The International Seismological Summary for 1927 October, November, December.

FORMERLY THE BULLETIN OF THE BRITISH ASSOCIATION SEISMOLOGY COMMITTEE.

The present number of the Summary deals with 174 epicentres, 56 of which are new and 118 old epicentres. On December 4d. Nagasaki gives 41 repetitions for 32°·2N. 129°·5E.; these are not included in the totals.

The cases of abnormal focus are as follows :—

Date, 1927	d.	h.	m.	s.	Epicentre.		Focal depth (below normal)
					°	°	
Oct.	2	3	7	26	35·0N.	69·0E.	+·030
Nov.	6	15	34	27	6·7S.	131·2E.	+·030
Nov.	9	1	5	36	5·5S.	147°0E.	+·040
Nov.	15	8	29	16	51·0N.	179·0E.	+·010
Nov.	16	21	10	9	7·0N.	126·0E.	+·020
Nov.	17	20	54	42	23·8S.	67·5W.	+·025
Nov.	17	22	35	20	7·0N.	126·0E.	+·020
Nov.	19	7	29	36	19·0S.	173°0W.	+·060
Nov.	26	12	53	52	25·0S.	67·0W.	+·030

University Observatory,
Oxford.

1931 May 15.

1927 OCTOBER, NOVEMBER, DECEMBER.

Oct. 1d. Readings at 0h. (Adelaide, Irkutsk, Ekaterinburg, Tiflis, Baku, Makeyevka, Kucino, Ottawa, Toronto, and Victoria), 1h. (Copenhagen, Feldberg, Uccle, De Bilt, Kew, Pulkovo, Granada, and San Fernando), 2h. (near Rocca di Papa), 4h. (near Sumoto and Matuyama), 5h. (near Toyooka), 9h. (La Paz and La Plata), 11h. (Tiflis), 12h. (Rocca di Papa (2) and Tiflis), 15h. (Tiflis), 20h. (Tucson).

Oct. 2d. 3h. 7m. 26s. Epicentre 35°·0N. 69°·0E. (as on 1927 July 15d.).

$A = +\cdot294$, $B = +\cdot765$, $C = +\cdot574$; $D = +\cdot934$, $E = -\cdot358$; $G = +\cdot205$, $H = +\cdot536$, $K = -\cdot819$.

The depth of focus 0·030 of Sept. 30d. is retained.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent		−0·1	6·3	2	i 1 5	−30	i 1 55	−54	i 2·0	2·2
Simla	N.	−0·2	7·9	117	—	—	—	—	e 4·0	—
Tiflis	E.	−1·2	20·0	297	e 4 24	− 3	e 8 1	+ 3	e 12·3	16·1
	N.	−1·2	20·0	297	e 4 23	− 4	e 8 14	+16	e 12·9	14·4
Ekaterinburg		−1·4	22·5	348	—	—	—	—	15·1	—
Makeyevka		−1·7	26·4	309	—	—	—	—	11·7	—
Kucino		−2·0	29·7	324	—	—	—	—	e 17·1	—
Pulkovo		−2·3	35·2	326	—	—	—	—	18·6	—
Upsala		−2·6	41·2	324	—	—	—	—	e 36·6	—

Additional readings: Tashkent e = +1m.22s. and +1m.35s.; epicentre 35°·3N. 69°·0E. Tiflis eN = +4m.58s. = PR_1 +14s. Makeyevka L = +17·2m. Pulkovo e = 3h.1m.42s. Upsala e = +51m.6s.

Oct. 2d. 4h. 47m. 45s. Epicentre 14°·0N. 88°·0W.

$A = +\cdot034$, $B = -\cdot970$, $C = +\cdot242$; $D = -\cdot999$, $E = -\cdot035$; $G = +\cdot008$, $H = -\cdot242$, $K = -\cdot970$.

Adopted as an approximate origin after comparison with the epicentre 14°·5N. 88°·7W. of 1926 July 21d. There is a definite indication of a displacement towards Az. (approx.) 135° with regard to the old origin, but no one assumption will account for the observed discrepancies of all the stations.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Merida		7·2	347	(1 52)	+ 3	(3 7)	− 8	(3·1)	(4·4)
Oaxaca		9·0	291	(2 21)	+ 5	(4 3)	0	(4·0)	(4·5)
Tacubaya		12·1	298	2 58	− 2	4 58	−23	5·3	6·2
Port au Prince		15·7	71	e 3 57	+ 9	i 7 9	+21	e 9·3	—
Tucson	E.	27·7	315	e 6 13	+ 8	e 10 53	− 1	e 15·4	15·6
	N.	27·7	315	e 6 17	+12	e 10 53	− 1	e 15·2	15·7
Chicago		27·8	1	6 7	+ 1	11 23	+28	—	13·4
Ann Arbor		28·6	7	—	—	i 11 3	− 7	e 15·8	—
Ithaca		30·1	17	e 7 23	?PR_1	—	—	—	—
Toronto	E.	30·5	14	6 29	− 4	i 11 27	−16	14·2	14·4
Ottawa		33·1	18	i 6 56	− 1	i 12 15	−11	e 14·8	—
La Paz		36·3	147	7 12	−12	13 11	− 3	16·3	23·0
Sucre		39·9	146	i 7 28	−26	i 13 37	−28	21·4	25·8
Victoria		45·1	328	8 29	− 5	14 27	−49	23·9	29·9
	N.	45·1	328	8 27	− 7	15 9	− 7	—	—
La Plata		56·6	151	9 44	− 6	17 28	−13	31·2	—
Rio de Janeiro		57·3	131	—	—	e 17 37	−13	—	—
Honolulu T.H.	N.	66·5	288	—	—	i 19 45	+ 1	—	—
San Fernando		75·2	56	—	—	—	—	37·2	47·2

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Edinburgh		75·6	36	—	—	e 21 27	− 6	36·2	39·2
Stonyhurst		76·1	39	—	—	e 21 5	−33	35·8	38·0
Toledo		76·5	52	—	—	e 21 9	−34	e 32·8	39·3
Oxford		77·1	40	12 40	+38	21 47	− 3	e 36·2	41·8
Granada		77·2	55	e 12 29	+27	e 22 43	+52	36·6	38·0
Kew		77·7	40	e 12 38	+33	21 45	−12	36·2	—
Almeria		78·2	55	e 12 35	+27	—	—	—	43·0
Tortosa	N.	79·8	50	—	—	22 13	− 8	e 36·2	41·4
Paris		79·9	43	e 12 15?	− 3	—	—	39·2	41·2
Uccle		80·6	40	e 12 15?	− 8	e 22 15?	−15	e 38·2	—
De Bilt		80·9	39	i 12 30	+ 6	—	—	e 37·2	42·1
Besançon		82·5	45	—	—	—	—	41·2	—
Strasbourg		83·3	43	e 12 39	+ 1	e 23 50	?PS	e 40·2	50·0
Feldberg		83·3	40	—	—	e 22 57	− 3	e 36·4	41·8
Copenhagen		84·2	35	—	—	e 23 15?	+ 5	41·2	—
Cheb		85·5	40	—	—	e 23 15?	−10	e 40·2	44·2
Upsala	E.	85·6	29	—	—	—	—	e 42·2	—
Prague		87·1	40	—	—	—	—	e 44·2	47·2
Rocca di Papa		88·5	47	e 14 36	+88	e 23 36	[+18]	e 38·9	44·2
Zagreb		89·4	44	e 13 26	+14	e 23 31	[+ 7]	45·2	—
Pulkovo		91·3	26	13 17	− 6	23 41	[+ 5]	42·2	50·3
Kucino		96·8	28	—	—	i 24 10	[+ 3]	47·6	52·2
Suva		97·7	255	—	—	—	—	52·2	—
Makeyevka		101·6	35	—	—	24 35	[+ 3]	46·8	58·0
Wellington	E.	104·5	231	—	—	—	—	52·2	—
Ekaterinburg		104·6	18	—	—	24 51	[+ 6]	48·8	57·0
Ksara	E.	108·3	46	e 19 4	?PR_1	e 28 39	?PS	—	—
Tiflis	E.	109·3	35	—	—	e 28 22	+60	e 49·2	59·4
	N.	109·3	35	—	—	e 28 26	+64	e 52·2	56·8
Baku		113·0	33	19 41	?PR_1	—	—	54·2	65·0
Tashkent		120·8	20	e 15 54	+ 8	25 56	[+ 9]	e 53·2	69·0
Phu-Lien	N.	142·4	336	—	—	—	—	76·2	—

Additional readings and notes: Merida readings have been increased by 2m. and Oaxaca by 1m. Port au Prince iP = +4m.27s. Tucson ePR_1N = +6m.40s., ePR_1E = +6m.43s. Chicago ePR_1E = +6m.50s., iPR_1N = +6m.51s., eE = +9m.3s., iSN = +10m.40s., MN = +16·8m. Ann Arbor ePR_1 = +6m.15s., eSR_2 = +13m.45s.; T_0 = 4h.45m.24s. Toronto eE = +7m.26s. = PR_1 + 1s., iSN = +11m.32s., iE = +11m.33s., MN = +16·4m.; T_0 = 4h.47m.57s. Ottawa i = +8m.13s. = PR_2 − 1s. La Paz i = +17m.25s. and +18m.8s. Sucre SR_1 = +16m.52s., i = +17m.49s. = SR_2 + 21s. Honolulu T.H. iSE = +19m.52s. San Fernando MN = +46·8m. Toledo MNW = +39·8m. Uccle e = +16m.15s.? De Bilt eLN = +34·2m., MN = +39·8m., MZ = +41·4m. Strasbourg ePR_1 = +16m.5s. Feldberg e = +20m.57s., +23m.51s. = PS + 3s., and +27m.45s. Copenhagen eSR_1N = +29m.15s.? Prague e = +42m.15s.? Zagreb ePNE = +13m.30s. Pulkovo PR_1 = +16m.54s., SR_1 = +29m.57s., MZ = +50·4m. Kucino ePR_1 = +17m.42s., eSR_1 = +30m.47s., MN = +52·9m. Makeyevka ePR_1 = +18m.15s., MZ = +57·7m. Ekaterinburg PR_1 = +18m.36s., e = +24m.24s. and +27m.52s. = PS − 4s., PPS = +28m.5s., SR_1 = +33m.3s., SR_2 = +38m.12s., MZ = +57·4m., MN = +57·9m. Tiflis ePR_1? = +19m.14s., ePR_1E? = +19m.17s., eN = +25m.14s. = [S] + 7s., eS = +25m.15s. = [S] + 8s., and +34m.36s. = SR_1 + 3s. Baku iPR_1 = +20m.2s., e = +25m.35s. = [S] + 13s., and +28m.28s., eSR_1 = +35m.48s., MN = +65·7m., MZ = +66·6m. Tashkent iPR_1 = +20m.35s., $S_4P_4P_4S$ = +27m.28s., ePS = +30m.23s.?, iPPS = +32m.2s., SR_1 = +37m.15s., SR_2 = +41m.44s., MZ = +63·0m., MN = +63·2m.

Oct. 2d. 9h. 29m. 15s. Epicentre 14°·0N. 88°·0W. (as at 4h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Merida		7·2	347	(1 51)	+ 2	(2 37)	+38	(2·6)	(4·0)
Oaxaca		9·0	291	(2 22)	+ 6	—	—	2·4	—
Tacubaya		12·1	298	2 51	− 9	4 46	−35	5·0	5·9
Tucson	N.	27·7	315	—	—	—	—	e 16·2	17·6
Chicago	N.	27·8	1	—	—	e 11 0	+ 5	e 19·2	—
Toronto	E.	30·5	14	—	—	—	—	e 21·3	—
Ottawa		33·1	18	—	—	e 11 57	−29	e 17·8	—
Victoria		45·1	328	—	—	—	—	25·6	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Granada	77·2	55	—	—	e 24 45?	?	—	36·8
Kew	77·7	40	—	—	—	—	e 33·8	—
Paris	79·9	43	—	—	—	—	e 35·8	—
De Bilt	80·9	39	—	—	—	—	e 39·8	—
Strasbourg	83·3	43	—	—	—	—	e 36·8	—
Moncalieri	84·1	46	—	—	e 28 48	?SR_1	40·2	—
Kucino	96·8	28	—	—	—	—	e 49·0	—
Makeyevka	101·6	35	—	—	—	—	e 47·8	—
Ekaterinburg	104·6	18	—	—	e 25 47	? Σ	50·2	—
Baku	113·0	33	—	—	—	—	e 54·8	—
Tashkent	120·8	20	—	—	—	—	e 54·8	73·7

Additional readings and notes: Merida readings have been increased by 2m., and Oaxaca by 1m. as for the 4h. shock. Tucson eN = +14m.33s. Chicago eE = +11m.3s. and +16m.36s.

Oct. 2d. Readings also at 0h. (Ekaterinburg), 4h. (Makeyevka, Pulkovo, and Tiflis), 6h. (Kucino), 8h. (Ekaterinburg), 10h. (La Paz), 17h. (La Paz and Tiflis), 19h. (Tashkent), 20h. (Irkutsk and near Taihoku), 21h. (Ekaterinburg (2), Makeyevka, Tashkent, Tiflis (2), Strasbourg, Feldberg, De Bilt, Paris, Kew, Oxford, Granada, San Fernando, and Ottawa), 22h. (Baku), 23h. (near Toyooka).

Oct. 3d. 23h. 55m. 42s. Epicentre 19°·5S. 66°·0W. (as on 1924 March 6d.).

A = +·383, B = −·861, C = −·334; D = −·914, E = −·407; G = −·136, H = +·305, K = −·943.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz	3·6	325	i 1 21	+25	i 2 17	+38	2·4	3·5
Santiago	14·5	196	3 16	−17	5 8	−72	5·9	—
La Plata	17·0	156	4 23	+18	7 28	+10	9·4	—
Rio de Janeiro	21·5	103	e 4 59	0	—	—	14·5	15·9
Toronto	64·3	350	i 10 40	0	i 19 11	− 6	39·7	—
Ottawa	65·5	353	i 10 48	0	e 19 30	− 1	e 30·3	—
Tucson N.	67·2	320	e 8 49	−130	—	—	—	—
San Fernando E.	79·9	45	—	—	—	—	—	24·3
Malaga	80·8	46	12 23	− 1	22 45	+12	—	—
Granada	81·6	46	i 12 28	0	i 22 55	+13	41·3	52·5
Almeria	82·3	46	12 31	− 1	22 50	+ 1	—	43·5
Toledo	82·8	43	i 12 36	+ 1	22 55	0	e 37·0	—
Victoria	85·0	325	12 29	−19	(22 51)	−28	22·8	24·2
Kew	91·1	34	—	—	(e 23 18?)	[−17]	e 23·3	—
Moncalieri	92·9	43	(13 44)	+12	13 44	?P	19·2	—
Uccle	93·4	36	—	—	e 24 47	− 2	e 39·3	—
Strasbourg	94·3	39	e 13 36	− 4	—	—	e 55·3	—
De Bilt	94·4	35	—	—	—	—	e 26·3	—
Rocca di Papa	94·9	47	e 18 11	?PR_1	—	—	—	—
Feldberg	95·5	38	—	—	—	—	e 40·2	—
Pulkovo	109·9	31	—	—	(e 28 18?)	+51	e 28·3	—
Kucino	113·8	36	—	—	—	—	e 51·6	—
Tiflis E.	118·2	51	—	—	—	—	e 58·8	—
Baku	122·0	52	e 20 43	?PR_1	e 33 35	?	e 62·3	74·7
Ekaterinburg	126·0	33	e 19 6	[− 2]	e 47 52	?SR_2	51·3	—
Tashkent	136·4	49	i 19 26	[− 7]	—	—	e 66·3	80·9
Irkutsk	146·4	10	i 19 47	[− 3]	—	—	—	—

Additional readings: La Paz i = +1m.28s. and +1m.54s., MN = +2·7m.; T_0 = 23h.55m.50s.; epicentre 20°·2S. 69°·0W. Tucson eE = +8m.51s. San Fernando MN = +22·3m. Granada PR_1 = +16m.23s., i = +23m.38s. = PS + 12s. Almeria i = +26m.17s., MZ = +46·4m. Moncalieri e = +4m.33s. Strasbourg e = +26m.18s.? = PS + 19s. Tiflis ePR_1E = +20m.17s., eN? = +23m.26s. = PR_1 − 4s., eE? = +29m.49s., eLN = +63·3m. Baku MN = +78·5m. Tashkent i = +22m.17s. = PR_1 + 7s., and +23m.33s., e = +40m.30s. = SR_1 + 22s., and +45m.18s.?, MZ = +82·2m. Irkutsk e = +20m.5s., i = +20m.22s.

Oct. 3d. Readings at 1h. (Taihoku), 3h. (Tashkent and Tiflis (2)), 4h. (Baku, Ekaterinburg, Tiflis, Makeyevka, and Pompeii), 5h. (Tiflis and Zagreb), 6h. (Tiflis), 10h. (near Tacubaya), 13h. (Taihoku), 14h. (Taihoku (2) and near Sumoto), 15h. (Ekaterinburg, Irkutsk, Phu-Lien, Tashkent, Taihoku, and Zi-ka-wei), 16h. (Ekaterinburg, Irkutsk, Tashkent, Taihoku, Phu-Lien, and Zi-ka-wei), 17h. (Ekaterinburg, Irkutsk, Tashkent, Taihoku, Phu-Lien, Hong Kong, and Zi-ka-wei), 18h. (Baku, Feldberg, Uccle, and Tiflis), 20h. (Ekaterinburg, Tashkent, Taihoku, Zi-ka-wei, and near Sucre), 23h. (Baku, Irkutsk, Tashkent, and Tiflis).

Oct. 4d. 2h. 14m. 24s. Epicentre 25°·0N. 123°·0E. (as on 1927 Sept. 2d.).

A = −·494, B = +·760, C = +·423 ; D = +·839, E = +·545 ;
G = −·230, H = +·354, K = −·906.

For the series of shocks 4d. 2h. and 17h., 5d. 16h., 6d.13h., 7d.19h., 9d.4h., 10d.17h., 11d.3h., and 12d.6h. and 7h. De Bilt gives the epicentre near the South Riu-Kiu Islands.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	N.	1·3	274	e 0 26	+ 6	—	—	—	1·5
Zi-ka-wei		6·3	348	e 1 18	−18	—	—	—	—
Hong Kong		8·5	252	4 24	?L	—	—	(4·4)	6·1
Manila		10·6	191	—	—	—	—	—	6·6
Phu-Lien		15·7	258	e 3 23	−25	—	—	—	—
Irkutsk		30·7	338	e 6 36?	+ 1	e 10 36?	−70	e 17·1	19·9
Ekaterinburg		54·3	324	—	—	e 21 6	?SR_1	26·1	30·4
Baku		61·7	305	—	—	—	—	e 32·6	—
Tiflis	E.	65·2	308	—	—	—	—	e 36·2	43·4
	N.	65·2	308	—	—	—	—	e 30·6	40·7
Kucino		66·9	323	—	—	—	—	e 34·8	—
Pulkovo		69·9	328	—	—	—	—	e 42·6	—
Feldberg		85·2	325	—	—	—	—	e 45·6	—
De Bilt		85·8	327	—	—	—	—	e 46·6	48·4
Strasbourg		86·6	324	—	—	—	—	e 52·6	—
Uccle		87·0	326	—	—	—	—	e 46·6	—
Moncalieri		88·6	320	—	—	—	—	47·9	—
Kew		88·8	329	—	—	—	—	e 47·6	—

Additional readings and notes: The reading for Hong Kong is the only one given with a definite phase. Tiflis eLN = +36·1m., eLE = +40·1m., the readings entered are given as e only. De Bilt MZ = +56·0m.

Oct. 4d. 17h. 32m. 31s. Epicentre 25°·0N. 123°·0E. (as at 2h.).

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku		1·3	274	e 0 26	+ 6	—	—	—	—
Zi-ka-wei		6·3	348	e 2 29	?S	(e 2 29)	−23	—	11·1
Hong Kong		8·5	252	—	—	—	—	—	13·2
Phu-Lien		15·7	258	—	—	—	—	7·5	—
Irkutsk		30·7	338	—	—	—	—	e 16·5	—
Tashkent		47·0	305	—	—	e 14 29?	−72	e 32·5	36·5
Ekaterinburg		54·3	324	—	—	—	—	e 29·6	—
Baku		61·7	305	—	—	—	—	e 42·4	—
Tiflis	E.	65·2	308	e 8 29?	?	—	—	e 43·1	—
Feldberg		85·2	325	—	—	—	—	e 53·0	—
De Bilt		85·8	327	—	—	—	—	e 53·5	—
Strasbourg		86·6	324	—	—	—	—	e 61·5	—
Uccle		87·0	326	—	—	—	—	e 53·5	—
Kew		88·8	329	—	—	—	—	e 57·5	—

Additional readings: Irkutsk e = +22m.11s. and +23m.41s. Tashkent MN = +34·2m., MZ = +38·4m. Ekaterinburg L = +35·0m. Tiflis eN = +44m.3s., LN = +62·2m. Uccle e = +61m.29s.?

Oct. 4d. 21h. 5m. 40s. Epicentre 55°·0S. 27°·5W. (as on 1927 Aug. 16d.).

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Rio de Janeiro		34·2	335	e 12 40	?S	(e 12 40)	− 3	e 16·3	—
La Paz		49·5	305	e 9 4	0	i 16 9	− 4	32·3	—
San Fernando	E.	93·3	15	—	—	—	—	—	57·3
Granada		94·4	19	—	—	—	—	48·3	53·8
Rocca di Papa		102·6	29	e 55 17	?L	—	—	(e 55·3)	62·9
Strasbourg		107·7	23	—	—	—	—	e 57·3	—
Kew		108·8	17	—	—	—	—	e 57·3	—
Uccle		109·1	20	—	—	—	—	e 53·3	—
De Bilt		110·5	21	—	—	—	—	e 57·3	—
Tiflis	E.	114·5	50	—	—	e 25 44	[+17]	e 58·8	75·8
	N.	114·5	50	—	—	e 27 1	? Σ	e 70·7	69·6
Baku		115·8	55	—	—	—	—	e 60·3	71·8
Tashkent		126·2	66	e 21 16	?PR$_1$	e 24 38	?PR$_2$	e 62·3	73·1
Ekaterinburg		132·5	46	—	—	—	—	e 67·8	—

Additional readings: Rio de Janeiro ePN = +12m.20s. La Paz i = +22m.56s. San Fernando MN = +52·8m. Rocca di Papa e = +62m.24s. Tiflis eN = +42m.56s. Baku MN = +78·4m.

Oct. 4d. Readings also at 1h. (Tashkent), 2h. (Taihoku), 3h. (near Tacubaya (2)), 5h. (Tiflis), 6h. (Stonyhurst), 8h. (Entebbe), 10h. (near Nagasaki), 11h. (Ekaterinburg and Taihoku), 12h. (Tashkent), 15h. (Wellington), 17h. (Taihoku), 19h. (Manila).

Oct. 5d. 7h. 51m. 30s. Epicentre 54°·0S. 8°·0E. (assumed to be an anticipation of 1927 Nov. 14d. 15h., but there is very little evidence).

A = +·582, B = +·082, C = −·809; D = +·139, E = −·990; G = −·801, H = −·113, K = −·588.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Cape Town		21·4	25	10 43	?L	—	—	(10·7)	13·7
Tananarive		46·3	58	e 21 2	?L	—	—	(e 21·0)	—
La Plata		48·7	267	9 6	+ 8	—	—	—	—
Rio de Janeiro		49·2	289	—	—	e 16 3	− 6	e 19·5	—
La Paz		68·6	273	i 11 41	+33	—	—	37·4	42·7
Wellington		84·0	171	—	—	—	—	43·5	—
Ksara	N.	91·1	24	e 24 50	?S	(e 24 50)	+25	51·5	—
San Fernando		91·3	349	—	—	25 5	+38	—	54·0
Moncalieri		99·0	0	—	—	e 26 42	?PS	53·9	—
Tiflis	E.	100·7	29	—	—	e 21 47	?	47·4	52·6
	N.	100·7	29	—	—	e 21 43	?	48·6	55·2
Baku		101·0	32	—	—	e 27 11	?PS	45·5	57·0
Strasbourg		102·6	0	—	—	—	—	e 56·5	—
Paris		102·9	357	—	—	—	—	e 53·5	—
Uccle		104·9	358	—	—	e 28 30?	?PS	e 50·5	—
Makeyevka		105·1	21	—	—	—	—	e 33·5	—
Kew		105·7	355	—	—	—	—	e 49·5	—
Oxford		106·0	354	—	—	—	—	e 53·5	57·8
De Bilt		106·1	359	—	—	—	—	e 51·5	—
Tashkent		108·7	45	e 19 30?	?PR$_1$	e 28 0	+44	e 41·5	64·6
Kucino		112·5	18	—	—	—	—	e 48·9	—
Ekaterinburg		118·8	30	—	—	e 38 11	?SR$_1$	55·0	65·2
Ottawa		122·1	305	—	—	—	—	e 51·5	—
Irkutsk		132·8	56	—	—	e 34 30?	?	—	—

Additional readings: Rio de Janeiro eN = +16m.5s. = S +8s. Ksara LE = +54·5m. San Fernando MN = +52·0m. Moncalieri S? = +37m.23s. = SR$_2$ +11s. Tiflis eN = +27m.7s. = PS −6s., eE = +29m.4s. and +30m.43s. Baku e = +34m.19s., +38m.59s., and +44m.4s., MN = +52·6m., MZ = +57·7m. Uccle e = +34m.30s.? Tashkent e = +35m.56s., +36m.12s., MNZ = +62·8m.

Oct. 5d. 16h. 36m. 48s. Epicentre 25°·0N. 123°·0E. (as on Oct. 4d.).

A = −·494, B = +·760, C = +·423; D = +·839, E = +·545; G = −·230, H = +·354, K = −·906.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	1·3	274	e 0 26	+ 6	—	—	0·9	—
Zi-ka-wei	6·3	348	e 1 38	+ 2	3 0	+ 8	—	4·9
Hong Kong	8·5	252	—	—	—	—	—	7·0
Phu-Lien	15·7	258	3 38	−10	—	—	10·2	—
Irkutsk	30·7	338	6 5	−30	11 12	−34	19·4	20·1
Tashkent	47·0	305	—	—	—	—	e 26·2	28·1
Ekaterinburg	54·3	324	—	—	e 21 23	?SR_1	26·7	34·4
Baku	61·7	305	—	—	—	—	e 34·7	—
Tiflis E.	65·2	308	—	—	—	—	e 35·3	—
Pulkovo	69·9	328	—	—	—	—	e 42·2	—
Copenhagen	80·2	328	—	—	—	—	44·2	—
De Bilt	85·8	327	—	—	—	—	e 46·2	56·3
Strasbourg	86·6	324	—	—	—	—	e 53·2	—
Uccle	87·0	326	—	—	—	—	e 47·2	—
Kew	88·8	329	—	—	—	—	e 49·2	—
Paris	89·2	325	—	—	—	—	e 55·2	—

Additional readings and notes: Irkutsk e = +11m.57s., +15m.39s., and +17m.38s. Tashkent e = +24m.38s., MZ = +31·4m. Ekaterinburg MN = +30·6m. Tiflis eN = +36m.17s., eLE = +40·4m. Uccle e = +55m.12s.?

Oct. 5d. Readings also at 0h. (Feldberg and near Mizusawa), 1h. (Taihoku and near Tashkent (3)), 2h. (Irkutsk and Taihoku), 3h. (Tiflis and near Mizusawa), 5h. (Moncalieri), 7h. (near Mizusawa), 9h. (Berkeley), 10h. (Feldberg, Tiflis, and near Tashkent), 11h. (Tiflis), 12h. (Moncalieri and near Rocca di Papa), 14h. (near Taihoku), 20h. (Florence), 21h. (Ottawa, Victoria, near Tucson (2), and near Lick), 22h. (near Tucson), 23h. (Florence).

Oct. 6d. 13h. 21m. 37s. Epicentre 25°·0N. 123°·0E. (as on Oct. 5d.).

A = −·494, B = +·760, C = +·423; D = +·839, E = +·545; G = −·230, H = +·354, K = −·906.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku N.	1·3	274	e 0 26	+ 6	—	—	—	—
Hong Kong	8·5	252	—	—	—	—	—	8·4
Phu-Lien	15·7	258	—	—	—	—	6·4	—
Irkutsk	30·7	338	e 5 33	−62	e 11 23	−23	19·4	19·8
Tashkent	47·0	305	e 10 23?	?PR_1	e 15 17	−24	e 25·3	31·6
Ekaterinburg	54·3	324	—	—	e 21 0	?SR_1	28·9	—
Baku	61·7	305	—	—	—	—	e 35·4	—
Tiflis	65·2	308	—	—	e 25 28	?SR_1	e 38·0	—
Pulkovo	69·9	328	—	—	—	—	e 40·4	—
De Bilt	85·8	327	—	—	—	—	e 47·4	55·8
Strasbourg	86·6	324	—	—	—	—	e 53·4	—
Uccle	87·0	326	—	—	—	—	47·4	—

Additional readings: Irkutsk e = +15m.17s., +15m.29s., and +16m.59s. Tashkent e = +23m.59s., MN = +30·7m., MZ = +37·9m.

Oct. 6d. Readings also at 2h. (Baku, Batavia, La Paz, Florence, and Tiflis (2)), 3h. (Taihoku), 4h. (Ekaterinburg and Irkutsk), 6h. (near Batavia), 7h. (near Tashkent), 12h. and 15h. (Tiflis), 21h. (Ottawa, Tiflis, Tucson (3), and Victoria), 22h. (Baku, Ottawa, Tucson, and Victoria), 23h. (Baku and Tiflis).

Oct. 7d. 14h. 19m. 30s. Epicentre 38°·0N. 21°·5E. (as on 1925 July 6d.).

A = +·733, B = +·289, C = +·616; D = +·366, E = −·930; G = +·573, H = +·226, K = −·788.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Trente		4·2	289	e 1 0	− 5	i 2 0	+ 5	—	—
Naples	E.	6·3	299	e 3 15	+99	e 4 15	+83	—	—
Belgrade	N.	6·8	354	—	—	e 2 58	− 7	6·7	—
Rocca di Papa		7·7	302	e 2 44	+47	e 3 30	+ 1	4·1	5·0
Zagreb	N.E.	8·8	334	e 3 0	+47	e 3 55	− 3	e 5·2	7·1
	N.W.	8·8	334	e 2 30?	+17	e 3 46	−12	e 5·0	6·6
Florence	N.	9·6	310	—	—	e 4 30	+12	—	6·0
Ksara		12·4	105	e 3 20	+15	5 58	+29	9·1	—
Moncalieri		12·4	308	(e 3 21)	+16	(6 3)	+34	6·2	—
Prague		13·0	340	—	—	—	—	e 6·5	8·5
Cheb		13·7	335	e 2 30?	−52	—	—	—	8·5
Strasbourg		14·5	321	—	—	e 6 21	+ 1	e 9·5	10·2
Feldberg		15·3	327	—	—	—	—	e 9·8	13·5
Paris		17·4	314	—	—	—	—	e 9·5	—
Hamburg		17·5	337	—	—	—	—	e 10·5	—
Uccle		17·6	322	—	—	e 7 20	−11	e 9·5	—
De Bilt		18·1	326	e 4 19	+ 1	e 7 33	− 9	e 10·0	10·5
Tiflis	E.	18·2	71	e 4 19	0	e 8 11	+27	e 11·6	13·0
	N.	18·2	71	e 4 30	+11	e 8 12	+28	e 10·9	13·6
Copenhagen		18·7	344	—	—	e 7 48	− 7	10·5	—
Granada		19·8	275	i 4 22	−17	—	—	—	—
Kew		20·4	318	—	—	—	—	e 10·5	—
Kucino		20·9	26	—	—	—	—	e 11·3	13·6
Oxford		21·1	318	—	—	—	—	e 12·3	12·5
Baku		22·0	75	—	—	e 9 12	+ 7	13·5	17·1
Pulkovo		22·4	11	4 58	−12	9 2	−11	11·5	—
Ekaterinburg		31·8	41	—	—	11 43	−22	17·5	21·1
Irkutsk		56·8	47	—	—	—	—	e 31·5	—

Additional readings: Belgrade eE = +3m.15s. and +5m.4s., iN = +5m.22s. Zagreb eNW = +5m.49s. Moncalieri eP = (+3m.23s.); this and the P and S readings entered have been increased by 3m. Strasbourg e = +8m.12s. De Bilt MN = +10·6m. Baku e = +11m2s., MZ = +16·3m., MN = +17·5m. Ekaterinburg e = +14m.57s. Irkutsk L = +36·0m.

Oct. 7d. 15h. 28m. 14s. Epicentre 38°·0N. 21°·5E. (as at 14h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Trente		4·2	289	e 1 6	+ 1	e 2 6	+11	—	—
Naples	E.	6·3	299	e 2 46	?S	(e 2 46)	− 6	—	—
Belgrade	N.	6·8	354	—	—	e 2 59	− 6	7·8	—
Rocca di Papa		7·7	302	e 3 1	+64	—	—	e 4·5	5·7
Zagreb	N.E.	8·8	334	—	—	—	—	e 5·1	—
Florence	N.	9·6	310	e 4 46	?L	—	—	(e 4·8)	7·8
Moncalieri		12·4	308	(e 3 5)	0	(5 3)	−26	7·0	—
Strasbourg		14·5	321	—	—	—	—	e 6·8	—
Feldberg		15·3	327	—	—	—	—	e 9·2	—
Makeyevka		15·6	45	—	—	—	—	10·2	—
De Bilt		18·1	326	—	—	—	—	e 10·3	—
Tiflis	E.	18·2	71	e 4 40	+21	e 8 19	+35	e 12·5	13·2
	N.	18·2	71	e 4 41	+22	e 8 22	+38	e 12·3	13·8
Baku		22·0	75	—	—	—	—	e 15·3	—
Ekaterinburg		31·8	41	—	—	—	—	17·3	—

Additional readings and notes: Belgrade eE = +4m.33s. and +5m.28s., eN = +5m.36s. Rocca di Papa e = +3m.15s. Zagreb e = +3m.4s., eNW = +5m.10s. Moncalieri P is given as e simply and has been increased by 7m., S has been increased by 4m.

Oct. 7d. 19h. 3m. 29s. Epicentre 25°·0N. 123°·0E. (as on Oct. 6d.).

$A = -\cdot494$, $B = +\cdot760$, $C = +\cdot423$; $D = +\cdot839$, $E = +\cdot545$; $G = -\cdot230$, $H = +\cdot354$, $K = -\cdot906$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	N.	1·3	274	e 0 26	+ 6	—	—	—	—
Zi-ka-wei		6·3	348	e 1 28	− 8	2 25	−27	—	4·5
Hong Kong		8·5	252	—	—	—	—	—	6·5
Phu-Lien	E.	15·7	258	e 2 31?	?	—	—	—	—
Irkutsk		30·7	338	—	—	e 11 58	+12	16·5	18·1
Ekaterinburg		54·3	324	—	—	—	—	27·0	29·8
Baku		61·7	305	—	—	—	—	e 34·0	—
Tiflis		65·2	308	—	—	—	—	e 20·5	—
Makeyevka		68·5	315	—	—	—	—	e 40·3	—
Pulkovo		69·9	328	—	—	—	—	e 36·8	—
Copenhagen		80·2	328	—	—	—	—	43·5	—
De Bilt		85·8	327	—	—	—	—	e 46·5	—
Strasbourg		86·6	324	—	—	—	—	e 50·5	—
Uccle		87·0	326	—	—	—	—	e 46·5	—
Rocca di Papa		87·3	316	—	—	e 20 5	?PR_3	—	23·7
Kew		88·8	329	—	—	—	—	e 51·5	—

Additional readings: Irkutsk e = +13m.59s. Pulkovo L = +42·5m.
Uccle e = +54m.31s. ?

Oct. 7d. 21h. 34m. 25s. Epicentre 36°·8N. 69°·5E. (as on 1925 Dec. 18d.).

$A = +\cdot280$, $B = +\cdot750$, $C = +\cdot599$; $D = +\cdot937$, $E = -\cdot350$; $G = +\cdot210$, $H = +\cdot561$, $K = -\cdot801$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent		4·5	358	1 27	+17	i 2 28	+24	—	3·6
Simla	E.	8·5	129	e 2 53	+44	4 41	+51	—	—
	N.	8·5	129	e 3 47	+98	4 53	+63	—	—
Baku		15·7	289	e 3 50	+ 2	e 6 53	+ 5	9·6	—
Bombay		18·1	170	9 32	?L	e 10 32	?	(9·5)	—
Tiflis	E.	19·7	292	e 4 36	− 1	e 8 18	+ 1	e 11·9	16·5
	N.	19·7	292	e 4 35	− 2	e 8 28	+11	e 14·9	22·4
Ekaterinburg		20·9	346	i 4 57	+ 5	i 8 53	+11	i 12·0	12·6
Hyderabad		20·9	155	8 37	?S	(8 37)	− 5	13·0	16·3
Makeyevka		25·6	306	e 5 31	−13	e 10 8	− 6	14·6	18·2
Kucino		28·5	322	—	—	e 11 20	+12	e 16·4	—
Irkutsk		28·8	46	—	—	e 10 54	−19	e 16·1	—
Pulkovo		33·9	325	e 6 29	−35	e 12 25	−14	16·6	—
Upsala	N.	40·0	322	—	—	—	—	e 22·6	—
Copenhagen		42·3	316	—	—	—	—	18·6	—
Hamburg		43·7	312	—	—	—	—	e 21·6	—
Feldberg		44·9	308	—	—	—	—	e 25·6	—
Strasbourg		45·6	305	—	—	—	—	e 28·6	—
De Bilt	E.	46·3	310	—	—	—	—	e 27·6	—
Uccle		47·4	309	—	—	—	—	e 25·6	—
Paris		48·9	305	—	—	—	—	e 32·6	—
Kew		50·1	310	—	—	—	—	e 27·6	—
Edinburgh		51·0	315	—	—	—	—	—	35·6

Additional readings and notes: Tashkent i = +1m.30s., +1m.50s., and +2m.8s., e = +1m.32s.; epicentre 36°·4N. 69°·0?E. Baku i = +8m.5s. Tiflis eE = +14m.35s. Ekaterinburg i = +5m.12s. = PR_1 −1s., e = +8m.59s., MN = +13·6m., MZ = +14·7m. Hyderabad S = +11m.34s.; readings are all given for 20h. Irkutsk e = +17m.9s. and +17m.58s. De Bilt eLN = +26·6m.

Oct. 7d. Readings also at 1h. (La Paz and Tiflis), 2h. (Tiflis), 3h. (Baku, Ekaterinburg, Kucino, Makeyevka, Tashkent, Tiflis, De Bilt, and Kobe), 4h. (Taihoku and Uccle), 6h. (Taihoku and Tiflis), 7h. (Suva), 9h. (Tiflis), 11h. (Ekaterinburg, Taihoku, and Irkutsk), 12h. (Ekaterinburg, Irkutsk, La Paz, Taihoku, and Wellington), 13h. (Irkutsk, Baku, Tiflis, Taihoku, near Batavia and Malabar), 14h. (Ksara and Ekaterinburg), 17h. (Taihoku), 18h. (La Paz (2), Tiflis, near Sumoto, and near Malabar), 19h. (Ekaterinburg), 20h. (Ekaterinburg, Feldberg, Irkutsk, Taihoku (2), Tashkent, and Zi-ka-wei), 21h. (Ekaterinburg and near Irkutsk), 22h. (Ekaterinburg, Irkutsk, and Taihoku).

Oct. 8d. 10h. 34m. 28s. Epicentre 30°·5N. 80°·5E. (as on 1926 July 27d.).

A = +·142, B = +·850, C = +·508; D = +·986, E = −·165; G = +·084, H = +·501, K = −·862.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Dehra Dun		2·2	265	1 8	+34	1 56	+56	2·3	2·5
Simla		2·9	282	0 56	+11	—	—	1·8	2·2
Calcutta	E.	10·6	137	2 56	+18	3 54	−51	4·8	—
	N.	10·6	137	2 50	+12	3 53	−52	5·0	—
Hyderabad		13·2	188	3 3	−13	5 6	−43	5·8	6·9
Bombay		13·5	213	3 7	−13	5 37	−19	6·7	—
Tashkent		14·1	323	3 35	+ 8	i 6 20	+10	i 6·7	9·6
Kodaikanal		20·5	189	—	—	—	—	10·3	11·0
Baku		26·7	300	5 59	+ 4	e 10 46	+11	15·5	20·4
Irkutsk		27·9	32	e 3 36	?	e 10 49	− 8	e 15·4	17·2
Ekaterinburg		29·7	338	i 6 23	− 2	e 11 27	− 2	15·0	17·2
Tiflis	E.	30·7	303	6 42	+ 7	e 11 53	+ 7	e 25·6	27·7
	N.	30·7	303	e 6 58	+23	e 11 47	+ 1	e 25·6	29·7
Zi-ka-wei		34·9	79	e 3 56	?	—	—	—	—
Makeyevka		36·7	312	e 7 24	− 4	e 13 12	− 8	16·5	26·3
Kucino		39·1	324	e 7 27	−20	e 13 45	− 8	22·5	25·2
Pulkovo		44·3	328	8 23	− 5	15 4	− 2	21·5	29·0
Upsala		50·5	325	—	—	—	—	e 27·5	—
Prague		52·2	314	—	—	—	—	e 28·5	31·0
Copenhagen		53·1	321	—	—	17 14	+17	25·5	—
Cheb		53·5	314	—	—	—	—	e 29·5	34·5
Hamburg		54·6	318	—	—	—	—	e26·5	31·5
Strasbourg		56·7	312	—	—	—	—	e 32·5	—
De Bilt		57·7	317	—	—	—	—	e 32·5	38·5
Uccle		58·4	316	—	—	—	—	e 33·5	—
Paris		60·0	314	—	—	—	—	e 35·5	40·5
Kew		61·1	315	—	—	—	—	e 33·5	40·6
Oxford		61·7	317	—	—	—	—	—	36·7
Granada		67·8	301	—	—	—	—	e 40·5	47·5
Ottawa		101·1	345	—	—	—	—	e 56·5	—
La Paz		148·2	289	19 56 [+ 3]		—	—	—	—

Additional readings: Simla ePN = +1m.8s. Tashkent i = +3m.39s. and +3m.48s. Baku MN = +20·5m., MZ = +21·4m. Ekaterinburg e = +11m.46s. Tiflis eE = +7m.1s., eN = +14m.2s., and +17m.2s., eE = +17m.3s. Kucino ePR$_2$ = +9m.17s., MN = +24·1m. Pulkovo MN = +24·4m., MZ = +28·9m. Copenhagen SR$_1$ = +20m.32s. ? De Bilt MN = +34·2m. Kew MN = +35·6m., MZ = +40·5m. Ottawa e = +47m.32s. ?

Oct. 8d. 12h. 26m. 5s. Epicentre 34°·0N. 144°·5E.

A = −·675, B = +·481, C = +·559; D = +·581, E = +·814; G = −·455, H = +·325, K = −·829.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	5·8	333	(1 25)	− 5	(2 28)	−11	—	—
Nagoya		6·4	283	e 1 36	− 2	3 27	+32	—	—
Osaka		7·5	278	1 49	− 5	—	—	3·7	10·1
Kobe		7·8	278	1 45	−13	—	—	4·0	5·0
Toyooka		8·1	284	1 56	− 7	—	—	—	—
Nagasaki		12·3	268	e 3 52	+49	—	—	7·8	—
Zi-ka-wei		19·6	268	3 11	−85	6 41	?	9·4	10·8

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		28·8	233	—	—	e 9 55?	−78	—	—
Irkutsk		33·9	316	6 58	− 6	12 28	−11	17·9	22·2
Honolulu, T.H.	E.	52·0	90	—	—	—	—	e 25·9	—
Tashkent		58·2	302	i 9 58	− 2	i 17 58	− 3	e 26·9	37·1
Ekaterinburg		58·9	323	i 10 14	+10	i 18 25	+15	28·9	39·2
Kucino		70·8	326	—	—	e 20 48	+12	37·8	46·1
Pulkovo		71·9	332	16 12	?PR_2	e 21 9	+20	40·9	46·5
Baku		71·9	307	e 11 30	+ 1	i 20 55	+ 6	36·9	42·7
Tiflis	E.	74·5	311	e 12 6	+20	e 21 23	+ 3	37·9	47·1
	N.	74·5	311	e 12 3	+17	e 21 15	− 5	37·9	43·8
Makeyevka		75·1	320	e 11 54	+ 4	e 21 35	+ 8	39·9	45·7
Copenhagen		81·4	336	—	—	—	—	42·9	—
De Bilt		86·9	337	—	—	e 23 48	+ 8	e 46·9	—
Uccle		88·2	337	—	—	—	—	e 47·9	—
Strasbourg		88·9	334	—	—	—	—	e 52·9	—
Kew		89·1	340	—	—	—	—	e 48·9	—
Paris		90·6	337	—	—	—	—	e 53·9	—
Ottawa		92·7	27	—	—	—	—	e 49·4	—
Granada		102·9	335	—	—	—	—	62·9	68·4
San Fernando	E.	104·4	337	—	—	—	—	—	69·4

Additional readings and notes: Mizusawa PN =(+1m.7s.); all readings having been diminished by 1m. Osaka MN = +7·6m. Kobe MN = +4·5m. Irkutsk MN = +19·5m. Honolulu, T.H. eN = +28m.55s. Tashkent e = +10m.37s., ePS = +18m.29s., e = +21m.37s., MN = +30·8m., MZ = +37·6m. Ekaterinburg e = +20m.2s., MN = +36·7m. Kucino MZ = +46·2m., MN = +46·6m. Pulkovo MZ = +48·0m. Baku iP = +11m.34s., MN = +45·8m. Tiflis eN = +12m.12s. Makeyevka MN = +46·1m., MZ = +48·9m. San Fernando MN = +70·4m.

Oct. 8d. 19h. 49m. 0s. Epicentre 48°·1N. 16°·6E. (as given by De Bilt, Vienna and Strasbourg).

A = +·640, B = +·191, C = +·744; D = +·286, E = −·958; G = +·713, H = +·213, K = −·668.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Vienna		0·2	315	i 0 4	0	—	—	—	—
Graz		1·3	217	i 0 22	+ 2	—	—	—	0·7
Budapest		1·8	110	0 28	0	(0 50)	− 1	0·8	1·5
Zagreb		2·3	190	e 0 39	+ 3	i 1 21	+18	i 1·4	1·8
Prague		2·4	324	i 0 39	+ 2	e 1 9	+ 3	e 1·2	1·3
Laibach		2·5	215	—	—	e 1 2	− 7	e 1·7	—
Cheb		3·4	307	i 0 59	+ 6	e 1 41	+ 7	e 1·8	1·9
Innsbruck	N.W.	3·6	259	e 0 54	− 2	i 1 34	− 5	—	—
Venice		3·9	228	i 1 13	+12	2 8	?L	(2·1)	—
Belgrade	E.	4·2	139	e 0 54	−11	i 1 52	− 3	—	2·7
	N.	4·2	139	e 0 55	−10	i 1 53	− 2	—	2·5
Jena		4·3	313	e 1 6	− 1	2 0	+ 2	i 2·2	2·3
Ravensberg		4·7	270	e 1 8	− 5	2 32	+23	—	—
Hohenheim		4·9	280	1 14	− 2	2 10	− 4	—	2·8
Lemberg	E.	5·2	64	e 2 18	+58	e 4 54	+152	—	5·7
	N.	5·2	64	e 2 24	+64	e 5 6	+164	—	6·2
Zurich		5·5	266	i 1 20	− 5	i 2 21	−10	—	3·1
Feldberg	E.	5·7	294	e 1 27	− 1	i 2 48	+12	i 3·1	3·2
	N.	5·7	294	e 1 27	− 1	e 2 38	+ 2	i 3·1	3·1
Florence		5·7	223	e 1 15	−13	2 30	− 6	—	3·5
Strasbourg		5·9	278	1 24	− 7	i 3 9	+28	3·7	4·6
Neuchatel		6·6	264	i 1 36	− 5	i 2 52	− 8	—	—
Moncalieri		6·8	246	e 1 59	+15	i 3 30	+25	4·0	—
Rocca di Papa		6·9	205	e 1 39	− 6	e 3 7	0	e 3·9	5·3
Hamburg		6·9	324	e 2 48	+63	e 3 22	+15	i 3·8	5·9
Besançon		7·2	267	e 2 17	+28	3 59	+44	—	—
Konigsberg	E.	7·2	18	—	—	—	—	e 3·6	10·0
Pompeii		7·4	192	e 3 56	?L	e 4 21	+60	(e 4·0)	—
Naples	E.	7·4	194	e 3 51	?L	—	—	(e 3·8)	—
Grenoble		8·0	253	—	—	e 3 0?	−37	i 4·6	—
Copenhagen		8·0	342	e 2 40	+39	e 3 32	− 5	4·3	5·3
De Bilt		8·4	303	e 2 18	+11	e 3 48	+ 1	e 4·3	5·7
Uccle		8·4	294	e 2 0?	− 7	e 4 21	+34	i 4·5	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Paris		9·4	280	e 2 53	+31	e 4 40	+27	5·1	—
Kew		11·4	294	e 3 19	+29	e 5 31	+27	i 6·5	—
Upsala		11·8	1	e 3 8	+12	e 5 26	+12	i 6·5	7·6
Oxford		12·1	295	—	—	—	—	i 6·0	7·0
Stonyhurst		13·3	303	e 3 15	− 2	e 5 46	− 5	(e 7·3)	—
Tortosa	N.	13·5	243	e 6 6	?S	(e 6 6)	+10	7·9	8·6
Pulkovo		14·1	29	3 18	− 9	6 1	− 9	7·7	8·1
Makeyevka		14·3	82	—	—	e 6 44	+29	7·9	10·6
Edinburgh		14·4	310	—	—	—	—	i 8·6	—
Toledo	N.E.	16·9	249	—	—	—	—	e 8·9	—
Almeria		17·8	238	—	—	—	—	12·3	15·2
Granada		18·4	241	—	—	—	—	e 12·4	—
Tiflis		20·8	97	e 4 49	− 2	e 8 36	− 4	e 12·3	16·6
Ekaterinburg		27·7	55	5 55	−10	e 10 50	− 4	14·0	15·0
Tashkent		37·3	80	e 9 0?	?PR_1	—	—	e 10·9	17·0
Irkutsk		52·8	50	—	—	—	—	e 28·5	—

Additional readings: Budapest MN = +3·0m. Zagreb iP = +43s., iPR_1 = +45s., i = +47s., iPS = +48s., iPR_2 = +52s., iR_8P_2S = +1m.6s., iPS = +1m.8s., $iR_{82}P_4S$ = +1m.10s., i = +1m.12s. and +1m.17s., $iR_2P_2S_2$ = +1m.18s., $iR_{82}P_3S_3$ = +1m.20s., iSR_1 = +1m.23s., iR_8P = +1m.29s., $iR_{82}P_2S_2$ = +1m.31s., iR_2S = +1m.37s., $iR_{82}S$ = +1m.45s. Innsbruck i = +1m.5s. Venice S = +2m.19s. and +2m.28s. ?; also +2m.36s. and +3m.13s. Belgrade iE = +57s. and +2m.1s., iN = +2m.2s., iSEN = +2m.16s. Jena eE = +1m.19s., +1m.23s., and +1m.53s., iE = +1m.37s. Ravensburg iP = +1m.13s., PR_1 = +1m.27s., i = +1m.30s. Hohenheim P = +1m.35s., MN = +2·7m. Feldberg eN = +1m.31s., +1m.37s., +2m.0s., +2m.27s., and +2m.33s. Strasbourg iP = +1m.51s., MN = +4·1m. Rocca di Papa P = +1m.42s., eSE = +3m.18s. Hamburg MZ = +4·3m., MN = +5·1m.; none of the readings entered are given with a definite phase. Konigsberg eE = +3m.54s., iE = +4m.16s., eZ = +5m.3s., iZ = +5m.21s., eE = +5m.30s., MZ = +6·0m.; T_e = 19h.48m.55s. Copenhagen eE = +3m.58s., MN = +4·7m., MZ = +4·8m. De Bilt MN = +4·8m.; P and S are given as eZ and eEZ respectively. Paris e = +3m.57s. Kew e = +2m.46s., iN = +6m.7s., and +6m.21s., iZ = +6m.14s. Upsala MN = +8·1m. Stonyhurst, S is given as e and L as eS ?, eSR_1 ? = +8m.14s. Tortosa SN = +7m.46s. Pulkovo MNZ = +9·6m. Makeyevka MN = +10·1m., MZ = +10·4m. Tiflis eE = +8m.41s., MN = +16·0m.

Oct. 8d. Readings also at 0h. (Ekaterinburg, Suva, Sucre, and near Sumoto), 1h. (Taihoku (2) and Ekaterinburg), 2h. (Ekaterinburg, La Paz, and Sucre), 3h. (La Plata), 5h. (Baku, Ekaterinburg, Tiflis, Taihoku, and Zi-ka-wei), 7h. (Baku and Tashkent), 8h. (Irkutsk, near Tucson, near Guadalajara, and Tacubaya), 9h. (Baku, Tashkent, near Kobe, and Sumoto), 10h. (Taihoku), 12h. (Irkutsk and near Belgrade), 13h., 16h., and 17h. (Taihoku), 18h. (Ekaterinburg), 19h. (La Paz), 20h. (near Vienna), 21h. (Tiflis, La Paz, and near Vienna), 22h. (Baku, Ekaterinburg, Irkutsk, Taihoku (2), and Tashkent), 23h. (Ekaterinburg, Taihoku, and near Vienna).

Oct. 9d. 3h. 37m. 25s. Epicentre 34°·0S. 57°·0E. (as on 1927 Sept. 10d.).

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.
Baku		74·7	355	e 11 45	− 2	e 21 27	+ 5	e 34·6	49·5
Tashkent		76·1	10	i 11 27	+31	e 20 29	−69	—	27·5
Tiflis	E.	76·5	351	e 11 53	− 5	e 21 42	− 1	e 42·8	44·5
	N.	76·5	351	e 11 55	− 3	e 21 44	+ 1	40·1	45·7
Granada		90·8	317	—	—	—	—	50·6	55·1
Ekaterinburg		90·9	3	i 13 39	+18	e 23 59	−24	30·1	37·2
Kucino		91·2	350	—	—	—	—	e 39·8	—
Ottawa		142·5	302	—	—	—	—	e 79·6	—

Additional readings: Baku MN = +47·6m., MZ = +48·6m. Tashkent e = 3h.35m.24s. and 3h.38m.34s.; the P and S entered above are given merely as i and e respectively. Tiflis eN = +37m 51s. Ekaterinburg P and S are given as i and e only.

Oct. 9d. 4h. 47m. 3s. Epicentre 25°·0N. 123°·0E. (as on Oct. 7d.).

A = −·494, B = +·760, C = +·423; D = +·839, E = +·545; G = −·230, H = +·354, K = −·906.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	1·3	274	e 0 26	+ 6	—	—	—	—
Zi-ka-wei		6·3	348	1 38	+ 2	2 42	−10	—	4·6
Manila		10·6	191	—	—	—	—	e 7·0	—
Phu-Lien		15·7	258	2 57?	−51	—	—	—	—
Tashkent		47·0	305	—	—	e 13 57?	−104	e 16·0	18·2
Ekaterinburg		54·3	324	—	—	e 21 11	?SR_1	28·4	33·8
Baku		61·7	305	—	—	—	—	e 33·4	—
Tiflis	E.	65·2	308	—	—	—	—	e 37·0	—
Kucino		66·9	323	—	—	—	—	e 36·0	—
Makeyevka		68·5	315	—	—	—	—	e 40·0	—
Pulkovo		69·9	328	—	—	—	—	41·0	—
De Bilt		85·8	327	—	—	—	—	e 47·0	55·8
Strasbourg		86·6	324	e 15 57?	?	—	—	e 53·0	—
Uccle		87·0	326	—	—	—	—	e 47·0	—
Rocca di Papa		87·3	316	—	—	e 29 45	?SR_1	—	55·2
Kew		88·8	329	—	—	—	—	e 49·0	—
Paris		89·2	325	e 17 57?	?	—	—	51·0	—
Ottawa	N.	107·5	14	—	—	—	—	e 66·0	—

Additional readings: Tiflis eLN = +35·2m. De Bilt MN = +48·6m., MZ = +55·7m.

Oct. 9d. Readings also at 0h. (Ekaterinburg, near La Paz, and Sucre), 1h. (Tashkent), 2h. (Ekaterinburg, Taihoku, and Tashkent), 3h. (La Paz, Balboa Heights, Taihoku (2), Ekaterinburg, De Bilt, Uccle, and near Vienna), 4h. (Baku, De Bilt, Ekaterinburg, Kucino, Makeyevka, Pulkovo, and Tashkent), 5h. (Taihoku), 6h. (Ekaterinburg, Makeyevka, and Tashkent) 10h. (near Vienna), 12h. (Apia, Irkutsk, and near Sumoto), 14h. (near Tacubaya), 16h. (Ekaterinburg and Taihoku), 18h. (Ekaterinburg, Manila, and Tiflis), 19h. (Tashkent and Tiflis), 20h. (Tiflis), 22h. (Tashkent and Ekaterinburg), 23h. (Taihoku, Tiflis, and near Vienna).

Oct. 10d. 17h. 49m. 29s. Epicentre 25°·0N. 123°·0E. (as on 9d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	1·3	274	e 0 26	+ 6	—	—	—	—
Zi-ka-wei		6·3	348	e 1 55	+19	e 2 45	− 7	—	4·8
Hong Kong		8·5	252	—	—	—	—	—	7·5
Manila		10·6	191	—	—	—	—	e 5·5	—
Phu-Lien	N.	15·7	258	3 31?	−17	—	—	—	—
Irkutsk		30·7	338	—	—	e 11 31?	−15	17·5	20·6
Tashkent		47·0	305	—	—	e 15 19	−2	e 24·5	32·1
Ekaterinburg		54·3	324	e 9 24	−11	e 21 29	?SR_1	27·0	34·4
Baku		61·7	305	—	—	—	—	e 34·5	—
Makeyevka		68·5	315	—	—	—	—	e 40·5	—
Pulkovo		69·9	328	—	—	—	—	e 38·5	45·5
Copenhagen		80·2	328	—	—	—	—	43·5	—
Feldberg		85·2	325	—	—	—	—	e 45·0	49·7
De Bilt		85·8	327	—	—	—	—	e 46·5	56·2
Strasbourg		86·6	324	—	—	—	—	e 52·5	—
Uccle		87·0	326	—	—	—	—	e 46·5	—
Edinburgh		87·2	333	—	—	—	—	—	56·5
Kew		88·8	329	—	—	—	—	e 50·5	—
Oxford		89·1	330	—	—	—	—	—	50·5
Paris		89·2	325	—	—	—	—	e 51·5	—

Additional readings and note: Hong Kong reading is given for 16h. Irkutsk MZ = +20·2m. Tashkent e = +18m.19s., MN = +28·0m., MZ = +31·4m. Ekaterinburg MN = +30·5m., MZ = +34·5m. Pulkovo MZ = +44·5m. De Bilt MN = +48·9m. Strasbourg eL = +55·5m.

Oct. 10d. 23h. 17m. 55s. Epicentre 29°·2S. 177°·0W. (as on 1925 Feb. 13d.).

A = −·872, B = −·046, C = −·488 ; D = −·052, E = +·999 ;
G = +·487, H = +·026, K = −·873.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	11·8	338	2 47	− 9	e 5 17	+ 3	—	11·4
	N.	11·8	338	e 2 59	+ 3	e 5 11	− 3	—	8·9
Wellington	E.	13·8	206	—	—	—	—	i 7·1	13·0
	N.	13·8	206	—	—	—	—	i 7·2	9·7
Apia		16·1	18	—	—	e 6 22	−35	8·6	10·4
Riverview		27·5	251	e 6 59	+56	e 10 59	+ 9	e 14·3	17·4
Toronto	E.	114·8	52	—	—	—	—	e 73·2	—
Ottawa		117·8	51	—	—	—	—	e 58·1	—
Tashkent		125·9	301	e 9 5?	?	e 30 59	?	e 57·1	71·4
Ekaterinburg		131·6	322	e 19 15	[− 7]	e 22 41	?	64·1	75·8
Kucino		143·7	326	—	—	—	—	e 77·1	—
Pulkovo		144·3	337	e 19 30	[−17]	—	—	75·1	—
Makeyevka		147·2	315	e 19 45	[− 6]	—	—	82·1	110·6
Copenhagen		152·7	348	—	—	—	—	84·1	—
Edinburgh		152·9	8	—	—	—	—	e 90·1	—
De Bilt		157·1	357	e 20 5?	[0]	—	—	e 89·1	92·1
Oxford		157·2	7	—	—	—	—	—	90·1
Kew		157·6	6	—	—	—	—	e 84·1	—
Uccle		158·4	358	—	—	—	—	e 86·1	—
Strasbourg		160·3	351	—	—	—	—	e 88·1	—
Paris		160·4	1	—	—	—	—	e 90·1	—
San Fernando	E.	169·4	44	—	—	—	—	98·6	—
Granada		170·3	33	—	—	—	—	100·6	109·1

Additional readings : Riverview P is given simply as e, MN = +14·8m. Tashkent and Ekaterinburg give their readings as e simply, for the latter MZ = +74·7m. De Bilt MNZ = +93·6m. San Fernando MN = +93·6m.

Oct. 10d. Readings also at 0h. (Ekaterinburg and near Vienna), 1h. and 2h. (near Vienna), 3h. (Tacubaya, Tashkent, and near Vienna), 4h. (Taihoku (2) and Tashkent), 5h. (Taihoku and near Sumoto), 6h. (Ekaterinburg), 10h. and 11h. (Taihoku), 13h. (Ekaterinburg and Tashkent), 14h. (Ekaterinburg), 20h. (Stonyhurst), 22h. (Vienna).

Oct. 11d. 1h. 12m. 54s. Epicentre 38°·3N. 141°·0E. (as on 1923 Jan. 27d.).

A = −·610, B = +·494, C = +·620 ; D = +·629, E = +·777 ;
G = −·482, H = +·390, K = −·785.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa		0·8	6	0 44	+32	1 15	+53	—	—
Nagoya		4·5	228	i 1 13	+ 3	(2 0)	− 4	2·0	2·3
Toyooka		5·6	243	1 26	− 1	(2 29)	− 5	2·8	2·9
Osaka		5·8	233	1 28	− 2	(2 34)	− 5	2·6	3·4
Kobe		5·9	234	1 30	− 1	(2 38)	− 3	2·6	4·2
Sumoto		6·3	233	1 27	− 9	(2 46)	− 6	2·8	2·8
Irkutsk		28·9	311	e 6 12	− 5	e 11 6	− 9	18·1	—
Tashkent		53·6	299	i 9 27	− 3	i 17 7	+ 3	e 28·1	33·6
Ekaterinburg		53·8	320	i 9 36	+ 4	—	—	30·1	35·2
Kucino		65·7	324	—	—	—	—	e 32·4	—
Suva	N.	66·4	142	—	—	—	—	e 45·7	—
Pulkovo		66·7	330	i 11 2	+ 6	—	—	39·1	43·5
Baku		67·1	306	—	—	—	—	36·1	42·9
Makeyevka		70·0	318	—	—	e 32 6?	?	42·1	45·9
Copenhagen		76·3	334	—	—	—	—	38·1	—
Vienna	Z.	80·5	327	12 23	+ 1	—	—	—	—
De Bilt		81·8	334	e 12 29	0	—	—	e 42·1	—
Uccle		83·1	334	—	—	—	—	e 43·1	—
Oxford		83·4	339	—	—	—	—	—	55·1
Kew		84·1	339	—	—	—	—	e 42·1	—

Additional readings : Mizusawa PN = +45s. Nagoya P = +1m.21s., S = +1m.39s. Osaka MN = +3·5m. Kobe P = +1m.34s., S = +2m.8s., MN = +4·1m. Irkutsk e = +14m.8s. Tashkent MN = +33·7m. Baku MN = +43·4m., MZ = +43·5m. Makeyevka MZ = +45·6m. De Bilt eLN = +44·1m.

Oct. 11d. 3h. 5m. 45s. Epicentre 25°·0N. 123°·0E. (as on Oct. 10d.).

A = −·494, B = +·760, C = +·423 ; D = +·839, E = +·545 ;
G = −·230, H = +·354, K = −·906.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	1·3	274	e 0 26	+ 6	—	—	—	—
Hong Kong		8·5	252	—	—	—	—	—	6·5
Manila		10·6	191	e 1 48	−50	—	—	—	5·9
Osaka		14·5	45	4 15	+42	—	—	8·7	—
Irkutsk		30·7	338	e 10 1	?S	(e 10 7)	−99	16·2	—
Tashkent		47·0	305	—	—	e 16 3	+22	e 21·2	25·0
Kucino		66·9	323	—	—	—	—	e 33·5	—
Makeyevka		68·5	315	—	—	—	—	38·0	—
Pulkovo		69·9	328	e 8 2	?	—	—	39·2	42·2
Copenhagen		80·2	328	—	—	—	—	40·2	—
De Bilt		85·8	327	—	—	—	—	e 43·2	—
Strasbourg		86·6	324	—	—	—	—	e 46·2	—
Uccle		87·0	326	—	—	—	—	e 43·2	—
Edinburgh		87·2	333	—	—	—	—	e 52·3	—
Kew		88·8	329	—	—	—	—	e 46·2	—
Oxford		89·1	330	—	—	—	—	—	54·2
Paris		89·2	325	—	—	—	—	e 50·2	—

Additional readings: Irkutsk e = +12m.0s. Tashkent MN = +24·5m.

Oct. 11d. 4h. 23m. 58s. Epicentre 25°·0N. 123°·0E. (as at 3h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	1·3	274	e 0 26	+ 6	—	—	—	—
Hong Kong		8·5	252	—	—	—	—	—	6·5
Zi-ka-wei		6·3	348	e 1 35	− 1	—	—	—	4·9
Manila		10·6	191	—	—	—	—	e 6·5	9·0
Hukuoka		10·7	35	—	—	—	—	e 6·0	—
Osaka		14·5	45	4 36	+63	—	—	7·7	12·9
Phu-Lien		15·7	258	—	—	—	—	—	9·0
Irkutsk		30·7	338	(e 6 50)	+15	(10 56)	+10	(15·0)	(16·4)
Tashkent		47·0	305	e 8 31	−16	—	—	24·7	27·9
Kucino		66·9	323	—	—	—	—	35·8	—
Makeyevka		68·5	315	—	—	e 26 32	?	38·8	44·9
Pulkovo		69·9	328	e 15 30	?PR_2	—	—	38·0	44·6
Copenhagen		80·2	328	—	—	—	—	41·0	—
Hamburg		82·5	327	—	—	—	—	e 45·0	—
De Bilt		85·8	327	—	—	—	—	e 44·0	56·1
Strasbourg		86·6	324	—	—	—	—	e 50·0	—
Uccle		87·0	326	—	—	—	—	e 45·0	—
Edinburgh		87·2	333	—	—	—	—	e 53·0	—
Kew		88·8	329	—	—	—	—	e 50·0	—
Oxford		89·1	330	—	—	—	—	—	53·0
Paris		89·2	325	—	—	—	—	e 50·0	56·0
Ottawa		107·5	14	—	—	—	—	e 67·0	—

Additional readings and note: Irkutsk readings have been diminished by 2m. MZ = (+18·2m.). Makeyevka MZ = +44·7m. Pulkovo MZ = +44·6m. De Bilt MN = +48·9m., MZ = +56·4m.

Oct. 11d. 14h. 45m. 3s. Epicentre 42°·0N. 13°·5E. (as on 1922 Dec. 29d. and near the position given by De Bilt, viz., 41°56′N. 13°27E′).

A = +·722, B = +·173, C = +·669 ; D = +·233, E = −·972 ;
G = +·651, H = +·156, K = −·743.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Rocca di Papa		0·6	247	1 0 9	0	1 0 17	0	—	0·3
Naples	E.	1·3	154	e 0 23	+ 3	e 0 39	+ 3	—	—
Florence		2·4	317	0 42	+ 5	1 27	+21	—	1·5
Venice		3·5	350	1 1 5	+10	2 9	+32	2·6	—
Mostar		3·5	67	—	—	—	—	e 2·6	4·1
Zagreb		4·2	24	1 1 5	0	1 2 26	+31	—	3·2

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Moncalieri		5·2	308	1 18	− 2	2 34	+12	3·1	—
Graz		5·3	14	i 1 19	− 3	e 2 27	+ 2	3·0	3·4
Belgrade	E.	5·8	58	—	—	e 2 15	−24	—	—
Zurich		6·4	329	e 1 38	0	e 2 51	− 4	—	—
Ravensburg		6·4	336	1 54	+16	2 14	−41	3·2	4·7
Vienna		6·5	17	1 37	− 2	2 58	+ 1	—	4·4
Budapest		6·7	34	e 2 16	+34	e 3 47	+45	5·0	—
Strasbourg		7·7	331	1 55	− 2	—	—	—	5·1
Cheb		8·1	355	—	—	—	—	e 4·0	5·0
Prague		8·1	4	e 3 37	?S	(e 3 37)	− 3	(e 4·5)	5·0
Feldberg		8·9	338	—	—	e 4 20	+19	e 4·9	6·4
Jena		8·9	352	e 2 11	− 4	—	—	i 4·4	5·4
Tortosa	N.	9·8	267	—	—	—	—	5·3	7·8
Paris		10·2	315	e 2 39	+ 6	e 6 5	+90	7·0	7·0
Uccle		10·8	328	e 4 18	?S	(e 4 18)	−32	e 6·2	7·8
De Bilt		11·5	334	—	—	—	—	e 6·0	7·0
Hamburg	Z.	11·8	350	—	—	—	—	e 5·9	7·8
Kew		13·3	320	—	—	—	—	e 7·0	—
Copenhagen		13·7	357	—	—	—	—	e 7·4	9·4
Oxford		14·0	319	—	—	—	—	e 7·2	9·8
Granada		14·0	255	—	—	—	—	7·2	10·0
San Fernando	E.	16·2	256	—	—	—	—	—	10·0
Upsala		18·0	7	—	—	—	—	e 10·0	—
Pulkovo		20·5	24	4 38	− 9	e 8 28	− 6	12·0	13·7
Kucino		21·0	41	—	—	—	—	e 10·4	14·0
Ekaterinburg		33·2	47	6 35	−23	e 13 31	+64	17·4	21·4
Tashkent		40·9	72	—	—	e 17 21	?SR_1	e 19·0	26·6

Additional readings and notes: Rocca di Papa MZ = +0·4m., MN = +0·5m. Venice eS = +2m.16s. and +2m.27s. Mostar e = +3m.16s. and +3m.49s. Zagreb iP = +1m.21s., ePNW = +1m.43s., iPS = +1m.25s., iPR_2 = +1m.28s. and +1m.33s., iPS = +1m.47s. and +1m.59s., iP_4S = +1m.48s., iP_3S_2 = +2m.4s., iSR_1 = +2m.31s. and +2m.36s., MNW = +2·8m. Moncalieri S = +2m.40s. Graz MN = +3·8m. Belgrade iE = +2m.37s., +4m.5s., +4m.33s., +4m.48s., +5m.28s., and +6m.4s. Ravensburg i = +2m.44s. =S − 11s., MN = +4·1m. Vienna iNZ = +2m.24s., PS_2 = +3m.29s. Strasbourg i = +2m.50s. and +3m.49s., SR_2? = +4m.40s. Prague gives S as P and L as S. Feldberg e = +5m.53s. Jena iE = +2m.36s., eN = +2m.57s., eEZ = +3m.27s., iE = +3m.7s. Paris eP = +2m.58s. De Bilt MN = +7·5m., MZ = +8·2m. Hamburg ME = +8·6m. Copenhagen MN = +10·0m. San Fernando MN = +9·4m. Pulkovo MN = +13·8m. Kucino MN = +13·9m.

Oct. 11d. 15h. 29m. 8s. Epicentre 44°·5N. 20°·6E. (as on 1926 May 19d.).

A = +·668, B = +·251, C = +·701; D = +·352, E = −·936; G = +·656, H = +·247, K = −·713.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Belgrade	E.	0·3	343	i 0 2	− 3	i 0 9	+ 1	—	0·2
	N.	0·3	343	i 0 1	− 4	i 0 10	+ 2	—	0·2
Mostar		2·3	238	—	—	—	—	e 2·7	—
Budapest		3·2	340	e 0 41	− 9	—	—	e 3·9	—
Zagreb	N.E.	3·5	293	i 1 2	+ 7	i 1 58	+21	—	2·1
	N.W.	3·5	293	i 0 57	+ 2	i 1 57	+20	—	2·0
Vienna		4·7	323	0 16	−57	2 52	?	—	—
Rocca di Papa		6·4	247	e 2 58	?S	(e 2 58)	+ 3	e 6·8	—
Strasbourg		9·7	300	—	—	—	—	e 5·6	—
De Bilt		12·7	312	—	—	—	—	e 7·5	—
Ekaterinburg		27·7	49	—	—	(10 52?)	− 2	10·9	—

Additional readings: Belgrade iEN = +4s. Zagreb iNE = +1m.10s. and +1m.20s., iNW = +1m.26s., +1m.38s., and +1m.54s., eNE = +1m.45s., and +1m.50s. Vienna iPR_1 = +1m.23s., P_3S = +2m.14s.

Oct. 11d. 17h. 30m. 23s. Epicentre 44°·0N. 141°·5E. (as on 1924 May 22d.).

A = −·563, B = +·448, C = +·695 ; D = +·622, E = +·783 ; G = −·544, H = +·432, K = −·719.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		2·8	17	1 8	?S	(1 8)	− 9	1·9	2·8
Mizusawa		4·9	184	1 12	− 4	2 0	−14	—	—
Nagoya		9·5	204	i 2 20	− 3	(4 13)	− 3	4·2	4·3
Toyooka		9·9	213	2 32	+ 3	4 24	− 2	e 4·9	—
Osaka		10·4	209	2 41	+ 5	(4 51)	+11	4·8	5·9
Kobe		10·5	213	2 38	+ 1	3 52	−51	5·4	7·2
Sumoto		10·9	210	2 40	− 3	(e 4 36)	−16	e 4·6	5·7
Irkutsk		25·8	302	i 5 52	+ 6	i 10 30	+12	13·6	14·9
Hong Kong		31·2	236	—	—	—	—	—	18·1
Manila		34·2	219	e 6 37	−30	—	—	—	—
Phu-Lien	N.	37·1	243	11 37?	?	—	—	—	—
Ekaterinburg		49·9	317	i 9 9	+ 3	i 16 25	+ 7	23·6	29·0
Tashkent		51·4	295	i 9 13	− 3	i 16 38	+ 2	e 26·9	32·6
Batavia		59·2	223	e 10 49	+43	e 19 2	+49	—	—
Kucino		61·3	323	e 14 13	?PR_2	—	—	34·1	—
Pulkovo		62·0	330	10 30	+ 5	19 0	+12	32·6	41·1
Baku		64·2	305	—	—	e 19 31	+16	i 35·5	—
Makeyevka		66·1	317	10 55	+ 3	19 50	+12	30·4	43·9
Upsala	E.	66·5	335	—	—	e 19 50	+ 6	—	—
Tiflis		66·5	309	e 11 3	+ 8	e 19 59	+15	e 37·6	42·5
Copenhagen		71·4	334	e 11 30	+ 4	20 49	+ 6	34·6	—
Hamburg		74·0	333	e 11 45	+ 3	e 21 20	+ 6	e 37·6	—
Vienna	Z.	76·0	327	i 11 57	+ 2	—	—	—	—
De Bilt		76·8	335	12 0	0	21 53	+ 6	e 39·6	—
Zagreb		78·1	326	e 12 9	+ 1	e 22 3	+ 2	—	—
Uccle		78·1	335	—	—	e 22 3	+ 2	e 38·6	—
Kew		79·0	339	—	—	e 21 37?	−35	—	—
Strasbourg		79·0	331	12 12	− 1	e 22 17	+ 5	e 34·6	—
Paris		80·5	335	i 12 20	− 2	i 22 31	+ 2	46·6	—
Florence		81·6	327	e 12 31	+ 3	—	—	—	—
Rocca di Papa		82·8	325	e 12 30	− 5	22 44	−11	—	—
Ottawa		84·8	26	—	—	e 22 37?	[−18]	e 41·6	—
Granada		92·9	334	(e 13 37)	+ 5	(i 23 37)	[− 8]	—	(76·1)
San Fernando	E.	94·4	336	—	—	—	—	—	77·1

Additional readings: Mizusawa SN = +1m.58s. Nagoya S? = +3m.7s., MN = +4·7m. Osaka MN = +6·1m. Sumoto eS = +3m.37s. Ekaterinburg i = +9m.33s., +9m.46s., +17m.7s., and +18m.46s., iPR_1 = +10m.0s., eSR_1 = +21m.16s. = SR_2 − 13s., MZ = +25·2m. Tashkent eSR_1 = +20m.41s., MN = +33·9m., MZ = +48·4m. Baku eL = +24·6m. Makeyevka e = +20m.35s. = [S] − 7s., MZ = +43·8m. Tiflis e = +13m.31s. = PR_1 − 26s., eSR_1 = +25m.3s., eE = +29m.13s., eLN = +36·6m., MN = +48·4m. Copenhagen SR_1 = +25m.37s.? SR_2 = +29m.37s.? De Bilt eLN = +38·6m. Paris PR_1 = +15m.30s. Rocca di Papa e = +10m.25s. Granada i = (+20m.1s.) = PR_2 +7s. ; readings have all been increased by 3m. San Fernando MN = +76·1m.

Oct. 11d. Readings also at 0h. (near Tiflis), 1h. (Toyooka), 3h. (Taihoku), 6h. (near Kobe and Sumoto), 9h. (Wellington, Sucre, near Nagasaki, and Hukuoka), 11h. (Ekaterinburg and near Toyooka), 12h. (near Mizusawa), 13h. (Taihoku), 14h. (Florence and Rocca di Papa), 15h. (Taihoku), 17h. (Melbourne, Riverview, Wellington, and near Nagoya), 18h. (Moncalieri), 20h. (Apia), 22h. (Baku, Ksara, Tashkent, and Tiflis), 23h. (Ekaterinburg and Manila).

Oct. 12d. 6h. 28m. 2s. Epicentre 25°·0N. 123°·0E. (as on Oct. 11d.).

A = −·494, B = +·760, C = +·423 ; D = +·839, E = +·545 ; G = −·230, H = +·354, K = −·906.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	N.	1·3	274	e 0 26	+ 6	—	—	—	—
Zi-ka-wei		6·3	348	e 1 22	−14	e 2 52	0	—	5·0
Hong Kong		8·5	252	—	—	—	—	—	8·0
Manila		10·6	191	e 3 18	+40	—	—	—	8·6
Hukuoka		10·7	35	—	—	(4 27)	−21	4·4	7·0
Phu-Lien		15·7	258	—	—	4 58?	−110	8·0	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk		30·7	338	e 6 8	−27	e 10 29	−77	16·0	18·1
Bombay		46·8	273	—	—	—	—	e 24·0	—
Ekaterinburg		54·3	324	i 9 19	−16	e 17 10	− 3	25·0	34·3
Baku		61·7	305	—	—	—	—	33·0	—
Tiflis	N.	65·2	308	—	—	—	—	e 35·5	47·8
Kucino	N.	66·9	323	e 11 52	+55	—	—	—	—
Makeyevka		68·5	315	e 9 48	?	—	—	34·8	44·9
Pulkovo		69·9	328	e 10 43	−33	e 20 47	+22	37·0	45·5
Upsala		75·9	330	—	—	—	—	e 42·0	48·2
Copenhagen		80·2	328	—	—	e 20 58?	?	41·0	52·0
Hamburg		82·5	327	—	—	—	—	e 42·0	46·0
Dyce		85·9	334	—	—	—	—	—	53·0
De Bilt		85·8	327	e 12 36	−16	—	—	e 45·0	50·2
Strasbourg		86·6	324	—	—	e 24 48	?PS	e 47·0	55·6
Uccle		87·0	326	—	—	—	—	e 43·0	49·0
Edinburgh		87·2	333	—	—	—	—	e 50·0	56·0
Rocca di Papa		87·3	316	e 14 16	+75	—	—	e 49·6	—
Stonyhurst		88·2	331	—	—	—	—	e 45·0	50·0
Moncalieri		88·6	320	—	—	—	—	49·1	—
Kew		88·8	329	—	—	—	—	e 46·0	—
Oxford		89·1	330	—	—	—	—	e 47·2	53·2
Paris		89·2	325	—	—	—	—	e 48·0	53·0
Toledo	N.W.	98·5	322	—	—	—	—	e 51·4	56·1
Rio Tinto		101·4	321	29 58?	?	—	—	—	58·0
Ottawa		107·5	14	—	—	—	—	e 55·0	—

Additional readings: Manila MN = +8·4m. Irkutsk e = +7m.26s., eSR$_1$ = +11m.11s., MNZ = +20·2m. Ekaterinburg e = +12m.21s., MN = +30·2m., MZ = +34·4m. Tiflis eLE = +39·0m. Makeyevka P is given as e only, MN = +40·1m., MZ = +48·1m. Pulkovo P and S are given as e only, MN = +43·0m., MZ = +44·5m. Copenhagen eN = +30m.58s.?, MN = +44·7m. Hamburg MZ = +53·0m. De Bilt eLN = +43·0m., MN = +48·8m., MZ = +56·3m. Moncalieri e = +34m.58s.

Oct. 12d. 6h. 29m. 25s. Epicentre 44°·5N. 34°·5E. (as on 1927 Sept. 24d.).

A = +·588, B = +·404, C = +·701; D = +·566, E = −·824; G = +·578, H = +·397, K = −·713.

Baku attributes its record to the Crimea.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tiflis	8·0	107	—	—	—	—	e 4·9	—
Ksara	10·7	174	4 51	?S	(4 51)	+ 3	9·1	—
Baku	12·1	104	e 3 0	0	e 5 21	0	6·6	8·4
Granada	29·4	269	—	—	—	—	8·6	12·1
Nagasaki	71·2	62	—	—	—	—	e 31·2	—

Additional readings: Tiflis eE = +6m.18s., eN = +6m.19s. Ksara S = +7m.26s. Baku MN = +10·6m., MZ = +11·5m.

Oct. 12d. 7h. 20m. 15s. Epicentre 44°·0N. 21°·0E. (as on 1927 Sept. 17d.).

A = +·672, B = +·258, C = +·695; D = +·358, E = −·934; G = +·649, H = +·249, K = −·719.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Belgrade		0·9	334	e 0 12	− 2	i 0 26	+ 1	—	0·4
Mostar		2·4	254	—	—	—	—	e 2·6	—
Budapest		3·7	341	e 0 58	0	(1 50)	+ 8	1·8	2·2
Zagreb		4·0	298	e 0 59	− 3	i 1 56	+ 6	—	3·0
Vienna		5·3	325	1 13	− 9	i 2 22	− 3	—	—
Venice		6·3	286	3 45?	?L	—	—	(3·8)	—
Rocca di Papa	E.	6·4	252	i 2 56	?S	(i 2 56)	+ 1	(i 3·6)	3·8
	N.	6·4	252	i 3 3	?S	(i 3 3)	+ 8	(i 3·4)	—
Moncalieri	Z.	9·5	281	—	—	e 4 6	−10	—	—
Strasbourg		10·2	301	—	—	e 3 45?	−50	—	—

Additional readings and note: Belgrade iPN = +13s., iE = +14s., +15s., +18s., and +22s., iN = +15s., +19s., and +21s., iSE = +29s. Zagreb iP = +1m.5s., MNW = +2·0m. Vienna iN = +2m.29s., +2m.53s., +4m.11s., and +5m.13s., iZ = +3m.10s. Rocca di Papa gives S as P and L as S.

Oct. 12d. 7h. 55m. 47s. Epicentre 24°·0N. 123°·0E. (as at 6h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	1·3	274	e 0 26	+ 6	—	—	—	—
Zi-ka-wei		6·3	348	e 1 45	+ 9	—	—	—	—
Hong Kong		8·5	252	—	—	—	—	—	6·7
Nagasaki		9·8	36	—	—	(e 4 22)	− 1	e 4·4	—
Manila		10·6	191	e 3 9	+31	—	—	—	10·0
Hukuoka		10·7	35	0 25	?	—	—	—	—
Phu-Lien		15·7	258	—	—	—	—	5·2	—
Irkutsk		30·7	338	—	—	e 12 21	+35	17·2	20·7
Ekaterinburg		54·3	324	9 43	+ 8	—	—	26·7	34·6
Baku		61·7	305	—	—	—	—	e 33·2	—
Tiflis		65·2	308	e 11 31	+45	e 22 44	?	e 33·2	44·5
Kucino		66·9	323	—	—	—	—	34·5	—
Makeyevka		68·5	315	—	—	—	—	e 34·4	45·2
Pulkovo		69·9	328	e 11 57	+41	—	—	40·2	45·0
Upsala	E.	75·9	330	—	—	—	—	e 48·2	—
Copenhagen		80·2	328	—	—	—	—	42·2	—
De Bilt		85·8	327	—	—	—	—	46·2	50·6
Strasbourg		86·6	324	—	—	—	—	e 48·2	—
Uccle		87·0	326	—	—	—	—	e 46·2	—
Kew		88·8	329	—	—	—	—	e 48·2	—
Oxford		89·1	330	—	—	—	—	—	53·2
Paris		89·2	325	—	—	—	—	e 54·2	57·2
San Fernando	E.	102·0	320	—	—	—	—	—	60·2
Ottawa	N.	107·5	14	—	—	—	—	e 59·2	—

Additional readings and note: Irkutsk e =7h.51m.13s., MZ = +20·6m. Ekaterinburg MN = +30·8m., MZ = +34·8m. Tiflis eLN = +35·2m., MN = +39·1m. Pulkovo MZ = +44·9m. De Bilt MN = +49·2m., MZ = +55·6m. San Fernando MN = +59·2m. The only readings given with definite phase are the P's for Hukuoka and Ekaterinburg.

Oct. 12d. Readings also at 0h. (Taihoku), 1h. (Kucino, Makeyevka, Pulkovo, and Tiflis), 2h. (Taihoku), 3h. (Tiflis), 4h. (Ekaterinburg), 6h. (La Paz and Sucre), 7h. (Taihoku, Makeyevka, La Paz, and Sucre), 9h. (Tiflis), 10h. (Baku, Feldberg, Manila, Ekaterinburg, and Makeyevka), 11h. (Feldberg and La Paz), 12h. (Ekaterinburg and Feldberg), 14h. (La Paz, Tashkent, and Tiflis), 18h. (Tashkent), 20h. (Tiflis), 23h. (Taihoku).

Oct. 13d. 4h. 28m. 15s. Epicentre 47°·5N. 15°·8E. (as on 1926 July 6d.).

A = +·650, B = +·184, C = +·737; D = +·272, E = −·962;
G = +·709, H = +·201, K = −·676.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m_s
Graz		0·5	209	i 0 7	− 1	—	—	—	0·2
Vienna		0·8	26	i 0 12	0	0 22	0	—	0·5
Zagreb		1·7	176	e 0 35	+ 9	—	—	—	—
Innsbruck	N.W.	3·0	268	1 30	?S	(1 30)	+ 7	—	—
Strasbourg		5·5	285	—	—	e 2 31	0	—	—
Tiflis		21·3	95	—	—	—	—	e 17·8	—
Baku		25·3	94	—	—	—	—	e 20·8	—
Ekaterinburg		28·5	54	6 43	+30	17 18	?	—	—
Tashkent		37·9	79	i 3 0	?	—	—	e 26·8	44·5

Additional readings: Vienna iPR_1 = +16s., PS = +26s.; epicentre 47°·7N. 15°·7E. Zagreb eNW = +37s., i = +46s., +49s., +57s., +58s., +1m.3s., and +1m.9s., ? = +1m.11s., iNW = +1m.15s. Ekaterinburg e = +24m.42s. and +29m.3s., L = +38·8m. Tashkent i = +6m.19s., +16m.27s., +16m.47s., and +18m.1s., e = +22m.45s.?

Oct. 13d. 5h. 46m. 0s. Epicentre 34°·0S. 57°·0E. (as on 1927 Oct. 9d.).

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.
Tashkent	76·1	10	i 11 55	− 1	i 21 21	−17	e 37·0	44·9
Tiflis N.	76·5	351	—	—	e 21 57	+14	e 42·3	—
Ekaterinburg	90·9	3	e 13 22	+ 1	e 24 18	− 5	37·0	—
Uccle	96·6	330	—	—	—	—	—	54·0
Kew	99·1	328	—	—	—	—	e 60·0	—

No additional readings.

Oct. 13d. Readings also at 1h. (Taihoku), 4h. (Adelaide, Riverview, Melbourne, Wellington, and La Paz), 5h. (Kodaikanal, Kucino, Strasbourg, and Uccle), 6h. (Strasbourg, near Neuchatel, and Zurich), 7h. (Baku, Ekaterinburg, Kucino, Pulkovo, and Tashkent), 8h. (Copenhagen and Tashkent), 10h. (Baku, Kucino, Ekaterinburg (2), Tashkent, De Bilt, Paris, Strasbourg, Kew, Oxford, and Edinburgh), 11h. (Stonyhurst), 14h. (Potsdam and Tiflis), 16h. (Christchurch), 17h. (Tiflis), 19h. (Vienna), 20h. (La Paz), 22h. (Ekaterinburg).

Oct. 14d. Readings at 3h. (Tashkent and near Toyooka), 9h. (near Amboina), 10h. (Copenhagen), 12h. (Ekaterinburg, Tashkent, and near Manila), 16h. (Ekaterinburg, Irkutsk, and Tashkent), 17h. (Tashkent and near Nagasaki), 18h. (Ekaterinburg and Irkutsk), 21h. (Pulkovo and Tashkent).

Oct. 15d. 6h. 25m. 27s. Epicentre 24°·0N. 124°·0E. (as on 1927 June 6d.).

A = −·511, B = +·757, C = +·407; D = +·829, E = +·559; G = −·228, H = +·337, K = −·914.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku N.	2.5	294	—	—	e 1 9	0	1·7	2·4
Zi-ka-wei	7·5	343	e 0 3	−111	—	—	—	—
Hong Kong	9·2	262	—	—	—	—	—	13·1
Manila	9·8	197	—	—	—	—	e 5·6	—
Hukuoka	11·1	29	e 2 44	− 2	—	—	—	—
Osaka	14·6	40	6 55	?S	(6 55)	+33	13·5	—
Phu-Lien	16·4	262	3 33?	−24	—	—	—	—
Irkutsk	32·0	337	e 6 35	−12	e 11 46	−22	17·6	20·7
Tashkent	48·3	305	8 49	− 7	—	—	e 23·6	32·7
Ekaterinburg	55·6	324	i 9 51	+ 8	e 17 30	+ 1	29·0	34·9
Baku	63·0	307	—	—	—	—	e 36·0	—
Tiflis	66·5	309	—	—	e 21 29	[+44]	e 34·8	—
Pulkovo	71·2	326	—	—	e 21 33	[+13]	41·6	45·0
Copenhagen	81·6	329	—	—	—	—	41·6	—
Feldberg	86·5	325	—	—	—	—	e 46·0	50·2
De Bilt	87·2	327	—	—	—	—	e 46·6	56·6
Strasbourg	87·9	325	—	—	—	—	e 47·6	—
Uccle	88·3	327	—	—	—	—	e 46·6	—
Kew	90·1	329	—	—	—	—	e 50·6	—
Oxford	90·4	330	—	—	—	—	—	58·6

Additional readings: Tashkent e = +20m.27s. and +27m.15s., i = +27m.23s. MN = +31·8m., MZ = +32·1m. Ekaterinburg e = +22m.0s. = SR_1 + 10s., MN = +30·9m. De Bilt MN = +49·3m., MZ = +56·8m.

Oct. 15d. 10h. 59m. 0s. Epicentre 40°·7S. 46°·8E.

A = +·519, B = +·553, C = −·652 ; D = +·729, E = −·684 ; G = −·446, H = −·475, K = −·758 .

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Cape Town		23·4	278	5 19	− 2	9 36	+ 3	—	11·6
Kodaikanal		58·3	36	31 54	?L	—	—	(31·9)	—
Baku		81·1	3	e 13 13	+47	e 22 41	+ 5	38·0	47·6
Tiflis	E.	82·4	359	e 12 34	+ 2	22 46	− 4	e 39·7	48·8
	N.	82·4	359	12 32	0	e 22 47	− 3	—	47·6
Tashkent		84·5	16	i 12 45	0	i 23 12	− 2	e 38·0	44·9
Almeria		89·7	321	—	—	—	—	e 49·5	51·1
Granada		90·8	321	—	—	—	—	50·5	55·2
San Fernando	E.	91·2	320	—	—	—	—	—	57·5
Rio Tinto		92·4	320	56 0?	?L	—	—	(56·0)	66·0
Toledo		92·9	323	—	—	—	—	e 48·3	59·5
Sucre		93·2	241	—	—	—	—	48·8	50·8
Strasbourg		95·7	335	—	—	—	—	e 57·0	—
Feldberg		96·9	336	e 26 30	?PS	e 31 34	?SR_1	e 49·9	64·3
Paris		97·6	331	e 17 0?	?	—	—	52·0	60·0
Ekaterinburg		98·2	7	e 13·55	− 6	e 24 34	[+20]	41·0	59·2
Uccle		98·7	334	—	—	—	—	e 51·0	—
De Bilt		99·5	335	—	—	—	—	e 51·0	56·5
Copenhagen		100·5	340	—	—	—	—	60·0	—
Kew		100·8	332	—	—	—	—	e 54·0	—
Oxford		101·4	331	—	—	—	—	e 51·0	56·8
Pulkovo		101·4	351	—	—	—	—	e 61·0	—
Edinburgh		105·4	333	—	—	—	—	e 58·0	—
Irkutsk		105·4	32	—	—	—	—	e 54·0	—
Dyce		106·1	335	—	—	—	—	—	68·4
Ottawa	E.	139·1	295	—	—	—	—	e 67·0	—

Additional readings: Baku MZ = +48·8m., MN = +52·1m. Tiflis ePS = +23m.43s. Tashkent iSR_1 = +28m.39s., eSR_2 = +35m.0s. ? = SR_3 − 6s. Almeria MZ = +54·4m. San Fernando MN = +55·0m. Ekaterinburg e = +26m.53s. = PS − 9s., and +31m.16s.

Oct. 15d. 12h. 43m. 56s. Epicentre 40°·7S. 46°·8E. (as at 10h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Cape Town		23·4	278	—	—	—	—	—	14·6
Kodaikanal		58·3	36	31 58	?L	—	—	(32·0)	—
Baku		81·1	3	—	—	—	—	41·1	—
Tiflis	E.	82·4	359	e 12 42	+10	e 22 48	− 2	e 39·1	44·6
	N.	82·4	359	e 12 33	+ 1	22 47	− 3	e 40·1	44·9
Tashkent		84·5	16	—	—	—	—	e 38·1	44·9
Granada		90·8	321	—	—	—	—	51·1	54·1
Paris		97·6	331	—	—	—	—	e 55·1	—
Ekaterinburg		98·2	7	—	—	—	—	46·6	—

Tiflis gives also ePR_1N = +15m.55s., PS? = +23m.40s., SR_1 = +28m.26s. : the reading entered as ePE is only given as eE.

Oct. 15d. Readings also at 0h. (La Paz, Sucre, and Suva), 1h. (Ekaterinburg), 3h. (Tiflis), 4h. (Ekaterinburg and near Tacubaya), 5h. (Ekaterinburg and Tashkent), 8h. (Tashkent), 9h. (Ekaterinburg), 11h. (Feldberg and near Tacubaya), 14h. (Entebbe and Sucre), 15h. (Pulkovo and Tiflis), 18h. (Ekaterinburg and Tiflis), 21h. (Tiflis).

Oct. 16d. 6h. 7m. 10s. Epicentre 36°·5N. 133°·0E. (as on 1926 Nov. 27d.).

A = −·548, B = +·588, C = +·595; D = +·731, E = +·682; G = −·406, H = +·435, K = −·804.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Kobe		2·5	136	0 34	− 5	—	—	—	1·2
Osaka		2·7	133	0 44	+ 2	(1 11)	− 3	1·2	1·9
Sumoto		2·7	145	0 41	− 1	(1 17)	+ 3	—	1·3
Nagoya		3·5	112	e 0 34	−21	1 7	−30	—	1·2
Tashkent		48·7	296	—	—	e 15 50?	−12	e 25·8	43·3
Tiflis	N.	65·5	305	—	—	—	—	e 27·0	31·2

Additional readings: Osaka MN = +0·8m. Tashkent gives also e = 6h.5m.30s.

Oct. 16d. 7h. 0m. 48s. Epicentre 46°·0N. 89°·0E. (as on 1926 Aug. 29d.).

A = +·012, B = +·695, C = +·719; D = +1·000, E = −·017; G = +·013, H = +·718, K = −·695.

Doubtful identification.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent		15·0	259	e 3 54	+15	i 6 25	− 7	—	7·6
Bombay		30·2	211	—	—	—	—	e 16·2	—
Tiflis	E.	31·8	278	—	—	e 12 12?	+ 7	e 14·5	15·2
Pulkovo		36·6	314	—	—	e 13 9	− 9	22·2	23·0
Copenhagen		46·8	311	—	—	—	—	24·2	—
Feldberg		51·3	306	—	—	—	—	e 27·7	—
De Bilt		52·2	310	—	—	—	—	e 28·7	33·5
Uccle		53·3	309	—	—	—	—	28·2	—
Kew		55·4	311	—	—	—	—	e 30·2	—

Additional readings: Tashkent e = +4m.21s., i = +6m.6s., MNZ = +6·9m. Tiflis eLN = +13·2m. De Bilt MN = +30·0m.

Oct. 16d. 12h. 21m. 0s. Epicentre 41°·5S. 80°·0E. (as on 1927 Sept. 5d.).

A = +·103, B = +·738, C = −·663; D = +·985, E = −·174; G = −·115, H = −·653, K = −·749.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Perth		30·0	85	—	—	—	—	—	16·8
Tananarive		35·2	300	e 13 3	?S	(e 13 3)	+ 5	—	—
Batavia		42·6	41	e 9 48	?PR_1	—	—	—	—
Johannesburg		45·1	273	—	—	—	—	21·0	—
Cape Town		48·0	260	16 19	?S	(16 19)	+25	—	24·8
Colombo		48·4	0	5 20	?	16 5	+ 6	21·1	21·6
Melbourne		49·0	109	—	—	i 16 54	+48	e 25·1	27·0
Kodaikanal		51·8	357	24 54	?L	—	—	28·7	33·9
Riverview		55·3	107	e 12 49	?PR_1	—	—	e 28·3	30·4
Sydney		55·3	107	17 12	?S	(17 12)	−13	29·6	31·3
Hyderabad		59·0	358	19 58	?S	(19 58)	[+10]	—	34·0
Bombay		60·8	353	18 58	?S	(18 58)	+25	—	31·9
Simla		72·7	357	—	—	e 25 36	?PR_1	e 31·9	—
Tashkent		83·4	352	i 12 59	+21	i 23 15	+14	i 38·3	46·3
Tiflis	E.	89·1	335	e 13 15	+ 4	e 23 59	− 5	e 37·0	42·3
	N.	89·1	335	e 13 47	+36	e 23 57	− 7	e 40·0	—
Irkutsk		96·1	14	e 17 49	?PR_1	e 24 41	−36	47·0	57·0
Makeyevka		96·9	333	—	—	—	—	e 27·0	—
Mizusawa	E.	97·9	43	—	—	17 16	?PR_1	—	—
Ekaterinburg		99·7	350	—	—	e 24 54	[+32]	46·5	55·1
Kucino		103·6	337	—	—	e 33 18	?SR_1	54·2	—
Moncalieri		107·9	315	—	—	—	—	e 60·0	—
Pulkovo		109·2	336	—	—	—	—	e 59·0	—
Granada		109·5	302	—	—	—	—	e 54·0	56·5

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Strasbourg		110·2	317	21 0?	?PR_1	—	—	—	—
Feldberg		110·9	320	—	—	—	—	65·5	71·7
Copenhagen		112·7	325	—	—	—	—	59·0	—
Uccle		113·3	318	—	—	e 46 0?	?	e 62·0	—
De Bilt		113·8	319	—	—	—	—	e 62·0	76·5
Kew		116·1	317	—	—	—	—	e 64·0	—
Oxford	E.	116·7	315	—	—	—	—	—	76·0
Ottawa		162·2	291	—	—	—	—	e 76·0	—

Additional readings and note: Riverview MN = +29·5m. Bombay gives S as P and eS = +22m.53s. Simla gives its readings as eN and eE respectively. Tashkent eSR_1 = +25m.54s., MNZ = +45·1m. Irkutsk e = +20m.33s. =PR_2 +11s., +23m.41s., and +30m.46s. Ekaterinburg MN = +54·5m. Moncalieri L = +66·1m. De Bilt MN = +76·8m., MZ = +77·3m. Oxford MN = +80·0m.

Oct. 16d. 14h. 12m. 0s. Epicentre 43°·7S. 41°·0E.

A = +·546, B = +·474, C = −·691; D = +·656, E = −·755; G = −·521, H = −·453, K = −·723.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Cape Town		20·0	292	4 40	− 1	8 27	+ 4	—	11·2
Tananarive		25·4	15	i 10 10	?S	(i 10 10)	− 1	—	—
Colombo		61·6	45	—	—	—	—	—	44·5
Kodaikanal		63·4	41	27 36	?L	—	—	(27·6)	—
Melbourne		73·4	127	—	—	i 21 36	[− 1]	—	37·5
Ksara	E.	77·7	356	e 12 5	0	e 21 51	− 6	38·0	—
Sydney		79·8	128	21 6	?S	(21 6)	−75	39·8	42·5
Tiflis	E.	85·5	2	e 12 57	+ 6	e 23 14	−11	e 36·0	44·1
	N.	85·5	2	e 12 51	0	e 23 15	−10	e 40·5	50·2
Tashkent		88·7	20	e 13 18	+ 9	i 23 48	−12	e 34·0	40·2
Almeria		89·6	326	—	—	—	—	e 48·4	54·5
Granada		90·4	326	—	—	—	—	e 49·0	53·5
San Fernando		90·8	324	—	—	—	—	52·5	55·0
La Paz		91·8	244	e 13 24	− 2	—	—	43·0	49·4
Makeyevka		91·8	358	—	—	—	—	31·0	—
Rio Tinto		92·2	325	51 0	?L	—	—	(51·0)	62·0
Toledo	N.W.	92·9	326	—	—	—	—	e 46·0	57·1
Moncalieri		93·4	337	e 19 20	?PR_2	—	—	42·1	—
Strasbourg		96·8	340	e 15 0?	?	—	—	21·0	56·0
Cheb		97·0	343	—	—	e 24 23	[+15]	e 51·0	61·0
Feldberg		98·1	340	—	—	—	—	e 46·1	51·2
Paris		98·4	335	—	—	—	—	e 42·0	—
Uccle		99·7	338	—	—	e 27 0?	?PS	e 44·0	—
De Bilt		100·6	339	—	—	e 27 14	?PS	e 44·0	65·4
Kew		101·6	335	18 0?	[+ 8]	—	—	47·0	—
Ekaterinburg		101·9	10	—	—	e 25 46	−28	41·5	—
Oxford		102·2	335	—	—	—	—	e 48·0	64·0
Copenhagen		102·3	345	—	—	—	—	—	59·0
Pulkovo		103·8	355	—	—	e 28 36	+125	65·0	66·4
Edinburgh		106·3	337	—	—	—	—	e 58·0	—
Irkutsk		110·3	36	e 19 11	?PR_1	e 28 9	+38	34·0	36·6
Ottawa		136·0	295	—	—	—	—	e 63·0	—

Additional readings: Tiflis eE? = +35m.23s. Tashkent MN = +46·2m., MZ = +52·4m. Almeria MZ = +52·9m. Toledo MNE = +55·8m. Cheb e = +31m.42s. =SR_1 −18s. Paris L = +55·0m. De Bilt MNZ = +62·8m. Irkutsk MZ = +36·8m.

Oct. 16d. Readings also at 1h. (near Mizusawa), 3h. (Tashkent), 6h. (near Manila), 9h. (near Tacubaya), 10h. (near Mizusawa), 11h. (De Bilt, Uccle, Feldberg, Ekaterinburg, Tiflis, Tashkent, and Irkutsk), 12h. (Tiflis), 15h. (near Lick and near Vera Cruz), 16h. (De Bilt, Uccle, Feldberg, Kew, Paris, Strasbourg, Ekaterinburg, Tashkent, Ottawa, Tucson, and near Tacubaya), 17h. (Strasbourg and Tiflis), 19h. (near Nagoya, Osaka, Kobe, and Sumoto), 20h. (La Paz and Sucre), 21h. (Ekaterinburg, Pompeii, Moncalieri, near Naples, and Zagreb, near Nagasaki, and Hukuoka), 22h. (Jena and La Paz and Sucre), 23h. (Tiflis).

Oct. 17d. Readings at 1h. (near Amboina and near Hukuoka), 2h. (near Toyooka), 4h. (Suva and Tiflis), 6h. (Tashkent, near Nagasaki (2), and Hukuoka (2) and Matuyama (2)), 8h. (Colombo), 10h. (near Sumoto), 14h. (near Rocca di Papa), 16h. (Suva, Wellington, Manila, and near Puebla), 18h. (near Mizusawa and near Mostar), 20h. (La Paz), 22h. (Stonyhurst), 23h. (near Rocca di Papa).

Oct. 18d. 12h. 44m. 42s. Epicentre 32°·2N. 129°·5E.

A = −·538, B = +·653, C = +·533 ; D = +·772, E = +·636 ; G = −·339, H = +·411, K = −·846.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki	0·6	31	i 0 7	− 2	i 0 15	− 2	—	0·3
Hukuoka	1·6	29	0 24	0	0 45	0	—	0·9
Matuyama E.	3·2	58	e 0 54	+ 4	—	—	—	1·6
Sumoto	5·0	64	e 2 28	?S	(e 2 28)	+11	3·5	3·5
Kobe	5·3	61	2 25	?S	(2 25)	0	3·7	5·2
Osaka	5·6	62	2 29	?S	(2 29)	− 5	3·5	4·1
Nagoya	6·8	62	—	—	e 2 55	−10	—	—
Irkutsk	27·1	325	—	—	—	—	e 13·3	—
Ekaterinburg	52·2	320	(7 48)	−93	—	—	25·8	—
Baku	62·5	302	—	—	—	—	e 33·3	—
Tiflis E.	65·6	305	—	—	—	—	e 38·3	—

Additional readings: Hukuoka P = +25s., MN = +0·8m. Kobe gives S as P and S = +3m.32s., MN = +5·6m. Osaka MN = +4·0m. Ekaterinburg gives its readings as separate L's. Tiflis eN? = +2m.57s., eLN = +36·2m.

Oct. 18d. Readings also at 0h. (near Ksara), 1h. (near Graz and Vienna), 3h. (Vienna), 6h. (Irkutsk, Wellington, near La Paz, and Sucre), 7h. (Wellington), 9h. (Tiflis), 12h. (Irkutsk and Taihoku), 13h. (Taihoku and near Nagasaki), 15h. (near Nagasaki (3) and near Hukuoka (2)), 16h. (near Nagasaki), 17h. (near Tashkent (2)), 18h. (Baku), 19h. (Tashkent), 20h. (near Amboina, near Mizusawa, near Chur, Neuchatel, and Zurich), 22h. (Riverview).

Oct. 19d. 13h. 48m. 38s. Epicentre 34°·0S. 57°·0E. (as on 1927 Oct. 13d.).

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.
Johannesburg	26·1	280	—	—	—	—	13·4	—
Cape Town	31·7	262	—	—	—	—	—	18·6
Colombo	46·3	32	8 27	−15	15 12	−20	21·2	24·7
Kodaikanal	48·3	26	15 40	?S	(15 40)	−18	21·4	22·7
Batavia	53·7	70	i 10 20	+49	i 17 51	+46	—	—
Hyderabad	55·4	25	17 17	?S	(17 17)	− 9	23·4	28·1
Melbourne	68·6	122	—	—	e 18 22	?	—	34·4
Ksara	70·6	341	11 29	− 8	20 46	+13	31·4	—
Phu-Lien	72·3	49	—	—	e 20 40	−14	—	—
Baku	74·7	355	e 11 49	+ 2	e 21 25	+ 3	35·4	39·7
Tiflis E.	76·5	351	e 11 58	0	21 45	+ 2	e 34·4	43·7
N.	76·5	351	11 56	− 2	21 47	+ 4	e 36·4	45·6
Hong Kong	78·3	53	—	—	—	—	—	55·0
Makeyevka	83·8	349	—	—	i 22 29	−38	36·4	42·5
Wellington E.	85·5	139	—	—	—	—	e 43·0	—
Vienna Z.	89·8	335	13 6	− 9	—	—	—	—
Almeria	89·8	318	13 11	− 4	—	—	—	54·9
Granada	90·8	317	i 13 2	−18	—	—	51·9	54·9
Ekaterinburg	90·9	3	i 13 11	−10	i 24 7	−16	35·9	49·3
San Fernando E.	91·8	315	—	—	—	—	—	58·9
Toledo N.W.	92·8	319	—	—	—	—	e 47·6	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Strasbourg	93·5	330	—	—	e 26 22?	?PS	e 54·4	—
Feldberg	94·5	331	—	—	—	—	e 31·4	34·4
Irkutsk	95·6	27	—	—	e 24 0	[0]	44·4	63·8
Paris	95·9	329	—	—	—	—	e 57·4	—
De Bilt	97·3	332	—	—	—	—	e 54·4	—
Copenhagen	97·4	338	—	—	—	—	52·4	—
Kew	99·1	328	—	—	—	—	e 53·4	—
Oxford	99·7	328	—	—	—	—	—	66·4
Ottawa	142·5	302	—	—	—	—	e 68·4	—

Additional readings: Colombo, alternative P = +5m.42s. Batavia readings are both given as simple i. Baku PS = +22m.6s., SR_1 = +24m.56s., MZ = +48·2m. Wellington eLN = +42·2m. Ekaterinburg S_4P_4S = +23m.37s. =[S]+4s., i = +24m.10s., e = +29m.57s. San Fernando MN = +56·4m. Irkutsk e = +26m.6s. =PS −9s. Ottawa eL = +76·4m.

Oct. 19d. 14h. 41m. 45s. Epicentre 1°·5S. 76°·0W. (as on 1924 Jan. 26d.).

A = +·242, B = −·970, C = −·026; D = −·970, E = −·242; G = −·006, H = +·025, K = −1·000.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz	16·9	153	e 3 58	− 6	i 7 17	+ 1	9·3	11·4
Sucre	20·4	150	i 4 47	+ 1	i 8 35	+ 3	11·2	13·5
Rio de Janeiro N.	38·4	129	—	—	—	—	e 21·7	—
Ottawa	46·9	1	—	—	e 15 15?	−25	e 23·2	—
Kew	82·3	37	—	—	—	—	e 48·2	—
De Bilt	85·7	39	—	—	—	—	e 46·2	47·5
Makeyevka	106·9	39	—	—	(32 15?)	?	32·2	—
Irkutsk	129·2	0	—	—	(e 39 29)	?SR_1	39·5	—

Additional readings: La Paz iP = +4m.4s. Sucre eP? = +4m.26s.; T_0 = 14h.41m.44s. De Bilt MZ = +47·4m.

Oct. 19d. 21h. 58m. 36s. Epicentre 49°·5S. 124°·0E.

A = −·363, B = +·538, C = −·760; D = +·829, E = +·559; G = +·425, H = −·630, K = −·649.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Adelaide		18·1	42	e 4 21	+ 3	i 7 49	+ 7	9·0	13·9
Perth		18·6	338	i 4 24	0	i 7 49	− 4	9·1	12·7
Melbourne		19·0	60	e 4 0	−29	i 7 30	−32	—	8·6
Riverview		25·4	62	e 6 22	+40	e 10 22	+11	e 12·1	13·7
Bombay		82·0	310	—	—	—	—	e 40·4	—
La Plata		95·6	177	—	—	—	—	53·0	—
Irkutsk		103·2	347	—	—	e 27 35	?PS	59·4	—
Sucre		111·0	170	—	—	—	—	64·6	69·0
Baku		111·0	309	e 20 26	?PR_1	e 30 57	?PS	e 49·2	61·6
Tiflis	E.	114·6	306	e 20 31	?PR_1	e 30 33	?PS	e 55·4	66·7
Ekaterinburg		118·5	325	i 20 36	?PR_1	e 30 6	?PS	51·9	63·4
Makeyevka		122·4	309	—	—	e 36 24?	?SR_1	62·4	66·5
Kucino		127·1	315	—	—	—	—	e 70·2	—
Copenhagen		139·7	305	—	—	—	—	72·4	—
Feldberg		139·8	297	—	—	—	—	e 70·8	90·4
San Fernando	E.	142·1	268	—	—	—	—	—	86·4
De Bilt		142·4	298	—	—	—	—	e 76·4	—
Paris		142·7	291	—	—	—	—	e 83·4	—
Kew		145·4	294	—	—	—	—	e 79·4	—
Ottawa		166·1	100	—	—	—	—	e 83·4	—

Additional readings: Adelaide MN = +9·8m. Melbourne e = 21h.50m.0s.; all readings are given as e or i simply. Riverview MN = +14·9m. Irkutsk e = +33m.22s. =SR_1 +4s. Baku e = +35m.1s. =SR_1 +5s., MN = +64·4m. Tiflis eLN = +56·4m., MN = +64·4m. Ekaterinburg e = +36m.56s. = SR_1 +28s., MN = +62·6m. Feldberg e = +75m.10s. San Fernando MN = +81·4m.

Oct. 19d. Readings also at 2h. (La Paz and Sucre), 3h. (La Paz), 6h. (Ekaterinburg), 7h. (Ekaterinburg, Irkutsk, Manila, and near Amboina), 8h. (Phu-Lien, Ekaterinburg, and near Irkutsk), 9h. (Baku and Tiflis), 12h. (near Nagasaki), 13h. (Feldberg), 14h. (Ekaterinburg and near Toyooka), 15h. (Nagasaki and near Wellington), 17h. (Taihoku).

Oct. 20d. Readings at 0h. (near Sumoto), 1h. (La Plata), 2h. (Tiflis), 5h. (Apia), 8h. (Sucre, near La Paz, and near Tacubaya), 11h. (Tiflis, near Nagasaki, and near Tacubaya), 12h. (Tiflis), 16h. (Manila, near Batavia and Malabar, and near Tacubaya), 17h. (Ekaterinburg and Tiflis), 18h. (Ekaterinburg), 19h. (near Mizusawa), 20h. (near Irkutsk), 22h. (Wellington).

Oct. 21d. 0h. 57m. 50s. Epicentre 8°·2S. 79°·3W. (as on 1919 May 23d.).

$A = +\cdot184$, $B = -\cdot973$, $C = -\cdot143$; $D = -\cdot983$, $E = -\cdot186$; $G = -\cdot026$, $H = +\cdot140$, $K = -\cdot990$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz		13·7	128	e 3 21	− 1	i 6 18	+17	7·1	8·4
Sucre		17·4	130	4 5	− 5	i 7 22	− 5	9·1	10·8
Rio de Janeiro		37·6	119	—	—	—	—	e 19·6	—
Ottawa	E.	53·7	5	—	—	e 17 40	?PS	e 25·2	—
Paris		90·9	42	—	—	—	—	e 53·2	—
Uccle		92·4	41	—	—	—	—	e 49·2	—
De Bilt		93·1	40	—	—	—	—	e 51·2	—
Tiflis	E.	120·6	45	—	—	(e 27 34)	?Σ	e 61·1	—
Ekaterinburg		122·3	23	—	—	—	—	56·7	—
Irkutsk		135·8	357	—	—	—	—	(e 66·2)	—

Additional readings and notes: La Paz P = +3m.31s., MN = +8·3m. Ottawa eLN = +28·2m. Tiflis readings are given as two separate eL readings. Irkutsk reading has been increased by 1h.

Oct. 21d. 23h. 7m. 40s. Epicentre 37°·0N. 4°·5W. (as on 1927 March 14d.).

$A = +\cdot796$, $B = -\cdot063$, $C = +\cdot602$; $D = -\cdot078$, $E = -\cdot997$; $G = +\cdot600$, $H = -\cdot047$, $K = -\cdot799$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Malaga		0·2	166	e 0 3	− 1	—	—	—	—
Granada		0·8	76	e 0 11	− 1	(0 17)	− 5	0·3	0·3
Almeria		1·7	95	e 0 23	− 3	0 43	− 5	—	1·2
Toledo	N.E.	2·9	8	e 1 5	+20	—	—	—	—

Almeria gives also $SR_1 = +48s$.

Oct. 21d. Readings also at 0h. (near Sumoto), 3h. (Bagnères), 17h. (Tashkent, Tiflis, Ekaterinburg, and near Manila), 18h. (Ekaterinburg, Manila, and near Toyooka), 22h. (Manila), 23h. (La Paz, Manila, and Tashkent).

Oct. 22d. Readings at 2h. (Baku, Feldberg, Kew, Tashkent, Tiflis, and Strasbourg), 4h. (La Paz, La Plata, and Santiago), 6h. (La Paz), 18h. (near Nagasaki), 19h. (Ekaterinburg), 20h. and 22h. (La Paz).

Oct. 23d. 4h. 2m. 12s. Epicentre 15°·5N. 56°·5E. (as on 1925 Feb. 1d.).

$A = +·532$, $B = +·804$, $C = +·267$; $D = +·834$, $E = -·552$; $G = +·147$, $H = +·223$, $K = -·964$.

Very uncertain determination.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Hyderabad		21·1	82	4 21	−33	8 25	−21	10·5	15·6
Baku		25·6	348	e 5 43	− 1	e 10 24	+10	e 11·7	—
Ksara		26·1	318	e 6 14	+25	e 14 51	?L	17·8	—
Tiflis	E.	28·1	341	e 6 25	+16	e 11 7	+ 6	e 16·8	23·6
	N.	28·1	341	e 6 22	+13	e 11 9	+ 8	e 18·8	23·8
Ekaterinburg		41·5	3	8 51	?	e 14 24	− 4	20·3	—

Additional readings: Tiflis eN = +6m.58s. = PR_1 −5s., eE = +12m.7s. = SR_1 −11s. Ekaterinburg e = +11m.21s. and +17m.48s.

Oct. 23d. Readings also at 7h. (Tiflis (2)), 9h. (Ekaterinburg), 12h. (Irkutsk and La Paz), 14h. (near Mizusawa), 16h. (Baku, Copenhagen, Kucino, Pulkovo, and Tiflis), 17h. (Ekaterinburg), 20h. (near Manila), 21h. (Ekaterinburg (2), Tiflis (2), and near Baku).

Oct. 24d. 13h. 36m. 36s. Epicentre 36°·5N. 1°·0W.

$A = +·804$, $B = -·014$, $C = +·595$; $D = -·017$, $E = -1·000$; $G = +·595$, $H = -·010$, $K = -·804$.

		Δ	Az.	P.	O−C.	S.	O−C.	M.
		°	°	m. s.	s.	m. s.	s.	m.
Almeria		1·2	287	e 0 23	+ 5	0 42	+ 9	1·0
Alicante		1·9	13	i 0 32	+ 3	0 46	− 7	—
Granada		2·2	292	i 0 32	− 2	i 0 58	− 2	1·0
Malaga		2·8	274	e 0 51	+ 7	1 27	+10	—
Toledo	N.E.	4·1	326	e 1 4	0	i 1 36	−17	—

Additional readings: Almeria PR_1 = +32s., PR_2 = +46s. Toledo SNE = +1m.28s.

Oct. 24d. 15h. 59m. 44s. Epicentre 56°·4N. 136°·0W.

$A = -·398$, $B = -·384$, $C = +·833$; $D = -·695$, $E = +·719$; $G = -·599$, $H = -·579$, $K = -·553$.

The epicentre 56°·0N. 136°·0W. used on 1923 June 22d. and earlier dates, is only supported by meagre evidence. This variation of the epicentre is deduced from a large number of observations and the earlier shocks would also have fitted the present position.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka		0·7	29	i 0 24	+13	—	—	—	—
Victoria		11·1	131	3 6	+20	—	—	5·6	6·1
Saskatoon		17·3	92	i 4 5	− 4	i 7 33	+ 8	8·5	9·6
Berkeley		20·7	148	i 5 4	+15	e 9 10	?SR_1	—	—
Lick	N.	21·4	147	e 5 15	+17	e 9 32	?SR_1	i 12·4	—
Denver	N.	26·3	116	—	—	—	—	—	17·8
Tucson	N.	29·8	134	6 29	+ 3	11 43	+12	15·8	—
Chicago		34·0	96	i 6 59	− 6	i 12 27	−13	i 18·1	—
St. Louis		34·8	103	i 7 7	− 4	i 12 42	−10	e 16·9	19·6
Chihuahua		34·9	132	7 26	+14	12 58	+ 4	15·7	21·5
Ann Arbor		35·8	91	i 7 10	−10	i 12 52	−15	i 17·3	—
Toronto	N.	37·3	87	e 7 27	− 5	i 13 21	− 7	17·1	22·3
Ottawa		38·2	82	i 7 29	−11	i 13 31	−10	i 18·5	26·8

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Honolulu,T.H. E.	38·7	216	7 43	− 1	i 13 48	0	i 16·6	—
Mazatlan	39·6	136	—	—	—	—	—	31·4
Ithaca	39·7	86	7 53	+ 1	13 56	− 6	18·3	21·3
Cheltenham	42·0	90	8 12	+ 1	14 34	− 1	18·2	—
Fordham	42·2	86	i 8 7	− 5	i 14 29	− 9	—	21·3
Guadalajara	43·1	134	—	—	15 34	+45	21·8	26·4
Tacubaya	46·0	130	8 33	− 7	15 31	+ 3	22·1	26·8
Vera Cruz	47·6	127	7 48	−63	15 7	−42	22·9	32·3
Ootomari	48·4	297	e 8 56	0	(15 58)	− 1	16·0	29·0
Merida	49·1	119	7 35	−86	14 46	−81	21·8	37·2
Reykjavik	49·3	34	—	—	—	—	e 22·3	—
Mizusawa E.	54·6	290	9 32	− 5	17 12	− 4	—	—
N.	54·6	290	9 34	− 3	17 13	− 3	23·0	—
Nagoya	59·8	290	e 10 7	− 4	18 21	0	—	—
Port au Prince	60·2	102	e 10 14	+ 1	e 18 32	+ 6	e 28·4	34·5
Dyce	60·5	28	10 12	− 4	i 18 40	+10	28·0	34·6
Irkutsk	60·6	324	10 10	− 6	i 18 29	− 2	30·3	—
Osaka	61·0	291	10 31	+12	18 45	+ 9	27·4	39·4
Kobe	61·1	291	e 10 29	+ 9	(18 44)	+ 7	18·7	—
Edinburgh	61·4	29	10 24	+ 3	18 42	+ 1	28·3	37·4
Sumoto	61·5	291	e 10 26	+ 4	(e 18 44)	+ 2	e 18·7	—
Upsala	61·9	16	i 10 24	0	i 18 37	−10	e 26·3	41·6
Pulkovo	63·3	9	e 10 29	− 5	18 53	−12	28·3	30·6
Stonyhurst	63·4	30	e 10 36	+ 2	19 3	− 3	30·3	37·0
Bidston	63·6	30	10 40	+ 4	19 15	+ 7	30·3	37·1
San Juan E.	63·7	97	15 27	?PR_3	23 39	?SR_4	31·9	39·1
Hukuoka	64·3	294	e 10 56	+16	e 19 14	− 3	32·2	39·9
Balboa Hts. E.	64·6	116	15 22	+280	24 2	+282	35·0	38·5
N.	64·6	116	14 20	+218	24 0	+280	35·3	40·9
Copenhagen E.	65·0	20	e 10 46	+ 1	e 19 21	− 4	e 27·3	37·4
N.	65·0	20	i 10 46	+ 1	e 19 26	+ 1	e 29·3	35·8
Z.	65·0	20	i 10 46	+ 1	e 19 29	+ 4	e 30·3	36·7
Nagasaki	65·4	294	e 15 29	?PR_3	24 18	?	28·4	—
Oxford	65·6	30	i 10 49	0	i 19 30	− 2	e 28·3	38·9
Ekaterinburg	65·9	352	i 10 46	− 4	i 19 30	− 6	27·3	29·8
Kew	66·1	30	10 55	+ 3	e 19 40	+ 2	32·1	35·2
Hamburg	66·5	22	i 10 58	+ 3	i 19 43	− 1	e 30·7	38·3
De Bilt	66·9	26	11 1	+ 4	19 51	+ 2	e 31·3	40·6
Konigsberg	67·1	15	11 1	+ 2	19 51	0	e 30·8	34·3
Kucino	67·7	5	11 57	+55	i 20 50	+52	28·5	36·1
Uccle	67·9	28	i 11 6	+ 3	i 19 58	− 3	30·8	41·8
Potsdam	68·3	20	i 11 5	− 1	i 20 12	+ 6	e 32·6	37·4
Azores	69·0	54	20 16	?S	(20 16)	+ 2	—	42·9
Paris	69·3	29	i 11 16	+ 3	e 20 18	0	32·3	36·3
Feldberg	69·4	25	i 11 16	+ 3	i 20 23	+ 4	e 33·2	37·0
Jena	69·4	23	e 11 16	+ 3	e 20 16	− 3	e 32·3	42·6
Cheb	70·4	21	e 11 21	+ 2	e 20 33	+ 2	e 32·3	43·3
Prague	70·7	20	i 11 16	− 5	i 20 36	+ 2	e 33·3	42·8
Strasbourg	70·8	26	i 11 23	+ 1	i 20 39	+ 3	e 30·3	52·6
Zi-ka-wei	70·8	299	11 21	− 1	20 23	−13	43·2	46·1
Hohenheim	70·9	25	e 11 26	+ 4	e 20 46	+ 9	37·0	42·7
Besançon	71·6	27	11 26	− 1	20 44	− 1	31·3	36·3
Ravensburg	71·9	25	i 11 32	+ 3	i 20 52	+ 3	35·1	58·6
Zurich	72·1	25	e 11 27	− 4	i 20 46	− 5	—	—
Lemberg E.	72·5	14	e 11 58	+25	e 20 58	+ 2	e 31·3	46·1
N.	72·5	14	e 11 34	+ 1	—	—	e 34·9	48·0
Vienna	72·8	20	e 11 31	− 4	21 17	+17	e 33·3	43·3
Chur	72·9	25	i 11 32	− 3	e 20 53	− 8	—	—
Grenoble	73·4	28	e 11 41	+ 3	e 21 6	− 1	e 35·3	—
Graz	73·8	20	i 11 42	+ 1	i 21 10	− 2	33·3	39·8
Budapest	74·0	18	i 11 44	+ 2	i 21 14	0	38·3	44·3
Bagnères	74·0	32	11 44	+ 2	e 21 18	+ 4	e 32·3	43·4
Moncalieri	74·1	27	11 44	+ 1	21 16	+ 1	32·3	47·0
Laibach	74·6	21	i 11 36	−10	e 21 17	− 4	34·3	45·3
Venice	74·7	24	i 11 50	+ 3	20 53	−29	43·9	45·3
Zagreb N.E.	75·2	21	e 11 51	+ 1	e 21 26	− 2	e 33·7	51·6
N.W.	75·2	21	e 11 51	+ 1	e 21 28	0	e 34·9	46·3
Makeyevka	75·4	5	11 46	− 5	21 18	−12	34·3	40·7
Toledo	75·6	37	e 11 52	− 1	i 21 33	0	e 35·0	42·0
Taihoku N.	75·8	295	—	—	—	—	e 39·7	—
Barcelona	76·0	31	11 52	− 3	i 22 0	[+ 4]	e 34·5	43·9
Tortosa E.	76·1	34	11 57	+ 1	21 38	0	—	45·7
N.	76·1	34	i 11 56	0	i 21 41	+ 3	34·4	42·2
Florence	76·1	25	11 51	− 5	21 38	0	27·3	40·3

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Apia	76·3	216	e 12 21	+24	21 55	+14	36·7	51·3
Rio Tinto	76·4	40	12 16?	+19	—	—	—	39·3
Belgrade E.	76·8	17	e 11 59	− 1	21 40	− 7	—	—
N.	76·8	17	i 11 57	− 3	i 21 40	− 7	e 38·5	54·8
San Fernando	77·9	40	12 8	+ 2	i 22 3	+ 4	30·8	45·3
Alicante	78·0	35	e 12 4	− 3	i 22 10	+10	35·7	46·4
Granada	78·1	39	i 12 13	+ 5	i 22 3	+ 2	33·9	43·2
Malaga	78·2	39	12 1	− 7	i 21 57	− 5	31·3	38·6
Rocca di Papa E.	78·4	24	i 12 13	+ 4	e 22 2	− 3	e 37·3	—
N.	78·4	24	e 12 10	+ 1	i 22 4	− 1	e 37·7	50·4
Almeria	78·8	38	i 12 12	0	i 22 8	− 2	34·3	37·5
Naples E.	79·5	23	e 11 21	−55	e 22 31	+13	39·3	47·3
Pompeii	79·7	23	e 11 31	−46	e 21 16	−64	40·3	48·3
Tashkent	80·0	341	11 10	−69	i 21 11	−72	i 37·8	46·9
Algiers	80·6	32	12 20	− 3	i 22 28	− 2	38·3	47·1
Hong Kong	81·8	298	12 28	− 1	22 41	− 3	40·2	47·9
Tiflis E.	81·9	0	12 29	− 1	22 31	−14	e 36·1	51·0
N.	81·9	0	12 29	− 1	e 22 34	−11	e 37·9	53·9
Baku	83·1	356	e 12 27	−10	i 22 58	0	41·3	—
Manila	84·9	290	—	—	e 33 55	?	52·3	—
Phu-Lien	87·0	305	e 12 0	−59	e 22 23	−78	37·8	55·4
Simla E.	88·0	334	12 52	−13	23 22	[+ 7]	41·2	46·7
N.	88·0	334	12 52	−13	23 16	[+ 1]	49·3	54·5
Dehra Dun	88·5	332	23 40	?S	(23 40)	−18	42·1	47·6
Ksara	89·5	8	12 0	−73	22 29	?	41·1	—
La Paz E.	92·1	119	13 32	+ 4	i 24 0	?Σ	43·3	50·6
N.	92·1	119	—	—	i 24 6	?Σ	44·5	59·2
Helwan	93·0	11	e 13 31	− 1	24 19	?Σ	—	59·7
Sucre	95·1	118	e 13 37	− 7	i 25 1	− 6	46·3	52·8
Amboina	96·3	275	—	—	—	—	e 37·3	—
Hyderabad	100·6	329	(14 26)	+13	(24 29)	[+ 2]	(45·6)	(56·5)
Bombay	100·9	334	13 56	−19	24 36	[+ 8]	46·5	64·6
Wellington E.	106·1	217	i 14 36	− 4	i 26 38	−15	49·1	50·4
Pilar E.	107·1	122	—	—	—	—	—	88·3
Kodaikanal	107·8	325	26 52	?S	(26 52)	−16	58·0	61·1
Christchurch	108·9	217	25 16	?[S]	(25 16)	[+10]	51·0	60·9
Riverview	109·2	238	e 13 47	−67	—	—	e 50·5	57·8
Sydney	109·2	238	23 28	?	34 40	?SR_1	50·1	50·7
Batavia	109·9	290	e 19 16?	?PR_1	—	—	53·3	—
Rio de Janeiro E.	110·5	100	e 19 20	?PR_1	26 26	−67	34·8	55·6
N.	110·5	100	e 19 25	?PR_1	26 29	−64	34·8	55·6
Colombo	111·2	321	14 6	−57	26 51	−48	45·1	64·3
Buenos Aires E.	112·0	120	29 52?	?PS	—	—	56·9	72·9
La Plata	112·7	120	—	—	—	—	57·3	—
Melbourne	115·3	240	e 20 4	?PR_1	e 27 52,	−20	i 49·6	63·7
Adelaide	116·1	246	e 19 53	?PR_1	e 31 16	?	48·1	57·6
Perth	125·9	265	—	—	51 56	?	62·9	—
Johannesburg	147·7	28	—	—	—	—	60·3	—
Cape Town	151·6	49	—	—	33 40	?	—	83·4

Additional readings: Victoria LZ = +5·5m., MZ = +8·7m. Saskatoon MN = +9·4m. Berkeley iEN = +5m.8s., iE = +5m.31s., eE = +5m.47s., iZ = +7m.14s., iN = +7m.21s., eE = +7m.22s., iSE = +9m.13s., iSN = +9m.17s., eE = +10m.15s., iN = +10m.33s., +10m.48s., and +12m.4s., eZ = +10m.52s., iE = +10m.55s., and +12m.16s., iN = +12m.48s. Lick eN = +5m.20s., +7m.44s., +8m.1s., ePR₁?N = +5m.35s., iGN = +10m.10s. Tucson PR₁N = +7m.29s. St. Louis iPR₁N = +8m.15s., iP$_c$P = +9m.26s., iSR₁N = +15m.19s. Ann Arbor ePR₁ = +8m.16s., eSR₁ = +14m.58s.; T$_o$ = 15h.59m.36s. Toronto iPN = +7m.33s., eN = +13m.13s., iN = +13m.31s. and +15m.24s.; T$_o$ = 15h.59m.44s. Ottawa ePR$_2$ = +8m.57s. = PR$_1$ − 3s., iSR$_1$E = +15m.53s., SR$_2$ = +16m.30s.; T$_o$ = 15h.59m.36s. Honolulu T.H. eEN = +13m.26s., eLN = +18·3m. Ithaca e = +16m.16s.? SR$_1$ − 24s. Fordham i = +8m.19s. and +9m.44s. = PR$_1$ − 4s., SR$_1$? = +17m.19s., SR$_2$? = +18m.24s.; T$_o$ = 15h.59m.30s. Port au Prince MNW = +34·1m. Dyce PR$_1$ = +13m.59s., e = +17m.10s. and +19m.19s. Irkutsk iPR$_1$ = +12m.46s., iPR$_2$ = +13m.50s., SR$_1$ = +22m.10s. Kobe S = +14m.40s. = PR$_2$ − 11s. Sumoto eS = +14m.36s. = PR$_2$ − 19s. Upsala SR$_1$N = +23m.2s., eLN = +27·3m., MN = +40·0m. Pulkovo iP = +10m.33s., PR$_1$ = +12m.43s., PR$_2$ = +14m.16s., SR$_1$ = +23m.10s., SR$_2$ = +25m.10s., MZ = +41·1m., MN = +41·2m. Stonyhurst ePR$_2$ = +14m.29s., eSR$_2$ = +26m.8s.; T$_o$ = 15h. 15h.59m.57s. San Juan PN = +15m.33s Copenhagen PR$_1$ = +13m 10s., PR$_2$ = +14m 40s., eNZ = +17m 10s., eEN = +20m.40s. = [S] +7s., eSR$_1$N = +23m.16s., eZ = +23m.28s. Oxford PR$_1$N = +13m.21s.,

Continued on next page.

PR_2 = +15m.16s., SR_1 = +24m.4s. Ekaterinburg i = +12m.27s., PR_1 = +13m.3s., PR_2 = +14m.43s., i = +15m.21s., SR_1 = +23m.41s., SR_2 = +26m.33s., MN = +39·1m., MZ = +43·5m. Kew PR_1 = +13m.20s., PR_2 = +14m.52s., iSZ = +19m.48s., iSE = +20m.1s., PS = +20m.11s., SR_1E = +23m.58s., iSR_2 = +27m.10s., MZ = +36·4m. Hamburg SR_1 = +23m.53s., eLNZ = +31·3m., MN = +39·3m. De Bilt PR_1Z = +13m.20s., MN = +35·3m. Konigsberg PN = +11m.2s., eZ = +11m.3s., P_cPZ? = +11m.33s., eN = +13m.23s., PR_1Z = +14m.6s., PR_2E = +15m.8s., eE = +16m.8s., PSN = +20m.3s., PPSN = +20m.33s., e = +24m.10s., SR_1N = +24m.34s., SR_2N = +26m.43s. Kucino PR_2 = +16m.16s. Uccle iPR_1 = +13m.32s., iSR_1 = +24m.6s., MN = +34·7m. Potsdam i = +13m.37s. and +24m.23s. Paris i = +13m.46s., iS = +20m.23s., i = +24m.40s., MN = +38·3m. Feldberg e = +11m.49s., +12m.30s., +13m.23s., and +24m.22s. Jena iPZ = +11m.20s., iPN = +11m.22s., ePR_1N = +13m.52s., ePR_1Z = +14m.16s., eN = +23m.36s., and +25m.10s. = SR_1 − 32s., eZ = +25m.4s., eLNZ = +38·3m., eLE = +38·5m., MN = +40·5m. MZ = +47·7m. Prague PR_1 = +13m.51s., PS = +21m.31s., SR_1 = +25m.46s., MN = +40·8m. Strasbourg iPR_1 = +14m.0s., SR_1 = +25m.58s., SR_2 = +29m.12s., MN = +43·3m., MZ = +44·5m. Hohenheim PR_1 = +14m.0s., SR_1 = +25m.50s., SR_2 = +27m.58s. Ravensburg MN = +43·3m. Vienna iP = +11m.35s., PR_1 = +14m.22s., PR_2 = +17m.34s. = PR_3 +18s., PS = +22m.15s., SR_1 = +26m.25s., SR_2 = +31m.2s. Graz iPS = +21m.39s., eSR_1 = +26m.22s., MN = +44·9m. Budapest MN = +42·8m. Bagnères eSR_1 = +25m.52s. Moncalieri MN = +45·8m. Laibach e = +14m.42s. = PR_1 − 22s., and +29m.52s. = SR_2 − 9s. Zagreb eSR_2NW = +26m.33s. = SR_1 − 31s., eSR_2NW = +29m.53s. = SR_2 − 20s. Makeyevka PR_1 = +14m.36s., PR_2 = +15m.28s. = PR_1 +16s., SR_1 = +25m.0s. MN = +37·7m., MZ = +45·2m. Toledo iP = +11m.55s., eSZ = +21m.39s., MNW = +50·4m. Barcelona MN = +44·9m. Apia +31m.55s. = SR_2 −19s., +35m.7s., and +38m.46s. San Fernando MN = +44·3m. Alicante PR_1 = +15m.1s., MN = +46·6m. Granada MN = +41·7m. Malaga MN = +46·3m. Almeria PR_1 = +15m.10s., MZ = +42·2m. Tashkent P_2 = +11m.16s., i = +17m.35s., iS_2 = +21m.18s., e = +29m.47s. and +30m.26s. Algiers MN = +41·3m. Hong Kong PR_1 = +15m.46s., SR_1 = +28m.26s. Tiflis eE = +12m.52s., ePR_1E = +15m.49s., eN = +16m.43s., ePR_2E = +17m.42s., eE = +19m.21s. = PR_3 +14s., ePPSE = +22m.47s., eE = +26m.48s., and +33m.24s., eN = +29m.23s. Baku iP = +12m.33s. Phu-Lien eSR_1 = +28m.22s., eSR_2 = +33m.15s. Dehra Dun S = +35m.58s. Ksara LN = +41·2m. La Paz PR_1 = +16m.29s., PR_2 = +18m.33s., PR_3 = +20m.43s., PSN = +24m.32s., PPSN = +25m.41s., SR_1E = +28m.43s., SR_1N = +30m.14s., SR_2E = +33m.31s., SR_2N = +36m.16s., SR_2E = +36m.34s. Sucre PR_1 = +17m.36s., PR_2 = +19m.37s., PS = +26m.19s., PPS = +27m.4s., i = +27m.40s., SR_1 = +31m.25s., SR_2 = +36m.14s., SR_3 = +39m.21s. Hyderabad readings are diminished by 1m. Wellington iSR_1 = +34m.12s., MN = +53·4m.; T_0 = 15h.59m.50s. Pilar MN = +83·7m. Christchurch +35m.28s., +39m.52s. = SR_2 +10s., and +46m.4s. Riverview ePR_1 = +25m.26s. = [S] +19s., ePS = +28m.31s., eSR_1 = +34m.41s., eLq = +44·9m. and +46·1m., MZ = +61·7m., MN = +66·6m. Sydney PR_2 = +28m.40s., SR_2 = +43m.46s.; readings have been increased by 2h. Melbourne i = +10m.46s., +35m.58s. = SR_1 +9s., and +47m.52s. Adelaide i = +31m.41s., MN = +54·4m. Perth PR_1 = +38m.6s.

Oct. 24d. 19h. 5m. 32s. Epicentre 33°·5N. 143°·0E. (as on 1927 Aug. 24d.).

A = −·666, B = +·502, C = +·552; D = +·602, E = +·799; G = −·441, H = +·332, K = −·834.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		5·3	290	1 12	−10	(2 13)	−12	2·2	5·2
Mizusawa		5·8	346	1 32	+ 2	2 22	−17	—	—
Osaka		6·4	283	1 54	+16	(2 55)	0	2·9	4·7
Kobe		6·6	283	e 1 38	− 3	e 2 41	−19	3·9	4·8
Sumoto		6·8	279	e 1 40	− 4	e 2 58	− 7	4·3	4·9
Toyooka		7·0	290	1 47	+ 1	e 3 17	+ 7	e 4·4	7·5
Hukuoka		10·5	274	e 2 32	− 5	—	—	6·3	7·1
Nagasaki		11·0	270	e 4 38	?S	(e 4 38)	−16	9·8	—
Zi-ka-wei		18·3	269	e 4 16	− 5	7 53	+ 6	—	12·8
Taihoku	N.	20·5	251	—	—	—	—	e 10·2	—
Manila		27·5	232	—	—	e 9 3	−107	15·5	—
Irkutsk		33·4	316	(e 7 5)	+ 5	(e 12 35)	+ 5	18·5	21·8
Phu-Lien		34·6	258	—	—	—	—	17·5	—
Tashkent		57·3	302	e 10 28?	+34	—	—	30·5	36·3

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ekaterinburg		58·5	322	10 23	+21	—	—	30·5	38·0
Kucino	E.	70·5	325	—	—	—	—	—	47·2
Pulkovo		71·7	331	—	—	e 20 34	−12	37·5	48·0
Tiflis	N.	73·8	310	e 11 44	+ 3	e 21 19	+ 7	e 38·1	45·2
Copenhagen		81·3	335	—	—	—	—	e 42·5	55·7
Hamburg		83·9	335	—	—	—	—	e 44·5	53·5
Dyce		84·6	343	—	—	—	—	—	49·8
Prague		84·9	330	—	—	—	—	e 46·5	56·5
Vienna		85·4	329	e 12 47	− 3	23 27	+ 4	—	59·5
Cheb		85·7	330	—	—	—	—	e 45·5	56·5
De Bilt		86·8	336	—	—	—	—	e 45·5	55·8
Zagreb	N.E.	87·4	326	e 13 6	+ 5	e 25 0	?PS	e 54·2	—
Kew		89·1	340	—	—	—	—	e 46·5	—
Oxford		89·2	340	—	—	—	—	e 45·3	52·1
Strasbourg		89·3	333	—	—	—	—	e 48·5	—
Rocca di Papa		92·0	325	e 9 34	?	—	—	e 50·6	61·5
Grenoble		92·3	333	—	—	—	—	e 53·5	—
Tortosa	N.	98·0	334	—	—	—	—	e 49·5	55·4
La Plata		162·7	100	—	—	—	—	82·5	—
Rio de Janeiro	E.	168·1	29	—	—	—	—	e 87·0	—

Additional readings: Osaka MN = +5·2m. Kobe MN = +5·3m. Sumoto MN = +5·5m. Irkutsk readings appear to require a correction; the P entered has been increased by 9m., and S by 6m., the other readings uncorrected are ePR_2 = +1m.44s., e = +2m.46s., ePS = +6m.52s., eSR_2 = +14m.29s., MN = +21·4m. Tashkent MN = +36·0m. Ekaterinburg MZ = +38·2m., MN = +39·6m. Kucino MN = +46·2m. Pulkovo MZ = +46·1m., MN = +48·1m. Tiflis eE = +11m.47s. and +18m.17s., ME = +45·0m. Hamburg MZ = +56·5m. Prague e = +39m.28s.? Vienna PPS? = +24m.39s., SR_2?? = +34m.48s., MN = +57·5m. De Bilt MN = +54·9m., MZ = +59·8m. Zagreb eNW = +2m.32s., eNE = +9m.8s., eNW = +49m.44s., eNW = +54m.18s., eNE = +56m.18s., MNW = +56m.52s. Oxford MN = +55·5m. Rio de Janeiro eN = +89m.55s.

Oct. 24d. Readings also at 1h. and 3h. (3) (Tiflis), 5h. (Ekaterinburg), 6h. (Ekaterinburg, La Paz, and Tiflis), 7h. (near Belgrade), 8h. (Tiflis), 13h. (Ekaterinburg, Phu-Lien, Tashkent, and Tiflis), 18h. (Bagnères, Algiers, Grenoble, Hamburg, Moncalieri, Rocca di Papa, Strasbourg, and Tortosa), 19h. (Taihoku and Manila), 23h. (Tashkent and near Reykjavik).

Oct. 25d. 8h. 35m. 25s. Epicentre 30°·0S. 70°·0W. (as on 1923 June 1d.).

A = +·296, B = −·814, C = −·500; D = −·940, E = −·342; G = −·171, H = +·470, K = −·866.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		3·5	189	e 1 45	+50	2 15	+38	2·7	—
Pilar	N.	5·5	109	—	—	(2 29)	− 2	2·5	3·7
Buenos Aires	N.	10·8	118	—	—	—	—	5·2	6·4
La Plata		11·3	118	3 0	+11	4 51	−11	5·6	—
Sucre		11·8	23	i 2 49	− 7	i 5 5	− 9	i 6·2	7·4
La Paz		13·6	8	i 3 25	+ 4	i 6 3	+ 5	6·9	7·4
Rio de Janeiro		25·0	80	e 9 35	?S	(e 9 35)	−28	—	—

Additional readings: Pilar LE? = +2·6m., ME? = +3·8m. Buenos Aires LE = +4·9m., ME = +6·1m. Sucre i = +3m.26s.; T_o = 8h.35m.21s. La Paz i = +6m.27s.

Oct. 25d. 14h. 28m. 32s. Epicentre 35°·7N. 134°·8E. (as on 1927 August 5d.).

A = −·572, B = +·576, C = +·584; D = +·710, E = +·705; G = −·411, H = +·414, K = −·812.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Kobe	1·1	163	0 17	0	(0 24)	− 7	0·4	0·5
Osaka	1·2	154	0 26	+ 8	(0 33)	0	0·6	1·3
Sumoto	1·4	177	0 13	− 8	—	—	0·3	0·3
Nagoya	1·8	107	—	—	—	—	e 1·1	—
Tashkent	50·4	298	i 15 42	?S	(i 15 42)	−42	e 39·5	47·3

Tashkent gives also iS = +24m.28s.

Oct. 25d. 15h. 41m. 18s. Epicentre 22°·0S. 133°·5E.

A = −·638, B = +·673, C = −·375; D = +·725, E = +·688; G = +·258, H = −·272, K = −·927.

Very rough.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Adelaide	13·7	162	e 3 22	0	e 5 56	− 5	6·5	6·9
Riverview	19·5	131	e 4 55	+20	e 7 45	−28	e 9·2	10·9
Perth	18·5	234	—	—	e 7 52	+ 1	i 9·3	—
Ekaterinburg	99·4	328	i 13 15	−52	—	—	35·7	—
Tiflis	103·5	310	—	—	—	—	e 49·7	—

Riverview gives also eS = +7m.31s., MN = +10·2m.

Oct. 25d. 17h. 59m. 14s. Epicentre 56°·4N. 136°·0W. (as on Oct. 24d.).

	Δ	Az.	P.	O−C.	L.	M.
	°	°	m. s.	s.	m.	m.
Sitka	0·7	29	i 0 24	+13	i 0·6	—
Victoria	11·1	131	6 20	?L	6·9	8·3
Ann Arbor	35·8	91	—	—	e 19·0	—
Toronto E.	37·3	87	—	—	19·8	—
Ottawa	38·2	82	—	—	e 19·8	—
Ekaterinburg	65·9	352	—	—	27·8	—
Tashkent	80·0	341	—	—	e 40·8	48·3
Tiflis	81·9	0	—	—	e 54·8	—
Baku	83·1	356	—	—	e 48·3	—

Victoria gives also LN = +6·8m., MN = +7·7m.

Oct. 25d. 21h. 37m. 30s. Epicentre 36°·0N. 138°·0E. (as on 1925 Jan. 25d.).

A = −·601, B = +·541, C = +·588; D = +·669, E = +·743; G = −·437, H = +·393, K = −·809.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya	1·2	225	e 0 31	+13	—	—	2·1	2·6
Osaka	2·5	239	1 20	+41	(1 20)	+11	2·9	4·3
Sumoto	3·1	237	e 0 39	−10	—	—	e 7·9	—
Mizusawa E.	4·0	37	0 57	− 5	1 40	−10	—	—
Nagasaki	7·5	247	—	—	—	—	e 5·6	—
Hong Kong	24·8	243	—	—	—	—	—	18·0
Irkutsk	28·7	315	—	—	e 11 14	+ 2	18·5	22·0
Tashkent	52·5	300	—	—	15 59	−51	e 26·5	36·0
Ekaterinburg	53·9	319	—	—	e 17 19	+11	28·0	37·2
Kucino	66·0	323	—	—	—	—	35·5	44·3
Baku	66·4	305	—	—	e 19 59	+17	e 36·0	45·5
Pulkovo	67·4	329	e 15 0	?PR_1	—	—	38·5	47·2
Tiflis E.	69·0	307	e 11 10	− 1	e 20 54	[−11]	e 38·5	44·6
Copenhagen	77·2	332	—	—	—	—	42·5	—
La Paz	149·7	57	19 22	[−33]	—	—	—	—

Additional readings: Nagoya MN = +2·4m. Osaka MN = +4·5m. Mizusawa PN = +1m.0s. Irkutsk e = +15m.57s. Tashkent e = +22m.30s.?, MN = +35·2m., MZ = +35·5m. Ekaterinburg MN = +35·3m. Kucino MN = +43·4m., readings have been increased by 1h. Baku MN = +45·4m. Tiflis eN = +8m.27s., eLN = +33·5m.

Oct. 25d. Readings also at 0h. (Tashkent, Tiflis, and near Nagasaki), 1h. (Tashkent and Tiflis), 3h. (Tiflis), 4h. (Tiflis (2), near Tacubaya, and Vera Cruz), 6h. (Mizusawa, near Osaka, and Sumoto), 8h. (La Paz and Sucre (2)), 9h. (Tashkent), 13h. (Tiflis), 14h. (near Sumoto (2)), 15h. (Sucre), 18h. (near St. Louis), 21h. (near La Paz), 23h. (Göldberg).

Oct. 26d. Readings at 0h. (Sucre and near La Paz), 1h. (Tiflis and near Osaka), 8h. (Feldberg), 9h. (Ekaterinburg, Dehra Dun, Simla, and near Tashkent), 10h. (La Paz), 11h. (Tashkent), 13h. (Sucre and near La Paz), 15h. (Ekaterinburg and Tashkent), 21h. (Tashkent).

Oct. 27d. 1h. 53m. 50s. Epicentre 37°·4N. 138°·8E.

See paper by T. Matuzawa in Bull. E'quake Research Institute of Japan, Aug. 1928, Vol. V.

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	2·5	48	0 34	− 5	1 9	0	—	—
Nagoya		2·7	213	e 0 41	− 1	(1 19)	+ 5	1·3	1·8
Osaka		3·8	225	1 13	+14	—	—	2·1	2·6
Kobe		4·0	228	e 1 4	+ 2	—	—	—	2·6
Sumoto		4·4	227	e 1 34	+26	—	—	e 2·8	3·0
Tashkent		52·5	298	—	—	e 15 10?	−100	i 24·7	—
Ekaterinburg		53·3	319	—	—	—	—	28·2	—
Kucino		65·3	323	—	—	—	—	41·5	—
Baku		66·2	305	—	—	—	—	e 41·2	—
Tiflis	E.	68·8	307	—	—	—	—	e 38·2	—
Makeyevka		69·4	316	—	—	—	—	e 35·2	—

Additional readings: Nagoya P = +46s., MN = +1·9m. Osaka MN = +2·9m., readings are given for 26d. Tashkent i = +19m.44s., the readings entered are not given as any particular phase. Tiflis eLN = +37·2m.

Oct. 27d. 7h. 31m. 6s. Epicentre 14°·5S. 128°·0E.

A = −·596, B = +·763, C = −·250; D = +·788, E = +·616; G = +·154, H = −·197, K = −·968.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Melbourne		27·7	150	—	—	e 10 54	0	—	20·6
Riverview		28·5	137	e 8 36	?	e 11 12	+ 4	e 15·2	20·6
Sydney		28·5	137	—	—	11 6	− 2	15·9	16·9
Suva		48·3	101	—	—	—	—	23·9	—
Irkutsk		69·8	345	e 11 17	+ 1	e 20 25	+ 1	36·9	43·7
Baku		90·6	311	—	—	e 27 33	?	52·2	—
Ekaterinburg		90·6	330	i 13 28	+ 9	e 24 7	−13	38·4	57·6
Tiflis	E.	94·6	311	e 25 0	?S	(e 25 0)	− 2	e 54·9	64·4
	N.	94·6	311	—	—	e 25 29	+27	e 53·9	65·8
Makeyevka		100·7	316	—	—	—	—	58·9	—
Kucino		102·0	324	—	—	—	—	e 54·0	63·4
Pulkovo		106·4	329	—	—	e 28 52	?PS	57·9	71·6
Victoria	E.	113·1	43	—	—	—	—	44·1	49·8
Copenhagen		116·2	325	—	—	—	—	71·9	—
Strasbourg		120·7	318	—	—	—	—	e 69·9	—
De Bilt		121·3	321	—	—	—	—	e 68·9	—
Paris		123·9	319	—	—	—	—	e 77·9	—
Kew	Z.	124·7	322	—	—	—	—	e 69·9	—
Rio Tinto		133·7	307	82 54	?L	—	—	(82·9)	93·9
San Fernando	E.	133·8	305	—	—	—	—	—	99·9
St. Louis	E.	138·6	46	—	—	—	—	e 57·4	—
Toronto	E.	142·6	32	—	—	—	—	67·9	—
Ottawa		143·2	27	—	—	—	—	e 61·9	—
La Paz		145·2	150	i 19 26	[−22]	—	—	—	—

Additional readings: Riverview MN = +22·1m. Irkutsk eSR_1 = +25m.21s., eSR_2 = +29m.9s. Ekaterinburg MZ = +58·5m. Pulkovo MZ = +71·9m. San Fernando MN = +91·9m.

Oct. 27d. 19h. 41m. 6s. Epicentre 9°·8N. 126°·2E. (as on 1927 June 7d.).

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		7·0	314	e 2 24	+38	—	—	4·2	—
Hong Kong		17·0	319	4 12	+ 7	7 46	?SR_1	—	13·6
Phu-Lien		21·8	302	4 57	− 6	e 8 59	− 2	9·9	—
Batavia		25·0	231	i 5 54	+16	9 54	− 9	—	—
Irkutsk		46·1	343	8 44	+ 3	i 15 43	+14	23·9	—
Tashkent		58·9	314	i 10 25	+21	i 18 31	+21	e 28·9	40·9
Ekaterinburg		68·6	328	i 11 18	+10	i 20 24	+15	31·9	47·0
Baku		73·3	310	11 40	+ 2	i 21 13	+ 7	e 37·9	47·5
Tiflis	E.	77·1	311	e 12 1	− 1	21 54	+ 4	e 36·9	49·0
	N.	77·1	311	e 12 5	− 3	21 51	+ 1	e 37·9	49·6
Kucino		81·0	326	—	—	e 22 24	−11	41·4	50·0
Makeyevka		81·6	319	—	—	—	—	e 55·9	—
Pulkovo		84·5	330	12 47	+ 2	23 13	− 1	45·9	57·2
Ksara	E.	84·9	304	e 12 39	− 8	22 58	[+ 3]	—	—
Copenhagen		94·8	329	—	—	e 27 54?	?	48·9	—
Feldberg		99·4	324	—	—	e 26 2	+12	e 43·7	46·1
De Bilt		100·3	326	—	—	—	—	e 53·9	—
Rocca di Papa		100·4	315	—	—	—	—	e 61·4	68·1
Strasbourg		100·6	325	—	—	—	—	e 61·9	—
San Fernando	E.	115·7	319	—	—	—	—	—	72·9

Additional readings and notes: Batavia iP = +5m.58s., i = +6m.4s. Tashkent MN = +39·8m., MZ = +40·7m. Ekaterinburg e = +28m.30s., MN = +40·1m., MZ = +47·2m. Baku MN = +47·8m. Tiflis eN = +12m.35s. and +23m.3s. Kucino e = +28m.6s. =SR_1 − 22s. Feldberg e = +32m.24s. =SR_1 − 6s.

Oct. 27d. Readings also at 2h. (Tashkent and near Toyooka), 4h. and 6h. (near Hukuoka), 7h. (Baku, Ekaterinburg, Irkutsk, Phu-Lien, near Bombay, and near Calcutta), 9h. (near Zagreb), 10h. and 12h. (Tiflis), 15h. (near Toyooka), 18h. (near Batavia and Malabar), 23h. (Tashkent).

Oct. 28d. 15h. 22m. 50s. Epicentre 33°·5N. 143°·0E. (as on Oct. 24d.).

A = −·666, B = +·502, C = +·552; D = +·602, E = +·799; G = −·441, H = +·332, K = −·834.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		5·3	290	i 1 18	− 4	—	—	—	—
Mizusawa	E.	5·8	346	1 35	+ 5	2 20	−19	—	—
	N.	5·8	346	1 46	+16	2 34	− 5	—	—
Osaka		6·4	283	1 41	+ 3	—	—	3·2	5·9
Kobe		6·6	283	1 58	+17	—	—	4·2	4·5
Sumoto		6·8	279	e 1 42	− 2	e 2 46	−19	e 3·9	4·5
Toyooka		7·0	290	e 0 22	−84	—	—	—	—
Hukuoka		10·5	274	e 1 26	−71	—	—	6·6	6·8
Nagasaki		11·0	270	e 0 18	?	3 38	−76	5·4	—
Zi-ka-wei		18·3	269	4 27	+ 6	—	—	—	12·2
Manila		27·5	232	e 7 10?	+67	—	—	—	—
Hong Kong		27·7	254	—	—	—	—	—	19·8
Irkutsk		33·4	316	e 6 38	−22	i 12 2	−28	16·2	22·5
Phu-Lien		34·6	258	1 10?	?	—	—	—	—
Tashkent		57·3	302	i 10 9	+15	18 1	+11	e 27·2	38·1
Ekaterinburg		58·5	322	i 10 6	+ 4	i 18 3	− 2	27·2	38·1
Baku		71·2	308	e 11 29	+ 5	20 42	+ 2	36·2	42·5
Pulkovo		71·7	331	e 11 32	+ 4	20 48	+ 2	37·2	45·6
Tiflis	E.	73·8	310	e 11 43	+ 2	e 21 7	− 5	e 38·2	46·7
	N.	73·8	310	e 11 44	+ 3	e 21 12	0	e 37·2	50·4
Makeyevka		74·6	319	—	—	—	—	e 47·2	52·1
Upsala	E.	76·5	336	—	—	—	—	e 49·2	—
Copenhagen		81·3	335	—	—	22 25	−13	41·2	52·1
Ksara	E.	84·1	309	e 13 4	+21	23 1	− 8	—	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Prague		84·9	330	—	—	—	—	e 47·2	55·2
Cheb		85·7	331	—	—	—	—	e 46·2	54·2
De Bilt		86·8	336	—	—	—	—	e 46·2	54·6
Feldberg		87·1	333	—	—	—	—	e 46·4	58·6
Uccle		88·1	336	—	—	—	—	e 45·2	—
Strasbourg		89·3	333	—	—	—	—	e 59·2	—
Paris		90·5	336	—	—	—	—	e 54·2	—
Florence		91·1	327	13 10	−12	—	—	—	—
Rocca di Papa		92·0	325	—	—	—	—	e 57·3	59·5
Ottawa	E.	93·6	26	—	—	—	—	e 48·2	—
San Fernando	E.	104·4	336	—	—	—	—	—	66·7
La Paz		147·3	68	20 10	[+18]	—	—	—	—

Additional readings: Osaka MN = +5·2m. Sumoto MZ = +4·4m., MN = +5·7m. Irkutsk MN = +19·5m., MZ = +22·3m. Tashkent MN = +34·2m. Ekaterinburg i = +19m.51s. =[S]+7s., MN = +35·5m., MZ = +37·9m. Baku MZ = +46·4m., MN = +46·6m. Pulkovo MZ = +45·7m., MN = +46·6m. Tiflis eN = +21m.52s. =[S]+12s., eE = +23m.1s. Copenhagen MN = +56·6m. Ottawa eN = +52m.10s. San Fernando MN = +68·2m.

Oct. 28d. 21h. 49m. 40s. Epicentre 44°·6N. 9°·5E. (given by Strasbourg).

A = +·702, B = +·118, C = +·702; D = +·165, E = −·986; G = +·692, H = +·116, K = −·712.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Moncalieri		1·3	287	0 2	−18	0 26	−10	—	0·5
Florence		1·5	123	0 0	−23	—	—	—	0·5
Venice		2·2	68	0 36	+ 2	0 44	−16		—
Grenoble		2·8	282	0 39	− 5,	—	—	—	—
Zurich		2·8	347	e 0 28	−16	i 0 56	−21	—	—
Neuchatel		3·0	324	i 0 24	−23	i 1 2	−21	—	—
Innsbruck		3·0	25	i 0 55	+ 8	i 1 25	+ 2	—	—
Ravensburg		3·2	359	e 0 44	− 6	(e 1 5)	−23	e 1·1	1·5
Besançon		3·6	319	e 0 22	−34	i 1 13	−26	—	—
Rocca di Papa		3·7	139	e 0 28	−30	(i 1 44)	+ 2	i 1·7	—
Hohenheim		4·2	0	e 0 54	−11	i 2 14	+19	—	—
Strasbourg		4·2	344	e 0 42	−23	i 1 56	+ 1	—	—
Zagreb	N.E.	4·7	73	e 1 23	+10	e 2 14	+ 5	—	2·5
	N.W.	4·7	73	e 1 24	+11	e 2 16	+ 7	—	2·7
Vienna		6·0	50	e 1 39	+ 7	2 59	+15	i 3·8	4·3
Prague		6·4	30	—	—	e 2 57	+ 2	—	4·3
Jena	E.	6·4	12	e 1 46	+ 8	i 2 44	−11	e 3·0	3·4
Uccle		7·1	332	e 2 44	+56	—	—	e 7·3	—
Tortosa	N.	7·6	244	—	—	—	—	e 3·6	4·0
Potsdam		8·1	15	−e 0 58	?	—	—	—	—
Copenhagen		11·3	8	—	—	4 20?	−42	—	—
Pulkovo		19·6	32	—	—	—	—	e 7·3	—
Makeyevka		19·8	70	(3 30?)	−79	—	—	3·3	—
Tashkent		42·9	73	—	—	—	—	e 22·3	28·3

Additional readings: Moncalieri MN = +2·2m. Venice PE = +0m.17s., PN = +0m.42s. Neuchatel iP = +26s. Innsbruck eP = +22s. Ravensburg readings are given for 22h. Rocca di Papa eN = +31s., eZ = +37s. Zagreb e = +1m.7s., eNW = +1m.35s., +1m.44s., +1m.49s., and +2m.10s., eNE = +1m.36s., +1m.42s., +1m.55s., and +2m.4s. Vienna iZ = +2m.12s., +2m.26s., and +2m.50s., iE = +2m.19s. and +2m.43s. Jena iE = +2m.24s. and +2m.34s., MZ = +3·6m.

Oct. 28d. Readings also at 1h. (Ekaterinburg), 4h. (Sitka), 7h. (near La Paz and Sucre), 12h. (Florence (2) and Sucre), 13h. (La Paz and near Neuchatel), 14h. (Florence (2) and near Neuchatel), 15h. (Florence (2)), 18h. (Florence, Moncalieri, and near Neuchatel), 19h. (Tiflis, Sucre, Moncalieri, and near La Paz), 20h. (Florence, Tiflis, Moncalieri, and near Neuchatel), 21h. (Strasbourg, Tiflis, Zagreb (2), Zurich, Florence (2), near Moncalieri, and near Neuchatel), 22h. (Innsbruck, Rocca di Papa, Strasbourg (2), Florence (2), Neuchatel (2), Zagreb (2), Zurich, Venice, and near Moncalieri (2)), 23h. (Makeyevka).

Oct. 29d. 1h. 24m. 44s. Epicentre 39°·0N. 75°·0E.

A = +·201, B = +·751, C = +·629; D = +·966, E = −·259; G = +·163, H = +·608, K = −·777.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent		5·0	300	e 1 15	− 2	i 2 4	−13	—	3·3
Simla	N.	8·0	166	—	—	e 3 40	+ 3	—	—
Baku		19·3	282	i 4 38	+ 5	i 8 20	+12	11·3	11·6
Bombay		20·2	186	4 41	− 2	e 8 31	+ 4	10·9	—
Ekaterinburg		20·2	337	i 4 49	+ 6	8 30	+ 3	9·8	—
Tiflis	E.	23·1	286	5 17	− 1	e 9 30	+ 3	e 11·9	—
	N.	23·1	286	e 5 18	0	e 9 27	0	e 11·5	—
Irkutsk		24·2	47	e 5 28	− 2	i 9 52	+ 4	15·3	—
Makeyevka		28·0	301	—	—	—	—	e 14·3	20·2
Kucino		29·7	317	e 8 16?	?	e 12 16?	?	—	—
Ksara	N.	31·7	274	e 6 21	−23	13 17	+74	22·3	—
Pulkovo		34·8	323	e 7 0	−11	e 12 27	−25	16·3	18·6
Copenhagen		43·8	315	—	—	e 14 46	−13	23·3	—
Feldberg		47·1	307	—	—	—	—	e 25·3	27·3

Additional readings: Tashkent i = +1m.26s., MZ = +4·3m. Simla eE = +3m.22s. Baku e = +8m.15s. Ekaterinburg i = +5m.1s., e = +8m.24s. Tiflis eE = +7m.42s., eN = +11m.21s., eLN? = +14·3m. Irkutsk SR_1 = +12m.44s. Makeyevka L = +18·3m., MN = +24·1m.

Oct. 29d. Readings also at 1h. (Florence and Moncalieri), 2h. (Tiflis), 3h. (Tiflis), 4h. (Florence, Vienna, Zagreb, Ksara, Ekaterinburg, Tiflis, Tashkent, and Suva), 5h. (near Manila), 6h. (La Paz and Tashkent), 7h. (Baku and Tiflis), 10h. (Florence, Moncalieri, Zagreb, near La Paz, and Sucre), 11h. (Ekaterinburg and near Tashkent), 15h. (Florence), 18h. (Florence), 21h. (near Tashkent), 23h. (Tashkent and near Nagasaki).

Oct. 30d. 3h. 8m. 52s. Epicentre 72°·5N. 12°·0W.

A = +·294, B = −·063, C = +·954; D = −·208, E = −·978; G = +·933, H = −·198, K = −·301.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Reykjavik		9·1	209	—	—	(e 4 8?)	+ 2	e 4·1	—
Edinburgh		17·0	163	—	—	—	—	e 9·1	—
Upsala		17·1	122	—	—	e 7 35	+15	e 9·1	—
Copenhagen		19·6	135	4 32	− 4	e 8 8	− 7	10·1	13·0
Pulkovo		20·6	106	5 1	+13	8 33	− 3	10·1	10·7
Hamburg		21·1	142	e 5 2	+ 8	—	—	—	15·2
Oxford		21·3	161	—	—	—	—	e 10·1	11·9
De Bilt	N.	21·7	151	—	—	e 9 9	+10	e 10·5	11·4
Kew		21·7	160	i 5 3	+ 2	e 9 4	+ 5	11·1	12·0
Uccle		22·9	153	e 5 13	− 3	e 9 25	+ 2	e 11·1	—
Feldberg		24·1	147	—	—	i 9 47	+ 1	e 11·3	12·4
Paris		24·6	156	e 5 32	− 2	—	—	13·8	14·1
Cheb		24·8	141	—	—	e 10 8?	+ 9	e 13·1	18·1
Prague		25·3	138	—	—	—	—	e 14·1	17·1
Strasbourg		25·6	149	e 6 8?	+24	—	—	e 13·1	e 17·1
Kucino		26·2	103	—	—	e 10 20	− 6	—	13·3
Moncalieri		29·0	151	e 6 34	+16	12 19	+62	16·2	—
Ekaterinburg		32·1	81	e 6 49	+ 1	e 12 8	− 2	15·1	19·7
Tortosa	N.	32·3	164	e 7 8?	+17	—	—	e 16·1	20·0
Toledo	N.W.	32·9	169	—	—	—	—	e 16·6	20·0
Rocca di Papa		33·0	144	e 6 37	−19	—	—	—	—
Makeyevka		33·1	110	—	—	e 10 8?	?	e 15·1	26·0
Rio Tinto		34·9	175	18 8?	?L	—	—	(18·1)	21·1
Granada		35·6	169	—	—	—	—	e 17·8	21·1
Almeria		36·0	167	—	—	—	—	e 19·4	24·4

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
San Fernando E.	36·2	173	—	—	—	—	—	19·1
Ottawa	39·4	265	—	—	e 14 8?	+11	e 18·1	—
Tiflis	40·8	106	e 8 41	+40	e 14 11	− 7	e 19·1	24·0
Toronto E.	42·1	268	—	—	—	—	22·8	—
Baku	43·5	102	—	—	—	—	21·1	23·8
Chicago	46·3	273	—	—	—	—	e 22·3	—
Irkutsk	47·7	49	—	—	—	—	30·1	—
Tashkent	48·5	84	9 11	+14	16 9	+ 9	e 22·1	29·2
La Paz	96·3	234	13 27	−24	21 2	?	—	—
Sucre	98·0	230	13 17	−43	—	—	—	—

Additional readings: Copenhagen eZ = +4m.41s., MN = +14·2m. Pulkovo MNZ = +11·8m. De Bilt eLE = +12·0m., ME = +12·6m., MZ = +14·7m. Kew MN = +12·5m. Kucino MN = +13·2m. Ekaterinburg eSR$_1$ = +13m.16s. Toledo MNE = +19·8m. Makeyevka MN = +21·8m. San Fernando MN = +11·1m. Tiflis eSR$_1$N? = +16m.20s., eLN = +20·1m., MN = +24·8m. Tashkent e = +21m.14s. =SR$_3$ −13s., MZ = +29·3m.

Oct. 30d. 23h. 47m. 10s. Epicentre 44°·6N. 9°·5E. (as on Oct. 28d.).

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Moncalieri Z.	1·3	287	0 30	+10	i 0 37	+ 1	—	—
Florence	1·5	123	e 0 18	− 5	—	—	—	0·7
Venice	2·2	68	0 43	+ 9	1 4	+ 4	—	—
Zurich	2·8	347	—	—	—	—	—	5·8
Neuchatel	3·0	324	e 0 46	− 1	e 1 20	− 3	—	—
Ravensburg	3·2	359	—	—	e 1 26	− 2	1·6	—
Rocca di Papa	3·7	139	e 0 49	− 9	e 1 34	− 8	—	2·3
Zagreb N.E.	4·7	73	e 1 45	+32	e 2 30	+21	—	—
N.W.	4·7	73	e 1 43	+30	e 2 32	+23	—	—
Vienna Z.	6·0	50	2 21	?S	(2 21)	−23	—	—

Zagreb gives also e = +1m.52s., eNW = +2m.0s., eNE = +2m.4s., e = +2m.9s., eNE = +2m.13s.

Oct. 30d. Readings also at 1h. (Ekaterinburg, Tashkent, La Paz (2), Sucre, near Amboina, and near Nagasaki), 2h. (Manila), 4h. (Tiflis and near Belgrade), 5h. (Tiflis (2), Phu-Lien, and near Mizusawa), 6h. (Ekaterinburg, Tiflis, and near Manila), 7h. (Tashkent and near Tacubaya), 8h. (Ekaterinburg, Tashkent, and Tiflis (2)), 11h. (near Hukuoka and Matuyama), 12h. (Florence), 13h. (La Paz and Sucre), 15h. (Florence and near Moncalieri), 22h. (Irkutsk), 23h. (La Paz).

Oct. 31d. 6h. 23m. 0s. Epicentre 36°·5N. 49°·0E.

A = +·527, B = +·607, C = +·595; D = +·755, E = −·656; G = +·390, H = +·449, K = −·804.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Baku	3·9	11	e 2 46	+105	—	—	4·0	5·6
Tiflis N.	6·1	329	e 1 15	−18	—	—	i 4·4	5·0
Ksara	11·0	260	e 2 48	+ 4	4 58	+ 4	6·2	—
Makeyevka	14·1	329	—	—	—	—	10·0	—
Tashkent	16·4	67	3 15	−42	6 47	−17	e 9·2	13·3
Ekaterinburg	21·8	17	4 59	− 4	9 4	+ 3	12·0	—
Pulkovo	26·2	338	—	—	—	—	e 16·0	—

Additional readings: Baku MZ = +6·4m., MN = +7·3m. Tiflis eN = +3m.33s. and +3m.46s. Makeyevka eL$_1$ = +13·0m. Tashkent MN = +11·1m.

Oct. 31d. 13h. 25m. 0s. Epicentre 30°·6N. 144°·0E. (as on 1924 June 22d.).

A = −·696, B = +·506, C = +·509; D = +·588, E = +·809; G = −·412, H = +·299, K = −·861.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Osaka		8·3	302	2 9	+ 3	—	—	2·9	8·4
Mizusawa	E.	8·8	345	2 48	+35	3 40	−18	—	—
	N.	8·8	345	2 42	+29	3 48	−10	—	—
Zi-ka-wei		19·4	278	e 4 20	−14	e 7 48	−22	—	11·9
Irkutsk		36·1	319	e 6 59	−24	12 41	−30	19·0	—
Tashkent		59·6	303	i 10 8	− 1	i 18 12	− 6	e 28·0	44·7
Ekaterinburg		61·2	322	e 10 23	+ 3	18 36	− 2	31·0	38·8
Kucino		73·4	325	—	—	—	—	38·5	—
Makeyevka		77·3	320	—	—	—	—	e 46·0	—
La Paz		147·5	72	20 0	[+ 8]	—	—	—	—

Additional readings: Osaka MN = +6·2m. Tashkent MN = +31·6m., MZ = +37·4m. Ekaterinburg i = +10m.24s. Makeyevka L = +49·0m.

Oct. 31d. 17h. 41m. 15s. Epicentre 7°·0S. 147°·0E.

A = −·833, B = +·541, C = −·122; D = +·545, E = +·839; G = +·102, H = −·066, K = −·993.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina	19·0	279	i 4 24	− 5	i 8 15	+13	—	—
Sydney	27·1	172	10 57	?S	(10 57)	+14	15·6	16·8
Adelaide	29·0	194	e 6 13	− 5	i 11 13	− 4	13·9	20·2
Manila	33·7	312	(e 7 20)	+18	—	—	—	—
Perth	38·3	226	—	—	i 13 35	− 7	i 20·6	21·4
Batavia	39·9	270	e 8 1	+ 7	—	—	—	—
Zi-ka-wei	45·4	330	e 8 17	−19	e 15 10	−10	—	—
Phu-Lien	48·5	308	—	—	12 45?	?	—	—
Irkutsk	69·5	335	e 11 11	− 3	20 9	−11	e 32·8	—
Tashkent	85·6	314	e 12 39	−12	e 23 3	[+ 3]	e 44·8	54·3
Ekaterinburg	93·8	328	e 13 6	−31	e 23 54	[+ 3]	41·8	54·9
Makeyevka	107·8	320	—	—	—	—	60·8	—
Copenhagen	119·5	332	—	—	—	—	—	69·8
De Bilt	125·1	332	—	—	—	—	e 67·8	—
Florence	126·7	320	19 44	[+34]	—	—	—	—
Ottawa	126·8	35	—	—	—	—	e 61·8	—
La Paz	138·0	124	e 19 31	[− 5]	—	—	—	—

Additional readings and note: Manila reading has been increased by 12m. Batavia iE = +9m.16s. = PR_1 − 5s. Irkutsk eSR_3 = +27m.59s. Tashkent iSR_1 = +28m.38s. Ekaterinburg e = +31m.3s. = SR_1 − 17s.

Oct. 31d. 23h. 29m. 45s. Epicentre 39°·0N. 78°·0E.

A = +·162, B = +·760, C = +·629; D = +·978, E = −·208; G = +·131, H = +·616, K = −·777.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent		7·0	292	i 1 48	+ 2	i 3 34	+24	—	4·3
Dehra Dun		8·7	180	3 52	?S	(3 52)	− 4	(5·5)	—
Ekaterinburg		21·1	333	i 4 54	0	8 42	− 4	i 10·7	12·4
Baku		21·6	283	—	—	e 9 14	+17	e 12·2	—
Irkutsk		22·5	45	—	—	e 9 31	+16	13·2	14·8
Tiflis		25·3	287	e 5 38	− 3	e 10 8	− 1	e 14·2	16·0
Phu-Lien		30·5	118	—	—	—	—	15·2	—
Kucino		31·2	315	—	—	e 11 57	+ 3	15·2	18·6
Pulkovo		36·2	321	—	—	e 16 49	?SR_3	19·2	21·7
Upsala	N.	42·5	320	—	—	—	—	e 22·6	25·0
Copenhagen		45·5	314	—	—	—	—	23·2	—
Cheb		46·5	307	—	—	—	—	e 28·2	29·0
De Bilt		50·4	310	—	—	—	—	e 27·8	32·0

For Notes see next page.

NOTES TO OCT. 31d. 23h. 29m. 45s.

Additional readings: Tashkent i = +1m.57s., +2m.13s., +2m.43s., and +2m.51s., MZ = +4·2m., MN = +14·0m. Dehra Dun gives S as P and L as S; also L = +16·7m. Ekaterinburg MNZ = +12·2m. Irkutsk e = +12m.7s. Tiflis eN = +5m.50s., PR$_1$E = +6m.14s., PR$_1$N = +6m.17s., PR$_2$E? = +6m.27s., eSR$_1$E = +11m.23s., eSR$_2$E? = +11m.54s., eSR$_2$N? = +11m.57s., MN = +18·9m. Kucino MN = +18·3m. Upsala ME = +25·6m. De Bilt MZ = +32·1m.

Oct. 31d. Readings also at 3h. (Sitka and Victoria), 5h. (Tiflis), 9h. (Florence and Mizusawa), 14h. (near La Paz), 17h. (Venice), 19h. (Feldberg), 21h. (near Toyooka), 22h. (Ekaterinburg and Tashkent).

Nov. 1d. Readings at 0h. (Wellington), 1h. (Ekaterinburg and near Mizusawa), 3h. (Barcelona), 9h. (Zagreb), 10h. (Ekaterinburg, La Paz, and Sucre), 13h. (Victoria), 14h. (Tiflis), 20h. (Riverview and Tashkent), 21h. (Ekaterinburg and Wellington).

Nov. 2d. 6h. 9m. 38s. Epicentre 20°·7S. 69°·0W. (deduced from 20°·4S. 69°·5W. given by Sucre).

A = +·335, B = −·873, C = −·353; D = −·934, E = −·358; G = −·127, H = +·330, K = −·935.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Sucre	3·9	65	i 0 58	− 3	i 1 43	− 4	1·9	2·3
La Paz	4·3	12	i 1 8	+ 1	i 1 59	+ 1	2·1	3·4
Santiago	12·8	186	e 3 9	− 1	(5 45)	+ 6	5·8	—
La Plata	17·2	148	4 4	− 3	7 22	0	8·7	—

No additional readings.

Nov. 2d. 21h. 6m. 12s. Epicentre 5°·9S. 102°·9E. (given by Strasbourg).

A = −·222, B = +·970, C = −·103; D = +·975, E = +·223; G = +·023, H = −·100, K = −·995.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Batavia		3·9	95	i 1 21	+20	i 1 58	+11	—	—
Malabar		4·9	106	1 1	−15	1 50	−24	—	—
Colombo		26·3	299	5 7	−44	10 7	−21	14·3	19·4
Phu-Lien	N.	27·0	8	e 5 39	−19	10 18	−23	13·0	—
Manila		27·2	41	e 6 1	+ 1	—	—	—	18·8
Perth		28·7	157	e 11 8	?S	(e 11 8)	− 4	e 14·3	—
Kodaikanal		30·1	304	14 42	?L	—	—	18·0	22·0
Hong Kong		30·3	21	5 55	−36	—	—	—	19·5
Bombay		38·6	311	7 33	−10	13 28	−18	e 20·3	—
Zi-ka-wei		41·1	25	e 7 41	−23	e 13 43	−39	—	24·8
Adelaide		43·9	137	e 14 24	?S	(e 14 24)	−37	e 21·9	27·5
Simla		44·5	329	—	—	—	—	e 18·2	—
Osaka		50·9	35	9 43	+31	(16 5)	−25	16·1	16·9
Riverview		52·6	130	—	—	—	—	e 31·2	38·2
Sydney	E.	52·6	130	24 6	?L	—	—	30·7	33·8
Tashkent		56·3	330	i 9 35	−13	i 17 23	−15	e 24·8	40·4
Irkutsk		58·2	1	9 51	− 9	—	—	e 32·3	36·7
Baku		67·1	320	i 11 16	+17	i 19 51	0	33·1	43·5
Tiflis		71·1	319	i 11 22	− 2	20 37	− 2	e 37·8	45·4
Ekaterinburg		71·6	337	i 11 24	− 3	i 20 40	− 5	31·8	39·6
Wellington	E.	72·6	131	—	—	—	—	e 41·7	—
Ksara		74·6	309	11 47	+ 1	21 23	+ 2	—	—
Makeyevka		78·1	322	e 12 1	− 7	i 21 24	−37	39·3	52·2

Continued on next page.

		Δ °	Az. °	P. m. s.	O−C. s.	S. m. s.	O−C. s.	L. m.	M. m.
Kucino		81·3	329	—	—	—	—	38·4	—
Pulkovo		86·5	331	12 38	−18	e 23 16	−20	45·8	57·6
Zagreb		92·0	316	e 13 14	−13	—	—	—	—
Pompeii		92·6	311	e 13 36	+ 6	—	—	—	—
Copenhagen		95·1	326	—	—	—	—	49·8	—
Feldberg		97·4	320	—	—	—	—	e 57·0	—
De Bilt		99·4	322	—	—	—	—	e 59·8	—
Ottawa	E.	140·5	358	—	—	—	—	e 74·8	—
Sucre		152·5	205	20 2	[+ 2]	—	—	—	—
La Paz		155·9	201	e 20 14	[+11]	—	—	—	—

Additional readings: Batavia iP = +1m.22s., iE = +1m.27s., iN = +1m.28s., iZ = +1m.29s., iSE = +2m.9s. Adelaide S = +20m.27s., MN = +24·3m. Riverview e = +22m.36s. =SR_2 +7s. Tashkent eSR_2 = +21m.48s. = SR_1 −16s., MN = +30·1m., MZ = +30·6m. Irkutsk MZ = +37·0m., MN = +37·2m. Tiflis eE = +11m.36s., PR_1E = +14m.3s., PR_2E = +15m.51s., PSE = +21m.19s., MN = +51·9m. Ekaterinburg i = +11m.37s. and +21m.47s. =[S] +24s., e = +25m.13s. Ksara PR_1 = +14m.47s.; T_g =21h.6m.11s. Pulkovo MN = +54·1m., MZ = +55·7m. Zagreb eNE = +13m.19s. Ottawa eLN = +82·8m.

Nov. 2d. 22h. 56m. 25s. Epicentre 28°·0N. 127°·0E. (as on 1926 Sept. 9d.).

A = −·531, B = +·705, C = +·470; D = +·799, E = +·602; G = −·283, H = +·375, K = −·883.

		Δ °	Az. °	P. m. s.	O−C. s.	S. m. s.	O−C. s.	L. m.	M. m.
Nagasaki		5·3	27	e 1 30	+ 8	2 38	+13	3·3	5·1
Taihoku	E.	5·7	240	e 1 43	+15	—	—	—	—
Zi-ka-wei		5·8	305	e 1 32	+ 2	3 8	+29	—	5·0
Hukuoka		6·3	27	1 25	−11	2 36	−16	—	4·4
Sumoto		9·2	45	e 1 53	−26	—	—	3·3	—
Osaka		9·8	45	0 42	−105	—	—	2·8	7·2
Hong Kong		12·9	247	3 8	− 4	—	—	—	9·2
Manila		14·6	204	e 4 4	+30	—	—	—	—
Phu-Lien		19·9	253	4 35	− 5	—	—	9·6	—
Irkutsk		29·5	331	e 7 43	+80	e 12 43	+77	18·2	21·2
Tashkent		48·4	302	—	—	—	—	e 24·2	35·3
Ekaterinburg		54·0	323	e 10 20	+47	—	—	25·6	35·8
Baku		63·0	304	—	—	—	—	e 34·7	—
Sydney	E.	66·0	158	35 17	?L	—	—	39·5	40·2
Tiflis	E.	66·3	307	e 13 20	?PR_1	—	—	e 39·4	42·0
Kucino		66·6	323	—	—	—	—	34·7	—
Makeyevka		68·9	315	—	—	—	—	40·1	—
Pulkovo		69·3	329	—	—	—	—	e 40·6	45·5
Copenhagen		79·5	329	—	—	—	—	44·6	—
De Bilt		85·2	328	—	—	—	—	e 46·6	—

Additional readings and note: Osaka MN = +6·6m. Irkutsk MZ = +21·3m. P and S are given as simply e. Tashkent eL = +27·1m. Ekaterinburg e = +21m.37s. =SR_1 +13s., MN = +31·8m., MZ = +36·0m. Tiflis eLN = +39·0m.

Nov. 2d. Readings also at 0h. and 1h. (near Belgrade), 2h. (Taihoku and near Sumoto), 3h. (Tiflis), 5h. (Apia (2) and Manila), 6h. (Manila, Tashkent, and near Tacubaya), 10h. and 16h. (La Paz), 18h. (Sucre), 19h. (La Paz, Ekaterinburg, Tashkent, near Mizusawa, and Ootomari), 21h. (La Paz, Sucre, and Irkutsk).

Nov. 3d. Readings at 3h. (Santiago), 4h. (Tiflis), 5h. (near Tacubaya), 6h. (Tashkent and near Manila), 8h. (Bombay, Ekaterinburg (2), Irkutsk, Phu-Lien (2), Pulkovo, Tashkent (2), Malabar, and near Batavia), 12h. (Batavia), 13h. (near Tacubaya (2)), 18h. (Fordham), 21h. (near La Paz (2) and Sucre (2)), 23h. (Feldberg and Florence).

Nov. 4d. 13h. 50m. 51s. Epicentre 34°·9N. 121°·0W.

(as given by De Bilt).

A = −·422, B = −·703, C = +·572; D = −·857, E = +·515; G = −·295, H = −·490, K = −·820.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Lick		2·5	348	0 50	+11	i 1 39	+30	—	1·9
Berkeley	E.	3·2	340	e 0 58	+ 8	i 1 39	+11	—	2·2
	Z.	3·2	340	e 0 57	+ 7	i 2 2	+34	—	2·6
Tucson	E.	8·8	104	i 2 18	+ 5	i 4 5	+ 7	—	6·6
	N.	8·8	104	i 2 17	+ 4	i 4 6	+ 8	—	8·0
Victoria		13·6	353	3 27	+ 6	—	—	6·5	9·3
Denver	E.	13·6	65	e 3 31	+10	i 6 15	+17	e 7·4	9·6
	N.	13·6	65	e 3 33	+12	i 6 15	+17	e 7·2	8·4
Chihuohua		14·1	112	5 9	+102	7 53	+103	8·2	10·6
Mazatlan		17·2	129	(4 11)	+ 4	(7 28)	+ 6	(8·7)	(12·0)
Saskatoon		20·0	26	i 4 28	−13	i 8 12	−11	i 10·2	15·0
Guadalajara		20·9	128	5 59	+67	10 6	+84	11·4	14·3
Sitka		24·2	341	5 33	+ 3	i 9 59	+11	14·7	20·6
		24·2	341	5 37	+ 7	—	—	14·4	17·2
Tacubaya		24·7	123	5 16	−19	9 58	+ 1	11·8	16·0
St. Louis		24·8	72	i 5 34	− 2	e 9 58	− 1	i 11·5	15·3
Chicago		26·9	65	i 5 52	− 5	i 10 26	−13	—	—
Vera Cruz		27·0	119	(5 20)	−38	(10 18)	−23	(12·4)	(17·2)
Cincinnati		29·2	71	i 6 8	−12	i 11 23	+ 3	i 14·2	—
Ann Arbor		29·8	64	i 6 15	−11	i 11 15	−16	e 14·4	—
Merida		30·8	109	6 37	+ 1	11 40?	− 8	13·9	26·6
Toronto	E.	33·0	60	i 6 44	−12	i 12 0	−24	15·3	20·8
	N.	33·0	60	—	—	i 12 1	−23	14·7	19·5
Ithaca		35·1	62	—	—	12 40	−17	—	22·2
Honolulu T.H.		35·2	258	i 7 7	− 8	i 12 48	−10	14·6	—
Ottawa		35·6	59	i 7 7	−11	i 12 49	−15	i 17·1	25·6
Fordham	E.	37·2	67	i 7 30	− 2	i 13 10	−17	i 17·5	20·2
Port au Prince		45·9	97	e 17 33	?S	(e 17 33)	+126	e 28·1	31·7
San Juan	E.	51·0	94	e 11 17	+124	e 17 59	+88	e 30·8	33·2
Apia		68·5	234	11 15	+ 7	20 24	+16	31·0	33·2
Ootomari		69·2	313	11 22	+10	(20 32)	+16	20·5	—
La Paz		71·8	126	e 11 32	+ 4	i 20 47	− 1	37·6	46·8
Azores		73·1	55	21 33	?S	(21 33)	+30	46·4	47·0
Mizusawa	E.	74·1	307	11 51	+ 8	21 37	+22	31·4	—
	N.	74·1	307	11 54	+11	21 27	+12	31·4	—
Dyce		74·5	29	e 11 54	+ 8	21 29	+ 9	34·8	42·0
Edinburgh		75·0	30	11 48	− 1	21 37	+11	37·2	43·6
Bergen		75·1	24	11 51	+ 1	—	—	38·2	44·2
Sucre		75·5	126	11 53	+ 1	i 21 37	+ 5	40·3	55·8
Stonyhurst		76·6	33	i 12 1	+ 2	21 41	− 3	36·6	45·5
Bidston		76·6	32	21 56	?S	(21 56)	+12	37·2	47·2
Suva		78·2	237	12 3	− 5	21 33	−29	36·6	38·6
Oxford		78·6	34	i 12 17	+ 6	i 22 17	+10	36·8	48·0
Upsala		79·3	20	e 12 13	− 2	e 22 20	+ 5	e 39·2	50·2
Kew		79·4	33	e 12 19	+ 4	i 22 26	+10	36·2	41·3
Toyooka		80·2	307	12 27	+ 7	22 38	+13	e 34·4	34·9
Osaka		80·4	306	12 27	+ 6	22 16	−12	36·0	44·9
Kobe		80·5	306	e 12 27	+ 5	(e 22 34)	+ 5	(e 33·7)	38·7
Sumoto		80·9	306	e 10 12	−132	e 23 24	?PS	e 33·3	—
Helsingfors	E.	80·9	15	12 31	+ 7	i 22 43	+ 9	39·2	42·4
	N.	80·9	15	12 33	+ 9	22 44	+10	—	48·2
	Z.	80·9	15	i 12 29	+ 5	—	—	—	—
Copenhagen		81·0	24	12 32	+ 7	22 45	+10	39·2	50·5
De Bilt		81·1	30	e 12 30	+ 4	22 48	+12	e 38·2	47·5
Uccle		81·7	31	i 12 34	+ 5	i 22 50	+ 7	e 39·2	45·9
Hamburg		81·8	26	e 12 30	+ 1	e 22 57	+13	e 38·2	45·2
Pulkovo		82·4	13	i 12 38	+ 6	22 59	+ 9	39·2	51·3
Feldberg	E.	83·6	29	e 14 47	+127	i 23 17	+12	e 42·2	46·8
Hukuoka		84·3	308	12 51	+ 7	(23 13)	+ 2	23·2	24·8
Irkutsk		84·3	334	i 12 43	− 1	i 24 3	?PS	44·6	50·4
Konigsberg		84·3	21	—	—	i 23 23	+12	e 39·2	46·2
Paris		84·4	34	i 12 39	− 5	i 22 59	−13	40·2	48·2
Jena		84·6	27	e 12 45	− 1	e 23 9	− 6	e 40·2	44·7
Strasbourg		84·9	30	12 48	+ 1	i 23 21	+ 3	39·2	50·4
Besançon		85·1	33	12 51	+ 2	23 21	+ 1	36·2	46·2
Rio Tinto		85·2	47	13 9?	+20	—	—	—	54·2

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toledo		85·3	43	e 12 38	−12	e 23 7	−15	e 39·4	51·6
Nagasaki		85·3	308	e 18 38	?PR$_2$	—	—	—	—
Hohenheim		85·4	30	—	—	—	—	e 48·2	49·0
Bagnères		85·5	39	e 12 51	0	e 23 21	− 4	e 35·2	50·4
Cheb		85·5	27	e 12 56	+ 5	e 23 26	+ 1	e 40·2	49·2
Neuchatel		85·7	32	e 12 52	0	e 23 25	− 2	—	—
Zurich		86·1	31	e 12 55	+ 1	e 23 26	− 5	—	—
Ravensburg		86·2	31	e 13 6	+12	e 23 34	+ 2	e 41·2	54·4
Prague		86·4	25	e 12 56	+ 1	e 23 26	− 8	e 42·2	50·2
San Fernando		86·4	47	12 49	− 6	i 23 28	− 6	44·2	52·2
Grenoble		86·5	35	—	—	e 23 28	− 8	e 33·2	—
Tortosa	E.	87·2	40	i 13 2	+ 2	23 40	− 3	e 38·2	52·4
	N.	87·2	40	13 2	+ 2	i 23 31	−12	e 38·2	52·7
Malaga		87·2	45	e 12 56	− 4	e 23 31	−12	33·0	52·5
Granada		87·4	45	i 13 3	+ 2	i 23 56	+11	45·0	52·3
Innsbruck	N.E.	87·4	29	—	—	—	—	44·0	—
Barcelona		87·5	38	13 13	+11	23 47	0	e 43·5	52·0
Kucino		87·6	11	i 12 59	− 4	23 19	[+ 6]	39·2	47·5
Moncalieri		87·6	33	12 54	− 9	23 20	[+ 7]	37·6	53·4
Marseilles		87·8	36	e 13 0	− 4	e 23 56	+ 6	e 42·2	54·8
Ekaterinburg		88·2	359	i 13 2	− 4	i 23 53	− 1	36·2	48·9
Alicante		88·3	42	e 12 47	−20	e 23 29	[+12]	37·4	57·4
Almeria		88·3	45	e 13 6	− 1	23 54	− 1	42·9	55·3
Vienna		88·6	26	e 13 6	− 2	i 24 3	+ 4	e 41·2	57·2
Graz		89·2	27	e 13 10	− 1	e 24 5	0	40·2	49·0
Venice		89·2	30	e 14 9?	+58	23 39	[+16]	45·4	50·2
Laibach		89·6	28	e 12 54	−20	e 23 30	[+ 4]	41·2	52·2
Lemberg	E.	89·8	21	—	—	—	—	e 49·0	57·0
Florence		90·1	31	e 13 9?	− 8	24 9?	− 6	31·2	54·2
Budapest		90·2	25	e 12 9?	−68	19 9?	?PR$_2$	e 45·2	49·6
Zagreb	N.E.	90·4	28	e 13 18	0	e 23 51	[+21]	e 43·8	51·8
	N.W.	90·4	28	e 13 18	0	e 23 49	[+19]	e 44·8	54·6
La Plata		91·3	134	13 15	− 8	—	—	46·8	—
Algiers		91·4	40	13 13	−10	23 58	?Σ	41·2	54·6
Zi-ka-wei		91·7	311	i 13 23	− 2	25 39	?PS	47·2	59·2
Rocca di Papa		92·4	32	13 25	− 4	i 24 3	?Σ	e 47·0	62·4
Belgrade		93·0	25	e 13 29	− 3	e 24 35	−10	e 44·4	50·9
Pompeii		94·0	31	e 13 55	+17	e 24 25	?Σ	—	54·2
Makeyevka		95·0	14	e 13 38	− 5	24 17	[+20]	45·2	61·1
Wellington	E.	96·3	222	14 54	+63	i 25 20	+ 1	43·9	56·7
	N.	96·3	222	14 26	+35	i 25 12	− 7	44·9	48·0
Tiflis	E.	102·3	10	e 14 19	− 3	e 25 21	?Σ	e 45·2	55·4
	N.	102·3	10	e 14 9	−13	e 25 22	?Σ	e 44·2	60·9
Hong Kong		102·5	309	14 14	− 9	—	—	—	—
Manila		103·2	299	e 11 9?	?	—	—	39·2	—
Tashkent		103·2	353	14 12	−14	i 26 40	+14	e 47·0	58·5
Baku		104·3	6	—	—	i 25 3	[+19]	—	—
Riverview	E.	107·0	240	—	—	—	—	e 48·8	54·3
Sydney	E.	107·0	240	18 33	[+21]	28 9	?PS	51·2	53·8
Ksara		107·9	20	18 9	[− 6]	—	—	56·2	—
Phu-Lien		108·3	313	—	—	e 28 26	?PS	47·2	—
Helwan		110·2	25	e 19 19	?PR$_1$	28 51	?PS	—	67·0
Simla	N.	111·8	343	e 26 45	?S	(e 26 45)	−59	—	—
Melbourne		113·4	239	i 18 57	[+25]	i 29 3	?PS	i 55·4	63·2
Adelaide		116·9	244	e 17 52?	[−52]	e 29 46	?PS	e 54·3	89·5
Hyderabad		124·5	337	21 19	?PR$_1$	—	—	—	72·6
Bombay		124·6	343	e 18 46	[−19]	31 1	?PS	59·1	78·8
Batavia		127·6	291	e 20 33	?PR$_1$	—	—	e 59·2	—
Kodaikanal		131·6	336	35 27	?	—	—	79·0	80·0
Perth		133·1	256	e 23 1	?	25 9?	?PR$_2$	—	70·2
Colombo		133·8	330	(19 30)	[+ 3]	19 30	?P	75·0	76·5
Cape Town		146·8	97	19 55	[+ 4]	—	—	—	94·8
Johannesburg		152·1	80	—	—	—	—	—	87·2

Additional readings and notes: Lick ePEN = +52s., iP* = +54s., iPEN = +1m.2s., iZ = +1m.5s., iSZ = +1m.42s. Berkeley iP*Z = +1m.2s., iP*E = +1m.3s., iP*N = +1m.4s., iPN = +1m.10s., iPE = +1m.14s., iPZ = +1m.15s. iSEN = +2m.0s. Denver iPN = +3m.53s., iPE = +3m.55s., iE = +4m.13s. +4m.20s., +5m.3s., +5m.55s., and +6m.37s., iN = +4m.49s., +6m.41s., and +6m.49s., iEN = +6m.29s. Saskatoon MN = +13·0m.; T_g = 13h.50m.39s. Mazatlan readings have been diminished by 3 min. St. Louis iPR$_1$E = +5m.57s., iPR$_2$E = +6m.9s., eEN = +9m.42s., iSE = +10m.9s., iSR$_1$EN = +10m.41s., MN = +13·8m. Vera Cruz readings have

Continued on next page.

been increased by 2m. Ann Arbor $ePE_1 = +7m.3s.$, $iSR_1 = +12m.45s.$; $T_0 = 13h.50m.36s.$ Toronto $PR_1E = +7m.45s.$, $iE = +12m.26s.$ and $+12m.48s.$; $T_0 = 13h.50m.55s.$ Honolulu T.H. $eN = +12m.29s.$ Ottawa $iPR_2E = +8m.16s.$, $iPR_2N = +8m.39s.$, $iSR_1 = +14m.36s.$, $iN = +15m.17s.$, $MN = +20{\cdot}4m.$; $T_0 = 13h.50m.47s.$ Fordham $iE = +8m.35s. = PR_1 - 13s.$, $+15m.42s. = SR_1 - 6s.$, $+16m.24s. = SR_2 - 3s.$, and $+16m.44s. = SR_3 + 4s.$; $T_0 = 13h.50m.47s.$ San Juan $eLN = +28{\cdot}2m.$, $MN = +32{\cdot}2m.$ Apia $SN = +20m.33s.$; $T_0 = 13h.50m.43s.$ La Paz $iPE = +11m.34s.$, $PR_1 = +14m.17s.$, $PR_2 = +16m.54s. = PR_3 - 12s.$, $iSE = +20m.52s.$, $iSN = +20m.54s.$, $PS = +21m.37s.$, $PPS = +22m.7s.$, $SR_1 = +26m.14s.$, $SR_2E = +29m.9s.$, $SR_2 = +29m.32s.$, $SR_3 = +31m.32s.$, $MN = +54{\cdot}0m.$ Azores $S = +33m.9s.$ Dyce $PR_1? = +16m.19s.$, $SR_1 = +26m.29s.$ Edinburgh $SR_1 = +26m.29s.$ Sucre $i = +11m.58s.$, $PR_1 = +15m.16s.$, $i = +21m.51s. = [S] - 2s.$, $iPS = +22m.10s.$, $iPPS = +22m.45s.$, $SR_1 = +26m.21s.$, $SR_2 = +29m.57s.$; $T_0 = 13h.50m.48s.$ Stonyhurst $ePcP? = +12m.29s.$, $iPR_1 = +14m.59s.$, $PR_2? = +17m.1s.$, $PR_3 = +18m.0s.$, $ScS? = +22m.46s.$, $iSR_1? = +26m.39s.$, $SR_2 = +30m.18s.$ Bidston readings have been increased by 1h. Suva $ePN = +12m.21s.$, $PR_1N = +16m.9s.$, $SR_2N = +30m.45s.$; $T_0 = 13h.51m.9s.$ Oxford $SR_1E = +27m.25s.$, $SR_1E = +27m.37s.$, $MN = +45{\cdot}6m.$ Upsala $SR_1 = +27m.31s.$, $SR_2E = +31m.43s.$ Kew $iZ = +12m.22s.$, $PR_1 = +15m.18s.$, $iPS = +23m.11s.$, $SR_1 = +27m.59s.$, $SR_2 = +31m.44s.$, $SR_3 = +34m.39s.$, $MZ = +43{\cdot}4m.$, $MN = +43{\cdot}6m.$ Kobe P, S, L, are all given as P of separate shocks. Helsingfors $PR_1E = +15m.43s.$, $PR_1N = +15m.44s.$, $PR_2E = +17m.20s.$, $SR_1E = +28m.9s.?$, $SR_2N = +31m.9s.?$ Copenhagen $PR_1 = +15m.33s.$, $SR_1 = +27m.33s.$, $SR_2 = +31m.33s.$, $MN = +48{\cdot}8m.$ De Bilt $iZ = +12m.33s.$, $ePR_1 = +15m.37s.$, $eSR_1 = +28m.0s.$, $MN = +46{\cdot}9m.$, $MZ = +49{\cdot}0m.$ Uccle $PR_1 = +15m.43s.$ Hamburg $iPZ = +12m.33s.$, $iPR_1Z = +15m.44s.$, $iSN = +23m.1s. = \Sigma - 3s.$ Pulkovo $PR_1 = +15m.54s.$, $SR_1 = +27m.39s.$, $SR_2 = +30m.9s.$, $MZ = +42{\cdot}6m.$, $MN = +51{\cdot}5m.$ Feldberg $eE = +20m.19s.$ and $+28m.24s.$, $MN = +50{\cdot}4m.$ Irkutsk $iPR_1 = +16m.30s.$, $iPR_2 = +18m.26s.$, $SR_1 = +29m.23s.$, $MZ = +50{\cdot}5m.$, $MN = +57{\cdot}5m.$ Paris $MN = +49{\cdot}2m.$ Jena $ePE = +12m.51s.$ and $+12m.55s.$, $eSE = +23m.24s.$ $\Sigma + 3s.$ Strasbourg $iR_1 = +16m.9s.$, $PR_3 = +18m.9s.$, $MN = +49{\cdot}3m.$, $MZ = +55{\cdot}4m.$ Toledo $iPNW = +12m.42s.$, $iSNE = +23m.19s.$, $MNW = +51{\cdot}8m.$, $MZ = +53{\cdot}3m.$ Hohenheim $eN = +44m.9s.$, $MN = +51{\cdot}2m.$ Ravensburg $MN = +50{\cdot}1m.$ Prague $PR_1 = +16m.19s.$ San Fernando $MN = +53{\cdot}2m.$ Granada $PR_1 = +17m.2s.$, $SPS = +23m.27s.$, $i = +24m.6s.$, $PS = +25m.1s.$, $G = +38m.12s.$ Barcelona $MN = +50{\cdot}2m.$ Kucino $PR_1 = +16m.31s.$, $SR_1 = +29m.41s.$, $SR_2 = +33m.39s.$, $e = +33m.50s.$, $MN = +48{\cdot}8m.$ Moncalieri $MN = +52{\cdot}9m.$ Ekaterinburg $e = +13m.45s.$, $i = +16m.6s.$, $+18m.30s.$, and $+29m.27s.$, $iS_4P_4S = +23m.35s. = [S] + 19s.$, $iPS = +24m.58s.$, $MN = +48{\cdot}8m.$, $MZ = +53{\cdot}2m.$ Alicante $MN = +54{\cdot}4m.$, $MZ = +59{\cdot}5m.$ Almeria $PR_1 = +17m.1s.$, $MN = +45{\cdot}8m.$ Vienna $iPZ = +13m.9s.$, $iENZ = +15m.17s.$, $PR_1 = +16m.42s.$, $ScPcS = +23m.35s. = [S] + 16s.$, $iPS = +25m.5s.$, $PPS = +26m.19s.$, $SR_1 = +30m.11s.$, $SR_2? = +33m.27s.$ Graz $MN = +54{\cdot}4m.$ Venice $eP = +14m.5s.?$ Laibach $i = +24m.21s. = S + 11s.$ Lemberg $eLN = +48{\cdot}8m.$, $MN = +55{\cdot}4m.$ Zagreb $e = +24m.19s. = S + 1s.$ Algiers $MN = +49{\cdot}2m.$ Zi-ka-wei $PR_1 = +17m.6s.$, $PR_2 = +19m.17s.$, $SR_1 = +30m.59s.$, $SR_2 = +37m.37s. = SR_3 + 3s.$ Makeyevka $PR_1 = +17m.25s.$, $PPS = +26m.13s.$, $SR_1 = +31m.25s.$, $MN = +55{\cdot}8m.$, $MZ = +59{\cdot}7m.$ Wellington $iPR_1N = +17m.32s.$, $iPR_1E = +17m.34s.$, $SR_1N = +31m.14s.$, $SR_1E = +31m.54s.$, $iSR_2N = +35m.35s.$ Tiflis $ePR_1E = +18m.19s.$, $PR_1N = +18m.21s.$, $ePR_2E? = +20m.38s.$, $PR_2N? = +20m.39s.$, $eE = +24m.51s. = [S] + 16s.$, $eN = +24m.52s. = [S] + 17s.$, $+27m.2s.$, $+27m.39s. = PS - 9s.$, and $+41m.5s. = SR_2 + 10s.$, $e = +32m.47s.$, and $+36m.56s.$, $eSR_2N = +38m.30s.$ Tashkent $iS_4P_4S = +24m.52s. = [S] + 13s.$, $iS_4P_4P_4S = +26m.3s.$, $iPS = +27m.38s.$, $iPPS = +28m.14s.$, $SR_1 = +33m.26s.$, $SR_2 = +37m.52s.$, $MN = +54{\cdot}2m.$ Baku $iPR_1 = +18m.39s.$, $iPS = +27m.57s.$ Riverview $ePR_1 = +19m.0s.$, $ePS = +28m.21s.$, $PPS = +29m.22s.$, $eSR_1 = +34m.22s.$, $eLN = +46{\cdot}2m.$, $MN = +50{\cdot}4m.$ Sydney $SR_1E = +33m.27s.$ Ksara $PR_1 = +28m.36s. = PS + 1s.$ Phu-Lien $ePR_1 = +19m.8s.$, $eSR_1 = +34m.9s.?$ Simla $ePE = +29m.21s. = PS + 3s.$ Melbourne $i = +35m.39s. = SR_1 + 15s.$ Adelaide $MN = +61{\cdot}4m.$ Colombo $P = +7m.10s.$

Nov. 4d. 18h. 47m. 25s. (I)
20h. 0m. 42s. (II)
20h. 44m. 6s. (III)
} Epicentre 34°·9N. 121°·0W. (as at 13h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Lick N.	2·5	348	e 0 33	− 6	e 1 7	− 2	i 1·7	—
II	E.N.	2·5	348	i 0 34	− 5	i 1 12	+ 3	—	—
II	Z.	2·5	348	e 0 38	− 1	e 1 13	+ 4	e 1·6	—
III	E.	2·5	348	e 0 34	− 5	1 3	− 6	i 1·2	—
III	N.	2·5	348	e 0 31	− 8	i 0 58	−11	i 1·2	—
I	Berkeley	3·2	340	e 1 32	?S	(e 1 32)	− 4	e 1·8	—
II		3·2	340	e 0 38	−12	e 1 23	− 5	—	—
III		3·2	340	e 1 13	?S	(1 13)	−15	—	—
I	Tucson	8·8	104	—	—	—	—	—	—
II	E.	8·8	104	e 4 10	?S	(e 4 10)	−12	4·4	5·1
II	N.	8·8	104	e 4 4	?S	(e 4 4)	+ 6	4·7	5·0
III	E.	8·8	104	e 4 26	?S	(e 4 26)	+28	e 4·6	5·3
III	N.	8·8	104	e 4 23	?S	(e 4 23)	+25	4·7	4·7
II	Victoria E.	13·6	353	6 56	—	—	—	8·1	9·3

A few other unclassified i and e readings are given.

Nov. 4d. Readings also at 0h. (Tiflis and near Sumoto), 1h. (Tashkent), 8h. (Merida), 11h. (Tiflis), 12h. (Vienna), 16h. (Algiers), 17h. (Tucson), 19h. (Berkeley and Taihoku), 20h. (Ekaterinburg, Tashkent, and near Victoria), 21h. (Tiflis), 22h. (Ekaterinburg, Tashkent, and Tiflis), 23h. (Ekaterinburg).

Nov. 5d. 5h. 14m. 38s. Epicentre 37°·0N. 4°·5W. (as on 1927 Oct. 21d.).

A = +·796, B = −·063, C = +·602.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Malaga	0·2	166	0 6	+ 2	—	—	0·2	—
Granada	0·8	76	0 8	− 4	0 19	− 3	—	0·4
Almeria	1·7	95	e 0 40	+14	e 0 52	+ 4	—	1·1

Almeria P is given as simply e.

Nov. 5d. 6h. 38m. 0s. Epicentre 27°·0N. 122°·5E.

A = −·480, B = +·751, C = +·454; D = +·843, E = +·537
G = −·244, H = +·383, K = −·891.

This position lies mid-way between epicentres 26°·3N. 121°·5E. of 1927 June 14d. and 27°·5N., 123°·5E. of 1919 March 10d., neither of which gives a good determination.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	2·2	204	0 51	+17	—	—	1·4	1·5
Zi-ka-wei	4·3	347	i 1 37	+30	2 51	+53	—	—
Nagasaki	8·5	46	i 2 5	− 4	(3 40)	−10	3·7	—
Hong Kong	8·9	240	2 24	+ 9	—	—	—	5·7
Hukuoka	9·4	44	2 20	− 2	(4 10)	− 3	4·2	4·8
Manila	12·5	187	e 2 55	−11	(i 5 41)	+ 9	i 5·7	—
Sumoto	12·9	52	e 3 0	−12	—	—	e 3·3	3·3
Kobe	13·2	51	3 21	+ 5	—	—	—	5·7
Nagoya	14·7	53	e 2 50	−45	3 41	?P	—	3·8
Phu-Lien	15·9	250	i 3 57	+ 6	7 2	+ 9	—	—
Mizusawa E.	19·6	47	(4 35)	− 1	7 53	−22	—	—
Irkutsk	28·8	337	7 6	+50	12 0	+47	14·5	17·1
Batavia	36·5	208	e 7 24	− 2	—	—	—	—
Hyderabad	41·7	269	8 0	− 9	14 16	−15	—	—
Tashkent	45·6	305	i 8 25	−12	i 15 55	+33	i 23·4	25·6
Bombay	46·2	274	8 26	−15	e 16 27	+56	—	—
Ekaterinburg	52·5	324	i 9 23	0	i 17 52	+62	24·0	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Baku		60·3	305	e 10 17	+ 3	e 19 37	+70	23·0	26·4
Tiflis		63·8	308	i 10 38	+ 1	e 20 21	[− 3]	e 27·8	31·6
Kucino		65·0	323	—	—	—	—	e 40·0	—
Makeyevka		66·9	315	—	—	e 20 52	[+ 4]	38·0	—
Pulkovo		68·0	328	i 11 3	− 1	e 21 6	[+ 9]	36·0	—
Copenhagen		78·3	328	—	—	—	—	38·0	—
Vienna	Z.	80·1	321	i 12 10	−10	—	—	—	—
Zagreb	N.E.	81·5	319	e 12 15	−13	—	—	—	—
De Bilt		83·9	327	—	—	—	—	e 47·0	—
Strasbourg		84·8	324	i 12 34	−13	—	—	e 52·0	—
Uccle		85·1	327	12 33	−16	—	—	e 48·0	—
Kew		86·9	330	—	—	—	—	e 49·0	—
La Paz		165·6	45	i 19 58	[−14]	—	—	—	—
Sucre		169·3	43	e 20 0	[−14]	—	—	—	—

Additional readings and notes: Nagasaki S = +3m.8s. Mizusawa readings are given as separate S's. Irkutsk MN = +17·2m., MZ = +17·4m. Tashkent iPR_1 = +9m.49s., ePR_2 = +11m.2s., ePS = +16m.5s., eSR_1 = +18m.51s., eSR_2 = +22m.12s., MZ = +24·7m., MN = +25·4m. Ekaterinburg i = +10m.23s., e = +16m.27s., +20m.4s., and +21m.41s. Baku e = +14m.19s. = PR_2 +13s., MN = +26·7m. Tiflis iE = +11m.47s., eE = +13m.7s., eN = +20m.22s. Makeyevka e = +22m.18s. Zagreb eNW = +12m.19s., eNE = +12m.21s.

Nov. 5d. 21h. 56m. 41s. Epicentre 11°·0N. 57°·0E. (as on 1926 Jan. 5d.).

A = +·535, B = +·823, C = +·191; D = +·839, E = −·545; G = +·104, H = +·160, K = −·982.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Hyderabad		21·8	70	5 3	0	9 3	+ 2	11·2	14·5
Ksara		29·9	323	—	—	12 58	?SR_1	16·8	—
Baku		30·0	349	e 6 28	0	e 11 29	− 5	16·3	—
Tashkent		32·2	17	e 4 19	?	(e 11 19?)	−52	e 11·3	19·2
Tiflis	E.	32·5	343	e 7 49	+56	e 12 7	− 9	e 18·5	20·0
	N.	32·5	343	e 7 48	+55	e 12 3	−13	e 18·6	21·2
Makeyevka		40·3	340	—	—	—	—	24·3	—
Ekaterinburg		45·9	3	e 8 39	0	e 15 23	− 4	26·3	—

Tiflis gives also eE = +13m.26s., eN = +17m.16s., all the readings entered are given as simple e's.

Nov. 5d. Readings also at 1h. (Wellington), 2h. (Tiflis), 3h. (near Berkeley (3), Lick (2), and Tucson (4)), 9h. (Berkeley, Lick, and Tucson), 11h. (Tashkent and near Toyooka), 12h. (Baku, Ekaterinburg, and Kucino), 14h. (near Batavia and Malabar), 15h. (Ekaterinburg, Sucre, and near Toyooka), 19h. (La Paz), 21h. (Tiflis), 22h. (Tashkent and Tiflis), 23h. (near Toyooka).

Nov. 6d. 2h. 39m. 54s. Epicentre 34°·9N. 121°·0W. (as on Nov. 4d.).

A = −·422, B = −·703, C = +·572; D = −·857, E = +·515; G = −·295, H = −·490, K = −·820.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Berkeley	E.	3·2	340	e 0 52	+ 2	e 1 45	+17	—	3·0
	N.	3·2	340	e 0 48	− 2	e 1 29	+ 1	—	4·1
	Z.	3·2	340	e 0 46	− 4	e 1 29	+ 1	—	4·9
Tucson	E.	8·8	104	e 2 2	−11	(3 56)	− 2	3·9	5·2
	N.	8·8	104	—	—	e 3 40	−18	i 4·4	5·9
Victoria	E.	13·6	353	6 14	?S	(6 14)	+16	7·9	9·3
	N.	13·6	353	3 12	− 9	—	—	8·0	9·5
Denver		13·6	65	e 3 23	+ 2	e 6 10	+12	e 7·6	7·9
St. Louis		24·8	72	i 5 32	− 4	i 10 0	+ 1	i 13·1	15·4

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Chicago	E.	26·9	65	—	—	e 10 18	−21	15·7	16·7
	N.	26·9	65	—	—	e 13 2	?L	e 15·7	16·9
Cincinnati		29·2	71	—	—	—	—	e 14·1	—
Ann Arbor		29·8	64	—	—	—	—	e 16·6	—
Toronto	E.	33·0	60	—	—	—	—	i 17·3	21·6
Ithaca		35·1	62	—	—	—	—	e 18·1	—
Ottawa		35·6	59	—	—	—	—	e 18·5	21·8
Fordham		37·2	67	—	—	—	—	18·1	—
Kew		79·4	33	—	—	—	—	e 45·1	—
Copenhagen		81·0	24	—	—	—	—	41·1	—
De Bilt		81·1	30	—	—	—	—	e 45·1	—
Pulkovo		82·4	13	—	—	—	—	e 45·1	—
Feldberg		83·6	29	—	—	—	—	e 44·1	50·2
Rio Tinto		85·2	47	47 6?	?L	—	—	(47·1)	54·1
Kucino		87·6	11	—	—	—	—	e 43·4	—
Ekaterinburg		88·2	359	—	—	e 23 26	[+10]	47·1	—
Makeyevka		95·0	14	—	—	—	—	e 47·9	—
Tiflis	E.	102·3	10	—	—	—	—	e 47·6	54·4
	N.	102·3	10	—	—	—	—	e 52·4	64·7
Tashkent		103·2	353	—	—	—	—	e 47·1	57·3
Baku		104·3	6	—	—	—	—	e 52·6	—

Additional readings: Berkeley eE = +1m.6s., eEN = +1m.20s. Tucson eE = +2m.10s. and +3m.4s., eN = +2m.22s. Denver ePE = +3m.24s., eSR$_1$E = +6m.42s. Chicago iE = +12m.31s. and +14m.1s., eN = +14m.59s. Ann Arbor eN? = +14m.30s., eE? = eN = +15m.24s., eE = +16m.12s. Ottawa e = +15m.18s. = SR$_1$ + 6s. Makeyevka L = +58·1m.

Nov. 6d. 15h. 34m. 27s. Epicentre 6°·7S. 131°·2E. (as on 1927 June 3d.).

A = −·654, B = +·747, C = −·117; D = +·752, E = +·659; G = +·077, H = −·088, K = −·993.

A depth of focus 0·030 has been assumed.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		+0·1	4·3	315	i 1 1	− 7	1 51	−10	—	—
Malabar		−1·5	23·4	267	4 45	−19	i 8 30	−33	—	—
Manila		−1·5	23·6	335	e 4 57	− 9	—	—	i 10·2	—
Batavia		−1·5	24·2	270	i 5 15	+ 2	i 7 1	?	—	—
Perth		−1·9	29·0	208	i 6 18	+19	i 10 13	−30	e 11·0	12·4
Adelaide		−1·9	29·0	167	i 5 51	− 8	i 11 19	+36	i 14·2	18·7
Riverview		−2·2	32·8	149	e 6 31	− 3	i 12 42	+58	i 17·6	18·2
Sydney	E.	−2·2	32·8	149	7 51	+77	12 33	+49	17·8	18·8
Melbourne		−2·2	33·5	160	—	—	i 12 33	+37	—	20·6
Hong Kong		−2·2	33·5	330	—	—	(11 21)	−35	11·4	—
Phu-Lien	N.	−2·4	36·6	319	e 6 47	−20	e 12 3	−40	14·8	—
Zi-ka-wei		−2·5	39·0	349	7 15	−11	12 53	−24	17·8	18·8
Osaka		−2·6	41·6	5	9 45	?PR$_1$	—	—	16·4	17·4
Colombo		−3·3	53·0	284	8 54	−11	15 54	−21	19·6	22·1
Bombay		−3·7	62·9	296	10 9	+ 3	18 7	− 6	—	—
Irkutsk		−3·7	63·3	343	i 10 12	+ 3	i 18 30	+12	33·0	—
Simla	E.	−3·7	64·0	310	—	—	e 18 27	0	—	—
Tashkent		−3·9	74·1	317	i 11 11	− 7	i 20 24	− 4	e 32·6	45·4
Ekaterinburg		−4·1	85·2	317	i 18 23	− 3	i 22 28	− 8	40·6	—
Baku		−4·2	87·8	312	i 12 33	− 7	i 22 48	−17	e 42·0	—
Tiflis	N.	−4·2	91·8	313	e 12 50	−13	—	—	—	—
Makeyevka		−4·3	97·1	319	—	—	e 23 36	[−32]	39·6	—
Kucino		—	97·4	325	e 23 33	?[S]	(e 23 33)	[−37]	44·6	50·4
Ksara	N.	—	98·1	304	e 23 35	?[S]	(e 23 35)	[−39]	—	—
Pulkovo		—	101·3	330	—	—	i 23 55	[−35]	49·6	—
Victoria	E.	—	105·3	42	24 28	?[S]	(24 28)	[−21]	47·8	—
Copenhagen		—	111·5	328	—	—	e 24 45	[−31]	54·6	—
Feldberg		—	115·8	323	—	—	e 37 10	?	—	60·8
De Bilt		—	116·8	326	—	—	e 29 33?	?PS	e 59·6	—
Almeria		—	128·2	312	20 50	?PR$_1$	—	—	—	—
Granada		—	128·9	313	i 20 56	?PR$_1$	(e 26 33?)	[+25]	e 26·6	—
Ottawa		—	134·8	26	—	—	(39 33?)	?SR$_4$	39·6	—

For Notes see next page.

NOTES TO Nov. 6d. 15h. 34m. 27s.

Additional readings: Batavia iPZ = +5m.16s., iP = +5m.17s., i = +5m.29s. Perth readings have been increased by 4 hours. Adelaide PR_1 = +6m.53s., iSR_2 = +13m.39s., MN = +16·2m. Riverview iZ = +14m.38s. Zi-kawei PR_1 = +8m.11s. Osaka MN = +17·2m. Irkutsk PR_1 = +13m.5s., PR_2 = +14m.25s. = PR_2 − 8s. Simla eN = +18m.33s. Tashkent iPS = +21m.3s., MZ = +47·0m., MN = +47·1m. Ekaterinburg i = +13m.0s. and +13m.23s., iPS = +23m.22s., eSR_1 = +27m.57s., e = +29m.20s. Tiflis eE = +12m.51s., e = +13m.50s., eE? = +16m.27s. = PR_1 − 21s. Makeyevka e = +25m.40s. Ksara PE = +23m.45s., SE? = +25m.58s. Pulkovo e = +31m.39s. Copenhagen eE = +28m.57s. = PS + 17s., eN = +29m.15s. = PS + 1s. Feldberg e = +38m.55s. Almeria iZ = +21m.27s. = PR_1 + 9s. Granada i = +21m.34s. = PR_1 + 11s.

Nov. 6d. Readings also at 1h. (near Graz and Vienna), 3h. (Tiflis), 4h. (Ekaterinburg), 5h. (near Zagreb), 6h. (Irkutsk, Balboa Heights, near Mizusawa, and Nagoya), 7h. (Ekaterinburg), 8h. (Chur), 10h. (Irkutsk, Tucson, and near Nagasaki), 11h. (Ekaterinburg and Tucson), 12h. (Amboina), 15h. (La Paz), 16h. (near Sumoto and near Toyooka), 17h. (Tiflis), 18h. (near Lick), 10h. (Apia and near Toyooka), 22h. (near Mizusawa and Nagoya), 23h. (La Paz and Sucre).

Nov. 7d. 0h. 3m. 30s. Epicentre 32°·0S., 179°·0W. (as on 1927 July 18d.).

A = −·848, B = −·015, C = −·530; D = −·017, E = +1·000;
G = +·530, H = +·009, K = −·848.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Wellington	E.	10·6	208	i 2 33	− 5	i 3 55	−50	—	—
	N.	10·6	208	i 2 36	− 2	i 3 52	−53	—	—
Apia		19·3	21	—	—	—	—	—	5·5
Riverview		25·1	258	i 5 38	− 1	e 10 4	− 1	e 11·7	13·6
Sydney	E.	25·1	258	(6 0)	+21	6 0	?P	13·1	15·9
Adelaide		35·3	254	—	—	i 12 35	−25	17·8?	26·7
Batavia		73·3	273	e 12 54	+76	i 21 36	+30	—	—
Mizusawa	E.	80·2	330	—	—	21 8	−77	—	—
Victoria		94·5	33	24 15	?S	(24 15)	−46	45·8	61·8
La Paz		98·0	115	e 13 44	−16	(24 30)	−66	24·5	27·3
Ottawa		120·9	51	—	—	e 37 30?	?SR_1	e 57·5	—
Tashkent		125·8	300	i 19 11	[+ 3]	i 34 20	?	e 63·5	74·4
Ekaterinburg		132·7	319	i 19 35	[+11]	—	—	59·5	—
Baku		140·2	295	i 19 59	[+20]	—	—	e 65·0	86·4
Tiflis	N.	144·1	297	e 19 40	[− 7]	—	—	—	—
Kucino		145·0	322	i 19 54	[+ 6]	—	—	e 64·6	78·5
Pulkovo		146·1	334	i 19 54	[+ 4]	—	—	76·5	—
Makeyevka		147·9	310	i 20 9	[+16]	e 31 30?	?	e 94·5	—
Ksara		150·8	283	20 13	[+16]	21 17	?	22·6	—
Copenhagen		155·0	345	—	—	—	—	74·5	—
De Bilt	E.	159·7	352	—	—	—	—	e 85·5	—
Vienna	Z.	160·0	329	i 20 13	[+ 5]	—	—	—	—
Kew		160·5	3	—	—	—	—	e 80·5	—
Uccle		161·0	353	—	—	—	—	e 87·5	—
Feldberg		161·0	345	—	—	—	—	e 78·0	85·5
Strasbourg		162·7	345	e 24 30?	?PR_1	—	—	e 56·5	—
Rio Tinto		171·5	45	95 30?	?L	—	—	(95·5)	100·5
San Fernando	N.	172·6	51	—	—	—	—	—	85·5
Granada		173·6	35	i 20 24	[+ 8]	—	—	83·5	91·8
Almeria		174·4	28	i 20 23	[+ 7]	—	—	—	—

Additional readings: Riverview MN = +13·9m. Adelaide SR_1 = +16m.9s., MN = +19·2m. Batavia readings are given as simple e and i. Tashkent iP_4P_4S = +22m.27s., PR_2 = +23m.56s., $S_4P_4P_4S$ = +27m.48s., PS = +31m.8s., i = +33m.35s., +34m.10s., and +34m.32s., eSR_2 = +39m.0s., eSR_2 = +45m.30s.?, MN = +73·0m., MZ = +74·3m. Ekaterinburg i = +20m.0s., iP_4P_4S = +23m.0s., $iS_4P_4P_4S$ = +28m.54s., ePS = +32m.30s., e = +36m.45s. Baku e = +24m.28s., +37m.32s., and +41m.46s. Tiflis iE = +19m.51s., and +20m.42s., eE = +25m.40s., and +27m.15s. Kucino e = +23m.44s. = PR_1 + 38s., i = +30m.4s., MN = +78·6m. Ksara gives its readings for a local shock, T_s = 0h.22m.23s. De Bilt eLN = +87·5m. Granada i = +22m.4s. and +25m.54s. = PR_1 − 2s. Almeria i = +20m.49s., +26m.28s. = PR_1 + 28s., and +29m.22s.

Nov. 7d. Readings also at 0h. (Apia), 1h. (near Lick), 3h. (near Manila), 10h. (Wellington), 15h. (Tiflis), 16h. (Taihoku, Florence, and La Paz), 17h. (Victoria), 18h. (Chur, Neuchatel, and Zurich), 19h. (Riverview and near Toyooka), 20h. (Ekaterinburg).

Nov. 8d. 3h. 10m. 18s. Epicentre 34°·0S. 57°·0E.

(as on 1927 Oct. 19d.).

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	4 20	+11	—	—	—	—
Cape Town		31·7	262	6 48	+ 4	—	—	15·7	20·6
Kodaikanal		48·3	26	15 54	?S	(15 54)	− 4	21·2	25·8
Perth		48·8	105	e 8 42	−17	e 15 42	−22	20·7	23·4
Batavia		53·7	70	i 9 52	+21	i 16 19	−46	26·1	—
Bombay		55·0	19	9 41	+ 2	17 21	0	28·7	31·4
Hyderabad		55·4	25	9 43	+ 1	17 21	− 5	23·3	30·0
Adelaide		65·2	116	e 10 47	+ 1	e 19 24	− 3	30·7	41·0
Dehra Dun		67·3	20	10 33	−27	(19 27)	−27	19·4	20·4
Simla	E.	67·9	19	—	—	e 19 54	− 7	—	—
Helwan		68·3	337	11 9	+ 3	20 12	+ 6	—	44·5
Ksara		70·6	341	11 25	+ 4	20 46	+13	36·7	—
Phu-Lien		72·3	49	e 11 32	0	20 42?	−12	34·2	—
Baku		74·7	355	i 11 51	+ 4	—	—	34·7	67·5
Riverview		74·9	121	e 11 53	+ 5	e 21 26	+ 1	e 36·1	38·7
Sydney	E.	74·9	121	21 18	?S	(21 18)	− 7	36·7	38·5
Tiflis	E.	76·5	351	i 12 1	+ 3	i 12 47	+ 4	e 33·5	44·5
	N.	76·5	351	i 12 0	+ 2	i 21 51	+ 8	e 35·7	45·9
Manila		77·8	64	e 12 6	0	—	—	e 32·4	—
Hong Kong		78·3	53	12 5	− 4	21 59	− 5	—	45·7
Makeyevka		83·8	349	12 39	− 2	22 59	− 8	39·7	42·2
Pompeii		84·4	330	e 12 44	0	—	—	—	—
Rio de Janeiro	N.	85·2	246	e 13 1	+12	—	—	—	—
Wellington	E.	85·5	139	i 12 49	− 2	i 23 11	−14	e 40·2	46·5
	N.	85·5	139	i 12 49	− 2	i 23 14	−11	e 40·2	43·8
Belgrade	N.	85·5	336	e 13 49	+58	—	—	—	—
Rocca di Papa		85·9	329	e 12 53	0	—	—	—	—
Algiers		86·8	320	12 58	0	23 29	−10	e 42·7	50·2
La Plata		88·0	229	—	—	—	—	42·0	—
Zagreb	N.E.	88·0	334	e 13 3	− 2	e 23 46	− 6	—	—
	N.W.	88·0	334	e 13 2	− 3	e 23 47	− 5	—	—
Florence		88·2	330	e 12 57	− 9	23 42	−12	42·7	55·7
Budapest		88·2	337	13 2	− 4	23 48	− 6	—	—
Zi-ka-wei		89·0	50	13 2	− 8	23 51	−12	—	49·1
Graz		89·2	335	i 13 7	− 4	i 23 58	− 7	54·7	66·9
Almeria		89·8	318	i 13 14	− 1	24 19	+ 7	48·4	54·1
Alicante		89·8	320	e 13 24	+ 9	e 23 44	−28	—	56·2
Vienna		89·8	335	i 13 9	− 6	24 0	−12	e 53·7	64·7
Barcelona		90·7	324	—	—	—	—	51·2	55·1
Moncalieri		90·7	328	13 9	−11	23 29	[− 3]	34·0	—
Granada		90·8	317	i 13 17	− 3	i 24 26	+ 4	50·7	54·4
Ekaterinburg		90·9	3	i 13 17	− 4	i 24 12	−11	37·7	84·2
Malaga		90·9	317	e 13 18	− 3	e 24 26	+ 3	—	—
Innsbruck	N.E.	91·0	331	13 12	− 9	—	—	—	—
Tortosa	N.	91·1	321	e 13 26	+ 4	e 24 29	+ 4	e 43·7	52·9
Kucino		91·2	350	e 14 16	+54	25 38	+72	41·7	57·6
Chur		91·4	330	e 13 18	− 5	e 23 7	[−29]	—	—
San Fernando		91·8	315	—	—	24 0	−33	—	58·7
Prague		92·1	333	e 13 18	−10	e 24 20	−16	e 49·7	57·7
Zurich		92·2	330	e 13 21	− 7	e 23 26	[−15]	—	—
Neuchatel		92·6	329	e 13 24	− 6	—	—	—	—
Toledo		92·8	319	e 13 26	− 5	e 23 54	[+ 9]	—	54·4
Cheb		92·8	333	e 13 11	−20	e 23 58	[+13]	e 50·7	63·7
Rio Tinto		92·9	316	30 42?	?SR_1	—	—	—	62·7
Strasbourg		93·5	330	13 26	− 9	e 16 42	?PR_1	49·7	—
Jena		93·8	334	—	—	—	—	63·7	—
Feldberg	N.	94·5	331	e 17 0	?PR_1	e 24 9	[+15]	e 46·2	49·7
Paris		95·9	329	e 14 0	+12	e 24 18	[+16]	51·7	59·7
Pulkovo		96·3	348	13 36	−15	23 56	[− 8]	45·7	58·8

Continued on next page.

		Δ °	Az. °	P. m. s.	O−C. s.	S. m. s.	O−C. s.	L. m.	M. m.
Hamburg		96·5	335	e 13 41	−11	—	—	e 50·7	—
Uccle		96·6	330	—	—	e 22 42?	?PR_3	e 46·7	66·2
De Bilt		97·3	332	—	—	e 23 42?	[−27]	e 47·7	62·4
Copenhagen		97·4	338	—	—	e 24 0	[−10]	41·7	68·7
Helsingfors		97·8	346	—	—	e 25 3	?Σ	—	68·7
Kew		99·1	328	e 13 33	−33	e 25 30	−17	48·8	61·4
Upsala		99·3	343	—	—	—	—	e 61·7	—
Oxford		99·7	328	—	—	i 24 37	[+15]	e 46·7	64·7
Edinburgh		103·4	330	—	—	—	—	e 59·7	—
Sucre		103·6	235	e 18 4	[+ 4]	e 28 24	?PS	49·7	56·8
Dyce		103·9	331	—	—	e 26 6	−26	55·6	70·9
La Paz		107·4	235	18 52	[+39]	i 28 32	?PS	52·7	59·7
Ottawa		142·5	302	e 19 42	[− 2]	e 27 42?	?	e 68·7	—
Ithaca		143·0	298	—	—	—	—	83·7	—
Toronto	E.	145·1	299	i 19 47	[− 1]	—	—	74·7	—
Cincinnati		148·9	290	e 18 8	[−106]	—	—	—	—
Chicago	E.	151·2	296	e 75 1	?L	—	—	e 78·8	89·8
	N.	151·2	296	e 75 42	?L	—	—	e 81·4	84·8
St. Louis	E.	153·3	289	e 20 16	[+16]	23 50	?PR_1	e 71·7	75·7
Victoria	E.	165·6	1	25 8	?PR_1	—	—	69·2	97·3
	N.	165·6	1	24 58	?PR_1	—	—	80·3	95·4
Tucson	E.	169·7	264	e 20 34	[+19]	e 25 47	?PR_1	e 88·7	—
	N.	169·7	264	e 20 49	[+34]	e 25 55	?PR_1	e 96·2	—
Berkeley	Z.	176·1	352	20 22	[+ 5]	e 26 10	?PR_1	—	—

Additional readings and notes: Perth $PR_1 = +10$m.57s. Batavia i = +9m.53s., iZ = +11m.6s., iN = +11m.11s. Adelaide MN = +34·1m. Dehra Dun S = +13m.9s. Simla eN = +15m.6s. Baku MZ = +41·0m., MN = +56·6m. Riverview MN = +40·2m. Tiflis ePR_1? = +14m.49s., ePR_2N? = +16m.49s., eN = +18m.16s. $=PR_3+15$s., ePSE? = +22m.40s., eE = +26m.21s. Hong Kong $SR_1 = +26$m.54s. Makeyevka PR_1 = +15m.51s., PS = +23m.52s., $SR_1 = +27$m.37s., MZ = +48·2m., MN = +49·8m. Rio de Janeiro eE = +13m.4s. Belgrade eE = +13m.50s., eN = +16m.52s. $=PR_1+19$s., and +16m.53s. $=PR_1+20$s. Rocca di Papa e = +12m.27s., iSE = +13m.14s., iSN = +13m.17s. Zagreb ePR_1NW = +17m.0s. Zi-ka-wei $PR_1 = +16$m.32s. Almeria $PR_1 = +16$m.51s. Alicante MN = +59·8m. Vienna PR_1? = +15m.42s., $PR_2 = +18$m.55s., PS = +24m.34s., $SR_1 = +30$m.34s., $SR_2 = +33$m.31s. Barcelona MN = +61·4m. Ekaterinburg i = +13m.36s., +16m.28s., +24m.38s., +25m.35s., and +26m.29s., $eS_4P_4S = +23$m.42s., e = +29m.44s., MZ = +63·8m. Tortosa eLE = +48·7m., ME = +52·8m. Kucino PR_1 = +18m.6s., $PR_2 = +20$m.30s., $S_4P_4S = +25$m.12s., PS = +26m.36s., SR_2 = +37m.42s, MN = +57·5m. San Fernando MN = +57·2m. Zurich iP = +13m.22s. Toledo MNW = +61·6m. Rio Tinto and Jena readings have been diminished by 1h. Feldberg eN = +19m.14s., +26m.2s. = PS + 0s. and +31m.30s. $=SR_1+1$s. Pulkovo $S_4P_4P_4S = +24$m.16s., SR_1 = +31m.42s., MN = +54·3m., MZ = +58·0m. Uccle MN = +64·4m. De Bilt MZ = +66·5m., MN = +66·8m. Copenhagen $PR_1N = +16$m.42s.?, $eS_6P_6P_6SN = +24$m.18s., $eSR_1 = +31$m.48s., MN = +63·8m. Helsingfors eN = +27m.42s. ? Kew $ePR_1Z = +17$m.36s. $=$[P] −7s., eEN = +24m.36s. = [S] +17s., MN = +62·4m., MZ = +68·8m. Oxford MN = +69·2m. Sucre i = +18m.37s. $=PR_1-1$s. La Paz i = +19m.7s. $=PR_1+5$s., PR_2 = +25m.19s. =[S] +18s., iSN? = +28m.46s. =PS +17s., $SR_1 = +33$m.7s., $SR_2 = +38$m.37s. $=SR_1-44$s. St. Louis $PS_6P_6SE = +33$m.57s., $S_6P_6P_6SE = +34$m.57s. Tucson eE = +32m.23s. $=PR_2-26$s., eN = +33m.29s. $=PR_2+32$s. Berkeley eE = +20m.46s. =[P] +31s., +22m.18s., and +24m.57s., eZ = +25m.53s. $=PR_1-18$s.

Nov. 8d. 4h. 1m. 54s. Epicentre 37°·5N. 9°·0W. (as on 1924 March 2d.).

A = +·784, B = −·124, C = +·609; D = −·156, E = −·988; G = +·601, H = −·095, K = −·793.

	Δ °	Az. °	P. m. s.	O−C. s.	S. m. s.	O−C. s.	L. m.	M. m.
Malaga	3·7	101	0 57	− 1	(1 42)	0	1·7	—
Granada	4·3	93	1 13	+ 6	i 2 10	+12	—	2·4
Toledo	4·5	57	e 1 11	+ 1	e 2 12	+ 8	—	—
Almeria	5·3	95	e 1 13	− 9	i 2 20	− 5	i 2·4	3·0
Tortosa	8·1	63	e 3 33	?S	(e 3 33)	− 7	(e 4·7)	—

Additional readings and note: Granada iP = +1m.17s. Almeria MZ = +3·3m. Tortosa gives S as P and L as S.

Nov. 8d. Readings also at 2h. (Rocca di Papa), 3h. (Sucre and near La Paz), 5h. (Kew and Tiflis), 8h. (near La Paz), 9h. (Manila), 10h. (Tucson), 12h. (Phu-Lien and Tiflis), 14h. (Sucre and near La Paz), 17h. (Tiflis), 18h. (near Mizusawa), 19h. (Ekaterinburg, Taihoku, Tashkent (2), Tiflis, and near Mizusawa), 22h. (Tashkent), 23h. (Rocca di Papa, Sucre, and near Toyooka).

Nov. 9d. 1h. 5m. 36s. Epicentre 5°·5S. 147°·0E. (as on 1926 August 16d.).

$A = -\cdot835$, $B = +\cdot542$, $C = -\cdot096$; $D = +\cdot545$, $E = +\cdot839$; $G = +\cdot080$, $H = -\cdot052$, $K = -\cdot995$.

A depth of focus of 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.
Amboina		−1·5	18·8	275	i 3 42	−27	—	—	11·7	—
Riverview		−2·5	28·6	173	e 8 18	?PR_1	—	—	14·9	20·2
Sydney	E.	−2·5	28·6	173	10 42	?S	(10 42)	+18	16·4	17·6
Adelaide		−2·6	30·4	194	e 6 4	− 2	e 10 44	−11	13·0	20·6
Manila		−2·8	32·7	310	e 7 24?	+57	—	—	i 14·4	—
Perth		−3·3	39·3	225	(e 7 39)	+17	(e 13 24)	+14	(e 16·9)	(20·2)
Hong Kong		−3·4	42·5	313	9 1	?PR_1	13 27	−26	16·6	18·9
Wellington	E.	−3·5	43·5	149	—	—	i 14 21	+14	18·3	—
	N.	−3·5	43·5	149	—	—	i 14 24	+17	e 18·1	—
Zi-ka-wei		−3·6	44·1	330	e 7 19	−40	e 16 52	?SR_1	—	—
Christchurch		−3·6	44·2	153	—	—	14 12	− 3	26·1	32·1
Phu-Lien		−3·8	47·6	306	7 24?	'−60	—	—	—	—
Honolulu T.H.	E.	−4·6	60·2	61	—	—	e 24 24	?SR_3	e 28·2	29·4
Irkutsk		−4·8	68·2	334	10 38	+ 4	19 9	+ 3	30·1	41·5
Bombay		−5·0	76·9	291	—	—	e 21 24?	+35	—	—
Tashkent		−5·3	84·6	312	i 12 8	− 7	i 22 6	− 9	e 34·4	48·5
Ekaterinburg		−5·5	92·6	327	12 34	−26	23 7	−35	41·4	52·4
Victoria		−5·5	93·9	42	23 19	?S	(23 19)	[−32]	42·3	52·6
		−5·5	93·9	42	23 39	?S	(23 39)	[−12]	37·3	—
Baku		−5·5	99·0	311	e 17 45	[+ 2]	e 25 39	? Σ	45·9	58·0
Tiflis		−5·7	102·8	311	e 18 25	[+28]	e 24 35	[− 2]	e 54·4	64·3
Kucino		−5·7	105·2	327	—	—	e 25 0	[+12]	44·6	59·9
Makeyevka		−5·7	106·7	320	—	—	e 24 15	[−40]	50·4	68·1
Pulkovo		−5·8	108·0	333	e 19 47	?PR_1	—	—	52·4	64·2
Copenhagen		—	118·2	332	—	—	e 36 24?	?SR_1	57·4	73·6
De Bilt		—	123·8	332	—	—	—	—	e 60·4	—
Strasbourg		—	124·8	327	—	—	—	—	e 68·4	—
Uccle		—	125·1	331	—	—	—	—	e 64·4	—
Ottawa		—	125·6	35	—	—	e 38 12	?SR_1	e 54·4	—
Kew		—	126·7	335	—	—	—	—	e 62·4	—
Rio Tinto		—	139·8	327	71 24?	?L	—	—	(71·4)	85·4
San Fernando	E.	—	140·5	325	—	—	—	—	—	88·4

Additional readings and note: Riverview MN = +18·4m. Sydney SE = +13m.36s., SR_1E = +14m.42s. Adelaide MN = +19·9m. Perth SR_1 = (+15m.4s.); all readings have been diminshed by 5m. Honolulu T.H. eN = +27m.54s. Tashkent ePR_1 = +14m.18s., iPS = +22m.31s., i = +23m.43s. =PS −18s., eSR_2 = +33m.24s.?, MN = +43·0m. Ekaterinburg e = +15m.29s., MZ = +55·4m. Tiflis eE = +23m.46s., eSE? = +29m.9s., eN = +31m.6s., MN = +77·1m. Kucino e = +31m.42s. and +42m.0s., MN = +51·5m. Makeyevka e = +32m.54s. =SR_4 −4s., MN = +64·4m., MZ = +69·2m. Ottawa eE = +42m.24s. ? San Fernando MN = +85·9m.

Nov. 9d. Readings also at 6h. (Tiflis (2) and near Toyooka), 7h. (near Nagasaki), 8h. (Suva), 10h. (Tiflis), 12h. (La Paz and Sucre), 14h. (Tiflis), 19h. (La Paz and Santiago), 20h. (Suva).

Nov. 10d. 3h. 2m. 12s. Epicentre 2°·7S. 138°·8E. (as on 1926 Oct. 29d.).

A = −·752, B = +·658, C = −·047; D = +·659, E = +·752; G = +·035, H = −·031, K = −·999.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		24·7	315	e 3 48	−107	—	—	6·1	—
Batavia		32·0	265	e 8 12	?PR_1	—	—	—	—
Adelaide		32·3	180	e 7 16	+25	12 3	−10	14·3	17·2
Riverview		33·2	161	(e 6 54)	− 4	(e 12 36)	+ 9	(e 14·0)	(16·3)
Perth		36·4	215	e 12 8	?S	(e 12 8)	−68	19·0	20·6
Zi-ka-wei		37·7	338	e 7 29	− 7	e 15 58	?L	(e 16·0)	21·9
Wellington		50·4	145	—	—	—	—	27·8	—
Irkutsk		62·2	338	e 11 35	+69	—	—	e 36·5	—
Tashkent		76·6	315	i 12 1	+ 2	i 21 48	+ 4	—	47·7
Ekaterinburg		85·8	327	i 12 55	+ 3	23 26	− 2	45·8	—
Tiflis	E.	94·3	311	e 17 28	?PR_1	e 24 38	−26	e 55·3	64·6
Victoria	E.	97·2	41	—	—	—	—	44·8	46·5
Kucino		98·3	326	—	—	—	—	58·9	61·4
Makeyevka		99·2	319	—	—	—	—	58·8	—
Pulkovo		101·5	331	—	—	—	—	e 55·8	—
Copenhagen		111·9	331	—	—	—	—	56·8	—
De Bilt		117·4	330	—	—	—	—	e 59·8	—
Strasbourg		118·0	325	—	—	—	—	e 67·8	—
Uccle		118·6	330	—	—	—	—	e 59·8	—
Kew		120·5	332	—	—	—	—	e 66·8	—
Ottawa		127·7	30	—	—	—	—	e 62·8	—
La Paz		147·2	126	e 19 50	[− 1]	—	—	—	—

Additional readings and notes: Adelaide MN = +15·0m.; all readings have been diminished by 5m. Riverview iZ = (+7m.1s.), e = (+7m.54s.) = PR_1 − 6s. (+13m.31s.), (+13m.47s.), and (+13m.57s.), eL = (+15·6m.), MN = (+16·5m.); all readings have been diminished by 4m. Perth PR_1 = +12m.53s. = S − 23s., iS = +16m.43s. Tashkent eSR_2 = +30m.42s., MN = +40·1m., MZ = +45·4m. Tiflis eN = +25m.5s. and +40m.51s., eE? = +28m.42s., eLN = +52·3m.

Nov. 10d. 19h. 48m. 24s. Epicentre 36°·2N. 137°·8E. (given in Geophy. Mag. Tokyo, Vol. 2, No. 1).

A = −·598, B = +·542, C = +·591; D = +·672, E = +·741; G = −·438, H = +·397, K = −·807.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		1·0	215	1 0 31	+16	—	—	0·9	1·0
Osaka		2·5	231	0 44	+ 5	—	—	1·3	2·1
Toyooka		2·8	255	0 41	− 3	—	—	0·7	0·7
Kobe		2·9	235	0 43	− 2	(1 21)	+ 1	1·4	1·4
Sumoto		3·0	241	0 48	+ 1	(1 27)	+ 4	1·4	1·5
Mizusawa	E.	3·9	41	0 57	− 4	1 43	− 4	—	—
	N.	3·9	41	0 56	− 5	1 45	− 2	—	—
Hukuoka		6·6	249	1 52	+11	(e 2 48)	−12	e 2·8	—
Tashkent		52·3	298	—	—	e 15 41	−67	—	—
Ekaterinburg		53·7	319	—	—	e 16 11	−54	24·6	—
Tiflis	N.	68·8	307	—	—	—	—	e 38·6	—

Tashkent gives also e = +16m.6s.

Nov. 10d. Readings also at 2h. (near Toyooka), 5h. (Baku, Ekaterinburg, and Tiflis), 6h. (Tiflis), 7h. (Baku, Ekaterinburg, Irkutsk, near Tashkent, and near Toyooka), 8h. (Graz and Tiflis), 9h. (Baku and Tashkent), 10h. and 11h. (Tiflis), 14h. (near Toyooka), 15h. (Mizusawa), 16h. (Ekaterinburg, Tucson, near Berkeley, and Lick), 18h. (Taihoku), 21h. (Stonyhurst), 23h. (Apia and Fordham).

Nov. 11d. 2h. 47m. 44s. Epicentre 35°·7N. 134°·8E. (as on 1927 Oct. 25d.).

A = −·572, B = +·576, C = +·584 ; D = +·710, E = +·705 ;
G = −·411, H = +·414, K = −·812.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Toyooka	0·2	175	−0 9	−13	—	—	0·1	0·1
Kobe	1·1	163	0 13	− 4	—	—	0·6	0·6
Osaka	1·2	154	0 17	− 1	(0 33)	0	0·6	1·1
Sumoto	1·4	177	0 21	0	(0 40)	+ 1	0·7	0·7
Nagoya	1·8	107	e 0 25	− 3	(0 53)	+ 2	0·9	—

No additional readings.

Nov. 11d. Readings also at 1h. (Tashkent), 2h. (Stonyhurst), 3h. (Tiflis), 5h. (Ksara and near Tacubaya), 8h. (Tashkent and Tiflis), 12h. (Stonyhurst and near Sucre), 13h. (near Ksara), 15h. (La Paz, Sucre, La Plata, and near Toyooka (2)), 16h. (Baku, Ekaterinburg, Ksara, Tashkent (3), Tiflis, and Victoria), 18h. (near Toyooka), 22h. (Tiflis).

Nov. 12d. 14h. 45m. 40s. Epicentre 33°·5N. 46°·5E. (as on 1920 May 25d.).

A = +·574, B = +·605, C = +·552 ; D = +·725, E = −·688 ;
G = +·380, H = +·401, K = −·834.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Baku		7·4	20	e 2 11	+19	i 3 51	+30	—	—
Tiflis	E.	8·3	351	2 28	+22	e 4 0	+15	i 5·3	6·4
	N.	8·3	351	2 28	+22	e 3 56	+11	i 5·4	6·2
Ksara	E.	8·8	275	2 33	+20	5 21	+83	7·3	—
Helwan		13·4	259	3 27	+ 9	7 30	+97	—	12·5
Makeyevka		15·8	339	i 4 6	+17	7 11	+21	8·8	11·8
Tashkent		19·6	60	i 6 23	+107	i 10 5	+110	12·0	14·8
Budapest		24·9	312	5 45	+ 8	10 20	+19	e 17·3	—
Ekaterinburg		25·3	18	i 5 47	+ 6	i 10 14	+ 5	13·3	19·1
Simla	E.	25·9	87	—	—	e 10 14	− 6	—	—
Vienna		26·9	312	5 50	− 7	11 10	+31	—	20·3
Graz		27·0	309	e 5 58	0	e 11 18	+37	—	20·4
Rocca di Papa		27·8	297	e 8 28	+142	12 56	+121	—	20·3
Konigsberg		28·0	327	—	—	i 8 34	?	e 11·6	—
Pulkovo		28·3	343	6 13	+ 2	11 6	+ 2	15·3	19·2
Prague		28·7	315	e 6 30	+15	e 11 27	+15	e 19·3	21·3
Cheb		30·0	314	e 6 30	+ 2	e 11 37	+ 3	e 18·3	43·3
Helsingfors	E.	30·2	339	e 6 29	− 1	11 34	− 3	16·3	20·8
	N.	30·2	339	e 6 29	− 1	11 47	+10	16·8	20·8
Potsdam		30·5	318	—	—	—	—	e 14·3	—
Jena	N.	30·7	315	e 7 20?	?PR_1	—	—	e 13·3	23·8
Zurich		31·6	307	i 6 41	− 2	i 11 57	− 4	—	—
Copenhagen		32·3	324	e 6 48	− 3	12 13	0	e 21·3	23·7
Upsala		32·4	334	—	—	e 11 52	−22	e 18·3	23·3
Strasbourg		32·4	309	e 6 45	− 7	e 12 20?	+ 6	17·3	23·8
Feldberg	N.	32·4	315	—	—	e 12 14	0	e 19·9	22·1
Hamburg		32·7	319	e 6 53	− 1	e 12 20	+ 1	e 19·3	—
Neuchatel		32·7	307	e 6 50	− 4	e 11 48?	−31	—	—
Besançon		33·3	307	e 6 57	− 2	—	—	23·3	—
De Bilt		34·9	315	e 7 14	+ 2	e 12 56	+ 2	e 19·3	26·6
Uccle		35·1	313	e 7 12	− 2	e 12 52	− 5	e 19·3	24·6
Algiers		35·4	288	e 6 57	−20	15 32	?	26·3	32·3
Paris		35·9	309	e 7 19	− 2	—	—	22·3	26·3
Kodaikanal		36·7	125	21 26	?L	—	—	(21·4)	—
Tortosa		36·9	295	e 7 20	− 9	e 13 18	− 4	e 23·3	29·2
Kew		38·0	312	e 7 37	− 1	13 37	− 1	20·3	27·2
Oxford		38·7	314	—	—	—	—	16·9	27·9
Stonyhurst		38·7	314	—	—	e 12 36	−72	e 22·9	—
Dyce		40·3	322	—	—	e 14 12	+ 1	—	28·2

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toledo	N.W.	40·5	295	—	—	e 14 10	− 4	—	—
Granada		40·6	290	8 6	+ 6	15 12	+57	22·8	24·6
Edinburgh		40·6	320	—	—	e 12 20?	−115	—	32·3
Colombo		40·7	126	7 20?	−41	16 20?	+123	22·8	27·8
San Fernando	E.	42·8	289	—	—	—	—	—	31·3
Irkutsk		44·9	48	8 27	− 5	15 9	− 5	19·9	29·1
Phu-Lien	N.	54·2	88	—	—	14 20?	?	—	—
Ottawa		85·4	324	—	—	—	—	e 41·3	—
Sucre		118·2	267	—	—	—	—	70·2	73·7
La Paz		119·3	270	—	—	—	—	69·7	74·9

Additional readings: Baku iP = +2m.13s. Tiflis eE = +4m.31s., e = +4m.46s. Ksara LN = +9·3m. Helwan PR_1 = +6m.10s. Makeyevka i = +4m.31s., SR_1 = +8m.4s., MN = +12·3m. Tashkent MN = +15·7m. Ekaterinburg iPR_1 = +6m.29s., i = +10m.27s. and +10m.38s. MNZ = +18·8m. Simla eN = +9m.50s. Vienna iEN = +8m.0s., SR_1 = +13m.15s. Konigsberg eE = +9m.45s., e = +10m.12s., i = +10m.52s., and many i readings, of which the earliest is +12m.38s. Pulkovo MN = +18·8m., MZ = +19·0m. Helsingfors SR_1N = +14m.6s. Copenhagen SR_1 = +14m.26s., eN = +15m.26s., eEN = +16m.14s., eLN = +18·3m., MN = +24·3m. Upsala MN = +22·3m. Strasbourg MZ = +23·5m. Feldberg e = +14m.37s.; readings are all given as e simply. Hamburg eSR_1E = +15m.2s. De Bilt MN = +25·2m. Uccle e = +8m.31s. Kew PR_1 = +9m.11s., SR_1 = +16m.32s., MN = +25·0m., MZ = +29·8m. Oxford MN = +26·0m. Stonyhurst e = +14m.4s. Toledo e = +27m.6s. Irkutsk PR_1 = +10m.12s., PR_2 = +11m.47s., MN = +29·4m., MZ = +31·4m.

Nov. 12d. 21h. 56m. 12s. Epicentre 56°·4N. 136°·0W. (as on 1927 Oct. 25d.).

A = −·398, B = −·384, C = +·833; D = −·695, E = +·719;
G = −·599, H = −·579, K = −·553.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka		0·7	29	i 0 24	+13	i 0 28	+ 8	i 0·6	0·6
Victoria	E.	11·1	131	4 39	?S	(4 39)	−18	5·2	6·6
	N.	11·1	131	5 29	?S	(5 29)	+32	6·3	—
Chicago		34·0	96	—	—	—	—	e 18·4	e 18·8
St. Louis		34·8	103	—	—	—	—	e 17·8	19·1
Ann Arbor		35·8	91	—	—	—	—	e 19·4	—
Toronto	N.	37·3	87	—	—	—	—	e 19·2	—
Cincinnati	E.	37·4	95	—	—	—	—	i 22·0	—
Ottawa		38·2	82	—	—	e 17 24	?SR_3	20·0	—
Ithaca		39·7	86	—	—	—	—	e 21·8	—
Irkutsk		60·6	324	—	—	e 18 27	− 4	29·8	42·6
Edinburgh		61·4	29	—	—	—	—	—	42·3
Pulkovo		63·3	9	e 10 30	− 4	—	—	32·8	—
Copenhagen		65·0	20	—	—	—	—	34·8	—
Ekaterinburg		65·9	352	i 10 55	+ 5	—	—	28·8	—
Kew		66·1	30	—	—	—	—	e 33·2	—
De Bilt		66·9	26	—	—	—	—	e 35·8	—
Strasbourg		70·8	26	—	—	—	—	e 33·8	—
Tashkent		80·0	341	11 42	−37	e 21 48?	−35	e 33·8	40·0
Tiflis	E.	81·9	0	—	—	e 22 28	−17	e 38·8	50·7
Baku		83·1	356	—	—	—	—	e 38·8	—

Additional readings: Sitka iN = +27s. Chicago iLN = +18·2m. St. Louis iN = +17m.57s., eN = +18m.5s., iE = +18m.12s., and +18m.36s. Toronto iN = +19m.37s., iE = +19m.40s., and +19m.58s. Tashkent MN = +44·4m.

Nov. 12d. Readings also at 0h. (Berkeley and near Toyooka), 1h. (Ottawa), 6h. (Tashkent), 9h. (Stonyhurst), 10h. (Zurich and near Chur), 11h. (Pulkovo), 12h. (Copenhagen, De Bilt, Dyce, Edinburgh, Paris, Ottawa, Strasbourg, Pulkovo, and Uccle), 13h. (Baku and Tiflis), 14h. (Batavia), 15h. (Apia, Ekaterinburg, Tiflis, and Ksara), 16h. (Batavia, Baku, Ksara (2), and Tiflis (3)), 17h. (De Bilt, Ksara (2), Tiflis (2), and Tashkent), 18h. (De Bilt and near Mizusawa), 19h. (near Toyooka), 20h. (near Manila), 23h. (Ksara, Ottawa, and Tiflis).

Nov. 13d. Readings at 1h. (Strasbourg, near Chur, Neuchatel, and Zurich), 3h. (Tashkent and Tiflis), 4h. (Baku, Tashkent, Tiflis (2), and near Zurich and Chur), 5h. (Baku, Ekaterinburg, Ksara (2), Tashkent, and Tiflis (3)), 7h. (Baku, Ksara, and Tiflis), 11h. (Baku, Ksara, and Tiflis), 13h. (near Mizusawa), 14h. (Ksara (2)), 16h. (Baku, Ksara, Tashkent, Tiflis (2), and near Tacubaya), 17h. (La Paz), 18h. (Baku, Ksara (2), Tashkent, and Tiflis), 19h. (Taihoku, Tashkent, and near Tacubaya), 22h. (Baku, Ksara (2), Tashkent, and Tiflis (4)).

Nov. 14d. 0h. 12m. 0s. Epicentre 70°·0N. 128°·0E.

$A = -\cdot211$, $B = +\cdot270$, $C = +\cdot940$; $D = +\cdot788$, $E = +\cdot616$; $G = -\cdot579$, $H = +\cdot740$, $K = -\cdot342$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk		20·8	224	i 4 52	+ 1	8 30	−10	9·0	15·9
Ekaterinburg		30·8	280	i 6 33	− 3	i 11 36	−12	—	—
Mizusawa		31·6	160	6 24	−19	14 0	?SR_1	16·6	—
Toyooka		34·6	169	e 10 36	?S	(e 10 36)	−133	17·5	21·4
Nagoya		35·1	167	e 6 58	−16	—	—	18·8	—
Osaka		35·5	169	6 22	−56	12 45	−18	19·2	20·4
Sumoto		35·9	170	e 7 11	−10	—	—	e 21·1	22·1
Hukuoka		36·4	176	e 16 0	?SR_1	—	—	e 20·6	23·1
Nagasaki		37·3	177	e 21 21	?L	—	—	22·5	—
Pulkovo		38·0	305	i 7 27	−11	13 18	−20	19·0	26·2
Zi-ka-wei		39·0	188	i 7 39	− 7	(13 41)	−11	24·1	26·2
Kucino		39·1	295	i 7 48	+ 1	i 13 47	− 6	20·3	24·3
Helsingfors	N.	39·1	309	7 37	−10	13 32	−21	20·0	23·5
	Z.	39·1	309	i 7 36	−11	13 33	−20	—	21·7
Sitka	N.	39·9	58	—	—	—	—	e 22·2	—
Tashkent		41·0	259	i 7 58	− 5	i 14 11	−10	—	—
Upsala		41·2	314	i 7 52	−13	i 14 4	−20	e 22·0	26·3
Bergen		43·5	322	10 35	?PR_1	—	—	—	28·0
Konigsberg	N.	44·9	309	i 8 21	−11	e 15 1	−13	e 21·7	28·0
	Z.	44·9	309	i 8 24	− 8	e 15 3	−11	e 21·5	25·5
Taihoku	N.	45·1	188	e 24 49	?L	27 29	?	30·0	—
Makeyevka		45·7	290	i 8 33	−55	15 16	− 8	21·5	27·6
Copenhagen		46·1	315	8 33	− 8	e 15 18	−11	e 20·0	27·6
Dyce		47·9	326	i 8 43	−10	i 15 43	−10	24·8	35·2
Simla	E.	47·9	243	—	—	e 15 36	−17	25·6	27·8
	N.	47·9	243	8 48	− 5	15 42	−11	27·5	31·1
Lemberg		48·4	302	e 10 36	?PR_1	e 15 54	− 5	e 26·9	27·4
Dehra Dun		48·4	240	8 57	+ 1	15 51	− 8	24·6	27·2
Hong Kong		48·4	196	13 25	?	19 41	?SR_1	25·6?	27·7
Baku		48·6	275	i 8 55	− 3	i 16 3	+ 2	23·0	—
Hamburg		48·7	315	8 55	− 3	i 16 0?	− 2	27·0	28·5
Potsdam		49·0	312	i 8 54	− 6	i 15 58	− 8	20·0	32·0
Tiflis	E.	49·1	280	i 8 56	− 5	i 16 4	− 3	28·6	34·1
	N.	49·1	280	i 8 57	− 4	i 16 4	− 3	e 29·3	34·6
Edinburgh		49·4	325	—	—	i 16 4	− 7	28·0	36·6
Jena	E.	50·7	314	e 9 9	− 2	i 16 25	− 2	e 23·0	31·0
	N.	50·7	314	e 9 7	− 4	i 16 23	− 4	—	35·5
Phu-Lien		50·8	205	i 9 10	− 2	e 16 27	− 2	24·0	28·5
Prague		50·8	309	i 9 13	+ 1	i 16 30	+ 1	e 29·0	31·0
Victoria	E.	51·0	55	—	—	—	—	24·2	34·8
	N.	51·0	55	(9 15)	+ 2	9 15	?P	20·6	35·0
Stonyhurst		51·1	323	9 14	0	i 16 29	− 3	e 24·7	37·2
De Bilt		51·2	317	i 9 13	− 1	16 33	− 1	e 24·0	29·9
Cheb		51·3	310	i 9 15	0	e 16 37	+ 2	e 25·0	34·0
Vienna		51·9	308	e 9 11	− 8	16 40	− 3	i 23·6	29·5
Budapest		51·9	305	9 22	+ 3	16 45	+ 2	24·0	34·5
Feldberg	E.	52·2	315	e 9 21	0	i 16 45	− 1	e 27·0	30·7
	N.	52·2	315	e 9 21	0	i 17 45	+59	e 26·3	31·0
Uccle		52·5	319	i 9 23	0	i 16 49	− 1	e 24·0	30·3
Oxford		52·9	322	i 9 25	0	i 16 55	0	26·7	38·1
Kew		53·0	321	i 9 25	− 1	i 16 55	− 1	26·7	38·0
Graz		53·2	309	i 9 27	0	i 17 3	+ 4	26·0	30·4
Hohenheim		53·3	314	i 9 28	0	i 17 2	+ 2	e 28·0	32·5
Strasbourg		53·9	315	i 9 31	− 1	i 17 6	− 2	25·0	38·8
Belgrade	N.	54·0	303	i 9 32	− 1	i 17 8	− 1	e 27·8	32·0
Innsbruck		54·1	311	9 31	− 3	16 30	−40	31·0	38·2

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Ravensburg	54·1	313	i 9 30	− 4	17 6	− 4	e 26·0	34·0
Zagreb N.E.	54·3	307	e 9 34	− 1	e 17 9	− 4	e 26·5	35·9
N.W.	54·3	307	e 9 36	+ 1	e 17 10	− 3	e 26·5	31·2
Laibach	54·5	308	e 9 36	0	e 17 37	+22	e 26·2	30·0
Paris	54·8	319	i 9 40	+ 2	i 17 22	+ 3	29·0	31·0
Zurich	54·8	313	i 9 39	+ 1	i 17 22	+ 3	—	—
Chur	55·0	313	i 9 40	+ 1	16 35	−46	—	—
Neuchatel	55·5	313	i 9 44	+ 1	e 17 30	+ 2	—	—
Besançon	55·6	315	i 9 46	+ 3	17 27	− 2	26·0	31·0
Venice	55·6	309	10 1	+18	19 38?	[+17]	23·9?	27·9?
Manila	55·6	188	e 9 12	−31	18 26	+57	e 32·6	35·4
Moncalieri	57·2	313	9 56	+ 3	17 18	−31	26·1	36·7
Florence	57·4	308	9 58	+ 3	17 56	+ 5	26·5	30·3
Grenoble	57·5	315	—	—	—	—	e 29·0	—
Rocca di Papa	58·9	307	e 10 6	+ 2	i 18 21	+11	e 32·9	39·0
Ksara	59·2	284	10 16	+10	18 20	+ 7	29·0	—
Pompeii	59·3	305	e 10 6	− 1	e 17 56	−19	—	34·0
Marseilles	59·4	315	10 12	+ 4	e 18 19	+ 3	e 31·0	—
Bombay	60·7	242	10 19	+ 2	18 32	0	31·5	38·2
Barcelona	61·9	316	e 10 28	+ 4	18 53	+ 6	e 33·8	36·4
Tortosa	62·9	318	e 10 32	+ 1	19 7	+ 7	e 32·0	44·1
Ottawa	63·4	17	i 10 34	0	e 19 4	− 2	e 27·0	34·8
Helwan	64·4	284	10 44	+ 3	19 18	0	—	50·9
Toronto N.	64·6	21	i 10 39	− 3	i 19 17	− 3	36·2	42·3
Honolulu T.H. N.	64·7	97	—	—	—	—	e 33·0	—
Toledo	64·8	320	i 10 47	+ 3	e 19 29	+ 6	e 33·1	37·7
Chicago E.	65·3	28	—	—	i 19 28	− 1	e 32·5	38·5
Ann Arbor N.	65·4	25	i 10 48	+ 1	e 20 54	[+18]	e 36·0	—
Alicante	65·4	317	i 10 51	+ 4	i 19 36	+ 6	36·5	45·8
Algiers	66·1	314	i 10 55	+ 3	i 19 43	+ 5	34·0	37·0
Ithaca	66·2	19	—	—	—	—	32·0	—
Granada	67·3	320	i 11 4	+ 4	20 6	+12	38·5	46·2
Almeria	67·3	319	i 10 57	− 3	e 19 54	0	36·1	39·5
Rio Tinto	67·4	322	22 0?	?	—	—	—	43·0
Kodaikanal	67·6	235	30 18	?	—	—	37·4	39·2
Malaga	67·9	320	i 11 7	+ 4	20 11	+10	27·6	—
St. Louis	67·9	30	e 11 10	+ 7	e 20 4	+ 3	i 31·1	36·0
Fordham	68·0	18	11 11	+ 7	20 13	+11	35·1	40·0
Cincinnati	68·3	26	e 11 12	+ 6	e 20 7	+ 1	e 32·2	—
San Fernando	68·6	321	11 13	+ 5	20 17	+ 8	37·5	42·5
Tucson N.	69·4	50	e 11 4	− 9	—	—	e 39·9	—
Batavia	77·5	201	e 12 18	+14	—	—	i 44·4	—
Riverview N.	105·1	160	—	—	—	—	e 58·1	65·2
La Paz	125·6	20	i 19 8	[+ 1]	26 25	[+25]	65·0	74·3
Sucre	128·4	15	i 19 17	[+ 2]	—	—	63·0	72·4
Rio de Janeiro	132·7	350	—	—	—	—	e 68·3	—

Additional readings: Ekaterinburg PR_1 = +7m.22s., PR_2 = +7m.28s., i = +11m.51s., SR_1 = +13m.6s. Mizusawa LN = +16·2m. Osaka MN = +22·3m. Sumoto MN = +22·7m. Pulkovo PR_1 = +8m.43s., PR_2 = +9m.7s., SR_1 = +15m.18s., SR_2 = +16m.12s. =SR_1 +8s., MN = +23·8m., MZ = +26·1m. Zi-ka-wei PR_1 = +9m.21s., S = +16m.46s. =SR_1 +20s., SR_1 = +20m.8s., MZ = +26·4m.; true S is given as PR_2. Kucino PR_1 = +9m.18s., SR_1 = +16m.48s., e = +18m.0s., MN = +26·2m., MZ = +26·5m. Helsingfors PR_1Z = +9m.6s., PR_1N = +9m.9s., eZ = +10m.22s., eN = +15m.40s., SR_1Z = +16m.36s., SR_1N = +16m.51s. Tashkent iPR_1 = +9m.38s., iSR_1 = +16m.51s. Upsala PR_1 = +9m.27s., PR_2 = +9m.39s. Konigsberg ePR_1N = +10m.1s., iPR_1Z = +10m.11s., iPR_2Z = +10m.37s., iPR_2N = +10m.39s., iZ = +11m.1s., +12m.20s., and +13m.51s. iN = +11m.2s., and +13m.58s., eZ = +16m.27s., eN = +16m.50s., +17m.2s., and +17m.50s., SR_1Z = +18m.10s., and +18m.34s., SR_1N = +18m.23s., SR_2Z = +19m.21s., + 19m.37s., +20m.54s., and +21m.6s. Taihoku P entered is given as eN simply. Makeyevka PR_1 = +10m.23s., PR_2 = +11m.6s., i = +14m.2s., PS = +15m.26s., SR_1 = +18m.44s., MN = +26·7m., MZ = +30·0m. Copenhagen PR_1 = +10m.24s., and +12m.0s., P_cS = +14m.0s. ?, iSN =eSZ = +15m.20s., iZ = +15m.26s., SR_1 = +18m.18s., MZ = +26·4m., MN = +27·3m. Dyce PR_1 = +10m.41s. Baku PR_1 = +10m.53s., iSR_1 = +19m.41s. Hamburg iPR_1Z = +10m.49s. eSR_1N = +19m.31s. Potsdam iPR_1 = +11m.3s., iPR_2 = +11m.49s. Tiflis eE = +9m.6s., +9m.56s., and +10m.28s., ePR_1N? = +10m.54s., eN = +19m.43s., SR_1E = +19m.56s., eN = +20m.5s. Jena iPE = +9m.11s., iSE = +16m.29s., eN = +20m.21s. =SR_2 +1s., MZ = +34·5m. Phu-Lien

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MN = +33·0m. Prague PR_1 = +11m.20s., SR_1 = +20m.30s. De Bilt iPR_1Z = +11m.11s., MZ = +35·2m., MN = +38·2m. Cheb PR_1 = +11m.18s., SR_1 = +20m.35s. Vienna iPZ = +9m.15s., PR_1 = +11m.44s., SR_1 = +20m.53s., SR_1? = +21m.56s. Feldberg ePR_1N = +11m.27s., iN = +20m.29s. = SR_1 −19s. Uccle PR_1 = +11m.23s., SR_1 = +20m.42s., MN = +33·4m. Oxford PR_1N = +11m.27s., SR_1 = +21m.22s., MN = +38·4m. Kew PR_1 = +11m.23s., SR_1 = +21m.17s., MN = +36·0m. Graz i = +22m.39s. = SR_2 −3s. Hohenheim ePR_1E = +11m.22s., eE = +24m.0s., MN = +31·8m. Strasbourg PR_1 = +11m.37s., PR_2 = +12m.36s., MN = +33·2m., MZ = +37·5m. Belgrade eN = +12m.39s. = PR_2 −12s., iN = +14m.54s., +24m.32s., and +25m.50s. Ravensburg eSN = +17m.9s., MN = +33·0m. Zagreb iPNE = +9m.38s., iPNW = +9m.40s., ePR_1NE = +10m.18s., ePR_1NW = +10m.21s., ePR_2 = +12m.41s., ePR_3 = +15m.8s., ePR_4 = +16m.47s., iS = +17m.14s., iSNE = +17m.19s., ePSNW = +17m.32s., ePSNE = +17m.34s., ePS = +19m.38s., eSR_1 = +19m.43s., eSR_2NE = +21m.23s., eSR_2NW = +22m.0s., eSR_4NE = +22m.26s., eSR_4NW = +24m.16s., eSR_4NE = +24m.25s. Laibach e = +15m.37s. Paris MN = +34·0m. Neuchatel ePR_1 = +11m.50s., ePR_2 = +12m.58s. Venice P = +10m.9s. Manila PSE = +18m.6s., MN = +34·8m. Rocca di Papa eN = +9m.46s., PR_1 = +13m.41s. Ksara PR_1 = +13m.47s., SR_1N = +25m.18s.; T_o = 0h.12m.15s. Marseilles eS = +18m.22s. Barcelona MN = +42·6m. Ottawa eN = +14m.20s. = PR_2 −22s., MN = +40·2m. Toledo MNW = +38·2m., MZ = +46·1m. Chicago eE = +28m.20s. = SR_2 +10s. Ann Arbor eLE = +33·4m. Alicante MN = +41·4m. Algiers MN = +41·0m. Granada PR_1 = +13m.32s., PR_2 = +16m.55s. St. Louis iE = +20m.18s., iPSN = +20m.25s., iPPPSE = +20m.40s., iE = +25m.52s. = SR_1 +33s., eSR_2E = +27m.41s. Fordham e = +13m.16s., PR_1 = +13m.41s., PR_4 = +15m.41s.; T_o = 0h.11m.57s. Cincinnati iSN = +20m.6s. San Fernando MN = +42·0m. Tucson eE = +11m.34s., and +40m.12s., eN = +28m.24s. = SR_2 +1s., and +45m.24s. Riverview eLE = +51·1m. La Paz PR_1 = +21m.18s., SR_1E = +37m.30s., MN = +72·3m. Sucre i = +21m.25s. = PR_1 +7s., PR_1? = +22m.35s., SR_1 = +38m.53s.

Nov. 14d. 4h. 56m. 24s. Epicentre 70°·0N. 128°·0E.

(as at 0h.).

A = −·211, B = +·270, C = +·940; D = +·788, E = +·616; G = −·579, H = +·740, K = −·342.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk		20·8	224	i 4 52	+ 1	8 41	+ 1	9·6	18·6
Ootomari		24·4	155	5 14	−18	(9 58)	+ 6	10·0	10·4
Ekaterinburg		30·8	280	i 6 30	− 6	i 11 36	−12	15·6	—
Mizusawa	E.	31·6	160	6 30	−13	10 42	−79	16·7	—
	N.	31·6	160	—	—	11 42	−19	17·2	—
Toyooka		34·6	169	e 10 4	?	—	—	18·0	22·2
Nagoya		35·1	167	e 6 56	−18	—	—	19·1	19·4
Kobe		35·5	170	e 12 42	?S	(e 12 42)	−21	22·0	22·5
Osaka		35·5	169	5 45	−93	11 45	−78	17·4	21·9
Sumoto		35·9	170	e 7 12	− 9	—	—	e 19·4	22·9
Hukuoka		36·4	176	e 15 18	?SR_1	—	—	20·0	22·7
Nagasaki		37·3	177	i 14 56	?	18 22	?	18·9	21·1
Pulkovo		38·0	305	i 7 28	−10	13 18	−20	19·6	25·9
Zi-ka-wei		39·0	188	i 7 37	− 9	16 34	?SR_1	—	23·5
Kucino		39·1	295	i 7 50	+ 3	13 46	− 7	19·9	26·5
Helsingfors	N.	39·1	309	7 37	−10	i 13 39	−14	19·6	23·6
	Z.	39·1	309	i 7 36	−11	i 13 39	−14	18·6	21·9
Sitka	N.	39·9	58	—	—	—	—	e 23·6	—
Tashkent		41·0	259	i 7 55	− 8	i 14 3	− 8	i 17·2	27·6
Upsala		41·2	314	e 7 53	−12	i 14 6	−18	e 21·6	26·4
Bergen		43·5	322	8 28	+ 6	—	—	e 19·6	23·6
Königsberg	N.	44·9	309	i 8 24	− 8	e 14 44	−30	—	25·1
	Z.	44·9	309	i 8 21	−11	e 14 44	−30	e 21·6	28·1
Taihoku	N.	45·1	188	—	—	—	—	e 23·8	—
Makeyevka		45·7	290	i 8 32	− 6	i 15 15	− 9	21·1	27·9
Copenhagen		46·1	315	8 34	− 7	e 15 20	− 9	e 18·6	27·2
Dyce		47·9	326	8 51	− 2	15 44	− 9	25·4	33·4
Simla	E.	47·9	243	—	—	e 15 48	− 5	25·9	27·6
	N.	47·9	243	e 10 48	?PR_1	15 54	+ 1	27·3	31·1

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Lemberg		48·4	302	e 9 0	+ 4	e 16 0	+ 1	e 26·9	27·4
Dehra Dun		48·4	240	19 32	?	23 32	?	27·2	28·0
Hong Kong		48·4	196	15 48	?S	(15 48)	−11	—	27·9
Baku		48·6	275	i 8 45	−13	i 15 59	− 2	—	—
Hamburg		48·7	315	e 8 50	− 8	e 16 0	− 2	e 25·6	—
Potsdam		49·0	315	i 8 55	− 5	i 15 56	−10	e 24·1	28·1
Tiflis	E.	49·1	280	i 8 57	− 4	i 16 1	− 6	28·6	32·7
	N.	49·1	280	i 8 57	− 4	i 16 5	− 2	29·6	34·5
Edinburgh		49·4	325	—	—	i 16 5	− 6	28·6	36·6
Jena	E.	50·7	314	e 9 7	− 4	e 16 27	0	e 23·6	28·1
	N.	50·7	314	e 9 7	− 4	e 16 24	− 3	e 23·6	31·1
	Z.	50·7	314	i 9 9	− 2	e 16 27	0	e 23·6	34·3
Phu-Lien		50·8	205	e 9 9	− 3	e 16 26	− 3	23·6	28·9
Prague		50·8	309	i 9 11	− 1	i 16 31	+ 2	e 26·6	31·6
Victoria	E.	51·0	55	—	—	11 26	?PR_1	23·3	30·8
	N.	51·0	55	—	—	(16 26)	− 5	16·4	32·6
Stonyhurst		51·1	323	—	—	e 16 29	− 3	23·6	36·6
De Bilt		51·2	317	i 9 13	− 1	16 33	− 1	e 23·6	30·0
Cheb		51·3	310	i 9 14	− 1	i 16 36	+ 1	e 25·6	34·6
Vienna		51·9	308	e 9 11	− 8	16 19	−24	e 22·6	29·6
Budapest		51·9	305	9 23	+ 4	16 51	+ 8	e 23·6	34·1
Feldberg	E.	52·2	315	e 9 23	+ 2	—	—	e 25·4	30·0
	N.	52·2	315	i 9 21	0	i 16 51	+ 5	—	26·9
Uccle		52·5	319	i 9 22	− 1	16 45	− 5	e 23·6	30·1
Oxford		52·9	322	9 24	− 1	16 54	− 1	e 21·0	34·2
Calcutta	N.	52·9	228	9 48	+23	16 35	−20	—	—
Kew		53·0	321	9 25	− 1	e 16 57	+ 1	25·1	31·4
Graz		53·2	309	i 9 30	+ 3	i 17 4	+ 5	23·6	29·5
Hohenheim		53·3	314	i 9 30	+ 2	e 17 4	+ 4	e 27·6	30·4
Strasbourg		53·9	315	i 9 32	0	i 17 7	− 1	24·6	33·6
Belgrade	N.	54·0	303	e 9 39	+ 6	i 17 17	+ 8	i 27·8	32·1
Innsbruck		54·1	311	9 26	− 8	16 42	−28	—	31·1
Ravensburg		54·1	313	e 9 31	− 3	17 21	+11	e 25·6	33·8
Zagreb	N.E.	54·3	307	i 9 38	+ 3	e 17 15	+ 2	e 30·3	36·9
	N.W.	54·3	307	—	—	e 17 14	+ 1	—	31·2
Laibach		54·5	308	e 10 2	+26	e 17 52	+37	e 30·6	32·6
Paris		54·8	319	i 9 40	+ 2	i 17 23	+ 4	25·6	30·6
Zurich		54·8	313	e 9 36	− 2	i 17 23	+ 4	—	—
Chur		55·0	313	9 36	− 3	—	—	—	—
Neuchatel		55·5	313	e 9 40	− 3	e 17 21	− 7	—	—
Besançon		55·6	315	e 9 32	−11	17 37	+ 8	26·6	31·6
Venice		55·6	309	10 14	+31	18 36?	+67	23·1	31·6
Manila		55·6	188	e 9 34	− 9	e 18 4	+35	e 29·8	35·0
Moncalieri		57·2	313	9 54	+ 1	17 48	− 1	25·7	37·7
Florence		57·4	308	9 55	0	17 58	+ 7	31·6	34·6
Grenoble		57·5	315	e 9 55	− 1	e 17 58	+ 5	e 29·6	32·6
Rocca di Papa		58·9	307	i 10 9	+ 5	e 18 17	+ 7	e 25·0	38·1
Ksara		59·2	284	10 11	+ 5	18 20	+ 7	29·3	—
Pompeii		59·3	305	e 10 22	+15	e 21 32	?	31·6	38·6
Marseilles		59·4	315	e 10 5	− 3	e 18 31	+15	29·6	35·5
Hyderabad		60·4	237	—	—	18 46	+18	31·2	34·9
Bombay		60·7	242	10 23	+ 6	18 43	+11	31·9	38·2
Barcelona		61·9	316	e 10 29	+ 5	e 18 35	−12	e 29·8	36·2
Tortosa	E.	62·9	318	e 10 10	−21	e 19 9	+ 9	e 28·6	37·0
	N.	62·9	318	e 10 13	−18	e 18 49	−11	e 30·6	36·9
Ottawa		63·4	17	e 10 36?	+ 2	e 19 4	− 2	e 25·6	34·6
Helwan		64·4	284	10 46	+ 5	19 25	+ 7	—	45·2
Toronto	E.	64·6	21	—	—	i 19 16	− 4	29·6	36·0
Honolulu T.H.	E.	64·7	97	—	—	—	—	e 34·6	—
Toledo		64·8	320	e 10 45	+ 1	19 30	+ 7	e 30·6	40·4
Chicago	E.	65·3	28	—	—	i 19 27	− 2	e 32·6	34·6
Ann Arbor	E.	65·4	25	—	—	—	—	e 31·9	—
Alicante		65·4	317	e 11 4	+17	19 51	+21	—	44·9
Algiers		66·1	314	10 53	+ 1	19 41	+ 3	32·6	36·6
Ithaca		66·2	19	—	—	—	—	31·6	37·6
Granada		67·3	320	i 11 1	+ 1	20 2	+ 8	38·6	46·3
Almeria		67·3	319	e 10 56	− 4	19 54	0	35·7	39·8
Rio Tinto		67·4	322	14 36?	?PR_1	—	—	—	43·6
Kodaikanal		67·6	235	18 36	?S	(18 36)	−81	35·0	38·1
Malaga		67·9	320	11 4	+ 1	20 10	+ 9	27·6	50·3
St. Louis		67·9	30	e 11 21	+18	i 20 1	0	i 27·5	31·8
Fordham		68·0	18	e 11 9	+ 5	20 2	0	30·0	38·6
Cincinnati	N.	68·3	26	i 11 8	+ 2	i 20 7	+ 1	—	32·2

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
San Fernando		68·6	321	11 12	+ 4	i 20 20	+11	36·1	42·1
Tucson		69·4	50	e 11 20	+ 7	—	—	e 34·0	—
Cheltenham	E.	69·9	20	—	—	—	—	e 35·9	—
Colombo		70·1	233	20 34	?S	(20 34)	+ 7	35·2	39·6
Batavia		77·5	201	e 13 36?	?	—	—	42·9	—
Apia		93·4	122	—	—	—	—	50·6	—
Riverview		105·1	160	e 17 18	[−47]	—	—	e 52·5	77·7
Sydney	E.	105·1	160	44 6	?	—	—	59·4	61·3
Wellington	N.	116·4	141	—	—	—	—	58·5	—
La Paz		125·6	20	e 19 20	[+13]	26 33	[+33]	59·4	65·3
Cape Town		128·3	275	—	—	—	—	—	75·9
Sucre		128·4	15	19 19	[+ 4]	—	—	60·6	66·2
Rio de Janeiro		132·7	350	—	—	—	—	e 65·6	—
La Plata		144·8	8	—	—	—	—	77·6	—

Additional readings: Ekaterinburg iP = +6m.32s., iPR$_2$ = +7m.25s., i = +12m.12s., and +14m.0s., iSR$_1$ = +13m.10s.; epicentre 70°49′N. 125°40′E. Toyooka MN = +21·9m. Osaka MN = +21·6m. Sumoto MZ = +23·4m. Pulkovo PR$_1$ = +8m.44s., SR$_1$ = +15m.0s., MZ = +26·9m., MN = +28·1m. Zi-ka-wei PR$_1$ = +9m.26s., MN = +26·0m., MZ = +26·5m. Kucino PR$_1$ = +9m.18s., SR$_1$ = +16m.9s., MN = +25·6m. Helsingfors PR$_1$N = +8m.56s., PR$_1$Z = +8m.58s., PR$_2$N = +9m.23s., PR$_2$Z = +9m.31s., SR$_1$N = +16m.1s., SR$_1$Z = +16m.13s., SR$_2$Z = +16m.58s. Sitka eE = +25m.0s. Tashkent i = +9m.47s. =PR$_1$ +13s., and +14m.24s., MZ = +26·8m. Upsala PR$_1$ = +9m.28s., PR$_2$ = +9m.45s., PR$_4$ = +9m.54s., MN = +24·8m. Konigsberg iZ = +8m.59s., and +9m.38s., iPR$_1$N = +10m.11s., iZ = +10m.17s., +10m.24s., and +10m.37s., iPR$_2$N = +10m.59s., iPR$_2$Z = +11m.0s., iZ = +11m.32s., +11m.37s., +11m.46s., +12m.6s., +12m.34s., +12m.47s., +13m.9s., and +14m.4s., iN = +11m.54s. and +13m.7s., iSZ = +14m.57s., iSN = +15m.4s., iPSZ = +15m.18s., iPSN = +15m.21s., iZ = +15m.47s., +16m.17s., +16m.36s., and +17m.12s., SR$_1$Z = +18m.19s., SR$_1$N = +18m.24s., iZ = +18m.30s., iN = +18m.46s., iSR$_2$N = +19m.17s., iZ = +20m.9s., +20m.12s., and +20m.24s. Taihoku LN = +27·4m. Makeyevka PR$_1$ = +10m.21s., PR$_2$ = +11m.4s., PS = +15m.28s., SR$_1$ = +18m.33s., MN = +31·2m., MZ = +30·0m.; epicentre 70°27′N. 126°54′E. Copenhagen eE = +8m.36s., PR$_1$ = +10m.23s., eZ = +11m.54s. and +15m.22s., eN = +15m.26s., SR$_1$ = +18m.12s., MZ = +26·8m. Hong Kong PR$_1$ = +15m.58s., S = +19m.45s. Baku iPR$_1$ = +10m.43s., SR$_1$ = +19m.31s. Hamburg iPZ = +8m.55s., iPR$_1$Z = +10m.51s., iPR$_2$E = +11m.43s., ePR$_2$N = +12m.13s., iSN = +16m.3s., SR$_2$ = +19m.36s. =SR$_1$ −6s. Tiflis iE = +9m.6s., iN = +9m.7s., ePR$_1$N? = +10m.56s., ePR$_1$E? = +11m.0s., ePR$_2$E? = +11m.48s., PSN = +16m.20s., SR$_1$N = +19m.39s., SR$_1$E = +19m.42s. Phu-Lien MN = +31·8m. Prague PR$_1$ = +11m.21s., SR$_1$ = +20m.36s. Stonyhurst eSR$_1$ = +20m.27s. De Bilt iPR$_1$Z = +11m.11s., MN = +33·2m., MZ = +33·4m. Cheb PR$_1$ = +11m.16s., SR$_1$ = +20m.38s. Vienna iPZ = +9m.16s., PR$_1$ = +11m.17s., PR$_2$ = +11m.45s., PS = +16m.47s., SR$_1$ = +20m.49s. Feldberg eN = +20m.24s. Uccle PR$_1$ = +11m.29s., MN = +34·5m. Oxford PR$_1$N = +11m.34s., eLN = +23·6m., MN = +38·3m. Kew PR$_1$ = +11m.25s., SR$_1$ = +21m.18s., MZ = +35·9m., MN = +36·0m. Graz MN = +32·8m. Hohenheim ePR$_1$E = +12m.20s. =PR$_2$ −23s., eSE = +17m.10s., eE = +21m.22s. =SR$_1$ +14s., and +24m.36s., eN = +21m.36s. =SR$_1$ +28s., MN = +35·6m. Strasbourg ePR$_1$ = +11m.37s., ePS = +17m.29s., SR$_1$ = +22m.59s. =SR$_1$ +1s., MN = +31·3m., MZ = +38·0m. Belgrade eN = +16m.14s., iN = +21m.38s. =SR$_1$ +14s., +24m.40s., +25m.58s., +27m.46s.(L), and +29m.39s. Innsbruck MNW = +30·4m. Ravensburg eSN = +17m.19s., MN = +32·3m. Zagreb iPR$_1$NE = +10m.20s., iPR$_2$NE = +12m.10s., ePR$_2$NW = +12m.16s., iPR$_4$ = +13m.52s., ePR$_4$NW = +15m.56s., ePR$_4$NE = +16m.15s., iSNE = +17m.20s., eSR$_1$NE = +19m.1s. =[S] −10s., eSR$_2$NE = +20m.49s., eSR$_2$NW = +21m.52s. =SR$_1$ +24s., eSR$_2$NE = +22m.20s., eSR$_4$NE = +23m.27s. =SR$_2$ +21s. Laibach e = +10m.30s., +13m.29s. =PR$_2$ +4s., and +24m.3s. =SR$_2$ +8s. Paris MN = +34·6m. Manila MN = +34·0m. Moncalieri MN = +37·5m. Rocca di Papa iPZ = +10m.8s., iPN = +10m.11s., eL = +32·6m. Ksara PR$_1$ = +13m.44s. =PR$_2$ −9s. Barcelona MN = +36·9m. Ottawa eN = +14m.36s.? =PR$_2$ −7s., MN = +41·4m. Toronto iN = +19m.13s. Honolulu T.H. eN = +34m.6s. Toledo iP = +10m.48s., MZ = +44·6m. Chicago eE = +26m.18s. Alicante MN = +37·8m. St. Louis iE = +22m.12s. Fordham PR$_1$ = +15m.47s., e = +16m.50s. =PR$_2$ +30s. San Fernando MN = +41·6m. Tucson eN? = +11m.24s., eN = +26m.0s. =SR$_1$ +18s., +39m.12s., and +45m.42s. Colombo S = +28m.54s. = SR$_2$ +0s. Riverview iPR$_1$ = +25m.22s., MN = +60·8m. La Paz iP = +19m.31s., PR$_1$N = +21m.5s., SR$_1$N = +37m.53s., SR$_2$N = +44m.48s., MN = +71·1m. Sucre PR$_1$? = +22m.34s.

Nov. 14d. 7h. 19m. 20s. Epicentre 30°·2S. 71°·0W.

(as on 1927 July 23d.).

A = +·281, B = −·817, C = −·503; D = −·946, E = −·326; G = −·164, H = +·476, K = −·864.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		3·3	175	0 49	− 3	0 58	−33	1·0	—
Pilar		6·3	105	(1 28)	− 8	(2 4)	−48	1·5	4·7
La Plata		12·0	116	i 2 54	− 5	5 0	−19	5·8	—
Sucre		12·4	27	3 6	+ 1	i 5 33	+ 4	i 6·7	8·1
La Paz		14·0	12	i 3 35	+ 9	i 6 27	+19	8·5	10·2
Rio de Janeiro	E.	25·9	80	i 5 40	− 7	10 5	−15	12·6	14·2
	N.	25·9	80	i 5 40	− 7	10 3	−17	12·6	17·0
Balboa Heights		40·0	348	e 7 12	−43	—	—	—	—
Tacubaya		56·5	328	9 36	−13	17 30	−10	24·9	29·0
Chihuahua		67·8	327	10 40?	−23	19 40?	−20	—	—
Cincinnati	N.	70·5	350	i 11 21	+ 1	e 21 54	[+39]	—	38·7
St. Louis	E.	71·1	346	e 11 27	+ 3	i 20 40	+ 1	e 28·7	—
	N.	71·1	346	i 11 26	+ 2	e 20 42	+ 3	—	—
Ithaca		72·8	356	11 44	+ 9	21 13	+13	—	—
Tucson	E.	73·0	325	i 11 39	+ 3	i 21 6	+ 4	e 37·4	39·6
	N.	73·0	325	i 11 38	+ 2	i 21 5	+ 3	e 37·5	39·1
Cape Town		73·3	120	11 38	0	21 5	− 1	—	36·7
Ann Arbor		73·4	352	i 11 40	+ 2	i 21 4	− 3	e 36·1	—
Chicago	E.	73·6	348	—	—	i 21 5	− 4	e 31·3	39·4
Toronto	E.	74·2	355	11 34	− 9	i 21 4	−12	—	45·8
	N.	74·2	355	i 11 36	− 7	i 21 6	−10	37·8	42·9
Ottawa		75·7	357	i 11 50	− 3	i 21 31	− 3	e 36·2	44·7
Berkeley		83·2	323	e 12 31	− 6	e 22 50	− 9	—	—
Johannesburg		84·3	117	—	—	—	—	40·7	—
Wellington	E.	86·2	225	i 12 43	−11	i 23 5	[+ 2]	38·8	—
	N.	86·2	225	i 12 46	− 8	i 23 4	[+ 1]	e 39·6	—
San Fernando		90·2	47	13 7	−10	i 24 3	−13	—	62·7
Rio Tinto		91·1	46	13 40?	+18	—	—	—	58·7
Malaga		91·5	48	13 10	−14	e 24 6	?Σ	32·7	—
Victoria	E.	91·5	329	13 10	−14	23 44	[+ 7]	43·7	49·1
	N.	91·5	329	13 10	−14	23 40	[+ 3]	41·8	49·1
Apia		92·1	256	13 45	+17	24 35	− 1	42·7	—
Granada		92·3	48	i 13 19	−10	e 24 34	− 4	—	—
Almeria		92·9	48	e 13 13	−19	24 14	?Σ	e 49·3	54·9
Toledo	N.E.	93·6	46	e 13 19	−17	i 24 17	?Σ	e 41·6	53·9
Alicante		95·0	48	e 13 23	−20	24 28	[+31]	e 42·0	50·9
Algiers		96·4	51	13 37	−14	24 32	[+28]	—	50·7
Tortosa		97·0	46	—	—	26 40?	?PS	e 46·7	58·7
Honolulu T.H.	E.	97·9	290	—	—	e 25 15	?Σ	e 45·2	45·7
Barcelona		98·4	47	—	—	—	—	e 53·2	60·1
Oxford		102·1	37	—	—	i 24 58	[+24]	47·3	60·0
Kew		102·5	37	i 14 1	−22	i 25 1	[+25]	43·7	52·8
Paris		102·6	40	e 14 3	−20	e 25 2	[+26]	50·7	56·7
Stonyhurst		102·7	35	e 13 54	−30	i 24 56	[+19]	43·4	54·5
Edinburgh		103·5	32	—	—	i 25 7	[+27]	50·7	54·7
Besançon		103·7	44	e 14 4	−25	—	—	32·7	—
Moncalieri	E.	103·7	46	14 16	−13	25 2	[+21]	54·5	69·9
Neuchatel		104·2	45	e 14 9	−22	24 10	[−34]	—	—
Riverview	E.	104·6	216	—	—	—	—	e 44·4	49·0
	N.	104·6	216	—	—	—	—	e 48·3	53·8
Sydney	E.	104·6	216	24 34	?[S]	(24 34)	[−11]	51·0	54·2
Uccle		104·6	40	e 14 9	−23	e 25 13	[+28]	e 44·7	55·5
Dyce		104·8	30	—	—	e 25 15	[+29]	46·9	62·5
Zurich		105·3	45	i 14 15	−21	24 42	[− 7]	—	—
Florence		105·3	49	e 13 40?	−56	22 40	?	28·7	40·7
Rocca di Papa		105·3	51	i 14 16	−20	e 26 2	?Σ	e 55·6	64·7
Strasbourg		105·4	43	i 14 14	−22	(25 40?)	?Σ	25·7	67·9
De Bilt		105·7	38	14 16	−22	e 25 18	[+27]	e 50·7	64·0
Pompeii		106·2	53	e 18 36	?PR_1	e 31 40	?	61·7	70·7
Hohenheim		106·4	43	e 19 20	?PR_1	e 25 16	[+22]	e 54·7	—
Feldberg	N.	106·6	42	e 18 10	[0]	e 22 4	?PR_2	e 49·7	54·8
Venice		106·8	47	(20 40?)	?	—	—	20·7	—
Jena		108·7	42	e 18 52	?PR_1	e 28 10	?PS	52·7	62·7
Cheb		108·8	43	e 19 6	?PR_1	e 28 34	?PS	e 54·7	62·7
Hamburg		108·9	38	e 14 31	−22	—	—	e 41·7	60·7
Adelaide		109·1	206	e 13 40?	−73	i 25 0	[− 6]	44·1	60·7

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Graz		109·5	46	—	—	i 29 6	?PS	55·7	59·7
Prague		110·0	43	e 19 3	?PR_1	e 28 30	?PS	e 53·7	61·7
Vienna		110·5	45	e 17 31	?	27 8	−25	e 44·7	64·7
Copenhagen		111·1	37	14 40?	−23	e 26 28	?Σ	e 51·7	55·5
Budapest		111·8	46	19 10	?PR_1	—	—	e 58·7	64·7
Helwan		114·3	70	19 40	?PR_1	29 21	?PS	—	71·9
Upsala	E.	115·1	34	—	—	i 29 32	?PS	e 55·7	61·2
Konigsberg	N.	115·2	40	—	—	—	—	e 57·2	60·2
Helsingfors	E.	118·8	35	e 18 26	[−23]	25 32	[−10]	58·2	62·7
Ksara	E.	119·3	67	20 16	?PR_1	—	—	62·0	—
Pulkovo		121·3	35	e 18 54	[− 2]	e 26 4	[+15]	52·7	64·0
Makeyevka		124·2	50	e 18 58	[− 6]	26 4	[+ 7]	57·7	71·7
Tiflis		128·0	59	e 19 12	[− 2]	—	—	e 62·7	70·9
Baku		131·6	61	i 19 19	[− 3]	e 25 55	[−20]	—	—
Ekaterinburg		137·4	37	i 19 21	[−14]	i 23 7	?	52·7	77·9
Batavia	Z.	143·5	176	i 19 48	[+ 2]	—	—	—	—
Colombo		144·1	125	19 38	[− 9]	—	—	69·0	75·5
Kodaikanal		144·5	119	21 34	?	—	—	79·9	86·5
Bombay		145·4	100	19 42	[− 7]	—	—	—	79·0
Tashkent		146·3	60	19 45	[− 5]	—	—	e 61·7	86·0
Hyderabad		149·4	105	19 58	[+ 3]	33 44	?	73·8	79·7
Mizusawa	E.	152·3	297	(20 5)	[+ 6]	20 5	?[P]	—	—
Simla		152·7	80	e 30 58?	?PR_2	—	—	e 72·2	—
Osaka		157·3	288	—	—	21 24	?	30·4	—
Irkutsk		157·7	8	i 19 59	[− 7]	—	—	72·7	88·7
Manila		160·9	218	e 20 3	[− 6]	e 36 18	?	76·4	—
Zi-ka-wei		169·3	278	i 20 11	[− 3]	—	—	70·4	83·4
Phu-Lien		170·4	166	e 20 12	[− 3]	—	—	80·7	—
Hong Kong		170·9	211	20 15	[0]	31 30	?Σ	—	90·7

Additional readings and notes: Pilar gives P and S as LE and LN, also MN = +4·2m. Sucre i = +3m.24s.; T_0 = 7h.19m.19s.; epicentre 31°·5S. 70°·0W. La Paz i = +3m.54s., +7m.2s., +7m.29s., and +7m.58s.; T_0 = 7h.19m.17s.; epicentre 30°·2S., 71°·4W. Cincinnati eP_cPN = +11m.30s., ePSN = +22m.3s. St. Louis iN = +11m.40s., iP_cPN = +12m.8s., iN = +12m.38s., iPR_1N = +15m.51s., iPSE = +21m.3s., iE = +21m.24s. Tucson eN = +13m.7s., eE = +13m.53s., ePR_1N? = +14m.25s., eSR_1N = +25m.48s. Ann Arbor eN = +25m.40s.; T_0 = 7h.19m.24s. Toronto PR_1N? = +14m.48s.; T_0 = 7h.19m.24s. Ottawa ePR_1N? = +15m.8s., eSR_1E = +26m.52s.; T_0 = 7h.19m.27s. Berkeley ePN = +12m.37s., eZ = +12m.47s., eEN = +12m.48s., eSN = +22m.51s., eSZ = +22m.52s., eE = +23m.3s. Wellington iPR_1N = +16m.30s., iSR_1E = +28m.52s., iSR_1N = +29m.7s., SR_1N = +32m.30s.; T_0 = 7h.19m.26s.; T_0N = 7h.19m.34s. San Fernando MN = +58·7m. Malaga iP = +13m.13s., PR_1N = +16m.50s. Apia = +23m.25s. = [S] − 16s. Almeria PR_1 = +17m.0s., MN = +59·4m. Toledo iZ = +17m.7s. = PR_1 − 25s., MZ = +55·2m. Alicante MN = +54·8m. Algiers PR_1 = +17m.29s. Tortosa MN = +61·0m. Honolulu T.H. eSR_1E = +31m.27s., eN = +44m.40s. Barcelona MN = +60·0m. Oxford PR_1 = +18m.25s., MN = +60·2m. Kew PR_1 = +18m.9s., ePSE = +27m.26s., SR_1 = +33m.24s., MN = +49·1m., MZ = +52·7m. Besançon e = +18m.30s. = PR_1 − 8s. Moncalieri L = +33·6m. Riverview iPR_1 = +24m.43s. = [S] − 2s., eSR_1 = +33m.20s. Sydney PR_1E = +27m.40s. = PS − 16s., SE = +34m.34s., SR_1E = +46m.22s. Uccle e = +18m.6s. = PR_1 − 38s., MN = +57·5m. Rocca di Papa e = +17m.31s. = [P] − 35s. Strasbourg iPR_1 = +18m.40s., MZ = +64·2m. De Bilt iPR_1Z = +18m.38s., MN = +60·0m., MZ = +63·8m. Hohenheim eE = +20m.34s.; all readings have been increased by 1h. Jena eN = +18m.58s., iEZ = +18m.59s., eN = +33m.40s., eE = +34m.50s. Hamburg ePZ = +18m.5s. = [P] − 13s., iPR_1EZ = +19m.3s., iPSE = +28m.34s., eLEN = +53·7m., MNZ = +62·7m. Adelaide MN = +52·7m. Prague PR_1 = +21m.25s., SR_1 = +35m.25s. Vienna iEN = +19m.6s., PR_1 = +22m.32s., PS? = +28m.29s. Copenhagen ePR_1N = +18m.59s. = [P] + 34s., ePR_1 = +19m.16s., ePR_1Z = +21m.31s., eN = +22m.16s. = PR_1 − 15s., eS_cP_cSE = +24m.40s.? = PR_1 + 17s. eE = +26m.40s., eN = +27m.22s. = S − 16s., ePS = +28m.40s., ePPSEN = +29m.10s. = PS + 0s., eSR_1EN = +34m.40s. ?, eLN = +49·7m., MN = +62·9m. Budapest MN = +61·7m. Helwan PR_1 = +27m.2s. = Σ + 22s. Upsala PR_1 = +19m.44s., eLN = +50·7m., MN = +68·8m. Helsingfors iPR_1N = +20m.8s., PR_1Z = +20m.10s., PR_1E = +20m.12s., P_cP_cSZ? = +21m.47s., P_cP_cSE? = +21m.48s., PS = +30m.4s. Ksara PE? = +23m.48s. = PR_1 + 10s., PR_1? = +26m.9s. = [S] + 26s., PR_1? = +30m.37s. = PS + 0s. Pulkovo PR_1 = +20m.23s., PR_2 = +22m.58s., PS = +30m.24s., SR_1 = +37m.28s., MZ = +63·8m., MN = +71·7m. Makeyevka iP = +19m.4s. = [P] + 1s., PR_1 = +20m.45s., PR_2 = +23m.44s.,

Continued on next page.

$S_4P_4P_4S = +27m.44s.$, $= \Sigma + 5s.$, $PS = +29m.14s.$ $= S - 6s.$, $PPS = +32m.22s.$, $SR_1 = +37m.40s.$?, $MZ = +76{\cdot}5m.$, $MN = +76{\cdot}8m.$ Tíflis eN $= +19m.19s.$ $e = +23m.56s.$, $+24m.55s.$ $= PR_2 + 8s.$, $+31m.20s.$, $+35m.16s.$, $+36m.26s.$, $+38m.26s.$ $= SR_1 + 0s.$, and $+44m.35s.$ $= SR_2 + 24s.$ Baku $PR_1 = +21m.38s.$, $P_4P_4S = +22m.50s.$ Ekaterinburg $i = +19m.33s.$, $iPR_1 = +22m.11s.$, $iS_4P_4P_4S = +29m.29s.$, $iPS = +32m.29s.$, $iPPS = +34m.37s.$, $e = +36m.19s.$, $SR_1 = +40m.26s.$, $e = +41m.9s.$, $MN = +74{\cdot}4m.$, $MZ = +78{\cdot}0m.$ Batavia $i = +19m.52s.$ and $+19m.55s.$ Tashkent $SR_1 = +42m.16s.$, $SR_2 = +50m.12s.$, $MN = +82{\cdot}6m.$, $MZ = +86{\cdot}9m.$ Irkutsk $iPR_1 = +24m.16s.$, $e = +27m.32s.$, $PR_2 = +29m.29s.$, $S_4P_4SP = +34m.18s.$, $SR_1 = +44m.13s.$, $MZ = +88{\cdot}6m.$ Zi-ka-wei $eSR_1? = +36m.6s.$ Phu-Lien $ePR_1 = +25m.13s.$

Nov. 14d. 15h. 4m. 30s. Epicentre 54°·0S. 8°·0E. (as on 1927 Oct. 5d.).

$A = +{\cdot}582$, $B = +{\cdot}082$, $C = -{\cdot}809$; $D = +{\cdot}139$, $E = -{\cdot}990$; $G = -{\cdot}801$, $H = -{\cdot}113$, $K = -{\cdot}588$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Cape Town		21·4	25	5 0	+ 2	8 50	− 3	—	9·0
Johannesburg		31·5	36	—	—	12 30?	+30	—	—
La Plata		48·7	267	—	—	—	—	23·0	—
Rio de Janeiro		49·2	289	e 15 57	?S	(e 15 57)	−12	e 20·8	—
Sucre		64·9	272	i 10 42	− 2	i 19 23	− 1	29·6	32·7
La Paz		68·6	273	i 11 14	+ 6	i 20 24	+15	31·5	35·5
Adelaide		81·4	141	—	—	i 22 33	− 6	—	50·3
Wellington	E.	84·0	171	—	—	—	—	e 38·0	50·0
	N.	84·0	171	—	—	—	—	i 38·5	48·1
Colombo		85·1	71	13 49	+60	21 59	?	39·1	45·3
Helwan		86·2	21	23 22	?S	(23 22)	−10	—	46·7
Riverview		86·6	150	—	—	—	—	e 42·3	48·8
Sydney	E.	86·6	150	23 12	?S	(23 12)	−25	43·8	46·8
Kodaikanal		86·6	68	41 54	?L	—	—	(41·9)	—
Ksara	N.	91·1	24	e 13 10	−12	24 4	−21	—	—
San Fernando		91·3	349	—	—	24 20	− 7	—	58·5
Almeria		91·4	351	—	—	—	—	—	54·5
Bombay		91·5	60	e 23 42	?[S]	(e 23 42)	[+ 5]	—	—
Rio Tinto		92·6	348	25 30?	?PS	—	—	—	56·5
Hyderabad		93·1	65	23 5	?[S]	(23 5)	[−42]	—	55·8
Toledo		94·4	351	—	—	30 33	?SR_1	e 44·0	59·5
Tortosa	N.	95·0	355	—	—	—	—	e 44·5	50·4
Pompeii		95·0	6	e 24 46	?S	(e 24 46)	−20	—	—
Rocca di Papa		95·8	4	—	—	e 24 7	[+ 6]	—	—
Moncalieri	E.	99·0	0	e 17 54	[+11]	24 57	[+38]	31·9	—
Florence		99·2	4	—	—	—	—	—	40·5
Tíflis	E.	100·7	29	e 18 13	?PR_1	—	—	42·5	51·0
Baku		101·0	32	e 18 8	?PR_1	—	—	47·5	54·4
Graz		101·3	6	—	—	—	—	e 54·5	—
Budapest		101·9	9	e 18 0	?PR_1	—	—	e 55·5	—
Strasbourg		102·6	0	e 17 30?	[−26]	e 27 30?	?PS	45·5	57·5
Paris		102·9	357	—	—	e 29 11	?	50·5	57·5
Cheb		104·1	4	—	—	e 25 30?	?Σ	—	53·5
Feldberg	N.	104·2	1	—	—	e 26 52	+17	e 53·0	55·3
Prague		104·2	5	—	—	—	—	e 53·5	61·5
Uccle		104·9	358	—	—	e 27 36	?PS	e 48·5	59·1
Makeyevka		105·1	21	e 18 31	?PR_1	e 26 17	−26	35·5	53·9
Kew		105·7	355	—	—	e 27 30?	?PS	49·5	56·7
Oxford		106·0	354	—	—	—	—	e 48·5	60·2
De Bilt		106·1	359	—	—	e 27 54	?PS	e 49·5	59·8
Hamburg		107·6	2	e 18 47	?PR_1	e 28 8	?PS	e 56·5	63·5
Stonyhurst		108·2	355	—	—	e 25 32	[+30]	e 52·3	59·8
Tashkent		108·7	45	i 19 6	?PR_1	28 24	?PS	e 42·5	57·5
Copenhagen		109·8	3	e 18 30?	[+ 9]	e 28 30	?PS	49·5	64·8
Edinburgh		110·2	354	—	—	—	—	e 53·5	63·5
Dyce		111·5	354	—	—	e 28 40	?PS	—	65·2
Phu-Lien		111·7	84	—	—	—	—	48·5	—
Kucino		112·5	18	—	—	—	—	e 66·5	—
Upsala		114·1	5	—	—	—	—	e 63·5	71·0
Pulkovo		115·2	12	e 19 38	?PR_1	e 29 20	?PS	56·5	70·4
Hong Kong		117·3	87	—	—	—	—	—	61·5
Ekaterinburg		118·8	30	e 20 11	?PR_1	e 28 10	−30	47·5	53·5
Ottawa		122·1	305	—	—	e 37 0	?SR_1	e 50·5	—
Irkutsk		132·8	56	e 21 47	?PR_1	e 24 40	?PR_2	63·5	78·6

For Notes see next page.

NOTES TO NOV. 14d. 15h. 4m. 30s.

Additional readings: Rio de Janeiro eP = +15m.59s. = S − 10s. Sucre PR_1 = +14m.8s., SR_1 = +23m.5s.; T_0 = 15h.4m.26s. La Paz PR_1 = +14m.37s., iSN = +20m.27s., PS = +21m.2s. = [S] + 0s., SR_1E = +24m.32s.; T_0 = 15h. 4m.24s. Riverview MN = +48·9m. Ksara PR_1 = +17m.6s., PR_2 = +19m.0s., PR_3 = +20m.17s., PS = +25m.17s., SR_1 = +30m.17s., SR_2 = +34m.25s.; T_0 = 15h.4m.42s. San Fernando MN = +53·0m. Toledo MNW = +59·7m. Rocca di Papa e = +24m.32s. = Σ − 9s. Tiflis eE = +23m.55s. and +32m.25s. = SR_1 − 22s. Baku e = +24m.40s. = [S] + 11s., +25m.42s., +30m.23s., and +32m.40s. = SR_1 − 10s., MN = +52·4m., MZ = +63·8m. Feldberg eN = +28m.32s. and +33m.21s. = SR_1 − 9s. Prague e = +45m.30s. ? Uccle MN = +57·5m. Makeyevka e = +33m.21s., MZ = +60·7m., MN = +65·7m. Kew MN = +57·0m., MZ = +57·8m. Oxford MN = +61·0m. De Bilt MZ = +63·5m., MN = +63·6m. Hamburg, MNZ = +60·5m. Stonyhurst e = +31m.52s. and +42m.9s. Tashkent eSR_1 = +33m.30s., MN = +58·6m., MZ = +60·0m. Copenhagen PE = +25m.30s.? = [S] + 21s., eSR_1EN = +34m.24s., eSR_2N = +38m.30s., MN = +63·1m. Upsala MN = +71·7m. Pulkovo MN = +69·7m. Ekaterinburg e = +20m.25s. = PR_1 + 9s., +30m.2s. = PS − 30s., and +36m.40s. = SR_1 + 8s., MNZ = +72·2m. Irkutsk e = +31m.55s., MZ = +78·9m.

Nov. 14d. 19h. 44m. 10s. Epicentre 25°·0N. 141°·5E. (as on 1921 July 4d.).

A = −·709, B = +·564, C = +·423; D = +·622, E = +·783; G = −·331, H = +·263, K = −·906.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sumoto		10·9	329	2 50	+ 7	—	—	9·8	10·6
Osaka		11·0	333	1 42	−62	(4 59)	+ 5	5·0	12·0
Kobe		11·1	332	e 3 19	+33	—	—	—	—
Toyooka		12·0	333	2 57	− 2	—	—	9·1	11·4
Nagasaki		12·8	310	—	—	—	—	e 6·3	—
Hukuoka		12·9	313	e 3 5	− 7	—	—	e 8·2	11·2
Zi-ka-wei		18·7	294	i 4 57	+32	8 35	+40	—	—
Manila		21·9	246	e 5 8	+ 4	i 9 17	+14	i 11·8	—
Hong Kong		25·1	270	5 30	− 9	—	—	—	10·2
Phu-Lien		32·3	271	—	—	10 50?	−83	—	—
Irkutsk		39·1	325	e 7 29	−18	e 13 19	−34	—	—
Ekaterinburg		64·3	325	—	—	e 19 4	−13	—	—
Baku		75·3	310	e 11 49	− 2	e 21 35	+ 6	—	—
Tiflis	E.	78·4	312	—	—	e 21 46	−19	e 48·8	50·3

Additional readings and note: Sumoto MN = +10·8m. Osaka MN = +13·1m. Irkutsk e = +9m.10s. = PR_1 + 0s.; all readings are given as simply e. Tiflis eE = +40m.41s.

Nov. 14d. Readings also at 0h. (Ksara), 2h. (La Paz), 3h. (Ksara), 7h. (Manila), 10h. (Santiago), 11h. (Tiflis), 14h. (La Paz), 17h. (Copenhagen and Pulkovo), 18h. (Denver), 21h. (Stonyhurst and near Toyooka).

Nov. 15d. 8h. 29m. 16s. Epicentre 51°·0N. 179°·0E.

A = −·629, B = +·011, C = +777; D = +·017, E = +1·000; G = −·777, H = +·014, K = −·629.

A depth of focus 0·010 has been assumed.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		−0·5	24·0	274	5 11	−12	(9 35)	0	9·6	9·8
Mizusawa	E.	−0·7	28·9	261	6 9	− 1	10 54	− 9	—	—
	N.	−0·7	28·9	261	6 10	0	11 8	+ 5	—	—
Honolulu T.H.	E.	−0·8	34·8	141	—	—	—	—	e 14·7	16·3
	N.	−0·8	34·8	141	—	—	—	—	e 15·2	16·1
Osaka		−0·8	35·2	260	7 6	− 2	(12 38)	− 8	12·6	12·7

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.
Victoria	E.	−0·8	36·4	70	7 4	−14	(12 42)	−22	12·7	—
	N.	−0·8	36·4	70	7 14	− 4	(12 52)	−12	12·9	15·9
Hukuoka		−0·8	39·0	264	7 36	− 4	—	—	13·6	—
Nagasaki		−0·8	40·0	264	i 7 43	− 5	(13 51)	− 3	13·8	13·9
Berkeley		−0·9	42·7	85	e 8 0	− 9	e 14 17	−15	—	—
Irkutsk		−0·9	44·2	302	i 8 13	− 7	15 1	+ 9	19·2	28·1
Zi-ka-wei		−0·9	46·3	269	i 8 33	− 3	15 23	+ 3	—	25·9
Tucson	N.	−1·1	53·4	84	i 9 26	+ 4	i 16 50	+ 2	e 23·0	24·4
Hong Kong		−1·1	57·1	266	9 54	+ 8	17 46	+12	27·2?	—
Manila		−1·2	58·8	256	e 10 31	+35	(i 18 38)	+44	i 18·6	—
Ekaterinburg		−1·2	60·8	326	i 10 19	+10	i 18 31	+13	27·7	32·6
St. Louis	E.	−1·2	61·4	63	i 10 15	+ 2	e 18 11	−15	e 28·7	32·7
	N.	−1·2	61·4	63	e 10 16	+ 3	e 18 14	−12	—	—
Phu-Lien		−1·2	63·0	271	10 33	+ 9	e 18 52	+ 6	29·7	—
Toronto		−1·2	63·6	52	e 11 1	+33	i 18 51	− 2	25·7	—
Ottawa		−1·2	64·1	49	e 11 10	+39	e 18 56	− 4	e 26·2	—
Cincinnati		−1·2	64·2	60	i 10 37	+ 5	e 18 56	− 5	e 29·7	—
Ithaca		−1·2	65·9	51	—	—	—	—	30·7	—
Pulkovo		−1·2	66·4	344	i 10 49	+ 3	19 28	+ 1	30·7	38·1
Helsingfors	N.	−1·2	66·9	347	11 14	+25	20 4	+31	33·7	38·7
Upsala		−1·3	68·1	350	i 10 58	+ 1	i 19 47	− 1	e 31·7	42·0
Fordham		−1·3	68·3	51	e 10 46	−12	—	—	29·4	—
Kucino		−1·3	68·5	337	i 10 35	−24	19 22	−30	32·8	37·4
Tacubaya		−1·3	69·9	85	11 2	− 6	20 2	− 7	—	—
Copenhagen		−1·3	72·7	353	e 11 27	+ 1	—	—	34·7	—
Edinburgh		−1·3	73·1	0	—	—	i 20 49	+ 1	38·7	—
Simla	N.	−1·3	73·1	299	e 11 38	+10	—	—	—	—
Hamburg		−1·3	75·0	354	i 11 43	+ 3	i 21 12	+ 2	e 36·7	50·7
Stonyhurst		−1·3	75·1	0	i 21 13	?S	(i 21 13)	+ 1	25·1	—
Makeyevka		−1·3	75·5	334	e 11 45	+ 2	—	—	e 37·7	43·0
De Bilt		−1·3	77·0	355	11 52	− 1	21 32	− 2	e 36·7	47·7
Oxford		−1·3	77·3	0	—	—	i 21 34	− 3	—	—
Kew		−1·4	77·5	359	i 11 56	0	e 21 38	0	37·7	48·7
Jena	N.	−1·4	77·5	351	e 15 44?	?PR_1	—	—	—	—
Uccle		−1·4	78·1	356	i 11 59	0	e 21 44	− 1	e 31·7	48·3
Prague		−1·4	78·1	349	e 10 44?	−75	e 21 47	+ 2	e 40·7	49·7
Cheb		−1·4	78·3	350	e 11 2	−58	e 22 48	?PS	e 56·7	63·7
Baku		−1·4	78·4	323	i 12 4	+ 3	21 56	+ 7	38·1	44·7
Feldberg	N.	−1·4	78·5	353	e 16 52	?PR_2	e 21 32	−18	e 37·8	41·0
Tiflis	E.	−1·4	79·1	326	e 12 44	+39	e 21 56	− 1	—	45·8
	N.	−1·4	79·1	326	e 12 4	− 1	e 22 11	[− 6]	e 40·8	45·7
Vienna		−1·4	79·6	349	12 8	0	23 4	?PS	—	40·7
Strasbourg		−1·4	80·2	353	i 12 9	− 3	i 22 8	− 2	35·7	—
Paris		−1·4	80·2	357	—	—	i 22 11	+ 1	46·7	—
Ravensburg		−1·4	80·7	353	—	—	—	—	e 42·3	—
Graz		−1·4	80·9	348	i 12 13	− 3	i 23 21	?PS	38·7	49·8
Zurich		−1·4	81·3	353	e 12 16	− 2	i 22 20	− 2	—	—
Neuchatel		−1·4	81·7	353	e 12 20	− 1	e 22 20	− 7	—	—
Zagreb	N.E.	−1·4	82·1	348	e 12 20	− 3	e 23 27	?PS	—	—
	N.W.	−1·4	82·1	348	e 12 22	− 1	e 23 34	?PS	—	—
Hyderabad		−1·4	82·9	289	(12 22)	− 6	(22 40)	− 1	(43·1)	(52·1)
Moncalieri		−1·4	83·7	354	e 11 46	−46	22 48	− 1	43·0	—
Florence		−1·4	84·6	350	10 59	?	—	—	—	—
Bombay		−1·4	85·0	294	12 40	0	23 0	− 5	e 43·4	—
Rocca di Papa	N.	−1·4	86·5	349	e 12 39	−10	—	—	—	—
Pompeii		−1·4	87·2	348	e 13 9	+17	e 22 39	−49	—	—
Ksara		−1·4	89·1	330	13 0	− 3	23 50	+ 1	37·7	—
Toledo	N.E.	−1·4	89·1	1	—	—	e 23 42	− 7	—	41·2
Rio Tinto		−1·4	91·2	4	21 44?	?	—	—	—	45·7
Granada		−1·4	91·8	1	i 13 46	+28	e 24 32	+14	—	—
Almeria		−1·4	92·1	0	—	—	e 24 27	+ 6	44·5	—
La Paz		—	117·1	82	e 18 40	[− 4]	29 45	?PS	55·2	—
Sucre		—	120·8	81	19 14	[+20]	i 27 12	? Σ	—	—
La Plata		—	136·6	89	(23 2)	?	—	—	23·0	—

Additional readings and notes: Osaka MN = +13·9m. Berkeley eZ = +8m.18s., eSZ = +14m.18s., eSR_1EZ = +18m.21s. Irkutsk PR_1 = +9m.59s., SR_1 = +18m.2s., MZ = +27·9m. Tucson eN = +12m.0s. = PR_1 +21s., and +20m.16s. Ekaterinburg i = +10m.39s., +11m.13s., +12m.25s. = PR_1 − 27s., and +22m.13s., iPR_2 = +14m.8s. e = +18m.19s., iSR_2 = +25m.17s., MN = +32·8m. St. Louis ePR_1N = +12m.55s., iPR_2E = +14m.24s. = PR_1 +19s., iPSN = +18m.23s., iE = +18m.54s., iN = +18m.58s., iSR_1E = +22m.39s., iSR_2E = +24m.35s., iSR_2N = +24m.39s.,

Continued on next page.

$eSR_3 = +25m.40s.$, $ePcSScPE = +26m.14s.$ Ottawa $e = +14m.48s. = PR_2 + 10s.$, $iN = +20m.14s. = [S] - 8s.$ Cincinnati $iPN = +10m.39s.$, $ePR_1N = +13m.11s.$, $ePPSSN? = +23m.33s.$, $eSR_1N? = +23m.34s.$ Pulkovo $PR_2 = +14m.47s.$, $SR_1 = +23m.50s.$, $MZ = +37 \cdot 2m.$, $MN = +37 \cdot 3m.$ Helsingfors $ePZ = +11m.11s.$, $PR_1N = +12m.51s.$, $PR_2N = +14m.55s.$, $ME = +41 \cdot 2m.$ Fordham $i = +10m.49s.$ Kucino $e = +10m.59s.$, $PR_2 = +14m.47s.$, $PS = +19m.55s.$, $SR_1 = +23m.43s.$, $SR_2 = +27m.17s.$, $MN = +38 \cdot 5m.$ Tacubaya readings are given as for 9h. Stonyhurst $eS? = +23m.41s.$ Makeyevka $PR_1 = +14m.58s.$, $PS = +22m.11s.$, $e = +23m.6s.$, $MN = +46 \cdot 9m.$, $MZ = +47 \cdot 5m.$ De Bilt $MN = +37 \cdot 7m.$ Baku $PR_1 = +14m.59s.$, $SR_1 = +26m.55s.$, $SR_2 = +31m.57s.$, $MZ = +49 \cdot 9m.$ Feldberg $eN = +22m.25s. = [S] + 12s.$, and $+33m.2s.$ Tiflis $PR_1N = +15m.9s.$, $PR_1E = +15m.10s.$, $eN = +18m.4s. = PR_3 - 13s.$, $eE = +18m.7s. = PR_3 - 10s.$, and $+32m.25s. = SR_3 - 18s.$ Vienna $iN = +14m.21s.$ Strasbourg $PR_1 = +15m.12s.$, $PR_2 = +17m.29s.$, $PS = +22m.38s.$ Ravensburg $eL = +48 \cdot 0m.$ Zurich $iP = +12m.17s.$ Zagreb $ePR_1NE = +13m.2s.$, $ePR_2NE = +14m.54s.$, $eNE = +17m.54s. = PR_2 + 3s.$, $eNW = +22m.6s. = [S] + 32s.$ Hyderabad readings have all been diminished by 10m. Rocca di Papa $ePZ = +12m.41s.$, $eE = +13m.18s.$ Granada $i = +17m.3s. = PR_1 - 6s.$ La Paz $i = +20m.38s. = PR_1 + 33s.$, $iPR_2? = +25m.24s. = [S] - 12s.$, $SR_2N = +36m.0s. = SR_1 - 11s.$

Nov. 15d. 14h. 39m. 12s. Epicentre 33°·5N. 48°·0E.

$A = +\cdot558$, $B = +\cdot620$, $C = +\cdot552$; $D = +\cdot743$, $E = -\cdot669$; $G = +\cdot369$, $H = +\cdot410$, $K = -\cdot834$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Baku		7·1	12	e 1 58	+10	e 3 32	+19	5·2	6·9
Tiflis	E.	8·6	343	e 2 27	+17	e 3 41	−12	e 4·4	6·1
	N.	8·6	343	e 2 7	− 3	e 3 42	−11	e 4·4	6·1
Ksara	E.	10·1	275	2 34	+ 3	4 34	+ 2	6·8	—
Helwan		14·6	260	e 3 13	−21	e 7 10	+48	—	12·3
Makeyevka		16·4	336	—	—	e 7 4	0	9·8	—
Ekaterinburg		24·9	17	i 5 28	− 9	e 10 6	+ 5	13·8	—
Pulkovo		28·7	341	e 3 10	?	—	—	15·8	—
Copenhagen		33·1	323	—	—	—	—	20·8	—
Irkutsk		44·0	47	—	—	—	—	e 19·8	—

Additional readings: Baku $MZ = +6 \cdot 2m.$ Ksara $LN = +5 \cdot 7m.$ Ekaterinburg $i = +10m.14s.$, and $+10m.29s.$ Irkutsk $L = +27 \cdot 5m.$

Nov. 15d. 21h. 48m. 36s. Epicentre 70°·0N. 128°·0E. (as on Nov. 14d.).

$A = -\cdot211$, $B = +\cdot270$, $C = +\cdot940$; $D = +\cdot788$, $E = +\cdot616$; $G = -\cdot579$, $H = +\cdot740$, $K = -\cdot342$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk		20·8	224	e 4 53	+ 2	8 29	−11	9·4	17·5
Ekaterinburg		30·8	280	i 6 35	− 1	i 11 37	−11	i 14·2	20·7
Pulkovo		38·0	305	i 7 30	− 8	i 13 20	−18	21·4	25·2
Zi-ka-wei		39·0	188	e 7 41	− 5	e 16 48	?SR_1	—	26·2
Kucino		39·1	295	i 7 40	− 7	13 36	−17	20·2	25·3
Helsingfors		39·1	309	i 7 38	− 9	13 38	−15	22·4	25·9
Tashkent		41·0	259	i 8 6	+ 3	i 14 20	− 1	19·3	25·8
Upsala		41·2	314	7 55	−10	e 14 6	−18	—	26·3
Taihoku	N.	45·1	188	e 3 1	?	—	—	—	—
Makeyevka		45·7	290	i 8 34	− 4	i 15 17	− 7	20·7	31·8
Copenhagen		46·1	315	8 35	− 6	15 20	− 9	24·4	27·1
Simla		47·9	243	—	—	e 15 54	+ 1	e 24·1	—
Hong Kong	E.	48·4	196	—	—	—	—	—	27·7
Baku		48·6	275	i 8 56	− 2	i 15 59	− 2	27·4	33·8
Hamburg		48·7	315	i 8 57	− 1	e 16 0	− 2	e 24·4	29·2
Potsdam		49·0	315	e 9 1	+ 1	—	—	e 23·9	—
Tiflis	E.	49·1	280	e 9 0	− 1	16 5	− 2	e 28·4	34·5
	N.	49·1	280	8 59	− 2	16 5	− 2	29·2	34·3
Edinburgh		49·4	325	e 6 54	?	—	—	e 29·4	36·4
Phu-Lien		50·8	205	e 9 13	+ 1	e 16 28	− 1	24·4	—
Prague		50·8	309	e 11 24?	?PR_1	—	—	e 29·4	31·4
Victoria	E.	51·0	55	16 39	?S	(16 39)	+ 3	27·9	—
	N.	51·0	55	16 34	?S	(16 34)	+ 3	28·0	34·0
Stonyhurst		51·1	323	—	—	—	—	e 25·2	37·1

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
De Bilt		51·2	317	i 9 15	+ 1	16 35	+ 1	e 24·4	30·0
Cheb		51·3	310	e 9 16	+ 1	e 16 38	+ 3	e 28·4	34·4
Vienna		51·9	308	i 9 20	+ 1	16 16	−27	i 25·7	29·4
Budapest		51·9	305	e 9 24?	+ 5	—	—	—	—
Feldberg		52·2	315	e 9 25	+ 4	—	—	e 28·4	31·0
Uccle		52·5	319	i 9 24	+ 1	e 16 53	+ 3	e 24·4	39·0
Oxford		52·9	322	9 34	+ 9	16 58	+ 3	21·2	38·3
Kew		53·0	321	i 9 28	+ 2	e 16 52	− 4	28·4	31·4
Graz		53·2	309	—	—	—	—	e 26·4	—
Strasbourg		53·9	315	i 9 34	+ 2	e 17 5	− 3	e 26·4	37·4
Ravensburg		54·1	313	e 24 32	?	e 27 8	?	e 28·4	—
Zagreb	N.E.	54·3	307	e 9 40	+ 5	e 17 10	− 3	e 29·3	—
	N.W.	54·3	307	e 10 0	+25	e 17 15	+ 2	e 26·4	28·9
Paris		54·8	319	—	—	e 17 21	+ 2	31·4	34·4
Zurich		54·8	313	i 9 41	+ 3	—	—	—	—
Neuchatel		55·5	313	e 9 47	+ 4	e 17 34	+ 6	—	—
Besançon		55·6	315	—	—	—	—	e 29·4	—
Moncalieri	E.	57·2	313	8 34	−79	15 34	−135	22·8	—
Florence		57·4	308	—	—	e 12 24?	?PR_1	—	33·4
Rocca di Papa		58·9	307	—	—	—	—	e 33·0	41·7
Ksara		59·2	284	9 39	−27	17 39	−34	26·2	—
Bombay		60·7	242	18 53	?S	(18 53)	+21	—	38·2
Tortosa	N.	62·9	318	—	—	—	—	e 35·4	37·0
Ottawa		63·4	17	—	—	—	—	e 32·4	—
Toledo	N.W.	64·8	320	—	—	—	—	e 34·6	38·7
Almeria	E.	67·3	319	—	—	—	—	—	42·6
Rio Tinto		67·4	322	41 24?	?L	—	—	(41·4)	44·4
San Fernando	E.	68·6	321	—	—	—	—	—	43·9
Colombo		70·1	233	19 58	?S	(19 58)	−29	—	45·3
La Paz		125·6	20	e 19 7	[0]	—	—	—	—

Additional readings: Irkutsk i = +4m.59s., MZ = +12·9m. Ekaterinburg PR_1 = +7m.27s., i = +8m.12s., and +9m.26s., SR_1 = +13m.9s., SR_2 = +13m.44s., MNZ = +21·1m. Pulkovo PR_1 = +9m.6s., SR_1 = +15m.30s., MN = +23·8m. Kucino PR_1 = +9m.8s., MN = +25·4m., MZ = +26·3m. Helsingfors PR_1E = +9m.9s., PR_1N = +9m.14s., SR_1E = +16m.42s. Tashkent i = +9m.55s., +14m.8s., and +17m.20s. = SR_1 +12s., SR_1 = +17m.6s. Makeyevka SR_1 = +18m.39s., MZ = +29·9m., MN = +30·1m. Copenhagen SR_1 = +19m.12s., and +20m.24s.? = SR_2 −6s., MN = +29·1m. Hong Kong MN = +31·9m. Baku e = +19m.41s. = SR_1 +1s., i = +20m.48s. = SR_2 −12s., MZ = +33·1m., MN = +33·2m. Hamburg iE = +23m 57s, MN = +29·1m., MZ = +31·4m. Tiflis ePR_1N = +10m.53s., ePR_1?E = +10m.58s., ePR_2 = +11m.51s., ePS?N = +16m.14s., SR_1 = +19m.33s. De Bilt MZ = +35·2m., MN = +36·6m. Vienna PR_1 = +11m.13s., SR_2 = +22m.1s. Uccle SR_1 = +20m.47s., MN = +34·7m. Kew MN = +36·0m., MZ = +38·0m. Rocca di Papa e = 21h.31m.18s. Ksara LN = +36·0m.; T_o = 21h.48m.16s. Ottawa e = +26m.36s. Almeria MZ = +40·0m.

Nov. 15d. Readings also at 4h. (near Toyooka), 6h. (Adelaide, Riverview, Wellington, Ekaterinburg, and Tiflis), 7h. (De Bilt and Tiflis), 9h. (Feldberg and near Ksara), 12h. (Apia and Ksara), 13h. (Ekaterinburg), 15h. (near Toyooka), 17h. (Tashkent), 19h. (Tiflis and Tashkent), 20h. (Tiflis), 23h. (Zi-ka-wei).

Nov. 16d. 1h. 27m. 0s. Epicentre 27°·5N. 53°·8E. (as on 1924 June 30d.).

A = +·524, B = +·716, C = +·462; D = +·809, E = −·591; G = +·273, H = +·373, K = −·887.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Baku	13·3	347	e 3 18	+ 1	e 5 56	+ 5	9·2	11·5
Tiflis	16·0	335	e 3 58	+ 6	e 7 8	+13	9·0	11·0
Tashkent	18·7	39	i 4 27	+ 2	—	—	e 9·6	13·0
Makeyevka	23·9	333	—	—	—	—	e 12·6	—
Ekaterinburg	29·7	8	e 6 12	−13	e 11 12	−17	14·0	17·2
Pulkovo	36·0	340	e 8 14	?PR_1	—	—	22·0	—

Additional readings: Baku e = +6m.33s., and +7m.30s., MZ = +13·0m., MN = +13·3m. Tiflis eSN? = +7m.7s., MN = +10·0m. Tashkent i = +5m.2s., and +5m.19s., MZ = +12·4m., MN = +13·4m. Makeyevka L = +19·0m. Ekaterinburg, MN = +19·5m., MZ = +19·7m.

Nov. 16d. 21h. 10m. 9s. Epicentre 7°·0N. 126°·0E.

(as on 1925 April 23d.).

A = −·583, B = +·803, C = +·122; D = +·809, E = +·588; G = −·072, H = +·099, K = −·993.

A depth of focus 0·020 has been adopted; see the note at the end.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		−0·2	9·0	327	i 2 7	− 6	i 5 27	?	i 6·6	7·1
Amboina		−0·2	10·9	169	i 2 34	− 6	i 4 35	−13	—	—
Taihoku	N.	−0·7	18·5	347	4 32	+17	(8 9)	+33	8·2	—
Hong Kong		−0·7	19·1	325	4 31	+ 9	(8 1)	+12	8·0	8·1
Phu-Lien		−1·0	23·2	308	i 5 8	+ 1	8 6	−63	8·8	10·1
Malabar		−1·0	23·2	232	5 3	− 4	i 9 19	+10	—	—
Batavia		−1·0	23·2	236	i 5 16	+ 9	9 31	+22	—	—
Zi-ka-wei		−1·1	24·6	350	i 5 19	− 4	i 9 43	+ 8	—	14·7
Nagasaki		−1·2	26·0	8	e 5 40	+ 4	—	—	11·3	—
Hukuoka		−1·2	26·9	8	5 36	− 9	—	—	12·5	16·5
Sumoto		−1·3	28·5	15	e 5 19	−41	e 9 25	−80	e 13·3	—
Kobe		−1·3	28·9	16	6 0	− 4	9 56	−56	13·4	15·5
Osaka		−1·3	29·0	16	6 2	− 3	—	—	12·0	13·4
Nagoya		−1·4	29·9	18	e 6 8	− 5	—	—	—	—
Mizusawa	E.	−1·6	34·9	21	6 53	− 6	11 57	−32	16·8	—
	N.	−1·6	34·9	21	6 55	− 4	12 27	− 2	15·6	—
Calcutta	N.	−1·7	39·4	297	7 26	−10	13 28	− 6	—	—
Perth		−1·7	40·1	194	i 7 37	− 4	13 28	−16	17·7	19·3
Adelaide		−1·8	43·6	166	i 7 56	−13	i 14 15	−17	18·8	28·3
Colombo		−1·9	45·8	273	8 21	− 4	(14 59)	− 2	15·0	15·1
Riverview		−2·0	47·3	152	i 8 30	− 5	i 15 14	− 5	e 19·8	30·7
Sydney	E.	−2·0	47·3	152	8 39	+ 4	15 9	−10	18·6	20·4
Hyderabad		−2·0	47·5	288	8 40	+ 3	15 26	+ 5	22·4	25·8
Kodaikanal		−2·0	48·1	278	8 9	−32	(15 3)	−26	15·0	37·2
Irkutsk		−2·0	48·6	343	i 8 43	− 1	15 43	+ 7	20·4	26·4
Dehra Dun		−2·1	50·5	306	8 8	−48	14 8	−111	18·9	19·5
Simla		−2·2	51·5	306	e 9 9	+ 7	16 33	+23	—	—
Bombay		−2·2	52·9	289	9 35	+24	16 35	+ 8	e 24·4	25·2
Tashkent		−2·4	60·7	316	i 10 13	+12	i 18 28	+25	27·8	38·6
Apia		−2·5	65·2	109	e 10 59	+29	19 16	+19	30·5	32·2
Christchurch		−2·5	65·8	146	e 11 3	+29	19 27	+22	36·4	44·4
Wellington	E.	−2·5	65·8	143	i 10 38	+ 4	i 19 12	+ 7	30·4	38·1
	N.	−2·5	65·8	143	i 10 55	+21	i 19 5	0	31·3	32·4
Ekaterinburg		−2·6	70·8	329	i 11 20	+15	i 20 27	+23	31·4	38·2
Honolulu T.H.	N.	−2·6	74·4	70	—	—	i 21 11	+23	e 30·2	—
Baku		−2·6	74·9	311	i 11 39	+ 7	i 21 12	+18	35·2	38·8
Tiflis	E.	−2·7	78·8	313	e 11 59	+ 3	e 21 51	+13	e 38·4	47·6
	N.	−2·7	78·8	313	e 11 59	+ 3	i 21 53	+15	e 35·4	44·1
Kucino		−2·7	83·1	325	12 23	+ 2	22 42	+14	37·4	50·0
Makeyevka		−2·7	83·4	320	12 24	+ 1	22 38	+ 7	38·8	47·2
Ksara	N.	−2·7	86·2	305	e 12 44	+ 5	i 23 12	+ 9	38·6	—
Pulkovo		−2·7	86·8	330	i 12 41	− 2	23 24	+15	39·8	53·6
Helsingfors		−2·8	89·3	331	e 12 51	− 5	23 35	− 1	44·8	54·8
Helwan		−2·8	90·4	300	e 12 58	− 5	23 21	[− 9]	—	55·5
Konigsberg		−2·8	93·0	326	—	—	i 23 48	[+ 2]	e 34·4	46·8
Upsala		−2·8	93·0	332	—	—	24 4	−12	e 42·8	48·6
Entebbe		−2·8	93·5	273	13 4	−16	23 30	[−19]	51·5	—
Budapest		−2·8	96·0	320	e 13 20	−13	23 54	[− 8]	e 36·4	53·8
Copenhagen		−2·8	97·1	330	13 33	− 7	24 33	−26	36·8	52·4
Vienna		−2·8	97·5	322	e 13 34	− 8	24 43	−20	e 35·8	61·8
Potsdam		−2·8	98·0	326	e 9 51?	?	—	—	e 45·8	49·8
Victoria	E.	−2·8	98·1	40	13 36	− 9	24 11	[− 3]	45·4	46·0
	N.	−2·8	98·1	40	13 38	− 7	24 11	[− 3]	41·2	41·7
Prague		−2·8	98·1	324	e 14 51?	+66	e 24 9	[− 5]	e 44·8	55·8
Graz		−2·8	98·5	321	e 17 38	[− 3]	e 27 31	?	36·8	62·0
Zagreb	N.E.	−2·8	98·6	319	17 51?	[+10]	e 24 3	[−14]	e 32·5	—
	N.W.	−2·8	98·6	319	—	—	e 24 6	[−11]	e 32·4	—
Hamburg		−2·8	99·2	327	e 13 42	− 9	e 24 13	[− 7]	e 40·8	50·8
Cheb		−2·8	99·3	324	e 13 58	+ 6	e 24 10	[−10]	e 43·8	53·8
Jena	E.	−2·8	99·4	325	e 13 51	− 1	e 24 45	−37	e 44·8	52·6
	N.	−2·8	99·4	325	—	—	e 25 3	−19	e 42·8	52·6
Venice		−2·9	101·1	320	14 51?	+50	—	—	—	—

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.
Pompeii		−2·9	101·3	314	e 18 45	?PR$_1$	e 23 45	[−45]	42·8	—
Feldberg	N.	−2·9	101·6	324	—	—	e 23 48	[−44]	e 47·2	51·8
Ravensburg		−2·9	101·9	323	e 17 7	[−47]	24 18	[−15]	e 50·5	61·2
Rocca di Papa	E.	−2·9	102·2	315	e 17 42	[−13]	e 26 25	+36	e 41·6	55·4
	Z.	−2·9	102·2	315	e 14 58	+51	—	—	e 55·2	—
Florence		−2·9	102·4	317	e 14 21	+13	24 41	[+ 5]	38·8	50·8
Berkeley	E.	−2·9	102·4	50	—	—	e 24 34	[− 2]	e 47·1	—
Chur		−2·9	102·4	322	13 54	−14	—	—	—	—
De Bilt		−2·9	102·5	327	13 57	−12	e 24 29	[− 7]	e 44·8	54·4
Strasbourg		−2·9	102·7	324	e 13 51	−19	e 25 38	−16	e 49·8	65·4
Zurich		−2·9	102·7	322	e 13 42	−28	—	—	—	—
Dyce		−2·9	103·2	335	—	—	i 24 36	[− 3]	44·9	56·0
Uccle		−2·9	103·6	325	e 13 59	−15	i 24 35	[− 6]	e 33·8	55·1
Neuchatel		−2·9	103·9	322	e 13 49	−26	e 23 17	[−85]	—	—
Moncalieri		−2·9	104·2	320	e 14 14	− 3	e 24 32	[−12]	36·1	61·7
Besançon		−2·9	104·3	322	e 21 42	?	—	—	41·8	64·8
Edinburgh		−2·9	104·5	333	e 18 21	[+18]	i 25 55	? Σ	46·8	59·8
Stonyhurst		−2·9	105·4	331	e 18 32	[+26]	24 42	[− 7]	46·4	53·9
Paris		−2·9	105·6	324	—	—	e 24 43	[− 7]	50·8	54·8
Kew		−2·9	105·7	330	e 14 1	−23	e 24 42	[− 9]	47·8	55·2
Oxford		−2·9	106·0	330	—	—	24 41	[−11]	45·4	62·4
Bidston		−2·9	106·0	331	24 44	?[S]	24 44	[− 8]	46·0	57·6
Cape Town		−3·0	108·4	236	24 55	?[S]	(24 55)	[− 8]	—	—
Tortosa	N.	—	110·8	319	e 19 16	?PR$_1$	28 44	?PS	e 44·8	58·8
Algiers		—	111·0	314	e 13 47	?	e 25 5	[− 9]	e 45·8	59·8
Alicante		—	112·8	317	e 19 36	?PR$_1$	e 30 19	?	e 42·5	58·1
Tucson		—	113·2	50	e 20 58	?	—	—	e 52·2	—
Toledo		—	114·3	320	e 19 18	?PR$_1$	e 29 13	?PS	e 41·0	57·5
Almeria		—	114·8	316	i 19 45	?PR$_1$	29 9	?PS	56·5	67·6
Granada		—	115·5	316	i 20 7	?PR$_1$	i 24 57	?PR$_2$	49·2	55·8
Malaga		—	116·3	316	e 20 9	?PR$_1$	e 33 15	?	42·7	—
Rio Tinto		—	117·2	320	19 51?	?PR$_1$	—	—	—	72·8
San Fernando		—	117·6	317	19 9	[+23]	29 49	?PS	55·8	68·8
Chicago	E.	—	122·4	30	—	—	e 37 17	?SR$_1$	e 58·4	59·0
St. Louis	E.	—	123·4	33	e 14 51	?	i 24 40	?	52·0	54·2
Ann Arbor	N.	—	123·8	26	—	—	—	—	e 59·8	—
Ottawa		—	124·1	17	—	—	25 51	[− 6]	e 56·5	65·8
Toronto		—	124·4	21	e 20 36	?PR$_1$	e 26 8	[+10]	65·0	65·8
Cincinnati	N.	—	125·9	29	e 20 8	[+60]	—	—	e 54·8	61·8
Ithaca		—	126·5	20	—	—	—	—	63·8	—
Balboa Heights		—	150·0	58	e 19 51	[− 5]	—	—	—	—
La Plata		—	151·9	173	19 56	[− 3]	—	—	65·8	—
Rio de Janeiro		—	161·0	212	e 20 31	[+22]	—	—	—	—
La Paz		—	163·3	126	e 20 3	[− 7]	—	—	75·4	85·0
Sucre		—	163·8	138	i 20 3	[− 8]	—	—	64·4	95·4

Additional readings: Malabar iP = +5m.6s., iN = +5m.20s. Batavia iP = +5m.18s., iN = +5m.22s., +5m.37s., and +6m.12s., iZ = +5m.30s., i = +5m.31s. Osaka MN = +14·3m. Perth iP = +7m.48s., PR$_1$ = +9m.31s., SR$_1$ = +15m.39s. Adelaide iPR$_2$ = +9m.57s., iSR$_2$ = +17m.36s. = SR$_1$ + 12s., MN = +27·6m. Riverview iZ = +10m.17s., PR$_1$ = +10m.23s., PS = +15m.23s. and +15m.46s., iSR$_1$ = +18m.39s., +18m.51s., +19m.4s., and +19m.8s., eLE = +24·0m., eLN = +25·0m., MN = +29·4m., MZ = +29·5m.; T$_g$ = 21h.9m.59s. Irkutsk PR$_1$ = +10m.43s., PR$_2$ = +11m.23s., MN = +26·3m., MZ = +35·1m.; epicentre 7°46′N. 124°58′E. Simla PN = +9m.27s. Tashkent ePR$_1$ = +12m.27s., ePR$_2$ = +14m.9s., eSR$_1$ = +22m.27s., eSR$_2$ = +24m.51s. ?, MN = +34·2m., MZ = +38·4m. Apia PR$_1$ = +13m.1s. Christchurch PR$_2$ = +15m.45s. = PR$_2$ + 24s., SR$_1$ = +24m.27s., SR$_2$ = +27m.45s. = SR$_2$ + 22s. Wellington PR$_1$N = +13m.22s., PR$_1$E = +13m.25s., SR$_1$N = +24m.0s., SR$_1$E = +24m.3s., SR$_2$E = +26m.20s., SR$_2$N = +26m.48s.; T$_g$E = 21h.10m.10s.; T$_g$N = 21h.10m.42s. Ekaterinburg i = +13m.21s., iPR$_1$ = +14m.5s., e = +14m.37s., iPR$_2$ = +15m.37s., i = +16m.7s., and +17m.22s., iPS = +20m.58s., S$_1$P$_1$S = +21m.36s., e = +24m.55s. = SR$_1$ − 29s., SR$_2$ = +28m.20s., MN = +38·0, MZ = +44·2m. Baku MZ = +45·8m. Tiflis PR$_1$N = +15m.10s., PR$_2$N ? = +17m.6s., eN = +18m.59s., SR$_1$ = +27m.3s., eN = +27m.37s., and +31m.13s. Kucino PR$_1$ = +15m.33s., SR$_1$ = +28m.26s. MN = +40·9m. Makeyevka SR$_1$ = +27m.51s. ?, MN = +46·0m., MZ = +55·1m. Pulkovo PR$_1$ = +16m.6s., iS$_1$P$_1$S = +23m.4s., PS = +23m.49s., SR$_1$ = +28m.57s., SR$_2$ = +32m.21s., MN = +43·7m., MZ = +52·0; epicentre 7°58′N. 126°52′E. Helsingfors PZ = +13m.7s., PR$_1$E = +16m.31s., PR$_1$N = +16m.41s., PR$_2$E = +17m.33s., SR$_1$E = +30m.21s. Konigsberg eE = +24m.14s. = Σ − 6s., and +24m.45s., PS ? E = +24m.37s., PPS =

Continued on next page.

+25m.11s. Upsala $PR_1 = +17m.9s.$, $iE = +23m.42s.$, $eLN = +40{\cdot}8m.$, $MN = +45{\cdot}8m.$ Copenhagen $PR_1 = +17m.27s.$, $S_0P_0S = +23m.57s.$, $PS = +25m.51s.$?, $SR_1 = +31m.39s.$, $MZ = +50{\cdot}4m.$, $MN = +51{\cdot}2m.$ Vienna $PR_1 = +17m.29s.$, $PR_2 = +19m.35s.$, $S_0P_0S = +23m.58s.$, $PPS = +26m.44s.$, $SR_1 = +32m.7s.$ Prague $MN = +53{\cdot}4m.$ Zagreb $ePR_1 = +18m.47s.$, $ePR_2 = +19m.57s.$, $ePR_3 = +22m.8s.$, $ePS = +24m.42s. = \Sigma - 16s.$, $eSR_1NW = +26m.28s. = PS - 21s.$, $eSR_1NE = +26m.31s. = PS - 18s.$ Jena $eE = +36m.51s. = SR_2 + 18s.$ Feldberg $eN = +25m.29s. = \Sigma + 9s.$, +32m.51s., and +42m.22s., $i = +42m.58s.$, $ME = +53{\cdot}6m.$ Ravensburg $PR_1 = +19m.15s.$, $PR_2 = +20m.5s.$, $SR_1 = +28m.20s.$ Rocca di Papa $eP = +18m.56s.$, $PR_1 = +24m.26s. = [S] - 9s.$ Berkeley $eZ = +47m.10s.$, $eE = +70m.45s.$ Chur $e = +18m.14s. = PR_1 + 3s.$ De Bilt $ePR_1 = +18m.16s.$, $MN = +52{\cdot}4m.$, $MZ = +67{\cdot}4m.$ Strasbourg $ePR_1 = +18m.6s.$ $ePS = +26m.58s.$, $eSR_1 = +32m.42s.$, $eSR_2 = +40m.47s.$, $MN = +63{\cdot}0m.$ Zurich $e = +15m.21s.$ Dyce $PR_1 = +18m.21s.$, $e = +33m.7s. = SR_1 + 26s.$ Uccle $e = +18m.19s. = PR_1 + 1s.$, $i = +27m.43s. = PS - 2s.$, $MN = +55{\cdot}3m.$ Moncalieri $MN = +55{\cdot}0m.$ Stonyhurst $SR_1? = +31m.13s.$, $SR_2? = +34m.47s.$ Kew $PR_1 = +18m.33s.$, $e = +28m.9s. = PS + 1s.$, $eSR_1 = +35m.3s.$, $eSR_2 = +39m.21s.$, $MN = +62{\cdot}0m.$, $MZ = +62{\cdot}1m.$ Oxford $MN = +60{\cdot}8m.$ Bidston $S? = +32m.57s. = SR_1 - 20s.$ Tortosa $SE? = +28m.48s. = PS - 19s.$ Alicante $MN = +61{\cdot}9m.$ Tucson $eN = +26m.21s. = \Sigma - 12s.$, $+29m.8s. = PS - 25s.$, $+39m.13s.$, and $+46m.50s.$, $eE = +29m.4s. = PS - 29s.$ Toledo $MNW = +57{\cdot}7m.$ Granada $i = +21m.2s.$ San Fernando $PR_1 = +25m.25s. = PR_2 - 3s.$, $MN = +77{\cdot}8m.$ Chicago $eE = +27m.7s. = \Sigma - 21s.$, $+30m.7s.$, and $+49m.57s.$ St. Louis $iS_0P_0PE = +20m.59s. = PR_1 + 13s.$, $iPR_1E = +27m.33s. = \Sigma - 1s.$, $iPS_0P_0SE = +30m.15s.$, $ePPSE = +32m.7s.$, $eSR_2E = +36m.24s.$, $iE = +37m.26s. = SR_1 - 2s.$, and $+41m.0s.$, $iSR_1E = +38m.36s.$ Ottawa $PR_1 = +20m.43s.$, $PS = +30m.33s.$, $SR_1 = +37m.35s.$, $MN = +66{\cdot}8m.$ Toronto $eE? = +10m.54s.$, $eN = +27m.36s. = \Sigma - 4s.$, $eE = +39m.16s.$ Cincinnati $iN = +25m.44s. = [S] - 18s.$, $+31m.48s. = PS + 5s.$, and $+34m.12s.$, $eN = +34m.30s.$, and $+38m.36s. = SR_1 + 35s.$ La Paz $iP = +20m.6s.$, $PR_1 = +24m.27s.$, $i = +31m.23s. = \Sigma - 3s.$, and $+32m.22s. = PR_2 + 17s.$, $PS? = +35m.22s.$, $iSR_2? = +44m.52s.$, $i = +46m.31s.$ Sucre $PR_1 = +23m.59s.$, $i = +24m.51s. = PR_1 - 9s.$, and $+31m.23s. = \Sigma - 5s.$, $PS? = +35m.21s.$, $SR_1 = +41m.3s.$, $SR_2 = +44m.59s. = SR_1 - 31s.$, $SR_2 = +50m.27s.$

Note to the Shock of Nov. 16d. 21h.

Assuming the origin and time adopted and dividing the residuals in Δ into groups according to Azimuth, we have the following table :—

No. of Stations.	Group.	Az.	Equation.	Residuals. (1)	(2)
6	Japan	15	$+26x + 97y$	−1·6	−0·3
4	Australia	155	$+42x - 91y$	−2·1	−0·6
1	Perth	195	$-26x - 97y$	−2·5	−0·8
2	Java	235	$-82x - 57y$	−0·6	+0·3
7	India, etc.	290	$-94x + 34y$	−1·2	0·0
10	Russia, etc.	318	$-67x + 74y$	−1·5	+0·9

In the column for residuals (1) the figures are those deduced directly from the observations, while those in residuals (2) have been corrected for a depth of focus 0·020 as adopted above.
Solving the equations for residuals (2) we have $x = -0°{\cdot}4$, $y = +0°{\cdot}3$, indicating epicentre 6°·7N. 126°·4E. The new origin gives only a very slight improvement in the determination.

Nov. 16d. Readings also at 0h. (Ekaterinburg and near Toyooka), 1h. (La Paz, La Plata, and near Santiago), 2h. (near Tacubaya), 4h. (Tashkent), 5h. (Tiflis), 8h. (Tucson), 9h. (Tiflis and Tashkent), 11h. (Tashkent, near Sumoto and Toyooka), 13h. (near La Paz), 15h. (Tucson), 17h. (Tashkent), 18h. (Tashkent and Tiflis), 19h. (Tiflis and Toyooka (2)), 20h. (Tiflis), 21h. (near Port au Prince), 23h. (Tiflis, Batavia, and near Malabar).

Nov. 17d 13h 45m. 25s. Epicentre 2°·7S. 138°·8E. (as on Nov. 10d.).

A = −·752, B = +·658, C = −·047 ; D = +·659, E = +·752 ;
G = +·035, H = −·031, K = −·999.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		10·6	264	2 41	+ 3	—	—	i 5·2	—
Manila		24·7	315	(e 5 35?)	0	—	—	(12·6)	—
Batavia		32·0	265	e 7 35?	?PR$_1$	—	—	i 15·8	—
Adelaide		32·3	180	e 13 7	?S	(e 13 7)	+54	i 20·6	21·8
Riverview		33·2	161	e 12 37	?S	(e 12 37)	+10	e 19·9	24·7
Sydney	E.	33·2	161	16 41	?L	—	—	19·5	20·0
Perth		36·4	215	e 12 35	?S	(e 12 35)	−41	e 19·1	20·2
Wellington	E.	50·4	145	—	—	—	—	e 26·5	—
Irkutsk		62·2	338	e 10 30	+ 4	18 59	+ 8	34·4	40·0
Tashkent		76·6	315	i 11 55	− 4	i 21 50	+ 6	e 36·6	46·0
Ekaterinburg		85·8	327	i 12 43	− 9	23 21	− 7	38·6	49·5
Tiflis	E.	94·8	311	—	—	e 23 54	[− 2]	e 58·6	68·8
Kucino		98·3	326	—	—	—	—	e 53·3	—
Makeyevka		99·2	319	—	—	—	—	e 59·7	—
Pulkovo		101·5	331	—	—	e 34 29	?SR$_1$	54·6	65·9
Copenhagen		111·9	331	—	—	—	—	e 62·6	—
De Bilt		117·4	330	—	—	—	—	e 56·6	—
Uccle		118·6	330	—	—	—	—	e 31·6	—
Kew		120·5	332	—	—	—	—	e 74·6	—
Ottawa		127·7	30	—	—	—	—	e 64·6	—
La Paz		147·2	126	i 19 39	[−12]	—	—	—	—

Additional readings and note : Manila readings have been increased by 9m. Adelaide iS = +18m.16s. Riverview iS = +16m.57s., and +17m.1s., i = +18m.17s., SR$_1$ = +18m.37s., SR$_2$ = +19m.15s., eL = +20·6m., MN = +22·1m. Perth eS = +17m.40s. Wellington eLN = +26·6m. Irkutsk ePR$_1$ = +12m.45s. Tashkent eSR$_2$ = +28m.54s. Ekaterinburg iP = +14m.54s., S = +25m.32s. Tiflis eE = +26m.8s. = PS +3s., eLN = +58·1m., MN = +69·1m. De Bilt eL = +67·6m.

Nov. 17d. 14h. 33m. 25s. Epicentre 11°·0S. 167°·0E. (as on 1925 Jan. 14d.).

A = −·956, B = +·221, C = −·191 ; D = +·225, E = +·974 ;
G = +·186, H = −·043, K = −·982.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		20·9	100	e 5 35?	+53	—	—	11·6	—
Riverview		27·0	210	—	—	e 10 29	−12	e 11·8	18·3
Adelaide	E.	35·2	224	—	—	—	—	—	23·5
Irkutsk		82·8	327	e 12 39	+ 4	e 23 3	+ 8	35·1	46·9
Tashkent		103·0	311	—	—	—	—	e 45·6	57·2
St. Louis	E.	106·8	52	—	—	—	—	e 55·6	63·1
Ekaterinburg		108·1	326	—	—	—	—	45·6	70·0
Toronto	E.	114·6	46	—	—	—	—	61·9	—
Ottawa		116·9	44	—	—	—	—	e 55·6*	—
La Paz		118·9	116	e 44 57	?	—	—	60·5	—
Sucre		120·4	120	45 11	?	—	—	—	—
Kucino		120·4	330	—	—	—	—	e 57·5	—
Pulkovo		121·7	336	—	—	—	—	66·6	—
Makeyevka		123·7	321	—	—	—	—	68·6	—
Copenhagen		131·1	341	—	—	—	—	71·6	—
De Bilt		136·4	344	—	—	—	—	e 74·6	—
Feldberg	N.	137·0	340	—	—	—	—	—	83·6
Uccle		137·7	344	—	—	—	—	e 77·6	—
San Fernando	E.	153·8	348	—	—	—	—	—	123·6

Additional readings : Riverview MN = +18·4m. Adelaide MN = +22·4m. Tashkent MZ = +55·9m., MN = +56·2m. Ekaterinburg MN = +61·2m., MZ = +68·1m. San Fernando MN = +89·6m.

Nov. 17d. 20h. 54m. 42s. Epicentre 23°·8S. 67°·5W. (give by La Paz).

$A = +\cdot350$, $B = -\cdot845$, $C = -\cdot404$; $D = -\cdot924$, $E = -\cdot383$; $G = -\cdot154$, $H = +\cdot373$, $K = -\cdot915$.

A depth of focus 0·025 has been assumed.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Sucre		0·0	5·2	24	i 1 20	0	i 2 16	− 6	i 2·4	3·2
La Paz		−0·1	7·3	355	i 1 52	+ 3	i 3 18	+ 3	i 3·9	5·3
Santiago		−0·3	10·0	196	2 32	+ 6	3 52	−29	4·7	—
La Plata		−0·5	13·8	145	3 8	− 9	5 30	−21	6·6	—
Rio de Janeiro	N.	−1·2	22·3	93	e 4 42	−12	—	—	—	—
Toronto	N.	−3·2	68·3	351	—	—	i 19 28	+ 2	—	—
Ottawa		−3·2	69·6	354	—	—	i 19 46	+ 4	—	—
Pulkovo		—	114·3	33	—	—	—	—	e 26·3	—
Ekaterinburg		—	130·4	34	e 18 59	[−21]	—	—	48·3	—
Tashkent		—	140·1	53	i 19 9	[−30]	—	—	—	—
Irkutsk		—	150·9	10	19 30	[−27]	e 29 45	?Σ	—	—
Phu-Lien		—	173·8	118	15 18?	?	—	—	—	—

Additional readings: La Paz iSN = +3m.24s., i = +3m.49s. Rio de Janeiro ePE = +4m.43s. Ekaterinburg i = +19m.47s., +22m.4s., +23m.31s., and +27m.53s. = Σ −23s., e = +21m.4s. = PR_1 −28s., and +28m.23s. Tashkent i = +21m.54s., and +22m.32s., e = +34m.11s. Irkutsk e = +20m.20s.

Nov. 17d. 22h. 35m. 22s. Epicentre 7°·0N. 126°·0E. (as on Nov. 16d.).

$A = -\cdot583$, $B = +\cdot803$, $C = +\cdot122$; $D = +\cdot809$, $E = +\cdot588$; $G = -\cdot072$, $H = +\cdot099$, $K = -\cdot993$.

The depth of focus 0·020 is assumed.

	Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	−0·2	9·0	327	e 1 38?	−35	—	—	—	—
Amboina	−0·2	10·9	169	2 28	−12	—	—	—	—
Hong Kong	−0·7	19·1	325	4 40	+18	—	—	—	8·2
Phu-Lien	−1·0	23·2	308	i 5 8	+ 1	e 9 20	+11	11·2	—
Batavia	−1·0	23·2	236	i 5 12	+ 5	i 9 23	+14	—	—
Zi-ka-wei	−1·1	24·6	350	e 5 19	− 4	e 9 52	+17	—	—
Irkutsk	−2·0	48·6	343	8 41	− 3	e 15 52	+16	24·5	33·0
Tashkent	−2·4	60·7	316	i 10 7	+ 6	18 58	?PS	e 28·6	38·1
Ekaterinburg	−2·6	70·8	329	i 11 19	+14	e 20 51	[−26]	32·6	37·8
Makeyevka	−2·7	83·4	320	—	—	—	—	42·6	—
Pulkovo	−2·7	86·8	330	—	—	e 20 8	?	48·6	—
Copenhagen	−2·8	97·1	330	—	—	—	—	53·6	—
De Bilt	−2·9	102·5	327	—	—	—	—	e 57·6	—
Uccle	−2·9	103·6	325	—	—	—	—	53·6	—

Additional readings: Batavia i = +5m.15s. Irkutsk PR_1 = +10m.56s., SR_1 = +19m.32s. Tashkent ePR_1 = +12m.33s., ePR_2 = +12m.44s., eSR_1 = +22m.41s., MN = +34·4m., MZ = +38·0m. Ekaterinburg e = +25m.35s. = SR_1 +11s.

Nov. 17d. Readings also at 4h. (Zagreb), 6h. (Ekaterinburg and Irkutsk), 7h. (Tashkent), 8h. (Tashkent and Wellington), 9h. (Tiflis), 10h. (near Toyooka), 13h. (near La Paz), 15h. (Mizusawa), 17h. (near Kobe and Sumoto), 20h. (Ekaterinburg, Makeyevka, Tashkent, near Irkutsk, near Mizusawa, near Oaxaca, and Tacubaya).

Nov. 18d. 3h. 24m. 36s. Epicentre 9°·8N. 126°·2E. (as on 1927 Oct. 27d.).

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		7·0	314	i 1 55	+ 9	i 3 7	− 3	i 3·5	5·2
Amboina		13·6	172	3 17	− 4	—	—	—	—
Taihoku	E.	15·9	344	4 6	+15	(6 59)	+ 6	7·0	—
Hong Kong		17·0	319	4 14	+ 9	7 14	− 4	8·4	11·9
Phu-Lien		21·8	302	4 59	− 4	e 8 53	− 8	e 10·3	13·4
Zi-ka-wei		21·9	349	i 5 3	− 1	i 9 6	+ 3	—	28·7
Nagasaki		23·2	8	i 5 15	− 4	(9 58)	+29	10·0	—
Hukuoka		24·1	9	5 25	− 4	(9 47)	+ 1	9·8	10·4
Batavia		25·0	231	i 5 42	+ 4	i 10 18	+15	—	—
Malabar		25·2	228	5 35	− 5	—	—	—	—
Sumoto		25·8	17	e 5 39	− 7	e 8 38	−100	e 12·6	—
Kobe		26·2	17	e 5 15	−35	—	—	—	16·4
Osaka		26·3	17	6 44	+53	(11 13)	+45	11·2	12·8
Mizusawa	E.	32·2	23	6 38	−12	—	—	—	—
Perth		42·9	193	—	—	14 39	− 8	—	—
Irkutsk		46·1	343	i 8 29	−12	15 12	−17	23·2	30·9
Hyderabad		46·9	286	8 40	− 6	15 25	−15	24·7	32·3
Kodaikanal		48·0	275	13 54	?	—	—	19·2	30·5
Riverview		49·6	153	e 10 48	?PR_1	e 19 30	?SR_1	e 26·5	28·2
Sydney	E.	49·6	153	14 0	?S	(14 0)	−134	25·7	27·7
Simla		50·1	304	—	—	e 16 12	− 8	—	—
Melbourne		50·7	161	—	—	i 15 24	−63	i 29·0	32·4
Bombay		52·3	287	9 20	− 2	16 48	0	e 26·1	—
Tashkent		58·9	314	i 10 50	+46	i 18 52	+42	e 30·4	37·7
Ekaterinburg		68·6	328	i 11 14	+ 6	i 20 11	+ 2	27·4	—
Baku		73·3	310	i 11 38	0	i 21 11	+ 5	38·4	47·2
Tiflis	E.	77·1	311	e 11 59	− 3	e 21 45	− 5	e 40·4	49·8
	N.	77·1	311	e 12 1	− 1	e 21 46	− 4	—	46·4
Kucino		81·0	326	12 42	+17	e 22 30	− 5	40·4	51·0
Makeyevka		81·6	319	e 12 22	− 6	i 22 29	−13	35·4	53·8
Pulkovo		84·5	330	i 12 38	− 7	22 59	−15	45·4	52·4
Ksara		84·9	304	13 36	+49	24 4	?PS	48·4	—
Helsingfors		87·0	331	i 12 50	− 9	23 25	−16	47·4	54·6
Upsala		90·6	332	—	—	e 23 24?	[− 8]	—	58·5
Budapest		94·1	320	—	—	—	—	e 51·9	—
Copenhagen		94·8	329	e 16 24?	?	e 24 0	[+ 4]	45·4	60·2
Vienna		95·5	322	e 13 27	−19	—	—	—	59·4
Victoria	E.	96·0	39	24 11	?[S]	(24 11)	[+ 9]	45·3	46·6
Prague		96·0	323	—	—	e 25 24?	+ 8	e 52·4	57·4
Graz		96·5	320	—	—	—	—	e 40·4	63·6
Hamburg		97·0	328	—	—	—	—	e 51·4	61·4
Cheb		97·2	325	—	—	e 25 2	−26	e 49·4	57·4
Feldberg	N.	99·4	324	—	—	—	—	e 49·9	55·1
Pompeii		99·5	315	e 23 44	?[S]	(e 23 44)	[−37]	—	—
De Bilt		100·3	326	—	—	e 25 24?	?Σ	e 48·4	64·5
Rocca di Papa		100·4	315	e 16 5	?	e 25 14	?Σ	e 49·0	—
Florence		100·5	318	—	—	—	—	e 55·4	62·4
Strasbourg		100·6	325	—	—	—	—	e 38·4	—
Uccle		101·4	327	—	—	e 25 24?	?Σ	e 50·4	59·1
Edinburgh		102·1	334	—	—	—	—	—	65·4
Moncalieri	E.	102·3	320	e 14 16	− 6	26 10	− 8	55·7	—
		102·3	320	e 15 52	+90	25 50	?Σ	54·8	—
Paris		103·4	325	—	—	e 38 42	?SR_2	58·4	64·4
Kew		103·4	330	—	—	e 41 24?	?SR_2	50·4	65·9
Oxford		103·7	330	—	—	—	—	e 55·9	66·4
Tortosa	N.	108·9	320	—	—	—	—	e 57·4	61·5
Toledo	N.W.	112·3	320	—	—	—	—	e 49·0	—
Granada		113·6	318	—	—	—	—	e 65·9	68·9
Rio Tinto		115·2	320	60 24?	?L	—	—	(60·4)	73·4
San Fernando	E.	115·7	319	—	—	—	—	—	62·4
St. Louis	N.	120·9	33	—	—	—	—	e 59·4	—
Ottawa		121·4	16	e 20 33	?PR_1	e 30 24	?PS	e 55·4	—
La Paz		164·5	117	20 14	[+ 2]	i 31 36	?Σ	79·4	92·0
Sucre		165·6	131	i 20 16	[+ 4]	—	—	82·4	91·6

Additional readings: Manila MN = +5·0m. +15m.51s. Zi-ka-wei PS = +9m.28s. +5m.45s., iZ = +5m.49s., i = +5m.51s. Amboina i = +4m.21s., and Batavia iZ = +5m.44s., iP = Osaka MN = +13·2m. Perth

Continued on next page.

S? = +14m.19s. Irkutsk PR_1 = +10m.22s., PR_2 = +11m.49s., SR_1 = +18m.29s., MZ = +31·0m.; epicentre 10°38′N. 125°51′E. Tashkent ePR_1 = +12m.56s., ePS = +19m.20s., eSR_1 = +23m.4s., MN = +36·6m., MZ = +58·7m. Ekaterinburg e = +20m.27s., and +24m.51s. Baku MN = +42·2m., MZ = +54·1m. Tiflis eS_1P_4S?E = +22m.5s., eE = +23m.0s., SR_1E = +27m.35s., SR_1N = +27m.37s., eSR_2?N = +30m.49s. Kucino PR_2 = +18m.12s., e = +21m.42s., and +22m.0s., eSR_1 = +27m.54s., MN = +45·2m., MZ = +51·9m. Makeyevka MZ = +52·0m., MN = +53·3m. Pulkovo SR_1 = +29m.0s., MN = +49·3m. Helsingfors PE = +12m.52s., eE = +23m.4s. = [S] − 5s., MN = +53·6m. Upsala MN = +61·0m. Budapest eL = +59·9m. Copenhagen MN = +53·2m., MZ = +60·3m. Vienna iPZ = +13m.31s. Hamburg MN = +54·4m. De Bilt MN = +57·1m., MZ = +64·3m. Rocca di Papa ePN = +18m.8s. = PR_1 − 8s. San Fernando MN = +75·9m. Ottawa eE = +37m.9s. La Paz PR_1 = +24m.43s., SR_1? = +46m.51s. Sucre PR_1 = +24m.54s., PPS = +38m.22s., SR_1 = +44m.40s.

Nov. 18d. 11h. 1m. 36s. Epicentre 21°·5N. 68°·0E.

A = +·349, B = +·863, C = +·367; D = +·927, E = −·375; G = +·137, H = +·340, K = −·930.

Very uncertain.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Bombay		5·2	119	1 18	− 2	2 16	− 6	2·6	—
Hyderabad		10·7	110	4 7	+87	4 40	− 8	4·8	5·2
Simla		12·7	39	e 4 0	+51	—	—	—	—
Colombo		18·6	140	7 56	?S	(7 56)	+ 3	—	12·1
Calcutta	N.	18·9	83	6 34	+126	8 36	+36	—	—
Tashkent		19·8	3	i 4 46	+ 7	i 8 8	−11	i 10·2	11·2
Baku		24·3	325	—	—	e 9 26	−24	15·2	20·6
Tiflis	N.	28·1	321	—	—	—	—	e 17·4	—
Ekaterinburg		35·7	354	e 6 39	−40	e 11 57	−69	16·4	—
Kucino		40·9	334	—	—	—	—	e 27·4	—
Irkutsk		41·5	33	e 8 47	+40	e 16 14	+106	19·4	24·2
Pulkovo		46·6	335	—	—	e 18 30	?SR_1	26·4	—

Additional readings and note: Tashkent i = +5m.2s., and +8m.22s., MZ = +12·2m. Irkutsk MZ = +24·6m.; P and S are given simply as e.

Nov. 18d. 12h. 36m. 30s. Epicentre 34°·5N. 25°·0E. (as on 1925 Jan. 19d.).

A = +·747, B = +·348, C = +·566; D = +·423, E = −·906; G = +·513, H = +·239, K = −·824.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ksara		9·0	91	2 28	+12	5 2	+59	—	—
Belgrade	N.	10·9	343	e 15 34	?	—	—	—	—
Zagreb	N.W.	13·2	331	—	—	—	—	e 7·0	8·1
Budapest		13·7	343	—	—	—	—	e 7·0	9·5
Makeyevka		16·7	32	—	—	—	—	e 9·2	—
Tiflis		17·1	59	—	—	e 7 57	+37	e 8·8	10·0
Prague		17·4	337	—	—	—	—	e 9·5	11·5
Baku		20·6	66	e 4 43	− 5	e 8 45	+ 9	10·5	—
De Bilt		22·6	327	—	—	—	—	e 13·0	—
Pulkovo		25·5	6	5 45	+ 2	9 59	−14	14·5	—
Ekaterinburg		32·8	36	e 6 52	− 3	e 12 20	− 1	15·5	—
Tashkent		35·2	65	—	—	—	—	e 15·5	24·4

Additional readings: Belgrade eN = +16m.59s. Zagreb eSNW = +7m.50s., MNE = +7·9m. Makeyevka L = +13·5m. Tiflis MN = +10·1m.

Nov. 18d. Readings also at 1h. (near Batavia), 4h. (Nagoya and near Mizusawa), 7h. (Ottawa, St. Louis, Tucson, Victoria, Tacubaya, Sucre, La Paz, and Zi-ka-wei), 8h. (Baku, Ekaterinburg, Honolulu T.H., Makeyevka, Tashkent, and near Irkutsk), 10h. (near Mizusawa), 12h. (near Ksara), 15h. (Toyooka), 16h. (Ekaterinburg, Tashkent, and Tiflis), 17h. (Ekaterinburg), 18h. (La Paz (2)), 22h. (Sucre, La Paz (2), and Tiflis), 23h. (La Paz),

Nov. 19d. 3h. 32m. 36s. Epicentre 37°·7N. 118°·5W. (as on 1927 Sept. 18d.)

A = −·378, B = −·695, C = +·612 ; D = −·879, E = +·477 ;
G = −·292, H = −·537, K = −·791.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Berkeley	E.	3·0	273	—	—	e 1 24	+ 1	e 1·6	—
	N.Z.	3·0	273	**e 0 51**	+ 4	e 1 25	+ 2	e 1·5	—
Tucson		8·3	129	—	—	e 3 26	−19	4·6	4·9
Victoria	E.	11·2	343	—	—	—	—	7·4	9·7
St. Louis		22·2	79	e 4 51	−16	i 9 24	+15	e 12·4	15·2
Toronto	E.	30·0	67	—	—	—	—	18·0	—
Ottawa	N.	32·5	62	—	—	—	—	e 18·4	—

Additional readings : Tucson eN = +3m.45s., =S +0s., eE = +4m.15s., eN = +4m.22s. St. Louis iN = +7m.59s., iSN = +9m.31s., MN = +15·6m.

Nov. 19d. 6h. 50m. 40s. Epicentre 8°·0N. 103°·0W. (as on 1926 Nov. 7d.).

A = −·223, B = −·965, C = +·139 ; D = −·974, E = +·225 ;
G = −·031, H = −·136, K = −·990.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tacubaya		12·0	17	2 48	−11	5 32	+13	5·9	7·1
Tucson	E.	25·3	344	e 5 43	+ 2	e 10 5	− 4	e 11·6	12·9
	N.	25·3	344	e 5 40	− 1	e 9 49	−20	e 13·5	18·4
St. Louis		32·7	20	i 6 26	−28	e 11 19	−60	e 14·2	18·2
Chicago	E.	36·4	20	—	—	e 13 5	−11	e 20·0	—
Toronto		41·2	26	e 7 54	−11	i 14 6	−18	27·9	—
La Paz		42·3	128	i 8 16	+ 3	i 14 39	0	21·7	30·5
Victoria	E.	43·9	341	14 51	?S	(14 51)	−10	21·0	24·9
Ottawa		44·2	28	e 10 5	?PR_1	e 14 54	−11	e 21·3	—
Sucre		46·0	129	e 8 44	+ 4	i 15 36	+ 8	24·7	30·3
Honolulu T.H.	E.	54·4	291	—	—	—	—	e 25·6	27·2
	N.	54·4	291	—	—	e 24 6	?SR_3	26·9	28·5
Paris		94·0	40	—	—	—	—	e 49·3	—
Uccle		94·5	38	—	—	—	—	46·3	—
De Bilt		94·6	36	—	—	—	—	e 46·3	—
Copenhagen		97·2	31	—	—	26 20?	?PS	—	—
Pulkovo		102·8	22	—	—	e 23 48	?	53·3	59·8
Kucino		108·5	22	—	—	e 34 38	?SR_1	55·5	62·8
Ekaterinburg		113·8	10	—	—	e 29 39	?PS	55·3	71·1
Makeyevka		114·3	27	—	—	—	—	56·3	—
Baku		125·6	25	—	—	—	—	62·3	—
Tashkent		130·2	6	e 19 33	[+14]	—	—	e 59·3	65·0

Additional readings and notes : St. Louis iPR_1 = +7m.19s., eSE = +11m.26s., iSR_3N = +13m.54s. =SR_1 −12s., MN = +18·3m. Chicago eSR_1E = +15m.37s. La Paz iSN = +14m.42s. ; T_0 =6h.50m.43s. Victoria PN = +14m.49s. Sucre PR_1 = +10m.36s., SR_1 = +18m.57s. ; T_0 = 6h.50m.40s. Pulkovo e = +33m.7s. =SR_1 −5s. Kucino MN = +63·0m. Ekaterinburg e = +35m.40s. =SR_1 +10s., and +39m.53s., MN = +62·4m., MZ = +71·2m. Tashkent e = +23m.7s., +27m.14s. =PR_3 −18s., and +29m.53s., MN = +82·9m., MZ = +83·2m.

Nov. 19d. 7h. 29m. 36s. Epicentre 19°·0S. 173°·0W. (given by Apia, and as on 1924 Nov. 5d.).

A = −·939, B = −·115, C = −·326; D = −·122, E = +·993; G = +·323, H = +·040, K = −·946.

A depth of focus 0·060 has been assumed, see the note at the end.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		+0·4	5·3	13	1 28	0	2 32	− 4	2·9	3·1
Suva	E.	−0·3	8·2	275	i 1 54	− 6	i 3 18	−16	i 4·5	6·5
	N.	−0·3	8·2	275	i 1 30	−30	i 3 0	−34	i 3·9	5·5
Wellington	E.	−3·1	24·6	202	i 4 40	−19	i 8 20	−35	i 10·3	—
	N.	−3·1	24·6	202	e 4 8	−51	i 8 8	−47	10·4	—
Riverview		−4·2	35·1	237	e 6 54	+17	—	—	e 13·3	18·7
Sydney	E.	−4·2	35·1	237	—	—	—	—	15·2	17·6
Melbourne		−4·8	41·0	234	e 8 42	+78	—	—	e 15·0	22·4
Adelaide		−5·1	45·5	240	e 13 29	?S	(e 13 29)	−44	e 24·9	27·1
St. Louis	E.	−7·6	96·4	53	—	—	—	—	e 46·1	—
Toronto	E.	−7·8	105·5	49	—	—	—	—	57·4	—
Ottawa	N.	−7·9	108·4	47	—	—	—	—	e 51·4	—
Tashkent		—	123·0	308	—	—	e 69 30	?	e 69·7	71·1
Ekaterinburg		—	125·4	327	—	—	—	—	60·4	70·8
Pulkovo		—	136·0	343	e 21 50	?PR_1	—	—	68·4	76·3
Kucino		—	136·5	334	—	—	—	—	e 69·9	—
Makeyevka		—	141·6	326	—	—	e 63 24?	?	73·4	—
Copenhagen		—	143·1	354	—	—	—	—	72·4	—
Hamburg	Z.	—	145·3	358	18 36	[−73]	—	—	—	—
De Bilt		—	146·5	2	i 18 43	[−68]	—	—	e 77·4	—
Kew	Z.	—	147·1	10	—	—	—	—	e 76·4	—
Uccle		—	148·1	4	—	—	—	—	e 76·4	—
Vienna	Z.	—	149·8	347	18 39	[−77]	—	—	—	—
Paris		—	150·0	6	—	—	—	—	e 78·4	—
Zagreb		—	152·2	347	i 18 57	[−62]	—	—	—	—
Florence		—	155·0	353	e 18 54	[−68]	—	—	—	—
Rio Tinto		—	157·8	29	83 24?	?L	—	—	(83·4)	93·4
San Fernando	E.	—	159·1	31	—	—	—	—	—	102·9

Additional readings: Apia MN = +3·0m.; T_o = 7h.29m.44s.; epicentre 19°S. 173°W., as adopted. Suva iE = +5m.6s.; T_oN = 7h.29m.12s.; T_oE = 7h.29m.36s. Riverview MN = +16·6m. Adelaide eS = +19m.55s., MN = +26·6m. Ekaterinburg MN = +68·3m. Zagreb eNE = +19m.2s. and +19m.9s., iNW = +19m.11s. San Fernando MN = +88·9m.

Note to the Shock of Nov. 19d. 7h. 29m. 36s.

Collecting the residuals in Δ for the stations near the epicentre we have the following table:—

Az.	Station	Residuals. (1)	(2)
°			
13	Apia	0·0	−0·4
202	Wellington E.	−5·2	−2·1
234	Melbourne	(+4·3)	(+9·1)
237	Riverview	−3·0	+1·2
240	Adelaide	−8·5	−3·4
275	Suva E.	−1·1	−0·8

The Residual (2) column is obtained by applying a correction for focal depth to the natural residuals in column (1). It would seem from this that a greater depth still would give better results but the earthquake is not sufficiently widely observed to justify greater refinement.

Nov. 19d. 18h. 5m. 45s. Epicentre 72°·5N. 12°·0W. (as on 1927 Oct. 30d.

A = +·294, B = −·063, C = +·954; D = −·208, E = −·978; G = +·933, H = −·198, K = −·301.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Copenhagen	19·6	135	—	—	(8 15?)	0	8·2	—
Pulkovo	20·6	106	e 4 47	− 1	e 8 20	−16	9·8	10·0
Kew	21·7	160	—	—	—	—	e 10·2	—
Makeyevka	33·1	110	—	—	e 12 41	+15	16·2	—
Tashkent	48·5	84	e 8 56	− 1	—	—	e 19·6	26·1

Additional readings: Pulkovo MN = +9·9m., MZ = +11·1m. Tashkent MZ = +28·5m., MN = +28·6m.

Nov. 19d. 23h. 3m. 36s. Epicentre 48°·8N. 0°·5W.

(See "A study of the Seismograms of English Channel Earthquakes" by A. E. Mourant, M.N.R.A.S. Geoph. Supp., Vol. II, No. 7.)

A = +·659, B = −·006, C = +·752; D = −·009, E = −1·000; G = +·752, H = −·007, K = −·659.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Paris		2·0	90	e 0 19	−12	e 0 51	− 4	0·9	—
Kew		2·7	2	e 0 40	− 2	i 1 17	+ 3	—	—
Oxford	N.	3·1	351	i 0 48	− 1	1 17	− 9	—	—
Uccle		3·7	55	e 0 55	− 3	i 1 46	+ 4	—	—
Puy de Dôme		3·9	141	e 1 4	+ 3	i 1 49	+ 2	—	—
Besançon		4·6	107	e 1 30	+19	i 2 17	+11	—	—
De Bilt		4·8	43	—	—	—	—	e 2·4	—
Neuchatel		5·3	107	e 1 7	−15	i 2 37	+12	—	—
Strasbourg		5·4	89	e 1 42	+19	2 36	+ 8	—	—
Zurich		6·2	100	e 1 20	−15	i 3 8	+19	(i 3·1)	—
Hohenheim	E.	6·4	86	e 2 37	+59	e 3 12	+17	—	3·5
	N.	6·4	86	e 2 38	+60	e 3 8	+13	—	3·5
Ravensburg		6·8	94	—	—	—	—	e 3·5	3·8
Chur		7·0	102	e 1 30	−16	i 3 35	+25	(i 3·6)	—
Tortosa		8·0	174	—	—	e 3 51	+14	(4·5)	—
Vienna	Z.	11·2	86	5 41	?L	—	—	(5·7)	—

Additional readings and note: Paris eP = +28s. Kew e = +1m.11s. Oxford iPE = +51s. =P +2s. Uccle i ∓ +1m.0s., e = +1m.27s. Strasbourg S = +2m.9s., iSR$_3$ = +2m.44s., and +2m.51s. Zurich iP = +1m.22s. Tortosa gives S as e and L as S.

Nov. 19d. Readings also at 0h. (Ekaterinburg and Tashkent), 1h. (Tashkent), 2h. (Manila), 3h. (Tashkent and near Tortosa), 5h. (La Plata), 8h. (near Tacubaya), 12h. (Ekaterinburg), 14h. (Irkutsk), 15h. (Ekaterinburg and Tiflis), 16h. (Tiflis), 19h. (Taihoku), 22h. (near Balboa Heights).

Nov. 20d. 10h. 24m. 0s. Epicentre 43°·9N. 9°·5E. (as on 1926 Oct. 11d.).

A = +·711, B = +·119, C = +·693; D = +·165, E = −·986; G = +·684, H = +·114, K = −·721.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Florence		1·3	95	0 12	− 8	—	—	—	0·7
Moncalieri	E.	1·7	311	e 0 17	− 9	1 2	+14	1·4	—
Chur		2·9	0	e 0 55	+10	i 2 38?	+78	—	—
Neuchatel		3·6	331	e 0 53	− 3	e 1 29	−10	—	—
Zurich		3·6	350	e 0 50	− 6	i 1 28	−11	—	—
Innsbruck		3·7	20	e 1 13	+15	i 2 33	+51	—	—
Strasbourg		4·8	349	1 42	+28	—	—	i 2·4	—
Zagreb	N.E.	5·0	65	i 1 49	+32	i 2 20	+ 3	i 2·5	—
	N.W.	5·0	65	e 1 30	+13	i 2 18	+ 1	i 2·5	—

Zagreb gives also eNE = +1m.55s., iNW = +2m.16s.

Nov. 20d. 17h. 14m. 36s. Epicentre 1°·5N. 121°·0E.

A = −·515, B = +·857, C = +·026; D = +·857, E = +·515;
G = −·013, H = +·022, K = −1·000.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		8·8	125	i 2 43	+30	—	—	—	—
Manila		13·1	0	e 3 18	+ 4	—	—	11·3	—
Batavia	E.	16·1	241	e 2 24?	?	—	—	i 8·3	—
Phu-Lien		23·9	325	e 5 23	− 4	e 9 36	− 6	11·4	—
Zi-ka-wei	Z.	29·7	1	e 6 17	− 8	—	—	—	—
Irkutsk		52·7	349	i 9 24	0	16 53	+ 1	24·9	34·9
Tashkent		61·2	319	i 10 24	+ 4	18 51	+13	e 30·4	38·4
Ekaterinburg		73·0	331	i 11 43	+ 7	e 21 10	+ 8	29·4	46·4
Baku		74·8	311	—	—	—	—	46·4	—
Tiflis	E.	78·8	312	e 12 11	− 1	e 22 5	− 5	e 48·4	51·8
	N.	78·8	312	e 12 12	0	e 22 4	− 6	e 47·4	55·6
Makeyevka		84·2	319	—	—	—	—	58·4	—
Pulkovo		89·1	330	e 13 5	− 6	e 23 29	[+ 6]	49·4	—
Copenhagen		99·1	330	—	—	—	—	54·4	—
La Paz		162·6	150	20 21	[+11]	—	—	—	—

Additional readings and notes: Amboina e = +1m.12s. Batavia i = +5m.5s. Irkutsk PR_1 = +11m.50s., PR_2 = +12m.49s., SR_1 = +20m.33s., SR_2 = +23m.33s. Ekaterinburg e = +19m.45s., and +22m.14s.

Nov. 20d. Readings also at 0h. (Balboa Heights), 1h. (Alicante), 3h. (Suva), 4h. (Calcutta, Tashkent, and Tiflis), 8h. (Ekaterinburg, Pulkovo, near Irkutsk, near Tashkent, and near Sumoto), 10h. (Florence), 12h. (Amboina), 13h. (Tashkent), 15h. (La Paz), 20h. (Tiflis), 21h. (Sucre).

Nov. 21d. 15h. 13m. 50s. Epicentre 56°·4N. 136°·0W. (as on Nov. 12d.).

A = −·398, B = −·384, C = +·833; D = −·695, E = +·719;
G = −·599, H = −·579, K = −·553.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka		0·7	29	i 0 23	+12	—	—	i 0·6	0·7
Victoria	E.	11·1	131	5 19	?S	(5 19)	+22	6·2	—
	N.	11·1	131	5 29	?S	(5 29)	+32	6·3	8·1
Tucson		29·8	134	—	—	—	—	e 17·0	—
Chicago		34·0	96	—	—	—	—	e 18·1	18·8
St. Louis		34·8	103	—	—	—	—	e 16·8	18·4
Ann Arbor		35·8	91	—	—	—	—	e 18·0	19·8
Toronto	E.	37·3	87	—	—	—	—	i 19·5	20·0
Cincinnati	N.	37·4	95	—	—	—	—	i 19·9	20·8
Ottawa		38·2	82	—	—	—	—	e 19·2	20·2
Ithaca		39·7	86	—	—	—	—	e 20·7	—
Fordham	N.	42·2	86	—	—	—	—	e 22·2	—
Irkutsk		60·6	324	—	—	e 18 40	+ 9	e 33·0	38·1
Pulkovo		63·3	9	—	—	—	—	e 31·5	—
Ekaterinburg		65·9	352	e 10 47	− 3	e 19 29	− 7	28·2	42·4
Tashkent		80·0	341	—	—	e 22 9	−14	e 38·2	47·5

Additional readings: Sitka iE = +24s., iN = +27s. Chicago iN = +18m.16s., eLN = +18·4m., LE = +18·5m. St. Louis eN = +18m.0s., eE = +18m.2s., MN = +18·6m. Ann Arbor eN = +18m.52s., eE = +19m.4s., eL = +19·7m., MN = +19·9m. Ottawa eN = +18m.10s. Irkutsk MZ = +38·8m. Tashkent e = +31m.10s. ?, MN = +54·6m.

Nov. 21d. 18h. 50m. 40s. Epicentre 9°·2S. 80°·0W.

A = +·171, B = −·972, C = −·160; D = −·985, E = −·174; G = −·028, H = +·157, K = −·987.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz		13·7	124	e 3 21	− 1	i 6 0	− 1	7·1	8·5
Sucre		17·4	126	i 4 9	− 1	i 7 27	0	8·7	10·6
Balboa Heights		18·2	1	e 4 20	+ 1	—	—	—	—
La Plata		32·7	145	i 6 41	−13	—	—	—	—
Rio de Janeiro	E.	37·8	117	e 13 5	?S	(e 13 5)	−30	19·5	—
	N.	37·8	117	e 13 0	?S	(e 13 0)	−35	19·5	—
St. Louis		48·4	350	e 9 0	+ 4	e 15 52	− 7	e 22·0	—
Tucson		50·9	327	e 9 14	+ 2	—	—	e 26·3	—
Toronto	N.	52·8	0	—	—	(16 39)	−15	34·3	—
Ottawa		54·7	5	e 9 50	+13	e 17 20	+ 3	e 24·3	—
Victoria		69·1	331	11 23	+11	20 26	+11	36·0	40·4
San Fernando	E.	82·7	51	—	—	—	—	—	56·3
Rio Tinto		82·8	50	41 20?	?L	—	—	(41·3)	51·3
Granada		84·9	51	i 12 45	− 2	22 30	[−25]	45·3	50·1
Kew		90·9	38	—	—	—	—	e 47·3	—
Uccle		93·9	40	—	—	—	—	e 48·3	—
De Bilt		94·3	39	—	—	—	—	e 37·3	—
Strasbourg		95·4	42	—	—	—	—	e 46·3	—
Copenhagen	E.	99·0	35	—	—	—	—	e 51·3	—
Pulkovo		108·1	30	—	—	e 28 32	?PS	54·3	—
Makeyevka		115·4	40	—	—	—	—	52·3	—
Ksara	E.	116·6	56	41 18	?SR_2	49 5	?	50·6	—
Tiflis		121·8	45	e 40 40	?	—	—	52·0	53·6
Ekaterinburg		123·5	24	e 16 28	+29	e 26 41	[+45]	41·3	61·1
Baku		125·9	45	—	—	—	—	e 51·7	—
Irkutsk		136·8	355	e 19 37	[+ 3]	—	—	71·1	76·7
Tashkent		138·0	34	e 16 25	?	—	—	e 72·3	81·9

Additional readings: La Paz i = +6m.53s. Rio de Janeiro SE = +17m.28s., SN = +17m.30s. St. Louis iPN = +9m.3s., iPS = +16m.0s., eE = +18m.4s., and +19m.58s., eS_cSE ? = +18m45s. Toronto readings are both given as LN. Tucson ePN = +9m.15s. San Fernando MN = +54·3m. Granada PS = +23m.23s. Tiflis e = +46m.39s. = SR_1 −9s. Ekaterinburg e = +20m.58s. = PR_1 +11s., and +28m.13s. Irkutsk e = +22m.17s. = PR_1 +3s. and +31m.57s., MZ = +76·5m. Tashkent e = +20m.6s., +23m.17s., +42m.20s., and +52m.8s., MN = +82·0m.

Nov. 21d. 23h. 12m. 14s. Epicentre 44°·7S. 73°·0W.

A = +·208, B = −·680, C = −·703; D = −·956, E = −·292; G = −·206, H = +·673, K = −·711.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		11·3	10	1 23	−86	4 10	−52	5·0	—
Pilar		14·8	32	4 4?	+28	(6 46)	+19	6·8	10·8
Buenos Aires		15·0	53	2 46	−53	—	—	—	—
La Plata		15·1	54	i 3 53	+13	6 54	+20	—	—
Sucre		26·5	17	e 5 51	− 2	i 10 33	+ 1	15·6	—
La Paz		28·5	10	6 13	0	i 11 9	+ 1	14·8	19·3
Rio de Janeiro	E.	32·7	59	e 6 46	− 8	12 13	− 6	16·0	19·5
	N.	32·7	59	e 6 46	− 8	12 16	− 3	16·3	18·3
Balboa Heights		54·0	352	e 8 46	−47	—	—	—	—
San Juan	E.	63·4	8	—	—	e 26 55	?	e 32·8	—
Cape Town		67·8	116	20 10	?S	(20 10)	+10	—	56·8
Tacubaya		68·4	334	11 5	− 2	20 20	+13	32·2	—
Christchurch		74·2	225	11 52	+ 9	21 34	+18	31·5	42·5
Wellington	E.	74·8	227	i 12 18	+30	i 21 43	+19	34·8	39·0
	N.	74·8	227	i 12 9	+21	i 22 0	+36	34·2	43·0
Johannesburg		79·2	116	—	—	22 46?	?PS	—	—
Tucson	E.	84·3	330	e 12 43	− 1	23 6	− 5	e 37·3	44·1
	N.	84·3	330	e 12 52	+ 8	e 23 4	− 7	e 40·7	44·4
Cincinnati	N.	84·4	352	e 12 54	+10	i 23 25	+13	42·6	48·8

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
St. Louis		84·7	348	e 12 46	0	i 23 25	+ 9	e 40·6	48·0
Fordham		85·5	0	e 13 15	+24	i 23 49	+24	e 35·8	39·3
Apia		86·4	256	—	—	23 43	+ 9	46·8	47·8
Ithaca		87·2	358	e 13 14	+14	e 23 25	−18	40·8	—
Chicago	E.	87·4	350	—	—	i 23 42	− 3	e 41·6	47·4
Ann Arbor	E.	87·5	354	—	—	i 23 46	− 1	46·3	55·6
	N.	87·5	354	—	—	e 23 28	−19	44·6	47·7
Toronto	E.	88·5	356	—	—	i 23 54	− 4	38·4	48·1
	N.	88·5	356	i 13 4	− 4	i 23 55	− 3	40·4	—
Ottawa	E.	90·1	359	—	—	i 24 14	− 1	e 40·8	—
	N.	90·1	359	e 13 16	− 1	i 23 56	−19	e 44·3	55·8
Melbourne		90·7	210	—	—	i 24 52	?PS	i 39·7	41·0
Riverview		91·9	216	e 13 25	− 1	i 23 52	[+13]	e 38·2	50·1
Azores		92·8	36	(39 4)	?	(46 10)	?	—	(59·8)
Berkeley		93·8	324	e 17 21	?PR_1	e 24 56	+ 2	e 44·7	—
Adelaide		95·4	206	e 13 38?	− 7	i 24 8	[+ 9]	40·4	54·8
Entebbe		101·0	100	e 24 39	?[S]	(e 24 39)	[+10]	—	—
San Fernando		101·1	49	—	—	30 4	?	50·3	67·3
Honolulu T.H.	E.	101·2	289	—	—	e 26 3	− 4	e 42·4	60·1
Rio Tinto		101·9	48	20 46?	?PR_2	—	—	—	61·8
Malaga		102·2	50	e 14 13	− 8	e 26 20	+ 3	e 35·6	—
Victoria	E.	102·9	330	18 50	?PR_1	25 5	[+27]	45·4	45·8
	N.	102·9	330	18 35	?PR_1	24 59	[+21]	33·6	51·2
Perth		103·0	187	e 21 46	?PR_2	i 33 26	?SR_1	i 55·8	64·5
Granada		103·0	50	e 14 16	− 9	i 24 38	[0]	47·8	62·2
Almeria		103·5	50	e 16 4	?	e 18 32	?PR_1	e 48·1	51·5
Toledo		104·7	47	e 21 17	?PR_2	33 20	?SR_1	e 44·2	56·9
Alicante		105·6	51	e 23 28	?PR_2	—	—	43·1	65·9
Tortosa		107·9	50	—	—	e 26 46?	−23	e 44·8	54·4
Barcelona		109·2	51	—	—	—	—	e 46·5	63·7
Bagnères		109·3	47	—	—	e 34 46?	?SR_1	e 45·8	55·0
Puy de Dôme		112·5	46	—	—	e 36 16	?	e 47·8	55·4
Paris		114·3	44	e 15 37	+20	e 19 58	?PR_1	35·8	59·8
Oxford		114·5	40	—	—	e 30 6	?PS	e 43·1	66·1
Moncalieri		114·6	50	19 6	[+30]	30 6	?PS	36·0	68·8
Kew		114·7	40	e 19 46?	?PR_1	—	—	48·8	62·7
Bidston		114·8	39	29 32	?S	(29 32)	?PS	47·1	62·3
Besançon		115·1	47	—	—	—	—	36·8	53·8
Rocca di Papa	E.	115·3	55	e 12 16	?	e 31 49	?	e 59·4	64·6
	N. or Z.	115·3	55	e 12 13	?	e 31 35	?	e 60·4	—
Neuchatel		115·4	50	e 18 17	[−22]	e 29 24	?PS	—	—
Stonyhurst		115·4	39	e 20 54	?	e 30 29	?PS	46·9	53·4
Florence		115·8	53	e 20 16	?PR_1	e 29 46?	?PS	36·8	46·8
Pompeii		115·8	57	e 24 30	?	e 35 30	?SR_1	52·8	67·8
Edinburgh		116·4	36	—	—	—	—	48·8	64·5
Uccle		116·5	43	e 20 10	?PR_1	e 27 58	−24	35·8	64·9
Zurich		116·5	50	e 18 18	[−24]	e 29 52	?PS	—	—
Strasbourg		116·8	47	e 19 46?	?PR_1	e 29 46?	?PS	e 37·8	67·3
Ravensburg	E.	117·4	48	—	—	—	—	e 49·5	67·2
De Bilt		117·7	43	i 20 29	?PR_1	e 29 52	?PS	e 48·8	68·5
Innsbruck	N.E.	118·0	50	—	—	—	—	e 52·8	—
Feldberg	N.	118·2	45	—	—	e 27 4	? Σ	e 50·0	60·5
Zagreb	N.E.	119·7	53	—	—	e 31 46?	—	e 57·3	—
Graz		120·1	51	e 21 20	?	—	—	47·8	75·9
Cheb		120·2	48	e 21 9	?	e 30 11	?PS	e 49·8	57·8
Jena	E.	120·2	47	—	—	e 30 16	?PS	e 49·8	67·8
	N.	120·2	47	—	—	e 32 46	?	e 48·8	62·8
Helwan		120·2	77	e 20 56	?PR_1	—	—	—	82·4
Hamburg		120·9	43	e 19 22	[+27]	—	—	e 49·8	65·8
Prague		121·2	49	e 21 33	?	e 30 36	?PS	e 50·8	66·8
Vienna		121·3	51	e 20 49	?PR_1	30 43	?PS	e 52·8	69·8
Potsdam		121·8	45	—	—	—	—	e 51·1	65·3
Budapest		122·4	53	20 46?	?PR_1	e 33 16	?	54·3	70·8
Copenhagen		123·3	42	—	—	e 26 16	[+21]	47·8	71·3
Ksara		125·6	76	e 19 5	[− 2]	—	—	58·8	—
Konigsberg		127·0	45	—	—	—	—	e 57·0	72·8
Upsala		127·7	41	—	—	e 22 35	?	e 53·8	70·2
Batavia		129·1	179	e 22 26	?PR_1	—	—	e 62·8	—
Helsingfors		131·2	41	19 32	[+11]	—	—	59·8	72·8
Pulkovo		133·6	42	19 36	[+ 9]	—	—	59·8	78·2
Makeyevka		133·9	60	e 19 44	[+16]	—	—	—	75·5
Colombo		135·4	140	19 7	[−24]	—	—	—	—
Tiflis		135·7	71	e 23 10	?	e 40 20	?SR_1	—	69·8

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Kucino		136·4	50	i 19 22	[−11]	—	—	54·3	71·4
Kodaikanal		137·2	134	47 46	?	—	—	76·8	93·8
Bombay		141·7	121	23 7	?PR_1	e 34 37	?	59·4	84·2
Hyderabad		143·8	129	19 46	[− 1]	—	—	62·5	81·1
Manila		147·7	206	e 19 29	[−23]	—	—	i 20·1	—
Ekaterinburg		149·0	50	i 20 1	[+ 7]	—	—	59·8	84·4
Tashkent		152·4	84	i 20 15	[+16]	—	—	e 64·8	88·0
Simla		153·1	110	e 42 22	?	—	—	(e 64·1)	—
Phu-Lien	N.	156·1	179	e 19 38	[−25]	e 34 57	?	60·8	—
Hong Kong		156·9	197	21 1?	?	—	—	—	72·8
Zi-ka-wei		162·4	225	e 21 2	?	e 24 48	?PR_1	—	—
Irkutsk		172·2	12	20 25	[+ 9]	—	—	73·7	102·1

Additional readings: Santiago $PR_1 = +2$m.8s. Sucre i = +5m.57s., $PR_1 = +6$m.51s., i = +10m.56s., and +12m.46s.; $T_0 = 23$h.12m.15s.; epicentre 44°·6S. 74°·0W. La Paz $PR_2 = +7$m.4s., i = +11m.41s., $SR_1E = +12$m.10s., i = +14m.22s., MN = +17·6m.; $T_0 = 23$h.12m.13s. San Juan eN = +34m.19s. Wellington $SR_1E = +26$m.43s., $SR_1N = +27$m.38s., $SR_2E = +31$m.23s. $= SR_3 - 17$s.; $T_0N = 23$h.12m.19s.; $T_0E = 23$h.12m.57s. Tucson $ePR_1E = +15$m.18s., $ePR_1N = +15$m.20s., $eSR_1N = +28$m.41s. Cincinnati $ePR_1N = +16$m.0s., eN = +18m.52s. $= PR_2 + 24$s., $eS_0P_0SN = +23$m.14s., $eS_0SN = +24$m.8s. $= PS + 9$s., eN = +25m.43s., +31m.37s., and +37m.37s. St. Louis eP = +12m.52s., $P_0P = +13$m.0s., $ePR_2N = +18$m.11s., $PR_2E = +18$m.17s., $ePR_2E = +20$m.39s., $ePR_2N = +20$m.41s., $eS_0P_0SN = +23$m.18s., $eS_0P_0SE = +23$m.21s., $iS_0P_0P_0S = +23$m.45s., $iS_0SE = +23$m.56s., iPSN = +24m.11s., iPPPSN = +24m.51s., $iP_0S_0S_0PN = +27$m.58s., iN = +28m.11s., and +28m.36s., $iSR_1N = +29$m.4s., $iSR_1E = +29$m.13s., $eP_0P_0P_0PE = +31$m.15s., $eP_0P_0P_0PN = +31$m.23s., $iSR_2N = +32$m.59s., $eSR_2E = +33$m.25s., $iSR_2N = +34$m.55s., $iSR_3E = +35$m.24s., eLN = +40·4m., MN = +47·2m. Fordham e = +24m.16s., +26m.19s., and +31m.59s., $SR_1 = +30$m.16s., i = +36m.49s. Apia +38m.46s. and +40m.50s., MN = +51·1m. Ithaca $eSR_1 = +29$m.46s. Chicago $eSR_1E = +29$m.34s. Ann Arbor e?N = +29m.28s. Toronto iN = +16m.31s. $= PR_1 - 24$s., $iS_0P_0SN = +23$m.36s., eE = +23m.42s., iE = +23m.56s., iN = +24m.2s., and +25m.2s., PSE = +24m.46s., $SR_1N = +29$m.56s.; $T_0 = 23$h.12m.43s. Ottawa $PR_1N = +17$m.2s., iN = +25m.16s. $= PS + 8$s. $SR_1 = +30$m.14s., $SR_1N = +34$m.2s., e = +37m.16s. $= SR_3 + 14$s.; $T_0 = 23$h.12m.47s. Riverview $S_0P_0P_0S = +24$m.7s., MN = +44·8m., MZ = +47·1m.; $T_0 = 23$h.12m.57s. Azores readings have been increased by 1h. Berkeley eE = +23m.55s. $=$[S] + 4s., eE = +40m.11s. Adelaide MN = +51·2m. Entebbe S = +32m.41s. $= SR_1 - 9$s. San Fernando $PR_1 = +26$m.0s., $SR_1 = +33$m.10s., MN = +51·3m. Honolulu T.H. eN = +32m.46s. $= SR_1 - 6$s., $eSR_1E = +32$m.46s., MN = +59·5m. Perth P? = +22m.46s.? $= PR_3 - 16$s., $PR_1 = +24$m.46s. $=$[S] + 8s. Granada e? = +10m.15s., i = +18m.47s. $= PR_1 + 13$s., +27m.40s. $= PS + 2$s., +28m.39s. +28m.55s., and +29m.40s. Toledo eNE = +24m.25s. $=$[S] − 21s., MNW = +48·7m. Alicante i = +24m.57s. $=$[S] + 7s., S = +34m.19s. $= SR_1 + 31$s., MN = +58·9m. Tortosa eSN = +11m.25s. Barcelona MN = +63·1m. Paris MN = +51·8m. Moncalieri MN = +63·8m. Kew eE = +26m.22s., eN = +27m.22s., eZ = +31m.16s., $eSR_1 = +35$m.46s. ?, $eSR_3 = +40$m.46s. ?, MN = +59·1m., MZ = +65·7m. Bidston S = +35m.2s. ? Rocca di Papa e = +20m.9s., iL = +64·1m. Stonyhurst i = +27m.6s. and +35m.57s. $= SR_1 + 7$s. Uccle e = +30m.22s. $= PS + 14$s., MN = +55·9m. Strasbourg MZ = +66·2m. Ravensburg eLN = +49·8m., MN = +57·5m. De Bilt e = +36m.34s. $= SR_1 + 15$s., MN = +60·0m., MZ = +64·2m. Feldberg eN = +36m.10s. $= SR_1 - 14$s., ME = +66·4m. Zagreb eLNW = +49·8m. Graz e = +30m.37s. $= PS - 8$s., MN = +59·0m. Jena eE = +37m.40s., eN = +37m.46s. Hamburg MN = +57·8m. Prague MN = +55·8m. Vienna $PR_1 = +26$m.18s. $= PR_2 + 13$s., $PR_3 = +29$m.25s., iE = +31m.30s., iEN = +32m.34s., PPS = +38m.33s., MN = +57·8m. Potsdam MN = +55·8m. Budapest MN = +60·8m. Copenhagen $ePR_3E = +22$m.58s., ePS = +29m.22s., $eSR_1 = +37$m.34s., $eSR_2E = +41$m.46s. ?, MN = +62·0m., MZ = +71·7m. Ksara PE = +22m.49s., PN = +22m.59s., $PR_1E = +23$m.57s. $= PR_2 + 32$s., $PR_2E = +26$m.18s. $=$[S] + 17s. Konigsberg MN = +59·8m. Upsala MN = +63·0m. Helsingfors $PR_1Z = +21$m.47s., $P_0P_0SE = +22$m.48s., $P_0P_0SN = +22$m.52s., PPSE = +34m.34s., $SR_1E = +39$m.46s. ?, $SR_2E = +44$m.46s. ?, eE = +49m.16s. $= SR_2 - 7$s., MN = +64·8m. Pulkovo $PR_1 = +22$m.0s., $P_4P_4S = +22$m.58s., PPS = +33m.58s., $SR_1 = +39$m.16s., $SR_2 = +43$m.58s., $SR_3 = +49$m.4s., MN = +65·8m., MZ = +78·1m. Makeyevka $iP_4P_4S = +23$m.2s., $SR_1 = +43$m.46s. ?, MN = +67·2m., MZ = +74·6m. Kucino e = +18m.28s., +22m.10s. $= PR_1 + 0$s., +25m.4s., +31m.46s., and

Continued on next page.

+36m.34s., i = +40m.58s., MN = +62·6m., MZ = +69·5m. Ekaterinburg i = +20m.9s., and +20m.37s., e = +21m.53s., iPR_1 = +24m.6s., e = +24m.21s., $iS_4P_4P_4S$ = +30m.28s., e = +38m.53s., iSR_1 = +41m.56s., MN = +73·9m., MZ = +83·6m. Tashkent i = +24m.43s., PR_2 = +25m.43s., PPS = +34m.48s., e = +38m.53s., SR_2 = +45m.42s., MN = +80·7m. Simla readings are given as ePE and ePN respectively. Hong Kong MN = +73·9m. Irkutsk e = +21m.51s., PR_1 = +25m.34s., PR_2 = +30m.14s., $S_4P_4P_4S$ = +32m.32s., S_4P_4SP = +36m.27s., SR_1 = +46m.49s., MZ = +101·7m. MN = +102·3m.

Nov. 21d. Readings also at 3h. (Tiflis and near Tashkent), 5h. (Tiflis), 6h. (Taihoku), 10h. (Vienna), 11h. (Port au Prince), 14h. (Ekaterinburg and Tashkent), 17h. (Ekaterinburg, Fordham, Irkutsk, Tashkent, Tiflis, and near Ksara), 21h. (Sucre), 22h. and 23h. (La Paz).

Nov. 22d. 12h. 52m. 52s. Epicentre 44°·0N. 150°·5E.

A = −·626, B = +·354, C = +·695; D = +·492, E = +·870; G = −·605, H = +·342, K = −·719.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		6·0	298	1 37	+ 5	2 42	− 2	3·4	7·3
Mizusawa		8·5	238	2 7	− 2	3 37	−13	—	—
Nagoya		13·7	236	e 3 42	+20	—	—	—	—
Zi-ka-wei		26·2	250	e 5 31	−19	e 10 30	+ 4	—	—
Irkutsk		31·3	304	i 6 24	−17	11 37	−19	13·9	20·7
Phu-Lien		43·0	252	e 8 0	−18	e 17 58	?SR_1	26·1	—
Honolulu T.H.		48·1	102	—	—	—	—	e 20·1	—
Ekaterinburg		54·4	319	i 9 33	− 2	i 17 15	+ 1	25·1	36·7
Tashkent		57·3	300	i 9 57	+ 3	i 17 54	+ 4	e 25·1	39·0
Kucino		65·2	325	9 38	−68	18 20	−67	32·7	—
Pulkovo		65·3	332	i 10 41	− 6	i 19 28	− 1	32·1	44·2
Upsala	N.	69·2	338	—	—	—	—	e 46·1	—
Baku		69·5	309	—	—	—	—	e 34·1	—
Makeyevka		70·6	320	e 11 18	− 3	e 20 35	+ 2	38·1	50·2
Tiflis	E.	71·6	313	e 11 31	+ 4	e 20 48	+ 3	e 40·1	47·9
	N.	71·6	313	e 11 31	+ 4	e 20 47	+ 2	e 40·6	—
Copenhagen		74·2	338	—	—	—	—	36·1	—
De Bilt		79·4	340	i 12 9	− 6	—	—	e 38·1	56·1
Uccle		80·7	340	—	—	—	—	e 44·1	—
Kew		81·2	344	—	—	—	—	e 48·1	—
Strasbourg		81·8	338	i 12 16	−13	e 23 8?	+24	e 37·1	—
Ksara	N.	82·0	311	e 12 25	− 5	e 22 36	−10	—	—
Paris		83·0	339	—	—	—	—	e 57·1	59·1
Port au Prince		106·2	43	e 61 44	?L	—	—	(e 61·7)	—

Additional readings: Irkutsk PR_1 = +7m.40s., PR_2 = +8m.15s., MZ = +20·8m. Ekaterinburg i = +9m.36s., PR_2 = +12m.58s., e = +20m.48s., MN = +35·0m. Tashkent MN = +37·9m. Pulkovo MN = +42·4m. Makeyevka MN = +50·6m., MZ = +52·5m.

Nov. 22d. Readings also at 0h. (La Paz, Sucre, La Plata, Sydney, near Batavia, and Malabar), 1h. (Apia), 3h. (La Paz), 4h. (Tashkent), 5h. (Ekaterinburg, Irkutsk, La Plata, and Tashkent), 6h. (near Toyooka), 8h. (Ksara), 9h. (Tashkent), 16h. (Tashkent and Ekaterinburg), 19h. (near Toyooka), 21h. (Tashkent and Ekaterinburg), 22h. (Venice, near Chur, Neuchatel, and Zurich), 23h. (Tashkent).

Nov. 23d. 0h. 12m. 55s. Epicentre 29°·5N. 129°·0E. (as on 1925 Nov. 30d.).

A = −·548, B = +·676, C = +·492; D = +·777, E = +·629; G = −·310, H = +·383, K = −·870.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki		3·3	13	1 14	+22	2 0	+29	2·3	2·6
Hukuoka		4·3	16	—	—	—	—	2·4	3·3
Zi-ka-wei		6·8	286	—	—	—	—	e 3·6	7·5
Hong Kong	E.	15·1	245	—	—	—	—	—	12·1
Phu-Lien		22·0	252	—	—	9 5?	0	—	—
Irkutsk		29·2	328	—	—	e 11 51	+31	27·9	30·2
Tashkent		49·1	301	i 8 48	−13	—	—	e 24·8	27·6
Ekaterinburg		54·0	321	e 9 32	− 1	e 17 11	+ 2	27·1	35·2
Tiflis		66·9	307	—	—	—	—	e 38·6	—
Pulkovo		69·0	328	—	—	—	—	e 39·1	45·3
Makeyevka		69·2	315	—	—	—	—	39·1	—
Copenhagen		79·2	330	—	—	—	—	41·1	—
De Bilt		84·8	329	—	—	—	—	e 47·1	—
Uccle		86·0	329	—	—	—	—	e 47·1	—
Strasbourg		86·0	325	—	—	—	—	e 48·1	—
Kew		87·6	331	—	—	—	—	e 50·1	—

Additional readings: Hukuoka eP? = 0h.11m.13s. Zi-ka-wei S = +4m.58s. Hong Kong MN = +13·2m. Tashkent ePR$_1$ = +10m.44s., eSR$_1$ = +19m.35s. Ekaterinburg e = +21m.15s. = SR$_1$ − 9s., MN = +30·9m., MZ = +35·8m. Pulkovo MN = +39·9m., MZ = +44·3m.

Nov. 23d. Readings also at 4h. (Mizusawa and Tashkent), 5h. (Ekaterinburg, Irkutsk, and Tashkent), 15h. (Rio Tinto), 16h. (Ekaterinburg, Tiflis, and Sumoto), 18h. (Tiflis), 19h. (Ekaterinburg), 20h. (Suva).

Nov. 24d. Readings at 0h. (Ekaterinburg), 2h. (Ekaterinburg, Fordham, Hong Kong, Irkutsk, Manila, Phu-Lien, Taihoku, and Tashkent), 3h. (Fordham), 4h. (Tiflis), 5h. (Tashkent and Ksara), 7h. (Makeyevka and Santiago), 10h. (Tashkent), 13h. (near Batavia and Malabar), 14h. (Hong Kong, near Phu-Lien, and near Toyooka), 15h. (Ekaterinburg, Irkutsk, Taihoku, Tashkent, and Manila), 16h. (Taihoku), 17h. (near Tacubaya), 20h. (near Matuyama).

Nov. 25d. 19h. 52m. 30s. Epicentre 1°·0N. 129°·0W. (as on 1924 June 17d.).

A = −·629, B = −·777, C = +·017; D = −·777, E = +·629; G = −·011, H = −·014, K = −1·000.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tucson	E.	35·7	27	—	—	e 11 20	?	e 14·6	17·6
	N.	35·7	27	e 7 53	+34	e 13 44	+38	e 17·5	18·8
Victoria	E.	47·7	5	22 18	?L	—	—	24·8	29·0
Chicago		55·2	38	—	—	e 16 43	−41	e 23·2	—
Toronto	N.	61·2	39	—	—	e 17 53	−45	29·4	—
La Paz		62·5	109	e 10 30	+ 1	e 18 52	− 3	25·5	30·7
Ottawa	N.	64·4	39	—	—	e 18 45	−33	e 25·5	—
Sucre		65·7	111	e 11 35	+46	20 6	+33	27·5	32·0
La Plata		75·2	127	—	—	—	—	36·1	—
Uccle		114·9	30	—	—	26 30?	?Σ	—	—
Strasbourg		118·0	30	—	—	—	—	55·5	—
Ekaterinburg		121·7	355	—	—	—	—	e 50·5	—
Florence		122·9	33	—	—	—	—	e 61·5	112·5
Tashkent		134·6	340	—	—	—	—	e 66·5	80·3
Tiflis	E.	137·0	6	—	—	—	—	e 72·6	—
Baku		138·6	1	—	—	—	—	e 69·5	—

Additional readings and note: Ottawa eN = +16m.18s. Florence e = +84m.30s. ? Tashkent e = +53m.30s. ? Tiflis eE = +58m.10s., eLN = +63·5m. The North America stations give their readings without phase, except Tucson, which gives P as PN ?

Nov. 25d. Readings also at 0h. (Ekaterinburg and Tashkent), 1h. (La Paz), 6h. (Fordham), 8h. (Rio Tinto), 12h. (Fordham), 13h. (near Toyooka), 15h. (St. Louis), 16h. (La Plata), 17h. (La Paz and St. Louis), 18h. (La Paz), 19h. (Denver, St. Louis, and near Tacubaya), 20h. (near Sumoto), 22h. (Suva), 23h. (Tashkent (2), and Ekaterinburg).

Nov. 26d. 12h. 53m. 52s. Epicentre 25°·0S. 67°·0W.

$A = +\cdot354$, $B = -\cdot834$, $C = -\cdot423$; $D = -\cdot921$, $E = -\cdot391$; $G = -\cdot165$, $H = +\cdot389$, $K = -\cdot906$.

A depth of focus 0·030 has been assumed.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Sucre		−0·1	6·2	16	1 26	− 7	2 29	−17	—	5·1
Pilar	E.	−0·2	7·2	158	—	—	(2 50)	−20	2·8	5·8
	N.	−0·2	7·2	158	1 26	−20	(3 2)	− 8	3·0	6·3
La Paz		−0·3	8·6	353	2 1	− 5	i 3 32	−13	3·8	4·2
Santiago		−0·3	9·0	200	e 2 22	+10	3 34	−22	4·0	—
Buenos Aires	E.	−0·6	12·1	144	2 43	− 9	4 58	− 9	—	7·3
	N.	−0·6	12·1	144	2 43	− 9	4 57	−10	—	9·1
La Plata		−0·6	12·6	144	i 3 7	+ 8	5 25	+ 6	6·3	—
Rio de Janeiro	E.	−1·4	21·8	90	i 4 46	0	(8 35)	+ 3	8·6	13·8
	N.	−1·4	21·8	90	i 4 48	+ 2	(8 38)	+ 6	8·6	13·8
Tacubaya		−3·4	54·4	322	9 2	−11	14 9	−142	—	16·4
Cincinnati	N.	−3·7	66·2	346	i 10 31	+ 2	i 18 58	+ 3	—	—
St. Louis		−3·7	67·2	340	i 10 35	0	i 19 10	+ 3	e 30·9	—
Ithaca		−3·8	67·9	354	i 11 25	+46	i 19 17	+ 3	—	—
Ann Arbor		−3·8	69·1	348	—	—	i 19 32	+ 3	—	—
Chicago	N.	−3·8	69·4	345	—	—	i 19 33	+ 1	—	—
Toronto	E.	−3·8	69·6	351	—	—	i 19 39	+ 4	31·9	—
	N.	−3·8	69·6	351	i 10 50	0	i 19 35	0	41·8	—
Ottawa		−3·8	70·8	355	i 10 59	+ 1	i 19 57	+ 7	e 32·1	—
Tucson	E.	−3·8	70·9	321	e 10 3	−56	e 20 2	+11	—	—
	N.	−3·8	70·9	321	e 11 3	+ 4	e 20 5	+14	—	—
Cape Town		−3·9	72·8	120	11 22	+12	20 34	+21	—	—
San Fernando		−4·1	84·0	45	12 20	+ 2	i 22 26	+ 4	—	—
Rio Tinto		−4·1	84·5	44	24 8?	?PS	—	—	—	26·1
Malaga		−4·1	85·3	46	13 10	+44	22 38	+ 1	30·0	—
Granada		−4·1	86·1	46	i 12 25	− 5	i 22 39	− 7	e 34·6	37·1
Almeria		−4·1	86·7	46	12 26	− 8	i 22 42	−11	—	53·6
Toledo		−4·1	87·4	44	e 12 33	− 5	i 22 44	−16	e 35·9	46·3
Alicante		−4·2	88·8	46	e 12 51	+ 5	23 3	−12	e 37·5	44·7
Victoria		−4·2	89·0	327	12 38	− 9	(22 51)	−26	22·7	24·6
Algiers		−4·2	90·3	49	—	—	23 3	[−27]	e 45·1	65·1
Tortosa	N.	−4·2	90·8	45	—	—	i 23 4	[−29]	e 36·1	—
Bagnères		−4·2	91·9	42	—	—	e 23 12	[−27]	—	—
Barcelona		−4·2	92·2	45	—	—	i 23 12	[−29]	—	—
Puy de Dôme		−4·3	94·9	41	—	—	i 23 31	[−25]	—	—
Oxford		−4·3	95·8	35	—	—	i 23 30	[−31]	—	—
Kew		−4·3	96·2	35	e 13 59	+33	i 23 32	[−31]	39·1	45·1
Paris		−4·3	96·3	39	e 13 59	+32	i 23 34	[−30]	38·1	56·1
Stonyhurst		−4·3	96·5	33	i 23 33	?[S]	(i 23 33)	[−32]	—	—
Edinburgh		−4·3	97·2	30	—	—	23 8?	[−61]	—	—
Besançon		−4·3	97·5	41	—	—	i 23 39	[−31]	—	—
Moncalieri		−4·3	97·5	44	13 39	+ 6	i 23 39	[−31]	34·7	—
Neuchatel		−4·4	98·0	43	e 13 23	−13	e 23 42	[−31]	—	—
Uccle		−4·4	98·3	38	e 15 7	+90	i 23 45	[−30]	e 36·1	—
Zurich		−4·4	99·1	43	e 13 27	−15	i 23 50	[−29]	—	—
Strasbourg		−4·4	99·2	40	e 14 10	+28	i 26 2	+58	—	—
Rocca di Papa	E.	−4·4	99·2	48	i 23 51	?[S]	(i 23 51)	[−29]	—	—
Florence	E.	−4·4	99·2	46	e 11 38	−124	23 48	[−32]	31·1	40·1
De Bilt		−4·4	99·4	37	i 14 15	+32	i 24 41	−25	e 40·1	—
Honolulu T.H.		−4·4	99·5	289	—	—	—	—	e 48·6	—
Pompeii		−4·4	100·1	49	e 16 44	?	e 23 54	[−30]	—	—
Feldberg	N.	−4·4	100·3	39	—	—	i 24 50	−25	e 40·6	57·8
Venice		−4·4	100·6	44	16 8?	?	—	—	—	—
Cheb		−4·4	102·6	40	e 14 24	+23	i 24 9	[−27]	—	—
Hamburg		−4·4	102·6	36	—	—	e 23 56	[−40]	—	—

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.
Zagreb		−4·4	103·0	45	e 16 38	?	e 24 12	[−26]	—	—
Graz		−4·4	103·3	43	i 24 7	?[S]	(i 24 7)	[−32]	—	63·4
Prague		−4·4	103·8	40	e 16 8?	?	i 24 8?	[−34]	—	—
Vienna	Z.	−4·4	104·2	42	e 17 58	?PR_1	—	—	—	—
Copenhagen		−4·4	104·8	34	—	—	24 20	[−26]	e 43·7	—
Budapest		−4·5	105·6	43	—	—	i 24 24	[−26]	e 66·1	68·6
Upsala	E.	−4·5	108·8	31	—	—	i 24 30	[−35]	—	—
Helwan		−4·5	108·9	65	e 18 39	?PR_1	24 38	[−28]	—	—
Riverview		−4·5	110·9	213	—	—	(e 24 14)	[−60]	e 24·2	—
Ksara	E.	—	113·8	62	e 19 15	?PR_1	i 26 2	[+37]	56·5	—
Pulkovo		—	115·1	33	—	—	i 24 58	[−31]	48·1	71·5
Makeyevka		—	118·1	46	e 15 8?	−26	i 26 33	−122	35·1	—
Kucino		—	118·7	38	e 19 47	?PR_1	—	—	e 40·3	—
Tiflis	E.	—	122·2	54	e 19 43	[+44]	i 25 26	[−26]	e 66·1	—
	N.	—	122·2	54	e 19 32	[+33]	e 25 26	[−26]	e 53·1	—
Baku		—	125·9	56	e 18 53	[−15]	25 43	[−18]	—	—
Ekaterinburg		—	131·1	35	19 2	[−19]	—	—	51·1	72·4
Tashkent		—	140·5	53	i 19 17	[−23]	—	—	e 46·5	90·4
Bombay		—	142·4	90	19 21	[−23]	22 46	?PR_1	24·8	—
Hyderabad		—	147·0	94	19 27	[−24]	29 27	? Σ	—	—
Batavia		—	148·2	166	i 20 40	?	—	—	—	—
Irkutsk		—	152·0	12	19 36	[−23]	—	—	55·0	88·0
Mizusawa	E.	—	152·5	308	(19 43)	[−16]	19 43	?[P]	—	—
Manila		—	167·2	217	e 20 3	[−10]	—	—	—	—
Zi-ka-wei		—	170·4	312	i 19 54	[−21]	e 24 57	?	—	—
Phu-Lien		—	172·8	124	15 8?	?	—	—	—	—
Hong Kong		—	177·1	202	21 48?	?	—	—	—	—

Additional readings: La Paz iSN = +3m.35s., MN = +4·8m.; T_g = 12h.53m.56s.; epicentre 23°·6S. 68°·0W. Santiago PR_1 = +2m.38s., PR_2 = +3m.18s. Cincinnati eN = +10m.58s., iP_cPN = +11m.23s., eN = +14m.3s., ePR_2N = +15m.8s., iSE = +18m.59s., iPSE = +19m.18s., iEN = +20m.11s., iE = +20m.31s. = [S] − 11s., eE = +21m.33s. = Σ +13s.; T_g = 12h.53m.57s.; epicentre 22°·4S. 72°·4W. St. Louis iP_cP = +11m.22s., iN = +11m.51s., iPR_1N? = +13m.43s., ePR_2N? = +15m.43s., i = +20m.14s. = PS − 12s., and +21m.40s. = Σ +13s., eSR_2N = +27m.31s. Ann Arbor i = +20m.32s. and +20m.46s. Chicago iE = +19m.36s. = S +4s., iSN? = +20m.35s., iSE? = +20m.37s.; the S entered is given as iN. Toronto iP_cPN = +11m.35s., iN = +20m.35s., iE = +20m.59s. = PS +3s.; T_g = 12h.53m.57s. Ottawa eLN? = +35·1m.; T_g = 12h.53m.53s. Toledo i = +13m.18s. Alicante i = +13m.30s., MN = +44·3m. Tortosa iSE = +23m.5s. Barcelona PS = +23m.39s. Kew ePSEN = +24m.9s., iZ = +25m.34s. Stonyhurst i = +24m.13s., iS? = +25m.39s. Zurich iPR_1 = +17m.24s. Strasbourg i = +17m.21s. = PR_1 − 19s., +23m.42s., and +24m.34s. = [S] +14s.; epicentre 23°·6S. 68°·0W. Rocca di Papa iPN = +23m.53s. De Bilt i = +23m.51s. = [S] − 30s. Feldberg iN = +25m.27s. = [S] +2s., eN = +26m.13s.; readings have been diminished by 1h. Zagreb eNW = +17m.22s., eNE = +17m.57s. = PR_1 − 7s., eNW = +25m.20s. = Σ − 9s., eNE = +25m.22s. Graz i = +25m.17s. = Σ − 14s., eS = +32m.45s. = SR_1 +21s. Copenhagen eN = iE = +25m.4s. = Σ − 37s., ePSEN = +27m.8s.; epicentre 23°·6S. 68°·0W. Ksara iE = +24m.55s., +28m.42s. and +29m.44s. = PS +5s., PSE? = +33m.32s., PPSE? = +34m.31s., eE = +36m.19s., SR_1E = +39m.48s., SR_1E = +44m.44s. = SR_2 + 16s., SR_2E = +48m.21s. Pulkovo i = +26m.6s., e = +28m.42s., MZ = +71·4m. Makeyevka e = +25m.12s. = [S] − 27s., i = +29m.39s. Kucino e = +20m.27s. = PR_1 +12s. and +29m.26s., i = +25m.11s. = [S] − 30s., and +26m.31s. Tiflis ePR_1?E = +20m.17s., ePR_1?N = +20m.26s., i = +26m.57s. = Σ − 30s., ePSE = +30m.21s., $eS_4P_4P_4S$?N = +30m.51s., eSR_1E = +36m.11s., eSR_1N = +36m.12s. Baku e = +19m.41s., PR_1 = +20m.45s., i = +21m.27s., and +22m.58s., $S_4P_4P_4S$ = +27m.13s., PS = +30m.38s., SR_1 = +39m.0s., i = +39m.49s., and +44m.54s., SR_2 = +42m.32s. Ekaterinburg e = +19m.46s., i = +19m.52s., +21m.52s., +22m.9s., +23m.10s., +23m.36s., +29m.2s., +29m.23s., and +40m.11s., PR_2 = +21m.7s., P_4P_4S = +22m.26s., $S_4P_4P_4S$ = +27m.56s., SR_2 = +38m.28s., e = +39m.11s., MN = +59·6m. Tashkent i = +20m.23s., +22m.16s., +22m.44s. = PR_1 +7s., +22m.55s., +23m.16s., +28m.50s. = Σ − 15s., +35m.49s., and +40m.19s., e = +23m.26s., +35m.37s., +41m.38s., and +60m.8s. ?, MN = +89·4m., MZ = +93·2m. Batavia iN = +24m.12s. Irkutsk i = +20m.26s., PR_1 = +24m.3s., $S_4P_4P_4S$ = +29m.56s., S_4P_4SP = +33m.18s. Phu-Lien e = +30m.48s., and +44m.42s. Hong Kong ? = +26m.48s. = PR_1 +32s., and +32m.29s. = Σ − 5s.

Nov. 26d. Readings also at 0h. (Baku), 1h. (Suva), 2h. (Ekaterinburg), 3h. (Baku, Tashkent, and near Tacubaya), 6h. (Ekaterinburg), 9h. (Suva), 11h. (near Toyooka), 14h. (Sucre and near La Paz), 15h. (near Mizusawa and near Toyooka), 21h. (Toyooka, and near Oaxaca and Tacubaya), 23h. (Florence).

Nov. 27d. Readings at 1h. (Ekaterinburg), 2h. (La Paz, Sucre, and near Toyooka), 5h. (Tashkent and Tucson), 6h. (Makeyevka, Ottawa, and near Matuyama), 7h. (Ekaterinburg and Tashkent), 10h. (Tiflis (2)), 12h. (La Paz and near Misusawa), 13h. near Belgrade and near Matuyama), 21h. (near Toyooka), 22h. (Ekaterinburg and Tashkent), 23h. (Taihoku).

Nov. 28d. 10h. 12m. 8s. Epicentre 3°·0S. 177°·5E. (as on 1921 Feb. 10d.).

$A = -\cdot998$, $B = +\cdot044$, $C = -\cdot052$; $D = +\cdot044$, $E = +\cdot999$; $G = +\cdot052$, $H = -\cdot002$, $K = -\cdot999$.

Very uncertain.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		15·2	136	3 38	− 4	6 57	+20	7·7	14·9
Suva	E.	15·2	177	i 3 46	+ 4	6 16	−21	7·3	9·0
	N.	15·2	177	i 3 46	+ 4	5 52	−45	i 6·4	8·0
Honolulu T.H.	N.	34·3	45	—	—	—	—	22·9	—
Wellington		38·4	183	—	—	—	—	i 15·1	—
Riverview		39·4	217	e 10 52?	?	—	—	e 20·9	26·5
Sydney	E.	39·4	217	15 40	?SR_1	—	—	21·8	23·5
Adelaide		48·2	224	—	—	e 22 10	?	e 25·8	33·4
Hong Kong		66·7	296	—	—	—	—	—	72·5
Victoria	N.	72·5	37	26 47	?SR_1	—	—	44·8	47·4
Irkutsk		82·2	324	—	—	e 24 16	+88	57·8	60·0
St. Louis	E.	93·7	52	—	—	—	—	e 54·0	—
Ottawa	N.	103·8	44	—	—	—	—	e 54·9	—
Ekaterinburg		106·9	329	—	—	e 35 10	?SR_1	64·4	76·9
La Paz		112·4	110	—	—	—	—	52·3	54·9
Sucre		114·5	112	—	—	—	—	55·9	—
Kucino		118·0	335	—	—	—	—	e 81·2	—
Baku		119·8	315	—	—	—	—	e 79·9	—
Tiflis	E.	122·7	319	—	—	e 27 15	? Σ	e 82·9	88·3
	N.	122·7	319	—	—	—	—	e 81·9	85·6
De Bilt		130·5	8	—	—	—	—	e 92·9	—
Rio Tinto		145·0	5	91 52?	?L	—	—	(91·9)	96·9
San Fernando	E.	146·4	5	—	—	—	—	—	94·9

Additional readings: Honolulu T.H. eE = +23m.52s. ? Riverview MN = +24·1m. Adelaide MN = +28·7m. Irkutsk e = +28m.43s. = SR_1 −1s., MN = +60·1m., MZ = +60·2m. Tiflis eE = +33m.48s. and +39m.7s., eN = +39m.8s. and +46m.37s. San Fernando MN = +96·4m.

Nov. 28d. 14h. 28m. 42s. Epicentre 47°·0S. 78°·0W. (as on 1926 Dec. 7d.).

$A = +\cdot142$, $B = -\cdot667$, $C = -\cdot731$; $D = -\cdot978$, $E = -\cdot208$; $G = -\cdot152$, $H = +\cdot715$, $K = -\cdot682$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Plata		19·3	58	4 22	−11	(8 18?)	+10	8·3	—
Sucre		29·9	25	e 6 21	− 6	i 11 18	−14	14·6	17·2
La Paz		31·6	18	e 6 46	+ 3	e 12 6	+ 5	15·3	18·2
Tiflis	E.	139·6	76	—	—	—	—	e 87·1	—
Ekaterinburg		153·2	53	—	—	—	—	73·3	—
Tashkent		156·0	92	—	—	—	—	e 76·3	—

Additional readings: La Paz iP = +6m.53s. Tiflis eLN = +85·3m.

Nov. 28d. Readings also at 0h. (near Toyooka), 2h. (Florence, Rocca di Papa, and near Manila), 3h. (La Paz and near Tashkent), 4h. (Baku, Tashkent, Ksara, and Tiflis), 5h. (Feldberg), 6h. (Balboa Heights and La Paz), 8h. (La Paz), 11h. (Bombay), 15h. (near Mizusawa), 16h. (near Sucre and La Paz), 18h. (De Bilt, Uccle, Tashkent, and La Paz), 20h. (La Paz, near Amboina, and near Toyooka), 21h. (near St. Louis).

Nov. 29d. 11h. 34m. 26s. Epicentre 30°·0N. 83°·0E. (as on 1913 March 6d.).

$A = +\cdot106$, $B = +\cdot860$, $C = +\cdot500$; $D = +\cdot993$, $E = -\cdot122$; $G = +\cdot061$, $H = +\cdot496$, $K = -\cdot866$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Simla		5·1	283	1 28	+ 9	(2 28)	+ 8	2·5	—
Hyderabad		13·2	199	5 44	?S	(5 44)	− 5	8·0	8·8
Bombay		14·6	222	6 11	?S	(6 11)	−11	8·1	10·4
Tashkent		15·8	319	e 3 49	0	i 6 22	−28	8·0	8·4
Ekaterinburg		31·0	336	—	—	—	—	14·6	—
Tiflis	E.	32·7	301	—	—	—	—	e 18·6	—
De Bilt	N.	59·6	316	—	—	—	—	e 32·6	—

Additional readings: Hyderabad S = +7m.19s. Bombay S = +7m.34s. Tashkent MN = +8·5m. Tiflis eLN = +22·6m.

Nov. 29d. Readings also at 4h. (Zagreb), 10h. (Tiflis), 13h. (Moncalieri and Tiflis) 15h. (Taihoku), 16h. (La Paz, Sucre, La Plata, and near Santiago), 17h. (near Toyooka), 19h. (Ekaterinburg), 22h. (Florence), 23h. (Tashkent, Tiflis, and near Toyooka).

Nov. 30d. 2h. 58m. 8s. Epicentre 43°·5N. 11°·8E. (as on 1918 Jan. 14d.).

$A = +\cdot710$, $B = +\cdot148$, $C = +\cdot688$; $D = +\cdot204$, $E = -\cdot979$; $G = +\cdot674$, $H = +\cdot141$, $K = -\cdot725$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Florence	0·5	305	0 16	+ 8	—	—	—	0·7
Rocca di Papa	1·9	159	e 0 28	− 1	0 56	+ 3	—	2·1
Venice	2·0	11	0 28	− 3	1 20	+25	—	—
Pompeii	3·4	142	e 1 52	?L	—	—	(e 1·9)	—
Zagreb	3·8	51	e 1 1	+ 2	i 1 38	− 6	e 1·8	2·1
Zurich	4·5	331	e 1 12	+ 2	i 2 7	+ 3	—	—
Neuchatel	4·9	317	e 1 16	0	e 2 16	+ 2	—	—
Strasbourg	5·8	333	1 52?	+22	—	—	—	—

Additional readings: Rocca di Papa PN = +32s., PE = +34s. Zagreb e = +1m.6s., +1m.13s., and +1m.18s., i = +1m.25s., +1m.31s., and +1m.35s. Neuchatel eP = +1m.34s.

Nov. 30d. Readings also at 0h. (near Ksara), 1h. (Tiflis, near Ksara, and near Manzanillo), 3h. (Tiflis), 4h. (Hong Kong and Tiflis), 6h. (Tashkent), 9h. (Tiflis and near Toyooka), 11h. (near Taihoku), 16h. (Balboa Heights), 17h. (Tiflis, near La Paz, and near Toyooka), 18h. (Riverview, Sydney, Irkutsk, Tashkent, and La Paz), 19h. (Tiflis and Strasbourg), 20h. (Tiflis), 23h. (La Paz).

Dec. 1d. 4h. 37m. 21s. Epicentre 0°·7S. 119°·7E. (as on 1917 Nov. 14d.).

$A = -\cdot495$, $B = +\cdot869$, $C = -\cdot012$; $D = +\cdot869$, $E = +\cdot495$; $G = +\cdot006$, $H = -\cdot001$, $K = -1\cdot000$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		9·0	109	i 1 57	−19	3 15	−48	3·8	15·6
Malabar		13·7	242	3 29	+ 7	i 6 13	+12	9·2	—
Batavia		13·9	246	3 30	+ 5	—	—	i 8·0	—
Manila		15·3	5	i 3 44	+ 1	i 7 21	+42	i 8·5	9·4
Phu-Lien		25·0	330	e 5 28	−10	e 9 51	−12	11·6	19·8
Taihoku	E.	25·8	4	e 5 52	+ 6	—	—	11·2	—
Perth		31·5	186	e 6 49	+ 6	13 28	?SR_1	18·6	20·5

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zi-ka-wei		31·9	4	i 6 30	−16	e 11 23	−44	—	18·6
Osaka		38·3	21	12 29	?S	(12 29)	−73	19·6	21·3
Adelaide		38·6	153	e 6 39	−64	12 32	−74	16·4	25·1
Kodaikanal		43·4	286	11 27	?	—	—	29·0	30·6
Riverview		44·4	142	e 7 47	−42	e 14 45	−22	e 17·6	30·7
Hyderabad		44·5	297	8 22	− 8	14 53	−16	23·2	25·6
Bombay		50·0	297	9 2	− 5	16 17	− 2	26·0	30·4
Simla	N.	51·3	313	16 39	?S	(16 39)	+ 4	—	—
Irkutsk		54·5	349	i 9 33	− 3	17 12	− 3	25·6	36·7
Tashkent		61·9	320	i 10 25	+ 1	i 18 44	− 3	e 30·6	45·0
Wellington		64·1	137	—	—	e 18 56	−18	e 28·0	42·1
Ekaterinburg		74·2	331	—	—	i 21 10	− 6	34·2	50·6
Baku		75·2	314	i 11 51	+ 1	—	—	36·6	—
Tiflis		79·2	314	e 12 15	+ 1	e 22 17	+ 3	e 37·6	47·0
Makeyevka		85·0	320	12 42	− 6	23 1	−18	39·6	55·6
Ksara		85·2	304	i 12 50	+ 1	23 22	+ 1	43·6	—
Kucino		86·0	326	e 12 42	−11	23 12	−18	40·8	56·7
Helwan		88·9	300	13 5	− 5	23 54	− 8	—	56·6
Pulkovo		90·2	330	e 13 7	−10	23 57	−19	44·6	58·8
Helsingfors	E.	92·9	330	—	—	—	—	—	59·6
Upsala	E.	96·6	330	—	—	—	—	e 52·6	64·0
Copenhagen		99·9	327	—	—	e 24 36	[+13]	53·6	61·2
Zagreb		100·0	317	—	—	—	—	58·4	—
Prague		100·2	322	e 18 9	?PR_1	e 26 9	+11	e 47·6	58·6
Cheb		101·5	322	e 20 17	?	e 31 1	?	e 49·6	59·6
Hamburg		102·1	325	—	—	—	—	e 53·6	70·6
Florence		103·7	315	—	—	e 26 39?	+ 9	37·6	60·6
Strasbourg		104·8	321	e 18 36	?PR_1	e 27 39?	?PS	40·6	—
De Bilt		105·3	325	—	—	—	—	e 47·6	59·5
Moncalieri		105·8	317	e 18 39	?PR_1	27 10	+20	47·0	—
Uccle		106·2	323	—	—	e 25 9	[+16]	e 49·6	74·2
Dyce		107·2	331	—	—	—	—	—	65·0
Paris		108·0	322	—	—	e 27 39?	+29	56·6	64·6
Victoria	E.	108·1	39	28 28	?PS	—	—	50·0	51·6
Edinburgh		108·3	330	—	—	—	—	e 54·6	—
Kew		108·7	325	—	—	e 24 39?	[−26]	52·6	61·6
Stonyhurst		108·8	326	—	—	e 28 56	?PS	e 52·6	—
Oxford		109·1	325	—	—	e 25 14	[+ 8]	e 51·4	73·2
Algiers		111·4	310	—	—	—	—	e 63·6	70·6
Tortosa	N.	112·3	314	—	—	—	—	e 61·6	—
Rio Tinto		118·4	313	29 39?	?S	(29 39?)	+62	—	79·6
St. Louis	E.	133·2	31	—	—	—	—	e 59·6	70·6
Ottawa	N.	133·3	13	—	—	i 22 54	?	e 63·6	—
Toronto	N.	133·8	18	—	—	i 22 54	?	i 70·6	—
Sucre		159·7	166	e 20 57	[+49]	—	—	78·0	87·8
La Paz		161·2	156	e 20 16	[+ 7]	—	—	80·6	89·0

Additional readings and notes: Malabar iP = +3m.36s., i = +6m.38s., +7m.16s and +8m.53s. Phu-Lien MN = +21·7m. Perth PR_1 = +11m.39s. = S−21s., SR_1 = +13m.39s., iSR_1 = +14m.29s. Adelaide MN = +24·0m. Riverview SR_1? = +16m.33s., MN = +26·0m. Irkutsk PR_1 = +11m.53s., PR_1 = +12m.57s., PS = +17m.36s., SR_1 = +22m.1s., MZ = +36·8m. Tashkent PR_1 = +12m.48s., PR_3 = +14m.15s., eS_4P_4S = +20m.10s., eSR_1 = +24m.15s., MN = +39·9m., MZ = +44·7m. Wellington iN = +19m.8s. = S−6s. Ekaterinburg e = +17m.4s. = PR_2 −30s., i = +21m.36s. = [S]−8s., e = +24m.10s., MN = +47·0m., MZ = +49·5m. Tiflis e? = +13m.6s. and +17m.5s. = PR_2 −31s., eSR_1 = +28m.20s. Makeyevka i = +13m.6s., PR_1 = +16m.7s., MN = +49·3m., MZ = +55·5m. Ksara SE = +23m.25s., LN = +46·6m. Kucino ePR_1 = +16m.7s., S_4P_4S = +23m.8s., PPS = +25m.11s., SR_1 = +33m.48s. = SR_2 +14s. Pulkovo MN = +55·9m., MZ = +60·8m. Upsala eLN = +49·6m., MN = +68·0m. Copenhagen eN = +25m.15s. = Σ +7s., SR_1E = +30m.39s.? Hamburg MN = +65·6m., MZ = +68·6m. De Bilt iPR_1Z = +18m.43s., MN = +63·1m., MZ = +76·1m.; epicentre 0°·5S. 119°·5E. Uccle e = +28m.39s., = PS +24s. Kew MN = +59·6m. Tortosa reading is given for 2d. Oxford PS = +28m.6s. St. Louis eLN = +60·6m., MN = +66·6m. Ottawa eN = +39m.15s. = SR_1 −16s. Sucre PR_1 = +25m.21s. La Paz P = +20m.41s., (corresponding to the Sucre eP), MN = +97·0m.

Dec. 1d. 9h. 55m. 36s. Epicentre 43°·5N. 11°·8E. (as on 1927 Nov. 30d.).

$A = +·710$, $B = +·148$, $C = +·688$, ; $D = +·204$, $E = -·979$; $G = +·674$, $H = +·141$, $K = -·725$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Florence		0·5	305	0 12	+ 4	—	—	—	0·6
Rocca di Papa	E.	1·9	159	i 0 32	+ 3	i 0 56	+ 3	—	1·0
	N.	1·9	159	i 0 30	+ 1	i 0 57	+ 4	—	1·0
Venice		2·0	11	0 55	?S	(0 55)	0	(1·6)	—
Moncalieri		3·3	297	0 34	−18	2 10	?	2·9	—
Pompeii		3·4	142	e 2 4	?L	—	—	(e 2·1)	—
Zagreb		3·8	51	e 1 0	+ 1	i 1 43	− 1	i 1·9	2·0
Zurich		4·5	331	e 1 9	− 1	i 2 5	+ 1	—	—
Neuchatel		4·9	317	e 1 15	− 1	e 2 12	− 2	—	—
Vienna	Z.	5·7	33	e 2 52	?L	—	—	(e 2·9)	—
Strasbourg		5·8	333	—	—	2 50	+11	—	—
Stonyhurst		13·9	323	e 2 51	−34	e 4 31	?	—	—

Additional readings and notes: Venice gives S as P and L as S. Zagreb eNW = +1m.18s., iNE = +1m.47s., i = +1m.51s., and +1m.54s. Strasbourg SR_1 = +3m.2s., +3m.24s., and +3m.44s.

Dec. 1d. 22h. 47m. 18s. Epicentre 39°·0N. 81°·5E. (as on 1927 May 2d.)

$A = +·115$, $B = +·769$, $C = +·629$; $D = +·989$, $E = -·148$; $G = +·093$, $H = +·622$, $K = -·777$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Simla	N.	8·6	206	—	—	—	—	e 4·7	—
Tashkent		9·6	288	i 2 33	+ 9	i 4 1	−17	—	5·4
Irkutsk		20·6	42	—	—	e 9 44	+68	e 13·7	14·4
Bombay		21·4	203	5 25	+27	—	—	—	13·6
Ekaterinburg		22·5	330	i 5 11	0	e 9 12	− 3	i 10·7	12·8
Baku		24·2	283	—	—	e 10 3	+15	14·2	—
Tiflis	E.	27·9	287	e 6 3	− 4	e 10 41	−16	e 21·7	25·5
	N.	27·9	287	—	—	e 10 28	−29	e 22·7	24·5
Kucino		33·2	315	—	—	—	—	e 18·5	—
Copenhagen		47·5	315	—	—	—	—	25·7	—
Strasbourg		52·0	307	—	—	—	—	30·7	—
De Bilt		52·5	311	—	—	—	—	e 31·7	32·2
Uccle		53·4	310	—	—	—	—	—	31·7
Kew		55·9	313	—	—	—	—	e 27·7	—

Additional readings: Simla eE = +5m.24s. Tashkent i = +1m.28s., +2m.44s., 2m.50s., +3m.6s., +3m.15s., +3m.35s., +3m.45s., and +3m.53s. Irkutsk e = +12m.40s. Ekaterinburg MNZ = +12·4m. Tiflis eE? = +14m.39s. and +15m.55s. Kucino e = +16m.30s.

Dec. 1d. Readings also at 2h. (Tashkent), 3h. (Nagasaki), 4h. (Sucre), 6h. (Uccle and near Algiers), 10h. (near San Fernando), 14h. (La Plata), 15h. (near Mizusawa), 16h. (near Tacubaya), 17h. (La Paz), 22h. (Makeyevka).

Dec. 2d. 6h. 55m. 10s. Epicentre 34°·0N. 136°·0E. (as on 1927 Aug. 16d.).

A = −·596, B = +·576, C = +·559; D = +·695, E = +·719; G = −·402, H = +·389, K = −·829.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Osaka		0·8	325	0 13	+ 1	(0 23)	+ 1	0·4	1·2
Sumoto		0·9	291	−0 6	−20	—	—	0·0	0·1
Kobe		1·0	316	0 5	−10	—	—	0·3	0·3
Nagoya		1·4	33	i 0 32	+11	0 46	+ 7	0·9	1·7
Toyooka		1·8	328	0 28	0	(0 47)	− 4	0·8	0·9
Matuyama		2·7	266	i 0 28	−14	(e 0 52)	−22	e 0·9	1·0
Hukuoka		4·6	266	1 13	+ 2	(2 10)	+ 4	2·2	2·2
Nagasaki		5·2	258	i 1 20	0	2 23	+ 1	2·8	—
Mizusawa	E.	6·6	37	3 2	?S	(3 2)	+ 2	(3·8)	—
Irkutsk		29·1	319	—	—	—	—	15·3	—
Ekaterinburg		54·4	319	—	—	—	—	27·3	—

Additional readings: Osaka MN = +0·9m. Sumoto MNZ = +0·2m. Kobe MNZ = +0·4m. Nagoya P = +34s., MN = +0·9m. Mizusawa gives S as P and L as S.

Dec. 2d. Readings at 3h. (Suva), 4h. (near Berkeley and near Irkutsk), 5h. (Tortosa and near Sumoto), 7h. (Suva, near Sumoto, and near Toyooka), 8h. (Tashkent, near Merida, and Tacubaya), 14h. (Suva and near Sumoto), 18h. (Wellington), 19h. (near Toyooka), 20h. (Batavia, Manila, and Tashkent).

Dec. 3d. 10h. 9m. 10s. (I) } Epicentre 35°·7N. 2°·3W.
10h. 13m. 30s. (II) } (as given by Granada and Toledo).

A = +·809, B = −·033, C = +·586; D = −·040, E = −·999; G = +·586, H = −·024, K = −·810.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Almeria	1·0	352	0 23	+ 8	i 0 44	+16	—	1·2
II		1·0	352	e 0 23	+ 8	i 0 43	+15	—	1·0
I	Granada	1·6	321	i 0 28	+ 4	0 48	+ 3	—	1·3
II		1·6	321	i 0 30	+ 6	0 50	+ 5	—	1·0
I	Malaga	1·9	296	0 24	− 5	(0 46)	− 7	0·8	—
II		1·9	296	e 0 33	+ 4	(e 0 45)	− 8	e 0·8	—
I	Toledo	4·2	342	e 1 4	− 1	1 53	− 2	—	—
II	N.W.	4·2	342	—	—	1 52	− 3	—	—

Additional readings: Almeria I PR_1 = +33s., PR_2 = +38s., SR_1 = +51s., SR_2 = +59s., MN = +1·3m., MZ = +1·5m., II PR_1 = +38s., SR_1 = +51s. Granada I P = +30s., i = +36s. and +41s., II i = +46s. and +49s. Toledo I eP = +1m.15s., SNE = +2m.11s., SR_1NW = +2m.22s., II S = +2m.10s.

Dec. 3d. Readings also at 0h. (Tiflis and Wellington), 1h. (Tiflis), 2h. (Tashkent), 3h. (near La Paz and Sucre), 4h. (Tashkent), 7h. (Port au Prince), 8h. (Suva), 12h. and 13h. (Ekaterinburg), 17h. (near Sumoto), 21h. (Port au Prince), 22h. (Ksara).

Dec. 4d. 3h. 53m. 4s. Epicentre 32°·2N. 129°·5E. (as on 1927 Oct. 18d.).

A = −·538, B = +·653, C = +·533; D = +·772, E = +·636; G = −·339, H = +·411, K = −·846.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki		0·6	31	i 0 7	− 2	0 10	− 7	—	—
Hukuoka		1·6	29	0 24	0	0 40	− 5	—	0·7
Matuyama		3·2	58	e 1 4	+14	(e 1 40)	+12	e 1·7	1·8
Sumoto		5·0	64	e 0 38	−39	—	—	1·8	1·8
Kobe		5·3	61	1 25	+ 3	—	—	2·7	2·7
Osaka		5·6	62	1 33	+ 6	—	—	2·8	4·6
Toyooka		5·6	52	1 24	− 3	(2 30)	− 4	2·5	2·7
Nagoya		6·8	62	e 2 0	+16	—	—	3·4	3·9
Zi-ka-wei		6·9	264	—	—	e 3 19	+12	—	—
Hong Kong		16·8	238	—	—	—	—	—	11·4
Phu-Lien		23·4	246	—	—	—	—	11·9	—
Baku		62·5	302	—	—	—	—	e 33·9	—
Kucino		64·7	321	—	—	—	—	e 34·2	—
Tiflis	E.	65·6	305	—	—	—	—	e 35·6	—
Pulkovo		66·9	327	—	—	—	—	e 34·9	—
Copenhagen		77·1	329	—	—	—	—	41·9	—
De Bilt		82·4	329	—	—	—	—	e 44·9	—
Uccle		84·0	329	—	—	—	—	45·9	—

Additional readings: Sumoto MN = +1·9m. Kobe MZ = +2·8m., MN = +3·0m. Osaka MN = +4·2m. Nagoya MN = +4·1m.

Dec. 4d. 12h. 18m. 20s. Epicentre 32°·2N. 129°·5E. (as at 3h.).

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki	0·6	31	i 0· 7	− 2	0 11	− 6	—	—
Hukuoka	1·6	29	0 19	− 5	0 35	−10	—	0·6
Matuyama	3·2	58	e 1 19	−31	(e 1 27)	− 1	e 1·5	1·6
Sumoto	5·0	64	e 1 24	+ 7	(2 26)	+ 9	2·4	2·4
Kobe	5·3	61	1 13	− 9	(2 34)	+ 9	2·6	2·7
Osaka	5·6	62	2 25	?S	(2 25)	− 9	3·4	4·6
Toyooka	5·6	52	1 24	− 3	(2 28)	− 6	2·5	2·5
Nagoya	6·8	62	e 1 59	+15	—	—	3·4	—
Zi-ka-wei	6·9	264	—	—	—	—	e 3·6	—
Irkutsk	27·1	325	—	—	—	—	e 12·6	—

Additional readings: Kobe MZ = +2·6m. Osaka MN = +4·4m.

Dec. 4d. List of times for P for Nagasaki records of after shocks from the epicentre 32°·2N. 129°·5E.

h.	m.	s.	h.	m.	s.	h.	m.	s.
3	53	11	5	45	15	10	37	4
4	3	17	5	45	41	10	44	1
4	3	47	5	48	51	11	11	28
4	15	11	5	53	37	12	18	27
4	17	42	6	4	24	12	22	9
4	20	31	6	14	3	12	23	0
4	36	56	6	39	41	12	32	1
*4	48	1	6	45	29	12	33	15
4	49	12	6	58	0	12	34	29
5	35	38	7	12	52	12	38	9
5	38	8	8	12	18	12	40	10
5	43	47	9	43	13	14	1	29
5	44	4	10	14	4	14	13	16
5	44	57	10	17	56			

*Hukuoka gives P = 4h.48m.16s., S = 4h.48m.32s.

Dec. 4d. Readings also at 0h. (Ekaterinburg, near Sumoto, and Toyooka), 3h. (Tiflis, Nagoya, near Sumoto, and Toyooka), 4h. (Nagoya, near Mizusawa, and near Port au Prince), 5h. (Makeyevka and Tiflis (2)), 6h. (near Amboina), 7h. (La Paz and Riverview), 8h. (Strasbourg), 9h. (near Toyooka), 11h. (near La Paz and Sucre), 12h. (Ksara), 13h. (Irkutsk), 16h. (near La Paz and Sucre), 18h. (Ekaterinburg), 22h. (Ksara).

Dec. 5d. 17h. 49m. 30s. Epicentre 68°·0S. 90°·0W.

A = ·000, B = −·375, C = −·927; D = −1·000, E = ·000; G = ·000, H = +·927, K = −·375.

Very doubtful.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Plata		37·7	45	—	—	13 40	+ 6	17·1	—
Sucre		51·4	30	e 9 7	− 9	16 33	− 3	26·1	36·0
La Paz		53·3	26	9 36	+ 8	i 17 1	+ 1	27·1	31·8
Wellington		54·1	247	—	—	—	—	e 40·5	—
Riverview		68·6	232	—	—	—	—	e 41·6	51·7
Ottawa		113·9	11	—	—	—	—	e 54·5	—
San Fernando	E.	121·2	69	—	—	—	—	—	61·0
Kodaikanal		121·7	165	54 18	?L	—	—	(54·3)	—
Rio Tinto		122·3	68	46 30?	?L	—	—	(46·5)	54·5
Bombay		129·8	158	—	—	—	—	e 53·5	—
Phu-Lien	N.	131·7	200	—	—	—	—	60·5	—
Hong Kong		132·1	210	—	—	—	—	—	73·0
Florence	E.	134·0	80	e 19 30	[+ 2]	—	—	—	—
Kew		136·4	64	—	—	—	—	e 58·5	—
Strasbourg		136·7	73	—	—	—	—	(58·5)	—
Uccle		137·4	68	—	—	—	—	e 54·5	—
De Bilt		138·8	68	—	—	—	—	e 59·5	66·2
Copenhagen		144·2	70	—	—	—	—	58·5	—
Tiflis	N.	144·5	113	e 20 48	[+60]	—	—	e 60·3	73·7
Baku		145·0	120	e 20 19	[+31]	e 30 16	? Σ	e 48·5	71·9
Makeyevka		147·5	98	—	—	—	—	75·5	—
Tashkent		151·1	147	i 19 21	[−36]	—	—	e 54·5	73·6
Kucino		153·6	91	—	—	—	—	e 65·0	—
Pulkovo		153·6	78	—	—	—	—	e 68·5	—
Irkutsk		162·9	211	i 20 4	[− 6]	i 23 54	?PR_1	78·4	—

Additional readings and notes: Sucre PR_1 = +11m.25s., SR_1 = +19m.49s., SR_2 = +22m.4s.; T_o = 17h.49m.15s. Riverview MN = +50·6m. San Fernando MN = +56·5m. Strasbourg reading has been diminished by 1h. Baku MN = +65·8m., MZ = +67·5m. Tashkent i = +21m.22s. and +22m.33s., e = +21m.50s., +31m.30s., and +43m.30s.? = SR_1 +25s., MN = +70·4m., MZ = +74·3m.

Dec. 5d. Readings also at 1h. (La Paz and La Plata), 7h. (Tiflis), 10h. (Wellington), 15h. (near Nagasaki), 16h. (Florence), 17h. (near Nagasaki), 18h. (Sucre), 19h. (Kucino, Merida, and La Paz), 20h. (Suva).

Dec. 6d. Readings at 19h. (near Nagasaki), 22h. (Nagoya).

Dec. 7d. 9h. 33m. 30s. Epicentre 37°·0N. 141°·0E. (as on 1924 Jan. 15d.).

A = −·621, B = +·503, C = +·602; D = +·629, E = +·777; G = −·468, H = +·379, K = −·799.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	2·1	2	0 33	0	1 0	+ 2	—	—
Nagoya		3·8	242	e 0 56	− 3	(1 36)	− 8	1·6	1·8
Osaka		5·1	245	2 1	+42	—	—	2·9	3·3
Kobe		5·3	246	1 33	+11	—	—	2·6	3·0
Sumoto		5·6	244	e 2 0	+33	—	—	2·7	—
Irkutsk		29·8	313	—	—	—	—	17·7	—
Tashkent		54·2	298	—	—	—	—	e 29·5	33·5
Ekaterinburg		54·8	319	—	—	—	—	28·0	—

Additional readings: Nagoya S = +1m.14s., MN = +2·1m. Osaka MN = +3·2m. Kobe MN = +2·9m.

Dec. 7d. Readings also at 1h. (near Toyooka), 5h. (Wellington), 7h. (La Paz), 8h. (near Sumoto), 11h. (La Paz), 14h. and 15h. (2) (Tiflis), 16h. (near Sumoto and Toyooka), 17h. (near Toyooka), 20h. (near Irkutsk and near Tacubaya), 22h. (La Plata and Santiago).

Dec. 8d. Readings at 0h. (Riverview and Tashkent), 3h. (Ekaterinburg, Tashkent, Tiflis, and near Irkutsk), 4h. (near Balboa Heights), 5h. (near Tacubaya), 6h. and 7h. (Tucson), 10h. (Irkutsk and Tashkent), 11h. (La Paz and Sucre), 12h. (La Paz and Tashkent), 15h. (La Paz, Stonyhurst, Moncalieri, near Neuchatel, and Zurich).

Dec. 9d. Readings at 0h. (near Sumoto (2)), 3h. (Kobe and La Paz), 8h. (Irkutsk and Tashkent), 15h. (Tashkent), 17h. (Stonyhurst), 21h. (Taihoku), 22h. (Makeyevka).

Dec. 10d. 2h. 44m. 27s. Epicentre 38°·0N. 138°·9E. (given in Bulletin of Earthquake Res. Inst. Tokyo Vol. VII, pt. 2).

A = −·594, B = +·518, C = +·616 ; D = +·657, E = +·754 ;
G = −·464, H = +·405, K = −·788.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	N.	2·1	56	0 32	− 1	0 58	0	—	—
	N.	2·1	56	0 33	0	0 59	+ 1	—	—
Nagoya		3·2	211	0 55	+ 5	—	—	1·7	1·7
Toyooka		4·1	235	0 59	− 5	—	—	1·9	1·9
Sumoto		4·9	228	e 1 4	−12	(e 1 57)	−17	e 2·0	2·1

Dec. 10d. 18h. 28m. 58s. Epicentre 44°·6N. 9°·5E. (as on 1927 Oct. 30d.).

A = +·702, B = +·118, C = +·702.

		Δ	Az.	P.	O−C.	S.	O−C.	M.
		°	°	m. s.	s.	m. s.	s.	m.
Moncalieri	z.	1·3	287	0 29	+ 9	0 39	+ 3	—
Florence		1·5	123	e 0 22	− 1	—	—	1·0
Zurich		2·8	347	e 0 43	− 1	i 1 22	+ 5	—
Neuchatel		3·0	324	(e 0 48)	+ 1	e 1 24	+ 1	—

Zurich gives also i = +1m.19s. Neuchatel P has been increased by 5m.

Dec. 10d. 19h. 48m. 24s. Epicentre 42°·0N. 139°·5E. (as on 1926 Oct. 19d.).

A = −·565, B = +·483, C = +·669 ; D = +·649, E = +·760 ;
G = −·509, H = +·435, K = −·743.

		Δ	Az.	P,	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	3·1	157	0 56	+ 7	1 30	+ 4	—	—
	N.	3·1	157	0 59	+10	1 31	+ 5	—	—
Nagoya		7·1	197	e 2 19	+31	—	—	—	—
Irkutsk		25·7	306	—	—	e 8 58	−78	e 13·2	—
Ekaterinburg		50·3	316	i 9 7	− 2	i 16 17	− 6	25·6	—
Tashkent		50·9	295	i 9 12	0	i 16 27	− 3	e 25·4	29·2
Pulkovo		62·9	328	e 10 34	+ 3	i 18 58	− 2	e 29·6	—

Additional readings: Irkutsk e = +17m.11s., L = +19·9m. ; the readings entered as eS and eL are given as simple e's. Tashkent i = +9m.42s.

Dec. 10d. Readings also at 0h. (Moncalieri), 3h. (Tiflis), 4h. (Phu-Lien and Tashkent), 7h. (Tiflis), 12h. (near Tacubaya), 15h. (Tashkent), 19h. (Pulkovo, near Kobe, and Sumoto), 20h. (Port au Prince, Tiflis, and near Toyooka (2)), 21h. (Tiflis, Zagreb, Port au Prince, La Paz, Sucre, and near St. Louis), 22h. (Baku and La Paz).

Dec. 11d. 15h. 33m. 12s. Epicentre 27°·0S. 172°·0W. (as on 1918 Jan. 13d.).

A = −·882, B = −·124, C = −·454; D = −·139, E = +·990; G = +·450, H = +·063, K = −·891.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	12·6	313	e 3 36	+29	i 6 18	+44	e 7·0	10·4
	N.	12·6	313	e 2 54	−13	i 5 24	−10	e 6·5	—
Apia		13·2	0	—	—	—	—	6·9	10·6
Wellington	N.	17·9	214	—	—	—	—	e 6·7	10·0
Riverview		32·3	248	(e 6 36)	−15	e 6 36	?P	10·9	16·1
Sydney		32·3	248	—	—	—	—	13·9	15·3
Zi-ka-wei	Z.	86·1	308	e 12 21	−33	—	—	—	—
Victoria	E.	87·1	30	23 38	?S	(23 38)	− 4	45·2	48·6
La Paz		94·3	111	—	—	—	—	51·8	61·2
Sucre		95·2	115	23 43	?[S]	(23 43)	[−15]	52·8	57·3
St. Louis	N.	100·6	51	e 29 48	?	—	—	e 56·8	66·8
Chicago	E.	103·8	50	—	—	—	—	e 65·4	69·2
Irkutsk		107·4	320	—	—	(e 25 48?)	[+49]	27·6	—
Toronto	E.	110·0	50	—	—	—	—	e 58·2	—
Ottawa		113·0	49	—	—	e 29 48?	?PS	66·8	—
Tashkent		128·4	304	i 17 44	[−91]	—	—	e 56·8	82·4
Ekaterinburg		132·5	325	i 22 37	?	—	—	58·8	—
Pulkovo		143·9	341	e 19 20	[−27]	—	—	71·8	87·7
Kucino		144·1	332	e 24 0	?	—	—	e 67·7	—
Tiflis	E.	146·6	307	e 19 24	[−27]	e 29 31	? Σ	e 77·9	101·3
	N.	146·6	307	e 19 28	[−23]	e 29 45	? Σ	e 78·8	101·6
Makeyevka		148·6	321	—	—	—	—	e 75·8	90·8
Dyce		148·9	12	—	—	—	—	—	105·2
Copenhagen		151·1	355	—	—	e 38 42	?	74·8	—
Oxford		154·3	13	—	—	—	—	—	103·8
Kew	Z.	154·8	13	—	—	—	—	e 86·8	—
De Bilt		154·9	2	—	—	—	—	e 85·8	—
Paris		157·8	10	—	—	e 88 48?	?L	108·8	—
Strasbourg		158·4	0	—	—	—	—	86·8	—
Toledo	N.W.	163·7	35	—	—	—	—	e 92·3	—
San Fernando	E.	164·7	48	—	—	—	—	—	96·3

Additional readings: Apia e = 15h.31m.46s. Wellington ME = +9·7m. Riverview MN = +15·8m. Sydney P = 15h.31m.0s. St. Louis eN = +38m.48s.? and +46m.48s.? Chicago eN = +48m.36s., eE? = +58m.11s., eE = +61m.13s., eLN = +58·4m. Irkutsk readings are both given as L. Ottawa e = +35m.48s.? = SR_1 + 28s., and +52m.48s.? Tashkent e = +18m.50s. = [P] − 24s., +26m.30s. = [S] − 23s., +29m.48s. = S − 2s., +30m.52s. and +42m.48s.?, MN = +83·2m. Ekaterinburg e = +31m.15s., +38m.26s., and +42m.51s. Kucino e = +29m.36s., +32m.48s., and +40m.54s. Tiflis eZ = +19m.22s. Makeyevka MN = +112·4m. Copenhagen eE = +43m.0s. = SR_1 − 5s. San Fernando MN = +95·8m.

Dec. 11d. 15h. 49m. 12s. Epicentre 45°·0N. 7°·2E. (near Turin).

A = +·702, B = +·089, C = +·707; D = +·125, E = −·992; G = +·702, H = +·089, K = −·707.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Moncalieri	0·3	90	0 5	0	0 10	+ 2	—	0·5
Neuchatel	2·0	355	i 0 33	+ 2	i 1 0	+ 5	—	—
Besançon	2·4	339	0 40	+ 3	i 1 15	+ 9	—	—
Zurich	2·6	14	i 0 45	+ 4	i 1 18	+ 6	—	—
Puy de Dôme	3·1	285	e 1 6	+17	—	—	—	1·7
Florence	3·1	112	e 0 58	+ 9	—	—	—	2·3
Ravensburg	3·3	29	1 25	?	1 35	+ 4	1·7	—
Strasbourg	3·6	6	1 3	+ 7	1 55	+16	—	—
Innsbruck	3·7	50	e 1 32	?S	(e 1 32)	−10	i 1·7	—
Paris	5·0	322	e 1 19	+ 2	e 2 41	+24	3·1	—
Rocca di Papa	5·1	128	e 3 24	?L	—	—	(e 3·4)	4·0
Uccle	6·2	343	e 2 8	+33	—	—	e 3·2	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zagreb		6·2	79	—	—	e 2 53	+ 4	e 3·4	—
Jena	E.	6·6	19	e 2 4	+23	e 2 58	− 2	e 3·5	3·6
Vienna	Z.	7·1	59	e 3 39	?L	—	—	(e 3·6)	—
De Bilt		7·2	350	—	—	—	—	e 3·8	—
Almeria		11·0	224	e 3 35	+51	—	—	—	6·0
Makeyevka		21·3	71	e 4 29	−28	(e 7 48?)	−62	e 7·8	—

Additional readings: Neuchatel iP = +36s. Strasbourg P = +1m.17s., SR_1 = +2m.11s., SR_2 = +2m.17s. Innsbruck i = +2m.18s. Zagreb e = +4m.0s. Jena iE = +2m.7s., +2m.10s., +2m.16s., +2m.19s., and +2m.32s. Vienna iZ = +4m.27s. Makeyevka e = +2m.59s.

Dec. 11d. 17h. 25m. 30s. Epicentre 1°·0S. 124°·0E. (as on 1924 March 7d.).

A = −·559, B = +·829, C = −·017; D = +·829, E = +·559; G = +·010, H = −·015, K = −1·000.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		5·0	122	i 0 53	−24	1 36	−41	—	—
Manila		15·9	349	i 3 57	+ 6	—	—	i 7·5	7·6
Malabar		17·5	249	i 4 15	+ 4	—	—	11·5	—
Batavia		17·9	253	i 4 17	+ 1	—	—	15·5	—
Hong Kong		25·2	338	5 34	− 6	10 0	− 7	12·3	13·1
Phu-Lien		27·6	323	e 5 58	− 6	(11 30?)	+38	11·5	—
Perth		31·9	192	e 5 30	−76	i 12 30	+23	—	—
Zi-ka-wei		32·3	356	i 6 36	−15	e 12 28	+15	—	19·2
Adelaide		36·6	160	i 7 44	+17	i 13 17	− 1	15·9	20·5
Osaka		37·2	15	7 29	− 3	(13 3)	−24	13·0	14·4
Riverview		41·6	145	i 7 35	−33	i 13 55	−34	e 20·1	27·6
Sydney		41·6	145	(8 36)	+28	8 36	?P	21·4	22·6
Kodaikanal		47·7	285	15 42	?S	(15 42)	− 8	31·8	33·3
Hyderabad		48·5	295	8 50	− 7	15 50	−10	25·7	35·0
Bombay		54·0	295	9 43	+10	17 15	+ 6	26·6	33·6
Simla	E.	54·8	310	—	—	e 17 24	+ 5	—	—
Irkutsk		55·8	346	e 9 41	− 4	17 21	−10	27·1	35·7
Tashkent		65·0	319	i 10 46	+ 1	19 34	+ 9	36·5	45·3
Ekaterinburg		76·6	330	i 11 56	− 3	i 21 41	− 3	36·5	42·8
Baku		78·6	312	—	—	i 22 12	+ 5	44·5	51·2
Tiflis	E.	82·6	313	12 28	− 6	i 22 51	− 2	e 46·5	54·4
	N.	82·6	313	12 29	− 5	22 52	− 1	e 43·5	47·7
	Z.	82·6	313	12 28	− 6	22 50	− 3	e 46·5	53·6
Makeyevka		88·1	319	—	—	i 23 43	−10	34·5	60·0
Kucino		88·6	326	—	—	i 23 52	− 7	45·8	52·9
Ksara	N.	89·0	305	—	—	23 47	−16	—	—
Pulkovo		92·7	330	—	—	i 25 36	PS	49·5	62·0
Copenhagen	E.	102·8	328	—	—	e 24 50	[+13]	51·5	66·4
Prague		103·2	322	—	—	e 34 30?	?	e 53·5	62·5
Cheb		104·4	322	—	—	e 24 48	[+ 3]	e 56·5	62·5
Victoria	E.	105·6	40	—	—	—	—	50·7	56·2
De Bilt	E.	108·1	325	—	—	—	—	e 51·5	65·8
Uccle		109·0	324	—	—	—	—	e 50·5	—
Dyce		109·5	332	—	—	—	—	55·4	65·0
Oxford		111·8	327	—	—	—	—	—	67·5
St. Louis	E.	131·1	35	e 23 54	?	—	—	—	—
Ottawa		132·3	17	e 22 30?	?	—	—	74·5	—
Sucre		158·0	156	20 19	[+13]	—	—	81·5	101·8
La Paz		158·8	146	e 20 14	[+ 7]	e 29 40	?	43·5	—

Additional readings and note: Manila MN = +8·0m. Batavia iZ = +4m.14s. Hong Kong ? = +11m.53s. Perth readings have been diminished by 1h. Adelaide iPR_1 = +8m.56s. Osaka MN = +15·4m. Riverview iPR_1 = +9m.7s. and +9m.16s., MN = +22·6m.; T_0 = 17h.24m.52s. Sydney SR_1 = +13m.12s. Irkutsk iP = +9m.46s., MZ = +35·8m.; epicentre 1°41'S. 121°26'E. Tashkent i = +10m.51s. and +11m.29s., iS = +19m.36s., eSR_1 = +24m.12s., eSR_2 = +24m.18s., MZ = +38·0m., MN = +47·0m. Ekaterinburg i = +21m.46s., iS_4P_4S = +21m.56s., iPS = +22m.36s., eSR_2 = +30m.17s. Baku MN = +48·6m. Tiflis PR_1Z? = +16m.1s., PR_4E? = +18m.3s. Makeyevka e = +23m.22s. and +25m.53s., MN = +55·4m. Kucino e = +23m.16s. and +25m.56s., i = +23m.41s., MN = +55·8m., MZ = +56·1m. Pulkovo MZ = +57·3m. Copenhagen eEZ = +27m.18s. =PS −18s., eN = +32m.30s.?, MN = +56·3m. De Bilt eLN = +53·5m., MN = +67·3m., MZ = +76·3m.

Dec. 11d. Readings also at 0h. (Tiflis), 2h. (near Toyooka), 3h. (Tiflis and near Malabar), 4h. (Bombay, La Plata, and near Santiago), 7h. (near Toyooka), 10h. (near Tashkent), 13h. (Tiflis, near Hukuoka, and Nagasaki), 14h. (Florence, Neuchatel, Zurich, and Zagreb), 15h. (Fordham), 16h. (near Moncalieri, Neuchatel, and Zurich), 18h. (near La Paz and Sucre), 19h. (Taihoku), 20h. (near Balboa Heights).

Dec. 12d. 13h. 21m. 15s. Epicentre 27°·0S. 172°·0W. (as on 11d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	12·6	313	i 3 15	+ 8	i 5 39	+ 5	i 6·6	7·6
	N.	12·6	313	i 3 9	+ 2	i 15 21	−13	—	6·7
Wellington		17·9	214	—	—	—	—	e 11·7	—
Sydney		32·3	248	12 9	?S	(12 9)	− 4	17·8	20·2
Ottawa	N.	113·0	49	—	—	—	—	59·8	—
Tashkent		128·4	304	e 21 24	?PR_1	i 30 34	?	—	78·4
Ekaterinburg		132·5	325	—	—	—	—	55·8	—
Tiflis	E.	146·6	307	e 19 19	[−32]	e 23 57	?PR_1	e 74·8	101·2
	N.	146·6	307	e 19 20	[−31]	e 36 55	?	e 77·8	82·9
Kew	Z.	154·8	13	—	—	—	—	e 78·8	—
De Bilt		154·9	2	—	—	—	—	e 78·8	—
Ksara	N.	155·1	293	e 20 38	[+36]	—	—	—	—

Additional readings: Tashkent eSR_1 = +33m.45s.? Tiflis eE = +40m.41s.

Dec. 12d. 18h. 23m. 42s. Epicentre 44°·6N. 7°·7E. (as on 1927 June 21d.).

A = +·706, B = +·095, C = +·702.

		Δ	Az.	P.	O−C.	S.	O−C.
		°	°	m. s.	s.	m. s.	s.
Moncalieri	Z.	0·4	0	1 14	+ 8	0 18	+ 7
Neuchatel		2·5	347	e 0 36	− 3	e 1 3	− 6
Zurich		2·9	13	e 0 46	+ 1	i 1 21	+ 1

Zurich gives also iP = +50s.

Dec. 12d. 18h. 53m. 15s. Epicentre 27°·0S. 172°·0W. (as at 13h.).

A = −·882, B = −·124, C = −·454; D = −·139, E = +·990;
G = +·450, H = +·063, K = −·891.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva		12·6	313	i 2 51	−16	i 5 51	+17	—	11·4
Apia		13·2	0	—	—	(5 56)	+ 7	5·9	8·6
Wellington	E.	17·9	214	—	—	i 5 57	−101	i 8·5	9·6
	N.	17·9	214	—	—	i 5 48	−110	i 9·0	9·2
Riverview		32·3	248	—	—	(e 12 27)	+14	e 12·4	16·8
Sydney		32·3	248	5 3	?	—	—	14·0	15·4
Adelaide		42·7	247	—	—	—	—	e 17·9	25·4
Irkutsk		107·4	320	—	—	(e 27 3)	− 2	57·2	—
Toronto	E.	110·0	50	—	—	—	—	e 52·0	—
Ottawa	E.	113·0	49	—	—	—	—	e 58·8	—
Tashkent		128·4	304	20 5	?	e 29 59	+ 9	e 64·8	72·6
Ekaterinburg		132·5	325	—	—	e 31 5	?	59·8	—
Baku		143·1	303	—	—	—	—	e 66·8	89·1
Pulkovo		143·9	341	—	—	—	—	e 80·8	—
Tiflis	E.	146·6	307	e 22 50	?PR_1	e 29 0	?	e 71·8	94·5
	N.	146·6	307	e 18 57	[−54]	—	—	e 67·4	93·4
	Z.	146·6	307	e 18 41	[−70]	e 31 22	?	e 84·8	—
Makeyevka		148·6	321	—	—	—	—	105·8	—
Copenhagen		151·1	355	—	—	—	—	88·6	—
Oxford		154·3	13	—	—	—	—	—	106·8
Kew		154·8	13	e 19 45?	[−17]	—	—	86·8	—
De Bilt		154·9	2	—	—	—	—	e 87·8	—
Uccle		156·0	6	—	—	—	—	—	92·8
Paris		157·8	10	—	—	—	—	—	90·8
Strasbourg		158·4	0	—	—	—	—	(e 82·8)	—
Granada		165·9	41	23 39	?	—	—	e 99·8	104·8

For Notes see next page.

NOTES TO DEC. 12d. 18h. 53m. 15s.

Additional readings and notes: Suva iSE = +6m.21s., T_0E = 18h.51m. 42s., T_0N = 18h.52m.18s. Riverview e = +9m.3s., MN = 17·9m. Sydney readings have been increased by 1h. Adelaide e = +12m.20s., MN = +21·4m. Irkutsk gives both readings as L. Ottawa eN = +51m.27s. Tashkent ePS = +31m.15s. Baku MN = +96·0m. Strasbourg reading has been increased by 1h. Granada i = +24m.21s.

Dec. 12d. Readings also at 0h. (Sucre), 1h. and 2h. (Edinburgh), 3h. (Phu-Lien), 6h. (Amboina, Suva, and La Paz), 7h. (Makeyevka, La Paz, and St. Louis), 11h. (Tiflis (2)), 13h. (Suva), 15h. (San Fernando), 16h. (La Paz), 17h. (Fordham and La Paz), 18h. (Toronto), 20h. (near Helwan and Ksara).

Dec. 13d. Readings at 0h. (De Bilt, Granada, Strasbourg, Uccle, Zagreb, Tiflis, and La Paz), 1h. (Baku, Ekaterinburg, Kew, Tashkent, and Wellington), 2h. (Baku, Tashkent, Tiflis (2), and near Santiago), 4h. (Tiflis), 5h. (Tiflis, Zagreb, near Helwan, Ksara, and near Toyooka), 6h. (Baku and La Paz), 8h. (near Ksara), 11h. (near Florence), 14h. (near Amboina), 17h. (Ksara), 19h. (Baku, Ekaterinburg, Irkutsk, and Tashkent).

Dec. 14d. 7h. 50m. 18s. Epicentre 24°·7N. 63°·0E.

A = +·412, B = +·809, C = +·418; D = +·891, E = −·454; G = +·190, H = +·372, K = −·908.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent		17·4	16	i 4 10	0	i 7 33	+ 6	9·4	12·0
Baku		19·1	328	e 4 50	+20	e 8 5	+ 1	e 12·7	16·1
Tiflis	E.	22·7	323	e 5 12	− 1	e 9 13	− 6	—	—
	N.	22·7	323	e 5 13	0	e 9 14	− 5	—	—
Ksara	N.	25·3	297	e 5 31	−10	5 51	?	6·2	—
Ekaterinburg		32·1	358	—	—	e 11 4	−66	18·7	—

Additional readings: Tashkent i = +4m.20s., MZ = +11·9m. Tiflis eZ? = +9m.18s.

Dec. 14d. Readings also at 9h. (Manila), 12h. (near La Paz and Sucre), 16h. (near Tashkent), 17h. (Baku, Ekaterinburg, Irkutsk, and near Tashkent), 19h. (Baku, Ekaterinburg, Tashkent, and Tiflis), 21h. (Baku and near Tashkent).

Dec. 15d. 16h. 11m. 50s. Epicentre 3°·0S. 138°·0E. (as on 1923 Sept. 16d.).

A = −·742, B = +·668, C = −·052; D = +·669, E = +·743; G = +·039, H = −·035, K = −·999.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina		9·8	266	i 2 43	+16	—	—	7·2	—
Manila		24·4	317	e 5 34	+ 2	(i 9 57)	+ 5	i 10·0	—
Adelaide		32·0	179	e 6 39	− 8	e 12 19	+11	16·2	24·7
Riverview		33·2	160	—	—	e 12 22	− 5	e 20·3	23·2
Sydney		33·2	160	12 40	?S	(12 40)	+13	18·9	20·5
Perth		35·7	214	11 10	?	17 55	?L	23·2	—
Zi-ka-wei	Z.	37·7	338	e 7 13	−23	—	—	—	—
Phu-Lien		38·9	310	e 7 36	− 9	e 13 30	−21	16·2	—
Wellington		50·6	144	—	—	—	—	e 28·2	—
Irkutsk		62·2	339	10 26	0	18 51	0	29·4	—
Tashkent		76·2	315	i 11 58	+ 2	i 21 42	+ 3	e 34·2	47·2
Ekaterinburg		85·6	328	i 11 47	− 4	22 16	−10	37·2	45·0
Baku		90·5	311	e 13 14	− 5	i 24 16	− 3	45·7	63·4
Tiflis	E.	94·4	313	e 13 37	− 3	e 26 41	?PS	e 57·6	63·2
	N.	94·4	313	e 13 39	− 1	—	—	e 54·2	58·6
	Z.	94·4	313	e 13 37	− 3	e 26 56	?PS	e 58·2	62·6

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria	E.	98·0	41	—	—	—	—	47·8	53·4
Kucino		98·1	327	—	—	e 27 46	?	e 58·9	60·5
Pulkovo		101·4	331	e 14 8	− 9	e 27 37	?PS	50·2	65·5
Budapest		111·4	320	—	—	e 24 10?	?PR$_2$	—	—
Copenhagen		111·8	330	—	—	e 25 10?	[− 7]	e 56·2	—
De Bilt		117·3	330	—	—	—	—	e 59·2	—
Strasbourg		117·8	325	—	—	—	—	e 72·2	—
La Paz		147·7	128	20 0	[+ 8]	—	—	—	—
Sucre		148·3	133	20 5	[+12]	—	—	—	—

Additional readings: Adelaide MN = +21·1m. Riverview e = +15m.28s., iS = +18m.14s., MN = +21·8m. Tashkent i = +12m.22s., +12m.30s., and +21m.52s., iPR$_4$ = +14m.46s., eSR$_3$ = +29m.52s., MN = +48·5m., MZ = +53·4m. Ekaterinburg e = +15m.7s. Baku ePR$_4$ = +16m.48s., MN = +60·5m. Tiflis eZ? = +17m.19s., eE = +17m.20s., eN = +17m.27s. Kucino e = +40m.4s. =SR$_4$ +27s. Pulkovo e = +20m.7s., i(P) = +23m.36s., e = +31m.32s., MZ = +63·5m., MN = +66·2m. Copenhagen eLN = +55·2m.

Dec. 15d. Readings also at 0h. (Balboa Heights), 1h. (near Granada), 3h. (La Paz), 4h. (near Nagasaki), 8h. (Tashkent), 12h. (La Paz and near Sucre), 13h. (La Paz), 14h. (Florence, Rocca di Papa, Vienna, and Zagreb), 16h. (De Bilt), 21h. (Tashkent and near Toyooka), 23h. (La Paz).

Dec. 16d. 10h. 44m. 40s. Epicentre 48°·3N. 9°·0E.

A = +·657, B = +·104, C = +·747; D = +·156, E = −·988; G = +·737, H = +·117, K = −·665.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Hohenheim		0·5	19	i 0 4	− 4	i 0 10	− 4	—	0·2
Ravensburg		0·6	141	0 8	− 1	0 16	− 1	0·4	—
Strasbourg		0·9	289	i 0 14	0	i 0 25	0	—	—
Zurich		1·0	197	e 0 14	− 1	i 0 25	− 3	—	—
Neuchatel		1·9	227	i 0 31	+ 2	i 0 55	+ 2	—	—
Besançon		2·3	243	e 0 43	+ 7	1 13	+10	—	—
Cheb		2·8	51	e 0 32	−12	—	—	—	1·6
Jena	E.	3·0	32	e 0 56	+11	i 1 23	0	e 1·6	1·8
Uccle		3·9	312	e 2 2	?L	—	—	(e 2·0)	—
Vienna	Z.	4·9	88	—	—	—	—	e 2·5	—

Jena gives also iE = +1m.28s. Vienna reading is given for 11h.

Dec. 16d. 22h. 21m. 36s. Epicentre 1°·0S. 124°·0E. (as on Dec. 11d.).

A = −·559, B = +·829, C = −·017; D = +·829, E = +·559; G = +·010, H = −·015, K = −1·000.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent	65·0	319	i 10 44	− 1	e 19 19	− 6	e 31·1	38·5
Ekaterinburg	76·6	330	i 12 4	+ 5	i 21 38	− 6	35·4	45·7
Baku	78·6	312	—	—	e 23 54	+107	e 46·4	—
Tiflis	82·6	313	i 12 30	− 4	—	—	e 43·9	—
Kucino	88·6	326	—	—	—	—	e 52·0	—
Pulkovo	92·7	330	—	—	—	—	e 52·4	—

Additional readings: Tashkent i = +10m.47s., MN = +39·0m., MZ = +39·3m. Tiflis eE = +30m.29s., eLN = +50·4m.

Dec. 16d. Readings also at 0h. (La Paz), 2h. (near Toyooka), 5h. (La Paz), 7h. (near Amboina), 10h. (Wellington and near Strasbourg), 12h. (near Amboina and near Toyooka), 15h. (Tiflis), 16h. (Wellington), 20h. (Kodaikanal), 21h. (near Port au Prince), 22h. (Tashkent).

Dec. 17d. 7h. 26m. 15s. Epicentre 34°·0S. 57°·0E. (as on 1927 Nov. 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.
Baku		74·7	355	i 11 48	+ 1	e 21 32	+10	e 35·8	43·8
Tashkent		76·1	10	e 11 56	0	i 21 25	−13	e 35·8	43·6
Tiflis	E.	76·5	351	11 59	+ 1	e 21 45	+ 2	e 36·8	44·8
	N.	76·5	351	11 58	0	e 21 45	+ 2	e 37·8	41·6
	Z.	76·5	351	11 58	0	—	—	e 40·2	44·7
Makeyevka		83·8	349	—	—	—	—	44·8	—
Ekaterinburg		90·9	3	i 13 10	−11	i 24 4	−19	42·8	85·3
San Fernando	E.	91·8	315	—	—	—	—	—	58·2
Pulkovo		96·3	348	—	—	e 32 43	?SR_1	53·8	—

Additional readings and note: Baku MN = +47·8m., MZ = +48·3m. Tashkent e = +24m.21s., eSR_1 = +26m.45s., eSR_2 = +29m.45s.?, eSR_3 = +31m.21s., MN = +40·7m., MZ = +41·1m. Tiflis eE = +12m.12s., eN = +12m.14s. Makeyevka reading has been diminished by 1h. Ekaterinburg e = +23m.49s. and +29m.46s., ePS = +25m.17s. San Fernando MN = +58·4m.

Dec. 17d. Readings also at 2h. (near Toyooka), 3h. (near Tashkent), 5h. (near Toyooka), 9h. (Tiflis), 13h. (La Paz), 15h. (near Toyooka), 16h. (Port au Prince), 17h. (Nagoya and near Mizusawa), 18h. (Ekaterinburg and Irkutsk (2)), 19h. (Bagnères, Baku, Tashkent, and Tiflis), 20h. (San Fernando), 21h. (La Paz), 22h. (Ekaterinburg).

Dec. 18d. 19h. 49m. 15s. Epicentre 41°·5N. 132°·0E. (see note at end.).

A = −·501, B = +·557, C = +·663; D = +·743, E = +·669; G = −·443, H = +·492, K = −·749.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toyooka		6·4	158	e 1 48	+10	(3 4)	+9	3·1	3·2
Kobe		7·3	159	1 54	+ 3	(3 22)	+ 4	3·4	3·5
Osaka		7·3	157	1 56	+ 5	(3 24)	+ 6	3·4	4·3
Mizusawa	E.	7·4	106	(1 49)	− 3	1 49	?P	—	—
Nagoya		7·4	147	e 2 10	+18	(3 16)	− 5	3·3	3·6
Sumoto		7·5	162	e 1 46	− 8	(3 14)	−10	3·2	3·3
Hukuoka		8·0	190	2 6	+ 5	2 24	−73	—	—
Nagasaki		8·9	192	i 2 10	− 5	(3 57)	− 4	4·0	—
Irkutsk		21·6	310	e 6 42	+102	—	—	e 10·6	—

Additional readings: Kobe MN = +3·4m. Osaka MN = +4·6m. Mizusawa SN = +1m.48s. Irkutsk e = +7m.51s.

The epicentre 41°·0N. 133°·0E. is given for this shock in "The Geophysical Magazine," Tokio, 1929 Mar., with focus 500 km. deep. The observations of the eight Japanese stations available do not fit this origin and a depth of focus correction still further increases the discrepancy.

The following table gives the principle values of the observed distances in degrees, the T_0 being the mean of five available values.

	Δ observed	Δ_1 calculated for 41N.133E.	$O-C_1$	Δ_2 calculated 41·5N.132°·0N.	$O-C_2$
	°		°		°
Toyooka	6·9	5·6	+1·3	6·4	+0·5
Kobe	7·4	6·5	+0·9	7·2	+0·2
Osaka	7·5	6·6	+0·9	7·3	+0·2
Mizusawa	7·1	6·4	+0·7	7·4	−0·3
Nagoya	8·6	6·6	+2·0	7·4	+1·2
Sumoto	7·1	6·8	+0·3	7·5	−0·4
Hukuoka	8·3	7·7	+0·6	8·0	+0·3
Nagasaki	8·6	8·6	0·0	8·9	−0·3

Dec. 18d. Readings also at 1h. and 2h. (near Nagasaki), 3h. (St. Louis, near Tacubaya, Merida, and Vera Cruz), 4h. (St. Louis, Ottawa, Tashkent (2), Rio Tinto, and near Nagasaki), 9h. (Baku, Ekaterinburg, Irkutsk, Pulkovo, Tashkent, and Tiflis), 11h. (Baku, Tashkent, and Tiflis), 13h. (near Toyooka), 16h. (near Reykjavik), 17h. (near Mizusawa), 18h. (Ekaterinburg, Irkutsk, and Pulkovo), 19h. (Irkutsk), 20h. (La Paz and Irkutsk).

Dec. 19d. Readings at 1h. (Baku, Mizusawa, and Tiflis), 5h. (Ekaterinburg and Manila), 6h. (Irkutsk, Wellington, near Apia, and near Manila), 7h. (Baku, Honolulu T.H., and Tashkent), 8h. (Apia, Ekaterinburg, Tashkent, and Pulkovo), 12h. (near Manila), 13h. (Makeyevka), 21h. (La Paz).

Dec. 20d. Readings at 2h. (Taihoku), 3h. (Berkeley), 6h. (Riverview), 8h. (Adelaide, Christchurch, Sydney, Ekaterinburg, and Tiflis), 9h. (Baku, Kucino, and San Fernando), 11h. (Rio Tinto), 13h. (Perth), 14h. (near Toyooka), 17h. (near Nagoya), 18h. (Wellington), 22h. (Ekaterinburg).

Dec. 21d. Readings at 2h. (Taihoku and near Sumoto), 4h. (Adelaide, Apia, Riverview, and Wellington), 5h. (Ekaterinburg), 6h. (San Fernando), 9h. (La Plata), 12h. (San Fernando), 15h. (near La Paz and Sucre), 20h. (Irkutsk), 21h. (near Toyooka).

Dec. 22d. 13h. 50m. 48s. Epicentre 11°·0S. 115°·0E.

A = −·415, B = +·890, C = −·191; D = +·906, E = +·423; G = +·081, H = −·173, K = −·982.

Very rough.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Malabar		8·2	297	2 6	+ 2	i 3 33	− 9	—	—
Batavia		9·4	300	e 1 36	−46	i 4 11	− 2	i 5·0	—
Manila		26·3	13	e 5 57	+ 6	—	—	11·9	—
Adelaide		32·2	142	i 11 30	?S	(i 11 30)	−41	15·8?	18·0
Phu-Lien		32·9	346	6 12?	−44	—	—	—	—
Riverview		40·4	131	—	—	e 16 36	?SR$_1$	e 20·6	23·7
Zi-ka-wei		42·7	10	e 8 16	0	e 14 42	− 2	—	—
Wellington	N.	60·2	133	—	—	—	—	e 31·2	—
Irkutsk		64·0	355	—	—	e 16 18	?	e 33·7	—
Ekaterinburg		81·2	334	e 12 25	− 1	e 23 50	?PS	37·2	—
Tiflis	E.	83·0	317	—	—	e 22 49	− 8	e 54·2	—
	N.	83·0	317	—	—	e 22 48	− 9	e 56·2	—
	Z.	83·0	317	e 12 54	+18	e 22 50	− 7	e 46·2	—
Kucino		91·9	327	—	—	—	—	e 50·2	—
La Paz		152·2	173	e 20 5	[+ 6]	—	—	—	—

Additional readings: Malabar iP = +2m.10s. Adelaide S = +14m.48s.?, MN = +18·1m. Riverview MN = +21·8m. Ekaterinburg i = +13m.13s. Tiflis eZ? = +23m.41s. = PS − 2s., eE? = +42m.34s.

Dec. 22d. Readings also at 1h. (La Paz), 8h. (Sucre), 11h. (near Toyooka), 12h. (La Paz), 13h. (Wellington), 15h. (near Amboina), 20h. (La Paz and Tiflis), 21h. (near Manila).

Dec. 23d. Readings at 4h. (Ekaterinburg, Irkutsk, and Tiflis), 8h. (Tiflis), 9h. (Tashkent, Suva, and near Santiago (2)), 10h. (Apia and Wellington), 11h. (Ekaterinburg and near Toyooka), 14h. (Irkutsk (2)), 16h. (La Paz), 19h. (Ekaterinburg).

Dec. 24d. 4h. 28m. 52s. Epicentre 15°·6N. 97°·8W. (as on 1920 April 6d.).

A = −·131, B = −·954, C = +·269; D = −·991, E = +·136; G = −·036, H = −·266, K = −·963.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca	1·7	35	(0 28)	+ 2	(0 47)	− 1	(0·8)	(0·9)
Puebla	3·4	354	0 18	−35	—	—	1·0	1·3
Vera Cruz	3·9	24	(0 35)	−26	(1 21)	−26	(1·4)	(1·8)
Tacubaya	4·0	341	1 6	+ 4	—	—	2·1	2·2
Guadalajara	7·4	314	—	—	—	—	3·5	3·8
Merida	9·4	54	—	—	—	—	4·4	4·9
Tucson N.	20·4	327	e 4 48	+ 2	—	—	e 11·0	13·3
St. Louis N.	24·0	15	e 5 27	− 1	e 9 43	− 1	e 13·0	15·2
Ottawa	35·1	28	—	—	i 12 34	−23	e 17·6	—
Victoria E.	38·9	333	—	—	—	—	21·6	25·4
Ekaterinburg	105·4	12	—	—	—	—	58·1	—

Additional readings and notes: Oaxaca readings have been increased by 1m. Vera Cruz readings have been increased by 2m. St. Louis iP = +5m.28s., PR_1 = +5m.57s.; eSE = +9m.45s., SR_1N = +10m.50s., SR_2N = +11m.11s. Ottawa e = +22m.8s.?

Dec. 24d. Readings also at 4h. (near Amboina), 16h. (Tiflis), 18h. (Taihoku), 21h. (near Oaxaca, Puebla, Tacubaya (2), and Vera Cruz).

Dec. 25d. Readings at 3h. (Taihoku), 4h. (near Mizusawa), 5h. (near Vera Cruz), 6h. (near Bombay and near Calcutta), 12h. (near Tacubaya), 15h. (Vienna), 16h. (Baku, Tiflis, and near Ksara), 22h. (Baku).

Dec. 26d. 15h. 6m. 14s. Epicentre 41°·8N. 12°·7E. (close to Rocca di Papa).

A = +·727, B = +·164, C = +·667; D = +·220, E = −·976; G = +·650, H = +·147, K = −·745.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Rocca di Papa	0·1	—	i 0 0	− 2	—	—	—	0·0
Naples E.	1·5	129	e 0 27	+ 4	e 0 52	+10	—	1·5
Pompeii	1·7	128	0 31	+ 5	—	—	—	1·4
Florence	2·2	332	e 0 46	+12	—	—	—	1·8
Zagreb	4·6	30	e 1 15	+ 4	—	—	i 2·3	—
Vienna Z.	6·9	21	—	—	—	—	e 4·0	—

Zagreb gives e = +1m.35s., i = +2m.25s., and +2m.31s., iNW = +2m.41s., i = +3m.6s.

Dec. 26d. Readings also at 0h. (near Oaxaca, Puebla, Tacubaya (2), and Vera Cruz), 1h. (near Tacubaya), 3h. (Baku), 10h. (Riverview and Sydney), 12h. (Batavia), 14h. (La Paz, Sucre, La Plata, and near Nagasaki), 15h. (near Rocca di Papa).

Dec. 27d. 20h. 31m. 45s. Epicentre 16°·5N. 89°·5W. (as on 1925 May 26d.).

A = +·009, B = −·959, C = +·284; D = −1·000, E = −·009; G = +·002, H = −·284, K = −·959.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Merida	4·5	359	2 0	+ 0	—	—	3·3	3·8
Tacubaya	9·7	289	2 23	− 3	(4 24)	+ 3	4·4	5·2
St. Louis	22·2	358	1 5 5	− 2	i 9 17	+ 8	e 9·7	10·2
Cincinnati	23·0	10	—	—	—	—	e 15·2	17·2
Ekaterinburg	102·6	17	—	—	—	—	50·2	—
Tashkent	118·9	18	—	—	—	—	e 59·0	72·0

Additional readings: St. Louis iN = +5m.33s., +5m.40s., and +7m.37s., iEN = +8m.36s. Cincinnati eEN = +22s., +1m.41s., +2m.45s., +3m.45s., +4m.52s., and +5m.41s.

Dec. 27d. 23h. 31m. 15s. Epicentre 15°·6N. 97°·8W. (as on 24d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		1·7	35	0 36	+10	—	—	1·2	1·4
Puebla		3·4	354	1 17	+24	—	—	2·0	2·3
Vera Cruz		3·9	24	(0 58)	− 3	—	—	(1·9)	(2·3)
Tacubaya		4·0	341	1 44	?S	(1 44)	− 6	2·4	2·6
Guadalajara		7·4	314	—	—	—	—	3·5	3·7
Tucson	E.	20·4	327	e 5 17	+31	—	—	11·1	11·4
	N.	20·4	327	e 5 18	+32	e 5 55	?	11·0	11·4
St. Louis		24·0	15	e 5 27	− 1	i 9 44	0	—	—
Chicago	N.	27·6	17	e 6 32	+28	e 11 25	+33	e 16·8	—
Toronto		32·1	26	—	—	e 12 34	+24	22·0	—
Ottawa		35·1	28	—	—	e 13 15	+18	e 22·8	—
Victoria	E.	38·9	333	—	—	—	—	21·6	22·6
Ekaterinburg		105·4	12	—	—	—	—	e 54·8	—
Baku		116·5	26	—	—	—	—	e 74·8	—
Tashkent		121·9	11	—	—	—	—	e 65·8	—

Vera Cruz readings have been diminshed by 3m. Chicago gives also eE = +17m.10s. and +22m.21s.

Dec. 27d. Readings also at 2h. (Apia), 9h. (Baku, Tashkent (2), Almeria, and near Granada), 10h. (La Paz), 11h. (near Sumoto), 12h. (Baku, Ekaterinburg, and Tashkent), 13h. (near Amboina), 20h. (near Santiago), 22h. (La Paz), 23h. (near Tacubaya).

Dec. 28d. 8h. 54m. 45s. Epicentre 54°·0N. 161°·0E. (as on 1927 July 31d.).

A = −·556, B = +·191, C = +·809; D = +·326, E = +·946; G = −·765, H = +·263, K = −·588.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	20·1	230	4 44	+ 2	—	—	12·1	—
Osaka		26·3	233	5 48	− 3	10 18	−10	16·4	—
Irkutsk		33·2	290	i 6 45	−13	12 16	−11	14·2	19·9
Zi-ka-wei		36·2	248	e 8 50	?PR_1	e 16 2	?PR_2	—	24·5
Victoria	E.	45·4	66	—	—	15 26?	+ 6	22·6	24·1
Hong Kong		47·2	247	15 57	?S	(15 57)	+13	25·6	31·2
Manila		50·3	234	e 8 58	−11	—	—	—	—
Phu-Lien		52·6	255	8 15?	?	—	—	—	—
Tashkent		58·7	300	i 10 4	+ 1	i 18 6	− 1	e 30·2	35·9
Pulkovo		59·6	335	10 7	− 2	18 6	−12	30·2	33·5
Kucino		60·8	328	e 10 15	− 3	e 18 24	− 9	28·4	33·4
Simla	N.	61·9	286	—	—	—	—	e 36·4	—
Upsala		62·5	340	e 10 27	− 2	—	—	—	36·3
Konigsberg	E.	66·4	337	—	—	—	—	e 35·2	—
Makeyevka		67·2	324	10 58	− 1	e 19 51	− 1	32·2	37·0
Copenhagen		67·3	343	11 0	0	e 19 45	− 9	e 32·2	45·0
Chicago	N.	67·7	50	—	—	—	—	e 34·8	40·2
Baku		68·8	311	i 11 9	− 1	20 15	+ 3	34·2	40·1
St. Louis		69·1	54	i 11 27	+15	e 20 29	+14	e 32·8	36·8
Ottawa		69·5	40	—	—	e 20 15?	− 5	e 35·2	—
Toronto	E.	69·6	42	—	—	e 25 30	?SR_1	43·8	—
Hamburg		69·8	342	i 11 16	0	—	—	e 36·2	43·2
Tiflis	E.	69·9	315	e 11 17	+ 1	20 24	− 1	36·2	40·2
	N.	69·9	315	e 11 17	+ 1	20 25	0	e 35·0	40·7
	Z.	69·9	315	i 11 18	+ 2	20 27	+ 2	e 37·4	45·8
De Bilt		72·0	346	11 29	− 1	e 20 43	− 7	e 35·2	42·8
Prague		72·2	339	—	—	e 30 15?	?	e 39·2	43·2
Cheb		72·7	340	—	—	e 20 15?	−43	e 35·2	40·2
Feldberg		73·3	344	—	—	—	—	—	56·0
Uccle		73·4	347	e 11 36	− 2	—	—	e 37·2	—
Kew		73·4	350	e 11 41	+ 3	—	—	e 39·2	—
Vienna		73·5	338	e 11 38	− 1	—	—	—	41·2
Bombay		73·8	281	11 42	+ 1	21 24	+12	40·0	41·7

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Graz		74·8	338	—	—	—	—	e 39·2	42·0
Strasbourg		75·0	344	11 45	− 4	—	—	35·2	—
Innsbruck		75·5	340	e 11 43	− 9	—	—	—	—
Paris		75·6	347	e 11 52	− 1	—	—	41·2	—
Zagreb		75·8	337	—	—	—	—	e 40·6	—
Kodaikanal		78·0	272	38 15	?L	—	—	(38·2)	—
Colombo		79·2	269	40 19	?L	—	—	(40·3)	46·9
Ksara	E.	80·3	318	12 21	0	—	—	—	—
Rio Tinto		87·6	350	35 15?	?L	—	—	(35·2)	56·2
Granada		87·9	349	i 12 51	−13	—	—	51·2	—

Additional readings: Mizusawa PN = +4m.45s. Irkutsk PR_1 = +7m.47s., PR_2 = +8m.7s., MZ = +20·9m.; epicentre 56°54′N. 158° 5′E. Hong Kong ? = +19m.44s. Tashkent i = +10m.17s., eSR_1 = +21m.45s., eSR_2 = +23m.33s., e = +28m.15s.?, MN = +32·4m. Pulkovo PR_1 = +12m.19s., SR_1 = +22m.45s., MN = +33·6m., MZ = +37·9m. Kucino PR_2 = +14m.9s., SR_1 = +22m.27s., MN = +37·5m. Makeyevka eSR_2 = +27m.25s., MN = +37·4m., MZ = +45·1m. Copenhagen ePE = +11m.15s., PR_1 = +13m.26s., eSR_1N = +24m.15s., eSR_1NZ = +27m.45s., eLN = +36·2m., MN = +38·6m. Chicago eE = +27m.58s. = SR_2 +9s., and +34m.35s. Baku eSR_1 = +24m.59s., SR_2 = +27m.40s., MZ = +44·9m., MN = +47·3m. St. Louis iP_cPN = +12m.5s., iEN = +21m.4s. = [S] − 2s., eSR_1EN = +24m.55s. Ottawa eN = +25m.15s. = SR_1 − 28s. Tiflis eZ = +13m.51s., ePR_1E = +14m.18s., eZ = +15m.28s., PSE = +21m.4s., eN = +21m.19s., SR_2N = +28m.6s. De Bilt PR_1Z = +14m.8s. Vienna iPZ = +11m.41s., PR_1? = +14m.23s. Zagreb e = +35m.15s. ?

Dec. 28d. 14h. 33m. 24s. Epicentre 36°·2N., 143°·0E. (as on 1927 Aug. 29d.).

A = −·644, B = +·486, C = +·591; D = +·602, E = +·799; G = −·472, H = +·355, K = −·807.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa		3·2	333	0 50	0	1 32	+ 4	—	—
Nagoya		5·0	260	e 1 9	− 8	(2 9)	− 8	2·2	2·8
Sumoto		6·8	257	e 1 48	+ 4	(3 10)	+ 5	3·2	3·3
Irkutsk		31·5	314	—	—	—	—	19·0	—
Tashkent		55·9	300	—	—	—	—	e 29·6	34·0
Ekaterinburg		56·4	321	—	—	—	—	27·6	—
Baku		69·5	307	—	—	—	—	e 41·6	43·8
Tiflis	z.	72·1	310	—	—	—	—	e 38·6	46·3

Additional readings: Mizusawa SN = +1m.33s. Baku e = +37m.13s. and +38m.31s., MZ = +44·1m., MN = +44·2m. Tiflis eZ? = +40m.36s. ?, ME = +46·0m.

Dec. 28d. 18h. 20m. 18s. Epicentre **54°·0N. 161°·0E.**

(as at 8h.).

A = −·556, B = +·191, C = +·809; D = +·326, E = +·946; G = −·765, H = +·263, K = −·588.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		13·7	245	3 26	+ 4	—	—	6·4	9·6
Mizusawa	E.	20·1	230	3 54	−48	9 6	+41	11·1	—
Nagoya		25·2	231	e 5 53	+13	(10 28)	+21	10·5	13·3
Toyooka		25·9	235	e 6 8	+21	(10 43)	+23	10·7	16·4
Osaka		26·3	233	6 35	+44	10 54	+26	14·8	15·4
Kobe		26·5	234	e 5 58	+ 5	10 55	+23	14·2	15·1
Sumoto		26·9	234	e 6 3	+ 6	11 5	+26	15·1	18·0
Hukuoka		29·7	239	7 59	+94	12 17	+48	15·2	20·4
Nagasaki		30·6	240	e 6 40	+ 6	11 53	+ 9	15·7	18·7

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk		33·2	290	6 43	−15	12 2	−25	—	—
Sitka		34·8	60	e 7 22	+11	e 12 35	−17	e 19·2	23·3
Zi-ka-wei		36·2	248	e 7 18	− 6	13 14	+ 1	—	25·8
Taihoku	E.	41·1	241	14 33	?S	(14 33)	+11	24·8	27·8
Honolulu T.H.	E.	44·9	120	i 9 46	+74	i 15 22	+ 8	i 19·0	22·7
	N.	44·9	120	i 8 42	+10	i 15 6	− 8	21·7	22·7
Victoria	E.	45·4	66	8 35	− 1	(15 5)	−15	15·1	24·2
Hong Kong		47·2	247	8 45	− 3	15 44	0	23·8	31·2
Manila		50·3	234	e 9 15	+ 6	i 17 17	+54	i 27·3	34·7
Ekaterinburg		51·7	318	i 9 9	− 9	i 16 33	− 7	—	—
Phu-Lien		52·6	255	e 9 23	− 1	e 17 9	+18	24·7	29·5
Berkeley		52·9	76	e 9 30	+ 5	e 17 19	+24	e 27·4	30·0
Lick	E.	53·6	76	e 9 38	+ 8	e 17 26	+22	e 30·9	—
	N.	53·6	76	e 9 35	+ 5	e 17 23	+19	e 29·6	—
Tashkent		58·7	300	i 10 0	− 3	i 18 1	− 6	e 21·7	43·1
Pulkovo		59·6	335	i 10 4	− 5	i 18 16	− 2	26·7	31·1
Helsingfors	E.	60·6	338	10 18	+ 2	i 18 32	+ 1	26·7	33·7
	N.	60·6	338	10 18	+ 2	i 18 35	+ 4	27·2	33·7
	Z.	60·6	338	i 10 17	+ 1	—	—	—	31·7
Kucino		60·8	328	10 17	− 1	18 24	− 9	—	45·3
Denver		61·0	62	e 10 52	+33	e 19 16	?PS	29·5	32·6
Calcutta	N.	61·9	272	10 35	+11	—	—	33·8	—
Simla	E.	61·9	286	10 36	+12	18 48	+ 1	31·6	36·9
	N.	61·9	286	10 36	+12	18 54	+ 7	31·4	38·4
Dehra Dun		61·9	284	11 12	+48	18 24	−23	23·4	38·4
Upsala		62·5	340	10 24	− 5	18 49	− 6	e 30·7	36·4
Tucson	E.	63·4	73	e 10 44	+10	19 24	+18	28·4	34·7
	N.	63·4	73	e 10 39	+ 5	19 21	+15	26·0	29·3
Amboina		63·8	219	e 10 42	+ 5	i 19 36	+25	22·7	—
Bergen		64·0	348	10 38	0	19 18	+ 5	e 29·7	—
Konigsberg		66·4	337	—	—	i 18 56	−46	e 27·7	38·7
Copenhagen		67·3	343	10 57	− 3	e 19 50	− 4	e 28·7	39·6
Chicago	E.	67·7	50	11 5	+ 3	e 19 54	− 4	—	—
	N.	67·7	50	11 8	+ 6	i 20 2	+ 4	32·6	40·0
Dyce		67·9	352	10 44	−19	19 24	−37	—	—
Baku		68·8	311	i 11 6	− 4	i 20 20	+ 8	—	—
Chihuahua		68·8	71	11 42	+32	21 18	+66	32·0	—
Ann Arbor		69·0	47	e 11 24	+13	i 20 24	+10	i 34·0	37·2
St. Louis		69·1	54	11 22	+10	i 20 28	+13	e 31·4	34·4
Edinburgh		69·4	351	e 11 27	+14	20 21	+ 2	28·7	47·2
Ottawa		69·5	40	i 11 14	0	i 20 20	0	e 31·4	43·2
Toronto		69·6	42	i 11 17	+ 2	i 20 27	+ 6	i 36·0	40·4
Hamburg		69·8	342	11 13	− 3	20 25	+ 1	e 32·7	41·4
Tiflis	E.	69·9	315	e 11 15	− 1	i 20 29	+ 4	e 33·2	43·8
	N.	69·9	315	e 11 16	0	i 20 28	+ 3	e 33·2	44·6
	Z.	69·9	315	11 14	− 2	e 20 27	+ 2	e 32·1	46·4
Lemberg		70·1	332	e 10 0	−78	e 28 18	?SR_2	e 34·7	45·2
Potsdam		70·4	340	i 11 22	+ 3	i 20 24	− 7	e 34·6	40·4
Cincinnati	N.	71·2	49	i 11 26	+ 2	i 20 43	+ 3	e 34·1	39·4
Stonyhurst		71·3	350	e 11 25	0	20 42	0	31·7	45·7
Apia		71·7	153	11 48	+20	21 14	[−10]	30·4	43·7
Ithaca		71·8	42	11 35	+ 7	20 50	+ 2	32·7	—
De Bilt		72·0	346	11 27	− 3	20 44	− 6	e 30·7	42·6
Jena	E.	72·0	341	e 11 25	− 5	i 20 51	+ 1	e 34·7	41·2
	N.	72·0	341	e 11 25	− 5	e 20 42	− 8	e 34·7	42·4
	Z.	72·0	341	i 11 25	− 5	e 20 48	− 2	e 34·7	42·5
Prague		72·2	339	e 11 31	0	e 20 54	+ 2	e 32·7	40·2
Cheb		72·7	340	e 11 31	− 3	e 20 59	+ 1	e 35·7	40·2
Oxford		73·2	350	i 11 37	0	i 21 17	+13	e 28·0	44·9
Feldberg	E.	73·3	344	e 11 27	−11	e 20 59	− 7	e 36·3	42·3
Kew		73·4	350	e 11 38	0	i 21 7	0	31·3	44·2
Uccle		73·4	347	e 11 32	− 6	21 7	0	32·7	43·6
Vienna		73·5	338	e 11 34	− 5	21 1	− 7	e 28·7	41·7
Budapest		73·5	335	e 17 42?	?PR_2	21 6	− 2	32·7	41·7
Suva		73·6	165	i 11 6	−34	i 21 12	+ 3	i 38·1	—
Bombay		73·8	281	11 43	+ 2	21 13	+ 1	38·7	41·9
Harvard	E.	73·8	39	e 11 49	+ 8	i 21 15	+ 3	e 33·9	—
	N.	73·8	39	i 11 45	+ 4	e 21 18	+ 6	i 37·0	47·0
Fordham		74·1	41	i 11 54	+11	i 20 27	−48	e 30·0	38·4
Hohenheim		74·5	342	i 11 42	− 4	e 20 59	−21	e 35·7	41·9
Cheltenham	E.	74·8	45	—	—	—	—	e 34·4	—
Gras		74·8	338	e 11 44	− 4	i 21 23	− 1	32·7	42·5
Strasbourg		75·0	344	i 11 42	− 7	e 21 21	− 5	32·7	42·2
Batavia		75·2	238	i 11 52	+ 2	i 21 50	[0]	34·2	46·2

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ravensburg		75·4	342	e 11 42	− 9	e 21 30	0	e 36·2	43·1
Innsbruck		75·5	340	e 11 44	− 8	—	—	e 29·7	42·2
Belgrade	E.	75·6	332	e 11 52	− 1	e 21 32	− 1	e 37·2	—
	N.	75·6	332	e 11 49	− 4	e 21 32	− 1	e 30·5	49·3
Paris		75·6	347	i 11 49	− 4	e 21 30	− 3	33·7	45·7
Zagreb		75·8	337	e 11 53	− 1	e 21 36	+ 1	e 26·7	43·1
Zurich		76·0	341	e 11 52	− 3	i 21 36	− 1	—	—
Chur		76·3	342	e 11 53	− 4	21 40	− 1	—	
Besançon		76·6	344	e 12 5	+ 6	e 21 30	−14	30·7	42·7
Kodaikanal		78·0	272	12 0	− 7	—	—	38·6	57·2
Moncalieri		78·4	342	i 12 5	− 4	21 54	−11	38·0	46·9
Puy de Dôme		78·6	346	—	—	—	—	e 37·7	—
Florence	Z.	78·9	340	12 8	− 4	22 20	+ 9	37·7	44·2
Colombo		79·2	269	12 17	+ 3	22 52	?PS	37·0	46·9
Tacubaya		80·0	72	12 14	− 5	22 38	+ 5	38·0	45·3
Ksara		80·3	318	12 20	− 1	22 27	0	38·3	—
Marseilles		80·5	343	e 12 13	− 9	e 22 9	−20	e 38·7	47·5
Rocca di Papa		80·5	339	i 12 22	0	22 21	− 8	e 39·5	55·0
Bagneres		81·6	348	e 12 29	+ 1	e 23 32	−10	e 38·7	47·4
Barcelona		82·9	345	12 28	− 7	e 23 19	? Σ	e 39·2	46·7
Tortosa	N.	83·7	347	e 12 18	−22	e 22 55	−11	39·2	48·3
Toledo		85·3	350	i 12 41	− 9	e 22 52	[− 6]	e 36·6	50·2
Helwan		85·6	319	12 45	− 6	i 23 15	−11	—	51·0
Alicante		86·3	347	10 48	?	e 22 47	[−17]	e 39·7	—
Algiers		87·3	343	e 12 46	−15	23 32	−12	41·7	45·7
Rio Tinto		87·6	350	13 42?	+39	—	—	—	50·7
Granada		87·9	349	i 12 55	− 9	23 35	−16	43·4	52·3
Almeria		88·0	349	i 12 52	−13	i 23 37	−15	41·6	49·6
Riverview		88·3	189	e 13 8	+ 1	e 24 22	+27	e 42·0	49·7
Sydney		88·3	189	(13 18)	+11	(24 24)	+29	(45·7)	(48·7)
Malaga		88·4	350	12 46	−21	23 14	[− 4]	30·7	55·3
San Fernando		88·9	350	13 5	− 5	i 23 38	[+17]	47·8	54·2
Adelaide		91·0	199	i 13 19	− 2	i 23 44	[+10]	i 39·5	51·3
Perth		94·4	219	16 47	[−38]	i 24 28	? Σ	45·4	—
Wellington	E.	96·0	170	—	—	i 21 4	?	e 40·5	42·9
	N.	96·0	170	(i 17 43)	[+12]	i 17 43	?[P]	e 38·6	50·5
Entebbe		111·4	304	e 18 28	[+ 2]	e 27 24	−17	53·9	62·1
La Paz		126·7	65	e 19 19	[+ 9]	i 31 44	?	56·0	69·7
Sucre		130·4	64	e 19 23	[+ 4]	i 32 19	?	55·8	75·9
Pilar		141·2	74	23 36	?PR_1	—	—	—	—
Rio de Janeiro	E.	144·0	40	e 19 42	[− 5]	—	—	35·7	81·4
La Plata		146·9	72	19 48	[− 3]	—	—	64·1	—
Cape Town		147·0	293	19 56	[+ 5]	—	—	—	81·5

Additional readings: Ootomari MN = +10·6m. Nagoya MN = +13·8m. Osaka MN = +15·0m. Kobe MN = +17·8m. Sumoto MZ = +17·4m., MN = +17·7m. Nagasaki MN = +19·0m., MZ = +21·8m. Irkutsk PR_1 = +7m.41s., PR_2 = +8m.19s. Sitka eN? = +8m.30s., iSN = +15m.26s., eE = +17m.22s. Zi-ka-wei MN = +22·4m. Taihoku SE = +19m.42s. Honolulu T.H. ePR_1N = +10m.12s., ePR_1E = +10m.27s., iSR_1N? = +19m.2s. Victoria LN = +15m.25s. = S + 5s., MN = +20·9m. Hong Kong S? = +15m.50s., MN = +29·4m. Manila PSE = +16m.53s., iSR_1 = +21m.51s., MN = +33·7m. Ekaterinburg iPR_1 = +11m.11s., i = +16m.12s.; epicentre 55°7′N. 163°43′E. Phu Lien ePR_1 = +11m.31s., ePR_1? = +12m.56s. = PR_2 − 4s., eSR_1? = +20m.52s. and +23m.22s. = SR_2 + 12s., MN = +29·8m. Berkeley ePN = +9m.42s., eN = +11m.51s. = PR_1 + 6s., eSZ = +17m.27s. = PS + 8s., eSR_1E? = +20m.41s., eSR_1Z? = +20m.51s., eSR_1N? = +21m.7s., eSR_2N? = +23m.13s. = SR_2 − 5s., eSR_2E? = +23m.15s. = SR_2 − 3s., eSR_2Z? = +24m.45s., eSR_2E? = +25m.1s. Lick eE = +16m.50s., eSR_1E? = +21m.11s., eSR_2N? +23m.34s., eSR_2E? = +23m.26s. Pulkovo PR_1 = +12m.12s., PR_2 = +13m.40s., SR_1 = +21m.36s., MN = +32·3m., MZ = +37·7m. Helsingfors PR_1E = +12m.30s., PR_1N = +12m.31s., PR_1Z = +12m.32s., PR_2N = +13m.51s., PR_2EZ = +13m.55s., SR_1N = +23m.12s. Kucino PR_1 = +12m.40s., PR_2 = +14m.17s., SR_1 = +22m.36s., SR_2 = +25m.0s., MZ = +44·2m. Denver PR_1N = +13m.19s., PR_2N = +15m.18s., iSE = +19m.39s., iE = +19m.42s. = [S] − 20s., iSR_1 = +23m.21s., eSR_2E = +26m.7s., eSR_2N = +26m.15s., MN = +33·2m. Upsala PR_2 = +14m.19s. Tucson eSR_1N? = +22m.2s., eSR_1E = +23m.32s. Amboina i = +10m.54s. Konigsberg iPR_1E = +13m.8s., PS = +19m.26s., PPS = +19m.49s., i = +20m.12s., +21m.24s., +22m.44s., +23m.0s., and +23m.24s., e = +20m.56s. Copenhagen ePE = +11m.0s., ePR_1EN = iPR_1Z = +13m.32s., PR_2 = +15m.25s., S = +19m.57s., eE = +20m.42s. = [S] − 9s., eN = +21m.31s. = Σ + 3s., eSR_1EZ = +24m.6s., iSR_1N = +24m.24s.,

Continued on next page,

SR_2 = +26m.42s.? eLN = +31·7m., MN = +38·6m., MZ = +40·2m. Chicago SR_1N = +24m.8s., eSR_1E = +24m.34s., SR_2N = +27m.40s. Ann Arbor ePR_1 = +15m.0s., iSR_1 = +25m.12s., iSR_2 = +28m.30s., MN = +46·2m.; T_0 = +18h.20m.36s. St. Louis iP_cPEN = +12m.3s., iS = +20m.35s., PS = +20m.52s., S_cSEN = +21m.54s., SR_1EN = +25m.5s., SR_1EN = +28m.15s., SR_2E = +29m.33s. Ottawa iSR_1 = +25m.23s., iSR_2 = +28m.23s., iN = +33m.32s., iE = +33m.47s.; T_0 = 18h.20m.26s. Toronto iPEN = +11m.20s., SR_1E = +25m.50s., SR_2E = +28m.32s., MN = +44·5m.; T_0 = 18h.20m.25s. Hamburg PR_1 = +13m.42s., PR_2 = +15m.32s., SR_1 = +25m.6s., SR_2 = +28m.30s., MN = +40·2m., MZ = +47·7m. Tiflis iZ = +11m.23s., ePR_1N? = +13m.49s., PR_1Z = +13m.56s., PR_2Z = +15m.33s., eN? = +15m.47s., eZ = +21m.29s. =[S] +18s., SR_1Z = +24m.59s., eZ = +27m.14s., SR_2Z = +28m.33s. Potsdam iPR_1 = +14m.12s. Cincinnati iP_cPN = +12m.7s., iPR_1N = +14m.12s., iPR_2N = +15m.50s., iN = +16m.0s., iPR_2N = +16m.54s., iPSN? = +21m.8s., iPPPSN = +21m.26s., iN = +21m.42s., iS_cSN? = +22m.2s., iPPSSN = +25m.50s., iP_cSS_cPN = +27m.0s., iSR_2N = +28m.50s., iSR_2N? = +30m.1s., iN = +30m.56s. and +31m.42s.; T_0 = 18h.20m.34s. Apia PR_1 = +15m.15s., L = +33·9m.; T_0 = 18h.20m.30s. Ithaca e = +15m.53s., SR_1 = +25m.49s., SR_2 = +28m.57s. De Bilt PR_1Z = +14m.6s., eLN = +34·7m., MN = +42·4m., MZ = +44·2m. Jena P = +11m.52s., ePR_1Z = +14m.27s., ePR_2N = +15m.51s., ePR_2Z = +15m.58s., eSR_1 = +25m.16s. Prague e = +11m.10s. PR_1 = +14m.12s., PR_2 = +16m.2s., PS = +21m.32s., SR_1 = +25m.30s., SR_2 = +29m.17s. Cheb eP = +11m.39s. Oxford PR_1 = +14m.37s., SR_1 = +26m.7s., MN = +44·6m. Feldberg MN = +42·1m. Kew PR_1 = +14m.25s., PR_2Z = +16m.6s., PSEZ = +21m.40s., SR_1EN = +26m.0s., LN = +33·7m. Uccle i = +11m.43s., +14m.26s. =PR_1 −30s., and +16m.11s. =PR_2 −27s., PR_1 = +14m.12s., MN = +42·6m. Vienna iPZ = +11m.35s., iPE = +11m.45s., iPN = +11m.48s., PR_1 = +14m.27s., PR_2 = +16m.18s., iEN = +18m.50s., PS = +21m.37s., SR_1 = +27m.1s., MN = +44·4m. Suva iSE = +21m.48s. =[S] +9s., iLN = +38·2m. Harvard ePR_1N = +16m.15s., eSR_1N = +26m.15s.; T_0 = 18h.20m.31s.; epicentre 55°N. 160°E. Fordham i = +12m.17s., iE = +12m.35s., i = +17m.27s. =PR_2 −6s., e = +20m.47s., and +21m.7s., SR_1 = +21m.27s., PS = +22m.0s., SR_2 = +26m.22s., e = +27m.32s. Hohenheim iPR_1 = +14m.35s., iPR_2N = +16m.25s., eSR_1 = +26m.8s., MN = +48·6m. Cheltenham eN = +39m.0s. Graz P = +14m.39s. and +16m.24s., PS = +22m.3s., SR_1 = +26m.18s., MN = +41·8m. Strasbourg PR_1 = +14m.36s. PR_2 = +16m.28s., PR_2 = +17m.32s., PS = +22m.8s., SR_1 = +26m.42s., SR_2 = +29m.42s., MZ = +46·2m., MN = +49·0m. Batavia i = +11m.53s. and +16m.4s., LZ = +27·2m. Ravensburg ePN = +11m.39s., ePR_1N = +14m.43s., ePR_2N = +16m.31s., eSR_1N? = +26m.23s., MN = +44·9m. Innsbruck i = +11m.58s. Belgrade eN = +13m.10s., +14m.36s., and +23m.9s. Paris PR_1 = +14m.47s., SR_1 = +26m.28s. Zagreb eLNW = +30·1m. Chur eP = +12m.10s. Moncalieri L = +31·9m., MN = +47·7m. Florence iPZ = +12m.13s., PR_1Z = +15m.25s., PR_2Z = +17m.12s., PR_2Z = +18m.27s., SR_1Z = +27m.52s., SR_2Z = +31m.27s., SR_2Z = +32m.42s. Ksara PR_1N = +15m.30s., PR_2N = +17m.28s., PR_2N = +18m.36s., PSN = +23m.8s., PSE = +23m.9s., SR_2E = +31m.33s., SR_2E = +33m.20s.; T_0 = 18h.20m.37s., epicentre 56°N. 163°E. Marseilles ePR_1 = +15m.17s. Rocca di Papa iPZ = +12m.18s., SN = +22m.35s., iS = +23m.2s. =PS −11s. Barcelona MN = +50·1m. Tortosa, LE = +37·9m., ME = +47·5m. Toledo MNW = +53·2m., MZ = +56·6m. Granada iP = +12m.57s., PR_1 = +15m.24s., PR_2 = +18m.58s., PR_2 = +20m.42s., SZ = +23m.41s., PS = +24m.38s., i = +34m.5s. =SR_2 −1s., and +42m.0s. Almeria PR_1 = +16m.23s., MZ = +55·8m. Riverview eS_cP_cS = +23m.48s., ePS = +25m.16s., eSR_1 = +30m.16s., eL = +37·8m., and +38·3m., MN = +48·8m. Sydney SR_1 = +(30m.54s.); all readings have been diminished by 7 mins. San Fernando MN = +58·3m. Adelaide iSR_1 = +30m.47s., eSR_2 = +33m.42s., MN = +54·8m. Perth SR_1 = +31m.24s., SR_2 = +37m.42s. Wellington iSR_1E = +26m.25s. = PS +6s., iSR_1N = +30m.48s. Entebbe iP = +19m.16s. =PR_1 −12s., iS = +28m.20s. La Paz iP = +19m.23s., PR_1 = +24m.9s. =PR_2 −28s., PR_2N = +26m.16s. =[S] +13s., PR_2E = +26m.26s., iPSN = +33m.7s., iPPS = +34m.6s., SR_1N = +39m.8s., SR_2N = +43m.12s., SR_2E = +46m.43s. Sucre PR_1 = +26m.35s. =[S] +13s., iPS = +33m.47s., iPPS = +34m.24s., SR_1 = +39m.13s., SR_2 = +43m.40s., SR_2 = +48m.10s.

Dec. 28d. **Readings also at 0h. (near Toyooka), 1h. (near Sumoto and near Tacubaya), 3h. (Christchurch, near Tacubaya, and near Toyooka), 5h. (Tashkent), 8h. (Nagasaki), 10h. (Ekaterinburg and Helsingfors), 11h. (Tiflis and near Sumoto), 13h. (Christchurch and near Toyooka (2)), 14h. (near Tacubaya), 17h. (near Toyooka), 18h. (Ekaterinburg and Tashkent), 19h. (La Paz), 21h. (Baku), 23h. (La Paz).**

Dec. 29d. Readings at 1h. (Tiflis), 2h. (Baku, Tiflis, and La Paz), 3h. (Tiflis (2)), 4h. (La Paz), 5h. (Tiflis (2) and near Algiers), 6h. and 7h. (La Paz), 11h. (Suva and near Toyooka), 13h. (Ksara, Mizusawa, Victoria, and near Toyooka (2)), 16h. (Ekaterinburg and Irkutsk), 17h. (Baku, Tashkent, Tiflis, and near Sumoto), 18h. (Tacubaya and near Toyooka), 20h. (near Tacubaya), 21h. (near Sumoto), 23h. (near Sumoto and near Toyooka).

Dec. 30d. 6h. 0m. 42s. Epicentre 4°·0S. 129°·0E.

A = −·628, B = +·775, C = −·070; D = +·777, E = +·629;
G = +·044, H = −·054, K = −·998.

Very rough.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina	0·9	290	i 0 42	+28	i 1 12	+47	—	—
Manila	20·2	337	e 4 52	+ 9	(i 8 53)	+26	i 8·9	—
Batavia	22·2	264	i 5 1	− 6	i 9 15	+ 6	—	—
Riverview	36·2	149	—	—	—	—	e 18·7	21·3
Irkutsk	60·2	345	e 10 12	− 1	e 18 19	− 7	31·7	—
Tashkent	70·6	318	i 11 25	+ 4	e 20 36	+ 3	e 38·6	44·8
Ekaterinburg	81·8	331	i 12 23	− 6	e 22 37	− 7	37·3	—

Additional readings: Riverview i = +14m.22s. and +15m.14s., MN = +20·4m. Irkutsk eP = +9m.17s. Tashkent i = +11m.39s.

Dec. 30d. 12h. 31m. 12s. Epicentre 19°·0N. 57°·0W.

A = +·515, B = −·793, C = +·326; D = −·839, E = −·545;
G = +·177, H = −·273, K = −·946.

Very doubtful; see note at end.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Port au Prince		14·5	271	e 3 35	+ 2	i 6 25	+ 5	e 8·8	9·0
Fordham		26·2	330	e 6 28	?PR_1	(e 10 38)	+12	e 10·6	—
Harvard	N.	26·2	336	—	—	e 10 59	+33	16·8	—
Ithaca		28·6	329	—	—	e 10 18	−52	—	—
Ottawa	N.	30·6	335	e 8 12	?	e 11 52	+ 8	e 13·8	19·8
Toronto	E.	31·0	330	—	—	e 11 41	−10	14·8	21·0
St. Louis		34·8	313	e 7 11	0	e 11 56	−56	14·2	16·0
La Paz		37·2	200	e 8 27	?PR_1	e 16 36	?SR_2	21·8	24·2
Sucre		38·9	194	e 8 1	+16	e 15 55	?	21·0	25·3
Granada		49·7	59	e 11 48?	?PR_2	—	—	e 20·8	30·3
Oxford		54·2	40	—	—	—	—	e 28·8	30·8
Edinburgh		54·4	35	—	—	—	—	e 30·8	—
Kew		54·7	40	—	—	—	—	e 28·8	—
Paris		55·9	45	—	—	—	—	e 30·8	—
Uccle		57·4	41	—	—	—	—	e 27·8	—
De Bilt		58·1	40	—	—	—	—	e 27·8	33·6
Strasbourg		59·3	45	—	—	—	—	e 31·8	—
Cheb		62·4	43	—	—	—	—	e 31·8	44·8
Copenhagen		62·8	37	—	—	—	—	30·8	—
Pulkovo		72·3	31	—	—	—	—	e 37·8	—
Kucino		77·1	36	—	—	—	—	e 42·8	—
Tiflis		85·8	48	—	—	—	—	e 46·1	62·2
Ekaterinburg		88·1	30	—	—	e 24 56	?PS	44·8	—
Tashkent		101·8	39	—	—	—	—	e 50·8	63·9
Irkutsk		106·9	13	—	—	—	—	56·6	—

Additional readings and note: San Juan (Δ = 8°·7) gives iE = 12h.30m.0s., iLE = 12h.30m.19s. and iLN = 12h.30m.23s. Port au Prince iP = +5m.32s. Harvard eN = +16m.49s. St. Louis e = +13m.13s. = S + 21s. La Paz SR_4 = +20m.4s. De Bilt MN = +33·4m., MZ = +34·2m. Tiflis MZ = +64·0m. Ekaterinburg e = +35m.39s. Tashkent MN = +58·4m., MZ = +64·1m.

NOTE TO SHOCK OF DEC. 30d. 12h. 31m. 12s.

The above determination is based on the readings of Port au Prince, and the e readings of North American stations supported by the European eL. The La Paz and Sucre observations cannot belong to this shock; they give a consistent T_0 at 29m.25s., with epicentral distances 60°·2 and 56°·5 respectively, indicating an origin on the opposite side of those stations, *i.e.*, in the South Atlantic ocean.

Dec. 30d. 23h. 24m. 54s. Epicentre 44°·0N. 146°·2E. (as on 1927 July 12d.).

A = −·598, B = +·400, C = +·695; D = +·556, E = +·831; G = −·577, H = +·386, K = −·719.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		3·6	319	1 1	+ 5	(1 47)	+ 8	1·8	2·9
Mizusawa	E.	6·2	220	1 45	+10	3 3	+14	—	—
Nagoya		11·4	222	e 2 56	+ 6	—	—	—	—
Irkutsk		28·4	302	e 6 0	−12	e 10 49	−17	13·2	19·0
Ekaterinburg		52·3	318	9 6	−16	i 16 29	−19	22·1	34·6
Tashkent		54·5	298	i 9 30	− 6	i 17 7	− 8	e 24·1	29·1
Pulkovo		63·8	330	e 10 46	+ 9	—	—	e 25·1	—
Baku		67·1	305	i 11 11	+12	i 19 45	− 6	33·6	37·0
Tiflis	E.	69·2	310	—	—	e 20 6	−10	e 36·1	44·9
	N.	69·2	310	e 11 6	− 6	20 9	− 7	e 36·1	40·4
	Z.	69·2	310	i 11 5	− 7	e 20 7	− 9	e 39·1	42·7
Copenhagen		72·9	335	—	—	—	—	29·1	—
Vienna	Z.	77·8	329	e 11 51	−15	—	—	—	—
De Bilt		78·2	337	e 12 13	+ 5	—	—	e 40·1	—
Uccle		79·6	337	—	—	—	—	e 42·1	—
Kew		80·2	340	—	—	—	—	e 40·1	—
Strasbourg		80·6	334	i 12 25	+ 2	—	—	40·1	—
Paris		81·9	338	—	—	—	—	e 48·1	—
St. Louis		82·9	31	i 12 56	+21	i 23 5	+ 9	—	—

Additional readings and notes: Ootomari MN = +2·1m. Irkutsk MZ = +19·2m. Ekaterinburg i = +9m.28s. and +18m.45s. = [S] − 8s., MN = +35·0m. Tashkent i = +9m.34s., iP = +9m.51s., i = +17m.9s., iS = +18m.3s., i = +19m.10s. = [S] − 2s., e = +23m.34s. = SR_3 − 21s., and +27m.18s., i = +28m.3s., MN = +36·1m., MZ = +36·3m. Baku MN = +45·5m., MZ = +45·7m. Tiflis iZ = +11m.27s., eSR_3?N = +27m.38s., eE = +28m.35s, = SR_3 +16s., eZ = +28m.42s. = SR_3 +23s. St. Louis iEN = +12m.24s., eE = iN = +22m.28s. = [S] − 14s.

Dec. 30d. Readings also at 4h. (near Toyooka), 7h. (near Sumoto and Kobe), 10h. (Tashkent), 12h. (La Paz), 13h. (Makeyevka), 14h. (Amboina), 19h. (near Toyooka), 22h. (Ekaterinburg, Irkutsk, Nagoya, and near Mizusawa), 23h. (Pulkovo and Kucino).

Dec. 31d. 4h. 59m. 28s. Epicentre 46°·5N. 13°·0E. (as on 1926 Sept. 28d.).

A = +·671, B = +·155, C = +·725; D = +·225, E = −·974; G = +·707, H = +·163, K = −·688.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Venice		1·1	204	0 2	−15	0 43	+12	—	—
Innsbruck		1·4	305	0 26	+ 5	—	—	—	—
Zagreb		2·2	108	e 0 49	+15	e 0 59	− 1	(i1·6)	1·7
Chur		2·4	278	e 0 37	0	i 1 2	− 4	—	—
Ravensburg		2·7	299	1 6	+24	1 22	+ 8	1·5	—
Vienna		2·9	52	—	—	—	—	e 1·9	2·8
Zurich	N.	3·2	288	e 0 48	− 2	e 1 25	− 3	—	—
Hohenheim		3·4	313	e 1 4	+11	e 1 22	−12	e 1·8	2·0
Strasbourg		4·1	302	0 51	−13	1 17	−36	—	—
Neuchatel	N.	4·1	278	e 0 59	− 5	i 1 39	−14	—	—
Jena	E.	4·5	348	—	—	e 1 44	−20	i 2·8	2·9

Additional readings and note: Zagreb gives S as e and L as iS. Chur iP = +38s. Ravensburg PR_1 = +1m.16s. Zurich iP = +54s. Strasbourg SR = +1m.22s., +1m.32s., and +1m.50s. Neuchatel eP = +1m.9s.

Dec. 31d. 5h. 50m. 45s. Epicentre 36°·0N. 139°·0E. (as on 1921 Dec. 8d.).

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

Geophys. Mag. Vol. 2, No. 1, gives epicentre 36°·1N. 139°·2E., with focal depth 140 km., and Bulletin Equake. Res. Inst. Tokyo, Vol. VII, part 2, gives 36°7′, 139°35′E. The earthquake is here referred to the nearest previously adopted epicentre.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		1·9	243	0 37	+ 8	(0 59)	+ 6	1·0	1·5
Kobe		3·4	248	e 0 55	+ 2	(1 36)	+ 2	1·6	2·8
Mizusawa	E.	3·5	28	0 53	− 2	1 32	− 5	—	—
	N.	3·5	28	0 54	− 1	1 34	− 3	—	—
Sumoto		3·7	244	e 1 1	+ 3	(1 42)	0	1·7	2·1
Irkutsk		29·3	315	—	—	e 10 48	−34	—	—
Tashkent		53·3	299	—	—	—	—	e 21·2	31·6
Ekaterinburg		54·5	319	i 9 15	−21	i 16 44	−31	28·7	—
Baku		67·1	305	—	—	—	—	e 33·7	—

Additional readings: Kobe MN = +1·8m. Sumoto MN = +2·2m.

Dec. 31d. 19h. 6m. 45s. Epicentre 56°·4N. 136°·0W. (as on Nov. 21d.).

A = −·398, B = −·384, C = +·833; D = −·695, E = +·719; G = −·599, H = −·579, K = −·553.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka	E.	0·7	29	i 0 59	+48	i 1 3	+43	i 1·2	1·3
	N.	0·7	29	i 0 25	+14	—	—	e 0·6	0·8
Victoria	E.	11·1	131	7 33	?	—	—	8·0	8·1
Berkeley	E.	20·7	148	—	—	—	—	7 3	—
Denver		26·2	116	i 7 1	+70	e 10 42	+14	12·0	13·0
Tucson	E.	29·8	134	—	—	e 15 33	?L	16·9	18·2
	N.	29·8	134	6 37	+11	—	—	16·6	20·2
St. Louis		34·8	103	—	—	—	—	18·7	—
Ann Arbor		35·8	91	—	—	—	—	e 19·4	19·9
Toronto	E.	37·3	87	—	—	e 13 20	− 8	18·7	20·2
Cincinnati		37·4	95	—	—	i 16 30	?SR_1	i 20·3	—
Ottawa		38·2	82	—	—	e 13 33	− 8	e 17·2	20·4
Ithaca		39·7	86	—	—	e 16 15?	?SR_1	e 19·8	20·9
Cheltenham	E.	42·0	90	—	—	—	—	e 22·1	—
Fordham		42·2	86	—	—	—	—	i 20·4	—
Harvard	N.	42·7	83	—	—	—	—	e 20·4	—
Irkutsk		60·6	324	—	—	e 18 26	− 5	28·2	34·5
Pulkovo		63·3	9	i 10 37	+ 3	—	—	29·2	42·8
Copenhagen		65·0	20	—	—	23 15?	?	—	—
Oxford		65·6	30	—	—	—	—	e 34·8	—
Ekaterinburg		65·9	352	e 10 50	0	19 34	− 2	27·2	39·6
Kew		66·1	30	—	—	—	—	e 35·2	—
De Bilt		66·9	26	—	—	—	—	e 34·2	—
Kucino		67·7	5	—	—	e 21 58	? Σ	e 43·6	—
Uccle		67·9	28	—	—	—	—	e 33·2	—
Paris		69·3	29	—	—	—	—	e 35·2	—
Feldberg	N.	69·4	25	—	—	—	—	—	41·2
Strasbourg		70·8	25	e 11 15?	− 7	—	—	e 37·2	—
Vienna	Z.	72·8	20	e 11 38	+ 3	—	—	—	—
Granada		78·1	39	—	—	—	—	e 45·2	48·8
Tashkent		80·0	341	e 12 17	− 2	22 18	− 5	e 33·2	42·4
Hong Kong		81·8	298	45 40?	?L	—	—	(45·7?)	50·5
Tiflis		81·9	0	—	—	—	—	e 43·2	54·4
Baku		83·1	356	—	—	—	—	38·2	54·9

Additional readings: Victoria LN = +7·2m., MN = +7·9m. Berkeley eZ = +1m.57s.? and +3m.3s.? eN = +7m.42s. Denver i = +7m.48s., iN = +11m.11s. = SR_1 − 24s., iE = +11m.13s. = SR_1 − 22s., MN = +13·2m. St. Louis i = +15m.8s., +16m.33s., +17m.30s., +17m.42s., +18m.3s., and +18m.15s. Ann Arbor e? = +15m.39s., eN = +16m.3s., eE = +16m.39s., and +19m.9s. Toronto iE = +19m.59s. Cincinnati i = +20m.40s., e = +21m.31s. and +22m.16s. Ottawa MN = +20·3m. Cheltenham eN = +22m.1s. Fordham e = +17m.41s. = SR_1 + 9s. Harvard eE = +21m.57s., eN = +34m.21s. Ekaterinburg i = +10m.54s. and +11m.37s., e = +23m.39s., MN = +47·6m., MZ = +49·6m. Tashkent e = +29m.15s.?, MN = +47·6m., MZ = +51·3m. Baku MN = +58·6m., MZ = +60·3m.

Dec. 31d. 21h. 10m. 54s. Epicentre 45°·0N. 11°·0E. (as on 1924 Dec. 22d.).

A = +·694, B = +·135, C = +·707; D = +·191, E = −·982; G = +·694, H = +·135, K = −·707.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Venice		1·1	65	0 16	− 1	0 18	−13	0·6	—
Chur		2·1	331	e 0 34	+ 1	i 1 0	+ 2	—	—
Zurich	N.	2·9	325	i 0 46	+ 1	e 1 24	+ 4	—	—
Neuchatel		3·5	306	e 0 57	+ 2	i 1 46	+ 9	—	—
Zagreb		3·6	77	e 0 56	0	i 1 38	− 1	—	—
Strasbourg		4·1	330	—	—	—	—	e 2·1	—
Vienna	Z.	4·9	47	e 1 56	?S	(e 1 56)	−18	—	—
Jena	E.	5·9	5	e 1 36	+ 5	(i 2 45)	+ 4	i 2·8	2·9

Additional readings: Venice +1m.2s. Chur P = +36s. Zurich P = +52s.

Dec. 31d. 23h. 13m. 18s. Epicentre 51°·0S. 140°·0E. (as on 1927 June 14d.).

A = −·482, B = +·405, C = −·777; D = +·643, E = +·766; G = +·595, H = −·500, K = −·629.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Adelaide		16·1	356	i 3 6	+ 3	i 7 4	+ 7	i 7·5	8·8
Riverview		19·0	29	i 4 39	+10	e 8 28	+26	e 9·8	11·7
Sydney		19·0	29	(4 18)	−11	4 18	?P	16·7	21·2
Christchurch		23·2	84	5 30	+11	—	—	11·2	12·2
Wellington	E.	25·7	82	i 5 39	− 6	i 10 5	−11	10·2	14·1
	N.	25·7	82	i 5 39	− 6	i 10 9	− 7	11·8	12·3
Perth		26·1	308	e 5 52	+ 3	i 10 14	−10	11·6	13·8
Suva	E.	44·7	58	e 6 0	?	i 13 54	?	i 22·3	32·1
Batavia		52·5	318	e 9 12	−11	i 16 59	+ 9	—	—
Hong Kong		76·8	336	—	—	(22 2)	+15	—	22·0
Colombo		77·4	298	21 54	?S	(21 54)	+ 1	—	38·2
Phu-Lien		77·6	328	—	—	21 42?	−14	—	—
Kodaikanal		81·5	298	41 48	?L	—	—	(41·8)	—
Hyderabad		87·0	304	32 40	?L	—	—	(32·7)	56·5
Irkutsk		107·6	337	—	—	e 25 8	[+ 9]	e 44·3	—
Tashkent		110·9	310	—	—	e 25 0	[−14]	e 51·7	62·0
Baku		120·2	297	—	—	—	—	56·7	66·3
Ekaterinburg		125·9	317	e 19 13	[+ 5]	—	—	55·7	71·5
Kucino		135·7	307	—	—	—	—	69·0	—
Pulkovo		141·1	310	e 22 34	?PR_1	—	—	47·7	84·2
Copenhagen		149·1	299	—	—	—	—	e 75·7	—
Strasbourg		149·6	284	—	—	—	—	e 13·7	—
Granada		150·8	256	—	—	—	—	e 68·7	80·4
San Fernando		151·9	252	—	—	63 12	?	83·5	90·4
De Bilt		152·3	290	—	—	—	—	e 74·7	—
Uccle		152·4	287	—	—	—	—	e 81·7	—
Paris		152·9	282	—	—	—	—	e 88·7	—
Kew		155·4	287	—	—	—	—	e 84·7	—
Ottawa		155·8	89	—	—	e 43 42?	?SR_1	e 59·7	—

Additional readings: Riverview eSN = +8m.46s., MN = +13·1m. Christchurch SR_1 = +10m.6s. Suva P and S are given as e and i respectively. Tashkent i = +28m.42s. ? = PS − 26s., and +31m.15s., MZ = +60·4m. Ekaterinburg e = +27m.55s., = Σ + 6s., +32m.24s. = PS + 41s., +38m.15s. = SR_1 + 14s., and +44m.39s., MN = +71·3m., MZ = +73·4m. Copenhagen eN = +55m.42s. ?, eLN = +70·7m. San Fernando MN = +84·4m.

Dec. 31d. Readings also at 0h. (Taihoku), 3h. and 4h. (Apia), 5h. (Graz), 7h. (Almeria and Granada), 9h. (Riverview), 13h. (Ekaterinburg, Irkutsk, Makeyevka, Tashkent, and Tiflis), 14h. (Baku, Copenhagen, Kucino, and Pulkovo), 15h. (near La Paz and Sucre), 21h. (near Nagasaki and near Reykjavik), 22h. (near Batavia and Malabar).

J.W. County Press.—910-5-31.