The International Seismological Summary for 1928 October, November, December.

FORMERLY THE BULLETIN OF THE BRITISH ASSOCIATION SEISMOLOGY COMMITTEE.

The present number deals with 122 epicentres, 48 of which are new and 74 repetitions from old epicentres. The following are the only two cases of abnormal focus :—

	Date. d. h. m. s.	Epicentre ° ′ °	Focal depth (below normal)
1928 Oct.	21 16 16 45	5·0S. 135·0E.	+0·060/5
Dec.	19 15 15 50	21·4N. 143·5E.	+0·040

The correction for deep focus is not applied to the Δ for [P] [S] PS and Σ.

University Observatory, Oxford,
1932 June 20.

1928 OCTOBER, NOVEMBER, DECEMBER.

Oct. 1d. 12h. 49m. 15s. Epicentre 42°·0N. 142°·0E. (as on 1927 Aug. 29d.).

A = −·586, B = +·458, C = +·669; D = +·616, E = +·788; G = −·527, H = +·412, K = −·743.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	2·9	193	0 48	+ 3	1 27	+ 7	—	—
Ootomari		4·7	6	e 1 31	+18	(e 2 5)	− 4	e 2·1	—
Nagoya		7·8	212	—	—	e 3 14	−17	—	—
Irkutsk		27·2	305	e 5 53	− 7	e 10 45	0	16·8	19·0
Ekaterinburg		51·6	318	i 9 11	− 6	e 16 44	+ 5	24·8	30·4
Tashkent		52·6	297	—	—	e 16 45?	− 6	e 27·8	34·0
Kucino		63·2	323	—	—	—	—	e 34·4	—
Pulkovo		64·0	330	—	—	—	—	e 35·8	42·4
Baku		65·7	305	—	—	—	—	34·8	39·2
Copenhagen		73·4	334	—	—	—	—	37·8	40·6
De Bilt		78·8	335	—	—	—	—	e 41·8	—
Feldberg	N.	79·3	332	—	—	—	—	e 47·8	—
Uccle		80·1	335	—	—	—	—	e 41·8	—
Strasbourg		81·0	332	—	—	—	—	42·8	—
Kew	E.	81·0	339	—	—	—	—	e 44·8	—

Additional readings: Mizusawa SN = +1m.26s. Tashkent e = +20m.45s.? = SR_1 −11s. Copenhagen eE = +34m.3s.

Oct. 1d. Readings also at 4h. (Santiago, near Zagreb, near Sebastopol, Simferopol, and Yalta), 12h. and 13h. (La Paz), 14h. (Paris), 15h. (near Nagasaki and near Tacubaya), 17h. (La Paz), 20h. (near Osaka, Kobe, and Sumoto), 23h. (Frunse).

Oct. 2d. Readings at 0h. (Santiago), 1h. (La Paz), 3h. (near Taihoku), 4h. (Florissant), 5h. (Irkutsk, Tashkent, La Plata, near La Paz, and Sucre), 6h. (Sucre), 7h. (near Tacubaya and near Taihoku), 14h. (De Bilt, Uccle, Ravensburg, Besançon, Kew, Chur, Strasbourg, Zagreb, Zurich, Copenhagen, Ekaterinburg, Pulkovo, and Venice), 15h. (Irkutsk), 16h. (Mizusawa), 17h. (near Lick), 18h. (near La Paz and near Mizusawa), 19h. (La Paz, Manila, Florissant, Georgetown, Cincinnati, Victoria, Ottawa, Toronto, near Berkeley, Lick, and Tucson), 21h. (near Tacubaya), 22h. (Ksara, near Batavia, and Malabar), 23h. (Tucson and near Amboina).

Oct. 3d. 0h. 56m. 50s. Epicentre 39°·7N. 34°·0E. (adopted from the origin 39°·2N. 34°·8E. of 1928 July 5d.).

A = +·638, B = +·430, C = +·639; D = +·559, E = −·829; G = +·530, H = +·357, K = −·769.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Yalta		4·8	2	e 1 22	+ 8	(2 13)	+ 2	2·2	2·7
Sebastopol		4·9	356	e 1 21	+ 5	(e 2 9)	− 5	e 2·2	—
Simferopol		5·2	1	1 20	0	(2 14)	− 8	2·2	—
Theodosia		5·4	10	e 1 24	+ 1	2 19	− 9	2·5	2·6
Belgrade	E.	11·2	301	e 5 12	?S	(e 5 12)	+13	(e 6·0)	—
	N.	11·2	301	e 5 19	?S	(e 5 19)	+20	(e 6·0)	6·3
Baku		12·2	82	3 15	+13	5 51	+27	7·4	10·3
Budapest		13·3	311	7 26	?L	—	—	9·2	—
Zagreb		14·5	300	e 3 29	− 4	e 7 44	+84	e 8·6	—
Vienna		15·2	310	e 3 36	− 6	—	—	—	—
Rocca di Papa	E.	16·2	284	—	—	e 5 54	−66	e 9·4	10·7
	N.	16·2	284	—	—	e 7 6	+ 6	e 8·7	10·1
Kucino		16·3	8	—	—	e 6 40	−22	7·8	9·0
Venice		16·8	297	7 28	?S	(7 28)	+15	—	—
Florence		17·4	291	e 4 35	+25	—	—	—	—
Konigsberg		17·6	334	—	—	e 7 53	+22	e 12·2	13·2
Chur		19·1	300	e 4 26	− 4	e 7 56	− 8	—	—
Moncalieri		20·0	294	—	—	9 4	+41	11·6	16·1

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Pulkovo		20·2	354	e 4 36	− 7	e 8 18	− 9	10·7	14·5
Strasbourg		20·7	304	e 4 10?	−39	e 8 40	+ 2	11·2	—
Feldberg	N.	20·7	309	—	—	—	—	e 10·2	—
Lund		21·1	326	—	—	—	—	13·2	—
Hamburg		21·4	318	e 4 51	− 7	—	—	12·2	18·7
Copenhagen		21·4	325	e 4 52	− 6	8 44	− 9	13·0	—
Upsala		22·6	338	—	—	—	—	e 15·2	—
De Bilt		23·4	311	—	—	e 9 24	− 9	e 11·2	17·7
Uccle		23·4	308	—	—	e 9 10?	−23	e 11·2	14·4
Paris		24·1	303	—	—	—	—	e 13·2	16·2
Ekaterinburg		24·4	37	e 5 27	− 5	e 9 44	− 8	13·2	—
Tortosa	N.	25·4	283	—	—	—	—	e 12·2	15·3
Kew		26·3	308	e 7 34	?	e 10 22	− 6	12·2	—
Tashkent		26·7	75	e 4 56	−59	i 10 50	+15	e 15·2	18·7
Edinburgh		29·2	317	—	—	—	—	e 13·2	—
Granada		29·3	277	—	—	—	—	e 17·7	18·9
San Fernando	E.	31·5	277	—	—	—	—	—	18·3
Scoresby Sund		41·8	335	—	—	—	—	21·2	—
Irkutsk		48·4	50	—	—	—	—	e 29·2	—

Additional readings and notes: Yalta MN = +2·3m. Belgrade gives S as P and L as S. Zagreb eNW = +7m.35s. Vienna iN = +9m.25s. and +10m.37s. Venice S = +7m.57s. Konigsberg eE = +11m.50s. Moncalieri e = +6m.25s. De Bilt MN = +14·2m., MZ = +16·9m. Paris MN = +14·2m. Ekaterinburg i = +5m.28s. Tashkent e = +10m.29s. and +12m.34s. San Fernando MN = +18·5m.

Oct. 3d. Readings also at 1h. (Tucson), 6h. (Tucson, Victoria, near Puebla Tacubaya, and Vera Cruz), 9h. (near Amboina), 12h. (Tucson), 15h. (near Mizusawa), 22h. (Zurich), 23h. (near Amboina and near Santiago (3)).

Oct. 4d. 11h. 13m. 54s. Epicentre 39°·7N. 34°·0E. (as on 3d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Yalta		4·8	2	e 1 21	+ 7	2 15	+ 4	—	3·0
Sebastopol		4·9	356	1 19	+ 3	2 17	+ 3	—	2·5
Simferopol		5·2	1	1 23	+ 3	2 18	− 4	—	2·6
Theodosia		5·4	10	e 1 36	+13	2 34	+ 6	—	2·6
Ksara	N.	6·0	165	1 50	+18	3 44	+60	4·5	—
Belgrade	E.	11·2	301	—	—	e 4 54	− 5	e 6·0	6·3
Baku		12·2	82	3 16	+14	4 53	+29	7·4	10·3
Budapest		13·3	311	e 6 36	?S	(e 6 36)	+45	e 8·1	9·6
Zagreb		14·5	300	e 3 32	− 1	e 7 48	+88	e 8·6	—
Vienna		15·2	310	3 49	+ 7	—	—	e 8·1	11·1
Kucino		16·3	8	—	—	e 7 18	+16	8·3	9·6
Konigsberg		17·6	334	e 4 10	− 2	—	—	e 9·5	14·1
Innsbruck		18·0	302	4 6?	−11	—	—	—	—
Chur		19·1	300	e 4 23	− 7	e 8 6	+ 2	—	—
Zurich		19·8	301	e 10 10	?L	—	—	(e 10·2)	—
Moncalieri		20·0	294	e 8 19	?S	(e 8 19)	− 4	11·6	—
Pulkovo		20·2	354	4 45	+ 2	8 22	− 5	10·1	15·5
Strasbourg		20·7	304	e 5 6?	+17	—	—	12·1	—
Feldberg	N.	20·7	309	—	—	—	—	e 11·0	—
Lund		21·1	326	—	—	—	—	13·1	—
Copenhagen		21·4	325	e 4 54	− 4	8 48	− 5	13·0	15·0
Hamburg		21·4	318	e 4 57	− 1	e 8 50	− 3	e 12·1	15·2
Upsala		22·6	338	—	—	e 9 16	− 1	—	16·6
Uccle		23·4	308	e 6 6?	+45	e 9 25	− 8	e 11·1	—
De Bilt		23·4	311	e 5 19	− 2	9 25	− 8	e 11·1	17·7
Paris		24·1	303	—	—	e 9 36	−10	13·1	14·1
Ekaterinburg		24·4	37	i 5 29	− 3	i 9 49	− 3	13·1	19·1
Kew		26·3	308	—	—	e 10 30	+ 2	13·1	—
Tashkent		26·7	75	e 5 55	0	i 10 32	− 3	e 14·1	18·9
Stonyhurst		28·2	312	e 5 43	−27	—	—	—	22·1
Edinburgh		29·2	317	—	—	—	—	e 13·1	—
Granada		29·2	277	—	—	—	—	e 13·1	19·6
Irkutsk		48·4	50	—	—	—	—	e 29·1	—

Additional readings: Yalta MN = +3·2m. Konigsberg eN = +4m.17s., e = +13m.6s.? Strasbourg ePR$_1$? = +8m.6s.? Copenhagen MN = +17·3m. De Bilt MN = +13·3m., MZ = +17·0m. Irkutsk e = +19m.6s. = SR$_1$ − 30s.

Oct. 4d. 18h. 22m. 45s. Epicentre 6°·5N. 37°·0E.

(deduced by comparison with the epicentre 6°·0N. 37°·0E. of 1922 March 16d.).

A = +·793, B = +·598, C = +·113; D = +·602, E = −·799;
G = +·090, H = +·068, K = −·994.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Entebbe		7·9	215	2 20	+20	—	—	—	5·3
Helwan		24·0	348	5 26	− 2	9 45	+ 1	—	14·9
Ksara	N.	27·4	358	6 0	− 2	10 40	− 8	13·5	—
Tananarive	E.	27·4	158	e 6 5	+ 3	e 11 2	+14	e 12·9	17·2
	N.	27·4	158	e 6 5	+ 3	e 10 56	+ 8	e 14·1	17·8
Baku		35·8	18	7 14	− 6	12 50	−17	18·0	22·2
Bombay		37·0	68	e 7 34	+ 4	13 21	− 3	18·8	20·9
Yalta		38·1	359	e 13 52	?S	(e 13 52)	+13	—	—
Sebastopol		38·2	357	e 16 40	?SR_2	—	—	—	—
Simferopol		38·5	358	e 7 33	− 9	—	—	—	—
Theodosia		38·6	359	e 13 34	?S	(e 13 34)	−12	—	—
Kodaikanal		40·1	83	14 3	?S	(14 3)	− 5	21·4	22·2
Rocca di Papa		41·3	334	e 7 40	−25	—	—	e 20·2	38·6
Hyderabad		41·9	70	7 52	−18	14 10	−24	20·0	23·6
Colombo		42·5	87	8 6	− 9	14 31	−11	21·8	22·8
Algiers		43·3	321	—	—	e 17 59	?SR_1	e 23·2	25·2
Zagreb		43·3	340	e 8 17	− 3	e 14 52	0	e 17·9	—
Florence		43·6	333	8 0	−23	16 5	+69	—	—
Cape Town		44·0	203	—	—	15 27	+25	—	25·6
Budapest		44·2	345	e 8 15?	−12	15 0	− 5	28·2	31·2
Tashkent		45·1	35	i 8 23	−11	—	—	—	—
Dehra Dun		45·2	54	8 33	− 1	15 33	+15	21·6	30·8
Vienna		45·3	341	i 8 25	−10	i 15 14	− 5	e 26·2	35·2
Moncalieri		46·1	332	e 8 36	− 5	15 25	− 4	25·7	28·4
Alicante		46·3	320	e 9 1	+19	e 16 15	+43	e 23·2	34·3
Barcelona		46·7	325	—	—	—	—	e 24·8	32·4
Chur		46·7	335	e 8 42	− 3	e 15 34	− 3	—	—
Almeria		47·0	317	8 47	0	15 47	+ 6	22·9	29·2
Grenoble		47·3	331	e 8 31	−18	e 11 36	?PR_2	e 26·2	—
Tortosa	N.	47·3	323	e 8 36	−13	15 42	− 3	e 23·2	26·8
Ravensburg		47·5	335	—	—	—	—	e 19·2	—
Zurich		47·6	336	e 8 48	− 3	e 19 22	?SR_1	—	—
Granada		48·0	317	i 8 54	0	16 1	+ 7	24·4	30·8
Neuchatel		48·0	335	e 8 51	− 3	—	—	—	—
Malaga		48·4	317	e 9 31	+35	e 16 35	+36	26·2	33·1
Besançon		48·6	334	e 9 7	+ 9	16 3	+ 2	23·2	29·2
Strasbourg		48·8	336	8 57	− 2	e 16 4	0	22·2	38·3
Bagnères		48·8	325	e 12 15?	?	17 15?	?	44·2	—
Jena		49·1	338	e 8 59	− 2	e 16 15	+ 8	e 28·8	31·6
Frunse		49·2	37	e 8 58	− 3	—	—	23·2	—
Kucino		49·3	2	9 9	+ 7	16 21	+11	22·0	33·0
San Fernando	E.	49·5	315	—	—	—	—	—	29·4
Toledo		49·6	320	e 9 5	+ 1	e 16 26	+12	e 24·6	29·6
Feldberg	N.	49·8	338	e 9 6	0	e 16 14	− 2	e 19·7	31·8
Konigsberg		50·1	349	e 8 17	−51	e 16 18	− 2	e 24·2	32·2
Paris		51·4	332	e 9 21	+ 5	e 16 26	−10	27·2	30·2
Hamburg		51·9	340	e 9 21	+ 2	i 16 46	+ 3	e 25·2	29·8
Uccle		52·0	335	e 9 22	+ 2	e 16 46	+ 2	e 24·2	29·9
De Bilt		52·6	337	9 28	+ 4	16 55	+ 4	e 24·2	32·7
Lund		52·7	346	—	—	16 58	+ 6	25·2	—
Copenhagen		53·0	345	e 9 28	+ 2	e 16 58	+ 2	—	—
Pulkovo		53·5	357	9 31	+ 1	17 5	+ 2	26·2	32·2
Ekaterinburg		53·6	16	i 9 31	+ 1	e 16 52	−12	25·2	35·4
Kew		54·5	333	e 9 44	+ 8	17 23	+ 8	25·2	33·2
Oxford		55·2	333	—	—	i 17 49	+25	—	—
Upsala		55·4	350	—	—	e 17 25	− 1	e 31·2	38·6
Stonyhurst		57·1	334	e 10 2	+ 9	i 18 4	+17	27·2	—
Edinburgh		58·7	336	—	—	e 17 15?	−52	32·2	39·8
Dyce		59·2	337	—	—	—	—	28·2	42·8
Irkutsk		71·1	37	11 28	+ 4	e 20 28	−11	38·2	45·8
Zi-ka-wei	Z.	81·8	60	e 12 32	+ 3	—	—	53·7	58·0
Rio de Janeiro	E.	83·5	246	—	—	e 23 32	+29	e 38·2	—
Ottawa		100·9	320	—	—	e 24 57	[+29]	e 44·2	—
Sucre		103·7	251	16 13	+104	—	—	50·2	61·4

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toronto		104·0	319	—	—	25 15?	[+32]	—	—
Georgetown	z.	104·2	313	e 18 30	[+28]	e 24 42	[− 2]	e 49·4	66·1
La Paz		106·4	255	16 6	?	—	—	54·2	63·8
Cincinnati		109·4	315	—	—	e 27 15	− 8	50·2	55·2
Florissant		113·5	318	—	—	—	—	e 40·0	62·2
Victoria		122·5	345	—	—	—	—	71·3	79·7

Additional readings and notes: Ksara LE = +13·8m. Tananarive eE = +11m.21s. and +12m.8s. = SR_1 +6s. Rocca di Papa eLN = +23·2m. Zagreb e = +8m.27s. and +10m.7s. = PR_1 +6s. Tashkent iPR_1 = +9m.51s., iPS = +15m.10s., iSR_1 = +18m.4s. Dehra Dun readings are given for 19h. Vienna iE = +17m.46s., +18m.38s. = SR_1 +2s., +20m.8s. = SR_2 +2s. Moncalieri MN = +29·9m. Alicante MN = +33·6m. Barcelona MN = +31·4m. Almeria MZ = +32·1m. Tortosa ME = +36·4m. Granada PR_1 = +10m.57s., i = +15m.40s. and +20m.58s. = SR_2 +13s. Malaga MN = +33·2m. Besançon PR_1 = +11m.5s. Strasbourg PR_1 = +10m.51s., iPS = +16m.15s., SR_1 = +19m.51s., MZ = +39·2m. Jena eZ = +8m.15s. and +10m.59s. = PR_1 − 8s., eN = +11m.0s. = PR_1 − 7s., eSN = +19m.39s. = SR_1 − 10s., eSE = +19m.55s. = SR_1 +6s., eN = +22m.51s., eE = +23m.2s., MN = +36·4m., P and S are given as eZ and eN respectively. San Fernando MN = +31·4m. Toledo MNW = +27·7m. Feldberg eN = +11m.2s. = PR_1 − 12s. Konigsberg eN = +12m.43s. and +13m.17s., eN = +16m.54s., eLN = +20·2m., eLZ = +23·3m. Hamburg MN = +36·6m. Uccle ePR_1 = +11m.26s., eSR_1 = +20m.20s., MN = +29·7m. De Bilt PR_1 = +11m.30s., eE = +17m.4s., SR_1 = +20m.57s., eLN = +25·2m., MN = +29·8m., MZ = +36·2m. Copenhagen eE = +17m.9s. = PS − 11s., and +19m.15s.? = [S] +15s., SR_1 = +20m.15s.?, SR_2 = +23m.15s.? = SR_2 − 5s. Kew ePR_1Z = +11m.54s., eE = +17m.32s. = PS − 6s., SR_1EN = +21m.9s., LZ = +30·2m. Oxford eSR_1 = +21m.40s., e = +22m.58s., SR_2 = +24m.25s. Zi-ka-wei PR_1 = +15m.40s., Rio de Janeiro eN = +23m.35s. = PS − 15s., eLN = +39·6m. Ottawa eE = +27m.21s. = PS +5s., e = +32m.45s. = SR_1 +6s. Georgetown eZ = +29m.18s. Florissant iPR_1Z = +19m.45s., ePSE = +29m.28s.

Oct. 4d. Readings also at 4h. (La Paz, Sebastopol, Simferopol, and near Yalta), 12h. (Apia and Sucre), 14h. (Manila), 15h. (Toledo, near Almeria, and Granada), 21h. (near Tacubaya), 22h. (La Paz).

Oct. 5d. 6h. 58m. 24s. Epicentre 35°·7N. 140°·4E.

A = −·626, B = +·518, C = +·584; D = +·637, E = +·771; G = −·450, H = +·372, K = −·812.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		2·9	259	0 41	− 4	1 8	−12	—	1·7
Mizusawa	N.	3·5	9	0 55	0	1 37	0	—	—
Osaka		4·1	261	1 2	− 2	(1 57)	+ 4	2·0	1·6
Kobe		4·4	258	1 16	+ 8	1 53	− 8	2·1	3·1
Sumoto		4·7	254	e 1 19	+ 6	(i 2 9)	0	i 2·2	2·3

Additional readings: Nagoya P = +43s., MN = +1·3m., MZ = +1·5m. Osaka MN = +2·7m. Kobe MN = +3·2m.

Oct. 5d. Readings also at 1h. (near Amboina and near Mizusawa), 2h. (Rocca di Papa (4)), 3h. (Rocca di Papa (3), Florissant, and near Taihoku), 4h. (2) and 5h. (Rocca di Papa), 6h. (Rocca di Papa and Zurich), 7h. (Rocca di Papa (3) and near Hukuoka), 9h. (Suva), 11h. (Sucre, La Paz, and Lick), 12h., 13h., and 15h. (Rocca di Papa), 17h. (Ekaterinburg, Tashkent, Frunse, near Almeria, and Granada), 19h. (Rocca di Papa, Pulkovo, Ekaterinburg, Irkutsk, Almata, near Frunse, and Tashkent), 20h. (Irkutsk, Manila, and near Mizusawa), 21h. (Ekaterinburg and Tashkent).

Oct. 6d. Readings at 1h. (near Algiers and near Taihoku), 3h. and 4h. (near Irkutsk), 6h. (Rocca di Papa, Neuchatel, near Chur, and Zurich), 7h. (near Irkutsk), 13h. (near Almata, Frunse, and Tashkent), 14h. (near Granada, near Lick, and near Tananarive), 18h. (Ksara, Sucre, and near La Paz), 20h. (Ekaterinburg, Irkutsk, Tashkent, Zi-ka-wei, and near Tacubaya), 21h. (near Malabar), 22h. (near La Paz).

Oct. 7d. Readings at 2h. (near Tortosa (2)), 3h. (Tucson), 4h. (Baku and Tashkent), 5h. (Taihoku), 6h. (near Tacubaya), 9h. (Entebbe and Rocca di Papa), 11h. (Chicago, Florissant, Cincinnati, Georgetown, Ottawa, Toronto, Ekaterinburg, Irkutsk, and Wellington (2)), 12h. (Suva), 21h. (La Paz).

Oct. 8d. Readings at 1h. and 2h. (Florissant, Georgetown, Ottawa, Toronto, and Tucson), 7h. (near La Paz and Sucre), 11h. (Florissant and Uccle), 12h. (Almata, Frunse, Tashkent, and near Irkutsk), 13h. (Florissant), 15h. (Taihoku), 16h. (La Paz), 17h. (Sebastopol, Simferopol, Theodosia, and near Yalta), 19h. (near Tacubaya).

Oct. 9d. 3h. 1m. 0s. Epicentre 16°·2N. 97°·2W.

(as on 1928 Aug. 20d.).

A = −·120, B = −·953, C = +·279; D = −·992, E = +·125; G = −·035, H = −·277, K = −·960.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Puebla		3·0	341	(0 52)	+ 5	(1 22)	− 1	(1·4)	(1·6)
Vera Cruz		3·2	18	(1 4)	+14	—	—	(1·8)	(2·1)
Tacubaya		3·8	330	1 3	+ 4	(1 48)	+ 4	1·8	1·9
Manzanillo		7·4	293	(1 42)	−10	(3 1)	−20	(3·2)	(3·8)
Guadalajara		7·5	307	2 21	+27	3 43	+19	3·8	4·3
Merida		8·6	55	(1 45)	−25	(3 27)	−26	(3·6)	(3·9)
Chihuahua		14·9	328	(3 20)	−18	(6 7)	−23	(6·4)	(8·1)
Balboa Hts.	E.	18·6	111	4 27	+ 3	8 9	+16	8·2	8·6
	N.	18·6	111	4 29	+ 5	8 9	+16	8·3	8·7
Tucson	E.	20·3	325	i 4 47	+ 2	i 8 31	+ 2	i 10·4	12·8
	N.	20·3	325	i 4 47	+ 2	i 8 32	+ 3	i 10·4	10·9
Florissant	Z.	23·4	13	i 5 16	− 5	—	—	—	—
Port au Prince		23·8	81	i 5 21	− 5	i 9 48	+ 8	e 12·5	14·8
Cincinnati		25·5	23	i 5 40	− 3	i 10 3	−10	13·0	15·2
Chicago		26·9	16	i 4 59	−58	i 9 35	−64	e 13·0	21·2
	N.	26·9	16	i 4 59	−58	i 9 24	−75	12·0	18·1
Charlottesville		27·3	34	i 5 53	− 8	i 10 36	−10	14·9	—
Ann Arbor		28·5	21	i 6 6	− 7	i 11 18	+10	e 14·9	20·1
Georgetown	(E.)	28·7	34	i 6 10	− 5	i 10 57	−15	e 13·3	21·8
	N.	28·7	34	i 6 12	− 3	e 10 58	−14	e 13·4	22·7
Lick		30·2	320	e 6 20	−10	e 11 23	−14	e 14·6	—
Berkeley		31·0	320	i 6 28	−10	e 11 34	−17	i 14·8	18·2
Toronto	E.	31·3	26	i 6 26	−15	i 11 36	−20	—	22·1
	N.	31·3	26	i 6 27	−14	i 11 39	−17	14·5	23·9
Harvard	E.	34·2	36	i 6 29	−38	i 12 1	−42	e 14·6	—
Ottawa		34·3	28	i 6 58	− 9	i 12 28	−16	e 15·5	21·8
Spokane	E.	35·6	337	—	—	e 12 35	−29	e 16·7	17·1
	N.	35·6	337	—	—	i 12 40	−24	e 15·2	19·0
Saskatoon		36·7	350	i 7 18	−10	i 13 3	−17	e 17·2	20·5
Victoria		38·7	333	7 30	−14	13 35	−13	19·2	21·5
Halifax		40·1	39	i 7 41	−15	i 13 51	−17	e 19·4	25·8
La Paz	E.	43·5	139	i 8 18	− 4	i 14 47	− 8	—	25·0
	N.	43·5	139	i 8 17	− 5	i 14 52	− 3	21·5	23·6
Sucre		47·2	139	i 8 46	− 2	i 15 40	− 4	23·3	25·8
Sitka		49·9	335	9 7	+ 1	i 16 23	+ 5	i 25·9	28·6
Santiago		55·7	155	e 9 48	+ 4	17 40	+10	26·8	—
Honolulu T.H.	N.	57·3	286	i 9 57	+ 3	i 17 58	+ 8	24·0	30·3
La Plata		63·2	145	10 37	+ 4	19 6	+ 3	33·0	—
Azores		65·6	56	8 54	?	—	—	—	36·4
Rio de Janeiro	E.	65·7	127	i 11 0	+11	i 19 46	+13	33·1	33·4
	N.	65·7	127	i 11 0	+11	i 19 47	+14	33·1	38·4
Reykjavik		69·0	27	11 20	+ 9	20 52	?PS	34·0	45·7
Scoresby Sund		69·9	20	11 20	+ 4	20 32	+ 7	—	—
Edinburgh		78·9	35	12 13	+ 1	22 11	0	38·0	46·7
Dyce		79·1	34	e 12 16	+ 2	i 22 44	? Σ	28·0	43·5
Bidston		79·4	38	12 20	+ 5	22 22	+ 6	36·9	53·3
Apia		79·6	254	e 12 46	+29	23 12	? Σ	38·7	41·6
Stonyhurst		79·8	38	i 12 18	0	i 22 28	+ 7	37·5	48·7
Oxford	E.	80·9	40	i 12 27	+ 3	22 40	+ 6	e 31·0	43·5
	N.	80·9	40	i 12 34	+10	i 22 43	+ 9	e 31·0	43·3

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
San Fernando		81·2	55	i 12 33	+ 7	22 59	+22	37·8	43·8
Kew	E.	81·6	30	i 12 29	+ 1	22 50	+ 8	39·0	44·8
	N.	81·6	40	i 12 29	+ 1	i 23 1	+19	35·0	49·4
	Z.	81·6	40	i 12 29	+ 1	i 22 57	+15	40·0	45·3
Bergen		82·0	29	12 40	+10	22 55	+ 9	26·5	44·0
Toledo		82·1	51	i 12 30	− 1	i 22 55	+ 8	e 38·8	42·3
Malaga		82·5	54	12 53	+20	23 19	+27	28·4	44·8
Le Mans		82·8	43	12 0	−35	22 40	−15	38·0	45·5
Granada		83·1	54	i 12 37	0	—	—	34·3	43·8
Almeria		84·1	54	12 40	− 3	i 23 7	− 2	34·0	47·9
Paris		84·1	41	i 12 42	− 1	i 23 15	+ 6	37·0	46·0
Bagnères		84·4	47	i 12 48	+ 4	23 39	+27	39·0	43·3
De Bilt		84·6	37	12 45	− 1	e 23 19	+ 4	e 40·0	51·0
Uccle		84·6	39	i 12 45	− 1	i 23 20	+ 5	e 39·0	49·1
Alicante		85·1	51	i 12 55	+ 6	i 23 27	+ 7	e 37·6	49·4
Tortosa	E.	85·2	49	12 47	− 2	23 21	0	36·5	52·0
	N.	85·2	49	12 48	− 1	23 21	0	36·7	46·9
Puy de Dôme		85·3	44	—	—	—	—	44·0	—
Barcelona		86·1	48	12 53	− 1	i 23 26	− 5	35·9	45·5
Besançon		86·8	42	i 13 1	+ 3	i 23 24	−15	37·0	47·0
Hamburg		86·8	35	i 12 56	− 2	23 33	− 6	e 41·0	55·0
Feldberg		87·2	39	12 59	− 1	23 40	− 3	—	48·7
Copenhagen		87·2	32	12 58	− 2	i 23 38	− 5	41·3	46·3
Grenoble		87·3	44	e 12 50	−11	i 22 18	−86	36·0	46·3
Neuchatel		87·4	43	i 13 1	0	e 23 23	−22	—	—
Strasbourg		87·4	40	i 12 59	− 2	i 23 41	− 4	39·0	51·5
Lund		87·6	32	13 2	− 1	23 42	− 6	41·0	—
Upsala		87·8	27	e 12 55	− 9	23 29	−21	e 43·0	50·6
Marseilles		87·8	45	i 13 21	+17	i 24 9	+19	39·0	—
Algiers		88·3	51	13 2	− 5	23 39	−16	41·0	52·5
Hohenheim		88·3	39	e 13 4	− 3	23 42	−13	e 43·0	52·6
Zurich		88·4	42	e 13 5	− 2	e 23 46	−10	—	—
Moncalieri		88·7	44	13 7	− 2	23 13	[− 7]	30·1	54·0
Jena		88·8	37	e 13 6	− 3	i 23 39	[+18]	e 35·0	54·0
	Z.	88·8	37	e 13 0	− 9	e 24 0	− 1	e 37·0	54·0
Ravensburg		88·8	40	13 4	− 5	23 42	[+21]	e 42·0	55·0
Potsdam		89·0	35	i 13 11	+ 1	23 37	[+15]	42·2	56·0
Chur		89·2	42	i 13 7	− 4	i 23 47	[+24]	—	—
Suva	N.	89·9	251	i 13 30	+15	i 24 18	+ 5	i 41·5	46·6
Innsbruck		90·2	40	13 12	− 5	24 15	− 1	36·2	48·6
Helsingfors		90·7	25	i 13 13	− 7	i 23 57	? Σ	41·0	—
Florence		91·5	44	13 15	− 9	24 0	? Σ	44·0	48·2
Venice		91·6	40	13 21	− 4	23 57	[+19]	42·5	48·7
Konigsberg		91·7	31	e 13 23	− 2	i 24 58	+26	e 38·5	56·0
Laibach		92·6	40	e 13 19	−11	—	—	e 34·0	45·6
Vienna		92·7	37	e 13 22	− 9	24 10	? Σ	e 35·5	54·0
Graz		92·8	38	i 13 34	+ 3	i 24 22	? Σ	42·0	49·1
Pulkovo		93·0	24	i 13 25	− 7	—	—	42·0	48·7
Rocca di Papa		93·3	45	e 13 18	−16	i 24 7	[+19]	e 45·6	51·5
Zagreb		93·6	40	e 13 31	− 5	e 24 5	[+15]	e 45·8	56·4
Budapest		94·7	37	13 38	− 4	24 23	[+28]	43·0	55·0
Naples	N.	94·7	45	e 13 22	−20	e 24 17	[+22]	45·0	57·0
Pompeii		95·0	45	e 13 30	−13	e 24 20	[+23]	44·0	51·0
Lemberg	E.	96·2	35	e 12 36	−74	e 24 42	? Σ	e 47·7	58·9
	N.	96·2	35	e 12 0	−110	e 24 6	[+ 3]	e 47·4	59·6
Belgrade	E.	96·8	40	e 13 37	−16	e 24 30	[+23]	53·5	58·8
	N.	96·8	40	e 13 39	−14	e 24 31	[+24]	52·3	—
Ootomari		97·3	325	e 21 42	?PR_3	e 31 32	?SR_1	36·7	54·5
Kucino		98·5	25	i 14 6	+ 3	24 48	[+32]	45·8	54·7
Wellington	E.	99·2	230	i 13 25	−41	i 24 21	[+ 1]	e 45·8	50·8
	N.	99·2	230	i 13 21	−45	i 24 21	[+ 1]	44·9	52·4
Christchurch		101·2	228	24 54	?S	(24 54)	[+24]	46·5	56·6
Sebastopol		104·5	35	—	—	25 5	[+20]	—	—
Ekaterinburg		104·6	13	i 14 21	−11	i 24 44	[− 1]	45·0	53·8
Simferopol		104·6	35	—	—	25 3	[+18]	e 68·5	—
Yalta		104·9	34	—	—	e 24 16	[−31]	e 70·2	—
Theodosia		105·1	33	e 14 30	− 5	25 6	[+18]	—	—
Osaka		108·7	316	17 26	?	29 13	?PS	55·6	63·7
Kobe		108·9	316	e 18 41	?PR_1	e 28 33	?PS	e 51·6	65·1
Irkutsk		109·0	346	i 14 38	−15	25 6	[0]	56·0	65·6
Sumoto		109·3	315	—	—	e 45 14	?	e 64·6	—
Helwan		112·3	46	14 54	−14	i 29 5	?PS	—	66·6
Hukuoka		112·6	318	e 19 32	?PR_1	e 29 21	?PS	—	64·8
Ksara	E.	112·9	40	19 33	?PR_1	—	—	54·0	—

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki		113·6	318	e 19 42	?PR_1	e 27 30	−29	e 28·6	62·4
Baku		115·7	27	i 15 11	−13	—	—	—	—
Riverview		116·7	240	e 18 51	[+ 9]	i 27 8	? Σ	e 53·8	62·4
Sydney	E.	116·7	240	19 42	?PR_1	25 42	[+ 8]	59·1	63·0
Zi-ka-wei		119·7	322	i 18 56	[+ 5]	—	—	65·7	67·8
Cape Town		120·0	120	—	—	28 11	−38	—	68·0
Almata		120·3	4	e 19 26	[+33]	—	—	45·5	—
Frunse		120·4	6	e 19 12	[+19]	—	—	40·5	—
Tashkent		121·1	11	15 33	−15	26 6	[+17]	—	63·0
Melbourne		121·7	234	i 20 29	?PR_1	i 26 8	[+18]	e 56·0	57·3
Taihoku	E.	124·1	317	—	—	e 29 0?	−20	—	—
Adelaide		127·0	239	e 19 48	[+37]	i 33 10?	?	i 59·4	80·0
Entebbe		127·7	77	e 19 15	[+ 2]	31 30	?PS	61·0	71·8
Johannesburg		128·3	111	34 0?	?	—	—	—	—
Hong Kong		130·7	320	19 30	[+10]	—	—	e 58·0	73·5
Manila		131·3	307	e 19 25	[+ 3]	—	—	i 65·0	75·0
Dehra Dun		133·2	5	22 0	?PR_1	28 36	? Σ	34·1	77·1
Amboina		133·7	280	i 19 35	[+ 8]	—	—	e 44·0	74·0
Phu-Lien		136·3	326	e 18 0	[−93]	—	—	—	76·1
Calcutta	N.	140·9	351	20 10	[+29]	35 50	?	—	—
Bombay		143·5	15	19 46	[0]	33 11	?	69·6	89·3
Hyderabad		146·1	7	19 52	[+ 2]	—	—	55·9	79·1
Perth		146·2	235	19 45	[− 5]	49 40	?	70·0	—
Tananarive		146·3	98	i 19 52	[+ 2]	26 49	[+14]	70·3	87·6
Kodaikanal		153·0	12	20 48	[+48]	—	—	50·1	101·4
Malabar		154·2	287	i 20 5	[+ 4]	—	—	43·0	—
Batavia	Z.	154·4	290	i 20 2	[+ 1]	—	—	44·0	95·0
Colombo		156·7	7	—	—	—	—	—	97·0

Additional readings and notes: Puebla readings have been *diminished* by 1m. Vera Cruz readings have been *diminished* by 2m. Manzanillo readings have been *diminished* by 8m. Merida and Chihuahua readings have been *increased* by 1m. Tucson iN = +5m.5s., iE = +5m.36s. Florissant iPEN = +5m.17s. Cincinnati iPR_1 = +6m.12s., iPR_2 = +6m.30s., iP_cPE = +9m.0s., iSR_1E = +11m.11s., iSR_2E = +11m.40s., iP_cS = +12m.44s. Chicago iPR_1E = +5m.30s., iN = +6m.33s. Charlottesville iPE = +5m.54s., SR_1N = +13m.0s. Ann Arbor eLN = +14·5m., MN = +23·4m.; T_e = 3h.0m.24s. Georgetown PR_1EN = +6m.54s., PR_2E = +7m.5s., SR_1N = +12m.15s., SR_1E = +12m.23s., SR_2N = +12m.25s., SR_2E = +12m.34s., SR_2E = +12m.45s., the PZ is entered as E and PEN as N. Lick iPN = ePZ = +6m.22s., iEN = +6m.28s., iE = +7m.30s., iSN = +11m.27s., eZ = +11m.58s., eLN = +14·9m. Berkeley iSN = +11m.37s., iN = +11m.47s., iE = +11m.50s., eZ = +13m.51s., eN = +13m.56s., iE = +14m.0s., iZ = +17m.53s.; epicentre 15°N. 97°W. Harvard iE = +8m.59s., iSR_1E = +14m.6s.; T_e = 3h.0m.30s. Ottawa iPR_2N = +8m.2s., iSR_1 = +14m.4s., iSR_2E = +14m.30s., MN = +24·0m.; T_e = 3h.1m.2s. Spokane iSR_1N = +12m.42s. Saskatoon ePR_2N = +8m.42s. = PR_1 − 1s., eSR_1N = +15m.0s., i = +15m.57s., MN = +19·8m.; T_e = 3h.1m.7s. Victoria PN = +7m.35s., T_eE = 3h.0m.50s., T_eN = 3h.1m.1s. Halifax ePR_2 = +9m.15s. = PR_1 − 8s., eSR_2 = +17m.0s., MN = +29·7m.; T_e = 3h.0m.54s. La Paz iPR_1 = +9m.57s., iE = +10m.27s., PR_2N = +10m.30s., SR_1E = +18m.5s., SR_1N = +18m.7s., SR_2E = +19m.30s. Sucre PR_1 = +10m.37s., PR_2 = +11m.25s., i = +16m.48s., SR_1 = +18m.43s. Sitka ePR_1E = iPR_1N = +11m.7s., iPR_2N = +11m.48s., iSR_1N = +20m.22s., iSR_1E = +20m.23s., eSR_2E = +21m.24s., MN = +28·1m. Honolulu T.H. iPR_1N = +11m.9s., ePR_2E = +14m.54s., iE = +19m.50s. = [S] +16s., eSR_1N = +21m.34s., LE = +25·7m. Reykjavik PS? = +20m.33s. Scoresby Sund +14m.0s. = PR_1 − 25s. +15m.50s. = PR_2 − 10s. Edinburgh PR_1 = +15m.18s. Dyce PR_1 = +15m.27s. Apia e = +13m.17s., SR_1? = +28m.11s.; T_e = 3h.1m.10s. Stonyhurst PR_1 = +15m.23s., PR_2 = +17m.18s., SR_1 = +27m.46s., SR_2 = +32m.18s. Oxford PR_1E = +15m.46s., PR_1N = +16m.20s., eE = +18m.53s. = PR_2 − 1s. San Fernando SR_2 = +32m.18s., MN = +45·5m. Kew PR_1 = +15m.37s., PSZ = +23m.35s., iSR_1E = +27m.32s., iSR_2E = +32m.33s., eN = +34m.0s. = SR_2 − 8s. Bergen PR_1 = +16m.0s. Toledo MZ = +43·0m., MNW = +46·7m. Malaga iP = +12m.55s., MZ = +44·5m., MN = +46·3m. Granada PR_1 = +15m.46s., i = +16m.1s. = PR_1 − 14s., +17m.57s. = PR_2 − 18s., and +24m.12s. Almeria MN = +47·0m. Paris PR_1 = +16m.5s., MN = +44·0m. Bagnères PR_1 = +15m.54s. De Bilt MN = +47·5m., MZ = +51·2m. Uccle iPR_1 = +16m.0s., i = +24m.14s. = PS + 13s., MN = +46·9m. Alicante MN = +48·2m., MZ = +51·0m. Puy de Dôme iPR_2? = +18m.25s., i = +27m.23s., iSR_1? = +28m.21s.

Continued on next page.

Barcelona $PR_1 = +16m.17s.$, $PR_2 = +18m.5s.$, $PS = +24m.39s.$, $MN = +50{\cdot}0m.$ Besançon $PR_1 = +16m.21s.$, $PS = +24m.35s.$ Hamburg $iPR_1Z = +16m.16s.$, $PSE = +24m.44s.$, $eSR_1E = +29m.16s.$, $SR = +34m.6s.$, $MN = +48{\cdot}6m.$, $MZ = +53{\cdot}7m.$ Feldberg $iPR_1N = +16m.10s.$, $ePR_1E = +16m.24s.$, $eN = +22m.38s.$, $eE = +23m.3s. = [S] - 7s.$, $iE = +24m.50s. = PS + 17s.$, $MN = +50{\cdot}0m.$ Copenhagen $PR_1 = +16m.19s.$, $PR_2 = +18m.24s.$, $eE = +20m.0s. = PR_3 - 12s.$, $S = +24m.16s.$, $PS = +24m.50s.$, $iSR_1E = +29m.17s.$, $SR_2 = +33m.0s.?$, $MZ = +47{\cdot}4m.$, $MN = +53{\cdot}6m.$ Grenoble $PR_1 = +16m.31s.$, $e? = +19m.0s. = PR_2 + 3s.$ Strasbourg $iPR_1 = +16m.25s.$, $iPS = +24m.45s.$, $SR_1 = +29m.51s.$, $SR_2 = +35m.32s.$, $MZ = +56{\cdot}0m.$, $MN = +60{\cdot}0m.$ Lund $SN? = +24m.1s.$, $PS = +24m.54s.$, $SR_1 = +29m.24s.$ Upsala $PR_1 = +16m.23s.$, $MN = +50{\cdot}4m.$ Marseilles $PR_1 = +17m.9s.$, $iPS = +25m.10s.$ Algiers $MN = +46{\cdot}0m.$ Hohenheim $PR_1 = +16m.35s.$, $MN = +53{\cdot}4m.$ Moncalieri $MN = +52{\cdot}6m.$ Jena $iPZ = +13m.7s.$, $ePR_1Z = +16m.22s.$, $ePR_1E = +16m.31s.$, $iPR_1Z = +16m.33s.$, $iPR_1EN = +16m.37s.$, $iE = +18m.39s.$, $iPSN = +25m.7s.$, $ePSE = +25m.8s.$, $iPSZ = +25m.18s.$, $eE = +26m.31s.$, $eN = +29m.18s.$, $eZ = +30m.30s.$, $eE = +31m.0s.$ Ravensburg $PR_1 = +16m.36s.$, $PS = +24m.53s.$, $PPS = +25m.41s.$, $e = +27m.30s.$, $i = +28m.47s.$, $SR_1 = +30m.21s.$, $MN = +55{\cdot}6m.$ Potsdam $i = +17m.0s. = PR_1 + 0s.$, $+24m.27s.$ and $+24m.35s. = PS - 20s.$, $MN = +50{\cdot}7m.$ Suva $PR_1N = +17m.6s.$, $iSR_1N = +30m.30s.$, $SR_2N = +34m.24s.$; $T_0 = 3h.1m.24s.$ Innsbruck $iPNW = +13m.14s.$, $PR_1 = +16m.48s.$, $PR_2NE? = +19m.12s.$, $S_0P_0S = +23m.48s.$, $PS = +25m.0s.?$, $PPSNE = +25m.30s.$, $SR_1?NE = +31m.36s.$ Konigsberg $eE = +13m.24s.$, $iPR_1E = +16m.58s.$, $iPR_1N = +17m.1s.$, $eS_0P_0S = +24m.2s.$, $eS_0P_0SN = +24m.6s.$, $iPSE = +25m.38s.$, $iPPSN = +26m.4s.$, $iPPSE = +26m.5s.$, $iSR_1E = +30m.36s.$, $iSR_2E? = +34m.16s.$, $MN = +53{\cdot}0m.$; $T_0 = 3h.1m.20s.$ Laibach $e = +16m.31s.$ and $+17m.9s.$, $i = +25m.53s. = PS + 15s.$ Vienna $iPZ = +13m.25s.$, $iN = +14m.47s.$, $iZ = +15m.49s.$, $iE = +16m.20s.$, $PR_1 = +17m.6s.$, $S_0P_0S = +23m.55s.$, $PS = +25m.10s.$, $PPS = +26m.4s.$, $SR_1 = +31m.24s.$, $iN = +32m.21s.$, $SR_2? = +37m.23s. = SR_2 - 31s.$ Graz $iPR_1 = +9m.30s.$, $iPS = +25m.16s.$, $i = +26m.7s.$, $MN = +59{\cdot}1m.$ Pulkovo $iPR_1 = +16m.42s.$, $S_0P_0P_0S = +23m.59s.$ Rocca di Papa $iP = +13m.27s.$, $PR_1 = +17m.27s.$, $eLN = +45{\cdot}5m.$, $MN = +49{\cdot}4m.$ Zagreb $eNE = +13m.44s.$ and $+16m.33s.$, $iPR_1 = +17m.14s.$, $eNE = +23m.27s.$, $+24m.20s.$, and $+24m.51s.$, $iPS = +25m.14s.$, $eNE = +25m.48s.$, $iPPSNW = +26m.8s.$, $iNE = +27m.8s.$, $eNE = +28m.14s.$, $e = +29m.26s.$, $eSR_1 = +30m.54s.$, $eSR_2 = +34m.30s.$, $eNE = +32m.35s.$, $eLNE = +38{\cdot}4m.$, $MNW = +60{\cdot}1m.$ Budapest $PR_1 = +17m.31s.$, $i = +26m.12s. = PS + 8s.$, $MN = +53{\cdot}0m.$ Kucino $iPR_1 = +18m.0s.$, $PS = +27m.6s.$ Wellington $iPR_1E = +18m.0s.$, $[S]N = +23m.38s.$, $[S]E = +23m.42s.$, $SR_2E = +35m.18s.$; $T_0N = 3h.1m.3s.$, $T_0E = 3h.1m.11s.$ Christchurch $S? = +33m.48s.$ Ekaterinburg $iP' = +18m.5s.$ $iPR_1 = +18m.41s.$ Osaka $MN = +85{\cdot}7m.$ Kobe $MN = +63{\cdot}8m.$ Irkutsk $iPR_1 = +18m.58s.$, $PS = +28m.28s.$ Ksara $PR_1E = +23m.10s.$, $PR_2E = +25m.40s.$, $PR_1E = +26m.27s.$, $PSE? = +29m.18s.$, $PPSE? = +30m.42s.$, $SR_2E = +41m.11s.$, $SR_1E = +45m.0s.$; $T_0 = 3h.1m.52s.$ Nagasaki $MN = +74{\cdot}5m.$ Baku $PR_1 = +19m.58s.$, $PR_2 = +22m.30s.$, $PS = +29m.50s.$ Riverview $iP' = +20m.9s. = PR_1 + 7s.$, $iPR_1 = +21m.4s.$, $iPR_2 = +25m.54s. = [S] + 20s.$, $iPS = +29m.56s.$, $i = +30m.3s.$, $P_0P_0P_0P = +30m.33s.$, $PPS = +30m.56s.$, $PPPS = +31m.25s.$, $SR_1 = +36m.52s.$, $SR_2 = +41m.9s.$, $SR_3 = +45m.1s.$, $MN = +60{\cdot}6m.$, $MZ = +62{\cdot}1m.$ Zi-ka-wei $iZ = +19m.0s.$ and $+28m.16s.$, $MN = +68{\cdot}2m.$, $MZ = +74{\cdot}0m.$ Sydney $SE = +54m.12s.$ Cape Town $PR_1 = +20m.18s.$ Tashkent $iP' = +19m.5s.$, $iPR_1 = +20m.17s.$ Melbourne $i = +22m.12s.$, $+30m.15s.$, $+37m.30s. = SR_1 + 22s.$, and $+41m.55s.$ Adelaide $i = +22m.30s.$ and $+38m.21s. = SR_1 + 7s.$, $iSR_1 = +41m.8s.$, $i = +54m.10s.$, $MN = +66{\cdot}2m.$ Entebbe $PR_1 = +21m.15s.$ Hong Kong $PR_1 = +21m.30s.$, $SR_1 = +39m.9s.$ Manila $eP'N = +22m.25s.$, $eP'E = +22m.29s.$, $iPR_1N = +25m.0s. = PR_2 - 13s.$, $iPR_2E = +27m.22s. = PR_3 - 19s.$, $PSN = +35m.15s.$, $PSE = +35m.18s.$, $PPSEN = +36m.40s.$, $iSR_2E = +47m.26s.$, $iSR_2N = +48m.0s.$, $iLN = +65{\cdot}6m.$, $MN = +75{\cdot}5m.$ Amboina $iE = +19m.44s.$, $i = +31m.54s.$, and $+34m.46s.$ Phu-Lien $MN = +95{\cdot}2m.$ Perth $P = +19m.55s. = [P] + 5s.$, $PR_1 = +35m.25s.$, $PR_2 = +42m.27s. = PR_1 + 21s.$, $PR_3 = +43m.5s.$, $SR_1 = +56m.30s.$, $SR_2 = +61m.15s.$ Tananarive $eE = +20m.34s.$, $eN = +20m.40s.$, $PR_1 = +23m.1s.$, $S_0P_0P = +23m.33s.$, $eN = +24m.31s.$, and $+27m.7s.$, $S_0P_0P_0S = +30m.4s.$, $PS_0P_0S = +33m.41s.$, $PPS = +36m.22s.$, $PPPS = +37m.37s.$, $iSR_1 = +42m.28s.$, $MN = +87{\cdot}4m.$ Kodaikanal $L = +98{\cdot}0m.$ Batavia $iE = +20m.8s. = [P] + 7s.$, $iZ = +20m.11s. = [P] + 10s.$, $i = +20m.22s.$, $iZ = +20m.55s.$, $iN = +21m.8s.$

Oct. 9d. 14h. 36m. 50s. Epicentre 16°·0S. 163°·5E.

A = −·922, B = +·273, C = −·276; D = +·284, E = +·959
G = +·264, H = −·078, K = −·961.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	N.	14·4	100	i 3 34	+ 2	i 6 4	−14	—	7·7
Riverview		21·0	210	i 6 3	?	i 9 1	+17	e 10·3	12·4
Wellington	E.	27·1	161	—	—	i 9 36	−67	e 12·5	14·2
	N.	27·1	161	—	—	i 8 58	−105	—	15·6
Melbourne		27·2	213	—	—	i 10 42	− 3	i 14·2	17·2
Adelaide		29·2	225	—	—	—	—	i 13·9	17·6
Perth		46·0	241	21 10?	?L	—	—	(21·2)	—
Irkutsk		85·3	328	e 12 50	0	e 23 23	+ 1	e 40·2	—
Tashkent		103·6	310	—	—	e 23 44	?PR,	—	62·0
Baku		118·1	307	—	—	e 26 22	?	54·2	—
Toronto		120·5	47	—	—	—	—	57·2	—
Georgetown	Z.	122·7	52	—	—	—	—	e 59·6	73·6
Ottawa		122·8	45	—	—	e 37 28	SR,	e 58·2	—
Copenhagen		134·6	336	—	—	—	—	65·2	—
De Bilt		140·0	339	—	—	—	—	e 76·2	—
Feldberg	N.	140·3	335	—	—	—	—	e 76·2	85·8
Strasbourg		141·9	334	i 19 38	[− 5]	—	—	—	—
San Fernando	E.	157·6	338	—	—	—	—	—	96·0

Additional readings: Riverview iS = +9m.10s., MN = +11·9m. Tashkent e = +26m.46s. =S +17s. Baku e = +38m.23s. Ottawa e = +50m.10s.? Copenhagen L = +86·2m. San Fernando MN = +94·8m.

Oct. 9d. Readings also at 0h. (near Tacubaya), 2h. (Phu-Lien), 4h. (Puebla and near Vera Cruz), 5h. (near Vera Cruz), 7h. (Taihoku), 8h. (near Algiers), 11h. (near Puebla and Vera Cruz), 12h. (Tucson), 16h. (near Tashkent), 17h. (near Algiers), 20h. (near Zagreb), 21h. (La Paz), 22h. (near Matuyama, Nagasaki, and Hukuoka).

Oct. 10d. 20h. 36m. 30s. Epicentre 13°·0N. 144°·5E.

A = −·793, B = +·566, C = +·225; D = +·581, E = +·814;
G = −·183, H = +·131, K = −·974.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		23·0	277	e 5 23	+ 6	e 9 43	+18	i 12·9	14·7
Osaka		23·1	341	4 55	−23	(9 44)	+17	9·7	11·1
Kobe		23·3	340	e 5 15	− 5	e 9 50	+19	e 13·5	—
Hong Kong		30·3	293	—	—	e 11 15	−24	e 13·8	14·2
Phu-Lien		37·0	287	7 30?	0	—	—	—	—
Riverview		47·3	174	e 7 3	−106	—	—	e 21·8	26·3
Irkutsk		50·7	330	e 9 5	− 6	—	—	24·5	—
Melbourne		50·8	180	—	—	i 16 3	−26	—	28·3
Perth		52·6	211	14 30?	?	—	—	—	—
Tashkent		70·4	310	i 11 20	+ 1	i 20 31	0	33·5	43·8
Ekaterinburg		75·8	326	i 11 54	0	21 36	+ 1	34·5	49·3
Baku		85·0	311	e 12 43	− 5	23 7	[+11]	44·5	59·4
Kucino		88·3	328	—	—	23 27	[+10]	41·5	54·9
Pulkovo		90·4	334	—	—	—	—	49·5	58·4
Copenhagen		100·5	336	—	—	—	—	51·5	57·1
Feldberg	N.	105·9	333	—	—	—	—	e 43·5	60·5
De Bilt		106·0	335	—	—	—	—	e 55·5	—
Uccle		107·3	335	—	—	—	—	e 55·5	—
Strasbourg		107·5	331	—	—	—	—	e 66·5	—
Kew		108·6	338	—	—	—	—	e 55·5	—
Cincinnati	Z.	110·7	39	—	—	—	—	e 56·0	—
Toronto		110·7	32	—	—	—	—	54·5	—
Ottawa		111·2	29	—	—	—	—	e 53·5	—
Georgetown	Z.	115·2	35	—	—	—	—	e 54·6	—
Granada		121·6	330	—	—	—	—	e 61·5	76·5
Sucre		150·8	106	19 58	[+ 1]	—	—	—	—

Additional readings: Manila eSN = +10m.14s. =SR, +0s. Osaka MN = +12·7m. Kobe eSN = +9m.58s. Riverview e? = +7m.47s., e = +18m.12s., MN = +26·6m. Irkutsk e = +15m.31s. Kucino PPS = +25m.23s., eSR, = +30m.45s. Cincinnati LZ = +62·5m. Ottawa LN = +65·5m.

Oct. 10d. Readings also at 0h. (Taihoku), 6h. (near Tacubaya), 9h. (near Tananarive and near Tacubaya (2)), 10h. (Suva, near Tacubaya, and Vera Cruz, Almata, Frunse, and near Tashkent), 12h. (Ekaterinburg, Irkutsk, and Tashkent), 13h. (Baku), 14h. (near Tacubaya), 15h. (Ekaterinburg and near Tacubaya), 16h. (near Batavia and Malabar), 17h. and 20h. (near Tacubaya), 22h. (Lick).

Oct. 11d. 23h. 32m. 28s. (I) } Epicentre 26°·8N. 172°·0E.
23h. 44m. 16s. (II) } (given by the Russian stations).

A = −·884, B = +·124, C = +·451; D = +·139, E = +·990;
G = −·447, H = +·063, K = −·893.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
II	Osaka	32·1	294	7 34	+46	—	—	10·1	—
I	Manila	49·0	269	—	—	e 14 32?	−94	—	—
II	Hong Kong	52·4	279	—	—	—	—	—	28·6
II	Victoria	53·8	48	21 45	?SR_1	—	—	29·6	37·8
I	Irkutsk	55·7	318	e 8 56	−48	e 18 50	[−32]	30·5	33·3
II		55·7	318	9 50	+ 6	—	—	—	—
II	Phu-Lien	59·5	280	—	—	18 44	+27	—	—
I	Ekaterinburg	78·5	330	12 0	−10	21 52	−14	29·5	37·6
II		78·5	330	12 2	− 8	—	—	29·7	36·8
II	Florissant	79·0	52	i 12 35	+22	e 24 23	+131	39·8	—
I	Tashkent	81·4	313	i 12 28	+ 1	e 22 36	− 3	29·5	39·4
II		81·4	313	i 12 28	+ 1	—	—	32·7	39·4
I	Scoresby Sund	82·2	5	—	—	—	—	33·5	—
I	Ottawa	85·2	41	—	—	—	—	e 36·5	—
II		85·2	41	—	—	—	—	e 43·7	—
I	Pulkovo	87·9	342	i 13 9	+ 5	—	—	37·5	58·1
II		87·9	342	13 11	+ 7	—	—	—	—
II	Georgetown Z.	88·0	47	—	—	e 48 44?	?	e 52·1	—
I	Kucino	88·7	336	—	—	e 21 38	?	36·5	55·7
II		88·7	336	13 4	− 5	e 22 31	?	—	—
I	Baku	94·0	320	i 13 46	+ 8	e 23 51	[− 1]	38·2	47·5
II		94·0	320	i 13 48	+10	e 23 53	[+ 1]	38·4	47·5
I	Lund	95·5	349	—	—	—	—	51·5	—
I	Copenhagen	95·6	349	e 13 32?	−15	—	—	e 37·5	60·0
I	De Bilt N.	100·2	352	—	—	—	—	e 54·5	—
I	Kew	101·4	356	—	—	—	—	e 47·5	—
I	Feldberg N.	101·6	350	—	—	—	—	e 33·0	62·5
I	Strasbourg	103·3	350	—	—	—	—	e 52·5	—
I	Paris	103·8	354	—	—	—	—	e 56·5	—
II		103·8	354	—	—	—	—	54·7	—
I	Moncalieri	106·8	349	—	—	—	—	52·2	—
I	Rocca di Papa	108·8	345	—	—	—	—	43·0	44·9
I	Granada	115·9	356	—	—	—	—	e 55·5	59·5

Additional readings: Irkutsk I e = +14m.21s. Ekaterinburg II i = +12m.4s.
Kucino I e = +29m.6s. and +33m.24s. Copenhagen I eLN = +41·5m.

Oct. 11d. Readings also at 1h. (near Tacubaya), 4h. (Ekaterinburg, Tashkent, Ottawa, Georgetown, and Victoria), 12h. (Ksara), 19h. (Florissant).

Oct. 12d. 7h. 26m. 9s. Epicentre 23°·0N. 95°·0E. (as on 1926 Sept. 8d.).

A = −·080, B = +·917, C = +·391; D = +·996, E = +·087;
G = −·034, H = +·389, K = −·921.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Calcutta	E.	6·2	267	1 36	+ 1	2 52	+ 3	4·3	—
	N.	6·2	267	1 30	− 5	2 46	− 3	4·3	—
Phu-Lien		11·0	99	e 2 37	− 7	—	—	—	—
Hong Kong		17·7	88	i 4 8	− 5	—	—	—	—
Bombay		21·1	263	8 34	?S	(8 34)	−12	13·0	—
Frunse		26·1	325	e 5 51	+ 2	—	—	—	—
Manila		25·9	104	e 6 19	+32	—	—	e 21·2	—
Tashkent		28·2	316	i 6 12	+ 2	i 11 13	+10	—	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Baku	41·6	306	8 2	− 6	—	—	28·6	—
Ekaterinburg	42·0	332	i 8 14	+ 3	i 13 6	−89	28·8	38·5
Theodosia	52·7	311	e 9 29	+ 5	—	—	—	—
Yalta	53·5	310	e 9 32	+ 2	—	—	—	—
Simferopol	53·6	310	e 9 32	+ 2	—	—	—	—
Sebastopol	54·0	310	e 9 31	− 2	—	—	—	—
Pulkovo	57·6	327	9 4	−52	—	—	27·8	45·0

Additional readings: Bombay eS = +11m.34s. Tashkent e = +12m.21s. Ekaterinburg i = +10m.2s. Pulkovo i = +13m.5s.. e = +17m.7s. and +21m.45s.

Oct. 12d. 7h. 29m. 30s. Epicentre 45°·3N. 153°·5E. (as on 1928 Sept. 25d.).

A = −·630, B = +·314, C = +·711; D = +·446, E = +·895; G = −·636, H = +·317, K = −·703.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		7·6	284	1 44	−11	(3 13)	−13	3·2	—
Mizusawa		11·0	240	2 47	+ 3	4 46	− 8	—	—
Osaka		17·4	239	3 52	−18	(6 27)	−60	6·5	12·5
Kobe		17 6	239	4 14	+ 2	e 7 59	+28	e 11·1	11·6
Hukuoka		21·2	244	e 2 27	−148	e 9 4	+16	—	—
Nagasaki		22·1	244	5 9	+ 3	9 19	+12	—	—
Zi-ka-wei	N.	28·6	252	e 6 7	− 7	—	—	—	—
Irkutsk		32·5	300	e 6 28	−25	e 11 22	−54	16·5	19·9
Taihoku	N.	32·7	242	e 5 30?	−84	—	—	—	—
Hong Kong		39·4	245	7 41	− 9	—	—	—	26·4
Honolulu T.H.		46·1	103	—	—	e 15 36	+ 7	22·2	—
Victoria		54·1	55	17 7	?S	(17 7)	− 3	37·4	39·7
Frunse		54·4	299	—	—	—	—	33·1	—
Ekaterinburg		54·9	319	i 11 28	+110	i 19 26	+126	—	—
Tashkent		58·6	300	i 10 3	0	—	—	e 28·5	37·1
Scoresby Sund		64·2	358	—	—	19 14	− 1	30·5	—
Kucino		65·4	326	10 54	+ 7	e 19 23	− 7	33·1	40·5
Batavia	E.	66·2	233	i 10 0	−53	—	—	—	—
Upsala		68·9	338	e 12 5	+55	—	—	e 35·5	—
Bombay		70·2	279	e 21 38	?S	(e 21 38)	[+25]	—	44·4
Baku		70·5	310	11 22	+ 2	e 20 43	+11	36·2	45·4
Konigsberg		72·3	334	e 11 27	− 5	—	—	e 40·5	47·5
Kodaikanal		73·0	269	45 24	?L	—	—	(45·4)	—
Lund		73·6	339	—	—	20 54	−15	36·5	—
Copenhagen		73·8	339	e 11 38	− 3	e 21 4	− 8	35·5	39·6
Hamburg		76·4	339	e 11 55	− 2	—	—	e 39·5	43·5
Chicago	E.	77·3	42	—	—	20 48	−64	e 43·8	—
	N.	77·3	42	—	—	20 42	−60	e 48·2	—
Florissant		78·3	46	e 12 36	+27	i 21 59	− 5	—	—
Stonyhurst		78·8	346	—	—	—	—	e 42·5	52·5
De Bilt		78·9	340	i 12 12	0	—	—	e 41·5	45·7
Budapest		79·1	330	e 12 10	− 4	—	—	e 47·5	50·5
Riverview		79·2	182	—	—	e 22 24	+10	e 41·9	45·6
Vienna		79·3	333	12 3	−12	22 39	+24	e 35·0	52·0
Toronto	E.	79·4	36	—	—	e 22 8	− 8	44·0	—
Ottawa	N.	79·5	32	—	—	e 22 18	0	e 40·5	—
Feldberg	N.	79·8	339	e 13 0	+42	—	—	—	52·3
Uccle		80·3	341	e 12 30	+ 9	—	—	e 36·4	—
Kew		80·6	345	12 8	−15	—	—	41·5	46·5
Zagreb		81·5	331	e 12 24	− 4	—	—	—	—
Strasbourg		81·6	338	i 12 23	− 5	—	—	e 40·5	—
Zurich		82·4	336	e 12 30?	− 2	—	—	—	—
Chur		82·6	336	i 12 29	− 5	—	—	—	—
Paris		82·6	342	e 12 33	− 1	—	—	45·5	55·5
Ksara	E.	82·9	313	12 30	− 5	22 51	− 5	45·5	—
Georgetown		84·3	37	e 12 30	−14	e 23 48	?PS	e 41·6	68·8
Moncalieri		84·8	337	e 12 38	− 9	22 57	−20	41·0	—
Grenoble		85·2	339	e 12 50	+ 1	—	—	33·5	—
Rocca di Papa		86·3	332	e 13 7	+12	—	—	e 55·3	60·8
Wellington	E.	88·7	165	—	—	—	—	e 49·5	—
Granada		95·0	343	—	—	—	—	50·5	66·0
La Paz		134·9	62	30 30?	?	—	—	—	—

For Notes see next page.

NOTES TO OCT. 12d. 7h. 29m. 30s.

Additional readings and notes: Mizusawa PN = +2m.46s. Kobe eN = +5m.46s. Ekaterinburg readings are given simply as i. Konigsberg eE? = +11m.36s., iZ = +11m.42s., eE = +22m.6s. = Σ+4s., and +25m.18s., eN = +22m.35s. and +30m.45s., eLZ = +39·9m., eLN = +41·5m. Copenhagen ePEN = +11m.41s., SR_1 = +25m.30s.?, SR_2 = +29m.30s. ?, MN = +49·5m. Hamburg MN = +49·5m. Florissant readings are given without phase. De Bilt MN = +52·7m., MZ = +52·8m. Riverview e = +23m.12s. = PS +16s. Vienna PS = +23m.33s. Ottawa eN = +33m.0s. = SR_3 −22s., LE = +43·5m., readings being given without phase. Georgetown readings are given without phase.

Oct. 12d. 12h. 23m. 5s. Epicentre 35°·7N. 132°·5E. (as on 1927 May 8d.).

A = −·549, B = +·599, C = +·584; D = +·737, E = +·676; G = −·394, H = +·430, K = −·812.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Matuyama	1·9	174	i 1 42	?	—	—	—	1·8
Kobe	2·4	115	0 31	− 6	(1 2)	− 4	1·0	1·1
Sumoto	2·4	125	e 0 34	− 3	(i 0 59)	− 7	i 1·0	1·0
Osaka	2·6	114	0 43	+ 2	(1 17)	+ 5	1·3	2·3
Hukuoka	2·7	219	0 50	+ 8	1 23	+ 9	—	—
Nagoya	3·6	98	—	—	e 1 34	− 5	1·9	—

Osaka gives also MN = +1·3m.

Oct. 12d. Readings also at 2h. (Baku, Ekaterinburg, Tashkent, and near Wellington), 6h. (Matuyama, Frunse, and Zagreb), 9h. (Graz, Cincinnati, Georgetown, Ottawa, and Toronto), 10h. (Taihoku), 11h. (Venice), 12h. (Matuyama), 13h. (Baku, Ekaterinburg, near Tashkent, and near Matuyama), 17h. (Copenhagen, Baku, Ekaterinburg, Irkutsk, Pulkovo, Tashkent, and Taihoku), 18h. (Venice), 20h. (near Tacubaya), 23h. (Georgetown, Ottawa, Toronto, and near Lick).

Oct. 13d. 13h. 8m. 33s. Epicentre 16°·2N. 97°·2W. (as on Oct. 9d.).

A = −·120, B = −·953, C = +·279; D = −·992, E = +·125; G = −·035, H = −·277, K = −·960.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Puebla		3·0	341	0 38	− 9	(1 10)	−13	1·2	1·5
Vera Cruz		3·2	18	(0 38)	−12	(1 22)	− 6	(1·4)	(1·6)
Tacubaya		3·8	330	1 0	+ 1	(1 47)	+ 3	1·8	2·0
Guadalajara		7·5	307	1 59	+ 5	3 19	− 5	3·4	3·6
Merida		8·6	55	2 0	−10	3 29	−24	3·7	3·8
Tucson		20·3	325	4 45	0	8 33	+ 4	10·8	—
Florissant		23·4	13	e 5 3	−18	i 9 33	0	—	—
Georgetown	z.	28·7	34	—	—	—	—	e 19·5	—
Toronto		31·3	26	—	—	—	—	18·4	—
Ottawa		34·3	28	—	—	—	—	e 16·4	—
Victoria	E.	38·7	333	—	—	—	—	21·5	25·0
Scoresby Sund		69·9	20	—	—	—	—	39·4	—
Kew		81·6	40	—	—	—	—	e 44·4	—
Granada		83·1	54	—	—	—	—	e 40·4	45·6
De Bilt		84·6	37	—	—	—	—	e 41·4	—
Uccle		84·6	39	—	—	—	—	e 40·4	—
Copenhagen		87·2	32	—	—	e 23 27?	−16	41·4	46·4
Strasbourg		87·4	40	—	—	—	—	e 45·4	—
Pulkovo		93·0	24	e 17 5	?PR_1	—	—	46·4	—
Kucino		98·5	25	—	—	—	—	52·0	—
Ekaterinburg		104·6	13	e 18 37	?PR_1	e 25 13	?Σ	46·4	—
Baku		115·7	27	—	—	(e 29 45)	?PS	e 29·8	—
Tashkent		121·1	11	e 21 27?	?	e 26 27?	[+39]	e 67·4	73·4

Additional readings and note: Vera Cruz readings have been *diminished* by 2m. Tucson SN = +8m.19s. Florissant eSN = +9m.29s. Georgetown eLZ = +21·6m. Copenhagen MN = +53·6m. Pulkovo e = +8m.5s.

Oct. 13d. 15h. 16m. 56s. Epicentre 2°·5N. 126°·7E. (as on 1928 April 11d.).

$A = -\cdot597$, $B = +\cdot801$, $C = +\cdot044$; $D = +\cdot802$, $E = +\cdot598$; $G = -\cdot026$, $H = +\cdot035$, $K = -\cdot999$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		6·4	166	1 29	− 9	1 2 41	−14	—	—
Manila		13·3	335	e 3 44	+27	(i 5 56)	+ 5	i 5·9	—
Batavia		21·0	246	i 5 4	+11	—	—	—	—
Hong Kong		23·2	329	5 16	− 3	9 33	+ 4	9·7	15·3
Phu-Lien		26·8	315	e 5 51	− 5	e 10 27	−10	12·1	—
Sumoto		32·7	12	e 6 53	− 1	(e 12 17)	− 2	e 12·3	—
Kobe		33·1	12	6 56	− 1	12 24	− 2	—	—
Osaka		33·2	13	6 53	− 5	(12 16)	−11	12·3	14·5
Nagoya		34·0	16	e 6 6	−59	—	—	—	—
Mizusawa	E.	38·9	19	7 47	+ 2	13 52	+ 1	18·1	—
	N.	38·9	19	7 58	+13	13 54	+ 3	—	—
Adelaide		39·1	165	e 9 4	+77	i 15 36	+103	e 20·2	26·8
Riverview		43·0	150	e 7 58	−20	e 14 13	−35	e 21·3	27·3
Sydney	E.	43·0	150	9 22	+64	—	—	26·1	27·6
Melbourne		43·7	159	—	—	i 14 21	−37	—	28·6
Colombo		46·9	276	8 24	−22	15 9	−31	22·9	29·2
Irkutsk		53·1	344	9 33	+ 6	i 17 8	+11	27·1	—
Bombay		55·1	291	17 15	?S	(17 15)	− 7	27·2	32·8
Frunse		61·4	320	10 33	+12	—	—	—	—
Wellington	E.	61·8	141	—	—	i 18 41	− 5	e 27·6	—
Tashkent		64·3	316	i 10 47	+ 7	i 19 11	− 6	e 28·1	37·7
Ekaterinburg		75·0	330	i 11 55	+ 6	i 21 29	+ 3	34·1	49·1
Honolulu T.H.	E.	75·6	68	—	—	—	—	e 37·1	—
Baku		78·4	311	i 12 10	+ 1	e 22 4	− 1	40·3	—
Kucino		87·3	325	12 57	− 4	23 37	− 7	38·4	46·3
Ksara		89·3	305	13 6	− 6	23 32	[+ 8]	41·6	—
Pulkovo		91·0	330	e 13 14	− 7	24 8	−16	46·1	57·7
Entebbe		94·2	270	—	—	—	—	51·1	—
Konigsberg	E.	97·2	326	—	—	e 24 34	[+25]	e 50·4	—
Lund		100·8	329	—	—	24 41	[+13]	55·1	—
Victoria	E.	101·2	40	—	—	—	—	48·6	49·4
Copenhagen		101·3	329	—	—	e 24 39	[+ 9]	49·1	65·1
Hamburg	E.	103·4	327	—	—	e 24 47	[+ 7]	65·1	—
Scoresby Sund		104·1	350	—	—	—	—	49·1	—
Feldberg	N.	105·6	323	—	—	—	—	—	64·0
Strasbourg		106·7	323	e 20 4?	?PR_1	—	—	e 29·1	—
De Bilt		106·7	327	—	—	e 25 8	[+13]	e 53·1	68·1
Uccle		107·7	326	—	—	—	—	e 56·1	—
Edinburgh		108·8	333	—	—	—	—	73·1	—
Paris		109·6	324	—	—	—	—	e 63·1	66·1
Kew		109·9	330	e 28 34	?S	(e 28 34)	?PS	58·1	—
Granada		119·1	315	—	—	—	—	64·1	73·7
Ottawa	N.	128·1	18	—	—	—	—	e 64·1	—
Georgetown	Z.	133·1	26	—	—	—	—	77·3	—
La Paz		159·8	135	e 25 17	?PR_1	—	—	—	—

Additional readings: Manila iLN = +6·1m. Batavia e = +3m.43s. Sumoto e = +8m.23s. Riverview eSR_1 = +17m.29s., MN = +32·3m. Melbourne i = +17m.41s. = SR_1 − 23s. Bombay S = +22m.35s. Wellington iN = +25m.29s. = SR_2 − 19s. Copenhagen iE = +24m.45s., SR_1 = +32m.4s. ?, eE = +40m.4s. ?, MN = +61·4m., MZ = +65·0m. De Bilt eLN = +55·1m.

Oct. 13d. Readings also at 0h. (Ekaterinburg and Tashkent), 1h. (Rio de Janeiro), 2h. (Baku, Copenhagen, Ekaterinburg, Tashkent, and near Tacubaya), 8h. and 10h. (near Lick), 11h. (Frunse and near Lick), 15h. (near Sucre, near Sebastopol, Simferopol, Theodosia, and Yalta), 17h. (Copenhagen, Perth, near Tacubaya, and Vera Cruz), 18h. (Chicago and Florissant), 19h. (Ottawa and Toronto), 20h. (Tashkent and near Irkutsk), 21h. (Ekaterinburg and near Tacubaya), 22h. (near Tacubaya).

Oct. 14d. Readings at 1h. (near Tacubaya), 3h. (Ekaterinburg, Tashkent, and near Mizusawa), 9h. (Charlottesville), 10h. (Sebastopol), 11h. (Wellington), 12h. (near Manila), 13h. (Ekaterinburg, Irkutsk, and Tashkent), 14h. (near Tacubaya), 22h. (Santiago), 23h. (Entebbe).

Oct. 15d. 8h. 30m. 45s. Epicentre 3°·0S. 151°·5E. (as on 1926 Feb. 7d.).

A = −·878, B = +·477, C = −·052; D = +·477, E = +·879; G = +·046, H = −·025, K = −·999.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		23·3	268	4 52	−28	9 25	− 6	—	—
Riverview		30·9	181	e 6 33	− 4	e 11 39	−11	e 14·6	19·8
Sydney	E.	30·9	181	9 57	?	14 3	?	16·0	19·6
Adelaide		34·1	199	e 3 53	?	i 8 11	?	i 9·7	16·8
Manila		35·0	300	e 7 34	+21	—	—	e 14·8	—
Melbourne		35·3	189	—	—	i 13 27	+27	i 17·1	21·6
Osaka		40·6	340	7 54	− 6	—	—	16·5	18·9
Kobe	E.	40·7	340	e 9 33	?PR_1	—	—	—	—
Wellington	E.	43·7	155	e 8 17	− 7	(i 15 9)	+11	i 15·2	23·8
	N.	43·7	155	i 10 20	?PR_1	i 14 40	−18	—	28·7
Perth		44·3	225	e 7 45	−43	i 14 51	−15	22·4	—
Hong Kong		44·4	307	—	—	—	—	—	18·9
Batavia		44·6	265	e 7 24	−64	—	—	—	—
Phu-Lien		50·0	300	e 9 4	− 3	e 16 15	− 4	—	—
Honolulu T.H.		55·2	61	—	—	—	—	24·0	31·4
Irkutsk		68·1	330	11 11	+ 6	20 12	+ 9	33·2	—
Bombay		80·3	290	e 18 57	?PR_3	22 29	+ 2	24·4	—
Tashkent		86·2	313	i 12 57	+ 3	i 23 25	− 7	—	50·2
Victoria	E.	89·1	41	24 10	?S	(24 10)	+ 6	37·4	52·6
	N.	89·1	41	24 12	?S	(24 12)	+ 8	37·3	37·5
Ekaterinburg		92·9	327	i 13 28	− 4	i 24 36	− 8	38·8	52·4
Baku		100·7	311	—	—	24 34	[+ 7]	47·0	66·4
Tananarive		102·2	250	21 15?	?PR_2	—	—	50·2	54·2
Kucino		105·5	327	—	—	25 5	[+15]	46·8	62·4
Pulkovo		107·8	334	e 21 12	?	—	—	57·2	65·6
Scoresby Sund		112·3	357	—	—	—	—	59·2	—
Florissant		113·5	48	—	—	e 26 23	? Σ	e 48·4	57·4
Chicago	E.	114·6	44	—	—	34 45	?	45·2	—
	N.	114·6	44	—	—	34 51	?	e 47·2	65·4
Lund		117·6	3 4	—	—	—	—	59·2	—
Cincinnati	Z.	117·7	45	—	—	—	—	59·2	68·2
Copenhagen		117·9	334	—	—	e 26 27	? Σ	56·2	61·4
Toronto	N.	119·4	40	—	—	e 29 41	+56	51·6	—
Ottawa		120·9	37	—	—	e 27 15	? Σ	57·2	—
Zagreb		122·2	324	—	—	—	—	e 67·2	—
Georgetown	Z.	123·1	43	—	—	—	—	e 60·8	68·7
Edinburgh		123·3	341	—	—	—	—	e 77·2	—
Feldberg	N.	123·4	331	—	—	e 37 40	?SR_1	—	72·2
De Bilt		123·5	336	e 21 15?	?PR_1	—	—	e 57·2	70·4
Uccle		124·8	336	—	—	e 37 15?	?SR_1	e 57·2	—
Strasbourg		124·9	330	e 21 15?	?PR_1	(e 37 15?)	?SR_1	e 37·2	—
Kew		126·1	339	e 30 15?	?	—	—	60·2	72·2
Rocca di Papa		126·5	323	—	—	—	—	e 57·6	68·4
Paris		126·9	334	e 22 34	?	—	—	68·2	77·2
La Paz		136·3	119	e 19 52	[+19]	—	—	66·2	77·3
Sucre		137·7	123	e 19 51	[+16]	—	—	76·2	86·4
Granada		139·0	329	e 22 38	?PR_1	i 30 24	?	67·2	74·4
Rio de Janeiro	N.	150·4	152	—	—	—	—	e 81·6	—

Additional readings: Riverview eS = +11m.22s., iL = +14·3m., MN = +16·8m., MZ = +17·0m. Manila eLN? = +15·2m. Melbourne i = +15m.55s. Osaka MN = +18·0m. Wellington iE = +9m.35s. = PR_1 − 32s. Perth PS = +14m.40s., SR_1 = +17m.40s., SR_2 = +18m.0s. Honolulu T.H. MN = +29·8m. Ekaterinburg iS_cP_cS = +23m.59s. = [S] +14s. Baku PR_1 = +18m.5s., PPS = +28m.5s. Kucino PS = +27m.53s., SR_1 = +33m.39s. Copenhagen ePS = +30m.9s., eSR_1EN = +36m.51s., eSR_2E = +40m.33s., eSR_2N = +40m.57s. Toronto LE = +52·2m. Ottawa e = +36m.45s. = SR_1 − 13s., eL = +49·2m. Georgetown eZ = +32m.16s. and +47m.6s. = SR_2 − 4s. De Bilt eLN = +58·2m., MN = +70·1m., MZ = +72·7m. La Paz LN = +69·2m.

Oct. 15d. 14h. 19m. 32s. Epicentre 28°·5N. 66°·3E.

(deduced from the position 29°·0N. 66°·5E. given by the Russian stations).

A = +·353, B = +·805, C = +·477 ; D = +·916, E = −·402 ;
G = +·192, H = +·437, K = −·879.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Dehra Dun		10·4	77	2 15	−21	3 21	−79	5·2	6·0
Bombay		11·3	146	2 42	− 7	5 42	+40	—	—
Tashkent		13·0	10	i 3 12	− 1	—	—	—	17·0
Hyderabad		15·7	132	3 44	− 4	6 26	−22	7·3	9·7
Frunse		15·9	23	3 48	− 3	6 41	−12	—	—
Almata		17·1	27	3 28?	−38	—	—	—	—
Baku		18·0	316	i 4 27	+10	i 7 52	+12	—	—
Calcutta	E.	20·7	102	4 46	− 3	8 34	− 4	10·9	—
	N.	20·7	102	4 44	− 5	8 10	−28	11·0	—
Kodaikanal		21·0	148	5 16	+23	—	—	9·2	14·1
Colombo		25·1	147	5 29	−10	10 9	+ 4	14·2	16·8
Ksara	E.	26·5	289	5 58	+ 5	10 40	+ 8	13·3	—
Ekaterinburg		28·6	354	i 6 8	− 6	i 10 53	−17	14·5	—
Theodosia		29·5	312	e 6 18	− 5	12 42	?SR$_1$	e 25·7	—
Yalta		30·1	312	e 6 27	− 2	—	—	—	—
Simferopol		30·3	312	e 6 27	− 4	—	—	—	—
Helwan		30·5	281	i 6 31	− 2	e 11 44	+ 1	—	22·3
Sebastopol		30·6	312	e 6 25	− 9	—	—	—	—
Kucino		34·0	331	i 6 57	− 8	12 18	−22	17·5	23·8
Irkutsk		36·8	39	i 7 14	−14	12 58	−23	20·5	23·6
Phu-Lien		37·2	93	e 7 18	−14	e 12 59	−28	18·0	28·1
Lemberg	E.	38·4	315	7 52	+11	—	—	—	30·3
Pulkovo		39·6	334	i 7 46	− 5	i 13 52	− 8	19·5	26·0
Belgrade	N.	39·6	308	e 7 28	−23	e 13 58	− 2	e 23·5	—
Budapest		41·0	311	8 2	− 1	14 23	+ 2	24·5	29·5
Konigsberg		42·0	322	i 8 6	− 5	e 14 28	− 7	e 19·7	32·2
Helsingfors		42·1	330	(i 8 7)	− 5	(i 14 35)	− 1	(21·5)	—
Vienna		42·9	313	e 8 13	− 4	14 44	− 3	e 18·0	36·0
Zagreb		42·9	309	e 8 15	− 2	e 14 40	− 7	e 25·1	32·2
Entebbe		43·1	236	8 18	− 1	14 49	0	23·5	27·0
Graz		43·3	311	e 8 30	+10	e 18 30	?SR$_4$	24·5	30·5
Hong Kong		43·4	87	14 28	?S	(14 28)	−26	24·2	25·3
Pompeii		43·7	300	e 8 28?	+ 4	e 14 28?	−30	—	22·5
Naples	E.	43·9	300	e 8 28	+ 3	e 14 56	− 5	28·5	35·5
Rocca di Papa		45·1	303	e 8 30	− 4	e 15 16	0	e 23·1	40·3
Venice		45·3	308	e 8 36	+ 1	—	—	—	—
Upsala		45·3	329	e 8 24	−11	15 13	− 6	i 21·4	31·7
Potsdam		45·7	317	i 8 37	− 1	i 15 30	+ 6	—	33·2
Innsbruck	N.E.	46·1	311	e 8 34	− 7	14 58	−31	19·0	—
Florence		46·1	305	8 28	−13	15 13	−16	—	—
Jena	E.	46·3	315	i 8 43	+ 1	e 15 34	+ 2	e 26·5	29·5
	N.	46·3	315	e 8 43	+ 1	e 15 40	+ 8	e 26·5	33·2
Lund		46·3	322	8 40	− 2	15 32	0	—	—
Copenhagen		46·7	322	e 8 42	− 3	e 15 36	− 1	27·5	34·4
Chur		47·4	310	e 8 43	− 7	e 15 47	+ 1	—	—
Ravensburg		47·4	311	8 50	0	15 8	−38	e 19·5	36·7
Zi-ka-wei	N.	47·4	72	—	—	15 31	−15	26·4	29·8
	Z.	47·4	72	8 41	− 9	15 37	− 9	26·0	31·6
Hamburg		47·7	319	e 8 51	− 1	e 15 50	0	i 23·9	35·8
Hohenheim		47·7	313	8 51	− 1	15 8	−42	e 28·5	36·7
Zurich		48·1	309	8 54	− 1	e 15 54	− 1	e 20·0	—
Feldberg		48·3	314	i 8 59	+ 3	e 16 9	+11	—	37·5
Moncalieri		48·6	307	i 8 56	− 2	15 9	−52	20·0	34·3
Strasbourg		48·7	312	i 8 58	0	e 16 5	+ 3	23·5	36·3
Taihoku	E.	49·0	80	—	—	e 19 15	?SR$_1$	26·7	—
Besançon		49·8	310	i 9 7	+ 1	e 16 14	− 2	27·5	—
De Bilt		50·5	316	i 9 14	+ 4	16 34	+ 9	e 25·5	34·4
Uccle		50·9	315	9 16	+ 4	i 16 41	+11	e 25·5	34·5
Tananarive	E.	50·9	204	e 9 10	− 2	e 16 30	0	23·0	27·8
	N.	50·9	204	e 9 10	− 2	e 16 25	− 5	e 22·2	29·6
Bergen		51·3	326	9 21	+ 6	16 51	+16	—	29·5
Paris		52·1	313	i 9 27	+ 6	e 16 53	+ 8	29·5	38·5
Batavia		52·2	127	e 9 7	−14	—	—	26·5	—
Manila	E.	52·2	94	e 9 37	+16	i 16 59	+13	i 25·1	32·6
	N.	52·2	94	e 9 37	+16	i 16 45	− 1	i 25·0	32·6
Barcelona		52·9	302	9 30	+ 5	e 17 5	+10	e 21·9	34·7

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Algiers		53·0	296	9 30	+ 4	17 3	+ 7	23·5	40·5
Kew		53·8	316	i 9 38	+ 6	17 18	+12	28·2	40·3
Nagasaki		54·0	69	17 9	?S	(17 9)	0	28·5	35·0
Tortosa	N.	54·2	302	9 39	+ 5	17 25	+14	e 25·5	43·3
Hukuoka		54·3	68	e 28 42	?L	e 33 36	?	(e 28·7)	38·2
Dyce		54·8	322	e 9 59	+21	17 34	+15	23·5	36·6
Stonyhurst		55·0	318	i 9 48	+ 9	i 17 34	+13	31·5	39·1
Bidston		55·4	318	e 9 51	+ 9	17 43	+17	29·4	37·5
Edinburgh		55·4	321	9 56	+14	17 38	+12	30·5	41·0
Alicante		55·4	299	e 9 53	+11	e 17 42	+16	e 24·4	37·6
Almeria		57·2	298	10 2	+ 9	18 2	+13	24·0	—
Sumoto		57·7	66	e 9 58	+ 1	e 17 58	+ 3	e 30·4	—
Kobe		57·8	65	10 0	+ 2	i 17 58	+ 2	e 29·2	37·0
Toledo		57·8	301	e 10 6	+ 8	i 18 12	+16	e 26·7	38·8
Granada		58·1	298	i 10 7	+ 7	i 18 16	+16	30·3	46·6
Osaka		58·1	65	10 2	+ 2	18 6	+ 6	30·1	41·5
Malaga		58·8	298	9 53	−11	18 21	+12	26·5	—
Nagoya		59·1	64	e 9 45	−21	18 13	+ 1	32·8	—
San Fernando		60·3	298	i 10 25	+11	i 18 46	+19	33·4	42·9
Ootomari		60·8	50	18 28	?S	(18 28)	− 5	27·6	34·9
Mizusawa		61·3	59	10 26	+ 5	18 42	+ 2	31·8	—
Scoresby Sund		62·7	338	10 40	+10	19 22	+25	34·5	—
Perth		76·6	137	—	—	22 8	+24	36·5	—
Adelaide		92·8	129	—	—	i 23 53	[+ 8]	47·0	55·1
Ottawa		98·4	334	e 20 4	?	i 25 28	−12	e 47·5	57·3
Melbourne		98·9	129	—	—	i 24 26	[+ 8]	i 48·6	59·0
Ithaca		101·3	333	—	—	—	—	61·5	—
Toronto		101·3	336	—	—	i 25 50	−18	—	61·0
Riverview		101·6	122	—	—	—	—	e 46·6	59·9
Sydney	E.	101·6	122	23 58	?	38 10	?SR_2	59·0	65·1
Victoria		102·6	7	17 56	[0]	24 54	[+18]	54·6	61·0
Spokane	N.	103·8	4	—	—	—	—	e 60·5	65·9
Ann Arbor	N.	104·0	338	—	—	e 24 58	[+15]	51·6	61·3
Georgetown	Z.	104·4	331	e 14 21	−11	e 28 59	?	52·5	63·0
Chicago	N.	105·7	340	i 24 3	?[S]	(i 24 3)	[−48]	e 50·6	61·8
Charlottesville	E.	105·8	332	—	—	e 46 58	?	e 51·9	62·0
	N.	105·8	332	—	—	e 25 4	[+13]	e 51·0	65·1
Cincinnati	Z.	107·2	337	e 14 28	−17	—	—	52·4	61·6
Florissant		109·2	340	—	—	i 25 22	[+15]	e 53·1	64·6
Honolulu T.H.		114·5	45	—	—	—	—	52·5	55·5
Rio de Janeiro	N.	117·1	257	—	—	e 30 16	?PS	e 63·3	68·5
Tucson	E.	119·2	358	—	—	—	—	—	68·8
Wellington	E.	121·6	122	—	—	e 36 22	?SR_1	e 58·2	65·6
	N.	121·6	122	—	—	i 36 31	?SR_1	i 50·9	65·8
La Plata		132·7	246	—	—	—	—	89·5	—
Sucre		135·0	270	19 40	[+10]	—	—	60·5	78·9
La Paz		136·5	276	e 19 39	[+ 6]	—	—	64·5	82·3

Additional readings and notes: Ksara $PR_1E = +6m.31s.$, $PR_2E = +6m.56s.$, $SR_2E = +12m.41s.$; $T_0 = 14h.19m.20s.$ Phu-Lien $eSR_2 = +16m.28s.$, $MN = +22·4m.$ Lemberg $eN = +7m.40s.$, $MN = +26·3m.$ Belgrade $eN = +7m.48s.$, $+8m.30s.$, and $+10m.43s.$ Konigsberg $ePR_1E = +9m.46s.$ $ePRN = +10m.4s. = PR_2 - 14s.$, $ePR_2Z = +10m.28s. = PR_1 + 0s.$, $iSE = +14m.34s.$, $iE = +15m.15s.$, $iSR_1Z = +17m.40s.$, $iE = +17m.52s.$, $iN = +19m.11s.$, $eZ = +19m.4s.$, $eLN = +20·7m.$, $MN = +28·4m.$, $MZ = +32·1m.$ Helsingfors readings have been *increased* by 4m. Vienna $iPZ = +8m.14s.$, $PR_1 = +9m.39s.$, $iN = +11m.18s.$, $iE = +12m.28s.$, $PS = +14m.55s.$, $iZ = +15m.41s.$, $iE = +16m.38s.$ Zagreb $ePR_1 = +10m.2s.$, $e = +12m.45s.$, $ePSNE = +14m.52s.$, $eSR_1 = +18m.3s.$, $e = +23m.14s.$, $eNW = +28m.36s.$ Graz $iP = +8m.31s.$ Hong Kong $? = +17m.40s. = SR_1 - 18s.$, $S = +19m.35s.$ Rocca di Papa $iPEZ = ePN = +8m.31s.$, $eS? = +15m.22s.$ $eS?Z = +15m.40s.$ Upsala $PR_1E = +10m.16s.$, $SR_1 = +18m.38s.$, $SR_2E = +20m.0s. = SR_2 - 10s.$, $MN = +30·5m.$ Potsdam $iSN = +15m.44s.$, $MN = +30·3m.$ Jena $iE = +19m.25s.$, $eN = +19m.28s.$, $+22m.28s.$, $+23m.28s.$, and $+25m.28s.$ Lund $PR_1 = +10m.34s.$, also $+18m.58s. = SR_1 + 2s.$ Copenhagen $iPEZ = +8m.44s.$, $ePN = +8m.47s.$, $PR_1 = +10m.36s.$, $iSN = +15m.39s.$, $eEN = +18m.10s.$, $eSR_1EN = +19m.10s.$, $eE = +20m.16s. = SR_2 + 0s.$, $MN = +30·6m.$ Chur $e = +8m.49s.$ Ravensburg $PR_1 = +10m.30s.$, $PR_2 = +11m.6s.$, $i = +13m.2s.$, $SR_1 = +18m.20s.$, $MN = +32·3m.$ Zi-ka-wei $PR_1Z = +10m.37s.$, $PSZ = +16m.7s.$, $SR_1Z = +19m.17s.$, $ME = +35·0m.$ Hamburg $iPEZ = +8m.53s.$, $ePR_1E = +11m.12s.$, $eSR_1 = +19m.28s.?$, $SR_2E = +21m.10s.$, $SR_2N = +21m.21s.$, $MN = +31·8m.$ Hohenheim $PR_1 = +10m.28s.$, $PR_2 = +11m.0s.$, $SR_1 = +18m.9s.$, $MN = +31·5m.$ Feldberg $eE = +16m.5s.$, $eN = +20m.1s.$, $MN = +31·3m.$

Continued on next page.

Moncalieri MN = +34·6m. Strasbourg iPR_1 = +10m.55s., PR_3 = +11m.51s., iSR_1 = +20m.7s., MZ = +37·1m., MN = +40·0m. Besançon SR_1 = +20m.33s., De Bilt eSR_1 = +20m.11s., eLN = +27·5m., MN = +32·3m., MZ = +37·5m. Uccle SR_1 = +20m.27s., MN = +32·5m. Tananarive eN = +17m.0s., SR_1 = +19m.7s., SR_2 = +20m.9s. = SR_1 − 15s., SR_3 = +20m.48s., eE = +21m.45s. = SR_2 − 7s. Bergen PR_1 = +11m.36s. Paris MN = +33·5m. Batavia iE = +13m.30s., iN = +13m.56s. Barcelona MN = +29·8m. Algiers MN = +35·5m. Kew iEZ = +14m.42s., PSE = +17m.32s., SR_1E = +21m.50s., eN = +22m.41s. = SR_2 − 15s., and +23m.23s. = SR_3 − 11s., MN = +34·3m., MZ = +40·7m. Nagasaki MN = +30·9m. Tortosa ePE = +9m.37s. Stonyhurst PR_1 = +12m.58s., SR_1 = +22m.12s. Edinburgh SR_1 = +22m.18s. Alicante MN = +40·6m. Kobe MN = +32·4m., MZ = +39·2m. Toledo MNW = +32·5m. Granada PR_1 = +12m.26s., i = +18m.49s. = PS + 21s. and +19m.18s. = [S] − 22s. Osaka MN = +43·3m. San Fernando MN = +42·6m. Ootomari eS = +23m.40s. = SR_1 + 18s. Mizusawa SN = +18m.39s. Scoresby Sund +12m.52s. = PR_1 − 31s., and +26m.28s. = SR_2 + 22s. Perth +42m.58s. and +46m.8s. Adelaide i = +24m.20s. = Σ + 1s., MN = +57·3m. Ottawa i = +24m.30s. = [S] + 15s., e = +32m.10s. = SR_1 − 8s. and +36m.36s. = SR_2 − 27s., MN = +58·9m. Melbourne i = +26m.40s. = PS − 12s., +31m.12s., and +36m.18s. Toronto iEN = +24m.43s. = [S] + 13s., eE = +36m.8s. Riverview MN = +61·2m. Victoria SN = +24m.56s. = [S] + 20s., MN = +61·7m. Ann Arbor e?E = +25m.4s. = Σ − 32s., eN = +27m.52s. = PS + 3s., e?N = +33m.22s. = SR_1 − 6s., and +39m.4s. = SR_2 + 33s., eLE = +58·3m. Georgetown PR_1? = +18m.39s., PS? = +27m.57s., iZ = +43m.55s. Chicago iN = +27m.3s., eN = +36m.34s., and +40m.34s. Cincinnati eP'Z = +17m.50s., iPR_1Z = +18m.56s., iPR_2Z? = +21m.14s., iPSZ = +28m.20s., iP_cSS_cPZ = +28m.56s., ePPSZ = +29m.20s., eSR_2Z = +36m.20s. Florissant ePR_1 +19m.10s., ePR_2 = +22m.28s., i = +26m.19s. = Σ + 12s., iPSN = +28m.44s,. MN = +63·8m. Honolulu T.H. MN = +65·5m. Tucson PR_1 = +19m.24s., PS? = +29m.20s., MN = +66·7m. Sucre PR_1 = +23m.58s., SR_1? = +40m.1s. La Paz PR_1 = +23m.11s., LN = +62·5m.

Oct. 15d. Readings also at 2h. (Toronto, Ottawa, Chicago, Florissant, Lick, Tucson, near Tacubaya, Guadalajara, and Manzanillo), 6h. (Nagoya), 10h. (near La Paz and Sucre), 12h. (near Amboina), 15h. (Sucre and near La Paz), 20h. (Sucre), 22h. (La Paz).

Oct. 16d. Readings at 1h. (Rocca di Papa), 4h. (Florissant and near Lick), 13h. (Baku, Ekaterinburg, Kucino, and near Frunse), 14h. (Tashkent and near Tacubaya), 15h. (La Paz and near Sucre), 17h. (Tucson), 18h. (Ekaterinburg and Baku), 19h. (near Nagasaki), 20h. (La Paz), 22h. (Matuyama). 23h. (Tashkent and Frunse).

Oct. 17d. 6h. 15m. 22s. Epicentre 28°·7S. 179°·0E.

A = −·877, B = +·015, C = −·480; D = +·017, E = +1·000; G = +·480, H = −·008, K = −·877.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	N.	10·6	357	i 2 38	0	i 4 50	+ 5	5·4	8·5
Wellington	E.	13·1	196	i 3 44	+30	i 6 37	+51	7·0	12·7
	N.	13·1	196	—	—	i 6 40	+54	e 7·5	10·3
Christchurch		15·7	197	—	—	6 20	−28	9·1	11·9
Riverview		24·3	251	e 5 32	+ 1	e 9 50	0	e 12·4	14·6
Sydney	E.	24·3	251	—	—	—	—	12·4	15·1
Melbourne		29·7	243	e 7 18	?PR_1	i 11 18	−11	15·1	16·9
Zi-ka-wei	Z.	81·2	313	e 12 25	− 1	e 23 43	?PS	—	43·2
Victoria	E.	92·7	34	24 9	?S	(24 9)	−33	44·3	—
Irkutsk		103·8	322	e 18 37	?PR_1	e 27 45	?PS	e 48·6	—
Florissant		108·0	54	e 13 46	−62	e 18 1	?PR_1	e 50·3	58·8
Chicago	E.	111·0	52	—	—	—	—	e 57·7	—
Cincinnati	Z.	112·3	55	—	—	—	—	54·0	61·6
Rio de Janeiro	E.	114·4	136	—	—	—	—	e 53·1	—
Toronto	E.	117·3	51	—	—	—	—	64·3	—
Georgetown	Z.	117·8	59	—	—	e 30 38?	?PS	66·8	—
Ottawa	N.	120·2	50	—	—	e 41 38?	?	e 50·6	—
Tashkent		122·6	302	e 18 47	[−13]	—	—	—	84·1

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ekaterinburg		129·0	321	19 3	[−13]	—	—	e 66·6	77·4
Baku		137·1	300	—	—	—	—	e 76·6	—
Kucino		141·6	325	—	—	—	—	e 69·3	—
Pulkovo		142·4	335	i 19 21	[−23]	—	—	74·6	—
Theodosia		147·0	310	e 19 35	[−16]	—	—	—	—
Simferopol		147·9	309	e 19 38	[−15]	—	—	—	—
Yalta		148·0	309	e 19 50	[− 3]	—	—	—	—
Ksara	E.	148·2	287	e 19 51	[− 2]	—	—	—	—
Copenhagen		151·3	344	—	—	—	—	76·6	—
De Bilt	E.	156·2	351	—	—	—	—	e 55·6	—
Kew	Z.	157·2	359	—	—	—	—	e 84·6	—
Feldberg	N.	157·3	344	—	—	—	—	—	87·6
Strasbourg		159·0	344	—	—	—	—	e 54·6	—
San Fernando	E.	171·1	29	—	—	—	—	—	101·0
Granada		171·2	14	—	—	—	—	e 91·6	96·6

Additional readings and note: Christchurch $SR_1 = +7$m.38s. Florissant eNZ = +33m.11s. Chicago eE = +63m.20s. Cincinnati eZ = +52m.38s. Ottawa eLE? = +55·6m. Tashkent e = +20m.41s. $=PR_1 - 1$s. and +21m.50s. Ekaterinburg i = +22m.28s. and +22m.49s., e = +31m.34s. $=PS - 40$s. De Bilt eLN = +62·6m. San Fernando MN = +102·4m.

Oct. 17d. 15h. 19m. 25s. Epicentre 53°·0S. 56°·0W.

A = +·337, B = −·499, C = −·799; D = −·829, E = −·559;
G = −·447, H = +·662, K = −·602.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Plata		18·2	355	4 28	+ 9	7 55	+11	8·7	—
Santiago		22·2	326	e 5 19	+12	9 15	+ 6	12·4	—
Rio de Janeiro	E.	31·6	23	e 7 41	?PR_1	11 53	− 8	13·6	19·7
	N.	31·6	23	e 7 40	?PR_1	11 55	− 6	13·7	29·9
Sucre		34·8	345	e 7 3	− 8	e 12 38	−14	16·4	23·0
La Paz		37·7	341	7 35	− 1	i 13 33	− 1	18·6	21·6
Wellington		76·0	218	—	—	i 21 33	− 4	e 25·8	35·0
Tananarive		82·8	112	—	—	e 22 52	− 3	e 35·1	44·2
Melbourne		87·4	196	—	—	i 23 10	[− 1]	36·2	37·6
Entebbe		89·1	89	—	—	22 5	?	—	—
Riverview		90·1	202	e 12 44	−33	e 24 2	−13	e 38·2	48·9
Adelaide		91·1	192	i 20 2	?	i 37 26	?	e 43·4?	53·1
Charlottesville		93·1	344	—	—	—	—	e 41·6	53·6
Georgetown	Z.	93·7	345	e 13 48	+12	e 26 3	?PS	45·5	61·2
St. Louis	N.	96·3	334	—	—	e 23 49	[−15]	—	—
Florissant		96·5	334	e 13 43	− 9	i 24 5	[0]	—	51·2
Tucson	N.	97·7	316	—	—	—	—	—	50·8
Ann Arbor	E.	98·2	340	—	—	—	—	e 48·3	—
Chicago	E.	98·6	338	—	—	—	—	e 47·6	51·6
Toronto	N.	98·7	345	—	—	e 24 23	[+ 6]	55·3	—
San Fernando		99·3	40	—	—	—	—	51·9	63·4
Ottawa		99·8	348	—	—	e 24 26	[+ 3]	e 45·6	—
Granada		100·9	41	e 27 17	?PS	—	—	47·6	53·1
Toledo	N.W.	103·1	40	—	—	—	—	e 33·8	59·7
Alicante		103·2	42	—	—	—	—	e 54·1	—
Algiers		103·3	45	—	—	—	—	55·6	63·6
Rocca di Papa		111·6	48	20 23	?PR_1	e 30 18	?	e 59·3	66·9
Moncalieri		112·1	43	e 20 9	?PR_1	35 35	?SR_1	57·0	—
Paris		113·2	37	—	—	—	—	e 60·6	67·6
Honolulu T.H.	N.	113·9	274	—	—	—	—	52·6	56·6
Kew		114·6	34	—	—	e 30 35?	?	55·6	74·6
Strasbourg		115·0	41	e 19 35?	?PR_1	—	—	e 54·6	—
Uccle		115·5	37	—	—	—	—	e 54·6	68·7
Stonyhurst		115·7	32	—	—	—	—	e 63·6	73·6
Victoria	N.	116·3	316	—	—	—	—	57·2	67·4
Feldberg	N.	116·6	40	—	—	e 30 35?	?PS	—	—
De Bilt		116·8	38	—	—	e 25 23	[−12]	e 54·6	78·9
Graz		117·0	46	—	—	—	—	e 70·6	—
Edinburgh		117·2	30	—	—	—	—	e 60·6	—
Ksara	E.	117·4	70	—	—	e 25 59	[+22]	53·6	—
Vienna		118·3	45	—	—	—	—	e 53·6	70·6

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Dyce		118·8	29	—	—	—	—	55·6	76·1
Budapest		118·9	48	—	—	—	—	e 64·6	—
Hamburg		119·8	38	—	—	—	—	e 62·6	88·6
Copenhagen		122·3	39	—	—	e 29 35?	+29	58·6	82·1
Lund		122·6	39	—	—	—	—	64·6	—
Kodaikanal		123·3	120	62 5	?L	—	—	(62·1)	—
Upsala	N.	127·2	36	—	—	—	—	e 74·6	—
Baku		130·0	73	e 22 59	?PR_1	e 34 36	?	55·6	76·2
Pulkovo		132·1	41	e 19 17	[− 6]	e 22 17	?PR_1	62·6	77·1
Kucino		133·1	50	e 23 41	?	—	—	65·4	74·8
Tashkent		142·0	85	19 34	[− 9]	—	—	e 58·6	85·7
Ekaterinburg		144·7	57	19 44	[− 4]	—	—	60·6	90·0
Phu-Lien		145·1	150	—	—	—	—	68·6	—
Frunse		146·1	86	e 19 46	[− 4]	—	—	—	—
Irkutsk		168·0	85	19 42	[−32]	—	—	e 72·6	98·1

Additional readings: La Paz $PR_1 = +9m.8s.$, $PR_2N = +9m.33s.$, $SR_1N = +15m.53s.$, $SR_2N = +16m.28s.$, $SR_2E = +16m.35s.$, MN = +25·8m.; epicentre 52°S. 60°W. Wellington eLN = +21·5m. Tananarive eN = +17m.19s., +18m.31s. $=PR_2 + 19s.$, +25m.6s., +28m.4s., and +31m.52s., eE = +19m.13s. $=PR_2 - 3s.$, and +23m.1s. $= \Sigma - 8s.$, eEN = +38m.52s., MN = +41·9m. Melbourne i = +24m.25s. $=PS - 10s.$ Riverview $eSR_1 = +29m.56s.$, eLN = +38·1m., MN = +51·8m. Adelaide MN = +59·1m. Georgetown eZ = +17m.55s. $=PR_1 + 23s.$ St. Louis eN = +24m.28s. $= \Sigma - 16s.$, and +31m.28s. $=SR_1 - 23s.$ Florissant $ePR_1E = +16m.57s.$, eN = +17m.18s. $=[P] - 15s.$, $eSR_1N = +31m.3s.$, $eSR_1E = +31m.13s.$ Ann Arbor eLN? = +47·2m. Chicago LN = +44·3m., MN = +52·0m. Toronto LE = +49·6m. San Fernando MN = +61·5m. Ottawa e = +32m.27s. $=SR_1 - 9s.$, eN = +37m.29s. $=SR_2 + 4s.$ Toledo MNE = +72·1m. Victoria LE = +57·6m. De Bilt MZ = +65·2m., MN = +69·2m. Ksara eE = +4m.11s. Hamburg MN = +69·6m. Copenhagen eEN = +38m.29s. and +42m.41s. $=SR_2 - 12s.$, MN = +72·4m., MZ = +82·3m. Kucino e = +26m.37s. and +41m.7s. Tashkent e = +37m.41s. and +42m.5s. Ekaterinburg $P_cP_cS = +23m.34s.$, $S_cP_cSP = +33m.29s.$ Irkutsk $PR_1 = +25m.12s.$, $SR_1 = +45m.35s.$

Oct. 17d. 17h. 38m. 21s. Epicentre 41°·0N. 16°·0E. (as on 1927 May 26d.).

A = +·725, B = +·208, C = +·656; D = +·276, E = −·961; G = +·631, H = +·181, K = −·755.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Pompeii		1·1	257	e 0 9	− 8	e 0 20	−11	—	—
Naples	E.	1·3	263	(i 0 26)	+ 6	(e 0 39)	+ 3	—	—
Rocca di Papa		2·6	287	0 45	+ 4	1 22	+10	—	1·6
Zagreb		4·8	0	1 42	+28	e 2 14	+ 3	e 2·4	2·8
Belgrade	N.	5·0	39	e 2 9	+52	i 3 17	+60	i 3·6	—
Venice		5·2	330	—	—	—	—	2·6	—
Budapest		6·8	18	—	—	—	—	e 3·6	—
Vienna	Z.	7·2	2	—	—	e 3 18	+ 3	—	—
Ksara		17·2	108	—	—	—	—	e 9·4	—

Additional readings and notes: Rocca di Papa PN = +51s. Naples readings have been *increased* by 1m. Belgrade iN = +3m.22s.

Oct. 17d. Readings also at 0h. (Mizusawa and Nagoya), 3h. (near Osaka, Kobe, and Nagoya), 7h. (near Santiago), 10h. (Tortosa), 13h. (La Paz), 15h. (Tashkent, Almata, and Frunse), 16h. (Bombay), 17h. (Ksara and Lick), 21h. (near Port au Prince), 22h. (near Mizusawa), 23h. (Ekaterinburg and Tashkent).

Oct. 18d. Readings at 0h. (La Paz), 1h. (Florissant, Ekaterinburg, Frunse, and Tashkent), 2h. (Kucino, Rocca di Papa, and Zagreb), 5h. (Riverview and near Lick), 6h. (Florissant), 7h. (Apia, Suva, and La Plata), 11h. (Zagreb and near Belgrade), 13h. (Tashkent), 14h. (Baku, Ekaterinburg, Irkutsk, and Kucino), 15h. (La Paz and Sucre), 17h. (near Lick), 18h. (Manila and near Sumoto), 20h. (near Tacubaya (2)), 22h. (Apia and Taihoku).

Oct. 19d. 5h. 41m. 30s. Epicentre 35°·5S. 73°·3W. (as on 1928 May 1d.).

A = +·234, B = −·780, C = −·581; D = −·958, E = −·287; G = −·167, H = +·556, K = −·814.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		3·0	48	0 57	+10	1 19	− 4	1·6	—
La Plata		12·6	92	3 1	− 6	5 56	+22	6·5	—
Sucre		18·0	26	4 16	− 1	7 43	+ 3	—	—
La Paz		19·6	15	4 36	0	8 15	0	—	—
Georgetown	Z.	74·5	357	—	—	—	—	e 39·6	—
Florissant		76·0	347	—	—	e 29 39	?	e 35·2	39·6
Chicago	E.	78·4	350	—	—	—	—	e 37·2	—
Toronto		79·3	356	—	—	—	—	40·5	—
Ottawa	N.	80·9	359	—	—	e 35 54	?	e 38·5	—
Granada		97·2	50	—	—	—	—	e 36·5	50·5
Copenhagen		116·5	39	—	—	—	—	60·5	—
Ekaterinburg		142·7	40	—	—	—	—	61·5	—
Tashkent		150·3	67	—	—	—	—	e 70·5	85·9

Florissant gives also MN = +40·2m.

Oct. 19d. 5h. 49m. 0s. Epicentre 15°·3S. 73°·0W. (as on 1922 Oct. 11d.).

A = +·282, B = −·922, C = −·264; D = −·956, E = −·292; G = −·077, H = +·252, K = −·965.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz		4·8	105	i 1 13	− 1	i 2 8	− 3	2·2	2·4
Sucre		8·3	118	i 2 6	0	i 3 46	+ 1	4·1	4·4
La Plata		23·8	148	5 27	+ 1	9 50	+10	13·6	—
Rio de Janeiro	E.	29·1	110	e 6 16	− 3	—	—	14·0	—
	N.	29·1	110	e 6 15	− 4	—	—	14·1	—

La Paz gives also i = +1m.20s.; epicentre 13°·0S. 72°·7W.

Oct. 19d. 10h. 18m. 50s. Epicentre 28°·0S. 177°·5W.

A = −·882, B = −·039, C = −·469; D = −·044, E = +·999; G = +·469, H = +·020, K = −·883.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	10·6	338	i 2 22	−16	i 4 46	+ 1	i 6·2	12·5
	N.	10·6	338	i 2 16	−22	i 4 10	−35	i 5·2	7·7
Wellington	E.	14·7	203	i 3 32	− 3	i 6 39	+14	i 7·9	11·2
	N.	14·7	203	i 3 33	− 2	i 6 48	+23	i 7·9	9·2
Apia		15·1	22	e 2 49	−51	5 2	−92	5·4	9·3
Christchurch		17·5	204	(3 34)	−37	(7 16)	−13	7·3	12·2
Riverview		27·4	250	e 5 50	−12	e 10 58	+10	e 13·5	15·3
Sydney	E.	27·4	250	5 40	−22	9 22	−86	13·4	16·2
Melbourne		32·8	241	i 6 33	−22	i 12 18	− 3	16·2	18·0
Adelaide		37·8	249	—	—	11 25?	?	i 17·2	25·2
Honolulu T.H.		·52·8	23	—	—	i 17 10	+16	24·7	26·5
Perth		57·0	249	—	—	—	—	30·3	37·8
Manila		73·2	297	e 11 10?	−27	—	—	—	—
Batavia		74·5	271	i 11 44	− 2	i 21 25	+ 5	44·2	—
Mizusawa	N.	77·1	329	—	—	42 27	?L	51·0	—
Hong Kong		82·9	300	12 37	+ 2	23 0	+ 4	42·5	45·7
Berkeley		83·6	40	e 11 47	−53	—	—	e 40·5	—
Lick		83·7	40	e 13 10?	+30	—	—	—	—
Tucson		87·4	50	13 4	+ 3	23 23	−22	37·8	—
Phu-Lien		88·0	295	11 10?	?	—	—	—	—
Victoria		90·4	31	23 49	?S	(23 49)	−29	44·1	47·6
La Paz		98·5	113	—	—	i 24 17	[+ 1]	50·2	61·3
Sucre		99·4	117	—	—	i 24·20	[− 1]	50·5	55·5
Colombo		104·4	270	17 9	?	33 29	?SR_1	53·7	68·7
Florissant		105·0	54	e 18 49	?PR_1	i 26 28	−14	e 47·1	58·3
Irkutsk		105·1	320	e 14 18	−17	i 26 0	? Σ	54·2	62·9

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Kodaikanal	108·0	272	24 52	?S	(24 52)	[− 9]	62·9	73·0
Chicago E.	108·1	50	(i 13 55)	−54	(27 10)	− 1	(e 54·5)	(60·5)
Cincinnati	109·4	54	(i 18 50)	?PR_1	—	—	(48·0)	(50·2)
Hyderabad	110·2	279	—	—	—	—	—	67·0
Ann Arbor E.	111·0	51	—	—	—	—	e 58·8	—
Rio de Janeiro E.	112·7	133	—	—	25 27	[+ 6]	e 52·3	—
Toronto	114·5	51	—	—	i 25 35	[+ 8]	51·8	75·2
Georgetown Z.	114·8	57	e 20 23	?	i 29 49	?PS	e 57·7	74·4
Bombay	115·7	278	e 18 17	[−23]	29 47	?PS	55·2	67·2
Tananarive	116·0	227	—	—	e 26 56	? Σ	e 58·4	60·4
Ottawa	117·4	50	—	—	e 28 4	−25	e 60·2	—
Tashkent	124·9	302	e 15 40	−26	i 26 5	[+ 7]	e 57·2	94·6
Ekaterinburg	130·4	321	i 19 25	[+ 6]	—	—	56·2	79·6
Scoresby Sund	135·3	11	23 10	?	—	—	71·2	—
Baku	139·4	300	i 19 27	[−11]	—	—	e 71·2	94·0
Kucino	142·5	326	i 19 38	[− 6]	—	—	65·0	88·9
Pulkovo	143·0	336	e 19 35	[−10]	—	—	71·2	86·0
Theodosia	148·8	312	e 19 42	[−12]	—	—	—	—
Simferopol	149·8	312	e 20 11	[+15]	—	—	—	—
Yalta	149·9	312	e 20 0	[+ 4]	—	—	—	—
Konigsberg N.	150·2	339	—	—	—	—	80·2	91·7
Lund	151·3	347	—	—	55 22	?	83·2	—
Copenhagen	151·4	348	20 10?	[+12]	—	—	77·2	—
Ksara	151·4	290	19 55	[− 3]	—	—	76·8	88·8
Edinburgh	151·8	7	—	—	—	—	e 85·2	—
Hamburg	153·8	350	—	—	—	—	e 84·2	109·2
Stonyhurst	153·8	7	—	—	—	—	e 59·2	96·2
De Bilt	155·2	356	i 20 0	[− 2]	—	—	e 84·2	109·4
Jena	156·1	346	e 20 10	[+ 7]	—	—	e 91·2	—
Kew	156·4	4	e 18 59	[−65]	—	—	84·2	89·7
Budapest	156·6	331	—	—	—	—	e 85·2	—
Vienna Z.	157·1	336	e 20 1	[− 4]	—	—	—	—
Feldberg N.	157·3	350	e 20 40	[+35]	—	—	—	98·5
Strasbourg	159·0	350	e 19 10?	[−57]	e 24 10?	?PR_1	31·2	—
Paris	159·1	1	—	—	—	—	e 89·2	91·2
Zagreb	159·2	333	e 20 26	[+19]	e 30 30	?	e 72·8	—
Innsbruck	159·5	343	—	—	—	—	59·2	—
Moncalieri	162·5	348	e 19 46	[−24]	32 21	?PR_2	52·5	—
Rocca di Papa	163·9	332	e 20 12	[+ 1]	e 30 24	?	e 87·8	108·5
Toledo	167·0	23	—	—	e 45 47	?SR_1	—	120·2
San Fernando	168·8	39	—	—	—	—	87·1	101·5
Alicante	169·3	13	—	—	e 43 35	?	e 91·0	—
Granada	169·5	28	e 20 47	[+32]	—	—	79·2	98·0
Algiers	171·2	357	e 20 17	[+ 2]	e 32 30	? Σ	40·2	110·2

Additional readings and notes: Christchurch SR_1 = +5m.10s.; P is given as S and S as L. Riverview iP = +5m.51s., iPR_1 = +6m.47s., iPR_2 = +7m.8s., P_cS = +11m.50s., MZ = +15·0m., MN = +17·2m. Melbourne iPR_1? = +7m.42s., iSR_1? = +14m.31s. Adelaide iSR_1 = +15m.2s., iSR_2 = +15m.42s., i = +16m.26s., MN = +24·9m. Honolulu T.H. MN = +30·2m. Perth e = +23m.30s. and +24m.18s. = SR_2 +12s., i = +25m.2s. = SR_2 +8s.; all readings being given for 11h. Berkeley eZ = +25m.52s., eLN? = +39·5m. Tucson eN = +16m.13s. Victoria MN = +48·3m. La Paz MN = +66·9m. Sucre SR_1 = +30m.10s. Florissant iZ = +19m.32s., iE = +24m.48s. = [S] +1s., and +25m.48s. = Σ +6s., eE = +27m.59s. = PS − 2s. Irkutsk iPS = +28m.6s., iPPS = +29m.10s. Chicago eE = (+17m.16s.), (+29m.58s.), and (+33m.10s.), eN = (+22m.22s.); readings have been *diminished* by 10m. Cincinnati iPR_1Z = (+19m.6s.), iZ = (+19m.44s.), eZ = (+23m.28s.), iPR_2Z = (+24m.22s.); iZ = (+31m.21s.), iSR_2Z = (+35m.0s.), iSR_2Z = (+40m.25s.), eEZ = (+44m.6s.): all readings have been *diminished* by 10m. Ann Arbor eN? = +51m.16s., eL?N = +60·1m. Rio de Janeiro eN = +25m.22s. = [S] +1s. Toronto eE = +26m.40s. = Σ − 1s., eN = +39m.27s. Tananarive eE = +29m.26s., +31m.59s. +39m.26s., and +51m.36s., eN = +29m.41s., +32m.11s., +45m.46s., and +52m.56s., MN = +60·9m. Ottawa eN? = +34m.34s., eLN? = +48·2m. Tashkent iP′ = +19m.7s., iPR_1 = +20m.56s., $S_cP_cP_cS$ = +28m.0s. Ekaterinburg iPR_1 = +21m.39s., PS = +31m.32s. Baku iP_cP_cS = +23m.17s., PPS = +35m.4s., SR_1 = +42m.28s. Kucino ePR_1 = +22m.48s., $S_cP_cP_cS$ = +29m.46s., S_cP_cSP = +33m.6s., PPS = +36m.4s. Pulkovo PS = +33m.4s. Copenhagen ePR_1EN = +24m.10s? Ksara PR_1N = +24m.34s., PR_2N = +27m.53s., PR_3N = +31m.1s., PR_4N = +33m.11s., SR_1N = +44m.18s., SR_2N = +51m.1s., SR_3N = +55m.34s., SR_4N = +60m.30s.; T_e = 10h.18m.25s. ? Hamburg MN = +112·2m.

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Stonyhurst eL = +40·2m. De Bilt MZ = +99·6m., MN = +99·8m.
Kew ePR$_1$Z = +23m.21s. Feldberg eN = +24m.22s. = PR$_1$ +0s., +27m.10s., +29m.30s., +32m.34s., and +35m.52s. Zagreb ePR$_1$ = +24m.38s., eNE = +27m.28s., eSR$_2$ = +38m.10s. ?, eL = +45m.10s. ?, e = +52m.10s. ? Rocca di Papa eN = +20m.22s. Toledo MNW = +117·3m.
San Fernando MN = +98·1m. Granada i = +21m.36s., and +31m.33s.
Algiers MN = +105·2m.

Oct. 19d. Readings also at 3h. (Wellington), 4h. (Florissant), 6h. (Suva), 7h. (Wellington, Christchurch, Riverview, Melbourne, Adelaide, Perth, Ekaterinburg, Tashkent, and near Malabar), 9h. (near Taihoku), 12h. (Kodaikanal and near Baku), 14h. (Florissant), 15h. (Ottawa, Toronto, Georgetown, La Paz, Ekaterinburg, Phu-Lien, Hong Kong, and near Manila), 16h. (Baku, Irkutsk, Pulkovo, Tashkent, near Rocca di Papa, and Zagreb), 17h. (Baku, Ekaterinburg, Ksara, and Tashkent), 19h. (Charlottesville, near Vera Cruz, Oaxaca, Tacubaya, and Merida), 20h. (La Paz and Tucson).

Oct. 20d. 12h. 46m. 44s. Epicentre 30°·5N. 129°·0E. (as on 1928 June 5d.).

A = −·542, B = +·670, C = +·508; D = +·777, E = +·629; G = −·319, H = +·394, K = −·862.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki		2·3	18	e 0 53	+17	1 29	+26	1·8	1·8
Hukuoka		3·3	21	1 5	+13	2 0	+29	—	2·6
Matuyama		4·6	42	e 1 15	+ 4	i 2 15	+ 9	i 2·6	3·0
Sumoto		6·3	51	1 30	− 6	2 35	−17	3·2	3·8
Zi-ka-wei	Z.	6·5	278	i 2 22	+43	i 4 6	?	5·1	6·1
Kobe		6·6	49	1 32	− 9	2 59	− 1	3·5	3·8
Osaka		6·8	51	1 44	0	—	—	3·6	4·9
Nagoya		8·1	52	e 1 49	−14	3 15	−25	4·1	5·5
Taihoku	N.	8·5	232	e 3 0	+51	—	—	—	—
Mizusawa	E.	13·1	46	3 9	− 5	6 24	+38	—	—
	N.	13·1	46	3 10	− 4	6 21	+35	—	—
Hong Kong		15·6	242	3 56	+ 9	6 56	+10	8·6	9·9
Manila		17·5	207	e 4 25	+14	—	—	—	—
Phu-Lien		22·3	250	e 4 36	−33	e 9 46	+35	12·3	—
Batavia	E.	42·4	216	i 8 12	− 2	e 14 6	−34	—	—
Frunse		44·5	303	e 8 41	+11	—	—	—	—
Tashkent		48·6	300	8 56	− 2	16 8	+ 7	e 23·3	32·8
Bombay		51·8	273	e 11 58	?PR$_1$	19 18	[+28]	29·0	33·8
Ekaterinburg		53·2	320	i 9 33	+ 6	e 17 8	+ 9	24·3	35·1
Baku		63·1	303	—	—	e 19 33	+31	37·3	39·8
Kucino		65·8	322	—	—	19 43	+ 8	35·8	39·9
Pulkovo		68·1	328	11 1	− 4	e 20 4	+ 1	37·3	45·2
Upsala		73·6	330	—	—	—	—	e 47·3	—
Konigsberg	E.	75·0	325	—	—	—	—	e 42·3	49·3
Lund		78·0	329	—	—	—	—	43·3	—
Budapest		79·9	320	—	—	—	—	e 42·3	52·3
Potsdam		80·1	326	—	—	—	—	—	52·3
Hamburg		80·8	328	—	—	—	—	e 43·3	52·3
Vienna		80·9	321	12 24	0	—	—	e 41·3	54·3
Jena		81·8	325	—	—	—	—	e 46·3	54·8
Graz		82·1	321	—	—	—	—	e 47·3	53·5
Zagreb		82·6	320	—	—	—	—	e 49·7	53·3
Feldberg	N.	83·7	326	—	—	e 29 34	?SR$_1$	—	49·4
De Bilt		84·0	330	—	—	—	—	e 46·3	55·4
Edinburgh		84·5	335	—	—	—	—	—	56·3
Uccle		85·2	329	—	—	—	—	e 44·3	56·3
Strasbourg		85·2	325	—	—	—	—	e 43·3	55·8
Stonyhurst		85·8	333	—	—	—	—	e 46·3	58·3
Kew		86·4	331	—	—	—	—	e 47·3	53·3
Rocca di Papa		87·0	318	—	—	—	—	e 49·9	57·1
Paris		87·4	328	—	—	—	—	e 51·3	57·3
Moncalieri		87·5	323	—	—	e 23 54	+ 7	48·3	58·3

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tortosa	N.	94·2	324	—	—	—	—	e 53·3	62·6
Alicante		96·6	323	—	—	—	—	e 63·2	—
Granada		99·1	324	—	—	—	—	54·3	61·3
Ottawa		100·8	17	—	—	e 27 16?	?PS	e 47·3	—
San Fernando	E.	100·9	325	—	—	—	—	—	64·5
Toronto		101·4	20	—	—	—	—	39·3	—
Georgetown	Z.	106·4	21	e 21 35	?PR_2	e 27 51	?PS	e 58·7	67·9
La Paz		159·0	52	20 14	[+ 7]	—	—	—	—

Additional readings: Nagasaki ePZ = +57s., SZ = +1m.31s., MNZ = +1·9m. Hukuoka MN = +2·5m. Sumoto MN = +3·7m. Zi-ka-wei PZ = +2m.36s. Kobe P = +1m.42s., SN = +2m.45s., MN = +3·9m. Osaka MN = +5·4m. Nagoya P = +2m.1s., MN = +5·1m. Baku SR_1 = +24m.43s. Kucino SR_1 = +24m.35s. Konigsberg eE = +45m.19s. MN = +50·3m. Jena eLZ = +51·3m., MZ = +53·8m. De Bilt eLN = +43·3m. Uccle MN = +56·1m. Kew eLZ = +49·3m., MZ = +58·3m. Moncalieri S? = +35m.20s. Granada e = +50m.16s. ? Ottawa eN = +36m.16s. ? San Fernando MN = +66·2m.

Oct. 20d. Readings also at 0h. (Tucson, near Tacubaya, Oaxaca, and Vera Cruz), 4h. (Rocca di Papa), 7h. (near La Paz), 8h. (Suva and Wellington), 10h. (near Granada), 12h. (near Nagasaki), 18h. (Phu-Lien and Toronto), 20h. (Tashkent), 21h. (Ekaterinburg and Santiago), 22h. (La Paz (2) and Sucre (2)).

Oct. 21d. 13h. 11m. 55s. Epicentre 28°·5N. 66°·3E. (as on Oct. 15d.).

A = +·353, B = +·805, C = +·477; D = +·916, E = −·402; G = +·192, H = +·437, K = −·879.

Very uncertain identification.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Bombay	11·3	146	e 3 23	+34	4 57	− 5	5·6	10·0
Tashkent	13·0	10	e 3 13	0	i 5 40	− 4	e 6·6	8·1
Frunse	15·9	23	e 3 40	−11	—	—	—	—
Baku	18·0	316	e 4 22	+ 5	e 7 11	−29	e 7·8	—
Ekaterinburg	28·6	354	—	—	e 10 16	−54	14·1	20·1
Kucino	34·0	331	—	—	e 15 23	?	20·7	21·3
Pulkovo	39·6	334	—	—	—	—	e 21·1	—
Copenhagen	46·7	322	—	—	—	—	28·1	—

No additional readings.

Oct. 21d. 15h. 17m. 6s. Epicentre 7°·0S. 178°·0E.

A = −·992, B = +·035, C = −·122; D = +·035, E = +·999; G = +·122, K = −·004, K = −·993.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	N.	11·1	178	i 2 48	+ 2	i 5 0	+ 3	—	6·0
Apia		12·2	125	3 6	+ 4	3 45	−99	3·9	5·9
Wellington	N.	34·4	185	—	—	e 12 30	−16	—	—
Sydney	E.	36·5	220	13 24	?S	(13 24)	+ 7	22·4	23·6
Honolulu T.H.		37·0	40	—	—	—	—	18·4	18·6
Irkutsk		85·8	324	—	—	—	—	46·9	—
Tashkent		108·6	311	—	—	—	—	—	70·4
Ekaterinburg		110·6	330	—	—	—	—	55·9	69·8
Pulkovo		121·9	341	—	—	—	—	e 66·9	—
Baku		123·0	315	—	—	—	—	e 68·9	—

Additional readings: Suva eE = +3m.54s., iSE = +5m.12s., ME = +6·7m. T_0N = 15h.17m.6s. Wellington iE = +13m.29s. Honolulu T.H. MN = +19·4m.

Oct. 21d. 16h. 16m. 45s. Epicentre 5°·0S. 135°·0E. (as on 1923 Feb. 19d.).

$A = -\cdot704$, $B = +\cdot704$, $C = -\cdot087$; $D = +\cdot707$, $E = +\cdot707$; $G = +\cdot062$, $H = -\cdot062$, $K = -\cdot996$.

A *depth* of focus 0·015 is assumed for this shock. On previous occasions when this epicentre was adopted 0·060 was assumed, but this is too great to satisfy the present observations.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		−0·8	24·0	325	e 4 45	−34	—	—	—	—
Adelaide		−1·0	30·1	174	—	—	e 11 20	+ 1	i 15·6	18·0
Perth		−1·1	32·4	211	15 15?	?L	—	—	(15·2)	—
Riverview		−1·1	33·3	153	—	—	e 12 3	− 8	e 17·4	20·0
Sydney		−1·1	33·3	153	11 39	?S	(11 39)	−32	18·2	19·4
Melbourne		−1·2	34·0	165	12 23	?S	(12 23)	+ 2	17·9	18·8
Phu-Lien		−1·3	38·0	314	—	—	12 15?	−65	—	—
Zi-ka-wei	Z.	−1·3	38·4	341	e 7 45	+14	15 53	?SR_1	—	20·4
Wellington	E.	−1·5	50·8	142	i 15 2	?S	(i 15 2)	−68	e 26·0	34·0
	N.	−1·5	50·8	142	—	—	—	—	e 23·9	25·9
Irkutsk		−1·9	62·9	340	e 10 22	+ 3	18 48	+12	29·2	32·4
Frunse		−2·0	72·5	319	e 11 36	+16	—	—	—	—
Tashkent		−2·0	75·5	316	i 11 45	+ 6	i 21 19	+11	e 34·2	45·8
Ekaterinburg		−2·1	85·7	330	i 12 40	0	22 58	− 7	36·2	45·8
Baku		−2·1	89·5	310	—	—	e 23 50	+ 5	—	—
Pulkovo		−2·2	101·7	331	—	—	—	—	e 53·2	66·4
Lund		−	111·6	330	—	—	—	—	55·2	—
Copenhagen		−	112·0	330	—	—	38 15?	?	55·2	60·0
Feldberg	N.	−	116·6	323	—	—	e 28 21	− 2	—	64·2
De Bilt		−	117·5	327	—	—	—	—	e 55·2	63·0
Strasbourg		−	117·7	321	—	—	—	—	e 62·2	—
Uccle		−	118·6	326	—	—	—	—	e 61·2	—
Edinburgh		−	119·2	333	—	—	—	—	e 58·2	—
Kew		−	120·7	330	—	—	—	—	e 58·2	—
Florissant		−	126·9	43	—	—	—	—	e 65·6	69·3
Granada		−	130·4	315	—	—	—	—	—	73·2
San Fernando	E.	−	132·6	316	—	—	—	—	—	76·2

Additional readings: Adelaide MN = +20·4m. Riverview e = +16m.27s., MN = +18·8m. Melbourne S = +·16m.29s. Wellington eN = +18m.23s., iSE = +21m.15s. Copenhagen MN = +59·6m. San Fernando MN = +75·7m.

Oct. 21d. Readings also at 0h. (Nagoya, near Kobe, and Sumoto), 1h. (near Amboina), 5h. (near Mizusawa), 6h. (Baku, Ekaterinburg, Tashkent, Sucre, and near La Paz), 7h. (La Plata and Sucre), 13h. (Taihoku, Matuyama, near Kobe, and Sumoto), 17h. (near Amboina), 19h. (near Tacubaya), 21h. (Ekaterinburg, Tashkent, Melbourne, and Riverview).

Oct. 22d. Readings at 1h. (La Paz), 2h. (Zagreb), 3h. (Baku, Bombay, Ekaterinburg, Frunse, and Tashkent), 4h. (De Bilt, Feldberg, Kew, Copenhagen, Pulkovo, and Irkutsk), 5h. (Apia, Suva, Christchurch, Wellington, Sydney, Riverview, and Melbourne), 6h. (Irkutsk, Ekaterinburg, and Tashkent), 7h. (Baku, Copenhagen, De Bilt, Frunse, and Pulkovo), 8h. (Phu-Lien), 9h. (near Frunse and Tashkent), 11h. (Manila), 13h. (La Paz), 22h. (Frunse).

Oct. 23d. 17h. 52m. 6s. Epicentre 51°·0N. 157°·3E.

A = −·579, B = +·246, C = +·777 ; D = +·391, E = +·921 ;
G = −·715, H = +·304, K = −·629.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		10·3	250	2 42	+ 8	4 31	− 6	4·9	—
Nagoya		21·4	230	e 4 57	− 1	—	—	—	—
Osaka		22·5	232	5 11	0	(9 18)	+ 3	9·3	9·7
Kobe		22·7	232	5 9	− 4	9 18	− 1	e 13·0	—
Sumoto		23·1	232	e 5 15	− 3	(e 9 24)	− 3	e 9·4	—
Irkutsk		32·0	294	i 6 36	−11	12 17	+ 9	16·9	20·6
Hong Kong		43·7	245	8 12	−12	14 41	−17	22·1	30·7
Honolulu T.H.		46·0	113	—	—	i 15 10	−18	18·9	24·9
Manila		46·5	233	e 10 6	?PR_1	—	—	—	—
Victoria	E.	49·0	60	15 57	?S	(15 57)	− 9	19·6	19·8
Phu-Lien		49·4	254	e 8 54	− 9	e 15 54?	−17	22·9	—
Ekaterinburg		52·2	317	i 9 22	+ 1	i 16 37	− 9	i 25·1	34·5
Frunse		53·8	296	e 9 34	+ 2	—	—	—	—
Tashkent		57·9	298	i 9 59	+ 1	—	—	e 32·9	37·3
Pulkovo		61·2	333	10 24	+ 4	18 26	−12	32·9	40·0
Kucino		61·9	325	10 28	+ 4	18 42	− 5	31·7	40·3
Upsala	N.	64·4	339	—	—	—	—	e 33·9	42·6
Tucson		66·8	68	e 11 0	+ 3	e 19 53	+ 5	—	—
Konigsberg		68·1	335	—	—	e 20 12	+ 9	e 36·9	45·9
Baku		68·8	310	i 11 15	+ 5	e 20 17	+ 5	34·6	44·6
Lund		69·2	340	—	—	20 24	+ 8	31·9	—
Copenhagen		69·3	340	11 17	+ 4	20 24	+ 6	31·9	40·5
Hyderabad		69·4	275	—	—	—	—	—	44·5
Theodosia		71·5	321	e 11 36	+ 9	—	—	—	—
Chicago	E.	71·6	46	—	—	19 48	−57	e 32·8	42·7
	N.	71·6	46	—	—	19 42	−63	e 39·2	44·2
Bombay		71·8	279	11 28	0	20 46	− 2	37·6	39·7
Hamburg		71·8	340	e 11 32	+ 4	—	—	e 36·9	46·9
Edinburgh		71·9	349	—	—	—	—	e 40·9	—
Yalta		72·4	321	e 12 2	+30	—	—	—	—
Sebastopol		72·6	322	e 11 54?	+20	—	—	—	—
Florissant		72·6	50	i 11 34	0	i 20 58	+ 1	—	40·0
St. Louis		72·8	50	e 11 34	− 1	i 20 59	− 1	e 33·6	40·2
Simferopol		72·8	321	e 11 54?	+19	—	—	—	—
Ottawa	N.	73·4	36	e 11 39	+ 1	e 20 56	−11	e 34·9	—
Stonyhurst		73·7	347	—	—	—	—	e 43·9	43·9
De Bilt		74·2	343	11 46	+ 3	21 19	+ 3	e 36·9	46·3
Jena		74·2	339	e 4 24	?	—	—	e 41·9	47·9
Cincinnati		75·0	45	e 11 54	+ 5	e 21 50	+24	—	—
Budapest		75·1	332	11 51	+ 1	—	—	44·9	47·9
Vienna		75·2	335	e 11 51	+ 1	—	—	e 38·9	48·9
Feldberg	N.	75·3	340	e 11 52	+ 1	i 21 31	+ 2	e 38·0	46·1
Oxford		75·6	347	—	—	—	—	e 41·9	52·8
Uccle		75·6	344	11 53	0	—	—	e 37·9	50·9
Kew		76·4	347	i 11 54	− 3	e 22 34	− 8	39·9	47·9
Graz		76·5	335	—	—	—	—	e 33·9	39·8
Strasbourg		77·0	340	i 12 3	+ 2	e 21 51	+ 2	e 37·9	—
Innsbruck		77·4	337	e 12 0	− 3	—	—	38·0	52·4
Paris		77·8	344	i 12 7	+ 1	e 22 1	+ 3	42·9	52·9
Zagreb		78·1	333	e 12 4	− 4	e 21 54?	− 7	39·9	48·9
Chur		78·3	340	i 12 9	0	—	—	—	—
Georgetown	Z.	78·4	40	i 12 9	0	22 25	+20	e 39·2	52·2
Charlottesville		78·6	41	—	—	22 6	− 1	e 40·9	—
Besançon	N.	78·7	340	12 10	− 1	—	—	—	—
Neuchatel		78·7	340	i 12 11	0	—	—	—	—
Zurich		78·7	339	i 12 7	− 4	e 21 52	−16	—	—
Florence		80·6	336	e 12 16	− 7	—	—	—	—
Ksara		80·6	315	12 19	− 4	—	—	46·1	52·9
Rocca di Papa	N.	82·2	334	e 12 24	− 7	—	—	—	—
Pompeii		82·5	332	e 12 14	−19	e 22 54	+ 2	—	—
Riverview		85·0	185	i 17 4	?PR_1	i 23 4	−15	—	—
Tortosa		85·9	343	—	—	—	—	e 41·9	52·1
Granada		90·2	346	i 13 9	− 8	e 23 9	[−20]	48·9	54·3
San Fernando		91·3	348	—	—	e 23 49	[+13]	—	63·0
Wellington	N.	93·6	167	—	—	i 23 34	[−16]	e 43·1	—
La Paz		130·3	63	19 20	[+ 1]	i 22 58	?	—	—
Sucre		133·9	61	19 31	[+ 3]	i 22 58	?	77·9	—
Cape Town		145·6	283	—	—	i 25 54	?	—	—
La Plata		150·2	71	(20 36)	[+40]	—	—	20·6	—

For Notes see next page.

NOTES TO OCT. 23d. 17h. 52m. 6s.

Additional readings: Honolulu T.H. MN = +23·9m. Victoria PN = +16m.3s. Tashkent eSR_1 = +22m.0s., eSR_2 = +24m.18s. Upsala eLE = +35·9m. Konigsberg e = +17m.18s., MN = +44·9m. Copenhagen ePR_2Z = +15m.54s. ?, SR_2 = +28m.42s. ?, MN = +43·2m. Hamburg MNZ = +45·9m. Florissant iZ = +11m.48s., iE = +21m.21s. = [S] − 10s. St. Louis e = +16m.4s., iSE = +21m.0s., ePS = +21m.27s., eN = +29m.4s. = SR_2 − 24s. Ottawa eN? = +25m.42s.; T_3 = 17h.52m.26s. De Bilt eSR_1 = +26m.12s., MN = +50·7m., MZ = +50·9m. Vienna iPZ = +11m.53s. Feldberg eN = +26m.30s. = SR_1 − 36s. Innsbruck MNW = +50·7m. Paris MN = +50·9m. Zagreb eNE = +12m.38s., ePR_1NE = +14m.21s. Chur e = +14m.11s. Georgetown eZ = +27m.14s. = SR_1 − 34s. Neuchatel e = +17m.22s. = PR_2 − 9s. Zurich e = +23m.2s. Florence iP = +12m.24s. Ksara PR_1E? = +13m.6s., PR_2N = +15m.48s. = PR_1 − 6s., PR_2N = +17m.34s. = PR_2 − 16s., PR_4N = +18m.45s. = PR_3 − 5s., PS = +22m.22s. = S − 8s., PPSN? = +23m.40s., SR_1E = +28m.41s., SR_2E = +33m.36s. = SR_2 − 8s., SR_2E = +36m.47s. Rocca di Papa eE = +12m.28s. Granada PR_1 = +16m.46s., 1 = +24m.41s., G = +45m.6s. San Fernando MN = +62·7m. Wellington iE = +23m.36s.

Oct. 23d. Readings also at 2h. (near Algiers and near Tacubaya), 3h. (Frunse (2) and near Tashkent), 4h. (Frunse, Nagoya, and near Mizusawa), 8h. (Suva), 9h. (near Tacubaya), 13h. (Baku, Ekaterinburg, and Tashkent), 17h. (near Tananarive), 18h. (near Entebbe), 20h. (near Oaxaca, Tacubaya, and Vera Cruz), 21h. (Tucson), 22h. (near Oaxaca and Tacubaya), 23h. (near Yalta).

Oct. 24d. 7h. 2m. 0s. Epicentre 44°·5N. 34°·5E. (as on 1927 Oct. 12d., and as given by the Stations).

A = +·588, B = +·404, C = +·701.

	△	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Yalta	0·2	270	0 1	− 3	(0 5)	− 1	0·1	0·1
Simferopol	0·5	326	e 0 8	0	(0 14)	0	0·2	0·3
Sebastopol	0·7	279	e 0 10	− 1	(0 20)	0	0·3	0·4
Theodosia	0·8	48	e 0 15	+ 3	(0 26)	+ 4	0·4	—

No additional readings.

Oct. 24d. Readings also at 1h. (near Tacubaya), 3h. (Sumoto, near Kobe, and Matuyama), 5h. (Pompeii, Pulkovo, Zagreb, near Kobe, and Sumoto), 6h. (Baku, Tashkent, and Taihoku), 7h. (Baku, Irkutsk, Phu-Lien, and Tashkent), 12h. (Belgrade, Mizusawa, and Nagoya), 13h. (near Mizusawa, and Nagoya), 17h. (Malabar), 19h. (near La Paz).

Oct. 25d. 12h. 32m. 48s. Epicentre 12°·3N. 85°·8W.

(as on 1926 Nov. 5d.).

A = +·072, B = −·974, C = +·213 ; D = −·997, E = −·073 ;
G = +·016, H = −·212, K = −·977.

For a number of stations in the following list, phases for this and the following earthquake at 12h. 36m. 9s. are much confused. Readings are consequently regarded as belonging to the earlier shock, unless they agree closely with definite phases of the second. In the case of Ekaterinburg and Irkutsk the same reading may be regarded as the P for either shock.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Balboa Hts.	E.	7·0	117	2 5	+19	3 35	+25	4·4	5·1
	N.	7·0	117	2 10	+24	3 36	+26	4·1	5·1
Merida		9·4	338	(2 0)	−22	(3 50)	−23	(4·1)	(5·1)
Oaxaca		11·6	296	(2 39)	−14	(4 47)	−22	—	(5·3)
Vera Cruz		12·1	306	(2 54)	− 6	(5 7)	−14	(5·3)	(8·0)
Port au Prince		14·4	63	e 3 49	+17	i 6 55	+37	e 9·1	9·5
Tacubaya		14·7	300	3 31	− 4	6 30	+ 5	7·0	7·2
Charlottesville	E.	26·5	13	—	—	e 10 32	0	i 13·4	17·4
	N.	26·5	13	i 6 0	+ 7	i 11 6	+34	15·2	18·6
St. Louis	N.	26·6	352	i 5 58	+ 4	i 10 33	0	i 13·7	15·7
Florissant		26·8	352	i 5 57	+ 1	i 10 33	− 4	i 13·5	—
Cincinnati		26·8	2	e 5 38	−18	e 10 15	−22	15·2	—
Georgetown	Z.	27·7	15	i 6 16	+11	11 26	+32	—	17·3
Chicago	E.	29·5	357	—	—	e 11 5	−21	12·6	14·2
Ann Arbor		30·0	4	e 6 6	−22	e 11 30	− 4	e 15·7	17·4
Tucson	E.	30·5	315	e 6 26	− 7	e 12 10	+27	e 16·1	—
	N.	30·5	315	e 6 24	− 9	e 12 4	+21	e 19·3	19·7
Ithaca		31·2	14	i 6 40	0	e 12 4	+10	e 17·2	—
Toronto		31·8	10	e 6 43	− 2	12 2	− 3	i 18·0	20·2
Harvard	E.	32·6	20	—	—	—	—	e 18·6	20·7
La Paz		33·7	150	6 55	− 7	i 12 20	−16	15·8	21·4
Ottawa		34·2	14	i 7 6	− 1	e 12 37	− 6	e 16·8	21·4
Sucre		37·3	149	i 7 25	− 7	13 18	−10	19·6	22·9
Lick	E.	40·6	316	e 7 48	−12	e 13 48	−27	e 19·8	—
Berkeley		41·4	316	e 7 56	−10	e 14 10	−17	e 20·8	22·8
Spokane	N.	44·1	331	e 8 2	−25	—	—	e 31·2	36·2
Victoria	E.	47·7	328	8 51	− 1	16 11	+21	25·4	38·2
	N.	47·7	328	8 51	− 1	15 51	+ 1	23·2	33·4
La Plata		54·1	152	9 34	0	17 5	− 5	—	—
Rio de Janeiro	E.	54·6	131	e 9 34	− 3	17 28	+12	26·1	34·6
	N.	54·6	131	e 9 38	+ 1	17 22	+ 6	26·9	37·4
Honolulu T.H.		69·0	290	—	—	i 20 22	+ 8	31·7	38·0
Scoresby Sund		69·8	20	—	—	21 12?	+48	33·2	—
San Fernando		74·4	56	i 13 15	+90	—	—	40·0	45·3
Edinburgh		75·7	36	—	—	e 27 12?	?SR_1	37·2	47·2
Bidston		75·8	39	22 12	?S	(22 12)	+37	38·2	46·3
Malaga		75·8	55	12 6	+12	22 58	?PS	30·2	—
Toledo		75·9	52	e 12 6	+12	e 21 48	+12	e 36·6	41·7
Stonyhurst		76·2	39	—	—	e 23 12?	+93	38·2	46·7
Dyce		76·2	34	—	—	—	—	31·2	43·2
Granada		76·4	55	i 12 14	+17	22 6	+24	32·2	36·9
Oxford		77·0	40	—	—	—	—	e 28·2	42·3
Almeria		77·4	55	e 13 13	+70	e 23 1	+68	e 32·2	—
Kew		77·6	40	—	—	—	—	37·2	41·2
Alicante		78·7	53	e 12 20	+ 9	e 23 38	+90	e 39·6	—
Tortosa	N.	79·2	50	—	—	e 22 12?	− 2	e 35·2	43·6
Paris		79·7	43	e 12 33	+16	e 23 12?	?PS	37·2	44·2
Barcelona		80·3	50	—	—	—	—	e 28·7	43·4
Uccle		80·5	40	e 11 12?	−70	e 23 12?	?PS	e 38·2	45·2
De Bilt		80·9	39	e 12 34	+10	—	—	e 39·2	44·3
Algiers		81·8	55	—	—	—	—	e 33·2	41·2
Besançon		82·2	45	—	—	—	—	e 42·2	43·2
Neuchatel		82·8	45	i 12 42	+ 7	—	—	—	—
Strasbourg		83·1	43	—	—	e 24 27	?	e 37·2	45·7
Feldberg	N.	83·2	40	—	—	e 23 6	+ 7	—	49·2
Hamburg		83·5	37	—	—	e 23 12?	+ 9	e 39·2	50·2
Zurich		83·9	45	e 13 24	+43	—	—	43·2	—
Copenhagen		84·4	34	e 12 52	+ 8	e 23 23	+11	38·2	45·5
Ravensburg	E.	84·5	42	—	—	—	—	e 43·2	46·8

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Chur		84·6	45	e 12 32	−14	—	—	e 43·2	—
Lund		84·8	34	—	—	23 53	?PS	39·2	—
Jena		85·0	40	—	—	e 24 41	?	e 41·2	49·2
Potsdam		85·6	37	—	—	—	—	e 40·6	46·2
Upsala	E.	86·0	30	—	—	e 25 12?	?	—	48·6
Florence		86·5	47	e 11 14	−102	—	—	—	—
Rocca di Papa		88·0	49	—	—	e 24 57	?PS	e 45·7	47·5
Laibach		88·1	42	—	—	—	—	e 45·2	—
Graz		88·5	41	i 15 21	?	e 28 12	?	38·2	48·6
Vienna		88·8	40	—	—	22 47	[−34]	e 40·2	49·2
Konigsberg		89·0	34	—	—	—	—	e 35·2	49·2
Helsingfors		89·2	28	—	—	e 30 38	?SR_1	44·7	—
Zagreb		89·2	43	—	—	e 24 3	− 2	e 41·2	—
Naples	E.	89·3	49	e 16 12	?	—	—	57·2	—
Budapest		90·7	41	—	—	—	—	e 46·2	49·7
Pulkovo		91·8	27	e 13 21	− 5	e 23 53	[+14]	47·2	50·9
Kucino		97·4	29	—	—	24 28	[+18]	48·3	57·7
Sebastopol		101·0	40	e 14 12?	− 3	—	—	—	—
Simferopol		101·2	39	e 14 18	+ 2	—	—	—	—
Theodosia		102·0	38	e 14 14	− 6	—	—	—	—
Wellington	E.	105·1	231	—	—	i 25 3	[+15]	e 49·2	—
Ekaterinburg		105·5	20	i 14 47	+10	i 25 9	[+19]	44·2	60·1
Ksara	E.	107·9	49	e 14 0	−48	—	—	57·4	—
Baku		113·2	35	e 19 49	?PR_1	e 26 20	? Σ	57·2	65·8
Irkutsk		114·9	353	i 15 7	−13	—	—	63·2	73·5
Tashkent		121·7	21	—	—	—	—	58·2	69·5
Frunse		121·9	16	—	—	—	—	76·2	—
Melbourne		128·3	230	—	—	—	—	e 59·2	61·2
Zi-ka-wei	Z.	129·3	330	—	—	—	—	68·4	76·7
Adelaide		134·0	232	—	—	i 67 37	?L	e 77·0	82·4
Tananarive	E.	134·7	103	—	—	—	—	e 66·2	75·2
Hyderabad		146·4	28	—	—	—	—	—	94·2
Kodaikanal		152·0	37	88 12	?L	—	—	(88·2)	—

Additional readings and notes: Merida readings have been *diminished* by 2m. Oaxaca readings have been *increased* by 1m. Vera Cruz readings have been *diminished* by 1m. St. Louis iN = +7m.18s. Florissant iLZ = +14·3m. Cincinnati iE = +6m.14s., i = +9m.50s., iSE = +12m.7s. Georgetown PR_1Z = +7m.6s., PR_2Z = +7m.17s., SR_1Z = +12m.36s. Chicago eE = +9m.21s. Ann Arbor eSR_1 = +13m.30s., iE = +14m.54s., eLN = +16·4m., MN = +18·4m.; T_e = 12h.31m.54s. Tucson ePR_2N = +7m.18s. = PR_1 − 7s., ePR_2E = +7m.27s., eN = +14m.23s. Toronto iE = +12m.32s.; T_e = 12h.32m.48s. La Paz PR_2 = +8m.30s., SR_1E = +14m.12s., MN = +19·0m. Ottawa i = +8m.29s., eSR_2E = +14m.42s.; T_e = 12h.32m.57s. Sucre PR_1 = +8m.54s., PR_2 = +9m.18s., i = +13m.33s., SR_2 = +16m.39s. Lick eEZ = +7m.53s. Berkeley ePZ = +7m.58s., eZ = +9m.51s. = PR_1 + 13s., eZ? = +14m.58s., eN = +18m.4s. = SR_2 − 5s. Spokane eE = +8m.26s., eN = +12m.47s. San Fernando MN = +43·5m. Granada i = +21m.28s. = [S] − 31s. Kew iPSEN = +23m.5s., SR_1E = +27m.48s., SR_2E = +31m.10s., MZ = +43·3m., MN = +43·8m. Tortosa ME = +45·2m. Paris MN = +42·2m. Barcelona MN = +45·6m. Uccle i = +28m.30s. = SR_1 + 9s. De Bilt eE = +23m.17s. = PS − 1s., e = +23m.56s., eN = +27m.54s., eE = +28m.38s. = SR_1 + 11s., and +31m.55s. = SR_2 − 6s., MN = +43·6m. Strasbourg eSR_1 = +29m.25s. Feldberg eN = +24m.28s. and +29m.12s. = SR_1 + 14s. Hamburg MZ = +53·2m. Copenhagen SR_1 = +29m.24s., SR_2 = +33m.6s., MN = +47·1m. Jena iPZ = +15m.47s., iPE = +16m.24s. = PR_1 − 6s., eN = +40m.35s., eLZ = +42·2m., MN = +46·7m., MZ = +47·2m. Potsdam MN = +45·2m. Upsala MN = +48·8m. Konigsberg eLN = +33·7m. Zagreb eNW? = +30m.53s. and +37m.41s., e = +46m.12s. ? Budapest MN = +52·2m.; all readings have been *diminished* by 1h. Pulkovo PS = +25m.29s. Kucino PR_1 = +17m.36s., SR_1 = +32m.32s. Ekaterinburg iPR_1 = +18m.47s., iPS = +28m.11s. Ksara eE = +23m.58s. and +29m.19s., LN = +60·2m. Baku i = +29m.42s. = PS + 9s. Irkutsk PPS = +30m.6s., e = +37m.12s. Tananarive SR_1 = +41m.12s. ?, eLN = +62·2m., MN = +78·2m.

Oct. 25d. 12h. 36m. 9s. Epicentre 13°·5S. 68°·5E. (as on 1927 March 14d.).

$A = +·356$, $B = +·905$, $C = -·233$; $D = +·930$, $E = -·366$; $G = -·086$, $H = -·217$, $K = -·972$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tananarive	20·9	252	4 55	+ 3	8 41	− 1	—	11·9
Kodaikanal	25·3	21	12 39	?L	—	—	(12·6)	—
Hyderabad	32·4	17	6 49	− 3	12 4	−10	15·2	21·0
Bombay	32·6	8	6 38	−15	11 44	−34	15·8	21·7
Tashkent	54·8	1	i 9 41	+ 3	i 17 7	−12	—	—
Baku	56·6	345	e 9 52	+ 2	—	—	—	—
Ksara	56·6	328	e 9 45	− 5	—	—	—	—
Frunse	56·7	6	e 9 51	+ 1	—	—	—	—
Zi-ka-wei	67·6	47	11 24	+22	(19 50)	− 7	e 31·8	—
Ekaterinburg	70·6	356	11 26	+ 5	—	—	—	—
Melbourne	71·1	126	—	—	e 19 16	−83	e 35·4	36·0
Irkutsk	72·6	23	i 11 46	+12	—	—	—	—
Pompeii	73·7	321	e 12 41	+61	—	—	—	—
Kucino	73·9	344	e 11 45	+ 4	21 7	− 6	—	—
Budapest	75·2	328	12 6	+16	—	—	—	—
Rocca di Papa	75·4	321	11 52	+ 1	—	—	—	—
Zagreb	75·8	326	e 11 55	+ 1	—	—	—	—
Vienna	77·1	329	11 50	−12	—	—	—	—
Innsbruck	79·2	325	12 21	+ 7	—	—	—	43·6
Konigsberg	79·3	335	—	—	e 22 7	− 8	—	—
Zurich	80·9	324	e 12 23	− 1	—	—	—	—
Jena	81·2	329	e 12 19	− 7	—	—	—	—
Strasbourg	82·0	325	i 12 30	0	—	—	—	—
Feldberg	82·4	327	e 11 57	−35	—	—	—	—
Hamburg	83·5	330	12 39	0	—	—	—	—
Uccle	85·0	326	11 51?	−57	—	—	—	—

Additional readings: Tananarive SN = +8m.43s., SR_1 = +9m.28s. Zi-ka-wei PR_2 = +16m.6s.; true S is given as PR_2. Rocca di Papa PEN = +11m.53s., eP = +11m.54s.

Oct. 25d. Readings also at 1h. (near Tacubaya), 3h. (La Paz, Sucre, and near Manila), 12h. (Phu-Lien, Strasbourg, near Oaxaca, and Tacubaya), 13h. (Bombay), 15h. (Copenhagen), 16h. (La Paz), 17h. (near Tacubaya), 19h. (Ekaterinburg, Tashkent, and Batavia (2)).

Oct. 26d. 4h. 29m. 36s. Epicentre 43°·5N. 17°·0E. (as on 1928 July 5d.).

$A = +·694$, $B = +·212$, $C = +·688$; $D = +·292$, $E = -·956$; $G = +·658$, $H = +·201$, $K = -·725$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mostar		0·6	104	2 24	?	2 34	?	—	3·1
Zagreb		2·4	342	0 41	+ 4	i 1 9	+ 3	i 1·3	1·5
Belgrade	N.	2·8	62	i 2 8	+84	e 3 3	+106	i 3·1	—
Laibach		3·1	312	e 0 48	− 1	i 1 30	+ 4	—	1·7
Pompeii		3·3	220	e 0 54	+ 2	e 1 44	+13	—	—
Naples	E.	3·3	218	e 0 55	+ 3	e 1 24	− 7	—	—
Rocca di Papa		3·6	243	i 0 54	− 2	i 1 41	+ 2	—	2·4
Graz		3·8	344	e 0 51	− 8	e 1 59	+15	—	2·5
Venice		3·8	301	e 1 29	+30	2 30	+46	—	2·7
Florence		4·2	275	0 54	−11	2 14	+19	—	—
Trenta		4·2	187	e 1 4	− 1	—	—	—	—
Budapest		4·3	19	1 12	+ 5	2 4	+ 6	2·9	—
Vienna		4·8	355	1 14	0	2 14	+ 3	i 2·5	3·2
Innsbruck		5·5	316	e 1 12	−13	i 2 22	− 9	i 2·9	3·0
Chur		6·2	304	e 1 28	− 7	—	—	—	—
Zurich		7·1	307	e 1 42	− 6	e 3 14	+ 1	—	—

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Hohenheim		7·5	317	—	—	—	—	i 3·9	—
Neuchatel		7·8	299	i 1 48	−10	e 3 12	−19	—	—
Strasbourg		8·2	312	(e 2 26)	+22	(4 3)	−39	—	—
Jena	E.	8·3	335	e 2 36	+30	—	—	e 3·6	3·7
Besançon		8·6	300	—	—	e 3 29	−24	—	—
Feldberg	N.	8·9	322	—	—	—	—	e 4·5	—
Potsdam		9·3	345	e 2 18	− 2	—	—	—	5·2
Hamburg		11·1	338	—	—	—	—	e 5·2	7·4
Uccle		11·3	315	—	—	—	—	e 6·0	—
De Bilt		11·7	321	—	—	—	—	e 6·4	—
Copenhagen		12·6	348	—	—	—	—	6·9	—

Additional readings: Zagreb e = +44s., i = +47s., +1m.2s., and +1m.13s. Belgrade iN = +3m.13s. Laibach iP = +56s. Rocca di Papa iPZ = +55s., iPN = +58s., PR_1 = +1m.8s., MN = +2·2m. Budapest readings are given for 5h. Vienna i = +1m.20s. and +2m.19s. Innsbruck P*NW = +1m.30s., PNW = +1m.36s., S* = +2m.48s., MNW = +3·5m. Hohenheim i = +4m.12s. and +4m.52s. Neuchatel eP = +2m.16s. Strasbourg readings are given as ePR_1? and SR_1? respectively. Jena eE = +2m.48s. and +3m.1s.

Oct. 26d. Readings also at 6h. (near Manila), 7h. (Sebastopol, Simferopol, and near Yalta (2)), 10h. (Tashkent (2), near Almata, and near Manila), 11h. (Ekaterinburg and Manila), 15h. (Mizusawa, Nagoya, and near Sumoto), 19h. (Victoria), 20h. (near Mizusawa).

Oct. 27d. Readings at 1h. (Entebbe), 2h. (Baku and Tashkent), 5h. (near Algiers), 9h. (Ekaterinburg, Irkutsk, and near Taihoku), 10h. and 11h. (near Lick), 14h. (Taihoku), 15h. (Ekaterinburg and near Tashkent).

Oct. 28d. Readings at 5h. (Almata, Frunse, and Tashkent), 7h. (near Tacubaya), 8h. (near Taihoku), 9h. (Toronto), 10h. (Tashkent, and near Sumoto), 14h. (Merida, La Paz, Sucre, Florissant, Ottawa, and Georgetown), 15h. (De Bilt, Feldberg, Copenhagen, and Scoresby Sund), 17h. (Almata and Frunse), 19h. (near Tacubaya).

Oct. 29d. Readings at 2h. (near Tananarive), 5h. (Taihoku), 9h. (Santiago), 11h. (Charlottesville), 13h. (near Tashkent), 14h. (Algiers), 23h. (Zagreb).

Oct. 30d. 4h. 23m. 5s. Epicentre 16°·2N. 97°·2W. (as on 1928 Oct. 13d.).

A = −·120, B = −·953, C = +·279; D = −·992, E = +·125; G = −·035, H = −·277, K = −·960.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Puebla		3·0	341	1 5	+18	—	—	1·8	2·2
Vera Cruz		3·2	18	1 31	+41	—	—	2·3	2·7
Tacubaya		3·8	330	1 25	+26	—	—	2·3	2·5
Guadalajara		7·5	307	—	—	(3 21)	− 3	(3·6)	(4·0)
Merida		8·6	55	(2 34)	+24	(4 1)	+ 8	(4·1)	(4·2)
Tucson	E.	20·3	325	4 57	+12	8 53	+24	11·2	—
	N.	20·3	325	4 57	+12	8 55	+26	11·1	—
St. Louis		23·2	14	i 5 23	+ 4	i 9 36	+ 7	i 14·6	15·9
Florissant		23·4	13	i 5 24	+ 3	i 9 39	+ 6	e 12·4	15·9
Cincinnati		25·5	23	i 5 44	+ 1	e 10 11	− 2	—	—
Chicago		26·9	16	5 58	+ 1	10 43	+ 4	16·1	19·1
Ann Arbor	E.	28·5	21	e 6 1	−12	e 12 1	?SR_1	e 14·9	—
	N.	28·5	21	e 6 13	0	e 11 25	+17	e 17·6	—
Georgetown	Z.	28·7	34	6 13	− 2	11 3	− 9	e 15·4	22·0
Lick	E.	30·2	320	—	—	e 11 29	− 8	e 15·3	—
Berkeley	Z.	31·0	320	—	—	—	—	e 20·7	—
Toronto	E.	31·3	26	6 29	−12	e 11 41	−15	—	—
	N.	31·3	26	i 6 26	−15	e 11 36	−20	e 17·9	23·8
Ottawa		34·3	28	i 7 0	− 7	e 12 28	−16	e 16·4	—

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria		38·7	333	7 44	0	13 49	+ 1	20·9	25·2
	N.	38·7	333	7 44	0	13 54	+ 6	20·4	25·1
La Paz		43·5	139	8 25	+ 3	—	—	22·4	27·1
Sucre		47·2	139	8 50	+ 2	15 40	− 4	23·9	27·3
Scoresby Sund		69·9	20	—	—	—	—	36·9	—
Stonyhurst		79·8	38	—	—	—	—	e 38·9	44·9
Kew		81·6	40	e 12 37	+ 9	—	—	39·9	—
Toledo		82·1	51	e 11 45	−46	e 21 9	−98	e 36·4	—
Granada		83·1	54	i 12 44	+ 7	e 22 24	−34	—	42·6
Paris		84·1	41	—	—	—	—	e 43·9	47·9
De Bilt		84·6	37	—	—	—	—	e 41·9	46·3
Uccle		84·6	39	—	—	—	—	e 43·9	—
Alicante		85·1	51	e 11 52	−57	—	—	e 45·8	—
Copenhagen		87·2	32	—	—	e 23 43	0	42·9	49·4
Feldberg	N.	87·2	39	—	—	—	—	—	55·9
Strasbourg		87·4	40	e 12 57	− 4	—	—	43·9	—
Pulkovo		93·0	24	e 17 12	?PR_1	—	—	46·9	—
Kucino		98·5	25	—	—	—	—	48·7	—
Ekaterinburg		104·6	13	i 18 44	?PR_1	e 25 3	[+18]	57·9	65·4
Baku		115·7	27	—	—	—	—	57·4	68·4
Tashkent		121·1	11	e 20 43	?PR_1	—	—	e 55·9	74·3

Additional readings and notes: Guadalajara readings have been *increased* by 2min. Merida readings have been *diminished* by 2min. Florissant iSN = +9m.37s., iSR_1N = +10m.37s., iSR_2E = +10m.56s. Cincinnati i = +5m.50s., iS = +10m.24s., eSR_1 = +11m.11s. Chicago eN = +11m.31s., eE = +11m.37s., eLN = +14·5m., MN = +17·5m. Ann Arbor e?E = +6m.49s., =PR_1 −10s., +10m.1s., and +14m.55s., e?N = +8m.13s., +10m.19s., and +20m.37s. Georgetown PR_1Z = +7m.23s., SR_1Z? = +12m.25s., SR_2Z? = +12m.40s. Lick eE = +16m.59s. Berkeley eZ = +11m.4s., eE = +12m.41s., eN = +12m.43s., eE = +14m.55s., eZ = +17m.30s., eN = +17m.46s., eE = +17m.50s. eZ = +19m.3s., eN = +19m.10s. Toronto eE = +11m.47s.; T_o = 4h.23m.1s. Ottawa iSN = +12m.31s.; T_o = 4h.23m.11s. Copenhagen eN = +38m.55s.?, MN = +51·6m. Ekaterinburg e = +27m.57s., =PS + 1s. Tashkent e = +30m.6s., and +37m.7s. = SR_1 + 6s.

Oct. 30d. Readings also at 0h. (Florissant, St. Louis, Georgetown, Ottawa (2), Toronto, Victoria, Berkeley, and near Tucson), 2h. (near Ksara), 6h. (Georgetown, Ottawa, and Toronto), 7h. (Georgetown, Ottawa, and Toronto), 10h. (near Taihoku), 11h. (Phu-Lien, Ekaterinburg, Tashkent, and near Taihoku), 20h. (Suva), 22h. (near Belgrade and Zagreb).

Oct. 31d. 20h. 4m. 18s. Epicentre 43°·2N. 147°·2E. (as on 1927 June 20d.).

A = −·613, B = +·395, C = +·685; D = +·542, E = +·841; G = −·575, H = +·371, K = −·729.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		4·7	319	(1 33)	+20	—	—	1·6	3·4
Mizusawa		6·2	230	1 43	+ 8	2 53	+ 4	—	—
Kobe		12·7	232	e 4 25	+76	—	—	e 7·8	9·4
Sumoto		13·0	230	e 4 26	+73	5 31	−13	6·5	9·1
Zi-ka-wei	z.	23·6	248	5 16	− 8	9 52	+16	14·3	15·1
Irkutsk		29·8	303	e 6 9	−17	11 45	+14	15·7	19·3
Phu-Lien		40·5	249	9 42?	?PR_1	—	—	—	—
Frunse		51·3	297	e 9 17	+ 2	—	—	—	—
Ekaterinburg		53·3	318	9 24	− 4	e 16 58	− 2	25·7	34·4
Tashkent		55·5	297	i 9 43	0	i 17 29	+ 1	e 26·8	36·1
Kucino		64·5	324	e 10 37	− 5	e 19 10	− 9	31·3	41·2
Pulkovo		64·8	330	10 50	+ 6	19 29	+ 6	34·7	42·1
Bombay		66·0	274	—	—	—	—	e 36·7	—
Scoresby Sund		66·1	356	—	—	—	—	37·7	—
Baku		68·1	306	11 9	+ 4	20 15	+12	36·3	44·0
Lund		73·8	336	—	—	—	—	43·7	—
Copenhagen		74·0	336	—	—	—	—	35·7	48·1
Budapest		78·5	328	—	—	—	—	e 44·7	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
De Bilt	E.	79·2	338	—	—	—	—	e 37·7	43·5
Feldberg	N.	80·0	335	—	—	—	—	—	52·7
Uccle		80·6	338	—	—	—	—	e 38·7	—
Zagreb	N.W.	81·0	328	—	—	—	—	e 49·2	—
Kew		81·2	341	—	—	—	—	e 43·7	—
Strasbourg		81·6	334	—	—	—	—	e 46·7	—
Florissant		82·8	42	e 12 31	− 4	i 22 42	−13	e 42·8	48·8
Ottawa		83·6	28	—	—	e 22 42	−23	e 36·7	—
Toronto	N.	83·7	31	—	—	—	—	53·7	—
Moncalieri		84·8	333	e 35 47	?	42 28	?	47·4	—
Georgetown	Z.	88·6	33	e 11 42?	?	—	—	e 51·7	—

Additional readings and note: Mizusawa SN = +2m.55s. Bombay reading is given for 21h. De Bilt eLN = +40·7m., MN = +51·6m., MZ = +61·6m. Zagreb eNE = +49m.54s. and +54m.24s. Florissant iZ = +12m.40s., iE = +22m.59s.

Oct. 31d. Readings also at 6h. (near Tacubaya), 16h. (Frunse), 17h. (Batavia), 19h. (Mizusawa).

Nov. 1d. 4h. 12m. 39s. Epicentre 27°·0N. 107°·5W.

A = −·268, B = −·850, C = +·454; D = −·954, E = +·301; G = −·137, H = −·433, K = −·891.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mazatlan		3·9	165	(1 18)	+17	—	—	(2·2)	(2·8)
Tucson	E.	6·0	332	i 1 55	+23	—	—	i 3·7	5·6
	N.	6·0	332	i 1 56	+24	i 3 5	+21	i 3·6	5·1
Guadalajara		7·3	149	(2 3)	+12	(3 32)	+14	(3·6)	(3·8)
Manzanillo		8·5	159	(2 21)	+12	—	—	(5·2)	(5·7)
Tacubaya		10·8	133	2 49	+ 8	5 4	+14	5·3	6·1
Puebla		11·7	131	—	—	—	—	6·0	6·2
Denver		12·9	9	e 3 16	+ 4	i 5 26	−16	—	6·4
Vera Cruz		13·0	124	3 3	−10	5 35	− 9	5·9	6·4
Oaxaca		14·1	133	(3 3)	−24	(5 31)	−39	(6·4)	(7·4)
Lick		15·8	315	e 4 15	+26	i 7 39	+49	i 9·4	10·0
Berkeley		16·5	315	i 4 24	+25	e 7 46	+39	e 9·5	—
Merida		17·4	106	(4 39)	+29	(7 49)	+22	(8·5)	(15·1)
St. Louis		18·5	47	e 4 12	−11	i 7 33	−18	—	—
Florissant		18·6	46	e 4 12	−12	i 7 34	−19	—	—
Chicago	E.	22·0	43	i 5 3	− 2	i 8 54	−11	10·6	11·3
	N.	22·0	43	i 5 3	− 2	i 8 50	−15	10·4	12·6
Cincinnati		22·7	52	i 5 0	−13	i 8 56	−23	i 11·2	12·7
Ann Arbor		24·7	46	i 5 27	− 8	i 9 45	−12	e 11·7	13·2
Victoria		24·7	334	5 41	+ 6	(10 30)	+33	10·5	16·4
Saskatoon		25·1	1	i 5 39	0	i 10 11	+ 6	e 12·6	14·0
Charlottesville	E.	26·7	58	e 5 41	−14	e 10 5	−30	e 11·8	16·0
	N.	26·7	58	e 5 43	−12	e 10 3	−32	e 12·4	14·4
Georgetown	E.	28·0	57	5 55	−13	i 10 43	−16	e 12·6	14·6
	N.	28·0	57	e 5 56	−12	10 36	−23	e 12·9	14·5
	Z.	28·0	57	i 5 55	−13	10 32	−27	—	—
Toronto	E.	28·1	46	i 5 50	−19	i 10 29	−32	i 14·1	16·8
	N.	28·1	46	e 5 48	−21	i 10 29	−32	12·7	14·6
Ithaca		29·5	50	—	—	e 11 1	−25	—	15·8
Ottawa		31·2	45	i 6 23	−17	i 11 24	−30	i 14·8	18·8
Balboa Hts.	N.	32·0	120	e 8 21?	?	—	—	—	—
Sitka		36·0	335	—	—	—	—	e 20·0	24·1
Halifax		39·1	51	e 7 21	−26	e 13 5	−48	e 17·4	20·2
Honolulu T.H.	E.	46·0	275	—	—	—	—	23·9	24·8
La Paz		57·9	136	i 9 59	+ 1	17 59	+ 1	29·4	33·0
Sucre		61·6	135	i 10 24	+ 1	i 18 39	− 4	30·6	37·2
Scoresby Sund		63·2	23	10 44	+11	—	—	29·4	—
Dyce		75·3	33	—	—	—	—	34·4	40·8
Edinburgh		75·4	35	—	—	e 26 21?	?SR_1	—	46·4
Bidston		76·6	38	25 51	?	—	—	e 36·8	44·9
Stonyhurst		76·7	38	—	—	i 21 37	− 8	39·4	45·4

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Plata		77·7	141	(12 3)	− 2	—	—	12·0	—
Oxford		78·4	39	—	—	—	—	e 35·7	47·0
Kew		79·0	39	i 12 13	0	e 22 7	− 5	35·8	46·1
Rio de Janeiro		79·7	124	—	—	e 22 21	+ 1	e 37·7	—
De Bilt		81·6	36	i 12 28	0	e 22 46	+ 4	e 36·4	49·4
Uccle		81·8	37	e 12 29	0	e 22 51	+ 7	e 36·4	47·1
Paris		81·9	40	—	—	—	—	e 40·4	48·4
Upsala		82·3	25	e 12 27	− 5	—	—	e 38·4	44·5
Toledo		82·5	50	e 12 35	+ 2	e 22 54	+ 2	e 37·5	41·1
Copenhagen		82·8	29	i 12 35	0	e 22 57	+ 2	39·4	42·7
Hamburg		83·1	32	e 12 37	0	—	—	e 41·4	46·4
Lund		83·2	29	12 39	+ 2	23 44	−15	41·4	—
Malaga		83·7	51	12 12	−28	22 40	−26	—	—
Granada		84·1	51	i 12 40	− 3	e 23 11	+ 2	e 41·2	49·1
Feldberg	N.	84·3	36	e 12 43	− 1	e 28 50	?SR_1	—	46·0
Helsingfors		84·6	22	12 47	+ 1	—	—	38·4	—
Besançon		84·8	40	i 12 45	− 2	—	—	e 43·4	—
Strasbourg		84·9	37	i 12 44	− 3	e 23 10	− 8	42·4	51·8
Tortosa	N.	85·0	47	—	—	—	—	e 40·4	49·9
Potsdam		85·3	31	e 12 49	− 1	—	—	e 42·4	54·4
Neuchatel		85·4	39	i 12 48	− 2	—	—	e 53·4	—
Jena		85·5	35	i 12 47	− 4	—	—	e 37·4	47·4
Grenoble		85·7	41	—	—	—	—	47·4	—
Zurich		86·1	39	e 12 51	− 3	—	—	e 50·4	—
Ravensburg		86·4	38	i 12 56	+ 1	i 23 34	0	e 41·4	—
Pulkovo		86·6	20	i 12 57	0	23 29	− 8	40·4	51·2
Konigsberg		86·8	27	—	—	—	—	e 41·4	51·4
Chur		86·9	39	e 12 56	− 2	—	—	e 51·4	—
Moncalieri		87·0	40	11 36	?	23 26	−15	41·5	—
Vienna		89·6	34	13 6	− 8	—	—	e 45·4	49·4
Florence		89·8	39	13 5	−10	e 23 51	−21	—	—
Graz		89·9	35	e 12 55	−20	—	—	44·4	52·0
Zagreb		91·0	36	13 21?	0	e 25 6	+42	e 43·4	47·4
Rocca di Papa		91·8	40	—	—	—	—	e 54·8	59·4
Ekaterinburg		95·6	7	i 13 40	− 7	24 18	[+18]	—	66·6
Irkutsk		96·0	341	i 13 47	− 2	—	—	49·4	—
Baku		109·4	19	e 19 10	?PR_1	—	—	49·0	66·4
Ksara		109·9	32	e 18 46	[+24]	—	—	51·4	—
Frunse		110·1	359	e 18 43	[+21]	—	—	—	—
Tashkent		111·6	3	—	—	—	—	e 49·4	71·4
Phu-Lien		121·9	321	—	—	—	—	49·4	—
Bombay		134·1	0	19 40	[+12]	22 5	?PR_1	82·3	—

Additional readings and notes : Mazatlan readings have been *increased* by 4m. Guadalajara readings have been *increased* by 2m. Tucson i = +2m.18s. Manzanillo readings have been *increased* by 2m. Oaxaca readings have been *increased* by 1m. Lick iN = +5m.19s., iE = +8m.48s., e = +9m.19s., MN = +9·7m. Berkeley ePR_1E = +4m.40s., eN = +6m.1s., eSNZ = +7m.47s., iE = +9m.43s., iZ = +9m.56s., and +10m.9s., iP_cS?E = +12m.44s., eZ = +12m.47s., iN = +14m.3s. Merida readings have been *increased* by 1m. Florissant iP = +4m.13s., iSR_1E = +8m.2s., iP_cPE = +8m.44s. Chicago iSR_1N = +9m.15s. Ann Arbor eSR_1 = +10m.39s. ; T_0 = 4h.12m.42s. Victoria MN = +14·7m. Saskatoon iLN = +13·4m. ; T_0 = 4h.12m.36s. Charlottesville iS = +10m.17s. Georgetown PR_1E = +6m.28s., iPR_1Z = +6m.34s., iPR_2Z = +6m.48s., PR_2E = +6m.49s., PR_3E = +6m.52s. Toronto eN = +10m.21s., iE = +10m.36s. ; T_0 = 4h.12m.37s. Ottawa iE = +10m.10s. and +13m.11s., eE = +10m.33s., MN = +16·8m. ; T_0 = 4h.12m.43s. Sitka MN = +20·9m. Honolulu T.H. eLN = +22·7m., MN = +25·0m. La Paz eSN = +19m.17s. = [S] − 22s. Kew PR_1Z = +15m.11s., PSE = +22m.46s., eZ = +23m.12s., SR_1EN = +27m.19s., LZ = +39·4m., MN = +40·6m., MZ = +46·2m. De Bilt eSR_1 = +27m.51s., MN = +46·8m., MZ = +49·7m. Uccle e = +27m.21s.? MN = +48·0m. Paris MN = +41·4m. Upsala MN = +45·7m. Copenhagen ePEN = +12m.39s., eN = +23m.40s. = PS − 1s., eEN = +26m.39s., eN = +34m.21s. ? = SR_2 − 11s., MN = +43·6m. Hamburg MN = +51·6m., MZ = +53·4m. Helsingfors PS? = +24m.3s. Strasbourg PR_1 = +15m.56s., ePS = +24m.2s. Tortosa eLE = +38·4m. Potsdam MN = +46·4m. Jena ePN = +12m.49s., MN = +52·4m. Ekaterinburg iPR_1 = +17m.25s., iPR_2 = +19m.33s., SR_1 = +32m.3s. Irkutsk ePR_1 = +17m.25s., ePR_3 = +19m.45s., $S_cP_cP_cS$ = +24m.27s. Baku PS = +28m.54s., PPS = +30m.7s., SR_1 = +34m.39s. Tashkent iPR_1 = +19m.22s., iPS = +29m.4s., iPPS = +30m.6s. Bombay eP = 5h.15m.9s., eS = 5h.23m.15s. ; these, together with the adopted L, are recorded as a separate shock.

Nov. 1d. 16h. 8m. 18s. Epicentre 5°·5N. 71°·5W. (as on 1923 Dec. 22d.).

A = +·316, B = −·944, C = +·096; D = −·948, E = −·317; G = +·030, H = −·091, K = −·995.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Port au Prince		13·1	356	e 3 19	+ 5	—	—	i 6·3	—
La Paz	E.	22·3	172	5 8	− 1	i 9 18	+ 7	11·2	13·0
	N.	22·3	172	5 8	− 1	i 9 15	+ 4	11·2	17·7
Sucre		25·3	166	i 5 41	0	i 10 15	+ 6	13·0	17·2
Charlottesville	E.	33·1	351	—	—	—	—	e 14·7	19·7
Georgetown	Z.	33·8	354	e 7 5	+ 2	13 31	− 7	e 17·1	23·0
Cincinnati		35·6	345	i 7 19	+ 1	e 12 53	−11	18·2	—
St. Louis	N.	37·2	337	—	—	e 12 32	−55	19·7	24·7
Ann Arbor	E.	38·4	346	—	—	e 13 54	+10	e 21·3	—
Toronto	E.	38·8	352	—	—	e 13 34	−15	22·0	—
Chicago	E.	39·0	342	—	—	9 2	?PR_1	e 15·7	19·1
	N.	39·0	342	—	—	9 3	?PR_1	e 16·3	19·5
Rio de Janeiro		39·7	138	e 13 58	?S	(e 13 58)	− 4	21·6	22·9
Ottawa		40·1	356	i 9 22	?PR_1	e 14 6	− 2	e 17·7	26·1
La Plata		42·4	166	8 29	+15	15 42?	+62	21·7	—
Tucson		45·4	312	e 8 30	− 6	e 10 0	?PR_1	11·2	—
Victoria	E.	61·3	325	—	—	—	—	32·8	36·4
Kew		74·0	39	—	—	—	—	e 32·7	—
Uccle		76·8	40	—	—	e 25 42?	?	e 33·7	—
De Bilt		77·5	39	—	—	—	—	e 32·7	42·7
Strasbourg		78·8	41	—	—	(e 23 42?)	+92	e 23·7	—
Feldberg	N.	79·3	40	—	—	e 22 36	+21	e 35·7	**48·9**
Hamburg		80·5	37	—	—	—	—	e 38·7	45·7
Copenhagen		82·0	35	—	—	—	—	39·7	—
Pulkovo		91·1	30	—	—	e 23 53	−32	45·7	57·7
Kucino		96·1	34	—	—	e 24 18	[+15]	e 78·7	—
Ekaterinburg		106·6	26	e 21 4	?	e 25 13	[+18]	38·7	52·7
Baku		109·4	42	—	—	e 30 5	?	47·7	—
Tashkent		121·1	32	e 20 42?	?PR_1	—	—	—	73·1
Irkutsk		122·1	3	—	—	e 30 42?	?PS	e 58·7	—
Batavia		178·2	112	—	—	e 32 42?	?	—	—

Additional readings: Port au Prince i = +7m.22s. Charlottesville eLN = +11·7m., MN = +21·7m. Georgetown PR_1Z = +8m.35s. Cincinnati iPR_1NZ = +8m.12s., iPR_2NZ = +8m.41s., iPR_2Z? = +9m.4s., iP_cSEZ = +13m.27s., eEZ = +13m.52s., eEN = +14m.55s., iZ = +15m.22s. = SR_1 + 10s. iSR_2 = +15m.51s., i = +16m.57s. Ann Arbor e?E = +13m.12s., e?N = +15m.18s., e?E = +16m.54s., eE = +17m.18s. and +17m.54s., eN = +18m.24s., eL?N = +20·0m. Toronto eN = +9m.9s., LN = +16·7m. Chicago SR_1N? = +13m.44s. = S − 8s. Rio de Janeiro ePN = +14m.1s., SE = +18m.45s., SN = +18m.32s. Tucson LN = +10·9m. De Bilt MN = +34·8m., MZ = +43·9m. Kucino e = +26m.36s. = PS + 16s. Ekaterinburg e = +28m.17s. = PS − 3s. Tashkent e = +31m.48s. and +36m.42s. ?

Nov. 1d. 16h. 28m. 30s. Epicentre 30°·2N. 140°·3E. (as on 1926 Dec. 5d.).

A = −·665, B = +·552, C = +·503.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya	5·7	331	e 1 31	+ 3	(2 40)	+ 4	2·7	—
Osaka	6·1	317	1 36	+ 3	(2 54)	+ 8	2·9	3·5
Sumoto	6·2	313	i 1 34	− 1	(2 43)	− 6	2·7	—
Kobe	6·3	318	i 1 34	− 2	2 45	− 7	—	3·7

No additional readings.

Nov. 1d. Readings also at 0h. (near Lick and near Tacubaya), 4h. (La Paz, Sucre, near Mazatlan, and Tacubaya), 6h. (Tucson), 8h. (Tucson, Ekaterinburg and Tashkent), 9h. (Tucson), 10h. (near Ksara), 11h. and 13h. (2) (Tucson), 14h. (near Amboina), 16h. (Tucson), 17h. (Tucson, near Oaxaca, Tacubaya (2), and Vera Cruz), 18h. (Tucson), 19h. (La Paz and Sucre), 20h. (La Plata, Sucre, Rio de Janeiro, Ottawa, Toronto, Ekaterinburg, and Tashkent), 22h. (near Manila).

Nov. 2d. Readings at 2h. (Tucson), 3h. (La Paz (2) and Sucre), 4h. (Almata and near Charlottesville), 5h. (Apia), 11h. (Tucson), 13h. (near Ksara), 18h. (Rocca di Papa, Pompeii, and near Naples), 21h. (Suva), 23h. (Apia and Suva).

Nov. 3d. 4h. 2m. 51s. Epicentre 36°·0N. 84°·0W.

$A = +\cdot085$, $B = -\cdot805$, $C = +\cdot588$; $D = -\cdot995$, $E = -\cdot105$; $G = +\cdot061$, $H = -\cdot585$, $K = -\cdot809$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Cincinnati		3·2	353	i 0 53	+ 3	i 1 31	+ 3	—	—
St. Louis	E.	5·6	300	e 1 52	+25	e 2 16	−18	—	—
Florissant		5·8	301	—	—	e 2 34	− 5	i 3·3	3·8
Georgetown		6·2	60	1 32	− 3	i 2 43	− 6	e 2·8	3·3
Toronto	E.	8·4	23	—	—	e 4 1	+14	i 4·3	—

Additional readings and note: Cincinnati i = +1m.41s. and +1m.52s., iZ = +2m.1s. St. Louis iEN = +3m.19s., +3m.24s., and +3m.34s., iE = +3m.53s. Georgetown SN = +2m.44s., MN = +3·1m. Only the P for Cincinnati and the P and S for Georgetown are given with definite phase.

Nov. 3d. 9h. 5m. 51s. Epicentre 21°·1N. 121°·7E. (as on 1927 July 8d.).

$A = -\cdot490$, $B = +\cdot794$, $C = +\cdot360$; $D = +\cdot851$, $E = +\cdot526$; $G = -\cdot189$, $H = +\cdot306$, $K = -\cdot933$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	3·9	0	—	—	—	—	e 2·3	—
Manila		6·5	186	e 1 23	−16	(i 2 19)	−38	i 2·3	3·3
Hong Kong		7·0	281	1 38	− 8	—	—	3·9	5·5
Phu-Lien		14·1	271	e 3 3	−24	—	—	7·0	—
Irkutsk		34·0	341	—	—	e 12 32	− 8	e 20·0	—
Tashkent		48·3	307	8 55	− 1	i 15 57	− 1	e 24·0	31·0
Ekaterinburg		56·7	325	e 9 56	+ 6	17 53	+11	27·0	—
Baku		62·9	306	—	—	e 19 15	+15	36·0	43·2
Kucino		69·2	323	—	—	—	—	e 38·8	—
Pulkovo		72·6	328	—	—	—	—	43·0	46·8
Copenhagen		82·9	329	—	—	—	—	52·0	—
De Bilt		88·4	327	—	—	—	—	e 47·0	57·5
Uccle		89·5	326	(e 17 3?)	?PR_1	—	—	(e 17·0)	—
Kew	Z.	91·5	328	—	—	—	—	e 52·0	—

Additional readings: Manila MN = +2·8m. Irkutsk e = +16m.48s. Ekaterinburg i = +10m.5s. Kew L = +58·0m.

Nov. 3d. Readings also at 3h. and 4h. (near Manila), 8h. (Florissant), 11h. (Batavia, Ekaterinburg, Tashkent, Nagoya, near Kobe, and Sumoto), 12h. (Manila), 15h. (Moncalieri), 16h. (Wellington), 19h. (Frunse), 23h. (Frunse and Tashkent).

Nov. 4d. Readings at 2h. (Nagoya), 3h. (near Ksara), 4h. (Suva), 5h. (Manila, Simferopol, Theodosia, Yalta, and near Sebastopol), 9h. (near Zagreb), 14h. (Wellington), 17h. (near Lick), 19h. (Taihoku), 22h. (Lick).

Nov. 5d. 4h. 41m. 2s. Epicentre 33°·2N. 131°·0E.

A = −·549, B = +·632, C = +·548 ; D = +·755, E = +·656 ;
G = −·359, H = +·413, K = −·837.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Hukuoka		0·6	308	0 6	− 3	0 17	0	—	0·3
Nagasaki		1·1	243	i 0 14	− 3	i 0 29	− 2	—	0·5
Matuyama		1·6	66	i 0 28	+ 4	i 0 31	−14	—	0·9
Sumoto	N.	3·4	69	1 1	+ 8	—	—	1·7	1·9
Kobe		3·8	66	e 1 52	?S	(e 1 52)	+ 8	e 3·3	3·3
Osaka		4·0	66	2 3	?S	(2 3)	+13	3·1	4·6
Nagoya		5·3	66	—	—	e 2 24	− 1	—	—

No additional readings.

Nov. 5d. Readings also at 3h. (Lick, Manila, and near Amboina), 5h. (Belgrade), 7h. (Nagoya), 8h. (Frunse), 10h. (Tucson, near Merida, Oaxaca, Puebla, Tacubaya, and Vera Cruz), 11h. (Bombay), 13h. (near Sumoto), 14h. (Adelaide, Melbourne, Sydney, Wellington, and Manila), 15h. (Perth and Uccle), 18h. (Taihoku), 19h. (Sucre and near La Paz).

Nov. 6d. 4h. 4m. 48s. Epicentre **20°·6S. 168°·8E.**

(as on 1928 Mar. 29d.).

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.
Suva	E.	9·4	76	i 2 24	+ 2	i 4 36	+23	—	—
	N.	9·4	76	i 2 12	−10	i 4 24	+11	—	—
Apia		19·7	73	4 24	−13	8 31	+14	9·5	10·5
Riverview		20·5	226	i 5 0	+13	—	—	e 10·0	12·8
Sydney		20·5	226	4 48	+ 1	8 48	+15	e 11·4	12·9
Wellington	E.	21·3	168	i 4 57	0	i 8 56	+ 6	i 11·3	17·8
	N.	21·3	168	i 4 54	− 3	i 8 54	+ 4	i 10·9	17·1
Christchurch		23·2	173	4 10	−69	9 28	− 1	12·8	14·7
Melbourne		26·8	225	5 58	+ 2	10 50	+13	14·1	15·8
Adelaide		30·1	235	i 6 29	0	i 11 36	0	i 13·9	19·5
Amboina		42·9	288	i 8 30	+13	—	—	e 24·2	27·2
Perth		48·3	245	e 8 47	− 9	i 16 4	+ 6	24·2	27·4
Honolulu T.H.	E.	53·1	40	—	—	i 16 51	− 6	21·6	25·1
	N.	53·1	40	e 9 52	+25	i 16 53	− 4	21·6	24·4
Manila	E.	58·7	304	e 10 2	− 1	i 17 58	− 9	—	21·2
	N.	58·7	304	e 10 2	− 1	i 18 1	− 6	—	21·4
Batavia		61·6	275	i 10 34	+11	i 19 9	+26	e 31·2	—
Osaka		63·7	331	10 30	− 6	18 15	−54	30·9	34·1
Kobe		63·9	330	10 40	+ 3	e 19 19	+ 7	e 27·2	32·4
Taihoku	E.	64·7	315	e 10 51	+ 8	—	—	—	—
Nagasaki		65·0	326	e 10 52	+ 7	e 19 42	+17	e 27·2	—
Hukuoka		65·4	327	e 6 35	?	e 18 54	−36	e 28·6	—
Hong Kong		68·4	306	11 14	+ 7	(20 14)	+ 7	24·7	38·9
Zi-ka-wei	Z.	68·9	320	e 11 13	+ 3	20 13	0	32·6	36·4
Phu-Lien		73·5	300	11 50	+11	21 27	+19	31·7	—
Berkeley		87·1	48	i 12 54	− 6	24 31	?PS	e 39·2	—
Lick		87·4	49	e 12 54	− 7	e 24 30	?PS	e 36·7	—
Calcutta	E.	89·5	294	13 31	+18	(24 19)	+10	24·3	—
	N.	89·5	294	13 55	+42	(24 47)	+38	24·8	—
Colombo		91·4	277	13 19	− 4	24 31	+ 3	44·0	55·6
Victoria		91·7	38	24 19	?S	(24 19)	−13	37·6	50·7
Irkutsk		91·8	326	e 13 18	− 8	24 8	−25	43·2	45·8
Tucson		93·2	57	13 42	+ 9	24 33	−14	43·0	—
Kodaikanal		94·8	280	—	—	—	—	62·4	69·6
Hyderabad		96·4	286	13 43	− 8	24 23	[+19]	46·0	52·9
Dehra Dun		100·9	299	—	—	—	—	39·5	61·0
Bombay		102·2	286	18 24	?PR_1	26 1	−16	37·4	56·0
Almata		105·3	311	e 18 48	?PR_1	—	—	—	—
Frunse		106·9	310	e 17 54	[−18]	—	—	—	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tananarive		110·2	240	—	—	—	—	52·4	60·2
Tashkent		110·4	308	14 16	−43	—	—	46·2	61·8
Florissant		111·0	55	e 16 21	?	e 25 51	[+37]	e 50·8	59·8
La Paz		113·0	120	i 19 46	?PR$_1$	i 29 20	?PS	52·2	57·9
Chicago		113·5	51	—	—	—	—	e 53·2	60·2
Sucre		113·9	124	e 19 27	?PR$_1$	29 44	?PS	54·2	75·2
Cincinnati		115·5	55	—	—	—	—	53·9	60·2
Ann Arbor	E.	116·5	50	—	—	—	—	e 56·0	—
Ekaterinburg		117·0	324	e 15 14	−15	i 27 58	−28	47·2	75·7
Toronto	N.	119·7	50	e 30 20	?PS	e 36 37	?SR$_1$	50·2	—
Charlottesville	E.	120·1	58	—	—	—	—	e 56·2	64·2
Georgetown	Z.	121·3	55	20 22	?PR$_1$	i 33 14	?	e 59·8	65·5
Ithaca		121·7	51	—	—	—	—	62·2	—
Ottawa		122·3	47	30 24	?PS	—	—	e 50·9	64·2
Baku		124·9	307	e 19 17	[+11]	—	—	57·2	63·8
Rio de Janeiro	N.	126·5	142	e 21 12	?PR$_1$	—	—	—	—
Kucino		129·5	328	e 19 21	[+ 4]	—	—	e 56·5	70·3
Scoresby Sund		129·7	5	21 31	?PR$_1$	—	—	55·2	—
Pulkovo		131·1	334	i 19 22	[+ 1]	i 26 39	[+25]	63·2	82·0
Entebbe		132·6	250	19 12?	[−12]	—	—	—	72·2
Helsingfors		133·0	337	e 22 54	?	—	—	57·2	—
Simferopol		135·6	314	e 19 45	[+14]	—	—	—	—
Upsala		135·7	340	e 22 48	?PR$_1$	—	—	e 61·2	79·1
Yalta		135·7	314	e 20 24	[+53]	—	—	—	—
Sebastopol		136·1	314	e 19 40	[+ 8]	—	—	—	—
Ksara	E.	136·5	298	18 9	[−84]	—	—	67·9	83·2
Konigsberg		138·3	333	—	—	e 36 12?	?	e 62·2	—
Bergen		138·5	348	—	—	25 12?	?	—	—
Lund		140·5	339	19 54	[+14]	22 18	?PR$_1$	61·2	—
Copenhagen		140·7	339	e 19 39	[− 1]	—	—	61·2	65·9
Potsdam		143·1	335	e 21 54	?	—	—	e 63·9	71·2
Hamburg		143·3	339	e 19 42	[− 4]	—	—	e 63·2	80·2
Budapest		143·7	325	19 45	[− 1]	—	—	e 73·2	84·7
Edinburgh		144·3	351	e 19 42	[− 5]	—	—	—	93·0
Vienna		144·6	329	e 19 44	[− 4]	—	—	e 66·2	79·2
Jena		144·8	335	e 19 50	[+ 2]	—	—	e 65·2	—
Graz		145·8	328	e 19 51	[+ 1]	e 28 45	?	68·2	100·9
Stonyhurst		146·1	350	e 19 55	[+ 5]	—	—	69·2	91·7
De Bilt		146·1	340	i 19 50	[0]	—	—	e 70·2	83·3
Zagreb		146·4	325	e 19 47	[− 3]	—	—	e 72·8	—
Feldberg	N.	146·6	339	i 19 57	[+ 6]	—	—	—	88·2
Bidston		146·6	350	20 2	[+11]	—	—	66·5	87·9
Uccle		147·4	341	e 19 53	[+ 1]	—	—	43·2	88·7
Innsbruck		147·6	331	20 12?	[+20]	—	—	—	—
Oxford	N.	147·9	349	i 19 56	[+ 3]	—	—	—	—
Kew		148·0	348	? 20 0	[+ 7]	—	—	64·2	85·9
Strasbourg		148·2	334	19 56	[+ 3]	—	—	43·2	—
Venice		148·5	326	e 20 6	[+12]	—	—	—	—
Chur		148·8	334	e 19 55	[+ 1]	—	—	—	—
Zurich		148·8	334	e 19 53	[− 1]	e 23 33	?PR$_1$	e 66·2	—
Paris		149·7	342	e 19 58	[+ 3]	—	—	72·2	88·2
Neuchatel		149·8	334	e 20 0	[+ 4]	—	—	—	—
Besançon		150·0	336	e 20 3	[+ 7]	—	—	70·2	—
Florence		150·2	326	19 57	[+ 1]	27 42	?PR$_2$	—	—
Pompeii		150·3	318	e 20 12	[+16]	—	—	—	—
Naples	E.	150·4	318	e 20 12	[+16]	—	—	—	—
Rocca di Papa		150·8	322	20 3	[+ 6]	26 32	?	e 77·0	108·3
Moncalieri		151·1	332	20 0	[+ 3]	32 53	?	42·8	—
Tortosa	N.	157·5	337	e 19 55	[−10]	—	—	55·2	107·2
Algiers		159·8	326	e 19 35	[−33]	32 37	?	62·2	98·2
Toledo	Z.	159·8	344	e 20 14	[+ 6]	e 30 30	?	e 45·5	—
Alicante		160·0	335	e 20 6	[− 2]	e 30 39	?	e 46·2	—
Almeria		162·0	337	20 47	[+38]	30 52	?	43·1	—
Granada		162·2	340	i 20 12	[+ 3]	—	—	e 82·7	95·1
Malaga		162·8	341	e 20 17	[+ 7]	31 29	?	41·8	—
San Fernando		163·6	346	20 29	[+18]	31 21	?	65·4	111·2

Additional readings: Apia MN = +9·6m., MN = +10·4m.; T_e = 4h.3m.55s. Riverview PR_1 = +5m.7s., PR_2 = +5m.12s., PR_3 = +5m.18s., iSR_3 = +9m.5s., P_cP = +9m.37s., MZ = +11·9m., MN = +12·0m.; T_e = 4h.5m.35s. Wellington iPR_1E = +5m.9s., iPR_1N = +5m.23s., iSR_1E = +9m.44s.; T_eN = 4h.4m.37s.; T_eE = 4h.4m.41s. Adelaide 1 = +7m.38s. and +12m.26s.

Continued on next page.

Perth PR_1? = +11m.17s., SR_1 = +19m.42s. Honolulu T.H. SR_1N = +19m.57s., SR_2E = +20m.2s. Manila iPR_3N = +11m.29s. Batavia i = +10m.39s. Kobe PR_1E = +13m.13s., SR_1E? = +22m.24s., MN = +34·4m. Hong Kong S is given as SR_1 ? Zi-ka-wei iPZ = +11m.25s., PR_1Z = +13m.49s., PR_2Z = +18m.25s., SR_1Z = +23m.9s. Berkeley eEN = +12m.56s. and +36m.1s. = SR_3 − 1s. Lick eEN = +12m.57s. Victoria SEN = +30m.32s. = SR_1 − 20s., LN = +37·3m., MN = +37·8m. Irkutsk S_cP_cS = +23m.35s., PS = +25m.25s., SR_1 = +31m.12s. Tucson SR_1N = +30m.46s. Tananarive e = +56m.54s., MN = +59·4m. Tashkent eP′ = +17m.48s., iPR_1 = +18m.46s., $iS_cP_cP_cS$ = +25m.48s., PS = +28m.7s., iPPS = +29m.11s., SR_1 = +34m.42s. La Paz PSN = +30m.3s. SR_1N = +34m.43s., LN = +47·2m. Florissant ePREZ? = +18m.16s. = [P] − 9s., iPSE = +28m.45s., iEZ = +34m.11s., iN = +38m.51s., eLN = +45·8m., MZ = +63·4m. Chicago PSE = +29m.24s., SR_1N = +35m.16s., SR_1E = +35m.23s., SR_2E = +38m.54s., SR_2N = +39m.25s., eLN = +46·0m., MN = +57·2m. Sucre PS = +30m.21s. Cincinnati eE? = +47m.16s., eN? = +48m.25s., iE = +51m.5s. Ann Arbor eL?N = +51·0m. Ekaterinburg iPR_1 = +20m.8s., S_cP_cS = +26m.21s., $S_cP_cP_cS$ = +27m.6s., iPS = +29m.58s., iSR_1 = +36m.0s. Charlottesville eLN = +50·2m., MN = +70·3m. Ottawa PS? = +37m.12s. = SR_1 − 3s., MN = +70·2m. Baku iPR_1 = +21m.12s., S_cP_cSP = +26m.49s., PS = +31m.8s. Rio de Janeiro eN = +21m.45s. Kucino ePR_1 = +21m.34s., PS = +31m.43s., S_cP_cSP = +32m.18s., PPS = +33m.49s. Scoresby Sund +22m.42s. Pulkovo eP = +16m.13s., iPR_1 = +21m.44s., iP_cP_cS = +22m.48s., PPS = +33m.42s. Upsala eLN = +60·2m., MN = +76·6m. Ksara P′E = +20m.54s., PR_2E = +27m.6s., PR_4E = +31m.39s., PSE = +34m.44s., PPSE = +36m.27s., SR_1E = +42m.14s., SR_2E = +47m.33s. Copenhagen PR_1 = +22m.30s., eE = +41m.12s. ? = SR_1 + 12s., and +44m.12s. ?, MN = +70·5m. Hamburg MN = +84·2m., MZ = +86·2m. Budapest MN = +74·7m. Vienna iPZ = +19m.47s., PR_1 = +23m.34s., PS = +31m.46s., SR_1 = +37m.49s. Jena iPZ = +19m.51s., ePE = +19m.53s. Stonyhurst ePR_1 = +23m.34s. De Bilt MN = +86·3m., MZ = +94·4m. Feldberg eN = +21m.4s. Uccle iP = +19m.57s., MN = +89·8m. Kew ePR_1N = +24m.3s., eE = +33m.40s., eEN = +44m.12s. ?, LZ = +69·2m., MN = +86·5m., MZ = +88·1m. Strasbourg PR_2 = +26m.47s. = [S] + 10s., PR_3 = +29m.51s. = Σ − 9s. Rocca di Papa eP = +19m.22s. and +20m.17s., SN = +26m.53s. Tortosa ME = +107·5m. Algiers MN = +91·8m. Granada i = +21m.5s., +23m.57s., +24m.50s. = PR_1 − 2s., +28m.24s. = PR_2 − 17s., and +32m.6s. = PR_3 + 8s. San Fernando MN = +94·4m.

Nov. 6d. 13h. 42m. 25s. Epicentre 39°·7N. 53°·3E.

A = +·460, B = +·617, C = +·639; D = +·802, E = −·598; G = +·382, H = +·512, K = −·769.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Baku	2·7	285	i 0 55	+13	(i 1 20)	+ 6	i 1·3	—
Tashkent	12·2	78	3 5	+ 3	i 5 30	+ 6	i 6·0	7·7
Theodosia	14·2	298	e 3 33	+ 4	e 6 9	− 4	—	—
Yalta	14·9	295	e 3 40	+ 2	e 6 32	+ 2	—	—
Simferopol	15·1	296	e 3 41	+ 1	e 6 23	−11	—	—
Ksara E.	15·1	253	3 44	+ 4	—	—	—	—
Sebastopol	15·4	295	e 3 52	+ 8	e 6 35	− 6	—	—
Frunse	16·2	72	e 4 5	+10	e 7 22	+22	—	—
Ekaterinburg	17·8	13	4 13	− 2	i 7 36	0	—	—
Almata	18·0	71	e 16 47	?	—	—	—	—
Pulkovo	24·7	332	5 32	− 3	9 50	− 7	13·6	—
Copenhagen	31·2	314	—	—	e 11 35?	−19	—	—

Additional readings: Tashkent i = +6m.38s. Ksara PR_1E = +6m.46s., PR_2E = +9m.52s., PR_3E = +12m.37s., PSE = +17m.27s. **Ekaterinburg** i = +4m.48s. and +9m.27s.

Nov. 6d. Readings also at 2h. (Simferopol, near Sebastopol, and Yalta), 3h. (Taihoku), 4h. (near Batavia), 15h. (La Paz), 20h. (Suva), 21h. (Irkutsk and Tashkent), 23h. (Tortosa).

Nov. 7d. 15h. 26m. 40s. Epicentre 54°·5N. 156°·5W. (as on 1927 Aug. 6d.).

A = −·533, B = −·232, C = +·814; D = −·399, E = +·917; G = −·747, H = −·325, K = −·581.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria	E.	21·3	93	—	—	—	—	9·5	13·6
Honolulu T.H.		33·2	183	—	—	—	—	e 15·3	—
Chicago	E.	45·7	78	—	—	—	—	e 22·9	31·3
Florissant		46·1	83	—	—	e 14 20	−69	—	25·8
Toronto	E.	49·0	70	—	—	—	—	e 27·1	—
Cincinnati	Z.	49·2	78	—	—	—	—	30·3	—
Ottawa		49·8	65	—	—	—	—	e 24·3	—
Scoresby Sund		50·9	19	—	—	e 16 14	−16	27·3	—
Charlottesville	E.	53·4	75	—	—	—	—	e 28·3	32·3
Georgetown	Z.	53·5	73	—	—	—	—	e 28·8	35·2
Irkutsk		54·1	312	e 9 34	0	—	—	26·6	36·0
Ekaterinburg		64·7	339	10 44	+ 1	e 19 26	+ 5	36·3	44·0
Pulkovo		65·7	357	—	—	—	—	e 35·3	—
Edinburgh		67·5	17	—	—	—	—	e 36·3	—
Copenhagen		69·4	7	—	—	—	—	34·3	—
Kew		72·2	16	—	—	—	—	e 40·3	—
De Bilt		72·4	11	—	—	—	—	e 35·3	43·0
Uccle		73·5	12	—	—	—	—	e 37·3	—
Paris		75·2	15	—	—	—	—	e 45·3	—
Strasbourg		76·1	10	—	—	—	—	e 39·3	—
Tashkent		76·7	327	i 11 57	− 2	21 38	− 7	—	50·7
Baku		82·6	341	—	—	e 22 41	−12	—	—
San Fernando	E.	85·6	24	—	—	—	—	—	49·4

Additional readings: Victoria LN = +9·3m. Chicago eLN = +23·1m., MN = +32·4m. Toronto iE = +28m.55s., LE = +31·3m. Ottawa e = +18m.20s. ? Charlottesville eLN = +26·3m., MN = +31·8m. Irkutsk PS = +17m.28s., SR_1 = +21m.0s. De Bilt eE = +30m.56s. San Fernando MN = +52·4m.

Nov. 7d. 18h. 36m. 45s. Epicentre 52°·5N. 95°·0E. (given by the Russian stations)

A = −·053, B = +·606, C = +·793; D = +·996, E = +·087; G = −·069, H = +·790, K = −·609.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk	5·7	88	e 2 44	?S	(e 2 44)	+ 8	4·0	—
Almata	15·1	239	—	—	—	—	8·0	—
Frunse	16·7	243	—	—	—	—	8·8	—
Ekaterinburg	20·1	296	e 4 46	+ 4	—	—	10·2	—
Tashkent	20·7	248	i 4 48	− 1	8 35	− 3	—	12·6
Baku	32·7	267	—	—	—	—	e 15·2	—

Baku gives also L = +18·8m.

Nov. 7d. Readings also at 2h. (near Berkeley and Lick), 5h. (Almata and Frunse), 13h. (near Ootomari), 16h. (near Tacubaya (2)), 19h. (Manila), 21h. (Ekaterinburg, near Tashkent, Almata, Frunse, near La Paz, and Sucre).

Nov. 8d. Readings at 5h. (Ksara), 6h. (Baku and Tashkent).

Nov. 9d. 11h. 2m. 36s. Epicentre 5°·5S. 153°·5E. (as on 1928 March 13d.).

A = −·891, B = +·444, C = −·096; D = +·446, E = +·895; G = +·086, H = −·043, K = −·995.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview		28·4	184	i 6 59	+47	i 11 1	− 5	e 14·0	15·4
Sydney		28·4	184	10 42	?S	(10 42)	−24	14·6	15·4
Melbourne		33·2	192	—	—	i 12 24	− 3	i 16·6	18·9
Manila		38·0	304	e 8 1	+33	—	—	—	—
Wellington		40·5	155	—	—	—	—	27·4	—
Batavia		46·4	268	i 9 6	+23	i 15 50	+17	—	—
Irkutsk		71·2	331	e 11 29	+ 5	e 20 48	+ 8	e 33·4	—
Victoria	E.	89·6	41	—	—	—	—	43·0	46·1
Ekaterinburg		96·2	327	14 4	+14	i 18 5	?PR_1	38·4	49·9
Tananarive		103·2	250	—	—	—	—	—	49·4
Baku		103·9	311	—	—	—	—	e 55·4	—
Pulkovo		111·0	333	—	—	e 29 26	?PS	59·4	—
Florissant		113·7	50	—	—	—	—	e 57·4	61·4
Chicago	E.	115·0	45	—	—	—	—	e 67·1	—
Toronto		120·0	41	—	—	—	—	66·4	—
Copenhagen		121·0	335	—	—	—	—	57·4	—
Ottawa		121·6	37	—	—	—	—	e 62·4	—
De Bilt		126·6	335	—	—	—	—	e 63·4	—

Additional readings and note: Riverview iE = +14m.31s., MN = +15·8m. Melbourne i = +13m.39s. and +15m.6s., all readings being given as for 12h. Batavia readings are given as i without phase. Irkutsk e = +12m.15s.

Nov. 9d. Readings also at 3h. (Wellington and Suva), 4h. (Tashkent, near Almata and Frunse), 7h. (Baku, Copenhagen, Ekaterinburg, Irkutsk, Pulkovo, Tashkent, and near Tacubaya), 9h. (near Tacubaya), 13h. (Perth), 15h. (near Tacubaya), 16h. (Tananarive), 17h. (near Tacubaya), 18h. (near Santiago), 19h. (Baku, Ekaterinburg, Ksara, and Tashkent).

Nov. 10d. 12h. 27m. 30s. Epicentre 20°·6S. 168°·8E. (as on Nov. 6d.).

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.
Suva	E.	9·4	76	i 2 48	+26	i 5 0	+47	—	7·4
Apia		19·7	73	e 5 30?	+53	—	—	—	10·5
Riverview		20·5	226	i 4 48	+ 1	i 8 48	+14	e 10·8	12·9
Sydney		20·5	226	4 30	−17	8 18	−16	11·3	12·7
Wellington	E.	21·3	168	i 5 27	+30	i 8 57	+ 7	i 9·9	12·0
	N.	21·3	168	i 4 57	0	i 8 54	+ 4	10·5	12·7
Christchurch		23·2	173	—	—	—	—	—	15·8
Melbourne		26·8	225	(i 5 48)	− 8	(i 10 32)	− 5	(13·8)	(17·5)
Adelaide		30·1	235	—	—	i 11 18	−18	i 14·0	19·8
Honolulu T.H.		53·1	40	—	—	17 12	+15	—	35·0
Manila		58·7	304	e 10 21	+18	—	—	—	—
Batavia		61·6	275	e 11 13	+50	i 18 52	+ 9	—	—
Hong Kong		68·4	306	20 12	?S	(20 12)	+ 5	—	39·0
Phu-Lien		73·5	300	—	—	20 30?	−38	—	—
Victoria		91·7	38	31 4	?SR_1	—	—	46·4	49·8
Irkutsk		91·8	326	e 13 10	−16	i 24 12	−21	42·5	—
Bombay		102·2	286	e 17 12	?	—	—	—	—
Tananarive		110·2	240	—	—	24 10	[−61]	e 58·4	62·2
Tashkent		110·4	308	e 14 36	−23	25 30	[+18]	—	73·6
Florissant		111·0	55	—	—	e 27 32	− 5	—	57·0
St. Louis		111·1	55	e 9 30	?	e 27 30	− 8	e 62·5	72·9
Chicago	E.	113·5	51	—	—	e 35 42	?SR_1	57·5	60·8
Cincinnati	Z.	115·5	55	—	—	—	—	61·7	65·8
Ekaterinburg		117·0	324	—	—	e 26 49	? Σ	46·5	47·8
Toronto		119·7	50	—	—	—	—	61·5	—
Georgetown	Z.	121·3	55	—	—	e 43 2	?	e 63·9	78·4
Ottawa	E.	122·3	47	—	—	e 30 30?	?	e 58·5	76·5

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Baku		124·9	307	—	—	—	—	e 70·0	79·0
Kucino		129·5	328	e 22 21	?PR_1	e 29 34	−24	e 59·9	77·8
Pulkovo		131·1	334	i 22 42	?PR_1	—	—	68·5	76·0
Lund		140·5	339	—	—	—	—	80·5	—
Vienna	Z.	144·6	329	19 42	[− 6]	—	—	—	—
De Bilt		146·1	340	i 19 48	[− 2]	—	—	e 72·5	87·4
Zagreb		146·4	325	e 19 50	[0]	—	—	e 84·5	—
Uccle		147·4	341	e 19 50	[− 2]	—	—	e 72·5	—
Innsbruck		147·6	331	20 0?	[+ 8]	—	—	—	—
Kew		148·0	348	i 19 52	[− 1]	—	—	78·5	88·5
Strasbourg		148·2	334	e 19 59	[+ 6]	—	—	62·5	—
Paris		149·7	342	—	—	—	—	e 86·5	89·5
Rocca di Papa		150·8	322	—	—	—	—	85·2	—
Granada		162·2	340	e 20 30?	[+21]	—	—	80·5	90·7

Additional readings and notes: Suva iSN = +5m.12s., MN = +7·5m. Riverview PR_1 = +5m.16s., PR_2 = +5m.29s., PR_3 = +5m.35s., i = +10m.9s., MN = +11·1m. Melbourne readings have been *diminished* by 10m. Adelaide iSR_2 = +13m.30s., MN = +19·4m. Honolulu T.H. SR_1 = +22m.48s. = SR_2 + 9s. Batavia readings are given without phase. Irkutsk S_cP_cS = +23m.44s., ePS = +25m.26s. Tashkent iPS = +28m.46s. St. Louis e = +28m.55s. = PS − 15s., eE = +35m.30s., e = +56m.30s., eN = +59m.30s. Ekaterinburg ePR_1 = +20m.0s., ePS = +29m.43s. Georgetown eZ = +50m.5s. Ottawa eLN = +53·5m. Baku PR_1 = +22m.4s., S_cP_cSP = +32m.48s., SR_1 = +39m.51s. Kucino e = +38m.49s. = SR_1 + 5s. De Bilt MN = +85·7m., MZ = +86·0m. Paris MN = +91·5m.

Nov. 10d. Readings also at 2h. (Ekaterinburg, Tashkent, and Sydney), 3h. (near Oaxaca and Tacubaya), 4h. (Perth), 5h. (near Tacubaya), 9h. (near Suva), 10h. (Chicago and near Moncalieri), 16h. (Manila), 17h. (Tananarive), 18h. (Santiago), 20h. (Baku, Ekaterinburg (2), Ksara (2), Tashkent, and near Mizusawa), 21h. (Baku, Irkutsk, Tashkent, Riverview, Melbourne, Suva, Wellington, and near Batavia), 22h. (Baku and Ekaterinburg), 23h. (near Sumoto and Kobe).

Nov. 11d. 22h. 40m. 46s. Epicentre 34°·0S. 57°·0E. (as on 1928 Aug. 8d.).

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	i 4 16	+ 7	e 7 25	0	—	9·5
Johannesburg		26·1	280	—	—	10 14?	−10	—	—
Entebbe		41·1	321	i 8 0	− 4	14 14	− 8	22·2	24·7
Colombo		46·3	32	8 34	− 8	15 14	−18	22·4	22·8
Kodaikanal		48·3	26	15 50	?S	(15 50)	− 8	21·8	27·0
Perth		48·8	105	e 15 59	?S	(e 15 59)	− 5	—	—
Batavia		53·7	70	i 9 28	− 3	i 17 0	− 5	—	—
Bombay		55·0	19	9 41	+ 2	17 18	− 3	28·7	29·0
Hyderabad		55·4	25	9 52	+10	17 28	+ 2	26·3	30·4
Calcutta	N.	63·9	33	10 43	+ 6	—	—	—	—
Dehra Dun		67·3	20	10 23	−37	18 11	?	30·2	34·4
Helwan		68·3	337	11 16	+10	20 16	+10	—	42·4
Ksara		70·6	341	11 25	+ 4	20 27	− 6	32·0	—
Phu-Lien		72·3	49	—	—	e 20 53	− 1	34·2	—
Baku		74·7	355	i 11 50	+ 3	i 21 30	+ 8	37·7	47·9
Riverview		74·9	121	—	—	e 21 27	+ 2	e 40·5	45·4
Sydney		74·9	121	21 26	?S	(21 26)	+ 1	37·8	40·2
Tashkent		76·1	10	? 11 55	− 1	i 21 28	−10	e 36·2	43·1
Manila		77·8	64	e 12 14?	+ 8	—	—	—	—
Hong Kong		78·3	53	21 54	?S	(21 54)	−10	—	45·9
Frunse		78·6	14	e 12 10	− 1	—	—	—	—
Almata		79·4	16	e 12 23	+ 8	—	—	—	—
Rio de Janeiro	N.	85·2	246	e 18 14	?PR_2	—	—	—	—
Wellington	E.	85·5	139	—	—	i 34 0	?	e 44·0	47·5
	N.	85·5	139	—	—	i 33 10	?SR_2	e 40·5	46·3
Rocca di Papa		85·9	329	e 12 54	+ 1	e 23 17	−12	—	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Algiers		86·8	320	e 13 0	+ 2	23 36	− 3	46·2	50·2
La Plata		88·0	229	23 30	?S	(23 30)	−22	41·5	—
Zagreb		88·0	334	e 13 4	− 1	e 23 44	− 8	—	—
Florence		88·2	330	e 12 54	−12	—	—	—	—
Zi-ka-wei	Z.	89·0	50	i 13 26	+16	23 48	−15	47·1	49·2
Vienna	Z.	89·8	335	13 7	− 8	—	—	—	—
Alicante		89·8	320	e 13 40	+25	e 24 28	+16	e 47·7	—
Granada		90·8	317	i 13 19	− 1	24 33	+ 1	e 48·2	55·2
Ekaterinburg		90·9	3	i 13 11	−10	i 23 40	+17	42·2	53·7
Tortosa	N.	91·1	321	—	—	—	—	e 48·2	53·2
Kucino		91·2	350	13 14?	− 8	i 17 14?	?PR_1	e 46·2	—
San Fernando	E.	91·8	315	—	—	—	—	—	58·6
Toledo		92·8	319	—	—	e 24 29	−14	e 40·0	56·6
Strasbourg		93·5	330	e 13 14?	−21	—	—	e 55·2	—
Irkutsk		95·6	27	e 13 39	− 8	23 59	[− 1]	45·2	54·8
Pulkovo		96·3	348	13 38	−13	24 13	[+ 9]	52·2	57·7
Hamburg		96·5	335	—	—	—	—	e 59·2	—
Uccle		96·6	330	—	—	—	—	e 47·2	—
Lund		97·1	339	—	—	—	—	49·2	—
De Bilt		97·3	332	—	—	e 24 32	[+23]	e 50·2	62·4
Copenhagen		97·4	338	—	—	25 14	−16	47·2	53·4
Kew		99·1	328	—	—	—	—	e 54·2	—
Upsala		99·3	343	—	—	—	—	58·2	—
Oxford	N.	99·7	328	—	—	—	—	e 55·2	65·7
Suva	E.	103·7	123	i 23 14	?PR_2	e 26 14	−16	—	28·2
	N.	103·7	123	e 23 2	?PR_2	e 25 14	? Σ	—	27·1
Dyce		103·9	331	—	—	—	—	—	66·2
Scoresby Sund		118·3	338	—	—	—	—	67·2	—
Ottawa		142·5	302	—	—	e 35 14	?	e 71·2	—
Georgetown	Z.	143·1	291	—	—	—	—	e 77·2	—
Toronto		145·1	299	e 42 6	?SR_1	e 44 24	?	83·9	—
Chicago	E.	151·2	296	—	—	—	—	e 87·0	89·2
St. Louis		153·3	289	e 36 14	?	—	—	e 76·2	84·7
Florissant		153·4	290	—	—	—	—	74·3	80·3
Victoria	E.	165·6	1	—	—	—	—	95·8	98·4

Additional readings: Tananarive $iPR_1 = +4m.30s.$, $iSR_1 = +7m.45s.$, $iSR_2 = +7m.51s.$, $MN = +9·1m.$ Batavia $i = +9m.32s.$, $iZ = +9m.38s.$ Calcutta $PE = +10m.4s.$ Ksara $PR_1E = +14m.6s.$; $T_s = 22h.41m.28s.$ Riverview $MN = +43·6m.$ Algiers $MN = +54·2m.$ Zagreb $eSNW = +23m.38s.$ Zi-ka-wei $PR_1Z = +16m.52s.$ Granada $PR_1 = +17m.5s.$ Ekaterinburg $iPR_1 = +16m.24s.$, $S_cP_cS = +23m.24s.$ San Fernando $MN = +57·8m.$ Toledo $MNW = +61·2m.$ Irkutsk $ePR_1 = +17m.27s.$, $PPS = +26m.5s.$, $SR_2 = +35m.7s.$ Pulkovo $PR_1 = +17m.7s.$, $PPS = +26m.20s.$ De Bilt $MN = +66·8m.$ Copenhagen $PR_1 = +17m.44s.$, $S_cP_cS = +24m.22s.$, $PPS = +27m.8s.$, $SR_1 = +31m.14s.$?, $MN = +63·2m.$ Ottawa $eN = +41m.38s.$ = $SR_1 + 16s.$, and $+46m.56s.$, $eLN? = +69·3m.$ St. Louis $eN = +44m.4s.$ $eE = +48m.14s.$ Florissant $eSR_1 = +34m.18s.$

Nov. 11d. Readings also at 0h. (near Tacubaya), 2h. (Sucre and near La Paz), 5h. (near Tacubaya), 11h. (near Kobe and Sumoto), 18h. (Baku, Ekaterinburg, Almata, Frunse, Ksara, and Tashkent), 19h. (Frunse and Irkutsk), 20h. (near Manila), 22h. (Apia, Melbourne, La Paz, and Sucre), 23h. (Ksara).

Nov. 12d. Readings at 0h. (Copenhagen), 1h. (De Bilt), 5h. (La Paz and near Algiers (2)), 10h. (Suva and Wellington), 11h. (near Sumoto), 16h. (Taihoku), 18h. (near Oaxaca and Tacubaya), 21h. (La Plata).

Nov. 13d. Readings at 0h. (Apia), 1h. (Taihoku), 4h. (Bombay), 5h. (near Zagreb), 6h. (San Fernando, Sebastopol, Simferopol, near Yalta, and near Ksara), 7h. (Suva and Wellington), 8h. (Florissant and near Granada), 13h. (Tucson, near Chihuahua), 14h. (Mizusawa and Tucson (2)) 15h. and 17h. (Taihoku), 20h. and 21h. (near Tacubaya), 22h. (Tucson, near Oaxaca, Tacubaya, and Vera Cruz), 23h. (Santiago, Tucson, near Oaxaca, Puebla, Tacubaya, and Vera Cruz).

Nov. 14d. 4h. 32m. 54s. Epicentre 35°·0N. 71°·5E.

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent		6·5	344	i 1 52	+13	(2 53)	− 4	i 2·9	5 4
Dehra Dun		7·2	129	1 49	0	2 43	−32	3·7	3·9
Frunse		8·3	16	i 2 10	+ 4	i 3 41	− 4	4·2	4·6
Almata		9·3	25	i 2 22	+ 2	i 4 4	− 6	4·5	7·5
Bombay		16·2	176	3 52	− 3	6 52	− 8	8·5	10·3
Baku		17·9	294	i 4 29	+13	i 8 3	+25	10·6	18·3
Hyderabad		18·6	159	4 38	+14	7 43	−10	9·2	10·9
Calcutta	E.	19·3	126	4 25	− 8	7 51	−17	10·3	11·1
	N.	19·3	126	4 22	−11	7 50	−18	10·2	11·0
Ekaterinburg		23·0	345	i 5 16	− 1	i 9 23	− 2	i 11·7	29·8
Irkutsk		29·0	43	6 3	−15	10 55	−22	16·1	—
Colombo		29·1	163	10 55	?S	(10 55)	−24	15·2	—
Ksara	E.	29·3	278	6 18	− 3	16 22	?L	(16·4)	—
Kucino		30·9	324	e 7 1	+24	e 11 38	−12	e 13·7	23·1
Phu-Lien		33·9	110	e 6 46	−18	—	—	18·1	—
Pulkovo		36·3	328	i 7 21	− 3	13 14	0	19·1	23·7
Helsingfors		38·9	327	—	—	e 13 38	−13	21·8	—
Hong Kong		39·2	99	7 31	−15	13 22	−32	—	24·0
Konigsberg		40·0	316	—	—	—	—	e 16·1	27·1
Budapest		40·5	306	e 8 6?	+ 7	—	—	—	—
Zi-ka-wei	Z.	41·6	82	i 7 49	−19	13 43	−46	26·0	28·6
Vienna	Z.	42·3	306	8 7	− 6	—	—	—	—
Upsala		42·4	325	—	—	—	—	23·1	25·3
Zagreb		42·7	303	e 8 13	− 3	e 18 14	?SR_1	e 27·6	—
Lund		44·2	319	—	—	—	—	24·1	—
Pompeii		44·5	296	e 8 36	+ 6	—	—	—	—
Copenhagen		44·7	319	—	—	18 30	?SR_1	24·1	28·2
Rocca di Papa		45·7	298	e 7 58	−40	—	—	23·4	—
Hamburg		46·1	315	—	—	e 19 6?	?SR_1	—	29·2
Chur		47·0	305	e 8 47	0	e 15 35	− 6	—	—
Zurich		47·6	305	e 8 48	− 3	—	—	—	—
Strasbourg		48·0	309	e 10 6	+72	—	—	29·1	—
Moncalieri		48·6	304	e 7 27	−91	19 18	?SR_1	34·4	—
Neuchatel		48·7	305	e 9 0	+ 2	—	—	—	—
Manila		48·7	103	e 8 48	−10	—	—	—	30·8
De Bilt	E.	49·1	312	—	—	—	—	e 27·1	32·8
Uccle		49·8	311	—	—	—	—	e 26·1	—
Kew	N.	52·5	314	—	—	—	—	e 27·1	—
San Fernando	E.	61·3	297	—	—	—	—	—	45·3

Additional readings : Colombo S = +11m.35s. Ksara PR_1E = +11m.27s., PR_1E = +12m.37s., SR_1E = +26m.11s., LE = +31·2m. Kucino e = +7m.57s., and +12m.57s. Hong Kong MN = +21·4m. Zi-ka-wei PR_1Z = +9m.29s., PSZ = +14m.13s. Upsala eN = +22m.6s.? Copenhagen MN = +28·1m. Strasbourg e = +10m.55s. De Bilt eLN = +26·1m., MN = +28·2m., MZ = +32·7m. San Fernando MN = +43·8m.

Nov. 14d. Readings also at 0h. (Victoria), 4h. (Entebbe and near Algiers), 5h. (near La Paz and Sucre), 6h. (Granada and near Zurich), 7h. (Almata and Frunse), 8h. (Taihoku (2)), 9h. (Suva), 15h. (Irkutsk and near Kobe), 16h. (Florissant and Tashkent), 19h. (Theodosia, Yalta, Simferopol, and near Sebastopol), 20h. (Baku, Ekaterinburg, and Tashkent), 22h. (Florissant), 23h. (near Tacubaya).

Nov. 15d. 2h. 32m. 18s. (I) } Epicentre 2°·4N. 133°·0E. (given by the Russian
7h. 37m. 9s. (II) } stations).

A = −·681, B = +·731, C = +·042; D = +·731, E = +·682:
G = −·029, H = +·031, K = −·999.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Amboina	7·7	218	1 48	− 9	—	—	—	—
I	Manila	17·0	316	e 4 5	0	i 8 27	+69	i 11·2	—
II		17·0	316	e 4 7	+ 2	—	—	e 11·5	—
I	Hong Kong	27·0	319	5 54	− 4	10 13	−28	—	11·1
II		27·0	319	10 23	?S	(10 23)	−18	—	—
I	Batavia	27·5	252	i 5 49	−14	10 43	− 7	—	—
II	E.	27·5	252	i 6 4	+ 1	i 10 47	− 3	—	—
II	Z.	27·5	252	i 5 48	−15	i 10 52	+ 2	—	—
II	Phu-Lien	31·6	307	—	—	10 51?	−70	—	—
II	Adelaide	37·7	174	—	—	—	—	i 19·6	24·4
I	Riverview	40·1	157	e 7 41	−15	i 13 49	−19	e 22·8	24·9
II		40·1	157	—	—	e 13 44	−24	e 25·0	26·2
I	Melbourne	41·7	167	—	—	i 17 7	?SR_1	21·3	23·7
II		41·7	167	—	—	i 17 6	?SR_1	—	27·4
I	Irkutsk	55·3	340	9 41	0	17 26	+ 1	28·7	—
II		55·3	340	9 42	+ 1	e 17 18	− 7	e 27·8	—
I	Bombay	61·0	290	e 12 42?	?PR_1	—	—	—	—
II	Almata	64·1	319	e 10 51	+12	—	—	—	—
I	Frunse	65·7	318	e 10 48	− 1	—	—	—	—
II		65·7	318	e 10 51	+ 2	—	—	—	—
I	Tashkent	68·9	315	i 11 12	+ 2	20 16	+ 3	e 31·7	40·8
II		68·9	315	i 11 12	+ 2	20 17	+ 4	e 32·8	36·0
I	Ekaterinburg	78·4	328	i 12 8	− 1	i 22 5	0	38·7	44·0
II		78·4	328	12 7	− 2	e 22 4	− 1	36·8	—
I	Baku	83·2	310	i 12 36	− 1	i 23 0	+ 1	41·7	52·9
II		83·2	310	i 12 53	− 2	22 58	− 1	42·4	—
I	Kucino	90·9	326	—	—	24 11	−12	e 45·9	55·9
I	Pulkovo	92·5	330	e 17 23	?PR_1	—	—	52·7	—
I	Copenhagen	104·6	330	—	—	—	—	50·7	—
II		104·6	330	—	—	—	—	52·8	—
I	De Bilt	110·1	329	—	—	—	—	e 58·7	—
I	Florissant E.	122·7	40	—	—	e 37 12	?SR_1	—	—
II	La Paz	154·9	126	e 20 4	[+ 2]	—	—	—	—

Additional readings: Amboina I i = +5m.8s. Manila I iSE = +11m.49s., iLN = +11·5m. Batavia I iE = +6m.0s., iN = +7m.32s. Adelaide II eL = +22·7m. Riverview I iSN = +13m.46s., MN = +24·6m. Melbourne I i = +19m.45s.

Nov. 15d. 13h. 17m. 35s. Epicentre 51°·2N. 176°·0W. (as on 1928 April 24d.).

A = −·625, B = −·044, C = +·779; D = −·070, E = +·998;
G = −·777, H = −·054, K = −·627.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Honolulu T.H.	N.	32·9	150	—	—	—	—	15·4	17·4
Victoria	E.	33·4	76	12 5	?S	(12 5)	−25	15·9	18·8
Irkutsk		46·8	305	e 8 36	−10	—	—	23·4	—
Scoresby Sund		56·9	11	—	—	18 25?	+40	—	—
Florissant		58·3	68	i 9 58	− 3	i 17 53	−10	—	—
St. Louis		58·5	68	e 10 33	+31	i 18 17	+12	e 31·4	35·4
Toronto	N.	60·9	56	—	—	—	—	37·6	—
Cincinnati	Z.	61·3	64	i 10 1	−20	—	—	31·9	—
Ottawa		61·5	52	—	—	e 18 43	+ 1	e 27·4	—
Ekaterinburg		62·4	330	i 10 30	+ 2	18 57	+ 4	33·4	40·2
Charlottesville	N.	65·4	60	—	—	—	—	e 36·4	41·4
Georgetown	Z.	65·5	59	10 50	+ 2	e 19 31	0	e 32·2	40·8
Pulkovo		67·0	347	e 10 56	− 2	—	—	37·4	41·6
Frunse		67·8	313	e 10 32	−31	—	—	—	—
Kucino		69·4	340	—	—	—	—	e 37·7	41·5
Tashkent		71·5	315	11 26	− 1	i 20 45	+ 1	e 36·4	43·5
Copenhagen		72·8	355	(13 25?)	?	—	—	13·4	—
De Bilt		76·7	359	—	—	e 39 25?	?	e 51·4	—
Baku		80·1	326	12 18	− 2	e 22 37	+13	40·9	51·3

Additional readings: Irkutsk e = +16m.25s. and +18m.30s. Toronto eN = +30m.1s. Cincinnati iZ = 13h.15m.50s. and +22m.57s. Georgetown PSZ = +20m.5s.

Nov. 15d. 15h. 34m. 56s. Epicentre 25°·5N. 93°·5E. (as on 1927 Feb. 13d.).

$A = -\cdot055$, $B = +\cdot901$, $C = +\cdot431$; $D = +\cdot998$, $E = +\cdot061$; $G = -\cdot026$, $H = +\cdot430$, $K = -\cdot903$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Calcutta	E.	5·6	239	1 37	+10	2 37	+ 3	—	—
	N.	5·6	239	1 25	− 2	2 33	− 1	—	—
Phu-Lien		12·9	108	4 4?	+52	—	—	—	—
Hyderabad		16·2	243	6 37	?S	(6 37)	−23	—	8·8
Bombay		20·2	255	8 23	?S	(8 23)	− 4	10·7	10·9
Tashkent		25·5	314	i 5 40	− 3	i 10 11	− 2	—	15·4
Irkutsk		28·0	14	—	—	—	—	e 17·1	—
Baku		39·0	305	—	—	—	—	e 1·6	—

Bombay gives also S = +10m.5s.

Nov. 15d. Readings also at 12h. (Manila), 13h. (near Matuyama, near Neuchatel, and Zurich), 14h. (Laibach), 15h. (Frunse), 20h. (near Algiers), 21h. (near Port au Prince).

Nov. 16d. 3h. 17m. 15s. Epicentre 46°·5N. 13°·0E. (as on 1928 Aug. 2d.).

$A = +\cdot671$, $B = +\cdot155$, $C = +\cdot725$; $D = +\cdot225$, $E = -\cdot974$; $G = +\cdot707$, $H = +\cdot163$, $K = -\cdot688$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Laibach		1·1	113	e 0 25	+ 8	i 0 31	0	—	—
Venice		1·1	204	0 9	− 8	0 42	+11	—	1·2
Innsbruck		1·4	305	e 0 21	0	(i 0 36)	− 3	i 0·6	1·0
Graz		1·8	71	i 0 26	− 2	i 0 51	0	—	1·2
Zagreb	N.E.	2·2	108	e 0 42	+ 8	e 1 2	+ 2	i 1·2	1·6
	N.W.	2·2	108	e 0 37	+ 3	i 0 59	− 1	i 1·2	1·5
Chur		2·4	278	i 0 37	0	i 1 11	+ 5	—	—
Ravensburg		2·7	299	0 51	+ 9	1 25	+11	i 1·6	1·8
Vienna		2·9	52	e 0 49	+ 4	i 1 22	+ 2	i 1·6	2·0
Zurich		3·2	288	i 0 46	− 4	i 1 35	+ 7	—	—
Hohenheim		3·4	313	e 1 1	+ 8	1 49	+15	2·3	—
Neuchatel		4·1	278	i 0 59	− 5	1 43	−10	—	—
Strasbourg		4·1	302	1 14	+10	2 13	+20	—	—
Jena	E.	4·5	348	e 1 27	+17	e 2 21	+17	e 2·4	2·9
Rocca di Papa		4·7	183	e 2 8	?S	(e 2 8)	− 1	(2·8)	—
Uccle		7·2	310	—	—	2 45?	−30	—	—

Additional readings and notes: Zagreb eNW = +48s., eNE = +54s.; all readings being given for 1h. Ravensburg $PR_1 = +1$m.13s., MN = +1·6m. Vienna P = +53s. and +58s., iZ = +1m.5s., i = +1m.22s. Hohenheim $PR_1 = +1$m.21s., i = +1m.55s., +2m.9s., and +2m.15s. Strasbourg $SR_1 = +2$m.22s., $SR_2 = +2$m.31s. Jena eN = +2m.23s. Rocca di Papa gives S as P and L as S.

Nov. 16d. 11h. 1m. 48s. Epicentre 26°·0N. 143°·0E. (as on 1927 Aug. 3d.).

$A = -\cdot718$, $B = +\cdot541$, $C = +\cdot438$; $D = +\cdot602$, $E = +\cdot799$; $G = -\cdot350$, $H = +\cdot264$, $K = -\cdot899$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Sumoto	10·9	322	e 1 34	−69	4 29	−23	6·2	7·0
Kobe	11·0	324	e 2 49	+ 5	—	—	e 6·7	11·7
Nagasaki	13·2	303	—	—	(5 33)	−16	5·6	—
Manila	23·5	245	e 5 41	+18	(i 9 12)	−23	i 9·2	—
Hong Kong	26·5	268	5 35	−18	10 22	−10	—	—
Phu-Lien	33·7	269	—	—	11 12?	−84	—	—
Irkutsk	39·1	323	e 7 38	− 9	e 13 34	−19	22·2	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Batavia	47·6	233	i 8 46	− 5	i 15 21	−28	—	—
Tashkent	61·4	311	i 10 22	+ 1	i 18 48	+ 7	—	38·1
Bombay	64·6	280	e 11 47	+65	(19 23)	+ 3	19·4	19·5
Baku	75·8	309	—	—	e 21 36	+ 1	e 39·7	—
Kucino	76·7	326	—	—	e 21 58	+13	e 35·6	—
Pulkovo	78·3	332	—	—	—	—	e 37·5	—
Copenhagen	88·1	334	—	—	—	—	52·2	—

Additional readings: Sumoto iN = +2m.11s., MN = +8·0m. Kobe e = +7m.11s. Bombay S = +16m.43s. Kucino e = +22m.29s. and +24m.20s.

Nov. 16d. Readings also at 2h. (near Tananarive, near Sebastopol, Simferopol (2) Theodosia (2), and Yalta (2)), 3h. (near Hukuoka and Nagasaki (2)), 6h. (near Tacubaya), 7h. (Baku, Almata, Tashkent, near Nagoya, and near Tacubaya), 8h. (near Tacubaya (3)), 9h. (near Ksara), 10h. (near Tacubaya), 11h. (Kobe and near Ksara), 12h. (Mizusawa), 13h. (Ekaterinburg and Tashkent), 17h. (near Tacubaya (2)), 19h. (near Tacubaya, near Simferopol (2), Sebastopol (2), Theodosia (2), and Yalta (2)), 20h. (Santiago and near Tacubaya (4)), 21h. (Ekaterinburg and Tashkent), 22h. (near Tacubaya).

Nov. 17d. Readings at 0h. (2) and 2h. (near Tacubaya), 9h. (near Hukuoka and Nagasaki), 10h. (Riverview, Melbourne, Adelaide, Perth, Suva, Wellington, Irkutsk, and near Lick), 11h. (Ekaterinburg), 14h. (Simferopol and near Mizusawa), 17h. (near Algiers), 23h. (Sebastopol, Simferopol, and Yalta).

Nov. 18d. 18h. 42m. 18s. Epicentre 17°·0N. 97°·0W. (as on 1927 April 9d.).

A = −·117, B = −·949, C = +·292; D = −·992, E = +·122; G = −·036, H = −·290, K = −·956.

This epicentre gives a better determination than 16°·2N. 97°·2W. of Oct. 30d.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		0·2	86	(0 25)	+21	—	—	(0·6)	(0·7)
Puebla		2·3	331	(1 3)	+27	—	—	(1·6)	(1·8)
Vera Cruz		2·4	20	(0 50)	+13	—	—	(1·6)	(1·8)
Tacubaya		3·2	319	0 54	+ 4	—	—	1·8	1·9
Guadalajara		7·2	301	(1 39)	−10	(3 12)	− 3	(3·4)	(3·5)
Merida		8·0	59	(2 18)	+17	(3 48)	+11	(3·9)	(4·0)
Tucson		19·8	323	i 4 38	− 1	8 18	− 1	10·4	—
Florissant	N.	22·6	14	i 5 6	− 6	i 9 16	− 1	e 12·8	—
Cincinnati		24·7	24	i 5 10	−25	i 9 57	0	10·7	—
Georgetown	Z.	28·0	34	e 5 58	−10	—	—	e 17·5	—
Ottawa		33·5	29	—	—	e 13 42?	+70	e 17·7	—
Victoria	E.	38·0	331	—	—	—	—	21·2	24·7
La Paz		43·9	141	8 10	−15	—	—	e 23·7	—
Copenhagen		86·4	31	—	—	—	—	43·7	—
Pulkovo		92·3	23	e 17 12	?PR_1	—	—	46·7	—
Ekaterinburg		103·9	12	—	—	e 24 49	[+ 7]	47·7	62·9
Baku		114·9	26	—	—	—	—	58·7	—
Tashkent		120·4	11	—	—	—	—	e 55·7	64·4

Additional readings and notes: Oaxaca readings have been *increased* by 2m. Puebla readings have been *increased* by 3m. Vera Cruz readings have been *increased* by 1m. Guadalajara readings have been *diminished* by 2m. Merida readings have been *diminished* by 1m. Tucson LN = +10·5m. Florissant iZ = +5m.7s. Cincinnati iNZ = +5m.20s., e = +9m.42s.

Nov. 18d. Readings also at 6h. (Adelaide, Melbourne, Riverview, Perth, Ekaterinburg, Tashkent, and near Lick), 14h. (Strasbourg, near Manila, near Orbe, Chur, Neuchatel, and Zurich), 15h. (near Amboina), 17h. (Ekaterinburg, Almata, Tashkent, and near Frunse), 18h. (near Lick), 22h. (near Tacubaya).

Nov. 19d. 15h. 27m. 52s. Epicentre 20·6S. 168°·8E. (as on 10d.).

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.
Suva	E.	9·4	76	i 3 8	+46	i 4 38	+25	—	6·1
	N.	9·4	76	i 2 8	−14	i 4 20	+ 7	—	5·1
Riverview		20·5	226	e 6 14	?	e 9 2	+28	—	12·4
Sydney		20·5	226	—	—	8 44	+10	12·4	13·1
Wellington	E.	21·3	168	i 4 29	−28	i 8 21	−29	i 10·2	12·0
	N.	21·3	168	i 4 36	−21	i 8 21	−29	9·4	11·9
Melbourne		26·8	225	i 5 57	+ 1	i 11 3	+26	15·8	16·8
Adelaide		30·1	235	—	—	—	—	16·2?	17·6
Perth		48·3	245	e 22 8	?	—	—	26·6	—
Manila		58·7	304	—	—	(i 19 8?)	[−37]	i 19·1	—
Irkutsk		91·8	326	—	—	e 23 8?	[−31]	e 44·1	—
Tashkent		110·4	308	e 19 8?	?PR_1	—	—	—	24·4
Ekaterinburg		117·0	324	e 20 46	?PR_1	e 26 8	[+32]	63·1	—
Georgetown	Z.	121·3	55	—	—	e 44 8?	?	i 65·0	—
Ottawa		122·3	47	—	—	—	—	e 64·6	—
Baku		124·9	307	—	—	—	—	e 83·6	—
Zagreb		146·4	325	e 20 23	[+33]	—	—	—	—
Granada		162·2	340	—	—	—	—	e 90·1	93·6
San Fernando	E.	163·6	346	—	—	—	—	—	98·4

Additional readings and note: Adelaide e = +14m.13s. Ekaterinburg e = +22m.46s. Georgetown LZ = +70·3m. San Fernando MN = +97·4m. Wellington gives epicentre 20°S. 168°E.

Nov. 19d. Readings also at 1h. (near Barcelona and near Batavia), 5h. (Sebastopol Simferopol, and Yalta), 7h. (Batavia), 12h. (near La Paz and Sucre), 14h. (Charlottesville), 15h. (near Tacubaya), 17h. (near Almeria (2)), 21h. (near Ksara), 22h. (Suva and near Malabar).

Nov. 20d. 20h. 35m. 5s. Epicentre **22°·5S. 70°·5W.**

(as on 1926 Jan. 1d.).

A = +·308, B = −·871, C = −·383; D = −·943, E = −·334; G = −·128, H = +·361, K = −·924.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sucre		6·0	55	i 1 35	+ 3	2 51	+ 7	—	—
La Paz		6·4	21	i 1 45	+ 7	i 3 9	+14	3·2	3·4
Santiago		10·9	181	2 47	+ 4	4 25	−27	5·0	
La Plata		16·6	141	i 3 42	−18	6 39	−30	8·1	—
Rio de Janeiro	E.	25·2	96	i 5 17	−23	i 9 43	−24	11·6	14·1
	N.	25·2	96	i 5 17	−23	i 9 35	−32	11·6	16·8
Tacubaya		50·4	325	9 7	− 2	16 20	− 4	22·5	
Charlottesville	E.	61·0	355	e 10 15	− 4	i 18 33	− 3	e 26·9	33·4
	N.	61·0	355	i 10 15	− 4	i 18 31	− 5	e 29·9	32·9
Georgetown	Z.	61·7	355	i 10 22	− 1	i 18 51	+ 7	e 29·2	37·8
Cincinnati		63·0	349	i 10 28	− 4	i 18 57	− 4	28·9	33·7
Florissant		64·1	345	i 10 34	− 5	i 19 9	− 5	—	37·4
Ithaca		65·1	356	e 10 47	+ 1	19 27	+ 1	29·9	—
Ann Arbor		66·0	351	e 10 55	+ 4	—	—	e 29·1	36·1
Chicago	E.	66·2	348	i 10 50	− 3	i 19 28	−12	e 29·6	39·3
	N.	66·2	348	i 10 42	−11	i 19 25	−15	e 29·6	39·3
Toronto	E.	66·7	354	e 11 10	+14	i 19 42	− 4	31·8	—
	N.	66·7	354	i 10 58	+ 2	i 19 40	− 6	31·7	41·0
Tucson	E.	67·0	325	i 11 0	+ 2	i 19 54	+ 4	e 31·6	—
	N.	67·0	325	i 11 0	+ 2	i 19 49	− 1	e 33·1	33·9
Ottawa		68·1	357	i 11 1	− 4	i 19 58	− 5	e 31·9	44·9
Lick		76·8	321	e 11 59	− 1	e 21 43	− 4	—	—
Cape Town		76·9	123	i 11 50	−10	21 39	− 9	—	38·9
Berkeley		77·5	321	e 11 56	− 8	e 21 53	− 2	e 38·1	42·1

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
San Fernando		84·6	47	i 12 37	− 9	i 22 58	−17	43·2	55·2
Victoria		85·2	329	12 41	− 8	22 59	−22	39·0	49·8
Malaga		85·9	47	i 12 31	−22	23 15	−14	33·9	—
Granada		86·7	47	i 12 47	−10	e 23 47	+ 9	36·2	47·8
Johannesburg		87·4	118	—	—	23 55?	+10	—	—
Almeria		87·4	48	i 12 48	−13	23 36	− 9	32·3	49·7
Toledo		87·9	45	i 12 50	−14	i 23 22	[+ 8]	e 37·5	45·9
Alicante		89·4	47	e 12 59	−13	e 23 39	[+15]	e 36·8	43·3
Algiers		91·2	51	i 13 7	−15	23 59	[+24]	41·9	53·9
Tortosa		91·4	46	13 5	−18	23 41	[+ 5]	35·9	49·7
Wellington	E.	92·1	225	i 13 24	− 4	i 23 39	[− 2]	42·2	43·3
	N.	92·1	225	i 13 28	0	23 47	[+ 6]	42·3	44·4
Barcelona		92·7	47	—	—	e 23 42	[− 2]	e 39·4	47·7
Apia		94·8	256	—	—	24 5	[+ 9]	44·9	—
Puy de Dôme		95·2	43	—	—	—	—	48·9	—
Bidston		95·5	35	22 30	?	—	—	38·5	43·8
Honolulu T.H.		95·6	291	—	—	(e 24 10)	[+10]	43·9	45·8
Oxford	N.	95·6	37	13 44	− 3	i 24 0	[0]	e 35·9	51·9
Kew		96·0	37	i 13 29	−20	i 25 6	−10	42·4	52·2
Stonyhurst		96·1	35	—	—	24 8	[+ 5]	42·9	49·9
Paris		96·4	40	e 13 33	−18	e 24 9	[+ 5]	41·9	51·9
Grenoble		96·7	45	e 13 39	−14	—	—	47·9	—
Edinburgh		96·8	32	—	—	i 24 11	[+ 4]	46·9	52·1
Besançon		97·7	44	e 16 54	?	24 13	[+ 2]	45·9	50·9
Moncalieri		97·9	45	13 32	−27	24 15	[+ 3]	38·5	60·8
Dyce		97·9	31	—	—	e 24 11	[− 1]	38·9	52·4
Neuchatel		98·2	45	i 13 38	−23	—	—	e 52·6	—
Uccle		98·3	39	e 13 38	−24	i 24 15	[0]	e 41·9	50·5
Scoresby Sund		99·0	15	13 47	−18	24 19	[0]	42·9	—
De Bilt		99·3	39	i 13 47	−20	e 24 25	[+ 5]	e 42·9	51·3
Strasbourg		99·4	41	13 43	−24	—	—	46·9	50·4
Florence		99·7	47	i 10 46	?	—	—	49·4	52·9
Chur		99·8	45	e 13 47	−23	(e 24 24)	[+ 1]	e 24·4	—
Rocca di Papa		100·0	50	e 13 49	−22	i 24 28	[+ 4]	—	—
Ravensburg		100·2	43	i 18 15	?PR_1	i 27 14	?PS	e 47·9	—
Naples	N.	100·8	51	e 15 55	?	e 20 25	?PR_2	43·9	57·9
Pompeii		100·9	51	e 13 55?	−20	e 17 55?	?[P]	57·9	—
Venice		101·1	46	13 55?	−21	—	—	—	—
Innsbruck		101·1	45	13 40?	−36	i 24 25	[− 4]	40·5	52·4
Entebbe		102·0	95	e 14 0	−20	24 35	[+ 1]	48·9	54·9
Hamburg		102·6	38	e 13 58	−25	i 24 38	[+ 2]	e 44·9	56·9
Laibach		102·7	45	e 18 14	?PR_1	—	—	e 44·4	56·9
Bergen		102·8	30	—	—	—	—	51·9	—
Jena		102·8	41	i 14 0	−24	e 24 59	[+22]	e 44·9	56·4
Zagreb		103·6	46	e 14 6	−22	e 24 19	[−22]	e 43·9	53·9
Graz		103·7	44	e 18 15	?PR_1	e 26 15	−15	32·9	55·8
Potsdam		103·9	40	e 18 7	[+ 6]	e 25 9	[+27]	51·9	56·9
Copenhagen		104·6	36	e 14 11	−21	26 26	−12	48·9	55·2
Vienna		104·6	45	e 14 5	−27	24 43	[− 2]	e 44·9	56·9
Lund		105·0	36	—	—	24 43	[− 4]	45·9	—
Budapest		106·1	46	e 18 32	?PR_1	27 42	?PS	45·7	55·9
Belgrade	E.	106·3	49	e 17 20	?	e 25 9	[+16]	e 53·8	66·7
Tananarive		106·7	120	—	—	e 25 25	[+30]	45·3	53·9
Upsala		108·4	31	e 15 14	+24	e 26 16	? Σ	e 44·9	58·4
Lemberg	E.	109·9	43	e 19 7	?PR_1	e 25 13	[+ 3]	e 56·5	59·8
	N.	109·9	43	e 18 55	?PR_1	e 24 25	[−45]	e 56·4	59·4
Helwan		110·8	65	19 0	?PR_1	28 57	?PS	53·9	68·2
Riverview		111·1	216	e 15 5	+ 2	—	—	e 46·1	52·5
Melbourne		111·1	210	—	—	i 26 15	? Σ	51·4	53·6
Helsingfors		112·1	32	—	—	26 45	?	44·9	—
Pulkovo		114·7	33	i 14 53	−26	25 25	[− 3]	50·9	62·5
Sebastopol		115·4	50	—	—	—	—	e 65·9	—
Ksara	E.	115·5	61	19 39	?PR_1	—	—	50·9	59·9
Simferopol		115·8	50	—	—	—	—	e 61·9	—
Yalta		115·8	50	—	—	—	—	e 68·9	—
Adelaide		116·2	206	i 20 0	?PR_1	e 29 5	+45	i 43·6	56·1
Theodosia		116·7	49	e 30 55?	?	—	—	e 61·9	—
Kucino		118·6	37	18 52	[+ 4]	25 40	[− 2]	51·7	66·0
Perth		125·2	186	21 0	?PR_1	—	—	62·9	—
Baku		127·2	55	e 15 58	−17	—	—	61·4	75·1
Ekaterinburg		130·8	33	i 19 15	[− 5]	—	—	55·9	71·7
Tashkent		141·5	50	i 19 22	[−20]	—	—	59·9	79·0
Frunse		144·6	45	e 19 40	[− 8]	—	—	—	—

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Bombay		145·6	89	19 48	[− 1]	33 24	?	71·9	84·4
Almata		146·1	43	e 19 47	[− 3]	—	—	—	—
Kodaikanal		147·0	105	19 25	[−26]	—	—	82·8	86·5
Colombo		147·5	114	19 47	[− 5]	—	—	60·8	77·7
Amboina		148·1	216	19 53	[0]	—	—	—	—
Mizusawa	E.	148·4	309	—	—	20 31	?	—	—
Irkutsk		150·0	7	19 44	[−12]	26 55	[+16]	—	—
Hyderabad		150·5	94	19 56	[0]	29 33	?	53·4	83·7
Dehra Dun		150·9	68	19 56	[− 1]	33 32	?	54·2	85·4
Batavia		151·2	174	19 58	[+ 1]	—	—	75·9	—
Nagoya		153·0	304	e 20 5	[+ 5]	—	—	—	—
Calcutta	E.	160·5	86	20 19	[+10]	34 22	?	94·8	—
Zi-ka-wei	Z.	166·3	312	20 8	[− 4]	—	—	51·3	81·7
Manila		166·5	236	20 36	[+23]	—	—	e 77·9	81·0
Taihoku	E.	168·7	285	—	—	e 27 23	?	—	—
Hong Kong		175·6	269	22 2	?	32 25	? Σ	46·7	48·6
Phu-Lien		176·8	122	e 21 55	?	e 46 55	?	74·9	99·9

Additional readings and notes: Sucre i = +2m.29s. La Paz iE = +2m.12s., iN = +2m.27s.; epicentre 23°·6S. 70°·3W. Georgetown ePE = iPN = +10m.25s., PR_1Z = +13m.14s., PR_2Z = +14m.44s., iSE = +18m.50s., iPSN = +19m.11s., iPSE = +19m.12s., iPSZ = +19m.13s., SR_1Z = +26m.7s., SR_1E = +26m.12s. Cincinnati iPN = +10m.31s., iP_cPZ = +11m.22s., iPZ = +11m.40s., iPR_2NZ = +14m.33s., iPR_3NZ = +15m.10s., iPSZ = +19m.25s., iPPPSZ = +19m.44s., iS_cSEZ = +19m.52s., iSE = +20m.10s., iSR_1EZ = +22m.48s., iSR_2E = +25m.10s., iSR_3 = +26m.10s., LNZ = +29·9m. Florissant eZ = +11m.25s., iZ = +12m.58s., eSE = iSN = +19m.2s., iS_cSE? = +20m.24s., iN = +23m.27s. Ann Arbor iPS = +19m.37s., iSR_1 = +24m.13s., eLN? = +30·0m., MN = +33·9m. Chicago iPSN = +20m.44s., iPSE = +21m.36s., SR_1N = +23m.33s. Toronto iN = +12m.5s., iE = +19m.45s.; T_0 = 20h.35m.21s. Tucson iE = +12m.54s., iN = +13m.0s., ePR_1E = +14m.24s., iPR_2N = +15m.43s., eSR_1E = +24m.45s., eSR_2N = +27m.32s., eSR_2E = +27m.39s., eLN = +33·1m. Ottawa eSR_2E = +27m.51s., MN = +41·9m.; T_0 = 20h.35m.9s. Lick eE = +13m.41s. and +26m.55s. Berkeley iZ = +12m.5s., eN = +12m.14s., iZ = +12m.18s., iSN = +21m.52s., eZ = +23m.12s., eN = +23m.14s., eSR_2E? = +27m.8s. = SR_1 − 29s., eN = +32m.13s. = SR_3 − 25s. San Fernando MN = +52·7m. Victoria MN = +56·0m.: T_0 = 20h.35m.26s. Granada i = +23m.30s., PS = +24m.37s. Almeria MZ = +51·1m. Toledo MNW = +46·2m. Alicante iE = +24m.13s., iN = +24m.14s., MN = +51·0m. Algiers PS = +23m.37s., MN = +49·4m. Tortosa MN = +48·2m. Wellington [S]E = +22m.58s., [S]N = +23m.24s.; T_0E = 20h.35m.59s.; T_0 = 20h.36m.2s. Barcelona PS = +24m.42s., MN = +51·8m. Puy de Dôme PR_1 = +17m.45s. Honolulu T.H. MN = +45·4m.; S is given as eLE. Kew P′EZ = +17m.22s., PR_1EZ = +17m.33s., S_cP_cSE = +24m.3s., eSEN = +24m.23s., PSE = +26m.10s., iPPSE = +26m.26s., SR_1E = +31m.16s., SR_2E = +35m.15s., LZ = +46·2m., MZ = +52·3m. Paris PR_1 = +17m.22s., MN = +52·9m. Edinburgh i = +26m.17s. = PS − 11s. Besançon i = +17m.33s. = PR_1 − 25s. Moncalieri MN = +55·8m. Dyce ePR_1 = +17m.45s., eSR_1 = +31m.51s. Neuchatel i = +75m.36s. Uccle ePR_1 = +17m.37s., i = +26m.37s. = PS − 8s., MN = +45·3m. Scoresby Sund +25m.39s. = S − 7s. De Bilt iPR_1Z = +17m.47s., e = +26m.43s. = PS − 13s., MN = +46·4m., MZ = +53·0m. Strasbourg iP′ = +17m.45s., ePS = +27m.0s. Florence PR_1 = +17m.45s. Ravensburg i = +32m.23s. = SR_1 − 17s. Entebbe PR_1? = +18m.7s. Hamburg ePR_1Z = +18m.7s., ePS = +27m.25s., eLN = +42·9m., eLZ = +50·9m. Laibach e = +20m.17s. Jena eEZ = +17m.55s., eEN = +27m.23s. = PS − 13s., eN = +33m.7s. = SR_1 − 5s., eLN = +41·9m., MN = +48·4m. Zagreb e = +18m.16s. = PR_1 − 22s., and +32m.40s. Potsdam e = +24m.36s. Copenhagen PR_1 = +18m.26s., ePR_1E = +20m.43s., S_cP_cS = +24m.51s., $eS_cP_cP_cSEN$ = +25m.54s., iPSE = +27m.44s., ePSN = +27m.56s., eSR_1N = +33m.33s., MN = +57·5m. Vienna PR_1 = +18m.10s., PR_2 = +20m.59s., PPS = +27m.35s., i = +28m.55s., SR_1? = +33m.34s. Lund PR_1EN = +18m.30s., PS = +27m.48s., SR_1 = +33m.25s. Budapest MN = +57·9m. Belgrade e = +22m.9s. Tananarive ePR_1 = +18m.39s., ePS = +26m.12s., P_cSS_cP = +28m.33s. = PS − 12s., eE = +29m.18s., EN = +33m.48s. = SR_1 − 13s., and +37m.21s., SR_2 = +38m.57s. = SR_2 − 14s., EN = +41m.33s. = SR_2 − 35s., MN = +52·6m. Upsala ePR_1E = +18m.53s., ePSE = +28m.15s., MN = +57·6m. Riverview eP′? = +18m.44s., ePR_1 = +19m.30s., e = +20m.4s., $iS_cP_cP_cS$ = +26m.15s., ePS = +28m.44s., eSR_1 = +34m.42s., eSR_2 = +39m.4s. Melbourne iPR_1 = +19m.30s., iS_cP_cS = +25m.15s., i = +27m.0s., iPS = +28m.25s., iPPS = +29m.10s., iSR_1 = +34m.40s., iSR_2? = +40m.5s. Helsingfors ePR_1? = +19m.18s., PS = +28m.57s. Pulkovo iPR_1 = +19m.37s., PR_2 = +21m.58s.

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PS = +29m.22s., SR_1 = +35m.7s. Ksara PR_1E = +20m.28s., PR_2E +23m.12s., PR_3E = +25m.10s., PR_4E = +26m.10s., PSE = +29m.31s., PPSE = +30m.49s.: SR_1E = +35m.44s.: T_o = 20h.36m.18s. Adelaide i = +25m.27s. = [S] − 5s., +26m.45s. = Σ − 7s., and +36m.3s. = SR_1 + 3s. Kucino iPR_1 = +20m.0s., PPS = +30m.57s., SR_1 = +35m.55s. Baku iP′ = +19m.14s., iPR_1 = +21m.1s., iPR_2 = +23m.47s., PS = +31m.25s. Ekaterinburg iP = +16m.12s., iPR_1 = +21m.19s., $S_cP_cP_cS$ = +27m.55s., iPS = +31m.18s., iSR_1 = +39m.1s. Tashkent e = +16m.13s., iPR_1 = +22m.33s., PR_2 = +25m.53s., eSR_1 = +40m.55s. ? Amboina i = +20m.7s. Irkutsk iPR_1 = +23m.24s., $S_cP_cP_cS$ = +29m.47s. Batavia i = +22m.5s., eL = +47m.55s. ? Calcutta PN = +20m.33s. Zi-ka-wei iZ = +21m.16s., iPZ = +25m.8s. = PR_1 − 6s., iZ = +31m.36s. = Σ − 6s., and +38m.52s.: all readings have been *increased* by 1h. Manila iS_cP_cP = +24m.7s. Hong Kong PR_1 = +25m.52s. Phu-Lien ePR_1 = +25m.55s., ePR_2 = +32m.37s.

Nov. 20d. Readings also at 0h. (near La Paz), 1h. (Taihoku), 3h. (Suva), 4h. (La Paz, Suva, Mizusawa, Sebastopol, Simferopol, Yalta, and near Tananarive), 5h. (Almata, Frunse, near Tananarive, and near Wellington), 6h. (Malabar, near Batavia, and near Tananarive (2)), 8h. (near La Paz), 10h. (Taihoku and near La Paz), 11h. (near Nagasaki), 12h. (Taihoku (2)), 13h. and 14h. (2) (near Tacubaya), 15h. (Taihoku and near Tacubaya), 16h. (Hohenheim and near Lick (5)).

Nov. 21d. 16h. 59m. 50s. Epicentre 15°·5N. 122°·0E. (as on 1926 Nov. 2d.).

A = −·511, B = +·817, C = +·267; D = +·848, E = +·530; G = −·142, H = +·227, K = −·964.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		1·4	227	i 0 29	+ 8	—	—	i 0·8	—
Taihoku	E.	9·6	357	e 2 38	+14	—	—	—	—
Hong Kong		10·1	314	2 27	− 4	(4 10)	−22	4·2	5·8
Phu-Lien		15·6	292	e 3 36	−11	(6 10?)	−36	6·2	—
Zi-ka-wei	Z.	15·7	358	e 3 53	+ 5	e 8 51	?L	(e 8·8)	14·8
Kobe		22·5	29	e 5 25	+14	—	—	—	—
Irkutsk		39·4	343	e 7 32	−18	e 13 27	−30	19·2	—
Bombay		47·0	282	7 30	−77	15 16	−25	27·2	30·5
Frunse		48·8	315	e 8 53	− 6	—	—	—	—
Tashkent		52·1	311	i 9 9	−12	i 16 31	−14	e 45·1	50·2
Ekaterinburg		61·5	327	i 10 21	− 1	i 18 39	− 3	27·7	34·5
Baku		66·5	309	e 11 4	+ 9	—	—	e 34·2	—
Kucino		74·0	325	—	—	—	—	e 43·2	—
Pulkovo		77·5	330	—	—	—	—	41·2	48·7
Copenhagen		87·8	328	—	—	—	—	43·2	46·8
De Bilt		93·3	327	—	—	—	—	e 47·2	48·9
Rocca di Papa		93·4	315	—	—	—	—	e 50·4	52·2
Strasbourg		93·6	323	—	—	—	—	e 51·2	—
Uccle		94·4	326	—	—	—	—	e 47·2	—
Kew		96·4	329	—	—	—	—	e 49·2	—

Additional readings and notes: Kobe e = +7m.16s. Zi-ka-wei readings have been *increased* by 1h. De Bilt MN = +50·1m.: epicentre 16°·2N. 120°·6E. The origin of 1926 Oct. 30d. as given by De Bilt for the present shock, does not fit the observations as well as the adopted position.

Nov. 21d. Readings also at 3h. (near Reykjavik), 6h. (Hohenheim), 7h. (near Reykjavik), 11h. (Wellington and near Reykjavik), 12h. (near Reykjavik (2)), 13h. (near Amboina), 16h. (Batavia), 19h. (Reykjavik), 22h. and 23h. (Taihoku).

Nov. 22d. 8h. 30m. 56s. Epicentre 56°·0S. 3°·0W.

A = +·558, B = −·029, C = −·829; D = −·052, E = −·999:
G = −·828, H = +·043, K = −·559.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Cape Town		26·6	43	5 51	− 3	(10 16)	−17	10·3	11·9
La Plata		42·5	277	8 0	−15	14 15	−27	20·0	—
Rio de Janeiro	E.	44·3	302	e 8 22	− 6	14 56	−10	20·4	21·2
	N.	44·3	302	e 8 23	− 5	i 14 54	−12	20·8	24·3
Tananarive		52·8	68	e 9 33	+ 8	(i 17 4)	+10	i 22·6	24·7
Sucre		58·9	282	i 10 11	+ 7	—	—	27·8	29·2
La Paz		62·5	281	10 26	− 3	i 19 5	+10	29·1	34·1
Entebbe		63·0	40	10 4?	−28	19 4?	+ 3	—	31·1
Perth		77·8	131	e 12 4?	− 2	i 22 4?	+ 6	36·1	—
Melbourne		82·3	155	e 14 39	?	i 22 50	+ 1	33·8	34·6
Wellington	E.	82·6	179	12 31	− 3	i 22 59	+ 6	42·0	50·5
	N.	82·6	179	12 28	− 6	i 24 3	?	e 38·4	50·8
Adelaide		83·3	150	—	—	23 4	+ 4	e 34·0?	52·6
Riverview		87·5	160	i 13 10	+ 8	e 23 47	0	e 42·3	44·6
Sydney		87·5	160	23 34	?S	(23 34)	−13	48·1	51·5
Helwan		90·7	30	e 15 44	?	24 33	+12	42·1	49·8
Colombo		91·8	80	12 34	−52	24 32	− 1	37·4	54·7
San Fernando		92·5	357	24 26	?S	(24 26)	−14	38·4	54·0
Algiers		92·9	5	e 13 28	− 4	24 36	− 8	e 40·1	48·1
Almeria		92·9	0	e 13 43	+11	e 24 47	+ 3	37·1	—
Granada		93·2	0	i 13 27	− 6	23 57	[+10]	41·6	51·9
Kodaikanal		93·2	76	25 4	?S	(25 4)	+17	48·3	54·7
Alicante		94·4	2	e 13 37	− 3	—	—	e 43·0	—
Batavia		95·7	110	i 18 23	?PR_1	i 24 27	[+26]	45·1	—
Ksara	E.	95·8	32	—	—	—	—	e 42·1	—
Toledo	N.E.	95·9	0	—	—	e 24 37	[+35]	e 31·3	44·3
Tortosa	N.	96·9	3	—	—	—	—	e 39·1	59·8
Bombay		98·0	69	14 36	+36	25 30	− 6	48·1	50·0
Pompeii		98·0	14	e 15 4?	+64	e 26 4?	+28	64·1	—
Rocca di Papa		98·6	13	e 14 15	+12	e 25 16	−26	e 46·3	62·3
Hyderabad		99·7	74	17 8	?PR_1	25 39	−14	41·3	44·2
Florence		100·6	11	e 13 9	−64	—	—	—	—
Moncalieri		101·4	8	13 41	−36	24 40	[+ 9]	41·3	63·1
Zagreb		103·1	14	e 17 40	?PR_1	e 28 24	?	e 48·9	60·1
Besançon		103·5	7	—	—	—	—	42·1	—
Graz		104·3	14	e 18 31	?PR_1	e 28 47	?	e 43·1	62·8
Ravensburg		104·4	9	—	—	—	—	e 57·1	—
Paris		105·0	5	e 34 14	?SR_1	—	—	42·1	57·1
Strasbourg		105·0	9	e 13 4?	?	e 22 4?	?	49·1	—
Budapest		105·1	16	—	—	—	—	e 51·1	70·1
Yalta		105·3	28	e 19 30	?PR_1	—	—	—	—
Vienna		105·5	14	—	—	—	—	e 44·1	68·1
Simferopol		105·7	28	e 18 42	?PR_1	—	—	—	—
Theodosia		106·1	28	e 18 47	?PR_1	—	—	e 63·1	—
Baku		106·3	40	e 15 36	+55	25 44	[+51]	e 46·6	62·2
Uccle		107·0	5	—	—	e 20 4?	?	e 43·1	—
Kew		107·6	2	e 11 4?	?	e 24 50	[− 9]	45·1	48·8
Jena		107·6	10	—	—	—	—	e 59·1	—
De Bilt		108·3	6	e 22 4?	?PR_1	e 34 16	?SR_1	e 44·1	47·0
Calcutta	E.	109·3	79	34 31	?SR_1	—	—	53·3	—
Stonyhurst		109·9	1	e 32 4?	?	—	—	45·1	50·1
Dehra Dun		110·1	65	25 51	?S	(25 51)	[+41]	45·6	57·8
Hamburg		110·1	8	e 19 16	?PR_1	—	—	e 45·1	57·1
Edinburgh		111·9	0	—	—	—	—	47·1	—
Copenhagen		112·5	10	—	—	e 25 10	[−10]	53·1	60·1
Lund		112·5	10	—	—	35 4	?SR_1	53·1	—
Konigsberg		112·6	15	—	—	e 27 4	−47	e 48·1	67·1
Dyce		113·3	0	—	—	e 29 33	?PS	48·6	63·1
Charlottesville	E.	113·6	304	—	—	e 35 40	?SR_1	e 54·1	58·8
	N.	113·6	304	—	—	e 29 16	?PS	e 49·4	61·6
Georgetown	Z.	113·7	305	e 20 50	?PR_1	—	—	e 54·4	57·9
Tashkent		114·8	51	e 16 4?	?	e 25 46	[+18]	e 56·1	62·3
Kucino		116·6	25	—	—	25 40	[+ 5]	50·5	62·2
Upsala		117·0	11	—	—	—	—	e 55·1	74·8
Cincinnati		117·4	300	i 17 9	?	—	—	57·2	62·0
Phu-Lien		117·7	92	19 4?	[+18]	—	—	45·1	—
Helsingfors		118·3	15	—	—	e 29 23	+47	55·1	—

Continued on next page.

		△ °	Az. °	P. m. s.	O−C. s.	S. m. s.	O−C. s.	L. m.	M. m.
Ottawa		118·3	310	—	—	e 29 54	+78	e 55·1	—
Frunse		118·5	54	e 20 16	?PR_1	—	—	—	—
Toronto		118·6	307	—	—	e 30 4	?PS	59·1	—
Pulkovo		118·8	18	—	—	—	—	56·1	69·5
Ann Arbor	N.	119·5	303	—	—	—	—	e 56·1	—
Almata		119·9	56	e 20 34	?PR_1	—	—	—	—
Florissant		120·0	295	e 20 36	?PR_1	—	—	e 54·3	63·8
Chicago		120·9	300	—	—	—	—	e 58·8	65·1
Hong Kong		123·4	98	31 15	?PS	—	—	e 53·1	63·1
Ekaterinburg		123·9	36	19 11	[+ 8]	—	—	51·6	60·9
Lick	E.	135·7	271	—	—	—	—	e 62·7	—
Victoria	E.	143·9	283	—	—	—	—	75·6	78·9

Additional readings: Tananarive e = +9m.57s., +10m.32s., +12m.24s., +13m.55s., and +14m.52s., PR_1 = +17m.24s. S = +20m.40s., SR_1 = +21m.5s., MN = +24·6m., true S is given as P and P as e. La Paz iPE = +10m.30s., PR_1E = +13m.16s., PR_1N = +13m.21s., PR_2N? = +14m.58s. SR_1N = +24m.12s., SR_2E = +26m.5s., MN = +36·3m. Melbourne i = +28m.39s. = SR_1 − 7s. Wellington SR_2E = +35m.11s. Adelaide i = +23m.17s., iSR_1 = +28m.19s., i = +30m.39s., and +32m.8s., MN = +41·7m. Riverview iS = +23m.52s., $S_cP_cP_cS$ = +24m.4s., SR_1 = +29m.54s., SR_2 = +36m.30s., e = +38m.46s., MN = +45·2m. Sydney S = +36m.40s. San Fernando S = +30m.56s. = SR_1 − 7s., MN = +51·0m. Algiers MN = +59·1m. Granada iP = +14m.11s., PR_1 = +17m.33s., PS = +24m.51s. Batavia iE = +25m.42s. Toledo MNW = +51·7m. Tortosa ME = +60·2m. Rocca di Papa e = +13m.44s., PR_1N = +17m.53s., S = +26m.16s., LZ = +48·8m. Zagreb e = +33m.0s. = SR_1 − 17s. Paris MN = +54·1m. Baku iPR_1 = +18m.55s., iPS = +28m.15s. Kew eEN = +34m.4s.? = SR_1 − 8s., MN = +56·6m. De Bilt MN = +51·8m., MZ = +61·8m. Dehra Dun S = +35m.9s. = SR_1 + 26s. Hamburg MZ = +68·1m. Copenhagen eEN = +27m.28s., eE = +28m.58s., eEN = +30m.33s., eN = +32m.38s., iN = +35m.7s., eE = +35m.16s., eEN = +38m.52s. and +46m.4s.?, MN = +70·0m. Konigsberg eN = +29m.4s.? = PS − 23s., and +33m.28s., eZ = +35m.4s. = SR_1 − 12s., eE = +35m.10s. = SR_1 − 6s., and +44m.4s.? = SR_2 − 4s., MN = +70·1m. Charlottesville eN = +35m.34s. = SR_1 + 6s. Georgetown eZ = +23m.15s. and +24m.15s. Tashkent e = +19m.28s. = PR_1 − 22s., +22m.28s. and +35m.4s.? Kucino PR_1 = +19m.53s., PS = +29m.43s., SR_1 = +35m.58s. Cincinnati iZ = +19m.58s., +20m.25s., and +23m.40s., eEN = +35m.0s. Helsingfors e = +36m.44s. = SR_1 + 19s. Ottawa e = +36m.26s. = SR_1 + 1s. Toronto e = +36m.30s. = SR_1 + 0s. Pulkovo PR_1 = +20m.14s., PS = +29m.52s., SR_1 = +36m.16s. Florissant eZ = +23m.18s., eEN = +30m.18s., and +36m.18s., MN = +64·8m. Chicago MN = +70·7m. Ekaterinburg PR_2 = +23m.42s., $S_cP_cP_cS$ = +27m.45s., iPS = +30m.59s., iPPS = +32m.13s., SR_1 = +37m.40s.

Nov. 22d. Readings also at 4h. (Taihoku, Almata, and near Belgrade), 5h. (Frunse and near Tashkent), 6h. (Wellington), 7h. (Manila and near Lick), 10h. (La Paz and Naples), 11h. (Manila), 14h. (Rocca di Papa), 15h. (Tucson and near Tacubaya), 16h. and 19h. (near Tacubaya), 21h. (La Paz (2)), 22h. (near Amboina), 23h. (Suva and Wellington).

Nov. 23d. 4h. 23m. 30s. Epicentre 47°·5N. 29°·7E. (as given in the Bulletin of the Seismological stations of the Crimea).

A = +·587, B = +·335, C = +·737; D = +·495, E = −·869; G = +·640, H = +·365, K = −·676.

		△ °	Az. °	P. m. s.	O−C. s.	S. m. s.	O−C. s.	L. m.	M. m.
Sebastopol		3·9	135	i 1 0	− 1	(1 56)	+ 9	1·9	—
Simferopol		4·9	128	i 1 0	− 2	(1 54)	+ 4	1·9	2·4
Yalta		4·3	132	1 2	− 5	1 52	− 6	2·1	2·1
Lemberg	E.	4·4	304	e 1 24	+16	—	—	—	—
Theodosia		4·6	121	1 13	+ 2	—	—	2·4	2·8
Zagreb		9·6	265	e 1 27	−57	e 3 21	−57	—	—
Pulkovo		12·3	2	i 2 52	−11	i 5 31	+ 5	—	—
Ekaterinburg		20·9	52	4 43	− 9	—	—	e 9·6	—

Lemberg gives also eN = +36s.

Nov. 23d. 17h. 48m. 32s. Epicentre 35°·7N. 132°·5E. (as on 1928 Oct. 12d.).

A = −·549, B = +·599, C = +·584 ; D = +·737, E = +·676 ;
G = −·394, H = +·430, K = −·812.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Matuyama	1·9	174	(0 55)	+26	—	—	(1·2)	(2·0)
Sumoto	2·4	125	0 30	− 7	(0 55)	−11	0·9	1·1
Kobe	2·4	115	0 39	+ 2	(1 9)	+ 3	1·2	1·3
Osaka	2·6	114	0 47	+ 6	(1 17)	+ 5	1·3	1·8
Hukuoka	2·7	219	0 42	0	1 17	+ 3	—	1·5
Nagoya	3·6	98	e 1 0	+ 4	e 1 36	− 3	—	—
Nagasaki	3·7	216	0 54	− 4	1 39	− 3	—	1·7
Ekaterinburg	51·2	318	e 9 17	+ 3	—	—	29·5	—

Additional readings and note : Matuyama readings have been *increased* by 1m.
Sumoto MNZ = +1·0m. Osaka MN = +2·1m.

Nov. 23d. Readings also at 1h. and 3h. (Nagoya), 4h. (Vienna and near Tacubaya, 8h. (Tashkent, Frunse, Ekaterinburg, Adelaide, Melbourne, Riverview, Perth, Batavia, and near Amboina), 20h. (La Paz).

Nov. 24d. Readings at 5h. (near Tacubaya), 10h. (La Paz), 11h. (Batavia and near Tacubaya), 12h. (Phu-Lien and near Tananarive), 13h. (near Tananarive), 14h. (Yalta, near Sebastopol, Simferopol, and Theodosia), 16h. (near Barcelona and Tortosa), 17h. (near La Paz), 20h. (near Malabar), 22h. (near Osaka, Kobe (2), Sumoto, and Toyooka), 23h. (Taihoku).

Nov. 25d. Readings at 1h. (near Algiers), 7h. (Manila (2)), 10h. (Ekaterinburg) 11h. (Baku, Tashkent, and Granada), 12h. (Ekaterinburg, Tashkent, and Toyooka), 20h. (Adelaide, Melbourne, and Riverview), 21h. (Perth), 23h. (near Kobe and Sumoto).

Nov. 26d. Readings at 0h. and 2h. (La Paz), 3h. (near Vera Cruz), 4h. (Entebbe, and La Plata), 8h. (Ekaterinburg, Irkutsk, Pulkovo, and Tashkent), 9h. (Baku, Copenhagen, and Chicago), 10h. (near Oaxaca and Tacubaya), 17h. (Chur and near Neuchatel and Zurich).

Nov. 27d. 9h. 18m. 38s. Epicentre 60°·3N. 144°·0W.

A = −·401, B = −·291, C = +·869 ; D = −·588, E = +·809 ;
G = −·703, H = −·511, K = −·495.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka	E.	5·6	122	—	—	—	—	e 3·7	6·3
Victoria		16·8	126	4 21	+19	—	—	7·9	10·2
Florissant		39·4	99	—	—	e 13 59	+ 2	e 21·4	—
St. Louis		39·6	99	—	—	e 13 56	− 4	e 21·4	25·8
Toronto		41·1	85	—	—	e 14 25	+ 3	24·8	—
Ottawa		41·7	80	—	—	e 14 22	− 9	e 21·4	27·4
Cincinnati		42·0	93	—	—	—	—	i 23·3	—
Scoresby Sund		43·1	26	—	—	—	—	18·4	—
Georgetown		45·8	97	e 12 14	?	—	—	25·1	25·6
Charlottesville	N.	45·8	89	—	—	—	—	e 25·0	29·4
Irkutsk		54·9	316	—	—	e 17 8	−12	30·4	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m
Pulkovo		59·9	3	i 10 12	+ 1	e 17 49	−33	31·4	—
Ekaterinburg		61·3	346	i 10 20	− 1	i 18 42	+ 2	29·9	38·1
Copenhagen		62·5	15	—	—	—	—	33·4	—
Kew	Z.	64·5	25	—	—	—	—	e 39·4	—
De Bilt		64·9	20	—	—	—	—	e 36·4	—
Strasbourg		68·8	20	—	—	—	—	e 42·4	—
Tashkent		74·8	335	i 11 43	− 5	21 16	− 8	37·4	50·0
Granada		77·2	31	—	—	—	—	e 39·4	46·7
Baku		78·7	350	12 12	+ 1	22 8	0	e 39·9	57·0
La Paz		97·5	110	e 52 43	?L	—	—	(e 52·7)	—

Additional readings: Sitka eLN = +3·6m. Florissant eE = +16m.59s. = SR_1 +25s. St. Louis e = +16m.56s. = SR_1 +18s. Toronto i = +22m.55s., LN = +26·9m. Ottawa eN = +17m.40s., e = +19m.28s. Cincinnati eZ = +23m.47s., eEN = +25m.26s., L = +27·0m. Georgetown eN = +12m.18s., MN = +25·8m. De Bilt eLN = +40·4m.

Nov. 27d. Readings also at 3h. (Toronto, Florissant, St. Louis, Tananarive, near La Paz, near Tacubaya, Oaxaca, and Merida), 5h. (near Manila), 8h. (Almata and Tashkent), 11h. (La Paz), 17h. (near Malabar), 18h. (near Nagasaki), 20h. (Georgetown).

Nov. 28d. 1h. 23m. 0s. Epicentre 16°·2N. 97°·2W. (as on 1928 Oct. 30d.).

A = −·120, B = −·953, C = +·279; D = −·992, E = +·125; G = −·035, H = −·277, K = −·960.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		0·9	27	(0 46)	+32	—	—	(1·1)	(1·3)
Puebla		3·0	341	(0 52)	+ 5	(1 27)	+ 4	(1·4)	(1·7)
Vera Cruz		3·2	18	(0 36)	−14	(1 27)	− 1	(1·4)	(1·9)
Tacubaya		3·8	330	1 3	+ 4	(1 48)	+ 4	1·8	1·9
Manzanillo		7·4	293	—	—	—	—	3·0	3·5
Guadalajara		7·5	307	—	—	—	—	2·7	3·2
Tucson		20·3	325	4 41	− 4	7 58	−31	10·1	—
St. Louis		23·2	14	i 5 23	+ 4	i 9 38	+ 9	e 13·1	15·1
Florissant		23·4	13	i 5 21	0	i 9 35	+ 2	e 11·6	16·0
Cincinnati		25·5	23	i 5 36	− 7	e 10 21	+ 8	—	—
Chicago	E.	26·9	16	5 54	− 3	10 37	− 2	16·9	19·0
	N.	26·9	16	5 53	− 4	10 43	+ 4	16·3	18·7
Charlottesville	N.	27·3	34	e 6 0?	− 1	e 10 36	−10	e 16·7	22·3
Lick	E.	30·2	320	—	—	—	—	e 14·7	—
Toronto		31·3	26	e 6 3	−38	e 11 51	− 5	18·0	24·0
Ottawa		34·3	28	e 7 12	+ 5	e 12 38	− 6	e 18·0	—
Victoria	E.	38·7	333	13 30	?S	(13 30)	−18	19·2	24·7
	N.	38·7	333	13 40	?S	(13 40)	− 8	19·9	24·5
La Paz		43·5	139	i 8 47	+25	14 59	+ 4	22·0	24·8
Rio de Janeiro	N.	65·7	127	—	—	e 19 50	+17	—	—
Scoresby Sund		69·9	20	—	—	—	—	43·0	—
Kew		81·6	40	—	—	—	—	e 45·0	—
Granada		83·1	54	—	—	i 23 14	+16	e 42·0	48·8
Paris		84·1	41	—	—	—	—	e 46·0	54·0
De Bilt		84·6	37	—	—	e 23 26	+11	e 46·0	53·6
Uccle		84·6	39	—	—	—	—	e 48·0	—
Copenhagen		87·2	32	e 13 10	+10	e 24 0	+17	—	—
Strasbourg		87·4	40	—	—	—	—	49·0	—
Pulkovo		93·0	24	13 31	− 1	—	—	51·0	56·5
Ekaterinburg		104·6	13	e 18 41	?PR_1	e 25 2	[+17]	51·0	64·6
Irkutsk		109·0	346	—	—	—	—	57·0	—
Baku		115·7	27	—	—	—	—	e 59·5	—
Tashkent		121·1	11	e 20 18	?PR_1	e 28 0?	−58	—	79·2

Additional readings and notes: Oaxaca readings have been *increased* by 2m. Puebla readings have been *diminished* by 1m. Vera Cruz readings have been *increased* by 1m. Florissant MN = +16·3m. Cincinnati eN = +5m.40s., iZ = +10m.26s., and +11m.28s., iEZ = +18m.50s., eZ = +21m.0s. Lick eE = +16m.42s. and +19m.42s. Toronto iN = +10m.42s. Copenhagen ePR_1E = +16m.22s., eS_cPSE = +23m.42s., ePSEZ = +25m.0s., SR_1 = +29m.48s. Pulkovo P = +9m.42s., PR_2 = +17m.18s. = PR_1 −10s., PS = +23m.56s. = [S] +10s., SR_1 = +31m.0s. Ekaterinburg e = +27m.57s. = PS +1s. Tashkent e = +21m.54s.

Nov. 28d. 7h. 36m. 50s. Epicentre 25°·5N. 56°·0W.

A = +·505, B = −·748, C = +·431; D = −·829, E = −·559; G = +·241, H = −·357, K = −·903.

Very uncertain.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Charlottesville	N.	22·8	309	—	—	—	—	e 12·8	—
Ottawa		25·4	326	—	—	e 9 52	−19	e 11·2	—
Toronto	N.	26·3	319	—	—	e 10 25	− 3	14·2	—
St. Louis		31·6	304	—	—	—	—	e 15·4	—
Florissant		31·8	304	i 12 45	?S	(i 12 45)	+40	(e 15·9)	—
La Paz		43·7	199	i 8 24	0	e 14 59	+ 1	25·7	31·8
Toledo	N.E.	45·3	59	(e 8 39)	+ 4	—	—	e 8·6	—
Stonyhurst		48·4	40	e 9 10?	+14	—	—	—	13·2
Edinburgh		48·5	37	e 11 10?	?PR_1	—	—	—	—
Scoresby Sund		49·0	15	(11 10?)	?PR_1	—	—	11·2	—
Kew		49·1	43	(10 10?)	?	—	—	10·2	—
Rio de Janeiro	N.	50·0	167	—	—	—	—	e 23·3	—
Uccle		52·0	45	e 9 58	+38	—	—	e 12·2	—
De Bilt		52·6	43	—	—	e 10 13	?	e 13·2	14·2
Strasbourg		54·0	47	—	—	—	—	14·2	—
Hamburg	E.	55·6	41	—	—	(e 15 10?)	?	e 15·2	—
Copenhagen		57·1	39	e 11 31	?	—	—	16·2	20·7
Lund		57·6	39	—	—	(17 10?)	−44	17·2	17·2
Upsala		60·0	35	—	—	17 10?	−73	—	—
Pulkovo		66·3	34	—	—	(19 10?)	−31	19·2	26·9
Kucino		71·2	36	—	—	(21 40)	+60	21·7	25·1
Ekaterinburg		82·0	30	e 17 23	?	—	—	26·7	30·6
Baku		84·8	48	—	—	—	—	e 30·7	—
Tashkent		96·1	39	—	—	e 24 10?	[+ 7]	e 34·1	38·3

Additional readings: De Bilt eLN = +12·7m. Pulkovo e = 7h.35m.42s. Ekaterinburg e = +21m.31s. Tashkent e = +21m.10s. ? and +28m.4s.

Nov. 28d. 9h. 3m. 10s. Epicentre 19°·0N. 120°·5E. (as on 1927 April 23d.).

A = −·480, B = +·815, C = +·326; D = +·862, E = +·507; G = −·165, H = +·280, K = −·946.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	E.	4·4	173	i 1 5	− 3	(i 2 3)	+ 2	i 2·0	2·3
Hong Kong		6·7	301	1 40	− 2	—	—	—	5·1
Irkutsk		35·6	344	—	—	—	—	16·8	—
Tashkent		48·7	310	e 8 55	− 3	15 55	− 7	e 26·1	29 9
Ekaterinburg		57·8	327	e 10 0	+ 2	18 7	+11	28·8	32·3
Pulkovo		73·8	330	—	—	—	—	e 39·8	—
De Bilt		89·5	326	—	—	—	—	e 48·8	—

Additional readings: Tashkent eSR_1 = +19m.39s. Ekaterinburg SR_1 = +22m.2s.

Nov. 28d. 10h. 43m. 0s. Epicentre **8°·0S. 122°·0E.**

A = −·525, B = +·840, C = −·139; D = +·848, E = +·530: G = +·074, H = −·118, K = −·990.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		7·5	55	i 2 25	+31	i 4 5	+41	—	—
Malabar		14·3	272	i 3 30	0	—	—	6·0	10·0
Batavia		15·2	276	i 3 41	− 1	—	—	10·0	11·5
Manila	E.	22·6	357	e 5 20	+ 8	(i 9 39)	+22	i 9·6	10·3
Perth		24·6	193	i 5 25	− 9	i 12 0	?L	(i 12·0)	—
Adelaide		31·0	152	i 6 38	0	i 11 24	−27	i 13·2	21·2
Hong Kong		31·3	347	6 34	− 7	(11 24)	−32	11·4	15·1
Phu-Lien		32·5	332	i 6 43	−10	i 11 58	−18	15·0	28·4
Taihoku	E.	33·0	0	6 54	− 2	12 25	+ 1	14·5	—
Melbourne		36·3	148	i 6 20	−64	i 12 0	−74	17·0	25·0
Riverview		37·3	139	i 7 28	− 4	i 13 6	−22	e 18·4	24·2

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sydney		37·3	139	6 12	−80	13 18	−10	21·5	25·0
Zi-ka-wei	Z.	39·2	0	7 36	−12	13 42	−12	20·6	26·3
Hukuoka		42·3	11	8 7	− 6	14 35	− 4	e 19·0	—
Sumoto		44·1	16	8 21	− 6	e 10 54	?	e 14·6	—
Osaka		44·5	16	8 31	+ 1	15 6	− 3	24·1	29·9
Kobe		44·5	16	8 27	− 3	e 15 15	+ 6	e 18·4	21·5
Colombo		44·6	288	8 20	−10	15 15	+ 5	21·5	28·8
Calcutta	E.	44·9	315	8 50	+18	15 14	0	22·7	35·6
Toyooka		45·2	15	i 8 27	− 7	i 15 11	− 7	18·6	—
Nagoya		45·4	18	e 8 32	− 4	—	—	18·8	—
Kodaikanal		48·0	292	9 18	+24	—	—	24·4	32·4
Hyderabad		50·0	301	8 56	−11	16 0	−19	23·2	33·2
Mizusawa		50·3	20	9 8	− 1	16 19	− 4	20·0	—
Bombay		55·1	300	9 42	+ 2	17 26	+ 4	28·8	37·4
Suva	N.	55·6	108	i 10 0	+17	i 17 42	+13	28·2	—
Christchurch		56·6	138	—	—	29 24	?L	33·4	41·4
Dehra Dun		57·0	315	9 44	− 8	17 44	− 2	29·7	37·7
Wellington	E.	57·2	135	i 10 4	+11	i 18 2	+13	27·7	32·9
	N.	57·2	135	i 10 5	+12	i 18 7	+18	29·4	37·2
Irkutsk		62·2	349	i 10 33	+ 7	18 52	+ 1	26·0	—
Apia		65·1	101	—	—	19 39	+13	34·5	—
Almata		65·5	325	10 56	+ 8	19 52	+21	—	—
Frunse		66·7	324	11 0	+ 4	—	—	—	—
Tashkent		69·0	320	i 11 11	0	i 20 14	0	34·0	48·4
Tananarive		72·8	254	11 36	+ 1	20 57	− 3	e 34·6	41·2
Ekaterinburg		81·8	331	i 12 29	0	i 22 34	−10	38·0	55·0
Baku		81·9	314	e 12 35	+ 5	—	—	—	—
Honolulu T.H.	E.	83·9	68	—	—	24 18	?PS	42·2	44·0
Entebbe		89·6	271	13 6	− 8	23 46	−24	—	45·0
Ksara	E.	91·3	305	e 14 0?	+37	e 24 0?	−27	e 56·0	—
Kucino		93·3	326	13 26	− 8	24 23	−25	41·1	58·7
Theodosia		93·3	316	—	—	—	—	e 52·0	—
Simferopol		94·1	315	—	—	—	—	e 52·0	—
Helwan		94·5	300	e 13 32	− 9	24 2	[+ 8]	—	59·4
Cape Town		96·6	235	—	—	—	—	—	52·0
Pulkovo		97·7	329	i 13 43	−15	24 48	[+37]	47·0	63·0
Helsingfors		100·4	330	e 18 12	[+24]	—	—	50·0	—
Konigsberg		103·1	325	e 16 12	?	—	—	e 50·0	68·0
Belgrade	E.	103·8	314	e 16 39	?	e 24 22	[−20]	e 63·5	—
Upsala		104·1	330	e 18 30	?PR_1	—	—	e 48·0	65·5
Budapest		104·6	316	18 30	?PR_1	—	—	e 43·5	67·0
Vienna		106·3	317	e 17 59	[−10]	29 7	?	e 41·5	69·5
Zagreb		106·9	315	e 18 42	?PR_1	e 28 0?	?PS	e 62·0	—
Graz		107·1	316	i 18 38	?PR_1	i 29 30	?	56·0	64·6
Lund		107·1	325	—	—	—	—	50·0	—
Copenhagen		107·6	325	e 14 30	−16	i 26 36	−30	e 52·0	72·5
Potsdam		107·8	322	i 19 18	?PR_1	—	—	54·0	—
Laibach		107·8	316	—	—	—	—	e 65·0	—
Jena	E.	109·0	321	i 18 15	[− 4]	i 19 15	?PR_1	e 58·0	69·5
	N.	109·0	321	—	—	i 19 22	?PR_1	e 50·0	56·5
Hamburg		109·4	323	e 19 21	?PR_1	e 28 33	?PS	e 54·0	58·1
Rocca di Papa		109·7	310	e 18 48	[+27]	—	—	e 51·5	65·6
Florence		110·4	313	19 3	?PR_1	29 0	?PS	48·0	62·0
Chur		111·1	316	e 19 19	?PR_1	—	—	—	—
Zurich		111·7	316	e 19 26	?PR_1	—	—	e 49·0	—
Strasbourg		111·9	319	e 15 0	− 7	—	—	53·0	75·2
Victoria		112·2	40	19 40	?PR_1	29 10	?PS	53·0	57·7
De Bilt		112·6	323	—	—	e 29 18	?PS	e 57·0	62·9
Moncalieri		112·7	315	18 36	[+ 6]	38 17	?	51·0	77·5
Neuchatel		112·8	316	—	—	—	—	—	77·0
Besançon		113·4	317	e 19 44	?PR_1	e 29 22	?PS	—	72·0
Scoresby Sund		113·5	346	19 42	?PR_1	29 36	?PS	53·0	—
Uccle		113·5	321	—	—	i 29 7	?PS	e 57·0	64·2
Dyce		114·6	330	e 19 54	?PR_1	e 30 58	?	53·5	70·0
Berkeley		115·1	50	e 20 33	?PR_1	e 29 43	?PS	e 63·7	—
Paris		115·2	320	i 19 53	?PR_1	e 29 32	?PS	39·0	68·0
Lick	E.	115·7	50	e 19 59	?PR_1	e 29 29	?PS	e 57·6	—
Edinburgh		115·8	329	e 20 0?	?PR_1	i 30 6	?PS	57·0	67·5
Kew		116·0	323	e 15 30	+ 5	—	—	55·0	75·3
Stonyhurst		116·2	325	e 18 50	[+ 8]	—	—	56·0	63·0
Oxford	E.	116·4	323	20 10	?PR_1	—	—	—	75·1
Algiers		117·8	307	—	—	—	—	67·0	72·0
Alicante		120·2	310	—	—	e 26 32	?	e 73·5	—
Toledo		122·4	311	e 14 58	−56	—	—	e 43·1	68·2

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Granada		122·9	309	i 20 47	?PR_1	—	—	e 59·1	76·6
San Fernando		125·1	309	19 3	[− 3]	—	—	—	85·1
Tucson	E.	125·4	55	—	—	e 32 48	?	61·0	—
La Plata		137·1	180	19 30	[− 4]	—	—	70·0	—
Chicago	E.	137·3	32	—	—	—	—	65·3	72·0
Florissant		137·6	37	e 19 34	[− 1]	—	—	e 65·6	74·1
St. Louis		138·1	37	e 20 27	[+51]	—	—	e 58·6	69·7
Ann Arbor	E.	138·9	28	—	—	—	—	e 71·5	—
Ottawa		139·6	17	e 22 47	?PR_1	—	—	70·0	—
Toronto	N.	139·6	23	e 19 25	[−14]	e 45 44	?	79·4	—
Cincinnati		140·8	31	e 19 40	[− 1]	—	—	85·0	95·0
Georgetown	E.	144·6	25	e 19 53	[+ 5]	33 7	?	—	—
	N.	144·6	25	e 19 52	[+ 4]	33 9	?	—	—
	Z.	144·6	25	i 19 49	[+ 1]	33 22	?	74·3	98·7
Charlottesville	E.	144·7	27	e 19 48	[0]	e 42 0	?SR_1	e 58·0	73·0
	N.	144·7	27	e 19 51	[+ 3]	e 42 30	?SR_1	e 48·0	92·5
Rio de Janeiro	N.	145·9	204	e 19 47	[− 3]	—	—	—	—
Sucre		152·1	165	20 6	[+ 7]	27 34	?PR_2	77·0	87·4
La Paz		153·5	158	e 20 12	[+11]	27 38	?PR_2	76·0	96·1

Additional readings: Amboina i = +2m.39s. Malabar i = +3m.51s. Batavia iZ = +3m.53s. and +5m.17s., i = +9m.52s. Adelaide iSR_1 = +12m.35s., MN = +20·1m. Hong Kong MN = +22·1m. Phu-Lien MN = +32·7m. Melbourne iPR_2 = +7m.2s. Riverview iEN = +7m.30s. iZ = +7m.33s. and +7m.37s., PR_1 = +8m.23s., PR_2 = +9m.8s., PR_2 = +9m.20s., P_gS = +13m.36s., SR_1 = +15m.36s., SR_2 = +16m.16s., SR_2 = +16m.42s., MNZ = +24·6m.; T_g = 10h.43m.4s. Zi-ka-wei iPZ = +7m.52s., PR_1N = +8m.10s., PR_1Z = +8m.54s., PR_2N = +9m.36s., ePSZ = +9m.42s., PSE = +13m.58s., SR_1Z = +16m.54s., SR_2Z = +17m.40s., LN? = +22·1m., MN = +25·3m. Kobe PR_1 = +10m.27s., MN = +20·0m., MZ = +24·7m. Mizusawa SN = +9m.10s. Suva iPR_1N = +12m.24s., iPR_2N = +13m.42s., SR_2N = +23m.54s.: T_gN = 10h.43m.18s. Christchurch PR_1 = +25m.6s. Wellington iPR_1N = +12m.32s., PR_1E = +13m.26s., SR_1E = +22m.4s., SR_2E = +22m.17s., iSR_1N = +25m.7s.; T_gN = 10h.43m.4s.; T_gE = 10h.43m.7s. Apia +25m.26s., L = +30·3m.; T_s = 10h.43m.15s. Tananarive PR_1 = +14m.27s., PS = +21m.24s., eE = +22m.3s., SR_1N = +25m.24s. Kucino PR_1 = +17m.17s., PR_2 = +19m.14s., SR_1 = +30m.42s. Pulkovo P′ = +17m.6s., PR_1 = +17m.38s., S_gP_gS = +24m.6s. = [S] − 5s. Helsingfors PR_2? = +25m.24s. = Σ + 12s. Konigsberg eZ = +18m.30s. = PR_1 − 4s., eE = +18m.40s. = PR_1 + 6s., eN = +24m.24s. = [S] + 14s., eE = +27m.24s. = PS − 15s., +28m.34s., +33m.54s. = SR_1 + 37s., +38m.0s. ? = SR_2 − 16s., and +41m.0s. ? = SR_2 − 10s., MN = +57·0m. Upsala MN = +56·3m. Vienna PR_2? = +23m.15s., iE = +25m.9s. = [S] + 16s., and +26m.7s., S_gP_gS = +28m.13s. = PS − 2s., PS = +29m.58s., iE = +32m.48s., SR_1? = +34m.49s. Graz MN = +68·2m. Lund PR_1 = +19m.4s., PS = +28m.8s., SR_1 = +34m.18s., SR_2 = +37m.30s. Copenhagen ePR_1E = +19m.1s., PR_1 = +19m.6s., eLN = +49·0m., MN = +56·3m. Jena eZ = +18m.13s., iZ = +19m.14s. = PR_1 + 2s., eE = +29m.30s., eN = +29m.59s. Hamburg eE = +35m.6s. and +39m.0s. ?, LN = +51·0m., MN = +59·8m., MZ = +71·0m. Rocca di Papa i = +19m.30s. = PR_1 + 14s., PR_1Z = +21m.54s., PR_2Z = +32m.30s. Strasbourg ePR_1 = +19m.21s., PR_2 = +21m.55s., PS = +29m.55s. Victoria SN = +30m.44s. De Bilt iPR_1EZ = +19m.38s., MN = +62·2m., MZ = +81·8m. Neuchatel ePR_1 = +19m.26s. Uccle ePR_1 = +19m.38s., e = +27m.39s. Berkeley eE? = +20m.42s., eZ = +20m.49s., and +36m.13s. = SR_1 + 26s. Paris MN = +63·0m. Kew PR_1Z = +20m.4s., PS = +29m.41s., eEN = +42m.0s. and +45m.18s. = SR_2 + 10s. Stonyhurst PR_1 = +19m.57s., PR_2 = +22m.45s., PS = +30m.5s., SR_1 = +35m.45s. Oxford e = +29m.17s. Algiers MN = +76·0m. Toledo MNW = +79·9m. Granada i = +23m.41s. = PR_2 − 27s., +27m.14s. = Σ − 17s., and +32m.19s., SR_1E = +34m.39s. Chicago ePR_1N = +22m.24s., iPR_1E = +22m.27s., eE = +23m.18s., iPSE = +32m.27s., ePSN = +32m.36s. PPSE = +34m.55s., ePPSN? = +35m.48s., eSR_1N = +40m.36s., eSR_1E = +40m.37s., eN = +52m.18s., eE = +57m.0s., LN? = +59·8m., MN = +82·9m. Florissant iZ = +19m.44s., iNZ = +22m.26s. = PR_1 + 7s., iZ = +24m.59s. and +31m.56s., iN = +32m.39s., iE = +32m.41s., eNZ? = +34m.48s. St. Louis e = +22m.32s. = PR_1 + 10s. and +32m.37s., MN = +70·1m. Ann Arbor eL?N = +70·2m. Ottawa eE = +30m.54s., eN = +35m.0s., e? = +41m.0s. ?, eN = +52m.12s., eL = +62·0m. Cincinnati iNZ = +22m.30s. = PR_1 − 8s., eN = +32m.50s., iNZ = +35m.10s., eNZ = +51m.0s. ?, iZ = +55m.0s., +66m.36s., and +69m.0s. Charlottesville eN = +33m.40s. Rio de Janeiro ePE = +19m.50s. = [P] + 0s. Sucre i = +20m.23s., P_gP_gS = +23m.54s., PR_1 = +24m.34s., i = +30m.55s., and +34m.12s., SR_1? = +42m.46s., SR_2 = +48m.46s. La Paz eN = +23m.31s. PR_1N = +24m.25s., $S_gP_gP_gS$ = +30m.43s., S_gP_gSP = +34m.30s., eN = +37m.49s., SR_1E? = +44m.39s., eE = +68m.0s., MN = +89·2m.

Nov. 28d. 14h. 16m. 15s. Epicentre 41°·3N. 2°·5E. (given by Toledo).

A = +·751, B = +·033, C = +·660 ; D = +·044, E = −·999 ; G = +·659, H = +·029, K = −·751.

		Δ	Az.	P.	O−C.	S.	O−C.
		°	°	m. s.	s.	m. s.	s.
Barcelona		0·3	299	i 0 5	0	i 0 8	0
Tortosa	E.	1·6	258	0 30	+ 6	0 52	+ 7
	N.	1·6	258	0 28	+ 4	0 51	+ 6
Bagnères		2·1	319	e 1 24	+51	i 1 51	+53
Toledo		5·2	256	e 1 17	− 3	2 35	+13
Neuchatel		6·5	28	e 1 36	− 3	e 2 53	− 4
Zurich		7·5	34	e 2 51	+57	—	—

Additional readings : Tortosa PN = +31s. Toledo PR_1 = +1m.35s., SR_1 = +2m.55s. Neuchatel eS = +3m.26s.

Nov. 28d. Readings also at 0h. (Tucson, near Oaxaca, Puebla, Tacubaya, and Vera Cruz), 2h. (near Merida and near Sumoto), 6h. (Nagasaki), 9h. (Phu-Lien), 11h. (Manila), 12h. (Toronto), 14h. (Yalta), 15h. (near Sucre), 17h. (near Algiers), 19h. (Mizusawa).

Nov. 29d. 12h. 23m. 45s. Epicentre 22°·5S. 70°·5W. (as on 1928 Nov. 20d.).

A = +·308, B = −·871, C = −·383 ; D = −·943, E = −·334 ; G = −·128, H = +·361, K = −·924.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sucre		6·0	55	i 1 31	− 1	2 51	+ 7	2·9	3·1
La Paz		6·4	21	i 1 39	+ 1	i 3 15	+20	3·8	4·3
Santiago		10·9	181	e 2 25	−18	3 53	−59	4·5	—
La Plata		16·6	141	3 33	−27	e 6 27	−42	7·8	—
Rio de Janeiro		25·2	96	e 5 15	−25	9 35	−32	11·6	—
Georgetown	Z.	61·7	355	i 10 13	−10	e 18 49	+ 5	—	—
Cincinnati	Z.	63·0	349	i 10 15	−17	—	—	33·2	35·2
St. Louis		63·9	345	e 11 0	+23	i 19 30	+18	—	37·2
Florissant		64·1	345	i 10 31	− 8	—	—	—	37·2
Toronto		66·7	354	—	—	e 19 41	− 5	40·2	—
Ottawa		68·1	357	—	—	e 19 55	− 8	e 31·2	—
Granada		86·7	47	i 12 40	−17	—	—	e 37·0	42·4
Wellington	E.	92·1	225	—	—	—	—	e 42·1	—
Kew		96·0	37	—	—	—	—	e 49·2	—
Paris		96·4	40	—	—	—	—	e 52·2	—
Edinburgh		96·8	32	—	—	—	—	e 51·2	—
Moncalieri		97·9	45	—	—	—	—	e 46·5	—
Uccle		98·3	39	—	—	e 24 33	[+18]	e 49·2	—
De Bilt		99·3	39	e 13 40	−27	—	—	e 50·2	—
Strasbourg		99·4	41	—	—	—	—	e 50·2	—
Copenhagen		104·6	36	—	—	—	—	50·2	—
Pulkovo		114·7	33	—	—	e 26 51	? Σ	56·2	62·2
Baku		127·2	55	—	—	—	—	e 57·2	—
Ekaterinburg		130·8	33	e 19 8	[−12]	—	—	54·2	72·4
Tashkent		141·5	50	e 19 23	[−19]	—	—	e 67·2	76·6
Irkutsk		150·0	7	—	—	—	—	e 80·2	—

Additional readings : Rio de Janeiro LN = +11·9m. Cincinnati iZ = +27m.30s. = SR_3 +14s. St. Louis eN ? = +7m.35s., eE = +19m.48s. = PS +4s. Florissant eN = +33s., eZ = +42s., iN = +9m.5s. and +10m.42s., iZ = +11m.26s., eN = +13m.24s. = PR_1 −11s. Ekaterinburg iPR_1 = +21m.23s., iP_cP_cS = +22m.30s., PS = +31m.21s., PPS = +33m.20s. Tashkent i = +22m.33s. = PR_1 −10s., e = +23m.7s., and +26m.51s. = PR_1 +27s.

Nov. 29d. 15h. 42m. 20s. Epicentre 29°·0S. 174°·0W. (see 17h.).

A = −·870, B = −·091, C = −·485; D = −·105, E = +·995;
G = +·482, H = +·051, K = −·875.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	12·9	326	i 3 10	− 2	i 5 46	+ 4	7·2	12·7
	N.	12·9	326	i 2 58	−14	i 5 10	−32	i 6·1	7·7
Wellington	E.	15·3	214	i 4 35	+52	i 8 11	+92	i 9·6	10·7
	N.	15·3	214	—	—	8 9	+90	—	10·2
Christchurch		18·0	213	—	—	—	—	—	14·2
Riverview		30·0	251	e 7 22	+54	e 11 34	0	e 14·1	19·5
Sydney		30·0	251	(5 52)	−36	5 52	?P	16·2	17·7
Melbourne		35·1	242	i 7 23	+ 9	13 17	+20	17·2	23·3
Adelaide		40·2	250	—	—	e 16 22	?SR_1	i 19·9	26·9
Perth		59·4	249	e 23 40	?	—	—	—	—
Victoria	E.	89·7	30	—	—	—	—	45·8	56·6
St. Louis		103·2	53	—	—	e 25 40?	Σ	—	47·7
Florissant	E.	103·2	53	—	—	—	—	e 47·7	—
Chicago	E.	106·4	51	—	—	—	—	e 58·9	71·9
Cincinnati		107·5	53	—	—	—	—	60·7	—
Kodaikanal		111·0	270	66 4	?L	—	—	(66·1)	—
Toronto	N.	112·3	50	—	—	—	—	e 52·9	—
Georgetown		112·8	56	—	—	e 30 10	?	e 60·7	67·0
Ottawa		115·7	49	—	—	e 30 16	?	e 57·7	—
Bombay		118·8	277	e 22 31	?	34 31	?	62·9	75·0
Tashkent		128·0	301	e 22 34	?	—	—	e 77·7	82·7
Ekaterinburg		133·0	322	e 19 33	[+ 8]	—	—	63·7	76·4
Scoresby Sund		133·0	12	—	—	—	—	71·7	—
Baku		142·5	300	—	—	—	—	e 69·2	—
Pulkovo		145·1	337	i 20 14	[+26]	—	—	76·7	—
Edinburgh		152·3	11	—	—	—	—	—	122·7
Copenhagen		152·9	352	—	—	—	—	86·7	—
Stonyhurst		154·4	12	—	—	—	—	e 92·7	—
De Bilt		156·9	1	e 20 52	[+47]	—	—	e 85·7	95·7
Kew		157·1	10	e 20 40	[+35]	—	—	86·7	—
Uccle		158·2	3	—	—	—	—	e 85·7	—
Paris		160·0	7	—	—	—	—	95·7	104·7
Strasbourg		160·4	357	—	—	—	—	e 84·7	—
Moncalieri		164·0	356	—	—	—	—	e 79·7	—
Granada		168·6	42	—	—	—	—	e 86·7	90·7

Additional readings: Riverview MN = +16·8m. Melbourne PR_1 = +7m.40s. Adelaide i = +18m.18s., MN = +24·4m. Florissant e = +66m.58s. Chicago eLN = +62·5m., MN = +72·4m. Georgetown eZ = +38m.42s., and +55m.40s. Ottawa e = +36m.52s., eLN? = +52·7m. Tashkent e = +23m.9s. Ekaterinburg e = +19m.54s., i = +23m.20s. De Bilt eE = +44m.34s., MZ = +94·5m., MN = +99·0m. Kew ePR,Z = +24m.48s. Paris e = +78m.40s.?

Nov. 29d. 17h. 59m. 48s. Epicentre 28°·0S. 174°·0W. (as at 15h.).

A = −·870, B = −·091, C = −·485; D = −·105, E = +·995;
G = +·482, H = +·051, K = −·875.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	12·9	326	i 3 12	0	i 5 48	+ 6	7·2	13·4
	N.	12·9	326	i 3 18	+ 6	i 5 48	+ 6	6·7	7·5
Apia		15·3	8	—	—	e 6 57	+18	e 8·8	9·6
Wellington	E.	15·3	214	i 4 0	+17	i 7 25	+46	i 9·1	12·8
	N.	15·3	214	3 53	+10	i 7 29	+50	i 9·1	9·8
Christchurch		18·0	213	(4 17)	0	(7 59)	+19	8·0	14·0
Riverview		30·0	251	e 6 20	− 8	i 11 18	−16	e 13·8	19·0
Sydney		30·0	251	6 18	−10	10 42	−52	15·0	15·3
Melbourne		35·1	242	7 2	−12	12 55	− 2	17·1	23·0
Adelaide		40·2	250	(e 9 36)	?PR_1	(i 13 37)	−33	i 16·3	25·0
Honolulu T.H.		52·7	20	—	—	(e 17 12?)	+20	e 17·2	—
Perth		59·4	249	12 2	?PR_1	e 18 27	+11	30·4	39·2
Batavia		77·6	271	e 12 12	+ 7	i 21 46	−10	42·2	—
Lick	E.	82·5	39	—	—	e 23 21	+29	e 40·4	—
Berkeley	E.N.	82·6	39	e 12 53	+19	e 23 24	+31	e 40·2	43·9
	Z.	82·6	39	e 12 59	+25	e 23 15	+22	e 40·3	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tucson	N.	85·7	49	13 9	+17	22 54	[− 6]	46·6	—
Zi-ka-wei	Z.	86·0	309	i 12 52	− 1	—	—	41·9	43·9
Hong Kong		86·1	299	e 12 52	− 2	e 23 20	−11	e 41·2	75·2
Victoria	E.	89·7	30	24 1	?S	(24 1)	−10	45·0	56·7
	N.	89·7	30	24 6	?S	(24 6)	− 5	44·2	—
Phu-Lien		91·2	292	e 13 24	+ 2	—	—	—	—
La Plata		92·2	132	—	—	—	—	49·2	—
La Paz		95·2	112	e 14 15	+31	i 24 45	−23	47·6	53·0
Sucre		96·2	116	e 14 11	+21	24 47	−31	50·0	60·2
St. Louis		103·2	53	e 16 2	+96	e 26 37	+11	e 52·2	60·2
Florissant		103·2	53	e 14 46	+20	e 26 29	+ 3	e 44·3	59·7
Chicago	E.	106·4	51	—	—	e 25 28	[+34]	e 55·3	71·7
	N.	106·4	51	—	—	e 26 59	+ 3	e 47·9	63·7
Colombo		107·4	267	17 33	[−40]	—	—	—	64·3
Cincinnati		107·5	53	—	—	—	—	52·2	—
Ann Arbor	E.	109·3	50	—	—	—	—	e 62·7	—
Rio de Janeiro	E.	109·8	131	—	—	e 25 45	[+36]	—	—
Kodaikanal		111·0	270	57 30	?L	—	—	62·1	75·5
Charlottesville	E.	111·4	56	—	—	—	—	—	67·2
Toronto	E.	112·3	50	e 21 27	?	—	—	58·2	74·2
Georgetown	Z.	112·8	56	e 19 48	?PR_1	i 29 48	?PS	e 57·5	65·9
Hyderabad		113·4	277	—	—	29 15	?PS	—	75·4
Ithaca		114·3	52	—	—	—	—	69·2	—
Ottawa		115·7	49	e 21 12?	?	28 18	+ 2	e 59·2	—
Tananarive		117·5	225	—	—	30 12?	?PS	e 56·2	69·2
Bombay		118·8	277	18 4	[−45]	30 5	?PS	58·0	73·4
Tashkent		128·0	301	—	—	26 31	[+25]	e 55·2	73·7
Ekaterinburg		133·0	322	e 19 41	[+16]	26 46	?	55·2	76·2
Scoresby Sund		133·0	12	23 30	?	—	—	72·2	—
Baku		142·5	300	i 19 52	[+ 8]	—	—	68·7	91·5
Kucino		144·9	329	—	—	—	—	e 65·2	87·0
Pulkovo		145·1	337	i 19 57	[+ 9]	—	—	76·2	86·2
Upsala	N.	148·2	349	—	—	—	—	e 85·2	101·9
Konigsberg	E.	152·1	342	—	—	—	—	e 79·1	93·2
Edinburgh		152·3	11	e 22 12?	?	—	—	—	—
Lund		152·8	351	—	—	—	—	78·2	—
Copenhagen		152·9	352	—	—	—	—	72·2	103·4
Stonyhurst		154·4	12	e 32 12?	?	—	—	83·2	108·2
Hamburg		155·2	355	e 20 12?	[+10]	—	—	e 80·2	103·2
De Bilt		156·9	1	e 20 24	[+19]	—	—	e 83·2	99·3
Kew		157·1	10	e 20 20	[+15]	—	—	83·2	90·2
Uccle		158·2	3	e 20 12?	[+ 6]	—	—	e 83·2	94·8
Budapest		158·9	335	—	—	—	—	e 86·2	—
Vienna		159·2	340	—	—	—	—	e 84·7	104·2
Paris		160·0	7	e 20 35	[+27]	e 24 59	?PR_1	86·2	101·2
Strasbourg		160·4	357	e 20 12?	[+ 4]	e 26 12?	?	80·2	—
Graz		160·5	340	—	—	—	—	e 94·2	104·2
Zagreb		161·4	338	—	—	—	—	e 85·2	—
Besançon		161·8	0	—	—	—	—	—	100·2
Neuchatel		162·0	358	—	—	—	—	e 105·2	—
Moncalieri		164·0	356	e 24 57	?PR_1	46 26	?	88·8	—
Florence		164·6	346	20 12	[0]	25 7	?PR_1	—	88·2
Rocca di Papa		166·1	339	e 24 49	?PR_1	e 34 22	?	e 87·0	100·8
Tortosa	N.	167·0	19	—	—	—	—	e 96·2	—
Granada		168·6	42	i 21 43	?	i 32 6	?	84·2	90·2
Alicante		169·0	28	—	—	—	—	e 105·8	—

Additional readings and notes: Christchurch gives P as S and S as L. Riverview $PR_1 = +7$m.10s., $PR_2 = +7$m.23s., MN = +16·3m. Melbourne $PR_1 = +8$m.24s. Adelaide PR_1 and S are given as S and SR_2 respectively, MN = +24·0m. Perth P = +14m.2s., eS = +20m.12s. =[S]+21s., SR_1 = +23m.12s. and +24m.47s. =$SR_2 - 10$s. Batavia readings are given without phase. Berkeley eN = +16m.5s. =$PR_1 - 5$s., eZ = +16m.9s. and +25m.7s., eN = +38m.11s., MN = +44·3m. Tucson eN = +37m.0s. Zi-ka-wei iZ = +30m.4s. La Paz PS? = +25m.45s., i = +26m.56s. St. Louis eN = +20m.37s., e = +34m.12s., eE = +43m.12s., eN = +46m.52s., MN = +60·7m. Florissant eZ = +18m.16s. =$PR_1 - 18$s., eE = +25m.11s., eN = +25m.16s., eE = +25m.46s., e = +33m.41s. =SR_1 +23s., eN = +38m.12s. =$SR_2 - 6$s., eN = +46m.12s., MN = +55·2m. Chicago eN = +34m.27s. =SR_1 +29s. Ann Arbor eL?N = +63·4m. Rio de Janeiro eN = +25m.38s. Charlottesville MN = +65·2m. Toronto eE = +56m.22s. Ottawa eE = +30m.6s. =PS +6s., e = +36m.24s., eN = +52m.12s.?, LN = +67·2m. Tashkent $PR_1 = +21$m.56s., P_cP_cS = +22m.43s., PPS = +33m.11s., $SR_1 = +38$m.54s. Ekaterinburg iPR_1 =

Continued on next page.

+21m.56s., iPS = +32m.18s., SR_1 = +39m.18s. Baku P_cP_cS = +23m.37s., PR_2 = +25m.46s., $S_cP_cP_cS$ = +29m.56s., PPS = +35m.36s. Pulkovo PR_1 = +23m.15s., S_cP_cSP = +33m.18s., SR_1 = +41m.54s. Konigsberg eLN = +80·2m., MN = +82·2m. Copenhagen ePR_1EN = +24m.12s.? eS_cP_cSPN = +34m.21s., eSR_1E = +43m.24s., eSR_2N = +50m.12s.?, MN = +91·0m. De Bilt ePR_1Z = +24m.24s., eE = +44m.26s. = SR_1 + 15s., MZ = +98·4m., MN = +98·9m. Kew PR_1Z = +24m.29s., PPSN = +35m.12s., SR_2E = +44m.22s., eE = +60m.16s., LN = +77·2m. Uccle MN = +96·7m. Paris MN = +110·2m. Zagreb e = +90m.12s.? Granada i = +32m.15s.

Nov. 29d. 23h. 9m. 8s. Epicentre 29°·0S. 174°·0W. (as on 17h.).

A = −·870, B = −·091, C = −·485; D = −·105, E = +·995; G = +·482, H = +·051, K = −·875.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	12·9	326	—	—	5 40	− 2	i 7·6	12·9
	N.	12·9	326	—	—	i 5 46	+ 4	i 7·4	8·9
Apia		15·3	8	—	—	—	—	7·6	10·0
Wellington	E.	15·3	214	i 3 43	0	i 7 36	+57	i 9·2	11·8
	N.	15·3	214	i 4 28	+45	i 8 12	+93	i 9·8	13·7
Riverview		30·0	251	e 6 28	0	(e 11 34)	0	e 11·6	13·3
Sydney		30·0	251	—	—	9 46	−108	14·2	17·1
Melbourne		35·1	242	8 42	?PR_1	—	—	17·4	20·3
Adelaide		40·2	250	—	—	i 14 4	− 6	16·4	26·0
Perth		59·4	249	9 52?	−16	—	—	—	—
Tucson	N.	85·7	49	13 36	+44	18 4	?PR_2	20·8	—
Victoria	E.	89·7	30	24 51	?S	(24 51)	+40	46·6	48·8
	N.	89·7	30	24 43	?S	(24 43)	+32	47·3	—
St. Louis		103·2	53	i 15 40	+74	e 23 26	[−73]	e 52·9	55·9
Florissant		103·2	53	—	—	e 23 16	[−83]	—	56·9
Chicago	E.	106·4	51	—	—	25 34	? Σ	55·9	62·6
Rio de Janeiro		109·8	131	—	—	—	—	e 75·9	—
Toronto		112·3	50	—	—	e 29 2	?PS	61·9	—
Georgetown	Z.	112·8	56	—	—	e 30 6	?	e 57·3	66·0
Ottawa		115·7	49	—	—	e 28 34	+18	77·9	—
Bombay		118·8	277	e 18 52	[+ 3]	e 31 7	?	61·4	73·9
Tashkent		128·0	301	—	—	—	—	e 64·9	88·4
Ekaterinburg		133·0	322	e 19 52	[+27]	—	—	56·9	75·7
Scoresby Sund		133·0	12	—	—	—	—	74·9	—
Baku		142·5	300	20 12	[+28]	—	—	e 69·4	84·8
Kucino		144·9	329	—	—	—	—	e 56·5	—
Pulkovo		145·1	337	20 8	[+20]	—	—	76·9	88·1
Lund		152·8	351	—	—	—	—	80·9	—
Copenhagen		152·9	352	—	—	—	—	72·9	96·1
Stonyhurst		154·4	12	e 60 52?	?	—	—	e 80·9	94·9
De Bilt		156·9	1	e 20 43	[+38]	—	—	e 82·9	93·0
Kew		157·1	10	e 20 42	[+37]	—	—	82·9	89·9
Uccle		158·2	3	—	—	—	—	e 85·9	—
Paris		160·0	7	—	—	—	—	e 90·9	—
Strasbourg		160·4	357	—	—	—	—	76·9	—
Florence		164·6	346	—	—	—	—	e 89·0	102·9
Granada		168·6	42	—	—	—	—	81·9	97·9

Additional readings: Riverview eS? = +7m.3s., MN = +13·6m. Melbourne i = 22h.58m.12s. Adelaide MN = +24·8m. St. Louis iPE = +15m.41s., MN = +57·4m. Florissant e = +33m.41s. = SR_1 + 23s., eE = +36m.56s. and +40m.26s. Chicago eN = +24m.46s. = [S] − 8s., eE = +24m.52s. = [S] − 2s. and +41m.58s. = SR_2 − 14s., eN = +49m.34s. Georgetown eZ = +47m.10s. Ottawa e = +30m.16s. = PS + 16s. and +36m.52s., eE = +47m.52s.?, LN = +83·9m. Tashkent iPR_1 = +21m.29s., PS = +31m.34s. SR_1 = +38m.4s. Ekaterinburg ePR_1 = +22m.9s., iP_cP_cS = +23m.16s., iPS = +32m.32s., iPPS = +34m.9s., eSR_1 = +39m.34s. Baku P_cP_cS = +23m.50s., PPS = +35m.48s., SR_2 = +46m.40s. Pulkovo PR_1 = +23m.22s., PR_2 = +25m.44s., $S_cP_cP_cS$ = +29m.52s., PPS = +36m.32s. Copenhagen PR_1 = +24m.52s.?, SR_1 = +43m.52s.?, SR_2 = +50m.52s.?, MN = +99·5m. De Bilt MZ = +94·6m. Kew ePR_1Z = +24m.51s., SR_2E = +44m.40s., LN = +77·9m. Strasbourg e = +23m.52s.? Florence S = +96m.22s. Granada e = +12m.33s., i = +13m.1s.

Nov. 29d. Readings also at 0h. (La Paz), 4h. (Ekaterinburg and Tashkent), 8h. (near Taihoku), 11h. (near Barcelona (3)), 13h. (near Apia and Suva), 14h. (Georgetown, Ottawa, Toronto, St. Louis, Florissant, Wellington, Adelaide, Melbourne, Riverview, Sydney, Perth, and Honolulu T.H.), 15h. (De Bilt, Kew, and Rio de Janeiro), 22h. (Riverview and Suva), 23h. (Adelaide).

Nov. 30d. Readings at 0h. (La Paz), 2h. (Cincinnati), 3h. (Besançon and Manila), 5h. (Ekaterinburg, Tashkent, and near Barcelona), 8h. (Baku, Ekaterinburg, Batavia, and Tananarive), 16h. (Almata, Frunse, and near Toyooka), 17h. (La Paz), 22h. (Baku, Ekaterinburg, and Tashkent).

Dec. 1d. 4h. 6m. 8s. Epicentre 34°·0S. 73°·0W.

(as on 1926 Dec. 3d.).

A = +·242, B = −·793, C = −·559; D = −·956, E = −·292; G = −·163, H = +·535, K = −·829.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		2·0	74	(0 32)	+ 1	—	—	0·5	—
La Plata		12·5	98	2 48	−18	5 7	−25	6·1	—
Sucre		16·5	27	i 4 1	+ 2	? 7 19	+12	—	—
La Paz	E.	18·0	15	i 4 28	+11	i 8 3	+23	—	—
	N.	18·0	15	i 4 23	+ 6	i 7 58	+18	9·7	10·7
Rio de Janeiro	N.	28·4	75	i 5 52	−20	11 12	+ 6	—	20·2
Balboa Hts.	E.	43·4	351	8 25	+ 4	14 53	− 1	18·2	18·9
	N.	43·4	351	8 13	− 8	14 47	− 7	18·2	19·1
Port au Prince		52·5	1	e 9 23	0	e 16 40	−10	e 21·1	30·6
Merida		57·2	343	(9 34)	−19	(17 25)	−24	(25·8)	(29·6)
Vera Cruz		57·6	335	(9 24)	−32	(17 31)	−23	(24·2)	(29·2)
Tacubaya		58·9	331	10 13	+ 9	18 26	+16	28·0	29·2
Guadalajara		61·9	329	10 13	−11	18 17	−30	27·3	30·5
Mazatlan		65·4	328	(10 56)	+ 9	(19 47)	+17	(29·8)	(33·5)
Chihuahua		70·0	330	(11 30)	+13	(20 43)	+17	(32·5)	(37·0)
Charlottesville	E.	72·2	355	e 11 40	+ 9	i 20 52?	0	29·7	43·3
	N.	72·2	355	e 12 24	+53	i 22 0	+68	29·9	48·9
Cape Town		72·9	121	11 24	−11	21 4	+ 3	33·4	38·1
Georgetown	E.	73·0	358	e 11 48	+12	21 14	+12	e 32·2	41·0
	N.	73·0	358	11 41	+ 5	21 14	+12	e 33·0	46·4
	Z.	73·0	358	i 11 39	+ 3	i 21 13	+11	—	—
Cincinnati		73·9	355	i 11 45	+ 4	e 21 15	+ 2	37·2	39·9
St. Louis		74·3	347	i 11 40	− 4	i 21 14	− 4	—	—
Florissant		74·5	347	i 11 39	− 7	e 21 9	−11	—	—
Tucson	E.	75·2	329	i 11 54	+ 4	i 21 28	0	e 36·8	39·6
	N.	75·2	329	—	—	i 21 34	+ 6	e 42·8	63·3
Harvard		76·4	2	i 11 55	− 2	i 21 43	+ 1	—	—
Ithaca		76·5	358	e 12 27	+29	e 22 4	+21	32·9	49·0
Chicago	E.	76·9	350	i 11 59	− 1	i 21 42	− 6	e 35·2	49·1
	N.	76·9	350	i 12 2	+ 2	i 21 53	+ 5	35·7	46·3
Ann Arbor		76·9	354	i 12 4	+ 4	i 21 52	+ 4	37·9	49·2
Toronto	E.	77·7	355	e 12 5	0	i 21 50	− 7	33·9	52·1
	N.	77·7	355	i 11 58	− 7	i 21 55	− 2	33·9	49·5
Ottawa		79·4	359	i 12 10	− 5	i 22 19	+ 3	e 38·5	43·9
Denver	E.	79·4	336	e 12 17	+ 2	i 22 22	+ 6	e 37·2	42·0
	N.	79·4	336	e 12 19	+ 4	i 22 23	+ 7	—	—
Christchurch		82·1	223	12 38	+ 7	22 52	+ 5	37·6	47·1
Wellington	E.	82·3	225	i 12 24	− 8	i 22 35	−14	37·6	38·7
	N.	82·3	225	i 12 27	− 5	i 22 30	−19	38·0	38·8
Johannesburg		84·0	119	11 46	−56	—	—	—	—
Lick		84·5	324	e 12 39	− 6	i 23 24	+10	e 41·2	43·5
Berkeley	E.	85·2	324	e 12 48	− 1	e 23 20	− 1	e 38·7	—
	N.	85·2	324	e 12 46	− 3	i 23 16	− 5	e 38·7	44·0
	Z.	85·2	324	e 12 44	− 5	—	—	—	—
Apia		89·3	256	13 24	+12	23 56	−10	41·4	43·9
Saskatoon		91·0	341	e 13 14	− 7	i 24 1	−23	e 43·9	49·3
Victoria		93·8	330	13 35	− 2	24 11	[+20]	47·2	52·2
San Fernando		93·9	48	i 13 27	−10	23 2	[−49]	40·4	64·0
Suva		94·4	245	12 34	−66	i 23 16	[−38]	42·9	53·4

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Malaga	95·2	50	13 27	−17	24 7	[+ 9]	32·9	57·2
Granada	96·1	50	i 13 30	−20	—	—	e 41·7	55·2
Almeria	96·7	50	13 33	−20	23 52	[−14]	32·7	54·9
Toledo	97·5	47	e 13 36	−21	24 10	[0]	e 39·1	53·0
Honolulu T.H. E.	97·6	291	—	—	i 24 17	[+ 6]	i 45·7	48·2
Alicante	98·7	50	e 13 44	−20	e 24 31	[+14]	e 41·4	58·8
Melbourne	100·0	210	i 13 55	−16	25 14	? Σ	48·5	52·8
Algiers	100·1	53	e 13 49	−22	25 27	−30	41·9	56·4
Riverview	100·5	217	e 14 5	− 8	i 24 25	[− 1]	e 46·0	50·6
Sydney E.	100·5	217	12 16	?	24 22	[− 4]	49·9	54·8
Tortosa E.	100·8	48	14 1	−13	27 6	?PS	46·9	57·8
N.	100·8	48	13 59	−15	25 56	− 7	47·1	61·1
Bagnères	102·0	46	e 14 9	−11	24 58	[+24]	35·9	62·9
Barcelona	102·2	49	e 14 33	+12	24 53	[+18]	43·1	55·4
Tananarive	102·6	125	14 9	−14	—	—	e 52·2	53·9
Entebbe	102·8	97	e 13 55	−29	24 52	[+15]	48·9	61·4
Adelaide	105·0	207	—	—	e 24 44	[− 3]	i 49·4	64·3
Sitka	105·1	331	—	—	e 25 12	[+24]	47·4	69·9
Marseilles	105·2	47	e 14 12	−23	—	—	43·9	61·8
Puy de Dôme	105·3	44	e 14 24	−12	24 52	[+ 3]	43·9	—
Reykjavik	106·0	20	—	—	e 28 16	?PS	50·6	57·9
Bidston	106·2	36	14 29	−11	18 43	?PR$_1$	48·3	62·9
Kew	106·5	38	e 14 16	−26	e 26 22	−35	53·8	55·1
Paris	106·5	41	e 14 17	−25	e 25 12	[+18]	43·9	58·9
Stonyhurst	106·8	36	14 28	−15	25 4	[+ 8]	48·9	62·2
Moncalieri	107·5	46	e 14 26	−20	25 56	? Σ	45·0	—
Edinburgh	107·6	34	14 30	−16	25 22	[+23]	45·9	64·4
Neuchatel	108·1	45	e 14 23	−26	i 25 24	[+22]	—	—
Uccle	108·6	41	e 14 23	−28	i 25 15	[+11]	e 53·9	63·3
Dyce	108·8	33	e 14 36	−16	e 25 24	[+19]	44·9	63·9
Rocca di Papa	109·0	51	i 14 29	−24	e 28 14	?PS	55·5	—
Florence	109·1	50	i 14 24	−29	—	—	51·4	57·9
Zurich	109·2	45	e 18 10	[−10]	e 28 35	?PS	—	—
Strasbourg	109·3	44	14 26	−28	24 33	[−34]	49·9	63·9
Chur	109·5	45	e 14 26	−29	—	—	—	—
Naples Z.	109·6	54	e 17 52	[−29]	—	—	—	67·9
De Bilt	109·7	41	14 30	−26	e 28 42	?PS	e 53·9	63·4
Pompeii	109·8	54	e 14 52	− 4	e 28 52	?PS	58·9	66·9
Ravensburg	110·1	44	e 14 28	−30	25 20	[+10]	e 54·9	63·8
Hohenheim	110·3	43	e 14 41	−18	25 20	[+ 9]	e 51·9	63·0
Feldberg	110·6	42	e 14 57	− 3	—	—	e 57·3	63·8
Scoresby Sund	110·6	16	14 52	− 8	28 56	?PS	47·9	—
Venice	110·6	49	e 14 42	−18	e 26 42	? Σ	56·8	59·7
Innsbruck	110·9	46	e 18 22	[− 3]	28 46	?PS	52·2	63·9
Jena	112·6	42	e 15 28	+19	—	—	e 55·7	63·9
Hamburg	112·9	40	e 14 49	−22	e 25 27	[+ 5]	e 54·9	64·9
Zagreb	113·0	49	e 14 39	−32	—	—	e 48·2	65·1
Graz	113·3	47	e 18 1	[−31]	? 29 11	?PS	48·9	67·6
Perth	113·6	188	e 19 32	?PR$_1$	i 29 12	?PS	53·9	66·4
Bergen	113·8	32	e 13 52?	?	i 27 12	−48	48·9	68·9
Potsdam	114·1	42	i 19 39	?PR$_1$	i 25 45	[+19]	e 55·1	63·9
Vienna	114·3	46	19 4	[+29]	29 45	?PS	i 49·4	71·4
Belgrade E.	115·4	51	e 14 23	−59	e 27 28	?	e 56·4	66·6
Lund	115·5	39	18 52	[+13]	27 40	−34	—	—
Budapest	115·6	48	e 18 22	[−18]	29 26	?PS	48·9	67·4
Konigsberg	119·1	41	—	—	e 25 1	[−42]	e 58·9	—
Upsala E.	119·2	35	—	—	—	—	e 58·9	70·2
Lemberg E.	119·5	47	e 20 16	?PR$_1$	e 30 28	?PS	e 49·9	67·7
N.	119·5	47	e 19 16	[+25]	e 30 32	?PS	e 50·6	74·6
Ksara	122·3	69	e 19 20	[+21]	—	—	59·2	71·2
Helsingfors	122·9	35	—	—	27 45	? Σ	51·4	—
Sebastopol	124·1	55	19 30	[+27]	—	—	—	74·0
Yalta	124·5	55	e 19 24	[+19]	—	—	—	78·8
Simferopol	124·6	55	e 19 8	[+ 3]	—	—	—	72·5
Pulkovo	125·3	36	i 19 3	[− 4]	26 11	[+11]	48·9	67·2
Theodosia	125·5	55	e 19 14	[+ 7]	(37 58)	?SR$_1$	38·0	77·8
Kucino	129·0	42	e 19 10	[− 6]	—	—	54·9	71·4
Baku	135·0	65	e 19 19	[−11]	—	—	—	—
Malabar	138·8	180	e 19 30	[− 8]	i 22 24	?PR$_1$	67·9	—
Batavia	139·8	179	i 19 29	[−10]	—	—	e 56·9	59·9
Ekaterinburg	141·4	39	i 19 25	[−17]	—	—	—	76·9
Colombo	143·1	131	19 30	[−15]	41 10	?SR$_1$	64·9	86·9
Kodaikanal	144·0	124	19 58	[+11]	—	—	70·9	91·1
Bombay	146·2	106	19 41	[− 9]	33 24	?	73·2	78·6

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent		149·5	65	e 18 27	[−88]	—	—	—	—
Hyderabad		149·6	116	19 20	[−35]	33 12	?	66·4	86·7
Ootomari		150·3	306	20 0	[+ 4]	33 40	?	43·1	105·5
Mizusawa	E.	152·3	291	20 6	[+ 7]	33 14	?	—	—
Frunse		153·3	61	20 4	[+ 4]	—	—	—	—
Almata		155·0	59	e 20 7	[+ 5]	—	—	—	—
Dehra Dun		155·3	90	20 8	[+ 6]	—	—	56·0	92·1
Nagoya		155·4	281	e 20 31	[+29]	e 45 23	?SR_1	72·4	—
Osaka		156·5	280	18 27	[−97]	33 11	?	74·0	94·5
Manila		156·8	216	e 20 2	[− 3]	—	—	73·6	122·9
Kobe		156·8	280	e 19 59	[− 6]	e 33 6	?	e 73·0	81·4
Sumoto		157·0	279	e 20 8	[+ 3]	e 31 10	?PR_2	e 44·6	—
Toyooka		157·1	282	e 20 17	[+12]	—	—	74·2	—
Calcutta	E.	160·0	120	20 3	[− 5]	35 3	?	88·0	105·6
	N.	160·0	120	20 17	[+ 9]	34 47	?	80·8	110·0
Hukuoka		160·6	275	e 20 16	[+ 7]	35 35	?	e 74·8	98·6
Nagasaki		160·9	273	20 8	[− 1]	31 17	?	45·7	104·8
Irkutsk		161·6	5	20 2	[− 7]	—	—	82·9	99·7
Taihoku	N.	164·5	238	21 36	?	45 46	?SR_1	77·7	118·0
Hong Kong		166·7	210	20 15	[+ 2]	e 45 39	?SR_1	e 63·9	114·7
Phu-Lien		166·8	179	e 19 58	[−15]	—	—	69·9	94·4
Zi-ka-wei		167·5	261	20 18	[+ 4]	27 12	?	53·5	84·9

Additional readings and notes: Sucre i = +4m.18s.: epicentre 34°·7S. 74°·5W. La Paz iN = +4m.33s., iE = +4m.59s., iN = +8m.13s., and +9m.25s.: epicentre given as for Sucre. Port au Prince i = +10m.19s. Merida readings have *diminished* by 3m. Vera Cruz readings have been *increased* by 1m. Chihuahua and Mazatlan readings have been *diminished* by 1m. Charlottesville iPN = +12m.39s., eN = +15m.22s., iE = +25m.24s. SR_1N = +26m.36s. Georgetown PR_1Z = +14m.53s., PR_1N = +15m.6s. PR_1E = +15m.8s., PR_2E = +16m.27s., PR_2N = +16m.28s., PR_2Z = +16m.34s. PR_3E = +17m.4s., PR_3Z = +17m.5s., PSN = +21m.53s. Cincinnati iP_cPN = +12m.16s., e = +12m.19s., iN = +12m.31s., and +14m.44s., iPR_1N = +14m.49s., PR_2 = +15m.59s., PR_3 = +17m.1s., iPS? = +21m.21s., i = +21m.35s., S_cS = +21m.57s., i = +25m.29s., SR_1E = +25m.55s., eP_cSS_cPE = +27m.39s., SR_2E = +30m.9s., LN = +33·4m. Florissant iPEN = +11m.40s., iPR_1NZ = +11m.42s., iSE = +21m.15s., iSR_1EN = +26m.22s. Tucson iPR_1N = +14m.49s., iN = +23m.37s., eSR_1N = +26m.43s., eSR_2N = +29m.30s., eE = +29m.57s. Chicago iPR_1N = +14m.36s., iPR_2E = +16m.57s., iPR_2N = +17m.0s., iN = +26m.17s., and +32m.29s. = SR_3 + 3s. Ann Arbor eN = +15m.10s. = PR_1 − 13s., iSR_1 = +27m.52s., eSR_2 = +30m.58s., MN = +44·5m.; T_0 = 4h.6m.18s. Toronto eE = +12m.9s., iE = +22m.0s. = [S] − 8s.: T_0 = 4h.6m.7s. Ottawa iPR_1N = +15m.30s., iPR_2N = +17m.25s., iSR_2E = +31m.32s., eSR_2? = +34m.0s., MN = +48·3m.: T_0 = 4h.6m.6s. Denver iPSE = +23m.2s., eE = +26m.54s., eP_cSS_cPE = +27m.36s., eSR_1E = +27m.46s., eE = +29m.30s., +31m.9s., and +34m.1s. Christchurch PR_1 = +15m.52s. Wellington SR_1E = +28m.4s., SR_2E = +34m.9s., SR_3N = +34m.29s.; T_0E = 4h.6m.6s., T_0N = 4h.6m.18s. Lick ePZ = +12m.44s., iE = +12m.52s., eE = +17m.38s., eSE = +22m.48s. = [S] − 5s., iE = +23m.45s. = PS − 15s., +24m.44s., and +29m.4s. = SR_3 − 13s. Berkeley iZ = +12m.53s., eN = +12m.54s., iN = +13m.42s., eN = +18m.26s. = PR_2 − 10s., iN = +23m.40s., iE = +23m.48s., iN = +24m.6s., eZ = +24m.32s., iE = +24m.34s., iZ = +25m.14s., iE = +25m.22s., and +29m.8s. = SR_1 − 18s., eN = +32m.42s. Apia e = +15m.57s., MZ = +45·9m., MN = +55·9m.; T_0 = 4h.6m.44s. Saskatoon eSN = +23m.43s. = [S] + 9s., eSR_1N = +30m.4s., MN = +52·2m.; T_0 = 4h.6m.32s. Victoria PE = +13m.36s., MN = +51·2m.: T_0N = 4h.7m.5s., T_0E = 4h.7m.7s. San Fernando SR_2 = +33m.27s., MN = +58·4m. Suva iPN = +12m.40s., PR_1E = +16m.22s., iPR_1N = +17m.28s. SR_1N = +29m.10s., SR_2N = +34m.4s., MN = +55·9m.; T_0E = 4h.5m.42s., T_0N = 4h.6m.12s. Malaga MN = +56·4m. Granada i = +15m.35s., PR_1 = +17m.35s., i = +26m.53s., MN = +54·4m. Almeria MN = +55·4m., MZ = +55·6m. Toledo i = +13m.45s., iNW = +17m.33s., and +18m.39s., iNE = +24m.38s., MNW = +52·8m. Honolulu T.H., SR_1E = +31m.22s., eLqE = +42·1m. Alicante MN = +56·8m. Melbourne PR_1 = +17m.20s., P′ = +17m.59s., PR_2 = +21m.0s., iS_cP_cS = +24m.32s. = [S] + 8s., SR_1 = +32m.14s., SR_2 = +37m.22s. Algiers PR_1 = +17m.59s., MN = +58·4m. Riverview 1 = +25m.40s., eSR_1 = +31m.8s., eSR_2 = +36m.6s., eSR_3 = +38m.58s., e = +41m.58s., MN = +51·0m. Sydney SR_1E = +32m.22s., SR_2E = +38m.28s. Bagnères ePR_1 = +18m.21s., PS = +28m.32s. Barcelona PR_1 = +18m.27s., ? = +27m.31s. = PS + 2s., MN = +59·6m. Tananarive P′ = +18m.6s., SR_1 = +33m.0s., e = +36m.18s., and +37m.48s. = SR_2 − 21s., SR_2 = +41m.50s. = SR_3 − 10s., e = +48m.12s.

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Entebbe $PR_1 = +18m.27s.$ Adelaide i = +18m.2s. =[P] − 3s., i = +24m.56s., $iSR_1 = +33m.42s.$, i = +44m.7s., MN = +54·9m. Sitka iPSE = +27m.48s., ePSN = +27m.52s.?, $iSR_1E = +34m.10s.$, $iSR_1N = +34m.12s.$, $iSR_2N = +38m.27s.$, $eSR_2E = +38m.35s.$, eLN = +47·5m., MN = +63·6m. Marseilles $ePR_1 = +18m.51s.$, PS? = +28m.10s. Puy de Dôme $ePR_1 = +18m.32s.$, PS = +28m.16s. Reykjavik e = +33m.26s. and +34m.1s. Kew iP = +14m.27s., eP′ = +17m.57s., $PR_1 = +18m.50s.$, $S_cP_cSE = +25m.0s.$ =[S] + 6s., iPS = +28m.11s., iPPSZ = +29m.8s., $SR_1 = +33m.57s.$, $SR_2N = +37m.58s.$, eEN = +49m.46s., MNZ = +58·9m. Paris e = +18m.46s. $=PR_1 - 9s.$ Stonyhurst $PR_1 = +18m.49s.$, $PR_2 = +21m.21s.$, PS = +28m.11s., PPS = +29m.19s., $SR_1 = +34m.31s.$, $PR_2'? = +38m.5s.$, $PR_3'? = +42m.41s.$ Edinburgh i = +28m.18s. =PS − 12s. Neuchatel eP′ = +18m.7s., $ePR_1 = +19m.10s.$ Uccle $iPR_1 = +18m.58s.$, iPSE = +28m.30s., MN = +60·2m., MZ = +63·5m. Dyce e = +19m.6s. = $PR_1 - 4s.$ Rocca di Papa eZ = +14m.2s., $PR_1Z = +19m.6s.$, i = +19m.32s., iSE = +28m.32s. =PS − 15s. Florence P′ = +18m.12s., $PR_1 = +19m.7s.$, $PR_2 = +21m.22s.$, $PR_3 = +23m.37s.$, PS = +28m.22s., PPS = +30m.2s., $SR_1 = +34m.22s.$, $SR_2 = +39m.22s.$, $SR_3 = +41m.52s.$; readings have all been *diminished* by 1h. Strasbourg $PR_1 = +18m.33s.$, $ePR_2 = +21m.52s.$, $ePR_3 = +24m.2s.$, PS = +28m.36s., MZ = +57·0m., MN = +61·9m. Chur $iPR_1 = +19m.22s.$ De Bilt MZ = +63·6m., MN = +64·6m. Ravensburg eP′ = +18m.2s., $PR_1 = +19m.28s.$, $PR_2 = +21m.58s.$, PS = +28m.44s., PSS = +35m.12s., MN = +64·2m. Hohenheim $PR_1 = +19m.20s.$, $PR_2 = +21m.58s.$, PS = +28m.44s., $SR_1 = +34m.32s.$, $SR_2 = +38m.12s.$, MN = +61·4m. Feldberg eP′N = +18m.9s. and +18m.16s., eP′E = +18m.13s., $PR_1N = +19m.47s.$, $ePR_2E = +21m.43s.$, ePSE = +28m.46s., ePSN = +29m.12s., $eSR_2N = +39m.13s.$, eLN = +56·5m., MN = +63·5m. Scoresby Sund +19m.27s. $=PR_1 + 5s.$ Innsbruck iNE = +19m.34s. $=PR_1 + 9s.$, P′ = +22m.4s. $=PR_2 - 25s.$, $PR_3 = +25m.10s.$ =[S] − 4s., $S_cP_cP_cS?NW = +29m.40s.$, $PS?NW = +31m.58s.$, $P_cP_cP_cP = +34m.46s.$ $=SR_1 - 8s.$, $SR_1?NW = +38m.52s.?$, MNW = +69·0m. Jena eP′Z = +18m.4s., eZ = +19m.16s., eN = +19m.18s., eE = +19m.22s., $iPR_1Z = +19m.32s.$, $iPR_1E = +19m.33s.$, iE = +25m.37s., iZ = +25m.39s., eN = +27m.18s., eEN = +29m.0s., eZ = +29m.4s., and +32m.52s., eE = +33m.9s., eN = +34m.14s. and +35m.11s., eE = +35m.18s., eZ = +32m.52s., +35m.52s., and +37m.22s., eE = +38m.15s., eN = +38m.18s., and +39m.1s., eLN = +55·9m., MN = +66·9m., Hamburg eP′Z = +18m.11s., $iPR_1Z = +19m.31s.$, $iPR_1E = +19m.34s.$, iPSE = +29m.12s., $iSR_1N = +35m.10s.$, $eSR_2N = +38m.58s.$ Zagreb P′ = +17m.24s., $PR_1 = +19m.28s.$, $PR_2 = +22m.9s.$, $PR_3 = +25m.43s.$, $PR_4 = +27m.9s.$, iPS = +29m.13s., PPS = +30m.21s., $iSR_1 = +36m.9s.$, $eSR_2NW = +39m.29s.$, MNW = +67·2m. Graz PS = +31m.13s., $SR_1 = +35m.55s.$ Bergen $iPR_1 = +19m.47s.$ Potsdam iN = +19m.53s., iE = +29m.26s. =PS − 17s., MN = +59·9m. Vienna iPE = +19m.42s., iE = +22m.33s., P′ = +22m.49s., $PR_1 = +24m.29s.$, iN = +25m.49s., iE = +25m.56s., $PR_2 = +27m.7s.$, iN = +27m.45s., iEN = +29m.25s., S? = +30m.45s., iN = +31m.21s., PS = +33m.41s., iN = +35m.52s., +36m.42s., and +38m.25s., $SR_1 = +39m.49s.$ Belgrade iE = +20m.1s., +20m.39s., and +30m.24s., eLN = +57·1m., MN = +75·5m. Lund $PR_1 = +19m.52s.$, $S_cP_cS = +25m.40s.$, $S_cP_cP_cS? = +27m.4s.$, PS = +29m.40s., PPS = +30m.40s., $SR_1 = +35m.52s.$ Konigsberg $iPR_1N = +20m.15s.$, $iPR_1Z = +20m.16s.$, eE = +20m.52s., iN = +20m.55s., iZ = +22m.8s., $PR_2N = +23m.15s.$, iE = +24m.2s., iZ = +27m.52s., iE = +28m.30s. =S − 13s., iPSN = +30m.17s., iPSE = +30m.23s. Upsala $ePR_1 = +20m.18s.$, iPS = +30m.7s., $iSR_1N = +36m.57s.$, MN = +71·9m. Ksara $PR_4 = +27m.51s.$ = Σ + 24s., PSE = +32m.44s.. $SR_1E = +37m.48s.$; $T_0 = 4h.6m.15s.$ Helsingfors $PR_1? = +20m.41s.$, $S_cP_cS? = +26m.12s.$ Pulkovo iP = +15m.49s., $iPR_1 = +20m.57s.$ Kucino eP = +16m.7s., $iPR_1 = +21m.17s.$, PS = +31m.28s. Baku eP = +16m.33s., $iPR_1 = +22m.5s.$ Batavia i = +19m.32s., iN = +21m.59s., iZ = +22m,35s. = $PR_1 + 3s.$, i = +40m.54s. $=SR_1 + 4s.$, MN = +73.5m. Ekaterinburg eP = +17m.7s., $iPR_1 = +22m.32s.$, PS = +32m.56s. Tashkent iP = +20m.46s., $PR_1 = +23m.41s.$, $eSR_1 = +42m.52s.$ Hyderabad $PR_1 = +23m.50s.$, $PR_2 = +26m.29s.$, $PR_3 = +27m.28s.$ $=PR_2 + 10s.$, $PR_4 = +29m.44s.$ Osaka MN = +108·5m. Manila $PR_1E = +24m.28s.$, $PR_2E = +27m.51s.$, $PR_3E = +30m.45s.?$, $S_cP_cP_cS = +30m.57s.?$, $PR_4E = +32m.39s.$, $PR_5' = +34m.16s.$, PPS = +37m.51s., PPPS = +39m.6s., $SR_1 = +49m.59s.$, e = +68m.52s. Kobe ePN = +20m.9s., e = +45m.14s., MZ = +80·3m., MN = +117·9m. Toyooka LN = +75·2m. Hukuoka $SR_1 = +45m.54s.$, MN = +117·1m. Nagasaki MN = +116·0m. Irkutsk $PR_1 = +24m.46s.$, $PR_2 = +28m.56s.$, $S_cP_cSP = +35m.6s.$, $SR_1 = +38m.16s.$ Taihoku $PR_1N = +29m.57s.$, $PR_2N = +36m.34s.$, ME = +126·3m. Phu-Lien $eSR_1? = +45m.28s.$, MN = +86·6m. Zi-ka-wei $P_cPZ = +20m.8s.$, eE = +21m.20s., iP′Z = +21m.46s., $P_cP_cSZ = +23m.16s.$, $PR_1Z = +25m.16s.$, $PR_2Z = +30m.18s.$, iE = +32m.14s., $S_cP_cP_cSZ = +32m.20s.$, iE = +33m.56s., $PS_cP_cPZ = +35m.52s.$, iZ = +37m.38s., +39m.4s., +40m.36s., +42m.0s., and +44m.8s. $SR_1Z = +47m.40s.$, PSSZ = +48m.26s., LZ = +56·5m., LN = +70·3m., MN = +83·6m., MZ = +85·6m.

Dec. 1d. 9h. 19m. 30s. Epicentre 34°·0S. 73°·0W. (as at 4h.).

$A = +\cdot242$, $B = -\cdot793$, $C = -\cdot559$; $D = -\cdot956$, $E = -\cdot292$; $G = -\cdot163$, $H = +\cdot535$, $K = -\cdot829$.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Plata		12·5	98	2 47	−19	5 7	−25	6·3	—
La Paz	E.	18·0	15	4 31	+14	8 9	+29	10·2	12·7
	N.	18·0	15	i 4 26	+ 9	i 8 6	+26	10·0	13·5
Rio de Janeiro	N.	28·4	75	e 5 50	−22	10 50	−16	14·2	—
Georgetown	Z.	73·0	358	11 34	− 2	21 42	[+ 8]	45·0	—
Florissant		74·5	347	i 11 35	−11	i 21 12	− 8	—	
Ottawa	N.	79·4	359	—	—	—	—	45·5	—
Granada		96·1	50	i 17 16	?PR_1	—	—	e 47·5	58·5
Oxford		106·1	38	—	—	—	—	—	61·5
Kew		106·5	38	—	—	—	—	e 53·5	60·5
Edinburgh		107·6	34	—	—	—	—	e 61·5	—
Uccle		108·6	41	—	—	—	—	e 56·5	—
Rocca di Papa		109·0	51	—	—	—	—	e 44·2	46·7
Florence		109·1	50	—	—	28 30	?PS	—	57·5
De Bilt		109·7	41	—	—	—	—	e 54·5	63·3
Copenhagen		115·1	39	—	—	—	—	40·5	—
Lund		115·5	39	—	—	—	—	64·5	—
Pulkovo		125·3	36	—	—	e 38 58	?	69·5	81·3
Kucino		129·0	42	—	—	—	—	e 62·6	73·4
Baku		135·0	65	—	—	—	—	e 69·5	—
Ekaterinburg		141·4	39	e 19 24	[−18]	—	—	61·5	81·3
Tashkent		149·5	65	i 19 43	[−12]	i 23 20	?PR_1	72·5	92·0
Frunse		153·3	61	e 20 6	[+ 6]	—	—	—	—
Irkutsk		161·6	5	i 24 32	?PR_1	—	—	85·0	—

Additional readings: Georgetown eZ = +17m.8s. = PR_2 − 12s. Ottawa LE = +55·5m. De Bilt MN = +65·0m. Ekaterinburg e = +22m.35s. = PR_1 − 7s. and +41m.20s. = SR_1 + 12s.

Dec. 1d. 18h. 32m. 25s. Epicentre 34°·0S. 73°·0W. (as at 9h.).

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		2·0	74	0 39	+ 8	0 53	− 2	1·2	—
La Plata		12·5	98	2 46	−20	5 0	−32	5·8	—
Sucre		16·5	27	i 3 59	0	i 7 24	+17	9·3	12·0
La Paz		18·0	15	i 4 21	+ 4	i 8 2	+22	10·3	13·5
Rio de Janeiro	N.	28·4	75	e 5 55	−17	10 35	−31	13·1	17·9
Georgetown	Z.	73·0	358	i 11 35	− 1	21 3	+ 1	e 34·8	—
St. Louis	N.	74·3	347	i 11 42	− 2	e 21 21	+ 3	—	—
Florissant		74·5	347	i 11 42	− 4	i 21 20	0	—	—
Tucson		75·2	329	e 11 47	− 3	—	—	—	—
Chicago	E.	76·9	350	—	—	e 21 41	− 7	e 53·3	—
	N.	76·9	350	—	—	e 21 47	− 1	e 52·3	—
Toronto	E.	77·7	355	e 12 5	0	e 21 55	− 2	54·1	—
Ottawa		79·4	359	i 12 9	− 6	e 22 12	− 4	e 39·6	—
Victoria	E.	93·8	330	—	—	—	—	52·2	61·2
Granada		96·1	50	i 13 27	−23	—	—	46·6	53·2
Oxford		106·1	38	—	—	—	—	—	62·6
Kew		106·5	38	—	—	—	—	e 54·6	60·6
Stonyhurst		106·8	36	—	—	—	—	e 59·6	—
Uccle		108·6	41	—	—	—	—	e 56·6	—
Rocca di Papa		109·0	51	—	—	—	—	e 31·8	71·8
Florence		109·1	50	(17 35)	?	—	—	17·6	57·6
Strasbourg		109·3	44	(18 35?)	?	—	—	18·6	—
De Bilt		109·7	41	—	—	—	—	e 53·6	63·4
Copenhagen		115·1	39	—	—	e 26 35	? Σ	60·6	68·1
Lund		115·5	39	—	—	—	—	63·6	—
Pulkovo		125·3	36	e 19 25	[+19]	—	—	62·6	73·2
Baku		135·0	65	e 19 0	[−30]	—	—	64·0	82·7
Ekaterinburg		141·4	39	i 19 32	[−10]	—	—	60·6	81·9
Bombay		146·2	106	e 20 1	[+11]	—	—	—	—
Tashkent		149·5	65	i 19 44	[−11]	—	—	e 68·6	95·4
Frunse		153·3	61	e 19 53	[− 7]	—	—	—	—
Irkutsk		161·6	5	i 19 59	[−10]	—	—	83·6	—

For Notes see next page.

NOTES TO DEC. 1d. 18h. 32m. 25s.

Additional readings: La Paz iSN = +8m.5s., i = +8m.19s.; epicentre 35°·7S. 73°·2W. Georgetown PSZ = +21m.43s. St. Louis iSN? = +20m.34s. Florissant iE = +22m.18s. Chicago eE? = +37m.17s. Toronto iPN = +12m.3s. Granada i = +17m.19s., iE = +23m.59s. = [S] − 4s. and +26m.12s. = PS − 8s. Copenhagen e = +29m.29s. = PS − 24s. Pulkovo PR_1 = +21m.8s., PS = +31m.5s. Baku eP_cP_cS = +22m.53s., PPS = +34m.11s. Ekaterinburg iPR_1 = +22m.34s., $S_cP_cP_cS$ = +29m.29s., PS = +32m.47s., SR_1 = +41m.5s. Tashkent iPR_1 = +23m.24s., $S_cP_cP_cS$ = +30m.10s. Irkutsk P_cP_cS = +24m.35s., $S_cP_cP_cS$ = +31m.15s.

Dec. 1d. Readings also at 3h. (near Sumoto and near Tacubaya), 4h. (Santiago (2)), 5h. (La Plata and Santiago), 6h. (Christchurch, Entebbe, La Plata (2), Santiago (2), and near Toyooka), 7h. 8h. and 9h. (2) (Santiago), 10h. (Toronto), 12h. (Santiago and near Oaxaca), 13h. (Strasbourg and San Fernando), 14h. (Baku, Ekaterinburg, and Tashkent), 16h. (Santiago, Sucre, and La Paz (2)), 17h. (near Matuyama), 19h. (Santiago, Baku, Ekaterinburg, and near Port au Prince), 20h. (Santiago, La Plata, and near La Paz (2)), 22h. (near Neuchatel and near Matuyama), 23h. (Granada, La Plata, La Paz, and Santiago).

Dec. 2d. 4h. 20m. 16s. Epicentre 35°·0S. 72°·5W.

A = +·246, B = −·781, C = −·574; D = −·954, E = −·301; G = −·172, H = +·547, K = −·819.

Epicentre deduced by comparison with that of Dec. 1d.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		2·2	44	0 52	+18	—	—	1·4	—
La Plata		12·0	94	2 59	0	5 19	0	6·3	—
Sucre		17·3	24	i 4 13	+ 4	i 7 39	+14	9·4	10·9
La Paz	E.	18·9	13	—	—	i 8 20	+20	10·0	13·0
	N.	18·9	13	i 4 38	+10	i 8 18	+18	10·0	14·0
Rio de Janeiro	N.	28·3	73	i 6 4	− 7	i 10 59	− 5	15·2	18·1
Balboa Hts.	N.	44·5	350	8 24	− 6	14 56	−13	18·2	18·5
Tacubaya		60·0	331	10 23	+11	18 34	+11	27·8	30·1
Cape Town		72·0	120	11 34	+ 4	21 0	+10	34·7	37·5
Charlottesville	E.	73·3	356	—	—	21 6	0	e 29·7	33·7
	N.	73·3	356	e 11 38	0	21 4	− 2	e 30·0	48·9
Georgetown	Z.	74·0	357	i 11 44	+ 2	21 8	− 6	e 34·4	48·1
Cincinnati		75·0	351	i 11 54	+ 5	i 20 24	−62	33·9	39·7
St. Louis		75·4	347	e 11 50	− 1	i 21 27	− 3	—	39·2
Florissant		75·7	347	e 11 49	− 4	i 21 29	− 5	42·2	—
Tucson	E.	76·3	329	12 4	+ 7	i 21 46	+ 5	e 37·6	—
	N.	76·3	329	i 12 2	+ 5	i 21 42	+ 1	e 37·1	70·3
Harvard		77·4	1	i 12 2	− 1	i 21 55	+ 2	—	—
Ithaca		77·6	358	—	—	e 22 14	+18	35·7	—
Ann Arbor	E.	78·0	354	—	—	i 21 50	−10	e 33·6	—
Chicago	E.	78·0	349	—	—	i 21 56	− 4	e 31·2	42·0
	N.	78·0	349	12 5	− 2	i 21 54	− 6	e 35·1	44·7
Toronto	E.	78·9	356	e 12 6	− 6	i 21 59	−12	38·9	—
Ottawa		80·4	359	i 12 19	− 2	i 22 25	− 3	e 35·7	49·7
Christchurch		81·6	222	e 12 12	−16	22 4	−38	38·7	—
Wellington	E.	81·8	225	i 12 38	+ 9	i 22 36	− 8	i 38·4	40·4
	N.	81·8	225	12 41	+12	i 22 43	− 1	37·8	40·2
Johannesburg		83·2	117	—	—	—	—	34·7	—
Lick		85·6	324	e 13 0	+ 9	e 23 12	−14	—	—
Berkeley		86·2	324	e 12 49	− 5	e 23 18	−14	e 41·1	47·0
Apia		89·4	255	—	—	—	—	41·8	43·6
Suva		94·4	245	—	—	i 20 50	?	44·7	—
San Fernando		94·4	48	13 18	−22	24 7	[+13]	50·3	58·7

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria	E.	94·9	330	13 43	0	24 3	[+ 7]	40·9	50·2
	N.	94·9	330	13 53	+10	24 8	[+12]	41·0	48·5
Malaga		95·6	49	13 31	−16	24 23	[+23]	35·2	53·8
Granada		96·4	49	i 13 45	− 6	—	—	32·2	54·1
Almeria		97·0	50	13 33	−21	24 13	[+ 5]	31·7	59·7
Toledo		97·9	46	e 17 40	?PR_1	24 24	[+12]	e 28·7	56·0
Honolulu T.H.	E.	98·3	290	—	—	—	—	i 46·1	51·1
Alicante		99·1	49	e 17 54	[+11]	e 24 36	[+17]	45·8	58·9
Melbourne		99·3	210	e 13 44	−23	i 24 25	[+ 5]	46·5	51·9
Riverview		99·9	216	e 16 37	?	i 24 27	[+ 4]	e 42·6	53·9
Sydney	E.	99·9	216	24 32	?S	(24 32)	[+ 9]	e 49·4	51·2
Algiers		100·4	53	—	—	—	—	44·7	51·2
Tortosa	E.	101·2	48	—	—	—	—	e 46·7	58·0
Tananarive		101·6	124	—	—	—	—	—	69·7
Entebbe		102·2	98	14 9	−12	—	—	—	52·8
Barcelona		102·6	48	—	—	—	—	e 52·9	57·2
Adelaide		104·2	207	—	—	i 24 48	[+ 4]	43·9	62·7
Oxford	E.	106·7	39	18 47	?PR_1	e 25 3	[+ 8]	e 41·7	63·5
	N.	106·7	39	—	—	i 24 44	[−11]	e 33·8	61·5
Bidston		106·8	37	25 20	?[S]	25 20	[+24]	43·7	60·8
Paris		107·0	42	e 18 51	?PR_1	e 25 5	[+ 8]	50·7	58·7
Kew		107·1	39	e 14 26	−18	25 3	[+ 6]	45·7	61·1
Stonyhurst		107·4	38	—	—	25 4	[+ 5]	51·7	59·9
Moncalieri		107·9	47	19 25	?PR_1	32 52	?	50·2	67·4
Besançon		108·1	45	—	—	e 28 21	?PS	51·7	62·7
Edinburgh		108·3	34	—	—	e 24 44?	[−19]	46·7	64·2
Neuchatel		108·5	45	e 18 51	?PR_1	—	—	e 63·7	—
Uccle		109·1	40	—	—	e 28 38	?PS	e 46·7	63·3
Rocca di Papa		109·3	51	e 19 9	?PR_1	28 42	?PS	e 54·5	62·8
Dyce		109·5	33	—	—	e 25 17	[+ 9]	46·7	66·2
Florence		109·5	50	i 18 47	?PR_1	28 30	?PS	52·2	59·7
Zurich		109·6	45	e 18 19	[− 2]	—	—	e 53·7	—
Strasbourg		109·8	44	e 14 44?	−12	—	—	36·7	64·2
Chur		109·9	45	e 19 13	?PR_1	—	—	e 52·7	—
Pompeii		110·1	53	e 17 44?	[−38]	e 28 44?	?PS	60·7	64·7
De Bilt		110·2	40	—	—	e 25 19	[+ 8]	e 54·7	63·4
Ravensburg		110·5	44	—	—	—	—	e 52·7	—
Feldberg	N.	111·0	42	e 19 24	?PR_1	—	—	e 62·5	71·0
Innsbruck	N.E.	111·3	46	—	—	—	—	e 56·4	64·2
Scoresby Sund		111·5	15	—	—	29 2	?PS	51·7	—
Perth		112·6	187	e 19 44?	?PR_1	—	—	57·7	65·7
Laibach		112·6	48	—	—	—	—	e 46·7	—
Zagreb		113·4	50	e 19 44?	?PR_1	e 29 15	?PS	e 50·7	71·1
Hamburg	Z.	113·5	40	e 19 32	?PR_1	—	—	e 54·7	66·7
Graz		113·7	47	e 18 59	[+26]	e 29 43	?PS	48·7	70·6
Bergen		114·5	32	—	—	—	—	48·7	64·7
Potsdam		114·6	42	—	—	—	—	e 51·7	67·7
Vienna		114·7	46	19 40	?PR_1	29 30	?PS	e 52·2	75·7
Copenhagen		115·7	38	—	—	e 25 41	[+ 9]	53·7	68·6
Budapest		116·0	49	e 19 14	?PR_1	—	—	e 55·7	67·7
Lund		116·1	38	—	—	25 38	[+ 6]	—	—
Helwan		117·1	71	20 4	?PR_1	29 51	?PS	—	—
Konigsberg		119·7	41	e 20 38	?PR_1	e 27 26	? Σ	e 53·7	74·7
Upsala		119·8	35	—	—	e 39 44?	?	e 54·7	72·9
Lemberg		119·9	48	e 49 44	?	e 59 2	?	e 65·3	75·5
Ksara	E.	122·3	69	e 20 44?	?PR_1	—	—	53·2	—
Helsingfors		123·4	36	—	—	e 37 44?	?SR_1	51·3	—
Sebastopol		124·4	55	e 20 20	?PR_1	—	—	—	74·7
Simferopol		124·8	55	e 21 2	?PR_1	—	—	—	68·7
Yalta		124·8	55	e 20 59	?PR_1	—	—	—	78·9
Theodosia		125·7	54	—	—	—	—	—	77·7
Pulkovo		126·0	37	e 19 23	[+15]	26 14	[+13]	65·7	71·9
Kucino		129·4	42	e 19 23	[+ 6]	—	—	e 44·3	73·5
Baku		134·9	65	e 19 29	[− 1]	—	—	58·7	78·0
Batavia		138·8	178	e 21 44?	?PR_1	—	—	e 70·7	83·7
Ekaterinburg		141·9	40	i 19 33	[−10]	—	—	60·7	84·6
Colombo		142·1	130	19 33	[−10]	41 18	?SR_1	71·2	78·4
Kodaikanal		143·1	124	19 50	[+ 5]	—	—	81·1	86·3
Bombay		145·4	108	19 46	[− 3]	33 30	?	73·2	82·8
Hyderabad		148·8	117	19 58	[+ 4]	33 40	?	71·4	81·6
Tashkent		149·6	67	i 19 57	[+ 2]	—	?	62·7	86·8
Frunse		153·4	63	e 20 22	[+22]	—	—	45·6	—
Dehra Dun		154·9	92	18 32	?	32 26	?	59·1	85·6
Almata		155·1	61	—	—	—	—	45·6	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		156·2	214	e 20 35	[+32]	38 25	?	—	—
Kobe		157·4	277	—	—	—	—	e 79·7	87·2
Calcutta	E.	159·1	122	19 7	[−60]	32 11	?	—	—
	N.	159·1	122	19 41	[−26]	31 55	?	—	—
Nagasaki		161·3	269	e 26 30	?	e 39 16	?	e 78·2	—
Taihoku	N.	164·3	234	—	—	e 48 44?	?	71·7?	—
Phu-Lien		165·7	176	e 20 25	[+13]	—	—	77·7	91·8
Hong Kong		166·7	210	—	—	e 45 56	?SR_1	e 77·7	101·5
Zi-ka-wei		167·7	256	(20 13)	[− 1]	27 49	?	80·0	90·9

Additional readings and notes: La Paz iN = +5m.1s., +5m.38s., and +8m.37s. Charlottesville iE = +25m.44s. Georgetown PR_1Z = +14m.58s. Cincinnati ePS = +21m.52s. =[S]+3s., SR_1E = +30m.52s. St. Louis iPN = +11m.52s., iSN = +21m.28s., iSR_1 = +26m.0s. Florissant iPZ = +11m.54s., iSN = +21m.31s. Tucson iE = +12m.32s., ePR_1 = +16m.12s., ePR_2N = +19m.0s., eSR_1N = +26m.42s. Ann Arbor eN = +22m.2s., eLN = +37·0m. Toronto eE = +27m.4s.; T_o =4h.20m.27s. Ottawa eE = +27m.0s., eSR_1N = +27m.44s., eN = +34m.2s., eLN = +37·7m.; T_o =4h.20m.26s. Christchurch SR_1 = +27m.44s. Wellington SR_1E = +28m.6s.; T_oN =4h.20m.41s.; T_oE =4h.20m.42s. Lick iE = +23m.35s., eE = +23m.59s. Berkeley ePN = +12m.58s., eZ = +13m.1s., iN =eZ = +23m.22s., eN = +39m.38s. Apia e = +38m.27s., MN = +50·2m.; T_o =4h.20m.20s. Suva iE = +27m.38s., iSR_1N? = +28m.44s., LN = +42·7m. San Fernando PR_1 = +17m.37s., MN = +58·5m. Granada i = +14m.22s., PR_1 = +17m.32s., i = +24m.9s. =[S]+5s., +24m.36s., +26m.28s. =PS+4s., and +26m.36s. Almeria MN = +57·4m., MZ = +57·6m. Toledo MNW = +56·6m. Honolulu T.H. eLN = +46·8m. MN = +56·4m. Alicante MN = +55·8m. Melbourne i = +18m.57s., iPS? = +25m.44s., i = +32m.19s. =SR_1 −10s., L? = +42·4m. Riverview e = +16m.54s., ePR_1? = +18m.16s., $iS_cP_cP_cS$ = +24m.59s., PS = +27m.8s., PPPS = +28m.7s., $P_cP_cP_cP$ = +29m.56s., SR_1 = +32m.44s., PPSS = +32m.55s., SR_3 = +40m.24s., MN = +50·9m. Tortosa MN = +57·8m. Barcelona MN = +58·9m. Adelaide iPR_1 = +19m.0s., iSR_1 = +34m.9s., i = +42m.29s., MN = +58·2m. Oxford eN = +23m.28s. =PR_1 −11s., iE = +28m.7s. =PS−14s. Paris e = +28m.17s. =PS−7s., MN = +61·7m. Kew PR_1 = +18m.44s., iPSE = +28m.16s., SR_1N = +33m.56s., LZ = +49·7m., MZ = +62·5m., MN = +62·6m. Stonyhurst ePR_1 = +18m.59s. Moncalieri MN = +63·8m. Uccle ePR_1 = +19m.2s., e = +34m.44s. ? = SR_1 +13s., MN = +63·8m. Florence PR_1 = +19m.15s. and +21m.44s. Strasbourg ePR_1 = +17m.44s.?, iPS = +28m.44s., MN = +69·4m. De Bilt ePR_1EZ = +19m.18s., eEN = +29m.49s. and +34m.37s. =SR_1 −7s., MZ = +63·5m., MN = +65·1m. Feldberg eLE = +55·9m., ME = +63·5m. Scoresby Sund +35m.2s. =SR_1 +1s. Zagreb e = +25m.27s. =[S]+3s. and +39m.41s. Hamburg eLE = +47·7m., ME = +64·0m., MN = +65·8m. Graz MN = +73·8m. Potsdam MN = +68·7m. Vienna PR_1 = +25m.40s., MNZ = +70·2m.; the S is given as S_cP_cS. Copenhagen ePR_1 = +19m.54s., ePS = +29m.41s., ePPS = +30m.11s., SR_1 = +35m.38s., MN = +66·8m. Lund PR_1 = +20m.2s., PS = +29m.50s., SR_1 = +36m.14s. Helwan PR_1 = +25m.45s. =[S]+9s. Konigsberg eE = +30m.20s. =PS−21s. eLN = +56·7m., MN = +71·7m. Upsala MN = +72·1m. Pulkovo PR_1 = +20m.53s. Kucino ePR_1 = +21m.35s., P_cP_cS = +22m.43s., PS = +31m.57s. Baku iPR_1 = +22m.3s., PPS = +34m.2s. Batavia i = +23m.30s. Ekaterinburg iPR_1 = +22m.45s., iP_cP_cS = +23m.15s., iPS = +32m.54s. Tashkent S_cP_cSP = +33m.32s., ePPS = +36m.44s., SR_1 = +43m.38s. Kobe MZ = +81·6m. Phu-Lien MN = +95·1m. Zi-ka-wei $P'Z$ = +20m.35s., P_cP_cSZ = +25m.21s., iZ = +29m.43s., eE = +31m.53s., PR_2Z = +31m.57s., S_cP_cSZ = +33m.57s., S_cP_cSPZ = +36m.11s., PPSZ = +39m.31s., LZ = +48·0m., MZ = +85·9m., MN = +116·6m.; the reading entered as [P] is the earliest given and attributed to the phase P_cPZ.

Dec. 2d. 5h. 41m. 15s. Epicentre 35°·0S. 72°·5W. (as at 4h.).

A = +·246, B = −·781, C = −·574; D = −·954, E = −·301: G = −·172, H = +·547, K = −·819.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		2·2	44	0 30	− 4	(1 2)	+ 2	1·0	—
La Plata		12·0	94	2 58	− 1	—	—	5·8	—
Sucre		17·3	24	i 4 2	− 7	7 28	+ 3	9·1	12·4
La Paz		18·9	13	i 4 28	0	i 8 3	+ 3	9·8	13·2
Rio de Janeiro	N.	28·3	73	—	—	—	—	14·1	18·0
Florissant	Z.	75·7	347	i 11 40	−13	—	—	—	—
Tucson	N.	76·3	329	e 11 52	− 5	—	—	—	—
Frunse		153·4	63	19 46	[−14]	—	—	—	—

La Paz gives also MN = +14·8m.

Dec. 2d. 23h. 15m. 52s. Epicentre 35°·0S. 72°·5W. (as at 5h.).

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago	2·2	44	0 34	0	(1 9)	+ 9	1·2	—
La Plata	12·0	94	2 59	0	—	—	6·3	—
Sucre	17·3	24	i 4 8	− 1	7 33	+ 8	9·2	10·9
La Paz	18·9	13	e 4 30	+ 2	i 8 22	+22	10·3	13·2
Rio de Janeiro E.	28·3	73	e 10 50	?S	(e 10 50)	−14	17·4	18·1
N.	28·3	73	e 10 48	?S	(e 10 48)	−16	17·3	18·1
Granada	96·4	49	—	—	—	—	e 51·1	58·1
Baku	134·9	65	—	—	—	—	e 70·1	99·0
Ekaterinburg	141·9	40	—	—	—	—	74·1	—
Tashkent	149·6	67	—	—	—	—	e 81·1	—

Additional readings: La Paz gives also iP = +4m.34s., MN = +12·8m. Rio de Janeiro SE = +15m.1s., SN = +15m.2s.

Dec. 2d. 23h. 41m. 40s. Epicentre 42°·8N. 77°·2E. (given by Almata).

A = +·163, B = +·715, C = +·679; D = +·975, E = −·222; G = +·151, H = +·663, K = −·734.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Almata	0·5	331	i 0 4	− 4	(i 0 11)	− 3	i 0·2	—
Frunse	1·9	272	0 34	+ 5	(1 0)	+ 7	1·0	—
Tashkent	6·0	258	1 52	+20	i 2 55	+11	i 3·6	4·2
Ekaterinburg	17·5	329	e 3 55	−16	e 7 58	+29	9·3	10·1
Irkutsk	20·4	53	—	—	e 9 20?	+48	—	—

Additional readings: Tashkent i = +2m.1s. and +2m.15s. Ekaterinburg e = +8m.46s.

Dec. 2d. Readings also at 0h. (Santiago and near Tacubaya), 1h. (Ekaterinburg and Santiago), 2h. (Granada), 3h. (Tacubaya, Chicago, Florissant, St. Louis, Georgetown, Ottawa, Toronto, and near Tucson), 4h. (Santiago, La Paz (2), and La Plata), 5h. (La Plata, near Guadalajara, and Manzanillo), 6h. (La Paz (3) and La Plata (4)), 7h. (La Paz (2), Sucre, La Plata, near Barcelona, and Tortosa), 8h. (La Plata), 9h. (La Paz), 10h. (Batavia, La Paz (2), Sucre (2), La Plata (2), and Rio de Janeiro), 11h. (near Malabar), 13h. (La Plata), 15h. (La Paz and La Plata), 16h. (La Plata), 17h. (near Tacubaya), 19h. (near Neuchatel and near Tacubaya), 21h. (Sebastopol, Simferopol, Yalta, Manila, and near Amboina), 22h. (La Paz, Scoresby Sund, and near Reykjavik), 23h. (Copenhagen).

Dec. 3d. 1h. 44m. 33s. (I) } Epicentre 35°·0S. 72°·5W.
11h. 31m. 26s. (II) } (as on Dec. 2d.).

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
I Santiago	2·2	44	0 33	− 1	0 59	− 1	1·2	—
II	2·2	44	0 28	− 6	(1 4)	+ 4	1·0	—
I La Plata	12·0	94	2 56	− 3	5 14	− 5	6·3	—
II	12·0	94	2 56	− 3	—	—	6·1	—
I Sucre	17·3	24	4 10	+ 1	i 7 30	+ 5	9·5	13·4
II	17·3	24	i 4 4	− 5	i 7 29	+ 4	9·6	11·6
I La Paz	18·9	13	4 34	+ 6	8 9	+ 9	10·0	14·0
II	18·9	13	4 28	0	e 8 5	+ 5	10·3	13·3
I Rio de Janeiro N.	28·3	73	e 5 52	−19	—	—	—	—
II N.	28·3	73	—	—	—	—	e 13·6	—
I Granada	96·4	49	—	—	—	—	e 52·4	57·4

La Paz I gives also MN = +13·4m.

Dec. 3d. 5h. 29m. 0s. Epicentre 34°·5N. 7°·0E.

A = +·818, B = +·100, C = +·566; D = +·122, E = −·993: G = +·562, H = +·069, K = −·824.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Algiers		3·9	307	1 0	− 1	2 4	+17	—	3·0
Alicante		7·1	304	—	—	—	—	e 4·1	—
Barcelona		7·9	333	—	—	4 14	+40	(4·2)	—
Almeria		8·0	290	2 4	+ 3	4 28	+51	(4·5)	6·7
Rocca di Papa		8·5	30	e 1 49	−20	(e 3 36)	−14	e 3·6	4·6
Pompeii		8·7	41	e 5 0	?L	—	—	(e 5·0)	—
Granada		9·0	290	e 2 15	− 1	3 54	− 9	i 5·4	6·7
Malaga		9·5	287	e 5 9	?L	e 15 33	?	(e 5·2)	—
Florence		9·9	18	e 2 29	0	4 30	+ 4	5·2	6·5
Toledo		10·3	305	—	—	e 4 41	+ 4	—	7·7
Moncalieri		10·5	3	e 1 11	−86	(4 29)	−14	4·5	—
San Fernando	E.	10·9	284	—	—	—	—	—	8·0
Besançon		12·7	357	—	—	—	—	6·0	—
Laibach		12·9	24	—	—	—	—	e 6·0	—
Zagreb		13·2	28	e 2 51	−25	e 6 0?	+11	—	—
Graz		14·1	24	—	—	(e 6 0?)	−10	e 6·0	—
Strasbourg		14·1	2	e 4 0?	+33	—	—	—	8·0
Paris		14·7	348	—	—	—	—	e 7·0	8·0
Uccle		16·4	354	—	—	—	—	e 7·0	—
De Bilt	E.	17·7	356	—	—	—	—	e 7·9	11·1
Kew		17·8	345	—	—	—	—	e 7·0	10·0
Hamburg		19·2	5	—	—	—	—	e 10·0	11·0
Stonyhurst		20·5	344	—	—	—	—	e 10·0	12·5
Copenhagen		21·6	8	—	—	—	—	e 9·0	13·0
Lund		21·6	10	—	—	—	—	10·0	—
Edinburgh		22·5	345	—	—	—	—	e 12·0	—
Kucino		30·0	35	—	—	—	—	e 14·4	16·6
Ekaterinburg		42·2	41	7 42	−30	e 16 58	?SR_1	20·5	23·4
Tashkent		48·6	63	—	—	—	—	e 27·0	34·9
Irkutsk		67·4	41	—	—	—	—	e 40·0	—

Additional readings: Granada i = +2m.36s. and +4m.27s., MZ = +5·8m. San Fernando MN = +7·6m. De Bilt eLN = +9·0m., MNZ = +12·4m. Kew eLNZ = +8·9m. Copenhagen MN = +13·3m. Tashkent e = +34m.0s. ?

Dec. 3d. 12h. 26m. 10s. Epicentre 4°·2N. 85°·0W.

A = +·087, B = −·993, C = +·073; D = −·996, E = −·087; G = +·006, H = −·073, K = −·997.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tacubaya		20·6	319	4 39	− 9	8 40	+ 4	9·6	10·6
La Paz		26·5	142	5 56	+ 3	10 26	− 6	13·0	16·7
Sucre		30·3	142	6 35	+ 4	e 11 39	0	15·0	18·9
Charlottesville	N.	34·3	10	—	—	e 12 2	−42	e 19·3	22·9
St. Louis		34·7	355	e 6 55	−16	e 12 20	−31	—	14·8
Florissant		35·0	355	e 9 6	?PR_1	e 12 35	−20	e 14·4	—
Georgetown	Z.	35·5	13	e 7 18	0	16 6	?	—	22·4
Tucson		37·1	324	—	—	e 12 56	−29	(18·9)	—
Toronto	E.	39·8	7	—	—	e 16 50?	?SR_1	17·4	21·4
Ottawa		42·0	11	—	—	e 14 35	0	e 20·2	—
Rio de Janeiro	N.	49·0	127	—	—	e 16 11	+ 5	e 28·8	—
Victoria		55·0	330	17 19	?S	(17 19)	− 2	29·0	33·8
Scoresby Sund		77·3	18	—	—	—	—	33·8	—
Granada		80·6	54	—	—	e 28 50?	?SR_1	39·3	43·3
Kew		83·4	39	—	—	—	—	e 39·8	—
Uccle		86·3	40	—	—	e 23 50?	+17	e 40·8	—
De Bilt		86·8	39	—	—	—	—	e 40·8	46·5
Strasbourg		88·6	41	—	—	—	—	e 39·8	—
Copenhagen		90·7	35	—	—	—	—	41·8	—
Kucino		104·2	29	—	—	—	—	50·9	51·9
Ekaterinburg		113·0	20	—	—	e 23 50	?	47·8	61·8
Baku		119·3	38	—	—	—	—	e 52·8	—
Irkutsk		123·0	353	—	—	—	—	63·8	—
Tashkent		128·8	25	e 22 8	?	e 28 8	? Σ	e 38·6	70·0

For Notes see next page.

NOTES TO DEC. 3d. 12h. 26m. 10s.

Additional readings and notes: La Paz MN = +15·7m. Charlottesville eE = +15m.20s., eN = +17m.20s. Tucson gives S as e and L as S. Ottawa e = +17m.34s. = SR_1 +6s. Victoria LN = +29·1m. De Bilt eSR_1E = +29m.56s.

Dec. 3d. Readings also at 1h. (La Paz and Sucre), 5h. (Reykjavik), 6h. (La Paz, La Plata, and Santiago), 8h. (Reykjavik and near Apia), 10h. (Santiago), 14h. (Santiago (2), La Paz, and Sucre), 15h. (Frunse), 16h. (La Paz, Sucre, Santiago, Suva, Hong Kong, Tashkent, Ekaterinburg, Irkutsk, Phu-Lien, Kobe, near Sumoto, Hukuoka, Zi-ka-wei, and Nagasaki), 17h. (Baku, Copenhagen, Ekaterinburg, Riverview, Almata, and Tashkent), 19h. (La Plata), 20h. (Santiago), 22h. (La Paz and Santiago), 23h. (Wellington).

Dec. 4d. Readings at 1h. (Georgetown), 2h. (Toledo and near Granada (2)), 4h. (Apia), 7h. (near Taihoku), 10h. (near Santiago), 13h. (Ekaterinburg, Irkutsk, and Manila), 16h. (near Barcelona), 17h. (near Almata), 18h. (near Manila), 19h. (La Paz and La Plata), 20h. (Santiago), 21h. (near Sebastopol, Simferopol, and Yalta), 22h. (Sebastopol, Yalta, and near Taihoku).

Dec. 5d. 2h. 42m. 20s. Epicentre 36°·5N. 3°·5W. (as on 1926 Dec. 1d.).

A = +·802, B = −·049, C = +·595.

Doubtful identification.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Granada	0·7	353	i 0 36	+25	i 0 44	+24	—	0·9
Malaga	0·8	288	e 0 11	− 1	e 0 21	− 1	—	—
Almeria	1·9	67	i 0 24	+ 9	—	—	0·5	0·6
San Fernando	2·2	269	0 24	−10	—	—	—	—
Alicante	3·0	52	e 1 43	?L	—	—	(e 1·7)	—
Toledo	3·4	353	1 17	+24	2 0	+26	—	—

Additional readings: Granada iP = +39s., i = +40s., +41s., and +43s. Toledo e = +5m.9s.

Granada gives near Berga at 36°·9N. 2°·9W. For this epicentre the distances of the observing stations are as follows: Granada 0°·7, Malaga 1°·3, Almeria 0°·4. San Fernando 2°·7, Alicante 2°·4, Toledo 3°·1.

Dec. 5d. 11h. 4m. 12s. Epicentre 3°·0N. 95°·0W.

A = −·087, B = −·995, C = +·052; D = −·996, E = +·087;
G = −·005, H = −·052, K = −·999.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tacubaya	16·9	346	4 24?	+20	7 49?	+33	8·2?	9·1
La Paz	32·9	128	6 54	− 2	12 19	− 3	15·0	16·6
St. Louis	35·9	7	i 7 24	+ 3	i 12 56	−13	—	—
Florissant	36·1	7	i 7 24	+ 1	e 13 8	− 3	—	—
Sucre	36·6	128	e 7 31	+ 4	e 13 27	+ 9	19·0	25·3
Georgetown Z.	39·5	24	—	—	—	—	e 20·5	—
Toronto E.	43·0	18	—	—	e 13 48?	−60	22·6	—
Ottawa	45·6	20	—	—	e 15 32	+10	e 22·5	—
Ekaterinburg	117·0	14	—	—	—	—	46·8	—
Baku	126·1	31	—	—	—	—	e 65·8	—
Tashkent	133·5	15	—	—	—	—	e 71·8	85·0

Additional readings: Florissant eE = +15m.15s. = SR_1 − 7s. Georgetown eZ? = 11h.3m.6s., eZ = +11m.53s., +17m.8s., and +22m.48s. Toronto eE = +17m.18s. Ottawa e = +18m.56s. = SR_1 +14s., eN = +26m.48s.

Dec. 5d. Readings also at 1h. (La Paz), 2h. (Georgetown), 3h. (Riverview, Wellington, near Lick, near Orbe, Neuchatel, Zurich, Strasbourg, and Besançon), 6h. (near Toyooka), 12h. (Santiago), 14h. (Santiago), 21h. (Lick (2)).

Dec. 6d. Readings at 2h. (La Plata and Santiago), 3h. (near Almeria), 5h. (near Reykjavik), 6h. (Almata), 10h. (near Kobe and Sumoto), 15h. (Almata, Frunse, and near Reykjavik), 19h. (Sucre), 21h. (Almata and near Frunse).

Dec. 7d. 9h. 13m. 48s. Epicentre 4°·5S. 134°·0E.

A = −·693, B = +·717, C = −·078; D = +·719, E = +·695; G = +·055, H = −·056, K = −·997.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		23·0	326	i 5 22	+ 5	(i 9 15)	−10	i 9·2	10·2
Malabar		26·4	263	i 5 52	0	i 10 20	−10	16·2	—
Batavia		27·1	265	i 5 55	− 4	10 42	− 1	15·0	—
Adelaide		30·8	174	i 6 32	− 4	i 11 32	−16	i 13·7	20·0
Taihoku	E.	31·9	339	e 7 47	+61	11 35	−32	13·6	—
Perth		32·3	210	i 6 53	+ 2	12 2	−11	17·2	21·2
Hong Kong		33·1	325	6 54	− 3	—	—	14·4	15·6
Riverview		33·4	154	e 6 54	− 6	e 12 28	− 2	e 17·3	19·3
Sydney	E.	33·4	154	6 42	−18	12 42	+12	17·8	19·8
Melbourne		34·8	166	i 7 12	+ 1	i 12 37	−15	16·2	20·2
Phu-Lien		36·9	314	e 7 19	−10	13 12	−10	18·2	30·7
Nagasaki		37·4	355	7 25	− 8	13 21	− 9	15·9	18·7
Zi-ka-wei		37·6	344	e 7 24	−11	13 20	−12	17·8	20·8
Hukuoka		38·2	356	e 7 37	− 3	e 13 19	−22	16·3	19·2
Sumoto		38·8	1	e 7 22	−22	e 12 39	−70	e 17·3	—
Kobe		39·2	1	7 57	+ 9	e 13 37	−17	16·4	20·5
Osaka		39·2	1	8 16	+28	—	—	14·3	18·3
Mizusawa	E.	44·9	10	8 23	− 9	15 19	+ 5	24·4	—
	N.	44·9	10	—	—	14 56	−18	24·0	—
Suva	E.	45·4	113	i 7 54	−42	14 24	−56	21·0	—
	N.	45·4	113	7 18	−78	i 14 12	−68	21·9	—
Christchurch		51·8	145	e 8 48	−31	17 14	?PS	28·1	34·8
Wellington	E.	51·8	142	9 37	+18	e 16 57	+16	24·8	30·7
	N.	51·8	142	9 42	+23	17 3	+22	23·6	33·0
Calcutta	E.	52·2	305	9 36	+15	16 48	+ 2	27·1	—
	N.	52·2	305	9 25	+ 4	16 37	− 9	25·9	—
Apia		54·2	104	—	—	—	—	32·2	—
Colombo		55·3	281	9 44	+ 3	17 27	+ 2	29·0	36·9
Kodaikanal		58·2	285	13 54	?PR_g	—	—	28·2	37·9
Hyderabad		59·1	295	10 21	+15	18 28	+16	31·4	42·0
Irkutsk		62·1	340	10 36	+10	18 51	+ 2	26·2	32·7
Dehra Dun		63·8	307	11 17	+40	19 47	+36	31·4	41·4
Honolulu T.H.	E.	71·5	66	—	—	—	—	33·9	43·2
Frunse		71·5	319	e 11 41	+14	e 20 53	+ 9	—	—
Tashkent		74·5	316	i 11 54	+ 8	e 21 28	+ 8	40·2	51·4
Ekaterinburg		84·8	329	i 12 46	− 1	i 23 8	− 9	38·2	52·4
Tananarive		85·3	252	e 12 59	+ 9	23 31	+ 9	41·3	47·4
Baku		88·4	311	e 13 13	+ 6	i 23 58	+ 2	42·9	59·1
Kucino		97·1	325	—	—	24 30	[+22]	47·0	60·3
Pulkovo		100·8	331	—	—	e 24 49	[+21]	46·2	56·7
Entebbe		101·5	271	—	—	—	—	54·7	—
Victoria	E.	101·7	42	27 44	?PS	—	—	47·1	50·3
Berkeley	E.	103·5	53	—	—	—	—	e 55·4	—
Lick	E.	104·1	53	—	—	e 35 54	?	e 48·9	—
Upsala	E.	106·9	331	—	—	e 35 12?	?	e 50·2	61·8
Konigsberg		107·0	325	—	—	—	—	e 55·2	60·2
Budapest		110·0	319	—	—	e 28 42	?PS	e 58·2	63·7
Lund		110·6	329	—	—	—	—	52·2	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Copenhagen		111·0	329	—	—	24 36	[−38]	54·2	—
Vienna		111·5	320	—	—	—	—	e 53·2	69·2
Potsdam		112·0	325	—	—	—	—	e 59·0	63·2
Scoresby Sund		112·2	351	—	—	28 12?	+24	—	—
Graz		112·4	320	—	—	—	—	e 59·2	64·0
Zagreb		112·5	317	e 19 44	?PR_1	e 29 52	?PS	e 58·2	61·9
Hamburg		113·2	326	e 19 54	?PR_1	—	—	e 56·2	62·2
Jena		113·4	323	19 42	?PR_1	—	—	e 56·2	63·2
Laibach		113·4	319	—	—	—	—	e 60·2	—
Pompeii		115·0	312	e 19 12	?PR_1	—	—	—	—
Ravensburg		115·9	321	—	—	—	—	e 61·2	—
Rocca di Papa		116·0	314	e 18 2	[−39]	—	—	e 47·8	68·3
Florence		116·3	316	19 57	?PR_1	—	—	—	76·2
Chur		116·3	320	e 20 10	?PR_1	—	—	e 61·5	—
Zurich		116·6	320	—	—	—	—	e 46·2	—
De Bilt		116·6	326	e 20 14	?PR_1	e 30 0	?PS	e 58·2	63·1
Strasbourg		116·6	322	e 19 12?	?PR_1	e 30 12?	?PS	e 46·2	65·7
Dyce		117·0	335	—	—	e 30 4	?PS	59·2	70·1
Uccle		117·6	325	—	—	—	—	e 58·2	63·2
Moncalieri		118·2	319	e 19 55	?PR_1	29 1	+25	37·4	—
Besançon		118·3	321	—	—	—	—	61·2	—
Edinburgh		118·3	333	—	—	—	—	54·2	—
Paris		119·6	325	e 21 38	?	e 28 12?	−34	61·2	64·2
Kew		119·7	330	e 20 12	?PR_1	e 41 12	?	51·2	66·4
Bidston		119·9	331	37 12	?SR_1	—	—	50·2	73·7
Oxford	E.	120·0	330	—	—	—	—	—	71·7
Tortosa	N.	124·7	317	—	—	—	—	e 41·5	71·5
Alicante		126·6	315	e 21 48	?PR_1	—	—	—	—
Florissant		127·1	42	—	—	e 26 46	?PR_2	e 62·8	72·3
Chicago		127·4	38	—	—	e 41 42	?	e 59·9	65·2
St. Louis		127·4	42	e 22 12	?	—	—	e 62·2	71·2
Toledo	N.E.	128·2	318	e 21 30	?PR_1	—	—	—	70·8
Granada		129·3	315	i 20 29	?	—	—	55·7	71·6
Cincinnati	Z.	130·8	39	e 19 42	[+22]	—	—	e 45·4	—
Toronto	E.	131·0	32	—	—	—	—	58·2	—
San Fernando	E.	131·5	315	—	—	—	—	—	75·8
Ottawa		131·5	27	23 4	?	—	—	68·2	—
Charlottesville	N.	135·2	36	—	—	e 40 12	?SR_1	e 56·2	72·5
Georgetown	Z.	135·5	34	e 19 38	[+7]	—	—	e 65·6	86·8
La Plata		139·0	165	21 40	?PR_1	—	—	71·2	—
La Paz		149·7	133	i 20 11	[+16]	27 44	?	74·2	97·7
Sucre		149·8	140	20 6	[+10]	—	—	73·2	90·0
Rio de Janeiro	E.	152·5	186	20 12	[+12]	—	—	—	—

Additional readings and notes: Manila MN = +9·8m. Batavia iPE = +5m.58s., iN = +12m.22s. Adelaide i = +7m.1s., +7m.45s., and +11m.49s. Perth PR_1 = +8m.12s., PR_2 = +8m.32s., S = +12m.17s., SR_1 = +13m.34s., SR_2 = +14m.3s. Riverview PR_1 = +8m.18s., PS = +12m.40s., P_eS = +13m.6s., SR_1 = +14m.48s., SR_2 = +15m.34s., SR_3 = +16m.8s., MN = +19·4m., MZ = +22·4m. Phu-Lien MN = +22·9m. Hukuoka MN = +21·4m. Kobe PR_1 = +9m.40s., MZ = +26·7m. Osaka MN = +17·5m. Suva SR_2E = +18m.18s., T_gN = 9h.12m.18s., T_gE = 9h.13m.24s. Christchurch PR_1 = +11m.46s., SR_1 = +20m.50s. Tananarive SPS = +29m.7s. = SR_1 − 20s. Kucino PS = +26m.36s., eSR_1 = +31m.36s. Victoria LN = +43·1m., MN = +62·9m. Berkeley eZ? = +43m.27s., eE = +47m.57s. Upsala MN = +58·5m. Copenhagen ePSE = +28m.5s., eE = +45m.18s. Potsdam MN = +67·2m. Zagreb e = +44m.12s.? = SR_2 + 6s. Hamburg MZ = +68·2m. Jena eLZ = +65·2m., MN = +62·7m., MZ = +71·7m. Rocca di Papa ePZ = +20m.2s. + PR_1 +4s., i = +20m.14s. De Bilt MN = +69·7m., MZ = +70·9m. Strasbourg MZ = +78·9m. Kew eEN = +41m.12s.!. Paris MN = +76·2m. Tortosa ME = +71·1m. Florissant ePR_1 = +22m.16s., ePR_2E = +24m.20s., ePS = +31m.31s., eSR_1 = +38m.28s.; all readings have been *diminished* by 1h. Chicago eLN = +59·7m. St. Louis eE = +23m.12s., eSR_1E = +39m.7s. Toledo MNW = +73·2m. Granada i = +21m.39s. = PR_1 + 15s., +22m.3s., +35m.58s., and +43m.12s. Cincinnati readings have been *diminished* by 1h. San Fernando MN = +87·5m. Ottawa PR_1 = +28m.48s. = Σ +25s., SR_1 = +39m.36s., eN = +45m.48s., eL = +57·2m., LN = +79·2m. Georgetown eZ = +23m.9s., iZ = +28m.34s., eZ = +32m.21s., iZ = +43m.51s., eZ = +50m.40s. = SR_3 + 6s. La Paz PR_1? = +24m.17s., MN = +95·8m. Sucre iP′ = +20m.11s., PR_1 = +23m.48s., Rio de Janeiro eN = +20m.27s.

Dec. 7d. 17h. 7m. 20s. Epicentre 44°·5N. 34°·5E. (as on 1928 Oct. 24d.).

A = +·588, B = +·404, C = +·701.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Yalta	0·2	270	0 3	− 1	(0 6)	0	0·1	0·1
Simferopol	0·5	326	0 11	+ 3	(0 19)	+ 5	0·3	—
Sebastopol	0·7	279	0 10	− 1	(0 19)	− 1	0·3	—
Theodosia	0·8	48	e 0 20	+ 8	(0 31)	+ 9	0·5	—

Epicentre 44°23′N. 34°31′E. is given by the stations.

Dec. 7d. Readings also at 1h. (near Tacubaya), 4h. (Jena), 6h. (Baku and Ekaterinburg), 7h. (Ksara and Batavia), 15h. (Santiago, La Paz, Sucre, and La Plata), 16h. (Rio de Janeiro), 17h. (Santiago, near Port au Prince, near Neuchatel, and Zurich), 19h. (Rio de Janeiro), 20h. (near La Paz and near Nagasaki) 21h. (Lick), 22h. (near Mizusawa).

Dec. 8d. 13h. 23m. 38s. (I) } Epicentre 35°·0S. 72°·5W. (as on 3d.).
17h. 17m. 57s. (II) }

A = +·246, B = −·781, C = −·574; D = −·954, E = −·301;
G = −·172, H = +·547, K = −·819.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Santiago	2·2	44	0 42	+ 8	—	—	1·4	—
II		2·2	44	0 39	+ 5	—	—	1·2	—
I	La Plata	12·0	94	3 0	+ 1	—	—	6·2	—
II		12·0	94	—	—	—	—	6·4	—
I	Sucre	17·3	24	4 4	− 5	i 7 26	+ 1	9·2	11·1
II		17·3	24	4 5	− 4	e 7 27	+ 2	9·5	—
I	La Paz E.	18·9	13	4 30	+ 2	8 5	+ 5	—	12·4
I	N.	18·9	13	4 24	− 4	8 1	+ 1	10·3	13·0
II		18·9	13	4 24	− 4	—	—	10·1	12·0
I	Rio de Janeiro E.	28·3	73	e 10 33	?S	(e 10 33)	−31	17·2	17·8
I	N.	28·3	73	e 10 34	?S	(e 10 34)	−30	17·2	—
II	E.	28·3	73	—	—	—	—	e 15·1	—

Rio de Janeiro I SN = +14m.56s., SE = +15m.0s.

Dec. 8d. 23h. 57m. 36s. Epicentre 10°·5S. 157°·0E. (as on 1928 Feb. 17d.).

A = −·905, B = +·384, C = −·182; D = +·391, E = +·921;
G = +·168, H = −·071, K = −·983.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	22·0	113	(4 9)	−65	4 0	?P	—	16·4
	N.	22·0	113	(3 42)	−83	3 42	?P	4·9	15·4
Riverview		24·0	192	e 5 30	+ 2	e 9 59	+15	e 11·8	15·1
Sydney	E.	24·0	192	1 54	?	(10 24)	+40	10·4	11·6
Melbourne		29·4	200	i 6 24	+ 2	11 47	+23	15·3	18·0
Adelaide		29·7	211	i 6 29	+ 4	i 11 24	− 5	i 13·8	19·6
Apia		30·7	100	e 6 33	− 2	11 37	− 9	15·9	17·4
Wellington	E.	34·6	158	i 6 49	−21	—	—	17·7	24·4
	N.	34·6	158	i 6 53	−17	12 30	−19	17·8	21·8
Christchurch		35·7	163	—	—	—	—	18·6	53·1
Perth		43·6	235	e 8 24	+ 1	e 14 59	+ 3	23·4	—
Manila		43·6	306	e 8 7	−16	(e 14 35)	−21	e 14·6	—
Osaka		49·5	336	—	—	13 18	?	22·4	26·0
Kobe	E.	49·7	336	—	—	—	—	—	26·5
Batavia		49·8	273	i 9 6	0	i 16 14	− 2	—	—
Hong Kong		53·3	310	9 19	− 9	—	—	—	28·6
Honolulu T.H.	E.	54·6	55	—	—	e 25 24	?	i 26·1	27·1
	N.	54·6	55	—	—	e 24 48	?	e 25·7	26·1
Phu-Lien		58·6	303	e 10 2	− 1	e 18 3	− 3	27·4	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk		77·3	330	11 54	− 9	—	—	32·4	—
Hyderabad		82·5	289	13 4	+31	22 53	+ 1	—	51·7
Bombay		87·9	290	13 2	− 2	23 38	−13	45·1	72·4
Victoria	E.	91·1	41	—	—	—	—	37·1	47·9
Tashkent		95·2	312	13 23	−21	—	—	e 43·4	55·9
Ekaterinburg		102·2	326	e 13 52	−29	25 26	? Σ	44·4	57·4
Florissant		114·1	51	—	—	e 28 22	+19	e 58·5	—
St. Louis	E.	114·3	51	e 19 59	?PR	e 29 24	?PS	e 54·4	64·4
Kucino		114·8	327	—	—	e 27 17	−51	51·0	60·8
Chicago	E.	115·8	47	—	—	—	—	e 62·4	—
Pulkovo		117·0	333	—	—	—	—	53·4	71·0
Scoresby Sund		120·0	359	—	—	—	—	56·4	—
Toronto	E.	121·3	43	—	—	—	—	i 67·4	—
Ottawa		123·2	40	—	—	—	—	e 57·4	—
Charlottesville	N.	123·4	51	—	—	—	—	e 63·9	—
Georgetown	Z.	124·3	50	—	—	e 31 6	?PS	83·6	—
Lund		126·7	336	—	—	—	—	62·4	—
Copenhagen		127·0	336	—	—	—	—	58·4	68·4
Zagreb		131·4	323	e 22 39	?PR_1	—	—	e 68·1	—
De Bilt		132·6	336	—	—	e 39 24?	?SR_1	e 64·4	—
Uccle		133·9	336	—	—	e 39 24?	?SR_1	e 59·4	—
Strasbourg		134·1	331	e 21 24?	?PR_1	—	—	65·4	—
Kew		135·0	340	—	—	—	—	e 69·4	—
Florence		135·5	324	e 21 55	?PR_1	—	—	—	83·1
Paris		136·2	336	—	—	—	—	e 78·4	—
Moncalieri		136·6	328	e 19 1	[−32]	—	—	40·3	—
Rio de Janeiro	N.	141·2	149	e 22 34	?PR_1	—	—	e 74·0	—
Granada		148·1	330	i 19 48	[− 5]	—	—	65·4	73·9
San Fernando		149·9	331	—	—	—	—	—	93·2

Additional readings and note: Riverview iS = +10m.3s., SR_1 = +11m.9s., SR_2 = +11m.26s., MN = +13·8m.; T_e = 23h.57m.16s. Melbourne SR_1 = +13m.39s. Apia e = +14m.29s.; all readings are given as simply e. Wellington iPR_1E = +8m.6s., PR_1N = +8m.23s.; T_eN = 23h.58m.38s. Perth SR_1 = +18m.24s. Kobe MN = +27·0m. Batavia i = +10m.4s. Irkutsk iPS = +21m.32s., SR_1 = +26m.28s. Tashkent $eS_cP_cP_cS$ = +24m.2s., i = +24m.41s. = Σ +4s. Ekaterinburg S_cP_cS = +24m.33s., PPS = +27m.14s. Florissant eN = +28m.32s., eE = +29m.47s. = PS +4s. Kucino $eS_cP_cP_cS$ = +26m.37s., PS = +29m.8s., SR_1 = +35m.24s., SR_2 = +39m.24s. Pulkovo PR_1 = +20m.21s., PS = +29m.40s., SR_1 = +35m.54s. Toronto iE = +68m.16s., LE = +74·5m. Ottawa eE? = +46m.54s., e = +52m.36s. Charlottesville eLN = +71·2m. Georgetown eZ = +36m.7s. +48m.6s., +58m.25s., and +72m.10s. Copenhagen SR_1 = +38m.6s., MN = +65·5m. Granada i = +19m.57s. and +20m.42s. San Fernando MN = +88·7m.

Dec. 8d. Readings also at 4h. (La Plata), 7h. (Melbourne and Riverview), 9h. (near Batavia and Malabar), 10h. (Melbourne and Riverview), 11h. (Adelaide), 14h. (Ekaterinburg and Tashkent), 16h. (Riverview), 17h. (Adelaide, Melbourne, Perth, Irkutsk, Tashkent, and Ekaterinburg), 18h. (Apia, Suva, and Riverview), 19h. (La Paz, Sucre, Tucson, near Oaxaca, Merida, Tacubaya, and Vera Cruz), 20h. (Suva), 22h. (near Ksara), 23h. (near Simferopol, Theodosia, and Yalta).

Dec. 9d. 3h. 51m. 0s. Epicentre 40°·0S. 174°·0E. (given by Wellington).

A = −·762, B = +·080, C = −·643; D = +·105, E = +·995; G = +·639, H = −·067, K = −·766.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Wellington	1·4	156	i 0 29	+ 8	0 45	+ 6	—	—
Christchurch	3·7	195	1 28	+30	1 51	+ 9	—	2·8
Riverview	19·2	282	e 4 34	+ 3	e 7 55	−11	e 8·7	11·2
Melbourne	22·6	266	i 4 52	−20	8 56	−21	—	14·1
Ekaterinburg	134·8	315	e 22 58	?PR_1	e 39 34	?SR_1	55·0	—

Additional readings: Wellington iSN = +44s., T_eE = 3h.51m.9s., T_eN = 3h.51m.11s. Riverview MN = +9·9m.

Dec. 9d. 5h. 5m. 18s. Epicentre 10°·5S. 157°·0E. (as on 8d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	22·0	113	3 24	−101	8 12	−53	11·7	14·2
	N.	22·0	113	i 3 30	−95	i 8 24	−41	12·6	19·7
Riverview		24·0	192	e 5 36	+ 8	i 10 10	+26	e 13·8	16·0
Sydney	E.	24·0	192	—	—	(10 12)	+28	10·2	14·0
Melbourne		29·4	200	6 20	− 2	11 47	+23	15·4	17·7
Wellington	E.	34·6	158	—	—	12 36	−13	17·1	25·2
	N.	34·6	158	—	—	i 12 31	−18	16·4	22·2
Christchurch		35·7	163	—	—	—	—	16·9	23·1
Perth		43·6	235	14 27?	?S	(14 27?)	−29	—	—
Manila		43·6	306	e 7 59	−24	(i 14 42)	−14	i 14·7	—
Osaka		49·5	336	10 40	+96	16 24	+11	23·8	26·6
Kobe	N.	49·7	336	—	—	—	—	e 25·9	26·9
Batavia	Z.	49·8	273	i 9 14	+ 8	—	—	—	—
Hong Kong		53·3	310	9 32	+ 4	i 19 15	[+13]	—	—
Honolulu T.H.	E.	54·6	55	—	—	e 24 24	?	26·0	27·0
	N.	54·6	55	—	—	e 24 15	?	25·6	27·1
Phu-Lien		58·6	303	10 11	+ 8	e 18 6	0	—	—
Colombo		78·7	278	11 37	−34	22 18	+10	31·5	32·0
Hyderabad	E.	82·5	289	—	—	(23 12)	+20	—	32·6
Bombay		87·9	290	12 59	− 5	23 35	−16	45·0	72·7
Victoria	E.	91·1	41	24 15?	?S	(24 15?)	−10	41·8	52·2
Frunse		91·7	314	e 14 43	+78	—	—	—	—
Tashkent		95·2	312	e 13 35	− 9	24 44	? Σ	e 44·7	59·9
Ekaterinburg		102·2	326	e 14 5	−16	24 51	[+16]	42·7	59·4
Florissant	E.	114·1	51	—	—	i 26 13	? Σ	—	—
St. Louis	E.	114·3	51	—	—	e 27 7	? Σ	e 55·7	—
Kucino		114·8	327	—	—	—	—	53·3	67·9
Chicago	E.	115·8	47	—	—	e 29 9	+53	57·4	—
Pulkovo		117·0	333	e 14 25	−64	—	—	53·7	70·9
Cincinnati	Z.	118·6	50	—	—	—	—	61·7	—
Scoresby Sund		120·0	359	—	—	29 42?	+53	54·7	—
Toronto		121·3	43	—	—	—	—	69·7	—
Upsala		122·2	337	—	—	—	—	69·7	—
Ottawa	E.	123·2	40	—	—	e 29 42?	+29	e 72·7	—
Konigsberg		124·0	331	—	—	e 30 42?	?	e 61·7	68·7
Georgetown	Z.	124·3	50	e 30 5	?	—	—	e 63·7	—
Lund		126·7	336	—	—	—	—	60·7	—
Copenhagen		127·0	336	e 18 42?	[−29]	—	—	58·7	76·9
La Paz		127·8	120	19 24	[+11]	—	—	74·7	87·2
Sucre		128·9	125	e 19 24	[+ 8]	—	—	76·7	115·0
Hamburg		129·5	334	e 20 42?	?PR_1	—	—	e 64·7	—
Zagreb		131·4	323	e 22 25	?PR_1	e 32 13	?	—	72·7
De Bilt		132·6	336	e 22 42?	?PR_1	—	—	e 62·7	74·1
Uccle		133·9	336	e 21 42?	?PR_1	—	—	e 59·7	—
Strasbourg		134·1	331	e 18 42?	[−46]	e 31 42?	?	54·7	—
Kew		135·0	340	e 20 42?	[+72]	—	—	59·7	—
Florence		135·5	324	e 20 28	[+57]	—	—	—	74·7
Paris		136·2	336	—	—	—	—	e 75·7	—
Moncalieri		136·6	328	e 20 9	[+36]	31 3	?	40·4	—
Rio de Janeiro	E.	141·2	149	e 22 42	?PR_1	—	—	—	—
Granada		148·1	330	i 19 51	[− 2]	—	—	—	—
San Fernando	N.	149·9	331	—	—	—	—	—	93·0

Additional readings: Riverview $PR_1 = +6m.11s.$ $PR_2 = +6m.19s.$, $e = +9m.52s.$, $i = +10m.0s.$, $SR_1 = +11m.30s.$, $SR_2 = +11m.54s.$, $SR_3 = +12m.6s.$ $MN = +26·2m.$; $T_0 = 5h.4m.57s.$ Melbourne $i = +13m.47s.$ Wellington $iPR_1N? = +8m.41s.$, $iE = +8m.46s.$, $SR_2E = +15m.6s.$ Osaka $MN = +26·8m.$ Kobe $ME = +26·6m.$ Batavia $iE = +9m.15s.$ Hyderabad readings are given as separate ME. Tashkent $ePR_1 = +17m.25s.$, $S_cP_cS = +24m.5s.$ Ekaterinburg $ePR_1 = +18m.14s.$, $iS_cP_cP_cS = +25m.26s.$, $iPS = +26m.44s.$ Florissant $iE = +29m.35s. = PS - 8s.$, $eE = +35m.31s. = SR_1 - 2s.$, and $+39m.42s.$ St. Louis $eE = +29m.34s. = PS - 11s.$, and $+38m.52s.$ Kucino $S_cP_cP_cS = +27m.26s.$, $PS = +29m.48s.$, $SR_1 = +35m.30s.$ Chicago $eE? = +38m.49s.$, $eN = +53m.27s.$, $LN = +61·9m.$ Cincinnati $iZ = +70m.54s.$ Ottawa $e = +36m.42s.?$, $eL = +54·7m.$, $LN = +76·7m.$ Georgetown $eZ = +41m.59s.$ and $+45m.54s.$ Copenhagen $ePSE = +29m.42s.?$, $SR_1 = +38m.12s.$, and $+47m.36s.$, $MN = +74·9m.$ Sucre $PR_1? = +22m.46s.$, $L = +102·9m.$ De Bilt $MN = +72·0m.$ Rio de Janeiro $eN = +22m.50s. = PR_1 + 8s.$ Granada $i = +21m.47s.$

Dec. 9d. 18h. 10m. 25s. Epicentre 10°·5S. 157°·0E. (as at 5h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	22·0	113	i 5 5	0	7 41	−84	9·6	13·0
	N.	22·0	113	i 3 29	−96	i 7 35	−90	i 10·1	15·6
Riverview		24·0	192	e 5 33	+ 5	i 10 3	+19	e 13·7	15·7
Sydney	E.	24·0	192	3 47	−101	(10 23)	+39	10·4	15·4
Melbourne		29·4	200	i 6 23	+ 1	i 11 38	+14	15·2	17·4
Adelaide		29·7	211	i 6 44	+19	i 11 30	+ 1	i 13·6	20·3
Wellington	E.	34·6	158	7 8	− 2	i 12 38	−11	16·4	21·4
	N.	34·6	158	i 7 0	−10	i 12 38	−11	17·0	23·2
Perth		43·6	235	8 35?	+12	15 15	+19	21·9	—
Manila		43·6	306	e 8 14	− 9	(i 14 38)	−18	i 14·6	—
Batavia		49·8	273	e 9 35?	+29	i 15 27	−49	—	—
Hong Kong		53·3	310	—	—	17 0	0	—	24·1
Honolulu T.H.	E.	54·6	55	—	—	e 24 35	?	e 25·6	27·0
	N.	54·6	55	—	—	e 24 29	?	i 25·6	26·8
Phu-Lien		58·6	303	e 10 4	+ 1	e 18 4	− 2	—	—
Irkutsk		77·3	330	e 11 51	−12	i 21 39	−13	36·6	—
Hyderabad	E.	82·5	289	—	—	(23 11)	+19	—	23·2
Bombay		87·9	290	13 17	+13	23 46	− 5	45·3	65·5
Victoria	E.	91·1	41	23 56	?S	(23 56)	[+21]	—	49·2
Ekaterinburg		102·2	326	e 14 0	−21	—	—	41·6	59·4
Florissant		114·1	51	e 17 49	[−45]	e 28 29	+26	e 52·2	57·7
St. Louis		114·3	51	—	—	e 28 29	+25	e 52·6	57·6
Kucino		114·8	327	—	—	—	—	52·4	60·7
Chicago	E.	115·8	47	—	—	—	—	e 55·8	59·6
Pulkovo		117·0	333	e 16 6	+37	—	—	54·6	70·9
Cincinnati	Z.	118·6	50	—	—	—	—	57·9	73·6
Scoresby Sund		120·0	359	—	—	29 35?	+46	49·6	—
Toronto		121·3	43	—	—	—	—	60·6	—
Ottawa		123·2	40	—	—	—	—	e 55·6	—
Charlottesville	N.	123·4	51	—	—	—	—	86·2	89·3
Georgetown	Z.	124·3	50	—	—	e 30 57	?	e 65·7	83·0
Lund		126·7	336	—	—	—	—	61·6	—
Copenhagen		127·0	336	—	—	—	—	58·6	68·6
La Paz		127·8	120	e 21 44	?PR_1	—	—	—	—
Sucre		128·9	125	e 19 54	[+38]	—	—	—	—
Hamburg		129·5	334	—	—	—	—	e 61·6	—
Zagreb		131·4	323	e 22 35?	?	—	—	e 65·6	—
De Bilt		132·6	336	e 22 35?	?	—	—	e 64·6	73·1
Uccle		133·9	336	e 21 35?	?PR_1	—	—	e 66·6	—
Strasbourg		134·1	331	(e 20 35?)	?	—	—	e 20·6	—
Kew		135·0	340	—	—	—	—	e 64·6	—
Florence		135·5	324	e 19 20	[−11]	22 4	?PR_1	23·6	74·6
Paris		136·2	336	—	—	—	—	e 73·6	78·6
Moncalieri		136·6	328	e 10 11	?	—	—	21·6	—
Rio de Janeiro	N.	141·2	149	—	—	—	—	e 75·6	—

Additional readings: Riverview iP = +5m.36s. Melbourne SR_1 = +13m.40s.? Adelaide PR_1 = +7m.25s. Wellington PR_1E = +8m.1s., PR_1N = +8m.20s., SR_2N = +14m.54s. = SR_1 + 4s., T_2N = 18h.10m.17s., T_2E = 18h.10m.33s. Perth S = +16m.40s., SR_1 = +18m.35s. Ekaterinburg iPR_1 = +18m.5s., $S_cP_cP_cS$ = +24m.55s., SR_1 = +32m.35s. Florissant eE = +26m.2s. = Σ − 36s., eEN = +29m.54s. = PS + 9s. St. Louis eE = +25m.29s. = [S] + 32s. Kucino $S_cP_cP_cS$ = +27m.9s., PS = +29m.55s., eSR_1 = +36m.11s. Chicago eE? = +41m.35s., eN = +51m.11s., LN = +60·8m. Pulkovo P′ = +19m.33s., PR_1 = +20m.31s., $S_cP_cP_uS$ = +27m.30s., PS = +30m.5s. Charlottesville eN = +56m.35s.?, eE? = +61m.35s.?, eN = +63m.35s.?, eE = +85m.35s.?, ME = +89·1m. Georgetown eZ = +39m.42s. Copenhagen ePR_1EN = +20m.59s., eN = +23m.11s. eSR_1EN = +38m.5s., eE = +44m.35s.?, and +55m.35s., MN = +65·7m. De Bilt MN = +78·7m.

Dec. 9d. Readings also at 2h. (Perth, La Paz, and near Nagasaki), 3h. (Lick, Moncalieri, Ekaterinburg, Copenhagen, Florence (2), Zagreb (2), Rocca di Papa (2), near Pompeii (2), and Naples), 4h. (Florissant, St. Louis, and La Paz), 9h. (San Fernando and Tucson), 10h. (Kew), 11h. (Florissant, Tucson (2), Zagreb, and Rocca di Papa), 12h. (Chicago, Georgetown, Ottawa, and St. Louis), 13h. (Georgetown,), 14h. (Melbourne), 17h. (Granada, La Paz, Sucre, La Plata, Santiago, and near Osaka), 21h. (Ottawa, Toronto, Florissant, La Paz (2), near Tacubaya, near Hukuoka, and Nagasaki), 22h. (Santiago, St. Louis, and near Tacubaya).

Dec. 10d. 4h. 33m. 33s. Epicentre 3°·0N. 97°·8E. (deduced from the epicentre 2°·4N. 98°·8E. of 1924 July 21d.).

A = −·136, B = +·989, C = +·052; D = +·991, E = +·136; G = −·007, H = +·052, K = −·999.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Batavia		12·8	135	3 12	+ 2	5 59	+20	—	—
Colombo		18·3	283	4 27	+ 6	8 15	+28	9·7	11·6
Phu-Lien		19·8	25	4 42	+ 3	e 8 35	+16	10·4	—
Kodaikanal		21·5	291	8 3	?S	(8 3)	−52	13·2	16·6
Calcutta	E.	21·6	335	7 20	?	10 12	?	—	—
Hyderabad		23·9	309	5 26	− 1	9 46	+ 4	14·0	17·0
Hong Kong		25·0	38	5 34	− 4	9 59	− 4	—	—
Manila		25·6	62	e 5 49	+ 5	—	—	e 11·4	—
Bombay		29·2	305	6 14	− 6	11 11	− 9	15·1	18·7
Dehra Dun		33·2	329	7 13	+15	12 43	+16	17·7	20·9
Perth		38·9	155	12 27?	?	—	—	—	—
Almata		44·3	340	8 25	− 3	15 0	− 6	—	—
Frunse		45·0	338	e 8 28	− 5	15 4	−11	—	—
Tashkent		46·1	331	—	—	—	—	—	29·8
Irkutsk		49·6	5	9 3	− 1	16 7	− 7	25·4	32·4
Melbourne		59·7	139	—	—	i 18 3	−16	31·1	33·2
Ekaterinburg		61·4	339	i 10 25	+ 4	i 18 46	+ 5	28·4	—
Riverview		62·2	133	—	—	e 18 37	−14	e 32·6	36·8
Ksara	N.	65·2	306	e 10 54	+ 8	19 37	+10	—	—
Theodosia		68·7	319	e 11 12	+ 3	e 20 12	+ 2	—	—
Yalta		69·4	318	e 11 17	+ 4	e 20 21	+ 2	—	—
Simferopol		69·5	318	e 11 15	+ 1	e 20 27	+ 7	—	—
Sebastopol		69·8	318	e 11 20	+ 4	e 20 26	+ 2	—	—
Kucino		71·1	330	11 24	0	20 38	− 1	34·8	46·4
Pulkovo		76·3	332	i 11 57	0	21 38	− 3	36·4	50·0
Vienna	Z.	82·1	320	i 12 28	− 3	—	—	—	—
Wellington	E.	82·3	134	—	—	—	—	e 43·2	—
Copenhagen		85·0	326	—	—	23 9	−10	40·4	—
Florence		85·5	314	—	—	e 21 27	?	—	—
De Bilt		89·3	323	—	—	e 23 51	−15	e 48·4	—
Uccle		89·9	321	—	—	e 23 27?	[0]	e 45·4	—
Scoresby Sund		96·6	344	—	—	—	—	56·4	—
Ottawa		131·3	353	—	—	—	—	e 68·4	—
Rio de Janeiro	N.	137·3	237	—	—	—	—	e 66·0	—
Florissant		137·5	8	—	—	—	—	e 68·4	85·4
St. Louis	E.	137·7	8	—	—	—	—	e 81·4	—
Sucre		156·9	225	20 28	[+23]	—	—	77·4	—
La Paz		160·7	225	e 20 14	[+ 5]	—	—	79·4	90·4

Additional readings: Batavia i = +3m.51s. Calcutta ePN = +8m.15s. = S − 42s. Riverview e = +6m.39s. and +7m.19s., MN = +35·2m. Florissant eL = +75·4m. Sucre PR_1 = +24m.13s., L = +80·4m.

Dec. 10d. 7h. 2m. 53s. Epicentre 37°·4N. 26°·1E. (as on 1928 April 10d.).

A = +·713, B = +·349, C = +·607; D = +·440, E = −·898; G = +·545, H = +·267, K = −·794.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Belgrade	E.	8·5	332	e 2 21	+12	e 4 41	+51	—	5·0
Helwan		8·7	148	i 2 12	0	i 3 39	−17	—	3·7
Ksara	N.	8·7	111	2 29	+17	i 4 4	+ 8	4·2	—
Sebastopol		9·1	35	e 2 48	+30	—	—	—	—
Yalta		9·4	38	e 2 50	+28	—	—	—	—
Pompeii		9·6	294	e 2 19	− 5	e 6 11	?	—	—
Simferopol		9·6	36	e 2 55	+31	e 5 55	+97	—	—
Theodosia		10·3	40	e 3 2	+28	—	—	—	—
Rocca di Papa		11·2	297	i 2 44	− 3	—	—	—	7·2
Budapest		11·3	335	2 49	0	—	—	6·6	—
Zagreb		11·3	321	e 2 55	+ 6	i 5 15	+13	e 6·3	7·6
Laibach		12·2	319	e 3 5	+ 3	—	—	e 7·0	—
Graz		12·4	324	i 3 13	+ 8	—	—	6·5	7·9
Vienna		12·9	331	3 17	+ 5	6 1	+19	—	8·1
Venice		13·0	312	e 3 17	+ 4	—	—	—	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Chur	15·5	313	e 3 44	− 2	e 6 45	+ 1	—	—
Moncalieri	15·7	305	3 16	−32	5 58	−50	8·5	—
Zurich	16·2	313	e 3 56	+ 1	e 6 56	− 4	—	—
Jena	17·0	327	e 4 11	+ 6	i 7 26	+ 8	—	—
Neuchatel	17·0	310	e 4 4	− 1	i 7 1	−17	—	—
	17·0	310	e 4 18	+13	e 7 16	− 2	—	—
Strasbourg	17·4	316	i 4 8	− 2	i 7 28	+ 1	e 12·1	—
Potsdam	17·5	333	i 4 16	+ 5	i 7 47	+18	—	—
Besançon	17·7	310	i 4 13	0	i 7 28	− 5	—	—
Konigsberg	17·8	349	e 4 7?	− 8	—	—	17·1	—
Feldberg	17·9	321	e 4 19	+ 3	e 7 50	+12	—	—
Algiers	18·3	275	4 8	−13	i 7 20	−27	8·6	—
Baku	18·7	73	4 58	+33	i 8 23	+28	9·0	—
Hamburg	19·6	331	i 4 39	+ 3	e 8 13	− 2	—	15·6
Kucino	20·0	20	i 5 52	+71	i 8 19	− 4	—	—
Lund	20·2	339	4 49	+ 6	8 33	+ 6	—	—
Uccle	20·4	318	i 4 45	− 1	e 8 31	− 1	e 11·1	—
Copenhagen	20·5	337	e 4 51	+ 4	e 8 31	− 3	—	—
Paris	20·5	311	i 4 41	− 6	i 8 29	− 5	11·1	—
De Bilt	20·8	322	i 4 50	− 1	8 38	− 2	—	—
Pulkovo	22·5	6	i 5 18	+ 7	9 17	+ 2	13·6	—
Upsala	23·1	349	e 5 13	− 5	e 9 22	− 5	—	—
Kew	23·3	315	i 5 14	− 6	i 9 24	− 7	9·9	—
Granada	23·5	278	i 5 15	− 8	i 9 19	−16	—	12·2
Oxford	24·0	316	5 19	− 9	i 9 31	−13	—	—
Stonyhurst	25·6	319	—	—	e 9 11	−63	—	10·8
Edinburgh	26·9	323	—	—	11 7?	+28	—	—
Ekaterinburg	30·0	38	e 6 26	− 2	11 26	− 8	—	—
	30·0	38	i 6 51	+23	e 12 6	+32	i 16·8	—
Tashkent	33·3	70	—	—	i 12 24	− 5	i 17·7	—
Irkutsk	54·5	47	—	—	e 16 7?	−68	26·1	—

Additional readings: Rocca di Papa $PR_1Z = +3m.33s.$, $PR_1E = +5m.35s.$, $PR_2E = +6m.12s.$ Zagreb i = +3m.12s., +3m.34s., and +4m.18s., eS = +5m.52s. Graz i = +3m.20s. Jena iE = +4m.14s., +4m.19s., +4m.24s., and +4m.52s., iZ = +7m.24s., iEZ = +7m.41s., iN = +7m.43s. Copenhagen iN = +5m.12s. and +8m.38s., eE = iN = +9m.10s. Pulkovo i = +16m.11s. Granada i = +5m.22s. Tashkent i = +12m.56s.

Dec. 10d. 15h. 38m. 48s. Epicentre 8°·5N. 40°·0W.

A = +·758, B = −·636, C = +·148; D = −·643, E = −·766; G = +·113, H = −·095, K = −·989.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Rio de Janeiro	E.	31·6	186	—	—	e 12 12	+11	—	—
Sucre		37·1	223	i 7 33	+ 2	i 13 30	+ 5	20·5	23·4
La Paz		37·4	229	i 7 32	− 1	13 28	− 2	20·2	31·5
Granada		43·6	44	—	—	—	—	e 19·2	22·7
Georgetown	Z.	45·0	318	e 8 7	−26	e 20 41	?	23·1	—
Paris		53·8	35	—	—	—	—	e 25·2	—
St. Louis	E.	54·1	313	—	—	e 17 12	+ 2	—	26·2
Uccle		55·9	33	—	—	e 17 36	+ 3	e 26·2	—
De Bilt		57·0	32	—	—	—	—	e 26·2	—
Vienna	Z.	61·7	40	10 26	+ 3	—	—	—	—
Copenhagen		62·5	30	—	—	—	—	27·2	—
Pulkovo		72·8	30	—	—	—	—	e 31·2	—
Kucino		76·2	35	—	—	e 21 48	+ 9	38·2	41·0
Ekaterinburg		88·6	33	e 13 3	− 5	e 23 45	−14	37·2	—
Tashkent		98·6	45	—	—	—	—	—	55·9
Irkutsk		112·0	23	—	—	—	—	e 67·2	—

Additional readings and note: La Paz MN = +26·6m. Georgetown eZ = 15h.17m.55s. and 15h.30m.57s. the readings entered are given as eZ simply. Ekaterinburg i = +13m.4s. Irkutsk i = +54m.12s.?

Dec. 10d. Readings also at 6h. (Granada), 7h. (Simferopol and Theodosia), 8h. (near Lick), 9h. (near Mizusawa), 10h. (La Paz), 11h. (near Batavia), 12h. (near Tacubaya), 13h. (Georgetown), 15h. (Lick and near Mizusawa), 19h. (near Lick (2) and near Ksara).

Dec. 11d. 18h. 54m. 3s. Epicentre 36°·0S. 71°·5W.

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	0 55	+14	—	—	1·4	—
La Plata		11·1	88	3 2	+16	5 4	+ 7	6·4	—
Sucre		17·9	20	4 12	− 4	i 7 35	− 3	9·6	13·3
La Paz		19·7	10	4 36	− 1	i 8 12	− 5	10·0	12·9
Rio de Janeiro		27·8	70	—	—	e 10 50	− 5	15·5	18·1
Georgetown	Z.	75·1	355	—	—	e 42 11	?L	47·7	—
Ottawa		81·5	357	—	—	—	—	e 41·0	—
Copenhagen		115·9	39	—	—	—	—	62·0	—
Pulkovo		126·2	38	—	—	—	—	e 64·0	—
Ekaterinburg		142·1	41	—	—	—	—	60·0	—
Tashkent		149·2	68	—	—	—	—	e 75·0	87·8

Additional readings: La Paz iE = +8m.28s. Rio de Janeiro eE = +10m.52s. Ottawa L = +49·0m.

Dec. 11d. Readings also at 8h. (Port au Prince), 10h. (Moncalieri), 11h. (Vienna (2) and near Graz (2)), 12h. (Kobe and near Sumoto), 15h. (Frunse), 16h. (near Manila), 18h. (Mizusawa), 21h. (Taihoku), 22h. (near Batavia and Malabar).

Dec. 12d. 1h. 25m. 30s. Epicentre 30°·5N. 69°·0E. (as on 1927 May 21d., but compare 1928 Dec. 14d. 0h.).

A = +·309, B = +·804, C = +·508; D = +·934, E = −·358; G = +·182, H = +·474, K = −·862.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Dehra Dun		7·8	89	3 26	?S	(3 26)	− 5	4·5	4·7
Tashkent		10·8	1	i 2 53	+12	e 5 2	+12	—	8·4
Bombay		12·1	163	2 48	−12	6 1	+40	7·6	8·1
Frunse		13·2	18	e 2 23	−53	7 19	?L	(7·3)	—
Almata		14·2	24	3 40	+11	e 9 18	?	—	—
Hyderabad		15·7	144	—	—	8 6	?L	(8·1)	9·8
Baku		18·4	308	i 4 28	+ 6	e 8 4	+15	11·1	—
Calcutta	N.	19·0	110	7 22	?S	(7 22)	−40	9·7	—
Ekaterinburg		27·1	350	e 5 50	− 9	e 10 30	−13	14·5	18·1
Kucino		33·4	328	—	—	e 12 0	−30	18·9	—
Irkutsk		33·7	40	7 16	+14	—	—	19·5	—
Pulkovo		39·0	330	e 8 2	+16	—	—	21·5	24·3
Copenhagen		46·6	320	—	—	—	—	e 28·5	—

Additional readings: Dehra Dun S = +4m.2s. Kucino e = +14m.12s., $_{S}R_{1}$ −10s., and +17m.6s. Irkutsk e = +15m.30s.?.

Dec. 12d. 20h. 19m. 40s. Epicentre **27°·5S. 176°·8W.**
(deduced from the position 28°S. 177°·5W. of 1928 Oct. 19d.).

A = −·886, B = −·050, C = −·462; D = −·056, E = +·998; G = +·461, H = +·026, K = −·887.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	10·4	334	i 3 2	+26	i 5 56	+76	i 7·3	13·3
Apia		14·4	20	3 29	− 3	6 22	+ 4	—	8·3
Wellington	E.	15·4	204	i 3 45	+ 1	i 7 8	+27	i 9·3	15·7
	N.	15·4	204	i 3 45	+ 1	i 7 13	+32	i 9·0	12·1
Christchurch		18·2	205	—	—	—	—	9·0	12·9
Riverview		28·2	249	i 6 0	−10	i 11 0	− 3	e 13·9	15·5
Sydney	E.	28·2	249	6 8	− 2	11 20	+17	14·7	16·9
Melbourne		33·6	241	i 6 47	−14	i 12 32	− 2	16·7	17·8

Continued on next page.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Adelaide		38·6	249	i 7 29	−14	i 13 45	− 1	i 17·9	25·1
Honolulu T.H.		52·1	23	e 9 44	+23	i 16 48	+ 3	e 21·9	24·5
Perth		57·8	249	e 12 5	?PR_1	20 0	? Σ	29·1	34·1
Manila		73·6	296	e 11 43	+ 3	(i 21 43)	[+ 4]	i 21·7	—
Sumoto		76·9	320	e 12 2	+ 2	e 22 2	[0]	e 38·4	—
Kobe		77·1	321	i 12 1	− 1	22 28	? Σ	e 38·1	39·9
Mizusawa	E.	77·4	329	12 4	+ 1	21 34	−19	—	—
	N.	77·4	329	12 0	− 3	22 56	+ 3	37·2	—
Berkeley		82·9	40	e 12 31	− 4	e 22 57	+ 1	e 40·0	46·8
Lick		83·0	40	e 12 40	+ 4	e 23 0	+ 3	e 39·3	48·0
Taihoku		84·7	306	11 52	−54	22 32	−44	41·0	—
Hong Kong		85·0	300	12 31	−17	22 59	−20	e 39·3	47·0
Tucson		86·6	50	12 55	− 2	23 22	−15	37·4	—
Phu-Lien		88·4	294	13 2	− 5	e 23 26	[+ 8]	40·3	—
Denver	E.	94·6	46	—	—	—	—	e 45·3	52·3
La Plata		95·0	134	—	—	—	—	45·3	—
La Paz		98·1	113	e 13 54	− 7	i 24 25	[+11]	45·5	55·6
Sucre		99·0	116	e 13 50	−15	i 24 27	[+ 8]	46·2	61·0
Florissant		104·2	53	—	—	24 50	[+ 6]	—	56·4
St. Louis		104·3	53	—	—	e 24 50	[+ 6]	e 46·3	57·3
Calcutta	N.	104·3	287	17 57	[− 5]	28 27	?PS	—	—
Colombo		105·0	269	18 36	?PR_1	28 42	?PS	54·4	59·9
Irkutsk		105·1	321	e 17 2	?	i 24 55	[+ 7]	46·3	56·7
Chicago	E.	107·3	50	—	—	25 1	[+ 3]	e 57·3	62·1
	N.	107·3	50	—	—	e 26 31	−33	e 56·6	72·8
Cincinnati		108·5	54	i 48 0	?	—	—	53·4	66·4
Kodaikanal		108·6	272	23 56	?PR_2	—	—	57·8	71·9
Ann Arbor	E.	110·2	51	—	—	e 28 8	+38	e 63·1	—
Hyderabad		110·7	279	18 9	[−15]	29 0	?PS	52·1	67·3
Rio de Janeiro	E.	112·6	133	e 25 30	?[S]	(e 25 30)	[+10]	50·8	73·6
	N.	112·6	133	e 25 29	?[S]	(e 25 29)	[+ 9]	50·9	71·7
Charlottesville	N.	112·6	56	—	—	—	—	e 63·3	71·3
Toronto		113·6	50	—	—	e 27 20?	−39	e 58·3	81·8
Georgetown	Z.	114·0	56	i 19 47	?PR_1	—	—	e 55·6	77·0
Ithaca		115·3	52	—	—	—	—	63·3	—
Dehra Dun		115·7	292	15 54	+30	27 18	−58	43·3	82·3
Bombay		116·2	278	18 40	[− 2]	31 6	?	60·9	74·3
Ottawa		116·6	49	e 20 30	?PR_1	—	—	e 60·3	79·3
Tananarive		116·8	227	—	—	e 25 54	[+20]	e 56·5	63·3
Almata		119·8	305	e 19 26	?PR_1	—	—	—	—
Tashkent		125·1	302	e 15 38	−28	26 8	[+ 8]	—	75·3
Ekaterinburg		130·4	322	i 19 16	[− 3]	26 24	[+12]	59·3	74·6
Scoresby Sund		134·7	11	22 3	?PR_1	22 57	?	—	—
Baku		139·7	300	e 19 31	[− 8]	—	—	69·3	87·7
Kucino		142·4	327	i 19 37	[− 7]	—	—	63·1	88·3
Pulkovo		142·8	337	i 19 36	[− 9]	—	—	76·3	85·9
Helsingfors		144·2	340	19 41	[− 6]	e 30 27	?	60·3	—
Upsala		146·2	346	e 19 46	[− 4]	—	—	—	94·9
Bergen		147·1	358	20 5	[+14]	—	—	—	—
Theodosia		149·1	313	i 19 58	[+ 4]	—	—	—	—
Konigsberg		149·9	340	e 19 59	[+ 3]	—	—	e 79·0	90·9
Simferopol		149·9	314	e 19 56	[0]	—	—	—	—
Yalta		150·0	313	e 19 58	[+ 2]	—	—	—	—
Lund		150·9	348	20 2	[+ 5]	23 38	?PR_1	76·3	—
Copenhagen		151·0	349	19 54	(− 3)	27 47	?PR_2	73·3	86·9
Edinburgh		151·2	7	e 23 20?	?PR_1	—	—	80·3	97·3
Ksara	N.	151·3	292	19 55	[− 3]	—	—	79·9	—
Stonyhurst		153·3	7	e 20 10	[+10]	—	—	80·3	92·8
Hamburg		153·4	351	e 19 57	[− 3]	—	—	e 74·3	98·3
Bidston		153·7	8	20 20	[+19]	—	—	—	39·8
Potsdam		154·1	346	e 20 14	[+13]	i 32 53	?	e 86·7	103·3
De Bilt		155·4	357	20 2	[0]	—	—	e 78·3	94·0
Oxford		155·5	7	i 20 6	[+ 3]	—	—	e 83·3	90·9
Jena		155·8	347	i 20 0	[− 3]	—	—	e 83·3	104·8
Kew		155·9	5	i 20 2	[− 1]	—	—	80·3	90·7
Budapest		156·5	332	20 12	[+ 8]	—	—	e 83·8	90·8
Uccle		156·7	358	e 20 2	[− 2]	—	—	e 54·3	94·2
Vienna		156·8	337	i 20 1	[− 4]	—	—	e 82·3	88·8
Belgrade		157·9	326	e 19 49	[−17]	e 20 29	?[P]	—	—
Graz		158·2	337	e 20 2	[− 4]	—	—	e 83·3	95·8
Strasbourg		158·6	352	i 20 5	[− 2]	—	—	60·3	100·8
Paris		158·7	1	i 20 6	[− 1]	—	—	85·3	96·3
Zagreb		159·1	334	e 19 59	[− 8]	—	—	—	85·3
Innsbruck	N.E.	159·2	344	e 19 50	[−17]	—	—	e 82·4	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zurich		159·7	349	e 20 45	[+37]	e 24 22	?PR_1	e 91·3	—
Chur		160·1	347	e 20 6	[− 2]	e 24 27	?PR_1	—	—
Besançon		160·2	354	e 25 7	?PR_1	—	—	e 90·3	—
Neuchatel		160·3	352	e 20 5	[− 3]	e 24 22	?PR_1	e 98·3	—
Moncalieri		162·2	349	e 19 40	[−29]	32 13	?PR_2	73·8	108·5
Florence		162·5	340	i 20 9	[0]	30 20	?	85·3	90·3
Rocca di Papa		163·8	334	e 20 8	[− 3]	—	—	45·8	—
Toledo		166·3	24	e 20 13	[+ 1]	e 31 59	? Σ	e 51·9	101·7
Tortosa	N.	166·5	9	e 21 36	[+84]	—	—	e 77·3	98·0
San Fernando		168·0	39	18 26	[−108]	31 46	?	46·2	99·7
Alicante		168·7	15	e 20 7	[− 7]	e 31 45	?	e 46·3	—
Granada		168·7	29	20 15	[+ 1]	—	—	e 74·8	97·4
Malaga		168·7	33	e 19 57	[−17]	32 7	?	e 45·3	—
Almeria		169·5	25	20 11	[− 3]	30 55	?	—	—
Algiers		170·7	1	—	—	—	—	36·3	41·8

Additional readings: Riverview $PR_1 = +6$m.52s., $PR_2 = +7$m.6s., $SR_1 = +12$m.48s., $SR_2 = +13$m.17s., MN = +16·1m., MZ = +18·4m.; $T_0 =$ 20h.19m.3s. Melbourne $PR_1 = +8$m.7s. Adelaide e = +4m.50s., $iPR_1 = +9$m.2s. Honolulu T.H. i = +19m.0s. =[S]+8s., eLN = +23·1m. Perth $SR_1 = +24$m.20s. $=SR_2 - 2$s. Kobe iPE = +12m.2s., MZ = +39·0m. Berkeley eE = +13m.6s., MZ = +45·8m. Tucson PE = +12m.57s. Denver $PR_1E = +17$m.5s., $SR_1E = +31$m.20s. La Paz $PR_1E = +17$m.40s. PR_2? = +19m.57s., PSN = +25m.20s., iE = +26m.38s. $=PS - 5$s. and +27m.6s., $SR_1 = +30$m.23s., MN = +52·1m. Sucre i = +26m.44s. = PS − 9s., $SR_1 = +29$m.53s. Florissant $iPR_1Z = +18$m.36s., $iS_cP_cP_cSE = +25$m.37s., eEN = +26m.8s. St. Louis i = +24m.59s., iE = +25m.44s. = Σ + 6s., eN = +26m.16s., and +35m.20s. Calcutta ePE = +18m.34s. = $PR_1 - 8$s. Irkutsk $iPR_1 = +18$m.36s., PS = +27m.22s. Chicago PSE = +29m.22s., $eSR_2E = +37$m.46s., eN = +47m.40s., eE = +54m.20s.? Cincinnati LN = +58·0m., i = +58m.46s. Ann Arbor e?E = +35m.2s. = $SR_1 + 18$s., +50m.32s., and +54m.32s., eE = +57m.2s., eL?N = +67·2m. Rio de Janeiro SE = +34m.44s., SN = +35m.10s. $=SR_1 - 6$s. Charlottesville ePSN? = +28m.20s., $eSR_1N = +33$m.20s. Toronto eN = +55m.28s., MN = +75·3m. Georgetown eZ? = +17m.38s., eZ = +29m.20s., and +30m.30s. Ottawa eE = +24m.44s., +29m.40s., +36m.28s., and +54m.20s., eN = +57m.20s.? Tananarive eEN = +27m.15s., eE = +29m.57s. =PS − 12s., and +33m.24s., MN = +70·3m. Tashkent P′ = +19m.12s. =[P]+6s., $iPR_1 = +20$m.56s. Ekaterinburg $iPR_1 = +21$m.26s., PS = +31m.54s., $SR_1 = +38$m.32s. Baku $iP_cP_cS = +23$m.5s., $S_cP_cP_cS = +28$m.46s., PPS = +35m.20s. Kucino $iPR_1 = +22$m.47s., $iS_cP_cP_cS = +29$m.16s., iPS = +32m.49s., $SR_1 = +41$m.26s. Pulkovo $PR_1 = +22$m.50s., $iP_cP_cS = +23$m.14s., $SR_1 = +41$m.32s. Upsala $ePR_1N = +23$m.10s., MN = +84·9m. Konigsberg $ePR_1N = +23$m.26s., eE = +23m.47s., eE? = +28m.12s., ePPSE = +36m.18s., eN = +38m.44s., and +39m.22s., eLN = +77·9m., MN = +88·3m. Copenhagen $ePR_1NZ = +23$m.38s., $eS_cP_cP_cSE$ +30m.32s., eZ = +30m.50s., $eS_cP_cSPN = +33$m.55s., ePSE = +35m.38s., ePPSN = +36m.47s., eNZ = +40m.2s., $SR_1 = +43$m.14s., $SR_2 = +49$m.20s.?, eE = +52m.14s., MN = +90·0m. Ksara $SR_2N = +52$m.18s., $SR_1N = +57$m.29s., $SR_1N = +62$m.2s.; $T_0 =$ 20h.19m.13s. Stonyhurst $PR_1 = +24$m.10s., ? = +33m.2s., $SR_1 = +43$m.20s. De Bilt $iPR_1Z = +23$m.53s., eN = +24m.2s., eE = +44m.1s. $=SR_1 + 7$s., MN = +93·2m., MZ = +93·4m. Jena eN = +23m.20s., iE = +24m.9s. $=PR_1 - 3$s., eE = +27m.53s. $=PR_2 - 5$s. Kew $PR_1Z = +24$m.6s., $iSR_1Z = +43$m.58s., LZ = +82·3m. Uccle e = +34m.20s.?, MN = +91·6m. Vienna $PR_1 = +24$m.14s., $SR_1 = +38$m.43s. Strasbourg $iPR_1 = +24$m.21s., $iPR_2 = +28$m.0s., $ePR_2 = +29$m.30s., PS = +34m.54s., MN = +95·3m., MZ = +99·7m. Paris $ePR_1 = +24$m.20s.?, e = +31m.20s. $=PR_1 - 7$s., ?MN = +92·3m. Innsbruck PR_1NE? = +24m.20s.? Moncalieri L = +62·6m., MN = +110·4m. Florence P′ = +21m.5s., $PR_1 = +24$m.50s., $PR_2 = +28$m.20s. Rocca di Papa e = +15m.32s. and +17m.20s., iZ = +21m.3s., iE = +21m.33s., $PR_1 =$ +24m.51s. and +28m.37s. $=PR_2 - 14$s. Toledo MNW = +98·5m. San Fernando MN = +98·7m. Granada i = +20m.57s., +23m.9s., +25m.17s. = $PR_1 - 11$s., +31m.7s., and +32m.1s., MZ = +103·6m. Algiers MN = +50·3m.

Dec. 12d. Readings also at 0h. (Tucson), 2h. (Ekaterinburg and Tucson), 3h. (Tashkent), 13h. (Ravensburg), 18h. (Adelaide, Wellington, and Suva), 19h. (near Wellington), 20h. (Riverview), 21h. (near La Paz and near Nagasaki), 23h. (La Paz (2), Sucre (2), and near Granada).

Dec. 13d. 3h. 5m. 16s. Epicentre 44°·8N. 81°·7E.

A = +·102, B = +·702, C = +·705; D = +·990, E = −·144;
G = +·102, H = +·698, K = −·710.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent		9·7	253	e 2 24	− 2	e 4 16	− 5	4·2	5·1
Irkutsk		16·6	55	e 3 59	− 1	7 6	− 3	i 8·8	—
Ekaterinburg		17·8	320	i 4 15	0	7 37	+ 1	8·7	10·8
Baku		23·7	271	e 5 24	− 1	e 9 41	+ 3	—	—
Bombay		27·0	199	—	—	e 11 44?	+63	—	—
Kucino		29·5	308	—	—	—	—	i 15·5	17·7
Pulkovo		33·7	318	8 10	+68	14 0	+84	19·7	20·6
Konigsberg	N.	39·4	308	—	—	—	—	e 20·8	25·7
Upsala		40·1	317	—	—	—	—	e 20·8	—
Lund		43·2	311	—	—	—	—	22·7	—
Copenhagen		43·6	311	—	—	—	—	25·9	26·7
Potsdam		44·3	306	—	—	—	—	i 23·8	—
Hamburg		45·7	308	—	—	—	—	e 22·7	24·7
Strasbourg		48·5	304	—	—	—	—	e 26·7	—
De Bilt		48·9	308	—	—	—	—	e 26·7	31·0
Uccle		49·9	307	—	—	—	—	25·7	—
Kew		52·2	310	—	—	—	—	e 22·7	—

Additional readings: Kucino e = +13m.8s. and +14m.27s. Konigsberg eE = +20m.53s. and +23m.20s., ME = +24·0m. Copenhagen +22m.56s. Strasbourg eL = +29·7m. De Bilt MN = +27·5m.

Dec. 13d. 19h. 36m. 14s. Epicentre 51°·0N. 6°·5E. (given by Gutenburg, see extract from "Gerlands Beitrage zin Geophysik" (1929 Bd. 23 S. 22-32.) *Das Rheinlandbeben vom 13 Dez 1928.*

A = +·625, B = +·071, C = +·777; D = +·113, E = −·994;
G = +·772, H = +·088, K = −·629.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
De Bilt		1·4	325	0 21	0	e 0 45	+ 6	—	—
Uccle		1·4	264	0 19	− 2	0 46	+ 7	—	—
Feldberg		1·5	120	e 0 20	− 3	(i 0 39)	− 3	i 0·6	—
Strasbourg		2·6	161	e 0 47	+ 6	1 7	− 5	—	—
Jena	E.	3·2	90	e 0 56	+ 6	i 1 19	− 9	e 1·5	1·7
Paris		3·4	230	e 0 52	− 1	e 1 39	+ 5	—	—
Hamburg	N.	3·4	38	e 1 8	+15	—	—	—	—
Besançon		3·8	184	—	—	e 1 48	+ 4	—	—
Zurich		3·9	159	i 0 51	−10	i 1 54	+ 7	—	—
Neuchatel		4·0	175	e 0 53	− 9	e 1 35	−15	—	—

Additional readings: Feldberg eN = +21s. and +26s. Strasbourg SR_2? = +1m.37s. Jena iE = +1m.10s.

Dec. 13d. 20h. 6m. 6s. Epicentre 35°·5N. 141°·0E. (as on 1926 Dec. 12d.; and near the position 35°·4N. 140°·9E. given in Geophysical Magazine, Tokyo, Vol. IV, No. 4).

A = −·633, B = +·512, C = +·581; D = +·629, E = +·777;
G = −·451, H = +·365, K = −·814.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		3·4	265	e 0 48	− 5	i 1 30	− 4	1·8	2·0
Mizusawa	E.	3·6	1	0 47	− 9	1 43	+ 4	—	—
	N.	3·6	1	0 51	− 5	1 46	+ 7	—	—
Osaka		4·6	261	1 15	+ 4	—	—	2·4	3·6
Kobe		4·9	262	e 1 6	−10	2 17	+ 3	2·5	2·7
Toyooka		5·0	273	i 1 21	+ 4	—	—	2·4	2·8

Continued on next page,

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Sumoto	5·2	258	1 34	+14	2 8	−14	2·6	2·9
Hukuoka	8·9	261	e 4 3	?S	(e 4 3)	+ 2	e 5·0	5·1
Irkutsk	30·8	315	e 6 54	+18	—	—	e 13·9	—
Amboina	41·0	201	—	—	—	—	i 23·6	47·3
Tashkent	54·9	300	e 9 37	− 1	i 17 18	− 2	—	33·8
Ekaterinburg	55·9	319	9 34	−11	e 17 29	− 4	24·9	—
Baku	68·7	306	—	—	—	—	e 34·9	—

Additional readings: Nagoya MN = +1·9m. Osaka MN = +3·4m. Kobe MN = +2·6m., MZ = +2·8m. Toyooka MN = +2·6m. Sumoto MZ = +2·8m., MN = +3·2m. Hukuoka eS? = +4m.28s. Irkutsk e = +10m.54s. Amboina L = +30·9m.

Dec. 13d. Readings also at 0h. (Rio de Janeiro), 1h. (Baku and Tashkent), 2h. (Perth), 3h. (Riverview and Melbourne), 4h. (near La Paz), 5h. (near Barcelona and Tortosa), 18h. (Baku, Ekaterinburg, Irkutsk, Manila, Tashkent, and near Calcutta), 21h. (Florissant).

Dec. 14d. 0h. 28m. 20s. Epicentre 30°·5N. 69°·0E. (as on 1928 Dec. 12d.).

A = +·309, B = +·804, C = +·508; D = +·934, E = −·358; G = +·182, H = +·474, K = −·862.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Dehra Dun		7·8	89	2 40	+42	3 46	+15	5·0	7·9
Tashkent		10·8	1	i 2 55	+14	i 5 2	+12	5·3	7·7
Bombay		12·1	163	2 49	−11	5 39	+18	6·9	8·2
Frunse		13·2	18	3 24	+ 8	—	—	—	—
Almata		14·2	24	2 37	−52	—	—	—	—
Hyderabad		15·7	144	3 43	− 5	6 46	− 2	7·7	• 8·7
Baku		18·4	308	i 4 30	+ 8	i 8 8	+19	10·7	14·9
Calcutta	E.	19·0	110	4 35	+ 6	8 0	− 2	10·3	13·0
Kodaikanal		21·8	157	—	—	—	—	11·4	12·2
Colombo		25·7	155	5 18	−27	9 28	−48	13·6	15·2
Ekaterinburg		27·1	350	5 53	− 6	10 32	−11	14·2	17·7
Ksara	N.	28·1	286	e 6 22	+13	—	—	16·1	—
Kucino		33·4	328	—	—	e 12 16	−14	17·9	23·4
Irkutsk		33·7	40	e 7 11	+ 9	e 12 22	−14	19·7	23·6
Phu-Lien		35·1	98	—	—	11 40	−77	—	—
Pulkovo		39·0	330	e 7 50	+ 4	e 13 38	−14	21·7	25·1
Hong Kong		41·0	92	—	—	—	—	e 22·9	24·7
Konigsberg		41·9	320	—	—	—	—	e 28·2	30·7
Upsala	N.	44·8	327	—	—	—	—	e 20·7	—
Lund		46·1	321	—	—	—	—	25·7	—
Copenhagen		46·6	320	—	—	15 32	− 4	e 27·7	42·3
Hamburg		47·8	317	—	—	—	—	e 25·7	—
Strasbourg		49·1	310	—	—	(15 40?)	−27	15·7	—
Manila	E.	50·1	96	—	—	e 15 15	−65	—	—
De Bilt		50·6	315	—	—	e 20 40?	?SR,	e 30·7	36·7
Uccle		51·2	314	—	—	e 20 40?	?SR,	e 28·7	—
Paris		52·5	310	—	—	—	—	e 36·7	37·7
Kew	N.	54·0	314	—	—	—	—	e 32·9	—
Stonyhurst		55·1	317	—	—	—	—	e 34·7	—
Edinburgh		55·3	320	e 4 40?	?	—	—	—	—
Granada		59·2	298	—	—	e 16 40?	?	33·7	35·2
San Fernando	E.	61·3	298	—	—	—	—	—	41·6
Scoresby Sund		61·7	339	—	—	—	—	25·7	—
Georgetown	Z.	103·7	335	—	—	—	—	e 56·5	—
Florissant	N.	108·0	345	—	—	—	—	e 60·6	71·7

Additional readings: Kucino e = +16m.6s. Konigsberg eN = +25m.16s., eE = +25m.40s. Copenhagen eSR,N = +18m.40s. ?, eLN = +25·7m., MN = +30·7m., MZ = +42·2m. De Bilt eLN = +24·7m., MN = +32·0m. San Fernando MN = +42·9m. Georgetown eLZ = +63·8m. Florissant eN = +62m.43s.

Dec. 14d. 1h. 58m. 4s. Epicentre 2°·8N. 96°·0E. (as on 1927 March, 19d.).

A = −·104, B = +·993, C = +·049; D = +·995, E = +·105;
G = −·005, H = +·049, K = −·999.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Batavia		14·1	130	—	—	e 5 36	−34	i 8·9	—
Kodaikanal		19·8	293	12 30	?L	—	—	(12·5)	—
Phu-Lien		20·7	29	e 4 41	− 8	—	—	10·6	—
Hyderabad		22·6	312	—	—	—	—	—	30·1
Hong Kong		26·0	41	—	—	e 10 48	+26	e 14·6	17·9
Manila	E.	27·3	63	—	—	—	—	—	16·4
Bombay		27·8	307	7 45	+99	12 33	+98	16·3	28·2
Tashkent		45·3	332	i 8 36	+ 1	i 15 17	− 2	e 18·6	25·9
Irkutsk		49·9	7	e 9 5	− 1	—	—	26·6	—
Baku		56·2	320	—	—	—	—	e 25·8	—
Ekaterinburg		60·9	340	i 10 24	+ 6	e 18 41	+ 6	28·6	38·4
Kucino		70·2	330	—	—	—	—	40·6	44·8
Pulkovo		75·5	333	—	—	—	—	e 41·6	45·5
Copenhagen		84·0	326	—	—	—	—	49·6	51·8
De Bilt		88·3	323	—	—	—	—	e 52·6	—
Uccle		88·8	321	—	—	—	—	e 52·6	—
Kew		91·6	323	—	—	—	—	e 51·6	—
Granada		95·9	309	—	—	—	—	e 51·6	57·1
Scoresby Sund		96·3	343	—	—	—	—	55·6	—
Georgetown	Z.	137·8	351	—	—	—	—	77·9	—

Additional readings and note: Batavia readings are given without phase. Irkutsk e = +20m.10s. = SR_1 + 6s., and +25m.6s. Baku e = +29m.27s.

Dec. 14d. Readings also at 1h. (Baku, Almata, Frunse, Ekaterinburg, Tashkent, Hyderabad, Bombay, Copenhagen, and De Bilt), 2h. (Calcutta, Almata, Frunse, and Tashkent), 6h. (Nagasaki and near Granada), 8h. (Bombay), 10h. (near Zagreb), 11h. (Florissant), 13h. (La Paz, near Batavia, and Malabar), 14h. (Riverview, Sydney, Melbourne, Ekaterinburg, and near Wellington), 15h. (Baku, Pulkovo, Almata, Frunse, and Tashkent), 20h. (Bombay, Baku (2), Ekaterinburg (2), Tashkent, and Cincinnati) 23h. (Baku, Ekaterinburg, Pulkovo, Tashkent, Georgetown, Riverview, Sydney, Melbourne, Wellington, Apia, and Suva).

Dec. 15d. 18h. 1m. 54s. Epicentre 31°·2S. 69°·6W. (as on 1923 April 24d.).

A = +·298, B = −·802, C = −·518; D = −·937, E = −·349;
G = −·181, H = +·486, K = −·855.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		2·4	203	0 50	+13	1 10	+ 4	1·4	—
La Plata		10·5	114	2 44	+ 7	4 53	+10	5·7	—
Sucre		12·8	19	i 3 11	+ 1	i 5 45	+ 6	6·6	7·6
La Paz		14·8	5	3 31	− 5	6 16	−11	7·6	8·3
Rio de Janeiro	E.	24·9	77	e 5 33	− 4	10 26	+25	12·8	—
	N.	24·9	77	e 5 32	− 5	10 1	.0	12·6	—
Ekaterinburg		137·4	38	e 19 19	[−16]	—	—	59·1	—
Frunse		149·4	57	e 19 54	[− 1]	—	—	—	—
Almata		151·1	56	e 20 0	[+ 3]	—	—	—	—
Irkutsk		158·5	10	—	—	—	—	e 87·1	—

Additional readings: La Paz iSN = +6m.19s., i = +7m.25s., MN = +10·2m. Ekaterinburg i = +22m.8s. = PR_1 − 10s., +22m,32s., and +29m,29s., e = +40m.21s, = SR_1 + 1s,

Dec. 15d. Readings also at 0h. (Baku, Bombay, Irkutsk (2), De Bilt, Uccle, Jena, Granada, Florissant, Ottawa, Toronto, and Chicago), 1h. (San Fernando), 4h. (Ekaterinburg, Pulkovo, Yalta, near Theodosia, Sebastopol, and Simferopol), 7h. (Ekaterinburg, near La Paz, Sucre, near Almata, Frunse, and Tashkent), 8h. (near Zurich), 12h. (Port au Prince, Sebastopol, Simferopol, and Yalta), 14h. (Ekaterinburg, La Paz, near Sucre, and near Almata, Frunse, and Tashkent), 15h. (Baku, Irkutsk, and Pulkovo), 16h. (near Tacubaya), 17h. (near Belgrade and Zagreb), 18h. (Baku, Irkutsk, and Pulkovo), 19h. (Baku and Irkutsk), 20h. (Manila, La Paz, Georgetown, Ottawa, Toronto, Chicago, St. Louis, and near Tucson), 21h. (near Kobe and Sumoto), 22h. (Rocca di Papa), 23h. (Ottawa, Toronto, and La Paz).

Dec. 16d. 18h. 43m. 6s. Epicentre 35°·0S. 75°·0W. (as 1926 Sept. 9d.).

$A = +\cdot212$, $B = -\cdot791$, $C = -\cdot574$; $D = -\cdot966$, $E = -\cdot259$; $G = -\cdot148$, $H = +\cdot554$, $K = -\cdot819$.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		3·9	68	1 0	− 1	(1 39)	− 8	1·6	—
La Plata		14·0	94	—	—	—	—	6·6	—
Sucre		18·2	31	4 15	− 4	7 35	− 9	9·4	10·2
La Paz		19·5	20	4 38	+ 3	8 14	+ 1	10·4	13·7
Rio de Janeiro	E.	30·2	75	—	—	e 11 7	−30	17·2	—
Georgetown	Z.	74·0	359	—	—	—	—	e 61·0	—
Granada		98·0	50	—	—	—	—	51·4	57·4
Kew	Z.	108·3	40	—	—	—	—	e 60·9	—
De Bilt		111·5	41	—	—	—	—	e 58·9	—
Copenhagen		117·0	40	—	—	—	—	64·9	—
Pulkovo		127·2	37	—	—	e 39 8	?SR_1	66·9	—
Kucino		130·8	43	—	—	—	—	e 70·8	73·3
Ekaterinburg		143·2	40	e 23 7	?PR_1	—	—	69·9	—
Tashkent		151·4	67	—	—	—	—	e 83·9	93·6
Irkutsk		162·7	2	—	—	—	—	94·9	—

Additional readings: La Paz SN = +8m.16s. Rio de Janeiro eN = +11m.16s., LN = +17·4m.

Dec. 16d. Readings also at 0h. (near Puebla, Tacubaya, and Guadalajara), 1h. (Florissant and St. Louis), 2h. (Georgetown and Tucson), 4h. (Manila), 13h. (La Paz), 15h. (near Taihoku), 18h. (La Paz and near Algiers (2)), 22h. (La Paz, Rocca di Papa, Almata, Frunse, and Tashkent).

Dec. 17d. Readings at 0h. (Granada), 3h. (Suva), 4h. (Adelaide, Riverview, Wellington, Melbourne, Florissant, St. Louis, Ottawa, Toronto, and Georgetown), 5h. (Granada and San Fernando), 6h. (Florissant, St. Louis, Chicago, Toronto, Ottawa, Georgetown, and near Tucson), 8h. (Ekaterinburg, Suva, Vienna, Sucre, and La Paz), 12h. (Bidston), 16h. (La Paz, La Plata, Sucre, Rio de Janeiro, and Santiago), 17h. (La Paz), 22h. (near Barcelona and Tortosa).

Dec. 18d. 3h. 39m. 27s. Epicentre 43°·5N. 90°·5E.

$A = -\cdot006$, $B = +\cdot725$, $C = +\cdot688$; $D = +1\cdot000$, $E = +\cdot009$; $G = -\cdot006$, $H = +\cdot688$, $K = -\cdot725$.

The Russian stations give epicentre 47°·5N. 96°·0E.

	△	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Almata	9·8	273	2 26	− 1	4 28	+ 5	—	—
Frunse	11·6	272	2 49	− 4	5 24	+15	—	—
Irkutsk	12·7	42	e 6 48	?L	8 13	?	9·6	—
Tashkent	15·8	269	i 3 38	−11	i 7 13	+23	—	8·2
Ekaterinburg	23·0	316	5 18	+ 1	e 9 24	− 1	11·6	—
Baku	30·0	278	—	—	e 12 24	+50	e 14·1	—
Kucino	35·2	309	—	—	—	—	e 18·8	—

Kucino gives also e = +20m.52s.

Dec. 18d. 9h. 16m. 24s. Epicentre 52°·0N. 103°·0E. (as on 1924 Nov. 9d.).

A = −·139, B = +·600, C = +·788 ; D = +·974, E = +·225 ;
G = −·177, H = +·768, K = −·616.

Uncertain.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk	0·8	72	i 0 51	+39	—	—	i 1·3	—
Almata	19·5	254	e 8 48	?L	—	—	(e 8·8)	—
Frunse	21·1	256	e 10 14	?L	—	—	(e 10·2)	—
Ekaterinburg	24·7	298	i 5 35	0	e 9 57	0	11·6	14·5
Tashkent	25·2	258	—	—	e 10 16	+ 9	i 12·9	14·4
Kucino	37·2	302	—	—	—	—	e 20·0	—
Baku	37·7	275	—	—	—	—	e 18·8	21·9
Pulkovo	39·5	314	—	—	—	—	20·6	—
Copenhagen	49·7	315	—	—	—	—	e 27·6	—
De Bilt	55·3	314	—	—	—	—	e 30·6	—

Additional readings and note : Tashkent e = +11m.43s. ; readings given without phase. Baku L = +20·6m.

Dec. 18d. Readings also at 1h. (Rocca di Papa, Pompeii, Venice, and near Zagreb), 6h. (Matuyama, Toyooka, near Sumoto, and Kobe), 10h. (Santiago), 12h. (Baku and Ekaterinburg), 16h. (near La Paz and near Mizusawa), 18h. (Apia), 19h. (La Paz), 21h. (Melbourne), 22h. (Riverview), 23h. (near Almata and Frunse).

Dec. 19d. 4h. 42m. 27s. Epicentre 31°·5N. 143°·5E.

A = −·685, B = +·507, C = +·522 ; D = +·595, E = +·804 ;
G = −·420, H = +·311, K = −·853.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	7·9	346	—	—	3 26	− 8	—	—
Irkutsk		35·2	318	e 7 19	+ 4	—	—	20·6	—
Tashkent		58·1	304	10 5	+ 5	i 18 8	+ 8	e 27·6	37·2
Ekaterinburg		60·3	322	i 10 11	− 3	e 18 24	− 3	—	—
Kucino		72·4	325	—	—	—	—	e 38·0	46·4
Baku		72·7	307	—	—	—	—	e 38·6	—
Pulkovo		73·6	331	—	—	—	—	e 44·6	—
Copenhagen		83·3	335	—	—	—	—	44·6	—
De Bilt		88·7	337	—	—	—	—	e 48·6	—
Uccle		90·1	337	—	—	—	—	e 47·6	—
La Paz		147·6	70	e 20 1	[+ 9]	—	—	—	—

No additional readings.

Dec. 19d. 11h. 37m. 0s. Epicentre **7°·0N. 125°·0E.**

(as on 1928 July 15d.).

A = −·569, B = +·813, C = +·122 ; D = +·819, E = +·574 ;
G = −·070, H = +·100, K = −·993.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	8·5	333	e 2 18	+ 9	i 4 10	+20	—	—
Amboina	11·1	163	i 2 48	+ 2	6 42	?	i 13·5	—
Taihoku	18·3	349	4 38	+17	7 55	+ 8	10·1	11·7
Hong Kong	18·5	327	4 30	+ 7	(7 50)	− 1	7·8	12·0
Batavia	22·4	235	i 5 6	− 4	11 51	?	14·0	—
Malabar	22·5	231	i 5 14	+ 3	i 9 37	+22	—	—
Phu-Lien	22·5	310	i 5 11	0	i 9 20	+ 5	11·0	13·4
Zi-ka-wei	24·4	353	5 31	− 1	10 0	+ 8	13·4	16·8
Nagasaki	26·1	9	6 5	+16	10 50	+26	—	17·8
Hukuoka	27·0	10	e 5 53	− 5	10 0	−41	12·5	19·1
Matuyama	27·8	14	e 14 8	?L	—	—	i 17·5	19·7

Continued on next page,

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sumoto		28·8	17	e 5 54	−22	(e 10 53)	−20	e 10·9	14·0
Kobe		29·2	17	6 16	− 4	10 59	−21	12·8	18·7
Osaka		29·3	18	6 3	−18	(11 36)	+14	11·6	21·0
Toyooka		30·0	16	i 6 27	− 1	i 11 31	− 3	i 13·5	21·8
Nagoya		30·2	20	e 6 30	0	—	—	13·6	16·5
Mizusawa	E.	35·2	24	7 18	+ 3	15 59	?	22·6	—
Calcutta	E.	38·5	299	7 37	− 5	13 33	−12	19·7	25·8
	N.	38·5	299	7 43	+ 1	13 33	−12	17·1	23·2
Perth		39·9	192	e 8 0	+ 6	i 13 30	−35	19·0	24·5
Ootomari		42·5	19	8 1	−14	13 52	−50	14·7	28·1
Adelaide		43·9	164	e 8 8	−17	i 14 50	−11	i 20·0	26·2
Colombo		44·8	272	8 20	−12	15 10	− 2	28·8	30·6
Hyderabad		46·5	287	8 34	−10	15 24	−11	24·1	32·1
Kodaikanal		47·1	278	7 30	−78	—	—	12·1	31·1
Riverview		47·8	150	e 8 51	− 2	i 15 51	0	e 23·1	30·8
Sydney	E.	47·8	150	8 0	−53	16 18	+27	30·2	32·3
Irkutsk		48·3	343	i 8 54	− 2	15 58	0	22·0	31·7
Melbourne		48·5	160	i 9 0	+ 3	i 15 50	−10	23·4	31·2
Dehra Dun		49·7	305	8 56	− 9	15 56	−19	20·2	25·5
Bombay		52·0	288	9 19	− 1	16 42	− 2	27·2	36·2
Almata		55·4	319	e 9 52	+10	—	—	28·0	—
Frunse		56·9	318	10 3	+12	18 14	+29	35·0	—
Suva	E.	58·3	117	—	—	17 42	−21	26·2	—
	N.	58·3	117	10 30	+29	e 17 54	− 9	24·0	27·4
Tashkent		60·0	314	i 10 21	+ 9	18 44	+21	—	43·0
Apia		66·1	108	—	—	(20 0?)	+22	20·0	22·2
Wellington	E.	66·4	142	11 31	+37	19 51	+ 9	29·7	48·2
	N.	66·4	142	11 30	+36	19 48	+ 6	29·2	30·8
Christchurch		66·4	145	e 12 15	+81	17 35	?	21·4	—
Ekaterinburg		70·3	328	i 11 21	+ 2	i 20 36	+ 6	—	—
Baku		74·2	310	i 11 51	+ 8	i 21 23	+ 7	—	—
Honolulu T.H.	E.	75·6	70	—	—	i 22 11	?PS	e 37·8	47·5
	N.	75·6	70	—	—	e 21 6	−27	e 31·4	32·6
Tananarive		80·5	250	12 48	+26	i 22 24	− 5	36·6	43·4
Kucino		82·5	325	i 12 36	+ 3	i 22 54	+ 2	—	—
Theodosia		84·8	316	i 12 59	+12	23 12	− 5	—	—
Ksara	N.	85·3	304	12 58	+ 8	23 20	− 2	35·8	—
Simferopol		85·7	315	e 13 2	+10	23 8	−19	—	—
Yalta		85·7	315	e 12 59	+ 7	e 23 19	− 8	—	—
Sébastopol		86·1	315	13 10	+16	23 24	− 7	—	—
Pulkovo		86·3	330	i 12 53	− 2	23 25	− 8	39·0	50·8
Helsingfors		88·8	331	e 13 23	+14	i 24 20	+19	42·7	—
Sitka		89·3	33	—	—	i 24 30	+24	e 38·0	46·4
Lemberg	E.	91·7	320	e 17 12	[− 2]	e 24 0	? Σ	e 46·1	56·7
	N.	91·7	320	e 17 6	[− 8]	e 23 48	[+10]	e 42·7	54·5
Entebbe		92·5	271	—	—	24 0	? Σ	—	59·1
Königsberg		92·5	326	—	—	—	—	—	57·2
Upsala		92·5	332	e 13 30	0	e 24 19	? Σ	e 42·0	52·2
Belgrade	E.	95·2	317	e 17 39	?PR$_1$	e 31 26	?SR$_1$	e 48·7	63·2
Budapest		95·4	319	e 13 36	− 9	24 44	? Σ	38·0	57·0
Lund		96·1	329	14 25	+35	—	—	47·0	—
Copenhagen		96·6	329	13 43	− 9	25 10	−12	e 44·0	53·4
Vienna		96·9	320	13 48	− 6	24 34	? Σ	e 45·0	61·0
Potsdam		97·4	325	i 17 49	?PR$_1$	i 25 2	? Σ	e 45·5	57·0
Bergen		97·8	335	—	—	e 27 0?	?PS	—	43·0
Graz		97·8	320	e 17 41	?PR$_1$	i 28 7	?	44·0	63·9
Zagreb		97·9	318	e 13 41	−18	e 24 26	[+14]	e 45·0	61·6
Hamburg		98·6	327	e 13 53	−10	i 24 31	[+14]	e 46·0	54·0
Laibach		98·8	319	e 17 57	?PR$_1$	e 31 58	?SR$_1$	e 47·5	56·2
Victoria	E.	98·8	39	15 20	+76	24 30	[+12]	42·0	63·4
Jena		98·9	325	e 14 18	+13	e 25 52	+ 7	e 42·0	49·5
Johannesburg		99·3	244	—	—	—	—	32·0	—
Scoresby Sund		99·4	350	18 6	?PR$_1$	24 42	[+21]	—	—
Venice		100·5	319	e 15 0?	+47	25 0?	? Σ	57·0	—
Pompeii		100·6	314	e 18 0?	?PR$_1$	e 33 0?	?SR$_1$	53·0	67·0
Naples	E.	100·7	315	e 18 12	?PR$_1$	e 30 0	?	63·0	70·0
Feldberg	N.	101·0	325	e 14 7	− 8	e 25 30	? Σ	40·7	56·6
Ravensburg		101·3	323	e 14 48	+31	e 27 0	?PS	e 47·0	62·8
Rocca di Papa		101·5	315	e 14 30	+12	—	—	e 49·1	70·4
Chur		101·7	322	e 14 4	−15	—	—	—	—
Florence		101·7	318	e 14 0	−19	—	—	51·5	62·0
De Bilt		102·0	326	e 19 18	?	—	—	e 47·0	57·2
Strasbourg		102·1	323	e 14 2	−19	—	—	53·0	58·0
Zurich		102·1	320	e 14 16	− 5	—	—	e 39·0	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Uccle		103·0	325	i 14 18	− 7	e 24 54	[+16]	e 46·0	64·2
Berkeley		103·2	48	e 18 24	?PR$_1$	e 24 54	[+15]	e 43·2	52·2
Neuchatel		103·3	320	e 14 17	−10	—	—	—	—
Moncalieri		103·6	320	15 22	+54	28 54	+145	51·0	61·4
Besançon		103·7	321	—	—	e 24 51	[+10]	39·0	54·0
Lick		103·8	48	e 17 51	[− 9]	—	—	e 43·7	52·4
Edinburgh		104·0	330	e 18 50	?PR$_1$	i 27 45	?PS	45·0	57·4
Stonyhurst		104·9	331	—	—	25 10	[+23]	50·0	58·6
Paris		105·0	325	e 15 3	+29	e 26 48	+ 6	46·0	66·0
Kew		105·2	328	e 14 22	−13	e 25 18	[+30]	52·1	58·0
Bidston		105·5	331	18 46	?PR$_1$	26 45	− 2	45·2	60·2
Puy de Dôme		106·2	322	—	—	—	—	41·0	—
Cape Town		107·6	237	—	—	25 12	[+13]	—	57·3
Barcelona		108·8	318	—	—	e 35 0	?SR$_1$	e 50·0	66·3
Bagnères		109·2	320	—	—	—	—	33·0	—
Tortosa	N.	110·2	318	e 18 20	[− 3]	—	—	52·6	67·2
Algiers		110·3	313	e 19 25	?PR$_1$	—	—	52·0	56·0
Alicante		112·1	316	e 19 32	?PR$_1$	e 30 56	?	e 46·7	73·7
Toledo		113·7	319	—	—	e 27 42	−18	e 34·9	56·8
Tucson	E.	114·0	50	e 20 17	?PR$_1$	—	—	e 56·2	57·2
Almeria		114·1	316	e 19 43	?PR$_1$	e 29 35	?PS	38·6	71·0
Denver		114·4	40	—	—	—	—	47·0	56·0
Granada		114·8	317	e 15 49	+30	—	—	52·4	62·8
Malaga		115·6	316	e 19 38	?PR$_1$	29 58	?PS	36·3	69·4
San Fernando	E.	117·0	317	20 18	?PR$_1$	30 23	?PS	—	65·4
Chicago	E.	122·9	29	e 23 36	?	—	—	e 51·7	64·2
Florissant	N.	123·7	33	—	—	e 28 21	−56	e 53·0	—
St. Louis		124·0	33	e 21 6	?PR$_1$	—	—	e 51·5	60·0
Ann Arbor	E.	124·2	24	e 20 30	?PR$_1$	—	—	e 53·8	67·2
Ottawa		124·4	18	e 21 0	?PR$_1$	—	—	e 57·0	70·3
Toronto		124·8	21	e 20 16	?PR$_1$	—	—	55·0	69·6
Cincinnati	Z.	126·4	28	—	—	21 0	?PR$_1$	65·5	75·0
Ithaca		126·8	19	e 18 53	[−17]	—	—	58·8	—
Harvard		128·5	14	e 21 36	?PR$_1$	—	—	e 64·0	—
Georgetown	E.	129·7	21	e 19 46	[+29]	e 34 0	?	e 58·4	80·5
	N.	129·7	21	e 19 43	[+26]	—	—	—	80·3
	Z.	129·7	21	e 19 26	[+ 9]	—	—	e 61·0	80·3
Charlottesville	N.	129·9	23	—	—	—	—	e 50·5	87·8
Balboa Heights		150·8	57	—	—	e 38 0?	?	—	—
La Plata		152·0	175	20 10	[+11]	—	—	72·4	—
Rio de Janeiro	E.	160·4	214	e 20 30	[+22]	29 26	?	45·0	—
	N.	160·4	214	e 20 12	[+ 4]	30 16	?	45·1	—
La Paz		164·0	127	i 20 20	[+ 9]	28 10	?	84·0	95·6
Sucre		164·4	141	20 29	[+18]	27 18	?	80·8	91·8

Additional readings and notes: Amboina i = +8m.34s. Taihoku MN = +13·9m. Hong Kong S = +6m.40s. Batavia PZ = +5m.8s., i = +5m.48s. Phu-Lien MN = +14·2m. Zi-ka-wei PR$_1$N = +6m.43s., PR$_2$N = +7m.11s., PSN = +10m.21s., PSE = +10m.23s., SR$_1$E = +11m.1s., SR$_2$E = +11m.29s., LN = +12·9m., MN = +27·6m. Hukuoka SR$_1$ = +10m.57s., MN = +15·0m. Sumoto S = +8m.25s., MZ = +15·5m., MN = +17·3m. Kobe PZ = +6m.19s., MZ = +17·5m., MN = +21·0m. Osaka MN = +17·7m. Toyooka MN = +19·8m. Adelaide iP = +8m.22s., i = +8m.46s., +11m.26s., +16m.5s., and +18m.19s. =SR$_1$ − 9s., iL = +22·3m., MN = +28·6m. Riverview PR$_1$ = +10m.52s., PR$_2$ = +11m.35s., PS = +16m.0s., SR$_1$ = +19m.27s., SR$_2$ = +20m.52s., SR$_3$ = +21m.14s., MZ = +29·9m., MN = +32·9m.; T$_o$ = 11h.36m.56s. Suva PR$_1$E = +12m.24s., PR$_1$N = +12m.42s., SR$_1$E = +19m.0s.?, iSR$_1$N = +20m.54s.; T$_o$N = 11h.38m.12s. Apia PR$_1$ = +11m.33s., S = +16m.47s.; T$_o$ = 11h.36m.51s. Wellington SR$_2$N = +26m.13s., T$_o$E = 11h.38m.9s., T$_o$N = 11h.38m.10s. Baku i = +11m.54s. and +20m.53s. Honolulu T.H. ePR$_1$E = +15m.50s., iSN = +21m.57s., eSR$_1$E = +25m.4s. Tananarive P$_c$P = +13m.15s., PR$_1$ = +16m.3s., PR$_2$ = +18m.36s., PS = +22m.45s., PPPS = +23m.13s., S$_c$S = +23m.35s., SR$_1$ = +27m.39s., eN = +27m.54s., eE = +29m.24s., SR$_2$ = +31m.3s., SR$_3$ = +32m.37s., N = +33m.54s., +34m.17s., and +34m.30s., MN = +44·2m. Kucino iPR$_1$ = +15m.54s. Pulkovo PR$_1$ = +16m.50s. Sitka iPSE = +26m.6s., eE = +33m.46s., eLN = +38·1m. Upsala e = +17m.3s. =PR$_1$ − 20s. Budapest MN = +53·5m. Copenhagen eZ = +14m.30s., eE = +15m.48s., PR$_1$EZ = +17m.46s., eE =iZ = +18m.26s., ePR$_2$N = +20m.13s., eEZ = +23m.20s., eS$_c$P$_c$SN = +23m.58s., eS$_c$P$_c$SE = +24m.3s., ePSEZ = +26m.42s., eN = +29m.54s., eE = +30m.24s., eSR$_1$EN = +31m.48s., eSR$_2$NZ = +35m.36s., eNZ = +39m.6s., eLN = +43·0m., MZ = +60·0m. Vienna P′ = +17m.26s., S$_c$P$_c$P = +21m.38s., iN = +23m.16s., PS = +28m.35s., PPS = +29m.47s., PPP′ = +35m.39s. Potsdam iE =

Continued on next page.

+19m.33s., iN = +25m.54s., MN = +54·0m. Graz iSR$_1$ = +32m.21s., i = +36m.33s. =SR$_2$ −21s., MN = +55·4m. Zagreb eP′ = +17m.36s., ePR$_1$ = +17m.52s., ePS = +25m.29s., e = +31m.30s., and +36m.0s.?, eL = +47·5m., MNW = +55·3m. Hamburg iSR$_1$N = +32m.36s., MZ = +61·0m. Laibach e = +18m.55s., and +38m.53s. Jena eZ = +18m.0s. =PR$_1$ −7s., eN = +25m.52s. and +32m.34s. =SR$_1$ +10s., eE = +38m.48s., eN = +39m.15s. Feldberg eN = +20m.58s. =PR$_3$ −7s., eE = +24m.42s. =[S] +13s., ME = +57·4m. Ravensburg P′E = +18m.19s., PR$_1$E = +19m.20s., PR$_2$E = +22m.11s., PS = +29m.40s., SR$_1$ = +35m.5s., SR$_2$ = +40m.0s., MN = +63·2m. Rocca di Papa PR$_1$ = +18m.30s., PR$_2$ = +26m.20s., PR$_3$ = +32m.54s., LN = +51·1m. Chur ePR$_1$ = +18m.21s. Strasbourg iPR$_1$ = +18m.20s., PR$_2$ = +21m.28s., PR$_3$ = +24m.10s. =[S] −24s., PS = +27m.38s., SR$_1$ = +33m.45s., MZ = +62·0m. Zurich iP′ = +18m.30s. Uccle e = +18m.42s. =PR$_1$ +8s., +28m.54s., and +33m.30s. =SR$_1$ +14s., MN = +57·0m., MZ = +64·2m. Berkeley eN = +19m.26s., eZ = +27m.49s. =PS +9s., +30m.5s., +31m.12s., eN = +33m.4s. =SR$_1$ −14s., eLZ = +47·4m. Neuchatel iPR$_1$ = +18m.37s. Moncalieri MN = +63·4m. Besançon ePR$_1$ = +18m.28s. Lick eN = +18m.46s. =PR$_1$ +8s., and +19m.55s., eZ = +19m.17s., eLN = +43·3m. Stonyhurst PR$_1$ = +19m.0s., SR$_1$ = +34m.5s., ? = +43m.35s. Paris e = +18m.56s. =PR$_1$ +10s., MN = +52·0m. Kew iPR$_1$Z = +18m.39s., iZ = +29m.37s., iSR$_1$EN = +33m.43s., LZ = +58·0m., MN = +59·4m., MZ = +66·1m. Puy de Dôme ePR$_1$ = +18m.0s. =[P] −9s. Barcelona e = +21m.25s., ? = +35m.45s., MN = +61·6m. Tortosa ME = +68·3m. Algiers MN = +71·0m. Alicante MN = +63·1m. Toledo PR$_1$ = +19m.38s., MNW = +57·1m. Tucson ePR$_1$N = +20m.17s., ePSE = +29m.16s., ePSN = +29m.21s., eSR$_1$N = +35m.46s., eSR$_2$N = +39m.37s., LN = +46·8m., MN = +48·7m. Almeria MN = +72·6m., MZ = +72·7m. Denver ePR$_1$E? = +19m.48s., ePR$_2$E = +22m.39s., ePPS = +30m.31s., eSR$_1$ = +35m.49s., eSR$_2$E = +40m.16s., eSR$_3$ = +44m.0s. Granada iPR$_1$ = +19m.57s., PR$_2$ = +21m.40s., i = +22m.30s., +26m.58s. = Σ +15s., +28m.37s., +31m.28s., +33m.33s., +36m.27s., +38m.26s., +41m.29s., and +43m.50s., MZ = +75·0m. Malaga MN = +72·7m. San Fernando MN = +65·9m. Chicago eE = +34m.48s. Florissant ePR$_1$N = +21m.1s., iPS = +31m.6s., iSR$_1$N = +38m.6s. St. Louis i = +21m.33s., eE = +22m.24s., iPSN = +31m.30s., eSR$_1$ = +38m.0s., eSR$_2$E = +42m.45s., eSR$_2$N = +42m.50s., eLN = +51·0m., MN = +64·0m. Ann Arbor e?E = +12m.24s. and +16m.12s. =P +10s., e?N = +21m.6s., eN = +23m.54s., e?E = +27m.12s., eE = +28m.12s. eN = +31m.18s., eE = +31m.54s., and +35m.0s., eN = +40m.48s., eLN = +50·7m., MN = +74·0m. Ottawa e = +26m.33s. =PR$_3$ −3s., PS = +31m.18s., SR$_1$ = +38m.18s., SR$_2$ = +43m.4s., SR$_3$N = +46m.45s., eE = +51m.0s., eN = +53m.38s., MN = +68·0m. Toronto e = +21m.0s.? =PR$_1$ +4s., eE = +30m.0s., SR$_1$ = +38m.0s.?, SR$_2$ = +43m.8s., LN = +57·5m., MN = +76·3m. Cincinnati PSZ? = +25m.0s., PPPSZ = +33m.0s., SR$_1$Z = +41m.42s. Ithaca e = +28m.1s. = Σ +7s., and +49m.15s. Harvard iE = +39m.10s. and +59m.51s. Georgetown iZ = +21m.39s. =PR$_1$ +11s., +23m.0s., and +23m.53s., PR$_1$Z = +24m.20s. Charlottesville ePR$_1$N = +22m.20s., PSN = +32m.0s.?, eSR$_1$N = +39m.0s.?, eSR$_2$N = +44m.0s.? La Paz i = +23m.38s., i = +30m.6s., PR$_1$E = +30m.40s., S$_c$P$_c$P$_c$S = +33m.16s., S$_c$P$_c$SP = +37m.15s., SR$_1$N = +48m.25s., e = +54m.18s., SR$_2$ = +55m.16s., LN = +82·3m., MN = +96·3m. Sucre P$_c$P$_c$S = +24m.15s., PR$_1$ = +25m.23s., PR$_2$ = +29m.39s., iS$_c$P$_c$P$_c$S = +31m.51s., S$_c$P$_c$SP = +34m.46s., i = +40m.12s., SR$_1$ = +45m.21s., SR$_2$ = +50m.29s., SR$_3$ = +55m.21s., e = +63m.27s., and +69m.52s.

Dec. 19d. 15h. 15m. 50s. Epicentre 21°·4N. 143°·5E.

A = −·748, B = +·554, C = +·365; D = +·595, E = +·804;
G = −·293, H = +·217, K = −·931.

A depth of focus 0·040 has been assumed.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		−1·0	14·9	339	e 3 20	− 5	e 6 29	+23	—	—
Osaka		−1·0	15·0	334	2 57	−29	(5 40)	−28	5·7	6·6
Sumoto		−1·0	15·0	332	3 22	− 4	(5 49)	−19	5·8	—
Kobe		−1·0	15·1	333	3 24	− 3	(6 7)	− 3	6·1	6·2
Toyooka		−1·1	16·0	334	i 3 35	− 3	(6 25)	− 5	6·4	6·5
Nagasaki		−1·2	16·6	316	4 0	+16	6 55	+14	—	—
Mizusawa	E.	−1·3	17·8	354	4 0	+ 1	7 3	− 4	—	—

Continued on next page.

	Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	−1·8	22·4	256	e 4 49	+ 1	—	—	—	—
Irkutsk	−3·5	43·1	323	i 7 42	− 9	i 13 50	−10	—	—
Batavia	−3·6	45·3	237	i 8 4	− 5	i 14 30	− 1	—	—
Frunse	−4·6	60·4	310	e 9 43	− 2	—	—	—	—
Tashkent	−4·7	64·4	308	(i 10 22)	+12	i 18 44	+25	—	—
Ekaterinburg	−4·8	68·3	325	i 10 42	+ 7	i 19 21	+14	—	—
La Paz	—	149·7	86	19 31	[−24]	—	—	—	—
Sucre	—	153·0	90	19 35	[−25]	—	—	—	—

Additional readings and note : Sumoto S = +4m.33s. Batavia P = +8m.6s. Tashkent i = +20m.10s. =[S]−18s., P has been *increased* by 2m.

Dec. 19d. Readings also at 0h. (Almata, Frunse (2), and Tashkent), 2h. (near Kobe and Sumoto), 10h. (Tucson), 14h. (Manila and Tananarive), 15h. (Ekaterinburg), 17h. (near Kobe and Sumoto), 23h. (Manila, Pompeii, and Rocca di Papa).

Dec. 20d. 6h. 34m. 42s. Epicentre 35°·5S. 72°·0W (as on 1925 Aug. 11d.).

A = +·252, B = −·774, C = −·581 ; D = −·951, E = −·309 ;
G = −·179, H = +·552, K = −·814.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		2·3	28	0 42	+ 6	—	—	1·2	—
La Plata		11·5	91	2 53	+ 1	5 2	− 5	6·0	—
Sucre		17·5	21	4 11	0	i 7 27	− 2	8·9	11·4
La Paz		19·3	11	4 38	+ 5	8 7	− 1	10·0	12·1
Rio de Janeiro	N.	28·0	71	e 5 49	−19	10 40	−19	13·6	15·5
	N.	28·0	71	e 5 58	−10	10 41	−18	13·5	15·5
Apia		89·7	255	—	—	—	—	e 61·3	—
Kew		107·0	38	—	—	—	—	e 55·3	—
De Bilt		110·3	40	—	—	—	—	e 56·3	—
Copenhagen		115·8	38	—	—	—	—	56·3	—
Baku		134·7	65	e 23 1	?PR_1	e 34 17	?	e 74·8	—
Ekaterinburg		142·0	40	e 19 41	[− 2]	—	—	66·3	—
Tashkent		149·3	67	i 20 4	[+10]	—	—	—	92·4
Irkutsk		163·0	8	—	—	(32 18)	?	e 88·3	—

Additional readings and notes : La Paz MN = +13·2m. Baku e = +36m.22s. Ekaterinburg L = +42·3m. Tashkent e = +20m.11s., i = +23m.37s. =PR_1 +4s. Irkutsk readings are given as separate L's.

Dec. 20d. Readings also at 2h. (Manila, near Kobe, and Sumoto), 3h. (near Amboina and near Mizusawa), 5h. (Batavia, Malabar, and Perth), 6h. (near Mizusawa), 7h. (Vienna, Chur, Zurich, and near Zagreb), 10h. (near Granada), 11h. (Apia and Taihoku), 15h. (near Nagasaki and Hukuoka), 16h. (La Paz), 17h. (Manila and Mizusawa), 22h. (Taihoku, near Neuchatel, and Zurich).

Dec. 21d. 1h. 40m. 36s. Epicentre 35°·0N. 142°·0E. (as on 1928 Jan. 24d.).

A = −·646, B = +·504, C = +·574 ; D = +·616, E = +·788 ;
G = −·452, H = +·353, K = −·819.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	4·2	351	1 0	− 5	1 50	− 5	—	—
Nagoya		4·2	274	e 1 2	− 3	(1 50)	− 5	1·8	2·4
Osaka		5·4	268	1 21	− 2	(2 30)	+ 2	2·5	3·5
Kobe		5·7	268	1 46	+18	(2 37)	+ 1	2·6	2·8
Sumoto		5·9	265	e 1 47	+16	(2 49)	+ 8	2·8	3·2
Toyooka		5·9	283	e 1 34	+ 3	(1 2 33)	− 8	1 2·6	3·0
Ekaterinburg		56·8	320	—	—	—	—	27·4	—
Kucino		68·8	325	—	—	—	—	e 38·3	—
Baku		69·6	308	—	—	—	—	e 35·9	—

Additional readings : Nagoya MN = +2·1m. Osaka MN = +3·1m. Kobe MZ = +2·9m. Toyooka MN = +2·6m.

Dec. 21d. 23h. 17m. 35s. Epicentre 33°·2N. 131°·0E. (as on 1928 Nov. 5d.).

A = −·549, B = +·632, C = +·548.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Hukuoka	0·6	308	0 12	+ 3	0 23	+ 6	(0·4)	0·5
Nagasaki	1·1	243	0 17	0	0 31	0	—	0·6
Matuyama	1·6	66	i 0 44	+20	i 0 49	+ 4	—	1·2
Sumoto	3·4	69	0 59	+ 6	—	—	1·7	1·8
Kobe	3·8	66	e 0 54	− 5	—	—	e 2·0	3·4
Osaka	4·0	66	1 8	+ 6	—	—	2·3	2·4

Hukuoka gives also MN = +0·4m.

Dec. 21d. Readings also at 0h. (La Paz, La Plata, Sucre, and Santiago), 3h. (Manila), 4h. (Tashkent), 5h. (Sucre, Tucson, near Tacubaya, Merida, Guadalajara, and Vera Cruz), 6h. (Tucson, Victoria, De Bilt, Scoresby Sund, near Puebla, and near Granada (2)), 7h. (Vera Cruz and near Tacubaya), 10h. (Tucson, near Tacubaya, near La Paz, and near Tashkent), 11h. (near Vera Cruz, near Granada (2), and Almeria), 13h. (La Paz and near Granada), 18h. (Taihoku), 19h. (near Matuyama, Hukuoka (3), and Nagasaki), 20h. (Tucson), 22h. (Granada).

Dec. 22d. Readings at 0h. (Apia, Suva, and near Ksara), 1h. (near Hukuoka and near Nagasaki), 2h. (La Paz), 3h. (near Hukuoka), 5h. (La Paz, near Sebastopol, Simferopol, and Yalta), 7h. (near Kobe and Sumoto), 10h. (Apia, Frunse, and Rocca di Papa), 14h. (Copenhagen, De Bilt, Scoresby Sund, Granada, and near Sucre), 15h. (La Paz, Sucre, Baku, Ekaterinburg, Irkutsk, Nagoya, and near Sumoto), 17h. (Ekaterinburg, Irkutsk, Nagoya, and near Mizusawa), 18h. (Baku and Tashkent), 19h. (Sebastopol, near Simferopol, and near Tacubaya), 21h. (Mizusawa), 22h. (Sebastopol, Simferopol, and Yalta), 23h. (Almata, Frunse, and near Tashkent).

Dec. 23d. Readings at 6h. (Suva, near Sumoto, and near Tacubaya), 10h. (near Tacubaya), 11h. (Simferopol and Yalta), 16h. (near Irkutsk), 18h. (Manila).

Dec. 24d. Readings at 1h. (near Belgrade), 7h. (near Algiers), 8h. (Santiago), 13h. (Irkutsk, Ekaterinburg, Phu-Lien, near Barcelona, and near Taihoku), 15h. (Sucre (2), and near La Paz), 16h. (Taihoku), 19h. (near Tacubaya), 20h. (Sucre).

Dec. 25d. 6h. 7m. 0s. Epicentre 54°·7S. 30°·0W. (as on 1927 July 25d.).

A = +·500, B = −·289, C = −·816; D = −·500, E = −·866;
G = −·707, H = +·408, K = −·578.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
La Plata	27·6	304	6 18	+14	—	—	28·0	—
Rio de Janeiro N.	33·3	337	—	—	(e 12 21)	− 8	e 12·4	18·5
Sucre	44·6	310	8 28	− 2	15 3	− 7	23·8	27·0
La Paz	48·1	308	e 8 59	+ 4	i 15 48	− 7	23·1	30·8
Granada	94·7	20	—	—	—	—	e 49·0	52·2
Baku	116·8	56	—	—	—	—	e 59·0	—
Ekaterinburg	133·4	47	—	—	—	—	73·0	—

Sucre gives also PR_1 = +10m.11s., SR_1 = +18m.21s.

Dec. 25d. 12h. 3m. 44s. Epicentre 37°·3N. 4°·0W.

A = +·793, B = −·055, C = +·606;

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Granada	0·3	110	i 0 6	+ 1	i 0 11	+ 3	i 0·2	0·5
Malaga	0·7	210	0 10	− 1	0 17	− 3	4·3	—
Almeria	1·4	110	i 0 21	0	(0 37)	− 2	0·6	—
Toledo	2·5	0	0 53	+14	1 42	+33	—	—

Toledo gives also i = +1m.31s.

Dec. 25d. Readings also at 0h. (near Sumoto), 1h. (near Wellington), 2h. (Wellington, La Paz, and near Entebbe), 3h. (Suva), 4h. (near Tacubaya), 10h. (near Kobe (2) and Sumoto (2)), 18h. (Frunse).

Dec. 26d. 21h. 32m. 38s. Epicentre 6°·0N. 99°·0W.

$A = -\cdot156$, $B = -\cdot982$, $C = +\cdot105$; $D = -\cdot988$, $E = +\cdot156$; $G = -\cdot016$, $H = -\cdot103$, $K = -\cdot995$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		11·2	11	2 19	−28	4 49	−10	—	5·7
Tacubaya		13·4	1	3 37	+19	5 55	+ 2	6·2	7·6
Vera Cruz		13·5	12	(3 28)	+ 8	—	—	(7·2)	(8·7
Tucson	E.	28·5	339	6 14	+ 1	11 8	0	15·0	—
	N.	28·5	339	6 14	+ 1	11 5	− 3	14·8	—
St. Louis	N.	33·6	14	i 6 59	− 2	i 12 30	− 4	—	—
Florissant		33·7	14	i 7 0	− 2	i 12 28	− 8	—	—
Cincinnati		35·6	21	i 7 2	−16	e 12 37	−27	—	—
Chicago		37·2	15	i 7 22	−10	i 13 13	−14	e 15·7	—
Lick		37·5	330	i 7 26	− 8	—	—	—	—
La Paz		38·0	129	i 7 36	− 2	13 39	+ 1	20·9	24·2
Georgetown	E.	38·4	29	e 7 50	+ 9	e 13 49	+ 5	—	—
	N.	38·4	29	e 7 50	+ 9	e 13 57	+13	—	—
	Z.	38·4	29	7 45	+ 4	i 13 46	+ 2	e 19·4	22·5
Ann Arbor	E.	38·7	20	e 7 46	+ 2	e 13 46	− 2	—	—
	N.	38·7	20	e 7 52	+ 8	e 13 52	+ 4	e 19·8	—
Toronto		41·4	24	i 8 2	− 4	i 14 25	− 2	19·9	—
Sucre		41·7	130	8 3	− 6	i 14 30	− 1	21·9	28·4
Ottawa		44·2	25	i 8 30	+ 3	i 15 7	+ 2	e 21·9	—
Victoria	E.	47·1	340	—	—	—	—	27·7	28·4
Rio de Janeiro	E.	61·7	121	—	—	e 18 56	+12	30·8	—
	N.	61·7	121	—	—	e 18 44	0	e 31·1	—
Scoresby Sund		80·0	20	—	—	22 46	+23	39·4	—
San Fernando	E.	88·7	55	—	—	—	—	—	48·3
Granada		90·6	54	i 12 41	−38	—	—	43·0	45·9
Kew		90·7	39	—	—	e 22 22?	?	—	—
De Bilt		93·8	38	—	—	e 26 4	?PS	e 45·4	52·8
Copenhagen		96·8	32	—	—	—	—	44·4	—
Rocca di Papa		101·8	46	—	—	(e 25 34)	? Σ	e 25·6	33·2
Pulkovo		103·1	25	—	—	e 25 22	? Σ	—	—
Ekaterinburg		115·0	12	—	—	—	—	53·4	64·6
Irkutsk		118·4	344	—	—	—	—	e 66·4	—
Baku		125·5	29	e 21 10	?PR_1	e 33 27	?	e 64·4	—
Tashkent		131·5	11	19 40	[+18]	—	—	e 62·4	75·2
Bombay		153·8	17	20 2	[+ 1]	24 7	?PR_1	26·9	30·0

Additional readings and note: Vera Cruz readings have been *increased* by 3m. Tucson $PR_1 = +7$m.9s. St. Louis $eN = +8$m.0s. $= PR_1 - 4$s., $iPR_1N = +8$m.9s., $eN = +14$m.8s. $= SR_1 - 18$s. Florissant $eNZ = +8$m.7s. $= PR_1 + 1$s., $eE = +13$m.52s. Cincinnati $ePEN = +7$m.7s., $iPR_1 = +8$m.19s., $iS = +12$m.46s. Chicago $ePR_1N = +8$m.42s., $iPR_1E = +9$m.2s., $iLN = +16{\cdot}4$m. Lick $eE = +7$m.31s., $eN = +9$m.4s. La Paz $PR_2 = +9$m.14s., $SR_2 = +16$m.16s. $= SR_1 + 12$s. Georgetown $PR_1Z = +9$m.10s., $PR_1EN = +9$m.23s., $SR_1Z = +16$m.38s., $SR_2Z = +17$m.13s. Ann Arbor $eE = +9$m.16s. $= PR_1 + 9$s., $iN = +9$m.22s., $eN = +16$m.58s. $= SR_2 - 8$s., and $+17$m.16s. $= SR_2 - 5$s. Toronto $PR_1 = +9$m.52s., $SR_1 = +17$m.37s., $LN = +25{\cdot}4$m.; $T_0 = 21$h.32m.36s. Sucre $iPN = +8$m.7s., $SR_1 = +17$m.37s. Ottawa $ePR_1 = +10$m.12s., $eSR_1 = +18$m.25s.; $T_0 = 21$h.32m.47s. Victoria $LN = +27{\cdot}4$m. San Fernando $MN = +49{\cdot}6$m. Copenhagen $ePS = +26$m.46s., $eSR_1 = +31$m.58s., $eSR_2N = +36$m.10s. Ekaterinburg $PR_1 = +19$m.48s., $PS = +29$m.46s., $SR_1 = +35$m.58s. Irkutsk $PR_1 = +20$m.20s., $S_cP_cP_cS = +26$m.46s., $SR_2 = +40$m.58s. Tashkent $iP_cP_cPS = +23$m.12s., $ePPS = +34$m.16s.

Dec. 26d. Readings also at 0h. (near La Paz), 3h. (near Tacubaya), 9h. (Manila and Santiago), 10h. (near Sebastopol, Simferopol, Theodosia, and Yalta), 11h. (Almata and near Rocca di Papa), 18h. (near Mizusawa and near Tacubaya), 21h. (Strasbourg), 22h. (Almata).

Dec. 27d. 4h. 45m. 56s. Epicentre 61°·3S. 50°·0W.

A = +·309, B = −·368, C = −·877 ; D = −·766, E = −·643 ;
G = −·564, H = +·672, K = −·480.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Plata		26·9	346	5 56	− 1	—	—	16·1	—
Rio de Janeiro	E.	38·7	10	e 7 47	+ 3	—	—	e 17·2	—
	N.	38·7	10	e 7 38	− 6	—	—	e 16·7	—
Sucre		43·6	339	i 8 22	− 1	e 14 51	− 5	21·6	29·1
La Paz		46·6	336	8 46	+ 2	i 15 41	+ 5	23·6	27·1
Tananarive	E.	77·0	106	e 12 25	+24	e 22 34	+45	e 39·2	42·7
	N.	77·0	106	e 12 28	+27	e 22 34	+45	e 40·5	41·9
Melbourne		80·2	192	—	—	i 22 29	+ 4	36·1	43·3
Riverview		83·3	197	—	—	e 22 59	− 1	e 40·2	50·7
Entebbe		86·5	83	—	—	—	—	48·1	—
Charlottesville	N.	102·0	337	—	—	—	—	e 52·4	70·9
San Fernando	E.	104·0	39	—	—	—	—	—	61·0
Granada		105·4	37	—	—	—	—	e 57·1	—
Florissant		105·4	329	—	—	—	—	e 55·1	—
Toronto		107·6	338	—	—	28 4?	?PS	—	—
Ottawa	N.	108·7	341	—	—	e 25 4	[− 1]	e 54·1	—
Rocca di Papa		114·8	47	—	—	—	—	e 64·0	69·5
Strasbourg		119·1	40	—	—	—	—	e 60·1	—
Kew		119·5	33	—	—	—	—	e 60·1	—
Uccle		120·2	36	—	—	—	—	e 66·1	—
De Bilt		121·5	36	—	—	—	—	e 65·1	68·3
Bombay		122·0	110	—	—	—	—	e 59·1	—
Yalta		125·4	60	—	—	—	—	e 74·2	—
Copenhagen		126·8	39	—	—	—	—	66·1	—
Baku		129·1	75	e 19 34	[+18]	e 21 54	?PR_1	70·1	—
Tashkent		139·0	89	—	—	e 29 53	?	e 67·1	91·8
Ekaterinburg		145·8	65	19 57	[+ 7]	—	—	68·1	—
Zi-ka-wei		149·4	166	(19 56)	[+ 1]	—	—	—	74·3
Irkutsk		163·4	111	e 20 22	[+12]	—	—	e 82·1	—

Additional readings and notes: Sucre SR_1 = +18m.7s. La Paz PR_1 = +10m.35s., PR_2 = +11m.13s., PSN = +16m.21s., iSR_1 = +19m.15s., MN = +27·8m. Tananarive eN = +16m.25s. ; all readings are given without phase. Riverview MN = +50·4m. Charlottesville eN = +46m.4s. and +57m.52s. ; readings having been *diminished* by 1h. San Fernando MN = +58·2m. Florissant eZ = +41m.12s. Ottawa eN = +28m.52s. = PS + 8s., and +34m.28s. = SR_1 + 1s., eLE = +47·1m. Tashkent e = +30m.8s., i = +34m.3s. Ekaterinburg i = +20m.2s. and +58m.20s. Zi-ka-wei P′Z = +20m.24s. = [P] + 29s., P_cP_cSZ = +24m.8s. ; the reading entered as [P] is given as P_cPZ, the earliest time recorded. Irkutsk e = +24m.48s. = PR_1 − 10s., and +28m.4s.?.

Dec. 27d. Readings also at 3h. (near Sumoto), 5h. (near Almata), 16h. (near Granada and Malaga), 19h. (Wellington and near Tacubaya), 20h. (near Sebastopol (2), Simferopol (2), Theodosia (2), Yalta (2), and near Irkutsk), 21h. and 22h. (Sebastopol, Simferopol, Theodosia, and Yalta), 23h. (Ekaterinburg, Irkutsk, Tashkent, Phu-Lien, and near Tacubaya).

Dec. 28d. 14h. 19m. 27s. Epicentre 7°·2N. 123°·0E.

(This epicentre is given by Manila and De Bilt. A position approximately 7°·5N. 124°·7E. would fit the observations more closely.)

A = −·540, B = +·832, C = +·125 ; D = +·839, E = +·545 ;
G = −·068, H = +·105, K = −·992.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		7·7	345	e 1 59	+ 2	—	—	i 4·0	—
Amboina		12·0	154	i 4 16	+77	i 4 57	−22	—	—
Hong Kong		17·4	332	4 2	− 8	7 23	− 4	8·2	12·7
Taihoku	E.	17·9	356	e 4 17	+ 1	8 5	+27	10·2	13·4
Phu-Lien		20·9	312	4 58	+ 6	e 8 54	+12	10·0	13·8
Batavia		21·0	230	i 5 3	+10	i 9 14	+30	12·6	—
Malabar		21·1	227	5 10	+16	i 9 19	+33	—	—

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zi-ka-wei		24·0	357	e 5 20	− 8	9 40	− 4	—	—
Hukuoka		27·3	14	e 4 18	−103	10 3	−43	—	18·1
Sumoto		29·3	20	i 5 20	−61	(i 11 21)	− 1	i 11·4	12·2
Kobe		29·7	21	6 13	−12	—	—	12·6	13·1
Osaka		29·8	21	6 52	+26	(12 17)	+46	12·3	16·2
Toyooka		30·4	19	7 7	+35	e 12 48	+67	e 18·6	—
Nagoya		30·8	23	e 6 7	−29	—	—	12·6	—
Mizusawa	E.	35·9	26	7 12	− 9	12 14	−55	15·0	—
	N.	35·9	26	7 9	−12	12 15	−54	14·9	
Calcutta	E.	36·6	299	7 18	− 9	13 30	+12	19·1	22·3
	N.	36·6	299	7 11	−16	13 51	+33	19·6	24·4
Perth		39·8	190	i 7 48	− 5	i 13 53	−10	i 19·9	—
Colombo		42·8	272	8 17	0	14 47	+ 2	21·7	29·5
Ootomari		43·0	19	e 7 42	−36	(e 15 2)	+14	e 15·0	—
Adelaide		44·6	162	i 8 28	− 2	i 15 2	− 8	i 20·0	28·4
Hyderabad		44·6	288	8 34	+ 4	15 14	+ 4	23·0	33·6
Kodaikanal		45·1	277	11 51	?PR_1	(14 57)	−19	15·0	36·4
Irkutsk		47·6	346	e 8 46	− 5	15 37	−12	24·6	27·4
Dehra Dun		48·0	306	9 5	+11	15 59	+ 5	20·1	26·6
Riverview		48·9	149	i 9 1	+ 2	i 16 15	+10	e 26·0	31·0
Sydney	E.	48·9	149	7 51	−68	16 3	− 2	26·8	30·0
Melbourne		49·4	157	i 9 4	+ 1	i 16 13	+ 2	24·0	29·4
Bombay		50·0	289	9 21	+14	16 16	− 3	25·2	26·3
Frunse		55·4	320	e 9 54	+12	—	—	56·2	—
Tashkent		58·4	315	i 10 17	+16	18 37	+33	29·6	40·0
Suva	E.	60·2	117	i 10 51	+38	18 9	−17	—	—
	N.	60·2	117	9 45	−28	18 3	−23	30·8	—
Christchurch		67·7	144	e 11 17	+15	20 14	+16	33·1	—
Wellington	E.	67·8	141	11 0	− 3	i 20 6	+ 6	30·8	39·9
	N.	67·8	141	i 11 9	+ 6	i 19 58	− 2	29·4	31·3
Ekaterinburg		69·1	329	e 11 16	+ 4	i 20 23	+ 8	31·6	41·6
Baku		72·5	311	i 11 48	+15	—	—	—	—
Honolulu T.H.	E.	77·4	70	e 15 39	?PR_1	e 22 9	+16	e 35·6	37·8
	N.	77·4	70	—	—	e 21 57	+ 4	e 36·2	—
Tananarive		78·8	250	e 12 21	+ 9	22 16	+ 6	38·2	43·2
Theodosia		83·3	315	e 12 47	+ 9	e 22 53	− 7	—	—
Ksara	N.	83·6	304	e 13 45	+65	23 7	+ 2	35·1	43·1
Yalta		84·1	315	e 12 51	+ 8	e 23 5	− 4	—	—
Simferopol		84·1	315	e 12 48	+ 5	—	—	—	—
Sebastopol		84·6	315	e 12 49	+ 3	—	—	—	—
Pulkovo		85·2	330	12 48	− 1	23 15	− 6	41·6	53·0
Helsingfors		87·7	330	—	—	e 23 27	[+14]	43·6	—
Helwan		87·8	300	13 8	+ 4	23 33	−17	—	56·1
Entebbe		90·5	271	12 13	−66	24 33	+ 4	—	58·6
Upsala		91·4	331	—	—	e 23 33?	[− 3]	e 42·6	54·8
Budapest		94·0	320	e 14 33?	+55	24 6	[+14]	e 47·0	61·6
Lund		94·9	328	—	—	24 10	[+14]	46·6	—
Copenhagen		95·4	328	13 39	− 6	e 25 0	−10	e 47·6	52·8
Vienna		95·5	321	e 13 37	− 9	24 16	[+16]	e 46·6	59·6
Graz		96·4	319	—	—	e 24 17	[+13]	44·6	63·8
Zagreb		96·5	318	e 13 48	− 4	e 24 21	[+16]	e 48·2	54·2
Bergen		96·8	334	—	—	—	—	e 51·6	60·6
Hamburg		97·4	327	e 13 51	− 5	i 24 27	[+17]	e 46·6	53·6
Jena		97·5	325	—	—	—	—	e 45·6	53·0
Scoresby Sund		98·8	349	20 33?	?PR_2	24 39	[+21]	46·6	—
Naples	E.	99·2	314	e 16 21	?	—	—	55·6	—
Feldberg	N.	99·7	325	—	—	—	—	e 53·6	60·6
Hohenheim		99·8	323	—	—	—	—	e 64·6	—
Victoria	E.	99·8	37	24 34	?[S]	(24 34)	[+11]	43·4	49·5
	N.	99·8	37	24 44	?[S]	(24 44)	[+21]	41·6	42·7
Ravensburg		99·9	322	18 3	?PR_1	24 33	[+10]	e 36·6	61·1
Rocca di Papa		100·0	315	e 13 47	−24	(24 35)	[+11]	e 50·6	66·2
Florence		100·3	317	e 13 53	−19	24 33	[+ 8]	27·2	58·2
De Bilt		100·7	326	e 14 5	− 9	i 24 46	[+19]	e 52·0	59·0
Strasbourg		100·7	323	e 14 5	− 9	—	—	e 40·6	64·6
Uccle		101·8	325	e 18 33?	?PR_1	e 24 49	[+16]	e 47·6	62·0
Neuchatel		101·9	321	—	—	—	—	e 54·6	—
Moncalieri		102·2	320	e 12 44	?	27 9	+52	51·2	65·4
Besançon		102·4	322	—	—	e 24 51	[+15]	53·6	—
Edinburgh		103·0	333	—	—	e 24 48	[+10]	49·6	61·6
Paris		103·7	325	e 16 33?	?	e 24 58	[+17]	41·6	66·6
Stonyhurst		103·8	330	—	—	24 45	[+ 3]	51·6	57·6
Kew		104·0	328	—	—	i 25 0	[+17]	50·6	58·7
Oxford	N.	104·3	328	—	—	e 26 45	+ 9	e 46·6	65·2

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Bidston		104·4	330	24 57	?[S]	(24 57)	[+12]	41·6	58·2
Berkeley	Z.	104·5	47	e 18 33	?PR_1	—	—	e 49·0	—
Lick	E.	105·2	47	—	—	—	—	e 48·1	—
Algiers		108·7	314	—	—	e 24 57	[− 8]	56·6	68·6
Tortosa	N.	108·7	317	e 18 33?	?PR_1	—	—	53·0	60·6
Alicante		110·6	315	—	—	e 29 12	?PS	62·4	—
Toledo		112·2	318	e 16 0	+52	29 56	?PS	e 37·9	71·9
Almeria		112·6	314	e 19 24	?PR_1	29 19	?PS	—	—
Granada		113·3	314	14 3	−70	i 26 13	? Σ	57·6	65·3
Malaga		114·1	314	e 19 29	?PR_1	e 29 33	?PS	39·6	65·6
Tucson	E.	115·4	48	—	—	—	—	55·4	76·4
San Fernando		115·5	315	19 41	?PR_1	32 21	?	59·0	76·0
Chicago	E.	123·6	27	—	—	e 28 21	−55	52·0	55·0
	N.	123·6	27	—	—	e 31 42	?PS	50·6	56·0
Florissant		124·6	30	—	—	e 26 7	[+ 9]	e 53·1	—
Ottawa		124·8	14	e 21 8	?PR_1	e 31 45	?PS	e 49·6	69·6
Ann Arbor	N.	124·9	23	—	—	e 29 33	+ 8	67·4	—
Toronto		125·3	19	—	—	e 29 55	+27	47·6	71·0
Cincinnati		127·1	26	—	—	—	—	56·9	—
Georgetown	Z.	130·3	19	e 21 40	?PR_1	e 26 54	?	e 63·4	83·6
Charlottesville	N.	130·6	21	—	—	—	—	e 75·9	85·6
La Plata		152·3	178	—	—	—	—	76·4	—
Rio de Janeiro	N.	159·4	219	e 20 54	?	—	—	—	—
Sucre		165·6	146	i 20 24	[+12]	—	—	79·4	111·0
La Paz		165·7	131	i 20 29	[+17]	27 10	?	79·6	96·2

Additional readings: Phu-Lien MN = +13·1m. Batavia iP = +5m.4s., i = +9m.23s. Malabar i = +5m.18s. Sumoto iS = +9m.31s., MN = +12·4m., Kobe PR_1 = +7m.5s. Osaka MN = +16·3m. Toyooka eSN = +12m.36s. Perth iPR_1 = +9m.23s., iPR_2 = +9m.43s., iSR_1 = +16m.53s. Adelaide iPR_1 = +9m.59s., SR_1 = +18m.23s., MN = +29·8m. Riverview PR_1 = +11m.13s., PS = +16m.23s., SR_1 = +19m.38s., SR_2 = +20m.49s., MN = +32·4m.; T_o = 14h.19m.18s. Melbourne i = +10m.55s. = PR_1 − 15s., SR_1 = +20m.33s., L = +24·8m. Suva SR_1E = +23m.3s., SR_2N = +25m.3s., T_oN = 14h.18m.54s. Christchurch PR_1 = +15m.45s., SR_1 = +25m.23s. Wellington SR_1E = +25m.5s., T_oE = 14h.19m.14s., T_oN = 14h.19m.41s. Tananarive PR_1 = +15m.23s., PR_2 = +18m.42s., S_cS = +23m.3s., PPPS = +23m.21s., SPS = +27m.27s. Upsala MN = +51·1m. Budapest MN = +53·0m. Copenhagen eEZ = +16m.9s., eE = +23m.27s., eS_cP_cSEN = +24m.16s., e$PPSE$ = +27m.5s., eSR_1N = +31m.33s.?, eSR_2N = +36m.9s., eLN = +46·6m., MN = +55·4m., MZ = +60·6m. Zagreb eP′ = +17m.22s., ePR_1 = +17m.44s. Hamburg MZ = +60·6m. Feldberg eLE = +52·6m. Victoria SE = +32m.34s. = SR_1 − 2s. Ravensburg PR_2 = +20m.19s., MN = +56·0m. Rocca di Papa eE = +14m.14s., PR_1E = +18m.28s., [S] is given as PR_2. Florence P = +15m.33s. De Bilt iZ = +27m.20s. = PS + 7s., MN = +56·6m., MZ = +69·8m. Strasbourg ePR_1 = +18m.20s., ePS = +27m.33s., MZ = +60·8m., MN = +61·3m. Moncalieri L = +39·2m., MN = +58·8m. Paris MN = +54·6m. Stonyhurst SR_1 = +33m.47s. Kew ePR_1Z = +18m.40s., eZ = +16m.57s., eSR_1E = +42m.34s., LZ = +57·6m., MN = +57·7m., MZ = +66·0m. Oxford eN = +24m.58s. = [S] + 14s. and +33m.31s. = SR_1 + 0s., ME = +68·6m. Berkeley eE = +48m.3s. Lick eE = +50m.27s. and +55m.27s. Uccle MN = +54·2m. Algiers e = +36m.35s., MN = +75·6m. Toledo PR_1NW = +19m.39s., MNW = +60·6m. Granada i = +17m.14s., and +32m.33s., MZ = +75·1m., S is given simply as i. San Fernando MN = +78·4m. Chicago eE = +32m.37s. and +37m.29s. = SR_1 − 3s. Florissant ePR_1Z = +20m.54s., eZ = +22m.9s., ePR_2Z = +24m.7s., e = +29m.7s. = S − 16s., eN = +33m.7s., iSR_1 = +37m.54s. Ottawa eSR_1? = +37m.58s., MN = +79·6m. Ann Arbor e?N = +25m.45s. = [S] − 14s., eN = +38m.33s., e?E = +38m.39s., eLN = +50·8m., eL?E = +56·0m. Toronto eN = +22m.56s. and +27m.56s. = Σ + 11s., iN = +41m.53s., eE = +38m.3s. = SR_1 + 10s., MN = +84·4m. Georgetown eZ = +30m.47s., PSZ = +38m.44s. = SR_1 − 9s. Charlottesville ePR_1N = +23m.33s.?, ePSN = +34m.33s.?, eSR_1N = +39m.57s. Rio de Janeiro eE = +20m.58s. Sucre PR_1 = +25m.16s., $S_cP_cP_cS$ = +31m.54s., SR_1 = +47m.24s. La Paz e = +24m.1s., PR_1N = +24m.42s. eN = +27m.7s. = [S] + 10s., $S_cP_cP_cS$ = +31m.57s., SR_1N = +45m.47s., PSS = +46m.52s. LN = +78·6m.

Dec. 28d. 18h. 44m. 21s. Epicentre 7°·2N. 123°·0E. (as at 14h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	E.	7·7	345	e 2 24	+27	—	—	i 4·1	—
Phu-Lien		20·9	312	e 4 56	+ 4	e 8 50	+ 8	—	—
Batavia		21·0	230	e 4 51	− 2	9 22	+38	—	—
Nagasaki		26·3	13	10 49	?S	(10 49)	+21	15·4	16·9
Irkutsk		47·6	346	e 8 39?	−12	e 18 39?	?SR_1	e 25·6	—
Tashkent		58·4	315	i 10 7	+ 6	i 18 20	+16	30·6	36·4
Ekaterinburg		69·1	329	i 11 16	+ 4	i 20 23	+ 8	33·6	—
Baku		72·5	311	—	—	—	—	e 46·6	—

Nagasaki readings have been *increased* by 1h.

Dec. 28d. Readings also at 4h. (Suva, Florence, Chur, Zurich, and Zagreb), 5h. (Ekaterinburg, Pulkovo, and Ottawa), 9h. (Kobe and near Sumoto), 11h. (Taihoku), 12h. (Lick, Amboina, near Batavia, and Malabar), 13h. (Mizusawa and Nagoya), 14h. (Suva). 17h. (Phu-Lien, Ekaterinburg, Batavia, Manila, and near Hukuoka), 19h. (near Sumoto), 20h. (Simferopol, Theodosia, near Yalta, and near Nagasaki).

Dec. 29d. Readings at 2h. (Ekaterinburg, Irkutsk, Tashkent, and Manila (2)), 9h. (Manila), 10h. and 11h. (near Algiers), 13h. (Ksara, Mizusawa, and near La Paz), 14h. (Baku and Tashkent), 16h. (Bombay, Phu-Lien, Irkutsk, and Tashkent), 19h. (Neuchatel), 20h. (Baku, Entebbe, Irkutsk, Tashkent, and Phu-Lien), 21h. (Taihoku), 22h. (Lick, Phu-Lien, Irkutsk, Tashkent, near Kobe, and Sumoto), 23h. (near Tucson).

Dec. 30d. 7h. 32m. 52s. Epicentre 47°·7N. 8°·8E.

A = +·665, B = +·103, C = +·740.

	Δ	Az.	P.	O−C.	S.	O−C.
	°	°	m. s.	s.	m. s.	s.
Zurich	0·4	204	i 0 7	+ 1	0 14	+ 3
Ravensburg	0·5	81	e 0 9	+ 1	i 0 16	+ 2
Hohenheim	1·0	15	0 14	− 1	i 0 28	0
Chur	1·0	150	e 0 14	− 1	e 0 27	− 1
Neuchatel	1·5	24	i 0 27	+ 4	0 26	−16

Additional readings: Ravensburg iE = +18s. Hohenheim iE = +26s., iN = +27s.

Dec. 30d. 17h. 34m. 35s. Epicentre 46°·5N. 6°·5E. (as on 1928 Aug. 22d.).

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. s.	s.	m. s.	s.	m.
Neuchatel	0·6	31	i 0 10	+ 1	0 16	− 1	—
Zurich	1·7	59	i 0 27	+ 1	i 0 49	+ 1	—
Chur	2·1	80	e 0 32	− 1	? 0 58	0	—
Strasbourg	2·2	22	—	—	(i 1 4)	+ 4	(e 1·2)
Ravensburg	2·5	59	e 1 11	?S	(e 1 11)	+ 2	—
Hohenheim	2·9	40	—	—	e 1 32	+12	—
Uccle	4·6	343	—	—	—	—	2·4

Additional readings and note: Strasbourg readings have been *increased* by 2m. Ravensburg e = +1m.14s., i = +1m.22s.

Dec. 30d. Readings also at 0h. (Florissant, La Paz, near Lick, near Oaxaca, Tacubaya, Merida, Vera Cruz, near Kobe, and Sumoto), 1h. (Manila), 4h. (near Lick, near La Paz (2), and Sucre (2)), 5h. (Lick, Sumoto, near Hukuoka, and Nagasaki), 6h. (near Nagasaki), 7h. (near La Paz and Sucre), 9h. (Hukuoka), 11h. (Manila and Taihoku), 15h. (Irkutsk and Tashkent), 16h. (Ekaterinburg), 17h. (Manila), 20h. (Phu-Lien and Zi-ka-wei), 21h. (Copenhagen, Baku (2), Ekaterinburg (2), Irkutsk (2), Tashkent (2), and Zi-ka-wei), 22h. (Phu-Lien, Taihoku, Ekaterinburg, Irkutsk, Tashkent, and Zi-ka-wei), 23h. (Copenhagen and Baku).

Dec. 31d. 7h. 33m. 36s. Epicentre 26°·5N. 99°·0E.

A = −·140, B = +·884, C = +·446 ; D = +·988, E = +·156 ;
G = −·070, H = +·441, K = −·895.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Phu-Lien		9·0	127	2 54	+38	—	—	5·1	—
Calcutta	E.	10·4	250	4 46	?S	(4 46)	+ 6	(6·2)	—
Hong Kong		14·4	104	—	—	—	—	—	8·6
Taihoku	Z.	20·3	89	—	—	—	—	e 11·0	—
Bombay		25·2	258	10 1	?S	(10 1)	− 6	15·6	16·6
Frunse		25·8	316	e 5 51	+ 5	—	—	—	—
Irkutsk		26·1	8	e 6 4	+15	—	—	14·4	15·1
Tashkent		28·6	309	e 6 11	− 3	e 10 54	−16	16·4	19·6
Ekaterinburg		40·8	329	i 7 58	− 3	e 14 21	+ 3	21·4	—
Baku		42·7	304	e 9 56	?PR_1	e 14 38	− 6	e 25·4	—
Pulkovo		56·7	326	—	—	—	—	e 30·4	—
Copenhagen		66·5	323	—	—	—	—	36·4	—
Zagreb		66·7	311	—	—	—	—	e 73·4	—

Additional readings: Calcutta PN = +4m.33s. Bombay S = +13m.37s.
Tashkent i = +6m.20s., e = +12m.51s. Baku e = +17m.52s.

Dec. 31d. Readings also at 1h. (Sucre and near La Paz), 6h. (Christchurch and near Wellington), 7h. (Adelaide, Riverview, Melbourne, and La Paz), 12h. (Taihoku), 13h. (La Paz and Sucre), 17h. (near Tananarive), 21h. (near Tacubaya).

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