = +19m.36s., LE = +20.5m. Georgetown PR₁EN = +9m.6s., PR₂Z = +9m.16s., SR₁Z = +16m.10s., SR₂EN = +16m.13s., SR₂Z = +16m.50s., SR₂EN = +16m.59s., SR₁Z = +17m.33s. Fordham SN = +15m.41s., SE = +16m.15s., SR₁N = +17m.57s., SR₁E = +18m.30s. Harvard eN = +16m.49s. = SR₁ - 15s. Upsala MN = +38.5m. Oxford eLN = +32.0m., MN = +40.7m. Kew SR₁ = +24m.42s., eE = +28m.24s. = SR₂ - 9s. De Bilt MN = +44.0m. Gottingen eLN = +40.0m., eLZ = +42.0m. Paris MN = +44.0m. Kucino eSR₁ = +25m.54s. Jena MN = +44.5m. Moncalieri MN = +45.3m. Toledo MNE = +46.3m. San Fernando MN = +47.0m. Baku SR₁ = +30m.0s. Hyderabad MN = +67.3m.

Mar. 1d. 8h. 52m. 36s. Epicentre 50°-2N. 130°-7W. (as at 7h.).

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria	5.1	108	1 34	+15	—	—	2.9	3.7
Berkeley	N. 13.7	151	—	—	—	—	e 6.8	—
Lick	N. 14.4	150	e 3 48	+16	—	—	—	—
Tucson	23.2	133	e 5 30	+11	e 9 55	+26	e 15.3	15.4
Florissant	30.5	96	e 6 27	- 6	e 11 34	- 9	e 15.4	17.4
St. Louis	30.7	96	e 10 58	†S	(e 10 58)	-48	(e 16.0)	—
Ann Arbor	32.8	85	e 17 24	†L	e 19 30	?	e 20.1	20.3
Cincinnati	34.0	91	—	—	—	—	17.6	19.4

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Toronto	34.9	81	—	—	—	—	17.4	19.2
Honolulu T.H.	35.9	229	—	—	—	—	e 16.5	17.4
Ottawa	36.4	76	—	—	e 12 54	-22	e 16.4	20.1
Ithaca	37.3	80	—	—	—	—	—	19.4
Charlottesville	38.5	88	—	—	—	—	e 23.4	24.0
Georgetown	38.9	86	—	—	—	—	e 18.6	24.2
Fordham	39.8	82	—	—	—	—	e 18.6	—
Scoresby Sund	49.0	25	—	—	—	—	—	19.5
Copenhagen	69.7	21	—	—	—	—	—	38.4
De Bilt	71.1	27	—	—	—	—	e 36.4	44.3
Uccle	71.9	29	—	—	—	—	—	39.4

Additional readings and note: Victoria PE = +1m.42s. Berkeley eE = +7m.30s., eN = +8m.38s. Tucson eSE = +10m.12s., eE = +11m.51s., eLN = +14.8m. St. Louis gives S as P and L as S. Ann Arbor eE = +18m.12s. Toronto iE = +18m.30s. Charlottesville eN = +20m.24s., eE = +20m.54s. Georgetown eZ = +17m.10s. = SR₁ + 0s. Fordham eL = +26.7m.

Mar. 1d. 10h. 32m. 15s. Epicentre 46°.5N. 6°.5E. (as on 1929 Feb. 28d.).

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Neuchatel	0.6	31	10 2	-7	10 7	-10	—	—
Besançon	0.8	335	10 10	-2	—	—	—	0.4
Grenoble	1.4	203	10 28	+7	10 49	+10	—	—
Moncalieri	1.7	151	0 21	-5	0 50	+2	—	—
	1.7	151	0 26	0	1 3	+15	—	—
Zurich	1.7	59	10 24	-2	10 41	-7	—	—
Chur	2.1	80	e 0 31	-2	0 59	+1	—	—
Strasbourg	2.2	22	e 0 31	-3	10 58	-2	—	—
Karlsruhe	2.8	27	0 32	-8	1 8	-9	1.3	2.4
Innsbruck	3.4	75	—	—	e 1 21	-13	i 1.7	2.0
Paris	3.6	312	e 0 56?	0	e 1 56?	+17	2.1	—
Uccle	4.6	343	e 1 21	+10	e 2 12	+6	1.2.3	—
Göttingen	5.5	25	e 1 33	+8	2 39	+8	—	—
Jena	5.6	36	e 1 31	+4	e 2 40	+6	e 2.8	2.9
De Bilt	5.7	352	—	—	—	—	e 2.9	—
Kew	6.6	321	—	—	—	—	—	—
Vienna	6.9	72	e 2 26	+41	3 34	+27	e 3.5	—
Hamburg	7.4	17	—	—	—	—	e 3.8	—

Additional readings: Chur iP = +32s. Innsbruck i = +2m.32s. Göttingen iZ = +2m.45s., iN = +2m.47s., and +2m.52s. Jena eE = +2m.3s., eN = +2m.28s. Kew e = +3m.54s. Vienna P = +2m.50s., iZ = +3m.6s., P₂S = +3m.22s.

Mar. 1d. 15h. 39m. 40s. Epicentre 13°.9N. 91°.2W. (as on 1929 Feb. 13d.).

A = -.020, B = -.971, C = +.240; D = -1.000, E = +.021;
G = -.005, H = -.240, K = -.971.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca	6.2	302	—	—	(2 21)	-28	2.4	2.9
Merida	7.2	12	1 58	+9	3 29	+14	3.6	4.2
Tacubaya	9.5	307	2 0	-23	3 33	-43	3.7	4.2
St. Louis	24.8	2	e 5 38	+2	e 9 59	0	—	20.5
Florissant	25.0	2	e 5 31	-7	e 9 59	-4	—	—
Tucson	25.7	319	5 26	-19	9 45	-31	12.7	—
Cincinnati	z. 25.9	12	—	—	—	—	e 31.4	—
Charlottesville	N. 26.6	23	—	—	e 10 8	-25	e 18.3	20.3
Georgetown	z. 28.0	24	6 40	+32	11 59	+60	—	20.9
Chicago	N. 28.1	6	—	—	e 11 2	+1	e 18.4	—

Continued on next page.

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		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ann Arbor	E.	29.2	11	—	—	—	—	e 16.6	—
Toronto		31.4	17	—	—	e 12 20?	+22	20.6	—
Ottawa		34.1	20	—	—	e 12 44	+ 2	20.3	—
Victoria		43.5	330	—	—	—	—	23.8	26.7
Scoresby Sund		70.1	20	—	—	—	—	40.3	—
De Bilt		82.9	38	—	—	—	—	e 48.3	—
Copenhagen		86.0	34	—	—	—	—	44.3	—
Pulkovo		92.7	25	e 18 45	?	—	—	48.3	—
Ekaterinburg		105.5	15	—	—	(24 20)	[-30]	24.3	—
Irkutsk		112.5	350	—	—	—	—	e 67.3	—
Baku		114.8	31	—	—	—	—	e 59.8	—
Tashkent		121.9	16	—	—	—	—	e 67.3	73.5

Additional readings: Tucson SN = +9m.38s. Charlottesville eN = +11m.34s. = SR₁ -8s., and +14m.56s., eE = +16m.20s., eLE = +17.3m., ME = +20.2m. Georgetown SR₁Z = +13m.56s. Chicago eE = +11m.18s., eLE = +18.8m. Ann Arbor eE = +17m.38s. and +20m.56s., eLN = +21.5m. Ottawa e = +16m.20s.

March 1d. 20h. 57m. 0s. Epicentre 13° 9N. 91° 2W. (as at 15h.).

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Merida		7.2	12	1 57	+ 8	3 27	+12	3.5	4.1
Tacubaya		9.5	307	2 9	-14	3 42	-34	3.8	4.6
St. Louis		24.8	2	e 5 37	+ 1	e 9 59	- 3	e 19.0	21.3
Florissant		25.0	2	e 5 35	- 3	e 9 59	- 4	—	—
Tucson		25.7	319	5 20	-25	9 49	-27	13.0	—
Cincinnati	Z.	25.9	12	e 5 0	-47	e 10 54	+34	17.5	—
Georgetown	Z.	28.0	24	6 10	+ 2	11 52	+53	17.7	20.9
Toronto		31.4	17	—	—	—	—	17.0	—
Ottawa		34.1	20	—	—	—	—	e 16.0	—
Victoria	E.	43.5	330	—	—	—	—	24.2	26.8

Additional readings: Tucson LN = +13.2m. Georgetown SR₁Z = +14m.8s.

March 1d. Readings also at 0h. (Sucre and near La Paz), 1h. (Apia and Wellington), 2h. (Andijan), 3h. (Nagoya), 6h. (Andijan and Sucre (2)), 7h. (Sucre), 8h. (Taihoku (2) and near Lick), 11h. (near Neuchatel (2)), 14h. (Taihoku and near Neuchatel), 15h. (Strasbourg, near Batavia, and Malabar), 17h. (Baku, Ekaterinburg, Irkutsk, Tashkent, and Mizusawa), 18h. (near Neuchatel), 19h. (Hong Kong, Baku, Tashkent, Ekaterinburg, Irkutsk, Pulkovo, Copenhagen, De Bilt, Neuchatel, Georgetown, and Ottawa), 20h. (La Paz), 21h. (Zurich and near Neuchatel), 22h. (Apia).

March 2d. Readings at 0h. (Simferopol and near Yalta), 1h. (near Tacubaya), 2h. (Baku, Ekaterinburg, and Tashkent), 3h. (Irkutsk), 5h. (near Kobe and Toyooka), 7h. (Entebbe and near La Paz), 8h. (Florissant, Tucson, and St. Louis), 9h. (Frunse, Almata, and Samarkand (2)), 12h. (Lick), 14h. (near Akita, Mizusawa, and Nagoya), 16h. (La Paz (2), Melbourne, and Perth), 17h. (Nagoya and San Fernando), 18h. (near Suva (2)), 19h. (Entebbe), 20h. (Honolulu T.H. and La Paz), 21h. (Florissant, Sucre, near La Paz, and near Suva), 23h. (Tashkent, Samarkand, near Frunse, and Andijan, near Kobe, and Sumoto).

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March 3d. 3h. 10m. 50s. Epicentre 36°5N. 70°5E. (as on 1929 Feb. 1d.).

A = +.268, B = +.758, C = +.595; D = +.943, E = -.334;
G = +.199, H = +.561, K = -.804.

A depth of focus 0.035 has been assumed for this shock, as adopted on 1928 Aug. 10d.

	Corr. for Focus	Δ	Az.	P.		O-C.	S.		O-C.	L.	M.
				m.	s.		m.	s.			
Andijan	+0.2	4.0	21	10	26	-39	—	—	e 1.0	—	—
Samarland	+0.2	4.2	320	11	20	+12	(2 8)	+ 7	—	2.1	—
Tashkent	+0.1	4.9	350	11	28	+11	—	—	—	—	—
Frunse	-0.2	7.1	25	11	54	+ 9	(13 9)	+ 2	i 3.2	—	—
Baku	-1.1	16.6	290	13	59	+13	i 7 3	+19	7.7	8.0	—
Bombay	-1.2	17.7	173	4	7	+ 8	7 23	+16	9.2	12.7	—
Hyderabad	-1.4	20.3	157	4	32	+ 4	8 2	+ 2	9.8	10.8	—
Calcutta	E. -1.5	20.8	127	4	28	- 5	(8 10)	+ 2	8.2	—	—
	N. -1.5	20.8	127	4	33	0	(8 17)	+ 9	8.3	—	—
Ekaterinburg	-1.5	21.4	345	14	45	+ 5	i 8 31	+10	—	—	—
Ksara	-2.2	28.3	275	5	54	+ 5	10 27	+ 3	—	—	—
Yalta	-2.2	28.5	298	e 5	52	+ 1	—	—	—	—	—
Simferopol	-2.2	28.6	298	e 5	51	- 1	—	—	—	—	—
Kucino	-2.2	29.2	322	e 5	55	- 3	e 10 40	- 1	e 11.5	—	—
Pulkovo	-2.6	34.6	327	i 6	44	- 3	e 13 47	SR ₁	—	—	—
Vienna	Z. -2.9	40.8	307	e 7	35	- 2	—	—	—	—	—
Zagreb	-3.0	41.3	301	7	41	+ 1	—	—	—	—	—
Copenhagen	-3.1	43.1	316	7	53	- 2	—	—	—	—	—
Jena	E. -3.1	43.7	310	i 8	0	0	—	—	—	—	—
Göttingen	N. -3.2	44.6	311	e 8	8	+ 2	—	—	—	—	—
Strasbourg	-3.3	46.5	309	i 8	23	+ 3	—	—	—	—	—
Neuchatel	-3.4	47.3	305	18	26	+ 1	—	—	—	—	—
De Bilt	Z. -3.4	47.6	312	18	30	+ 3	—	—	—	—	—
Paris	-3.5	49.8	309	18	45	+ 3	—	—	—	—	—
Tortosa	Z. -3.8	53.4	299	e 9	12	+ 8	—	—	—	—	—
Scoresby Sund	-4.0	56.7	338	—	—	—	17 10 ₂	+18	—	—	—

Additional readings: Ksara e = +7m.30s.; T₀ = 3h.10m.57s. Vienna
IPZ = +7m.36s. Jena IPZ = +8m.1s., eE = +9m.46s.

Mar. 3d. 16h. 51m. 50s. Epicentre 55°7N. 35°5W. (deduced from the epicentre 55°0N. 35°0W. of 1927 June 19d.).

A = +.459, B = -.327, C = +.826; D = -.581, E = -.814;
G = +.673, H = -.480, K = -.564.

	Δ	Az.	P.		O-C.	S.		O-C.	L.	M.
			m.	s.		m.	s.			
Reykjavik	10.8	31	—	—	—	e 4 48	- 2	e 6.4	7.7	—
Scoresby Sund	15.9	17	—	—	—	—	—	7.2	—	—
Edinburgh	18.0	76	14	22	+ 5	—	—	19.2	10.2	—
Dyce	18.3	71	—	—	—	—	—	e 8.6	10.6	—
Stonyhurst	19.0	82	(14 32)	—	+ 3	14 32	?P	9.2	—	—
Oxford	20.4	86	4	50	+ 4	8 35	+ 3	10.2	12.6	—
Kew	21.1	87	15	1	+ 7	e 9 0	+14	11.0	11.4	—
De Bilt	23.8	81	15	26	0	—	—	e 11.7	14.4	—
Paris	23.9	91	e 5	27	0	—	—	12.2	14.2	—
Uccle	24.0	85	5	27	- 1	—	—	e 11.2	—	—
Hamburg	25.9	75	e 5	44	- 3	—	—	e 14.2	17.2	—
Copenhagen	26.4	70	15	51	- 1	—	—	12.2	—	—
Besançon	26.7	91	—	—	—	—	—	e 15.2	—	—
Göttingen	26.8	79	e 5	10	-46	—	—	e 12.2	16.2	—
Lund	26.9	69	6	10 ₁	+13	—	—	13.2	—	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Strasbourg	27.0	87	e 6 10?	+12	—	—	14.2	—
Ottawa	27.1	265	—	—	—	—	e 15.0	—
Neuchatel	27.4	90	i 5 59	- 3	—	—	—	—
Moncalieri	29.0	93	3 17	?	—	—	14.1	17.6
Toronto	N. 30.2	265	—	—	—	—	16.9	—
Florence	31.7	92	e 14 26	?L	17 10	?	(e 14.4)	19.2
Vienna	32.0	81	—	—	—	—	20.2	—
Georgetown	Z. 32.1	258	e 7 49	+61	12 50	+40	18.7	19.8
Ann Arbor	N. 33.5	289	e 1 58	?	—	—	e 19.5	—
Charlottesville	N. 33.6	259	—	—	—	—	20.0	20.5
Pulkovo	33.9	56	—	—	—	—	15.2	—
Chicago	N. 36.1	272	—	—	—	—	e 19.8	—
Cincinnati	Z. 36.1	266	—	—	—	—	20.2	21.2
Florissant	39.6	270	—	—	—	—	e 20.2	23.2
St. Louis	39.7	270	—	—	e 14. 5	+ 3	e 21.2	23.7
Ekaterinburg	48.8	47	—	—	e 15 55	- 9	22.2	27.0
Victoria	E. 50.8	303	—	—	—	—	27.6	29.6
Baku	55.3	68	e 9 58	+17	i 17 40	+15	27.7	36.1
Tashkent	64.1	54	e 11 50	+71	i 20 37	+83	e 31.2	39.1
Samarkand	64.3	57	e 10 46	+ 6	—	—	—	—
Irkutsk	67.0	26	—	—	—	—	37.2	—

Additional readings: Reykjavik e = +5m.57s., MN = +8.3m. De Bilt
 MZ = +14.3m., MN = +14.9m. Gottingen eLZ = +15.2m., MZ = +16.4m.
 Moncalieri MN = +17.8m. Georgetown eZ = +10m.31s. Ann Arbor
 eLE = +19.8m. Charlottesville eN = +18m.50s., eE = +19m.10s., ME =
 +20.2m. Chicago eE = +20m.57s. Ekaterinburg e = +19m.28s. =
 SR₁-16s.

March 3d. Readings also at 0h. (Wellington), 1h. (Florissant, near Berkeley and Lick), 3h. (near Granada), 4h. (Nagoya, near Kobe, and Sumoto), 5h. (La Paz), 7h. (Batavia), 9h. (Cincinnati, Ottawa, Toronto, Ithaca, Charlottesville, Georgetown, Chicago, Ann Arbor, Florissant, St. Louis, Victoria, Sitka, Baku, Ekaterinburg, Irkutsk, Tashkent, Scoresby Sund, De Bilt, and near Hukuoka), 10h. (Baku, Ekaterinburg, De Bilt, and near Zagreb (2)), 11h. (Andijan, Bombay, and Tashkent), 18h. (Cincinnati, Ottawa, Toronto, Georgetown, Florissant, St. Louis, Scoresby Sund, De Bilt, Uccle, Paris, Edinburgh, Kew, Dyce, Florence, Moncalieri, Ekaterinburg, Copenhagen, Pulkovo, Samarkand, and near Sumoto), 19h. (Baku, Tashkent, Zurich, and near Neuchatel), 20h. (Baku, Ekaterinburg, Irkutsk, and Tashkent).

March 4d. Readings at 1h. (La Paz), 2h. (near Puebla), 3h. (Mizusawa, near Nagoya, near Neuchatel, and Zurich), 9h. (near Hukuoka and Nagasaki), 13h. (Baku, Ekaterinburg, La Paz, and Lick), 14h. (Melbourne, Riverview, and near Manila), 15h. (Perth), 17h. (near Manila), 23h. (Samarkand, Simferopol, Yalta, Ekaterinburg, Neuchatel, Vienna, La Paz, Suva, Wellington, and Entebbe).

March 5d. 16h. 4m. 36s. Epicentre 53° 5N. 158° 5E. (as on 1926 June 11d.).

A = - .553, B = + .218, C = + .804; D = + .367, E = + .930;
 G = - .748, H = + .295, K = - .595.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk	31.9	290	i 6 43	- 3	12 1	- 6	16.4	20.6
Ekaterinburg	51.0	317	i 9 13	0	i 16 30	- 1	26.4	33.8
Phu-Lien	51.1	252	—	—	—	—	20.4	—
Scoresby Sund	56.0	0	—	—	—	—	30.4	—
Tashkent	57.5	299	9 56	0	18 5	+12	e 29.4	37.1
Pulkovo	59.4	333	10 9	+ 1	e 18 19	+ 3	29.4	33.9
Kucino	60.4	326	10 14	- 1	e 18 26	- 2	e 28.6	36.8
Helsingfors	60.4	335	e 10 18	+ 3	e 18 34	+ 6	e 31.4	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Lund	67.1	340	—	—	—	—	37.4	—
Copenhagen	67.3	340	—	—	19 54	0	34.4	—
Baku	67.9	310	i 11 4	+ 1	20 16	+15	35.4	45.1
Ottawa	70.8	38	—	—	—	—	e 36.4	—
De Bilt	72.1	344	—	—	—	—	e 38.4	—
Bombay	72.3	278	e 30 26	?L	—	—	(e 30.4)	41.6
Uccle	73.4	344	—	—	—	—	e 41.4	—
Kew	73.5	348	—	—	—	—	e 44.4	—
Strasbourg	75.0	341	—	—	—	—	e 44.4	—
Paris	75.7	345	—	—	—	—	e 39.4	—
Neuchatel	76.6	340	e 11 58	- 1	—	—	—	—
Florence	78.7	336	—	—	—	—	e 45.4	50.4
San Fernando E.	89.1	349	—	—	—	—	—	58.3

Paris gives also L = +48.4m.

March 5d. Readings also at 2h. (Tucson, Tacubaya, Guadalajara, Oaxaca, and Vera Cruz), 3h. (Florissant, St. Louis, and Victoria), 7h. (Almata, Andijan, Samarkand, and near Batavia), 10h. (near La Paz), 12h. (near Kobe (2) and Sumoto (2)), 14h. (Hyderabad and near Zagreb), 17h. (Frunse), 21h. (Florissant).

March 6d. 16h. 59m. 23s. Epicentre 38° 7N. 70° 5E. (given by the stations).

$$A = +.261, B = +.736, C = +.625.$$

	Δ	P.	O-C.	S.	O-C.	L.	M.
	°	m. s.	s.	m. s.	s.	m.	m.
Andijan	2.1	0 33	0	—	—	i 1.1	—
Tashkent	2.8	0 42	- 2	(i 1 15)	- 2	1.2	1.6
Samarkand	2.9	0 47	+ 2	—	—	i 1.5	—
Almata	6.7	—	—	—	—	e 2.3	—

Tashkent gives also i = +1m.26s.

March 6d. Readings also at 0h. (Mizusawa), 2h. (Rio de Janeiro), 6h. (near Andijan), 8h. (Baku, Ekaterinburg, De Bilt, and Rio de Janeiro), 11h. (Ksara, Simferopol, Yalta, and Fulkovo), 14h. (near Ksara), 15h. (Florissant and Wellington), 17h. (Sucre and near La Paz), 19h. (Sucre, near La Paz, and near Neuchatel), 21h. (near Amboina), 22h. (Andijan and Samarkand), 23h. (Barcelona).

March 7d. 1h. 34m. 34s. Epicentre 49° 5N. 170° 0W.

$$A = -.640, B = -.113, C = +.760; D = -.174, E = +.985; \\ G = -.749, H = -.132, K = -.649.$$

A depth of focus 0.010 has been assumed, see note at the end.

	Corr. for Focus	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	s.	m. s.	s.	m.	m.
Sitka	E. -0.4	21.8	57	i 5 16	+ 8	i 9 2	+ 9	10.6	18.2
Honolulu T.H.	-0.7	29.8	157	i 6 26	+ 7	i 11 42	+ 23	12.7	—
Victoria	E. -0.7	30.2	74	6 16	- 7	(i 11 36)	+ 10	11.6	14.4
	N. -0.7	30.2	74	6 16	- 7	(i 11 16)	- 10	11.3	16.1
Otomari	-0.7	31.2	284	6 18	- 15	11 16	- 27	—	—
Sapporo	-0.8	33.6	279	6 47	- 8	12 18	- 3	—	—
Berkeley	-0.8	35.7	92	i 7 4	- 8	i 12 44	- 10	—	16.6
Mizusawa	E. -0.8	35.8	274	7 7	- 6	12 50	- 5	15.6	—
	N. -0.8	35.8	274	7 9	- 4	12 46	- 9	15.6	—
Akita	-0.8	36.2	276	e 7 17	0	(i 12 51)	- 10	i 12.8	13.1

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	Corr. for Focus	Δ	Az.	P.		O-C.	S.		O-C.	L.	M.
				m.	s.		m.	s.			
Lick	E. -0.8	36.4	92	i 7	12	- 6	i 12	58	- 6	e 15.0	16.1
Tokyo	-0.8	38.7	270	i 7	34	- 3	i 13	41	+ 4	—	—
Nagoya	-0.8	40.8	272	i 7	53	- 2	i 14	16	+ 9	17.3	27.5
Toyooka	E. -0.8	41.9	274	i 8	1	- 3	i 14	19	- 3	19.0	27.4
	N. -0.8	41.9	274	i 8	1	- 3	i 14	30	+ 8	18.9	20.4
Osaka	-0.8	42.1	273	i 8	4	- 1	i 14	27	+ 2	17.9	19.9
Kobe	-0.8	42.3	273	i 8	3	- 4	i 14	27	- 1	i 17.8	19.4
Sumoto	-0.9	42.6	273	i 8	5	- 4	i 14	36	+ 5	—	18.1
Siomisaki	-0.9	42.6	270	i 8	2	- 7	i 14	38	+ 7	—	—
Muroto	-0.9	43.8	272	i 8	17	0	i 14	52	+ 5	18.4	—
Koti	-0.9	44.0	273	i 8	16	- 3	i 14	50	+ 1	—	21.3
Matuyama	-0.9	44.3	273	(e 8	33)	+12	(e 16	11)	+77	(e 21.8)	(23.7)
Denver	E. -0.9	45.9	77	i 8	28	- 5	i 15	20	+ 5	—	(23.9)
	N. -0.9	45.9	77	i 8	28	- 5	i 15	16	+ 1	—	22.6
Hukuoka	-0.9	46.0	275	i 8	34	0	i 15	20	+ 4	21.0	30.4
Tucson	-0.9	46.5	90	i 8	35	- 2	i 15	19	- 3	i 22.8	—
Nagasaki	-0.9	46.9	275	i 8	40	0	i 15	36	+ 8	—	—
Irkutsk	-1.0	50.9	310	i 9	4	- 2	i 16	17	- 1	22.4	—
Chihuahua	-1.0	52.0	90	(e 8	53)	-20	(16	18)	-13	(23.7)	(24.0)
Zi-ka-wei	-1.1	53.4	279	i 9	29	+ 7	i 17	3	+15	39.1	43.1
Chicago	E. -1.1	55.2	65	i 9	17	-17	i 16	54	-16	24.4	—
Florissant	-1.1	55.4	70	i 9	35	0	i 17	15	+ 2	—	—
St. Louis	-1.1	55.6	70	i 9	35	- 1	i 17	15	0	—	—
Mazatlan	-1.1	55.6	95	(9	22)	-14	(17	7)	- 8	(24.9)	(25.9)
Ann Arbor	-1.1	57.1	62	i 9	50	+ 4	i 17	44	+10	e 26.5	35.1
Taihoku	E. -1.1	57.5	274	i 9	56	+ 8	i 17	50	+11	—	—
Scoresby Sund	-1.2	57.9	13	i 9	51	+ 1	i 17	44	+ 2	—	—
Cincinnati	-1.2	58.7	65	i 10	32	+36	e 18	29	+36	27.4	29.4
Toronto	-1.2	58.7	59	i 9	58	+ 2	i 17	57	+ 4	28.3	37.9
Guadalajara	-1.2	59.3	95	i 9	58	- 2	i 18	10	+10	26.6	36.0
Ottawa	-1.2	59.5	55	i 10	3	+ 2	i 18	8	+ 5	e 28.8	32.2
Manzanillo	-1.2	59.9	96	(10	11)	+ 8	(18	24)	+17	(25.4)	(33.0)
Ithaca	-1.2	61.1	58	i 10	13	+ 2	e 18	26	+ 4	28.4	33.8
Charlottesville	E. -1.2	62.9	63	i 10	30	+ 7	i 19	6	+22	e 26.4	—
	N. -1.2	62.9	63	i 10	29	+ 6	i 19	2	+18	i 28.4	—
Tacubaya	-1.2	63.0	92	i 10	39	+15	i 19	9	+23	29.2	36.9
Georgetown	-1.2	63.1	61	i 10	30	+ 6	i 18	56	+ 9	e 30.0	32.9
Apia	-1.2	63.3	182	i 10	52	+26	i 19	16	+27	29.8	34.4
Reykjavik	-1.2	63.6	16	i 10	33	+ 5	i 18	51	- 2	29.8	46.4
Harvard	-1.2	64.0	55	i 10	33	+ 2	i 19	4	+ 6	—	—
Hong Kong	-1.2	64.2	276	i 10	36	+ 4	i 19	35	+34	31.4	49.6
Manila	-1.2	65.4	266	e 10	49	+10	i 19	42	+27	i 32.2	37.3
Ekaterinburg	-1.2	65.8	334	i 10	47	+ 5	i 19	26	+ 6	—	36.6
Halifax	-1.2	66.3	50	i 10	56	+10	e 19	38	+12	i 31.7	44.8
Merida	-1.3	68.1	84	(11	11)	+14	(20	6)	+18	(32.3)	(37.7)
Suva	E. -1.3	68.4	193	(12	2)	+63	20	20	+29	i 32.6	42.4
	N. -1.3	68.4	193	(11	44)	+45	i 20	56	+65	i 34.4	—
Pulkovo	-1.3	69.6	350	i 11	8	+ 2	i 20	6	0	32.4	36.8
Helsingfors	-1.3	70.0	353	i 11	10	+ 1	i 20	12	+ 2	e 32.8	—
Bergen	-1.3	70.1	3	i 11	9	- 1	i 20	21	+ 9	e 33.4	39.4
Phu-Lien	-1.3	70.2	280	i 11	19	+ 9	e 19	52	-21	30.4	49.0
Upsala	-1.3	70.5	356	i 11	12	0	i 20	15	- 1	e 30.9	43.0
Kucino	-1.3	72.2	345	i 11	27	+ 5	i 20	40	+ 3	32.3	44.1
Dyce	-1.3	72.8	8	i 11	27	0	i 20	46	+ 2	e 29.4	47.7
Edinburgh	-1.3	74.1	8	i 11	40	+ 5	i 21	4	+ 4	31.4	49.9
Copenhagen	-1.3	74.8	359	i 11	40	+ 1	i 21	10	+ 2	35.4	—
Lund	-1.3	74.8	358	i 11	40	+ 1	i 21	6	- 2	32.4	37.4
Andijan	-1.3	74.9	317	i 11	41	+ 1	i 21	12	+ 3	—	—
Ambon	-1.3	75.0	246	i 11	54	+14	i 21	37	+27	30.4	—
Konigsberg	E. -1.3	75.3	355	i 11	47	+ 5	i 21	25	+11	e 34.4	45.3
	N. -1.3	75.3	355	i 11	44	+ 2	i 21	20	+ 6	e 35.4	45.5
Z.	-1.3	75.3	355	i 11	44	+ 2	i 21	18	+ 4	e 35.4	45.7

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	Corr. for Focus	Δ	Az.	P.		O-C.	S.		O-C.	L.	M.
				m.	s.		m.	s.			
Tashkent	-1.3	75.4	320	i 11	47	+ 4					
Stonyhurst	-1.3	76.1	9	i 11	51	+ 3	i 21	29	+ 5	e 35.4	47.4
Hamburg	-1.3	77.0	0	i 11	54	+ 1	i 21	42	+ 8	e 33.5	46.4
Samarkand	-1.3	77.8	320	i 12	0	+ 2	i 21	46	+ 3		
Oxford	E. -1.3	78.4	8	i 12	2	0	i 21	56	+ 6	e 28.4	42.0
	N. -1.3	78.4	8	i 12	6	+ 4		21 50	0		48.4
De Bilt	-1.3	78.4	3	i 12	2	0		21 53	+ 3	e 37.4	50.6
Kew	-1.3	78.7	8	i 12	2	- 1	i 21	54	+ 1	i 37.3	42.0
Göttingen	-1.3	79.0	0	i 12	5	0	i 21	56	- 1	e 35.9	52.9
Uccle	-1.3	79.6	4	i 12	8	- 1	i 22	7	+ 3	e 37.4	55.3
Jena	E. -1.3	79.7	359	i 12	10	+ 1	i 22	6	+ 1	e 37.4	39.4
	N. -1.3	79.7	359	i 12	10	+ 1	i 22	5	0	i 37.4	38.4
	Z. -1.3	79.7	359	i 12	8	- 1	i 22	3	- 2	i 37.1	38.5
Lemberg	E. -1.3	80.0	351	i 12	24	+13	i 22	2	- 6	e 36.7	48.3
	N. -1.3	80.0	351	i 12	8	- 3	i 22	20	+12	e 36.5	47.0
Dehra Dun	-1.3	80.0	307	i 11	56	-15		22 6	- 2	39.9	
Calcutta	E. -1.3	80.2	293	(12 15)	+ 3		(21 57)	-14		(38.7)	(42.9)
	N. -1.3	80.2	293	(12 13)	+ 1		(21 51)	-20			
Feldberg	N. -1.3	80.3	2	i 12	14	+ 1	i 22	18	+ 6		55.4
Port au Prince	-1.3	80.8	74	i 12	21	+ 5	e 22	25	+ 7	32.3	39.9
Paris	-1.3	81.5	6	i 12	19	- 1	i 22	24	- 1	33.4	51.4
Karlsruhe	-1.3	81.5	1	i 12	20	0		22 28	+ 3	e 42.4	55.1
Hohenheim	-1.3	81.8	1	i 12	18	- 4		22 30	+ 1	e 37.4	56.6
Strasbourg	-1.3	82.0	2	i 12	19	- 4	i 22	28	- 3	37.4	50.4
Vienna	-1.3	82.2	356	e 12	18	- 6		22 31	- 3	e 39.4	50.4
Budapest	-1.4	82.8	355	i 12 26	- 1		22 38	- 1		38.4	49.4
Theodosia	-1.4	82.9	344	i 12	28	0		22 46	+ 5		47.8
Zurich	-1.4	83.2	1	i 12	27	- 2	i 22	42	- 2		
Besançon	-1.4	83.3	3	i 12	28	- 2		22 40	- 5	39.4	61.4
Graz	-1.4	83.3	357	i 12	10	-20	i 22	27	-18	39.4	49.8
Simferopol	-1.4	83.3	344	i 12	29	- 1	i 22	43	- 2		48.1
Balboa Heights	-1.4	83.5	85	i 12	46	+15		22 52	+ 5	47.4	
Neuchâtel	-1.4	83.5	3	i 12	29	- 2	i 22	29	-18		
Baku	-1.4	83.6	331	i 12	32	+ 1					
Chur	-1.4	83.7	0	i 12	33	+ 1	i 22	49	- 0		
Yalta	-1.4	83.7	344	i 12	30	- 2	i 22	47	- 2		47.9
Sebastopol	-1.4	84.0	344	i 12	32	- 2	i 22	51	- 2		46.1
Laibach	E. -1.4	84.4	357	e 12	19	-17	e 22	30	-27	e 39.9	50.2
Zagreb	N.E. -1.4	84.6	357	i 12	36	- 1	i 22	54	- 5	e 41.0	53.3
	N.W. -1.4	84.6	357	i 12	35	- 2	i 22	51	- 8		
Venice	-1.4	85.1	358	i 12	38	- 2	i 23	3	- 3	45.4	51.1
Belgrade	E. -1.4	85.3	354	i 12	39	- 2	i 22	59	- 9	e 40.1	60.9
	N. -1.4	85.3	354	i 12	37	- 4	i 23	2	- 6	e 40.1	49.5
Grenoble	-1.4	85.3	4	i 12	40	- 1	i 23	1	- 7	39.4	56.3
Moncalieri	-1.4	85.6	2	i 12	41	- 2	i 23	8	- 2	40.4	61.5
Florence	-1.4	86.8	358	i 12	47	- 3	i 23	26	+ 3	41.1	47.7
Bagnères	-1.4	87.1	8	i 12	51	- 1	i 23	24	- 3	36.4	
Marseille	-1.4	87.2	5	i 12	49	- 3	i 23	26	- 2	34.4	
Barcelona	-1.4	88.8	6	i 12	58	- 3	i 23	35	-10	33.8	49.1
Tortosa	E. -1.4	89.3	8	e 13	0	- 4	e 23	32	[+ 8]	38.3	68.4
	N. -1.4	89.3	8	e 12	57	- 7	i 23	29	[+ 5]	37.8	56.4
Pompeii	-1.4	89.6	357	e 13	2	- 4	e 23	26	[0]	43.4	55.4
Naples	E. -1.4	89.6	357	e 13	11	+ 5	e 23	31	[+ 5]	40.4	50.4
Toledo	-1.4	89.8	11	i 13	1	- 6	i 23	34	[+ 7]	e 38.3	49.9
Hyderabad	-1.4	90.0	299	i 13	2	- 6	i 23	45	-14	42.2	60.6
Riverview	-1.4	90.2	213	e 13	10	+ 1	i 23	42	-19	e 42.6	44.4
Sydney	-1.4	90.2	213	i 13	14	+ 5	i 23	50	-11	52.8	
Batavia	-1.4	90.3	264	i 13	6	- 4	i 25	22	†PS	37.4	
Malabar	-1.4	90.6	262	e 13	10	- 1	e 23	21	[-11]	e 33.4	
Alicante	-1.4	91.8	9	i 13	12	- 6	i 23	45	[+ 6]	e 41.6	54.6
Wellington	E. -1.4	91.8	191	e 12	57	-21	i 23	48	[+ 9]	i 43.3	48.0
	N. -1.4	91.8	191	e 12	54	-24	i 23	45	[+ 6]	i 43.6	46.8

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	Corr. for Focus	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	m. s.	m. s.	m. s.	m. s.	m.	m.
Bombay	-1.4	92.0	305	14 14	+55	23 55	[+15]	45.8	50.5
Granada	-1.4	92.5	12	i 13 11	-11	i 23 47	[+ 4]	e 43.4	56.4
Malaga	-1.4	92.8	12	i 13 12	-11	23 48	[+ 3]	29.4	54.2
San Fernando	-1.4	92.9	14	i 13 19	- 5	i 23 50	[+ 5]	42.2	50.4
Almeria	-1.4	93.0	11	i 13 25	0	24 0	[+14]	48.9	56.9
Algers	-1.4	93.5	5	i 13 18	-10	i 23 59	[+10]	41.4	60.4
Ksara	-1.4	93.6	340	i 13 22	- 6	i 24 6	[+16]	52.4	—
Christchurch	-1.4	94.2	193	e 13 12	-19	24 12	[+19]	—	—
Adelaide	-1.4	95.9	220	e 13 33	- 8	i 24 12	[+10]	i 42.0	54.4
Melbourne	-1.4	95.9	215	i 13 38	- 3	i 25 6	+ 5	47.8	53.6
Kodaikanal	-1.4	96.3	295	13 26	-17	(26 14)	?PS	26.2	56.9
Colombo	-1.4	97.5	291	—	—	—	—	—	77.9
Helwan	-1.5	98.4	342	13 39	-15	i 24 27	[+12]	—	57.9
Perth	-1.5	104.9	238	i 14 26	- 1	i 23 6	?SR ₁	55.1	61.3
La Paz	—	110.1	92	e 14 37	-21	i 26 48	-41	54.8	75.9
Sucre	—	113.8	92	e 14 57	-18	i 27 20	-40	56.4	67.9
Entebbe	—	126.9	332	18 56	—	28 6	?E	54.9	67.4
La Plata	—	129.4	100	19 16	—	—	—	60.9	—
Rio de Janeiro	E.	130.9	77	18 50	—	21 29	?PR ₁	22.6	79.1
	N.	130.9	77	18 50	—	21 28	?PR ₁	22.6	68.1
Tananarive	—	137.2	302	e 19 28	[- 6]	—	—	60.5	84.4
Johannesburg	—	152.8	322	23 44	—	—	—	—	—
Cape Town	—	163.2	335	20 20	[+10]	—	—	92.4	93.0

Additional readings and notes : Berkeley iE = +9m.4s., iZ = +9m.19s., eN = +12m.23s., iZ = +13m.8s., iN = +13m.25s., iEN = +15m.30s., i = +16m.53s., iZ = +18m.8s., iN = +19m.32s., and +30m.53s. Akita iZ = +7m.11s., MN = +23.2m. Lick iE = +7m.17s., +7m.28s., +8m.17s., +9m.53s., +14m.2s., and +14m.5s., iZ = +8m.36s., iSZ = +12m.53s. Nagoya MN = +17.5m. Toyooka PR₁N = +9m.47s., PR₁E = +9m.52s., SR₁E = +17m.42s., SR₁N = +17m.59s. Osaka MN = +20.3m. Kobe SE = +14m.11s., MN = +20.6m., MZ = +23.7m. Sumoto MN = +18.3m. Muroto PR₁ = +10m.22s. = PR₁ - 8s. Koti PR₁ = +10m.2s., eP₁SZ = +14m.39s., iPSN = ePSZ = +15m.4s., iS₁SE = +18m.24s., iZ = +18m.38s., MN = +20.5m., MZ = +23.8m. Matuyama readings have been increased by 12m. Denver iPR₁ = +10m.16s., iE = +10m.30s., eSN = +15m.5s., eN = +18m.5s., iEN = +18m.32s. = SR₁ + 2s. Hukuoka ePR₁ = +10m.29s., SR₁ = +18m.53s., MN = +25.1m. Tucson iSN = +15m.25s., iSR₁N = +18m.26s., iSR₁E = +18m.45s., iN = +21m.6s., iE = +21m.43s. Chihuahua readings have been increased by 2m. Zi-ka-wei PSN = +17m.19s., SR₁E = +20m.49s., SR₁N = +20m.55s., SR₁E = +22m.29s., iN = +33m.21s., iE = +34m.47s., iN = +35m.37s., iE = +36m.3s., LN = +38.8m., MN = +44.4m. Chicago iPR₁E = +11m.24s., iSR₁E = +21m.7s. Florissant iPR₁N = +12m.4s., iSE = +17m.16s. St. Louis iSN = +17m.17s. Mazatlan readings have been diminished by 9m. Ann Arbor ePR₁ = +12m.2s., iSR₁ = +21m.50s., iSR₁ = +22m.56s., MN = +29.8m. T₁ = 1h.34m.54s., Cincinnati iP₁PZ = +11m.44s., iPR₁Z = +12m.34s., iPR₁Z = +14m.7s., iPR₁Z = +15m.0s., iN = +21m.44s., iSR₁EN = +24m.54s., Toronto PR₁N = +12m.38s., iN = +18m.7s., SR₁N = +22m.25s.; T₁ = 1h.34m.36s. Ottawa iE = +12m.14s., PR₁N = +13m.36s. PSN = +18m.34s., SR₁N = +22m.38s., SR₁ = +24m.44s., SR₁ = +25m.26s., eLN = +28.2m., MN = +31.8m.; T₁ = 1h.34m.35s. Manzanillo readings have been increased by 3m. Ithaca SR₁ = +23m.0s. Charlottesville ePR₁E = +12m.45s., ePR₁N = +13m.15s., ePR₁N = +14m.9s., ePR₁E = +14m.32s., eSR₁E = +22m.53s., eSR₁N = +23m.26s., iSR₁N = +24m.50s. Georgetown iPEN = +10m.32s., PR₁EN = +13m.21s., PR₁N = +14m.37s., PR₁E = +14m.38s., PR₁N = +14m.59s., PR₁E = +15m.0s., SN = +18m.59s., SR₁N = +24m.4s., SR₁N = +26m.17s., SR₁N = +27m.8s. Reykjavik PR₁ = +12m.57s., e = +20m.38s. = [S] + 16s., eSR₁ = +23m.13s., e = +23m.57s. = SR₁ + 9s. and +26m.54s. = SR₁ - 10s. Manila iP = +10m.53s., iP₁P = +11m.42s., iPR₁ = +13m.42s., iPR₁ = +14m.55s., iPPPS = +20m.31s., iS₁S = +21m.26s.?, i = +21m.40s., SR = FPSS = +24m.26s., iSR₁ = +27m.16s., i = +29m.21s. Halifax i = +13m.13s., ePR₁ = +15m.1s., iSN = +19m.42s., e = +23m.3s., SR₁ = +27m.7s., iE = +29m.24s., MN = +39.6m.; T₁ = 1h.34m.49s. Merida readings have been increased by 2m. Suva iSE = +20m.56s., SR₁N = +25m.26s.?, iSR₁E = +28m.56s., T₁N = 1h.35m.0s., T₁E = 1h.35m.36s. Helsingfors e = +11m.22s., +11m.49s., +13m.32s., and +13m.50s., ePR₁ = +15m.32s., e = +15m.51s., and +20m.24s. Phu-Lien ePR₁ = +13m.56s.

Continued on next page.

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MN = +48.5m. Upsala SR₁N = +24m.57s., SR₂N = +28m.18s., eLN = +33.4m., MN = +39.8m. Edinburgh i = +22m.1s. Amboina i = +12m.3s. Konigsberg P₀PZ = +12m.32s., iPR₁Z = +14m.45s., iPR₂E = +16m.20s., iPR₂NZ = +16m.28s., iScP₀ScZ = +22m.16s., iPSE = +22m.22s., iZ = +25m.52s., iSR₁N = +26m.14s., iE = +26m.39s., and +27m.32s., iSR₂N = +29m.33s., iZ = +30m.25s., iP₀PP₀P = +32m.46s. Stonyhurst PR₁ = +14m.50s., PR₂ = +16m.33s., PR₃ = +18m.18s., PS = +22m.5s., SR₁ = +26m.52s., SR₂ = +29m.58s., SR₃ = +31m.38s.; T₀ = 1h.34m.53s. Hamburg iPR₁Z = +14m.53s., iSN = +21m.40s., eSR₁E = +26m.58s., eSR₂Z = +30m.5s., eLZ = +35.9m., MNZ = +36.4m. De Bilt iPN = +12m.3s., iPR₁Z = +14m.56s., MNZ = +52.3m. Kew iSR₁N = +27m.20s., iSR₂N = +30m.42s., iE = +33m.2s., MN = +38.7m. Göttingen iPEN = +12m.6s., iPR₁N = +14m.26s., iPR₂Z = +14m.45s., iPR₂N = +16m.26s., iPSNZ = +22m.28s., eSR₁N = +27m.3s., eSR₂N = +29m.28s., eSR₃E = +29m.28s., iSR₃E = +32m.5s., iSR₃N = +32m.13s., eLZ = +36.4m., eLN = +37.2m., MN = +38.4m., MZ = +53.6m. Uccle PR₁ = +15m.4s., SR₁ = +27m.35s., MNZ = +51.0m. Jena ePR₁E = +14m.47s., iPR₁Z = +14m.54s., iPR₂N = +14m.57s., iPR₂N = +16m.51s., iPR₂Z = +18m.17s., eSZ = +21m.35s., ePSN = +22m.26s., ePSZ = +22m.40s., ePSE = +22m.44s., iN = +26m.34s., iE = +27m.26s. = SR₁ - 22s., eN = +30m.26s., eE = +30m.38s., eZ = +33m.26s. = SR₂ + 26s. Calcutta readings have been increased by 3m. Paris MN = +55.4m. Karlsruhe i = +22m.35s. = [S] + 1s. Hohenheim PR₁ = +15m.29s., SR₁ = +23m.20s. = PS - 8s., MN = +39.6m. Strasbourg ePR₁ = +15m.40s., ePR₂ = +17m.43s., ePR₃ = +18m.55s., iPS = +23m.4s., eSR₁ = +28m.15s., iSR₂ = +32m.1s., SR₂ = +34m.4s., MZ = +38.9m., MN = +54.1m. Vienna iP = +12m.21s., PR₁ = +15m.48s., PR₂ = +17m.8s., ScP₀Sc = +22m.43s., PS = +23m.19s., PPS = +23m.40s., iN = +25m.52s., SR₁ = +28m.0s. Budapest P₀P = +12m.49s., PR₁ = +16m.26s.?, PR₂ = +18m.56s., PS = +24m.15s., SR₁ = +28m.16s., SR₂ = +31m.26s.?, MN = +46.2m. Theodosia MN = +47.0m. Graz iPR₁ = +15m.22s., PS = +27m.47s., iN = +59.0m. Simferopol MN = +46.5m. Balboa Heights SE = +23m.2s. Yalta MN = +56.2m. Sebastopol MN = +48.2m. Leibach eE = +14m.56s., +22m.40s. = [S] - 12s., and +27m.32s. Zagreb iNW = +13m.15s., iNE = +14m.15s., iPR₁NE = +15m.15s., iPR₁NW = +15m.19s., iNW = +15m.49s., iNE = +16m.5s., iPR₂ = +17m.23s., iNW = +17m.48s., ePR₁NW = +18m.49s., iPR₂NE = +18m.53s., iNE = +20m.15s. and +21m.45s., iNW = +21m.55s., eNW = +23m.13s., eNE = +23m.18s., iNW = +23m.26s., iPS = +23m.47s., iNE = +24m.49s., e = +25m.12s., eNE = +26m.44s., e = +28m.2s., eSR₁ = +28m.48s., eSR₂ = +32m.19s., eSR₂NW = +34m.14s. Belgrade iN = +24m.10s. = PS + 0s. Grenoble PR₁ = +16m.2s., PR₂ = +18m.31s. Moncalieri P = +12m.36s., S = +22m.20s. and +23m.4s. Florence PR₁ = +16m.9s., PR₂ = +18m.6s., PS = +24m.24s., SR₁ = +29m.21s., SR₂ = +33m.26s., SR₃ = +35m.51s. Bagnères iPR₁ = +16m.11s. Marseilles PR₁ = +16m.10s. Toledo iPR₁NE = +16m.28s., +18m.40s. = PR₂ - 23s., iSR₁NW = +29m.34s., MNW = +45.1m. River- view iP = +13m.12s., iS = +23m.54s. and +24m.17s. = ? + 16s., PS = +24m.41s., iSR₁ = +29m.31s., +30m.41s., +31m.4s., and +31m.23s., SR₂ = +33m.23s., SR₃ = +35m.15s., and +37m.57s., eL₀ = +38.5m., MN = +44.6m., MZ = +48.4m.: T₀ = 1h.35m.16s. Sydney SR₁ = +31m.14s. Batavia iP = +13m.10s., i = +16m.52s. = PR₁ - 7s., iZ = +25m.18s. = PS + 7s. Alicante MN = +53.7m. Wellington iPR₁N = +17m.31s., [S]E = +23m.5s., iSR₁E = +29m.54s., iSR₁N = +30m.35s., T₀N = 1h.34m.19s., T₀E = 1h.34m.22s. Granada PR₁ = +16m.41s. Malaga MZ = +55.1m. San Fernando MN = +49.4m. Almeria MN = +56.0m., MZ = +57.2m. Algiers PR₁ = +17m.2s., MN = +57.4m. Ksara PR₁ = +17m.3s., also +43m.26s.?, Christchurch PR₂ = +20m.24s. Adelaide e = +16m.6s., iPR₁ = +17m.33s., i = +20m.52s., +26m.26s. = PS + 8s., and +31m.41s. = SR₁ + 12s., MN = +53.6m. Melbourne PR₁ = +17m.58s., PR₂ = +20m.19s., i = +24m.11s. = [S] + 9s., SR₁ = +31m.38s., Perth P = +18m.11s., S = +34m.16s. La Paz eP₁ = +18m.10s., i = +19m.12s., PR₁E = +19m.35s., PSE = +28m.37s., SR₁E = +35m.43s., SR₂E = +40m.52s., iE = +42m.8s., and +58m.26s. Sucre iPR₁ = +19m.37s., iPR₂? = +22m.17s., i = +29m.13s. = PS - 25s., SR₁ = +35m.26s. Entebbe P = +21m.2s. = PR₁ - 7s. La Plata PR₁ = +22m.37s. Tananarive iPR₁ = +21m.34s., iEN = +22m.32s., iN = +29m.31s., iPPS = +32m.28s., iN = +40m.33s., SR₁ + 15s., i = +45m.28s., iSR₂ = +47m.33s. Cape Town PR₁ = +24m.42s.

NOTE TO THE ABOVE SHOCK.

The following is the analysis of the residuals for the above shock. The "time at origin" is the mean of 90 values from P and S observations. The rough epicentre 50°N, 170°W, used in the I.S.S. for 1927 June 7d., is adopted for comparison, and with this assumption we have the following sets of residuals :

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	No. of Stations.	Rough Azimuth.	Residuals. Uncorrected.	Corrected for focal depth. 0.010
Europe	44	0	-0.9	+0.5
N. America (E.)	10	60	-0.4	+0.7
N. America (W.)	5	90	-1.4	-0.6
Australia (Riverview)	1	214	-1.6	-0.2
Japan and East	23	275	-0.9	+0.2
India	2	300	-1.6	-0.3
Asia	4	316	-0.6	+0.6

It is not possible to reduce the uncorrected residuals by a shift of epicentre. But if the correction for 0.010 focal depth be applied and the equation $x \sin Az + y \cos Az = \text{residual}$ solved after suitable weighting, we get $x = 0^\circ.0$, $y = +0^\circ.5$, which indicates the epicentre $49^\circ.5N$, $170^\circ.0W$, as adopted.

Mar. 7d. 5h. 45m. 6s. Epicentre $49^\circ.5N$, $170^\circ.0W$. (as at 1h.)

Depth of focus 0.010 adopted as for the previous shock.

	Corr. for Focus	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	°	m. s.	s.	m. s.	s.	m.	m.
Tucson	-0.9	46.5	90	i 8 35	- 2	—	—	—	—
Irkutsk	-1.0	50.9	310	9 6	0	16 20	+ 2	26.9	—
Ekaterinburg	-1.2	65.8	334	i 10 47	+ 5	i 19 29	+ 9	30.9	38.3
Pulkovo	-1.3	69.6	350	i 11 11	+ 5	20 8	+ 2	—	—
Helsingfors	-1.3	70.0	353	e 11 6	- 3	e 20 11	+ 1	—	—
Copenhagen	-1.3	74.8	359	i 11 42	+ 3	—	—	—	—
Tashkent	-1.3	75.4	320	i 10 46	+ 3	i 20 16	-59	e 34.9	43.5
Samarkand	-1.3	77.8	320	e 11 54	- 4	—	—	—	—
Feldberg	N. -1.3	80.3	2	e 12 13	0	—	—	—	—
Strasbourg	-1.3	82.0	2	i 12 21	- 2	—	—	—	—
Zurich	-1.4	83.2	1	e 12 27	- 2	—	—	—	—
Neuchatel	-1.4	83.5	3	e 12 29	- 2	—	—	—	—
Chur	-1.4	83.7	0	e 12 32	0	—	—	—	—
Florence	-1.4	86.8	358	i 12 45	- 5	21 4	?	—	—

No additional readings.

Mar. 7d. 11h. 6m. 28s. Epicentre $6^\circ.0S$, $102^\circ.5E$.

A = -0.215, B = +0.971, C = -0.105; D = +0.976, E = +0.216;
G = +0.023, H = -0.102, K = -0.995.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Batavia	4.3	92	i 1 8	+ 1	11 41	-17	—	—
Malabar	5.2	103	1 21	+ 1	i 1 58	-24	—	—
Colombo	26.0	299	—	—	10 12	-10	12.7	19.0
Phu-Lien	27.1	8	—	—	9 32	-71	—	—
Manila	27.6	42	e 6 8	+ 4	—	—	—	—
Perth	28.8	156	12 2	18	(12 2)	+49	—	—
Hong Kong	30.6	21	—	—	—	—	e 15.2	23.8
Bombay	38.4	313	8 48	+67	14 35	+51	20.3	25.7
Zi-ka-wei	z. 41.4	26	e 7 54	-12	—	—	—	29.6
Adelaide	44.1	136	—	—	e 20 48	?	23.5	31.9
Riverview	52.9	130	—	—	—	—	e 24.9	35.8
Andijan	54.0	332	e 9 37	+ 4	—	—	—	—
Irkutsk	53.3	1	9 59	- 2	18 3	0	34.5	39.2
Baku	66.9	320	—	—	e 19 53	+ 4	e 36.5	—
Ekaterinburg	71.5	338	i 11 24	- 3	20 42	- 2	33.5	—
Pulkovo	86.4	331	e 12 56	+ 1	23 23	-11	45.5	—
De Bilt	99.2	322	—	—	—	—	e 61.5	—

Additional readings: Batavia iPNW = +1m.12s., iZ = +1m.42s., i = +1m.56s., +5m.1s., and +8m.35s. Colombo P = 10h.46m.20s., Hong Kong MN = +21.0m. Adelaide MN = +25.0m. Riverview MN = +34.2m. De Bilt eLN = +57.5m.

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Mar. 7d. Readings also at 2h. (Vienna), 3h. (near Samarkand (2) and Andijan), 5h. (near Taihoku), 6h. (Berkeley and near Batavia), 7h. (near Moncalieri, near Simferopol, and Yalta), 9h. (near Tacubaya), 10h. (near Algiers), 11h. (near Akita, Kobe, and Sumoto), 15h. (Entebbe), 16h. (Batavia), 17h. (Batavia and near Malabar), 20h. (near St. Louis), 22h. (Batavia).

Mar. 8d. 10h. 54m. 5s. Epicentre 6°0S. 102°5E. (as on 7d.).

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Batavia	4.3	92	i 1 13	+ 6	—	—	i 2.5	—
Malabar	5.2	103	1 17	- 3	2 15	- 7	—	—
Colombo	26.0	299	5 40	- 8	—	—	—	19.0
Phu-Lien	27.1	8	—	—	9 55?	-48	—	—
Perth	28.8	156	12 55	?L	—	—	(12.9)	—
Hong Kong	30.6	21	—	—	—	—	e 15.2	21.4
Bombay	38.4	313	—	—	e 11 55?	?	—	—
Riverview	52.9	130	—	—	—	—	e 26.4	34.2
Tashkent	56.1	330	—	—	17 30	- 5	e 27.9	38.6
Irkutsk	58.3	1	e 10 0	- 1	18 7	+ 4	33.9	—
Baku	66.9	320	—	—	19 52	+ 3	e 37.9	—
Ekaterinburg	71.5	338	11 25	- 2	20 41	- 3	35.9	—

Additional readings: Batavia i = +3m.27s. Riverview e = +28m.25s.
Baku e = +28m.42s. Ekaterinburg i = +11m.33s.

Mar. 8d. Readings also at 0h. (Ekaterinburg, near Andijan (2), and Tashkent (2)), 4h. (Andijan), 5h. (Rio de Janeiro, Bombay, Tacubaya, near Andijan (2), and near Tashkent), 6h. (near Andijan (2), Tashkent, near Baku, and Ksara), 8h. (Florence), 9h. (Florissant, St. Louis, and near Cincinnati), 11h. (Sucre and near La Paz), 12h. (Riverview), 13h. (Andijan and near Tashkent), 15h. (Ekaterinburg, Tashkent, and near Irkutsk), 17h. (near Malabar), 20h. (Alicante).

March 9d. 2h. 11m. 44s. Epicentre 25° 0N. 143° 0E.

A = -0.724, B = +0.545, C = +0.423; D = +0.602, E = +0.799;
G = -0.338, H = +0.254, K = -0.906.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Muroto	11.3	319	e 2 51	+ 2	e 5 10	+ 8	e 6.5	—
Nagoya	11.4	334	e 2 53	+ 4	—	—	—	—
Osaka	11.7	328	2 46	- 9	(4 53)	-19	4.9	7.0
Sumoto	11.7	325	2 55	0	e 6 43	?L	(e 6.7)	—
Kobe	11.8	327	3 5	+ 9	—	—	6.4	6.8
Koti	11.9	318	e 2 59	+ 1	e 5 28	+11	6.4	6.9
Toyooka	12.6	328	3 19	+12	e 5 31	- 3	7.1	—
Hukuoka	13.9	311	3 32	+ 7	6 18	+12	e 7.6	8.1
Nagasaki	13.9	307	3 25	0	6 10	+ 4	8.0	—
Akita	14.9	351	i 3 49	+11	—	—	6.7	7.8
Zinsen	18.7	318	4 26	+ 1	7 54	- 1	—	—
Taihoku	N. 19.4	275	e 4 36	+ 2	(8 9)	- 1	8.2	—
Zi-ka-wei	Z. 20.0	293	e 4 38	- 3	8 18	- 5	10.9	12.8
Manila	23.2	248	i 5 11	- 8	i 9 47	+18	i 12.8	—
Hong Kong	26.5	271	5 45	- 8	10 9	-23	—	16.5
Phu-Lien	33.7	273	e 6 46	-16	—	—	14.3	—
Irkutsk	39.9	324	e 7 40	-14	e 13 23	-42	19.3	25.0
Batavia	47.1	235	i 8 37	-11	i 15 21	-20	e 30.3	—
Calcutta	E. 49.8	280	9 12	+ 6	18 54	-22	—	—
	N. 49.8	280	9 3	- 3	18 40	-36	—	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	m.	m. s.	m. s.	s.	m. s.	s.	m.	m.
Honolulu T.H. E.	54.1	82	—	—	e 17 16	+ 6	e 25.1	30.8
Almata	56.1	308	e 9 45	- 2	—	—	—	—
Riverview	59.4	174	—	—	i 18 7	- 9	e 27.9	32.6
Andijan	59.9	305	e 10 11	0	e 18 21	- 1	—	—
Adelaide	60.1	185	—	—	e 18 3	-21	e 24.5	—
Tashkent	62.0	307	i 10 24	- 1	i 18 47	- 1	31.3	39.9
Perth	62.6	207	—	—	i 18 46	-10	—	—
Melbourne	62.8	179	—	—	i 18 47	-11	27.0	41.6
Colombo	62.8	267	—	—	—	—	—	38.6
Kodalkanal	63.7	272	37 10	?L	—	—	(37.2)	—
Samarkand	64.0	306	e 10 16	-22	—	—	—	—
Bombay	64.7	280	10 42	- 1	19 17	- 4	33.6	41.8
Ekaterinburg	65.2	324	i 10 45	- 1	19 25	- 2	30.3	—
Wellington	E. 72.5	156	—	—	e 20 41	-15	35.3	—
Victoria	E. 73.9	44	—	—	21 57	[+16]	34.0	35.3
Baku	76.4	310	e 11 56	- 1	i 21 40	- 2	37.8	49.0
Pulkovo	79.1	332	12 10	- 4	i 22 6	- 7	39.3	51.0
Helsingfors	81.1	334	e 12 22	- 4	i 22 27	- 9	43.3	—
Scoresby Sund	83.9	356	12 40	- 1	22 58	-10	—	—
Theodosia	84.0	319	12 47	+ 5	22 58	-10	—	—
Upsala	84.2	337	—	—	—	—	e 46.3	56.7
Simferopol	84.8	319	e 12 50	+ 3	e 23 0	-17	—	—
Yalta	85.0	319	e 12 47	- 1	—	—	—	—
Sebastopol	85.3	319	e 13 8	+18	—	—	—	—
Konigsberg	86.2	331	—	—	e 23 20	-12	e 46.3	55.3
Lund	88.7	335	—	—	23 39	-21	46.3	—
Copenhagen	89.0	335	12 59	-11	23 43	-20	47.3	—
Tucson	E. 89.2	55	e 13 5	- 6	e 22 58	[-25]	—	41.4
Hamburg	91.6	335	e 16 58	?PR ₁	—	—	e 48.3	57.3
Budapest	91.7	326	e 13 16?	- 9	—	—	—	58.6
Vienna	92.6	329	e 13 6	-24	—	—	—	59.3
Dyce	92.7	344	—	—	—	—	e 47.9	57.6
Gottingen	E. 93.1	334	—	—	—	—	e 48.3	62.3
Graz	93.8	329	—	—	—	—	e 49.3	55.3
Edinburgh	94.1	343	—	—	e 24 16?	[+24]	49.3	—
Zagreb	94.4	326	e 13 35	- 5	e 23 57	[+ 3]	e 48.3	59.0
De Bilt	94.5	336	e 13 24	-17	e 23 59	[+ 5]	e 45.3	58.9
Stonyhurst	95.6	340	—	—	e 24 16?	[+16]	e 49.3	—
Uccle	95.8	336	e 13 34	-14	e 24 46	?E	e 45.3	64.4
Strasbourg	96.2	333	e 13 34	-16	—	—	e 43.3	—
Chur	96.8	330	e 13 52	- 1	e 24 8	[+ 1]	—	—
Kew	97.0	340	—	—	e 24 57	?E	49.9	57.0
Oxford	97.0	340	—	—	—	—	e 52.3	64.3
Paris	98.1	336	e 17 16?	?PR ₁	e 26 16?	+39	52.3	65.3
Florence	98.2	327	13 42	-19	26 31	?PS	53.8	63.8
Moncalieri	99.0	330	e 13 47	-18	—	—	45.4	64.9
Florissant	99.0	40	—	—	—	—	e 47.8	58.3
St. Louis	99.2	40	—	—	—	—	e 39.8	51.8
Toronto	N. 101.1	30	—	—	—	—	e 49.3	—
Ottawa	101.2	27	—	—	e 24 46	[+16]	e 42.8	—
Cincinnati	Z. 102.0	36	—	—	—	—	e 51.3	55.3
Tananarive	102.6	255	23 16?	?L	—	—	—	—
Tortosa	N. 105.5	331	—	—	—	—	e 58.3	66.6
Fordham	105.8	28	e 50 30	?L	57 41	?L	60.8	62.9
Georgetown	105.9	31	—	—	e 25 18	[+26]	57.3	61.3
Alicante	108.0	330	—	—	—	—	e 66.0	—
Toledo	N.W. 108.2	334	—	—	—	—	e 56.5	65.1
Granada	110.3	332	—	—	—	—	e 62.3	66.6
San Fernando	E. 112.0	334	—	—	—	—	—	69.9
La Paz	149.7	80	19 59	[+ 4]	30 32	?E	70.8	82.7
Sucre	153.2	83	e 19 53	[- 7]	—	—	73.3	84.0
Rio de Janeiro	174.0	71	e 25 41	?PR ₁	—	—	e 83.3	—

For Notes see next page.

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NOTES TO MARCH 9d. 2h. 11m. 44s.

Additional readings: Osaka MN = +6.7m. Koti i = +3m.22s., L_qZ = +6.6m., L_qN = +7.2m., MN = +7.5m., MN = +7.7m. Toyooka iSN = +5m.5s., LN = +7.2m. Zi-ka-wei eN = +4m.50s. Batavia i = +10m.5s. Honolulu T.H. eN = +25m.34s., MN = +29.1m. Riverview MN = +37.1m. Melbourne i = +24m.31s. Wellington iN = +20m.46s. Helsingfors LN = +42.3m. Scoresby Sund +16m.4s. = PR₁ -17s. Upsala MN = +52.5m. Konigsberg eZ = +13m.46s., eEN = +23m.37s., eLN = +48.3m. Copenhagen +24m.3s. = S + 0s. Tucson readings are given without phase. Gottingen eLN = +50.3m., MN = +59.8m. Zagreb MNW = +52.3m. De Bilt eE = +30m.56s., MN = +52.8m., MZ = +64.7m. Uccle MN = +61.1m. Moncalieri MN = +66.7m. Florissant eEN = +5m.55s., eENZ = +21m.16s., eEN = +24m.25s. = [S] + 6s., +25m.25s. = S - 21s., +32m.0s. = SR₁ - 26s., and +43m.45s. St. Louis eN = +1m.46s., +4m.46s., +18m.26s. = PR₁ + 18s., and +25m.6s. = Σ + 3s., eE = +11m.46s. and +23m.56s. = [S] - 24s., eEN = +31m.46s. Toronto LN = +55.3m. Ottawa eS = +32m.54s. = SR₁ + 2s., LN = +56.3m., LE = +57.7m. Georgetown eZ = +7m.24s., +33m.31s. = SR₁ - 20s., and +43m.51s. Toledo MNE = +66.1m. San Fernando MN = +75.2m. La Paz PR₁ = +23m.22s. Sucre iP = +21m.2s. Rio de Janeiro eLN = +84.3m.

March 9d. 10h. 50m. 33s. Epicentre 42°5S. 172°0E.

(given by De Bilt).

A = -0.730, B = +0.103, C = -0.676; D = +0.139, E = +0.990;
G = +0.669, H = -0.094, K = -0.737.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Christchurch		1.1	156	0 9	- 8				
Wellington	E.	2.4	60	10 37	0	11 8	+ 2		
Riverview		18.5	291	e 4 9	-14	i 7 53	+ 2	e 8.4	10.3
Sydney		18.5	291	3 57	-26	8 3	+12	9.4	11.2
Melbourne		21.1	274	14 32	-22	8 6	-40	9.0	13.4
Suva	E.	25.0	15	i 5 45	+ 7	i 10 39	+36	i 13.2	14.0
	N.	25.0	15	i 5 45	+7	i 10 15	+12	e 31.2	18.0
Adelaide		26.9	275	e 6 8	+11	i 10 59	+20	i 12.8	15.6
Apia		32.0	30			12 39	+31	17.0	18.4
Perth		45.1	267	e 8 22	-12	e 15 7	-9	e 18.4	23.4
Batavia		67.6	283	i 11 3	+ 1	i 20 4	+ 7	32.2	41.4
Honolulu T.H. N.		69.7	29			e 20 39	+17	e 31.2	35.8
Manila		73.8	310	e 11 39	- 2	i 21 7	- 5	i 35.1	
Hong Kong		83.9	308	12 37	- 4	22 37	-31	e 36.4	52.0
Osaka		84.2	331	12 56	+13	22 21	-49	36.3	50.4
Kobe		84.2	331	e 12 30	-13			e 34.5	39.4
Phu-Lien		87.3	301	e 12 39	-22	e 23 8	[- 3]	36.4	
La Plata		90.2	140			(23 13)	[-16]	37.8	
Colombo		96.2	275	15 27	+97	31 32	?SR ₁	45.0	57.0
Sucre		99.0	126	e 13 50	-15	25 24	[+ 5]	43.0	49.7
La Paz		99.2	122	e 14 2	- 4	i 24 36	[+16]	42.6	50.0
Cape Town		99.8	201					52.5	
Lick		100.1	46	e 14 27?	+16			e 41.4	48.4
Berkeley	E.	100.1	46	e 14 16	+ 5	e 24 21	[- 3]	e 46.0	53.8
Tananarive		100.1	233			24 37	[+13]	41.9	53.7
Kodaikanal		100.2	276	35 33	?			53.8	68.6
Calcutta	E.	100.6	290	21 51	?	30 51	?		
	N.	100.6	290	e 22 5	?	31 47	?		
Tucson	N.	102.8	57	e 18 24	?PR ₁	26 3	-19	42.8	
Hyderabad		104.2	280	17 28	?	27 38	?PS	48.2	67.8
Rio de Janeiro	E.	107.0	145	e 18 47	?PR ₁			e 45.0	58.4
Victoria	E.	107.2	39	26 27	?S	(26 27)	-36	44.3	56.2
	N.	107.2	39	26 27	?S	(26 27)	-36	44.4	58.9
Sitka		108.9	26					e 53.4	61.4
Bombay		109.2	277	17 27	?	28 37	?PS	52.4	63.9

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk	111.3	321	e 18 17	[- 9]	25 13	[- 2]	48.4	60.8
Florissant	120.0	61	e 17 27	?	—	—	e 50.4	61.4
St. Louis	120.0	61	—	—	e 26 38	?	e 50.6	56.0
Chicago	123.0	60	e 37 53	?SR ₁	—	—	e 64.7	68.1
Cincinnati	124.1	64	—	—	e 27 37	?Σ	51.5	61.4
Entebbe	124.1	230	19 27?	[+24]	—	—	—	67.4
Tashkent	124.6	296	e 19 6	[+ 1]	—	—	e 61.4	76.0
Ann Arbor	126.1	61	—	—	—	—	e 56.6	67.6
Charlottesville	127.6	69	—	—	e 38 27	?SR ₁	e 64.0	67.4
Georgetown	129.0	69	18 35	[-41]	—	—	e 57.0	68.3
Toronto	129.6	61	—	—	e 39 2	?SR ₁	63.0	69.2
Ithaca	130.9	64	—	—	—	—	61.4	—
Fordham	132.1	67	e 40 16	?	e 56 52	?	67.6	67.9
Ottawa	132.6	60	e 22 27?	?PR ₁	e 39 27	?SR ₁	e 55.4	71.4
Harvard	134.6	65	e 39 56	?SR ₁	—	—	e 58.0	—
Ekaterinburg	135.4	313	e 19 16	[-15]	—	—	57.4	75.8
Baku	137.4	286	e 19 53	[+18]	—	—	65.4	104.8
Kucino	147.9	310	19 43	[-10]	—	—	65.2	87.0
Theodosia	148.9	290	e 19 57	[+ 3]	—	—	e 96.4	—
Yalta	149.6	288	e 19 48	[- 7]	—	—	—	—
Simferopol	149.8	289	e 19 51	[- 5]	—	—	—	—
Sebastopol	150.1	288	e 19 56	[0]	—	—	—	—
Pulkovo	151.1	320	19 47	[-10]	—	—	79.4	94.6
Scoresby Sund	151.2	10	19 51	[- 6]	—	—	69.4	—
Helsingfors	153.4	323	—	—	—	—	e 64.4	—
Upsala	156.7	327	—	—	—	—	e 69.4	100.1
Konigsberg	157.7	313	—	—	—	—	e 67.4	77.4
Belgrade	159.4	286	e 22 18	?	—	—	80.2	99.1
Budapest	160.3	294	e 20 48	[+40]	—	—	e 51.4	106.4
Lund	161.0	321	23 51	?	28 22	?PR ₂	66.4	—
Copenhagen	161.3	322	20 27?	[+18]	—	—	69.4	—
Vienna	162.0	297	e 19 59	[-10]	29 57	?	e 52.4	104.4
Zagreb	162.5	289	20 0	[- 9]	e 35 27?	?	e 78.2	93.4
Graz	162.8	293	—	—	e 47 51	?	92.4	106.0
Laibach	163.5	290	(e 21 12)	[+61]	—	—	e 36.0	44.2
Hamburg	163.7	319	e 20 3	[- 8]	—	—	e 69.4	75.4
Jena	164.2	309	e 20 57	[+46]	e 31 27	?Σ	e 73.4	80.8
Dyce	164.8	348	—	—	—	—	e 76.4	96.8
Gottingen	164.8	312	—	—	e 31 27	?Σ	e 69.4	100.4
Florence	165.9	282	20 2	[-10]	27 50	?	79.4	109.7
Edinburgh	166.3	348	e 32 27?	?Σ	—	—	64.4	97.0
Feldberg	166.3	309	—	—	—	—	e 96.4	105.4
Hohenheim	166.4	303	—	—	—	—	e 99.4	—
Chur	166.8	295	e 20 13	[0]	—	—	—	—
Karlsruhe	166.9	305	—	—	—	—	e 76.4	—
De Bilt	167.0	321	e 20 15	[+ 2]	—	—	e 71.4	96.0
Zurich	167.3	298	e 20 25	[+12]	e 31 15	?Σ	e 73.4	80.8
Strasbourg	167.4	304	e 20 9	[- 4]	—	—	49.4	103.4
Stonyhurst	168.0	344	i 25 32	?PR ₁	—	—	78.4	97.4
Uccle	168.2	318	e 25 27?	?PR ₁	—	—	51.4	74.4
Moncalieri	168.4	288	e 19 32	[-42]	35 35	?	49.4	56.2
Neuchatel	168.5	298	e 20 26	[+12]	—	—	—	—
Bidston	168.6	345	30 35	?	53 35	?	70.8	98.1
Besançon	169.0	300	—	—	—	—	76.4	—
Kew	169.6	332	e 22 39	?	—	—	72.4	96.3
Oxford	169.7	336	e 26 9	?PR ₁	—	—	e 70.7	95.4
Algiers	169.7	240	—	—	e 32 1	?Σ	e 81.4	99.4
Paris	170.3	314	e 19 27?	[-48]	e 31 27?	?Σ	74.4	98.4
Puy de Dôme	171.5	298	—	—	—	—	e 102.4	—
Barcelona	172.4	265	—	—	—	—	e 93.8	98.7

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Alcante	172.9	236	e 25 36	?PR ₁	e 35 22	?	e 49.1	96.4
Almeria	172.9	220	—	—	e 23 15	?	—	100.5
Tortosa	N. 173.4	258	—	—	e 35 46	?	e 48.4	99.8
Malaga	173.6	206	e 21 53	[+97]	32 31	?Σ	e 40.4	43.0
Granada	173.7	214	1 21 41	[+85]	e 33 6	?PR ₁	e 79.0	99.1
San Fernando	173.8	193	—	—	47 57	?SR ₁	e 87.6	101.6
Toledo	176.0	230	e 21 44	[+87]	—	—	e 46.4	94.3

Additional readings and notes: Wellington iPN = +39s., T₁E = 10h.50m.29s. Riverview iP = +4m.14s., PR₁ = +4m.29s. and +4m.45s., iS = +8m.19s. = SR₁ + 1s., MZ = +10.6m., MN = +12.0m.; T₁ = 10h.49m.56s. Melbourne PR₁ = +4m.55s., SR₁ = +8m.32s. Adelaide i = +8m.55s. and +11m.57s. SR₁ + 9s., iSR₁ = +12m.30s. Apia MN = +23.4m. Batavia i = +20m.54s. = [S] + 0s., all readings are given without phase. Honolulu T.H. eE = +21m.27s. = [S] + 17s. and +24m.52s., eSN = +26m.19s., eE = +30m.47s. and +37m.47s., LE = +32.8m., ME = +36.0m. Hong Kong SR₁ = +28m.48s. Kobe MN = +38.3m. La Plata gives [S] as PR₁. Sucre SR₁ = +29m.26s. La Paz SR₁E = +29m.41s., LE = +45.9m., MN = +53.4m. Lick eE = +18m.51s. = PR₁ + 36s., +20m.45s. = PR₁ - 14s. and +31m.27s. Berkeley eN = +18m.8s. = PR₁ - 7s., eN₁ = +18m.46s. eN = +20m.1s. and +27m.10s. = PS + 4s., eE = +30m.6s. and +41m.45s. Tananarive E = +26m.34s. = PS - 32s., N = +26m.43s. = PS - 23s. and +30m.1s., E = +30m.4s. Tucson eN = +30m.35s. and +33m.9s. = SR₁ - 3s. Rio de Janeiro eN = +18m.48s., eLN = +44.4m. Victoria SN = +34m.7s. = SR₁ - 1s., SE = +34m.47s. Sitka MN = +61.0m. Irkutsk ScP₁PcS = +26m.23s., PS = +29m.1s., eSR₁ = +34m.27s. Florissant eEZ = +20m.47s. = PR₁ + 23s., e = +23m.27s. = PR₁ - 18s., eEZ = +30m.27s. = PS - 17s., eEN = +36m.27s. = SR₁ - 19s., eE = +37m.27s. = St. Louis eEN = +28m.6s., +30m.28s. = PS - 16s. and +36m.13s. = SR₁ - 33s., eE = +37m.33s., eN = +39m.58s., eE = +44m.58s., MN = +55.0m. Chicago eE = +57m.27s., +59m.43s., and +61m.53s. Cincinnati eZ = +30m.9s., eNZ = +36m.59s., eZ = +47m.47s., LZ = +56.4m. Tashkent iPR₁ = +20m.56s., PS = +31m.9s., SR₁ = +37m.27s. Ann Arbor eLN = +52.8m., MN = +67.2m. Charlottesville eN = +43m.15s., eE = +43m.27s., eN = +53m.27s., eE = +54m.27s., and +60m.27s., eLN = +63.4m. Georgetown iZ = +21m.59s. and +23m.33s., PS = +31m.32s., SR₁Z = +37m.22s. Fordham eN = +40m.29s. and +62m.34s., eE = +63m.23s. Ottawa eN = +30m.27s. Ekaterinburg iPR₁ = +22m.24s., iPcPcS = +23m.0s., PPS = +34m.11s., SR₁ = +39m.39s. Baku PR₁ = +23m.3s., ScP₁PcS = +30m.9s., PS = +34m.10s., eSR₁ = +42m.21s. Kucino ScP₁PcS = +30m.11s., SR₁ = +42m.15s. Pulkovo ScP₁PcS = +30m.10s., PS = +34m.58s., SR₁ = +39m.45s. Upsala eN = +56m.27s.?, MN = +95.0m. Konigsberg eN = +57m.27s.?, MN = +75.4m., MZ = +91.4m. Belgrade eN = +23m.9s., +25m.26s., +31m.5s. = Σ - 1s., +34m.57s., +43m.52s., +52m.1s., and +57m.56s. Budapest MN = +98.7m. Laibach readings are both given as eLE. Hamburg MN = +101.4m. Jena eLN = +81.4m., eLZ = +81.8m., MN = +78.4m., MZ = +94.4m. Gottingen MN = +101.4m. Karlsruhe eL = +112.4m. De Bilt ePR₁ = +25m.9s., eZ = +31m.44s. = Σ - 1s., eN = +35m.55s., MN = +98.0m., MZ = +99.6m. Zurich e = +26m.2s. Strasbourg i = +25m.11s. = PR₁ - 9s., MN = +102.7m., MZ = +103.1m. Stonyhurst i = +59m.27s. Uccle e = +33m.27s.?, MN = +100.4m. Moncalieri MN = +106.3m. Kew eNZ = +38m.27s.?, eEN = +46m.27s. = SR₁ - 7s., LZ = +81.4m., MN = +94.5m., MZ = +97.4m. Oxford eN = +41m.5s. and +44m.38s. Paris MN = +102.4m. Alcante MN = +99.0m. Tortosa ME = +103.2m. Granada PR₁ = +25m.24s., i = +30m.0s. = PR₁ + 6s., and +32m.48s. = Σ - 29s. San Fernando MN = +102.6m. Toledo MNW = +96.3m.

March 9d. Readings also at 0h. (Andijan), 2h. (near Koti and near Taihoku), 4h. (Batavia), 5h. (Samarkand), 6h. (Phu-Lien), 10h. (near La Paz), 11h. (Florissant and Christchurch), 12h. (Christchurch (2) and near Kobe), 13h. (Christchurch, Toronto, and Samarkand), 14h. (La Paz and Rio de Janeiro), 16h. and 17h. (Christchurch), 18h. (Almata and Frunse), 20h. (near Florissant (2) and St. Louis), 22h. (near Christchurch and Wellington), 23h. (near Christchurch and Wellington).

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March 10d. 14h. 34m. 40s. Epicentre 18°5N. 145°0E.

A = -·777, B = +·544, C = +·317 ; D = +·574, E = +·819 ;
G = -·260, H = +·182, K = -·948.

A depth of focus 0·025 has been adopted.

	Corr. for Focus	Δ	Az.	P. m. s.	O-C.	S. m. s.	O-C.	L. m.	M. m.
Nagoya	-0·9	18·2	339	e 4 13	+ 4	e 7 26	+ 1	—	7·6
Koti	-0·9	18·2	328	e 4 10	+ 1	i 7 28	+ 3	—	—
Sumoto	-0·9	18·2	332	e 4 15	+ 6	7 25	0	—	7·4
Osaka	-0·9	18·3	335	e 4 16	+ 6	(7 16)	- 9	7·3	8·8
Kobe	-0·9	18·4	334	e 4 31	+20	7 28	- 1	—	—
Toyooka	-0·9	19·3	334	e 4 30	+ 8	7 50	+ 1	—	—
Nagasaki	-1·0	19·7	319	e 5 3	+38	8 57	+62	—	—
Hukuoka	-1·0	20·0	322	e 4 26	- 3	8 8	+ 6	—	—
Mizusawa	-1·1	20·9	351	e 4 35	- 4	8 19	0	—	—
Akita	-1·1	21·7	350	e 4 44	- 4	(8 29)	- 7	8·5	9·0
Taihoku	N. -1·2	22·7	291	e 4 14	-45	—	—	10·1	—
Manila	-1·3	23·4	264	i 5 9	+ 3	i 9 0	- 7	i 11·1	—
Zi-ka-wei	-1·3	24·8	305	—	—	i 8 14	-81	(11·7)	—
Hong Kong	-1·6	29·1	283	e 5 59	- 4	—	—	14·2	14·8
Phu-Lien	-2·0	36·2	280	i 7 1	- 6	e 12 29	-14	e 15·3	—
Batavia	-2·4	45·0	240	i 8 11	- 4	i 16 3	+80	—	—
Irkutsk	-2·5	46·3	326	e 8 17	- 7	i 14 49	-10	21·3	—
Riverview	-2·7	52·7	174	—	—	e 16 10	- 9	24·5	28·8
Calcutta	-2·7	52·9	285	e 9 13	+ 5	e 16 35	+14	—	—
	N. -2·7	52·9	285	e 8 40	-28	16 10	-11	—	—
Adelaide	-2·8	53·8	187	i 9 15	+ 2	i 16 27	- 4	23·7	32·6
Melbourne	-2·9	56·3	180	—	—	e 16 28	-33	i 23·6	28·8
Perth	-2·9	57·6	210	i 9 45	+ 8	i 17 31	+14	—	—
Dehra Dun	-3·0	61·3	296	e 10 20	+19	—	—	—	19·3
Almata	-3·0	61·6	311	e 10 10	+ 7	—	—	—	—
Hyderabad	-3·1	62·9	282	e 10 13	+ 2	e 18 41	+20	32·5	40·0
Andijan	-3·1	65·1	308	e 10 33	+ 8	e 19 2	+14	—	—
Wellington	E. -3·1	65·9	156	i 10 31	0	i 18 57	- 1	29·3	—
	N. -3·1	65·9	156	i 10 28	- 3	i 18 55	- 3	29·3	—
Tashkent	-3·1	67·4	310	i 10 47	+ 7	i 19 28	+11	—	40·3
Bombay	-3·2	67·8	283	e 10 54	+12	19 38	+18	34·4	35·4
Samarkand	-3·2	69·3	308	e 12 52	+120	e 21 52	+134	—	—
Ekaterinburg	-3·2	71·5	325	i 11 9	+ 3	i 20 12	+ 6	28·3	42·4
Victoria	N. -3·3	77·4	43	e 21 39	±S	(21 39)	+24	32·3	33·2
Baku	-3·4	81·9	311	i 12 11	+ 1	i 22 11	+ 5	41·8	48·5
Pulkovo	-3·4	85·8	333	e 12 25	- 7	i 22 28	-22	43·3	52·3
Helsingfors	-3·5	87·8	335	e 12 21	-23	e 22 56	-15	e 45·3	—
Theodosia	-3·5	90·1	320	e 22 24	±S	(e 22 24)	[-65]	—	—
Scoresby Sund	-3·5	90·6	356	e 17 20	±PR ₁	—	—	—	—
Simferopol	-3·5	90·9	319	e 23 5	±S	(e 23 5)	[-28]	—	—
Upsala	-3·5	90·9	337	e 17 50	±PR ₁	e 22 58	[-35]	—	—
Tucson	E. -3·5	91·5	56	e 13 39	+34	e 23 6	[-31]	—	—
Lund	-3·6	95·4	335	(19 20)	±PR ₁	—	—	19·3	—
Copenhagen	-3·6	95·7	335	e 16 56	±PR ₁	23 29	-32	48·3	—
Hamburg	-3·6	98·2	335	e 17 20	±PR ₁	—	—	50·3	—
Vienna	Z. -3·6	99·1	330	e 17 10	±PR ₁	—	—	—	—
Edinburgh	-3·7	100·9	344	—	—	e 24 56	-32	—	—
Zagreb	-3·7	100·9	326	e 17 20	±PR ₁	e 23 56	[-32]	e 49·3	52·8
De Bilt	-3·7	101·3	336	e 17 50	±PR ₁	e 23 59	[-31]	e 48·3	53·0
Uccle	-3·7	102·6	336	—	—	e 24 5	[-31]	e 48·3	—
Strasbourg	-3·7	102·8	333	e 17 20	±PR ₁	—	—	38·3	—
Flouissant	-3·7	102·8	42	e 17 50	±PR ₁	i 24 4	[-33]	—	—
St. Louis	-3·7	103·0	42	e 17 54	±PR ₁	i 24 14	[-24]	—	—

Continued on next page.

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	Corr. for Focus	Δ	Az.	P. m. s.	O-C. s.	S. m. s.	O-C. s.	L. m.	M. m.
Zurich	-3.7	103.4	331	e 18 5	?PR ₁	e 24 16	[-24]	—	—
Chur	-3.7	103.4	331	e 17 56	?PR ₁	e 24 5	[-35]	—	—
Kew	-3.7	103.7	340	—	—	e 24 14	[-27]	50.3	—
Florence	-3.7	104.7	326	18 40	?PR ₁	27 20	?PS	57.3	63.3
Paris	-3.7	104.9	336	e 18 20?	?PR ₁	—	—	55.3	55.3
Cincinnati	z. -3.7	106.1	37	e 16 17	?	i 28 13	?	54.3	—
Ottawa	-3.7	106.2	28	—	—	i 24 18	[-35]	e 43.3	—
Georgetown	z. -3.8	110.4	34	14 58	+16	—	—	66.0	—
Tortosa	N. -3.8	112.1	332	—	—	—	—	e 56.3	62.9
Granada	-3.8	117.0	332	i 19 43	?PR ₁	e 30 35	?PS	e 64.3	69.8
San Fernando	E. -3.8	118.7	334	—	—	—	—	—	80.5
La Paz	—	148.4	92	19 33	[-20]	i 29 37	?	—	—
Sucre	—	151.4	96	19 34	[-24]	—	—	—	—

Additional readings and note : Sumoto MN = +7.5m. Osaka MN = +8.5m.
 Toyooka PE = +4m.38s. Akita ePEN = +4m.48s. Zi-ka-wei gives
 S as i only and L as S. Hong Kong i = +7m.2s. and +11m.50s. =
 SR₁ -14s. Phu-Lien eSR₁? = +13m.40s. Batavia iPNW = +8m.14s.
 Riverview eP = 14h.34m.41s., MN = +33.1m. Melbourne i = +17m.4s.
 and +18m.13s. = PS +8s. Pulkovo i = +13m.10s., PS = +23m.32s.
 Helsingfors e = +13m.21s., eS_CP_CS? = +22m.40s., PPS = +24m.16s. Tucson
 eN = +13m.45s. and +23m.10s. De Bilt eZ = +26m.36s. = S +64s.,
 MN = +58.8m. Uccle e = +32m.20s.? = SR₁ -4s. Strasbourg e =
 +20m.20s. ? and +32m.20s. ? = SR₁ -7s. Florissant iE = +24m.3s.,
 iEN = +24m.41s., eE = +24m.39s., iEN = +24m.41s., eE = +25m.22s.,
 E -5s., iEN = +25m.23s., eE = +26m.48s. St. Louis eEN = +24m.43s.
 +25m.26s. = E -3s., +26m.50s., and +27m.50s. = PS +12s. Florence
 eP = +10m.50s. Ottawa e? = +33m.38s. = SR₁ +29s., eLN = +46.3m.
 Georgetown PR₁Z = +18m.53s., PS? = +28m.3s. Granada i = +20m.52s.
 San Fernando MN = +81.1m.

Mar. 10d. 22h. 46m. 58s. Epicentre 52°6'N. 168°7'W.

A = -596, B = -119, C = +794 ; D = -196, E = +981 ;
 G = -779, H = -156, K = -607.

	Δ	Az.	P. m. s.	O-C. s.	S. m. s.	O-C. s.	L. m.	M. m.
Victoria	E. 28.7	80	11 14	?S	(11 14)	+ 2	13.9	14.4
Nagoya	41.7	270	e 8 40	+31	—	—	—	—
Kobe	43.1	270	18 7	-12	—	—	—	—
Irkutsk	49.6	309	18 57	- 7	e 16 8	- 6	26.0	34.6
Florissant	53.6	74	19 27	- 3	i 16 58	- 6	e 27.5	29.5
St. Louis	53.8	74	e 9 29	- 3	i 17 2	- 4	e 26.0	30.3
Zi-ka-wei	53.8	277	19 27	- 5	—	—	—	28.6
Scoresby Sund	54.7	14	—	—	17 8	- 9	—	—
Toronto	56.4	60	—	—	—	—	30.0	—
Cincinnati	z. 56.7	67	—	—	—	—	e 28.5	—
Ottawa	57.1	58	—	—	e 17 50	+ 3	e 29.0	—
Georgetown	81.0	64	e 9 43	-36	—	—	e 29.2	—
Ekaterinburg	63.4	334	i 10 37	+ 3	e 19 9	+ 3	29.5	41.9
Pulkovo	68.6	350	11 7	+12	19 49	+ 4	36.0	48.5
Almata	68.8	315	e 11 2	- 8	—	—	—	—
Copenhagen	71.7	359	—	—	20 48	+ 2	43.0	—
Andijan	73.2	317	e 11 37	0	—	—	—	—
Tashkent	73.6	320	11 38	- 2	e 21 12	+ 3	e 35.0	49.9
De Bilt	75.2	5	i 11 52	+ 2	—	—	e 41.0	51.2
Kew	75.5	9	—	—	—	—	e 42.0	—
Samar kand	76.0	320	e 13 49	+114	—	—	—	—
Uccle	76.4	6	—	—	—	—	e 40.0	—
Feldberg	77.2	3	i 12 5	+ 3	—	—	—	—
Paris	78.4	7	i 12 10	+ 1	—	—	—	50.0
Strasbourg	78.8	3	e 12 2?	-10	—	—	e 43.0	—
Vienna	z. 79.1	357	i 12 12	- 2	—	—	—	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Zurich	80.0	3	i 12 17	- 2	—	—	—	—
Innsbruck	80.1	0	e 12 14	- 6	—	—	—	—
Theodosia	80.2	345	e 12 21	+ 1	—	—	—	—
Neuchatel	80.3	4	i 12 20	- 1	—	—	—	—
Chur	80.6	2	e 12 22	- 1	e 22 29	- 1	—	—
Baku	81.3	332	e 12 46	+19	e 22 36	- 2	42.0	58.9
Zagreb	81.6	357	e 12 27	- 1	e 22 37	- 5	—	—
Granada	89.3	13	—	—	—	—	e 49.0	57.5
San Fernando	E. 89.7	14	—	—	—	—	—	61.9

Additional readings: Cincinnati LZ = +32.0m. Georgetown eZ? =
 22h.27m.45s., eZ = 22h.47m.12s., also +14m.13s. De Bilt MN =
 +50.1m., MZ = +51.4m. San Fernando MN = +58.7m.

March 10d. Readings also at 0h. (Ekaterinburg, Pulkovo, Tashkent, Scoresby Sund, Zagreb, and Manila), 1h. (Baku, Copenhagen, De Bilt, Uccle, Strasbourg, Kew, Florence, Granada, San Fernando, Florissant, near Christchurch, Wellington, near Batavia, and Malabar), 2h. (Adelaide), 3h. (near Taihoku), 4h. and 8h. (near Vera Cruz), 10h. (near Wellington), 11h. (Florence, Tortosa, and Riverview), 12h. (near Christchurch), 14h. (Andijan and Samarkand), 16h. and 22h. (La Paz).

Mar. 11d. 13h. 21m. 30s. Epicentre 43°1N. 143°4E. (given by Tokyo in Geophys. Mag., Vol. IV, No. 4.).

A = -586, B = +435, C = +683.

	Δ	P.	O-C.	S.	O-C.	L.
	°	m. s.	s.	m. s.	s.	m.
Kusiro	0.7	0 9	- 2	0 24	+ 4	—
Sapporo	1.5	0 22	- 1	0 42	0	—
Akita	4.2	e 1 16	+11	—	—	e 1.5
Hukusima	5.8	1 5	-25	2 3	-36	—

No additional readings.

Mar. 11d. 13h. 25m. 32s. Epicentre 10°5N. 75°5W.

A = +246, B = -952, C = +182; D = -968, E = -250;
 G = +046, H = -176, K = -983.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tacubaya	24.5	294	5 32	- 1	9 48	- 6	10.2	—
La Paz	28.0	165	6 9	+ 1	11 1	+ 2	14.7	18.3
Georgetown	Z. 28.5	357	e 6 13	0	e 12 37	?SR ₁	e 15.3	—
St. Louis	31.0	338	i 7 13	+35	e 11 14	-37	e 15.0	—
Sucre	31.2	163	e 6 40	0	e 12 28	+34	17.1	—
Florissant	31.3	338	e 7 11	+30	—	—	—	23.5
Ann Arbor	E. 32.6	350	—	—	—	—	e 17.1	—
Chicago	E. 33.0	344	—	—	—	—	e 16.3	—
Toronto	E. 33.3	355	—	—	—	—	e 16.6	20.9
Ottawa	34.9	0	—	—	e 14 15	+81	e 17.3	22.5
Tucson	39.2	310	e 9 22	?PR ₁	—	—	e 20.1	—
Rio de Janeiro	N. 46.0	138	—	—	—	—	e 25.5	—
Victoria	E. 54.9	324	18 13	?S	(18 13)	+53	30.3	34.1
Scoresby Sund	68.5	18	—	—	—	—	31.5	—
Kew	Z. 72.6	40	—	—	—	—	e 39.5	—
Paris	74.3	42	—	—	—	—	e 41.5	—
Uccle	75.5	41	—	—	e 23 28?	?	e 41.5	—
De Bilt	76.0	40	—	—	e 23 31	?	e 40.5	42.2
Strasbourg	77.7	42	—	—	—	—	e 40.5	—
Copenhagen	80.1	35	—	—	23 52	?	40.5	—
Pulkovo	88.7	29	—	—	—	—	e 45.5	—
Ekaterinburg	103.6	23	—	—	e 29 13	?	e 44.5	—
Tashkent	118.9	30	—	—	e 38 46	?	56.5	68.9

For Notes see next page.

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NOTES TO MARCH 11d. 13h. 25m. 32s.

Additional readings and note : Georgetown eZ? = +13h.21m.43s. St. Louis eN = +12m.25s. Florissant iN = +7m.12s., eZ = +8m.30s. Ann Arbor e?E = +15m.34s. Chicago eN = +16m.34s. Scoresby Sund L = +40.5m. De Bilt eSR₁ = +29m.10s., MZ = +45.2m. Only the readings for Tacubaya, La Paz, Sucre, and De Bilt are given with definite P or S phase.

Mar. 11d. Readings also at 0h. (La Paz), 4h. (Florissant and Tacubaya), 6h. (near Almata and near Christchurch), 7h. (La Plata and near Santiago), 8h. (Tucson and near Tacubaya (2)), 9h. (Sebastopol), 11h. (Nagoya), 13h. (near Toyooka), 14h. (La Paz and near Taihoku), 18h. (Entebbe and La Plata), 19h. (Scoresby Sund and near La Paz), 20h. (Andijan), 21h. (Fordham), 22h. (La Paz and near Tananarive).

Mar. 12d. Readings at 1h. (Entebbe, Andijan, and Samarkand), 2h. (Berkeley, Lick, Florissant, Tucson (2), Chicago, Ottawa, Toronto, Georgetown, Cincinnati, Ekaterinburg, Tashkent, near Victoria, and near La Paz ; these readings and those for 3h., with the exception of La Paz and Samarkand, apparently belong to a shock near Victoria B.C. ($\Delta = 6^\circ$). As no other station gives a P or S there is inadequate material for a definite determination). 3h. (Scoresby Sund, Copenhagen, De Bilt, Uccle, and Samarkand), 4h. (Tashkent, Andijan, and Samarkand), 7h. (near Christchurch and Wellington), 9h. (near Granada and Malaga), 12h. (Fordham), 17h. (Ekaterinburg, Tashkent, Irkutsk, Ottawa, and La Paz), 20h. (Apla, Andijan, and Samarkand).

March 13d. 11h. 1m. 12s. Epicentre 37°-6N. 72°-6E. (as given by the Central Asia Stations).

$$A = +.237, B = +.756, C = +.610; \quad D = +.954, E = -.299; \\ G = +.182, H = +.582, K = -.792.$$

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Andijan	2-7	355	i 1 27	+45	(i 1 27)	+13	2-4	—
Tashkent	4-5	326	i 1 35	+25	—	—	—	—
Samarkand	4-8	297	i 1 28	+14	—	—	—	—
Almata	6-6	29	1 55	+14	—	—	i 3-4	—
Dehra Dun	8-5	147	2 18	+ 9	(3 58)	+ 8	4-0	—
Baku	17-8	286	i 3 51	-24	i 7 33	- 3	9-3	—
Bombay	18-7	179	4 21	- 4	7 56	+ 1	10-0	13-4
Calcutta	E. 20-3	136	4 53	+ 8	8 25	- 4	—	—
	N. 20-3	136	4 56	+11	8 37	+ 8	—	—
Hyderabad	20-8	164	4 42	- 9	8 26	-14	10-6	11-1
Ekaterinburg	20-8	341	i 5 1	+10	i 8 50	+10	10-3	15-0
Irkutsk	26-5	46	e 6 3	+10	e 10 41	+ 9	—	—
Theodosia	28-7	297	e 5 44	-31	—	—	—	—
Kucino	29-4	319	e 7 12	?PR ₁	—	—	e 19-4	—
Simferopol	29-5	296	e 6 17	- 6	—	—	—	—
Yalta	29-5	296	i 7 1	?PR ₁	—	—	—	—
Ksara	29-8	273	e 5 48?	-38	e 11 5	-26	e 12-8	—
Sebastopol	29-9	296	e 7 11	?PR ₁	—	—	—	—
Pulkovo	34-7	323	7 6	- 5	e 12 29	-22	—	—
Konigsberg	E. 38-8	314	—	—	—	—	22-8	—
Vienna	Z. 41-5	306	e 8 17	+10	—	—	—	—
Zagreb	42-1	300	e 8 7	- 5	—	—	—	—
Copenhagen	43-4	315	8 18	- 3	14 41	-13	23-8	—
Strasbourg	47-2	307	e 8 48?	0	—	—	24-8	—
De Bilt	48-1	311	i 8 56	+ 1	e 15 43	-12	e 19-6	—
Matuyama	48-2	76	e 8 56	+ 1	—	—	—	—
Uccle	48-8	310	—	—	—	—	e 17-8	—
Paris	50-4	308	e 11 48?	?PR ₁	—	—	31-8	—
Kew	51-5	312	e 9 20	+ 3	e 16 32	- 6	e 28-8	—
Edinburgh	52-1	316	—	—	—	—	—	—
Scoresby Sund	56-4	338	—	—	16 48?	-51	—	—
Granada	58-7	295	e 10 26	+23	i 18 11	+ 4	35-8	—

For Notes see next page.

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NOTES TO MARCH 13d. 11h. 1m. 12s.

Additional readings: Dehra Dun S = +2m.48s. Baku i = +7m.38s.
 Hyderabad MN = +11.4m. Irkutsk e = +11m.46s. =SR₁+6s. Kucino
 e = +9m.6s., +12m.6s., and +13m.24s. Zagreb e = +9m.43s. =PR₁-4s.

March 13d. Readings also at 2h. (Granada, Tucson, near Lick, and near Mizusawa), 6h. (Mizusawa), 7h. (De Bilt, Uccle, and La Paz), 11h. (Taihoku), 13h. (near Mazatlan), 14h. (Manila), 15h. (Samarkand), 16h. (Graz, Samarkand, and Andijan), 17h. (Georgetown and near La Paz), 20h. (Samarkand), 22h. (Andijan, Samarkand, and Tashkent), 23h. (Lick, Berkeley, Tucson, St. Louis, and Florissant).

March 14d. 14h. 14m. 45s. Epicentre 39°·5N. 147°·5E.

A = -·651, B = +·415, C = +·636; D = +·537, E = +·843;
 G = -·536, H = +·342, K = -·772.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	4·9	268	1 13	- 3	1 42	-32	—	—
Akita	5·7	275	1 15	-13	(1 47)	-49	1·8	1·8
Nagoya	9·4	246	e 2 28	+ 6	(4 17)	+ 4	4·3	4·8
Kobe	10·9	248	i 3 4	+21	—	—	e 5·4	—
Irkutsk	32·1	309	6 25	-23	e 11 43	-27	15·2	17·4
Almata	51·4	298	e 10 9	+53	—	—	—	—
Andijan	55·8	297	e 9 50	+ 5	—	—	—	—
Ekaterinburg	56·2	319	i 9 46	- 1	17 35	- 1	26·8	35·0
Tashkent	57·5	299	i 9 55	- 1	i 17 50	- 3	e 27·6	34·2
Samarkand	59·8	299	e 10 9	- 2	—	—	—	—
Kucino	67·7	325	—	—	—	—	e 34·4	42·8
Pulkovo	68·2	331	e 11 13	+ 8	—	—	35·2	—
Baku	70·5	308	—	—	e 20 46	+14	e 37·8	44·0
Copenhagen	77·5	335	—	—	—	—	39·2	—
De Bilt	82·8	337	—	—	e 28 15?	SR ₁	e 43·2	48·5
Uccle	84·1	337	—	—	—	—	e 45·2	—
Kew	84·8	340	—	—	—	—	e 45·2	—
Strasbourg	85·0	335	—	—	—	—	e 45·2	—
Paris	86·4	338	—	—	—	—	e 51·2	—
Florence	87·8	329	21 30	?	—	—	—	30·2

Additional readings: Akita MN = +2·1m. Baku e = +29m.38s. De
 Bilt MNZ = +52·7m.

March 14d. 18h. 37m. 10s. Epicentre 28°·0N. 139°·5E.

A = -·671, B = +·573, C = +·469; D = +·649, E = +·760;
 G = -·357, H = +·305, K = -·883.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya	7·5	343	e 1 55	+ 1	—	—	—	—
Kobe	7·6	332	2 1	+ 6	e 5 29	+123	e 7·0	9·0
Manila	21·8	237	e 5 4	+ 1	—	—	—	—
Hong Kong	23·6	262	—	—	—	—	—	10·2
Irkutsk	35·6	323	7 50	+32	e 12 46	-18	19·8	22·2
Andijan	55·6	301	e 9 42	- 1	e 17 28	- 1	—	—
Tashkent	57·7	303	e 9 48	- 9	i 17 56	+ 1	—	38·6
Samarkand	59·7	302	e 10 11	+ 1	e 18 19	0	—	—
Ekaterinburg	60·9	322	e 10 14	- 4	—	—	31·8	—
Baku	72·1	307	—	—	—	—	e 40·6	47·4

Continued on next page.

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	Δ °	Az. °	P. m. s.	O-C. s.	S. m. s.	O-C. s.	L. m.	M. m.
Pulkovo	75.0	330	—	—	—	—	e 40.8	—
Copenhagen	84.9	333	—	—	—	—	46.8	—
De Bilt	90.4	334	—	—	—	—	e 49.8	—
Uccle	91.8	334	—	—	—	—	49.8	—
Strasbourg	92.2	330	—	—	—	—	e 50.8	—
Kew	93.1	337	—	—	—	—	e 52.8	—
Florence	94.0	325	17 35	?PR ₁	27 50	?	55.8	60.3
Granada	106.2	330	—	—	—	—	67.8	—
La Paz	152.0	72	19 56	[- 3]	—	—	—	—

Additional readings: Kobe MN = +8.8m., MZ = +10.4m. Ekaterinburg
SR₁ = +22m.41s.

March 14d. Readings also at 0h. (near Algiers), 5h. (Samarkand), 6h. (Mizusawa, Nagoya, and near Tacubaya), 7h. (Samarkand), 10h. (Simferopol and Yalta), 11h. (Granada), 15h. (Andijan, Samarkand, and near Taihoku), 16h. (Simferopol and near Yalta), 18h. (Almata, Samarkand, and near Andijan), 20h. (Calcutta), 22h. (Apia, Wellington, Ekaterinburg, and Tashkent), 23h. (De Bilt, Strasbourg, Scoresby Sund, Kucino, Copenhagen, Pulkovo, Baku, and Irkutsk).

March 15d. 1h. 56m. 58s. Epicentre 39°-7N. 143°-7E. (as given in Geophysical Magazine of Tokyo, Volume IV, No. 4).

A = -620, B = +455, C = +639; D = +592, E = +806;
G = -515, H = +378, K = -769.

	Δ °	Az. °	P. m. s.	O-C. s.	S. m. s.	O-C. s.	L. m.	M. m.
Miyoko	1.3	267	0 28	+ 8	0 46	+10	—	—
Mizusawa	2.1	254	0 33	0	1 0	+ 2	—	—
Sendai	2.7	237	0 38	- 4	1 4	-10	—	—
Akita	2.8	270	1 0 43	- 1	—	—	1.4	1.6
Hakodate	3.1	313	0 55	+ 6	—	—	—	—
Tokyo	5.1	219	1 11	- 8	2 22	+ 2	—	—
Nagoya	7.2	233	e 1 43	- 6	—	—	3.6	3.8
Osaka	8.3	235	e 2 27	+21	—	—	4.1	4.8
Kobe	8.5	237	2 25	+16	(4 0)	+10	4.0	4.6
Sumoto	8.8	235	2 25	+12	3 52	- 6	—	5.0
Koti	10.2	236	2 23	-10	e 4 45	+10	—	—
Zi-ka-wei	20.0	252	—	—	e 8 5	-18	—	—
Irkutsk	29.7	308	e 6 6	-19	—	—	16.0	—
Hong Kong	30.5	244	—	—	e 11 14	-29	—	20.3
Ekaterinburg	54.1	319	e 9 28	- 6	e 17 24	+14	25.5	35.5
Tashkent	54.8	299	1 9 31	- 7	17 13	- 6	e 24.0	35.1
Samarkand	57.1	299	e 9 57	+ 4	—	—	—	—
Kucino	65.8	324	—	—	—	—	e 34.2	42.3
Pulkovo	66.5	330	—	—	—	—	e 33.0	—
Baku	68.0	306	—	—	—	—	36.5	43.9
Copenhagen	76.0	335	—	—	—	—	39.0	—
De Bilt	81.4	336	—	—	—	—	e 41.0	48.0
Uccle	82.7	336	—	—	—	—	e 47.0	—
Strasbourg	83.5	333	—	—	—	—	e 47.0	—
Kew	83.5	340	—	—	—	—	e 45.0	—
Paris	85.0	336	—	—	—	—	e 54.0	—
Florence	86.2	327	12 45	- 9	(e 24 2)	+30	53.0	56.7
Granada	97.5	335	—	—	—	—	e 53.0	59.2

Additional readings: Mizusawa PE = +31s. Akita IPEN = +44s. Nagoya
MN = +4.0m. Osaka MN = +4.6m. Kobe MN = +4.4m. Sumoto
MZ = +4.6m., MN = +4.8m. Ekaterinburg 1 = +9m.36s. De Bilt
eLN = +42.0m., MNZ = +52.4m. Florence gives S as another eP.

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March 15d. 8h. 25m. 33s. Epicentre 12°·2N. 142°·0E. (as on 1929 Jan. 17d.).

A = -·770, B = +·602, C = +·211; D = +·616, E = +·788;
G = -·167, H = +·130, K = -·977.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	20·6	279	e 4 38	-10	—	—	—	—
Irkutsk	50·2	331	—	—	—	—	e 25·4	—
Tashkent	69·0	310	i 11 14	+ 3	e 20 23	+ 9	e 32·4	44·8
Ekaterinburg	75·1	327	i 11 48	- 2	e 21 32	+ 5	e 33·4	48·6
De Bilt	E. 105·8	335	—	—	—	—	e 60·4	—
Strasbourg	107·0	331	—	—	—	—	e 65·4	—
Paris	109·3	333	—	—	—	—	e 69·4	—
Granada	121·0	328	—	—	—	—	e 69·4	76·8
La Paz	150·5	102	23 4	?PR ₁	—	—	—	—

De Bilt gives also eLN = +57·4m.

March 15d. 10h. 13m. 48s. Epicentre 32°·7N. 131°·9E. (as on 1927 Feb. 18d.).

A = -·562, B = +·626, C = +·540; D = +·744, E = +·668;
G = -·361, H = +·402, K = -·842.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Matuyama	1·3	32	i 0 20	0	(i 0 30)	- 6	i 0·5	0·6
Hukuoka	1·5	305	0 26	+ 3	e 0 45	+ 3	—	0·8
Koti	1·6	58	0 18	- 6	i 0 44	- 1	—	—
Nagasaki	1·7	271	0 30	+ 4	0 59	+11	—	—
Muroto	2·0	74	e 0 28	- 3	e 0 50	- 5	—	—
Sumoto	3·0	56	i 0 34	-13	1 18	- 5	—	1·5
Kobe	3·3	54	0 54	+ 2	—	—	i 1·6	—
Nagoya	4·8	58	—	—	e 1 58	-13	—	—

Additional readings: Hukuoka P = +27s., S = +50s. Koti iP = +26s.,
e = +38s. Sumoto MNZ = +1·4m. Kobe iP = +58s.

March 15d. 17h. 57m. 18s. Epicentre 32°·0N. 46°·0W.

A = +·589, B = -·610, C = +·530; D = -·719, E = -·695;
G = +·368, H = -·381, K = -·848.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Fordham	24·0	299	—	—	e 9 43	- 1	10·9	12·4
Georgetown	Z. 26·1	294	—	—	—	—	e 13·5	18·6
Ottawa	26·6	309	—	—	e 11 18	+45	e 13·4	—
Toronto	N. 28·6	304	—	—	—	—	14·7	—
Cincinnati	31·9	296	—	—	—	—	16·7	—
Granada	35·0	70	e 8 21	?PR ₁	13 8	+13	14·3	16·7
Florissant	N. 36·4	295	—	—	—	—	e 16·7	18·7
Stonyhurst	37·8	43	—	—	—	—	e 17·7	—
Oxford	37·9	46	—	—	e 13 14	-23	e 16·1	18·2
Edinburgh	38·0	38	—	—	—	—	i 16·4	—
Tortosa	N. 38·0	63	—	—	—	—	e 15·7	17·3
Kew	38·4	46	—	—	—	—	e 17·7	—
Paris	39·8	50	—	—	—	—	e 17·7	21·7
Scoresby Sund	40·7	13	—	—	14 12	- 5	—	—
Uccle	41·2	48	—	—	—	—	e 18·7	—
De Bilt	41·8	46	—	—	e 14 12	-20	e 19·7	21·0
Strasbourg	43·2	51	e 7 42?	-38	e 13 42?	-69	17·7	—
Florence	45·7	59	e 3 27	?	—	—	23·5	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Copenhagen	46.5	41	—	—	15 26	- 9	—	—
La Paz	52.9	209	e 9 25	0	—	—	24.7	29.4
Pulkovo	56.0	36	—	—	—	—	e 22.7	—
Ekaterinburg	71.9	34	e 11 35	+ 6	i 20 59	+10	59.7	—
Baku	74.0	52	—	—	—	—	e 37.2	—
Samarkand	85.2	46	e 13 13	+24	—	—	—	—
Tashkent	85.6	44	e 12 47	- 4	e 23 18	- 8	e 36.7	49.9

Additional readings and note: Georgetown eZ? = 17h.52m.6s., eZ = 17h.59m.5s. and 18h.4m.9s. Toronto eN = +13m.42s. De Bilt eLN = +17.7m., MZ = +21.4m., MN = +21.6m. Tashkent P and S are given as e simply.

March 15d. Readings also at 0h. (Nagoya, Samarkand, and Tashkent), 3h. (Wellington and Christchurch), 6h. and 9h. (La Paz), 12h. (Baku, Ekaterinburg (2), Tashkent (2), Ksara, Granada, La Paz, Perth, Riverview, Melbourne, and near Wellington (2)), 13h. (De Bilt, Florence, Strasbourg, and Bombay), 14h. (Copenhagen, Scoresby Sund, Uccle, Paris, Kew, Oxford, Melbourne, Riverview, Wellington, Simferopol, and near Yalta), 15h. (Florissant), 17h. (Sucre), 18h. (near La Paz), 19h. (near Kobe and Sumoto), 21h. (Baku, Ekaterinburg, Ksara, and Lick (2)), 22h. (Sucre and near La Paz), 23h. (near Lick and near Sumoto).

Mar. 16d. 3h. 22m. 3s. (I) } Epicentre 14°·2N. 53°·8E.
12h. 30m. 40s. (II) }

A = +.573, B = +.782, C = +.245; D = +.807, E = -.591;
G = +.145, H = +.198, K = -.969.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
II Bombay	18.9	73	5 12	+44	8 21	+21	9.9	—
II Ksara	25.5	324	5 43	0	(10 20)	+ 7	24.6	—
II Helwan	26.0	311	e 5 48	0	e 10 31	+ 9	—	16.0
I Baku	26.4	353	e 6 25	+33	e 10 34	+ 4	14.4	—
I Samarkand	28.0	22	e 6 15	+ 7	—	—	—	—
I Tashkent	30.3	24	6 37	+ 6	i 11 35	- 4	e 16.0	18.8
II	30.3	24	i 6 32	+ 1	i 11 35	- 4	e 15.3	19.8
I Ekaterinburg	43.0	5	e 10 4	?PR ₁	e 14 38	-10	20.0	28.6
II	43.0	5	8 15	- 3	14 41	- 7	21.8	—
I Pulkovo	48.7	346	9 0	+ 2	e 16 2	0	26.0	—
II	48.7	346	e 9 0	+ 2	e 16 1	- 1	26.3	—
II Neuchatel	50.8	320	e 9 13	+ 1	—	—	—	—
I Copenhagen	52.2	333	—	—	16 51	+ 5	—	—
II	52.2	333	—	—	16 51	+ 5	—	—
II Irkutsk	55.2	35	—	—	—	—	e 31.3	—

Ksara gives also (Shock II) S = +14m.5s., true S being given as PR₁.

Mar. 16d. 6h. 0m. 0s. Epicentre 18°·0S. 164°·0E.

A = -.914, B = +.262, C = -.309; D = +.276, E = +.961;
G = +.297, H = -.085, K = -.951.

Very rough determination.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E. 13.6	93	i 3 18	- 3	i 5 42	-16	—	6.3
	N. 13.6	93	e 3 18	- 3	5 36	-22	6.9	11.6
Riverview	19.6	213	1 5 2	+26	1 8 56	+41	e 9.5	10.2
Sydney	19.6	213	4 30	- 6	—	—	10.3	12.6
Wellington	E. 25.1	161	1 5 32	- 7	i 10 8	+ 3	12.4	—
	N. 25.1	161	1 5 8	-31	i 10 18	+13	—	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Melbourne	25.9	216	e 5 58	+11	10 55	+35	13.5	14.0
Adelaide	28.2	228	e 6 5	- 5	1 11 27	+24	i 14.3	15.5
Perth	45.4	244	15 30	?S	(15 30)	+10	i 25.3	60.0
Manila	53.5	306	e 9 53	+23	e 14 14	?i	i 16.8	—
Batavia	56.9	274	e 11 12	+81	i 18 56	+71	—	—
Irkutsk	87.2	328	e 12 25	-35	22 45	[-25]	e 40.0	—
Tashkent	105.2	310	—	—	i 24 29	[-19]	—	60.5
Samarkand	106.7	308	—	—	e 24 31	[-24]	—	—
Ekaterinburg	112.3	325	18 53	[+24]	—	—	43.5	—
Baku	119.7	306	—	- e 30 28	?PS	e 58.5	—	—
Copenhagen	136.6	337	22 0?	?PR ₁	—	—	—	—
De Bilt	142.1	339	e 22 45	?PR ₁	—	—	e 73.0	—
Neuchatel	145.5	330	e 19 17	[-32]	—	—	—	—
Florence	145.5	324	i 19 16	[-33]	19 50	?[P]	—	23.0
Paris	145.7	339	i 19 18	[-31]	—	—	—	—

Additional readings and notes: Riverview ePR₁ = +5m.27s. and +5m.37s., iS = +9m.23s., MN = +10.0m. Melbourne i = +7m.15s. Adelaide MN = +15.8m. Batavia readings are given without phase. Tashkent PR₁ = +18m.44s., PS = +27m.36s., SR₁ = +34m.0s. Ekaterinburg iPR₁ = +19m.33s., PS = +28m.58s., SR₁ = +34m.54s. Baku e = +36m.38s. = SR₁ - 5s. and +42m.0s. = SR₂ - 15s. De Bilt eZ = +23m.44s. Florence readings are given as for a close shock.

Mar. 16d. Readings also at 0h. (La Paz), 2h. (Ekaterinburg, Samarkand, near Andijan, Frunse, and Tashkent), 3h. (La Paz and Sucre), 5h. (Strasbourg and near Neuchatel), 8h. (La Paz), 9h. (Kobe and near Toyooka), 15h. (Samarkand), 16h. (Tananarive), 17h. (near Matuyama and Sumoto), 20h. (Nagoya), 21h. (Entebbe), 22h. (near Batavia, Malabar, and near Manila), 23h. (Ekaterinburg, Tashkent, and Tananarive).

Mar. 17d. 12h. 14m. 10s. Epicentre 49°-0N. 144°-0E. (as on 1928 Aug. 25d.).

A = - .531, B = + .386, C = + .755; D = + .588, E = + .809;
G = - .611, H = + .444, K = - .656.

In Geophys. Mag., Vol. IV, No. 4, Tokyo gives epicentre 43°-3N. 148°-2E. with undetermined deep focus. No very certain determination is possible, but this is the best, using a previously adopted epicentre. Tokyo epicentre is not readily associated with the deep focus. A depth 0.050 has been assumed.

	Corr. for Focus	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.	
Nemuro	+0.3	5.8	169	1 14	-19	2 11	-35	—	—
Sapporo	+0.2	6.2	198	1 41	+ 3	2 51	- 4	—	—
Akita	-0.6	9.7	198	e 2 19	+ 1	(3 58)	- 8	4.0	—
Mizusawa	-0.6	10.1	193	—	—	3 58	-18	—	—
Sendai	-0.7	11.0	193	2 28	- 6	4 18	-19	—	—
Tokyo	-1.1	13.7	197	3 7	0	5 19	-15	—	—
Nagoya	-1.3	14.8	203	e 3 15	- 5	e 5 49	- 7	—	—
Irkutsk	-2.6	25.1	293	e 5 19	+ 8	—	—	11.8	—
Ekaterinburg	-4.6	47.7	314	i 8 22	+ 3	i 15 1	+12	e 20.8	—
Tashkent	-4.9	51.1	291	i 8 49	+ 8	i 15 51	+20	—	31.4

Mizusawa gives also SN = +3m.56s.

Mar. 17d. 21h. 18m. 33s. Epicentre 43°-8N. 34°-4E. (as given by the stations).

A = + .596, B = + .408, C = + .692.

	Δ	P.	O-C.	S.	O-C.	L.	M.
	°	m. s.	s.	m. s.	s.	m.	m.
Yalta	0.7	0 10	- 1	(10 19)	- 1	10.3	0.4
Sebastopol	1.0	0 16	+ 1	(10 29)	+ 1	10.5	0.5
Simferopol	1.2	0 13	0	(10 32)	- 1	10.5	0.5
Theodosia	1.4	e 0 29	+ 8	—	—	10.8	—

No additional readings.

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Mar. 17d. Readings also at 0h. (Nagoya, near Kobe, and Sumoto), 2h. (Ksara, Venice, Zagreb, and Andijan), 4h. (Ekaterinburg, Tashkent, and Samarkand), 6h. (Toronto), 9h. (Almata and Andijan), 10h. (Samarkand), 11h. (near Sumoto), 12h. (near Entebbe), 15h. (near Taihoku), 17h. (Andijan, Samarkand, and Lick), 18h. (near Sumoto and near Taihoku), 19h. (Nagoya, near Kobe, and Sumoto, Ekaterinburg, Tashkent, Andijan, and Samarkand), 20h. (near Suva), 22h. (Lick).

Mar. 18d. 1h. 42m. 56s. Epicentre 2°7S. 138°8E. (as on 1927 Nov. 17d.).

A = -0.752, B = +0.658, C = -0.047; D = +0.659, E = +0.752.
G = +0.035, H = -0.031, K = -0.999.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina	10.6	264	i 2 51	+13			i 6.6	—
Manila	24.7	315	e 5 34	-1	i 9 59	+ 2	—	—
Batavia	32.0	265	e 6 45	-2	i 9 14	?	—	—
Adelaide	32.3	180	e 7 29?	+38	e 12 14	+ 1	14.6	19.5
Riverview	33.2	161	e 5 22	?			e 17.7	19.4
Sydney	33.2	161	—	—	—	—	19.1	20.6
Melbourne	35.6	172	i 13 0	?S	(i 13 0)	- 4	20.8	21.6
Perth	36.4	215	e 13 24	?S	(e 13 24)	+ 8	21.4	23.2
Phu-Lien	39.4	310	e 7 41	- 9	e 13 39	-18	—	—
Wellington	50.4	145	—	—	—	—	27.3	—
Bombay	68.3	292	e 14 55	?PR ₁	20 15	+ 9	24.9	—
Tashkent	76.6	315	i 10 5	-114			e 36.1	48.6
Ekaterinburg	85.8	327	i 12 51	- 1	i 23 19	- 9	34.1	46.1
Victoria	E. 97.2	41	—	—	—	—	50.7	53.0
Kucino	98.3	326	—	—	—	—	50.0	60.3
Pulkovo	101.5	331	e 18 22	[+30]	—	—	50.1	60.9
Scoresby Sund	111.0	353	—	—	28 4?	+27	—	—
Copenhagen	111.9	331	—	—	29 4?	?PS	57.1	—
Feldberg	N. 116.8	326	—	—	—	—	e 58.5	—
De Bilt	117.4	330	—	—	—	—	e 59.1	68.2
Strasbourg	118.0	325	—	—	—	—	e 63.1	—
Uccle	118.6	330	—	—	—	—	e 59.1	—
Kew	120.5	332	—	—	—	—	e 62.1	—
Paris	120.7	328	—	—	—	—	e 71.1	—
Florissant	122.5	44	—	—	—	—	e 61.1	67.1
Toronto	E. 126.9	34	—	—	—	—	69.1	—
Ottawa	E. 127.7	30	—	—	—	—	e 63.1	—
Georgetown	Z. 131.2	36	—	—	—	—	e 61.2	—
La Paz	147.2	126	e 19 58	[+ 7]	—	—	—	—

Additional readings: Riverview MN = +21.9m. Melbourne iS? = +17m.11s.,
iSR, ? = +18m.16s. Tashkent i = +12m.17s. = P +18s., +12m.30s.,
+14m.56s. = PR₁ -24s., and +21m.48s. = [S] -12s. Kucino e =
+29m.40s., and +37m.52s. De Bilt MNZ = +74.1m.; epicentre 2°7S.
139°6E.

Mar. 18d. 11h. 30m. 38s. Epicentre 38°9N. 141°5E. (given by Tokyo in Geophys. Mag., Vol. IV, No. 4).

A = -0.609, B = +0.484, C = +0.628.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E. 0.4	308	0 4	-2	0 16	+ 5	—	—
	N. 0.4	308	0 6	0	0 17	+ 6	—	—
Iznomaki	0.5	197	0 9	+ 1	0 19	+ 5	—	—
Morioka	0.9	342	0 9	-5	0 23	- 2	—	—
Akita	1.4	306	i 0 19	-2	(0 36)	- 3	0.6	0.8
Tokyo	3.5	204	1 8	+13	—	—	—	—

No additional readings.

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Mar. 18d. 23h. 20m. 52s. Epicentre 38°·5N. 144°·5E. (as on 1922 July 5d.).

A = -·637, B = +·455, C = +·623; D = +·581, E = +·814;
G = -·507, H = +·361, K = -·783.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	2·7	283	0 42	0	1 21	+ 7	—	—
	N.	2·7	283	0 41	- 1	1 23	+ 9	—	—
Akita		3·6	292	i 1 1	+ 5	—	—	1·9	2·3
Nagoya		6·9	243	e 1 50	+ 5	(3 10)	+ 3	3·2	3·8
Osaka		8·2	245	2 5	+ 1	(3 36)	- 6	3·6	5·5
Toyooka	E.	8·3	252	2 2	- 4	3 38	- 7	—	—
Kobe		8·4	246	2 19	+12	4 7	+20	e 4·8	6·1
Sumoto		8·8	245	2 12	- 1	3 57	- 1	—	5·5
Kotl		10·1	244	—	—	4 27	- 5	6·8	—
Taihoku	E.	23·6	242	—	—	e 10 8?	+32	—	—
Hong Kong		30·5	244	6 18	-15	11 18	-25	14·3	17·1
Irkutsk		30·9	310	6 22	-15	11 20	-30	18·1	19·7
Manila		31·7	227	e 6 59	+15	—	—	—	—
Phu-Lien		37·0	254	6 8	-82	—	—	19·1	—
Andijan		54·2	297	e 9 31	- 3	e 17 13	+ 2	—	—
Dehra Dun		54·2	283	—	—	—	—	—	34·1
Ekaterinburg		55·4	320	i 9 42	0	17 24	- 2	27·6	35·7
Tashkent		55·9	300	i 9 38	- 7	—	—	e 28·2	36·0
Samarkand		58·1	299	e 10 3	+ 3	e 17 59	- 1	—	—
Hyderabad		60·7	272	10 7	-10	18 21	-11	—	38·4
Bombay		64·3	274	10 40	0	19 15	- 2	33·4	41·8
Kucino		67·1	325	—	—	e 21 1	[+11]	36·9	38·9
Pulkovo		67·9	330	e 11 11	+ 8	e 20 7	+ 6	33·1	40·6
Helsingfors		69·6	333	—	—	—	—	e 39·6	—
Scoresby Sund		70·6	356	—	—	20 44	+11	39·1	—
Upsala		72·4	335	—	—	—	—	e 42·1	—
Konigsberg		75·1	330	—	—	—	—	49·1	—
Lund		77·1	335	—	—	—	—	42·1	—
Copenhagen		77·4	335	12 7	+ 4	22 0	+ 7	37·1	—
Hamburg		79·9	335	—	—	—	—	e 43·1	—
Dyce		80·2	343	—	—	—	—	—	48·6
Budapest		81·3	326	—	—	—	—	e 47·1	52·4
Gottingen		81·6	334	—	—	—	—	e 46·2	48·2
Edinburgh		81·6	342	—	—	—	—	e 46·1	—
Vienna	Z.	81·8	329	i 12 28	- 1	—	—	—	—
De Bilt		82·7	336	12 36	+ 2	e 22 54	0	e 41·1	48·4
Feldberg	N.	83·2	334	—	—	e 23 8	+ 9	—	49·1
Zagreb		83·9	327	—	—	—	—	e 49·1	53·1
Uccle		84·1	336	—	—	—	—	e 42·1	—
Strasbourg		84·9	333	e 11 8?	-99	e 23 8?	-10	e 46·1	—
Kew		84·9	*340	e 12 48	+ 1	e 23 8	-10	41·5	49·6
Oxford		85·0	340	—	—	—	—	e 47·1	58·6
Paris		86·4	336	e 13 8?	+13	—	—	49·1	60·1
Florence		87·5	328	e 12 56	- 6	24 48	PS	51·1	55·1
Florissant	E.	87·8	40	—	—	—	—	e 41·7	—
Moncalieri		87·9	331	—	—	e 27 18	?	48·0	—
Ottawa		88·7	26	—	—	e 36 8?	?PR ₁	e 44·1	—
Cincinnati	Z.	90·4	36	—	—	—	—	e 47·1	—
Georgetown	Z.	93·7	31	—	—	—	—	62·8	—
Tortosa	N.	94·1	335	—	—	—	—	e 53·1	62·8
Toledo	N.E.	96·4	337	—	—	—	—	e 54·5	—
Alicante		96·7	334	—	—	—	—	e 56·2	—
Granada		98·8	336	—	—	—	—	e 58·1	60·6
San Fernando	E.	100·3	337	—	—	—	—	—	64·6
La Paz		143·9	62	20 30	[+43]	—	—	—	—

Additional readings and note: Akita P = +1m.9s., MN = +2·2m. Nagoya
MN = +4·0m. Osaka MN = +5·4m. Toyooka SN = +3m.42s. Kobe
MN = +6·5m. Sumoto MNZ = +4·8m. Kucino e = +24m.10s. and
+27m.46s. = SR₁ + 9s. Gottingen MN = +51·2m. De Bilt MN =
+53·0m., MZ = +57·8m. Feldberg readings have been increased by 1h.
Zagreb e = +47m.8s. Kew LZ = +49·1m. Florissant e MN =
+45m.8s. San Fernando MN = +64·8m.

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March 18d. Readings also at 0h. (Cincinnati, Batavia, near Amboina, near Manila, Samarkand, and near Santiago), 1h. (near Lick), 4h. (near La Paz), 7h. (Rio de Janeiro, Sucre, La Plata, and near La Paz), 8h. (Tashkent), 9h. (Sucre and near La Paz) 10h. (near Almata (2), Andijan, and Samarkand), 11h. (Tananarive, near Andijan, and Samarkand), 14h. (Feldberg and Georgetown), 15h. (Ekaterinburg, Copenhagen, De Bilt, Kew, and La Paz), 16h. (Almata, Andijan, Samarkand, and near Tashkent (2)), 19h. (Andijan and Samarkand), 20h. (Charlottesville and Andijan), 22h. (Florence).

March 19d. 20h. 53m. 42s. Epicentre 14°5N. 91°0W.

(as on 1927 Feb. 24d.).

A = -.017, B = -.968, C = +.250; D = -1.000, E = +.017;
G = -.004, H = -.250, K = -.968.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
			m. s.	s.	m. s.	s.	m.	m.
Merida	6.6	11	1 42	+ 1	3 6	+ 6	3.2	4.6
Vera Cruz	6.8	314	(1 46)	+ 2	(3 10)	+ 5	(3.3)	(5.6)
Puebla	8.3	304	(2 18)	+12	(3 43)	- 2	(3.8)	(4.2)
Tacubaya	9.3	304	2 37	+17	4 22	+12	4.5	4.7
Balboa Hts. N.	12.5	115	3 40	+34	6 12	+40	6.7	—
Guadalajara	13.4	299	3 45	+27	6 21?	+28	6.7	7.8
Port au Prince	18.4	75	e 4 33	+11	1 8 7	+18	e 10.0	11.8
St. Louis N.	24.2	4	e 5 32	+ 2	e 9 50	+ 2	e 15.4	17.8
Florissant	24.4	2	e 5 31	- 1	1 10 5	+13	i 13.3	—
Cincinnati	25.3	12	5 48	+ 7	(10 27)	+18	10.4	11.3
Tucson E.	25.4	318	5 43	+ 1	10 16	+ 5	13.6	—
N.	25.4	318	5 45	+ 3	10 14	+ 3	13.7	—
Georgetown N.	27.3	24	e 6 4	+ 3	11 22	+36	e 14.5	—
Z.	27.3	24	6 1	0	11 16	+30	14.2	17.6
Chicago N.	27.4	6	e 6 15	+13	10 42	- 6	12.8	—
Ann Arbor N.	28.5	12	—	—	i 11 24	+16	e 18.3	—
Fordham	30.3	28	—	—	e 12 18	+39	—	15.0
Ithaca	30.7	23	—	—	11 49	+ 3	14.8	—
Toronto	30.8	17	e 6 30	- 6	(11 33)	-15	11.6	20.2
Ottawa	33.5	20	e 6 58	- 3	(e 12 0)	-32	e 12.0	19.9
Lick	35.4	315	e 7 11	- 6	e 13 23	+22	e 18.5	21.8
Berkeley	36.2	316	1 7 18	- 6	—	—	e 18.6	22.0
La Paz E.	38.3	143	e 7 23	-17	i 13 15	-27	18.9	—
N.	38.3	143	e 7 26	-14	i 13 23	-19	18.0	21.9
Sucre	42.0	142	7 50	-21	14 11	-24	20.5	—
Victoria E.	43.1	329	8 17	- 2	14 47	- 2	22.9	31.4
N.	43.1	329	8 17	- 2	15 22	+33	21.6	—
La Plata	58.5	149	10 2	0	17 35	-10	30.3	—
Rio de Janeiro	59.9	129	e 10 3	- 8	—	—	22.3	35.6
Honolulu T.H. E.	63.5	287	—	—	19 1	- 6	30.0	—
Scoresby Sund	69.4	20	11 24	+11	20 6	-13	34.3	—
Edinburgh	76.8	35	—	—	e 22 8	+21	e 42.3	48.3
Dyce	77.2	33	—	—	e 22 8	+17	e 34.1	41.9
San Fernando E.	77.3	55	—	—	—	—	—	54.0
Toledo	78.5	51	—	—	e 22 7	+ 1	—	50.8
Oxford	78.5	40	e 12 40	+30	e 22 18?	+12	e 33.0	48.3
Kew	79.2	39	e 12 17	+ 3	e 22 48	+34	37.8	42.3
Granada	79.3	55	i 12 16	+ 1	e 22 23	+ 8	34.8	39.5
Alicante	81.4	53	—	—	e 23 9	+30	e 35.7	—
Paris	81.4	42	e 12 29	+ 2	—	—	32.3	43.3
Tortosa N.	81.7	50	—	—	—	—	e 34.3	48.8
Uccle	82.2	40	—	—	e 23 18?	+30	—	44.0
De Bilt	82.3	38	12 32	0	—	—	e 39.3	51.0
Hamburg	84.7	37	—	—	—	—	e 40.3	50.3
Apia	84.8	254	—	—	—	—	29.3	—

Continued on next page.

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		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		\circ	\circ	m. s.	s.	m. s.	s.	m.	m.
Feldberg	N.	84.8	40	e 12 44	- 3	—	—	—	55.3
Strasbourg		84.9	41	e 12 40	- 7	e 22 53	[- 2]	31.3	53.8
Copenhagen		85.3	34	12 51	+ 1	23 18	- 4	36.3	—
Gottingen	E.	85.4	38	—	—	(e 23 24)	+ 1	e 23.4	52.4
Moncalieri		85.8	45	—	—	e 23 12	-16	29.8	—
Lund		85.8	34	—	—	e 22 48	[-13]	34.3	—
Upsala		86.5	28	—	—	e 23 48	+12	e 40.3	49.9
Jena	N.	86.5	39	—	—	—	—	e 45.3	—
Florence		88.6	45	13 1	- 7	24 58	?PS	38.3	53.8
Helsingfors		89.6	26	e 13 27	+13	e 23 56	-14	e 39.3	—
Zagreb		91.0	42	13 18?	- 3	e 24 3	-21	—	—
Pulkovo		92.1	26	13 25	- 3	23 55	[+14]	37.3	55.1
Wellington	N.	102.6	230	—	—	—	—	e 48.3	—
Ekaterinburg		104.9	14	14 25	- 9	24 55	[+ 8]	44.3	63.4
Irkutsk		112.0	350	—	—	—	—	63.3	72.3
Cape Town		114.0	120	—	—	—	—	—	60.3
Riverview		120.9	238	—	—	e 27 30	?E	e 56.5	66.2
Tashkent		121.3	15	18 48	[- 8]	26 0	?PR ₁	e 37.3	78.4
Samarkand		122.1	20	e 19 54	?PR ₁	—	—	—	—
Andijan		123.1	15	e 27 31	?E	—	—	—	—
Zi-ka-wel	Z.	124.8	326	e 19 10	[+ 5]	e 20 58	?PR ₁	—	82.6
Melbourne		125.6	234	—	—	e 38 18	?SR ₁	e 58.3	63.3
Adelaide		131.1	235	e 53 8	?	e 60 38	?	—	71.2
Dehra Dun		134.0	13	21 18	?PR ₁	—	—	—	120.3
Hong Kong		135.7	325	24 8	?	—	—	e 65.3	—
Manila		137.1	311	e 20 13	[+39]	e 23 12	?	—	—
Tananarive	N.	140.1	100	e 20 27	[+48]	—	—	—	81.3
Phu-Lien		140.7	334	e 22 32	?PR ₁	—	—	—	—
Bombay		143.1	26	19 40	[- 5]	33 38	?	78.1	108.6
Hyderabad		146.4	20	19 44	[- 6]	—	—	—	97.3
Perth		149.9	230	69 18	?L	—	—	(69.3)	—

Additional readings and notes : Vera Cruz readings have been *increased* by 3m. Puebla readings have been *diminished* by 10m. Balboa Heights PR = +4m.11s. St. Louis iPN = +5m.33s., iSN = +10m.4s. Florissant, iPZ = +5m.32s., iNZ = +5m.47s., iSZ = +10m.17s. Tucson ePR₁E = +6m.33s. Georgetown PR₁E = +7m.0s., PR₁N = +7m.19s., SR₁Z = +12m.49s., SR₁Z = +13m.36s. Chicago SE = +11m.28s., eLE = +12.4m. Ann Arbor e?E = +10m.6s., eE = +10m.54s., and +11m.30s., iE = +14m.0s. iN = +14m.24s., eL?E = +15.2m. Fordham e = +1m.54s. and +8m.32s. Ottawa MN = +21.5m. Lick iPZ = +7m.16s., iN = +8m.15s. = PR₁ -11s. Berkeley eZ = +8m.18s., eN = +17m.44s., eLZ = +19.8m. La Paz PR₁E = +8m.34s., PR₁E = +8m.57s. = PR₁ -4s., iSR₁E = +15m.58s. = SR₁ -12s. Rio de Janeiro MN = +35.5m. San Fernando MN = +44.7m. Toledo MNW = +50.4m. Kew eSR₁ = +31m.18s., LN = +34.2m. Granada PS = +23m.13s. Paris MN = +43.3m. De Bilt MN = +50.1m. Hamburg MN = +55.3m. Strasbourg ePR₁ = +16m.18s.? Copenhagen +29m.0s. = SR₁ -27s. Gottingen eLN = +24.4m., MN = +50.4m. Zagreb e = +13m.39s., +46m.18s.?, and +55m.3s. Pulkovo PR₁ = +17m.5s., S_cP_cP_cS = +24m.12s., SR₁ = +30m.18s. Ekaterinburg ePR₁ = +18m.38s., PS = +27m.57s. Irkutsk ePR₁ = +18m.45s., PPS = +29m.8s., SR₁ = +34m.48s. Riverview e? = +32m.30s., MN = +62.0m. Tashkent PR₁ = +20m.0s., PPS = +32m.18s., SR₁ = +36m.36s. Adelaide e = +55m.43s. Tananarive ePR₁E = +23m.21s., ME = +79.3m.

March 19d. Readings also at 1h. (Amboina), 2h. (near Mizusawa and near Taihoku), 3h. (near La Paz), 6h. (Samarkand), 7h. (Batavia and Tucson), 8h. (Florissant, St. Louis, and Ottawa), 9h. (St. Louis (2), Florissant, Chicago, Tucson (2), Ann Arbor, Ottawa, Toronto, Georgetown, Cincinnati, and Fordham), 10h. (De Bilt and Kew), 12h. (Ekaterinburg, Pulkovo, Tashkent, and near La Paz), 13h. (Ekaterinburg, Irkutsk, Tashkent, Nagoya, Mizusawa, and near Akita), 16h. and 17h. (near Amboina), 18h. (Florissant, near Granada, Almeria, Malaga, and near La Paz), 19h. (Suva), 20h. (Taihoku), 22h. (Andijan, Samarkand, Hyderabad, Tashkent, Ann Arbor, and near Mizusawa), 23h. (Andijan, Samarkand, Batavia, and near Malabar).

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March 20d. 21h. 10m. 32s. Epicentre 19°·5N. 120°·0E. (as on 1923 July 8d.).

A = -·471, B = +·816, C = +·334; D = +·866, E = +·500;
G = -·167, H = +·289, K = -·943.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		5·0	169	i 1 10	- 7	i 2 5	-12	—	—
Taihoku	R.	5·7	14	—	—	e 2 18	-18	2·4	—
Hong Kong		6·1	299	1 37	+ 4	—	—	3·8	5·6
Phu-Lien		12·6	278	e 3 10	+ 3	(5 28?)	- 6	5·5	9·5
Sumoto		19·8	39	e 4 22	- 7	—	—	—	—
Kobe		20·2	38	4 40	- 3	e 6 42	?	e 8·3	—
Nagoya		21·7	40	e 4 58	- 3	—	—	—	—
Irkutsk		35·0	345	7 0	-13	i 12 30	-25	18·5	22·7
Hyderabad		39·4	275	8 31	+41	13 26	-31	—	24·8
Tashkent		48·0	310	e 8 43	-11	i 15 52	- 2	e 23·5	31·5
Samarkand		49·5	308	e 9 18	+14	11 18	?PR ₁	e 11·9	—
Ekaterinburg		57·1	326	e 9 49	- 4	i 17 49	+ 2	26·5	36·0
Theodosia		72·6	314	e 12 40	+66	—	—	—	—
Pulkovo		73·1	330	e 11 40	+ 3	e 20 58	- 5	35·5	46·8
Yalta		73·5	314	e 13 43	+124	—	—	—	—
Simferopol		73·5	314	e 13 31	+112	—	—	—	—
Sebastopol		73·9	314	e 13 53	+132	—	—	—	—
Lund		82·9	328	—	—	—	—	42·5	—
Copenhagen		83·3	328	—	—	22 52	- 8	42·5	—
Hamburg		85·6	327	—	—	—	—	e 47·5	54·5
Jena	N.	85·9	324	—	—	—	—	e 51·5	—
Scoresby Sund		86·2	349	—	—	—	—	48·4	—
Göttingen	N.	86·5	325	—	—	—	—	e 46·6	52·5
Feldberg	N.	87·9	325	—	—	—	—	—	53·5
De Bilt		88·8	326	—	—	e 23 28	[+ 7]	e 45·5	57·4
Strasbourg		89·2	322	—	—	—	—	e 48·5	—
Florence		89·2	317	e 13 3	- 8	—	—	54·5	57·0
Uccle		89·9	325	—	—	—	—	e 46·5	57·5
Edinburgh		90·7	332	—	—	—	—	e 51·5	—
Stonyhurst		91·6	330	—	—	—	—	e 50·5	59·5
Kew		92·0	329	—	—	—	—	e 45·5	59·6
Paris		92·0	325	—	—	—	—	e 55·5	59·5
Granada		102·4	318	—	—	—	—	e 57·0	64·0
La Paz		171·7	70	e 20 9	[- 7]	—	—	—	—

Additional readings and notes: Manila iP = +1m.24s.; epicentre 18°·5N. 119°·6E. Hyderabad readings are given for 20h. Tashkent e = +8m.46s. and +10m.38s. = PR₁ - 18s. Samarkand readings are given for 22h.

March 20d. Readings also at 0h. (Andijan and Samarkand), 6h. (La Paz), 7h. (Kobe, Irkutsk, Ekaterinburg, and Tashkent), 10h. (Samarkand), 11h. (Helsingfors, Nagasaki, and near Lick), 12h. (La Paz, Tashkent, Samarkand, Ekaterinburg, Melbourne, and Manila), 13h. (Lick and Samarkand), 15h. (La Paz), 16h. (Theodosia), 18h. (near Mizusawa and near Tacubaya), 19h. (Bombay, Samarkand, and Taihoku), 20h. (Melbourne, Muroto, Nagoya, near Kobe, Koti, Matuyama, and Sumoto), 21h. (Bombay, Dyce, Suva, Wellington, Adelaide, Riverview, and Taihoku), 22h. (Samarkand, Tashkent, La Paz, and Sucre), 23h. (Königsberg and near Nagoya).

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March 21d. 2h. 36m. 56s. Epicentre 14°5N. 91°0W.

(as on March 19d.).

A = -017, B = -968, C = +250; D = -1000, E = +017;
G = -004, H = -250, K = -968.

		Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Merida		6.6	11	(1 21)	-20	(2 48)	-12	(2.9)	(4.1)
Vera Cruz		6.8	314	(1 48)	+4	(3 7)	+2	(3.3)	(5.1)
Puebla		8.3	304	(2 43)	+37	(4 8)	+23	(4.2)	(4.4)
Tacubaya		9.3	304	2 34	+14	4 21	+11	4.4	5.0
Balboa Hts.	N.	12.5	115	2 59	-7	5 20?	-12	6.2	—
Guadalajara		13.4	299	(2 50)	-28	(5 29)	-24	(5.7)	(6.5)
Manzanillo		13.5	291	3 7	-13	5 34?	-22	5.8	6.8
Port au Prince		18.4	75	e 4 19	-3	e 7 56	+7	e 9.6	11.8
Chihuahua		19.9	318	(4 8)	-32	(8 7)	-14	(9.5)	(13.8)
St. Louis		24.2	4	i 5 34	+4	i 10 0	+12	e 14.3	16.5
Florissant		24.4	2	i 5 33	+1	i 10 9	+17	e 13.3	19.1
		24.4	2	e 5 34	+2	10 5	+13	—	19.1
Cincinnati		25.3	12	i 5 40	-1	e 10 27	+18	i 14.1	17.6
Tucson	E.	25.4	318	5 43	+1	10 17	+6	14.1	—
	N.	25.4	318	5 44	+2	10 14	+3	14.2	—
Charlottesville	E.	26.0	23	—	—	e 10 50	+28	15.1	—
	N.	26.0	23	i 5 43	-5	e 10 52	+30	17.7	—
Georgetown	E.	27.3	24	6 6	+5	11 20	+34	e 14.0	—
	N.	27.3	24	6 5	+4	11 20	+34	e 14.3	—
	Z.	27.3	24	i 6 1	0	i 11 16	+30	e 13.8	20.8
Chicago	E.	27.4	6	6 24	+22	11 19	+31	e 14.3	—
	N.	27.4	6	5 59	-3	11 9	+21	e 16.8	—
Ann Arbor		28.5	12	e 6 10	-3	e 11 34	+26	e 15.2	18.5
Fordham		30.3	28	e 6 26	-5	e 10 33	-66	17.8	24.0
Ithaca		30.7	23	6 26	-9	e 10 38	-68	—	—
Toronto		30.8	17	i 6 31	-5	i 11 49	+1	i 15.5	22.2
Harvard		32.8	28	i 6 45	-10	e 12 5	-16	e 16.1	—
Ottawa		33.5	20	i 6 53	-8	i 12 20	-13	i 16.2	23.0
Lick	E.	35.4	315	e 7 15	-2	e 12 55	-6	e 18.3	—
	N.	35.4	315	i 7 14	-3	e 12 55	-6	e 18.6	21.7
Berkeley		36.2	316	7 18	-6	e 13 10	-3	e 18.5	22.1
La Paz		38.3	143	e 7 24	-16	i 13 14	-28	18.7	23.5
Sucre		42.0	142	7 53	-18	i 14 8	-27	20.1	24.6
Victoria	E.	43.1	329	8 16	-3	16 3	+74	23.6	31.4
	N.	43.1	329	8 16	-3	14 56	+7	23.6	30.6
La Plata		58.5	149	9 52	-10	17 47	-18	31.1	—
Rio de Janeiro	E.	59.9	129	e 10 9	-2	—	—	22.3	35.4
	N.	59.9	129	e 10 10	-1	—	—	22.3	38.0
Honolulu T.H.	E.	63.5	287	—	—	19 18	+11	e 28.8	—
Scoresby Sund		69.4	20	11 21	+8	i 21 4	[-4]	34.1	—
Edinburgh		76.8	35	e 12 14	+14	i 22 24	?	39.1	51.5
Dyce		77.2	33	—	—	e 22 4	[0]	e 37.1	42.7
San Fernando		77.3	55	—	—	27 16	?	39.3	53.8
Stonyhurst		77.5	37	e 12 7	+3	22 3	+8	37.1	47.4
Oxford		78.5	40	e 12 29	+19	—	—	e 34.1	47.6
Toledo		78.5	51	e 12 13	+3	e 23 7	+61	37.6	52.1
Malaga		78.7	55	e 12 2	-9	e 21 32	-36	e 29.1	—
Kew		79.2	39	12 13	-1	e 22 35	+21	37.5	48.9
Granada		79.3	55	i 12 15	0	i 21 48	-27	e 36.1	38.6
Almeria		80.3	55	e 12 19	-2	e 23 35	?	e 35.1	—
Alicante		81.4	53	e 11 18	-69	e 21 18	-81	e 35.4	—
Paris		81.4	42	i 12 29	+2	—	—	31.1	48.1
Tortosa	N.	81.7	50	—	—	e 23 15	?	35.5	48.8
Uccle		82.2	40	e 12 29	-2	e 23 4?	+16	e 36.1	48.5
De Bilt		82.3	38	12 31	-1	—	—	e 39.1	51.4

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Besançon	84.1	43	—	—	e 24 4?	?PS	42.1	—
Algiers	84.6	53	—	—	e 24 16	?PS	e 41.1	49.1
Apia	84.8	254	—	—	—	—	40.1	—
Hamburg	84.7	37	e 12 45	- 1	—	—	e 39.1	50.1
Neuchatel	84.7	43	e 12 43	- 3	e 22 59	[+ 5]	—	—
Feldberg	N. 84.8	40	e 12 46	- 1	—	—	—	51.1
Strasbourg	84.9	41	i 12 46	- 1	e 23 11	- 7	35.1	51.1
Copenhagen	85.3	34	12 48	- 2	23 28	+ 6	—	—
Göttingen	85.4	38	—	—	(e 23 10)	- 13	e 46.2	50.7
Moncalieri	85.8	45	e 12 48	- 4	23 14	- 14	e 34.2	—
Lund	85.8	34	—	—	23 34	+ 6	40.1	—
Upsala	86.5	28	—	—	e 23 4	[- 2]	—	49.7
Jena	N. 86.5	39	—	—	(e 23 4)	[- 2]	e 23.1	—
Florence	88.6	45	i 13 2	- 6	e 20 34	?PR ₁	35.1	48.1
Helsingfors	89.6	26	—	—	e 23 58	- 12	e 42.6	—
Laibach	E. 90.0	41	—	—	—	—	e 47.8	—
Konigsberg	90.1	33	—	—	—	—	e 27.1	52.1
Graz	90.2	40	—	—	—	—	e 45.1	49.0
Vienna	90.4	40	e 13 10	- 8	e 24 37	+ 19	e 48.1	54.1
Zagreb	91.0	42	13 17	- 4	e 24 41	+ 17	e 46.1	—
Pulkovo	92.1	26	13 20	- 8	23 55	[+ 14]	43.1	55.0
Budapest	92.3	40	—	—	—	—	e 49.1	—
Belgrade	94.3	42	e 5 4?	?	—	—	—	—
Sebastopol	102.5	36	—	—	—	—	e 58.1	—
Simferopol	102.6	36	—	—	—	—	e 58.1	—
Wellington	E. 102.6	230	—	—	i 24 42	[+ 6]	e 47.1	50.9
Yalta	102.9	36	—	—	—	—	e 58.1	—
Theodosia	103.3	35	—	—	—	—	e 58.1	—
Ekaterinburg	104.9	14	14 17	- 17	25 58	? Σ	50.1	65.4
Irkutsk	112.0	350	—	—	—	—	51.1	69.3
Cape Town	114.0	120	—	—	—	—	—	65.1
Riverview	120.9	238	i 16 34	?	—	—	e 61.4	64.4
Sydney	120.9	238	—	—	—	—	61.1	65.6
Tashkent	121.3	15	—	—	26 4	[+ 15]	e 38.1	70.1
Melbourne	125.6	234	e 16 29	+ 21	i 26 16	[+ 16]	58.6	62.1
Dehra Dun	134.0	13	22 4	?PR ₁	33 4	?	46.1	78.1
Hong Kong	135.7	325	—	—	—	—	e 70.1	—
Manila	137.1	311	e 20 4	[+ 30]	—	—	—	—
Tananarive	140.1	100	—	—	—	—	—	83.2
Phu-Lien	140.7	334	—	—	—	—	68.1	—
Bombay	143.1	26	19 45	[0]	29 51	? Σ	48.6	91.9
Hyderabad	146.4	20	19 40	[- 10]	—	—	48.0	91.1

Additional readings and notes: Merida readings have been *diminished* by 1m. Vera Cruz readings have been *increased* by 1m. Puebla readings have been *diminished* by 1m. Balboa Heights PE = + 2m.40s. Guadalajara readings have been *diminished* by 1m. Chihuahua readings have been *increased* by 2m. St. Louis eLN = + 14.5m., MN = + 19.2m. Florissant (first line) iNZ = + 5m.49s. = PR₁ - 15s., and + 8m.1s., iN = + 10m.18s., iZ = + 10m.20s., iE = + 10m.21s., and + 11m.17s., iN = + 12m.4s., eLZ = + 14.6m., (second line) iE = + 10m.43s., Cincinnati iPR₁NZ = + 6m.17s., iPR₁NZ = + 6m.39s., iS = + 10m.37s., iSR₁ = + 12m.2s., S₂iNZ = + 16m.8s. Tucson PR₁N = + 6m.40s., SR₁ = + 11m.38s., Charlottesville ePR₁E = + 7m.4s., eSR₁E = + 14m.4s., eSR₁N = + 15m.38s., Georgetown PR₁Z = + 6m.55s., SR₁E = + 12m.41s., SR₁Z = + 12m.52s., SR₁N = + 13m.24s., SR₁Z = + 13m.36s., Chicago PR₁N = + 6m.45s., SR₁N = + 12m.38s., SR₁E = + 12m.45s., Ann Arbor iSR₁ = + 13m.28s., MN = + 18.4m. Fordham e = + 11m.41s. = S + 2s., and + 15m.18s., LN = + 16.4m., MN = + 26.8m., Toronto eN = + 11m.14s., iEN = + 12m.7s., LN = + 15.2m., MN = + 22.0m.; T₀ = 2h.36m.45s., Ottawa iN = + 8m.34s., SR₁E = + 14m.16s. = SR₁ - 8s., iN = + 15m.2s., MN = + 24.4m.; T₀ = 2h.36m.56s., Lick eN = + 17m.30s., Berkeley eZ = + 8m.35s. = PR₁ - 1s., iSN = + 13m.8s., iS₂SN = + 17m.36s., eLN = + 18.6m., eLZ = + 20.1m., La Paz PE = + 7m.25s., iP = + 7m.30s., PR₁N = + 8m.50s., eSR₁N = + 15m.40s., iSR₁E = + 15m.53s., MN = + 21.9m., San Fernando MN = + 44.8m., Toledo MNW = + 50.3m., Kew SR₁ = + 31m.10s., LZ = + 41.1m., Granada

Continued on next page.

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$i = +13m.53s.$ and $+23m.12s. = PS + 15s.$ De Bilt $MN = +49.8m.$ Hamburg $MN = +52.1m.$ Neuchatel $ePR_1 = +16m.28s.$ Strasbourg $PS = +24m.38s., MZ = +51.2m., MN = +52.3m.$ Copenhagen $PR_1 = +16m.8s., PS = +24m.34s.,$ also $+29m.22s. = SR_1 - 5s.$ Gottingen $eLN = +24.2m., MN = +53.1m.;$ the reading entered as S is given as LE, that entered as L as LZ. Upsala $MN = +59.8m.$ Florence $e = +12m.9s.$ Helsingfors $e = +24m.44s.$ and $+25m.15s.$ Zagreb $eE = +52m.29s.$ Pulkovo $PR_1 = +17m.1s., PS = +25m.29s., SR_1 = +31m.4s.$ Wellington $ISN = +24m.43s., LN = +48.1m.$ Ekaterinburg $iPS = +27m.59s., iSR_1 = +34m.4s.$ Irkutsk $PR_1 = +19m.13s., ScPcPcS = +25m.56s., PS = +29m.4s.$ Riverview $eL_1 = +56.2m., MN = +72.7m.$ Tashkent $PR_1 = +20m.38s., PS = +30m.4s.$ Melbourne $i = +38m.16s. = SR_1 + 20s.,$ and $+43m.0s.$ Tananarive $iPR_1E = +23m.19s., eE = +27m.13s.$ Hyderabad $MN = +83.8m.$

Mar. 21d. Readings also at 0h. (Colombo and near La Paz), 4h. (Hyderabad), 5h. (Kew and Samarkand), 6h. (Samarkand), 7h. (Samarkand and near Andijan), 8h. (near Tacubaya), 9h. (Samarkand), 11h. (near Ksara), 12h. (near Tananarive), 17h. (La Paz and Ksara), 18h. (near Granada and Malaga), 19h. (Andijan and Samarkand), 20h. (Andijan, Samarkand, Ekaterinburg, near Lick, and Wellington), 21h. (Gottingen and Tashkent), 22h. (Andijan (2) and Samarkand (2)), 23h. (Andijan).

Mar. 22d. 3h. 3m. 54s. Epicentre $25^{\circ}0N. 102^{\circ}0E.$

$A = -.188, B = +.887, C = +.423; D = +.978, E = +.208;$
 $G = -.088, H = +.413, K = -.906.$

(Deduced by comparison with the epicentre $25^{\circ}0N. 100^{\circ}5E.$ of 1925 Mar. 16d.).

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	m.	s.	m.	s.	m.	s.	m.	m.
Phu-Lien	6.0	134	1 28	- 4	e 2 23	-21	2.6	3.1
Hong Kong	11.5	101	5 16	?S	(5 16)	+ 9	6.2	6.8
Calcutta	N. 12.7	261	(3 38)	+29	(6 3)	+26	(7.3)	—
Taihoku	N. 17.7	86	—	—	—	—	e 9.1	—
Zi-ka-wei	N. 18.2	66	—	—	—	—	e 8.9	10.4
Manila	20.6	117	e 4 44	- 4	i 8 46	+10	i 11.0	—
Dehra Dun	21.8	289	4 16	-47	9 26	+25	12.9	13.1
Irkutsk	27.3	3	e 6 4	+ 3	e 10 36	-10	15.1	16.7
Bombay	27.6	263	8 11	+127	12 33	+101	15.7	17.6
Colombo	27.9	233	0 6?	?	13 6?	?	19.1	22.1
Andijan	29.1	309	e 7 6	?PR ₁	—	—	—	—
Sumoto	30.0	64	—	—	—	—	e 15.8	—
Kobe	30.2	64	—	—	—	—	e 16.8	—
Osaka	30.4	64	12 48	?S	(12 48)	+67	17.0	19.3
Batavia	31.6	171	—	—	—	—	i 17.9	—
Tashkent	31.6	310	—	—	e 11 56	- 5	e 11.4	21.9
Samarkand	32.7	307	e 7 40	?PR ₁	—	—	—	—
Ekaterinburg	43.4	329	8 21	0	14 55	+ 1	22.1	25.2
Kacino	54.7	321	—	—	e 17 30	+13	28.0	35.5
Pulkovo	59.4	328	e 10 21	+13	18 38	+22	31.1	34.2
Helsingfors	62.1	328	—	—	—	—	e 34.6	—
Upsala	65.8	328	—	—	—	—	36.1	—
Lund	68.9	324	—	—	—	—	—	37.1
Copenhagen	69.3	324	—	—	—	—	—	—
Hamburg	71.3	322	—	—	—	—	e 40.1	—
Gottingen	E. 71.9	320	—	—	—	—	e 38.2	—
Florence	73.5	311	—	—	—	—	e 45.1	48.1
Strasbourg	74.2	318	—	—	—	—	42.1	—
De Bilt	E. 74.5	321	—	—	—	—	e 39.1	48.4
Uccle	75.4	320	—	—	—	—	e 41.1	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Paris	77.3	319	—	—	—	—	e 45.1	—
Kew	77.8	322	—	—	—	—	e 41.1	—
Ottawa	109.6	358	—	—	—	—	e 59.1	—
Toronto	111.3	1	—	—	—	—	e 57.1	—
Florissant	E. 115.1	10	—	—	—	—	e 61.6	—
St. Louis	E. 115.3	10	—	—	—	—	e 62.1	—
Georgetown	Z. 116.0	0	—	—	—	—	e 71.9	—

Additional readings and note : Calcutta readings have been *diminished* by 2m.
 Osaka MN = +20.9m. Tashkent i = +18m.19s. Kucino e = +24m.36s.
 De Bilt eLN = +38.1m., MN = +42.8m. Georgetown eZ? = +55m.47s.,
 eZ = +61m.15s. and +67m.23s.

Mar. 22d. Readings also at 1h. (La Paz, La Plata, and near Santiago), 3h. (near Batavia), 4h. (Granada), 6h. (Samarkand), 7h. (Andijan, Samarkand (2), Adelaide, Riverview, and near Wellington), 8h. (Samarkand), 9h. (Samarkand and near Hong Kong), 10h. (Ekaterinburg, Tashkent, Taihoku, and near Phu-Lien), 13h. (Sucre), 16h. (Ksara), 17h. (Taihoku and Wellington), 19h. (Andijan, Frunse, Samarkand, Tashkent, and near Amboina), 20h. (Andijan (2), Frunse, and Samarkand (2)), 23h. (Perth, Bagneres, and near Tortosa).

March 23d. 10h. 5m. 9s. (i) } Epicentre 44°·5N. 34°·5E. (as on 1929 Feb. 24d.
 10h. 34m. 30s. (ii) } and given by the stations).

A = +·588, B = +·404, C = +·701.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
I Yalta	0.2	270	i 0 4	0	(i 0 8)	+ 2	i 0.1	0.1
II	0.2	270	0 4 0	0	(0 9)	+ 3	0.2	0.2
I Simferopol	0.5	326	i 0 7	- 1	(e 0 15)	+ 1	e 0.2	—
II	0.5	326	e 0 8	0	(0 15)	+ 1	0.2	—
I Sebastopol	0.7	279	0 11	0	(i 0 21)	+ 1	i 0.4	0.5
II	0.7	279	—	—	—	—	0.4	—
I Theodosia	0.8	48	0 16	+ 4	—	—	0.4	0.5
II	0.8	48	e 0 17	+ 5	—	—	0.5	—

No additional readings.

March 23d. 19h. 59m. 36s. Epicentre 0°·8S. 130°·1E. (as given by Manila).

A = -·644, B = +·765, C = -·015 ; D = +·765, E = +·644 ;
 G = +·009, H = -·011, K = -1.000.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	17.9	330	14 17	+ 1	17 7	-31	i 8.5	—
Batavia	23.8	256	15 25	- 1	9 43	+ 3	—	—
Taihoku	N. 27.2	343	e 6 1	+ 1	—	—	—	—
Hong Kong	27.8	327	5 55	-11	(10 17)	-38	10.3	11.2
Phu-Lien	31.5	315	e 6 24	-19	(11 24)	-36	11.4	—
Perth	33.9	203	(7 4)	0	112 24	-15	i 18.4	—
Adelaide	35.1	168	—	—	112 28	-29	i 20.8	23.6
Osaka	35.8	8	7 25	+ 5	—	—	14.7	16.3
Kobe	35.8	8	e 8 7	+47	e 10 29	?	e 15.2	16.3
Riverview	38.5	153	e 9 8	PR ₁	e 13 32	-13	—	28.5
Sydney	38.5	153	7 36	- 6	16 24	PR ₁	25.8	27.4
Melbourne	39.4	162	17 54	+ 4	113 56	- 1	19.6	27.4
Calcutta	E. 46.8	304	e 8 35	-11	15 56	+18	—	—
Hyderabad	54.0	293	9 24	- 9	16 49	-20	25.2	39.4
Wellington	57.1	141	e 10 4	+11	i 17 59	+12	27.3	—

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	e	e	m. s.	s.	m. s.	s.	m.	m.
Irkutsk	57.3	343	9 59	+ 5	17 52	+ 2	29.4	—
Dehra Dun	58.5	309	10 24	+22	17 24	-41	24.4	25.4
Bombay	59.5	294	9 57	-12	18 17	- 0	31.6	34.5
Andijan	66.5	317	e 10 52	- 3	e 19 35	- 9	—	—
Tashkent	69.1	317	11 15	+ 3	i 20 15	—	—	43.4
Samarkand	70.2	315	11 22	+ 4	e 20 35	+ 7	—	—
Ekaterinburg	79.6	330	i 12 15	- 2	22 12	- 7	35.4	48.9
Kucino	91.9	326	—	—	i 24 21	-13	42.7	48.1
Theodosia	92.8	317	e 24 10	?S	(e 24 10)	-33	—	—
Ksara	93.9	305	—	—	23 24?	[-27]	—	—
Pulkovo	95.6	331	e 15 6	+79	e 24 44	[+44]	45.4	53.8
Helsingfors E.	98.2	331	—	—	—	—	e 55.4	—
Victoria E.	101.5	40	—	—	—	—	49.3	52.6
Konigsberg N.	101.8	327	—	—	—	—	60.4	—
Lund	105.4	330	—	—	—	—	54.4	—
Copenhagen	105.9	330	—	—	33 24?	?SR ₁	52.4	—
Scoresby Sund	107.9	350	—	—	33 24?	?SR ₁	54.4	—
Hamburg	108.0	327	—	—	—	—	e 54.4	—
Gottingen N.	108.8	325	—	—	—	—	e 61.5	—
Feldberg N.	110.3	324	—	—	—	—	—	79.4
Florence	111.0	316	19 29	?PR ₁	e 30 9	?	63.4	66.9
De Bilt	111.3	327	e 19 24	?PR ₁	—	—	e 55.4	62.9
Strasbourg	111.4	323	—	—	—	—	e 62.4	—
Dyce	112.1	335	—	—	—	—	e 52.9	68.9
Uccle	112.3	326	—	—	e 29 24?	?PS	e 56.4	—
Edinburgh	113.3	333	—	—	—	—	e 58.4	—
Paris	114.3	325	—	—	—	—	e 61.4	64.4
Kew	114.5	329	—	—	—	—	e 56.4	—
Granada	124.0	316	—	—	—	—	e 66.4	72.4
Florissant	z. 127.0	39	e 21 15	?PR ₁	e 32 55	?	e 71.4	76.2
St. Louis	127.2	39	—	—	—	—	e 61.4	—
Toronto	129.8	26	—	—	—	—	e 64.8	—
Ottawa	129.9	22	—	—	—	—	60.4	—
Cincinnati	z. 130.3	34	—	—	—	—	61.4	78.4
Fordham	134.4	25	—	—	—	—	e 62.9	—
Georgetown	z. 134.4	30	19 34	[+ 5]	—	—	e 65.8	76.7
La Paz	155.0	135	e 20 29	[+27]	—	—	—	—

Additional readings and note: Batavia iP = +5m.28s. Hong Kong PR₁ = +6m.39s. Perth P is given as PR₁. Riverview eS = +13m.53s., MZ = +27.4s., MN = +27.5m. Sydney SR₂ = +23m.0s. Melbourne SR₁ = +16m.39s. Calcutta ePN = +8m.40s. Wellington eLN = +26.3m. Kucino e = +34m.30s. = SR₂ +16s. and +37m.24s. = SR₁ -14s. Pulkovo e = +31m.12s. = SR₁ -30s. De Bilt MN = +60.4m., MZ = +72.1m. Florissant ME = +71.9m. Georgetown PR₁Z = +22m.6s., eZ = +33m.32s.

March 23d. Readings also at 0h. (Riverview, Suva, Wellington, and Samarkand), 1h. (Ksara and near La Paz), 3h. (Andijan and near Samarkand), 5h. (Almata and Andijan), 6h. (Tucson, near Taihoku, and near La Paz), 8h. (Tucson), 10h. (Samarkand), 11h. (Sebastopol, Simferopol, Theodosia, Yalta, Georgetown, Ottawa, Toronto, Cincinnati, St. Louis, Florissant, Victoria, and near Tucson), 12h. (Wellington, Tashkent, Ekaterinburg, Charlottesville, and Fordham), 13h. and 14h. (near Lick), 15h. (Ekaterinburg, Irkutsk, Tashkent, and Cincinnati), 16h. (near Almeria and Granada), 17h. (Almeria (2)), 20h. (Batavia), 22h. (Ekaterinburg, Tashkent, and near Tananarive), 23h. (Irkutsk and near Amboina).

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March 24d. 5h. 32m. 36s. Epicentre 22°·0S. 174°·0E. (as on 1921 Jan. 3d.).

A = -·922, B = +·097, C = -·375 ; D = +·104, E = +·994 ;
G = +·373, H = -·039, K = -·927.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	5·7	47	2 0	+32	3 54	+78	—	4·7
Wellington	E. 19·9	178	i 4 43	+ 3	i 8 19	- 2	9·8	12·4
	N. 19·9	178	i 4 42	+ 2	i 8 18	- 3	i 10·5	12·6
Riverview	23·2	235	e 5 19	0	i 9 40	+11	e 11·5	15·8
Sydney	23·2	235	3 54	-85	9 36	+ 7	11·9	13·7
Melbourne	29·5	231	—	—	i 11 4	-22	13·9	17·0
Adelaide	33·5	239	e 11 14?	?	14 44?	?	16·6	20·9
Perth	52·2	246	20 24?	?L	—	—	(20·4)	—
Florissant	E. 107·8	54	—	—	—	—	e 52·2	58·1
St. Louis	E. 107·9	54	—	—	—	—	e 54·0	—
Cincinnati	z. 112·3	53	—	—	—	—	55·4	—
Toronto	116·8	50	—	—	—	—	60·8	—
Georgetown	z. 118·0	55	—	—	e 30 13	?PS	e 60·0	—
Ottawa	119·5	48	—	—	—	—	e 57·4	—
Ekaterinburg	121·0	324	—	—	e 37 17	?SR ₁	51·4	—
Kucino	133·3	328	—	—	—	—	e 37·9	—
Pulkovo	134·4	335	—	—	—	—	e 67·4	—
Vienna	z. 148·2	330	e 19 51	[- 2]	—	—	—	—
De Bilt	148·7	347	—	—	—	—	e 73·4	—
Uccle	150·2	347	—	—	—	—	e 77·4	—
Zagreb	150·2	328	e 20 5	[+ 9]	—	—	—	—
Granada	164·7	353	—	—	—	—	e 89·4	95·4

Additional readings: Suva SN = +4m.0s., MN = +5·4m., T₂N = 5h.32m.6s.,
T₁E = 5h.32m.12s., Riverview MN = +14·7m., Melbourne iPR₁? =
+7m.11s., Adelaide MN = +18·6m., Georgetown eZ = +35m.52s. =
SR₁ -30s., and +48m.36s.

March 24d. 12h. 11m. 9s. Epicentre 32°·0N. 35°·5E. (as on 1928 Feb. 22d.).

A = +·690, B = +·492, C = +·530 ; D = +·581, E = -·814 ;
G = +·432, H = +·308, K = -·848.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Kucino	23·8	4	—	—	—	—	e 12·1	19·8
Pulkovo	27·9	354	i 6 12	+ 5	10 57	0	—	—
Tashkent	28·4	61	—	—	e 10 27	-39	e 20·8	30·2
Ekaterinburg	30·3	28	i 6 28	- 3	11 33	- 6	14·8	—

Tashkent gives also e = +15m.26s.

March 24d. 16h. 17m. 36s. Epicentre 39°·5N. 42°·5E. (as given by the Russian stations).

A = +·569, B = +·521, C = +·636 ; D = +·676, E = -·737 ;
G = +·463, H = +·430, K = -·772.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Baku	5·7	78	e 1 45	+17	e 2 58	+22	3·3	—
Theodosia	7·6	318	e 2 8	+13	—	—	—	—
Ksara	7·7	225	e 4 1	+124	5 36	+127	—	—
Yalta	7·9	312	e 2 18	+18	—	—	—	—
Simferopol	8·2	314	e 2 24	+20	e 3 49	+ 7	—	—
Sebastopol	8·4	310	e 2 26	+19	e 4 0	+13	—	—
Tashkent	20·4	76	i 4 41	- 5	8 26	- 6	e 10·6	16·4
Ekaterinburg	21·0	28	e 4 37	-16	8 13	-26	10·4	12·7
Pulkovo	21·7	343	5 0	- 1	8 54	- 5	12·4	13·1

No additional readings.

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March 24d. Readings also at 0h. (La Paz), 1h. (Manila, Ekaterinburg, Tashkent, and De Bilt), 2h. (Andijan), 3h. (Florissant, St. Louis, Samarkand, and near Kobe), 7h. (Manila), 9h. (near Andijan), 10h. (Apia and Suva), 11h. (Pulkovo), 12h. (Florissant and St. Louis), 13h. (Andijan and Samarkand), 14h. (near Lick), 16h. (Manila), 20h. (Wellington), 21h. (Taihoku), 22h. (La Paz, Sebastopol, Simferopol, Theodosia, and Yalta).

March 25d. 3h. 46m. 54s. Epicentre 29°·5N. 95°·0E.

A = -·076, B = +·867, C = +·492; D = +·996, E = +·087;
G = -·043, H = +·490, K = -·870.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Calcutta	9·1	222	4 25	?S	(4 25)	+19	6·9	—
Phu-Lien	13·6	127	—	—	6 6?	+ 8	—	—
Dehra Dun	14·7	277	3 56	+21	6 26	+ 1	8·1	9·1
Hong Kong	18·6	108	4 36	+12	8 14	+21	—	11·7
Hyderabad	19·3	235	4 28	- 5	10 13	?	15·9	17·5
Almata	20·1	318	e 4 48	+ 6	8 33	+ 8	—	—
Andijan	21·4	306	e 5 4	+ 6	e 10 3	?	—	—
Bombay	22·7	247	5 15	+ 2	9 31	+12	12·4	12·8
Irkutsk	23·8	14	5 25	- 1	9 41	+ 1	13·1	14·7
Tashkent	23·9	306	i 4 8	-79	i 8 26	-76	e 10·8	14·2
Samarkand	25·1	301	e 5 38	- 1	—	—	—	—
Ekaterinburg	36·4	330	i 7 16	- 9	12 59	-17	18·1	—
Baku	38·1	300	—	—	e 13 35	- 4	e 21·4	—
Kucino	47·7	320	—	—	e 15 47	- 3	e 28·2	—
Theodosia	48·7	309	e 9 0	+ 2	e 16 4	+ 2	—	—
Simferopol	49·6	308	e 9 6	+ 2	—	—	—	—
Yalta	49·6	308	e 9 10	+ 6	—	—	—	—
Sebastopol	50·1	308	e 9 34	+26	—	—	—	—
Pulkovo	52·2	326	e 9 24	+ 3	e 16 49	+ 3	25·1	29·5
Copenhagen	62·0	321	—	—	—	—	31·1	—
De Bilt	67·0	319	—	—	—	—	e 36·1	37·8

Additional readings: Kucino e = +18m.48s. De Bilt eLE = +37·1m.,
MZ = +44·4m.

March 25d. 14h. 54m. 24s. Epicentre 5°·5N. 93°·0E.

A = -·052, B = +·994, C = +·096; D = +·999, E = +·052;
G = -·005, H = +·096, K = -·995.

Very uncertain.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Colombo	13·1	276	(3 36)	+22	3 36	?P	7·5	9·8
Phu-Lien	20·2	40	—	—	(7 36?)	-51	7·6	—
Bombay	23·8	306	5 30	+ 4	9 46	+ 6	e 12·7	23·8
Hong Kong	26·5	49	5 46	- 7	i 9 58	-34	e 13·2	15·1
Manila	29·0	70	e 6 36	+18	—	—	—	—
Andijan	39·4	335	e 7 46	- 4	—	—	—	—
Samarkand	41·4	330	e 7 52	-14	13 55	-32	—	—
Irkutsk	47·7	10	—	—	—	—	25·6	28·3
Baku	52·0	320	—	—	—	—	e 25·6	—
Ekaterinburg	57·3	340	e 9 50	- 4	e 17 52	+ 2	26·6	33·7
Kucino	66·4	330	—	—	—	—	e 33·6	—
Pulkovo	71·8	332	11 32	+ 4	20 58	+10	37·6	—

Additional readings: Colombo P = 14h.50m.33s. Phu-Lien 14h.54m.0s.
Irkutsk e = +12m.7s. and +18m.47s. Ekaterinburg i = +9m.56s.

March 25d. Readings also at 3h. (Koti and Matuyama), 6h. (Theodosia), 7h. (Samarkand), 8h. (Azores, Tashkent, near Tacubaya, and near Taihoku), 9h. (Ekaterinburg), 10h. (La Paz and near Neuchatel), 11h. (near Laibach and Zagreb), 13h. (Andijan and near Samarkand), 14h. (Andijan and near Samarkand), 19h. (Andijan).

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Mar. 26d. 5h. 25m. s. Epicentre 74°·2N. 4°·0E.

A = +·272, B = +·019, C = +·962; D = +·070, E = -·998;
G = +·960, H = +·067, K = -·272.

Deduced from the epicentre 72°·8N. 2°·5E. of 1924 July 19d.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Scoresby Sund	8·6	257	2 52?	+42	—	—	—	—
Helsingfors	16·0	140	e 4 22	+30	e 7 56	+61	—	—
Pulkovo	17·1	133	4 8	+2	e 7 25	+5	8·9	9·6
Copenhagen	18·8	165	—	—	—	—	8·9	—
De Bilt	22·1	178	—	—	e 9 3	-4	e 10·9	—
Kew	E. 22·8	187	—	—	e 9 25	+4	—	—
Uccle	23·4	179	—	—	e 9 34	+1	e 12·9	—
Feldberg	N. 24·0	173	e 5 30	+2	—	—	—	13·9
Strasbourg	25·7	174	—	—	—	—	e 13·9	—
Ekaterinburg	27·5	98	e 6 1	-2	e 10 44	-6	12·9	17·8
Granada	37·2	192	—	—	—	—	e 17·9	21·9
Baku	39·9	121	—	—	—	—	22·9	—
Florissant	E. 54·0	287	—	—	—	—	—	30·4

Additional reading and notes: Feldberg iN = +5m.32s. Strasbourg and Granada readings are given for 6h.

Mar. 26d. 8h. 25m. 12s. Epicentre 1°·0N. 97°·5E. (as on 1926 Aug. 3d.).

A = -·131, B = +·991, C = +·017; D = +·991, E = +·131;
G = -·002, H = +·017, K = -·1·000.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Batavia	11·7	128	e 1 48?	?	—	—	—	—
Phu-Lien	21·7	23	—	—	8 48	-11	—	—
Andijan	45·5	334	e 8 31	-6	—	—	—	—
Almata	46·1	340	e 8 33	-8	—	—	—	—
Samarkand	47·6	329	e 8 44	-7	—	—	—	—
Ekaterinburg	63·1	339	i 10 31	-2	e 19 2	0	26·8	—
Theodosia	70·0	320	e 11 25	+8	e 20 37	+11	—	—
Yalta	70·6	319	e 11 23	+2	—	—	—	—
Simferopol	70·8	319	e 11 24	+2	—	—	—	—
Sebastopol	71·1	319	e 11 26	+2	—	—	—	—
Pulkovo	77·9	332	12 4	-2	21 54	-5	—	—
Florence	86·6	314	—	—	—	—	e 41·1	46·8

Florence gives also e = +36m.48s.

Mar. 26d. 14h. 0m. 10s. Epicentre 28°·0N. 62°·0E. (as on 1927 July 7d.).

A = +·415, B = +·780, C = +·469; D = +·883, E = -·469;
G = +·220, H = +·415, K = -·883.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Samarkand	12·4	18	3 10	+5	7 45	?L	(7·8)	—
Tashkent	14·6	22	e 3 35	+1	1 6 31	+9	7·7	9·7
Andijan	14·9	32	e 4 8	+30	—	—	—	—
Fransé	18·1	31	e 4 22	+4	—	—	—	—
Almata	19·5	34	e 4 28	-7	—	—	—	—
Ksara	23·1	291	e 1 8	?	—	—	—	—
Theodosia	27·1	316	e 6 2	+3	e 10 44	+1	—	—
Yalta	27·6	314	e 6 3	-1	e 10 50	-2	—	—
Simferopol	27·9	315	e 6 8	+1	e 10 54	-3	—	—
Sebastopol	28·1	314	e 6 10	+1	e 11 7	+6	—	—

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Ekaterinburg	28.9	358	6 10	- 7	11 1	-14	16.8	19.2
Pulkovo	38.4	335	7 36	- 5	13 34	-10	18.8	—
Irkutsk	39.6	40	e 9 32	?PR ₁	e 13 41	-19	e 20.8	—
Chur	44.8	310	e 8 28	- 4	—	—	—	—
Zurich	45.5	310	1 8 29	- 8	—	—	—	—
Neuchatel	46.5	310	e 8 44	0	—	—	—	—

Zurich gives also e = + 8m.44s.

Mar. 26d. 23h. 36m. 36s. Epicentre 38°·5N. 144°·5E. (as on Mar. 18d.).

A = -·637, B = +·455, C = +·623; D = +·581, E = +·814;
G = -·507, H = +·361, K = -·783.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E. 2.7	283	0 43	+ 1	1 17	+ 3	—	—
Akita	3.6	292	e 0 58	+ 2	(1 37)	- 2	1.6	2.0
Osaka	8.2	245	3 5	+61	—	—	4.3	4.5
Irkutsk	30.9	310	—	—	e 11 26	-24	16.4	19.5
Phu-Lien	37.0	254	—	—	—	—	17.4	—
Ekaterinburg	55.4	320	9 42	0	e 17 30	+ 4	27.4	35.8
Tashkent	55.9	300	e 9 42	- 3	e 17 24	- 9	27.8	35.3
Kucino	67.1	325	—	—	—	—	e 42.4	44.1
Pulkovo	67.9	330	—	—	—	—	e 36.4	—
Baku	69.2	306	—	—	—	—	36.7	—
Copenhagen	77.4	335	—	—	—	—	43.4	—
De Bilt	82.7	336	—	—	—	—	e 48.4	—
Zagreb	83.9	327	—	—	—	—	e 51.0	—
Uccle	84.1	336	—	—	—	—	48.4	—
Florence	87.5	328	—	—	—	—	e 40.9	57.4

Akita gives also MZ = + 1.9m.

Mar. 26d. Readings also at 2h. (Taiboku), 4h. (Baku, Ekaterinburg, Samarkand, Manila, Florence), 5h. (Taiboku), 8h. (Akita and Mizusawa), 10h. (Adelaide, Melbourne, Riverview, Perth, Wellington, Georgetown, Baku, Ekaterinburg, and Ksara), 11h. (Ottawa, Toronto, and Florissant), 13h. (Manila), 15h. (near Sumoto), 17h. (Andijan and Georgetown), 19h. (Batavia and Manila), 20h. (Ekaterinburg and Tashkent), 22h. (Batavia).

Mar. 27d. 2h. 11m. 55s. (I) }
2h. 36m. 8s. (II) } Epicentre 39°·1N. 71°·6E.
3h. 37m. 18s. (III) }

A = +·245, B = +·736, C = +·631; D = +·949, E = -·316;
G = +·199, H = +·598, K = -·776.

The Central Asian stations give for II and III epicentres 39°6'N. 71°34'E. and 39°8'N. 71°42'E. respectively.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
I Andijan	1.2	26	—	—	—	—	10.7	—
II	1.2	26	1 20	+62	—	—	11.7	—
III	1.2	26	1 20	+62	—	—	11.7	—
I Tashkent	2.8	322	10 40	- 4	(1 14)	- 3	11.2	1.7
II	2.8	322	10 39	- 5	—	—	11.4	2.1
III	2.8	322	0 39	- 5	(1 16)	- 1	11.3	1.6

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
I Samarkand	3.6	280	0 56	0	1 45	+ 6	1.9	—
II	3.6	280	1 0	+ 4	—	—	1.9	—
III	3.6	280	0 58	+ 2	—	—	1.9	—
I Frunse	4.4	30	1 12	+ 4	—	—	—	—
III	4.4	30	—	—	—	—	e 2.2	—
III Almata	5.8	42	—	—	—	—	e 3.7	—
III Baku	16.7	281	—	—	—	—	e 9.6	—
II Ekaterinburg	19.1	342	e 4 15	-15	—	—	e 9.8	—
III	19.1	342	e 4 13	-17	—	—	e 9.8	—

Ekaterinburg gives also II L = +11.4m., III L = +11.2m.

Mar. 27d. 5h. 2m. 40s. (I) }
 5h. 11m. 2s. (II) } Epicentre 39°-0N. 143°-5E. (as on 1923 Feb. 5d).
 9h. 23m. 29s. (III) }

A = - .625, B = + .462, C = + .629; D = + .595, E = + .804;
 G = - .506, H = + .374, K = - .777.

Japanese stations give "SE of Miyako."

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
I Mizusawa	E. 1.8	274	0 28	0	0 54	+ 3	—	—
I	N. 1.8	274	0 29	+ 1	0 55	+ 4	—	—
II	E. 1.8	274	0 28	0	0 51	+ 0	—	—
III	E. 1.8	274	0 28	0	0 50	- 1	—	—
III	N. 1.8	274	0 29	+ 1	0 51	0	—	—
I Akita	2.8	285	0 39	- 5	—	—	1.5	1.9
II	2.8	285	1 3	†S	(1 3)	-14	1.7	1.9
III	2.8	285	e 0 46	+ 2	—	—	1.4	1.9
I Nagoya	6.5	236	e 1 31	- 8	e 2 44	-13	3.2	3.7
II	6.5	236	e 1 58	+19	—	—	3.3	—
III	6.5	236	e 1 32	- 7	(e 2 56)	- 1	2.9	3.6
III Toyooka	E. 7.7	246	1 46	-11	e 3 14	-15	—	—
I Osaka	7.8	238	2 29	+31	—	—	4.2	4.8
III	7.8	238	1 58	0	(3 41)	+10	3.7	4.9
III Kobe	8.0	240	e 2 30	+29	e 3 58	+21	4.2	4.3
III Sumoto	8.3	239	e 2 58	+52	4 6	+21	—	5.0
III Nagasaki	12.7	245	—	—	—	—	e 6.9	—
I Irkutsk	30.0	309	e 6 4	-24	—	—	16.3	19.3
III	30.0	309	e 6 9	-19	e 11 11	-23	15.5	19.3
I Ekaterinburg	54.5	318	—	—	e 21 20	†SR ₁	30.3	35.5
III	54.5	318	1 9 47	+11	e 17 10	- 5	27.5	35.8
I Tashkent	55.0	299	e 9 28	-11	e 21 20†	†SR ₁	30.3	34.9
I Pulkovo	67.1	330	—	—	—	—	e 36.3	—
III	67.1	330	—	—	—	—	e 36.5	—
I Baku	68.3	305	—	—	—	—	38.3	39.4
III	68.3	305	—	—	—	—	36.5	40.1
I Copenhagen	76.6	335	—	—	—	—	39.3	—
III	76.6	335	—	—	—	—	43.5	—
I De Bilt	E. 82.0	336	—	—	—	—	e 48.3	—
III	E. 82.0	336	—	—	—	—	e 46.5	—
I Feldberg	N. 82.4	334	—	—	—	—	—	54.3

Additional readings: Mizusawa II SN = +48s. Akita I and II MN = +2.0m., III ePEN = +49s., MNZ = +1.7m. Nagoya III eS = +2m.30s., MN = +3.5m. Kobe III MN = +4.4m. Sumoto III MZ = +4.7m., MN = +4.9m. De Bilt I eLN = +50.3m., III eLN = +47.5m.

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Mar. 27d. 7h. 41m. 36s. Epicentre 36°·8N. 26°·5E.

A = +·717, B = +·357, C = +·599; D = +·446, E = -·895;
G = +·536, H = +·267, K = -·801.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Helwan	8·0	148	1 59	- 2	1 3 17	-20	—	3·4
Taranto	8·1	300	2 12	+ 9	3 32	- 8	—	—
Ksara	8·2	108	1 2 3	- 1	1 3 26	-16	—	—
Trenta	8·4	291	1 2 4	- 3	—	—	—	—
Sebastopol	9·5	32	e 2 27	+ 4	—	—	—	—
Yalta	9·6	35	e 2 28	+ 4	e 4 14	- 4	—	—
Simferopol	10·0	33	e 2 33	+ 3	e 4 24	- 5	—	—
Pompeii	10·1	297	e 3 14	+43	—	—	—	—
Naples	10·3	297	e 2 31	- 3	—	—	—	—
Theodosia	10·6	36	e 2 44	+ 6	e 4 39	- 6	—	—
Zagreb	11·9	322	e 3 1	+ 3	—	—	—	6·3
Budapest	12·0	335	e 3 24?	+25	—	—	—	—
Venice	13·7	313	e 3 29	+ 7	e 7 24	+83	—	—
Moncalieri	16·3	306	4 12	+16	8 14	+72	—	—
Zurich	16·9	314	e 4 4	0	7 13	- 3	—	—
Neuchatel	17·7	311	i 4 13	0	e 7 28	- 5	—	—
Karlsruhe	17·9	318	4 30	+14	—	—	—	—
Strasbourg	18·0	317	i 4 17	0	—	—	i 8·7	—
Besançon	18·4	311	4 24	+ 2	—	—	—	—
Konigsberg	18·5	349	—	—	e 7 43	- 8	—	—
Feldberg	N. 18·6	321	e 3 23	-61	e 6 48	-65	—	12·9
Baku	18·6	72	e 4 48	+24	e 7 46	- 7	8·3	—
Uccle	21·1	318	e 4 48	- 6	e 8 54	+ 8	—	—
Paris	21·2	312	e 4 51	- 4	(9 24?)	+36	9·4	—
Copenhagen	21·2	338	4 47	- 8	8 34	-14	—	—
De Bilt	21·4	322	e 5 6	+ 8	e 9 24?	+31	—	—
Pulkovo	23·1	5	5 6	-12	9 6	-21	12·4	—
Granada	23·9	280	1 5 17	-10	—	—	—	—
Ekaterinburg	30·2	38	e 5 48	-42	i 11 51	+14	i 16·5	—
Tashkent	33·2	68	—	—	e 11 43	-44	—	14·3

Additional readings: Ksara 1 = +2m.4s., +2m.5s., +2m.8s., +2m.11s.,
+3m.27s., +3m.36s., +3m.39s., and +3m.53s. Zagreb ePNE =
+3m.8s. Zurich 1 = +4m.7s. Konigsberg 1 = +7m.45s., iE =
+8m.37s. Granada 1 = +5m.43s.

March 27d. 16h. 32m. 28s. Epicentre 34°·6N. 140°·7E. (as on 1926 Aug. 7d.).

A = -·637, B = +·521, C = +·568; D = +·633, E = +·774;
G = -·439, H = +·360, K = -·823.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya	3·2	281	e 0 41	- 9	1 14	-14	1·6	2·2
Osaka	4·3	272	1 14	+ 7	—	—	2·5	3·3
Mizusawa	E. 4·5	358	1 8	- 2	1 55	- 9	—	—
Kobe	4·6	272	e 1 18	+ 7	2 1	- 5	2·6	3·8
Sumoto	4·8	268	1 30	+16	2 30	+19	(2·5)	2·7
Toyooka	4·9	283	e 1 20	+ 4	(2 19)	+ 5	2·3	2·6
Akita	5·1	354	e 1 17	- 2	(2 12)	- 8	2·2	2·3
Irkutsk	31·3	318	—	—	—	—	15·6	19·7
Tashkent	55·1	300	—	—	—	—	e 27·1	33·6
Ekaterinburg	58·4	320	e 9 26	-22	—	—	30·0	—
Baku	69·0	308	—	—	—	—	38·0	—

Additional readings: Nagoya MN = +1·9m. MZ = +2·0m. Mizusawa
SN = +1m.56s. Kobe MN = +4·2m. Sumoto MN = +2·8m. Toyooka
PN = +1m.23s.

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March 27d. 21h. 6m. 10s. Epicentre 35°·0N. 20°·0E. (as on 1928 Sept. 13d.).

A = +·770, B = +·280, C = +·574; D = +·342, E = -·940;
G = +·539, H = +·196, K = -·819.

	△	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Taranto	5·8	339	1 16	-14	2 20	-19	—	—
Pompeii	7·2	325	e 2 40	+51	—	—	—	—
Naples	7·4	324	e 1 50	-2	—	—	—	—
Florence	11·0	325	e 2 45	+ 1	—	—	—	5·8
Zagreb	11·2	346	2 45	- 2	e 4 21	-38	e 4·5	4·7
Venice	11·9	333	e 2 50?	- 8	—	—	—	—
Ksara	13·2	91	e 3 23	+ 7	5 38	-11	9·8	—
Moncalleri	13·7	321	e 1 31	-111	6 22	+21	8·9	—
Sebastopol	14·1	43	e 4 27	+60	—	—	—	—
Chur	14·2	330	e 3 30	+ 1	—	—	—	—
Yalta	14·4	45	e 3 27	- 5	—	—	—	—
Simferopol	14·6	43	e 3 35	+ 1	—	—	—	—
Zurich	15·0	329	e 3 25	-14	—	—	—	—
Theodosia	15·4	45	e 3 55	+11	—	—	—	—
Feldberg	17·4	335	e 4 7	- 3	e 7 23	- 4	—	14·8
Uccle	19·4	329	—	—	—	—	10·8	—
De Bilt	20·1	333	i 4 43	+ 1	e 8 24	- 1	e 11·8	—
Copenhagen	21·3	348	—	—	—	—	11·8	—
Kew	22·0	325	—	—	—	—	e 11·8	—
Baku	24·2	68	e 5 36	+ 6	e 9 52	+ 4	12·7	—
Pulkovo	25·6	12	e 5 44	0	e 10 0	-14	—	—
Ekaterinburg	34·9	39	e 6 57	-15	12 24	-30	16·8	—
Irkutsk	59·8	45	—	—	—	—	e 28·8	—

Additional readings: Feldberg iN = +4m.14s. = PR₁ - 10s. Irkutsk eL = +36·8m.

March 27d. 21h. 40m. 10s. Epicentre 37°·4N. 138°·8E. (as on 1928 April 12d.).

A = -·598, B = +·523, C = +·607; D = +·659, E = +·752;
G = -·457, H = +·400, K = -·794.

	△	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Akita	2·5	24	e 0 34	- 5	—	—	—	—
Mizusawa	2·5	48	—	—	1 5	- 4	—	—
Nagoya	2·7	213	(0 49)	+ 7	—	—	0·8	1·2
Toyoooka	3·7	240	e 0 56	- 2	—	—	1·8	—
Osaka	3·8	225	1 3	+ 4	—	—	2·3	2·5
Kobe	4·0	228	0 44	-18	(e 1 51)	+ 1	e 1·8	—

Nagoya gives also P = +4s., MN = +1·0m.

March 27d. Readings also at 3h. (Charlottesville), 5h. (Florence), 6h. (Mizusawa and near Akita), 7h. (Simferopol, Theodosia, and Yalta), 9h. (Phu-Lien), 10h. (Mizusawa and Akita), 11h. (near Nagoya), 12h. (near La Paz), 14h. (La Paz); 15h. (Mizusawa and Nagoya), 16h. (Phu-Lien), 17h. (Kobe and near Sumoto), 18h. (Nagoya, Andijan, and near Samarkand), 20h. (Wellington, Tashkent, and near Sumoto), 21h. (Nagoya), 22h. (La Paz, Georgetown, Ottawa, Toronto, Florissant, Tortosa, Alicante, Granada, Scoresby Sund, Moncalleri, Florence, Paris, De Bilt, Strasbourg, Feldberg, Uccle, Edinburgh, Kew, Oxford, Stonyhurst, Copenhagen, Pulkovo, Ekaterinburg, and Baku), 23h. (Irkutsk, near Tacubaya, and near Toyoooka).

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March 28d. 3h. 9m. 45s. Epicentre 13°-0N. 97°-0W. (as on 1927 May 31d.).

A = -119, B = -967, C = +225; D = -993, E = +122;
G = -027, H = -223, K = -974.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Puebla	6.2	349	(1 52)	+17	(2 22)	-27	(2.4)	(2.5)
Vera Cruz	6.2	8	1 36	+1	(2 16)	-33	2.3	2.5
Tacubaya	6.7	342	1 38	-4	(2 17)	-45	2.3	2.5
Guadalajara	9.9	322	—	—	—	—	4.7	4.9
Merida	10.6	41	(2 18)	-20	(4 6)	-39	(4.2)	(4.5)
Tucson	23.1	329	5 16	-2	8 57	-30	11.0	—
Florissant	26.5	12	15 54	+1	e 10 7	-25	e 13.8	15.8
Cincinnati	28.4	21	16 15	+3	1 11 3	-3	13.7	19.2
Georgetown	31.3	30	6 50	+9	e 12 50	+54	e 17.0	23.4
Lick	32.8	323	—	—	—	—	e 15.2	—
Berkeley	33.5	323	—	—	—	—	e 15.2	—
Toronto	34.2	24	—	—	e 12 18	-25	18.6	—
Fordham	34.4	33	—	—	—	—	e 20.5	—
Ottawa	37.1	26	e 7 33	+2	e 13 15	-10	e 17.2	—
La Paz	41.0	137	e 8 8	+5	—	—	19.2	25.4
Victoria	41.6	335	—	—	—	—	20.3	25.2
Scoresby Sund	72.7	20	—	—	—	—	34.2	—
Edinburgh	81.4	35	—	—	—	—	—	47.2
San Fernando	83.0	54	—	—	—	—	—	46.2
Kew	84.0	39	—	—	—	—	e 42.2	—
Paris	86.4	40	—	—	—	—	e 44.2	49.2
De Bilt	87.0	37	—	—	e 24 7	+26	e 43.2	49.0
Uccle	87.0	39	—	—	e 24 0	+19	e 43.2	—
Strasbourg	89.8	40	—	—	—	—	49.2	—
Copenhagen	89.8	31	—	—	—	—	43.2	—
Ekaterinburg	107.9	13	—	—	e 24 57	[- 4]	49.2	64.4
Irkutsk	112.2	346	—	—	—	—	e 56.2	—
Baku	118.4	27	—	—	—	—	60.2	71.6
Tashkent	124.2	11	—	—	—	—	e 58.2	72.6

Additional readings and notes: Puebla readings have been increased by 5m. Merida readings have been increased by 1m. Tucson PR₁E = +5m.37s., PR₁N = +5m.39s., SN = +8m.55s., LN = +10.3m. Florissant 1N = +5m.56s. Cincinnati eZ = +7m.0s. = PR₁ +2s. Berkeley eN = +15m.45s., eNZ = +19m.15s., eN = +20m.33s. Toronto LE = +18.2m. Fordham L = +21.4m. La Paz i = +9m.8s. Victoria MN = +25.3m. San Fernando MN = +47.2m. De Bilt MZ = +56.8m. Ekaterinburg e = +28m.29s. = SR₁ -5s. Baku e = +30m.33s. = PS +5s. and +41m.56s. = SR₂ +1s. Tashkent e = +20m.33s. = PR₁ -19s., +30m.9s., and +43m.15s. = SR₂ -6s.

March 28d. 11h. 3m. 12s. Epicentre 35°-5N. 5°-5W. (as on 1923 July 9d.).

A = +810, B = -078, C = +581; D = -096, E = -995;
G = +578, H = -056, K = -814.

	Δ	Az.	P.	O-C.	S.	O-C.	M.
	°	°	m. s.	s.	m. s.	s.	m.
San Fernando	1.1	330	10 15	-2	—	—	—
Malaga	1.5	35	0 19	-4	0 34	-8	—
Granada	2.2	42	10 27	-7	10 47	-13	1.1
Almeria	2.9	61	0 45	0	1 22	+2	—
Toledo	4.5	15	e 1 0	-10	e 2 7	+3	—
Alicante	4.9	54	2 23	13	(2 23)	+9	—
Tortosa	N. 7.1	40	e 2 1	+13	3 16	+3	—

Additional readings and note: Granada 1P = +29s. and +35s., MZ = +1.2m. Toledo e = +1m.19s., i = +1m.36s., 1NE = +1m.51s., S is given as eNE. Alicante S† = +3m.5s.

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March 28d. 20h. 17m. 42s. Epicentre 55°-08. 27°-5'W. (as on 1927 Oct. 4d.).

A = +.509, B = -.265, C = -.819; D = -.462, E = -.887;
G = -.727, H = +.378, K = -.574.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
			m. s.	s.	m. s.	s.	m.	m.
La Plata	29.0	301	e 6 24	+ 6	11 1	-16	15.3	—
Rio de Janeiro E.	34.2	335	7 4	- 3	12 32	-11	15.8	19.6
N.	34.2	335	e 6 58	- 9	12 33	-10	15.9	19.8
Cape Town	38.0	75	i 7 51	+13	e 13 48	+10	—	—
Sucre	45.9	306	8 39	0	i 15 23	- 4	23.0	—
La Paz	E. 49.5	305	i 9 12	+ 8	i 17 13	+60	24.2	37.3
Tananarive	N. 66.1	89	—	—	—	—	e 35.0	36.3
Melbourne	87.0	173	i 16 26	?PR ₁	—	—	37.0	52.3
Perth	87.6	149	12 18	-45	—	—	—	—
Adelaide	89.3	169	e 42 38	?L	e 47 28	?	50.1	52.0
Riverview	91.3	179	e 17 12	?PR ₁	—	—	e 44.4	57.6
Sydney	91.3	179	—	—	—	—	50.5	54.3
San Fernando	93.3	15	(13 31)	- 3	(24 16)	[+28]	49.0	56.3
Malaga	93.8	18	—	—	—	—	e 40.3	—
Granada	94.4	19	e 13 44	+ 4	—	—	46.3	48.8
Algiers	95.4	24	e 14 20	+35	25 7	- 3	44.3	45.8
Alicante	96.2	21	—	—	e 24 19	[+16]	e 51.0	—
Toledo	N.E. 96.9	17	—	—	—	—	e 46.3	52.7
Tortosa	N. 98.7	20	—	—	e 24 45	[+28]	e 51.3	61.3
Charlottesville	N. 102.7	322	e 14 18	- 6	e 23 46?	[-51]	e 27.6	28.6
Ksara	104.0	49	18 27	?PR ₁	—	—	e 58.3	65.3
Florence	104.1	27	18 47	?PR ₁	27 53	?PS	—	55.3
Colombo	105.6	100	18 10	[+ 3]	—	—	44.9	60.4
Cincinnati	N. 106.0	317	—	—	e 24 56	[+ 4]	52.3	—
Kodaikanal	106.9	94	56 0	?L	—	—	(56.0)	—
Zagreb	107.3	30	—	—	—	—	e 59.3	—
Strasbourg	107.7	23	e 19 18?	?PR ₁	e 28 36	?PS	45.3	—
Toronto	N. 108.0	323	e 19 13	?PR ₁	e 25 20	[+19]	55.9	—
Florissant	108.0	313	—	—	—	—	e 53.3	57.3
Ottawa	108.3	327	e 13 48	-62	—	—	e 48.3	—
Kew	108.8	17	—	—	e 26 23	?E	49.3	60.3
Oxford	108.9	16	—	—	e 29 22	?PS	e 52.3	69.6
Uccle	109.1	20	—	—	e 26 31	?E	e 45.3	59.1
Feldberg	N. 109.4	23	—	—	e 25 40	[+32]	—	63.7
De Bilt	110.5	21	e 20 3	?PR ₁	e 29 0	?PS	e 45.3	59.7
Bombay	111.2	87	18 17	[- 9]	29 27	?PS	53.4	59.6
Edinburgh	112.6	13	—	—	e 36 18?	?	—	—
Hyderabad	113.3	90	19 51	?PR ₁	29 39	?PS	48.9	60.5
Dyce	114.1	13	—	—	25 52	[+26]	e 53.3	67.3
Copenhagen	115.4	23	—	—	29 54	?PS	50.3	—
Baku	115.8	55	e 20 45	?	—	—	e 51.3	73.3
Kucino	122.9	37	—	—	—	—	59.3	—
Dehra Dun	123.1	82	19 18	[+17]	31 18	?PS	48.3	71.3
Pulkovo	123.6	30	—	—	—	—	—	67.3
Scoresby Sund	125.5	2	20 0	?PR ₁	29 42	?	49.3	—
Tashkent	126.2	66	e 19 26	[+18]	—	—	—	72.9
Victoria	E. 130.6	299	—	—	—	—	71.4	78.4
Phu-Lien	131.6	115	21 18?	?PR ₁	—	—	—	65.3
Ekaterinburg	132.5	46	e 22 7	?PR ₁	i 23 6	?	58.3	82.3
Manila	132.8	137	e 19 38	[+13]	e 23 58	?	—	—
Hong Kong	136.7	123	22 37	?PR ₁	—	—	—	67.3
Irkutsk	151.9	75	e 20 12	[+13]	—	—	79.3	94.7

Additional readings and note: La Plata i = +6m.59s. Sucre SR₁ = +18m.13s. La Paz PN = +9m.13s. PR₁N = +11m.6s., PR₁N = +11m.43s., PR₁E = +12m.2s., PSN = +17m.30s. SR₁E? = +20m.21s., SR₁E = +21m.53s., MN = +30.8m. Tananarive eN = +20m.18s. = PS + 6s., +20m.44s. = [S] + 2s., +21m.34s. = E + 15s., +30m.15s., and +32m.28s. Adelaide MN = +51.8m. Riverview MN = +56.7m. San Fernando P and S

Continued on next page.

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have been *diminished* by 11m. MN = +53.3m. Algiers PS = +24m.25s. = E-14s. MN = +53.3m. Charlottesville eN = +17m.58s. = (P) +1s. Cincinnati eN = +29m.8s. Ottawa eN = +19m.18s. = PR₁ +10s., i = +25m.18s. = (S) +15s., and +28m.26s. = PS -13s., e = +34m.18s. = SR₁ -3s. Oxford e = +38m.51s. Uccle e = +34m.18s. ? = SR₁ -13s. De Bilt eLN = +52.3m., MNZ = +61.8m. Baku e = +30m.24s., +34m.9s., and +37m.30s. Pulkovo e = +57m.42s. Tashkent e = +21m.27s. = PR₁ +21s. Irkutsk e = +24m.8s. = PR₁ +19s., +25m.26s., +30m.40s. = E +18s., +33m.44s., and +42m.39s.

March 28d. 20h. 48m. 10s. Epicentre 34°·0N. 4°·0E. (as on 1925 Sept. 30d.).

A = +·827, B = +·058, C = +·559; D = +·070, E = -·998;
G = +·558, H = +·039, K = -·829.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Algiers	2·9	344	e 0 34	-11	1 6	-14	—	1·6
Alicante	5·6	320	e 2 25	†S	(2 25)	-9	—	—
Almeria	6·0	300	1 56	+24	2 53	+9	—	—
Granada	6·9	299	i 1 49	+4	i 3 1	-6	—	4·6
Tortosa	N. 7·3	339	e 2 3	+12	3 32	+14	3·7	5·4
Malaga	7·4	294	(e 1 46)	-6	e 1 46	†P	—	—
Toledo	8·7	315	e 2 9	-3	e 3 48	-8	e 4·5	—

Additional readings: Algiers iP = +37s. Alicante S† = +3m.15s. Malaga P = +29s.

March 28d. Readings also at 0h. (Taihoku), 1h. and 2h. (Nagoya), 6h. (Bombay and La Paz), 8h. (Nagoya), 13h. (Manila, Nagoya, near Akita, Mizusawa, and near Nagasaki), 15h. (Mizusawa), 21h. (Ksara).

March 29d. Readings at 3h. (La Paz and Sucre), 6h. (Suva, Irkutsk, Ekaterinburg, near Akita, and Mizusawa), 7h. (Baku and Tashkent), 8h. (Graz), 12h. (Andijan), 14h. (La Paz and Sucre), 20h. (Paris).

Mar. 30d. 16h. 15m. 54s. Epicentre 12°·3N. 93°·8W. (as on 1929 Feb. 10d.).

A = -·065, B = -·975, C = +·213; D = -·998, E = +·066;
G = -·014, H = -·213, K = -·977.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Merida	9·6	24	2 12	-12	3 33	-45	3·6	4·5
Tucson	25·4	325	5 47	+5	10 22	+11	13·8	—
Florissant	26·7	6	—	—	e 10 8	-27	—	—
Cincinnati	Z. 28·1	15	—	—	i 10 26	-35	15·1	—
Georgetown	Z. 30·5	26	6 24	-9	11 53	+10	e 15·0	19·0
Fordham	33·5	29	—	—	—	—	e 19·3	—
Toronto	33·7	20	—	—	e 13 28	+12	18·3	—
Ottawa	36·5	22	—	—	e 12 24	-53	e 18·1	—
Scoreby Sund	72·4	20	—	—	—	—	38·1	—
Granada	82·8	53	—	—	—	—	e 38·1	41·1
De Bilt	E. 85·7	38	—	—	—	—	e 41·1	—
Copenhagen	88·7	33	—	—	—	—	44·1	—
Ekaterinburg	107·7	15	—	—	e 25 8	[+ 8]	50·1	—
Irkutsk	113·6	348	—	—	—	—	e 72·1	—

Additional readings: Cincinnati eZ = +9m.46s., iZ = +12m.1s. = SR₁ -17s. Fordham L = +27·6m.

Mar. 30d. Readings also at 1h. (near Tacubaya), 2h. (Andijan), 3h. (Rio de Janeiro and near Wellington), 5h. (near Nagasaki), 7h. (Ekaterinburg and Tashkent), 10h. (near Manila, near Neuchatel, and near Tacubaya), 13h. (Ekaterinburg, Irkutsk, Tashkent, and Florissant), 14h. (Adelaide and Riverview), 16h. (Kobe and near Sumoto), 18h. (near Nagasaki), 19h. (Vienna), 23h. (La Paz and Entebbe).

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Mar. 31d. 3h. 9m. 48s. Epicentre 0°-6S. 16°-8W.

A = +.957, B = -.289, C = -.010; D = -.289, E = -.957;
G = -.010, H = +.003, K = -1.000.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
San Fernando	38.8	13	—	—	—	—	21.2	25.7
Malaga	39.0	15	e 8 58	?PR ₁	e 16 0	?SR ₁	e 20.2	—
Granada	39.7	15	i 9 8	?PR ₁	16 21	?SR ₁	20.2	21.2
Alicante	41.7	19	—	—	—	—	e 23.8	—
Moncalleri	50.5	22	—	—	1 16 23	- 2	23.3	—
Florence	50.9	27	10 58	?PR ₁	e 16 24	- 6	26.2	33.9
Paris	52.1	16	e 12 12?	?PR ₁	—	—	28.2	33.2
La Paz	53.0	250	9 26	0	16 54	- 2	23.2	31.4
Strasbourg	53.5	20	e 9 12?	-18	e 17 12?	+ 9	29.2	—
Kew	53.9	12	—	—	e 17 7	- 1	e 26.2	—
Oxford	54.0	10	—	—	17 10	+ 1	e 27.2	—
Uccle	54.4	16	—	—	e 17 12	- 2	e 25.2	—
Feldberg	N. 55.1	19	e 9 40	0	e 17 25	+ 3	—	33.9
De Bilt	55.8	16	e 9 44	- 1	e 17 34	+ 3	e 27.2	31.6
Copenhagen	61.1	19	—	—	—	—	26.2	—
Georgetown	Z. 67.7	314	e 11 24	+22	—	—	e 31.8	—
Ottawa	69.2	320	—	—	—	—	e 32.2	—
Pulkovo	70.5	23	e 11 6	-14	—	—	37.2	45.1
Kucino	70.5	30	—	—	e 20 52	+20	38.8	42.9
Cincinnati	Z. 73.3	313	—	—	—	—	e 34.8	—
Florissant	77.6	310	—	—	—	—	37.7	40.6
Ekaterinburg	83.6	33	12 30	-10	e 22 54	-11	40.2	52.5
Tashkent	87.4	49	i 13 49	+48	e 24 26	+41	e 47.2	56.8
Victoria	E. 101.3	320	—	—	—	—	53.5	61.3

Additional readings: San Fernando MN = +25.2m. Moncalleri e = +11m.50s. La Paz MN = +28.1m. De Bilt eLN = +28.2m., MN = +33.0m., MZ = +33.9m. Georgetown eZ? = 3h.6m.58s., eZ = 3h.12m.35s. Florissant e = +34m.12s. Ekaterinburg i = +23m.40s. = PS -12s. Tashkent e = +25m.20s.

Mar. 31d. 5h. 24m. 36s. Epicentre 3°-0S. 143°-5E. (as on 1926 Nov. 7d.).

A = -.803, B = +.594, C = -.052; D = +.595, E = +.804;
G = +.042, H = -.031, K = -.999.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	28.4	309	e 6 17	+ 5	e 11 14	+ 8	e 14.7	—
Riverview	31.7	168	e 6 36	- 8	e 11 13	-50	e 13.6	19.9
Sydney	31.7	168	5 30	-74	11 24	-39	16.6	18.0
Adelaide	32.3	188	e 6 49	- 2	1 11 40	-33	i 16.3	18.7
Melbourne	34.8	178	—	—	e 12 9	-43	15.4	21.2
Taihoku	E. 35.2	324	e 7 4	-11	—	—	—	—
Hong Kong	38.2	314	7 34	- 6	(1 13 49)	+ 8	i 13.8	20.4
Perth	38.9	219	—	—	13 49	- 2	21.6	22.9
Phu-Lien	43.3	305	e 8 8	-12	—	—	20.4	—
Wellington	E. 47.5	148	—	—	1 15 24	-24	e 27.2	—
	N. 47.5	148	—	—	1 15 41	- 7	e 27.5	—
Honolulu T.H.	N. 62.3	64	—	—	—	—	e 31.0	31.9
Irkutsk	64.4	335	—	—	—	—	35.4	—
Bombay	72.8	291	e 9 24?	?	—	—	—	—
Tashkent	80.3	313	e 13 19	+58	e 23 36	+69	e 41.4	48.7
Ekaterinburg	88.6	328	e 13 12	+ 4	e 23 22	[+ 3]	44.4	52.6
Victoria	E. 94.4	42	—	—	—	—	42.9	52.7
Kucino	101.2	327	—	—	e 26 29	+22	48.6	51.2
Pulkovo	104.1	331	e 18 30	?PR ₁	e 27 41	?PS	48.4	63.5
Helsingfors	106.4	332	—	—	—	—	e 58.9	—
Uppsala	109.8	335	—	—	—	—	—	61.4

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	\circ	\circ	m. s.	s.	m. s.	s.	m.	m.
Scoresby Sund	111.8	355	—	—	—	—	57.4	—
Lund	114.0	332	—	—	—	—	53.4	—
Copenhagen	114.4	332	—	—	e 29 30	?PS	55.4	—
Hamburg	116.7	331	—	—	—	—	e 62.4	—
Florissant	119.4	45	e 19 9	[+18]	e 27 24	?E	e 55.9	64.4
Feldberg	N. 119.5	329	—	—	—	—	—	72.2
De Bilt	E. 120.0	332	—	—	—	—	e 57.4	62.7
Strasbourg	120.8	330	—	—	—	—	56.4	—
Uccle	121.2	331	—	—	—	—	e 59.4	—
Florence	121.4	320	e 20 54	?PR ₁	—	—	—	67.9
Kew	122.9	334	—	—	—	—	e 55.4	73.4
Oxford	123.1	336	—	—	—	—	e 63.4	76.4
Paris	123.4	330	—	—	—	—	e 66.4	74.4
Cincinnati	Z. 123.4	42	—	—	—	—	74.1	—
Toronto	E. 124.4	37	—	—	—	—	56.6	—
Ottawa	125.5	33	—	—	e 37 48	?SR ₁	e 55.4	—
Georgetown	Z. 128.5	40	—	—	e 26 9	[+ 1]	74.9	—
Granada	134.4	323	—	—	—	—	e 70.4	78.0

Additional readings: Riverview MN = +20.2m. Adelaide iS = +13m.5s.,
 iL = +17.6m., MN = +21.3m. Honolulu, T.H. eN = +28m.0s., eE =
 +31m.0s., ME = +31.6m. Tashkent e = +13m.38s., +15m.52s. =
 PR₁ - 1s., +17m.48s. = PR₂ + 1s., and +28m.36s. = SR₁ + 18s. Ekaterin-
 burg iPS = +24m.52s., eSR₁ = +29m.48s. Kucino e = +33m.7s. =
 SR₁ + 15s., +37m.11s., and +42m.59s. Florissant e = +11m.24s. De
 Bilt eLN = +58.4m., MN = +63.3m., MZ = +73.9m. Cincinnati eZ =
 +59m.46s. Georgetown eZ = +43m.49s., and +52m.59s.

Mar. 31d. 20h. 17m. 18s. Epicentre 38°.5N. 144°-5E. (as on Mar. 26d.).

A = -.637, B = +.455, C = +.623; D = +.581, E = +.814;
 G = -.507, H = +.361, K = -.783.

In Geophys. Mag., Vol. IV, No. 4, Tokyo gives epicentre 38°-0N. 142°-9E. The adopted position is a variation of this.

	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
	\circ	\circ	m. s.	s.	m. s.	s.	m.	m.
Isinomaki	2.5	268	0 35	- 4	0 58	-11	—	—
Mizusawa	E. 2.7	283	0 40	- 2	1 27	+13	—	—
	N. 2.7	283	0 44	+ 2	1 34	+20	—	—
Sendai	2.8	266	0 43	- 1	1 11	- 6	—	—
Akita	3.6	292	i 0 54	- 2	(1 43)	+ 4	1.7	2.3
Kakioka	4.1	238	0 59	- 5	1 56	+ 3	—	—
Tokyo	4.7	235	1 10	- 3	2 0	- 9	—	—
Sapporo	5.2	334	1 30	+10	2 49	+27	—	—
Nagoya	6.9	243	e 1 39	- 6	2 34	-33	3.0	3.8
Osaka	8.2	245	2 6	+ 2	—	—	4.2	5.2
Toyooka	8.3	252	1 1 58	- 8	e 3 47	+ 2	e 4.8	—
Kobe	8.4	246	2 9	+ 2	4 7	+20	—	5.6
Slomisaki	8.7	237	1 44	-28	4 4	+ 8	—	—
Sumoto	8.8	245	2 7	- 6	3 57	- 1	—	5.1
Koti	10.1	244	e 2 21	-10	e 4 43	+11	6.1	6.8
Hukuoka	12.4	251	(e 2 52)	-13	(e 5 18)	-11	e 5.3	7.6
Nagasaki	13.2	249	e 3 13	- 3	e 6 58	+67	—	8.9
Keijo	13.8	272	3 16	- 7	6 23	+20	—	—
Zinsen	14.2	272	3 20	- 9	6 28	+15	—	—
Zi-ka-wei	N. 20.2	256	e 4 35	- 8	8 47	+20	—	13.0

Continued on next page.

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	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
			m. s.	s.	m. s.	s.	m.	m.
Taihoku	E. 23.6	242	e 7 12	?	—	—	—	—
Hong Kong	30.5	244	6 16	-17	(11 17)	-26	11.3	20.0
Irkutsk	30.9	310	i 6 22	-15	11 4	-46	15.7	18.9
Manila	31.7	227	e 7 17	+33	e 11 29	-34	—	—
Phu-Lien	37.0	254	e 7 12	-18	e 12 47	-37	18.7	—
Honolulu T.H.	N. 52.0	92	—	—	—	—	e 25.4	26.9
Dehra Dun	54.2	283	7 22	-132	17 42	+31	31.7	34.7
Ekaterinburg	55.4	320	i 9 42	0	17 26	0	26.7	36.3
Tashkent	55.9	300	i 9 47	+ 2	i 17 30	- 3	31.3	35.0
Hyderabad	60.7	272	10 15	- 2	18 22	-10	30.1	39.4
Bombay	64.3	274	10 37	- 3	19 13	- 4	34.7	41.2
Kucino	67.1	235	11 10	+11	20 5	+14	35.3	43.2
Pulkovo	67.9	330	11 7	+ 4	20 13	+12	34.7	42.9
Baku	69.2	307	—	—	e 21 21	[+15]	34.0	40.4
Helsingfors	69.6	333	—	—	—	—	e 40.2	—
Berkeley	N. 69.7	58	—	—	—	—	e 33.5	—
Scoresby Sund	70.6	356	—	—	20 54	+21	41.7	—
Upsala	72.4	336	—	—	—	—	e 40.7	50.0
Lund	77.1	335	—	—	22 7	+17	41.7	—
Copenhagen	77.4	335	—	—	22 0	+ 7	39.7	—
Hamburg	79.9	335	e 12 21	+ 3	—	—	e 39.7	45.7
Budapest	81.3	326	—	—	—	—	e 46.4	52.2
Göttingen	81.6	334	—	—	—	—	e 45.8	54.8
Jena	81.6	333	—	—	—	—	e 44.7	—
De Bilt	82.7	336	12 43	+ 9	e 22 57	+ 3	e 40.7	48.6
Feldberg	N. 83.2	334	—	—	e 22 51	- 8	—	54.7
Stonyhurst	83.3	341	—	—	—	—	e 45.7	52.7
Zagreb	83.9	327	12 42?	+ 1	—	—	e 47.7	52.7
Uccle	84.1	336	—	—	e 23 6	- 3	e 49.1	54.2
Strasbourg	84.9	333	e 12 42	- 5	i 23 14	- 4	42.7	—
Kew	84.9	340	e 12 47	0	e 23 16	- 2	40.7	49.7
Oxford	85.0	340	—	—	—	—	e 48.7	—
Zurich	85.6	331	—	—	—	—	e 52.7	—
Paris	86.4	336	e 12 55	0	—	—	48.7	49.7
Florence	87.5	328	12 42	-20	23 42	- 5	50.2	57.2
Florissant	87.8	40	e 13 6	+ 2	e 23 31	-19	—	—
Moncalleri	87.9	331	e 14 9	+65	23 52	+ 1	45.2	—
Ottawa	E. 88.7	26	—	—	i 23 54	- 6	55.7	—
Toronto	88.8	30	—	—	25 42?	?	—	—
Georgetown	Z. 93.6	31	—	—	—	—	e 54.2	—
Tortosa	N. 94.1	335	—	—	—	—	e 51.7	57.3
Granada	98.8	336	—	—	e 22 42?	?	—	52.7
La Paz	143.9	62	e 19 55	[+ 8]	—	—	—	—

Additional readings and note: Akita P = +1m.10s., MN = +2.8m. Nagoya MN = +3.9m. Toyooka eSE = +3m.55s. Kobe MZ = +5.7m. Sumoto MN = +5.2m., MZ = +5.8m. Hukuoka gives P as S and S as L; also eP? = 20h.16m.1s. Honolulu T.H. eN = +24m.36s. Hyderabad MN = +39.1m. Göttingen MN = +54.4m. De Bilt eLN = +42.7m., MN = +63.0m., MZ = +54.3m. Paris MN = +54.7m. Florence iS = +24m.49s. = PS +12s. Florissant iSEN = +23m.50s. Ottawa LN = +46.7m. Georgetown eZ = +32m.20s. and +37m.20s.

Mar. 31d. Readings also at 0h. (Andijan (2) and Samarkand (2)), 3h. (Göttingen, near Jena, and Vienna), 6h. (Bombay), 7h. (Vienna), 9h. (Manila (2)), 11h. (Florissant), 12h. (Nagoya, Taihoku, and Zi-ka-wei), 14h. (Manila, Ekaterinburg, and Irkutsk), 16h. (Andijan and near Samarkand), 20h. (Nagoya (2), near Kobe, Osaka, and Sumoto), 22h. (Andijan and Samarkand), 23h. (Florissant and near Lick).

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Belated readings from **Karlsruhe (49°1'N. 82°5'E.)**,

For 1929 January and February.

	Corr. for Focus	Δ	Az.	P.	O-C.	S.	O-C.	L.	M.
Jan. 13d.	0h. 3m. 3s.			Epicentre 49°·7N. 154°·8E.					
	-2·0	77·2	340	m. s. 11 50	s. 0	m. s. 21 32	+ 4	41·0	54·4
Jan. 17d.	0h. 6m. 40s.			Epicentre 39°·3N. 18°·0E.					
	-	11·9	328	4 58 ?S	(4 58)		-19	-	-
Jan. 17d.	11h. 45m. 34s.			Epicentre 10°·6N. 65°·6W.					
	-	71·6	42	e 8 26?	?		-	e 36·4	-
Jan. 23d.	11h. 14m. 12s.			Epicentre 34°·8N. 24°·9E.					
	-	18·7	325	4 33	+ 8		-	-	-
Feb. 1d.	17h. 14m. 12s.			Epicentre 36°·5N. 70°·5E.					
	-2·4	45·9	309	8 21	- 1	14 57	+ 2	23·8	26·1
Feb. 18d.	18h. 59m. 27s.			Epicentre 42°·1N. 2°·1W.					
	-	10·1	43	-	-	14 57	+26	5·6	-
Feb. 22d.	20h. 41m. 39s.			Epicentre 10°·6N. 42°·5W.					
	-	57·0	38	9 59	+ 7	17 50	+ 4	28·4	30·0

ADDITIONAL READINGS FOR THESE SHOCKS.

Jan. 13d.	MN = +55·6m.
Jan. 23d.	i = +5m.46s.
Feb. 1d.	i = +16m.26s.
Feb. 18d.	i = +5m.27s.
Feb. 22d.	PR ₁ ? = +12m.15s., PR ₂ = +13m.27s.

READINGS NOT CONNECTED WITH ANY TABULATED EARTHQUAKE.

Jan. 26d.	11h.
Feb. 1d.	19h.

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TABLE.

	P sec.	S sec.	S - P sec.	De-gress.	P sec.	S sec.	S - P sec.	De-gress.	P sec.	S sec.	S - P sec.
1	15	28	13	51	553	991	438	101	855	1565	710
2	31	55	24	52	560	1004	444	102	860	1575	715
3	47	83	36	53	566	1016	450	103	865	1584	719
4	62	110	48	54	573	1029	456	104	870	1593	723
5	77	137	60	55	579	1041	462	105	874	1602	728
6	92	164	72	56	586	1054	468	106	879	1612	733
7	106	190	84	57	592	1066	474	107	884	1621	737
8	121	217	96	58	599	1079	480	108	888	1630	742
9	136	243	107	59	605	1091	486	109	893	1639	746
10	150	269	119	60	612	1103	491	110	897	1648	751
11	164	294	130	61	619	1116	497	111	902	1657	755
12	179	319	140	62	625	1128	503	112	907	1666	759
13	193	344	151	63	632	1141	509	113	911	1674	763
14	206	368	162	64	638	1153	515	114	916	1682	766
15	219	392	173	65	645	1165	520	115	920	1690	770
16	232	415	183	66	651	1177	526	116	925	1698	773
17	245	438	193	67	658	1190	532	117	929	1706	777
18	257	460	203	68	664	1202	538	118	934	1714	780
19	269	482	213	69	671	1214	543	119	938	1722	784
20	281	503	222	70	677	1226	549	120	942	1729	787
21	293	524	231	71	683	1238	555	121	947	1737	790
22	305	545	240	72	690	1250	560	122	952	1744	792
23	317	565	248	73	696	1262	566	123	957	1752	795
24	328	584	256	74	702	1274	572	124	961	1759	798
25	338	603	265	75	709	1286	577	125	966	1766	800
26	348	622	274	76	715	1297	582	126	970	1773	803
27	358	641	283	77	721	1309	588	127	974	1780	806
28	368	659	291	78	727	1320	593	128	978	1787	809
29	378	677	299	79	733	1332	599	129	983	1794	811
30	388	694	306	80	739	1343	604	130	988	1801	813
31	398	711	313	81	745	1355	610	131	992	1807	815
32	407	728	321	82	750	1366	616	132	996	1814	818
33	416	744	328	83	756	1377	621	133	1001	1821	820
34	425	760	335	84	762	1388	626	134	1005	1827	822
35	433	775	342	85	768	1399	631	135	1009	1833	824
36	442	790	348	86	773	1410	637	136	1014	1840	826
37	450	804	354	87	779	1421	642	137	1018	1846	828
38	458	818	360	88	785	1432	647	138	1023	1852	829
39	466	832	366	89	790	1443	653	139	1027	1858	831
40	475	847	372	90	796	1454	658	140	1031	1864	833
41	483	861	378	91	801	1464	663	141	1035	1869	834
42	491	875	384	92	807	1475	668	142	1039	1875	836
43	498	888	390	93	812	1485	673	143	1043	1881	838
44	506	902	396	94	818	1496	678	144	1047	1886	839
45	513	915	402	95	823	1506	683	145	1051	1892	841
46	520	928	408	96	829	1516	687	146	1055	1897	842
47	527	941	414	97	834	1526	692	147	1059	1902	843
48	534	954	420	98	840	1536	696	148	1063	1907	844
49	540	966	426	99	845	1546	701	149	1067	1912	845
50	547	979	432	100	851	1556	705	150	1071	1917	846

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