The International Seismological Summary for 1929 July, August, September.

FORMERLY THE BULLETIN OF THE BRITISH ASSOCIATION SEISMOLOGY COMMITTEE.

The present number of the Summary deals with 150 epicentres, 60 of which are new and 90 repetitions from old epicentres.

Cases of abnormal focus are as follows :—

	Date, 1929. d. h. m. s.	Epicentre. ° °	Focal depth.
July	17 10 49 28	36·5N. 140·5E.	+0·015
	26 22 48 16	35·5N. 139·1E.	+0·010
Aug.	19 2 43 6	24·7N. 121·7E.	+0·010
	19 20 44 32	24·7N. 121·7E.	+0·010
	20 16 38 20	24·7N. 121·7E.	+0·010
	29 19 47 13	24·7N. 121·7E.	+0·010
Sept.	3 12 7 32	26·4N. 62·3E.	+0·020
	11 22 18 42	24·7N. 121·7E.	+0·010
	14 0 15 36	24·7N. 121·7E.	+0·010
	21 18 54 11	11·5N. 126·2E.	+0·020

UNIVERSITY OBSERVATORY,
OXFORD.

1933 June 9.

1929 JULY, AUGUST, SEPTEMBER.

July 1d. Readings at 0h. (Baku, Ekaterinburg, and Tashkent), 2h. (La Paz), 3h. (Ksara), 4h. (Wellington), 6h. (Manila and Pulkovo), 7h. (Baku, Ekaterinburg, Irkutsk, and Uccle), 10h. (Andijan, Ekaterinburg, and near Santiago), 12h. (Georgetown, Ottawa, Toronto, and Florissant), 14h. (Andijan), 17h. (near Wellington), 18h. (Florissant), 19h. (Ekaterinburg, Tashkent, and Manila), 21h. (Ekaterinburg and Melbourne), 22h. (Tashkent and Wellington), 23h. (Christchurch, near Wellington, and near Manila).

July 2d. 0h. 37m. 46s. Epicentre 9°·5N. 128°·8E. (as on 1924 June 23d.).

A = −·618, B = +·769, C = +·165; D = +·779, E = +·627; G = −·103, H = +·129, K = −·986.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		9·2	305	i 2 29	+10	i 4 30	+22	—	—
Hong Kong		19·0	314	4 4	−25	e 7 51	−11	—	13·4
Zi-ka-wei	Z.	23·5	344	e 5 18	− 5	9 30	− 5	—	33·4
Phu-Lien		24·2	300	e 5 37	+ 7	e 9 14	−34	12·2	—
Irkutsk		47·2	340	e 8 43	− 5	e 15 37	− 7	e 29·2	—
Tashkent		61·0	312	e 12 17	?	i 18 30	− 6	e 30·2	40·4
Ekaterinburg		70·2	328	e 11 19	+ 1	i 20 28	0	32·7	39·4
Baku		75·5	309	e 11 52	0	e 21 30	− 2	e 37·2	46·4
Kucino		82·7	325	—	—	e 22 38	−16	e 43·8	59·2
Pulkovo		86·0	330	e 12 51	− 2	e 23 14	−16	42·2	55·7
Helsingfors		88·5	331	e 12 58	−10	e 23 45	−13	—	—
Copenhagen		96·4	330	—	—	24 14	[+10]	51·2	—
Scoresby Sund		97·6	351	16 14?	?	24 32	[+21]	52·2	—
Feldberg	N.	101·1	326	—	—	e 25 36	−30	—	—
De Bilt		101·9	329	—	—	—	—	e 54·2	—
Strasbourg		102·3	325	—	—	—	—	e 61·2	—
Rocca di Papa		102·3	317	—	—	—	—	e 63·1	103·1
Uccle		103·0	329	—	—	—	—	e 54·2	—
Kew		104·9	330	—	—	—	—	e 57·2	—
Granada		115·4	319	—	—	—	—	e 61·2	72·5
Georgetown	Z.	125·9	23	—	—	—	—	e 80·5	—

No additional readings.

July 2d. 15h. 11m. 54s. Epicentre 54°·0S. 29°·6W. (as on 1929 June 27d.).

A = +·511, B = −·290, C = −·809; D = −·494, E = −·869; G = −·704, H = +·400, K = −·588.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Plata		27·5	303	(6 6)	+ 3	—	—	6·1	—
Rio de Janeiro	N.	32·7	335	—	—	—	—	e 17·1	—
Sucre		44·4	309	8 25	− 4	—	—	—	—
La Paz		47·9	308	8 54	+ 1	i 15 56	+ 3	27·1	39·9
San Fernando	E.	92·7	20	—	—	—	—	—	55·7
Georgetown	Z.	101·5	325	—	—	—	—	e 53·1	—
Paris		106·3	23	—	—	—	—	e 57·1	—
Toronto		106·5	325	—	—	—	—	56·1	—
Ottawa		106·9	329	—	—	—	—	e 54·1	—
Strasbourg		107·3	24	—	—	—	—	e 52·1	—
Kew		108·3	17	—	—	—	—	e 56·1	—
Uccle		108·6	21	—	—	—	—	e 51·1	—
De Bilt		110·0	21	—	—	—	—	e 54·1	61·9

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Edinburgh	112·0	14	—	—	—	—	—	65·1
Copenhagen	115·0	24	—	—	—	—	60·1	—
Baku	116·2	55	—	—	—	—	e 39·1	—
Kucino	122·8	37	—	—	—	—	e 66·1	—
Pulkovo	123·4	30	e 20 42	?PR_1	—	—	58·1	70·9
Tashkent	127·0	67	—	—	—	—	e 62·1	75·6
Ekaterinburg	132·7	46	e 19 16	[− 8]	—	—	65·6	80·9
Irkutsk	152·8	75	—	—	—	—	e 89·1	—

Additional readings: San Fernando MN = +52·2m. De Bilt MZ = +61·8m. Ekaterinburg e = +21m.42s. = PR_1 − 6s., and +22m.48s.

July 2d. Readings also at 1h. (Manila), 2h. (Baku, Copenhagen, De Bilt, Ekaterinburg, Hong Kong, Kew, Kucino, Phu-Lien, Pulkovo, Tashkent, Victoria, Scoresby Sund, and near Tacubaya), 3h. (Georgetown and Manila), 4h. (Manila, near Akita, and Mizusawa), 6h. (Manila, Nagoya, near Kobe, and near Toyooka), 7h. (Hong Kong, Tashkent, Pulkovo, and Manila), 8h. (Ekaterinburg, Irkutsk, Tashkent, Phu-Lien, near Amboina, and near Akita), 9h. (Wellington), 11h. (Ekaterinburg, Irkutsk, Hong Kong, and Phu-Lien), 12h. (near Tacubaya), 14h. (near Wellington), 16h. (Andijan, Samarkand, near Almata, near La Paz, and Sucre), 20h. (Kew, Oxford, and near Wellington), 21h. (Trenta), 22h. (Baku, Ekaterinburg, Ksara, Tashkent, and Christchurch).

July 3d. 0h. 52m. 55s. Epicentre 61°·5N. 146°·0W.

A = −·396, B = −·267, C = +·879; D = −·559, E = +·829; G = −·729, H = −·491, K = −·477.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria		18·3	125	4 44	+23	—	—	8·5	9·0
Saskatoon		23·0	96	e 5 51	+34	e 10 19	?SR_1	e 13·4	14·7
Tucson	N.	36·9	127	7 29	0	13 24	+ 2	—	—
Chicago	E.	39·5	92	e 14 1	?S	(e 14 1)	+ 2	21·6	22·3
	N.	39·5	92	e 13 59	?S	(e 13 59)	0	21·0	22·2
Florissant		40·5	97	e 7 58	− 1	e 14 16	+ 2	—	22·1
		40·5	97	i 7 59	0	i 14 15	+ 1	—	21·7
Ann Arbor		40·9	88	—	—	e 14 23	+ 3	—	—
Toronto		42·0	84	e 8 30	+19	e 14 35	0	20·1	23·8
Ottawa		42·4	79	e 8 13	− 1	e 14 41	+ 1	e 21·2	22·4
Scoresby Sund		42·4	25	8 3	−11	14 23	−17	—	—
Georgetown	Z.	46·7	85	i 8 45	0	i 14 32	−65	e 20·2	25·8
Irkutsk		53·4	315	e 9 13	−16	16 31	−30	32·1	—
Helsingfors		58·2	5	e 9 56	− 4	e 17 50	−11	—	—
Pulkovo		58·7	2	9 59	− 4	17 55	−12	29·1	37·9
Ekaterinburg		59·9	345	i 10 2	− 9	i 18 3	−19	23·1	38·0
Stonyhurst		61·1	25	—	—	18 37	0	—	—
Copenhagen		61·6	14	10 23	0	18 42	− 1	—	—
Kucino		62·7	358	e 10 28	− 2	18 52	− 5	e 30·0	38·3
Kew		63·8	25	e 10 38	+ 1	e 19 14	+ 3	31·1	—
De Bilt		64·2	20	10 41	+ 2	e 19 14	− 1	e 32·1	—
Ucole		65·3	21	e 10 47	0	e 19 29	0	e 31·1	—
Paris		66·9	23	i 10 59	+ 2	—	—	—	—
Strasbourg		68·3	20	11 6	0	e 20 5?	− 1	43·1	—
Zurich		69·2	20	e 14 5?	?PR_1	—	—	—	—
Neuchatel		69·4	21	i 11 13	0	—	—	—	—
Vienna	Z.	69·4	13	e 11 9	− 4	—	—	—	—
Almata		69·6	328	e 11 47	+32	—	—	—	—
Tashkent		73·4	335	—	—	i 20 33	−34	e 34·1	46·2
Theodosia		73·5	359	e 11 36	− 3	—	—	—	—
Simferopol		73·6	0	e 11 35	− 5	—	—	—	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Andijan	73·6	331	e 11 48	+ 8	—	—	—	—
Toledo	74·1	30	—	—	e 16 51	?PR_2	e 31·0	—
Rocca di Papa	75·4	17	i 11 51	0	(e 21 15)	−15	e 21·2	—
Samarkand	75·4	336	e 11 48	− 3	—	—	—	—
Alicante	76·3	28	e 11 33	−24	—	—	—	—
San Fernando E.	76·5	32	—	—	—	—	—	48·8
Granada	76·7	30	i 11 59	0	i 21 47	+ 2	40·1	44·1
Malaga	77·0	30	(e 12 26)	+25	(e 21 40)	− 9	—	—
Almeria	77·3	29	(e 12 3)	0	(21 12)	−40	—	—
Baku	77·4	349	e 12 11	+ 8	e 21 40	−13	38·1	47·5
Algiers	78·6	25	e 12 15	+ 4	e 22 15	+ 8	—	84·1
Ksara	84·7	359	e 12 54	+ 8	e 23 0	−16	—	—
La Paz	98·8	110	e 52 55	?L	—	—	(52·9)	—

Additional readings and notes: Tucson PR_1N = +8m.45s., PR_2N = +9m.14s. Chicago SE = +16m.43s. = SR_1 + 7s., eSN = +17m.11s. = SR_2 − 13s. Florissant (first line) eE = +9m.42s. = PR_1 + 14s., +13m.35s. and +14m.44s., eEN = +15m.5s.; (second line), i = +8m.22s., e = +9m.50s. = PR_2 − 10s., eSE = +13m.35s., iE = +15m.4s., eSR_1 = +17m.5s. Ann Arbor e?E = +14m.29s., e?N = +17m.59s. = SR_2 + 2s., and +19m.23s., e?E = +20m.5s., eN = +20m.47s., eE = +21m.5s., eN = +21m.53s., iE = eN = +22m.23s., eE = +26m.5s. Toronto eE = +18m.1s. Ottawa ePR_2 = +10m.15s., i = +15m.9s., SR_1E = +17m.49s., MN = +23·6m.; T_0 = 0h.52m.57s. Scoresby Sund +10m.11s. and +17m.59s. Georgetown iPR_2Z = +11m.8s. Copenhagen +20m.8s. = [S] + 1s. Kew eE = +20m.19s. = [S] − 5s. Strasbourg e = +39m.5s. ? Rocca di Papa e = +11m.12s. San Fernando MN = +46·8m. Granada i = +21m.54s. = [S] − 7s. Malaga eN = (+18m.2s.), eE = (+18m.4s.); all readings have been *increased* by 5m. Almeria i = (+26m.25s.); all readings having been *increased* by 4m.

July 3d. 8h. 25m. 45s. Epicentre 41°·5N. 22°·0E. (Negotin).

A = +·694, B = +·281, C = +·663; D = +·375, E = −·927; G = +·614, H = +·248, K = −·749.

Felt at Negotin in the Vardar Valley.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Belgrade N.	3·5	341	(e 0 19)	−36	(1 15)	−22	—	(2·4)
Trenta	4·9	245	e 1 15	− 1	3 15?	?	—	—
Pompeii	5·7	265	e 2 45	?L	—	—	(e 2·8)	—
Zagreb	6·1	317	e 1 45	+12	e 2 37	− 9	e 3·8	4·6
Catania	6·7	236	e 2 34	?S	(e 2 34)	−28	—	—
Rocca di Papa	7·0	275	e 1 55	+ 9	i 3 18	+ 8	—	4·2
Graz	7·2	322	i 2 1	+12	e 4 20	+65	—	5·6
Vienna	7·8	331	e 2 57	+59	—	—	i 5·1	5·8
Venice	8·0	303	e 3 13?	?S	(e 3 13?)	−24	(e 5·0?)	7·7
Florence	8·2	290	e 3 55	?S	(e 3 55)	+13	—	6·8
Simferopol	9·4	65	e 2 15	− 7	—	—	—	—
Yalta	9·4	67	e 2 47	+25	—	—	—	—
Piacenza	9·6	296	—	—	e 3 55	−23	—	7·2
Theodosia	10·3	66	e 2 29	− 5	—	—	—	—
Ravensburg	10·8	310	—	—	—	—	e 5·4	—
Cheb	10·9	325	—	—	—	—	e 5·4	7·8
Moncalieri	11·0	293	—	—	—	—	e 5·8	6·6
Zurich	11·2	306	e 3 1	+14	—	—	—	—
Hohenheim	11·5	313	—	—	—	—	e 5·8	—
Neuchatel	12·1	302	e 2 59	− 1	e 6 38	?L	(e 6·6)	—
Strasbourg	12·3	310	—	—	—	—	e 6·2	7·2
Gottingen N.	13·0	325	—	—	—	—	e 6·8	—
Konigsberg	13·3	356	—	—	—	—	e 7·8	10·6
Hamburg	14·5	330	—	—	—	—	e 7·2	11·0
Uccle	15·3	313	—	—	—	—	e 8·2	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Copenhagen	15·5	339	—	—	7 3	+19	—	—
Paris	15·5	305	—	—	—	—	e 7·3	—
De Bilt	15·6	319	—	—	—	—	e 7·3	10·6
Kucino	17·6	31	—	—	—	—	e 10·0	—
Kew	18·2	311	—	—	e 7 57	+13	10·2	—
Upsala N.	18·5	353	—	—	—	—	e 12·2	—
Helsingfors	18·7	5	e 4 29	+ 4	e 8 16	+21	e 12·2	—
Pulkovo	18·9	13	4 27	− 1	8 2	+ 2	10·2	—
Granada	20·2	266	—	—	e 7 26	−61	i 14·1	15·2
Scoresby Sund	36·4	339	—	—	—	—	22·2	—

Additional readings and notes: Belgrade ePN = (+29s.), ePR$_2$N = (+30s.), eN = (+36s.) and (+57s.), eSN = (+2m.12s.); all readings having been *increased* by 1m. Zagreb eNE = +1m.52s., eSNE = +3m.36s. Rocca di Papa i = +2m.26s., MN = +5·4m. Vienna P$_g$S = +4m.36s., i = +4m.50s. Venice gives S as P and L as S. Ravensburg iN = +6m.25s., iE = +6m.35s. Cheb e = +6m.52s. Hohenheim e = +6m.57s. Konigsberg e = +7m.56s. and +9m.34s. eLN = +10·6m.

July 3d. 17h. 53m. 24s. Epicentre 7°·0S. 150°·0E. (as on 1927 May 3d.).

A = −·860, B = +·496, C = −·122; D = +·500, E = +·866; G = +·106, H = −·061, K = −·992.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview	26·8	178	—	—	e 10 48	+11	e 13·7	16·2
Adelaide	29·9	199	e 4 49?	?	e 11 21	−11	e 15·6	17·9
Melbourne	31·1	186	—	—	i 12 11	+18	16·3	18·4
Manila	36·0	309	e 7 25	+ 3	—	—	—	—
Batavia	42·9	270	i 9 59	?PR$_1$	i 14 59	+12	—	—
Hong Kong	45·8	311	e 8 10	−29	e 15 36	+11	e 21·6	26·1
Phu-Lien	50·9	304	e 9 25	+13	e 16 55	+25	24·6	—
Irkutsk	70·9	333	11 23	+ 1	e 20 37	0	e 30·6	—
Almata	82·7	315	e 12 36	+ 2	—	—	—	—
Andijan	85·3	311	e 12 54	+ 4	—	—	—	—
Tashkent	87·8	312	13 0	− 4	i 23 55	+ 5	e 41·6	51·7
Samarkand	89·2	310	e 13 12	+ 1	—	—	—	—
Victoria E.	94·0	41	23 41	?[S]	(23 41)	[−11]	42·3	48·6
Ekaterinburg	95·5	326	i 13 27	−19	e 24 55	−16	39·1	88·9
Tucson E.	101·4	57	—	—	—	—	e 51·0	—
Baku	102·2	310	—	—	—	—	e 47·6	59·0
Kucino	108·1	326	—	—	e 28 24	?PS	—	—
Pulkovo	110·7	332	—	—	e 26 50	−44	51·6	67·8
Scoresby Sund	116·3	356	—	—	29 24	?	54·6	—
Florissant	117·3	49	e 19 39	[+54]	e 29 10	?	e 55·1	—
Copenhagen	120·9	333	—	—	—	—	54·6	—
Toronto N.	123·5	40	—	—	—	—	59·6	—
Ottawa	124·9	37	—	—	—	—	e 59·6	—
De Bilt	126·5	333	e 21 6	?PR$_1$	—	—	e 57·6	77·7
Georgetown Z.	127·0	44	—	—	—	—	e 62·6	73·2
Strasbourg	127·7	328	e 20 36?	?PR$_1$	—	—	66·6	—
Uccle	127·8	333	e 22 36?	?	—	—	e 58·6	—
Kew	129·2	337	—	—	—	—	e 66·6	—
Paris	130·0	332	e 21 30	?PR$_1$	—	—	72·6	—
La Paz	135·5	123	20 5	[+34]	—	—	—	—
Granada	141·5	325	e 19 31	[−11]	e 22 54	?PR$_1$	e 77·6	80·9

Additional readings: Riverview e = +3m.6s., eS = +11m.17s., MN = +19·1m. Adelaide MN = +19·9m. Melbourne i = +14m.24s. Irkutsk e = +30m.36s.? = SR$_2$ + 21s. Tashkent S$_e$P$_e$S = +23m.26s., SR$_1$ = +30m.30s. Ekaterinburg PR$_1$ = +17m.23s., SR$_1$ = +31m.36s. Tucson eN = +49m.50s. Pulkovo PR$_1$ = +19m.3s., PS = +28m.48s. Florissant eE = +27m.5s. = Σ+7s., eEN = +35m.25s., eN = +48m.36s. De Bilt MN = +71·0m. Georgetown eZ = +56m.36s.?

July 3d. 20h. 2m. 30s. Epicentre 34°·0N. 135°·5E. (as on 1928 April 11d.).

A = −·591, B = +·581, C = +·559; D = +·701, E = +·713; G = −·399, H = +·392, K = −·829.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Wakayama	0·4	310	0 6	0	0 13	+ 2	—	—
Sumoto	0·6	304	i 0 10	+ 1	0 20	+ 3	—	0·4
Osaka	0·7	355	0 11	0	(0 23)	+ 3	0·4	0·8
Kobe	0·7	339	i 0 11	0	(i 0 22)	+ 2	i 0·4	0·4
Muroto	1·3	236	0 19	− 1	0 22	−14	0·8	0·9
Koti	1·7	255	0 23	− 3	0 44	− 4	0·9	1·0
Nagoya	1·7	45	i 0 25	− 1	0 46	− 2	0·9	0·9
Toyooka	1·7	340	i 0 25	− 1	(i 0 45)	− 3	i 0·8	0·8
Tokyo	3·9	63	0 57	− 4	2 8	+21	—	—
Hukuoka	4·2	265	1 0	− 5	—	—	2·2	2·2
Nagasaki	4·9	257	e 1 30	+14	e 3 37	+83	—	—

Additional readings: Osaka MN = +0·7m. Koti ePE = +24s., eE = +36s.

July 3d. Readings also at 2h. (Sucre and Scoresby Sund), 3h. (Neuchatel and Suva), 5h. (Andijan), 6h. (Christchurch and near Wellington), 7h. (Copenhagen, Ksara, Andijan, and near Almata), 10h. (Ekaterinburg and near Manila), 11h. (Christchurch and near Wellington), 12h. (Samarkand, Ekaterinburg, and Tashkent), 13h. (La Paz), 14h. (Ekaterinburg, La Paz, and Rio de Janeiro), 20h. (Fordham, Ekaterinburg, and Irkutsk), 21h. (Baku, Georgetown, Scoresby Sund, and near Sumoto), 23h. (Wellington).

July 4d. 4h. 28m. 28s. Epicentre 63°·2N. 147°·3W.

A = −·379, B = −·244, C = +·893; D = −·540, E = +·842; G = −·751, H = −·482, K = −·451.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka	E.	8·5	131	i 2 26	+17	i 4 23	+33	i 4·9	5·4
	N.	8·5	131	e 2 30	+21	e 4 24	+34	e 5·0	5·4
Victoria		19·8	127	4 52	+13	9 4	+45	10·2	11·4
Berkeley		29·5	137	i 6 22	− 1	—	—	—	18·7
Lick		30·2	137	e 6 29	− 1	—	—	—	—
Tucson	N.	38·4	127	7 40	− 1	14 0	+16	20·3	—
Chicago	E.	40·1	95	—	—	e 16 21	?SR_1	e 21·6	21·9
	N.	40·1	95	—	—	e 13 41	−27	e 20·7	24·6
Scoresby Sund		41·0	26	7 49	−14	13 50	−31	—	—
Florissant		41·3	99	i 7 57	− 8	e 14 13	−12	e 22·3	—
		41·3	99	i 7 58	− 7	i 14 15	−10	—	22·0
St. Louis	E.	41·5	99	e 7 59	− 8	—	—	—	22·4
Ann Arbor	N.	41·5	90	—	—	e 17 32	?SR_1	e 22·4	25·5
Toronto	N.	42·3	85	e 8 7	− 6	e 14 24	−15	20·7	25·5
Honolulu T.H.	N.	42·5	195	—	—	—	—	e 22·5	—
Ottawa		42·6	79	e 8 9	− 6	e 14 32	−11	e 20·7	22·8
Fordham		47·0	83	10 22	?PR_1	17 27	?	e 21·5	25·5
Georgetown	Z.	47·2	86	e 8 46	− 2	e 15 40	− 4	e 21·3	25·7
Irkutsk		51·8	314	9 13	− 6	16 31	−10	26·5	33·7
Helsingfors		56·5	4	e 9 47	− 2	e 17 31	− 9	—	—
Pulkovo		57·0	2	9 50	− 2	17 39	− 7	—	35·3
Edinburgh		57·7	24	—	—	—	—	e 24·5	—
Ekaterinburg		58·0	344	i 9 54	− 5	i 17 53	− 6	26·0	34·1
Stonyhurst		59·7	25	—	—	e 19 1	?PS	—	38·7
Copenhagen		60·0	12	10 12	0	—	—	—	—
Konigsberg	E.	61·5	8	—	—	e 20 12	[+ 6]	—	—
Hamburg		61·9	16	e 10 26	+ 2	—	—	e 38·5	—
Oxford	E.	62·0	25	—	—	18 54	+ 6	e 25·8	38·8
Kew		62·4	24	10 29	+ 1	18 55	+ 2	30·5	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
De Bilt		62·7	19	10 31	+ 1	e 19 0	+ 3	e 30·5	41·2
Uccle		63·8	20	e 10 36	− 1	19 12	+ 1	e 30·5	—
Paris		65·5	22	i 10 50	+ 2	—	—	27·5	37·5
Cheb		65·6	14	—	—	e 19 32?	0	e 40·5	50·5
Strasbourg		66·5	19	i 10 57	+ 2	e 19 32?	−12	31·5	—
Vienna	Z.	67·8	12	e 11 3	0	—	—	—	—
Zurich		67·8	19	e 10 12	−51	—	—	—	—
Neuchatel		67·9	20	i 11 5	+ 2	—	—	—	—
Moncalieri		70·0	20	e 11 40	+23	e 20 19	− 7	28·6	40·5
Zagreb		70·2	13	e 11 14	− 4	—	—	—	—
Piacenza		70·2	19	—	—	—	—	e 41·5	—
Florence		71·6	16	i 11 30	+ 3	—	—	46·5	47·5
Tashkent		71·6	333	i 11 25	− 2	20 41	− 4	e 33·5	48·0
Theodosia		71·7	358	e 11 26	− 2	—	—	—	—
Simferopol		71·9	358	e 11 28	− 1	—	—	—	—
Andijan		71·9	330	e 11 28	− 1	—	—	—	—
Yalta		72·3	358	e 11 32	0	—	—	—	—
Toledo		72·9	29	11 36	+ 1	e 21 2	+ 1	e 34·5	—
Samarkand		73·6	333	e 11 32	− 8	—	—	—	—
Rome		73·7	15	e 11 42	+ 2	—	—	—	—
Hong Kong		74·0	288	—	—	—	—	e 36·5	41·0
Alicante		75·0	26	e 11 54	+ 5	e 21 23	− 3	—	—
Granada		75·5	30	i 11 51	− 1	21 34	+ 2	36·5	41·0
Baku		75·5	348	e 11 52	0	e 21 57	[+ 4]	36·5	52·3
San Fernando		75·6	32	—	—	21 16	−17	—	44·7
Malaga		75·7	30	e 12 14	+21	21 50	+16	—	—
Phu-Lien		78·5	295	—	—	—	—	38·5	—
Ksara	N.	82·9	358	e 12 40	+ 5	(e 23 38)	?PS	e 23·6	—
La Paz		99·9	106	e 18 9	?PR_1	—	—	61·5	—

Additional readings: Victoria SN = +8m.54s., T_0E = 4h.28m.5s., T_0N = 4h.28m.17s. Berkeley ePR_2Z = +7m.28s., eZ = +8m.37s., +10m.26s., and +12m.24s., eE = +18m.2s. Lick eN = +8m.13s., +9m.43s., +17m.48s., +18m.47s., and +20m.20s., eE = +8m.17s., +10m.30s., +16m.58s., and +19m.41s. Tucson PR_1N = +9m.18s. Chicago eE = +20m.1s. Scoresby Sund +9m.20s. = PR_1 −14s., and +16m.32s.? Florissant (first line) iPN = +7m.58s., ePR_1 = +9m.35s., eE = +18m.27s., (second line) ePR_1EZ = +9m.42s. Ann Arbor eE = +17m.50s., eN = +19m.50s., and +20m.14s., eE = +20m.50s., iLE = +21·9m., ME = +22·8m. Toronto PR_1 = +9m.42s., SR_1E = +17m.32s., iN = +22m.37s., ME = +22·7m.; T_0 = 4h.28m.37s. Honolulu T.H. eE = +18m.32s. = SR_1 −4s. Ottawa PR_1 = +9m.57s. = PR_1 +5s., SR_1E = +17m.32s. Fordham ePEN = +10m.27s. = PR_1 −19s., eLN = +19·5m., eLZ = +22·0m. Georgetown SR_1Z = +19m.13s. Kew SR_1 = +22m.56s. De Bilt ePR_1NZ = +12m.48s., eSR_1 = +23m.13s., MNZ = +41·0m. Uccle e = +23m.32s.? Cheb e = +27m.49s. Baku eSR_1 = +26m.43s. Malaga e = +13m.2s.

July 4d. 7h. 14m. 18s. Epicentre 55°·7N. 35°·5W. (as on 1929 March 3d.).

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Reykjavik		10·8	31	—	—	—	—	e 4·9	6·9
Scoresby Sund		15·9	17	3 49	− 2	6 54	+ 1	—	—
Edinburgh		18·0	76	i 4 22	+ 5	—	—	—	—
Stonyhurst		19·0	82	i 4 32	+ 3	—	—	9·0	11·0
Oxford	E.	20·4	86	i 4 49	+ 3	8 37	+ 5	e 9·8	11·3
Kew		21·1	87	e 4 57	+ 3	e 8 59	+13	10·1	11·3
De Bilt		23·8	81	5 26	0	e 9 40	0	e 11·2	—
Paris		23·9	91	i 5 27	0	e 9 45	+ 3	11·7	14·7
Uccle		24·0	85	e 5 26	− 2	e 9 45	+ 1	e 11·7	—
Hamburg		25·9	75	e 5 45	− 2	e 10 12	− 8	e 13·7	17·8

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.	26·0	114	—	—	e 9 43	−39	—	—
Copenhagen		26·4	70	5 48	− 4	10 24	− 6	—	—
Feldberg	N.	26·5	83	e 5 48	− 5	i 10 32	0	—	15·8
Gottingen	E.	26·8	79	—	—	e 9 30	−67	e 12·7	15·2
Strasbourg		27·0	87	i 5 58	0	e 10 42?	+ 1	e 12·7	—
Ottawa		27·1	265	—	—	—	—	e 14·7	—
Malaga		28·2	119	e 10 47	?S	(e 10 47)	−16	(e 14·4)	—
Granada		28·3	117	6 15	+ 4	11 12	+ 8	12·7	13·3
Cheb		28·8	81	—	—	e 10 42?	−31	—	16·7
Alicante		29·0	112	e 11 23	?S	(e 11 23)	+ 6	(e 14·4)	—
Moncalieri		29·0	93	e 4 54	?	(10 56)	−21	10·9	—
Piacenza		30·1	91	—	—	—	—	—	19·4
Toronto		30·2	265	—	—	e 11 59	+22	17·0	—
Florence		31·7	92	—	—	e 10 42	−81	—	20·2
Georgetown	Z.	32·1	258	—	—	(e 11 42?)	−28	18·4	19·8
Pulkovo		33·9	56	6 55	− 9	12 16	−23	16·7	19·9
Florissant		39·6	270	e 7 27	−24	e 14 17	+17	e 20·7	23·2
Ekaterinburg		48·8	47	i 8 54	− 5	e 15 57	− 7	21·2	—
Baku		55·3	68	e 9 52	+11	e 17 42	+17	e 27·7	—

Additional readings and notes: Reykjavik MN = +6·4m. Feldberg eN = +10m.37s. Malaga and Alicante give S as P and L as S. Georgetown S is given as eL. Florissant eEZ = +9m.42s. = PR_2 − 6s.

July 4d. 7h. 31m. 10s. (I)
7h. 56m. 32s. (II)
} Epicentre 55°·7N. 35°·5W. (as at 7h. 14m.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Reykjavik	10·8	31	—	—	—	—	e 5·2	6·9
II		10·8	31	—	—	—	—	e 5·2	7·0
II	Scoresby Sund	15·9	17	3 53	+ 2	6 52	− 1	—	—
I	Stonyhurst	19·0	82	i 4 31	+ 2	—	—	9·8	11·3
II		19·0	82	i 4 35	+ 6	—	—	10·0	11·1
I	Kew	21·1	87	—	—	—	—	e 10·3	—
II		21·1	87	e 4 57	+ 3	8 52	+ 6	e 10·5	—
I	De Bilt	23·8	81	—	—	—	—	e 21·1	—
II		23·8	81	5 27	+ 1	e 9 41	+ 1	e 11·5	14·1
II	Hamburg	25·9	75	e 5 47	0	e 10 17	− 3	e 14·5	17·5
I	Copenhagen	26·4	70	5 51	− 1	10 20	−10	—	—
II		26·4	70	5 50	− 2	10 22	− 8	—	—
I	Granada	28·3	117	—	—	—	—	14·8	15·8
II		28·3	117	—	—	—	—	14·5	16·0
II	Toronto	30·2	265	—	—	—	—	17·5	—
I	Georgetown Z.	32·1	258	—	—	—	—	19·6	—
II	Z.	32·1	258	—	—	—	—	e 18·4	—
II	Pulkovo	33·9	56	e 6 54	−10	e 12 16	−23	15·5	—
II	Ekaterinburg	48·8	47	e 8 54	− 5	—	—	24·5	—

Additional readings: Reykjavik I MN = +6·3m., II MN = +6·6m. De Bilt II MZ = +14·2m., MN = +14·9m. Georgetown I eLZ = +9m.14s.

July 4d. Readings also at 1h. (Wellington and near Akita), 2h. (Ksara and Wellington), 6h. (Wellington), 7h. (Wellington (2) and near Taihoku), 8h. (Tashkent, near La Paz, and Sucre), 9h. (Bombay (2), Colombo, Dehra Dun, Hyderabad, Kodaikanal, Batavia, Hong Kong, Phu-Lien, Andijan, Baku, Tashkent, Pulkovo (2), Racino, Irkutsk (3), Ekaterinburg (2), Copenhagen, Ksara, Paris, De Bilt, Scoresby Sund, Neuchatel (2), Strasbourg, Feldberg, Kew, Granada, and Tananarive), 10h. (Georgetown, La Paz, and Perth), 12h. (Almata, Andijan, Tashkent, Irkutsk, Dehra Dun, Hyderabad, Baku, Ekaterinburg, Pulkovo, Bombay, Calcutta, Granada, Ksara, Kew, and Copenhagen), 14h. (Bombay), 15h. (Andijan), 17h. (Ksara and Suva), 18h. (Wellington), 19h. (Port au Prince and Wellington), 20h. (Irkutsk, Tashkent, Neuchatel, and near Casamicciola), 22h. (near Wellington (3)).

July 5d. 5h. 7m. 43s. Epicentre 38°·0N. 135°·0E.

A = −·557, B = +·557, C = +·616; D = +·707, E = +·707; G = −·435, H = +·435, K = −·788.

Very uncertain.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		3·3	151	e 0 51	− 1	—	—	—	—
Kobe		3·3	178	i 1 34	?S	(i 1 34)	+ 3	—	—
Osaka		3·4	173	0 54	+ 1	—	—	2·0	2·0
Akita		4·3	65	e 1 39	?S	(e 1 39)	−19	2·1	—
Mizusawa	E.	4·9	74	1 15	− 1	2 12	− 2	—	—

No additional readings.

July 5d. 14h. 18m. 56s. Epicentre **51°·0N. 179°·5W.**

(as on 1927 Aug. 1d.).

A = −·629, B = −·005, C = +·777; D = −·009, E = +1·000; G = −·777, H = −·007, K = −·629.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka	N.	26·1	59	—	—	e 10 4	−20	e 13·2	18·9
Sapporo		27·4	269	6 3	+ 1	11 17	+29	—	—
Mizusawa		29·8	262	6 27	+ 1	11 30	− 1	—	—
Akita	Z.	30·1	264	i 6 26	− 3	—	—	e 16·4	—
Tokyo		32·8	260	6 52	− 3	16 6	?L	(16·1)	—
Honolulu T.H.	E.	34·1	142	6 44	−22	12 13	−29	15·7	—
	N.	34·1	142	e 6 54	−12	12 12	−30	15·3	—
Nagoya		34·8	263	e 7 8	− 3	—	—	—	—
Victoria	E.	35·6	73	6 58	−20	12 28	−36	15·3	17·0
	N.	35·6	73	6 58	−20	12 30	−34	15·1	15·8
Toyooka		35·9	265	7 17	− 4	e 13 1	− 8	15·3	20·2
Osaka		36·1	262	7 20	− 3	(13 8)	− 3	13·1	25·3
Kobe		36·3	264	7 20	− 4	e 13 24	+10	e 15·9	20·2
Sumoto		36·7	263	7 22	− 6	—	—	e 15·7	19·8
Koti		38·0	262	e 7 34	− 4	e 13 32	− 6	e 16·5	—
Nagasaki		40·9	266	e 8 1	− 1	e 14 15	− 5	—	23·1
Berkeley		41·7	86	e 7 55	−14	e 14 4	−27	—	—
Lick		42·5	87	e 8 0	−15	e 14 14	−28	e 19·8	—
Saskatoon		43·3	60	e 8 4	−16	e 14 22	−30	e 19·7	26·9
Irkutsk		45·0	304	i 8 30	− 3	15 29	+14	21·1	26·6
Taihoku	E.	51·4	265	—	—	e 14 12	?	—	—
Tucson	E.	52·5	85	e 9 16	− 7	i 16 38	−12	e 24·6	—
	N.	52·5	85	e 9 20	− 3	i 16 35	−15	e 22·1	—
Scoresby Sund		57·4	10	i 9 56	+ 1	17 51	0	—	—
Hong Kong		58·0	269	10 5?	+ 6	18 14	+15	28·9	48·2
Manila		59·7	295	e 10 23	+13	e 18 39	+20	i 28·8	—
Chicago		60·0	60	10 9	− 3	i 18 13	−10	27·1	—
Florissant		60·4	65	e 10 10	− 5	i 18 19	− 9	—	—
St. Louis		60·6	65	e 10 12	− 4	e 18 19	−12	28·1	32·1
Ekaterinburg		61·3	329	i 10 20	− 1	18 47	+ 7	—	25·6
Ann Arbor		61·6	57	e 10 22	− 1	i 18 34	− 9	e 28·4	39·7
Toronto		62·8	53	e 10 27	− 4	i 18 59	+ 1	29·3	39·1
Ottawa		63·4	50	e 10 30	− 4	i 18 59	− 7	e 29·6	39·7
Reykjavik		63·5	12	—	—	—	—	e 33·1	45·0
Phu-Lien		63·9	273	e 10 48	+11	e 19 30	+18	31·1	43·0
Almata		64·8	310	11 0	+16	e 19 54	?PS	35·1	—
Apia		65·2	172	—	—	19 34	+ 7	31·7	36·1
Pulkovo		66·6	346	i 10 59	+ 4	19 46	+ 1	30·1	44·7
Helsingfors		67·1	348	e 11 2	+ 3	e 19 54	+ 3	e 31·6	—
Charlottesville		67·4	58	e 11 4	+ 4	i 19 51	− 4	34·7	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Georgetown	E.	67·5	56	e 11 5	+ 4	i 19 56	0	e 28·5	39·7
	N.	67·5	56	e 11 6	+ 5	e 19 57	+ 1	—	40·0
Fordham		67·6	54	e 11 16	+14	e 20 4	+ 7	e 30·1	39·1
Harvard		67·8	50	i 11 6	+ 3	i 19 59	− 1	—	—
Upsala		68·3	353	e 11 9	+ 3	e 20 6	0	—	45·6
Bergen		68·5	358	11 14	+ 6	—	—	—	35·1
Kucino		68·8	340	11 16	+ 6	20 14	+ 2	32·4	40·5
Tacubaya		69·0	87	11 12	+ 1	20 8	− 6	—	—
Suva	N.	69·1	183	—	—	21 58	? Σ	35·1	—
Andijan		69·3	311	e 11 18	+ 5	e 20 24	+ 6	41·1	—
Tashkent		70·0	314	11 24	+ 7	20 57	?PS	—	34·1
Vera Cruz		71·1	84	(11 36?)	+12	(20 49)	+10	(33·9)	(61·0)
Dyce		71·7	2	i 11 30	+ 2	i 21 35	[+11]	31·8	—
Samarkand		72·4	315	e 11 37	+ 5	e 21 8	+13	39·1	—
Copenhagen		72·8	355	i 11 37	+ 2	21 4	+ 4	29·1	—
Konigsberg		72·8	349	e 11 36	+ 1	e 21 2	+ 2	e 32·1	44·1
Edinburgh		73·0	3	11 39	+ 3	21 9	+ 7	32·1	43·9
Calcutta	E.	73·9	287	11 51	+10	22 35	? Σ	42·0	—
	N.	73·9	287	11 47	+ 6	22 4	?PS	41·8	—
Dehra Dun		74·0	300	11 4?	−38	21 4?	−10	38·1	46·1
Stonyhurst		75·0	2	9 52	−117	21 27	+ 1	32·1	53·3
Hamburg		75·1	355	i 11 51	+ 1	i 21 31	+ 4	i 32·4	45·6
Bidston		75·5	2	11 51	− 1	21 53	[0]	34·1	54·4
Potsdam		76·0	353	i 12 6	+11	i 21 37	0	e 32·1	44·1
Agra	E.	76·4	299	11 36	−21	21 24	−18	e 40·5	47·2
	N.	76·4	299	11 30	−27	21 23	−19	40·7	48·0
De Bilt		76·8	357	i 12 1	+ 1	21 48	+ 1	e 37·1	50·3
Gottingen	E.	77·2	355	e 12 2	0	21 53	+ 2	e 32·1	44·2
	N.	77·2	355	e 12 3	+ 1	e 22 8	[+ 4]	e 38·4	43·1
	Z.	77·2	355	e 12 4	+ 2	e 22 4	[0]	e 39·2	44·1
Lemberg	E.	77·2	346	e 12 10	+ 8	e 21 52	+ 1	e 36·4	50·2
	N.	77·2	346	e 11 58	− 4	e 22 22	?PS	e 41·5	52·1
Oxford		77·2	2	i 12 4	+ 2	i 21 48	− 3	e 33·1	54·8
Kew		77·5	0	12 3	− 1	22 1	[− 5]	33·1	49·7
Jena		77·7	355	e 12 22	+17	e 21 52	− 5	e 34·1	41·1
Uccle		78·1	358	i 12 7	− 1	i 22 7	+ 6	e 33·1	49·1
Cheb		78·4	353	e 12 19	+10	e 22 5	0	e 34·1	45·5
Feldberg	N.	78·6	357	i 12 2	− 9	21 49	−18	—	56·1
Theodosia		79·3	339	12 19	+ 4	22 20	+ 5	28·3	—
Karlsruhe		79·7	356	12 21	+ 4	22 18	− 2	e 41·1	—
Simferopol		79·7	339	12 19	+ 2	22 23	+ 3	42·6	—
Vienna		79·8	350	e 12 17	− 1	22 32	+11	e 37·1	53·1
Hohenheim		80·0	356	12 17	− 2	22 23	0	e 36·1	45·6
Yalta		80·1	339	—	—	—	—	e 44·3	—
Paris		80·2	359	i 12 18	− 2	e 22 23	− 2	27·1	52·1
Strasbourg		80·2	356	i 12 18	− 2	22 26	+ 1	36·1	57·7
Ravensburg		80·8	356	12 21	− 3	22 31	− 2	e 39·1	52·1
Graz		81·0	350	i 12 28	+ 3	e 22 33	− 2	36·1	46·7
Innsbruck		81·2	355	e 12 24	− 2	22 34	− 3	e 37·0	51·3
Besançon		81·7	357	e 12 31	+ 2	i 22 38	− 5	34·1	—
Neuchatel		81·8	356	e 12 25	− 4	e 23 40	?PS	—	—
Chur		81·9	356	i 12 28	− 2	e 22 43	− 2	—	—
Laibach	N.	82·2	351	e 12 38	+ 7	e 23 1	? Σ	e 40·2	50·9
Zagreb		82·2	350	e 12 32	+ 1	e 22 46	− 2	e 42·0	53·5
Treviso		82·8	353	i 12 33	− 2	i 23 4	+ 9	43·1	55·6
Padova		83·0	354	e 12 38	+ 2	e 22 46	[+ 3]	e 43·1	61·1
Venice		83·0	352	i 12 37	+ 1	e 22 44	[+ 1]	49·1	—
Piacenza		83·6	355	12 40	0	23 4	− 1	—	59·1
Moncalieri		83·8	355	i 12 41	0	22 34	[−15]	34·2	61·4
Hyderabad		83·8	291	12 39	− 2	23 13	+ 6	44·5	53·6
Florence		84·7	354	12 45	− 1	23 29	+13	43·1	45·5
Marseilles		85·6	358	e 13 36	+45	e 24 4	+38	e 36·1	—
Bombay		85·9	297	12 53	0	23 21	− 8	44·5	53·8

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Rocca di Papa	86·6	351	12 51	− 6	i 23 22	−15	e 36·1	56·6
Naples E.	87·3	350	e 13 9	+ 8	e 24 39	?PS	—	64·1
Pompeii	87·4	350	e 13 4	+ 3	e 23 34	−11	36·1	48·1
Barcelona	87·5	359	—	—	e 23 33	−14	e 28·7	53·0
Tortosa	88·2	0	e 13 0	− 6	23 28	[+12]	37·7	53·1
Azores	88·3	21	22 52	?S	(22 52)	[−25]	—	64·1
Trenta	88·6	349	e 13 14	+ 6	e 23 14	[− 5]	—	49·1
Riverview	88·7	204	e 13 4	− 5	e 23 29	[+ 9]	e 36·5	45·8
Toledo	89·0	5	13 2	− 8	e 23 33	[+11]	e 39·1	54·3
Ksara	89·6	332	13 16	+ 2	23 39	[+13]	38·1	—
Kodaikanal	90·1	286	20 34	?PR_2	—	—	50·7	54·3
Catania	90·6	350	e 13 52	+33	—	—	e 48·7	54·6
Alicante	90·7	1	e 12 57	−23	e 23 52	[+20]	e 34·3	60·1
Colombo	91·2	282	13 19	− 3	24 4	? Σ	52·3	65·2
Granada	91·8	5	i 13 14	−12	i 24 17	−16	43·1	56·4
Almeria	92·1	3	e 13 13	−15	e 23 58	[+17]	37·6	43·0
Algiers	92·2	358	13 20	− 8	23 47	[+ 6]	43·1	54·1
Malaga	92·2	5	13 13	−15	23 51	[+10]	30·1	50·8
San Fernando	92·4	5	13 15	−14	24 20	? Σ	42·3	65·3
Wellington N.	92·4	185	e 12 39	−50	i 23 44	[+ 2]	45·7	66·7
Adelaide	93·5	215	e 17 4	?PR_1	e 23 56	[+ 7]	39·3	70·3
Melbourne	94·1	209	—	—	24 40	−17	39·8	54·4
Helwan	94·7	334	e 13 12	−30	24 9	[+14]	—	63·3
Christchurch	94·8	187	—	—	i 24 47	−17	—	74·3
Perth	100·5	231	23 4?	?	—	—	—	—
La Paz	116·2	84	e 16 25?	?	26 27	? Σ	55·8	75·9
Sucre	119·9	84	19 50	?PR_1	i 30 11	?PS	70·1	78·3
Tananarive	131·1	293	e 21 46	?PR_1	—	—	59·7	72·6
La Plata	135·7	92	—	—	—	—	64·2	—
Rio de Janeiro	136·8	67	e 23 4	?	e 35 4	?	e 60·7	88·6
Johannesburg	147·5	310	—	—	—	—	69·1	—
Cape Town	158·5	316	—	—	—	—	—	98·4

Additional readings and note: Mizusawa SN = +11m.32s. Honolulu T.H. PR_1N = +7m.54s., PR_1E = +7m.59s., eN = +11m.33s., eE = +11m.47s., SR_1E = +13m.40s., SR_1N = +13m.48s. Osaka MN = +25·1m. Kobe MZ = +19·8m., MN = +20·3m. Sumoto MNZ = +25·3m. Berkeley eZ = +8m.8s., eE = +8m.10s., ePR_1E = +9m.29s., ePR_1Z = +9m.34s., eZ = +11m.0s., eSN = +14m.6s., eSZ = +14m.8s., eN = +17m.18s. = SR_1 − 4s., eZ = +17m.34s. = SR_1 + 12s., eEN = +17m.40s., eZ = +19m.16s., eZ = +19m.16s., eZ = +19m.52s., eN = +20m.58s., eE? = +22m.40s., eZ = +22m.46s., eE = +29m.22s., eNZ = +35m.22s., eE = +36m.34s., eN = +37m.58s., eE = +41m.58s. Lick eE = +10m.16s. = PR_2 − 9s. Saskatoon i = +18m.6s. = SR_1 + 10s., T_e = 14h.19m.2s. Tucson eE = +9m.46s., iSRN = +19m.4s. = [S] + 9s., eSR_1E = +20m.6s. Scoresby Sund (no phase) +12m.16s. and +21m.34s., PR_1 = +13m.29s., SR_2 = +24m.22s. Hong Kong e = +26m.4s., MN = +43·9m. Manila iPR_1 = +12m.22s., PS = +18m.55s., T_e = 14h.19m.6s. Chicago PR_2N = +13m.42s., iSN = +18m.16s., SR_1N = +21m.50s., SR_1E = +21m.58s., SR_2E = +24m.21s., SR_2N = +24m.33s., LN = +27·5m. Florissant iEN = +10m.12s., iEN = +10m.14s., iEN = +10m.17s., iE = +10m.30s., eSR_1EN = +22m.11s., epicentre 50°N. 177°W. St. Louis iSE = +18m.21s., iN = +18m.36s., eEN = +23m.9s. = SR_1 − 9s., iEN = +24m.44s., iN = +31m.23s. Ann Arbor i = +20m.16s. = [S] + 9s., eN = +22m.46s., eSR_1E = +23m.40s., eSR_2 = +25m.34s., eL?N = +27·5m., MN = +37·7m.; T_e = 14h.19m.0s. Toronto iPN = +10m.29s., SR_1N = +23m.32s., SR_2N = +26m.4s.; T_e = 14h.18m.52s. Ottawa PR_2 = +14m.42s., SR_1 = +23m.57s., SR_2 = +25m.56s., MN = +40·1m.; T_e = 14h.18m.58s. Phu-Lien MN = +39·1m. Apia e = +5m.24s. Helsingfors PR_1 = +13m.51s., PR_2 = +15m.13s., SR_1 = +24m.7s., SR_2 = +27m.10s. Charlottesville iSN = +19m.54s., eE = +26m.1s., eN = +27m.49s. = SR_2 + 6s., eE = +31m.4s., eN = +30m.32s., LN = +35·5m. Fordham iSN = +20m.9s. Upsala SR_1E = +24m.49s., SR_1N = +24m.59s., SR_2E = +27m.59s., SR_2N = +28m.12s., MN = +44·1m. Bergen e = +16m.55s., e = +28m.4s.? Kucino gives epicentre 52°·0N. 173°·5W. Suva iN = +19m.28s. Vera Cruz readings have been *diminished* by 3m. Copenhagen +14m.21s. = PR_1 − 29s., +26m.15s. = SR_1 − 17s. Konigsberg eP_cPE = +12m.29s., eE = +13m.46s., eN = +13m.50s., ePR_1N = +14m.54s., ePR_1E = +15m.16s., eZ = +18m.8s. and +19m.40s., ePR_2N = +20m.58s., e$PPSN$ = +22m.5s., eE = +23m.53s.,

Continued on next page.

$eSR_1N = +25m.58s.$, $eSR_1E = +26m.2s.$, $eEN = +27m.8s.$, $eSR_2Z = +27m.52s.$, $eZ = +28m.14s.$ and $+28m.24s.$, $eE = +28m.36s.$, $eEN = +28m.46s.$, $eE = +29m.40s.$, $eN = +29m.47s.$ and $+31m.55s.$, $eLZ = +36·1m.$, $MN = +43·1m.$, $MZ = +45·1m.$ Stonyhurst $SR_1 = +25m.52s.$, Hamburg $iSR_1N = +26m.41s.$, $eLNZ = +37·1m.$, $MZ = +39·1m.$, $MN = +42·2m.$ Potsdam $MN = +42·1m.$ De Bilt $iZ = +16m.54s.$, $eSR_1 = +26m.47s.$, $MZ = +50·5m.$, $MN = +54·4m.$ Gottingen $iSR_1E = +27m.8s.$, $iSR_1N = +27m.10s.$ Oxford $iSN = +21m.52s.$, $eLN = +35·4m.$ Kew $PSZ = +22m.47s.$, $MZ = +53·1m.$ Jena $iE = +12m.28s.$ and $+12m.40s.$, $eN = +21m.34s.$, $eE = +21m.58s.$, $eSR_1EN = +27m.4s.$, $eLN = +37·1m.$, $eLZ = +31·1m.$ Uccle $iPR_1N = +15m.17s.$, $iPSN = +23m.0s.$, $iSR_1 = +27m.13s.$, $MN = +54·1m.$ Cheb $e = +14m.35s.$, $e = +27m.46s.$, $MN = +51·1m.$ Feldberg $eN = +15m.46s.$ Vienna $iPZ = +12m.21s.$, $iEZ = +14m.38s.$, $PR_2 = +18m.43s.$, $S_cP_cP_cS = +23m.25s.$, $SR_2 = +34m.31s.$ Hohenheim $PR_1 = +15m.32s.$, $PR_2 = +17m.33s.$, $PSN = +23m.28s.$, $SR_1N = +27m.59s.$ Paris $MN = +49·9m.$ Strasbourg $e = +15m.34s.$, $PS = +23m.29s.$, $SR_1 = +28m.7s.$, $SR_2 = +34m.44s.$, $MN = +44·8m.$, $MZ = +56·6m.$ Ravensburg $PS = +23m.32s.$, $L = +41·1m.$ Graz $MN = +54·6m.$ Innsbruck $PR_2 = +18m.40s.$, $PPS = +25m.40s.$ Neuchatel $iP = +12m.28s.$, $eSR_1 = +28m.24s.$ Laibach $eN = +16m.51s.$ Zagreb $e = +12m.45s.$, $+23m.4s.$, and $+23m.42s.$, $eNE = +26m.36s.$, $e = +27m.52s.$ and $eNE = +28m.51s.$, $e = +31m.16s.$, $eNW = +33m.36s.$, $e = +34m.24s.$, $eNW = +35m.44s.$, $e = +36m.21s.$, and $+41m.16s.$ Piacenza $MN = +57·1m.$ Marseilles $eSR_1 = +30m.4s.$ Rocca di Papa $S? = +23m.7s.$ Barcelona $MN = +53·5m.$ Tortosa $MN = +59·5m.$ Riverview $MN = +61·7m.$ Toledo $MNW = +54·6m.$ Ksara $PR_1N = +16m.51s.$, $PR_2N = +18m.53s.$, $LN = +30·6m.$; $T_0 = 14h.19m.52s.$ Catania $MNW = +59·1m.$ Alicante $MN = +60·4m.$ Granada $iPE = +13m.22s.$, $PR_1 = +16m.55s.$, $PS = +25m.53s.$, $PPS = +26m.6s.$, $SR_1 = +31m.0s.$, $SR_2 = +35m.8s.$, $i = +37m.48s.$, $+41m.36s.$, $+42m.14s.$, $MZ = +61·1m.$ Algiers $i = +25m.41s.$, $MN = +60·1m.$ San Fernando $MN = +53·3m.$ Wellington $SR_2N = +34m.24s.$, $LE = +41·1m.$, $ME = +64·4m.$, $T_0N = 14h.18m.12s.$ Adelaide $e = +30m.54s.$, $i = +36m.30s.$, $MN = +49·6m.$ Melbourne $SR_1 = +30m.48s.$ La Paz $iP'? = +19m.36s.$, $PPSE = +29m.45s.$, $PPSN = +29m.50s.$ Sucre $i = +20m.18s.$ Tananarive $PR_1 = +22m.47s.$, $PPSE = +33m.39s.$, $+39m.6s. = SR_1 + 3s.$, $SR_1E = +39m.54s.$, $SR_2E = +44m.35s.$, $MN = +73·4m.$ Rio de Janeiro $eLN = +60·9m.$, $MN = +84·6m.$

July 5d. 14h. 35m. 5s. Epicentre 51°·0N. 179°·5W. (as at 14h. 18m.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Akita	Z.	30·1	264	e 6 26	− 3	—	—	—	—
Nagoya		34·8	263	e 7 13	+ 2	—	—	—	—
Kobe	E.	36·3	264	e 7 19	− 5	—	—	—	13·1
Nagasaki		40·9	266	e 8 1	− 1	13 52	−28	—	—
Florissant		60·4	65	i 10 10	− 5	e 18 17	−11	—	—
St. Louis		60·6	65	—	—	i 18 21	−10	—	—
Copenhagen		72·8	355	11 37	+ 2	—	—	—	—
Konigsberg		72·8	349	e 11 37	+ 2	—	—	—	—
De Bilt		76·8	357	i 12 1	+ 1	—	—	—	—
Gottingen	Z.	77·2	355	e 12 1	− 1	—	—	—	—
Uccle		78·1	358	i 12 6	− 2	—	—	—	—
Feldberg	N.	78·6	357	i 11 56	−15	—	—	—	—
Theodosia		79·3	339	12 18	+ 3	—	—	—	—
Simferopol		79·7	339	12 18	+ 1	—	—	—	—
Vienna		79·8	350	12 25	+ 7	—	—	—	—
Ravensburg		80·8	356	12 0	−24	—	—	—	—
Innsbruck		81·2	355	12 19	− 7	—	—	—	—
Neuchatel		81·8	356	i 12 28	− 1	i 22 40	− 4	—	—
Chur		81·9	356	e 12 28	− 2	e 22 53	+ 8	—	—
Zagreb		82·2	350	e 12 29	− 2	e 23 13	+25	—	—
Florence		84·7	354	12 50	+ 4	—	—	—	
Rocca di Papa		86·6	351	e 12 54	− 3	e 23 13	[+ 7]	—	—
Ksara		89·6	332	e 13 34	+20	e 23 37	[+11]	—	—
Wellington		92·4	185	i 13 40	+11	—	—	—	—
Entebbe		122·2	321	14 55?	−58	27 5	? Σ	—	61·8

Kobe gives also PZ = +7m.21s.

July 5d. 22h. 36m. 9s. Epicentre 50°·5N. 178°·3W.

A = −·636, B = −·019, C = +·772; D = −·030, E = +1·000; G = −·771, H = −·023, K = −·636.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka		25·7	59	—	—	9 55	−21	i 12·4	—
Ootomari		25·7	277	5 53	+ 8	10 27	+11	12·2	—
Mizusawa	E.	30·5	265	5 40	−53	11 41	− 2	—	—
Akita	Z.	30·8	267	6 28	− 8	—	—	e 16·2	—
Honolulu T.H.	E.	33·4	144	—	—	e 11 58	−32	14·8	—
	N.	33·4	144	—	—	i 12 17	−13	15·0	—
Yokohama		33·7	261	7 12	+10	15 4	?L	(15·1)	—
Victoria		35·0	73	6 56	−17	(12 26)	−29	12·4	20·1
Osaka		36·8	265	e 7 22	− 6	—	—	—	—
Kobe		37·0	265	e 7 25	− 5	13 13	−11	—	20·4
Sumoto		37·4	265	7 15	−18	—	—	e 15·7	20·2
Koti		38·7	265	e 7 25	−19	e 13 51	+ 3	e 16·8	—
Hukuoka		40·7	268	7 58	− 3	e 14 15	− 2	19·4	24·6
Berkeley	Z.	41·0	88	e 8 10	+ 7	e 14 16	− 5	e 19·0	—
Nagasaki		41·6	267	e 8 7	− 1	14 31	+ 2	—	—
Lick	E.	41·8	88	e 7 58	−11	e 14 9	−23	e 19·9	—
Irkutsk		46·0	306	i 8 32	− 8	15 25	− 3	22·8	28·2
Tucson	E.	51·8	85	9 22	+ 3	i 16 31	−10	e 26·6	—
	N.	51·8	85	9 25	+ 6	i 16 24	−17	e 22·8	—
Taihoku	E.	52·2	267	—	—	e 15 51?	−55	—	—
Scoresby Sund		57·8	10	9 56	− 2	17 57	+ 1	—	—
Hong Kong		58·8	270	10 11	+ 7	18 26	+17	—	33·4
Chicago	E.	59·4	61	10 6	− 2	18 9	− 7	28·7	—
	N.	59·4	61	10 7	− 1	18 7	− 9	e 26·6	—
Florissant		59·9	66	e 10 8	− 3	i 18 15	− 7	—	33·1
		59·9	66	i 10 8	− 3	e 18 17	− 5	—	33·8
Manila		60·3	260	e 10 23	+ 9	i 18 31	+ 4	i 28·5	—
Ann Arbor		61·2	59	e 10 39	+19	e 18 39	+ 1	e 31·8	36·2
Ekaterinburg		62·2	330	i 10 23	− 3	19 6	+15	26·4	40·2
Toronto	E.	62·5	54	e 10 30	+ 1	i 18 45	−10	i 34·0	38·8
	N.	62·5	54	e 10 30	+ 1	e 18 53	− 2	28·9	39·0
Ottawa		63·1	50	e 10 29	− 4	i 18 55	− 7	e 28·8	40·4
Phu-Lien		64·8	275	10 53	+ 9	e 19 35	+12	30·8	—
Almata		65·7	310	e 11 1	+12	—	—	e 33·8	—
Charlottesville	N.	67·0	59	e 11 7	+ 9	19 49	− 1	32·1	—
Georgetown		67·1	57	e 10 59	0	e 19 52	+ 1	37·2	40·6
Fordham		67·3	55	e 11 15	+15	e 20 6	+12	e 33·9	43·8
Pulkovo		67·4	347	10 59	− 1	20 17	+22	36·8	45·8
Harvard		67·6	51	e 10 59	− 3	i 19 49	− 8	—	—
Helsingfors		67·7	349	e 11 7	+ 5	e 20 1	+ 3	e 36·8	—
Upsala		68·9	354	e 11 8	− 2	e 20 8	− 5	—	44·5
Bergen		69·1	358	—	—	—	—	e 40·8	50·8
Kucino		69·6	340	11 17	+ 2	e 20 21	0	35·2	46·6
Andijan		70·3	311	e 11 18	− 1	—	—	—	—
Tashkent		71·0	315	i 11 26	+ 3	e 20 52	+14	36·8	47·8
Dyce		72·2	4	i 11 32	+ 1	21 17	+25	—	41·8
Samarkand		72·9	315	e 11 29	− 6	—	—	—	—
Copenhagen		73·4	355	11 37	− 1	21 6	− 1	—	—
Konigsberg		73·5	350	e 10 29	−70	e 21 10	+ 2	e 37·8	49·4
Edinburgh		73·5	5	—	—	e 21 6	− 2	—	—
Dehra Dun		74·9	300	10 51?	−57	20 51?	−34	35·8	45·8
Stonyhurst		75·6	4	—	—	21 29	− 4	33·8	47·4
Hamburg		75·7	356	e 11 55	+ 2	e 21 33	− 1	e 38·8	49·8
Potsdam		76·7	354	e 10 39	−80	—	—	e 34·4	48·8
De Bilt		77·4	358	e 12 0	− 3	21 48	− 5	e 36·8	48·4
Agra	E.	77·4	299	11 1	−62	21 3	−50	40·6	46·2
	N.	77·4	299	12 33	+30	22 18	+25	41·8	46·2
Oxford		77·7	3	e 11 58	− 7	21 46	−11	e 29·8	53·4

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Gottingen	E.	77·8	356	e 11 57?	− 9	e 21 55	− 3	e 36·0	45·0
	N.	77·8	356	—	—	e 21 55	− 3	e 42·4	46·0
	Z.	77·8	356	e 11 55	−11	—	—	e 42·6	54·4
Kew		78·0	3	12 8	+ 1	22 4	+ 4	42·8	56·8
Jena	E.	78·3	356	e 12 9	0	—	—	e 41·8	48·4
	N.	78·3	356	e 12 7	− 2	e 23 30	+86	e 41·8	47·4
	Z.	78·3	356	e 12 5	− 4	—	—	e 43·8	46·8
Uccle		78·7	359	e 12 7	− 4	e 21 48	−20	e 37·8	49·3
Cheb		79·0	355	—	—	e 22 10	− 2	e 47·8	49·8
Feldberg	N.	79·1	357	10 2	?	e 22 31	+18	—	57·4
Baku		79·8	325	12 21	+ 3	i 22 36	+15	41·8	—
Theodosia		80·1	339	12 18	− 2	e 22 28	+ 4	31·8	—
Vienna		80·4	352	e 12 17	− 4	22 41	+13	e 37·8	54·8
Hohenheim		80·5	356	e 12 16	− 6	22 27	− 2	—	44·8
Simferopol		80·5	339	12 19	− 3	—	—	e 43·8	—
Paris		80·7	0	e 12 19	− 4	e 22 22	− 9	23·8	53·8
Strasbourg		80·8	357	12 40	+16	e 22 39	+ 6	33·8	54·1
Yalta		80·9	339	—	—	—	—	e 32·6	—
Ravensburg		81·5	356	e 12 21	− 7	22 35	− 6	—	45·8
Graz		81·7	352	e 12 45	+16	e 22 54	+11	42·8	55·7
Innsbruck		81·9	355	e 11 39	−51	—	—	—	—
Zurich		82·0	356	e 12 26	− 4	e 22 36	−10	—	—
Besançon		82·2	358	—	—	—	—	e 45·8	—
Neuchatel		82·4	357	i 12 27	− 5	e 22 25	−25	—	—
Chur		82·5	356	e 12 28	− 5	22 49	− 3	—	—
Zagreb		82·9	351	e 12 23	− 2	e 22 47	− 9	e 46·0	50·6
Belgrade	N.	83·3	348	e 13 43	+65	—	—	—	—
Treviso		83·4	356	i 12 34	− 4	e 23 12	+11	48·9	55·4
Venice		83·6	354	e 12 51?	+11	i 23 13	+ 8	—	—
Piacenza		84·3	356	13 7	+23	23 7	− 4	31·8	58·2
Moncalieri		84·4	357	e 12 41	− 3	23 8	− 4	e 33·8	54·8
		84·4	357	e 12 45	+ 1	23 1	−11	34·3	67·0
Hyderabad		84·7	293	—	—	23 29	+13	—	53·8
Florence		85·4	355	12 43	− 7	23 51	+28	48·8	53·8
Marseilles		86·2	359	e 13 51?	+57	e 23 51?	+19	e 43·8	—
Bombay		86·8	298	12 54	− 4	23 24	−15	44·7	49·4
Rocca di Papa		87·3	354	e 12 52	− 9	i 23 17	[+ 6]	e 51·3	62·4
Pompeii		88·0	351	e 13 46	+41	e 23 51	− 1	55·8	—
Casamicciola		88·1	351	12 55	−11	—	—	—	—
Riverview		88·6	205	e 13 17	+ 9	e 23 38	−21	e 35·0	56·2
Tortosa	N.	88·7	1	e 12 54	−15	23 40	−20	e 37·8	64·2
Toledo		89·5	5	e 13 5	− 8	e 23 46	−23	e 38·8	63·6
Alicante		90·0	2	e 13 17	+ 1	e 23 33	[+ 5]	e 34·5	—
Ksara		90·4	333	13 33	+15	23 40	[+10]	39·3	—
Kodaikanal		90·9	289	21 57	?	—	—	54·8	56·8
Catania		91·2	350	—	—	—	—	e 52·3	—
Wellington	N.	92·0	185	—	—	i 23 46	[+ 6]	45·6	50·2
Colombo		92·1	284	—	—	—	—	—	58·0
Granada		92·2	5	i 13 11	−17	i 24 17	−20	43·2	62·9
Almeria		92·5	4	e 13 20	−10	24 4	[+21]	41·8	53·3
Malaga		92·6	6	e 13 44	+14	23 50	[+ 6]	30·8	—
Algiers		92·7	359	—	—	e 23 54	[+10]	—	65·8
San Fernando		92·8	7	13 7	−24	24 7	[+22]	43·9	58·6
Adelaide		93·5	215	—	—	e 23 46	[− 3]	e 41·2	61·2
Melbourne		94·0	209	—	—	e 24 6	[+14]	41·0	43·6
Perth		100·8	233	23 51?	?	—	—	—	—
La Paz		115·4	84	e 16 53	+91	e 35 51	?SR_1	57·8	68·0
Sucre		118·1	84	e 19 42	?PR_1	—	—	63·8	76·8
Entebbe		123·1	322	—	—	—	—	64·8	—
Tananarive	E.	132·0	294	—	—	—	—	—	71·9
La Plata		134·8	91	—	—	—	—	65·2	—
Rio de Janeiro	N.	135·7	69	e 23 41	?PR_1	—	—	—	—
Johannesburg		148·4	310	—	—	—	—	—	87·8
Cape Town		159·4	317	—	—	—	—	—	100·0

For Notes see next page.

NOTES TO JULY 5d. 22h. 36m. 9s.

Additional readings: Sitka ePR$_1$EN = +6m.14s., eLN = +15·1m. Mizusawa SN = +11m.45s. Honolulu T.H. PR$_1$N = +7m.58s. Victoria LE = +11m.26s., MN = +21·9m. Kobe ePE = +7m.28s., MN = +25·2m. Sumoto MZ = +25·1m., MN = +25·3m. Berkeley ePE = +8m.11s., eE = +8m.23s., +13m.58s., and +17m.27s. =SR$_1$ +19s., eZ = +8m.41s., eN = +8m.47s. and +16m.57s. =SR$_1$ −11s. Tucson SR$_1$N = +19m.1s., SR$_2$E = +20m.16s. Scoresby Sund (no phase) +12m.9s. =PR$_1$ −25s. and +22m.9s. =SR$_1$ −21s., SN? = +18m.27s. =PS +2s., PS? = +19m.51s. = [S] +13s. Chicago SR$_1$N = +21m.58s., eSR$_2$E = +23m.15s. Florissant (first line) iEN = +10m.28s. and +18m.34s., (second line) ePR$_1$ = +12m.40s. Ann Arbor e = +20m.15s. =[S] +11s., eLN = +30·6m., MN = +34·4m. Ottawa SR$_1$ = +23m.43s., SR$_2$ = +25m.51s., MN = +38·6m.: T$_e$ = 22h.36m.13s. Charlottesville SE = +19m.48s., eN = +23m.51s.?, LE = +29·8m. Georgetown eSN = +19m.51s., eLZ = +28·9m., MN = +41·8m. Fordham iSEN = +20m.11s. Upsala SR$_1$N = +25m.8s., SR$_2$N = +28m.18s., MN = +43·2m. Kucino e = +25m.3s. Copenhagen +21m.31s. =[S] −6s. Konigsberg ePcPEN = +11m.31s., ePR$_1$N = +13m.35s., ePR$_2$E = +15m.26s., ePSE = +21m.29s., eN = +22m.49s., +23m.36s., and +24m.2s., ePSSN = +24m.51s., eN = +26m.21s., eE = +28m.51s., eN = +29m.51s., and +31m.21s., MN = +43·8m. Hamburg eSR$_2$N = +26m.40s., MN = +51·8m. De Bilt MZ = +55·6m., MN = +57·9m. Oxford MN = +59·4m. Gottingen eSR$_1$N = +27m.18s., eN = +31m.55s. Jena iPNZ = +12m.24s., eN = +27m.39s. =SR$_1$ −8s. Uccle SR$_1$ = +27m.33s., MN = +52·0m. Cheb e = +31m.32s. =SR$_2$ +6s., MN = +55·4m. Hohenheim SR$_1$N = +28m.9s. Paris MN = +55·8m. Strasbourg e = +28m.21s. =SR$_1$ −5s., MNZ = +57·1m. Ravensburg SR$_1$N = +28m.21s. Zagreb e = +23m.10s. = Σ +0s., +23m.43s. = PS +1s., +33m.21s., and +42m.41s. Belgrade eN = +15m.3s. Moncalieri (first line) MN = +70·2m., (second line) e = +28m.56s. Rocca di Papa i = +13m.14s. Riverview +25m.42s., MN = +50·1m. Tortosa ME = +64·7m. Toledo MNW = +63·2m. Ksara LN = +28·8m? T$_e$ =22h.37m.41s. Granada PR$_1$ = +16m.49s., PS = +25m.33s., MZ = +65·4m. Algiers ? = +25m.44s. =PS +4s. San Fernando MN = +53·0m. Adelaide e = +25m.30s. =PS −19s., i = +31m.14s. =SR$_1$ −1s. eSR$_2$ = +34m.21s., MN = +56·6m. Melbourne i = +24m.43s. =S −13s. Tananarive ePR$_1$ = +22m.57s., ePPS = +33m.56s.

July 5d. 23h. 9m. 34s. Epicentre 50°·5N. 178°·3W. (as at 22h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Akita	Z.	30·8	267	6 35	− 1	—	—	—	—
Berkeley		41·0	88	e 8 5	+ 2	e 13 50	−31	—	—
Lick	E.	41·8	88	e 7 45	−24	—	—	—	—
Florissant		59·9	66	e 10 13	+ 2	i 18 19	− 3	—	—
Helsingfors		67·7	349	e 11 8	+ 6	e 20 3	+ 5	e 37·4	—
Copenhagen		73·4	355	11 43	+ 5	—	—	—	—
De Bilt	Z.	77·4	358	i 12 6	+ 3	—	—	—	—
Vienna	Z.	80·4	352	i 12 24	+ 3	—	—	—	—
Simferopol		80·5	339	e 12 0	−22	—	—	—	—
Innsbruck		81·9	355	e 12 20	−10	—	—	—	—
Zurich		82·0	356	e 12 24	− 6	—	—	—	—
Neuchatel		82·4	357	e 12 32	0	—	—	—	—
Chur		82·5	356	e 12 33	0	—	—	—	—
Zagreb		82·9	351	e 12 38	+ 3	e 23 6	+10	—	—
Belgrade	N.	83·3	348	e 13 47	+69	—	—	—	—
Venice		83·6	354	e 11 46	−54	—	—	—	—
Rocca di Papa		87·3	354	i 12 57	− 4	e 23 21	[+10]	—	—
Ksara	N.	90·4	333	13 8	−10	e 23 45	[+15]	—	—

Additional readings: Berkeley eE = +10m.14s. Florissant ePR$_2$Z = +12m.50s., iSN = +18m.23s. Helsingfors e = +21m.13s. Belgrade eN = +14m.41s. and +18m.30s. =PR$_1$ +13s. Rocca di Papa S = +23m.29s.

July 5d. Readings also at 2h. (Sucre), 4h. (Wellington), 5h. (Wellington, near Oaxaca and Tacubaya), 8h. (Wellington), 12h. (Granada), 13h. (near Wellington), 14h. (Neuchatel, Rocca di Papa (2), Florissant (2), Samarkand, near Andijan, near La Paz, and Sucre), 16h. (Apia and near Reykjavik), 18h. (Florissant), 19h. (Florissant, Georgetown, Ottawa, Toronto, Baku, Tashkent, and Copenhagen), 20h. (Florissant and near Nagoya), 21h. (Osaka), 23h. (Florissant).

July 6d. 2h. 3m. 40s. Epicentre 50°·5N. 178°·3W.

(as on 5d.).

A = −·636, B = −·019, C = +·772; D = −·030, E = +1·000; G = −·771, H = −·023, K = −·636.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka		25·7	59	e 5 33	−12	10 8	− 8	13·9	—
Mizusawa	E.	30·5	265	6 35	+ 2	11 35	− 8	—	—
Akita		30·8	267	e 6 36	0	—	—	e 21·1	—
Honolulu T.H.	E.	33·4	144	6 58	− 2	12 0	−30	i 15·2	—
	N.	33·4	144	7 9	+ 9	12 8	−22	i 15·3	—
Victoria	E.	35·0	73	7 5	− 8	12 25	−30	16·2	17·1
	N.	35·0	73	7 0	−13	12 25	−30	14·8	15·3
Nagoya		35·6	265	e 7 29	+11	—	—	—	—
Osaka		36·8	265	7 28	0	—	—	13·1	14·7
Kobe		37·0	265	i 7 27	− 3	—	—	e 16·6	—
Sumoto		37·4	265	7 31	− 2	e 13 36	+ 6	—	24·7
Koti		38·7	265	e 7 30	−14	e 13 44	− 4	—	—
Berkeley	E.	41·0	88	e 8 0	− 3	e 13 54	−27	e 20·0	—
Nagasaki		41·6	267	e 8 8	0	e 14 36	+ 7	—	—
Lick	E.	41·8	88	e 7 44	−25	e 14 10	−22	e 19·6	—
Saskatoon		42·9	60	e 8 6	−11	e 14 26	−21	e 20·3	—
Zi-ka-wei	E.	48·0	273	e 8 54	0	—	—	—	—
Tucson	E.	51·8	85	9 15	− 4	16 34	− 7	—	—
	N.	51·8	85	9 29	+10	16 36	− 5	e 22·0	—
Scoresby Sund		57·8	10	9 58	0	18 2	+ 6	—	—
Hong Kong		58·8	270	10 14	+10	—	—	—	45·8
Chicago		59·4	61	10 6	− 2	18 7	− 9	e 27·0	—
Florissant		59·9	66	i 10 11	0	i 18 17	− 5	e 27·3	32·1
St. Louis		60·1	66	e 10 13	0	i 18 17	− 7	—	31·3
Manila		60·3	260	e 10 25	+11	i 18 44	+17	i 30·3	—
Ann Arbor		61·2	59	e 10 20	0	e 18 44	+ 6	e 31·0	—
Ekaterinburg		62·2	330	i 10 26	0	19 11	+20	32·8	40·4
Toronto		62·5	54	e 10 30	+ 1	e 18 46	− 9	e 28·8	38·8
Ottawa		63·1	50	e 10 31	− 2	i 18 57	− 5	e 28·9	39·1
Phu-Lien		64·8	275	e 10 54	+10	e 19 35	+12	31·3	—
Almata		65·7	310	e 10 28	−21	—	—	—	—
Charlottesville	E.	67·0	59	e 11 0	+ 2	19 52	+ 2	e 32·0	—
	N.	67·0	59	—	—	19 38	−12	e 32·3	—
Georgetown	Z.	67·1	57	i 11 4	+ 5	e 19 30	−21	e 29·0	42·1
Fordham		67·3	55	11 18	+18	i 19 57	+ 3	e 31·3	42·3
Pulkovo		67·4	347	11 4	+ 4	19 56	+ 1	38·3	45·0
Harvard		67·6	51	e 11 0	− 2	e 19 50	− 7	—	—
Helsingfors		67·7	349	e 11 7	+ 5	e 20 1	+ 3	e 38·8	—
Suva		68·7	184	—	—	—	—	26·3	—
Upsala		68·9	354	e 11 12	+ 2	e 20 13	0	—	47·2
Kucino		69·6	340	11 21	+ 6	20 41	+20	33·9	46·6
Andijan		70·3	311	—	—	e 21 10	[− 4]	—	—
Tashkent		71·0	315	i 11 30	+ 7	—	—	e 37·0	51·8
Dyce		72·2	4	e 11 31	0	i 21 11	+19	—	48·8
Samarkand		72·9	315	e 11 43	+ 8	e 21 11	+10	44·3	—
Copenhagen		73·4	355	11 41	+ 3	e 21 8	+ 1	—	—
Konigsberg		73·5	350	e 11 44	+ 5	e 21 14	+ 6	e 34·3	48·3
Edinburgh		73·5	5	—	—	e 21 20?	+12	39·3	—
Stonyhurst		75·6	4	—	—	21 49	+16	40·3	—
Hamburg		75·7	356	e 11 55	+ 2	e 21 44	+10	e 33·3	43·3
De Bilt		77·4	358	i 12 4	+ 1	e 22 4	+11	e 37·3	44·2
Oxford		77·7	3	i 12 5	0	21 50	− 7	e 37·3	51·6
Gottingen		77·8	356	e 12 11	+ 5	e 21 50	− 8	e 33·4	39·9
Kew		78·0	3	12 7	0	22 14	+14	36·3	45·3
Jena	N.	78·3	356	e 12 8	− 1	—	—	e 37·3	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Uccle		78·7	359	e 12 10	− 1	e 22 7	− 1	e 37·3	—
Cheb		79·0	355	—	—	e 22 20?	+ 8	e 48·3	51·3
Feldberg	N.	79·1	357	i 10 2	−132	e 22 30	+17	—	55·1
Baku		79·8	325	i 12 21	+ 3	i 22 52	? Σ	40·3	—
Theodosia		80·1	339	12 24	+ 4	e 22 33	+ 9	e 47·9	—
Vienna		80·4	352	e 12 20	− 1	—	—	e 45·3	55·3
Hohenheim		80·5	356	e 12 18	− 4	22 20	− 9	—	45·3
Simferopol		80·5	339	e 12 24	+ 2	—	—	e 48·3	—
Paris		80·7	0	i 12 21	− 2	e 22 27	− 4	29·3	50·3
Strasbourg		80·8	357	11 24	−60	(22 39)	+ 6	36·3	—
Yalta		80·9	339	e 12 27	+ 3	—	—	—	—
Ravensburg		81·5	356	e 12 25	− 3	22 37	− 4	—	—
Graz		81·7	352	i 12 27	− 2	e 22 56	+13	43·3	50·4
Innsbruck		81·9	355	e 12 26	− 4	—	—	—	—
Zurich		82·0	356	e 12 31	+ 1	e 22 35	[− 2]	—	—
Besançon		82·2	358	e 12 34	+ 3	24 14	+86	—	—
Neuchatel		82·4	357	e 12 31	− 1	e 22 42	[+ 3]	—	—
Chur		82·5	356	e 12 31	− 2	e 22 42	[+ 2]	—	—
Zagreb		82·9	351	e 12 36	+ 1	e 22 42	[0]	e 44·3	53·1
Treviso		83·4	356	i 12 39	+ 1	e 23 15	+14	—	—
Piacenza		84·3	356	12 52	+ 8	23 12	+ 1	—	58·1
Moncalieri		84·4	357	11 42	−62	23 24	+12	34·4	—
Hyderabad		84·7	293	23 16	?S	(23 16)	0	—	56·2
Florence		85·4	355	i 12 47	− 3	23 50	+27	43·8	52·3
Bombay		86·8	298	12 58	0	—	—	44·8	52·6
Rocca di Papa		87·3	354	12 57	− 4	e 23 14	[+ 3]	e 50·8	69·8
Pompeii		88·0	351	e 13 20	+15	—	—	—	—
Casamicciola		88·1	351	13 3	− 3	—	—	—	—
Riverview		88·6	205	e 13 28	+20	e 23 38	? Σ	e 35·8	47·0
Tortosa	N.	88·7	1	e 13 2	− 7	23 38	? Σ	e 46·3	60·8
Toledo		89·5	5	e 13 5	− 8	e 23 50	? Σ	e 39·5	63·5
Alicante		90·0	2	e 13 15	− 1	e 23 49	? Σ	e 34·5	—
Ksara		90·4	333	13 8	−10	23 44	? Σ	50·3	—
Kodaikanal		90·9	289	52 44	?L	—	—	(52·7)	—
Colombo		92·1	284	14 50	+82	—	—	—	57·7
Granada		92·2	5	i 13 16	−12	e 24 22	−15	e 40·3	52·1
Almeria		92·5	4	e 13 23	− 7	i 24 6	? Σ	—	51·0
Malaga		92·6	6	13 32	+ 2	25 2	+21	33·3	—
Algiers		92·7	359	—	—	e 23 51	[+ 7]	52·3	59·3
San Fernando	N.	92·8	7	—	—	—	—	—	52·6
Adelaide		93·5	215	e 21 10	?PR_2	e 23 35	[−14]	—	57·8
Melbourne		94·0	209	—	—	e 24 45	−11	—	—
La Paz		115·4	84	e 18 51	[+12]	—	—	68·3	78·8
Sucre		119·1	84	e 19 57	?PR_1	—	—	68·9	79·6
Entebbe		123·1	322	—	—	—	—	60·3	—
Rio de Janeiro	N.	135·7	69	e 24 10	?	—	—	—	—

Additional readings and note: Sitka SN = +10m.10s. Honolulu T.H. ePR_1 = +7m.32s., SR_1E = +14m.12s., SR_1N = +14m.17s. Berkeley ePZ = +8m.1s., ePR_1Z = +9m.57s., eZ? = +12m.16s., eZ = +17m.12s. = SR_1 +4s., and +17m.20s., eSR_2N = +17m.44s., eE? = +17m.50s., eZ = +19m.14s., eN = +19m.15s., and many other e readings. Lick eE = +10m.32s. and +18m.4s. = SR_2 −16s. Tucson eE = +12m.27s. Scoresby Sund +22m.2s. Chicago PN = +10m.9s., ePR_1E = +12m.2s., ePR_1N = +12m.26s., eLN = +26·8m. Florissant iZ = +11m.21s., iPR_1 = +12m.38s., iSN = +18m.18s. Ann Arbor ePR_1?E = +13m.32s., ePR_2N = +14m.14s., ePSN = +19m.14s., e = +20m.20s., eE = +28m.20s., eL?N = +28·6m.; T_e = 2h.3m.36s. Toronto eSN = +18m.57s., MN = +39·1m.; T_e = 2h.3m.45s. Ottawa e = +13m.8s., SR_1 = +23m.50s., SR_2 = +25m.52s., MN = +38·8m.; T_e = 2h.3m.46s. Georgetown PR_1Z = +13m.57s., PSZ = +20m.7s., SR_1Z = +24m.26s. Fordham iSN = +20m.20s., MN = +39·3m. Tashkent e = +43m.50s. Copenhagen eN = +21m.32s. Konigsberg eP_gPE = +12m.30s., eN = +13m.8s., +16m.41s. = PR_2 +2s., and +17m.30s. = PR_2 +3s., eSE = +21m.16s., eE = +22m.16s. and +24m.5s., eEN = +26m.32s. = SR_1 −9s., MN = +44·3m. Hamburg eSR_1N = +26m.56s. De Bilt eN = +27m.15s. = SR_1 −21s.,

Continued on next page.

eE = +32m.51s. =SR_3+15s., MN = +38·3m., MZ = +54·9m. Gottingen eSR$_1$N = +27m.24s., eLN = +35·8m. Kew SR_1N = +27m.48s. Jena iPZ = +12m.6s., ePE = +12m.10s., eN = +22m.50s. =PS+5s. Uccle SR_1 = +27m.32s. Cheb e = +31m.20s.? =SR_2−6s. Vienna iPZ = +12m.21s. Strasbourg e = +28m.20s.? =SR_1−6s., S is given as PS. Zagreb e = +12m.43s., +23m.2s. = Σ−8s., +23m.52s. =PS+10s., and +42m.10s. Moncalieri S = +13m.27s., L = +37·3m. Rocca di Papa iS = +23m.21s. Toledo MNW = +63·3m. Ksara LN = +30·3m. Algiers MN = +65·3m. Adelaide e = +37m.43s. =SR_3−27s., MN = +75·0m. La Paz iP′ = +19m.52s. =PR_1−2s.

July 6d. 9h. 46m. 6s. Epicentre 13°·9N. 46°·4W.

A = +·669, B = −·703, C = +·240; D = −·724, E = −·690; G = +166, H = −·174, K = −·971.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Harvard		35·6	329	i 7 9	− 9	i 12 50	−14	—	—
Fordham		36·5	324	i 7 39	+13	i 13 9	− 8	—	20·9
Georgetown	Z.	36·8	320	i 7 25	− 3	i 13 26	+ 5	e 17·6	24·4
Rio de Janeiro	E.	36·9	176	i 8 22	+53	13 29	+ 7	16·6	22·6
	N.	36·9	176	e 8 29	+60	13 24	+ 2	16·1	21·8
La Paz		37·2	217	i 7 27	− 5	13 19	− 8	17·1	19·9
Charlottesville	E.	37·3	318	e 7 34	+ 2	i 13 17	−11	16·1	—
	N.	37·3	318	e 7 34	+ 2	i 13 2	−26	15·8	—
Sucre		37·8	211	i 7 30	− 6	i 13 27	− 8	18·9	21·3
Ottawa		40·1	330	e 7 48	− 8	i 13 54	−14	—	20·6
Toronto		41·0	324	e 7 59	− 4	14 5	−16	20·2	24·1
Ann Arbor		42·9	320	e 8 12	− 5	i 14 36	−11	e 21·1	—
Malaga		43·8	51	8 14	−10	14 28	−31	17·9	—
Granada		44·6	51	i 8 20	−10	i 14 57	−13	18·0	28·0
Toledo		45·2	48	e 8 19	−15	15 3	−15	e 19·3	20·2
Chicago	E.	45·2	317	8 40	+ 6	i 15 8	−10	e 21·3	—
	N.	45·2	317	8 33	− 1	i 15 11	− 7	e 21·8	—
Almeria		45·4	51	i 8 26	−10	15 6	−14	21·2	22·6
St. Louis		45·8	313	e 8 48	+ 9	i 15 25	0	—	23·9
Florissant		46·0	313	e 8 38	− 2	i 15 27	− 1	e 22·4	26·2
		46·0	313	i 8 37	− 3	i 15 25	− 3	e 22·4	25·9
Alicante		47·2	50	e 8 42	− 6	e 15 38	− 6	e 21·0	22·7
Tortosa	E.	48·8	48	e 8 53	− 6	e 15 56	− 8	e 21·6	22·0
Algiers		49·6	53	9 0	− 4	15 58	−16	22·9	30·4
La Plata		50·0	193	—	—	—	—	24·1	—
Oxford		52·2	35	i 9 19	− 2	i 16 41	− 5	e 20·1	22·3
Kew		52·6	35	i 9 22	− 2	i 16 48	− 3	22·3	22·4
Stonyhurst		52·7	33	9 18	− 6	i 16 49	− 3	20·6	22·9
Marseilles		53·0	46	e 10 8	+42	e 17 54?	+58	e 23·9	—
Paris		53·1	39	i 9 24	− 3	16 53	− 4	22·9	24·9
Edinburgh		53·5	29	9 30	0	16 57	− 6	22·9	26·8
Dyce		54·7	27	e 9 36	− 1	i 16 47?	−30	—	23·4
Besançon		54·7	42	e 9 38	+ 1	e 17 14	− 3	—	—
Ucole		55·0	38	i 9 38	− 1	i 17 20	− 1	—	—
Moncalieri		55·1	45	e 9 59	+19	17 21	− 1	e 24·9	28·9
		55·1	45	9 38	− 2	17 24	+ 2	25·1	29·0
Neuchatel		55·2	44	e 9 40	0	e 17 31	+ 7	—	—
De Bilt		55·9	37	i 9 47	+ 2	i 17 36	+ 3	e 23·9	28·4
Strasbourg		56·2	41	i 9 46	− 1	i 17 38	+ 2	e 26·9	30·2
Zurich		56·4	44	e 9 50	+ 2	e 17 39	0	—	—
Piacenza		56·5	45	9 54	+ 5	16 6	−94	26·1	—
Chur		56·8	44	e 9 53	+ 2	e 17 22	−22	—	—
Karlsruhe		56·8	40	9 55	+ 4	—	—	—	—
Hohenheim		57·2	40	e 9 55	+ 2	17 56	+ 7	e 24·4	—
Ravensburg		57·2	42	e 9 54	+ 1	17 55	+ 6	e 24·4	—
Florence		57·3	48	i 9 54	0	13 54?	?	—	—
Rocca di Papa		57·9	50	e 9 43	−15	19 37	[− 2]	e 28·4	39·5

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Innsbruck		58·2	43	9 47	−13	—	—	—	—
Gottingen	E. or N.	58·5	38	e 10 3	+ 1	e 18 11	+ 6	e 28·2	30·0
	Z.	58·5	38	e 10 5	+ 3	—	—	e 28·3	—
Scoresby Sund		58·6	10	10 8	+ 5	i 18 13	+ 7	—	—
Naples	E.	58·9	50	e 11 4	+60	—	—	—	—
Catania		59·1	55	e 9 57	− 9	e 18 22	+10	e 36·5	46·2
Hamburg		59·2	36	i 10 9	+ 3	i 18 18	+ 5	e 24·9	33·7
Jena	E.	59·3	39	e 10 10	+ 3	e 18 14	− 1	e 24·9	29·4
	N.	59·3	39	e 10 12	+ 5	e 18 18	+ 3	e 23·9	28·9
Cheb		59·6	40	e 10 11	+ 2	e 18 23	+ 5	e 26·9	28·9
Potsdam		60·6	38	i 10 22	+ 6	i 18 34	+ 3	—	29·9
Zagreb		61·0	45	e 10 22	+ 3	e 18 40	+ 4	e 25·4	28·9
Copenhagen		61·2	34	i 10 24	+ 4	i 18 44	+ 6	24·9	—
Tucson	N.	61·2	300	10 34	+14	18 50	+12	e 29·8	—
Vienna		61·7	43	10 27	+ 4	18 49	+ 5	—	32·9
Upsala		65·1	30	e 10 49	+ 3	e 19 30	+ 4	e 28·9	29·8
Konigsberg		65·4	36	e 10 50	+ 3	e 19 34	+ 4	e 30·5	35·9
Helsingfors		68·7	30	e 11 13	+ 4	e 20 15	+ 5	e 30·2	—
Berkeley		70·5	308	e 11 34	+14	e 20 48	+16	e 35·8	40·5
Victoria	E.	71·0	319	11 32	+ 9	20 55	+17	35·8	40·7
	N.	71·0	319	11 32	+ 9	20 50	+12	34·4	40·8
Pulkovo		71·3	31	i 11 17	− 8	20 44	+ 2	30·9	38·1
Helwan		72·7	63	11 38	+ 4	21 3	+ 5	—	46·9
Simferopol		73·6	47	11 42	+ 2	e 21 14	+ 5	—	—
Yalta		73·6	47	e 11 43	+ 3	—	—	—	—
Theodosia		74·4	46	11 47	+ 2	e 21 26	+ 7	—	—
Kucino		75·4	36	i 11 55	+ 4	i 21 35	+ 5	32·8	36·8
Ksara		76·0	59	12 0	+ 5	21 42	+ 5	49·9	—
Sitka	E.	77·8	326	—	—	—	—	i 38·6	—
Cape Town		78·0	130	—	—	22 6	+ 6	—	—
Entebbe		79·3	93	13 14	+59	22 51	+36	—	48·4
Baku		85·8	49	i 12 52	0	e 23 0	[− 1]	44·9	—
Ekaterinburg		87·4	31	i 12 53	− 8	i 23 20	[+ 9]	37·4	47·1
Tananarive		98·1	108	—	—	e 24 53	? Σ	e 48·0	54·0
Almata		103·0	40	e 18 18	[+20]	—	—	—	—
Honolulu T.H.	N.	104·0	297	—	—	—	—	e 58·1	—
Irkutsk		109·2	19	e 18 41	[+22]	i 25 20	[+13]	48·9	—
Bombay		111·8	62	—	—	—	—	e 55·9	—
Kodaikanal		119·2	69	65 42	?L	—	—	65·7	—
Colombo		122·8	72	19 24	[+24]	—	—	—	71·7
Phu-Lien		136·4	38	e 22 3	?PR_1	—	—	—	—
Hong Kong		139·1	29	23 14	?	—	—	—	68·9
Manila		148·9	24	i 20 5	[+11]	—	—	e 65·9	—
Adelaide		158·5	191	—	—	—	—	e 78·7	83·0

Additional readings: Fordham PR_1 = +8m.54s. Georgetown PR_1Z = +8m.49s., SR_1Z = +15m.56s. La Paz PR_1E = +8m.49s. = PR_1 +1s., i = +16m.4s. = SR_1 +18s., MN = +22·2m.; T_o = 9h.46m.5s. Charlottesville iPR_1E = +8m.46s., iPR_1N = +18m.54s. Sucre PR_1 = +8m.43s., SR_1 = +16m.9s. = SR_1 +9s. Ottawa PR_1 = +9m.20s., eSR_1E = +16m.34s., SR_1N = +17m.18s.; T_o = 9h.46m.16s. Toronto iPR_1 = +9m.32s., iN = +17m.27s. = SR_1 +19s. Ann Arbor ePR_1 = +9m.54s., eN = +11m.0s., eE = +11m.36s., iSR_1 = +18m.0s., eLN = +20·1m.; T_o = 9h.46m.18s. Granada iP = +8m.22s., PR_1 = +10m.25s., MZ = +27·9m. Toledo iP = +8m.25s., MNW = +20·3m. Chicago PR_1E = +10m.47s., SR_1N = +18m.8s., SR_1E = +18m.30s. Florissant (first line) iPZ = +8m.42s., iPR_1 = +10m.45s., iZ = +13m.30s., iSN = +15m.29s., iSR_1N = +20m.13s., eLZ = +21·7m., (second line) eE = +10m.16s., iSN = +15m.27s., eE = +16m.55s., eSR_1N = +18m.28s., eSR_1E = +18m.43s., eSR_1N = +20m.13s. Algiers PR_1? = +13m.40s. Oxford i = +19m.5s. = [S] +13s. Uccle i = +19m.29s. = [S] +13s. De Bilt eSR_1 = +21m.29s., MN = +27·1m., MZ = +33·8m. Strasbourg e = +14m.54s.? +19m.55s. = [S] +30s., +24m.54s.? = SR_1 +18s., MNZ = +30·4m. Hohenheim PR_1 = +12m.31s. Rocca di Papa iP = +10m.2s. Gottingen eLN = +27·5m. Scoresby Sund +22m.0s. Hamburg MN = +27·9m. Jena iPZ = +10m.7s., eE = +14m.52s. Copenhagen +20m.18s. = [S] +14s. Tucson SR_1N =

Continued on next page.

+25m.36s. Vienna PS = +19m.8s., i = +20m.20s. =[S]+12s., SR_1 = +23m.31s., iL =iSR_2 = +26m.39s. Upsala eLN = +26·9m. Konigsberg eP_cPE = +11m.28s., eE = +12m.13s., ePR_1E = +13m.29s., eN = +15m.30s., eE = +16m.27s., eN = +18m.16s., ePSE = +19m.50s., eN = +20m.50s. = [S]+14s., eE = +23m.48s., eN = +24m.6s. and +26m.38s., eLN = +27·9m., MN = +33·9m. Helsingfors PS = +20m.42s., PPS = +21m.11s., S_cP_cS = +21m.33s., SR_1 = +24m.18s. Berkeley eZ = +13m.36s. Ksara LN = +32·2m. ; T_3 =9h.46m.31s. Sitka eE = +52m.30s. Tananarive PPS = +26m.49s., P_cSS_cP = +28m.15s., SR_1 = +32m.9s., e = +50m.58s. Honolulu T.H. eSR_1N = +33m.54s., eN = +43m.54s. Irkutsk PS = +28m.40s. Adelaide e = +74m.19s. and +77m.34s.

July 6d. 13h. 22m. 4s. Epicentre 1°·5N. 121°·0E. (as on 1928 Feb. 23d.).

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.
Manila	13·1	0	e 3 24	+10	i 5 54	+ 8	—	—
Irkutsk	52·7	349	e 9 17	− 7	e 16 44	− 8	26·9	—
Almata	57·2	323	e 9 8	−45	—	—	—	—
Andijan	58·6	318	e 10 17	+14	—	—	—	—
Ekaterinburg	73·0	331	i 11 32	− 4	e 21 4	+ 2	41·9	44·5
Scoresby Sund	104·0	348	—	—	—	—	55·9	—
Sucre	161·4	161	e 20 26	[+17]	—	—	—	—

No additional readings.

July 6d. Readings also at 0h. (Samarkand and Taihoku), 1h. (Hamburg), 2h. (Florissant), 6h. (Adelaide, Melbourne, Riverview, Christchurch, and near Wellington (2)), 7h. (near Wellington (2)), 8h. (Granada), 9h. (near Algiers), 10h. (Christchurch and near Wellington), 11h. (Perth and Riverview), 12h. (Christchurch and near Wellington), 13h. (Taihoku), 14h. (near Wellington (2)), 15h. (Lick), 16h. (Georgetown and Ottawa), 20h. (Kodaikanal and near Matuyama), 21h. (Tucson), 22h. (Georgetown and Ottawa), 23h. (Almata and Andijan).

July 7d. 6h. 16m. 10s. (I) } Epicentre 50°·5N. 178°·3W. (as on July 6d.).
9h. 27m. 9s. (II) }

		Δ	Az.	P.	O −C.	S.	O −C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Honolulu T.H. E.	33·4	144	—	—	—	—	e 15·2	—
II	N.	33·4	144	—	—	—	—	e 17·3	17·8
I	Victoria	35·0	73	—	—	12 29	−26	—	—
II		35·0	73	12 27	?S	(12 27)	−28	16·0	20·5
I	Scoresby Sund	57·8	10	12 50?	?PR_1	—	—	25·8	—
II		57·8	10	9 51	− 7	—	—	32·8	—
I	Florissant	59·9	66	e 10 8	− 3	e 18 14	− 8	—	31·3
II		59·9	66	i 10 10	− 1	i 18 16	− 6	—	33·9
I	Ekaterinburg	62·2	330	e 10 25	− 1	e 18 46	− 5	e 32·3	42·5
II		62·2	330	10 23	− 3	e 18 48	− 3	31·4	40·0
I	Toronto	62·5	54	—	—	—	—	35·8	—
II		62·5	54	—	—	—	—	31·9	—
I	Ottawa	63·1	50	—	—	—	—	e 30·8	—
II		63·1	50	—	—	e 18 51?	−11	e 29·9	—
I	Georgetown Z.	67·1	57	e 11 4	+ 5	—	—	e 38·9	44·9
II	Z.	67·1	57	e 11 5	+ 6	—	—	e 37·9	42·2
I	Pulkovo	67·4	347	e 15 28	?PR_2	—	—	38·8	46·3
II		67·4	347	e 10 59	− 1	—	—	34·9	45·3
I	Kucino	69·6	340	—	—	—	—	e 36·7	46·5
II		69·6	340	—	—	e 20 27	+ 6	38·2	46·5
I	Tashkent	71·0	315	—	—	e 23 50?	?	e 35·8	44·3
II		71·0	315	—	—	e 19 51?	−47	e 39·9	46·6
I	Copenhagen	73·4	355	—	—	—	—	31·8	—
II		73·4	355	—	—	—	—	38·9	—

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	△ °	Az. °	P. m. s.	O−C. s.	S. m. s.	O−C. s.	L. m.	M. m.
II De Bilt	77·4	358	e 11 58	− 5	—	—	e 44·9	—
I Baku	79·8	325	—	—	—	—	e 42·8	53·3
II	79·8	325	—	—	—	—	e 41·7	55·8
II Paris	80·7	0	—	—	—	—	e 53·9	—
II Neuchatel	82·4	357	e 11 42	−50	—	—	—	—
II Granada	92·2	5	—	—	—	—	e 48·9	52·4

Additional readings: Honolulu T.H. I eN = +16m.50s., II eEN = +15m.9s., ME = +17·6m. Florissant I ePZ = +10m.10s. Tashkent I e = +29m.2s. = SR_2 +10s.

July 7d. 21h. 23m. 3s. Epicentre 50°·5N. 178°·3W.

(as at 9h.).

A = −·636, B = −·019, C = +·772; D = −·030, E = +1·000; G = −·771, H = −·023, K = −·636.

		△ °	Az. °	P. m. s.	O−C. s.	S. m. s.	O−C. s.	L. m.	M. m.
Sitka		25·7	59	i 5 13	−32	i 10 3	−13	e 17·2	—
Ootomari		25·7	277	5 43	− 2	10 6	−10	—	—
Mizusawa	E.	30·5	265	6 28	− 5	11 36	− 7	—	—
	N.	30·5	265	6 25	− 8	11 37	− 6	—	—
Akita		30·8	267	6 20	−16	—	—	13·9	17·2
Honolulu T.H.		33·4	144	i 6 55	− 5	i 12 17	−13	i 15·1	—
Tokyo		33·5	263	6 57	− 4	—	—	—	—
Victoria		35·0	73	6 56	−17	(12 29)	−16	12·5	17·2
Nagoya		35·6	265	e 7 13	− 5	e 15 47	?L	(e 15·8)	—
Kyoto		36·0	265	7 19	− 3	13 7	− 3	—	—
Toyooka		36·6	266	7 21	− 6	13 12	− 6	16·0	20·2
Osaka		36·8	265	7 22	− 6	(13 14)	− 7	13·2	19·9
Kobe		37·0	265	7 24	− 6	i 13 17	− 7	e 15·8	20·3
Sumoto		37·4	265	7 25	− 8	13 14	−16	—	19·6
Muroto		38·6	265	e 7 39	− 4	—	—	e 17·0	—
Koti		38·7	265	e 7 38	− 6	e 13 38	−10	16·4	—
Hukuoka		40·7	268	i 7 57	− 4	14 2	−15	18·8	25·1
Berkeley	E.	41·0	88	e 7 55	− 8	i 14 7	−14	i 19·1	24·0
	N.	41·0	88	—	—	i 14 6	−15	e 19·4	24·1
	Z.	41·0	88	e 7 54	− 9	—	—	e 19·2	24·0
Nagasaki		41·6	267	e 8 3	− 5	e 14 26	− 3	18·1	22·1
Lick		41·8	88	e 7 59	−10	e 14 16	−16	e 19·5	24·6
Saskatoon		42·9	60	e 8 3	−14	i 14 21	−26	e 19·6	26·8
Irkutsk		46·0	306	i 8 32	− 8	i 15 32	+ 4	22·0	25·6
Zi-ka-wei		48·0	273	i 8 49	− 5	15 57	+ 3	23·7	32·8
Denver		50·7	74	e 9 5	− 6	e 16 7	−20	e 22·4	25·4
Tucson	E.	51·8	85	e 9 17	− 2	i 16 33	− 8	e 24·5	—
	N.	51·8	85	e 9 16	− 3	i 16 38	− 3	e 23·9	—
Taihoku		52·2	267	9 31	+10	16 52	+ 6	22·1	29·6
Chihuahua		57·3	85	10 30	+36	18 15	+25	26·6	32·6
Scoresby Sund		57·8	10	i 9 56	− 2	17 54	− 2	—	—
Hong Kong		58·8	270	10 12	+ 8	18 17	+ 8	e 28·0	33·4
Chicago	E.	59·4	61	10 8	0	18 6	−10	27·8	—
	N.	59·4	61	10 7	− 1	18 13	− 3	27·1	—
Florissant		59·9	66	e 10 12	+ 1	i 18 18	− 4	i 27·4	30·3
		59·9	66	e 10 11	0	i 18 15	− 7	e 28·0	31·4
St. Louis		60·1	66	e 10 9	− 4	e 18 14	−10	—	31·4
Manila		60·3	260	i 10 25	+11	i 18 38	+11	i 29·4	34·3
Ann Arbor		61·2	59	i 10 21	+ 1	i 18 33	− 5	e 27·6	37·0
Ekaterinburg		62·2	330	i 10 12	−14	18 47	− 4	—	27·4
Toronto	E.	62·5	54	i 10 25	− 4	i 18 43	−12	29·4	36·9
	N.	62·5	54	i 10 25	− 4	i 18 47	− 8	i 29·3	39·3
Ottawa		63·1	50	i 10 31	− 2	i 18 59	− 3	i 29·5	32·8
Reykjavik		63·9	13	—	—	—	—	e 26·4	45·0

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		64·6	174	10 59	+17	19 31	+11	31·0	35·0
Phu-Lien		64·8	275	10 50	+ 6	19 36	+12	30·0	43·0
Almata		65·7	310	e 10 58	+ 9	e 19 52	+19	29·0	—
Charlottesville	E.	67·0	59	i 10 59	+ 1	i 19 49	− 1	32·0	—
	N.	67·0	59	i 11 1	+ 3	i 19 47	− 3	33·9	—
Georgetown	E.N.	67·1	57	e 11 6	+ 7	19 54	+ 3	e 31·0	39·8
	Z.	67·1	57	e 11 4	+ 5	i 19 59	+ 8	—	—
Fordham		67·3	55	i 11 5	+ 5	i 19 57	+ 3	31·0	39·0
Pulkovo		67·4	347	11 0	0	19 53	− 2	31·0	35·6
Helsingfors		67·7	349	e 11 2	0	19 54	− 4	e 32·0	—
Tacubaya		68·3	85	11 12	+ 6	20 8	+ 2	31·6	41·7
Suva	E.	68·7	184	10 57?	−12	i 20 9	− 1	32·2	—
	N.	68·7	184	e 11 15	+ 6	i 20 15	+ 5	33·0	38·4
Upsala		68·9	354	i 11 10	0	i 20 10	− 3	e 31·0	42·3
Bergen		69·1	358	11 57?	+45	e 21 14	[+ 8]	e 29·0	34·0
Andijan		70·3	311	e 11 18	− 1	e 20 9	−21	25·0	—
Vera Cruz		70·4	84	(11 40)	+21	(20 49)	+18	(32·0)	(41·5)
Tashkent		71·0	315	i 11 23	0	i 21 59	? Σ	—	45·0
Dyce		72·2	4	i 11 30	− 1	i 20 50	− 2	e 33·0	50·0
Samarkand		72·9	315	11 41	+ 6	21 4	+ 3	25·8	—
Merida		73·2	78	(12 15)	+38	(21 36)	+32	(33·6)	—
Copenhagen		73·4	355	i 11 39	+ 1	i 21 4	− 3	—	—
Edinburgh		73·5	5	e 11 47	+ 8	i 21 9	+ 1	32·0	50·6
Konigsberg		73·5	350	e 11 42	+ 3	e 21 3	− 5	e 35·0	48·0
Calcutta	E.	74·8	288	11 45	− 3	21 37	+13	41·4	47·8
	N.	74·8	288	11 54	+ 6	21 42	+18	41·4	—
Dehra Dun		74·9	300	11 47	− 1	21 27	+ 2	30·0	45·0
Stonyhurst		75·6	4	11 57	+ 4	i 21 32	− 1	39·8	47·5
Hamburg		75·7	356	i 11 53	0	i 21 33	− 1	32·4	56·6
Potsdam		76·7	354	e 11 57?	− 2	i 21 39	− 6	e 32·0	49·0
De Bilt		77·4	358	i 12 3	0	i 21 52	− 1	e 32·4	51·1
Agra	E.	77·4	299	i 11 1	−62	i 20 52	−61	i 40·5	46·8
	N.	77·4	299	i 11 12	−51	i 20 59	−54	i 40·3	47·7
Oxford	E.	77·7	3	i 12 7	+ 2	i 21 52	− 5	e 32·0	48·0
	N.	77·7	3	i 12 4	− 1	i 21 50	− 7	e 33·4	51·4
Gottingen		77·8	356	12 4	− 2	e 22 39	?PS	e 37·4	40·4
Lemberg	E.	77·9	347	e 12 15	− 9	e 21 57	− 2	e 30·2	50·0
	N.	77·9	347	e 11 57	− 9	e 21 51	− 8	e 30·8	52·8
Kew		78·0	3	i 12 4	− 3	i 21 55	− 5	33·0	42·7
Jena		78·3	356	e 11 57	−12	e 21 57	− 7	e 33·0	40·4
Uccle		78·7	359	12 8	− 3	i 22 3	− 5	e 33·0	49·3
Cheb		79·0	355	e 12 11	− 2	e 22 9	− 3	e 38·0	51·0
Feldberg	N.	79·1	357	i 12 5	− 9	i 22 1	−12	—	—
Baku		79·8	325	i 12 18	0	i 22 18	− 3	—	—
Theodosia		80·1	339	12 19	− 1	22 21	− 3	e 28·4	—
Karlsruhe		80·3	356	12 19	− 2	22 26	− 1	e 40·0	55·4
Vienna		80·4	352	12 18	− 3	22 23	− 5	i 33·5	51·4
Hohenheim		80·5	356	12 19	− 3	22 22	− 7	40·0	46·0
Simferopol		80·5	339	12 19	− 3	e 22 22	− 7	43·8	—
Paris		80·7	0	i 12 20	− 3	i 22 25	− 6	29·0	51·0
Strasbourg		80·8	357	i 12 21	− 3	i 22 25	− 8	37·0	53·8
Yalta		80·9	339	e 12 20	− 4	—	—	e 44·2	—
Sebastopol		81·0	339	12 22	− 3	e 22 31	− 4	e 38·4	—
Ravensburg		81·5	356	12 22	− 6	22 32	− 9	40·4	—
Graz		81·7	352	e 12 25	− 4	i 23 5	? Σ	38·0	55·4
Innsbruck		81·9	355	e 12 21	− 9	22 39	− 6	34·2	51·4
Zurich		82·0	356	e 12 26	− 4	e 22 37	− 9	—	—
Besançon		82·2	358	12 32	+ 1	i 22 37	−11	33·9	48·4
Neuchatel		82·4	357	i 12 29	− 3	e 22 37	[− 2]	—	—
Chur		82·5	356	i 12 29	− 4	e 22 42	[+ 2]	—	—
Laibach	N.	82·9	352	e 12 3	−32	e 22 18	[−24]	e 39·8	45·8
Zagreb		82·9	351	e 12 32	− 3	e 22 47	[+ 5]	—	58·8
Belgrade		83·3	348	e 12 52	+14	e 23 14	+14	e 41·0	48·3

Continued on next page.

		Δ °	Az. °	P. m. s.	O−C. s.	S. m. s.	O−C. s.	L. m.	M. m.
Treviso		83·4	356	i 12 35	− 3	i 22 57	− 4	43·0	58·0
Venice		83·6	354	i 12 43	+ 3	23 12	+ 7	43·4	49·2
Padova		83·7	355	e 12 47	+ 7	e 23 14	+ 8	e 47·0	62·0
Piacenza		84·3	356	12 39	− 5	i 23 2	− 9	29·0	53·8
Grenoble		84·3	358	e 12 43	− 1	e 22 57	−14	—	—
Moncalieri		84·4	357	i 12 37	− 7	e 23 21	+ 9	33·0	62·0
Hyderabad		84·7	293	12 43	− 3	23 4	−12	43·0	53·8
Batavia		85·4	257	i 12 46	− 4	23 17	− 6	e 43·0	—
Florence		85·4	355	i 12 45	− 5	23 17	− 6	—	—
Livorno		85·7	355	12 49	− 3	22 47	[−13]	—	—
Marseilles		86·2	359	e 13 39	+45	e 24 13	+41	37·0	—
Bombay		86·8	298	13 3	+ 5	23 39	0	45·2	53·7
Rome		87·2	354	i 12 54	− 6	e 23 30	−13	45·0	51·6
Rocca di Papa		87·3	354	i 12 53	− 8	i 23 18	[+ 7]	e 39·2	67·2
Bari		87·3	350	12 57	− 4	23 20	[+ 9]	57·3	—
Benevento		87·7	351	i 13 23	+20	23 21	[+ 8]	—	30·1
Taranto		88·0	350	12 52	−13	23 42	−10	35·8	61·3
Barcelona		88·0	359	e 12 52	−13	e 23 30	[+15]	e 29·8	54·2
Casamicciola		88·1	351	12 34	−32	23 10	[− 6]	33·6	—
Azores		88·6	23	e 14 21	+73	22 57	[−22]	—	61·8
Riverview		88·6	205	e 12 59	− 9	i 23 31	[+12]	e 38·4	46·0
Tortosa	N.	88·7	1	12 58	−11	23 35	[+15]	39·3	62·4
Trenta		89·3	350	i 12 47	−25	i 23 7	[−17]	33·0	49·0
Toledo		89·5	5	e 13 2	−11	i 23 35	[+10]	e 39·4	54·2
Alicante		90·0	2	e 13 10	− 6	e 23 49	[+21]	e 34·4	58·8
Ksara		90·4	333	13 11	− 7	23 30	[0]	40·0	—
Kodaikanal		90·9	289	12 21	−60	—	—	44·8	50·2
Catania		91·2	350	e 13 22	0	23 58	[+23]	e 37·6	58·6
Wellington	E.	92·0	185	12 57?	−30	i 23 47	[+ 7]	45·1	46·1
	N.	92·0	185	12 55	−32	i 23 44	[+ 4]	44·7	49·6
Colombo		92·1	284	13 27	− 1	24 27	− 9	39·4	56·0
Granada		92·2	5	i 13 16	−12	i 24 19	[−22]	e 34·0	56·2
Almeria		92·5	4	13 24	− 6	24 31	− 9	44·6	52·6
Malaga		92·6	6	13 20	−10	23 48	[+ 4]	29·0	58·1
Algiers		92·7	359	13 16	−15	23 51	[+ 7]	43·0	56·4
San Fernando		92·8	7	i 13 20	−11	i 23 52	[+ 7]	40·3	68·8
Adelaide		93·5	215	i 13 29	− 6	i 23 57	[+ 8]	i 40·0	54·9
Melbourne		94·0	209	13 35	− 3	24 42	−14	39·8	43·6
Christchurch		94·4	187	e 13 58	+18	24 40	−20	44·4	—
Helwan		95·4	335	13 35	−10	24 7	[+ 8]	—	63·4
Perth		100·8	233	14 22	+ 8	24 42	[+14]	32·6	—
La Paz		115·4	84	e 17 24	[−75]	e 28 56	+43	51·0	68·5
Sucre		119·1	84	e 17 14	[−96]	28 7	−36	50·3	57·8
Entebbe		123·1	322	20 23	?PR_1	32 23	?	63·0	68·6
Tananarive	E.	132·0	294	—	—	26 29	?	58·8	73·5
	N.	132·0	294	—	—	26 23	?	58·8	76·0
La Plata		134·8	91	22 9	?PR_1	—	—	57·4	—
Rio de Janeiro	E.	135·7	69	e 19 57	[+26]	—	—	58·0	78·2
Johannesburg		148·4	310	14 57?	?	—	—	—	—
Cape Town		159·4	317	—	—	—	—	—	99·0

Additional readings and notes: Sitka iSN = +10m.13s. Akita MN = +17·1m. Honolulu T.H. iPR_1E = +7m.49s., iPR_1N = +8m.4s., iSE = +12m.19s., iSR_1E = +13m.56s., iSR_1N = +14m.17s. Victoria PN = +6m.57s., MN = +13·6m.; T_oE = 21h.22m.59s., T_oN = 21h.23m.1s. Toyooka LN = +15·9m. Osaka MN = +17·0m. Kobe MZ = +20·4m. Sumoto MN = +19·2m., MZ = +19·5m. Koti ePR_1N = +9m.10s., L_gN = +17·8m., L_gE = +18·0m., L_gZ = +18·8m. Hukuoka MN = +19·8m. Berkeley i = +8m.6s., eN = +8m.57s., eE = +9m.40s. = PR_1 +6s., eZ = +9m.41s. = PR_1 +7s., eE = +11m.27s. and +12m.34s., eEZ = +13m.49s., eE = +13m.56s., eZ = +15m.37s., iE = +17m.1s. = SR_1 −7s., iN = +17m.17s. SR_1 +9s., eZ = +17m.28s., iN = +17m.35s., iE = +17m.37s. Nagasaki i = +8m.7s., MZ = +24·1m. Lick ePN = +8m.0s., iN = +8m.9s., eZ = +9m.59s. = PR_1 +15s., eN = +10m.17s. = PR_1 +1s., eZ = +11m.59s., eNZ = +17m.27s. = SR_1 +3s., eLZ = +19·3m. Saskatoon i = +18m.4s. = SR_1 +16s., MN = +24·2m.; T_o = 21h.23m.8s. Zi-ka-wei iE = +10m.53s. = PR_1 −3s., LN = +23·8m., MZ = +28·2m., MN = +31·8m. Denver ePR_1 = +11m.16s., eSN = +16m.8s., eSR_1E = +18m.27s. Tucson PR_1E =

Continued on next page.

+11m.34s., SR_1N = +20m.10s., SR_1E = +20m.20s., SR_2N = +21m.51s. Scoresby Sund (no phase) +12m.21s. = PR_1 −13s., +15m.51s., and +21m.45s. PR_2 = +13m.21s., PS = +18m.25s., SR_2 = +24m.21s. Hong Kong PR_1 = +12m.15s. Chicago PR_2N = +13m.56s., SR_1N = +21m.57s., eSR_1E = +22m.45s. Florissant (first line) iPNZ = +10m.14s., iPR_1Z = +12m.43s., iPR_2Z = +13m.53s., iPR_3Z = +14m.27s., iN = +18m.21s., iPSN = +18m.36s., iSR_1Z = +22m.31s., iZ = +23m.44s., iSR_2Z = +24m.18s., (second line) iEN = +10m.12s., +10m.13s., and +10m.20s., iE = +10m.31s., eE = +18m.20s. and +18m.34s., eSR_1E = +22m.17s., eE = +23m.18s., MN = +32·0m. St. Louis iS = +18m.16s., iE = +19m.12s. = PS +17s. Manila iPR_2N = +14m.8s., S_eSN = +20m.40s., SR_1E = +23m.11s., iSR_2E = +25m.24s. ; T_0 = 21h.23m.18s. Ann Arbor eE = +13m.45s., ePR_2N = +14m.21s., e = +19m.57s., iN = +20m.15s. = [S] +11s., e = +22m.51s., iSR_1 = +23m.39s., iSR_2 = +25m.33s., eLN = +27·4m., MN = +37·6m ; T_0 = 21h.23m.0s. Toronto iSR_1N = +23m.35s. ; T_0 = 21h.23m.7s. Ottawa iN = +23m.22s., iSR_1E = +23m.55s., iSR_2 = +25m.53s., MN = +39·8m. ; T_0 = 21h.23m.7s. Reykjavik MN = +40·0m. Phu-Lien MN = +39·4m. Charlottesville eSR_1E = +24m.47s., eSR_2E = +26m.57s. Georgetown iEN = +21m.2s. = [S] +12s., SR_1EN = +25m.4s., MN = +42·0m. Helsingfors PR_2 = +15m.19s., PS = +20m.20s., SR_1E = +24m.42s., SR_2E = +28m.10s. Suva iPR_1E = +13m.51s., PR_2E = +15m.57s., SR_1N = +25m.21s. ; T_0N = 21h.23m.12s. Upsala SR_1N = +25m.15s., SR_2E = +27m.59s., SR_2N = +28m.13s., MN = +43·0m. Vera Cruz readings have been *diminished* by 2m. Dyce +15m.57s., i = +25m.44s. Merida readings have been *diminished* by 1m. Copenhagen +14m.25s. = PR_1 −31s. i = +21m.57s. = [S] +20s. Edinburgh i = +21m.38s. = [S] +0s. and +23m.2s. Konigsberg eZ = +12m.19s., eN = +12m.28s., eE = +12m.34s., eZ = +13m.24s., ePR_1N = +14m.33s., ePR_2E = +16m.9s., ePR_3N = +16m.13s., e = +16m.22s. eE = +17m.51s., eS_0P_0SEN = +21m.55s., iEN = +22m.45s., eN = +25m.45s., eEN = +29m.39s., eZ = +29m.51s., eL?N = +30·0m., MN = +42·0m., MZ = +44·0m. Stonyhurst PS = +21m.58s., SR_1? = +26m.14s., SR_2 = +32m.5s., SR_3 = +33m.27s. Hamburg PSN = +22m.12s., iSR_1N = +26m.48s., eSR_2E = +30m.11s., eLZ = +36·0m., MZ = +39·6m., MN = +42·0m. De Bilt eLN = +36·4m., MN = +48·5m., MZ = +52·1m. Oxford eE = +26m.17s., eN = +26m.19s. Gottingen iPE = +12m.14s.? iN = +22m.4s., eSZ = +22m.37s., iN = +22m.48s., iSR_1N = +27m.18s., eSR_2N = +31m.4s., eLZ = +39·1m., MZ = +43·4m., MN = +40·0m. Kew iP_cPZ = +12m.32s., iPSNZ = +22m.30s., SR_1NZ = +27m.27s., SR_2N = +30m.53s., LNZ = +37·4m., MN = +47·3m., MZ = +53·8m. Jena iPEN = +12m.7s. = P −2s., eSZ = +22m.9s., eZ = +22m.45s. = PS +0s., eE = +22m.49s., eN = +22m.47s., eSR_1Z = +26m.57s., eSR_1N = +27m.1s., eSR_1E = +27m.13s., eN = +31m.57s., eLNZ = +36·0m., MN = +41·4m., MZ = +50·4m. Uccle i = +23m.3s. = PS +14s., iSR_1 = +27m.7s., MN = +54·2m. Cheb ePR_1 = +15m.12s., e = +18m.50s. = PR_2 +18s., eSR_1 = +27m.36s. Feldberg eN = +17m.0s. Vienna iP = +12m.25s., PR_1 = +15m.33s., PR_2 = +17m.25s., PS = +23m.26s., PPS = +23m.35s., SR_1 = +28m.14s., SR_2 = +32m.41s., PPP′ = +39m.46s. Hohenheim PR_1 = +15m.31s., PS = +23m.11s., SR_1 = +28m.1s. Paris MN = +55·0m. Strasbourg e = +27m.57s.? = SR_1 −29s., MN = +43·6m., MZ = +57·8m. Ravensburg PR_1 = +15m.37s., PS = +23m.28s., SR_1 = +28m.10s. Graz PS = +23m.57s., SR_1 = +27m.57s., SR_2 = +35m.25s. Innsbruck P_cP = +12m.44s., SR_1 = +28m.15s. Zagreb e = +12m.46s., ePR_1NE = +15m.49s., e = +20m.47s., eNE = +23m.9s., eNW = +23m.27s., e = +23m.57s., +24m.57s., +25m.17s., and +26m.37s., eNE = +27m.57s., eNE = +28m.17s., e = +30m.57s. Belgrade iN = +13m.3s., iPSE = +33m.17s., eE = +37m.31s. Piacenza MN = +61·0m. Batavia iZ = +12m.50s., iP = +12m.52s., iE = +14m.52s., i = +24m.55s. Rome eL = +38·0m. Rocca di Papa e = +12m.45s., eL? = +32·0m. Barcelona MN = +51·1m. Riverview i = +13m.11s., iS = +23m.39s., i = +23m.54s. = Σ +4s., PS = +30m.11s. = SR_1 −1s., and +36m.31s. = SR_2 −1s., MN = +45·2m., MZ = +48·3m. ; T_0 = 21h.23m.30s. Tortosa LE = +38·2m., ME = +60·3m. Toledo MNW = +48·0m. Ksara PR_1N = +16m.45s., PR_2N = +18m.45s., PSE = +24m.8s. = Σ +6s., SR_1E = +30m.0s., T_0 = 21h.23m.47s. Wellington PR_1E = +17m.2s., SR_1N = +30m.51s., SR_2E = +33m.51s. ; T_0N = 21h.22m.51s. Granada i = +13m.22s., PR_1 = +16m.59s., PR_2 = +19m.47s., PS = +25m.47s., i = +32m.11s., MN = +51·2m., MZ = +53·0m. Almeria PR_1 = +16m.33s. Malaga iN = +25m.38s., MN = +52·8m., MZ = +53·5m. Algiers i = +25m.56s. = PS +18s. San Fernando MN = +52·8m. Adelaide e = +16m.36s., i = +24m.37s. = Σ +21s., +25m.52s. = PS +15s., +31m.9s. = SR_1 +6s., and +31m.22s., MN = +49·6m. Melbourne PR_1 = +17m.27s., i = +24m.0s. = [S] +8s., SR_1 = +31m.9s. Christchurch SR_1 = +35m.40s. La Paz iPR_1? = +20m.3s., S_cP_cS = +27m.31s., iSE = +29m.38s. = PS −18s., i = +30m.49s., SR_1E = +35m.45s., SR_2EN = +40m.16s., SR_3E = +43m.36s., i = +56m.33s. Sucre iPR_1 = +20m.29s., S_cP_cS = +27m.17s., iS = +30m.11s., SR_1? = +35m.20s., i = +36m.41s., SR_2 = +40m.11s. Tananarive ePR_1E = +21m.38s., ePR_1N = +21m.44s., iN = +22m.50s., iE = +22m.53s., eE = +24m.11s., ePR_2N = +24m.29s., PS = +31m.44s., E = +32m.54s., N = +33m.32s., PPPS = +34m.25s., SR_1 = +39m.35s., SR_2 = +44m.32s., SR_3 = +48m.33s.

July 7d. Readings also at 0h. (Christchurch and Wellington), 1h. (near Oaxaca), 3h. (Tashkent, Kucino, Scoresby Sund, Georgetown, and Ottawa), 4h. (near Oaxaca and Tacubaya), 5h. (Manila, Ottawa, Georgetown, and near Wellington), 6h. (near Mizusawa), 7h. (Wellington), 13h. (Christchurch and Wellington), 17h. (near Sumoto), 19h. (Christchurch and Wellington), 23h. (Wellington (3)).

July 8d. 0h. 42m. 40s. Epicentre 41°·8S. 172°·2E. (as on 1929 June 22d.).

A = −·739, B = +·101, C = −·667; D = +·136, E = +·991; G = +·660, H = −·090, K = −·745.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Christchurch		1·8	170	0 34	+ 6	0 52	+ 1	—	—
Wellington	E.	2·0	75	i 0 32	+ 1	i 0 56	+ 1	—	—
	N.	2·0	75	i 0 35	+ 4	i 1 0	+ 5	—	—
Riverview		18·4	289	i 4 12	−10	e 7 50	+ 1	e 8·3	10·0
Adelaide		27·0	274	e 5 20?	−38	e 10 8?	−33	11·7	15·2

Additional readings: Riverview MN = +9·1m. Adelaide MN = +13·7m.

July 8d. 2h. 4m. 43s. Epicentre 50°·5N. 178°·3W. (as on 7d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka	E.	25·7	59	e 10 10	?S	(e 10 10)	− 6	e 16·9	21·0
Honolulu T.H.	E.	33·4	144	—	—	—	—	e 14·3	—
Scoresby Sund		57·8	10	9 47	−11	—	—	31·3	—
Florissant		59·9	66	i 10 12	+ 1	e 18 16	− 6	—	—
		59·9	66	e 10 13	+ 2	e 18 18	− 4	—	—
Pulkovo		67·4	347	e 11 1	+ 1	e 19 55	0	34·3	45·0
Tashkent		71·0	315	—	—	—	—	e 34·3	37·7
Copenhagen		73·4	355	11 41	+ 3	21 17	+10	35·3	—
De Bilt		77·4	358	e 12 3	0	—	—	e 40·3	—
Cheb		79·0	355	—	—	—	—	e 45·3	—
Baku		79·8	325	—	—	—	—	e 41·8	48·7
Neuchatel		82·4	357	e 12 29	− 3	—	—	—	—
Granada		92·2	5	—	—	—	—	e 52·3	61·8

Additional readings: Sitka ePR$_1$E = +10m.30s., eSE = +14m.59s. Honolulu T.H. eN = +15m.17s. Tashkent e = +15m.41s., +19m.17s., and +28m.47s. = SR$_2$ − 5s.

July 8d. 19h. 8m. 45s. Epicentre 50°·5N. 178°·3W. (as at 2h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka	E.	25·7	59	e 10 5	?S	(e 10 5)	−11	e 19·6	21·6
Honolulu T.H.	E.	33·4	144	—	—	—	—	14·1	15·5
Victoria		35·0	73	—	—	12 15	−40	19·6	25·9
Irkutsk		46·0	306	e 8 31	− 9	e 15 13	−15	25·2	27·2
Scoresby Sund		57·8	10	15 15?	?	—	—	27·2	—
Chicago		59·4	61	—	—	—	—	e 32·3	—
Florissant	E.	59·9	66	e 10 11	0	e 18 14	− 8	—	—
		59·9	66	e 10 10	− 1	e 18 16	− 6	e 29·2	34·6
Ann Arbor		61·2	59	—	—	—	—	e 34·5	—
Ekaterinburg		62·2	330	—	—	e 18 40	−11	e 29·8	38·8
Toronto		62·5	54	—	—	e 18 47	− 8	34·0	45·4
Ottawa		63·1	50	—	—	e 18 15?	−47	e 31·2	—
Phu-Lien		64·8	275	—	—	—	—	28·2	—
Georgetown		67·1	57	—	—	e 19 52	+ 1	e 32·2	43·0
Pulkovo		67·4	347	e 9 32	−88	e 19 46	− 9	32·2	46·4
Helsingfors		67·7	349	—	—	—	—	e 39·2	—
Kucino		69·6	340	—	—	e 20 19	− 2	e 33·8	44·8
Tashkent		71·0	315	e 11 37	+14	i 20 39	+ 1	37·2	40·6

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Copenhagen		73·4	355	—	—	21 3	− 4	39·2	—
Edinburgh		73·5	5	—	—	—	—	e 47·2	—
Hamburg		75·7	356	—	—	21 15?	−19	e 48·2	—
De Bilt		77·4	358	—	—	e 21 50	− 3	e 46·2	47·9
Kew		78·0	3	—	—	—	—	e 42·2	—
Uccle		78·7	359	—	—	e 21 15?	−53	e 41·2	—
Cheb		79·0	355	—	—	—	—	e 45·2	49·2
Baku		79·8	325	e 12 36	+18	e 22 20	− 1	39·2	50·2
Paris		80·7	0	e 12 15?	− 8	—	—	48·2	50·2
Strasbourg		80·8	357	—	—	—	—	e 41·2	—
Zagreb		82·9	351	—	—	—	—	e 49·2	—
Piacenza		84·3	356	—	—	—	—	e 50·2	—
Florence		85·4	355	—	—	—	—	53·8	55·9
Bombay		86·8	298	—	—	—	—	e 48·2	—
Rocca di Papa		87·3	354	—	—	—	—	e 50·0	63·6
Tortosa	N.	88·7	1	—	—	—	—	e 54·2	62·2
Toledo		89·5	5	—	—	—	—	e 51·7	—
Granada		92·2	5	—	—	—	—	e 47·2	55·2
San Fernando	N.	92·8	7	—	—	—	—	—	61·2

Additional readings: Sitka ePR,E = +10m.54s., eSE = +15m.39s. Honolulu T.H. LN = +14·2m., MN = +15·2m. Toronto eN = +17m.53s. Kucino e = +21m.22s. =[S]+13s. De Bilt MN = +56·1m., MZ = +57·9m.

July 8d. Readings also at 0h. (Granada), 1h. (Christchurch and Wellington), 5h. (near Lick), 10h. (Baku, Tashkent, Ekaterinburg, Irkutsk, Scoresby Sund, Florissant, Georgetown, Ottawa, and near Manila), 11h. (Irkutsk and Tashkent), 12h. (Baku, Ekaterinburg, Irkutsk, Tashkent, Nagoya, near Osaka, near Almata, Andijan, and Samarkand), 13h. (Kobe, near Matuyama, and Toyooka), 15h. (Samarkand), 16h. (Denver, Chicago, Berkeley, near Tucson, Kobe, near Osaka, and Sumoto), 17h. (Ann Arbor, Fordham, Georgetown, Scoresby Sund, Ottawa, and Toronto), 18h. (Baku, Ekaterinburg, Scoresby Sund, Irkutsk, Kucino, Pulkovo, Tashkent, Florissant, Georgetown, Ottawa, Toronto, near Christchurch, and Wellington), 19h. (Melbourne, Moncalieri, near Wellington, Chicago, Almata, Andijan, and near Samarkand), 20h. (La Paz (2), 21h. (Upsala), 22h. (Wellington), 23h. (Batavia).

July 9d. 8h. 37m. 43s. Epicentre 50°·5N. 178°·3W. (as on July 8d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Honolulu T.H.	E.	33·4	144	—	—	—	—	e 15·3	—
Irkutsk		46·0	306	—	—	e 18 29	?SR,	25·3	—
Scoresby Sund		57·8	10	—	—	16 17?	?	28·3	—
Florissant		59·9	66	e 10 12	+ 1	e 19 16	[+22]	—	—
		59·9	66	e 10 27	+16	e 18 19	− 3	—	32·3
Ekaterinburg		62·2	330	e 10 24	− 2	e 19 23	?PS	32·8	40·1
Toronto		62·5	54	—	—	—	—	37·3	—
Ottawa		63·1	50	—	—	—	—	e 29·3	—
Georgetown	Z.	67·1	57	—	—	—	—	e 30·3	—
Pulkovo		67·4	347	—	—	—	—	e 39·3	—
Kucino		69·6	340	—	—	e 20 22	+ 1	e 36·4	46·0
Tashkent		71·0	315	—	—	—	—	e 33·3	44·5
Copenhagen		73·4	355	—	—	—	—	46·3	—
Baku		79·8	325	—	—	—	—	e 42·8	53·4

Additional readings: Honolulu T.H. eN = +16m.17s. Florissant (first line) ?EN = +10m.25s. Georgetown LZ = +41·6m.

July 9d. 17h. 23m. 18s. Epicentre 8°·3N. 126°·9E. (as on 1929 June 30d.).

A = −·594, B = +·791, C = +·144 ; D = +·800, E = +·600 ;
G = −·087, H = +·115, K = −·990.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		8·6	318	e 2 4	− 6	i 4 33	+40	i 6·0	—
Hong Kong		18·6	320	4 22	− 2	—	—	8·0	13·0
Phu-Lien		23·2	305	3 42?	?	—	—	12·7	—
Batavia		24·7	235	i 6 5	+30	i 10 49	+52	—	—
Irkutsk		47·7	342	e 8 42	−10	15 41	− 9	25·7	—
Tashkent		60·5	314	—	—	18 41	+11	e 28·7	37·3
Ekaterinburg		70·2	329	11 18	0	20 25	− 3	37·2	44·0
Baku		74·7	311	e 11 59	+12	e 21 34	+12	38·7	—
Kucino		82·6	326	—	—	22 45	− 8	e 43·3	45·9
Pulkovo		86·1	330	e 12 54	0	23 24	− 7	45·7	52·4
Helsingfors	N.	88·6	331	—	—	e 23 51	− 8	—	—
Copenhagen		96·5	330	—	—	—	—	54·7	—
Scoresby Sund		98·4	350	—	—	24 42?	[+27]	54·7	—
De Bilt		101·9	328	—	—	—	—	e 55·7	—
Uccle		103·0	327	—	—	—	—	e 55·7	—
Paris		105·0	325	—	—	—	—	e 66·7	—

Additional readings: Tashkent e = +19m.8s. = PS + 7s. Kucino S_cP_cS = +23m.3s. Pulkovo S_cP_cS = +23m.17s.

July 9d. Readings also at 0h. (Granada), 1h. (Baku, Ekaterinburg, Tashkent, Scoresby Sund, and Samarkand), 2h. (Almata and Andijan), 3h. (Florissant, near Osaka, Kobe, and Sumoto (2)), 4h. (Florissant), 5h. (Ekaterinburg, Wellington, Scoresby Sund, La Paz, and Rio de Janeiro), 6h. (Granada, Tortosa, San Fernando, Rocca di Papa, Florence, Strasbourg, Paris, Uccle, De Bilt, Zagreb, Copenhagen, Pulkovo, Baku, Tashkent, Georgetown, and Ottawa), 7h. (Christchurch), 10h. (Taihoku), 13h. (Reykjavik), 16h. (Andijan, near Samarkand, and near Manila), 17h. (near Akita and Mizusawa), 18h. (near Matuyama), 21h. (Georgetown and near Sumoto), 22h. (La Paz, La Plata, Santiago, and near Tananarive), 23h. (Samarkand).

July 10d. 9h. 1m. 57s. Epicentre 37°·5N. 70°·5E. (as on 1924 Sept. 17d. and given by the Central Asiatic stations).

A = +·265, B = +·748, C = +·609 ; D = +·943, E = −·334 ;
G = +·203, H = +·574, K = −·793.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Andijan	3·1	27	i 0 50	+ 1	—	—	i 1·7	2·3
Samarkand	3·4	310	0 55	+ 2	—	—	1·8	2·1
Tashkent	3·9	347	i 0 59	− 2	(i 1 47)	0	i 1·8	2·1
Baku	16·2	287	e 3 33	−22	e 6 41	−19	—	—
Ekaterinburg	20·4	345	e 4 47	+ 1	e 7 59	−33	—	—
Pulkovo	33·8	324	e 6 17	−46	—	—	—	—

No additional readings.

July 10d. Readings also at 2h. and 3h. (Wellington), 5h. (Christchurch, Melbourne, and Riverview), 11h. (Suva), 13h. (Wellington), 14h. (Baku, Ekaterinburg, Pulkovo, Tashkent, Ksara, and La Paz), 15h. (Irkutsk, Scoresby Sund, and Copenhagen), 16h. (Ekaterinburg, Tashkent, Scoresby Sund, and near Hukuoka), 17h. (Baku and near Matuyama), 18h. (near Tucson), 20h. (Andijan and Lick), 22h. (Georgetown and near Wellington).

July 11d. 13h. 36m. 54s. Epicentre 51°·2N. 172°·0W. (as on 1922 May 3d.).

A = −·621, B = −·087, C = +·779; D = −·139, E = +·990; G = −·772, H = −·108, K = −·627.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Irkutsk		48·8	308	—	—	e 16 6?	+ 2	24·1	30·1
Florissant		56·0	69	i 9 42	− 4	e 17 22	−12	e 27·1	33·1
Scoresby Sund		56·5	12	—	—	17 6?	−34	23·1	—
Ottawa		59·2	54	—	—	e 18 6?	− 7	e 28·1	—
Georgetown	Z.	63·4	60	e 10 38	+ 4	—	—	e 29·4	39·6
Ekaterinburg		63·6	332	e 10 34	− 2	—	—	32·6	38·0
Pulkovo		67·6	349	e 11 3	+ 1	—	—	35·1	—
Kucino		70·2	344	—	—	—	—	e 36·6	43·4
Copenhagen		73·0	357	—	—	—	—	38·1	—
Tashkent		73·3	318	e 10 6?	−92	e 22 6?	?Σ	e 33·1	45·5
De Bilt		76·9	1	e 12 1	+ 1	—	—	e 43·1	—
Uccle		78·1	2	—	—	—	—	e 43·1	—
Strasbourg		80·3	0	—	—	—	—	e 45·1	—
Baku		81·5	330	e 12 40	+12	e 23 26	?PS	43·1	54·1
Granada		91·1	10	—	—	—	—	48·1	52·1

Additional readings: Irkutsk e = +20m.3s. = SR_1 +19s. Tashkent e = +11m.6s.? = P −32s.

July 11d. 20h. 56m. 58s. Epicentre 51°·6N. 179°·0W.

A = −·621, B = −·011, C = +·784; D = −·017, E = +1·000; G = −·784, H = −·014, K = −·621.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Honolulu T.H.		34·4	145	—	—	—	—	14·2	18·0
Victoria		35·0	75	7 2	−11	12 24	−31	16·6	17·1
Kobe	E.	36·7	263	e 7 19	− 9	—	—	—	—
Irkutsk		45·0	304	8 28	− 5	e 15 5	−10	22·0	26·9
Tucson		52·1	85	9 17	− 4	16 35	−10	—	—
Scoresby Sund		56·8	10	9 54	+ 3	18 2?	+18	27·0	—
Hong Kong		58·4	269	—	—	—	—	—	33·5
Florissant	E.	59·8	65	e 10 4	− 7	e 18 14	− 7	—	—
		59·8	65	e 10 8	− 3	e 18 16	− 5	e 27·8	33·0
Ekaterinburg		61·0	328	i 10 15	− 4	18 37	+ 1	30·5	39·2
Toronto	N.	62·2	54	e 10 24	− 2	e 18 54	+ 3	36·4	—
Ottawa		62·8	50	e 10 32	+ 1	e 18 54	− 4	e 29·0	—
Phu-Lien		64·3	274	10 2?	−38	—	—	—	—
Pulkovo		66·2	346	10 56	+ 3	e 19 43	+ 3	31·0	44·2
Helsingfors		66·6	348	e 10 55	0	e 19 49	+ 4	e 33·0	—
Charlottesville		66·8	58	—	—	e 19 54	+ 6	e 35·0	39·0
Georgetown	Z.	66·9	57	e 10 57	0	19 51	+ 2	e 30·1	43·8
Fordham		67·0	53	—	—	e 20 2	+12	35·0	38·0
Upsala	N.	67·8	352	—	—	—	—	e 39·0	—
Kucino		68·4	340	11 10	+ 3	e 20 8	+ 1	36·1	40·6
Andijan		69·2	309	e 11 20	+ 8	—	—	43·0	—
Tashkent		69·9	313	11 22	+ 6	i 20 25	0	e 33·0	44·2
Copenhagen		72·2	354	11 35	+ 4	21 0	+ 8	35·0	—
Edinburgh		72·4	3	—	—	—	—	e 44·0	—
Hamburg		74·6	355	e 11 49	+ 3	—	—	e 38·0	51·0
De Bilt		76·2	357	i 11 58	+ 2	21 44	+ 5	e 37·0	45·6
Kew		76·9	2	—	—	—	—	e 27·0	—
Uccle		77·5	359	e 12 3	− 1	e 21 55	0	e 33·0	—
Cheb		77·9	354	—	—	—	—	e 38·0	51·0
Baku		78·7	325	i 12 9	− 2	e 22 27	+19	39·5	53·8
Theodosia		78·9	337	—	—	—	—	e 45·0	—
Paris		79·6	0	i 12 16	− 1	—	—	48·0	56·0
Strasbourg		79·7	356	i 12 14	− 3	e 22 19	− 1	28·0	—
Sebastopol		79·8	338	—	—	—	—	e 48·1	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zagreb		81·6	350	e 12 22	− 6	e 22 50	+ 8	e 51·0	—
Piacenza		83·1	355	e 12 26	−11	—	—	—	56·5
Moncalieri		83·2	356	e 12 37	0	e 22 22	[−22]	35·6	—
		83·2	356	—	—	e 22 17	[−27]	35·4	—
Florence		84·2	353	i 12 38	− 5	22 2?	−68	45·0	57·5
Rocca di Papa		86·1	351	e 12 50	− 4	e 23 24	− 7	e 41·3	70·1
Tortosa	N.	87·6	1	—	—	—	—	e 44·0	56·7
Toledo		88·4	5	—	—	e 23 16	[− 2]	e 44·1	53·8
Alicante		90·0	2	—	—	e 23 52	−22	—	—
Granada		91·1	5	i 13 10	−12	e 24 13	−12	e 45·0	49·4
San Fernando	N.	91·7	6	—	—	—	—	—	60·7
Wellington		93·1	185	—	—	—	—	43·0	—
La Paz		115·7	86	e 17 28	?	—	—	65·0	—
Rio de Janeiro	E.	135·7	67	—	—	—	—	e 77·4	—

Additional readings: Honolulu T.H. LN = +15·7m. Scoresby Sund +13m.26s. and +22m.2s.? = SR_1 − 10s. Florissant (first line) iN = +10m.10s., iE = +10m.11s.; (second line) iPZ = +10m.11s., ePEN = +10m.12s., ePR_1Z = +12m.40s., iSN = +18m.18s., iSZ = +18m.19s. Toronto SE = +18m.50s., iN = +20m.13s. = [S] + 2s. Ottawa eSR_1 = +25m.38s.; T_0 = 20h.57m.10s. Charlottesville MN = +41·8m. De Bilt eN = +22m.42s., MZ = +47·2m., MN = +53·9m. Baku SR_1 = +28m.2s. Zagreb ePS = +23m.42s. Toledo MNW = +53·5m.

July 11d. Readings also at 0h. (Christchurch and near Wellington), 1h. (Ekaterinburg, Irkutsk, Scoresby Sund, and Tashkent), 2h. (Baku and Pulkovo), 6h. (near Andijan), 7h. (Almata), 9h. (Wellington (2)), 14h. (Florissant), 16h. (Wellington), 17h. (Apia and Suva), 19h. (Florissant and La Paz), 20h. (near Akita), 21h. (Uccle), 23h. (Ekaterinburg and Tashkent).

July 12d. 15h. 54m. 33s. Epicentre 62°·8N. 151°·0W.

A = −·400, B = −·222, C = +·889; D = −·485, E = +·875; G = −·778, H = −·431, K = −·457.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sitka	E.	9·6	119	i 2 27	+ 3	i 4 30	+12	i 5·0	5·9
Victoria		20·9	120	5 0	+ 8	8 57	+15	10·3	11·4
Lick	N.	31·1	131	e 6 32	− 7	—	—	—	—
Tucson	N.	39·6	120	e 7 49	− 2	—	—	—	19·9
Chicago	E.	41·8	90	—	—	e 20 21	?L	22·0	24·4
	N.	41·8	90	—	—	e 14 3	−29	21·9	22·0
Scoresby Sund		42·1	24	7 57	−15	14 5	−31	20·4	—
Ann Arbor	N.	43·2	85	—	—	—	—	e 25·2	—
Toronto		44·1	80	—	—	—	—	20·7	22·8
Ottawa		44·4	76	—	—	e 14 39	−28	e 21·5	23·1
Fordham		48·8	79	—	—	—	—	—	25·5
Georgetown	Z.	48·9	84	e 8 42	−17	16 1	− 4	e 22·6	29·1
Irkutsk		50·8	311	9 20	+ 8	e 16 43	+14	26·4	—
Helsingfors		57·0	3	e 9 54	+ 2	e 17 43	− 3	—	—
Pulkovo		57·5	359	9 55	− 1	17 45	− 8	26·5	—
Ekaterinburg		57·9	341	i 9 56	− 2	e 17 53	− 5	21·9	35·5
Copenhagen		60·8	10	—	—	18 27	− 6	31·5	—
Kucino		61·3	355	—	—	e 18 40	0	29·9	36·0
De Bilt		63·6	16	e 10 37	+ 1	e 19 7	− 1	e 31·5	40·0
Uccle		64·8	18	—	—	—	—	e 30·5	—
Feldberg	N.	65·9	15	—	—	e 19 27	− 9	—	41·5
Paris		66·4	20	—	—	—	—	e 35·5	—
Strasbourg		67·4	15	—	—	—	—	e 40·5	—
Neuchatel		68·8	17	e 11 10	0	—	—	—	—
Tashkent		71·1	330	—	—	—	—	—	43·2
Toledo	N.E.	74·0	26	—	—	e 23 23	?	—	—
Baku		75·5	345	e 11 59	+ 7	e 21 46	+14	38·0	47·0
Alicante		76·1	24	e 9 18	?	—	—	—	—
Granada		76·7	26	i 11 55	− 4	e 21 44	− 1	e 38·5	40·8

For Notes see next page.

NOTES TO JULY 12d. 15h. 54m. 33s.

Additional readings: Lick eE = +6m.35s. Scoresby Sund +9m.27s. = PR_1 −20s. Ann Arbor eE = +21m.51s., eEN = +22m.15s., iEeN = +22m.51s. Toronto eN = +18m.27s. ? = SR_1 +15s., iN = +22m.48s. Ottawa e = +17m.27s. ? Fordham eEN = +19m.29s. = SR_1 +15s., MZ = +30·5m. Kucino e = +22m.54s. De Bilt ePR_1Z = +13m.40s., MN = +40·7m., MZ = +41·5m. Feldberg eN = +23m.33s. Tashkent e = +25m.27s. ?, e = +35m.27s. ?, e = +41m.27s.

July 12d. 17h. 58m. 58s. Epicentre 26°·8N. 130°·6E.

A = −·581, B = +·678, C = +·451; D = +·759, E = +·651; G = −·293, H = +·342, K = −·893.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki		6·0	354	1 34	+ 2	—	—	—	—
Hukuoka		6·8	358	e 1 49	+ 5	—	—	e 2·9	—
Koti		7·2	20	e 1 50	+ 1	—	—	—	—
Taihoku	E.	8·3	264	e 2 29	+23	—	—	—	—
Sumoto		8·4	25	2 8	+ 1	—	—	e 5·0	6·5
Osaka		8·9	27	(2 35)	+20	—	—	(4·7)	(5·1)
Zi-ka-wei	N.	9·1	301	e 2 16	− 2	4 12	+ 6	—	—
Nagoya		10·0	31	e 2 32	+ 2	—	—	—	—
Manila		15·2	219	e 3 56	+14	i 6 58	+21	i 8·5	10·2
Hong Kong		15·6	257	3 59	+12	—	—	7·1	12·2
Phu-Lien		22·7	260	e 5 14	+ 1	e 9 26	+ 7	—	—
Irkutsk		32·2	330	e 6 37	−13	11 45	−26	16·0	—
Tashkent		51·7	305	i 9 18	0	i 16 39	− 1	e 26·0	32·1
Ekaterinburg		57·0	325	i 9 47	− 5	i 17 39	− 7	26·5	37·8
Baku		66·3	307	i 11 2	+ 8	e 19 51	0	34·6	46·1
Kucino		69·6	325	—	—	—	—	e 36·5	39·5
Pulkovo		72·1	330	11 31	0	20 53	+ 2	37·0	46·8
Helsingfors		74·2	331	e 11 48	+ 5	e 21 8	− 8	e 41·0	—
Upsala		77·6	334	—	—	—	—	—	50·0
Scoresby Sund		80·8	353	12 32	+ 8	22 38	+ 5	43·0	—
Copenhagen		82·2	331	12 33	+ 2	22 56	+ 8	43·0	—
Hamburg		84·7	330	e 12 46	0	—	—	e 48·0	54·0
Feldberg		87·6	329	—	—	e 23 32	−16	—	51·0
De Bilt		87·8	330	13 1	− 3	e 23 37	−13	e 46·0	57·5
Strasbourg		89·0	327	—	—	—	—	e 49·0	—
Uccle		89·1	330	—	—	e 24 2?	− 2	e 46·0	—
Florence		90·2	322	16 49	?PR_1	e 24 22	+ 6	51·0	55·0
Piacenza		90·2	324	—	—	e 24 2	−14	—	53·5
Rocca di Papa		90·6	320	—	—	e 23 39	[+ 7]	e 40·8	58·2
Kew		90·7	333	—	—	—	—	e 48·0	—
Moncalieri		91·4	324	e 16 6	?	e 24 17	−11	31·7	—
Paris		91·4	330	e 16 59	?PR_1	—	—	54·0	56·0
Tortosa	N.	98·0	325	—	—	—	—	e 52·0	64·1
Toledo	N.E.	101·1	327	—	—	—	—	e 56·0	—
Granada		102·9	325	18 27	?PR_1	—	—	57·0	62·4
San Fernando	N.	104·8	326	—	—	—	—	—	67·8

Additional readings and note: Osaka MN = (+4·9m.); all readings have been *increased* by 2m. Manila gives epicentre 27°50′N. 131°E.; T, 17h.59m.5s. Hamburg MN = +51·0m. Feldberg eN = +31m.38s. De Bilt ePR_1Z = +16m.29s., MZ = +57·7m., MN = +57·8m. Rocca di Papa e? = +23m.8s.

July 12d. Readings also at 0h. (near Neuchatel), 1h. (Ekaterinburg and Tashkent), 2h. (near Wellington), 3h. (La Paz and Sucre), 7h. (Apia), 10h. (Ekaterinburg, Kucino, Pulkovo, Tashkent, Georgetown, Ottawa, and Toronto), 11h. (Baku), 13h. (near Lick and near Toyooka), 14h. (near Wellington), 15h. (Taihoku), 17h. (Taihoku and near Wellington), 20h. (La Paz), 21h. (Irkutsk), 22h. (Baku, Copenhagen, Ekaterinburg, Granada, Kucino, Pulkovo, Tashkent, and near Sumoto), 23h. (Baku, Copenhagen, Ekaterinburg, Irkutsk, Kucino, Pulkovo, Tashkent, Almata, Andijan, Scoresby Sund, and Wellington).

July 13d. 7h. 36m. 25s. Epicentre 37°·0N. 58°·5E.

A = +·417, B = +·681, C = +·602; D = +·853, E = −·522;
G = +·314, H = +·513, K = −·799.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Baku		7·5	300	i 2 0	+ 6	i 3 28	+ 4	3·6	10·9
Tashkent		9·4	59	e 2 28	+ 6	—	—	—	—
Andijan		11·2	69	e 3 1	+14	5 1	+ 2	6·6	7·2
Almata		15·4	60	i 4 1	+17	e 6 53	+12	8·2	9·2
Dehra Dun		17·5	106	3 35?	−36	7 55	+26	10·6	13·6
Ksara		18·7	267	4 33	+ 8	8 11	+16	10·2	—
Theodosia		19·1	302	4 33	+ 3	8 12	+ 8	e 12·6	—
Agra	E.	19·2	115	4 17	−14	7 53	−13	10·8	15·6
	N.	19·2	115	4 19	−12	7 54	−12	10·9	13·3
Ekaterinburg		19·9	3	i 4 31	− 9	i 8 11	−10	10·1	11·1
Simferopol		20·0	301	4 41	0	8 22	− 1	—	—
Sebastopol		20·3	300	4 47	+ 2	8 29	0	—	—
Bombay		22·0	141	5 18	+13	9 28	+23	12·3	15·6
Kucino		23·3	330	5 22	+ 2	9 26	− 5	11·2	17·4
Helwan		23·7	260	5 23	− 2	9 49	+11	—	19·0
Pulkovo		29·0	331	i 6 10	− 8	11 17	0	15·6	19·2
Calcutta	E.	29·5	111	11 9	?S	(11 9)	−17	18·6	—
Konigsberg		31·3	318	e 6 41	0	e 12 32	+36	e 19·6	24·6
Helsingfors		31·4	330	e 6 26	−16	e 12 23	+25	e 17·2	—
Kodaikanal		31·8	143	12 47	?S	(12 47)	+42	—	—
Vienna		32·5	506	e 6 59	+ 6	—	—	—	29·6
Zagreb		32·7	299	e 7 15	+21	—	—	e 15·3	25·1
Graz		33·0	304	—	—	—	—	e 18·6	—
Laibach		33·7	302	—	—	—	—	e 20·2	—
Upsala		34·6	325	e 8 5	+55	e 13 55	+66	e 17·9	25·0
Potsdam		35·0	312	—	—	e 13 43	+48	e 25·6	32·6
Irkutsk		35·2	50	e 7 8	− 7	e 12 24	−34	17·6	—
Cheb		35·2	309	—	—	e 13 35?	+37	e 23·6	26·1
Rocca di Papa		35·3	292	e 6 51	−25	—	—	e 14·7	30·1
Rome		35·5	292	e 7 8	−10	—	—	—	—
Jena	N.	35·8	309	—	—	—	—	e 16·6	25·6
Colombo		35·8	143	13 5	?S	(13 5)	− 2	19·1	23·0
Copenhagen		36·0	319	—	—	12 53	−17	—	—
Florence		36·1	295	e 6 51	−32	—	—	24·8	30·6
Gottingen	N.	36·8	310	—	—	e 14 23	+62	e 20·2	26·9
Hamburg		37·0	314	e 9 6	?PR_1	—	—	e 24·6	30·7
Ravensburg		37·0	304	—	—	e 15 35?	?SR_1	—	—
Piacenza		37·1	299	e 7 5	−26	—	—	—	32·0
Chur		37·1	300	e 7 22	− 9	—	—	—	—
Zurich		37·7	300	e 7 22	−14	—	—	—	—
Feldberg	N.	37·8	307	e 7 21	−15	—	—	e 21·8	27·6
Strasbourg		38·3	306	e 7 35?	− 5	e 16 4	?SR_1	—	—
Moncalieri		38·5	299	e 6 48	−54	e 13 29	−16	21·7	31·6
Neuchatel		38·9	300	e 7 35	−10	—	—	—	—
De Bilt		39·9	310	e 7 50	− 4	e 14 2	− 3	e 20·6	34·1
Uccle		40·4	309	—	—	e 15 35?	+82	e 21·6	—
Paris		41·7	306	e 8 35?	+26	e 17 35?	?SR_1	27·6	32·6
Kew		43·2	310	—	—	e 14 35?	−16	27·6	—
Oxford		43·8	310	—	—	e 14 50	− 9	e 24·3	31·1
Dyce	*	44·1	319	—	—	e 14 53	−10	e 22·1	31·9
Entebbe		44·1	220	—	—	21 25	?L	(21·4)	27·0
Stonyhurst		44·4	313	e 8 20	− 9	e 14 52	−15	—	31·4
Phu-Lien		44·6	97	—	—	14 35?	−35	25·6	—
Edinburgh		44·7	316	—	—	e 16 5	+44	—	34·6
Alicante		45·9	290	—	—	—	—	e 28·3	—
Toledo		48·1	293	e 8 48	− 7	e 18 33	?	—	—
Granada		48·6	289	e 15 59	?S	(e 15 59)	− 2	—	33·6
Hong Kong		49·8	91	16 25	?S	(16 25)	+ 9	e 20·2	32·8
San Fernando	N.	50·8	290	—	—	—	—	—	48·7

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Scoresby Sund		52·3	335	11 35?	?PR_1	—	—	23·6	—
Ottawa		87·9	329	—	—	e 23 59	+ 8	e 41·6	—
Toronto	N.	90·8	330	—	—	—	—	42·6	—
Georgetown	Z.	93·8	325	—	—	e 26 4	?PS	e 42·8	58·1
Victoria	E.	94·5	0	—	—	—	—	46·9	51·7
Florissant	N.	98·9	335	—	—	—	—	e 45·1	56·6

Additional readings: Baku i = +2m.58s. Tashkent i = +2m.53s. and +3m.35s. Calcutta ePN = +10m.49s. Konigsberg ePZ = +6m.50s., ePN = +7m.0s., eN = +9m.9s., eE = +12m.47s., iN = +13m.53s., eZ = +14m.0s., eE = +14m.13s., eNZ = +14m.43s., eE = +15m.6s., MN = +23·6m. Zagreb e = +14m.11s. = SR_1 + 5s. and +20m.57s. Laibach e = +25m.36s. Potsdam MN = +27·6m. Rocca di Papa e? = +4m.54s., e = +6m.1s. Rome e = +6m.27s. Jena eN = +22m.35s. Colombo S = +16m.5s. = SR_3 − 3s. Gottingen eE = +14m.53s. ?, eLE = +22·9m., ME = +29·9m. Hamburg eE = +15m.55s. = SR_1 +13s., iE = +18m.6s., iN = +18m.27s., MN = +28·7m., MZ = +31·7m. Ravensburg e = +26m.27s. Feldberg eN = +12m.12s. Strasbourg ePR₂ = +18m.6s., SR_1 = +25m.52s. Moncalieri e = +16m.25s. = SR_1 +11s. De Bilt SR_1 = +16m.40s., MN = +29·6m., MZ = +32·6m. Oxford e = +17m.56s. = SR_1 − 10s. Dyce SR_1 = +18m.1s. Stonyhurst SR_1? = +18m.1s. Granada i = +19m.31s. = SR_1 − 9s. Hong Kong MN = +31·2m. Ottawa eE = +36m.35s. ?

July 13d. 12h. 50m. 54s. Epicentre 42°·5N. 19°·0E.

A = +·697, B = +·240, C = +·676; D = +·326, E = −·946; G = +·639, H = +·220, K = −·737.

Danilovgrad (Montenegro) is given as the position of the epicentre by Belgrade.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mostar		1·2	314	1 8	+50	e 1 18	+45	—	1·6
Taranto		2·4	213	0 48	+ 9	1 21	+15	—	1·6
Belgrade	E.	2·5	24	e 1 54	+75	e 2 38	+89	—	—
Pompeii		3·8	244	e 1 24	+25	e 2 29	+45	—	—
Trenta		3·8	212	e 0 56	− 3	—	—	—	2·4
Naples	E.	3·9	246	e 1 34	+33	e 2 24	+37	—	—
Zagreb		3·9	328	e 1 6	+ 5	i 1 58	+11	i 2·1	2·3
Rocca di Papa		4·7	263	e 1 19	+ 6	2 9	0	—	3·2
Rome		4·9	265	1 23	+ 7	2 13	− 1	—	3·7
Graz		5·2	333	e 1 17	− 3	e 2 18	− 4	—	3·1
Venice		5·6	303	e 1 40	+13	i 3 10	+36	(i 3·2)	5·6
Florence		5·8	285	2 35	?S	(2 35)	− 4	—	3·4
Treviso		5·8	305	2 27	?S	(2 27)	−12	(3·1)	—
Padova		5·9	302	e 2 41	?S	(e 2 41)	0	(i 3·4)	—
Vienna		6·0	344	e 1 38	+ 6	2 55	+11	i 3·4	4·0
Innsbruck		7·2	314	3 12	?S	(3 12)	− 3	5·2	—
Piacenza		7·2	294	—	—	e 2 58	−17	—	6·0
Chur		8·0	305	e 2 1	0	—	—	e 4·6	—
Moncalieri		8·5	291	e 2 46	+37	—	—	—	—
Ravensburg		8·5	312	—	—	e 3 21	−29	i 4·8	—
Zurich		8·8	307	e 1 59	−14	—	—	—	—
Cheb		8·8	331	—	—	—	—	e 4·1	5·1
Neuchatel		9·6	302	e 2 23	− 1	e 4 5	−13	—	—
Karlsruhe		9·8	315	4 6	?S	(4 6)	−17	—	—
Strasbourg		9·9	311	e 2 12	−17	e 4 36	+10	—	—
Besançon		10·3	302	e 4 25	?S	(e 4 25)	−12	—	—
Feldberg	N.	10·6	320	e 2 32	− 6	—	—	—	7·0
Gottingen	E.	10·9	329	—	—	—	—	e 5·2	5·4
Hamburg		12·6	335	—	—	—	—	e 6·1	—
Uccle		13·0	315	—	—	—	—	e 7·1	—
Paris		13·1	304	—	—	—	—	e 6·8	—
De Bilt		13·4	321	—	—	—	—	e 6·9	9·2
Copenhagen		13·9	344	—	—	—	—	7·1	—
Kew		15·8	311	—	—	—	—	e 7·1	—
Oxford		16·5	311	—	—	—	—	e 8·2	—
Granada		18·1	260	e 4 6	−12	8 12	+30	9·7	12·9

For Notes see next page.

NOTES TO JULY 13d. 12h. 50m. 54s.

Additional readings and notes: Mostar eSR$_1$ = +1m.25s. Belgrade eP*E = +2m.1s., ePE = +2m.6s., eE = +2m.43s., eSE = +2m.46s. Zagreb e = +1m.20s., eNE = +1m.28s., i = +1m.50s., MNW = +2·5m. Treviso and Padova gives S as P and L as S. Vienna P$_2$S = +2m.35s. Innsbruck PR$_1$? = +3m.58s., i = +4m.10s., +4m.20s., and +4m.44s. Ravensburg i = +3m.52s., +4m.8s., +4m.16s., and +4m.28s., iN = +4m.36s. Gottingen iN = +5m.28s. De Bilt eL = +7·5m. Oxford e = +8m.34s. and +8m.43s. Granada i = +4m.18s.

July 13d. 14h. 50m. 18s. Epicentre 5°·5S. 148°·0E.

A = −·844, B = +·527, C = −·096; D = +·530, E = +·848; G = +·081, H = −·051, K = −·995.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview		28·5	174	e 6 21	+ 8	i 11 12	+ 4	i 14·2	17·3
Sydney	E.	28·5	174	7 36	+83	10 42	−26	12·2	13·2
Adelaide		30·7	195	i 6 45	+10	i 11 16	−30	i 15·2	19·5
Suva		32·2	118	e 7 6	+16	i 12 12	+ 1	—	—
Melbourne		32·4	184	i 7 52	+60	i 11 47	−27	17·9	21·3
Manila		33·5	309	—	—	9 36	?	—	—
Taihoku	E.	39·9	323	e 8 1	+ 7	e 14 4	− 1	—	—
Perth		40·0	225	—	—	i 13 47	−20	i 20·2	—
Miyazaki		40·7	339	8 5	+ 4	14 13	− 4	—	—
Batavia		41·0	267	i 8 6	+ 3	—	—	—	—
Koti		41·4	343	e 8 6	0	e 14 20	− 7	—	—
Sumoto		41·7	345	8 10	+ 1	e 14 56	+25	—	15·8
Tokyo		41·9	351	8 13	+ 3	—	—	—	—
Osaka		41·9	345	8 6	− 4	(14 53)	+19	14·9	15·3
Kobe		42·0	345	8 10	− 1	14 55	+20	—	—
Nagasaki		42·0	339	e 8 12	+ 1	e 14 33	− 2	—	—
Nagoya		42·0	348	e 8 14	+ 3	—	—	—	—
Toyooka	N.	42·9	346	8 19	+ 2	15 13	+26	—	—
Wellington		43·0	150	8 13	− 5	i 14 18	−30	19·7	—
Hong Kong		43·3	311	8 26	+ 6	(14 51)	− 1	14·8	20·0
Christchurch		43·8	153	e 8 24	0	i 14 42	−17	i 18·3	33·7
Zi-ka-wei	Z.	44·6	328	e 8 32	+ 2	—	—	23·0	25·3
Mizusawa	E.	45·1	355	(8 36)	+ 2	8 36	?P	—	—
Akita		45·8	354	e 8 43	+ 4	(15 48)	+23	15·8	—
Phu-Lien		48·4	305	e 9 3	+ 7	e 15 41	−18	21·7	—
Honolulu T.H.	E.	59·5	62	—	—	i 18 18	+ 1	28·1	29·2
Irkutsk		68·6	334	i 11 23	+15	i 20 26	+17	33·7	38·6
Colombo		69·1	280	11 42	+30	20 37	+22	34·7	42·5
Almata		80·2	316	e 12 48	+28	—	—	—	—
Andijan		82·8	313	e 12 52	+17	—	—	—	—
Tashkent		85·2	314	i 12 56	+ 7	i 23 25	+ 4	e 33·0	48·2
Ekaterinburg		93·2	327	i 13 20	−13	23 47	[0]	34·2	54·2
Victoria	E.	93·2	42	13 34	+ 1	25 52	?PS	42·8	44·4
Baku		99·7	310	—	—	—	—	47·7	65·5
Kucino		105·8	327	—	—	—	—	48·4	62·9
Pulkovo		108·4	[illegible]	e 14 35	−15	26 26	? Σ	49·7	65·2
Helsingfors		110·7	[illegible]	—	—	—	—	e 54·7	—
Upsala		114·0	335	—	—	—	—	e 59·7	—
Scoresby Sund		114·7	355	20 0	?PR$_1$	—	—	51·7	—
Konigsberg		115·3	330	—	—	e 26 21	? Σ	e 64·7	69·7
Florissant		117·8	47	e 20 12	?PR$_1$	e 27 13	? Σ	—	58·5
Copenhagen		118·7	333	—	—	—	—	57·7	—
Vienna		120·8	325	e 20 28	?PR$_1$	—	—	—	76·7
Hamburg		121·1	332	e 20 45	?PR$_1$	—	—	e 61·7	71·7
Ann Arbor	E.	121·4	41	—	—	—	—	e 62·8	—
Graz		121·9	324	—	—	e 30 38	?PS	59·7	—
Cheb		122·0	327	—	—	e 29·42?	?	e 64·7	71·7

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Zagreb		122·2	321	e 20 38	?PR_1	e 30 27	?PS	e 62·7	—
Gottingen		122·4	330	—	—	—	—	e 63·0	68·0
Dyce		123·2	341	—	—	—	—	57·7	75·5
Toronto	N.	123·6	39	—	—	e 30 50	?PS	53·4	—
Feldberg	N.	124·0	331	e 20 42	?PR_1	e 30 48	?PS	—	73·1
De Bilt		124·3	332	e 19 16	[+12]	e 31 5	?PS	e 62·7	67·2
Edinburgh		124·7	340	—	—	—	—	e 63·7	—
Ravensburg		124·8	327	—	—	—	—	59·7	82·7
Ottawa		125·0	35	e 21 0	?PR_1	e 30 54	?PS	e 52·7	—
Strasbourg		125·4	328	e 20 56	?PR_1	e 31 28	?PS	49·7	—
Uccle		125·5	332	e 20 42?	?PR_1	—	—	e 62·7	75·6
Florence		126·2	321	e 19 14	[+ 5]	i 31 42	?PS	65·7	70·7
Rocca di Papa		126·3	319	e 21 42	?PR_1	—	—	—	—
Piacenza		126·4	324	21 2	?PR_1	—	—	—	74·5
Kew		127·1	335	e 21 12	?PR_1	—	—	61·7	—
Oxford		127·2	336	e 21 25	?PR_1	e 23 5	?	e 60·7	78·7
Georgetown		127·4	43	i 19 20	[+ 8]	i 21 21	?PR_1	52·8	77·2
Moncalieri		127·6	325	e 19 51	[+38]	e 31 50	?PS	50·7	—
Paris		127·8	332	e 21 40	?PR_1	—	—	64·7	76·7
Fordham		128·6	40	19 42	[+27]	e 21 54	?PR_1	—	—
Alicante		136·5	324	e 23 4	?	—	—	72·0	—
Toledo		137·4	327	e 22 32	?PR_1	—	—	e 47·7	82·5
La Paz		138·0	121	e 19 30	[− 6]	23 15	?	24·8	—
Sucre		139·1	127	e 19 34	[− 4]	—	—	—	—
Granada		139·1	325	i 19 37	[− 1]	e 28 57	? Σ	65·7	72·2
Malaga		139·9	325	21 46	?	31 36	?	—	—
San Fernando	N.	141·1	326	—	—	—	—	—	84·6
Rio de Janeiro	E.	149·6	159	e 24 42	?	—	—	—	—

Additional readings: Riverview $PR_1 = +6$m.51s., iS = +10m.43s., $SR_1 = +11$m.46s., $iSR_2 = +12$m.13s., $SR_3 = +12$m.32s., MN = +20·9m. Adelaide eS = +10m.55s., $iSR_1 = +12$m.54s., $iSR_3 = +14$m.32s., MN = +18·3m. Suva S?E = +12m.36s.; $T_gN = 14$h.50m.54s. Melbourne e = +11m.37s. Perth i = +16m.27s. $= SR_1 - 19$s. and +21m.42s. Batavia i = +9m.49s. $= PR_1 + 15$s. Osaka MN = +15·0m. Nagasaki $ePR_1 = +9$m.41s., eSR_1? = +17m.49s. Wellington PE = +8m.18s., $SR_2E = +17$m.42s. $= SR_1 - 8$s., $SR_2N = +17$m.45s. $= SR_1 - 5$s., $T_gN = 14$h.50m.47s., $T_gE = 14$h.50m.58s. Hong Kong e? = +10m.48s. Zi-ka-wei ME = +24·2m. Mizusawa SN = +8m.38s. Honolulu T.H. eN = +25m.6s., eLN = +28·7m., MN = +29·7m. Tashkent $iPR_1 = +16$m.22s., i = +23m.8s. Kucino $PR_1 = +18$m.49s., PS = +28m.11s., $SR_1 = +34$m.24s. Pulkovo $PR_1 = +19$m.2s., $S_cP_cS = +25$m.9s. Konigsberg eN = +30m.28s., eZ = +45m.0s., eE = +61m.47s. Zagreb e = +38m.28s. Gottingen eLE = +65·3m., eLN = +66·5m. De Bilt $ePR_1 = +21$m.7s., e = +23m.49s., MZ = +75·8m., MN = +77·2m. Ottawa e = +38m.6s. $= SR_1 + 16$s. and +43m.12s. Uccle MN = +68·0m. Florence i = +21m.17s. $= PR_1 + 11$s. Georgetown iZ = +36m.24s. Paris MN = +79·7m. Granada $PR_1 = +22$m.43s.

July 13d. Readings also at 4h. (Hong Kong, Phu-Lien, Zi-ka-wei, and near Manila), 5h. (Copenhagen, De Bilt, Kucino, Pulkovo, Scoresby Sund, Tashkent, and La Paz), 14h. (Tortosa (2) and near Manila), 16h. (Georgetown), 17h. (Graz), 18h. (Strasbourg, Venice, De Bilt, Zurich, near Chur, Neuchatel, Moncalieri, Piacenza, and Livorno, a close shock in central Europe, but the readings do not suggest an accurate determination; Manila, near Tananarive, and near Wellington (2)), 19h. (Ottawa and Georgetown), 21h. (Entebbe), 22h. (La Paz and near Tacubaya).

July 14d. 8h. 57m. 55s. Epicentre 33°·2S. 108°·0W.

A = −·259, B = −·796, C = −·548; D = −·951, E = +·309; G = +·169, H = +·521, K = −·837.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz	E.	39·6	75	i 7 51	0	i 14 7	+ 7	i 20·2	25·1
	N.	39·6	75	i 7 51	0	i 14 5	+ 5	18·7	28·2
Sucre		40·6	80	i 8 1	+ 1	14 11	− 4	19·6	22·0
La Plata		41·1	106	8 3	− 1	14 22	0	20·5	—
Rio de Janeiro		57·3	96	e 11 5	+71	19 10	+80	29·2	34·1
Wellington		59·9	237	—	—	e 18 26	+ 4	i 27·5	28·9
Tucson	N.	65·6	356	10 45	− 4	20 3	?PS	32·0	—
Suva	N.	66·8	264	—	—	—	—	32·1	—
Lick	N.	71·7	348	e 11 28	0	—	—	—	—
Berkeley	Z.	72·4	348	e 11 29	− 3	—	—	—	—
Honolulu T.H.	E.	72·5	312	—	—	—	—	e 32·3	33·6
Florissant		73·9	13	i 11 42	+ 1	e 21 22	+ 9	—	—
	E.	73·9	13	e 11 38	− 3	e 21 35	[− 6]	—	—
Chicago	E.	77·3	15	(12 30)	+27	(21 53)	+ 1	(37·9)	(44·3)
Georgetown	Z.	77·6	25	12 13	+ 8	21 35	−21	e 35·4	43·0
Riverview		80·0	236	—	—	e 27 35	?SR_1	e 37·1	43·0
Fordham		80·5	26	e 12 21	− 1	—	—	—	—
Toronto	N.	81·2	20	e 12 27	+ 1	e 21 35	−62	41·1	—
Melbourne		81·9	230	—	—	i 22 39	− 6	37·9	41·6
Ottawa		83·9	12	e 12 47	+ 6	e 23 5	− 3	e 36·1	—
Adelaide		87·7	229	—	—	e 23 23	[+10]	e 40·5	48·2
Scoresby Sund		119·8	22	20 29	?PR_1	—	—	—	—
Edinburgh		125·0	40	—	—	e 31 5?	?PS	—	—
Kew		126·0	46	e 19 5?	[− 3]	—	—	—	—
De Bilt	Z.	129·4	46	e 19 29	[+12]	—	—	—	—
Strasbourg		130·6	50	e 21 50	?PR_1	—	—	—	—
Feldberg	N.	131·3	48	e 23 5	?	—	—	—	—
Placenza		131·5	55	(e 22 5?)	?PR_1	—	—	e 22·1	—
Rocca di Papa		133·1	60	e 22 16	?PR_1	—	—	—	36·3
Cheb		134·2	48	e 23 5?	?	—	—	—	—
Zagreb		136·0	55	e 22 5?	?PR_1	—	—	—	—
Pulkovo		142·1	31	i 19 30	[−13]	—	—	41·1	—
Simferopol		148·7	56	e 19 54	[0]	—	—	—	—
Theodosia		149·6	56	e 20 0	[+ 5]	—	—	—	—
Baku		161·0	61	e 20 27	[+18]	—	—	44·1	—
Dehra Dun		174·1	242	30 5?	?	41 5?	?	61·1	76·1

Additional readings and note: La Paz PR_1E = +9m.14s. Sucre iS = +14m.27s. Rio de Janeiro SE = +19m.12s., MN = +33·5m. Wellington iE = +18m.37s. Lick eE = +11m.36s. Honolulu T.H. eLN = +33·1m., MN = +33·9m. Chicago PR_1E = (+15m.19s.), PR_2E = (+16m.55s.), eSR_1E = (+26m.56s.), eSR_2E = (+30m.11s.); all readings have been *diminished* by 6m. Georgetown PR_1Z = +15m.25s. Riverview e = +21m.23s., MN = +47·1m. Toronto LE = +38·1m. Melbourne 1 = +27m.55s. Ottawa eN = +28m.41s. = SR_1 − 28s. Adelaide iS = +29m.26s. = SR_1 − 34s., e = +38m.37s. .N = +45·7m. De Bilt e = +21m.35s. = PR_1 + 9s. Strasbourg e = +22m.53s. Pulkovo ePR_1 = +23m.28s.

July 14d. 9h. 36m. 43s. Epicentre 48°·8N. 154°·7E.

(Deduced from the epicentre 48°·8N. 153°·5E. of 1925 Jan. 18d.).

A = −·596, B = +·281, C = +·752; D = +·427, E = +·904; G = −·680, H = +·322, K = −·659.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nemuro		8·4	233	2 1	− 6	3 52	+ 5	—	—
Mizusawa	E.	13·7	230	3 18	− 4	5 52	− 9	—	—
	N.	13·7	230	3 23	+ 1	5 54	− 7	—	—
Akita		13·9	235	3 19	− 6	6 23	+17	8·4	9·6
Tokyo		17·1	226	4 4	− 2	7 24	+ 4	—	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		18·9	230	e 4 27	− 1	8 17	+17	11·2	—
Toyooka	N.	19·7	235	4 37	0	8 19	+ 2	10·5	11·6
Osaka		20·0	233	3 43	+ 2	8 25	+ 2	11·1	12·6
Kobe		20·2	233	i 4 42	− 1	i 8 31	+ 4	11·0	13·1
Sumoto		20·6	233	4 47	− 1	8 39	+ 3	—	12·6
Muroto		21·8	232	5 2	− 1	e 9 4	+ 3	e 12·6	—
Koti		21·9	234	i 5 2	− 2	9 2	− 1	—	13·0
Hukuoka		23·6	239	5 18	− 6	9 32	− 4	11·6	13·2
Nagasaki		24·6	238	5 29	− 5	e 9 49	− 6	11·7	—
Taihoku		35·1	240	7 11	− 3	11 55	−62	15·5	—
Sitka		41·0	51	7 54	− 9	i 14 7	−14	e 19·7	26·1
Hong Kong		41·5	245	7 57	−10	14 7	−21	17·6	25·6
Manila		44·0	232	i 8 17?	− 9	i 14 45	−17	—	24·7
Honolulu T.H.	E.	46·3	110	i 8 37	− 5	i 15 17	−15	18·3	21·9
	N.	46·3	110	i 8 35	− 7	i 15 19	−13	18·3	20·6
Phu-Lien		47·3	252	8 41	− 8	e 15 20	−25	21·3	29·5
Victoria	E.	51·4	58	9 10	− 6	16 28	− 8	25·1	25·3
	N.	51·4	58	9 17	+ 1	16 21	−15	25·0	25·0
Almata		51·9	296	e 9 23	+ 4	e 19 5	[+14]	—	—
Ekaterinburg		52·8	318	9 19	− 6	16 37	−17	—	34·2
Andijan		56·5	295	e 9 58	+ 9	—	—	29·3	—
Calcutta	E.	57·8	270	e 10 8	+10	17 20	−36	—	—
	N.	57·8	270	e 10 10	+12	17 44	−12	—	—
Berkeley	E.	58·3	68	e 10 3	+ 2	e 18 9	+ 6	e 29·0	—
	N.	58·3	68	e 10 2	+ 1	e 18 6	+ 3	—	—
	Z.	58·3	68	e 10 0	− 1	e 18 8	+ 5	e 29·0	—
Lick		59·0	68	e 10 5	0	e 18 15	+ 4	—	—
Dehra Dun		59·3	283	(10 17?)	+10	(21 17?)	?	(41·3)	(56·3)
Scoresby Sund		60·7	359	10 21	+ 4	18 45	+13	—	—
Agra	N.	61·4	280	9 49	−32	18 3	−38	e 31·7	38·0
Pulkovo		62·4	332	i 10 28	0	18 53	0	29·3	35·0
Kucino		63·0	326	e 10 29	− 3	18 57	− 4	29·2	35·5
Helsingfors		63·7	335	10 52	+16	19 21	+12	e 32·0	—
Upsala		66·0	339	e 11 3	+12	e 19 37	0	e 30·3	36·3
Hyderabad		68·0	274	11 17	+13	20 6	+ 4	34·9	42·5
Baku		69·0	309	11 14	+ 3	i 21 21	+ 7	32·8	37·3
Batavia		69·0	233	i 11 11	0	i 20 11	− 3	e 36·3	—
Tucson	N.	69·0	66	11 11	0	20 15	+ 1	30·8	—
Konigsberg		69·4	335	e 11 16	+ 3	e 20 16	− 3	i 32·0	40·3
Suva	N.	70·1	156	—	—	i 21 17?	[+ 5]	—	—
Bombay		70·6	278	11 27	+ 6	20 27	− 6	35·2	39·3
Copenhagen		70·9	340	11 24	+ 2	20 36	− 1	34·3	—
Dyce		72·3	349	e 11 35	+ 3	i 21 36	[+ 7]	35·4	44·8
Theodosia		72·3	321	e 11 27	− 5	—	—	e 43·0	—
Simferopol		72·9	321	11 37	+ 2	—	—	e 34·8	—
Hamburg		73·4	340	e 11 40	+ 2	i 21 5	− 2	e 36·3	40·3
Sebastopol		73·4	321	—	—	—	—	e 45·4	—
Potsdam		73·7	337	e 11 21	−19	i 21 9	− 1	e 36·3	46·3
Edinburgh		73·7	348	—	—	e 21 17?	+ 7	34·3	45·3
Kodaikanal		74·0	270	16 47	?PR_4	—	—	46·6	52·0
Colombo		74·9	265	11 5	−43	21 29	+ 4	35·8	50·0
Florissant		75·2	47	e 11 46	− 4	e 21 22	− 6	e 36·3	42·0
		75·2	47	i 11 48	− 2	i 21 27	− 1	e 36·3	42·8
Gottingen	E.	75·3	339	i 11 3	−48	e 20 24	−65	e 34·2	40·3
	N.	75·3	339	e 10 59	−52	e 20 26	−63	e 39·1	40·3
Ann Arbor	E.	75·4	40	e 12 11	+20	i 21 23	− 7	e 34·5	—
	N.	75·4	40	e 11 53	+ 2	i 21 23	− 7	e 35·9	—
St. Louis		75·4	47	e 11 49	+ 2	e 19 26	?	e 38·3	—
Jena	E.	75·5	339	e 11 53	+ 1	e 21 23	− 9	e 31·3	40·8
	N.	75·5	339	e 11 52	0	e 21 17	−15	e 40·3	35·8
	Z.	75·5	339	e 11 51	− 1	—	—	—	50·8
Stonyhurst		75·6	347—	—	—	21 27	− 6	—	46·7

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
De Bilt		75·8	342	11 54	0	21 33	− 2	e 34·3	40·4
Cheb		76·0	337	e 16 17?	?	—	—	e 37·3	48·8
Ottawa		76·0	34	e 11 56	+ 1	i 21 32	− 5	e 35·3	47·3
Toronto		76·1	38	11 58	+ 2	i 21 35	− 3	39·8	43·2
Vienna		76·5	335	i 11 57	− 1	21 54	+11	e 36·3	52·3
Feldberg	N.	76·9	340	e 11 54	− 6	e 17 54	?PR$_3$	—	42·5
Uccle		77·2	342	12 2	0	21 47	− 4	e 35·3	48·5
Oxford		77·4	347	12 5	+ 2	i 21 50	− 3	e 35·3	46·3
Kew		77·5	346	12 4	0	21 52	− 3	33·3	46·3
Graz		77·8	335	e 12 3	− 3	e 21 57	− 1	40·3	50·1
Strasbourg		78·6	340	e 12 9	− 2	22 2	− 5	33·3	—
Innsbruck		78·8	338	12 10	− 2	20 47	?	—	—
Ravensburg		78·8	339	e 12 6	− 6	e 22 3	− 7	e 38·3	45·3
Zagreb		78·8	334	e 12 10	− 2	e 22 6	− 4	e 41·3	49·0
Paris		79·5	343	i 12 15	− 1	i 22 13	− 5	31·3	49·3
Zurich		79·5	339	e 12 15	− 1	e 22 14	− 4	—	—
Chur		79·8	338	12 17	− 1	e 22 17	− 4	—	—
Treviso		80·1	335	i 12 18	− 2	i 22 18	− 6	43·3	52·5
Neuchatel		80·2	340	i 12 16	− 4	i 22 21	− 4	—	—
Venice		80·2	335	e 12 23	+ 3	i 22 36	+11	—	—
Besançon		80·3	340	e 12 17	− 4	e 22 24	− 3	33·3	—
Padova		80·4	336	e 12 32	+11	i 22 37	+ 9	—	—
Fordham		80·6	36	e 12 18	− 5	i 22 20	−10	—	48·3
Georgetown	Z.	81·0	39	i 12 27	+ 2	i 22 36	+ 1	e 39·0	49·6
Ksara		81·1	314	12 28	+ 2	22 33	− 3	40·3	—
Charlottesville	E.	81·2	40	12 17	− 9	i 22 33	− 4	e 32·3	49·4
	N.	81·2	40	12 17	− 9	i 22 36	− 1	e 31·3	48·8
Piacenza		81·4	337	12 25	− 2	i 22 35	− 4	30·3	47·8
Moncalieri		81·9	339	i 12 39	+ 9	22 40	− 5	33·6	52·5
Florence	Z.	82·1	335	i 12 29	− 2	22 47	0	44·8	47·3
Grenoble		82·2	340	e 12 32	+ 1	i 22 43	− 5	—	—
Riverview		82·6	184	e 11 59	−35	i 22 46	− 7	e 35·4	44·4
Taranto		83·1	330	12 51	+14	24 26	?PS	53·3	—
Rome		83·4	334	e 12 34	− 4	i 22 55	− 6	—	—
Rocca di Papa		83·5	334	e 12 35	− 4	i 22 55	− 8	e 34·4	—
Naples	E.	83·8	331	e 12 50	+ 9	e 23 50	?PS	46·3	—
Pompeii		83·8	331	e 12 23	−18	—	—	—	—
Adelaide		85·0	193	e 11 17?	?	i 22 45	[−11]	i 35·0	39·6
Tacubaya		85·5	65	12 50	− 1	23 13	[+14]	—	—
Catania		86·6	330	e 12 23	−34	22 28	[−38]	e 37·0	48·8
Melbourne		87·0	188	—	—	23 25	[+16]	36·2	36·5
Tortosa	N.	87·6	343	e 13 1	− 2	i 23 19	[+ 6]	e 41·3	55·9
Perth		87·8	214	9 17?	?	—	—	—	—
Toledo		89·4	345	e 13 2	−10	e 23 32	[+ 8]	e 39·0	55·4
Alicante		90·1	342	—	—	e 23 37	[+ 8]	46·1	—
Algiers		90·8	338	—	—	e 23 36	[+ 3]	36·3	46·3
Wellington		91·8	166	—	—	i 24 1	? Σ	e 42·3	—
Almeria		92·0	343	e 13 13	−14	i 23 44	[+ 4]	49·9	51·9
Granada		92·0	345	i 13 25	− 2	i 23 48	[+ 8]	—	—
Malaga		92·5	346	e 14 37	+67	24 49	[+66]	33·3	—
San Fernando		93·1	346	—	—	23 51	[+ 4]	—	56·4
Entebbe		110·6	293	22 17?	?PR$_2$	—	—	—	61·7
Tananarive		115·4	270	—	—	24 49	[−41]	e 50·3	67·5
La Paz		132·6	62	i 19 27	[+ 3]	—	—	64·3	79·6
Sucre		136·2	61	19 35	[+ 3]	—	—	68·3	78·8
Rio de Janeiro	E.	150·5	35	—	—	—	—	e 74·9	—
La Plata		152·3	72	(19 59)	[0]	—	—	20·0	—

For Notes see next page.

NOTES TO JULY 14d. 9h. 36m. 43s.

Additional readings and note: Akita PEN = +3m.21s. Kobe iP = +4m.43s. iSN = +8m.37s., MNZ = +13·4m. Koti e = +5m.17s., SR_1N = +9m.43s., MZ = +12·6m. Sitka iPR_1E = +9m.17s., ePR_1N = +9m.18s., ePR_2N = iPR_2E = +9m.46s., iSR_1E = +16m.47s., eSR_1N = +16m.48s., eLN = +21·3m., MN = +23·5m., T_0 = 9h.36m.45s. Hong Kong iPR_1 = +9m.48s. Phu-Lien MN = +30·8m. Berkeley eZ? = +10m.4s., eEZ = +10m.13s., eZ = +12m.6s., eN? = +12m.17s., eN = +18m.28s., +18m.44s., and +26m.59s., eZ = +18m.33s., +19m.59s., and +27m.0s., eZ? = +27m.17s. Lick eN = +14m.52s. and +17m.11s., eEN = +26m.52s., eN = +29m.22s., eE = +29m.26s., eN = +33m.48s. Dehra Dun readings have been *increased* by 19m. Scoresby Sund +14m.12s. Helsingfors PR_2 = +14m.42s., SR_1 = +24m.2s., SR_2 = +26m.17s. Upsala PR_1N = +15m.5s., SR_1N = +24m.1s., SR_2 = +27m.11s., eLN = +32·3m., MN = +39·3m. Batavia i = +11m.13s. and +21m.15s. = [S] + 10s., LZ = +35·2m. Tucson PR_1N = +13m.53s. Konigsberg ePN = +11m.23s., eP_cPE = +11m.53s., eP_cPZ = +11m.56s., eN = +13m.14s. and +13m.30s., ePR_1N = +15m.16s., eEN = +15m.51s., eE = +16m.49s., eN = +18m.26s. and +20m.7s., eN = +20m.57s., eE = +21m.36s. and +21m.57s., eN = +22m.56s., MN = +44·3m. Copenhagen +15m.53s. = PR_2 − 20s., and +28m.53s. = SR_2 + 3s. Hamburg ePR_2Z = +16m.25s., iN = +21m.59s., MN = +41·3m., MZ = +46·3m. Florissant (first line) eSN = +21m.25s., (second line) ePN = +11m.49s., iZ = +12m.2s., iP_cPZ = +12m.20s., iPR_1Z = +14m.46s., iPR_2Z = +16m.30s., iPR_2Z = +17m.51s., iN = +21m.53s. = [S] + 3s., iSR_1N = +24m.13s., iSR_2N = +30m.3s. Gottingen eN = +29m.34s., eE = +29m.55s. Ann Arbor eSR_1N = +26m.23s., eSR_2N = +29m.11s., e?E = +32m.11s. = SR_2 + 15s. St. Louis iSE = +19m.29s. Jena iPZ = +11m.56s., iPE = +11m.58s. De Bilt i = +12m.5s., PR_1Z = +14m.54s., PR_2Z = +16m.46s., ePR_2Z = +17m.53s., eLNZ = +38·3m., MZ = +52·8m., MN = +52·9m. Ottawa iE = +14m.51s. = PR_1 − 25s., SR_1N = +27m.17s. = SR + 1s., eLN = +36·3m., T_0 = 9h.37m.1s. Toronto eE = +12m.7s., eSE = +21m.29s., iSN = +21m.33s., MN = +48·3m. Vienna PR_2 = +17m.11s., SR_2? = +32m.30s. = SR_2 + 12s. Uccle PR_1 = +15m.6s., ePR_2 = +18m.13s. Oxford i = +22m.45s. = PS + 12s., SR_1 = +27m.23s. Kew eZ = +18m.17s. = PR_2 + 2s., PSZ = +23m.0s. Strasbourg PR_1 = +15m.38s., PR_2 = +18m.24s., SR_1 = +28m.19s. Innsbruck P_gP = +13m.2s., PR_1 = +15m.35s., SR_1 = +25m.17s.?, SR_2 = +28m.53s. Ravensburg eLN = +40·3m. Zagreb e = +18m.17s.? = PR_2 − 11s., eNW = +32m.53s. Paris MN = +57·3m. Fordham MN = +51·3m. Georgetown iZ = +15m.36s. = PR_1 − 22s. Charlottesville eSR_1N = +27m.23s. Placenza MN = +52·6m. Riverview PS = +23m.8s., MN = +44·9m. Rocca di Papa e = +12m.31s. Adelaide iSR_1 = +28m.55s., MN = +44·9m. Wellington iSN = +24m.3s. Tananarive eE = +29m.52s. = PS − 4s., eEN = +36m.4s. = SR_1 + 16s., eE = +45m.50s. La Paz iPR_1? = +22m.50s. Sucre PR_1 = +22m.18s.

July 14d. Readings also at 0h. (Ravensburg, Neuchatel, near Chur, and Zurich), 2h. (Andijan), 5h. (Riverview), 6h. (Baku, Scoresby Sund, Copenhagen, De Bilt, Ekaterinburg, Pulkovo, Ann Arbor, Ottawa, Toronto, Adelaide, Melbourne, and Wellington), 7h. (Florissant, La Paz (2), Sucre, Rio de Janeiro, Ottawa, Paris, Baku, Ekaterinburg, Pulkovo, and near Wellington), 8h. (Ann Arbor, Scoresby Sund, De Bilt, and Paris), 11h. (Bergen), 15h. (Wellington and near Yalta), 21h. (Entebbe and La Paz), 22h. (Irkutsk, Tashkent, and near Lick), 23h. (Baku and Ekaterinburg).

July 15d. 7h. 44m. 7s. Epicentre 33°·7N. 49°·4E.

A = +·541, B = +·632, C = +·555; D = +·759, E = −·651; G = +·361, H = +·421, K = −·832.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	h. m. s.	s.	m. s.	s.	m.	m.
Baku	6·6	3	i 2 10	+29	—	—	i 4·2	—
Ksara	11·2	274	2 52	+ 5	5 46	+47	—	—
Theodosia	15·6	320	i 4 5	+18	i 7 22	+36	1 10·5	—
Helwan	15·7	261	i 3 45	− 3	6 53	+ 5	—	12·4
Simferopol	16·3	318	4 10	+14	7 28	+26	11·0	—
Sebastopol	16·4	316	4 13	+16	7 32	+28	—	—
Tashkent	17·4	58	i 4 20	+10	—	—	—	—
Andijan	19·3	64	4 41	+ 8	e 8 40	+32	11·9	—
Almata	23·4	58	5 25	+ 4	9 38	+ 5	—	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Kucino		23·4	344	i 5 29	+ 8	i 9 57	+24	14·1	21·1
Ekaterinburg		24·4	15	i 5 29	− 3	i 10 1	+ 9	13·4	17·9
Dehra Dun		24·4	90	9 33	?S	(9 33)	−19	15·7	16·9
Lemberg		24·6	319	5 29	− 5	e 10 5	+10	—	10·5
Belgrade		24·9	305	e 5 59	+22	e 10 26	+25	—	—
Bombay		25·6	119	5 28	−16	9 52	−22	13·2	22·7
Taranto		26·3	294	5 52	+ 1	10 36	+ 8	—	19·2
Trenta		27·0	292	i 5 53	− 5	10 28	−13	—	—
Catania		28·1	288	6 10	+ 1	10 59	− 2	e 19·8	30·6
Zagreb		28·1	306	e 6 8	− 1	e 10 51	−10	e 14·8	—
Mineo		28·3	287	6 58	?PR_1	—	—	—	—
Pompeii		28·5	294	e 6 15	+ 2	e 10 55	−13	20·9	—
Vienna		28·6	310	6 7	− 7	11 14	+ 4	i 12·5	18·9
Naples	E.	28·7	295	e 6 28	+13	e 12 23	?SR_1	—	—
Pulkovo		28·7	340	i 6 17	+ 2	i 11 15	+ 3	16·9	19·5
Graz		28·8	308	e 6 16	0	i 11 8	− 5	12·9	20·1
Laibach		29·2	306	e 6 21	+ 1	e 11 14	− 6	e 20·7	—
Konigsberg		29·2	325	e 6 22	+ 2	i 11 21	+ 1	e 14·4	15·4
Rocca di Papa		29·9	297	6 21	− 6	i 11 23	− 9	e 18·4	23·9
Rome		30·1	297	e 6 27	− 2	i 11 28	− 8	—	—
Venice		30·5	306	e 6 33	0	e 11 37	− 6	—	—
Hyderabad		30·6	115	—	—	11 10	−34	17·1	20·1
Treviso		30·7	306	e 6 33	− 2	i 11 38	− 8	—	—
Helsingfors		30·9	336	i 6 37	0	i 11 48	− 2	e 14·6	—
Padova		30·9	306	e 6 39	+ 2	i 11 43	− 7	—	—
Florence		31·1	300	6 34	− 5	11 44	− 9	16·9	—
Cheb		31·3	315	e 6 41	0	e 11 59	+ 3	—	24·9
Innsbruck		31·6	309	6 41	− 2	11 46	−15	—	—
Potsdam		32·0	319	i 6 44	− 3	i 12 2	− 6	e 23·0	24·9
Jena	E.	32·3	315	e 6 15	0	e 11 53	−20	e 17·9	32·4
	N.	32·3	315	e 6 53	+ 2	e 12 5	− 8	e 23·5	27·7
	Z.	32·3	315	e 6 47	− 4	—	—	e 21·5	24·4
Piacenza		32·4	303	6 51	− 1	12 5	− 9	—	26·0
Chur		32·7	306	e 6 47	− 7	i 12 6	−13	—	—
Ravensburg		32·8	309	e 6 45	−10	i 12 4	−17	i 17·1	20·9
Hohenheim		33·3	310	e 6 15	− 8	i 12 18	−11	—	—
Upsala		33·4	332	e 7 19	+19	i 12 23	− 7	e 20·9	22·3
Gottingen	E.	33·5	316	e 6 58	− 3	i 12 24	− 8	e 19·2	24·3
	N. or Z.	33·5	316	e 6 53	− 8	i 12 25	− 7	e 22·1	24·2
Zurich		33·5	306	e 6 54	− 7	e 12 18	−14	—	—
Copenhagen		33·6	324	i 6 58	− 3	i 12 28	− 6	—	—
Moncalieri		33·8	303	e 7 4	+ 1	12 16	−22	16·4	22·9
		33·8	303	e 7 8	+ 5	12 21	−17	16·4	26·9
Feldberg	N.	34·1	313	e 6 53	−13	i 12 26	−16	—	23·7
Hamburg		34·1	319	i 7 1	− 5	i 12 36	− 6	e 19·9	23·9
Strasbourg		34·2	310	e 7 9	+ 2	e 12 35	− 8	16·9	—
Neuchatel		34·5	306	e 7 2	− 7	e 12 33	−15	—	—
Kodaikanal		34·8	126	11 5	?	—	—	—	—
Besançon		35·2	308	e 7 8	− 7	i 12 44	−14	16·9	—
Grenoble		35·2	305	e 7 27	+12	e 12 48	−10	—	—
Calcutta	E.	35·9	96	e 10 14	?	—	—	20·7	—
De Bilt		36·5	316	7 22	− 4	13 11	− 6	e 19·9	26·2
Uccle		36·7	313	e 7 22	− 6	i 13 15	− 5	15·9	25·4
Entebbe		37·2	211	7 3	−29	12 38	−49	—	22·5
Algiers		37·6	290	e 7 28	− 7	—	—	—	—
Paris		37·6	310	e 7 30	− 5	i 13 23	− 9	17·9	22·9
Colombo		38·8	127	13 18	?S	(13 18)	−31	23·2	27·0
Bergen		39·0	326	7 21	−25	13 53?	+ 1	23·9	27·9
Tortosa	N.	39·1	297	e 7 34	−13	i 13 42	−11	16·7	—
Kew		39·7	315	7 48	− 4	i 13 57	− 5	19·9	25·9
Alicante		40·2	294	e 8 0	+ 3	e 13 58	−12	e 21·6	—
Oxford		40·4	315	7 50	− 8	i 14 3	−10	e 21·3	28·7

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Stonyhurst		41·3	317	8 3	− 2	i 13 23	−62	—	30·4
Dyce		41·7	320	—	—	i 14 27	− 4	21·4	29·9
Almeria		41·9	290	8 5	− 5	14 24	−10	30·8	33·0
Edinburgh		42·0	319	e 9 53?	?PR_1	i 14 33	− 2	—	30·9
Toledo		42·6	295	e 8 8	− 7	i 14 36	− 7	e 20·0	32·2
Granada		42·8	290	i 8 12	− 5	i 14 36	− 9	26·1	30·4
Irkutsk		43·0	45	i 8 15	− 3	i 14 48	0	24·9	26·3
Malaga		43·5	290	8 57	+35	15 45	+50	19·9	—
San Fernando		45·0	290	8 31	− 2	i 15 5	−10	—	27·4
Phu-Lien		51·8	88	9 13	− 6	e 16 34	− 7	22·9	—
Scoresby Sund		52·3	336	9 30	+ 8	17 6	+18	27·9	—
Tananarive	E.	52·6	182	—	—	i 16 20	−31	e 25·4	38·1
	N.	52·6	182	e 9 8	−16	e 16 23	−28	e 29·4	35·9
Hong Kong		57·4	83	9 54	− 1	17 51	0	e 28·9	41·1
Zi-ka-wei	Z.	59·5	69	e 10 9	0	—	—	—	39·6
Taihoku		62·2	76	e 11 23	− 3	—	—	—	—
Nagasaki		65·4	64	—	—	—	—	e 36·6	—
Manila		66·8	85	i 11 9	+12	i 20 4	?PS	—	—
Batavia		67·3	115	i 11 54	+54	i 19 39	−15	—	—
Sumoto		68·4	60	e 20 14	?S	(e 20 14)	+ 7	e 40·7	48·5
Kobe		68·5	60	—	—	e 20 14	+ 6	e 42·6	44·8
Nagoya		69·5	59	—	—	e 22 19	? Σ	—	—
Akita		69·7	54	11 20	+ 5	20 30	+ 8	—	—
Cape Town		73·6	208	—	—	—	—	42·9	43·9
Ottawa	E.	86·7	325	e 16 17	?PR_1	e 23 18	−20	54·9	—
Sitka	E.	89·0	3	e 13 7	− 3	(e 23 32)	[+10]	e 23·5	—
Toronto		89·7	326	—	—	e 23 41	[+15]	55·9	—
Georgetown	Z.	92·1	322	e 13 24	− 4	—	—	e 46·9	60·1
Victoria	E.	97·6	355	24 28	?S	(24 28)	[+17]	55·3	58·0
Florissant	N.	98·4	330	e 17 53	[+12]	e 24 23	[+ 8]	e 46·9	59·1
Rio de Janeiro	N.	104·5	252	—	—	e 25 48	? Σ	—	—
Tucson		111·4	341	e 18 44	[+18]	e 25 28	[+12]	—	—
La Paz		121·8	268	20 57	?PR_1	—	—	66·3	74·0

Additional readings: Dehra Dun S = +12m.43s. Lemberg ePE = +5m.35s. Zagreb MN = +11·5m. Belgrade iN = +10m.36s., eN = +16m.49s. Laibach ePR$_1$N = +7m.36s., e = +6m.35s. Vienna PR$_2$ = +7m.22s. eN = +8m.42s. and +9m.53s., eLN = +19·7m. Konigsberg eEN = +6m.26s., ePR$_1$Z = +7m.10s., eZ = +7m.27s., ePR$_1$EN = +7m.35s., eNZ = +7m.59s., eN = +8m.23s., eEZ = +9m.2s., eZ = +9m.23s., eN = +9m.29s. eE = +9m.44s., eN = +10m.19s., i = +11m.21s., eZ = +11m.47s., eP$_c$SN = +12m.40s., iN = +13m.0s., iZ = +13m.5s., iN = +13m.41s., MZ = +14·6m., MN = +15·1m. Rocca di Papa eS = +11m.13s. Rome eS = +11m.22s. Helsingfors PR$_1$ = +7m.30s. Innsbruck PR$_2$ = +7m.56s., PS = +12m.1s., S$_c$S = +16m.59s. Jena iN = +17m.5s. Piacenza MN = +23·6m. Hohenheim i = +7m.20s. and +8m.58s. Moncalieri (first line) MN = +20·3m. Feldberg i = +14m.44s. = SR$_1$ + 6s. Hamburg MN = +25·6m. Besançon i = +7m.34s. De Bilt ePR$_1$Z = +8m.50s., MN = +22·0m. Uccle ePR$_1$ = +8m.52s. Colombo S = +16m.18s. = SR$_1$ − 2s. Bergen i = +17m.27s. Kew PR$_1$Z = +9m.24s., eSR$_1$N = +17m.3s. Oxford i = +17m.10s. Dyce i = +18m.32s. Almeria PR$_1$ = +9m.42s. Toledo MNW = +32·0m. Granada i = +8m.35s., PR$_1$ = +10m.9s., i = +14m.55s., +15m.44s., and +20m.48s. San Fernando MN = +28·0m. Scoresby Sund +11m.29s. = PR$_2$ − 10s., and +20m.45s. = SR$_1$ − 5s., S$_c$P$_c$S? = +19m.17s. Tananarive eEN = +18m.36s. = [S] − 20s., E = +18m.56s. = [S] + 0s., S$_c$SN = +19m.32s., SR$_1$E = +20m.14s., E = +21m.23s., N = +22m.45s., E = +23m.58s. Kobe MN = +46·3m. Ottawa e = +29m.31s. = SR$_1$ − 15s., eE = +36m.23s. = SR$_2$ + 29s., LN = +50·9m. Sitka ePR$_1$E = +13m.46s., eE = +16m.44s. = PR$_1$ − 16s., iSE = +18m.31s. Georgetown eZ = +16m.2s., iZ = +26m.0s. Florissant eN = +25m.23s. La Paz e? = +20m.10s., MN = +72·9m.

July 15d. 8h. 58m. 4s. Epicentre 41°·8S. 172°·2E. (as on July 8d.).

A = −·739, B = +·101, C = −·667; D = +·136, E = +·991;
G = +·660, H = −·090, K = −·745.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Christchurch		1·8	170	0 27	− 1	0 45	− 6	—	—
Wellington	E.	2·0	75	i 0 22	− 9	i 0 45	−10	—	—
Riverview		18·4	289	e 3 26	−56	i 7 58	+ 9	9·5	11·1
Melbourne		21·2	272	i 5 4	+ 9	8 44	− 4	10·7	13·1
Suva	E.	24·3	14	i 5 32	+ 1	—	—	—	—
Adelaide		27·0	274	e 6 3?	+ 5	e 10 41	0	12·4	16·4
Bombay		109·3	278	—	—	—	—	e 58·9	—
Florissant	N.	119·5	61	—	—	—	—	e 48·9	60·9
Almata		120·4	302	e 65 8	?L	—	—	(e 65·1)	—
Andijan		121·9	297	e 61 2	?L	—	—	(e 61·0)	—
Tashkent		124·4	297	—	—	—	—	e 70·9	78·4
Toronto		129·1	61	—	—	—	—	68·9	—
Ottawa		132·1	60	—	—	—	—	e 59·9	—
Baku		137·3	288	—	—	—	—	e 61·9	—
Ksara		145·0	270	19 42	[− 6]	24 57	?	28·9	—
Kucino		147·5	310	—	—	e 49 34	?	—	—
Scoresby Sund		150·4	10	—	—	—	—	79·9	—
Pulkovo		150·6	321	—	—	—	—	81·9	—
Copenhagen		160·9	323	—	—	—	—	91·9	—
Zagreb		162·4	291	e 20 51	[+42]	e 24 41	?PR_1	—	—
De Bilt		166·5	324	—	—	—	—	e 89·9	109·9
Uccle		167·7	321	—	—	—	—	91·9	—
Kew		169·1	335	—	—	—	—	e 86·9	—
Paris		169·9	318	—	—	—	—	e 91·9	—
Granada		174·4	216	—	—	—	—	e 86·9	89·9

Additional readings: Wellington iPN = +25s. Riverview MN = +12·2m.
Suva eN = +6m.50s. Adelaide MN = +14·1m. De Bilt MN = +105·7m.

July 15d. 14h. 29m. 36s. Epicentre 31°·0S. 71°·0W. (as on 1929 April 16d.).

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		2·5	171	0 49	+10	1 7	− 2	1·4	—
La Plata		11·7	113	2 52	− 3	5 5	− 7	5·7	—
La Paz		14·7	11	3 34	− 1	6 31	+ 6	7·2	7·5
Rio de Janeiro	E.	26·0	79	e 6 24	+36	11 2	+40	13·4	—
	N.	26·0	79	e 6 27	+39	10 57	+35	13·2	—
Georgetown	Z.	70·2	356	i 11 12	− 6	i 20 35	+ 7	—	—
Granada		92·8	49	e 13 25	− 6	—	—	47·4	49·7
Paris		103·1	41	—	—	—	—	e 56·4	—
De Bilt		106·3	40	—	—	—	—	e 53·4	—
Copenhagen		111·7	37	—	—	—	—	54·4	—
Pulkovo		121·9	35	—	—	—	—	e 50·4	—
Kucino		125·6	41	—	—	—	—	e 65·9	—
Ekaterinburg		138·0	38	e 22 12	?PR_1	e 34 8	?	67·6	80·2
Tashkent		146·6	61	—	—	—	—	e 62·4	86·4
Irkutsk		158·4	8	—	—	—	—	92·4	—

La Paz gives also iSE = +6m.36s.

July 15d. 22h. 45m. 40s. Epicentre 35°·5N. 142°·0E. (as on 1923 May 6d.).

A = −·642, B = +·501, C = +·581; D = +·616, E = +·788;
G = −·458, H = +·358, K = −·814.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	3·7	350	0 59	+ 1	1 39	− 3	—	—
Nagoya		4·2	266	e 0 59	− 6	2 3	+ 8	—	—
Akita		4·5	341	1 7	− 3	—	—	2·4	3·2
Osaka		5·4	263	1 25	+ 2	(2 34)	+ 6	2·6	3·2
Kobe		5·7	263	e 1 44	+16	—	—	2·8	2·9
Sumoto		6·0	261	e 2 13	+41	e 3 9	?L	(e 3·2)	3·2

Additional readings: Osaka MN = +3·1m. Sumoto MN = +3·4m.

July 15d. 23h. 37m. 22s. Epicentre 44°·8N. 14°·7E. (as on 1925 May 1d.).

A = +·686, B = +·180, C = +·705; D = +·254, E = −·967;
G = +·682, H = +·179, K = −·710.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Laibach	E.	1·2	354	i 0 18	0	i 0 27	− 6	—	0·5
Zagreb		1·3	42	e 0 23	+ 3	i 0 36	0	—	0·8
Venice		1·8	291	i 0 8	−20	i 0 59	+ 8	—	—
Padova		2·0	287	e 1 8	?L	—	—	(e 1·1)	—
Graz		2·3	13	e 0 38	+ 2	i 1 6	+ 3	—	1·2
Rocca di Papa		3·4	206	e 1 21	+28	1 50	+16	(1·8)	2·6
Vienna		3·6	18	e 1 37	?L	(e 1 37)	− 2	—	—
Chur		4·1	303	e 1 4	0	e 2 6	+13	—	—
Ravensburg		4·6	313	—	—	e 2 14	+ 8	—	—
Zurich		5·0	304	e 1 29	+12	—	—	—	—
Hohenheim		5·4	319	—	—	e 2 44	+16	—	—
Neuchatel		5·8	295	e 1 26	− 4	e 2 32	− 7	—	—
Strasbourg		6·1	311	—	—	—	—	e 3·2	—

Additional readings: Zagreb e = +26s., i = +28m., +29s., and +33s., MNW = +0·7m. Rocca di Papa eP = +1m.26s. Neuchatel eP = +1m.48s., eS = +3m.3s.

July 15d. Readings also at 4h. (Nagasaki), 6h. (Wellington), 8h. (Simferopol), 9h. (Granada, Christchurch, and near Wellington), 11h. (near Algiers), 13h. (La Paz), 16h. (Entebbe, La Paz, Christchurch (2), and near Wellington), 17h. (Granada), 20h. (Amboina, Wellington, Batavia, and Manila), 21h. (La Paz), 22h. (Entebbe and Gottingen).

July 16d. 19h. 43m. 15s. Epicentre 28°·7N. 51°·9E. (as on 1928 Aug. 27d.).

A = +·541, B = +·690, C = +·480; D = +·787, E = −·617;
G = +·296, H = +·378, K = −·877.

Very doubtful.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Baku	11·8	353	—	—	—	—	3·6	9·0
Ksara	14·6	295	e 3 37	+ 3	6 30	+ 8	7·6	—
Helwan	18·0	279	e 3 46	−31	e 8 45	+65	—	13·3
Tashkent	18·9	44	4 13	−15	—	—	e 8·9	13·2
Andijan	20·3	50	e 4 48	+ 3	—	—	—	—
Ekaterinburg	28·8	8	e 5 40	−36	e 10 29	−44	15·0	17·8
Pulkovo	34·3	341	—	—	(e 11 45?)	−59	11·8	—
Copenhagen	38·9	325	—	—	—	—	17·8	—
De Bilt	41·6	317	—	—	—	—	e 19·8	—
Irkutsk	45·0	43	—	—	—	—	18·8	—
Scoresby Sund	57·7	338	—	—	—	—	28·8	—

Additional readings and note: Tashkent e = +10m.3s. Ekaterinburg readings are given without phase.

July 16d. Readings also at 0h. (Apia and Suva), 1h. (Adelaide, Melbourne, Riverview, Christchurch, Wellington, Sucre, Florissant, Georgetown, Ottawa, Toronto, Scoresby Sund, Ekaterinburg, Tashkent, De Bilt, Granada, Hamburg, Kew, and Paris), 2h. (Baku, Kucino, and Copenhagen), 4h. (near Algiers), 6h. (Amboina, near Taihoku, and near Neuchatel), 10h. (near La Paz and near Tacubaya), 13h. (near Nagasaki), 14h. (near Wellington), 15h. (Trenta), 21h. (Lick), 22h. (Wellington), 23h. (Almata, Andijan, Tashkent, Bombay, Calcutta, Irkutsk, Ekaterinburg, Copenhagen, and De Bilt).

July 17d. 8h. 37m. 57s. Epicentre 51°·0N. 179°·5W.

(as on 1929 July 5d.).

A = −·629, B = −·005, C = +·777; D = −·009, E = +1·000; G = −·777, H = −·007, K = −·629.

Of the three previously adopted epicentres in this region the above is best suited to the observations of this earthquake. The other positions are 51°·6N. 179°·0W. of 1929 July 11d., and 50°·5N. 178°·3W. of 1929 July 8d.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ootomari		24·9	275	5 37	0	8 29	−92	—	—
Sitka	E.	26·1	59	e 6 3	+14	i 10 27	+ 3	i 14·0	—
Akita		30·1	264	7 25	+56	e 12 10	+34	—	—
Tokyo		32·8	260	6 26	−29	—	—	—	—
Honolulu T.H.	E.	34·1	142	6 57	− 9	12 20	−22	15·4	—
	N.	34·1	142	6 53	−13	i 12 22	−20	15·2	—
Victoria	E.	35·6	73	7 2	−16	12 42	−22	17·0	17·5
	N.	35·6	73	7 2	−16	11 38	−86	14·3	15·7
Osaka		36·1	262	(e 7 17)	− 6	—	—	(11·3)	(13·9)
Kobe		36·3	264	7 17	− 7	12 59	−15	e 16·1	19·5
Sumoto		36·7	263	e 6 32	−56	(13 12)	− 8	—	13·2
Nagasaki		40·9	266	7 56	− 6	14 13	− 7	—	—
Tucson	E.	52·5	85	e 9 22	− 1	16 44	− 6	e 25·0	—
	N.	52·5	85	e 9 23	0	16 47	− 3	e 24·1	—
Scoresby Sund		57·4	10	i 9 57	+ 2	17 51	0	—	—
Hong Kong		58·0	269	10 2	+ 3	18 6	+ 7	e 24·8	32·4
Chicago	E.	60·0	60	10 7	− 5	18 13	−10	e 27·9	—
	N.	60·0	60	10 7	− 5	18 14	− 9	e 27·4	—
Florissant		60·4	65	e 10 17	+ 2	e 18 27	− 1	e 28·0	33·9
		60·4	65	i 10 16	+ 1	i 18 27	− 1	—	36·0
St. Louis	E.	60·6	65	e 10 18	+ 2	e 18 42	+11	—	—
Ekaterinburg		61·3	329	i 10 30	+ 9	—	—	35·5	39·2
Ann Arbor		61·6	57	—	—	e 19 15	+32	e 37·0	—
Toronto		62·8	53	10 20	−11	18 42	−16	28·3	34·0
Ottawa		63·4	50	e 10 37	+ 3	i 19 3	− 3	e 29·4	36·8
Phu-Lien		63·9	273	e 10 43	+ 6	e 19 11	− 1	29·0	—
Almata		64·8	310	e 10 50	+ 6	—	—	—	—
Pulkovo		66·6	346	11 0	+ 5	20 5	+20	33·0	46·7
Helsingfors		67·1	348	e 11 4	+ 5	e 19 55	+ 4	e 31·0	—
Charlottesville	E.	67·4	58	—	—	(e 20 15)	+20	36·1	—
	N.	67·4	58	—	—	(e 20 1)	+ 6	39·9	—
Georgetown	Z.	67·5	56	i 11 9	+ 8	e 20 6	+10	e 29·6	43·4
Fordham		67·6	54	e 11 4	+ 2	i 19 59	+ 2	e 30·6	39·0
Upsala	N.	68·3	353	e 11 8	+ 2	e 20 2	− 4	—	42·6
Bergen		68·5	358	i 12 14	+66	—	—	—	41·0
Kucino		68·8	340	11 13	+ 3	20 29	+17	33·3	42·6
Andijan		69·3	311	e 11 22	+ 9	—	—	—	—
Tashkent		70·0	314	i 11 25	+ 8	i 20 32	+ 6	—	46·2
Dyce		71·7	2	11 30	+ 2	e 20 46	0	e 37·0	47·6
Copenhagen		72·8	355	i 11 38	+ 3	—	—	—	—
Konigsberg		72·8	349	e 11 39	+ 4	e 21 3	+ 3	e 37·0	48·0
Edinburgh		73·0	3	—	—	e 21 3	+ 1	32·0	—
Dehra Dun		74·0	300	12 3?	+21	22 3?	[+21]	40·0	50·0
Stonyhurst		75·0	2	—	—	21 3?	−23	—	—
Hamburg		75·1	355	i 11 52	+ 2	e 21 25	− 2	e 37·0	49·4
Agra	N.	76·4	299	11 28	−29	i 21 8	−34	e 42·5	47·1

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
De Bilt		76·8	357	i 12 2	+ 2	21 49	+ 2	e 37·0	50·2
Oxford		77·2	2	12 5	+ 3	i 22 5	[+ 1]	e 40·0	55·0
Kew		77·5	0	i 12 5	+ 1	22 9	[+ 3]	37·0	47·0
Jena		77·7	355	e 12 3	− 2	—	—	—	—
Uccle		78·1	358	e 12 8	0	e 22 0	− 1	—	—
Cheb		78·4	353	—	—	e 22 3?	− 2	e 45·0	52·0
Feldberg	N.	78·6	357	i 12 3	− 8	e 22 0	− 7	—	55·0
Baku		79·0	324	12 16	+ 3	i 22 17	+ 5	39·0	48·1
Theodosia		79·3	339	12 20	+ 5	e 22 18	+ 3	43·0	—
Simferopol		79·7	339	e 12 19	+ 2	—	—	e 47·5	—
Vienna		79·8	350	12 18	0	22 37	+16	e 39·0	64·0
Paris		80·2	359	—	—	(e 22 3)	−22	e 22·0	61·0
Strasbourg		80·2	356	i 12 25	+ 5	22 33	+ 8	38·0	—
Ravensburg		80·8	356	e 12 23	− 1	e 22 27	− 6	e 42·0	49·0
Innsbruck		81·2	355	12 33	+ 7	—	—	—	—
Zurich		81·4	356	e 12 26	− 1	e 22 36	− 3	—	—
Neuchatel		81·8	356	e 12 28	− 1	—	—	—	—
Chur		81·9	356	e 12 29	− 1	—	—	—	—
Zagreb		82·2	350	e 12 32	+ 1	e 22 43	− 5	43·0	52·0
Piacenza		83·6	355	12 39	− 1	23 3	− 2	—	59·9
Hyderabad		83·8	291	12 39	− 2	23 0	− 7	43·1	53·6
Moncalieri		83·8	355	e 12 34	− 7	22 59	− 8	39·7	50·5
Florence		84·7	354	i 12 43	− 3	e 23 3	−13	44·0	58·5
Bombay		85·9	297	12 51	− 2	23 26	− 3	45·1	53·4
Rome		86·5	351	12 55	− 1	e 22 39	[−27]	—	—
Rocca di Papa		86·6	351	i 12 54	− 3	23 17	[+11]	59·2	—
Taranto		87·3	349	—	—	(e 24 3)	+19	e 24·0	62·0
Tortosa	N.	88·2	0	e 13 54	+48	25 0	+66	e 39·0	62·0
Riverview		88·7	204	—	—	e 23 20	[0]	e 44·4	50·0
Toledo		89·0	5	e 13 4	− 6	e 23 31	[+ 9]	e 38·1	53·4
Ksara	E.	89·6	332	e 12 48	−26	—	—	53·0	—
Kodaikanal		90·1	286	22 33	?	—	—	—	—
Alicante		90·7	1	—	—	e 26 38	?	—	—
Colombo		91·2	282	12 41	−41	24 3	? Σ	45·8	57·8
Granada		91·8	5	i 13 14	−12	e 24 8	? Σ	47·0	55·4
Almeria		92·1	3	e 13 11	−17	—	—	49·7	58·1
Algiers		92·2	358	—	—	e 23 47	[+ 6]	57·0	64·0
San Fernando	E.	92·4	5	—	—	—	—	—	62·0
Wellington		92·4	185	—	—	i 24 44	+ 5	44·0	—
Adelaide		93·5	215	—	—	e 23 54	[+ 5]	41·4	51·0
Melbourne		94·1	209	—	—	24 43	? Σ	43·5	53·4
La Paz		116·2	84	20 3	?PR_2	—	—	65·0	79·4
Rio de Janeiro	E.	136·8	67	—	—	—	—	e 77·0	—

Additional readings and notes : Sitka eE = +9m.5s., eN = +12m.45s. Honolulu T.H. PR_1N = +8m.10s. = PR_1 − 1s., eSR_1E = +13m.56s., eSR_1N = +14m.23s. Osaka readings have been *increased* by 4m. Tucson SR_1E = +20m.20s. Scoresby Sund (no phase) +13m.15s. and +22m.15s. = SR_1 − 9s., S_cP_cS? = +19m.10s., SR_2 = +24m.27s. Chicago eN = +19m.43s. = [S] − 12s. Florissant (first line) iPR_1Z = +12m.47s., iSNZ = +18m.29s., iZ = +20m.7s. = [S] + 9s. ; second line iE = +10m.29s., eE = +20m.4s. Ekaterinburg PR_1 = +13m.20s., PR_2 = +14m.43s., PS = +19m.43s. Ann Arbor e?E = +19m.21s., e?EN = +20m.9s., e?E = +29m.57s., eN = +31m.27s., e?E = +33m.39s. Toronto MN = +39·0m. Ottawa SR_1 = +23m.59s., SR_2 = +26m.7s., MN = +39·7m. ; T_1 = 8h. 38m.9s. Helsingfors PR_2 = +15m.13s. Charlottesville eSRE = +32m.3s., eSRN = +33m.3s. ; S is given as eSR_1. Fordham eLN = +31·8m., MN = +42·0m. Upsala eSE = +20m.4s., ME = +44·7m. Konigsberg +9m.51s., ePR_1N = +14m.29s., ePR_2E = +16m.3s., ePR_2N = +16m.9s., eN = +20m.3s., eE = +20m.39s., ePSN = +21m.17s., eS_cP_cSEN = +21m.54s., eN = +29m.49s. = SR_2 + 21s., +29m.51s., and +33m.3s. Hamburg MZ = +48·0m., MN = +51·0m. De Bilt MZ = +48·5m., MN = +53·8m. Jena eN = +20m.39s. Cheb MN = +51·0m. Vienna PS = +23m.24s. Strasbourg PR_1 = +15m.42s., PR_2 = +17m.38s., PS = +23m.21s. Zagreb eNW = +14m.50s., ePS = +23m.46s. Hyderabad MN = +53·4m. Ksara LN = +52·0m. Granada PR_1 = +16m.42s., i = +18m.42s., +19m.2s. and +25m.35s. = PS + 6s. Algiers ePR_1 = +16m.39s. Wellington LN = +45·0m. Adelaide e = +31m.8s., MN = +49·5m. Melbourne i = +25m.56s. = PS + 0s. and +31m.33s. = SR_1 + 10s.

July 17d. 10h. 49m. 28s. Epicentre 36°·5N. 140°·5E. (as on 1929 April 17d.).

A = −·620, B = +·511, C = +·595; D = +·636, E = +·772; G = −·459, H = +·378, K = −·804.

The depth of focus 0·015 used on the previous occasion with this epicentre is retained now.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	+0·2	2·6	10	0 44	0	1 18	+ 1	—	—
	N.	+0·2	2·6	10	0 45	+ 1	1 20	+ 3	—	—
Akita		+0·1	3·2	354	i 0 52	0	—	—	i 1·6	1·8
Nagoya		+0·1	3·2	245	e 0 52	0	(1 22)	− 9	1·4	1·7
Osaka		0·0	4·5	248	0 57	−13	(1 55)	− 9	1·9	3·1
Kobe		0·0	4·7	249	e 1 18	+ 5	2 0	− 9	—	2·0
Toyooka		0·0	4·7	260	e 1 5	− 8	(2 4)	− 5	2·1	2·2
Sumoto		0·0	5·1	246	0 42	−37	2 2	−18	—	2·4
Koti		−0·1	6·4	245	—	—	e 2 41	−11	—	—

Additional readings: Akita MN = +1·6m. Nagoya MZ = +1·9m., MN = +2·0m. Osaka MN = +2·4m., MZ = +2·6m. Sumoto MNZ = +2·3m.

July 17d. 19h. 52m. 12s. Epicentre 22°·0S. 160°·5W.

A = −·874, B = −·310, C = −·375; D = −·334, E = +·943; G = +·353, H = +·125, K = −·927.

Very rough.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		13·5	305	5 48	?S	(5 48)	− 8	—	12·8
Suva		20·2	277	i 4 48	+ 5	8 36	+ 9	—	11·8
Wellington		28·4	221	—	—	—	—	14·6	—
Riverview		43·9	244	—	—	e 14 54	− 7	e 19·8	23·3
Adelaide		54·3	242	—	—	e 16 8	−65	e 23·1	28·3
Victoria		77·9	23	25 26	?	—	—	43·3	45·6
La Paz		86·0	106	15 49	?	—	—	—	—
Florissant	N.	89·4	46	—	—	e 27 48	?	61·8	71·8
Georgetown	Z.	98·8	50	—	—	—	—	e 58·0	—
Toronto		98·9	45	—	—	—	—	53·8	—
Fordham		101·8	50	—	—	—	—	61·3	—
Ottawa	E.	101·9	45	—	—	—	—	57·8	—
Scoresby Sund		125·8	15	—	—	—	—	67·8	—
Ekaterinburg		134·1	330	—	—	—	—	72·3	76·0
Tashkent		134·2	307	—	—	—	—	e 61·8	74·7
Kucino		143·6	342	—	—	—	—	e 81·8	—
Copenhagen		145·9	6	—	—	—	—	85·8	—
Kew		146·8	23	—	—	—	—	e 87·8	—
Hamburg	Z.	147·6	10	e 22 38	?PR_1	—	—	—	—
De Bilt		147·9	15	e 22 42	?PR_1	—	—	e 81·8	93·2
Baku		148·4	313	—	—	—	—	e 81·3	—
Ucclo		148·9	20	—	—	—	—	e 89·8	—
Paris		150·0	24	e 22 48?	?	—	—	84·8	—
Granada		154·9	48	e 23 21	?	—	—	86·8	90·8

Additional readings: Apia S = +6m.48s. Suva S?N = +8m.12s., MN = +9·2m. Riverview MN = +23·2m. Adelaide MN = +27·1m. Florissant eN = +48m.48s. Georgetown eZ = +40m.48s. Fordham eN = +55m.48s. Ottawa eN = +53m.48s. ? Granada i = +24m.7s. = PR_1 +0s.

July 17d. Readings also at 0h. (Ekaterinburg, Tashkent, Almata, and Andijan), 1h. (near La Paz), 2h. (near Wellington), 5h. (Florence), 6h. (La Paz, Almeria, near Granada, and Malaga), 8h. (near Tacubaya), 10h. (Granada), 16h. (Basel and Wellington), 19h. (Baku, Ekaterinburg, Tashkent, Andijan, Batavia, and near Amboina), 22h. (Nagoya, near Akita (2), and near Mizusawa (2)), 23h. (near Chur, Neuchatel, and Zurich).

July 18d. 21h. 1m. 58s. Epicentre 43°·8N. 11°·2E. (as on 1929 June 12d.).

$A = +\cdot708$, $B = +\cdot140$, $C = +\cdot692$; $D = +\cdot194$, $E = -\cdot981$; $G = +\cdot679$, $H = +\cdot134$, $K = -\cdot722$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Florence		0·0	—	i 0 4	+ 4	—	—	—	0·4
Livorno		0·7	248	0 8	− 3	0 19	− 1	—	—
Padova		1·7	17	e 0 30	+ 4	i 0 47	− 1	—	—
Venice		1·9	26	i 0 28	− 1	i 0 46	− 7	—	—
Treviso		2·0	21	i 0 29	− 2	i 1 2	+ 7	—	1·3
Rocca di Papa		2·3	152	e 0 40	+ 4	1 19	+16	—	1·6
Moncalieri		2·8	295	0 46	+ 2	1 20	+ 3	—	2·5
		2·8	295	e 0 55	+11	e 1 29	+12	—	5·9
Chur		3·2	338	e 0 52	+ 2	i 1 30	+ 2	—	—
Laibach	E.	3·3	46	e 0 45	− 7	i 1 25	− 6	—	2·2
Innsbruck		3·5	2	0 54	− 1	(i 1 35)	− 2	i 1·6	1·7
Naples	E.	3·7	141	e 1 33	?S	(e 1 33)	− 9	(e 2·4)	—
Pompeii		3·9	142	e 1 31	+30	(e 1 31)	−16	(e 2·4)	—
Zagreb		4·0	58	1 2	0	e 1 50	0	—	2·6
Zurich		4·0	332	i 1 2	0	—	—	—	—
Ravensburg		4·2	345	e 1 4	− 1	1 54	− 1	i 2·2	—
Neuchatel		4·4	318	i 1 8	0	i 1 58	− 3	—	—
Graz		4·5	41	e 1 7	− 3	e 1 50	−14	—	2·8
Besançon		5·0	316	e 1 45	+28	i 2 19	+ 2	—	—
Hohenheim		5·1	346	e 1 15	− 4	2 12	− 8	i 2·7	2·8
Strasbourg		5·3	334	i 1 18	− 4	i 2 21	− 4	—	—
Karlsruhe		5·6	341	1 42	+15	—	—	—	—
Vienna		5·7	37	e 1 32	+ 4	2 48	+12	—	3·5
Feldberg	N.	6·6	345	i 1 30	−11	—	—	—	3·7
Jena	E.	7·1	2	e 1 47	− 1	e 3 0	−13	e 3·6	4·0
Paris		7·8	313	e 2 15	+17	—	—	4·0	6·0
Tortosa	N.	8·4	253	—	—	—	—	e 3·0	6·1
Uccle		8·4	329	—	—	—	—	e 4·6	—
Potsdam		8·7	8	—	—	e 3 56	0	—	4·6
De Bilt		9·2	336	—	—	e 4 32	+24	5·0	5·8
Hamburg		9·8	356	—	—	e 4 2?	−21	—	7·0
Alicante		10·4	242	—	—	—	—	e 8·0	—
Kew		10·8	316	—	—	—	—	e 5·8	—
Copenhagen		12·0	3	—	—	—	—	6·0	—
Konigsberg		12·6	25	—	—	e 5 2?	−32	—	—
Granada		13·0	244	e 3 19	+ 6	e 6 3	+19	7·1	8·3
Pulkovo		19·7	29	—	—	—	—	12·0	—
Kucino		20·8	46	—	—	—	—	e 6·6	10·9
Tashkent		42·0	72	—	—	—	—	e 21·0	28·7

Additional readings and note: Rocca di Papa iP = +41s., S? = +1m.27s. Laibach $ePR_1E = +56s.$ Innsbruck P = +1m.5s. Naples and Pompeii give S as P and L as S. Zagreb eNW = +1m.14s., eNE = +1m.21s., eNW = +1m.23s., eNE = +1m.31s., and +1m.36s., eNW = +1m.41s. eSNE = +1m.51s., MNW = +2·3m. Ravensburg P = +1m.20s., iS* = +2m.7s. Neuchatel i = +1m.25s. Hohenheim P? = +1m.17s., P = +1m.37s., i = +2m.25s., S* = +2m.31s. Strasbourg S = +2m.46s., $SR_1 = +2m.52s.$, $SR_1 = +3m.7s.$ Vienna P* = +1m.40s., S = +3m.15s. Jena eN = +2m.32s., eE = +2m.36s. and +2m.50s., eLN = +3·8m. Potsdam MN = +7·4m. De Bilt MZ = +6·8m. Hamburg MN = +5·5m., MZ = +5·7m.

July 18d. Readings also at 0h. (near La Paz), 2h. (De Bilt, Zurich, Neuchatel, Vienna, Suva, and near Apia), 3h. (Georgetown), 4h. (Ekaterinburg and Tashkent), 5h. (Suva, Christchurch, and near Wellington), 6h. (Ann Arbor, Georgetown, Ottawa, Chicago, Florissant (2), Tucson, Victoria (2), and near Sitka), 7h. (Toronto, Ottawa, Charlottesville, Harvard, Fordham, Berkeley, Granada, Rocca di Papa, Scoresby Sund, De Bilt, Uccle, Kew, Copenhagen, Pulkovo, Kucino, Ekaterinburg, and Tashkent), 8h. (Berkeley), 9h. (Granada and near Entebbe), 10h. (Wellington and near Manila), 17h. (Fordham), 18h. (Fordham and Trenta), 20h. (Georgetown), 21h. (Gottingen and Suva), 23h. (Batavia).

July 19d. 8h. 30m. 34s. Epicentre 44°·0N. 21°·0E. (as on 1927 Oct. 12d.).

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.
Zagreb		4·0	298	e 1 5	+ 3	i 2 1	+11	—	2·2
Vienna		5·3	325	e 1 24	+ 2	i 2 19	− 6	—	3·2
Venice		6·3	286	e 2 26	?S	(e 2 26)	−26	—	—
Rocca di Papa		6·4	252	e 1 38	0	3 33	?L	(3·6)	3·9
Padova		6·6	285	e 2 26	?S	(e 2 26)	−34	—	—
Florence		7·0	271	—	—	e 3 6	− 4	(e 3·9)	4·9
Piacenza		8·1	281	—	—	—	—	e 4·4	6·2
Ravensburg		8·8	300	—	—	—	—	e 4·6	—
Zurich		9·3	296	e 3 26	+66	—	—	—	—
Hohenheim		9·4	305	—	—	—	—	e 4·9	—
Strasbourg		10·2	301	—	—	—	—	e 4·4	—
Feldberg	N.	10·5	310	i 2 22	−15	—	—	—	6·0
Copenhagen		13·0	338	—	—	—	—	—	8·4
Uccle		13·1	307	—	—	—	—	e 6·4	—
De Bilt		13·3	313	—	—	—	—	e 7·3	9·0

Additional readings and note: Zagreb e = +1m.16s., eNW = +1m.36s., eNE = +1m.47s. Rocca di Papa eP = +1m.58s. Florence gives S as e and L as eS.

July 19d. Readings also at 3h. (Lick), 4h. (Rocca di Papa, Florence, and Venice), 5h. (Sucre, near La Paz, and near Tacubaya (2)), 6h. (Florence), 7h. (Granada and Kobe), 8h. (Rocca di Papa), 9h. (Theodosia), 11h. (La Paz and near Tacubaya), 13h. (Toledo), 14h. (La Paz), 15h. (Suva), 18h. (Wellington), 19h. (Tananarive), 21h. (De Bilt, Apia, and Suva), 22h. (Ekaterinburg, La Paz, and Tashkent), 23h. (Andijan).

July 20d. Readings at 2h. (La Paz), 3h. (near Sumoto), 6h. (Wellington), 7h. (Christchurch and near Wellington), 10h. (La Paz), 12h. (Ekaterinburg, Scoresby Sund, and Tashkent), 14h. (near La Paz), 22h. (Suva and near Sumoto), 23h. (near Tacubaya).

July 21d. 10h. 7m. 6s. Epicentre 15°·0S. 172°·0W. (as on 1925 Oct. 15d.).

A = −·956, B = −·134, C = −·259; D = −·139, E = +·990. G = +·256, H = +·036, K = −·966.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		1·2	11	e 0 19	+ 1	e 0 34	+ 1	—	0·9
Suva	E.	9·7	250	2 24	− 2	i 5 24	+63	7·8	8·9
	N.	9·7	250	2 24	− 2	i 5 18	+57	5·9	6·9
Wellington	N.	28·7	201	—	—	—	—	i 12·8	—
Riverview		38·1	233	—	—	—	—	e 16·3	21·3
Honolulu T.H.	E.	38·9	21	—	—	e 16 14	?SR_1	—	—
Victoria	E.	76·7	31	21 37	?S	(21 37)	− 8	36·4	44·1
Florissant		93·6	50	—	—	e 23 37	[−13]	e 42·0	53·4
Irkutsk		98·0	322	—	—	—	—	57·9	—
Toronto		102·2	48	—	—	—	—	54·9	—
Georgetown	Z.	103·2	52	—	—	e 44 34	?	e 46·2	—
Ottawa	N.	105·0	45	—	—	—	—	43·9	—
Scoresby Sund		121·6	12	—	—	40 6	?	58·9	—
Ekaterinburg		122·5	329	i 20 20	?PR_1	—	—	e 47·0	82·5
Pulkovo		132·4	345	e 22 29	?PR_1	—	—	67·9	—
Baku		135·7	313	e 22 38	?PR_1	—	—	63·8	84·3
Copenhagen		139·2	357	—	—	—	—	82·9	—
De Bilt		142·9	3	e 19 36	[− 9]	—	—	e 84·9	—
Kew		143·0	11	—	—	—	—	e 77·9	—
Uccle		144·1	5	—	—	—	—	e 85·9	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Feldberg	N.	144·8	3	—	—	—	—	—	95·7
Vienna	Z.	146·1	350	e 19 22	[−28]	—	—	—	—
Strasbourg		146·5	0	i 19 27	[−23]	—	—	—	—
Zagreb		148·5	349	e 19 39	[−14]	—	—	—	—
Granada		155·6	23	i 20 18	[+15]	i 23 48	?PR_1	e 81·9	88·2

Additional readings: Honolulu T.H. eN = +16m.39s. = SR_1 +16s. Ekaterinburg e = +30m.11s. and +37m.16s. = SR_1 −2s. Baku e = +33m.0s. and +41m.27s. Strasbourg i = +19m.40s. = [P] −10s.

July 21d. 13h. 15m. 54s. Epicentre 14°·6N. 124°·1E. (given by Tokyo in Geophys. Mag., Vol. IV, No. 4).

A = −·543, B = +·801, C = +·252; D = +·828, E = +·561; G = −·141, H = +·209, K = −·968.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		3·1	270	i 1 1	+12	i 1 43	+17	2·0	2·2
Taihoku	N.	10·7	347	—	—	e 4 40	− 8	—	—
Hong Kong		12·2	311	e 3 18	+16	—	—	—	10·1
Zi-ka-wei	Z.	16·8	352	4 10	+ 8	7 26	+13	—	—
Phu-Lien		17·8	293	e 4 18	+ 3	e 7 35	− 1	8·6	—
Nagasaki		18·9	15	4 34	+ 6	e 8 14	+14	—	—
Koti		20·8	23	4 49	− 2	8 45	+ 5	—	—
Somoto		22·0	24	e 5 2	− 3	e 9 0	− 5	—	9·3
Kobe		22·4	24	5 8	− 2	(9 19)	+ 6	9·3	—
Osaka		22·6	25	4 53	−19	(9 15)	− 2	9·2	9·7
Toyooka	N.	23·1	23	5 13	− 5	(9 29)	+ 2	9·5	—
Nagoya		23·6	27	e 5 17	− 7	—	—	—	—
Tokyo		25·3	31	5 43	+ 2	—	—	—	—
Batavia		27·0	221	6 24	+26	—	—	—	—
Akita		28·7	26	e 6 6	− 9	—	—	—	—
Irkutsk		40·8	341	e 7 51	−10	i 14 6	−12	21·1	27·7
Bombay		49·1	282	—	—	—	—	e 19·1	—
Almata		49·3	316	e 9 6	+ 4	—	—	—	—
Andijan		51·7	310	e 9 29	+11	—	—	—	—
Tashkent		54·2	311	—	—	i 17 16	+ 5	e 28·1	32·6
Ekaterinburg		63·4	327	i 10 42	+ 8	—	—	32·9	41·6
Baku		68·7	310	11 12	+ 3	i 20 23	+13	33·1	48·2
Kucino		75·9	325	11 52	− 2	21 34	− 2	e 34·6	41·9
Pulkovo		79·3	330	12 12	− 3	22 13	− 2	37·1	47·5
Ksara	N.	80·5	303	—	—	e 22 30	+ 1	—	—
Helsingfors		81·8	331	12 28	− 1	e 22 38	− 6	—	—
Copenhagen		89·6	329	—	—	24 0	−10	44·1	—
Scoresby Sund		91·8	350	—	—	24 18	−15	50·1	—
Victoria	E.	93·3	38	24 43	?S	(24 43)	− 5	44·0	52·5
Feldberg	N.	94·3	326	—	—	—	—	—	55·9
De Bilt		95·1	327	—	—	—	—	e 48·1	59·6
Strasbourg		95·5	324	—	—	—	—	e 56·1	—
Uccle		96·2	327	—	—	—	—	e 48·1	—
Kew		98·3	330	—	—	—	—	e 56·1	—
Granada		108·7	319	i 19 4	?PR_1	—	—	e 61·1	68·6
San Fernando	E.	110·8	320	—	—	—	—	—	77·4
Ottawa	N.	117·4	15	—	—	—	—	e 61·1	—
Florissant	N.	117·6	30	—	—	—	—	e 40·1	—
Toronto		117·9	19	—	—	—	—	—	71·1
Georgetown	Z.	122·9	20	—	—	e 56 32	?	e 70·3	—

Additional readings: Manila iS = +1m.50s., MN = +2·1m.; T_o = 13h.16m.9s. Hong Kong MN = +8·6m. Sumoto MN = +9·4m. Osaka MN = +9·5m. Batavia iE = +9m.11s., i = +11m.41s. = SR_1 −11s. Tashkent i = +10m.0s., e = +10m.52s., and +21m.6s. = SR_1 −20s. Ekaterinburg PS = +19m.58s. Ksara eE = +22m.33s. Helsingfors $S_gP_gP_gS$ = +22m.53s. De Bilt MN = +53·8m., MZ = +62·5m. San Fernando MN = +77·5m.

July 21d. Readings also at 0h. (Almata and Andijan), 1h. (La Paz), 2h. (Wellington), 3h. (near La Paz and Sucre), 4h. (La Plata, Tucson, and Lick), 5h. (Apia and Suva), 6h. (Wellington, Honolulu T.H., Ekaterinburg, De Bilt, Kew, Zagreb (3), and near Laibach), 7h. (Baku, Pulkovo, and Phu-Lien), 8h. (Andijan, Suva, and Vienna), 13h. (Manila), 21h. (Port au Prince), 22h. (Baku, Ekaterinburg, Christchurch, near Wellington, and near Manila).

July 22d. Readings at 1h. (Almata, Andijan, and near Baku), 2h. (Irkutsk, Ekaterinburg, and near Sumoto), 5h. (Wellington and near Baku), 6h. and 10h. (Wellington), 13h. (Apia), 15h. (Irkutsk and Tashkent), 16h. (near Wellington), 18h. (La Paz and near Taihoku), 19h. (near Wellington (2)), 21h. (Ekaterinburg), 22h. (Baku and Florissant).

July 23d. 14h. 45m. 30s. Epicentre 4°·0N. 128°·0E. (as on 1928 March 9d.).

A = −·614, B = +·786, C = +·070; D = +·788, E = +·616; G = −·043, H = +·055, K = −·998.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		12·6	327	e 3 0	− 7	(i 5 55)	+21	i 5·9	—
Hong Kong		22·7	325	5 2	−11	9 10	− 9	—	11·7
Batavia		23·5	244	i 6 54	?	i 9 36	+ 1	—	—
Phu-Lien		26·7	311	e 5 43	−12	—	—	—	—
Zi-ka-wei	Z.	27·9	348	e 5 54	−13	—	—	e 19·7	—
Adelaide		40·2	166	—	—	e 16 38	?SR_1	22·8?	22·9
Almata		59·6	320	e 10 9	0	e 18 20	+ 2	—	—
Andijan		61·7	315	e 10 30	+ 7	e 18 48	+ 4	—	—
Tashkent		64·2	315	e 10 57	+18	19 18	+ 3	—	41·3
Ekaterinburg		74·4	330	11 46	+ 1	e 21 15	− 4	43·0	47·6
Baku		78·4	312	e 12 5	− 4	22 0	− 5	38·8	47·4
Kucino		86·7	325	—	—	23 19	[+12]	e 38·4	53·5
Ksara		89·5	305	e 14 51	?	e 23 59	−10	62·5	—
Pulkovo		90·4	330	e 13 6	−12	23 32	[+ 2]	46·5	—
Copenhagen		100·7	329	—	—	—	—	56·5	—
Scoresby Sund		102·8	350	—	—	—	—	62·5	—
De Bilt		106·1	326	—	—	—	—	e 66·5	—
Uccle		107·2	327	—	—	—	—	e 59·5	—
Granada		119·0	316	—	—	—	—	79·5	—

Additional readings: Hong Kong MN = +15·0m. Adelaide MN = +26·2m. Pulkovo PR_1 = +16m.42s.

July 23d. 18h. 42m. 51s. Epicentre **63°·8N. 23°·8W.**

A = +·404, B = −·178, C = +·897; D = −·404, E = −·915; G = +·821, H = −·362, K = −·442.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Reykjavik		0·9	67	i 0 21	+ 7	—	—	—	—
Scoresby Sund		6·7	6	1 57	+15	3 5	+ 3	i 3·3	—
Dyce		12·4	112	i 3 4	− 1	i 5 29	0	—	9·6
Edinburgh		12·9	118	3 15	+ 3	i 6 2	+20	i 6·6	10·9
Bergen		13·9	90	3 49	+24	6 22	+16	8·1	10·1
Stonyhurst		14·7	122	3 49	+14	i 6 43	+18	7·2	8·4
Bidston		14·8	125	(3 35)	− 1	(6 29)	+ 2	6·5	11·5
Oxford	E.	16·8	125	i 4 8	+ 6	i 7 23	+10	e 7·8	13·5
	N.	16·8	125	—	—	i 7 32	?SR_1	e 8·6	11·7
Kew	E.	17·4	124	e 4 15	+ 5	e 7 37	+10	8·2	10·6
	N.	17·4	124	e 4 15	+ 5	e 7 41	+14	8·2	9·7
	Z.	17·4	124	e 4 11	+ 1	e 7 29	+ 2	8·4	10·3

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
De Bilt		19·0	114	4 32	+ 3	8 9	+ 7	e 8·8	13·0
Copenhagen		19·6	97	4 37	+ 1	i 8 20	+ 5	9·2	—
Upsala		19·6	82	e 4 34	− 2	8 9	− 6	e 8·9	13·6
Uccle		19·7	118	4 37	0	e 8 17	0	e 9·2	11·3
Hamburg		20·0	105	e 4 41	0	i 8 29	+ 6	e 9·7	16·2
Paris		20·7	124	i 4 52	+ 3	e 8 41	+ 3	10·1	13·2
Gottingen	E.	21·4	109	i 5 2	+ 4	e 8 59	+ 6	e 10·2	19·3
	N.	21·4	109	e 5 2	+ 4	i 9 4	+11	e 10·7	15·8
	Z.	21·4	109	e 5 1	+ 3	e 9 4	+11	e 10·7	15·7
Feldberg	N.	21·8	113	e 4 55	− 8	e 8 53	− 8	—	11·9
Potsdam		22·1	103	i 5 7	+ 1	i 9 9	+ 2	e 12·2	16·2
Helsingfors		22·6	77	e 5 10	− 2	i 9 20	+ 3	e 10·2	—
Jena		22·6	108	e 5 9	− 3	9 9	− 8	12·2	17·2
Karlsruhe		22·7	115	5 27	+14	e 10 9	?SR_1	e 14·2	16·7
Strasbourg		22·8	117	i 5 12	− 3	9 22	+ 1	12·1	15·3
Puy de Dôme		23·3	127	e 5 59	+39	—	—	10·4	—
Hohenheim		23·3	114	e 5 20	0	i 9 35	+ 4	—	—
Cheb		23·5	108	i 5 24	+ 1	i 9 37	+ 2	e 11·6	17·1
Konigsberg	E.	23·7	91	e 5 26	+ 1	e 9 38	0	e 10·6	16·0
	N.	23·7	91	e 5 28	+ 3	e 9 36	− 2	i 12·4	16·2
Ravensburg		24·1	115	e 5 26	− 3	i 9 51	+ 5	i 12·9	16·4
Zurich		24·1	117	e 5 26	− 3	e 9 52	+ 6	—	—
Chur		24·9	117	e 5 37	0	e 10 4	+ 3	—	—
Pulkovo		25·1	74	5 37	− 2	10 2	− 3	11·1	14·9
Innsbruck		25·3	114	e 5 39	− 2	—	—	13·9	18·4
Moncalieri		25·8	122	e 5 27	−19	9 45	−33	11·2	13·4
		25·8	122	5 19	−27	9 50	−28	12·5	13·5
Marseilles		26·4	127	e 5 57	+ 5	—	—	14·1	—
Piacenza		26·5	119	5 55	+ 2	10 37	+ 5	15·5	19·9
Vienna		26·6	106	e 5 51	− 3	i 10 34	+ 1	i 15·1	19·1
Toledo		26·6	144	e 5 56	+ 2	e 10 41	+ 8	e 12·7	15·0
Barcelona		26·9	134	e 6 10	+13	e 10 45	+ 6	13·0	16·9
Treviso		26·9	115	i 5 56	− 1	10 36	− 3	15·1	19·1
Padova		27·0	116	e 5 41	−17	i 10 59	+18	—	—
Tortosa		27·0	136	i 5 59	+ 1	i 10 44	+ 3	13·6	19·8
Graz		27·1	109	i 4 58	−61	i 9 47	−56	14·2	19·4
Venice		27·2	115	i 5 41	−19	i 10 59	+14	—	21·7
Laibach		27·6	111	6 42	+38	e 11 35	+43	e 14·9	19·8
Florence		28·1	118	5 55	−14	11 39	+38	15·1	18·6
Zagreb		28·4	110	e 6 9	− 3	e 10 55	−11	e 14·1	19·9
Lemberg	E.	28·7	96	e 2 57	?	—	—	—	19·7
	N.	28·7	96	e 3 9	?	—	—	—	21·2
Alicante		29·0	140	e 6 6	−12	e 11 12	− 5	e 13·3	15·9
Granada		29·3	146	i 6 19	− 2	i 11 25	+ 3	i 14·3	19·7
San Fernando		29·4	150	—	—	11 24	0	13·9	17·1
Malaga		29·5	148	e 6 2	−21	10 28	−58	12·1	—
Almeria		29·8	144	e 6 22	− 4	e 11 31	0	14·7	15·6
Rocca di Papa		30·4	119	i 6 30	− 2	11 39	− 2	e 15·6	21·6
Belgrade		31·6	105	(e 6 35)	− 3	(e 11 33)	−18	(e 15·9)	(21·8)
Algiers		31·5	135	6 39	− 4	11 53	− 7	15·6	20·2
Naples	E.	31·8	117	e 8 9	?	e 12 9	+ 4	—	22·1
Pompeii		32·0	117	e 8 9	?	e 15 9	?L	(e 15·2)	25·2
Ottawa		33·9	265	e 7 12	+ 8	i 12 44	+ 5	e 15·6	20·6
Trenta		34·0	117	e 6 39	−26	—	—	—	20·2
Catania		35·0	120	e 7 11	− 2	—	—	—	26·1
Toronto		36·9	268	—	—	13 29	+ 7	17·6	20·3
Sebastopol		36·9	92	—	—	—	—	20·1	—
Simferopol		36·9	91	e 7 27	− 2	—	—	21·2	—
Yalta		37·3	91	e 7 32	0	—	—	e 18·7	—
Theodosia		37·4	90	e 7 33	0	—	—	18·3	—
Ekaterinburg		39·2	60	7 50	+ 2	13 45	− 9	16·5	23·0
Georgetown	Z.	39·7	260	e 7 30	−22	e 13 21	−41	e 17·1	24·2

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ann Arbor	E.	39·9	269	—	—	e 14 21	+16	e 23·8	—
	N.	39·9	269	—	—	e 14 21	+16	e 22·2	26·5
Charlottesville	E.	41·1	260	—	—	e 14 33	+11	e 17·2	26·2
	N.	41·1	260	—	—	e 14 39	+17	e 17·2	24·2
Chicago	E.	42·0	273	e 10 14	?PR_1	i 15 52	?SR_1	e 22·4	24·8
	N.	42·0	273	e 10 12	?PR_1	e 17 52	?SR_1	e 23·4	26·9
Florissant		45·6	273	e 8 52	+15	e 16 4	+42	e 25·2	—
		45·6	273	e 8 50	+13	e 15 37	+15	e 25·2	—
St. Louis	E.	45·7	273	e 8 55	+17	e 15 44	+20	—	—
Ksara	E.	46·8	101	8 48	+ 2	15 33	− 5	23·7	—
Baku		47·5	84	e 8 52	+ 1	i 15 48	0	22·7	29·6
Sitka		48·3	318	—	—	—	—	e 27·0	33·1
Denver		51·3	284	—	—	e 15 59	−36	—	26·7
Victoria		51·5	305	9 27	+10	17 7	?PS	25·1	28·6
Tashkent		55·0	66	9 47	+ 8	i 17 33	+12	e 29·1	34·6
Almata		56·3	60	e 10 22	+34	—	—	—	—
Andijan		57·0	65	e 10 10	+18	—	—	—	—
Irkutsk		57·1	36	e 10 7	+14	i 18 2	+15	29·1	38·3
Berkeley	E.	60·0	297	—	—	—	—	e 30·0	—
Tucson		60·1	285	10 42	+29	18 50	+26	29·5	—
Dehra Dun		67·9	66	20 9?	?PS	28 9?	?SR_1	38·2	41·2
Entebbe		75·8	121	—	—	21 9?	−26	—	43·1
Bombay		75·9	77	11 35	−19	22 8	?PS	43·2	48·1
Hyderabad		79·6	73	11 54	−23	22 28	+ 9	40·6	46·9
Zi-ka-wei	Z.	81·1	30	e 12 36	+10	e 22 52	+16	46·0	50·5
Kodaikanal		85·7	77	44 51	?L	—	—	(44·8)	—
Phu-Lien		87·0	46	—	—	—	—	43·1	—
La Paz		87·2	223	e 13 22	+22	—	—	50·1	55·7
Hong Kong		87·8	38	23 48	?S	(23 48)	− 2	e 42·2	56·6
Sucre		88·8	220	—	—	—	—	50·6	56·5
Colombo		89·7	76	24 24	?S	24 24	+13	—	56·1
Manila		97·0	35	—	—	—	—	e 55·1	—
La Plata		102·3	209	—	—	—	—	59·3	—
Wellington	E.	155·1	325	—	—	—	—	79·2	—

Additional readings and notes: Scoresby Sund +2m.6s. Bidston gives P as S and S as L. De Bilt MN = +12·1m., MZ = +12·2m. Upsala MN = +15·3m. Uccle MN = +10·7m. Hamburg MN = +17·2m. Paris PS = +9m.2s. Feldberg ME = +14·2m. Potsdam MN = +20·2m. Jena iPN = +5m.17s., iPE = +5m.18s., eLN = +10·6m., MN = +17·6m. Strasbourg PR_1 = +5m.30s., MN = +15·4m. Cheb MN = +15·1m. Konigsberg eE = +6m.10s., eN = +6m.48s., eE = +7m.34s., eN = +8m.17s., eSR_1N = +10m.8s., eSR_1E = +10m.15s. Innsbruck e = +5m.51s., i = +6m.14s., PR_1? = +6m.43s. Piacenza MN = +20·8m. Vienna PR_1 = +7m.0s., PR_2 = +8m.7s., S = +12m.18s. Toledo iP = +5m.59s., MNW = +15·9m. Barcelona MN = +17·0m. Treviso MN = +18·3m. Graz MN = +19·2m. Laibach readings are given for 27d. Florence i = +8m.0s. and +14m.39s. Zagreb e = +6m.19s., +8m.26s., +10m.7s., +11m.49s., and +12m.49s., MNW = +20·1m. Granada i = +10m.28s., +12m.37s. = SR_1 − 10s., and +13m.41s. Almeria PR_1 = +7m.34s. Rocca di Papa L = +16·5m. Belgrade eN = (+11m.39s.), all readings have been *increased* by 2m. Algiers MN = +18·5m. Ottawa eSR_1 = +14m.39s., MN = +19·5m., T_0 = 18h.43m.4s. Toronto LN = +16·3m. Ann Arbor e?E = +11m.3s., eE = +16m.3s., eN = +17m.33s., and +20m.15s., eE = +21m.21s. Chicago iPR_1E = +14m.49s., iPR_1N = +14m.51s., eSR_1E = +20m.45s. Florissant (first line) iPZ = +8m.54s., iZ = +8m.56s., eSR_1E = +19m.23s. Sitka ePR_1E = +3m.51s., ePR_1N = +4m.14s., ePSE = +10m.59s., ePSN = +11m.24s., eSR_1E = +16m.19s., eSR_1N = +17m.14s., eSR_2E = +19m.55s., MN = +29·8m. Victoria LN = +25·8m., MN = +31·6m.; T_0 = 18h.42m.44s. Berkeley eN = +30m.39s. Tucson SR_1E = +25m.46s. Hyderabad MN = +47·4m. Phu-Lien +37m.9s.? Wellington LN = +77·2m.

July 23d. 20h. 4m. 10s. Epicentre 63°·8N. 23°·8W. (as at 18h.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Scoresby Sund		6·7	6	—	—	3 13	+11	—	—
Edinburgh		12·9	118	—	—	—	—	e 6·8	—
Stonyhurst		14·7	122	—	—	—	—	e 6·8	—
Kew		17·4	124	—	—	—	—	e 8·2	—
De Bilt		19·0	114	4 30	+ 1	8 6	+ 4	e 8·8	12·9
Copenhagen		19·6	97	4 38	+ 2	8 20	+ 5	8·8	—
Upsala		19·6	82	—	—	—	—	10·8	—
Hamburg	E.	20·0	105	—	—	—	—	e 10·6	—
Paris		20·7	124	e 4 52	+ 3	—	—	9·8	11·8
Helsingfors		22·6	77	—	—	(e 9 10)	− 7	e 9·2	—
Konigsberg	N.	23·7	91	—	—	—	—	e 12·8	15·8
Pulkovo		25·1	74	—	—	e 10 0	− 5	13·3	15·7
Moncalieri		25·8	122	—	—	e 9 53	−25	e 14·6	—
Florence		28·1	118	(e 6 5)	− 4	(e 10 50)	−11	—	15·7
Zagreb		28·4	110	e 6 8	− 4	—	—	e 17·2	—
Granada		29·3	146	—	—	—	—	e 13·8	16·0
Florissant	E.	45·6	273	—	—	—	—	e 22·8	—
Baku		47·5	84	—	—	—	—	22·8	28·7

De Bilt gives also MN = +11·8m., MZ = +12·7m. Konigsberg ME = +14·8m.
Florence readings have been *diminished* by 3m.

July 23d. Readings also at 0h. (Andijan, La Plata, and Mizusawa), 2h. (Taihoku), 5h. (Christchurch and Wellington), 9h. (Ekaterinburg and Pulkovo), 10h. (La Paz), 14h. (Georgetown, Ottawa, Toronto, and near Batavia), 15h. (La Paz, near Almata, and Andijan), 17h. (Florence), 18h. (near Reykjavik), 19h. (Tortosa), 21h. (Andijan, Granada, Scoresby Sund (2), Uccle, and near Wellington), 23h. (near Tacubaya).

July 24d. 2h. 34m. 6s. Epicentre 4°·0N. 128°·0E. (as on 23d.).

A = −·614, B = +·786, C = +·070; D = +·788, E = +·616;
G = −·043, H = +·055, K = −·998.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		12·6	327	e 3 22	+15	—	—	—	—
Hong Kong		22·7	325	5 4	− 9	9 10	− 9	—	15·9
Phu-Lien		26·7	311	—	—	9 54?	−41	—	—
Zi-ka-wei	Z.	27·9	348	e 5 54	−13	—	—	—	—
Andijan		61·7	315	e 18 52	?S	(e 18 52)	+ 8	(e 35·0)	—
Tashkent		64·2	315	—	—	e 20 54?	[+27]	—	36·3
Ekaterinburg		74·4	330	e 11 49	+ 4	21 19	0	—	78·1
Baku		78·4	312	e 12 7	− 2	e 22 7	+ 2	e 40·9	—
Pulkovo		90·4	330	e 12 36	−42	—	—	49·9	—
Copenhagen		100·7	329	—	—	—	—	55·9	—
Scoresby Sund		102·3	350	—	—	—	—	61·9	—
De Bilt		106·1	326	—	—	—	—	e 54·9	—
Uccle		107·2	327	—	—	—	—	e 54·9	—
Granada		119·0	316	—	—	—	—	73·9	—

Andijan readings are given as separate eP's.

July 24d. Readings also at 1h. (Cheb, Almata, and near Andijan), 2h. (Adelaide and Tucson), 3h. (Christchurch, Wellington, La Paz, Melbourne, and Riverview), 5h. (near Manila), 7h. (La Paz), 10h. (Baku, Ekaterinburg, Ksara, and Pulkovo, and Andijan), 11h. (Lick and Tucson), 12h. (Georgetown, Ottawa, Simferopol, Theodosia, Yalta, and Zagreb), 14h. (Wellington (2)), 15h. (Georgetown), 16h. (near Wellington), 18h. (La Paz), 19h. (Mizusawa, Scoresby Sund, and near Reykjavik (2)), 21h. (La Paz), 22h. (De Bilt, Granada, Rocca di Papa), 23h. (Baku, Irkutsk, Kew, Kodaikanal, and San Fernando).

July 25d. 0h. 17m. 17s. Epicentre 37°·7N. 57°·8E.

A = +·422, B = +·670, C = +·612; D = +·846, E = −·533; G = +·326, H = +·517, K = −·791.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Baku		6·7	296	e 1 43	+ 1	i 3 2	0	i 3·9	7·8
Tashkent		9·5	64	i 2 24	+ 1	e 4 20	+ 4	—	8·0
Andijan		11·6	73	2 54	+ 1	5 4	− 5	—	7·4
Ksara		18·1	264	4 23	+ 5	7 55	+13	10·7	—
Dehra Dun		18·3	108	4 43?	+22	—	—	10·0	11·7
Theodosia		18·3	300	4 20	− 1	7 46	− 1	10·9	—
Yalta		19·0	298	e 4 27	− 2	e 8 0	− 2	—	—
Simferopol		19·1	300	e 4 27	− 3	8 2	− 2	—	—
Ekaterinburg		19·2	5	4 33	+ 2	7 52	−14	9·6	12·4
Sebastopol		19·4	298	e 4 35	+ 1	—	—	—	—
Kucino		22·5	330	e 5 5	− 6	9 3	−12	e 10·9	16·8
Bombay		22·9	141	4 24	−52	9 24	+ 1	13·2	17·7
Helwan		23·3	258	e 5 13	− 7	9 25	− 6	—	—
Hyderabad		27·2	132	—	—	10 39	− 6	16·8	30·0
Pulkovo		28·2	330	6 1	− 9	e 10 46	−17	15·2	19·9
Konigsberg		30·4	318	e 8 20	?	e 11 47	+ 6	e 19·7	22·7
Helsingfors		30·5	330	e 6 42	+ 9	e 12 5	+22	e 18·2	—
Upsala		33·7	325	e 7 50	+48	e 12 58	+22	—	25·2
Potsdam		34·2	311	—	—	—	—	—	28·7
Cheb		34·4	309	—	—	e 12 33	−13	e 22·7	26·7
Rocca di Papa		34·5	293	6 57	−12	12 27	−21	e 21·9	31·4
Copenhagen		35·1	317	—	—	12 43?	−14	—	—
Irkutsk		35·2	50	e 7 7	− 8	e 12 41	−17	18·7	19·6
Hamburg	Z.	36·1	313	e 8 6	?PR_1	—	—	e 23·4	29·1
Piacenza		36·3	298	—	—	—	—	—	29·7
Colombo		36·7	143	14 13	?S	(14 13)	+53	19·2	21·6
Feldberg	N.	36·9	308	—	—	e 12 56	−26	—	28·7
Strasbourg		37·4	305	—	—	e 13 43?	+13	e 25·7	—
Moncalieri		37·7	299	—	—	e 12 31	− 3	—	30·7
De Bilt		39·0	310	—	—	13 34	−18	e 19·7	31·1
Uccle		39·5	309	—	—	e 13 41	−18	e 21·7	—
Paris		40·8	305	e 7 43?	−18	—	—	22·7	26·7
Kew		42·4	310	—	—	e 17 31	?SR_1	24·7	—
Oxford		43·0	310	—	—	e 17 24	?SR_1	e 25·7	32·0
Stonyhurst		43·5	312	—	—	e 17 41	?SR_1	—	—
Edinburgh		43·8	316	—	—	e 18 43?	?SR_1	—	36·7
Entebbe		44·3	219	—	—	16 26	+80	—	25·1
Phu-Lien		45·2	97	—	—	18 43?	?SR_1	25·7	—
Granada		47·8	290	e 10 47	?PR_1	i 15 42	− 9	29·2	33·8
Hong Kong		50·4	91	—	—	e 16 29	+ 5	e 29·0	33·0
Scoresby Sund		51·5	335	—	—	16 37	− 1	—	—
Zi-ka-wei	Z.	51·9	77	—	—	e 16 53	+10	e 28·2	34·7
Ottawa		87·1	330	—	—	—	—	e 41·7	—
Toronto		89·9	331	—	—	—	—	46·7	—
Georgetown	Z.	92·8	326	—	—	—	—	e 39·2	58·5
Victoria	E.	93·8	0	—	—	—	—	52·0	54·8
Florissant	N.	98·0	335	—	—	—	—	e 48·5	—

Additional readings: Andijan i = +3m.21s. Konigsberg eN = +8m.23s., eE = +11m.22s. and +11m.57s., eN = +14m.43s., +16m.50s., and +17m.39s. eE = +19m.11s., MN = +24·7m. Helsingfors e = +15m.16s. Upsala MN = +24·0m. Cheb e = +15m.20s. De Bilt SR_1 = +16m.17s., MN = +29·0m., MZ = +31·0m. Uccle e = +16m.27s. = SR_1 −9s. Granada iS = +20m.59s. Hong Kong e = +21m.0s., MN = +30·0m.

July 25d. 15h. 7m. 24s. Epicentre 42°·0N. 158°·0E.

A = −·689, B = +·278, C = +·669; D = +·375, E = +·927; G = −·620, H = +·251, K = −·743.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	13·1	263	—	—	5 28	−18	—	—
Akita		13·8	266	e 3 23	0	—	—	—	—
Irkutsk		37·0	306	e 7 56	+26	—	—	18·6	20·9
Ekaterinburg		59·5	322	e 10 4	− 5	e 18 4	−13	e 28·1	35·1
Tashkent		63·0	304	e 10 33	+ 1	e 18 36?	−25	e 30·6	37·3
Scoresby Sund		67·5	0	11 6	+ 5	19 36	−20	34·6	—
Pulkovo		69·6	335	11 12	− 3	e 20 16	− 5	36·6	44·1
Kucino		69·9	330	—	—	—	—	e 34·9	42·4
Baku		75·1	312	e 11 51	+ 1	e 21 36	+ 9	37·1	45·7
Copenhagen		78·8	341	—	—	—	—	34·6	—
De Bilt		83·0	345	12 36	0	—	—	e 42·6	—
Vienna	Z.	83·6	335	12 38	− 2	—	—	—	—
Strasbourg		85·8	341	—	—	—	—	50·6	—
Paris		86·7	346	e 13 2	+ 5	—	—	50·6	—
Granada		99·1	347	—	—	—	—	57·6	—

Additional readings: Ekaterinburg e = +21m.44s. Tashkent e = +22m.36s.?

July 25d. 22h. 57m. 10s. Epicentre 14°·5S. 14°·0W. (as on 1926 May 17d.).

A = +·939, B = −·234, C = −·250; D = −·242, E = −·970; G = −·243, H = +·061, K = −·968.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Rio de Janeiro		28·8	249	e 6 55	+39	11 50	+37	14·3	—
Entebbe		48·2	76	—	—	14 50?	−66	—	60·8
San Fernando		51·4	8	—	—	16 24	−12	—	30·9
La Paz		52·1	263	9 23	+ 2	i 16 46	+ 1	25·5	29·3
Almeria		52·5	11	9 12	−11	—	—	e 28·6	30·4
Granada		52·6	10	i 9 24	0	i 17 16	+25	25·3	27·5
Tananarive	E.	58·8	104	—	—	e 18 24	+15	e 30·0	35·3
Rocca di Papa		61·4	24	10 22	+ 1	e 18 45	+ 4	e 30·3	43·9
Rome		61·4	24	e 10 25	+ 4	—	—	—	—
Florence		62·6	21	10 25	− 4	17 50?	−66	32·3	35·8
Paris		65·0	12	e 10 44	− 1	—	—	32·8	32·8
Strasbourg		65·9	15	e 10 50	0	—	—	33·8	—
Zagreb		66·1	24	e 16 50?	?	—	—	e 43·5	46·4
Kew		67·0	9	e 10 56	− 2	e 19 56	+ 6	31·8	—
Uccle		67·2	13	e 10 50?	− 9	e 19 50?	− 2	e 30·8	—
Ksara		67·7	44	e 11 10	+ 8	—	—	40·8	—
Vienna	Z.	68·3	24	e 11 4	− 2	—	—	—	—
Cheb		68·6	19	—	—	—	—	e 24·8	—
De Bilt		68·6	13	11 8	0	20 22	+13	e 32·8	39·3
Stonyhurst		69·1	8	—	—	e 19 50?	−25	—	—
Edinburgh		70·9	7	—	—	e 20 50?	+13	—	—
Hamburg		71·1	15	e 11 16	− 8	—	—	e 35·8	42·8
Copenhagen		73·6	15	11 44	+ 4	21 17	+ 8	35·8	—
Georgetown	Z.	79·4	316	e 11 54	−21	—	—	e 37·8	—
Baku		80·6	44	12 16	− 7	(22 30)	0	42·8	—
Ottawa		81·7	322	e 12 38	+ 9	e 22 50	+ 7	39·8	—
Pulkovo		82·3	21	12 35	+ 3	e 22 46	− 3	40·8	48·4
Kucino		82·6	27	e 12 35	+ 1	22 45	− 8	e 42·4	51·6
Toronto		83·1	320	—	—	23 0	+ 2	—	—
Scoresby Sund		85·2	357	12 42	− 7	23 8	−13	—	—
Florissant		88·8	311	e 12 58	−11	—	—	e 40·6	—
Bombay		91·8	70	—	—	—	—	e 49·8	—
Ekaterinburg		94·0	32	e 13 25	−13	e 24 1	[+ 9]	e 48·3	59·4
Tashkent		94·6	49	—	—	e 24 31	? Σ	—	54·8
Victoria	E.	113·6	318	—	—	—	—	56·4	59·7
Irkutsk		118·6	38	—	—	—	—	e 60·8	—

For Notes see next page.

NOTES TO JULY 25d. 22h. 57m. 10s.

Additional readings: Rio de Janeiro ePE = +7m.0s. La Paz SR_1E = +19m.3s., MN = +31·2m. De Bilt eSR_1 = +24m.40s., MNZ = +41·2m. Baku gives S as PS. Ottawa e = +34m.50s. ? Ekaterinburg PPS = +25m.51s. Tashkent PR_1 = +17m.14s. Irkutsk PR_1 = +20m.2s., $S_cP_cP_cS$ = +27m.4s.

July 25d. Readings also at 2h. (Suva, Trenta, and near Andijan), 3h. (Batavia), 5h. (near Lick), 7h. (Nagoya, near Akita, Mizusawa, and near Reykjavik (2)), 8h. (La Paz and Taihoku), 10h. (near Tananarive), 11h. (near La Paz), 12h. (Adelaide, Tananarive, Bombay, Hyderabad, Andijan, Tashkent, Baku, Ekaterinburg, Irkutsk, Kew, and Granada), 13h. (De Bilt Scoresby Sund, Georgetown, and Ottawa), 16h. (Reykjavik) 17h. (Wellington), 18h. (near Manila), 20h. (Alicante), 23h. (near Reykjavik).

July 26d. 17h. 18m. 45s. Epicentre 3°·0S. 24°·0E. (as on 1922 April 16d.).

A = +·912, B = +·406, C = −·052; D = +·407, E = −·914; G = −·048, H = −·021, K = −·999.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Entebbe		9·0	70	2 7	− 9	—	—	—	4·0
Cape Town		31·4	189	—	—	—	—	18·2	18·4
Ksara	N.	38·5	17	—	—	—	—	e 18·9	—
Algiers		44·3	338	e 23 23	?L	—	—	(e 23·4)	29·8
Rocca di Papa		45·9	349	—	—	—	—	e 28·2	34·6
Granada		47·6	330	1 8 46	− 5	15 37	−12	e 25·4	29·0
Malaga		47·7	330	9 15	+23	17 17	?	23·2	—
Tortosa	N.	48·8	337	—	—	—	—	e 25·2	27·1
Baku		49·4	26	e 8 49	−14	e 15 47	−24	e 24·0	29·6
Strasbourg		53·5	348	e 9 15?	−15	—	—	e 31·2	—
Paris		55·1	344	e 9 41	+ 1	—	—	32·2	36·2
De Bilt		57·3	349	e 9 53	− 1	—	—	e 31·2	—
Kew		58·2	343	—	—	—	—	e 34·2	—
Copenhagen		59·4	354	—	—	—	—	31·2	—
Stonyhurst		61·0	343	—	—	—	—	e 38·2	—
Pulkovo		62·9	5	10 32	+ 1	18 42	−18	37·2	—
Edinburgh		62·9	343	—	—	—	—	e 35·2	—
Scoresby Sund		79·5	347	—	—	—	—	41·2	—

Additional readings: Ksara eE = +19m.24s., eLE = +21·4m. Algiers S? = +24m.45s.

July 26d. 22h. 48m. 16s. Epicentre **35°·5N. 139°·1E.**

A = −·615, B = +·533, C = +·581; D = +·655, E = +·756; G = −·439, H = +·380, K = −·814.

Epicentre given by K. Hayata in Geophys. Mag. of Tokyo, Vol. IV, No. 1, p. 43. 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_L	m.
Yokohama	+0·3	0·4	98	0 9	− 2	0 15	− 5	—	—
Numadu	+0·3	0·6	342	0 17	+ 3	0 24	− 1	—	—
Tokyo	+0·3	0·6	71	0 11	− 3	0 18	− 7	—	—
Kumagaya	+0·3	0·7	20	0 13	− 2	0 23	− 5	—	—
Maebasi	+0·2	0·9	358	0 18	+ 1	0 32	+ 1	—	—
Mera	+0·2	0·9	134	0 15	− 2	0 27	− 4	—	—
Kakioka	+0·2	1·1	50	0 18	− 2	0 31	− 5	—	—
Tukubasan	+0·2	1·1	49	0 18	− 2	0 32	− 4	—	—
Nagano	+0·2	1·3	328	0 24	+ 1	0 43	+ 1	—	—
Tyosi	+0·2	1·5	81	0 24	− 2	0 43	− 5	—	—

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.
Nagoya	+0·2	1·8	259	0 32	+ 1	—	—	1·0	1·3
Gihu	+0·2	1·9	267	0 33	0	0 59	+ 1	—	—
Onahama	+0·2	2·0	46	0 30	− 4	—	—	—	—
Tsu	+0·2	2·2	250	0 37	0	1 10	+ 4	—	—
Hikone	+0·2	2·3	264	0 42	+ 3	1 15	+ 6	—	—
Niigata	+0·2	2·4	359	0 34	− 7	1 4	− 8	—	—
Hatidyozima	+0·1	2·5	166	0 38	− 3	1 7	− 5	—	—
Hukusima	+0·1	2·5	25	0 39	− 2	1 11	− 1	—	—
Kyoto	+0·1	2·8	260	0 43	− 2	1 32	+12	—	—
Osaka	+0·1	3·0	255	0 48	− 1	—	—	1·6	2·2
Sendai	+0·1	3·1	27	0 49	− 1	1 36	+ 8	—	—
Kobe	+0·1	3·3	257	0 51	− 2	1 34	0	1·7	1·8
Isinomaki	+0·1	3·4	31	0 55	0	1 38	+ 1	—	—
Toyooka	+0·1	3·4	272	i 0 53	− 2	1 48	+11	1·8	1·9
Siomisaka	+0·1	3·4	233	0 46	− 9	1 40	+ 3	—	—
Wakayama	+0·1	3·5	250	0 54	− 2	1 33	− 6	—	—
Sumoto	+0·1	3·6	252	0 56	− 2	1 38	− 4	1·9	2·4
Mizusawa	+0·1	3·9	24	1 5	+ 3	1 52	+ 2	—	—
Akita	0·0	4·3	10	1 7	0	—	—	2·3	4·0
Morioka	0·0	4·5	21	1 9	− 1	2 20	+16	—	—
Muroto	0·0	4·6	242	e 1 13	+ 2	2 27	+21	(2·4)	2·6
Koti	0·0	5·0	249	e 1 15	− 2	i 2 13	− 4	e 2·3	3·2
Matuyama	0·0	5·5	255	i 1 28	+ 3	i 2 42	+11	—	3·3
Hamada	0·0	5·8	266	1 29	− 1	3 3	+24	(3·0)	—
Hakodate	0·0	6·4	11	1 47	+ 9	3 33	+38	—	—
Muroran	0·0	7·0	11	1 47	+ 1	3 7	− 3	—	—
Miyazaki	0·0	7·3	243	1 49	− 2	3 19	+ 1	—	—
Hukuoka	0·0	7·4	257	e 1 58	+ 6	—	—	3·9	4·7
Kumamoto	0·0	7·4	251	1 1	−51	2 58	−23	—	—
Sapporo	−0·1	7·8	12	1 58	+ 1	3 28	− 1	—	—
Kagosima	−0·1	8·1	243	2 6	+ 5	4 24	+47	—	—
Nagasaki	−0·1	8·2	253	e 2 5	+ 2	e 3 52	+12	4·3	4·6
Kusiro	−0·1	8·5	28	2 25	+18	—	—	—	—
Titizima	−0·1	8·8	162	2 2	−10	3 42	−14	—	—
Zinsen	−0·1	10·3	285	2 40	+ 7	—	—	—	—
Nake	−0·1	11·0	232	3 24	+41	6 11	?	—	—
Ootomari	−0·1	11·5	13	2 46	− 4	5 24	+20	—	—
Zi-ka-wei	−0·2	15·4	259	i 3 38	− 4	6 46	+ 9	9·3	9·9
Isigakizima	−0·3	17·1	233	3 59	− 3	7 19	+ 6	—	—
Taihoku N.	−0·3	18·4	240	4 39	+21	—	—	—	—
Hong Kong	−0·5	25·4	245	5 24	−13	10 2	+ 1	e 12·7	16·6
Manila	−0·6	26·5	222	e 6 22	?PR$_1$	i 11 23	?SR$_1$	i 14·5	—
Irkutsk	−0·7	29·7	315	e 6 4	−14	i 11 11	− 6	14·7	19·9
Phu-Lien	−0·7	32·0	252	5 44?	−57	—	—	12·7	20·8
Almata	−1·0	47·5	299	e 8 38	− 6	—	—	—	—
Medan	−1·0	49·1	238	—		—	—	i 26·2	—
Andijan	−1·0	51·7	296	e 9 5	− 6	e 16 23	− 4	—	—
Tashkent	−1·1	53·5	299	i 9 21	− 1	i 16 55	+ 6	e 24·7	33·4
Ekaterinburg	−1·1	54·8	320	i 9 32	+ 1	17 14	+ 9	24·2	35·5
Hyderabad	−1·1	56·3	270	17 25	?S	(17 25)	+ 1	—	38·2
Bombay	−1·2	60·1	274	(12 23)	?PR$_1$	(18 12)	+ 2	(27·7)	(32·9)
Colombo	−1·2	61·1	257	18 56	?S	(18 56)	+34	—	42·7
Kodnikanal	−1·2	61·1	263	39 38	?L	—	—	(39·6)	—
Kucino	−1·2	67·0	323	e 10 51	+ 1	19 43	+ 8	32·3	42·9
Baku	−1·2	67·4	305	e 10 56	+ 3	e 19 54	+14	33·7	43·2
Pulkovo	−1·3	68·3	330	e 11 1	+ 3	e 20 0	+10	33·7	44·4
Victoria E.	−1·3	68·7	45	20 6	?S	(20 6)	+11	32·9	42·6
Helsingfors	−1·3	70·2	331	e 11 13	+ 3	e 20 23	+10	e 36·2	—
Scoresby Sund	−1·3	73·1	354	11 30	+ 2	21 0	+12	35·7	—
Upsala	−1·3	73·2	334	e 11 27	− 2	e 20 52	+ 3	e 41·7	45·6
Theodosia	−1·3	74·0	315	e 11 50	+16	—	—	e 44·4	—
Simferopol	−1·3	74·8	315	e 11 41	+ 2	—	—	—	—

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.
Yalta		−1·3	75·0	315	e 11 52	+12	—	—	—	—
Sebastopol		−1·3	75·4	315	—	—	—	—	e 47·1	—
Konigsberg		−1·3	75·5	329	—	—	—	—	e 42·7	48·7
Copenhagen		−1·3	78·1	333	11 56	− 4	21 51	+ 4	40·7	—
Ksara	E.	−1·3	80·2	305	12 17	+ 5	22 18	+ 7	32·8	—
Hamburg		−1·3	80·6	332	e 12 13	− 2	e 22 19	+ 4	e 43·4	50·7
Vienna		−1·3	81·9	326	e 12 15	− 8	22 33	+ 3	e 46·2	55·2
Dyce		−1·3	82·0	340	e 12 13	−10	e 22 28	− 3	44·4	48·5
Gottingen	E.	−1·3	82·2	330	—	—	—	—	e 45·4	54·4
Cheb		−1·3	82·4	328	—	—	e 22 44?	+ 8	e 44·7	51·7
Belgrade	N.	−1·3	82·4	320	(e 12 36)	+10	(e 22 36)	0	(e 35·7)	—
Edinburgh		−1·4	83·1	340	—	—	e 22 44?	+ 1	43·7	—
Graz		−1·4	83·1	325	—	—	—	—	e 46·7	
De Bilt		−1·4	83·6	334	12 26	− 5	22 47	− 1	e 42·7	51·8
Zagreb		−1·4	83·8	324	e 12 32	0	e 22 44?	− 6	e 42·7	—
Feldberg	N.	−1·4	83·9	332	i12 33	0	e 22 47	− 5	—	57·7
Stonyhurst		−1·4	84·6	338	—	—	e 22 54	− 5	—	53·2
Uccle		−1·4	84·9	334	e 12 34	− 5	22 56	− 7	e 43·7	54·4
Ravensburg		−1·4	85·2	329	e 13 6	+25	e 22 51	−16	e 47·7	51·7
Strasbourg		−1·4	85·4	330	i 12 38	− 4	i 23 1	− 7	45·7	—
Tucson		−1·4	85·7	53	—	—	e 23 13	+ 2	—	—
Chur		−1·4	86·0	328	e 12 40	− 6	e 22 59	−16	—	—
Kew		−1·4	86·0	337	e 12 40	− 6	e 23 1	−14	42·7	—
Oxford	E.	−1·4	86·1	337	—	—	22 58	−18	e 42·2	59·0
	N.	−1·4	86·1	337	—	—	23 1	−15	e 49·7	61·2
Paris		−1·4	87·3	334	e 12 48	− 5	e 23 11	−18	46·7	54·7
Piacenza		−1·4	87·4	326	—	—	e 22 24	−66	50·3	55·8
Florence		−1·4	87·6	325	12 54	0	23 24	− 8	48·7	55·7
Moncalieri		−1·4	88·3	328	e 12 31	−27	22 59	[−18]	45·7	—
Rocca di Papa		−1·4	88·5	323	e 13 0	0	e 23 11	[− 7]	e 51·7	59·1
Florissant		−1·4	92·7	37	e 13 14	− 9	23 44	[0]	e 43·0	—
Ottawa		−1·4	93·2	23	—	—	e 23 44	[− 3]	e 52·7	—
Toronto		−1·4	93·5	26	—	—	e 23 49	[0]	54·2	—
Tortosa	N.	−1·4	94·7	330	—	—	—	—	e 52·7	64·4
Alicante		−1·4	97·2	329	—	—	—	—	e 55·1	—
Toledo	N.E.	−1·4	97·3	332	—	—	—	—	e 48·2	—
Georgetown	Z.	−1·5	98·4	27	e 16 46	?PR_1	—	—	e 54·9	64·9
Almeria		−1·5	99·3	329	17 45	?PR_1	e 28 2	?	e 57·9	63·4
Granada		−1·5	99·6	330	e 14 1	0	—	—	53·7	56·5
Malag¹		−1·5	100·2	330	17 14	?PR_1	27 25	?PS	—	—
San Fernando		−1·5	101·2	332	24 2	?S	(24 2)	[−28]	60·4	63·9
La Paz		−	149·2	58	e 19 44	[−10]	—	—	—	—

Additional readings and notes: Nagoya MN = +1·0m. Osaka MN = +2·0m., MZ = +2·6m. Sumoto MNZ = +2·1m. Akita MZ = +2·5m., MN = +2·7m. Koti iLZ = +2·4m., L_gN = +2m.36s., L_gZ = +2m.38s., MN = +2·8m., MZ = +3·3m. Matuyama iPR_1 = +2m.12s. Hukuoka MN = +4·3m. Nagasaki MN = +4·7m., MZ = +5·2m. Zi-ka-wei SZ = +6m.50s., iN = +8m.24s. Medan i = +29m.7s. Hyderabad MN = +38·0m. Bombay readings have been *diminished* by 6m. Helsingfors e = +20m.35s. Scoresby Sund +14m.20s. = PR_1 −22s. and +21m.38s. = [S] +3s. Upsala MN = +46·2m. Copenhagen +14m.56s. = PR_1 −26s. and +22m.44s. = PS +2s. Hamburg MNZ = +53·7m. Vienna PR_1 = +15m.54s. Dyce PR_1 = +15m.33s. Gottingen eN = +47m.56s. and +51m.8s., eLE = +53·4m. Belgrade eN = (+26m.3s.); all readings have been *increased* by 39min. De Bilt PR_1Z = +15m.43s., MNZ = +53·5m. Zagreb ePR_1 = +15m.38s., e = +23m.2s., eNE = +24m.34s. Strasbourg PR_1 = +15m.58s., PR_1 = +17m.57s. Kew LZ = +48·7m. Florence i = +16m.29s. = PR_1 −9s. Rocca di Papa S? = +16m.25s. and +16m.47s. = PR_1 +2s. Florissant eNZ = +16m.59s. = PR_1 −17s. Ottawa e? = +45m.44s. ? Toronto eE = +38m.7s. = SR_1 +1s. Granada PR_1 = +17m.55s. San Fernando S = +36m.27s.

July 26d. Readings also at 0h. (Neuchatel and near Reykjavik (4)), 1h. (Taihoku, near Kobe, and Sumoto (2), also near Reykjavik (4)), 2h. (2), 4h., and 5h. (2) (near Reykjavik), 6h. (Baku, Tashkent, and near Reykjavik (3)), 7h. (Florence and Reykjavik), 8h. (Reykjavik), 11h. (Adelaide, Melbourne, Riverview, Sydney, Wellington, and Ksara), 12h. (Ksara), 15h. (Alicante), 16h. (Andijan), 20h. (Florence, Ksara, and Tucson).

July 27d. 12h. 52m. 58s. Epicentre 8°·0N. 40°·5W. (as on 1919 April 21d.).

A = +·753, B = −·643, C = +·139; D = −·649, E = −·760; G = +·106, H = −·090, K = −·990.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Rio de Janeiro	N.	31·0	185	—	—	—	—	e 16·5	—
Sucre		36·4	222	—	—	—	—	20·0	25·5
La Paz		36·8	229	e 7 29	+ 1	i 13 23	+ 2	19·5	23·8
Granada		44·3	44	i 8 42	+14	—	—	20·0	23·7
Georgetown	Z.	45·1	319	e 8 32	− 2	i 15 8	− 8	e 21·2	25·3
Toledo	N.E.	45·5	40	—	—	e 14 59	−22	—	—
La Plata		45·9	200	—	—	—	—	23·5	—
Ottawa		48·2	328	e 8 56	+ 1	e 15 44	−12	e 21·0	—
Tortosa	N.	49·1	40	—	—	e 15 51	−16	e 23·0	26·3
Toronto		49·2	321	—	—	16 2?	− 7	—	—
Paris		54·5	35	e 9 32	− 4	—	—	25·0	33·0
Kew		54·5	29	—	—	e 17 8	− 7	25·0	—
Stonyhurst		55·1	27	e 11 17	?PR$_1$	—	—	—	26·4
Edinburgh		56·2	24	—	—	—	—	e 23·0	27·0
Uccle		56·6	32	—	—	e 17 33	− 8	e 26·0	—
Strasbourg		57·3	37	e 13 2?	?	—	—	27·0	—
De Bilt		57·6	32	e 9 58	+ 2	e 17 50	− 4	e 26·0	32·3
Feldberg	N.	58·4	35	e 10 2	+ 1	e 18 2	− 2	—	32·7
Hamburg		61·1	31	—	—	—	—	e 29·0	—
Copenhagen		63·2	30	—	—	—	—	25·0	—
Scoresby Sund		63·6	8	—	—	19 8	0	25·0	—
Pulkovo		73·5	29	—	—	—	—	29·0	39·8
Kucino		76·9	35	—	—	e 21 50	+ 2	e 35·2	39·8
Victoria	E.	79·4	319	22 20	?S	(22 20)	+ 4	40·7	43·2
Baku		85·2	50	—	—	e 23 12	− 9	37·5	—
Ekaterinburg		89·3	33	—	—	e 24 54	?PS	e 43·5	50·3
Tashkent		99·2	46	—	—	e 25 24	−24	e 48·0	60·9
Irkutsk		112·6	23	—	—	—	—	57·0	—

Tashkent gives also e = +26m.4s. and +32m.2s.

July 27d. Readings also at 0h. (Wellington), 1h. (near Santiago), 2h. (La Paz (2), La Plata, and Sucre (2)), 3h. (La Paz (2), La Plata, and near Santiago), 4h. (near Kobe), 5h. (near Wellington), 6h. (Florence and Rocca di Papa), 9h. (Alicante), 11h. (Andijan), 13h. (Alicante), 14h. (near Wellington (2)), 16h. (Taihoku), 19h. (Andijan, Tashkent, and Irkutsk), 20h. (Taihoku).

July 28d. 6h. 54m. 24s. Epicentre 44°·6N. 10°·6E.

A = +·700, B = +·131, C = +·702; D = +·184, E = −·983; G = +·690, H = +·129, K = −·712.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Piacenza		0·8	304	e 0 18	+ 6	0 36	+14	—	1·0
Florence		0·9	150	0 12	− 2	—	—	—	0·3
Padova		1·2	48	e 0 14	− 4	e 0 27	− 6	—	—
Treviso		1·5	46	i 0 21	− 2	i 0 42	0	—	1·4
Venice		1·5	55	e 0 22	− 1	i 0 38	− 4	—	—
Moncalieri		2·1	281	e 0 33	0	—	—	—	—
Chur		2·3	342	e 0 37	+ 1	—	—	—	—
Rome		3·0	153	—	—	—	—	e 1·7	2·6
Rocca di Papa		3·2	150	e 0 55	+ 5	1 52	+24	(1·9)	2·1
Strasbourg		4·4	335	—	—	—	—	2·5	—
Vienna	Z.	5·4	45	—	—	e 2 8	−20	—	—
De Bilt		8·3	336	—	—	—	—	e 5·6	—
Granada		13·0	240	(4 36?)	+83	—	—	4·6	—

Additional readings: Rome eP = +1m.51s. Rocca di Papa eP = +1m.18s.

July 28d. 17h. 33m. 14s. Epicentre 35°·5N. 139°·1E. (as on 26d.).

A = −·615, B = +·533, C = +·581; D = +·655, E = +·756;
G = −·439, H = +·380, K = −·814.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya	1·8	259	e 0 28	0	(0 49)	− 2	0·8	1·1
Osaka	3·0	255	0 41	− 6	—	—	1·5	2·1
Kobe	3·3	257	0 47	− 5	1 31	0	1·6	1·7
Toyooka	3·4	272	0 58	+ 5	—	—	1·8	1·8
Sumoto	3·6	252	e 1 11	+15	—	—	—	—
Akita	4·3	10	e 1 46	+39	—	—	—	—

Additional readings: Nagoya MN = +1·3m. Kobe MN = +1·8m. Osaka MNZ = +2·0m.

July 28d. Readings also at 1h. (near Amboina and near Lick), 2h. (Entebbe and Granada), 7h. (Wellington), 10h. (near Manzanillo), 12h. (near Wellington (2)), 17h. (De Bilt, Zagreb, Cheb, Copenhagen, Pulkovo, Baku, Ekaterinburg, Theodosia, Yalta, and near Simferopol), 19h. (Wellington), 20h. (Ksara, Ottawa, and Toronto), 22h. (Almata).

July 29d. Readings at 1h. (Wellington), 3h. (near Reykjavik (2)), 5h. (near Andijan), 8h. (Sebastopol), 9h. (Sebastopol, Yalta, and near Santiago), 10h. (Sebastopol, near La Paz, near Manila, and near Reykjavik), 11h. (Adelaide, Riverview, Suva, Wellington (2), Manila, Sebastopol, Ottawa, Georgetown, Paris, Rocca di Papa, Rome, and near Reykjavik (2)), 12h. (Granada and Toronto), 13h. (Sebastopol), 14h. (Georgetown and near Irkutsk), 15h. (Andijan), 16h. (near Sebastopol), 20h. (near Akita and Mizusawa), 21h. (Medan).

July 30d. 3h. 53m. 48s. Epicentre 18°·0N. 100°·0W. (as on 1918 May 16d.).

A = −·165, B = −·937, C = +·309; D = −·985, E = +·174;
G = −·054, H = −·304, K = −·951.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tacubaya		1·6	29	0 41	+17	—	—	1·2	1·5
Puebla		2·0	58	(0 26)	− 5	(1 1)	+ 6	(1·0)	(1·3)
Oaxaca		3·2	107	0 36	−14	(1 23)	− 5	1·4	1·5
Vera Cruz		3·8	71	(0 55)	− 4	—	—	(2·0)	(2·4)
Manzanillo		4·2	285	1 3	− 2	(2 2)	+ 7	2·0	—
Guadalajara		4·3	311	0 57	−10	(1 57)	− 1	2·0	2·1
Tucson		17·3	328	4 12	+ 3	7 32	+ 7	9·4	—
Florissant		22·5	20	5 9	− 2	9 21	+ 6	—	—
Chicago		26·0	22	5 42	− 6	10 30	+ 8	—	—
Toronto		31·0	30	—	—	—	—	13·2	—
Ottawa		34·0	31	—	—	e 12 12?	−28	e 16·2	—
Victoria	E.	35·8	333	12 40	?S	(12 40)	−27	18·5	20·5
La Paz		46·6	136	8 38	− 6	—	—	—	—
Scoresby Sund		69·1	20	11 15	+ 3	20 24	+ 9	36·2	—
Kucino		98·1	22	—	—	—	—	e 42·8	49·0
Tashkent		119·9	9	—	—	—	—	e 63·2	88·9

Additional readings and notes: Puebla and Vera Cruz readings have been *diminished* by 3m. Tucson SN = +7m.35s., e = +8m.53s. Chicago eN = +10m.48s. Victoria PN = +12m.34s.

July 30d. 7h. 43m. 34s. Epicentre 13°·9N. 91°·2W (as on 1929 March 1d.).

$A = -\cdot020$, $B = -\cdot971$, $C = +\cdot240$; $D = -1\cdot000$, $E = +\cdot021$; $G = -\cdot005$, $H = -\cdot240$, $K = -\cdot971$.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		6·2	302	1 32	− 3	2 38	−11	2·7	3·0
Vera Cruz		7·1	319	—	—	—	—	(4·1)	(6·4)
Merida		7·2	12	(1 41)	− 8	(3 45)	+30	(4·0)	(4·4)
Tacubaya		9·5	307	2 42	+19	4 24	+ 8	4·5	5·2
Florissant		25·0	2	i 5 39	+ 1	i 10 10	+ 7	e 15·9	18·9
Tucson		25·7	319	5 46	+ 1	10 19	+ 3	14·2	16·9
Charlottesville		26·6	23	e 5 26	−28	e 10 26	− 7	e 14·1	15·9
Georgetown	Z.	28·0	24	i 6 8	0	10 55	− 4	e 12·7	18·2
Chicago	N.	28·1	6	e 6 4	− 5	e 10 44	−17	e 18·0	—
Ann Arbor	E.	29·2	11	—	—	e 11 50	+30	e 16·1	—
Fordham		30·9	26	e 6 30	− 7	e 11 32	−18	e 14·4	16·4
Toronto	N.	31·4	17	—	—	e 11 41	−17	19·6	—
Ottawa		34·1	20	e 6 56	−10	i 12 26	−16	e 17·9	21·7
La Paz		38·0	143	e 7 48	+10	—	—	19·0	22·8
Sucre		41·7	143	—	—	—	—	17·4	20·0
Victoria		43·5	330	8 1	−21	13 41	−74	23·2	26·2
Scoresby Sund		70·1	20	11 26	+ 8	20 26	− 1	34·4	—
Edinburgh		77·5	35	—	—	—	—	e 44·4	—
Paris		82·0	42	—	—	—	—	e 40·4	—
De Bilt		82·9	38	e 12 38	+ 3	—	—	e 39·4	51·1
Strasbourg		85·4	41	—	—	—	—	44·4	—
Copenhagen		86·0	34	—	—	—	—	40·4	—
Pulkovo		92·7	25	e 13 26	− 5	23 59	[+15]	38·4	55·6
Kucino		98·3	26	—	—	e 26 32	?PS	—	58·8
Wellington	N.	102·1	230	—	—	—	—	46·4	—
Ekaterinburg		105·5	15	e 19 8	?PR_1	e 25 6	[+16]	e 55·9	62·7
Irkutsk		112·5	350	—	—	—	—	65·4	—
Baku		114·8	31	—	—	—	—	52·9	—
Tashkent		121·9	16	e 20 48	?PR_1	—	—	59·4	72·6

Additional readings and note: Merida and Vera Cruz readings have been *diminished* by 2m. Tucson MN = +16·5m. Charlottesville eLN = +14·7m., MN = +17·4m. Chicago eE = +11m.13s. Ann Arbor eE = +13m.2s., e?N = +13m.8s., eE = +13m.44s., eN = +14m.20s., eE = +14m.32s. and +15m.44s., eN = +16m.2s., eL?N = +17·7m. Toronto eE = +12m.4s., iE = +15m.0s., eN = +15m.4s., LE = +18·5m. Ottawa e = +8m.28s., eE = +14m.36s. = $SR_1 - 2$s., i = +16m.46s., MN = +21·4m. De Bilt MN = +50·2m. Pulkovo PR_1 = +17m.8s. Ekaterinburg e = +28m.10s. = PS + 3s.

July 30d. Readings also at 2h. (Georgetown, Ottawa, and Toronto), 5h. (Catania and Mineo), 9h. (Apia, Baku, Ekaterinburg, Andijan, and near Tacubaya), 13h. (Georgetown), 14h. (Georgetown and Wellington), 18h. (Yalta and near Toyooka), 20h. (Tashkent), 21h. (Ekaterinburg).

July 31d. Readings at 1h. (near Akita and Mizusawa), 5h. (near Sumoto), 6h. (Ksara and Wellington), 11h. (near Tacubaya), 12h. (Wellington and near La Paz), 14h. (Taranto), 19h. (Ksara and Tashkent).

Aug. 1d. 5h. 1m. 48s. Epicentre 12°·0N. 93°·5E.

$A = -\cdot060$, $B = +\cdot976$, $C = +\cdot208$; $D = +\cdot998$, $E = +\cdot061$; $G = -\cdot013$, $H = +\cdot208$, $K = -\cdot978$.

Epicentre deduced by comparison with 12°·7N. 94°·5E. of 1929 April 30d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Medan		9·8	147	i 1 58	−29	4 28	+ 5	—	—
Calcutta	E.	11·6	336	3 11	+18	6 5	+56	8·0	9·4
	N.	11·6	336	2 57	+ 4	5 45	+36	7·3	—
Colombo		14·4	250	3 14	−18	—	—	—	—
Phu-Lien		15·3	53	i 4 2	+19	i 7 17	+38	8·2	9·4
Hyderabad		15·6	292	3 50	+ 3	6 27	−19	8·0	12·7
Kodaikanal		15·9	265	3 24	−27	—	—	7·3	10·9
Agra	E.	21·1	319	5 22	+28	9 22	+36	12·5	13·2
	N.	21·1	319	4 29	−25	8 27	−19	—	—
Bombay		21·1	291	4 54	0	8 41	− 5	11·0	12·7
Hong Kong		22·2	60	5 12	+ 5	9 26	+17	—	16·5
Batavia		22·5	143	e 4 47	−24	—	—	—	—
Dehra Dun		23·3	324	5 2	−18	9 32	+ 1	13·0	15·2
Manila		26·8	82	5 53	− 3	i 10 45	+ 8	14·2	18·5
Taihoku	E.	29·5	60	6 23	0	—	—	—	—
Isigakizima		31·5	63	6 35	− 8	11 47	−13	—	—
Zi-ka-wei	Z.	32·1	49	6 43	− 5	12 3	− 7	14·8	24·4
Tashkent		36·2	330	i 7 17	− 7	i 13 0	−13	e 19·2	21·2
Irkutsk		41·2	10	i 8 4	− 1	i 14 25	+ 1	22·4	25·4
Koti		42·3	54	i 8 9	− 4	i 14 38	− 1	—	—
Sumoto		43·7	54	e 8 20	− 4	—	—	—	—
Kobe		44·0	53	i 8 22	− 4	—	—	—	—
Nagoya		45·5	53	e 8 35	− 2	—	—	—	—
Baku		47·6	316	8 49	− 2	i 15 49	0	23·9	32·4
Akita		49·4	49	e 9 7	+ 4	—	—	—	—
Mizusawa		49·6	50	9 11	+ 7	16 28	+14	—	—
Ekaterinburg		51·4	338	—	—	—	—	—	33·4
Tananarive		54·9	237	9 18	−20	16 42	−38	—	—
Ksara	N.	56·6	305	9 49	− 1	17 42	+ 1	31·8	—
Theodosia		59·2	317	10 8	+ 2	18 16	+ 3	e 36·3	—
Yalta		59·9	316	10 11	0	—	—	—	—
Simferopol		60·0	316	10 19	+ 7	18 33	+10	—	—
Sebastopol		60·3	316	10 18	+ 4	18 30	+ 3	—	—
Kucino		61·1	329	10 25	+ 5	18 43	+ 6	31·1	40·4
Entebbe		61·9	265	10 17	− 7	18 32	−15	28·2	37·5
Adelaide		63·4	139	—	—	i 18 41	−25	31·8	38·0
Pulkovo		66·3	331	i 10 58	+ 4	i 19 49	+ 8	35·2	44·7
Helsingfors		69·0	331	11 14	+ 3	20 18	+ 4	e 38·2	—
Melbourne		69·2	140	—	—	i 19 58	−18	36·2	41·0
Konigsberg		70·4	325	e 11 24	+ 5	i 20 36	+ 5	e 40·2	45·2
Riverview		71·4	133	e 10 40	−46	i 20 22	−21	e 32·2	42·7
Trenta		72·5	309	i 10 22	−11	e 19 32	−84	—	—
Vienna		72·5	319	i 11 34	+ 1	20 57	+ 1	e 34·7	47·2
Upsala		72·6	330	e 11 34	0	e 20 55	− 2	e 40·2	47·1
Zagreb		72·8	316	e 11 35	0	e 20 58	− 2	—	—
Catania		73·6	307	e 11 15	−25	e 20 41	−28	—	—
Mineo		73·9	307	12 37	+56	—	—	—	—
Cheb		75·1	320	e 11 51	+ 1	e 20 55	−32	e 43·2	51·2
Copenhagen		75·1	326	11 49	− 1	21 28	+ 1	—	—
Rocca di Papa		75·2	311	i 10 46	−64	20 36	−52	e 41·2	50·2
Venice		75·3	315	e 11 52	+ 1	e 21 57	+28	—	—
Rome		75·4	311	e 11 49	− 2	22 7	+37	—	—
Florence	Z.	76·1	313	i 11 52	− 4	—	—	—	—
Hamburg		76·6	324	i 11 58	− 1	i 21 44	0	e 41·2	48·2
Chur		77·2	318	i 11 59	− 3	i 21 35	−16	—	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Piacenza		77·2	315	11 52	−10	21 47	− 4	32·5	48·7
Zurich		77·8	317	i 12 4	− 2	i 21 55	− 3	—	—
Strasbourg		78·3	320	e 12 4	− 5	e 22 2	− 2	e 32·2	—
Moncalieri		78·6	315	e 12 21	+10	21 59	− 8	32·2	—
Neuchatel		78·9	316	e 12 9	− 3	—	—	—	—
De Bilt		79·5	322	i 12 14	− 2	e 22 16	− 2	e 42·2	48·6
Uccle		80·2	321	e 12 12?	− 8	—	—	—	—
Paris·		81·6	320	i 12 23	− 5	e 22 18	−24	33·2	—
Kew		82·9	322	i 12 32	− 3	e 22 48	− 8	—	50·4
Algiers		83·2	307	e 12 29	− 8	e 22 48	−11	e 49·2	—
Edinburgh		83·8	326	—	—	—	—	e 49·2	—
Stonyhurst		83·8	324	—	—	i 23 1	− 6	e 50·2	54·2
Alicante		85·6	310	e 12 51	0	e 23 20	− 6	—	—
Scoresby Sund		86·8	344	12 53	− 5	23 26	−13	—	—
Almeria		87·4	309	i 12 49	−12	23 29	−16	—	53·4
Toledo		88·0	312	e 12 55	−10	e 23 19	[+ 4]	e 37·0	—
Granada		88·3	309	i 12 57	−10	23 47	− 8	47·2	51·6
Malaga		89·0	309	e 12 56	−14	23 22	[0]	29·2	—
Wellington		91·5	133	—	—	i 23 49	[+12]	—	—
Victoria	N.	111·3	25	19 35	?PR_1	—	—	58·1	73·6
Ottawa	E.	121·8	350	—	—	e 28 30	−33	e 58·2	—
	N.	121·8	350	—	—	e 27 42	? Σ	e 66·2	—
Toronto	E.	123·9	354	—	—	e 28 42	−36	62·2	—
Georgetown	Z.	128·3	350	e 19 28	[+13]	—	—	e 67·1	83·0
Florissant		129·0	4	i 22 33	?	—	—	e 67·2	81·7
Sucre		158·4	249	e 20 4	[− 2]	—	—	—	—
La Paz		161·7	254	18 4	[−125]	—	—	77·2	85·4

Additional readings: Phu-Lien MN = +9·2m. Hyderabad MN = +9·4m. Hong Kong MN = +13·5m. Batavia i = +5m.37s. = PR_1 − 1s. Manila i = +7m.20s., MN = +18·4m. Zi-ka-wei iE = +16m.59s., MN = +19·4m. Sumoto e = +11m.8s. Mizusawa SN = +16m.24s. Adelaide i = +18m.47s., +20m.5s., and +20m.8s. Helsingfors PR_1 = +14m.11s., SE = +20m.19s. Konigsberg eZ = +11m.39s., eE = +16m.15s. = PR_2 +8s., ePSN = +21m.5s., eE = +21m.19s. and +23m.47s., eZ = +23m.54s., eSR_1N = +25m.19s., eE = +25m.34s. and +25m.57s., eSR_2N = +28m.6s., eE = +32m.18s., eN = +32m.24s., MN = +44·2m. Riverview iS = +20m.28s., MN = +41·9m. Zagreb e = +14m.24s. = PR_1 − 26s., +17m.34s. = PR_2 +18s., and +21m.38s. = [S] +5s. Copenhagen +21m.58s. = [S] +9s. Rocca di Papa iP = +11m.4s., eS = +19m.54s. Florence i = +17m.2s. = PR_1 − 3s. Hamburg MN = +46·2m. Strasbourg PR_1 = +15m.24s. De Bilt iPR_1 = +15m.46s., eLN = +40·2m., MN = +47·0m. Kew iP_cPZ = +12m.53s. Algiers PR_1 = +13m.27s. Scoresby Sund +23m.9s. = [S] +1s. Granada PR_1 = +16m.28s. Ottawa e = +37m.30s. = SR_1 +20s. Georgetown PR_1Z = +21m.35s., PS = +34m.46s. Florissant iE = +22m.55s., iZ = +23m.5s., iE = +38m.54s. = SR_1 +16s., iN = +39m.1s. Sucre i = +20m.32s., PR_1? = +24m.17s. La Paz iS_cP_cSP = +32m.59s.

Aug. 1d. 5h. 59m. 3s. Epicentre 40°·0N. 142°·5E. (as on 1928 May 31d.).

A = −·608, B = +·466, C = +·643; D = +·609, E = +·793; G = −·510, H = +·391, K = −·766.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	1·4	231	0 24	+ 3	0 45	+ 6	—	—
	N.	1·4	231	0 23	+ 2	0 44	+ 5	—	—
Akita		1·9	260	i 0 30	+ 1	—	—	1·0	1·5
Nagoya		6·6	224	e 1 37	− 4	—	—	—	—
Kobe		7·9	230	e 3 35	?S	(e 3 35)	+ 1	—	—
Sumoto		8·3	229	e 3 37	?S	(e 3 37)	− 8	(e 4·3)	4·8
Koti		9·6	231	—	—	—	—	e 5·1	—
Irkutsk		28·8	308	e 6 8	− 8	—	—	14·6	18·2
Copenhagen		75·3	334	—	—	—	—	43·0	—

Additional reading and note: Akita ePEN = +33s., MN = +1·7m., MZ = +2·0m. Sumoto gives S as P and L as S.

Aug. 1d. 8h. 12m. 6s. Epicentre 15°·0S. 165°·0E. (as on 1924 Feb. 17d.).

$A = -\cdot933$, $B = +\cdot250$, $C = -\cdot259$; $D = +\cdot259$, $E = +\cdot966$; $G = +\cdot250$, $H = -\cdot067$, $K = -\cdot966$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	13·2	105	3 6	−10	i 5 54?	+ 5	—	8·9
	N.	13·2	105	3 6	−10	i 5 30	−19	6·3	7·1
Apia		22·5	90	5 14	+ 3	6 38	?	—	14·9
Riverview		22·6	211	—	—	e 9 30	+13	e 17·5	19·4
Wellington	N.	27·6	164	—	—	(10 54?)	+ 2	10·9	—
Melbourne		28·9	214	—	—	—	—	20·9	22·7
Adelaide		31·0	225	—	—	—	—	e 20·8?	26·9
Medan		68·2	280	e 34 51	?L	—	—	(e 34·8)	—
Irkutsk		85·2	327	—	—	—	—	e 52·2	—
Victoria		89·6	40	—	—	24 29	+19	—	—
Tashkent		104·1	310	e 12 16	?	17 48	[−13]	e 43·9	77·6
Ekaterinburg		110·3	324	—	—	e 32 44	?	e 62·4	74·4
Florissant	N.	110·6	52	—	—	—	—	e 59·9	—
Baku		118·7	307	—	—	e 23 50	?PR_2	62·9	—
Toronto		119·0	47	—	—	—	—	52·9	—
Georgetown	Z.	121·0	51	—	—	—	—	e 59·0	73·2
Ottawa	N.	121·1	44	—	—	e 52 30	?	e 59·9	—
Kucino		122·8	326	—	—	e 24 36	?	e 47·2	82·4
Scoresby Sund		124·3	3	—	—	23 0	?	71·9	—
Pulkovo		124·5	334	e 20 59	?PR_1	—	—	65·9	83·6
Copenhagen		134·2	339	—	—	—	—	77·9	—
Kew	Z.	141·7	346	—	—	—	—	e 83·9	—
Granada		155·6	337	i 22 31	?	i 26 24	?	83·9	88·4
San Fernando		157·2	342	—	—	—	—	—	101·6

Additional readings: Riverview MN = +19·1m. Wellington eLE = +9·9m. Adelaide MN = +24·8m. Florissant eN = +46m.11s. Ottawa eN = +55m.42s., eLE = +57·9m. Kucino e = +30m.9s.

Aug. 1d. Readings also at 0h. (Ottawa), 1h. (near Kobe, Sumoto, and Nagoya), 3h. (Medan and near Batavia), 5h. (Taihoku), 9h. (near Algiers), 10h. (Kucino and Tashkent), 12h. (Mizusawa and Nagoya), 14h. (Dehra Dun, Andijan, Ekaterinburg, Pulkovo, and Irkutsk), 15h. (Copenhagen and Wellington), 16h. (near Kobe and Nagoya), 17h. (Vienna), 18h. (Kew and near Sumoto), 19h. (Pulkovo and Tashkent).

Aug. 2d. Readings at 2h. (near Kobe and Sumoto), 3h. (Catania), 4h. (Wellington and near Santiago), 5h. (Irkutsk, Tashkent, La Paz, La Plata, and near Santiago), 8h. (Andijan), 9h. (Adelaide, Riverview, and Wellington), 10h. (near Berkeley and Lick), 11h. (Wellington), 13h. (Chur, Neuchatel, Zurich, and Wellington), 14h. (Bombay and Florissant), 17h. (Bombay and Ksara), 18h. (Georgetown and Ottawa), 19h. (Andijan), 22h. (La Paz), 23h. (Andijan).

Aug. 3d. 12h. 49m. 22s. Epicentre 17°·0S. 172°·5W.

$A = -\cdot948$, $B = -\cdot125$, $C = -\cdot292$; $D = -\cdot131$, $E = +\cdot991$; $G = +\cdot290$, $H = +\cdot038$, $K = -\cdot956$.

		Δ	Az.	P.	O−C.	S.	O−C	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		3·2	12	0 50	0	1 17	−11	—	—
Suva	E.	8·8	261	e 2 2	−11	—	—	i 5·0	7·6
Wellington	N.	26·7	202	—	—	e 10 29	− 6	—	—
Riverview		36·6	235	e 7 58	+31	i 13 9	− 9	e 18·2	21·0
Honolulu T.H.	N.	40·9	22	i 7 48	−14	13 52	−28	17·1	19·6
Melbourne		42·6	231	—	—	i 14 36	− 7	22·1	25·3
Adelaide		47·0	238	—	—	i 15 45	+ 4	23·2	28·6
Lick		72·4	40	e 11 34	+ 2	—	—	—	—
Manila		72·8	292	e 10 28	−67	—	—	—	—
Tucson		76·8	50	12 5	+ 5	21 49	+ 2	35·0	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria		78·7	30	12 4	− 7	22 2	− 6	35·7	37·6
Batavia		79·3	269	12 21	+ 6	i 22 18	+ 3	—	—
Hong Kong		81·8	297	12 31	+ 2	22 44	0	—	44·1
Medan		89·9	275	14 7	+52	24 48	+35	—	—
Chicago	N.	97·5	49	—	—	—	—	e 47·8	—
La Paz		98·3	110	13 45	−17	—	—	47·0	—
Irkutsk		99·3	323	13 49	−18	24 29	[+ 9]	28·1	54·0
Sucre		99·9	114	14 4	− 6	—	—	(51·5)	—
Toronto		103·8	48	—	—	24 38?	[− 4]	—	—
Georgetown	Z.	104·7	54	e 14 22	−11	i 18 38	?PR_1	e 51·1	58·3
Ottawa	E.	106·7	47	—	—	e 25 2	[+ 7]	54·6	—
Andijan		120·0	307	e 19 23	[+31]	—	—	—	—
Tashkent		122·2	309	—	—	e 27 0	? Σ	e 52·6	66·3
Scoresby Sund		123·6	11	20 38	?PR_1	—	—	58·6	—
Ekaterinburg		123·9	329	19 13	[+10]	—	—	—	72·4
Pulkovo		134·1	344	19 28	[0]	—	—	66·6	73·1
Kucino		134·9	335	—	—	—	—	e 61·4	73·6
Baku		136·7	312	i 19 37	[+ 4]	—	—	73·6	75·6
Copenhagen		141·1	357	—	—	—	—	64·6	—
Stonyhurst		142·3	10	—	—	—	—	e 73·6	—
Theodosia		142·6	326	e 19 44	[0]	—	—	—	—
Simferopol		144·3	326	e 19 44	[− 3]	—	—	—	—
Yalta		144·5	326	e 20 2	[+14]	—	—	—	—
De Bilt		144·8	1	i 19 48	[0]	e 23 7	?PR_1	e 74·6	88·5
Kew	Z.	145·0	9	e 19 47	[− 1]	—	—	74·6	—
Uccle		146·1	4	i 19 51	[+ 1]	—	—	—	—
Feldberg		146·8	2	i 19 45	[− 6]	—	—	—	—
Vienna	Z.	147·9	350	e 20 55	[+62]	—	—	—	—
Paris		147·9	7	i 19 55	[+ 2]	—	—	76·6	—
Strasbourg		148·4	0	i 19 55	[+ 2]	—	—	76·1	—
Ksara		149·5	310	e 20 6	[+11]	—	—	83·4	—
Zagreb		150·3	348	e 20 0	[+ 4]	—	—	—	—
Piacenza		151·9	357	e 20 10	[+11]	—	—	—	—
Florence	Z.	153·0	357	(20 4)	[+ 4]	20 4	?[P]	—	—
Toledo		155·0	21	e 20 2	[0]	—	—	—	—
Granada		157·6	24	i 20 16	[+10]	i 24 21	?PR_1	e 70·6	79·1
Almeria		158·3	22	20 11	[+ 5]	—	—	—	83·3

Additional readings and note: Wellington eE = +10m.53s. Riverview MN = +21·4m. Adelaide e = +10m.26s. = PR_1 − 20s. and +19m.16s. = SR_1 +6s., MN = +26·9m. Lick eN = +12m.17s., eE = +12m.18s. Tucson SE = +21m.52s. Batavia i = +14m.24s., iNW = +23m.13s. = PS +16s. Medan i = +26m.12s. Chicago eE = +52m.50s. La Paz eP = +13m.56s. Irkutsk PR_1 = +17m.17s. Sucre readings are given as separate P's. Ottawa eE = +27m.56s. = PS − 26s. and +33m.38s. = SR_1 − 23s., eLN = +42·6m. Tashkent i = +27m.34s. = Σ +7s., e = +41m.38s.? Ekaterinburg PR_1 = +20m.51s. Pulkovo P_cP_cS = +22m.54s. Kucino ePR_1 = +21m.57s., P_cP_cS = +22m.57s., PR_1 = +24m.43s., SR_1 = +39m.56s. Baku P_cP_cS = +23m.13s., SR_1 = +40m.56s. De Bilt MN = +79·9m., MZ = +89·4m. Vienna iPZ = +20m.58s. Zagreb eNE = +20m.10s. = [P] +14s. Florence eP = +13m.59s. Granada i = +20m.40s. Almeria PR_1 = +24m.17s.

Aug. 3d. 14h. 55m. 57s. Epicentre 10°·7S. 159°·7E. (as on 1926 Sept. 17d.).

A = −·922, B = +·341, C = −·186; D = +·347, E = +·938; G = +·174, H = −·064, K = −·983.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview		24·4	197	i 5 35	+ 3	i 10 9	+17	e 13·6	15·2
Sydney	E.	24·4	197	10 3	?S	(10 3)	+11	17·8	18·2
Melbourne		30·2	205	—	—	i 11 5	−32	16·5	18·4
Adelaide		30·9	217	e 6 38?	+ 1	i 11 48	− 2	14·8	20·3
Wellington	E.	33·4	160	—	—	e 12 12	−18	e 18·7	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		46·0	305	e 8 35	− 5	e 15 16	−12	—	—
Batavia		52·4	273	i 9 31	+ 9	i 20 42	?SR_1	—	—
Honolulu T.H.	N.	52·6	52	—	—	e 17 30	?PS	e 26·8	27·2
Hong Kong		55·5	309	e 9 43	0	(e 17 33)	+ 5	e 17·6	31·4
Irkutsk		78·8	330	12 8	− 4	22 2	− 8	26·6	60·2
Victoria		89·6	40	13 1	−13	23 41	[+15]	40·8	44·2
Tucson		95·2	58	—	—	—	—	—	43·4
Tashkent		97·3	311	i 13 39	−17	24 52	−37	47·0	56·4
Ekaterinburg		103·9	327	—	—	26 0	−32	e 43·6	63·8
Baku		111·9	310	—	—	—	—	57·8	—
Chicago	E.	114·0	48	—	—	—	—	e 52·6	—
Kucino		116·4	328	—	—	e 27 0	? Σ	e 48·2	58·8
Pulkovo		118·3	334	e 20 12	?PR_1	—	—	58·0	76·4
Toronto	E.	119·6	45	—	—	—	—	e 61·2	—
Scoresby Sund		120·2	1	19 57	?PR_1	—	—	58·0	—
Helsingfors		120·4	335	—	—	—	—	e 68·0	—
Charlottesville	E.	121·5	50	—	—	—	—	e 60·0	68·0
Ottawa		121·6	41	e 20 27	?PR_1	—	—	e 58·0	—
Georgetown	Z.	122·4	49	e 18 37	[−22]	—	—	63·2	67·6
Fordham		124·3	47	—	—	—	—	e 61·5	72·0
La Paz		125·4	119	e 18 59	[− 8]	—	—	—	—
Copenhagen		128·3	336	21 15	?PR_1	—	—	58·0	—
Hamburg		130·8	337	e 21 3?	?PR_1	—	—	—	—
Vienna	Z.	131·6	330	e 19 19	[− 3]	—	—	—	—
Cheb		132·3	331	—	—	—	—	e 72·0	81·0
Zagreb		133·3	326	e 22 53	?	—	—	—	—
De Bilt		133·8	338	e 21 50	?PR_1	—	—	e 68·0	79·1
Uccle		135·1	338	—	—	—	—	e 75·0	—
Strasbourg		135·5	334	e 22 5	?PR_1	—	—	78·0	—
Kew	Z.	136·1	343	e 22 12	?PR_1	—	—	74·0	—
Florence	Z.	137·1	325	e 19 34	[0]	22 12	?PR_1	e 57·6	78·0
Paris		137·4	338	e 19 27	[− 8]	—	—	75·0	84·0
Alicante		147·2	331	e 19 51	[0]	—	—	—	—
Toledo		147·5	336	e 10 38	?	—	—	—	—
Almeria		149·2	331	19 44	[−10]	—	—	e 72·0	78·9
Granada		149·6	333	e 19 21	[−34]	—	—	e 74·0	83·4
San Fernando	E.	151·3	336	—	—	—	—	—	98·4

Additional readings: Riverview P_gS = +12m.24s., MN = +16·8m. Melbourne i = +14m.0s. Adelaide MN = +19·6m. Wellington eN = +9m.23s., LN = +18·3m. Honolulu T.H. eN = +21m.33s. Victoria PN = +13m.29s. Ekaterinburg PR_1 = +18m.22s. Baku e = +49m.30s. Kucino e = +35m.54s. = SR_1 − 8s. Ottawa e = +30m.3s., eE = +44m.33s. Georgetown iZ = +20m.37s. = PR_1 − 3s. De Bilt eEN = +22m.58s., MN = +81·1m., MZ = +81·3m. Granada i = +20m.3s. = [P] +8s. and +23m.43s. = PR_1 +7s. San Fernando MN = +97·8m.

Aug. 3d. 16h. 0m. 6s. Epicentre 34°·4N. 130°·2E.

A = −·533, B = +·630, C = +·565; D = +·764, E = +·645; G = −·365, H = +·432, K = −·825.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Hukuoka		0·[illegible]	168	0 12	0	0 21	− 1	—	0·4
Nagasaki		1·[illegible]	189	0 27	+ 1	0 49	+ 1	—	0·9
Matuyama		2·2	105	i 0 27	− 7	—	—	—	0·9
Koti		2·9	107	e 0 42	− 3	i 1 17	− 3	—	1·4
Muroto		3·5	109	0 56	+ 1	e 1 41	+ 4	—	—
Sumoto		3·9	90	0 58	− 3	1 51	+ 4	—	2·4
Toyooka		4·0	71	e 1 2	0	(1 51)	+ 1	1·9	2·0
Kobe		4·1	85	1 9	+ 5	(1 55)	+ 2	1·9	2·0
Osaka		4·4	85	1 12	+ 4	(2 9)	+ 8	2·1	3·6
Nagoya		5·6	80	e 1 31	+ 4	—	—	2·3	2·9
Zi-ka-wei	Z.	8·1	249	—	—	—	—	e 4·3	—

Additional readings: Koti MN = +1·6m. Sumoto MN = +1·8m., MZ = +2·3m. Kobe MNZ = +2·1m. Osaka MNZ = +3·5m. Nagoya MN = +2·8m.

Aug. 3d. 18h. 45m. 35s. Epicentre 51°·6N. 179°·0W. (as on July 11d.).

A = −·621, B = −·011, C = +·784; D = −·017, E = +1·000; G = −·784, H = −·014, K = −·621.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Honolulu T.H.		34·4	145	—	—	e 12 33	−13	14·4	16·1
Victoria		35·0	75	6 51	−22	—	—	15·5	16·5
Irkutsk		45·0	304	8 23	−10	15 21	+ 6	22·8	27·4
Tucson		52·1	85	—	—	—	—	—	23·5
Scoresby Sund		56·8	10	9 47	− 4	17 42	− 2	32·4	—
Chicago	E.	59·3	61	—	—	—	—	e 29·6	38·2
Ann Arbor	N.	61·0	59	—	—	—	—	e 32·0	—
Ekaterinburg		61·0	328	10 26	+ 7	18 48	+12	25·8	40·9
Toronto		62·2	54	—	—	e 18 48	− 3	35·2	37·3
Ottawa		62·8	50	—	—	e 18 43	−15	e 26·4	—
Pulkovo		66·2	346	11 5	+12	19 40	0	37·4	43·8
Helsingfors		66·6	348	—	—	—	—	e 39·4	—
Charlottesville		66·8	58	—	—	—	—	34·4	39·3
Georgetown	Z.	66·9	57	10 57	0	—	—	e 35·4	41·6
Fordham		67·0	53	—	—	—	—	e 33·6	36·4
Upsala	N.	67·8	352	—	—	—	—	e 39·4	—
Tashkent		69·9	313	e 11 18	+ 2	e 20 29	+ 4	e 33·4	41·2
Copenhagen		72·2	354	—	—	20 59	+ 7	32·4	—
Hamburg		74·6	355	—	—	e 21 25	+ 4	e 41·4	—
De Bilt		76·2	357	—	—	21 42	+ 3	e 42·4	51·3
Gottingen		76·6	355	—	—	—	—	41·3	51·4
Kew		76·9	2	—	—	—	—	e 42·4	—
Uccle		77·5	359	—	—	e 21 56	+ 1	e 41·4	—
Cheb		77·9	354	—	—	—	—	e 42·4	51·4
Paris		79·6	0	—	—	—	—	50·4	51·4
Strasbourg		79·7	356	—	—	—	—	46·4	—
Piacenza		83·1	355	—	—	—	—	e 50·4	—
Bombay		86·0	297	—	—	e 25 25?	?PS	—	—
Granada		91·1	5	—	—	—	—	e 43·4	50·4
San Fernando	E.	91·7	6	—	—	—	—	—	61·9
Wellington	E.	93·1	185	—	—	1 27 26	?PS	—	—

Additional readings: Honolulu T.H. LN = +14·7m. Victoria LN = +15·0m. Chicago eLN = +30·2m., MN = +34·5m. Charlottesville MN = +41·7m. Georgetown PSZ? = +21m.29s. Fordham eE = +17m.25s., e = +28m.25s. De Bilt MN = +56·8m., MZ = +57·5m. Gottingen MN = +47·4m. Paris e = +39m.25s.? San Fernando MN = +59·6m. Wellington 1N = +27m.25s.

Aug. 3d. Readings also at 6h. (Christchurch and near Wellington), 7h. (Granada, Sucre, near La Paz, and near Santiago), 9h. (Granada, near Akita, and Mizusawa), 11h. (Alicante), 13h. (La Paz), 14h. (near Sumoto and near Wellington), 16h. (Perth), 17h. (La Paz, Wellington, and near Apia), 18h. (Andijan), 21h. (Scoresby Sund), 22h. (Irkutsk and Sitka), 23h. (Tashkent).

Aug. 4d. 9h. 3m. 54s. Epicentre 36°·5N. 31°·0E. (as on 1927 June 5d.).

A = +·689, B = +·414, C = +·595; D = +·515, E = −·857; G = +·510, H = +·306, K = −·804.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ksara		4·8	122	1 10	− 4	2 7	− 4	—	—
Sebastopol		8·3	12	2 11	+ 5	—	—	—	—
Yalta		8·3	16	2 11	+ 5	e 3 52	+ 7	—	—
Simferopol		8·7	15	2 16	+ 4	4 1	+ 5	—	—
Theodosia		9·0	20	2 23	+ 7	e 4 12	+ 9	—	—
Belgrade	E.	11·5	319	e 4 17	?	—	—	e 5·8	6·2
Zagreb		14·6	314	e 3 43	+ 9	—	—	e 8·4	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Rocca di Papa		15·1	294	e 3 42	+ 2	7 12	+38	e 8·6	9·6
Rome		15·3	296	e 3 44	+ 1	—	—	—	4·8
Baku		15·3	69	e 3 40	− 3	e 6 42	+ 3	8·1	—
Vienna	Z.	15·9	322	e 3 51	0	—	—	—	—
Florence	Z.	16·7	302	e 4 28	+27	9 5	?L	—	10·1
Piacenza		18·2	305	4 42	?PR_1	8 6	+22	11·1	12·2
Chur		19·0	309	e 4 25	− 4	e 8 2	0	—	—
Cheb		19·1	321	—	—	e 8 6?	+ 2	—	11·5
Moncalieri		19·5	303	e 4 4	−31	8 33	+20	10·9	—
Zurich		19·8	310	e 4 43	+ 4	—	—	—	—
Kucino		19·8	12	—	—	e 8 18	− 1	e 12·0	—
Neuchatel		20·6	308	i 4 41	− 7	—	—	—	—
Strasbourg		20·8	313	e 4 45	− 6	e 9 3	+23	12·1	—
Gottingen	E.	21·1	322	e 8 44	?S	(e 8 44)	− 2	e 11·9	12·1
	N.	21·1	322	e 8 45	?S	(e 8 45)	− 1	e 11·7	12·1
Feldberg	N.	21·2	317	e 4 42	−13	e 8 35	−13	e 12·1	—
Hamburg		22·5	326	—	—	e 8 6?	−69	—	—
Copenhagen		23·0	332	—	—	9 48	+23	12·1	—
Pulkovo		23·3	359	5 11	− 9	e 9 43	+12	14·1	15·6
De Bilt		24·0	319	—	—	e 9 55	+11	e 12·1	14·1
Paris		24·1	310	e 6 6	?PR_1	—	—	13·1	15·1
Kew		26·7	314	—	—	e 11 6?	+31	—	—
Granada		27·5	282	—	—	—	—	14·1	—
Ekaterinburg		28·3	35	e 5 59	−12	e 11 24	+20	12·8	19·7
Tashkent		29·9	69	—	—	e 11 1	−31	e 16·1	22·6
Andijan		32·3	70	e 6 36	−15	—	—	—	—
Scoresby Sund		43·7	338	—	—	15 30	+32	23·1	—
Ottawa		74·9	316	—	—	e 19 42	?	26·6	—
Toronto		78·0	317	—	—	23 6?	?PS	—	—
Georgetown	Z.	79·6	314	e 17 41	?PR_2	—	—	e 26·4	—

Additional readings and note: Ksara iPR_1N = +1m.21s.; T_0 = 9h.4m.11s. Belgrade e = +5m.54s. Rocca di Papa e = +3m.32s., L = +9·2m. Tashkent e = +12m.30s., S and L are given without phase. Scoresby Sund +18m.42s. Ottawa eL = +23m.6s.?

Aug. 4d. 15h. 12m. 36s. Epicentre 36°·5N. 36°·0W. (as on 1926 July 31d.).

A = +·650, B = −·472, C = +·595; D = −·588, E = −·809; G = +·481, H = −·350, K = −·804.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toledo		25·2	72	e 5 38	− 2	e 10 1	− 6	e 11·2	—
Malaga		25·2	80	e 5 42	+ 2	—	—	—	—
Granada		25·8	79	5 46	0	10 23	+ 5	e 11·8	13·1
Almeria		26·8	79	e 5 40	−16	—	—	11·8	13·6
Alicante		28·0	75	—	—	—	—	e 12·7	—
Tortosa	N.	28·6	70	—	—	—	—	e 11·4	14·5
Paris		30·5	53	—	—	—	—	e 16·4	—
Ottawa		31·0	300	—	—	e 12 24?	?	e 16·4	—
Uccle		32·0	50	—	—	—	—	15·4	—
Georgetown	Z.	32·3	288	e 7 18	+27	(e 12 14)	+ 1	19·9	—
De Bilt		32·7	49	—	—	—	—	e 16·4	—
Strasbourg		33·3	56	—	—	—	—	17·4	—
Scoresby Sund		34·8	9	—	—	12 57	+ 5	15·4	—
Copenhagen		37·6	44	—	—	—	—	17·4	—

No additional readings.

Aug. 4d. 22h. 16m. 33s. Epicentre 55°·0S. 124°·0W.

$A = -·321$, $B = -·476$, $C = -·819$; $D = -·829$, $E = +·559$; $G = +·458$, $H = +·679$, $K = -·574$.

Very rough.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Wellington	N.	41·6	265	—	—	—	—	18·4	—
La Plata		48·8	94	—	—	—	—	26·2	—
Apia		55·2	300	—	—	e 24 36	?	26·0	28·4
La Paz		57·2	70	e 9 57	+ 4	e 17 54	+ 5	27·9	36·0
Riverview		60·1	255	e 10 43	+30	e 18 33	+ 9	e 28·2	31·7
Melbourne		60·5	246	—	—	i 18 34	+ 4	28·3	31·2
Adelaide		65·9	244	e 10 10	−40	i 18 21	−75	28·6	34·8
Rio de Janeiro	E.	66·3	96	—	—	e 20 47	[+ 4]	—	—
Honolulu T.H.		81·6	329	—	—	e 23 33	?PS	36·4	41·4
Tucson	E.	88·0	11	—	—	e 23 47	− 5	—	44·0
Georgetown	Z.	102·3	36	—	—	e 24 27?	[− 8]	e 47·8	—
Victoria	E.	103·3	1	26 6	?S	(26 6)	−21	49·6	50·8
Toronto		105·6	33	—	—	—	—	49·4	—
Ottawa		108·3	35	—	—	e 28 27?	?PS	e 47·4	—
Sitka	E.	112·4	354	e 52 15	?	—	—	e 55·3	57·4
Entebbe		121·8	151	—	—	46 56	?SR_3	63·4	—
Granada		136·6	88	—	—	—	—	e 63·4	68·0
Bombay		141·7	208	e 58 51	?L	—	—	(e 58·8)	—
Scoresby Sund		144·3	34	—	—	23 27?	?PR_1	67·4	—
Kew		147·0	73	—	—	—	—	e 44·4	—
Paris		147·3	79	e 19 40	[−12]	—	—	77·4	—
Uccle		149·3	77	—	—	—	—	e 71·4	—
Strasbourg		150·1	82	—	—	—	—	e 43·4	—
De Bilt		150·3	74	—	—	e 24 27?	?PR_1	e 76·4	77·9
Irkutsk		151·8	285	e 20 19	[+20]	—	—	70·4	91·0
Copenhagen		155·6	70	—	—	e 43 27?	?SR_1	79·4	—
Tashkent		163·8	218	e 20 33	[+22]	—	—	e 78·4	93·2
Baku		164·9	162	e 21 0	[+48]	e 31 15	?	e 71·4	92·2
Pulkovo		165·4	60	e 21 21	[+69]	—	—	82·4	92·0
Kucino		169·7	78	—	—	e 31 57	? Σ	85·4	98·0
Ekaterinburg		176·8	305	e 21 5	[+48]	—	—	—	95·4

Additional readings: Honolulu T.H. MN = +40·4m. Tucson MN = +42·6m. Ottawa eE = +32m.27s.? De Bilt MNZ = +85·0m. Irkutsk e = +23m.1s., +28m.55s., +33m.59s., +43m.47s., and +46m.19s. Tashkent e = +22m.16s., +31m.21s. = Σ −7s., and +42m.2s. Kucino e = +46m.10s. = SR_4 −25s. Ekaterinburg e = +25m.54s., +28m.14s., +32m.46s. = Σ +14s., +35m.15s., and +36m.19s.

Aug. 4d. Readings also at 2h. (Lick), 8h. (near Wellington), 9h. (La Paz), 10h. (Hong Kong and Taihoku), 12h. (Alicante and near Nagasaki), 13h. (near Wellington), 14h. (Georgetown), 18h. (Bombay), 19h. (La Paz and Riverview), 20h. (near Akita), 23h. (Granada).

Aug. 5d. 14h. 21m. 24s. Epicentre 34°·5S. 71°·5W. (as on 1929 April 17d.).

$A = +·261$, $B = -·782$, $C = -·566$; $D = -·948$, $E = -·317$; $G = -·180$, $H = +·537$, $K = -·824$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago		1·2	32	—	—	(0 31)	− 2	0·5	0·8
La Plata		11·2	96	2 48	+ 1	e 5 0	+ 1	6·4	—
Sucre		16·4	21	1 3 55	− 2	1 6 56	− 8	8·2	9·6
La Paz		18·2	10	1 4 19	0	1 7 32	−12	8·8	10·1
Rio de Janeiro	E.	27·3	72	e 6 36?	+35	11 56	?SR_1	15·1	—
	N.	27·3	72	e 6 56	+55	11 54	?SR_1	14·6	15·9

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toronto		78·4	355	—	—	(21 36)?	−29	21·6	—
Ottawa		80·0	358	—	—	(22 12)	−11	22·2	—
San Fernando	E.	93·4	47	—	—	—	—	—	65·5
Granada		95·5	48	—	—	—	—	e 58·6	—
Kew		106·1	37	—	—	—	—	e 55·6	—
Scoresby Sund		110·8	15	—	—	26 36?	? Σ	56·6	—
Copenhagen		114·8	37	—	—	—	—	62·6	—
Pulkovo		125·0	36	—	—	e 32 48	?	65·6	—
Kucino		128·5	42	—	—	—	—	e 54·6	—
Ekaterinburg		141·0	40	e 22 58	?PR$_1$	—	—	53·4	81·1

Additional readings: La Paz MN = +10·8m. San Fernando MN = +62·3m.
Ekaterinburg e = +29m.59s. and +35m.16s.

Aug. 5d. Readings also at 2h. (near Sumoto), 3h. (Almata, Andijan, La Paz, and La Plata), 5h. (near La Paz), 12h. (2), 13h. (11), and 14h. (13) (near Lick), 18h. (Lick and near La Paz), 20h. (Lick and near Wellington).

Aug. 6d. 1h. 30m. 0s. Epicentre 72°·0N. 8°·5W. (as on 1923 Sept. 10d.).

A = +·306, B = −·046, C = +·951; D = −·148, E = −·989;
G = +·941, H = −·141, K = −·309.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Scoresby Sund		4·6	258	1 27	+16	—	—	e 2·5	3·4
Reykjavik		9·2	219	—	—	—	—	5·2	—
Dyce		15·0	166	3 39	0	6 43	+11	—	8·7
Upsala		15·9	126	—	—	e 6 36	−17	—	10·8
Edinburgh		16·2	169	—	—	e 7 6	+ 6	i 11·4	—
Helsingfors		17·6	115	e 4 10	− 2	e 7 12	−19	e 8·5	—
Stonyhurst		18·3	168	—	—	e 7 43	− 4	—	14·1
Copenhagen		18·5	141	4 34	+11	7 48	− 3	10·0	—
Pulkovo		19·5	109	i 4 38	+ 3	8 10	− 3	10·0	11·4
Hamburg		20·1	147	e 4 44	+ 2	e 8 21	− 4	e 13·0	—
Oxford		20·5	167	4 48	+ 1	i 8 44	+10	e 10·1	14·4
Kew		20·8	166	e 4 52	+ 1	e 8 40	0	11·0	—
De Bilt		20·8	156	4 53	+ 2	8 36	− 4	e 10·0	15·8
Konigsberg		21·1	129	e 4 44	−10	e 8 46	0	e 10·7	—
Uccle		21·8	158	e 5 4	+ 1	e 8 56	− 5	e 11·0	—
Gottingen		22·0	148	e 8 10	?S	(e 8 10)	−55	e 13·3	14·0
Feldberg	N.	23·1	152	i 5 10	− 8	e 9 30	+ 3	e 13·9	—
Paris		23·7	162	e 5 19	− 6	—	—	14·0	21·0
Strasbourg		24·6	154	e 5 30	− 4	e 9 58	+ 3	14·8	—
Kucino		25·0	106	e 5 35	− 3	10 4	+ 1	e 11·8	13·9
Moncalieri		28·1	155	—	—	e 9 29	?	15·0	—
Piacenza		28·3	152	e 7 12	?PR$_1$	12 0	?SR$_1$	17·0	23·1
Florence	Z.	29·8	151	—	—	e 12 13	+42	—	19·0
Ekaterinburg		31·1	83	e 6 39	0	11 55	+ 2	e 16·5	21·5
Tortosa	N.	31·5	168	—	—	—	—	e 18·0	22·1
Rocca di Papa		32·0	150	e 8 9	?PR$_1$	13 9	+61	—	27·3
Toledo	N.E.	32·2	174	—	—	—	—	e 14·2	—
Alicante		33·9	170	—	—	—	—	e 20·4	—
Granada		34·9	174	e 7 9	− 3	13 30	+36	e 15·0	22·0
Almeria		35·2	172	—	—	—	—	—	22·2
San Fernando	E.	35·6	178	—	—	—	—	—	19·7
Ottawa		40·4	267	—	—	—	—	e 18·0	—
Baku		42·3	107	e 8 53	+40	e 16.59	?SR$_1$	21·7	—
Toronto		43·1	270	—	—	—	—	24·0	—
Georgetown	Z.	46·7	265	—	—	e 15 7	−30	e 22·0	—
Irkutsk		47·3	50	e 8 48	− 1	e 15 51	+ 6	24·2	—
Florissant		50·9	277	—	—	—	—	e 25·0	—

Additional readings: Scoresby Sund eN = +2m.23s., MN = +2·8m. Oxford i = +8m.56s. and +9m.15s. De Bilt MN = +13·2m., MZ = +13·5m. Konigsberg eE = +5m.44s., eN = +5m.48s., +6m.29s., +7m.10s., +8m.49s., and +9m.10s., eE = +9m.39s. Gottingen ePN = +8m.18s. Feldberg eN = +5m.12s. San Fernando MN = +21·2m.

Aug. 6d. 12h. 17m. 0s. Epicentre 6°·5S. 107°·5E. (as on 1926 April 13d.).

A = −·299, B = +·948, C = −·113; D = +·954, E = +·301; G = +·034, H = −·108, K = −·994.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Batavia	0·7	295	i 0 49	+38	1 23	+63	—	—
Medan	13·4	319	e 4 23	+65	1 6 45	+52	—	—
Phu-Lien	27·3	358	—	—	—	—	15·0	—
Hong Kong	29·6	13	—	—	e 11 20	− 7	e 15·0	22·5
Adelaide	40·3	139	—	—	e 14 8	− 3	20·2	27·2
Riverview	48·7	130	—	—	—	—	e 28·1	30·6
Andijan	56·8	330	e 10 20	+29	—	—	—	—
Irkutsk	58·8	357	e 10 13	+ 9	—	—	—	—
Baku	70·6	319	e 11 16	− 5	e 20 22	−11	36·5	—
Ekaterinburg	73·9	335	e 11 40	− 1	e 21 10	− 3	e 30·8	51·8
Pulkovo	89·3	331	12 59	−13	e 23 40	−26	49·0	—
Copenhagen	98·2	325	—	—	—	—	49·0	—
Scoresby Sund	109·5	345	—	—	—	—	61·0	—

Additional readings: Batavia iP = +50s. Adelaide e = +19m.34s., MN = +22·6m.

Aug. 6d. Readings also at 2h. (Nagasaki and Riverview), 3h. (Akita, Nagoya, and Riverview), 6h. (Wellington and near Lick), 8h. (near Lick (2) and near Sebastopol), 9h. (Lick, Akita, Nagoya, Osaka, and Matuyama), 11h. (Florissant and near Sebastopol), 12h. (Apia), 14h. (Batavia), 17h. (Riverview), 18h. (La Plata and Scoresby Sund), 19h. (Andijan), 20h. (La Paz and near Hukuoka), 21h. (near Andijan), 22h. (near Wellington).

Aug. 7d. 19h. 56m. 27s. Epicentre 55°·0S. 27°·5W. (as on 1929 March 28d.).

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 16·6	20·1
Sucre	45·9	306	e 8 51	+12	—	—	26·4	30·5
La Paz	49·5	305	e 8 57	− 7	16 8	− 5	25·6	32·1
Entebbe	73·4	65	—	—	—	—	36·6	—
Granada	94·4	19	—	—	—	—	e 45·6	49·6
Paris	106·8	20	—	—	—	—	55·6	—
Strasbourg	107·7	23	—	—	—	—	56·6	—
Uccle	109·1	20	—	—	e 28 41	?PS	e 54·6	—
De Bilt	110·5	21	—	—	e 34 57	?SR_1	e 53·6	67·5
Copenhagen	115·4	23	—	—	—	—	57·6	—
Baku	115·8	55	—	—	—	—	e 60·6	—
Pulkovo	123·6	30	e 21 24	?PR_1	—	—	e 64·6	70·4
Scoresby Sund	125·5	2	—	—	—	—	57·6	—
Tashkent	126·2	66	e 22 27	?	—	—	e 63·5	85·6
Ekaterinburg	132·5	46	e 19 37	[+13]	—	—	e 75·8	79·9
Irkutsk	151·9	75	e 20 22	[+23]	e 24 31	?PR_1	—	—

Additional readings: Rio de Janeiro MN = +20·6m. La Paz iP = +9m.1s. Uccle e = +34m.41s. −SR_1 +10s. De Bilt MN = +61·4m., MZ = +61·5m. Tashkent i = +24m.42s., e = +40m.45s., +41m.54s., and +44m.45s. Ekaterinburg e = +23m,7s, and +69m,55s,

Aug. 7d. 20h. 22m. 25s. Epicentre 35°·0N. 44°·0E. (as on 1926 April 2d.).

A = +·589, B = +·569, C = +·574; D = +·695, E = −·719;
G = +·413, H = +·398, K = −·819.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Ksara	6·8	263	2 3	+19	4 8	+63	5·6	—
Baku	7·1	39	2 12	+24	(3 13)	0	3·2	5·7
Kucino	21·1	351	—	—	—	—	e 11·8	—
Ekaterinburg	24·5	22	e 5 29	− 4	e 9 45	− 9	e 12·1	18·2
Pulkovo	26·3	344	5 46	− 5	e 10 19	− 9	13·6	16·0

Additional reading: Ksara $PR_1E = +2m.32s.$, $T_o = 20h.21m.51s.$

Aug. 7d. Readings also at 2h. (Toronto and near Andijan), 4h. (La Paz), 7h. (Ottawa, Georgetown, Scoresby Sund, Baku, Ekaterinburg, and Irkutsk), 9h. (Alicante), 12h. (Wellington), 16h. (near Santiago), 19h. (near Lick), 20h. (Sucre and near Batavia), 22h. (near La Paz).

Aug. 8d. 4h. 48m. 45s. Epicentre 35°·5N. 139°·1E. (as on July 28d.).

A = −·615, B = +·533, C = +·581.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Osaka	3·0	255	0 46	− 1	(1 27)	+ 4	(1·4)	1·5
Kobe	3·3	257	0 55	+ 3	(1 33)	+ 2	1·5	1·6
Toyooka	3·4	272	i 0 55	+ 2	(1 32)	− 2	1·5	1·6
Sumoto	3·6	252	0 54	− 2	1 44	+ 5	—	1·7

Additional readings: Osaka MNZ = +1·8m. Sumoto MN = +1·8m.

Aug. 8d. 12h. 57m. 13s. Epicentre **21°·0N. 97°·0E.**
(as on 1922 Dec. 24d.).

A = −·114, B = +·927, C = +·358; D = +·993, E = +·122;
G = −·044, K = +·356, K = −·934.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Calcutta	E.	8·2	282	4 49	‡S	(4 49)	+67	6·2	9·0
	N.	8·2	282	3 56	‡S	(3 56)	+14	6·3	8·7
Phu-Lien		9·0	90	2 28	+12	e 4 37	+34	5·0	8·9
Hong Kong		16·0	82	3 37	−15	7 7	+12	e 8·3	10·6
Medan		17·4	174	i 4 15	+ 5	i 7 21	− 6	(e 8·9)	—
Hyderabad		17·9	262	3 54	−22	7 7	−31	8·8	12·9
Agra	E.	18·4	294	3 56	−26	7 32	−17	9·2	12·9
	N.	18·4	294	4 5	−17	7 30	−19	9·0	12·2
Dehra Dun		19·5	303	4 27	− 8	8 7	− 6	12·1	15·8
Kodaikanal		21·7	243	3 35	−86	—	—	7·4	15·1
Colombo		21·8	232	4 35	−28	8 16	−45	12·5	13·0
Bombay		22·8	269	5 0	−15	8 58	−23	11·5	15·9
Taihoku		22·9	75	9 45	‡S	(9 45)	+22	13·7	14·8
Manila		23·7	102	4 24	−61	(i 9 42)	+ 4	i 11·1	16·5
Zi-ka-wei		24·1	60	5 33	+ 4	10 5	+19	12·2	15·8
Almata		27·9	328	e 6 5	− 2	e 10 53	− 4	16·8	—
Andijan		28·5	318	e 7 25	+72	e 12 49	+101	18·8	—
Batavia		28·8	159	i 5 48	−28	—	—	i 13·8	—
Tashkent		31·0	319	i 6 47	+ 9	i 12 0	+ 9	—	29·8
Nagasaki		31·4	60	—	—	—	—	e 16·3	18·6
Irkutsk		31·8	8	i 6 47	+ 2	i 12 10	+ 5	15·4	25·0
Hukuoka	E.	32·1	59	—	—	—	—	—	21·5
Miyazaki		32·5	63	6 46	− 7	12 14	− 2	—	—
Koti		34·6	61	—	—	e 12 48	− 1	18·2	—
Muroto		35·1	61	—	—	—	—	e 20·1	—

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		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Sumoto		35·9	60	—	—	e 13 6	− 3	e 19·0	21·2
Kobe	N.	36·1	60	7 19	− 4	13 11	0	e 18·5	20·9
	Z.	36·1	60	7 18	− 5	13 9	− 2	—	24·2
Toyooka	E.	36·1	58	7 20	− 3	e 12 14	−57	e 18·9	25·1
	N.	36·1	58	7 23	0	e 12 14	−57	e 19·4	20·2
Osaka		36·4	60	7 9	−16	13 25	+ 9	19·3	24·3
Nagoya		37·7	59	e 7 23	−13	19 58	?L	(20·0)	—
Akita		41·1	53	e 14 16	?S	(e 14 16)	− 6	21·9	24·2
Mizusawa		41·8	54	8 6	− 3	14 10	−22	20·8	—
Baku		44·3	309	8 17	−11	14 57	− 9	21·8	26·9
Ekaterinburg		44·7	333	i 8 26	− 5	e 16 0	+49	21·6	30·0
Ksara	N.	55·0	299	9 41	+ 2	17 18	− 3	27·8	—
Theodosia		55·5	313	e 9 43	0	e 17 27	− 1	e 30·3	—
Yalta		56·3	312	e 9 51	+ 3	—	—	—	—
Simferopol		56·4	312	i 9 51	+ 3	—	—	34·8	—
Pulkovo		60·3	330	i 10 17	+ 3	i 18 34	+ 7	31·8	38·0
Tananarive	E.	62·8	235	—	—	e 18 33	−25	e 29·3	36·8
Helsingfors		63·0	330	10 36	+ 4	19 5	+ 4	e 32·3	—
Konigsberg		65·3	323	i 10 53	+ 6	e 19 35	+ 6	e 26·8	—
Belgrade	E.	66·0	312	e 10 51	0	e 19 39	+ 2	e 33·9	43·9
Entebbe		66·4	264	19 30	?S	(19 30)	−12	(25·8)	39·9
Upsala		66·7	329	e 10 55	− 1	e 19 52	+ 6	e 34·8	46·4
Vienna		68·4	317	e 11 7	0	20 11	+ 4	e 38·8	44·3
Adelaide		68·5	144	e 11 4?	− 4	i 19 53	−15	30·5	50·6
Zagreb		69·0	314	e 11 13	+ 2	e 20 15	+ 1	e 37·8	41·3
Graz		69·1	316	i 11 33	+21	e 20 33	+18	27·8	40·9
Copenhagen		69·8	325	11 18	+ 2	20 31	+ 7	35·8	—
Potsdam		69·9	321	e 11 17	+ 1	i 20 29	+ 4	e 38·8	43·8
Trenta		69·9	307	i 11 12	− 4	—	—	—	—
Laibach	N.	70·0	314	e 11 21	+ 4	e 20 35	+ 9	e 42·1	—
Cheb		70·7	319	e 11 25	+ 4	e 20 40	+ 6	e 38·8	46·3
Jena		71·0	320	e 11 22	− 1	e 20 41	+ 3	e 40·9	47·9
Pompeii		71·0	309	e 11 47?	+24	e 20 [illegible]	+ 9	—	—
Catania		71·2	305	e 11 2	−22	20 5[illegible]	+19	—	—
Naples	E.	71·2	309	e 10 37	+13	e 19 [illegible]	−93	—	—
Hamburg		71·6	322	e 11 29	+ 2	e 20 51	+ 6	e 37·8	51·8
Venice		71·6	314	e 11 33	+ 6	i 21 5	+20	—	—
Treviso		71·7	314	i 11 32	+ 4	i 20 47	+ 1	40·8	44·8
Gottingen		71·9	321	(e 11 46)	?S	(e 20 37)	−12	(e 36·1)	(36·8)
Innsbruck		71·9	316	11 29	0	—	—	—	—
Padova		71·9	314	e 11 39	+10	i 20 56	+ 7	e 43·8	49·8
Rocca di Papa		72·1	310	e 11 30	− 1	21 16	+25	e 41·8	46·8
Rome		72·2	310	e 11 23	− 8	—	—	—	—
Bergen		72·7	330	i 11 41	+ 7	—	—	—	52·8
Florence	Z.	72·7	312	i 11 32	− 2	20 59	+ 1	46·8	48·8
Ravensburg		72·9	317	e 11 35	0	e 20 47	−14	e 37·8	—
Hohenheim		73·0	318	e 11 38	+ 2	e 21 3	+ 1	—	—
Feldberg	N.	73·1	320	e 11 23	−14	e 21 2	− 1	—	—
Chur		73·2	316	e 11 37	0	e 20 41	−23	e 41·4	—
Karlsruhe		73·4	318	10 34	−64	—	—	e 43·8	—
Piacenza		73·4	315	11 45	+ 7	21 11	+ 4	29·0	50·3
Zurich		73·7	316	e 11 47	+ 7	21 10	0	—	—
Strasbourg		74·0	318	11 45	+ 3	e 21 11	− 3	34·3	—
Melbourne		74·1	143	—	—	i 21 [illegible]	−13	33·8	47·1
De Bilt		74·7	320	11 47	0	21 [illegible]	+ 6	e 37·8	47·3
Neuchatel		74·8	316	e 11 46	− 2	(e 21 [illegible])	0	e 21·4	—
Moncalieri		74·9	315	e 11 32	−16	21 15	−10	30·0	43·5
		74·9	315	e 11 40	− 8	21 12	−13	30·8	46·8
Riverview		75·3	136	e 11 40	−11	e 21 19	−10	e 34·7	44·8
Uccle		75·5	320	e 11 52	0	21 [illegible]	+ 2	e 38·8	44·8

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Paris		77·2	319	i 12 2	0	e 21 51	0	30·8	45·8
Dyce		77·3	328	e 12 24	+21	i 21 54	+ 2	37·8	48·1
Kew		78·1	322	e 12 5	− 3	e 22 1	0	39·8	51·8
Edinburgh		78·3	326	—	—	i 22 7	+ 3	31·8	51·3
Stonyhurst		78·5	324	12 12	+ 2	22 11	+ 5	40·8	48·1
Oxford		78·6	322	12 8	− 3	22 5	− 2	e 39·8	46·0
Scoresby Sund		79·3	343	12 18	+ 3	22 24	+ 9	—	—
Algiers		80·6	308	—	—	e 22 23	− 7	—	47·8
Tortosa	N.	81·2	311	—	—	—	—	e 40·8	49·2
Alicante		82·7	310	—	—	e 22 48	− 6	e 48·7	—
Almeria		84·6	309	i 12 41	− 5	i 23 3	−12	49·8	52·6
Toledo		84·8	311	e 12 43	− 4	e 22 56	[+ 1]	e 37·5	50·5
Granada		86·0	309	i 12 46	− 7	22 55	[− 7]	45·8	51·4
Malaga		86·3	309	(13 19)	+24	(23 35)	+ 2	(31·4)	—
San Fernando		87·7	309	8 57	?	23 27	[+14]	50·4	62·0
Sitka	E.	90·6	25	—	—	—	—	i 49·5	51·9
Cape Town		92·6	234	—	—	—	—	50·5	57·6
Wellington	N.	95·0	131	—	—	i 24 41	? Σ	e 42·8	—
Honolulu T.H.	E.	95·6	64	—	—	e 24 14	[+14]	e 40·9	51·8
Victoria	E.	101·8	26	18 25	?PR_1	24 53	[+20]	37·9	58·9
	N.	101·8	26	18 25	?PR_1	24 49	[+16]	36·1	—
Ottawa		113·3	355	—	—	e 34 47?	?	e 54·8	—
Toronto	E.	115·3	357	—	—	—	—	55·8	—
Ann Arbor	N.	116·7	1	—	—	—	—	55·7	—
Chicago		117·1	4	e 25 46	?S	(e 25 46)	[+11]	e 53·1	73·6
Fordham		117·6	352	e 20 13	?PR_1	e 28 42	+11	e 54·9	60·4
Florissant	N.	119·8	5	e 20 24	?PR_1	e 25 56	[+13]	e 45·8	68·3
Georgetown	Z.	119·9	355	i 20 36	?PR_1	—	—	e 60·0	80·5
Rio de Janeiro	N.	143·1	260	—	—	—	—	e 74·8	—
La Plata		153·9	233	—	—	—	—	74·8	—
Sucre		163·2	275	—	—	—	—	82·8	94·0
La Paz		165·3	286	20 19	[+ 7]	—	—	e 79·8	97·2

Additional readings and notes: Hong Kong MN = +9·6m. Medan e = +8m.52s. and +9m.52s. Hyderabad MN = +12·1m. Taihoku SZ = +13m.8s. Manila PR_1 = +4m.55s., iS = +8m.36s., iP_cS = +11m.30s., MN = +16·0m.; true S is given as SR_1. Zi-ka-wei iN = +14m.11s., MZ = +21·8m. Batavia i = +6m.52s. = PR_1 − 12s., +9m.48s. and +15m.4s. Hukuoka MN = +19·2m. Koti e = +15m.28s. Sumoto MN = +20·8m., MZ = +24·5m. Kobe ME = +23·6m. Toyooka PN = +7m.23s., eLN = +19·4m., MN = +20·2m. Osaka MN = +22·8m. Ekaterinburg PR_1 = +10m.13s. Tananarive SN = +18m.30s., SR_1EN = +25m.33s., SR_1N = +26m.39s., MN = +36·5m. Helsingfors PR_1E = +13m.12s. Konigsberg ePN = +10m.56s., P_cPN = +11m.17s., P_cPE = +11m.23s., P_cPZ = +11m.24s., ePR_1E = +13m.31s., ePR_1N = +13m.34s., eP_cSN = +15m.17s., eZ = +15m.25s., ePSEN = +20m.11s., eE = +20m.57s., eN = +21m.7s., eE = +21m.59s., eSR_1E = +24m.35s., eSR_1E = +26m.31s. eSR_1N = +26m.35s. Belgrade eE = +21m.39s. = Σ − 21s. Entebbe gives S as P and L as S. Upsala MN = +37·5m. Vienna iPZ = +11m.13s., PR_1 = +13m.40s. Adelaide e = +24m.22s., iSR_1 = +27m.33s., MN = +36·5m. Zagreb ePSNW = +21m.13s., e = +27m.37s. Cheb MN = +42·6m. Jena eEN = +11m.23s., iZ = +11m.27s., eLN = +33·9m., MN = +42·4m. Hamburg SR_1 = +28m.47s., MNZ = +46·8m. Gottingen eN = (+30m.30s.), eE = (+30m.39s.), eLN = (+33·3m.); all readings have been *diminished* by 8m. Rome iP = +11m.36s. Bergen i = +11m.9s. Ravensburg LN = +42·8m. Melbourne i = +26m.19s. De Bilt MN = +44·2m. Neuchatel iP = +11m.51s. Moncalieri (second line) MN = +47·8m. Riverview PS = +21m.53s., MN = +41·4m. Uccle SR_1 = +27m.17s. Paris MN = +42·8m. Kew iPZ = +12m.9s., LZ = +42·8m., MN = +45·7m., MZ = +51·8m. Oxford PR_1 = +15m.53s. Scoresby Sund +15m.23s. = PR_1 − 20s., and +27m.23s. Almeria SR_1 = +24m.17s. = PS + 16s. Toledo MNW = +50·7m. Malaga readings have been *increased* by 23m. San Fernando MN = +58·0m. Sitka iPR_1E = +23m.38s. = [S] + 6s., iPR_1E = +26m.10s., iSR_1E = +37m.40s., iSR_1E = +42m.36s. Wellington iS? E = +24m.35s. = Σ − 1s. Honolulu T.H. eE = +30m.19s., MN = +49·8m. Ottawa eN = +40m.47s.? = SR_1 + 3s., eE = +47m.47s.? Ann Arbor eL?E = +62·7m. Chicago eLN = +63·1m., MN = +72·0m. Fordham PR_1 = +25m.45s. = [S] + 8s., LN = +55·8m., MN = +69·8m. Florissant eN = +26m.47s. = Σ − 25s., and +31m.50s. Georgetown PS? = +30m.24s. La Paz MN = +93·5m.

Aug. 8d. 13h. 29m. 29s. (I)
13h. 33m. 21s. (II) } Epicentre 33°·5N. 130°·3E.

Epicentre given by Tokyo in Geophys. Mag., Vol. IV, No. 4.

A = −·539, B = +·636, C = +·552; D = +·763, E = +·647:
G = −·357, H = +·421, K = −·834.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
I Hukuoka	0·1	49	0 0	− 2	0 3	0	—	0·1
II	0·1	49	0 0	− 2	0 3	0	—	0·1
II Kumanoto	0·8	155	0 16	+ 4	0 30	+ 8	—	—
I Nagasaki	0·9	205	e 0 15	+ 1	e 0 27	+ 2	—	—
II	0·9	205	i 0 14	0	i 0 26	+ 1	—	0·5
I Matuyama	2·1	81	e 0 36	+ 3	—	—	—	1·0
II	2·1	81	e 0 32	− 1	(e 0 53)	− 5	e 0·9	1·0
II Koti	2·7	89	e 0 47	+ 5	1 20	+ 6	e 1·6	—
II Muroto	3·3	94	e 1 3	+11	1 39	+ 8	—	—
II Sumoto	3·9	76	0 59	− 2	2 0	?L	(2·0)	2·1
II Wakayama	4·1	78	1 12	+ 8	2 3	+10	—	—
II Kobe	4·2	72	1 19	+14	—	—	2·2	2·3
II Toyooka	4·3	61	1 12	+ 5	(2 7)	+ 9	2·1	2·2
II Osaka	4·5	73	1 24	+14	—	—	2·4	3·1
II Nagoya	5·8	71	e 1 47	+17	—	—	3·0	—

Additional readings: Matuyama II ePR_1 = +40s. Sumoto II MZ = +2·0m. Kobe II MN = +2·4m. Toyooka II MN = +2·3m. Osaka II MZ = +3·0m., MN = +3·4m.

Aug. 8d. 14h. 38m. 41s. Epicentre 39°·0N. 17°·5E.

A = +·741, B = +·234, C = +·629; D = +·301, E = −·954;
G = +·600, H = +·189, K = −·777.

Rough.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Trenta	0·9	287	i 0 19	+ 5	i 0 29	+ 4	—	—
Taranto	1·5	353	0 20	− 3	0 45	+ 3	—	—
Messina	1·7	242	0 28	+ 2	—	—	—	—
Catania	2·4	232	e 0 40	+ 3	1 4	− 2	—	1·6
Mineo	2·8	231	0 43	− 1	—	—	—	—
Pompeii	2·9	307	e 0 54	+ 9	e 1 29	+ 9	—	—
Naples E.	3·1	307	e 0 44	− 5	e 2 14	+48	—	—
Casamicciola	3·3	305	0 41	−11	1 13	−18	—	—
Rocca di Papa	4·6	309	—	—	e 1 48	−18	(i 2·2)	2·8

Rocca di Papa gives S as e and L as iP.

Aug. 8d. Readings also at 5h. (Kucino, Pulkovo, and near Nagoya), 6h. (Manila), 9h. (Christchurch and near Wellington), 10h. (Wellington), 12h. (Alicante, near La Paz, and near Wellington), 14h. (Taihoku and Zagreb), 17h. (La Paz).

Aug. 9d. Readings at 0h. (Amboina), 2h. (La Paz and near Tacubaya), 3h. (Scoresby Sund, Georgetown, Ottawa, and near Santiago), 4h. (La Plata and near Andijan), 6h. (near Tacubaya), 7h. (La Paz, near Lick, and near Sumoto), 8h. (near Wellington), 9h. (Taihoku), 10h. (Graz and near Lick), 11h. (near Sumoto), 14h. (Ottawa), 16h. (Andijan), 17h. (near Tananarive), 19h. (Georgetown and Ottawa), 20h. (Sumoto, Kobe, Nagoya, near Santiago, and near Tananarive).

Aug. 10d. Readings at 1h. (Suva and near Santiago), 2h. (Scoresby Sund), 3h. (Matuyama, Kobe, near Sumoto, and near Toyooka), 4h. (Ekaterinburg, Irkutsk, near Akita, and Mizusawa), 5h. (De Bilt, Copenhagen, Kucino, and Pulkovo), 6h. (Bombay), 9h. (De Bilt and Zagreb), 12h. (near Vera Cruz), 13h. (near Hukuoka), 15h. (La Paz), 16h. (near Toyooka), 19h. (Andijan), 20h. (near Toyooka).

Aug. 11d. 10h. 8m. 16s. Epicentre 30°·5N. 54°·5E. (as on 1929 Jan. 21d.).

$A = +\cdot500$, $B = +\cdot701$, $C = +\cdot508$; $D = +\cdot814$, $E = -\cdot581$; $G = +\cdot295$, $H = +\cdot413$, $K = -\cdot862$.

Very doubtful.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Baku		10·5	341	e 2 39	+ 2	e 4 51	+ 8	5·3	—
Tashkent		16·0	44	(e 4 45)	+53	(e 7 54)	+59	e 8·0	13·1
Ksara		16·1	287	3 50	− 3	6 55	− 2	—	—
Andijan		17·4	51	e 5 22	+72	—	—	—	—
Ekaterinburg		26·6	8	e 6 33	+39	e 10 12	−21	e 13·6	17·4
Copenhagen		38·7	323	—	—	—	—	15·7	—
Moncalieri		39·1	305	—	—	—	—	e 21·1	—
Strasbourg		39·5	311	—	—	—	—	e 21·7	—
Neuchatel		39·8	309	i 7 10	−43	—	—	—	—
De Bilt	Z.	41·8	317	—	—	—	—	e 23·7	—

Tashkent P is given as S and S as e. Ekaterinburg readings are given without phase.

Aug. 11d. Readings also at 1h. (La Paz), 7h. (near Santiago), 12h. (Taihoku and near Lick), 14h. (Zagreb and near Belgrade), 17h. (near Taihoku), 18h. (Suva, Wellington, Riverview, Melbourne, Irkutsk, Tashkent, Ekaterinburg, Pulkovo, Copenhagen, Vienna, De Bilt, Uccle, Paris, Strasbourg, Kew, Granada, Scoresby Sund, Georgetown, and Ottawa), 19h. (Copenhagen and Uccle).

Aug. 12d. 11h. 24m. 51s. Epicentre 42°·9N. 78°·3W.

$A = +\cdot149$, $B = -\cdot717$, $C = +\cdot681$; $D = -\cdot979$, $E = -\cdot203$; $G = +\cdot138$, $H = -\cdot667$, $K = -\cdot733$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toronto	E.	1·1	314	i 0 14?	− 3	i 0 28?	− 3	—	—
	N.	1·1	314	i 0 17	0	i 0 31	0	—	—
Ottawa		3·0	37	e 0 47	0	i 1 29	+ 6	1·9	—
Fordham		3·9	121	—	—	i 1 44	− 3	—	2·2
Ann Arbor		4·1	264	1 3	− 1	i 1 51	− 2	i 2·0	2·1
Georgetown	Z.	4·1	167	i 1 9	+ 5	e 2 3	+10	e 2·2	2·3
Charlottesville		4·9	182	i 1 15	− 1	2 23	+ 9	2·6	—
Chicago	N.	7·0	264	—	—	3 27	+17	i 3·5	—
Florissant		10·0	250	e 2 18	−12	1 4 8	−21	i 5·2	—
		10·0	250	e 2 9	−21	e 4 9	−20	e 5·1	5·5
Denver	E.	20·2	270	—	—	—	—	e 9·3	—
Tucson		27·7	258	—	—	—	—	e 14·4	—
Scoresby Sund		39·0	26	—	—	—	—	18·2	—
De Bilt		53·9	49	—	—	—	—	e 30·2	—

Additional readings: Ann Arbor eN = +1m.15s. Charlottesville eN = +1m.20s., iN = +1m.25s., iE = +1m.28s., eEN = +1m.36s., iEN = +2m.10s., SE = +2m.26s. Chicago eN = +2m.48s., +2m.51s., and +3m.5s. Florissant (first line) iE = +2m.19s., +2m.54s., +3m.19s., +3m.23s., +4m.55s., and +5m.6s.; (second line) MZ = +5·7m. Tucson eEN = +15m.21s.

Aug. 12d. Readings also at 1h. (Andijan), 4h. (Nagoya, near Kobe, and Sumoto), 7h. (Manila) 11h. (near Santiago, near Sitka, and Victoria), 12h. (Granada, La Paz, and Manila), 13h. (Lick), 14h. (Berkeley and Manila), 16h. (near Sumoto), 17h. (Ekaterinburg, Irkutsk, and Tashkent), 19h. (near Tacubaya) 20h. (Irkutsk, La Paz, and Scoresby Sund), 21h. (Baku Ekaterinburg, Tashkent, and near Lick).

Aug. 13d. Readings at 2h. (near Lick), 5h. (Phu-Lien, near Almata, and near Santiago), 6h. (La Paz), 9h. (Christchurch and near Wellington), 15h. (Andijan, Georgetown, Ottawa, and Toronto), 16h. (near Lick), 19h. (Granada, Scoresby Sund, Georgetown, Ottawa, Toronto, near La Paz, Sucre, near Oaxaca, and Tacubaya), 20h. (Scoresby Sund), 23h. (near Akita).

Aug. 14d. 2h. 16m. 30s. Epicentre 66°·5S. 170°·0E.

A = −·393, B = +·069, C = −·917 ; D = +·174, E = +·985 ;
G = +·903, H = −·159, K = −·399.

Very doubtful.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Christchurch		23·0	5	4 24	−53	9 50	+25	14·2	—
Wellington		25·3	9	i 5 43	+ 2	e 10 13	+ 4	i 14·7	—
Melbourne		32·1	323	—	—	—	—	14·8	17·1
Riverview		34·5	332	—	—	i 13 21	+33	e 15·7	17·1
Adelaide		36·5	315	e 6 20?	−66	e 13 30?	+13	17·0	19·0
La Plata		72·2	140	—	—	—	—	32·5	—
Sucre		85·2	129	e 12 50	+ 1	23 13	− 8	37·5	46·2
La Paz		86·6	125	e 13 1	+ 4	e 23 7	[+ 1]	39·5	45·2
Bombay		110·1	272	—	—	—	—	e 53·5	—
Victoria	E.	125·6	48	—	—	—	—	56·2	68·1
Andijan		129·3	282	e 45 16	?	—	—	—	—
Sitka	E.	130·1	35	e 58 15	?	—	—	(e 58·2)	—
Almata		130·1	288	e 44 6	?	—	—	—	—
Tashkent		131·4	280	i 20 23	?	—	—	e 65·5	109·1
Georgetown	Z.	134·2	90	e 22 25	?	—	—	65·5	—
Toronto		137·3	85	—	—	—	—	54·5	—
Ottawa	N.	140·1	87	—	—	e 41 6	?SR_1	69·5	—
Ekaterinburg		147·1	286	e 19 56	[+ 5]	e 30 44	?	e 43·8	87·8
San Fernando	E.	149·9	186	—	—	—	—	—	90·2
Granada		150·5	190	e 20 13	[+16]	—	—	72·5	82·3
Rocca di Papa		152·3	218	e 20 12	[+13]	—	—	e 83·9	97·2
Tortosa	N.	153·7	198	—	—	—	—	e 73·5	90·8
Florence	Z.	154·6	218	—	—	—	—	84·4	113·6
Kucino		155·3	268	e 40 46	?	—	—	e 83·0	96·1
Piacenza		156·1	216	—	—	—	—	e 86·5	—
Vienna	Z.	157·2	230	20 9	[+ 4]	—	—	—	—
Strasbourg		159·9	216	e 20 30?	[+22]	—	—	78·5	—
Cheb		160·0	226	—	—	—	—	e 89·5	—
Pulkovo		161·0	269	—	—	—	—	e 77·1	—
Feldberg	N.	161·2	219	—	—	—	—	e 73·8	88·5
Paris		161·2	206	e 20 30?	[+21]	—	—	80·5	—
Konigsberg	N.	161·4	246	—	—	—	—	93·5	—
Uccle		162·7	212	e 35 30?	?	—	—	e 81·5	—
De Bilt		163·8	215	e 21 4	[+53]	—	—	e 82·5	95·6
Hamburg		163·8	227	—	—	—	—	e 87·5	102·5
Kew		164·2	203	e 21 1	[+50]	—	—	83·5	—
Oxford		164·7	201	—	—	—	—	e 83·5	94·5
Copenhagen		164·9	236	e 16 30?	?	—	—	89·5	—
Stonyhurst		166·9	200	—	—	—	—	e 93·5	—
Edinburgh		168·9	200	—	—	—	—	e 93·5	—
Scoresby Sund		174·1	42	21 0	[+44]	—	—	61·5	—

Additional readings: Wellington iE = +6m.18s. = PR_1 +2s., iPR_1N = +6m.32s., iSN = +10m.43s., SR_1N = +11m.53s.; T_1N = 2h.15m.56s. Adelaide ePR_1 = +8m.54s., MN = +22·5m. La Paz MN = +48·9m. Tashkent e = +23m.57s., +40m.30s.?, +51m.24s., and +52m.42s. Georgetown eLZ = +54·5m. Ottawa eLN? = +54·5m. Granada i = +20m.44s. Kucino e = +63m.20s. Pulkovo L = +85·5m. De Bilt eZ = +35m.30s. eE = +36m.19s., MN = +98·2m., MZ = +98·6m.

Aug. 14d. 6h. 38m. 24s. Epicentre 36°·1N. 3°·9W.

$A = +·806$, $B = -·055$, $C = +·589$; $D = -·068$, $E = -·998$; $G = +·588$, $H = -·040$, $K = -·808$.

Toledo gives epicentre 36°5′N. 3°38′W.; Almeria 36°2′N. 4°5′W. The adopted position is the mean.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Malaga		0·6	327	0 12	+ 3	0 29	+12	—	—
Granada		1·1	12	i 0 17	0	i 0 28	− 3	—	—
Almeria		1·5	57	0 17	− 6	i 0 41	− 1	—	1·4
San Fernando		1·9	280	1 9	+40	1 27	+34	—	—
Alicante		3·5	50	1 18	+23	2 7	+30	—	—
Toledo		3·8	359	0 53	− 6	1 57	+13	i 2·3	—
Algiers		5·6	81	e 1 56	+29	—	—	e 6·3	6·7
Tortosa		5·8	36	e 1 26	− 4	3 9	+30	3·4	3·5
Moncalieri		12·5	41	—	—	—	—	e 7·5	—
Neuchatel		13·5	33	e 6 25	?S	(e 6 25)	+29	e 7·3	—
Paris		13·6	19	—	—	e 6 36?	+38	7·6	7·6
Piacenza		13·6	45	—	—	—	—	—	9·1
Florence	Z.	13·9	52	—	—	e 6 9	+ 3	—	9·6
Rocca di Papa		14·1	61	8 14	?L	—	—	(8·2)	9·5
Zurich		14·6	36	—	—	—	—	e 8·0	—
Strasbourg		15·1	31	—	—	—	—	e 8·2	—
Kew	Z.	15·6	8	—	—	e 6 36?	−10	—	—
Oxford		15·8	6	—	—	e 7 16	+26	e 8·8	10·7
Uccle		15·9	20	—	—	—	—	e 8·6	—
Feldberg	N.	16·7	28	—	—	e 6 36?	−35	e 8·6	9·6
De Bilt		17·2	19	—	—	e 7 36	+14	e 8·6	9·9
Stonyhurst		17·8	3	—	—	—	—	—	11·6
Gottingen	N.	18·3	29	—	—	—	—	—	15·6
Cheb		18·3	35	—	—	—	—	e 9·6	12·1
Edinburgh		19·8	1	—	—	—	—	e 10·6	—
Hamburg		20·0	25	—	—	—	—	e 9·6	11·8
Copenhagen		22·5	24	—	—	—	—	11·6	—
Konigsberg	N.	25·1	34	—	—	—	—	11·6	—
Scoresby Sund		35·7	350	—	—	—	—	18·6	—

Additional readings: Malaga $P = +15s.$, $PR_1 = +30s.$, $P_2S = +38s.$, $PS_3 = +46s.$, $SR_1 = +54s.$, $P_4S = +55s.$, $P_2S_2 = +1m.9s.$, $PS_4 = +1m.17s.$ Granada $i = +20s.$, $+21s.$, $+25s.$, $+33s.$, $+40s.$, $+46s.$, $+51s.$, $+57s.$, $+1m.3s.$, and $+1m.16s.$ Almeria $iPR_1 = +21s.$ and $+26s.$, $SR_1 = +46s.$ and $+54s.$, $SR_2 = +1m.7s.$ and $+1m.18s.$ Alicante $P = +1m.23s.$ Toledo $P = +59s.$ and $+1m.2s.$, $PR_1 = +1m.12s.$, $i = +1m.31s.$, $iNE = +1m.44s.$, $i = +1m.53s.$ Tortosa $MN = +3·6m.$ Strasbourg $e = +9m.1s.$, $L = +9·6m.$ De Bilt $MN = +10·4m.$, $MZ = +11·6m.$

Aug. 14d. 19h. 3m. 20s. Epicentre 46°·0N. 130°·0W. (as on 1927 Mar. 28d.).

$A = -·447$, $B = -·532$, $C = +·719$; $D = -·766$, $E = +·643$; $G = -·462$, $H = -·552$, $K = -·695$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria	E.	5·2	59	1 3	−17	—	—	3·6	5·7
	N.	5·2	59	0 53	−27	—	—	2·8	5·2
Berkeley		9·9	142	e 2 20	− 9	—	—	e 5·3	—
Sitka		11·6	345	i 3 38	+45	e 7 22	+133	i 8·6	9·9
Tucson		20·1	126	(i 4 37)	− 5	i 4 37	?P	e 10·2	14·2
Florissant		29·8	90	i 6 23	− 3	e 11 40	+ 9	e 17·2	—
	E.	29·8	90	e 6 20	− 6	e 11 38	+ 7	—	21·7
Chicago	E.	30·5	82	—	—	e 11 28	−15	e 18·4	—
Ann Arbor	N.	33·0	79	—	—	—	—	e 18·5	—
Honolulu T.H.	E.	33·6	232	—	—	—	—	14·3	16·9

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Toronto	N.	35·3	75	—	—	e 12 48	−12	18·7	—
Ottawa		37·1	71	e 7 30	− 1	e 13 18	− 7	e 18·7	—
Georgetown	Z.	39·0	81	e 7 48	+ 2	e 13 49	− 3	e 17·6	29·0
Fordham		40·2	77	(e 8 4)	+ 7	(i 13 50)	−20	(e 22·0)	(24·7)
Scoresby Sund		52·7	25	9 49	+25	—	—	32·7	—
Irkutsk		71·3	329	—	—	(21 34)	[+13]	21·6	—
Pulkovo		73·0	10	(e 11 40?)	+ 4	—	—	e 11·7	—
Copenhagen		73·5	21	12 20	+41	—	—	38·7	—
De Bilt		74·7	27	—	—	—	—	e 37·7	—
Paris		76·6	30	e 12 40?	+41	—	—	44·7	—
Ekaterinburg		76·8	355	e 12 30	+30	(e 21 22)	−25	e 21·4	22·9
Strasbourg		78·6	27	e 11 40?	−31	e 23 40?	?	27·7	—
Granada		83·9	40	12 46	+ 5	—	—	45·7	50·6
Tashkent		91·1	346	e 13 46	+24	e 24 46	+21	e 49·9	60·8

Additional readings and note: Sitka iPR_1E = +4m.13s. Tucson eE? = +10m.46s. Florissant (first line) eLN = +16·2m. Ann Arbor e?N = +14m.10s. $=SR_1$ −4s. and +14m.58s. Honolulu T.H. LN = +14·2m., MN = +17·0m. Ottawa e = +8m.58s. $=PR_1$ +11s.; T_0 = 19h.3m.30s. Fordham ePEN = (+9m.5s.), MZ = (+29·7m.); readings having been *increased* by 4m.

Aug. 14d. Readings also at 2h. (La Paz, near Simferopol, Theodosia, and Yalta), 12h. (Granada, and near Toyooka), 13h. (Georgetown, Ottawa, Lick, and Victoria), 14h. (Fordham, Georgetown, Ottawa, Toronto, Ann Arbor, Chicago, Florissant, Tucson, Berkeley, Victoria, Sitka, Honolulu T.H., and Taihoku), 15h. (Ottawa, De Bilt, Paris, Ekaterinburg, Copenhagen, Kucino, Scoresby Sund, Irkutsk, near Almata, Andijan, and Tashkent), 21h. (Taihoku).

Aug. 15d. 19h. 56m. 16s. Epicentre 5°·0N. 82°·0W.

A = +·139, B = −·986, C = +·087; D = −·990, E = −·139;
G = +·012, H = −·086, K = −·996.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Port au Prince		16·5	34	1 4 8	+ 9	i 7 22	+15	e 8·6	—
Oaxaca		18·8	311	(4 34)	+ 7	(8 23)	+25	(8·4)	(9·9)
Vera Cruz		19·8	317	(4 24)	−15	(8 15)	− 4	(9·3)	(12·1)
Tacubaya		22·1	312	4 58	− 8	9 15	+ 8	10·6	11·6
La Paz		25·5	148	i 5 42	− 1	i 9 29	−44	—	17·6
Sucre		29·1	146	i 6 20	+ 1	i 11 28	+ 9	15·7	19·9
Charlottesville	E.	33·2	6	—	—	e 12 8	−19	e 14·4	—
Georgetown	Z.	34·2	8	i 7 6	− 1	e 13 30	+47	e 18·2	21·4
St. Louis		34·4	350	e 7 24	+16	e 12 1	−45	—	—
Florissant		34·7	350	i 6 51	−20	e 12 12	−39	e 15·2	—
	E.	34·7	350	e 6 49	−22	e 12 7	−44	e 15·2	—
Fordham		36·6	11	i 7 10	−17	i 12 52	−26	e 15·3	17·6
Chicago	E.	37·1	355	—	—	12 51	−34	17·8	—
Ann Arbor	N.	37·3	359	e 7 20	−12	e 13 8	−20	e 16·8	—
Tucson	E.	38·4	320	7 24	−17	13 24	−20	e 17·6	—
	N.	38·4	320	7 24	−17	13 18	−26	e 18·9	—
Harvard		38·6	14	i 7 28	−15	i 13 28	−18	—	—
Toronto		38·7	3	i 7 29	−15	e 13 21	−27	—	20·5
Ottawa		40·7	8	i 7 44	−17	i 13 54	−23	e 18·2	22·5
La Plata		45·9	152	e 8 26?	−13	e 15 14?	−13	25·7	—
Rio de Janeiro	E.	47·1	129	e 9 44	+56	16 44	+62	24·2	26·8
	N.	47·1	129	e 9 44	+56	16 34	+52	24·6	27·4
Lick	E.	48·5	319	e 8 51	− 6	—	—	—	—
Berkeley		49·2	319	e 8 52	− 9	(e 15 58)	−11	e 24·9	—
Victoria	E.	55·8	330	9 48	+ 3	17 33	+ 2	28·2	34·0
	N.	55·8	330	9 43	− 2	17 28	− 3	—	—
Sitka	E.	66·6	333	i 13 17	?	i 19 46	+ 1	e 26·6	38·6

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.	75·0	292	—	—	i 21 29	+ 3	e 32·7	—
	N.	75·0	292	—	—	i 21 26	0	e 31·7	—
Scoresby Sund		75·6	18	11 53	0	21 29	− 4	—	—
Malaga		77·0	54	12 7	+ 6	22 2	+13	27·7	—
Toledo		77·5	50	12 7	+ 3	22 1	+ 6	e 35·3	—
Granada		77·7	54	i 12 11	+ 6	i 22 9	+12	e 36·7	39·2
Almeria		78·7	54	12 17	+ 6	e 22 13	+ 5	—	43·4
Edinburgh		79·6	35	e 12 19	+ 2	i 22 20	+ 1	37·7	52·7
Stonyhurst		79·8	38	12 20	+ 2	22 20	− 1	37·7	41·7
Alicante		80·2	52	e 12 28	+ 8	e 22 34	+ 9	—	—
Oxford		80·3	39	i 12 20	− 1	i 22 29	+ 2	e 39·7	—
Kew		80·9	39	i 12 26	+ 2	e 22 33	− 1	38·5	—
Tortosa	N.	81·1	50	e 12 29	+ 3	22 45	+ 9	e 33·7	38·8
Paris		82·6	41	i 12 35	+ 1	e 22 55	+ 2	38·7	40·7
Algiers		83·4	54	e 12 40	+ 2	e 22 59	− 2	—	49·7
Uccle		83·8	40	e 12 41	0	e 23 14	+ 7	e 39·7	42·5
De Bilt		84·3	39	i 12 44	0	e 23 5	− 6	e 39·7	44·7
Neuchatel		85·6	45	e 12 47	− 4	e 23 22	− 4	—	—
Strasbourg		86·1	41	i 12 53	− 1	e 23 28	− 3	40·7	—
Moncalieri		86·2	46	e 12 44?	−10	e 23 18	−14	39·7	—
Feldberg	N.	86·4	40	i 12 45	−10	e 23 14	−20	—	42·0
Zurich		86·7	44	e 13 7	+10	—	—	—	—
Hamburg		87·1	37	e 12 56	− 4	e 23 28	−14	e 38·7	—
Gottingen	E.	87·3	38	e 44 28	?L	—	—	e 64·4	67·4
Chur		87·3	44	e 12 57	− 4	—	—	—	—
Piacenza		87·6	45	13 8	+ 5	23 36	−12	34·7	45·6
Copenhagen		88·3	35	i 13 4	− 3	23 51	− 4	38·7	—
Florence	Z.	88·8	47	13 20	+11	23 44	−17	42·7	46·2
Cheb		88·9	40	e 13 7	− 3	e 23 39	[+18]	e 41·7	45·2
Venice		89·4	45	e 13 14	+ 2	e 23 15	[− 9]	—	—
Rocca di Papa		90·2	49	e 13 12	− 5	e 23 49	[+20]	e 44·2	—
Upsala		90·5	30	—	—	23 44?	[+13]	—	—
Konigsberg		93·1	35	e 14 40	+67	e 25 2	+16	e 40·7	44·7
Helsingfors		94·0	29	e 13 27	−11	e 24 40	−16	e 40·2	—
Pulkovo		96·6	28	13 41	−11	—	—	38·7	50·2
Wellington	E.	103·2	228	—	—	—	—	48·7	—
Ekaterinburg		111·2	20	(e 19 18)	?PR_1	—	—	—	—
Irkutsk		122·5	355	(e 20 32)	?PR_1	—	—	—	—
Tashkent		126·8	26	—	—	—	—	55·7	68·4
Andijan		129·0	25	19 59	?	—	—	—	—
Bombay		145·6	43	e 19 54	[+ 5]	—	—	—	—

Additional readings and notes: Oaxaca readings have been *increased* by 3m. Vera Cruz readings have been *increased* by 1m. La Paz iP = +5m.46s., PR_2E = +6m.33s., SR_1 = +13m.38s. Sucre iPR_1 = +7m.8s. Charlottesville eN = +9m.44s., eLN = +14·7m. Georgetown SR_1Z = +16m.18s., SR_2Z = +17m.16s. Florissant (first line) iN = +6m.52s., iPR_1N = +8m.0s., iPR_1Z = +8m.1s. Chicago eSR_1E = +15m.26s. Ann Arbor eN = +8m.38s., e?E = +9m.8s., eN = +10m.14s., e?E = +10m.44s., eE = +12m.50s. and +14m.14s., eLE = +15·7m. Tucson iPR_1E = +8m.55s., iPR_1N = +8m.56s., eSR_1N = +15m.54s., eE = +16m.22s. Toronto iPR_2N = +8m.57s. = PR_1 −10s., SR_1E = +15m.52s., MN = +23·9m.; T_e = 19h.56m.20s. Ottawa iPR_1N = +9m.25s. = PR_1 −6s., eSR_1N = +16m.26s., iSR_1E = +16m.55s., eLN = +18·7m., MN = +23·5m.; T_e = 19h.56m.13s. Lick eE = +9m.1s. Berkeley ePE = +1m.24s., eZ = +2m.9s., eEZ = +11m.18s. = PR_1 +10s., eZ = +25m.24s., eN = +25m.43s.; true S is given as eLEN. Sitka ePR_1E = +14m.45s., ePR_2E = +15m.5s., eSR_1E = +22m.33s., eSR_2E = +23m.26s. Granada PR_1 = +14m.53s. Kew LN = +33·7m. De Bilt eSR_1 = +28m.45s., eLN = +35·7m., MN = +40·8m. Copenhagen +23m.31s. Cheb eSR_1 = +30m.8s. Konigsberg eE = +16m.34s., +17m.38s. = PR_1 +10s., +20m.48s., and +25m.54s. = PS +10s. Helsingfors PR_1 = +17m.17s., S_0P_0S = +24m.3s., $S_0P_0P_0S$ = +24m.27s., SR_1 = +31m.4s. Pulkovo PR_1 = +17m.37s., $S_0P_0P_0S$ = +24m.25s., SR_1 = +31m.38s. Ekaterinburg ePR_1 = +19m.18s., ePR_2 = +22m.22s., ePS = +28m.57s., SR_1 = +34m.38s. Irkutsk ePR_1 = +20m.32s., PR_2 = +23m.8s., ePS = +30m.2s. Tashkent PR_1 = +21m.12s., PS = +31m.9s., SR_1 = +38m.8s.

Aug. 15d. Readings also at 1h. (La Paz), 5h. (Neuchatel and La Paz), 6h. (near Vera Cruz and Tacubaya (2)), 7h. (near Tacubaya and Vera Cruz), 15h. (Kucino, Ekaterinburg, Pulkovo, Copenhagen, and Scoresby Sund), 16h. (Wellington), 18h. (La Paz), 19h. (near Oaxaca and Tacubaya), 22h. (Andijan), 23h. (Strasbourg).

Aug. 16d. 13h. 21m. 35s. Epicentre 36°·9N. 139°·8E.

A = −·611, B = +·516, C = +·600 ; D = +·645, E = +·764 ;
G = −·459, H = +·388, K = −·800.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Kakioka	0·7	156	0 10	− 1	0 20	0	—	—
Hukusima	1·0	30	0 21	+ 6	0 39	+11	—	—
Tokyo	1·2	182	0 17	− 1	0 32	− 1	—	—
Mizusawa	2·5	25	0 38	− 1	1 10	+ 1	—	—
Akita	2·8	5	e 0 46	+ 2	—	—	1·4	1·4
Nagoya	2·9	233	e 0 40	− 5	(1 15)	− 5	1·2	—
Osaka	4·1	238	1 5	+ 1	—	—	2·2	2·5
Toyooka	4·2	254	1 2	− 3	(i 1 51)	− 4	1·9	2·6
Kobe	4·4	241	—	—	—	—	e 1·4	—
Sumoto	4·7	239	e 1 16	+ 3	2 28	+19	(2·5)	2·7

Additional readings: Osaka MN = +2·9m. Toyooka MN = +2·2m.
Sumoto MZ = +2·5m., MN = +2·8m.

Aug. 16d. 21h. 28m. 12s. Epicentre 16°·3S. 122°·4E. (given by Batavia).

A = −·514, B = +·810, C = −·281 ; D = +·844, E = +·536 ;
G = +·150, H = −·237, K = −·960.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Perth		16·7	200	i 3 53	− 8	i 6 31	−40	7·8	—
Batavia		18·3	302	i 4 16	− 5	i 7 14	−33	—	—
Adelaide		23·6	145	—	—	i 10 6	+30	11·8	14·5
Melbourne		29·2	142	11 26	?S	(11 26)	+ 6	16·6	17·1
Medan		30·8	309	—	—	i 11 48?	0	i 14·0	—
Manila		31·0	358	e 6 36	− 2	i 8 17	?	—	—
Riverview		31·2	130	e 10 48	?S	(e 10 48)	−66	17·5	19·2
Sydney	E.	31·2	130	—	—	14 18	?	18·1	19·8
Hong Kong		39·5	348	7 46	− 5	13 34	−25	—	23·8
Phu-Lien		40·2	336	e 7 48	− 9	e 13 47	−23	19·3	—
Zi-ka-wei	Z.	47·3	0	e 8 54	+ 5	15 50	+ 5	—	—
Calcutta	N.	51·1	320	15 56	?S	(15 56)	−36	—	—
Wellington	E.	51·3	130	—	—	—	—	29·8	—
Hyderabad		54·9	307	16 59	?S	(16 59)	−21	—	32·6
Bombay		60·1	305	e 9 45	−28	17 14	−70	28·1	34·0
Irkutsk		70·4	349	i 11 31	+12	i 20 39	+ 8	25·1	43·3
Almata		72·6	328	e 11 45	+11	e 20 58	+ 1	—	—
Andijan		73·2	323	e 11 43	+ 6	21 2	− 2	—	—
Tashkent		75·7	323	i 11 56	+ 3	e 21 28	− 6	31·7	42·3
Ekaterinburg		89·2	331	i 13 9	− 2	—	—	35·3	53·7
Kucino		100·4	325	—	—	25 10	? Σ	e 47·8	53·5
Pulkovo		105·1	330	—	—	26 2	? Σ	42·6	63·0
Helsingfors		107·8	330	—	—	—	—	e 46·8	—
Copenhagen		114·7	324	—	—	27 30	−38	—	—
Hamburg		116·3	321	—	—	e 31 48?	?	—	—
Feldberg	N.	117·8	319	—	—	—	—	—	64·8
Victoria		118·2	42	—	—	30 24	?PS	—	—
De Bilt		119·5	321	e 20 18	?PR$_4$	—	—	e 53·8	62·7
Uccle		120·2	320	—	—	—	—	e 51·8	—
Scoresby Sund		121·7	346	20 46	?PR$_4$	—	—	49·6	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Kew		122·9	321	—	—	—	—	60·8	—
Granada		128·3	305	—	—	—	—	e 66·8	69·9
Sucre		143·9	168	e 20 5	[+18]	—	—	78·8	86·0
La Paz		145·6	161	e 20 3	[+14]	—	—	—	—
Toronto		147·0	30	—	—	—	—	—	98·8
Ottawa		147·2	23	e 42 48?	?SR_1	—	—	e 75·8	—
Georgetown	z.	151·7	33	e 20 19	[+21]	—	—	e 63·9	—

Additional readings: Batavia i = +5m.20s. Adelaide i = +10m.29s. and +10m.38s., MN = +13·4m. Melbourne S = +14m.51s. Riverview iS = +13m.40s. = SR_1 +8s., also +14m.49s., +15m.4s., and +16m.46s., MN = +18·9m., MZ = +19·4m. Hong Kong e = +9m.20s. = PR_1 +4s. Calcutta PE = +16m.3s., SN = +18m.12s., SE = +18m.21s. Wellington iN = +22m.11s., iE = +22m.56s. Hyderabad MN = +31·8m. Ekaterinburg PR_1 = +16m.33s., PR_2 = +18m.29s., SR_1 = +29m.36s. Kucino S_cP_cS = +24m.26s. Pulkovo PR_1 = +18m.38s., S_cP_cS = +24m.58s. De Bilt MN = +62·2m.

Aug. 16d. 23h. 28m. 52s. Epicentre 80°·5N. 5°·0E.

A = +·164, B = +·014, C = +·986; D = +·087, E = −·996; G = +·982, H = +·086, K = −·165.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Scoresby Sund		11·8	228	2 56	0	(5 8?)	− 6	5·1	—
Helsingfors		21·2	152	e 4 55	0	e 8 47	− 1	e 11·1	—
Pulkovo		22·0	145	5 4	− 1	9 4	− 1	11·1	14·2
Edinburgh		24·8	191	—	—	e 10 8?	+ 9	—	—
Copenhagen		24·9	170	5 35	− 2	9 56	− 5	13·1	—
Kucino		26·7	137	—	—	e 10 22	−13	e 12·2	14·0
Stonyhurst		26·7	190	—	—	—	—	e 13·1	—
Hamburg		27·0	173	e 6 8?	+10	—	—	—	—
De Bilt		28·4	180	e 6 8?	− 4	—	—	e 16·1	21·1
Ekaterinburg		28·8	110	—	—	e 11 0	−13	15·4	19·5
Kew		29·1	187	(e 6 8?)	−11	—	—	e 6·1	—
Feldberg		30·3	176	—	—	—	—	—	21·5
Rocca di Papa		38·9	171	—	—	—	—	e 23·0	27·4
Irkutsk		40·2	69	e 9 29	+92	—	—	21·6	28·6
Tashkent		45·2	107	—	—	—	—	e 22·0	28·2
Victoria	E.	47·9	315	—	—	—	—	22·7	25·9

Additional readings: Ekaterinburg i = +4m.17s. Tashkent e = +19m.2s.

Aug. 16d. Readings also at 3h. (near Oaxaca, Tacubaya, and Vera Cruz), 6h. (near Nagasaki), 10h. (Georgetown, Ottawa, Toronto, near Oaxaca, and Tacubaya), 11h. (Granada and Scoresby Sund), 12h. (Hong Kong and Phu-Lien), 15h. (Medan and near Lick), 16h. (near Manila and near Sumoto), 22h. (near Lick), 23h. (Hong Kong, Phu-Lien, Bombay, Calcutta, Almata, Andijan, Tashkent, Ekaterinburg, and Irkutsk).

Aug. 17d. 4h. 20m. 44s. Epicentre 44°·5N. 11°·0E. (as on 1929 May 27d.).

A = +·700, B = +·166, C = +·701; D = +·191, E = −·982; G = +·688, H = +·134, K = −·713.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Florence	0·7	166	0 6	− 5	—	—	—	0·4
Livorno	1·1	207	0 30	+13	0 41	+10	—	—
Padova	1·1	35	e 0 17	0	e 0 31	0	—	—
Piacenza	1·1	300	0 21	+ 4	0 40	+ 9	—	0·9
Venice	1·3	45	1 0 18	− 2	0 32	− 4	—	—
Treviso	1·4	36	1 0 15	− 6	0 39	0	—	1·6
Moncalieri	2·4	290	e 0 48	+11	1 17	+11	—	1·8

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Chur		2·6	337	e 0 41	0	1 21	+ 9	—	—
Rocca di Papa		3·0	154	e 0 45	− 2	1 33	+10	—	1·9
Zurich		3·3	330	e 0 54	+ 2	e 1 48	+17	—	—
Ravensburg		3·4	344	—	—	e 1 45	+11	i 1·9	—
Neuchatel	N.	3·7	313	e 0 54	− 4	e 1 41	− 1	—	—
Zagreb		3·8	68	—	—	e 1 24	−20	e 2·0	—
Besançon		4·4	310	e 1 56	?S	(e 1 56)	− 5	—	—
Hohenheim		4·4	345	e 1 16	+ 8	e 2 10	+ 9	—	—
Pompeii		4·6	144	e 2 36	?L	—	—	(e 2·6)	—
Strasbourg		4·6	336	—	—	2 37	+31	—	—
Karlsruhe		4·8	340	2 36	?L	—	—	(2·6)	—
Feldberg	N.	6·0	344	e 1 46	+14	—	—	—	4·1
Paris		7·2	310	—	—	e 3 16?	+ 1	—	—
Uccle		7·7	327	—	—	—	—	4·3	—
De Bilt		8·5	335	—	—	—	—	e 4·3	6·1
Hamburg		9·1	356	—	—	e 4 16?	+10	—	—
Kew		10·2	317	—	—	—	—	e 6·3	—
Copenhagen		11·2	4	—	—	—	—	6·3	—

Additional readings: Florence iP = +16s. Moncalieri P = +51s. Zagreb e = +2m.8s. Hohenheim e = +1m.46s. Strasbourg PR_2 = +1m.40s., SR_2 = +2m.54s.

Aug. 17d. 23h. 40m. 36s. Epicentre **16°·3N. 99°·0W.**

A = −·150, B = −·948, C = +·281; D = −·988, E = +·156; G = −·044, H = −·277, K = −·960.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		2·2	72	(0 56)	+22	(1 1)	+ 1	(1·0)	(1·4)
Puebla		2·8	16	0 52	+ 8	—	—	1·5	1·6
Tacubaya		3·1	356	0 58	+ 9	—	—	1·8	2·0
Vera Cruz		4·0	42	1 12	+10	—	—	2·2	3·2
Manzanillo		5·8	299	1 19	−11	(2 46)	+ 7	2·8	3·4
Guadalajara		6·1	317	1 45	+12	—	—	3·2	4·0
Merida		10·0	61	(2 23)	− 7	(4 15)	−14	(4·4)	(4·8)
Chihuahua		13·9	333	2 48	−37	5 34	−32	5·8	7·9
Tucson	E.	19·2	328	4 41	+10	i 8 25	+19	i 10·3	—
	N.	19·2	328	4 43	+12	i 8 20	+14	i 10·5	—
St. Louis		23·6	17	e 5 19	− 5	i 9 36	0	—	15·4
Florissant		23·7	17	i 5 20	− 5	i 9 38	0	—	16·3
		23·7	17	e 5 21	− 4	e 9 35	− 3	e 14·9	16·3
Denver		24·0	349	e 5 26	− 2	e 9 46	+ 2	—	13·0
Chicago	E.	27·3	19	i 5 54	− 7	i 10 40	− 6	15·8	—
	N.	27·3	19	i 5 54	− 7	i 10 34	−12	16·2	—
Charlottesville	E.	28·2	36	e 6 8	− 2	e 10 56	− 7	e 16·0	—
	N.	28·2	36	i 6 6	− 4	e 10 44	−19	16·6	—
Lick	E.	29·0	321	e 6 16	− 2	e 11 7	−10	e 14·9	19·5
	N.	29·0	321	e 6 16	− 2	e 11 20	+ 3	e 14·8	18·5
Ann Arbor		29·1	24	i 6 6	−13	i 11 6	−13	e 14·2	21·5
Georgetown		29·8	36	e 6 15	− 9	11 23	− 4	e 13·4	—
Berkeley		29·8	321	e 6 23	− 3	e 11 24	− 7	e 17·6	18·9
	Z.	29·8	321	e 6 21	− 5	e 11 36	+ 5	e 17·3	19·2
Toronto	E.	32·0	28	e 6 35	−12	i 11 53	−15	16·6	22·9
	N.	32·0	28	i 6 37	−10	i 11 53	−15	15·4	23·3
Fordham		32·8	37	e 6 43	−12	i 12 15	− 6	e 15·4	24·4
Ottawa		35·0	29	i 7 2	−11	i 12 45	−10	e 18·4	27·9
Harvard		35·3	37	i 6 55	−21	i 12 27	−33	—	—
Fort de France		36·5	87	i 7 2	−24	—	—	—	—
Victoria		37·7	334	7 30	− 6	13 30	− 4	19·3	25·0

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz		44·7	136	i 8 35	+ 4	i 15 5	− 6	22·6	24·8
Sucre		48·5	136	i 8 57	0	i 15 52	− 8	23·4	26·9
Sitka	E.	49·0	335	9 8	+ 8	e 16 24	+18	e 23·9	29·1
Honolulu T.H.	E.	55·6	285	—	—	—	—	e 26·4	30·0
La Plata		64·4	143	—	—	—	—	35·4	—
Rio de Janeiro	N.	67·2	125	e 12 7	+68	—	—	e 32·9	—
Scoresby Sund		70·3	20	11 26	+ 7	20 44	+14	37·4	—
Edinburgh		79·8	35	13 4	+46	22 44	+23	40·4	46·4
Dyce		80·0	33	e 12 16	− 3	i 22 31	+ 8	—	44·4
Stonyhurst		80·7	38	12 36	+ 3	e 22 31	0	42·5	52·7
Oxford		82·2	39	i 12 32	+ 1	i 22 48	0	e 42·4	56·4
Kew		82·6	39	i 12 35	+ 1	i 23 1	+ 8	42·4	—
San Fernando		82·6	54	12 54	+20	22 56	+ 3	—	56·5
Toledo		83·3	50	e 12 38	0	e 22 58	− 2	e 38·5	54·0
Malaga		83·9	53	12 44	+ 3	23 6	− 2	27·4	—
Granada		84·4	54	(i 12 28)	−16	(i 22 51)	−21	(38·4)	(41·9)
Paris		85·1	40	i 12 50	+ 1	e 23 22	+ 2	46·4	55·4
Almeria		85·4	52	i 12 47	− 3	23 9	−14	43·1	47·2
Uccle		85·5	39	12 50	− 1	23 24	− 1	e 44·4	48·6
De Bilt		85·6	37	i 12 50	− 1	23 25	− 1	e 45·4	53·7
Alicante		86·4	50	e 13 4	+ 9	e 23 29	− 5	e 40·4	—
Tortosa	E.	86·4	48	12 54	− 1	23 19	−15	—	48·0
	N.	86·4	48	12 54	− 1	23 28	− 6	e 37·4	53·0
Hamburg		87·7	35	e 13 1	− 2	e 23 24	[+11]	e 41·4	55·4
Besançon		87·8	41	—	—	—	—	e 51·4	—
Copenhagen		88·0	31	13 1	− 4	23 38	−14	43·4	—
Feldberg	N.	88·2	39	e 12 58	− 8	e 16 24	?PR_1	—	55·4
Strasbourg		88·4	40	i 13 3	− 4	24 3	+ 7	48·2	54·6
Gottingen	E.	88·5	36	e 13 10	+ 2	e 23 39	−19	e 47·6	59·1
	N.	88·5	36	e 15 1	?	—	—	e 47·3	59·1
Neuchatel		88·5	42	e 13 4	− 4	e 23 30	[+12]	—	—
Upsala		88·5	27	—	—	e 23 28?	[+10]	—	55·2
Zurich		89·4	41	e 13 52	+40	e 23 52	−15	—	—
Algiers		89·4	52	—	—	23 38	[+14]	46·4	52·4
Jena	E. or Z.	89·7	37	e 13 6	− 8	e 24 18	+ 7	e 49·4	55·9
	N.	89·7	37	—	—	e 24 24	+13	e 44·4	54·9
Moncalieri		89·8	43	13 20	+ 5	23 46	[+19]	47·4	51·4
Ravensburg		89·8	40	e 13 24?	+ 9	e 23 47	[+20]	e 45·4	51·4
Chur		90·2	41	e 13 11	− 6	e 23 45	[+16]	—	—
Cheb		90·6	37	e 13 16	− 3	e 23 58	[+26]	e 47·4	56·9
Piacenza		91·0	41	13 24	+ 3	24 4	−20	34·7	53·6
Helsingfors		91·3	25	e 13 3	−20	e 24 3	−24	e 39·9	—
Treviso		92·4	40	e 13 32	+ 3	24 17	−22	57·4	—
Konigsberg	E.	92·5	30	—	—	e 24 1	? Σ	48·4	52·4
Florence	Z.	92·6	44	13 25	− 5	e 23 55	[+11]	46·4	51·2
Venice		92·6	40	i 13 26	− 4	i 24 5	[+21]	—	—
Pulkovo		93·6	24	13 28	− 8	24 46	− 6	—	56·2
Vienna		93·7	37	13 29	− 7	24 10	[+20]	e 51·4	60·4
Graz		93·8	39	—	—	—	—	e 51·4	—
Rocca di Papa		94·4	45	e 13 26	−14	24 19	[+25]	47·1	73·1
Zagreb		94·6	40	e 13 33	− 8	e 24 11	[+16]	e 50·4	55·7
Wellington	E.	97·9	229	e 13 10	−49	i 24 30	[+18]	e 44·4	—
Ekaterinburg		104·9	12	i 14 23	−11	25 5	[+18]	e 37·9	65·1
Theodosia		106·0	31	e 18 47	[+39]	—	—	e 61·4	—
Ksara		114·0	40	e 19 49	?PR_1	29 26	?PS	—	—
Zi-ka-wei	Z.	118·7	320	e 20 8	?PR_1	—	—	—	79·6
Tashkent		121·4	10	15 18	−31	27 48	? Σ	e 57·4	79·4
Hong Kong		129·5	319	22 50	?	—	—	e 70·4	74·3
Phu-Lien		135·2	325	31 24	?	—	—	68·4	—
Bombay		143·9	12	e 19 50	[+ 3]	—	—	—	90·9
Hyderabad		146·1	5	19 56	[+ 6]	33 30	?	—	96·9

For Notes see next page.

NOTES TO AUG. 17d. 23h. 40m. 36s.

Additional readings and notes: Oaxaca readings have been *increased* by 3m. Merida readings have been *diminished* by 2m. Tucson $SR_1EN = +9m.59s.$ St. Louis iPEN = +5m.22s. Florissant (first line) iPN = +5m.21s., iN = +6m.28s.; (second line) ePE = +5m.23s., eSEN = +9m.37s. Denver eE = +10m.22s., $eSR_1E = +11m.7s.$ Chicago $SR_1E = +12m.1s.$ Lick ePN = +6m.17s., ePE = +6m.21s., eE = +7m.2s. $=PR_1 - 4s.$, and +7m.42s., eN = +11m.24s., eE = +11m.25s. Ann Arbor $ePR_1 = +7m.0s.$, $iSR_1 = +12m.18s.$, eLN = +16·1m.; $T_0 = 23h.40m.18s.$ Georgetown iPZ = +6m.20s., $PR_1 = +7m.8s.$ Berkeley eEN = +14m.15s., eN = +17m.12s., MN = +19·0m. Ottawa $ePR_2 = +8m.16s. = PR_1 - 6s.$, eLN = +17·9m., MN = +25·1m.; $T_0 = 23h.40m.26s.$ Victoria MN = +21·8m.; $T_0 = 23h.40m.22s.$ La Paz $eSR_1E = +18m.8s.$, iN = +18m.26s. Sitka $ePR_1E = +11m.3s.$, $ePR_2E = +12m.7s.$ Honolulu T.H. eLN = +26·1m., MN = +27·7m. Scoresby Sund +15m.42s. and +19m.12s. Dyce i = +21m.11s. Oxford $PR_1 = +15m.47s.$ Kew $PR_1Z = +15m.48s.$ San Fernando MN = +47·4m. Toledo MNW = +53·9m. Granada $PR_1 = (+15m.40s.)$; all readings have been *increased* by 2m. Paris MN = +52·4m. Almeria $PR_1 = +15m.57s.$ Uccle $PR_1 = +16m.9s.$, MN = +49·9m. De Bilt $PR_1Z = +16m.9s.$, $eSR_1N = +28m.54s.$, $eSR_1E = +29m.2s.$, MN = +53·3m., MZ = +56·7m. Hamburg MN = +50·4m., Copenhagen +16m.27s. $=PR_1 - 25s.$ Strasbourg $iPR_1 = +16m.29s.$ $S_cP_cS = +23m.40s.$, PS = +25m.1s., $SR_1 = +29m.47s.$, MZ = +54·5m. Upsala $ePR_1 = +16m.28s.$, $SR_1N = +29m.28s.$ Jena eE = +16m.36s., eZ = +16m.38s.; the P in the first line is for the Z component, the other phases are for E. Moncalieri S = +23m.50s., MN = +54·7m. Ravensburg $ePR_1E = +16m.24s.$ Cheb $ePR_1 = +16m.48s.$, $eSR_1 = +30m.14s.$, MN = +60·4m. Helsingfors $PR_1 = +16m.46s.$, $S_cP_cS = +23m.47s.$, PS = +25m.9s., $SR_1 = +30m.20s.$ Konigsberg $ePR_1N = +17m.5s.$, $ePR_1E = +17m.7s.$, $ePR_2E = +19m.16s.$, eE = +22m.17s., $eS_cP_cSE = +23m.16s.$, eSN = +24m.6s. $= \Sigma - 10s.$, ePSN = +25m.1s., $eSR_1E = +30m.12s.$, eE = +30m.42s., MN = +54·4m. Pulkovo $PR_1 = +17m.8s.$, $S_cP_cS = +24m.0s.$ PS = +26m.2s., $SR_1 = +31m.0s.$ Vienna $PR_1 = +17m.12s.$ Rocca di Papa i = +17m.26s. $=PR_1 - 10s.$, eL? = +38m.32s. $=SR_1 + 8s.$ Zagreb ePNE = +13m.40s., e = +16m.44s. Ekaterinburg $PR_1 = +18m.38s.$, $PR_2 = +20m.46s.$ Ksara eE = +26m.41s. $= \Sigma + 3s.$ Tashkent $eP' = +19m.6s. = [P] + 10s.$, $ePR_1 = +20m.29s.$, $PR_2 = +23m.6s.$, $S_cP_cSP = +30m.26s.$, PPS = +31m.36s.

Aug. 17d. Readings also at 0h. (near Catania), 6h. (Ekaterinburg and Irkutsk), 8h. (Scoresby Sund), 9h. (near Tacubaya), 13h. (near Toyooka), 14h. (Taihoku, near Manila, and near Tacubaya), 15h. (near Hukuoka), 20h. (Bombay), 21h. (Fordham), 23h. (Sucre, near La Paz, and near Andijan).

Aug. 18d. 8h. 35m. 0s. Epicentre 10°·5S. 157°·0E. (as on 1928 Dec. 9d.).

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	N.	22·0	113	i 5 18	+13	e 9 12	+ 7	e 12·0	15·4
Riverview		24·0	192	i 5 25	− 3	i 9 52	+ 8	e 12·2	15·6
Sydney	E.	24·0	192	10 0	?S	(10 0)	+16	19·0	19·6
Melbourne		29·4	200	—	—	i 11 22	− 2	14·2	17·2
Adelaide		29·7	211	—	—	i 11 28	− 1	15·1?	20·2
Apia		30·7	100	11 15	?S	(11 15)	−31	13·2	16·4
Wellington	E.	34·6	158	—	—	i 12 56	+ 7	i 14·8	18·3
Christchurch		35·7	163	—	—	(12 24)	−42	(17·7)	—
Perth		43·6	235	18 0?	$?SR_1$	—	—	—	—
Manila		43·6	306	e 8 39	+16	i 15 12	+16	—	—
Hong Kong		53·3	310	e 13 10	$?PR_2$	—	—	e 18·3	29·5
Honolulu T.H.		54·6	55	—	—	—	—	23·0	24·5
Phu-Lien		58·6	303	—	—	—	—	28·0	—
Sitka	E.	87·0	30	i 22 40	?[S]	(i 22 40)	[−29]	—	—
Bombay		87·9	290	—	—	e 24 0?	+ 9	—	—
Victoria	E.	91·1	41	—	—	23 15	[−20]	29·7	50·0
Ekaterinburg		102·2	326	e 17 31	[−24]	e 25 43	? Σ	29·8	61·6
Tananarive	E.	104·5	247	—	—	—	—	56·2	61·9

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Florissant	E.	114·1	51	e 21 5	?	—	—	—	—
Kucino		114·8	327	—	—	e 27 0?	?Σ	e 49·0	60·0
Pulkovo		117·0	333	—	—	—	—	e 62·0	73·8
Ann Arbor	N.	118·6	46	—	—	—	—	e 59·1	—
Helsingfors		119·1	335	—	—	—	—	e 65·7	—
Scoresby Sund		120·0	359	20 0?	?PR_1	—	—	55·0	—
Upsala	N.	122·2	337	—	—	—	—	e 62·0	—
Ottawa		123·2	40	e 19 0?	[− 1]	e 25 42	[−12]	e 53·0	—
Konigsberg		124·0	331	—	—	—	—	e 74·0	77·0
Georgetown	Z.	124·3	50	e 20 20	?PR_1	—	—	59·0	66·5
Copenhagen		127·0	336	—	—	—	—	61·0	—
Hamburg		129·5	334	—	—	—	—	e 66·0	—
Dyce		130·6	345	—	—	e 44 42	?SR_2	66·7	80·4
Cheb		130·8	330	—	—	—	—	e 53·0	79·0
Zagreb		131·4	323	e 20 0?	[+38]	—	—	e 68·5	—
Edinburgh		132·0	344	—	—	—	—	e 71·0	—
De Bilt		132·6	336	e 21 42	?PR_1	—	—	e 61·0	65·8
Feldberg	N.	132·6	333	e 22 24	?	—	—	—	69·0
Stonyhurst		133·6	341	e 14 0?	?	—	—	—	82·0
Venice		133·8	325	e 20 14	?	—	—	—	—
Uccle		133·9	336	—	—	—	—	e 61·0	—
Strasbourg		134·1	331	e 19 0?	[−28]	—	—	63·0	—
Kew		135·0	340	—	—	—	—	73·5	—
Florence	Z.	135·5	324	e 19 18	[−13]	—	—	—	79·1
Piacenza		135·5	327	e 21 40	?PR_1	—	—	—	81·5
Rocca di Papa		135·9	320	e 22 22	?PR_1	—	—	—	—
Paris		136·2	336	e 21 0?	?	—	—	73·0	85·0
Rio de Janeiro	N.	141·2	149	—	—	—	—	e 80·4	—
Tortosa	N.	143·2	330	—	—	—	—	e 79·0	89·9
Almeria		147·7	328	19 41	[−11]	—	—	—	89·6
Granada		148·1	330	18 48	[−65]	—	—	71·1	76·4
San Fernando	E.	149·9	331	—	—	—	—	—	115·3

Additional readings and note: Suva SE = +9m.18s. Riverview +10m.11s. and +10m.18s., MN = +13·6m. Melbourne e = +7m.22s. = PR_1 +12s. Adelaide MN = +18·7m. Apia S = +12m.54s. Wellington iLN = +18·4m., MN = +19·7m. Christchurch gives S as PR_1 and L as S, also L = +26·1m. Honolulu T.H. MN = +26·4m. Victoria MN = +55·6m. Ekaterinburg e = +18m.12s. = PR_1 −16s. Kucino e = +36m.0s.? = SR_1 +18s. Ottawa e = +30m.0s., eE = +37m.12s. = SR_1 −14s. Georgetown eZ = +30m.22s., +33m.0s., and +37m.36s. = SR_1 −4s. Cheb MN = +81·0m. Zagreb e = +22m.48s., eNE = +76m.40s. De Bilt MN = +73·5m., MZ = +84·0m. Florence PZ = +22m.19s. = PR_1 +14s.

Aug. 18d. 9h. 6m. 9s. Epicentre 16°·3N. 99°·0W. (as on 17d.).

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Oaxaca		2·2	72	(0 54)	+20	—	—	(1·3)	(1·4)
Puebla		2·8	16	(0 58)	+14	—	—	(1·6)	(1·8)
Tacubaya		3·1	356	0 56	+ 7	—	—	1·8	2·1
Vera Cruz		4·0	42	(1 15)	+13	—	—	(2·2)	(2·6)
Manzanillo		5·8	299	1 12?	−18	2 30	− 9	—	2·6
Guadalajara		6·1	317	—	—	—	—	3·8	3·9
Tucson		19·2	328	4 39	+ 8	8 25	+19	10·4	—
Florissant		23·7	17	i 5 20	− 5	i 9 34	− 4	e 21·8	—
		23·7	17	e 5 25	0	e 9 35	− 3	e 23·4	—
Chicago	E.	27·3	19	—	—	e 11 10	+24	i 26·8	39·0
Charlottesville	N.	28·2	36	—	—	—	—	e 22·8	31·8
Ann Arbor	N.	29·1	24	—	—	—	—	e 28·0	—

Additional readings and notes: Oaxaca readings have been *increased* by 3m. Puebla readings have been *diminished* by 1m. Vera Cruz readings have been *diminished* by 1m. Tucson PR_1 = +5m.1s. Florissant (first line) iSN = +9m.36s. Chicago eN = +17m.8s. Charlottesville eLE = +25·8m., eLN = +28·6m.

Aug. 18d. Readings also at 0h. (Wellington), 1h. (near Lick), 2h. (near Lick and near Trenta), 5h. (near Manila), 6h. (Copenhagen, Scoresby Sund, Florissant, Georgetown, Ottawa, and near Tacubaya), 7h. (Granada), 8h. (Wellington), 13h. (near Granada), 14h. (near Toyooka), 15h. (Zi-ka-wei, Hong Kong, Phu-Lien, Calcutta, Ekaterinburg, Irkutsk, Tashkent, Copenhagen, near Manila, and near Rocca di Papa).

Aug. 19d. 2h. 43m. 6s. Epicentre 24°·7N. 121°·7E.

A = −·477, B = +·773, C = +·418; D = +·851, E = +·525; G = −·220, H = +·355, K = −·908.

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.
Taihoku		+0·3	0·3	334	0 25	+16	—	—	0·7	—
Isigakizima		+0·2	2·3	99	0 31	− 8	0 52	−17	—	—
Zi-ka-wei		0·0	6·5	358	i 1 41	+ 2	i 3 9	+12	—	4·2
Hong Kong		0·0	7·2	252	1 54?	+ 5	3 9	− 6	3·8	4·4
Manila		−0·1	10·1	184	e 2 16	−14	i 4 6	−23	5·0	9·7
Nagasaki		−0·1	10·7	40	2 40	+ 2	5 0	+15	5·6	7·5
Miyazaki		−0·1	11·2	48	2 47	+ 1	5 2	+ 5	—	—
Hukuoka		−0·1	11·7	39	i 2 57	+ 4	i 5 14	+ 5	6·8	8·1
Koti		−0·2	13·6	47	3 21	+ 3	6 2	+ 9	7·2	8·0
Phu-Lien		−0·2	14·4	257	e 3 28	− 1	e 6 8	− 5	6·9	10·2
Sumoto		−0·2	15·0	47	3 39	+ 3	—	—	e 10·3	12·2
Kobe		−0·2	15·3	46	3 48	+ 8	7 4	+30	—	9·8
Osaka		−0·2	15·6	47	3 49	+ 5	—	—	7·2	14·1
Toyooka	E.	−0·2	15·7	43	—	—	7 30	+46	8·8	10·2
	N.	−0·2	15·7	43	3 46	0	7 32	+48	—	13·1
Nagoya		−0·3	16·7	48	e 5 8	?	9 58	?L.	(10·0)	—
Tokyo		−0·4	19·0	51	4 15	− 9	—	—	—	—
Akita		−0·4	21·5	42	e 5 11	+17	—	—	11·7	14·3
Mizusawa		−0·4	21·8	44	5 7	+ 9	8 55	+ 2	12·6	—
Ootomari		−0·6	27·7	32	5 53	− 6	10 4	−39	—	—
Calcutta	E.	−0·7	30·5	275	6 0	−26	12 0	+29	17·9	19·9
	N.	−0·7	30·5	275	6 10	−16	12 10	+39	17·7	—
Medan		−0·7	30·5	230	8 42	?	—	—	i 24·2	—
Irkutsk		−0·7	30·6	339	i 6 17	−10	11 31	− 1	14·9	28·1
Batavia		−0·8	34·1	209	i 6 41	−18	—	—	22·9	—
Dehra Dun		−0·8	38·9	290	6 54	−45	13 14	−25	21·1	24·9
Agra	E.	−0·8	39·1	285	7 34	− 6	14 6	+24	22·4	25·2
	N.	−0·8	39·1	285	8 4	+24	15 11	?	i 22·4	25·6
Hyderabad		−0·8	40·8	270	7 44	−11	13 56	−11	21·0	25·1
Almata		−0·8	40·8	310	e 11 40	?	—	—	—	—
Andijan		−0·9	43·8	305	8 36	+19	14 30	−17	29·9	—
Colombo		−0·9	43·8	256	8 11	− 6	14 38	− 9	25·0	29·2
Kodaikanal		−0·9	44·4	261	6 6	?	—	—	23·5	27·3
Bombay		−0·9	45·5	275	8 29	− 1	15 11	+ 1	23·1	27·2
Tashkent		−0·9	46·2	307	i 8 21	−14	i 15 24	+ 5	24·8	30·9
Ekaterinburg		−1·1	53·8	325	i 9 28	+ 4	—	—	23·4	33·8
Adelaide		−1·2	61·8	165	—	—	e 18 8	−23	31·0?	34·1
Riverview		−1·2	64·9	152	i 9 31	−65	i 19 9	0	e 33·1	37·3
Melbourne		−1·2	66·2	160	—	—	i 19 25	0	—	42·4
Pulkovo		−1·3	69·5	329	i 11 12	+ 7	20 20	+16	36·9	44·6
Theodosia		−1·3	70·3	313	11 20	+ 9	e 20 35	+21	e 38·5	—
Simferopol		−1·3	71·2	313	11 24	+ 8	20 44	+19	—	—
Helsingfors		−1·3	71·9	330	11 29	+ 8	e 20 48	+15	e 37·6	—
Honolulu T.H.	E.	−1·3	73·0	75	e 11 39	+11	i 20 49	+ 3	34·9	36·9
	N.	−1·3	73·0	75	—	—	i 20 54	+ 8	29·9	30·9

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.
Ksara	N.	−1·3	73·3	300	11 40	+10	i 21 9	+19	38·9	—
Konigsberg		−1·3	76·0	325	e 11 51	+ 4	e 21 40	+18	e 37·9	47·9
Sitka	E.	−1·3	76·1	35	—	—	—	—	i 42·5	48·5
Helwan		−1·3	78·3	298	12 4	+ 3	22 0	+11	—	52·7
Upsala		−1·3	78·4	331	11 46	−16	21 28	−22	e 38·9	48·9
Copenhagen		−1·3	79·8	329	i 12 12	+ 2	22 16	+10	38·9	—
Belgrade	E.	−1·3	80·3	316	e 13 1	+48	e 23 20	+68	e 48·3	54·0
Bergen		−1·3	80·6	334	13 54?	?	24 44	?	—	52·9
Potsdam		−1·3	81·1	325	e 11 54?	−24	e 22 24	+ 3	e 41·9	52·4
Vienna		−1·3	81·3	321	e 12 19	0	22 34	+11	e 41·9	55·9
Scoresby Sund		−1·3	81·4	350	i 12 21	+ 1	22 36	+12	40·9	—
Hamburg		−1·3	82·2	327	i 12 24	0	e 22 43	+ 9	e 37·9	44·9
Graz		−1·3	82·3	320	i 12 26	+ 1	e 22 41	+ 6	e 41·9	53·4
Wellington	E.	−1·3	82·3	143	—	—	i 22 22	−13	42·9	—
Cheb		−1·4	82·6	323	e 12 28	+ 2	e 22 46	+ 9	e 41·9	54·9
Jena	E.	−1·4	82·6	324	e 12 27	+ 1	e 22 46	+ 9	e 42·9	54·7
	N.	−1·4	82·6	324	e 12 30	+ 4	e 22 44	+ 7	e 41·9	54·6
Zagreb		−1·4	82·6	319	e 11 59	−27	e 22 44	+ 7	e 41·9	—
Christchurch		−1·4	82·7	145	—	—	i 22 38	0	—	—
Gottingen		−1·4	83·2	325	e 12 30	+ 1	—	—	e 43·0	54·8
Laibach	E.	−1·4	83·4	320	—	—	—	—	e 49·9	—
Tananarive		−1·4	84·4	247	—	—	23 0	+ 3	43·2	46·8
Feldberg	N.	−1·4	84·7	325	e 12 30	− 8	e 22 51	− 9	—	47·4
Innsbruck		−1·4	84·7	321	i 12 9	−29	—	—	—	—
Venice		−1·4	85·0	319	e 13 22	+42	e 22 59	− 6	—	—
Treviso		−1·4	85·0	320	e 12 37	− 3	22 59	− 6	44·9	—
Hohenheim		−1·4	85·1	324	e 12 36	− 4	—	—	e 45·9	54·4
Ravensburg	E.	−1·4	85·4	323	e 12 41	− 1	e 23 4	− 4	e 36·9	—
De Bilt		−1·4	85·4	327	i 12 40	− 2	23 4	− 4	e 40·9	54·9
Trenta		−1·4	85·5	313	e 12 49	+ 6	—	—	—	—
Dyce		−1·4	85·6	335	e 12 38	− 5	i 22 53	−17	32·9	55·5
Pompeii		−1·4	86·0	315	e 12 54?	+ 8	e 22 54?	−21	—	—
Strasbourg		−1·4	86·0	324	i 12 44	− 2	23 12	− 3	40·9	56·2
Chur		−1·4	86·0	322	i 12 43	− 3	e 23 5	−10	—	—
Zurich		−1·4	86·2	322	e 12 44	− 3	e 23 6	−11	—	—
Florence	Z.	−1·4	86·5	318	i 12 46	− 3	23 29	+ 9	51·9	56·5
Uccle		−1·4	86·5	326	e 12 46	− 3	23 11	− 9	e 40·9	57·1
Rocca di Papa		−1·4	86·7	316	i 12 45	− 5	e 23 15	− 7	e 47·3	60·2
Victoria		−1·4	86·7	38	12 47	− 3	23 4	−18	41·3	52·4
Edinburgh		−1·4	86·8	333	e 12 54?	+ 4	23 9	−14	43·9	56·4
Piacenza		−1·4	86·8	320	12 54	+ 4	23 14	− 9	46·9	57·5
Catania		−1·4	87·2	311	e 12 44	− 8	e 23 16	−12	—	—
Neuchatel		−1·4	87·4	323	e 12 51	− 2	e 23 15	−15	—	—
Besançon		−1·4	87·8	323	—	—	—	—	—	—
Stonyhurst		−1·4	87·9	330	12 52	− 4	23 15	[+ 1]	48·9 41·9	— 58·0
Moncalieri		−1·4	88·0	320	12 47	−10	23 9	[− 6]	38·9	56·4
		−1·4	88·0	320	e 13 37	+40	23 13	[− 2]	40·8	56·4
Bidston		−1·4	88·4	330	12 53	− 6	23 20	[+ 2]	43·2	58·2
Kew		−1·4	88·4	329	i 12 55	− 4	e 23 21	[+ 3]	41·9	56·8
Oxford		−1·4	88·7	329	e 12 52	− 9	i 23 22	[+ 2]	e 41·9	57·1
Paris		−1·4	88·7	325	i 12 56	− 5	i 23 21	[+ 1]	48·9	56·9
Entebbe		−1·4	89·3	272	—	—	—	—	45·9	—
Tortosa	E.	−1·4	94·7	320	—	—	—	—	e 46·9	62·1
Algiers		−1·4	95·6	316	—	—	e 23 59	[− 1]	42·9	46·9
Alicante		−1·4	96·9	319	e 13 7	−39	e 24 9	[+ 2]	e 51·9	—
Toledo		−1·5	98·0	321	e 13 37	−15	e 24 13	[0]	e 43·6	64·2
Almeria		−1·5	98·6	319	e 13 38	−17	e 24 16	[− 1]	54·9	62·1
Granada		−1·5	99·6	320	e 12 40	−81	i 23 31	[−51]	e 51·9	65·5
San Fernando		−1·5	101·6	320	—	—	24 22	[−10]	56·6	66·9
Tucson	E.	−1·5	104·1	45	—	—	—	—	—	58·5

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.
Chicago	N.	−1·5	108·2	23	—	—	e 41 54	?	e 62·9	68·0
Ottawa		−1·5	108·2	13	e 18 54	?PR$_1$	e 28 9	?PS	e 51·9	—
Ann Arbor	N.	−1·5	109·0	20	—	—	—	—	e 57·6	—
Toronto	N.	−1·5	109·0	16	—	—	e 41 54?	?	61·9	72·9
Florissant		−1·5	109·8	26	i 19 4	?PR$_1$	e 25 6	[− 3]	e 29·6	64·9
Fordham		—	112·9	13	e 19 34	?PR$_1$	i 29 0	?PS	39·9	50·9
Georgetown	Z.	—	114·0	16	e 19 0	?PR$_1$	e 29 4	?	e 52·3	77·9
Charlottesville	N.	—	114·5	17	—	—	e 28 54	?	66·9	74·9
Rio de Janeiro	E.	—	166·0	274	—	—	—	—	e 93·1	—
La Paz		—	167·7	50	i 20 12	[− 2]	—	—	81·9	97·2
La Plata		—	169·8	182	—	—	—	—	111·9	—
Sucre		—	171·4	50	e 20 13	[− 2]	—	—	83·9	92·1

Additional readings: Zi-ka-wei iZ = +1m.51s., +2m.5s., +2m.23s., and +2m.45s., MN = +6·8m. Manila MN = +9·8m. Nagasaki MN = +9·1m. Koti eEZ = +6m.14s., MN = +10·3m. Phu-Lien MN = +7·9m. Sumoto MN = +12·3m. Kobe MN = +15·5m. Osaka MN = +16·2m. Batavia i = +7m.56s. = PR$_1$ − 5s. Hyderabad MN = +25·9m. Ekaterinburg PR$_1$ = +11m.52s., PR$_2$ = +12m.41s., SR$_1$ = +21m.30s. Adelaide MN = +36·7m. Helsingfors PR$_2$ = +15m.58s., eSN = +20m.50s. Konigsberg iE = +11m.54s., eZ = +11m.55s., eE = +12m.11s., and +14m.12s., eN = +14m.40s., eE = +14m.51s., +15m.16s., and +15m.22s., eN = +17m.12s., and +17m.55s., eSN = +21m.39s., eN = +23m.7s., eSR$_1$E = +26m.48s., eE = +30m.15s., MN = +41·9m. Sitka iPR$_2$E = +20m.32s., iSR$_1$E = +31m.6s. Upsala eLN = +35·9m., MN = +48·6m. Copenhagen +15m.1s. and +23m.1s. = PS − 3s. Vienna iPZ = +12m.20s. Scoresby Sund +15m.30s. = PR$_1$ − 21s. and +28m.6s. = SR$_1$ − 9s. Hamburg eL = +41·9m., MZ = +51·9m. Wellington iSN = +22m.23s., iSR$_1$N = +27m.34s., LN = +41·9m. Jena ePE = +12m.29s. eSE = +22m.48s., eLE = +42·9m. Zagreb e = +12m.27s., +23m.44s. = PS + 6s. and +41m.54s.?, eNE = +46m.0s. Gottingen eSR$_1$EN = +23m.48s. = PS + 2s., eLN = +42·7m., eLZ = +44·2m., MN = +47·2m. Laibach eLN = +47·0m. Tananarive eE = +31m.38s. Hohenheim eN = +12m.41s., ePR$_1$E = +15m.54s. Ravensburg ePR$_1$E = +15m.54s., ePSE = +24m.6s. De Bilt PR$_1$Z = +16m.2s., eSR$_1$ = +29m.20s., MN = +49·3m., MZ = +56·2m. Strasbourg MN = +56·9m. Uccle PR$_1$ = +16m.12s., eSR$_1$ = +29m.18s., MN = +57·0m. Victoria SN = +23m.19s.; T$_s$ = 2h.43m.34s. Kew PR$_1$Z = +16m.26s., LZ = +48·9m., MN = +55·9m., MZ = +58·1m. Oxford PR$_1$ = +16m.25s. Paris MN = +48·9m. Tortosa MN = +62·2m. Algiers PR$_1$ = +17m.33s., MN = +64·9m. Granada i = +16m.51s., iE = +21m.34s. San Fernando MN = +66·1m. Chicago eLE = +63·9m., ME = +71·4m. Ottawa e = +25m.1s. = [S] − 1s., eN = +34m.54s., eE = +42m.54s. and +47m.24s. Ann Arbor eLE = +58·8m. Fordham PR$_1$ = +25m.24s. = [S] + 2s. Georgetown LZ = +59·5m. Charlottesville eN? = +35m.30s. = SR$_1$ − 9s., eE = +56m.54s., eLE = +64·3m., ME = +69·9m. La Paz L = +77·9m., MN = +103·4m. Sucre iPZ = +20m.21s. = [P] + 6s., i = +25m.30s. = PR$_1$ − 14s.

Aug. 19d. 2h. 53m. 27s. Epicentre 46°·5N. 13°·0E. (as on 1928 Nov. 16d.).

A = +·671, B = +·165, C = +·725; D = +·225, E = −·974; G = +·707, H = +·163, K = −·688.

		Δ	Az.	P.	O−C.	S.	O−C.	L.
		°	°	m. s.	s.	m. s.	s.	m.
Treviso		1·0	214	e 0 12	− 3	0 16	−12	0·4
Venice	E.	1·1	204	i 0 25	+ 8	—	—	—
Padova		1·4	216	e 0 17	− 4	e 0 29	−10	—
Chur		2·4	278	e 0 40	+ 3	i 1 8	+ 2	—
Piacenza		2·7	238	—	—	e 1 5	− 9	—
Ravensburg		2·7	299	—	—	e 1 23	+ 9	—
Zurich		3·2	288	e 0 56	+ 6	e 1 34	+ 6	—
Hohenheim		3·4	313	—	—	e 1 38	+ 4	—
Neuchatel		4·1	278	e 1 13	+ 9	e 2 0	+ 7	—

Additional readings: Venice iPN = +26s. Chur i = +49s. and 1m.10s.

Aug. 19d. 10h. 39m. 42s. Epicentre 5°·0S. 72°·5E.

A = +·300, B = +·950, C = −·087; D = +·954, E = −·301; G = −·026, H = −·083, K = −·996.

Rough.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Colombo		14·0	32	7 7	?L	—	—	(7·1)	9·1
Hyderabad	E.	23·2	15	—	—	—	—	—	15·6
Bombay		23·9	1	e 5 27	0	—	—	—	—
Tananarive	E.	28·0	238	—	—	e 11 0	+ 1	e 13·3	—
Tashkent		46·4	357	i 8 40	− 3	15 29	− 4	21·3	26·9
Ekaterinburg		62·6	353	—	—	e 19 8	+12	e 34·3	38·8
Scoresby Sund		96·2	340	—	—	—	—	56·3	—

Additional readings: Hyderabad MN = +16·0m. Tananarive eE = +11m.48s., +12m.2s., +15m.27s. and +17m.4s., eN = +11m.54s., +13m.12s., +14m.30s.; all readings being given without phase.

Aug. 19d. 20h. 44m. 32s. Epicentre 24°·7N. 121°·7E. (as at 2h.).

A = −·477, B = +·773, C = +·418; D = +·851, E = +·525; G = −·220, H = +·355, K = −·908.

The focal depth of 0·010 used with the 2h. shock is retained.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	+0·3	0·3	334	0 21	+12	—	—	0·6	0·7
Zi-ka-wei		0·0	6·5	358	1 44	+ 5	3 12	+15	—	5·3
Hong Kong		0·0	7·2	252	1 49	0	3 17	+ 2	—	5·4
Manila		−0·1	10·1	184	e 2 19	−11	4 11	−18	5·1	7·8
Nagasaki		−0·1	10·7	40	2 41	+ 3	e 4 53	+ 8	—	—
Hukuoka		−0·1	11·7	39	e 2 56	+ 3	e 5 21	+12	e 7·1	10·9
Phu-Lien		−0·2	14·4	257	e 6 31	?S	(e 6 31)	+18	7·7	10·1
Sumoto		−0·2	15·0	47	3 40	+ 4	—	—	e 10·5	12·3
Kobe		−0·2	15·3	46	e 5 21	?	—	—	e 11·6	—
Akita		−0·4	21·5	42	e 5 55	+61	—	—	—	—
Irkutsk		−0·7	30·6	339	i 6 18	− 9	e 11 48	+16	15·0	—
Dehra Dun		−0·8	38·9	290	—	—	—	—	—	22·5
Hyderabad	E.	−0·8	40·8	270	—	—	—	—	—	25·3
Almata		−0·8	40·8	310	e 11 39	?	—	—	—	—
Andijan		−0·9	43·8	305	e 8 14	− 3	—	—	—	—
Colombo		−0·9	43·8	256	14 45	?S	(14 45)	− 2	—	29·2
Kodaikanal		−0·9	44·4	261	18 52	$?SR_2$	—	—	—	—
Bombay		−0·9	45·5	275	13 16	?	18 49	$?SR_3$	23·9	28·2
Tashkent		−0·9	46·2	307	i 8 31	− 4	15 24	+ 5	20·3	31·4
Ekaterinburg		−1·1	53·8	325	i 9 28	+ 4	e 17 7	+15	e 23·4	35·2
Kucino		−1·2	66·4	324	—	—	—	—	34·5	40·9
Pulkovo		−1·3	69·5	329	11 12	+ 7	20 32	?PS	28·5	45·2
Theodosia		−1·3	70·3	313	e 11 18	+ 7	—	—	—	—
Simferopol		−1·3	71·2	313	11 22	+ 6	—	—	—	—
Helsingfors		−1·3	71·9	330	11 26	+ 5	e 20 50	+17	e 34·5	—
Ksara		−1·3	73·3	300	e 11 0	−30	21 10	+20	43·5	—
Konigsberg		−1·3	76·0	325	—	—	—	—	e 40·5	48·5
Upsala	N.	−1·3	78·4	331	—	—	—	—	e 39·5	48·6
Copenhagen		−1·3	79·8	329	12 11	+ 1	22 19	+13	45·5	—
Bergen		−1·3	80·6	334	—	—	—	—	—	51·5
Vienna		−1·3	81·3	321	e 12 19	0	22 33	+10	e 44·5	57·5
Scoresby Sund		−1·3	81·4	350	12 18	− 2	22 34	+10	45·5	—
Hamburg		−1·3	82·2	327	—	—	—	—	e 39·5	—
Cheb		−1·4	82·6	323	—	—	—	—	e 43·5	54·5
Zagreb	N.E.	−1·4	82·6	319	e 12 32	+ 6	e 22 48	+11	—	—
	N.W.	−1·4	82·6	319	e 12 30	+ 4	e 22 47	+10	—	—

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.
Gottingen		−1·4	83·2	325	—	—	23 16	? Σ	e 44·7	53·8
Feldberg	N.	−1·4	84·7	325	—	—	—	—	—	47·5
Ravensburg	E.	−1·4	85·4	323	—	—	—	—	—	50·5
De Bilt		−1·4	85·4	327	12 39	− 3	23 4	− 4	e 41·5	54·9
Dyce		−1·4	85·6	335	—	—	e 22 58	−12	44·5	55·4
Strasbourg		−1·4	86·0	324	e 12 28?	−18	e 22 28?	−47	45·5	—
Chur		−1·4	86·0	322	e 12 42	− 4	e 23 17	+ 2	—	—
Zurich		−1·4	86·2	322	e 13 18	+31	—	—	—	—
Florence	Z.	−1·4	86·5	318	e 42 28	?L	49 13	?	(e 42·5)	56·5
Uccle		−1·4	86·5	326	—	—	e 23 10	−10	e 43·5	—
Rocca di Papa		−1·4	86·7	316	e 12 46	− 4	—	—	e 54·3	65·9
Edinburgh		−1·4	86·8	333	—	—	e 23 10	−13	46·5	58·0
Piacenza		−1·4	86·8	320	e 10 56	?	22 36	−47	—	58·7
Neuchatel		−1·4	87·4	323	e 12 48	− 5	—	—	i 55·5	—
Kew		−1·4	88·4	329	—	—	e 23 22	−19	42·5	—
Oxford		−1·4	88·7	329	—	—	—	—	e 47·5	57·7
Paris		−1·4	88·7	325	e 12 55	− 6	—	—	48·5	55·5
Tortosa	N.	−1·4	94·7	320	—	—	—	—	e 51·5	62·2
Granada		−1·5	99·6	320	e 8 52	?	—	—	52·5	56·5
San Fernando	N.	−1·5	101·6	320	—	—	—	—	—	67·7
Ottawa		−1·5	108·2	13	—	—	e 25 4	[+ 2]	e 53·5	—
Toronto		−1·5	109·0	16	—	—	—	—	—	64·5
Fordham	E.	—	112·9	13	—	—	—	—	e 60·7	71·5
Georgetown	Z.	—	114·0	16	e 8 35	?	e 23 23	?	e 61·6	73·0
La Paz		—	167·7	50	20 10	[− 4]	—	—	—	—

Additional readings: Zi-ka-wei iZ = +1m.54s., +2m.2s., +2m.46s., +3m.34s. and +4m.0s. Hong Kong e = +2m.48s., MN = +4·8m. Manila MN = +8·6m.; T_0 = 20h.44m.32s. Sumoto MZ = +11·7m., MN = +14·1m. Hyderabad MN = +26·0m. Konigsberg eL = +45·5m., MN = +46·5m. Upsala ME = +48·9m. Vienna iPZ = +12m.20s., PR_1 = +15m.29s. Gottingen ePE = +4m.16s., eLN = +45·0m. De Bilt PR_1Z = +16m.3s., MN = +56·1m., MZ = +56·2m. Kew LZ = +51·5m. Ottawa eN = +28m.10s. = PS − 28s.

Aug. 19d. 23h. 17m. 51s. Epicentre 38°·0N. 29°·5E. (as on 1929 May 8d.).

A = +·686, B = +·388, C = +·616; D = +·492, E = −·870; G = +·536, H = +·303, K = −·788.

		Δ	Az.	P.	O–C.	S.	O–C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ksara	N.	6·6	127	e 1 34	− 7	2 45	−15	2·8	—
Simferopol		7·7	25	e 1 53	− 4	—	—	—	—
Cheb		17·1	320	—	—	—	—	e 9·2	—
Strasbourg		18·9	311	—	—	—	—	10·2	—
Copenhagen		21·1	332	—	—	8 57	+11	12·2	—
Uccle		21·9	314	—	—	9 9?	+ 6	—	—
De Bilt		22·1	318	—	—	—	—	e 12·2	—
Paris		22·2	308	—	—	9 9?	0	—	—
Granada		26·2	278	—	—	(8 9?)	?	8·2	—
Andijan		33·0	72	e 7 6	+10	—	—	—	—

No additional readings.

Aug. 19d. Readings also at 1h. (near Lick), 6h. (near Tacubaya), 7h. (Andijan and Christchurch), 10h. (Merida), 17h. (Andijan (2), Ekaterinburg, Scoresby Sund, Chur, Georgetown, and near Tacubaya), 18h. (Fordham, Ottawa, Irkutsk, and Tashkent), 20h. (Almata and near Andijan), 21h. (near Andijan), 22h. (Almata).

Aug. 20d. 16h. 38m. 20s. Epicentre **24°·7N. 121°·7E.**
(as on Aug. 19d.).

A = −·477, B = +·773, C = +·418; D = +·851, E = +·525;
G = −·220, H = +·355, K = −·908.

The depth of focus 0·010 used previously with this epicentre is retained here.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	+0·3	0·3	334	0 21	+12	—	—	0·6	0·7
Zi-ka-wei		0·0	6·5	358	e 1 42	+ 3	3 8	+11	—	5·1
Hong Kong		0·0	7·2	252	1 49	0	3 19	+ 4	3·8	5·2
Manila		−0·1	10·1	184	e 2 14	−16	4 5	−24	i 5·0	9·7
Nagasaki		−0·1	10·7	40	2 42	+ 4	5 1	+16	—	—
Hukuoka		−0·1	11·7	39	2 56	+ 3	e 5 14	+ 5	7·0	8·2
Koti		−0·2	13·6	47	e 3 20	+ 2	e 6 3	+10	—	—
Sumoto		−0·2	15·0	47	3 55	+19	e 7 21	+54	—	—
Kobe		−0·2	15·3	46	4 0	+20	7 31	+57	e 10·1	—
Akita		−0·4	21·5	42	e 5 28	+34	—	—	13·5	—
Calcutta	E.	−0·7	30·5	275	11 21	?S	(11 21)	−10	18·8	—
Irkutsk		−0·7	30·6	339	i 6 30	+ 3	11 32	0	14·0	19·0
Batavia		−0·8	34·1	209	e 5 32	−87	—	—	—	—
Dehra Dun		−0·8	38·9	290	13 20	?S	(13 20)	−19	21·5	23·7
Hyderabad		−0·8	40·8	270	7 44	−11	13 56	−11	21·2	25·8
Almata		−0·8	40·8	310	e 7 49	− 6	—	—	—	—
Andijan		−0·9	43·8	305	e 8 15	− 2	—	—	—	—
Colombo		−0·9	43·8	256	14 43	?S	(14 43)	− 4	—	29·3
Bombay		−0·9	45·5	275	10 26	?PR$_1$	15 34	+24	19·4	27·0
Tashkent		−0·9	46·2	307	i 8 31	− 4	i 15 23	+ 4	e 23·5	30·7
Ekaterinburg		−1·1	53·8	325	i 9 28	+ 4	e 17 7	+15	e 23·2	35·2
Kucino		−1·2	66·4	324	—	—	19 42	+15	34·0	40·6
Pulkovo		−1·3	69·5	329	i 11 12	+ 7	20 20	+16	33·7	44·7
Theodosia		−1·3	70·3	313	e 11 34	+23	—	—	—	—
Simferopol		−1·3	71·2	313	e 11 24	+ 8	—	—	—	—
Helsingfors		−1·3	71·9	330	e 11 28	+ 7	e 20 48	+15	e 36·7	—
Ksara	E.	−1·3	73·3	300	11 36	+ 6	21 10	+20	43·7	—
Konigsberg		−1·3	76·0	325	—	—	—	—	e 38·7	41·7
Upsala	N.	−1·3	78·4	331	—	—	—	—	e 38·7	48·5
Copenhagen		−1·3	79·8	329	12 11	+ 1	22 18	+12	39·7	—
Bergen		−1·3	80·6	334	—	—	i 29 54	?	—	51·9
Potsdam		−1·3	81·1	325	—	—	—	—	e 41·7	52·2
Vienna		−1·3	81·3	321	i 12 20	+ 1	22 33	+10	e 41·7	56·7
Scoresby Sund		−1·3	81·4	350	12 21	+ 1	22 34	+10	39·7	—
Hamburg		−1·3	82·2	327	e 12 24	0	—	—	e 43·7	51·7
Graz		−1·3	82·3	320	—	—	—	—	e 43·7	53·3
Zagreb		−1·4	82·6	319	e 12 27	+ 1	e 22 46	+ 9	e 45·0	—
Cheb		−1·4	82·6	323	e 22 44	?S	(e 22 44)	+ 7	e 44·7	54·7
Jena	N.	−1·4	82·6	324	—	—	—	—	e 44·7	53·9
Gottingen	E.	−1·4	83·2	325	—	—	—	—	e 43·2	45·7
Feldberg	N.	−1·4	84·7	325	i 12 28	−10	e 23 4	+ 4	—	47·4
De Bilt		−1·4	85·4	327	12 40	− 2	23 4	− 4	e 41·7	54·9
Ravensburg		−1·4	85·4	323	—	—	—	—	—	46·7
Dyce		−1·4	85·6	335	—	—	e 23 6	− 4	41·7	47·9
Chur		−1·4	86·0	322	e 12 44	− 2	e 23 3	−12	—	—
Strasbourg		−1·4	86·0	324	e 12 43	− 3	e 23 7	− 8	51·7	56·2
Zurich		−1·4	86·2	322	e 12 45	− 2	e 23 13	− 4	—	—
Uccle		−1·4	86·5	326	—	—	e 23 4	−16	e 42·7	55·2
Florence	Z.	−1·4	86·5	318	12 41	− 8	22 53	[−13]	51·7	56·7
Rocca di Papa		−1·4	86·7	316	—	—	e 22 30	[−37]	e 49·9	60·1
Victoria	E.	−1·4	86·7	38	—	—	—	—	51·6	93·0
Edinburgh		−1·4	86·8	333	—	—	e 23 10	−13	45·7	56·7
Neuchatel		−1·4	87·4	323	e 12 49	− 4	—	—	i 54·7	—

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.
Stonyhurst		−1·4	87·9	330	e 13 19	+23	i 23 19	−17	46·7	50·1
Moncalieri		−1·4	88·0	320	e 12 42	−15	e 22 57	[−18]	47·8	56·7
Kew		−1·4	88·4	329	e 12 55	− 4	e 23 21	−20	43·7	—
Oxford		−1·4	88·7	329	—	—	e 23 14	−30	e 44·7	57·1
Paris		−1·4	88·7	325	i 12 55	− 6	—	—	48·7	56·7
Tortosa	N.	−1·4	94·7	320	—	—	—	—	e 47·7	63·2
Alicante		−1·4	96·9	319	—	—	—	—	e 54·4	—
Toledo		−1·5	98·0	321	—	—	—	—	e 52·5	66·0
Almeria		−1·5	98·6	319	—	—	—	—	—	62·1
Granada		−1·5	99·6	320	—	—	—	—	e 52·4	60·4
San Fernando	E.	−1·5	101·6	320	—	—	—	—	—	67·4
Ottawa	N.	−1·5	108·2	13	—	—	e 24 58	[− 4]	e 58·7	—
Ann Arbor	E.	—	109·0	20	—	—	—	—	e 64·0	—
Fordham	E.	—	112·9	13	—	—	(e 25 50)	[+28]	55·7	—
Georgetown	Z.	—	114·0	16	e 19 44	?PR$_1$	e 28 21	+19	—	—
La Paz		—	167·7	50	20 7	[− 7]	—	—	—	—

Additional readings: Zi-ka-wei iZ = +1m.54s., +2m.14s., +2m.38s., SN = +3m.26s., iZ = +3m.58s. and +4m.8s. Hong Kong MN = +4·5m. Manila MN = +10m.4s. Dehra Dun S = +16m.40s. Hyderabad MN = +25·7m. Kucino SR$_1$ = +24m.28s., SR$_2$ = +26m.40s. Ksara LN = +44·7m.; T$_o$ = 16h.38m.12s. Upsala ME = +48·8m. Hamburg MN = +44·7m. Zagreb ePNE? = +12m.29s. Jena eLN = +48·7m. De Bilt PR$_1$Z = +16m.1s., MN = +56·0m., MZ = +56·2m. Dyce i = +24m.26s. = PS +12s., eSR$_1$ = +29m.6s. Strasbourg e = +47m.11s. Uccle MN = +57·1m. Moncalieri MN = +54·7m. Kew PR$_1$Z = +16m.28s., LZ = +48·7m. Tortosa ME = +60·0m. San Fernando MN = +65·9m. Ottawa eN = +28m.10s. = PS −28s. Fordham S is given as eLE.

Aug. 20d. 17h. 36m. 54s. Epicentre 10°·5N. 87°·0W.

A = +·051, B = −·982, C = +·182; D = −·999, E = −·052; G = +·010, H = −·182, K = −·983.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tacubaya		14·7	308	3 46	+11	6 58	+33	7·3	8·3
Florissant		28·5	355	e 6 10	− 3	e 10 53	−15	—	—
Charlottesville	N.	28·6	14	e 6 14	0	e 10 57	−13	e 12·6	19·1
Georgetown	Z.	29·8	16	i 6 28	+ 2	i 12 54	?SR$_1$	e 16·5	20·1
Tucson	E.	30·9	320	6 34	− 3	12 3	+13	—	20·1
Chicago		31·3	0	e 6 35	− 6	11 32	−24	—	14·4
Ann Arbor	N.	32·0	6	e 6 36	−11	e 11 42	−26	e 16·0	—
Fordham		32·5	20	i 6 42	−11	i 11 56	−20	e 15·1	24·1
La Paz		32·8	145	i 6 50	− 5	12 27	+ 6	15·9	24·8
Toronto	N.	33·8	11	e 7 58	?PR$_1$	—	—	21·6	—
Ottawa		36·2	14	e 7 16	− 8	i 12 54	−19	e 17·6	23·3
Sucre		36·5	145	—	—	—	—	20·1	23·4
Lick		41·1	318	e 8 1	− 3	—	—	—	—
La Plata		53·1	150	—	—	—	—	32·7	—
Rio de Janeiro	E.	54·4	130	—	—	—	—	e 34·1	—
Stonyhurst		78·4	38	—	—	—	—	e 38·1	43·1
Granada		78·5	55	—	—	—	—	e 36·1	39·1
Hamburg		85·7	37	—	—	e 23 6?	[+ 6]	e 45·1	55·1
Gottingen		86·1	38	—	—	—	—	41·4	45·4
Copenhagen		86·6	34	12 58	+ 1	23 25	−12	41·1	—
Cheb		87·9	40	e 23 31	?S	(e 23 31)	−20	e 42·1	48·1
Pulkovo		94·0	26	—	—	i 24 10	[+18]	—	—
Kucino		99·6	28	—	—	i 24 39	[+17]	e 48·0	51·6
Tashkent		123·8	21	—	—	—	—	e 59·1	69·4

Additional readings: Tucson PR$_1$N = +7m.38s., SR$_2$N = +14m.57s. Chicago eN = +7m.37s. = PR$_1$ +2s. and +9m.18s., eE = +10m.43s., MN = +26·7m. Ann Arbor eE = +10m.36s., eN = +11m.42s., eE = +13m.54s. = SR$_1$ +4s., eN = +15m.12s., eLE = +18·9m. Fordham PR$_1$ = +7m.51s., LZ = +15·8m., MZ = +22·1m. La Paz MN = +20·6m. Ottawa ePR$_2$ = +8m.38s. = PR$_1$ +2s.; T$_o$ = 17h.37m.4s. Lick eN = +8m.30s. Cheb eS = +32m.52s.

Aug. 20d. Readings also at 2h. (near Almata and Andijan), 3h. (Ekaterinburg and Irkutsk), 5h. (near Manila), 10h. (near Tacubaya), 13h. (La Paz), 20h. (Apia (2)), 21h. (Andijan and Lick), 23h. (Koti).

Aug. 21d. 1h. 24m. 14s. Epicentre 41°·0N. 37°·0E. (as on 1916 Jan. 24d.).

A = +·603, B = +·454, C = +·656 ; D = +·602, E = −·799 ;
G = +·524, H = +·395, K = −·755.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Yalta	4·1	331	e 1 46	+42	—	—	—	—
Theodosia	4·2	344	e 1 6	+ 1	—	—	—	—
Simferopol	4·5	332	e 1 5	− 5	—	—	—	—
Ksara	7·2	187	e 1 58	+ 9	i 3 24	+ 9	3·9	—
Kucino	14·8	2	—	—	—	—	e 7·9	12·2
Pulkovo	19·2	350	4 26	− 5	8 0	− 6	10·8	—
Copenhagen	21·8	321	—	—	9 4	+ 3	13·8	—
Ekaterinburg	22·0	35	e 5 7	+ 2	e 9 1	− 4	e 11·7	18·5
Tashkent	24·2	78	—	—	e 8 46?	−62	e 15·6	19·3
De Bilt	24·4	305	—	—	e 9 49	− 3	e 13·8	—
Granada	31·4	276	—	—	—	—	e 13·8	18·8

No additional readings.

Aug. 21d. 9h. 26m. 32s. Epicentre 13°·4N. 121°·5E. (given by Manila).

A = −·508, B = +·829, C = +·232 ; D = +·853, E = +·522 ;
G = −·121, H = +·198, K = −·973.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		1·3	337	0 28?	+ 8	i 0 46	+10	—	—
Hong Kong		11·3	323	3 0	+11	—	—	—	7·3
Taihoku	E.	11·6	0	—	—	e 5 28?	+19	—	—
Phu-Lien		16·0	300	e 3 50	− 2	e 6 59	+ 4	7·5	—
Zi-ka-wei	Z.	17·8	0	e 4 7	− 8	7 43	+ 7	—	12·8
Batavia		24·4	217	i 5 30	− 2	i 9 58	+ 6	—	—
Kobe		24·6	28	e 5 36	+ 2	—	—	—	—
Irkutsk		41·2	345	—	—	14 10	−14	—	27·4
Andijan		50·6	313	e 8 54	−17	—	—	—	—
Tashkent		53·1	314	9 20	− 7	16 40	−17	e 27·5	34·3
Ekaterinburg		63·0	328	e 10 32	0	e 19 3	+ 2	e 30·3	39·3
Kucino		75·3	325	—	—	—	—	e 37·3	46·2
Pulkovo		79·0	330	e 12 16	+ 3	22 20	+ 8	43·5	49·4
Copenhagen		89·2	329	—	—	—	—	45·5	—
Scoresby Sund		92·4	350	—	—	—	—	33·5	—
Feldberg	N.	93·7	325	—	—	—	—	—	55·5
De Bilt		94·8	327	e 13 23	−19	—	—	e 50·5	55·1
Strasbourg		94·9	323	—	—	—	—	50·5	—
Uccle		95·8	326	—	—	—	—	e 51·5	—
Edinburgh		96·8	332	—	—	—	—	e 53·5	—
Paris		97·8	324	—	—	—	—	e 28·5	—
Kew		98·0	329	—	—	—	—	e 59·1	—
Granada		107·8	317	—	—	—	—	e 59·5	—
Georgetown	Z.	124·9	17	—	—	—	—	e 77·8	—

Additional readings : Irkutsk e = +9m.29s. = PR_4 − 7s. and +16m.20s. De Bilt MN = +54·7m., MZ = +60·7m. Georgetown eZ = +52m.48s. and +58m.42s.

Aug. 21d. Readings also at 0h. (Florissant), 3h. (Sydney, Ravensburg, near Chur, Neuchatel, and Zurich), 5h. (Wellington), 7h. (near Andijan), 8h. (Christchurch, Wellington, and Melbourne), 9h. and 10h. (near Manila), 13h. (near La Paz and Sucre), 15h. (Suva), 18h. (Wellington), 20h. (near Tananarive).

Aug. 22d. 7h. 34m. 30s. Epicentre 20°·6S. 168°·8E. (as on 1929 Feb. 26d.).

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva		9·4	76	i 2 18	− 4	i 4 54	+41	5·6	6·4
Apia		19·7	73	e 4 38	+ 1	11 14	?	15·8	—
Riverview		20·5	226	e 4 56	+ 9	i 8 51	+17	e 11·4	23·6
Sydney	E.	20·5	226	4 42	− 5	—	—	23·3	23·8
Wellington	E.	21·3	168	(5 8)	+11	i 8 29	−21	i 12·5	14·4
	N.	21·3	168	(i 4 42)	−15	i 8 34	−16	i 13·0	13·2
Melbourne		26·8	225	e 6 22	+26	i 10 40	+ 3	13·5	20·8
Adelaide		30·1	235	e 5 3	?	e 10 59	−37	15·6?	19·4
Perth		48·3	245	25 30	?L	—	—	(25·5)	—
Batavia		61·6	275	i 11 47	+84	i 19 14	+31	—	—
Irkutsk		91·8	326	—	—	—	—	9·8	—
Tashkent		110·4	308	e 18 18	[− 5]	—	—	—	83·5
Ekaterinburg		117·0	324	e 20 37	?PR_1	—	—	e 41·0	76·7
Georgetown	Z.	121·3	55	e 20 30?	?PR_1	—	—	e 57·3	74·9
Ottawa		122·3	47	—	—	e 30 48	?PS	e 57·5	—
Fordham		123·8	54	—	—	—	—	e 68·7	—
Pulkovo		131·1	334	(22 30)	?	—	—	22·5	—
Ksara	E.	136·5	298	e 19 29	[− 4]	e 23 19	?	—	—
Copenhagen		140·7	339	19 42	[+ 2]	—	—	—	—
Hamburg	Z.	143·3	339	e 19 48	[+ 2]	—	—	—	—
Vienna	Z.	144·6	329	i 19 55	[+ 7]	—	—	—	—
De Bilt		146·1	340	—	—	—	—	e 97·5	—
Zagreb		146·4	325	e 20 6	[+16]	—	—	—	—
Kew		148·0	348	e 20 6	[+13]	—	—	88·5	—
Strasbourg		148·2	334	e 20 0	[+ 7]	e 28 30?	?	—	—
Paris		149·7	342	e 19 30?	[−25]	—	—	—	—
Florence	Z.	150·2	326	e 16 16	?	26 29	?	—	—
Rocca di Papa		150·8	322	e 19 56	[− 1]	—	—	—	—
Granada		162·2	340	i 22 54	?	31 1	? Σ	←	—

Additional readings and note: Apia +11m.52s. Riverview PR_1 = +5m.25s., MN = +13·5m. Wellington SR_1E = +10m.6s., SR_1N = +10m.41s.; P is given as PR_1. Adelaide MN = +18·7m. Tashkent e = +22m.18s. = PR_2 −6s. and +29m.12s. = PS +9s. Ekaterinburg e = +30m.20s. = PS +7s. Fordham LZ = +69·5m. Zagreb iPE = +20m.15s. Rocca di Papa e? = +15m.50s. Granada i = +22m.56s.

Aug. 22d. 16h. 32m. 24s. Epicentre 35°·0S. 96°·5W.

A = −·093, B = −·814, C = −·574; D = −·994, E = +·113; G = +·065, H = +·570, K = −·819.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz		31·4	60	6 44	+ 2	12 10	+12	14·8	17·8
La Plata		31·5	101	—	—	—	—	14·3	—
Sucre		31·9	69	e 6 44	− 2	11 53	−14	14·3	17·2
Rio de Janeiro	E.	47·7	90	e 16 52	?S	(e 16 52)	+62	23·8	—
	N.	47·7	90	e 16 56	?S	(e 16 56)	+66	23·9	—
Wellington	E.	66·9	235	—	—	—	—	e 29·6	—
Georgetown	Z.	76·1	16	e 15 12	?PR_1	—	—	e 32·8	43·2
Fordham		78·7	17	—	—	e 22 9	+ 1	e 33·6	44·6
Ottawa		82·6	15	—	—	e 22 51	− 2	e 37·1	—
Scoresby Sund		117·9	20	—	—	—	—	63·6	—
Kew	Z.	120·3	45	—	—	—	—	63·6	—
Paris		121·1	49	—	—	—	—	62·6	—
Uccle		122·8	47	—	—	—	—	e 60·6	—

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
De Bilt	123·7	46	—	—	e 37 36?	?SR_1	e 59·6	66·4
Strasbourg	124·3	50	—	—	—	—	e 32·6	—
Copenhagen	128·6	41	23 36?	?	—	—	57·6	—
Pulkovo	138·0	35	e 22 1	?PR_1	—	—	69·1	—
Ekaterinburg	153·3	28	e 20 20	[+20]	—	—	43·1	88·4
Irkutsk	157·3	325	—	—	—	—	76·6	—
Tashkent	167·2	57	e 20 24	[+11]	—	—	76·6	95·6

Additional readings: Fordham MN = +43·6m. Ottawa e = +34m.36s.? = SR_2 +8s., eLN = +40·6m. De Bilt MZ = +69·0m. Ekaterinburg e = +24m.11s. = PR_1 +13s. and +34m.15s. Tashkent e = +27m.54s. and +35m.54s.

Aug. 22d, 19h. 40m. 45s. Epicentre 3°·7S. 21°·2W.

A = +·930, B = −·361, C = −·065; D = −·362, E = −·932; G = −·060, H = +·023, K = −·998.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Rio de Janeiro E.	28·6	226	—	—	—	—	e 12·4	—
Granada	44·0	21	—	—	i 15 18	+16	e 20·4	22·4
Sucre	45·6	247	e 8 42	+ 5	e 15 34	+12	23·2	26·4
La Paz	47·8	253	8 47	− 6	i 15 34	−17	24·2	27·6
Rocca di Papa	54·9	30	9 43	+ 5	—	—	e 31·1	32·6
Paris	56·5	19	e 9 45	− 4	—	—	34·2	—
Strasbourg	58·1	23	e 10 0	0	—	—	e 31·2	—
Uccle	58·8	19	—	—	e 17 57	−12	e 29·2	—
Zagreb	59·5	29	e 10 18	+ 9	—	—	—	—
De Bilt	60·1	20	e 10 12	− 1	e 18 25	+ 1	e 30·2	32·4
Vienna Z.	61·4	28	i 10 22	+ 1	—	—	—	—
Copenhagen	65·5	21	10 51	+ 3	—	—	37·2	—
Pulkovo	75·1	25	e 11 52	+ 2	—	—	42·2	—
Ekaterinburg	88·7	34	13 8	− 1	e 23 57	− 3	e 38·0	46·6
Tashkent	92·8	49	i 13 37	+ 6	24 52	+ 9	e 50·2	61·6

Additional readings: La Paz PR_2E = +11m.11s. Zagreb e = +10m.33s. and +11m.22s. De Bilt eE = +26m.21s. = SR_2 +11s. Copenhagen +21m.9s. = Σ − 5s. Ekaterinburg $S_cP_cP_cS$ = +23m.53s. Tashkent ePR_1 = +17m.18s.

Aug. 22d. Readings also at 0h. (Ekaterinburg, Irkutsk, and Tashkent), 2h. (Georgetown, Ottawa, Lick, and Nagoya), 4h. (Tucson), 13h. (near Andijan), 17h. (near Wellington), 19h. (Lick), 20h. (near Manila (2) and near Andijan), 21h. (2) and 22h. (near Taihoku).

Aug. 23d. Readings at 1h. (near Apia), 5h. (near Taihoku), 7h. (Matuyama), 10h. (near Tananarive), 14h. (Nagoya), 15h. (Manila (2), Taihoku (2), Hong Kong, Phu-Lien, Zi-ka-wei, Irkutsk, Ekaterinburg, Tashkent, Pulkovo, and Apia), 16h. (De Bilt, Strasbourg, and Copenhagen), 19h. (Irkutsk, Tashkent, and near Taihoku).

Aug. 24d. Readings at 2h. (Granada, Melbourne, Riverview, Christchurch, and Wellington (2)), 3h. (Adelaide, Lick, La Paz, Tashkent, Ekaterinburg Pulkovo, Yalta, Copenhagen, Strasbourg, Chur, Paris, De Bilt, and Feldberg; these readings and those at 2h. refer to a shock in S. Pacific Ocean, but the data is inadequate to determine an approximate epicentre), 4h. (Wellington, Entebbe (2), Ksara, Strasbourg, and Rocca di Papa), 5h. (near Kobe and Sumoto), 6h. (near Manila), 7h. (Batavia and Medan), 9h. (Batavia), 12h. (La Paz), 15h. (near Irkutsk, near Sumoto, and near Wellington), 16h. (Andijan, Tashkent, Ekaterinburg, and Ksara, 17h. (Nagoya), 20h. (Zagreb), 21h. (near Taihoku), 23h. (Ekaterinburg, Tashkent, and Ksara).

Aug. 25d. Readings at 0h. (Mineo and near Lick), 1h. (near Kobe and Sumoto), 2h. (Andijan and near Matuyama), 3h. (Wellington), 5h. (near Santiago (2)), 6h. (Taihoku), 7h. (near Helwan and Ksara), 8h. (De Bilt and Uccle), 11h. (Wellington), 12h. (Entebbe and near Wellington), 19h. (Nagoya).

Aug. 26d. Readings at 2h. (Mizusawa and Wellington), 5h. (Wellington), 7h. (Taihoku), 8h. (Nagoya), 13h. (Andijan), 20h. (near Andijan).

Aug. 27d. Readings at 0h. (La Paz and Sucre), 1h. (Mizusawa, Nagoya, near Osaka, and near Tacubaya), 3h. (Nagoya and near Mizusawa), 7h. and 12h. (near Manila), 14h. (Phu-Lien), 16h. (Taihoku), 19h. (near Wellington), 22h. (La Paz), 23h. (Scoresby Sund).

Aug. 28d. 18h. 51m. 35s. Epicentre 41°·0N. 143°·1E.

(given by Tokyo in Geophys. Mag., Vol. IV, No. 4, and quoted by De Bilt).

$A = -\cdot604$, $B = +\cdot453$, $C = +\cdot656$; $D = +\cdot600$, $E = +\cdot800$; $G = -\cdot524$, $H = +\cdot394$, $K = -\cdot755$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Morioka		2·0	229	0 37	+ 6	1 9	+14	—	—
Sapporo		2·4	319	0 55	+18	2 2	+56	—	—
Mizusawa	E.	2·5	219	0 43	+ 4	1 7	− 2	—	—
	N.	2·5	219	0 44	+ 5	1 9	0	—	—
Akita		2·7	240	0 53	+11	—	—	1·6	4·8
Tokyo		6·0	207	1 11	−21	2 11	−33	—	—
Gihu		7·5	224	1 54	0	3 34	+10	—	—
Nagoya		7·6	222	1 53	− 2	—	—	4·2	4·7
Toyooka		8·5	233	2 7	− 2	4 4	+14	4·7	6·3
Osaka		8·7	226	2 3	− 9	(4 3)	+ 7	4·1	6·6
Kobe		8·9	228	2 13	− 2	3 56	− 5	—	5·4
Sumoto		9·3	227	2 30	+10	4 38	+28	(4·6)	5·1
Muroto		10·5	225	—	—	—	—	e 4·9	—
Koti		10·6	229	e 2 33	− 5	e 4 34	−11	e 5·0	6·5
Hukuoka		12·5	238	3 4	− 2	6 42	+70	8·1	9·4
Nagasaki		13·6	237	e 3 18	− 3	e 5 43	−15	—	8·5
Zi-ka-wei	Z.	20·0	248	i 4 33	− 8	8 31	+ 8	12·6	14·3
Taihoku	N.	24·0	235	5 24	− 4	9 57	+13	13·7	—
Irkutsk		28·5	307	i 6 1	−12	i 11 1	− 7	13·0	19·4
Hong Kong		30·7	242	6 21	−14	11 19	−27	e 14·9	18·7
Manila		32·7	225	e 6 36	−18	12 2	−17	16·9	25·7
Phu-Lien		36·9	250	e 7 13	−16	e 13 3	−19	16·4	24·5
Calcutta	E.	49·2	268	10 28	+87	18 14	?	28·6	—
Andijan		52·2	296	e 9 19	− 2	17 2	+16	20·4	—
Dehra Dun		52·7	281	—	—	—	—	—	37·4
Ekaterinburg		52·9	319	i 9 29	+ 4	17 0	+ 5	22·5	35·5
Honolulu T.H.	E.	53·2	93	—	—	i 16 52	− 7	—	17·1
Tashkent		53·8	297	i 9 34	+ 2	i 17 12	+ 6	e 29·4	34·3
Medan		54·6	240	—	—	—	—	32·4	36·1
Agra	E.	54·7	278	e 8 41	−56	16 37	−40	29·5	35·7
	N.	54·7	278	10 0	+23	17 15	− 2	26·6	36·8
Batavia		57·7	225	e 9 57	0	i 17 54	− 1	e 35·4	—
Hyderabad		59·7	270	10 12	+ 2	18 30	+11	31·1	42·5
Victoria	N.	62·6	49	—	—	(19 4)	+ 8	19·1	28·8
Bombay		63·1	275	10 37	+ 4	19 12	+10	33·4	42·0
Kucino		64·5	324	—	—	—	—	—	53·0
Kodaikanal		65·0	265	19 37	?S	(19 37)	+12	—	—
Pulkovo		65·3	330	10 50	+ 3	19 35	+ 6	29·4	43·0
Colombo		65·4	259	8 15	?	20 45	+75	33·5	53·6
Helsingfors		67·0	332	e 11 7	+ 9	e 20 0	+10	e 31·9	—
Scoresby Sund		68·1	356	11 13	+ 8	20 25	+22	32·4	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Upsala		69·7	335	e 11 30	+15	e 20 30	+ 8	e 36·4	41·8
Konigsberg		72·4	330	e 11 49	+17	e 21 4	+ 9	e 36·4	43·4
Theodosia		72·4	317	—	—	—	—	e 41·0	—
Bergen		72·9	340	—	—	—	—	—	48·4
Simferopol		73·2	317	e 11 39	+ 2	—	—	40·9	—
Yalta		73·4	317	—	—	—	—	e 41·3	—
Copenhagen		74·7	335	11 50	+ 3	21 28	+ 6	37·4	—
Hamburg		77·2	335	e 12 5	+ 3	e 21 59	+ 8	e 39·9	44·3
Potsdam		77·2	332	———	—	—	—	e 43·4	51·4
Ivigtut		77·4	6	—	—	22 1	+ 8	38·4	—
Dyce		77·6	343	e 12 7	+ 2	e 22 5	+ 9	e 36·9	48·8
Melbourne		78·8	179	—	—	i 21 56	−14	—	38·9
Gottingen	E.	78·9	334	—	—	e 22 19	+ 8	e 41·9	45·9
	N.	78·9	334	—	—	e 21 55	−16	e 42·7	45·4
Edinburgh		79·0	342	—	—	22 30	+18	45·4	54·4
Vienna		79·1	328	e 12 3	−11	22 13	0	e 43·4	54·4
Cheb		79·2	330	e 12 41	+27	e 22 18	+ 4	e 41·4	48·4
Ksara		79·6	308	e 12 14	− 3	22 24	+ 5	41·4	—
Belgrade		80·0	323	e 12 17	− 2	e 22 28	+ 5	e 40·4	51·4
Tucson	N.	80·0	56	—	—	e 22 18	− 5	—	—
De Bilt		80·1	335	12 20	0	22 28	+ 4	e 39·4	47·2
Graz		80·4	328	e 12 44	+23	—	—	e 45·4	50·1
Feldberg	N.	80·6	335	e 12 15	− 8	e 22 26	− 4	—	50·5
Zagreb		81·2	327	e 12 36	+10	e 22 43	+ 6	e 47·4	53·4
Uccle		81·4	336	e 12 31	+ 4	e 22 44	+ 5	e 41·4	47·8
Hohenheim		81·5	332	—	—	—	—	—	46·4
Laibach	N.	81·7	328	—	—	—	—	e 46·1	—
Ravensburg		82·1	331	—	—	—	—	e 43·4	47·4
Strasbourg		82·2	332	e 12 29	− 2	e 22 49	+ 1	49·4	55·2
Kew		82·2	339	e 12 29	− 2	e 22 54	+ 6	40·4	48·5
Oxford		82·2	340	e 12 34	+ 3	i 22 51	+ 3	e 41·4	62·4
Treviso		82·9	329	12 25	−10	22 55	− 1	48·4	56·4
Chur		82·9	330	e 12 33	− 2	e 22 54	− 2	—	—
Zurich		82·9	331	e 12 32	− 3	e 22 37	−19	—	—
Padova		83·2	329	e 12 39	+ 2	e 23 6	+ 7	50·4	58·4
Paris		83·7	336	—	—	e 23 25?	+19	42·4	49·4
Neuchatel		83·8	332	e 12 37	− 4	e 23 8	+ 1	—	—
Besançon		84·0	333	—	—	—	—	e 45·4	—
Placenza		84·5	330	e 11 33	−72	22 9	[−44]	35·4	52·9
Florence	Z.	84·8	328	12 46	− 1	23 18	+ 1	47·4	53·2
Moncalieri		85·2	330	12 2	−47	22 30	[−27]	44·7	49·4
		85·2	330	12 7	−42	22 33	[−24]	46·0	49·4
Helwan		85·2	307	e 12 46	− 3	23 7	[+10]	—	59·2
Chicago	E.	85·3	36	—	—	i 23 13	− 9	e 53·8	59·0
	N.	85·3	36	—	—	e 23 8	−14	e 51·8	55·8
Rocca di Papa		85·9	325	e 12 46	− 7	e 23 12	−17	43·4	62·7
Florissant		86·5	40	e 12 55	− 1	e 23 25	−11	—	38·9
Ottawa		86·9	26	—	—	i 23 27	−13	e 40·4	51·4
Toronto	E.	87·1	30	—	—	i 23 29	−13	43·4	—
Wellington	E.	87·2	157	—	—	e 23 0	[−10]	45·4	—
	N.	87·2	157	—	—	i 23 3	[− 7]	42·4	—
Tortosa	N.	91·4	344	e 17 1	?PR_1	23 50	[+14]	34·4	55·8
Georgetown	Z.	92·1	30	e 13 25?	− 3	—	—	e 39·6	60·2
Charlottesville	N.	92·3	31	—	—	e 24 25	−13	e 49·3	63·9
Toledo		93·8	335	e 16 59	?PR_2	e 27 1	?	e 38·4	55·1
Algiers		94·0	330	e 12 43	−55	e 24 38	−18	e 50·4	53·4
Alicante		94·0	333	—	—	e 21 21	?PR_2	e 46·5	—
Almeria		96·0	334	e 17 34	?PR_1	e 23 40	[−22]	53·8	55·9
Granada		96·1	335	e 13 54	+ 4	—	—	50·4	57·4
San Fernando	E.	97·6	336	—	—	—	—	—	59·3
Entebbe		105·4	285	14 25?	−11	—	—	—	—
La Paz		143·6	58	e 19 59	[+13]	—	—	—	—

For Notes see next page.

NOTES TO AUG. 28d. 18h. 51m. 35s.

Additional readings: Akita P = +1m.4s., MN = +2·2m. Nagoya MN = +4·4m. Toyooka PR_1N = +2m.49s., MN = +5·6m. Osaka MZ = +4·7m., MN = +5·1m. Kobe i = +2m.27s., MN = +5·3m. Sumoto MZ = +6·8m. Koti eEN = +5m.55s. Hong Kong MN = +23·2m. Manila MN = +25·6m. Phu-Lien MN = +25·0m. Medan i = +11m.53s. = PR_1 − 8s. and +14m.23s., iN = +22m.23s. Hyderabad MN = +40·9m. Scoresby Sund +13m.49s. = PR_1 − 22s. Upsala MN = +44·7m. Konigsberg ePN = +11m.55s., ePR_2E = +14m.43s. = PR_1 − 5s., eSN = +21m.7s., ePPSE = +22m.25s. Copenhagen +14m.42s. = PR_1 − 23s. and +26m.25s. Hamburg MZ = +51·4m. Belgrade e = +15m.22s. = PR_1 − 28s. Tucson eE = +20m.19s. De Bilt PR_1Z = +15m.28s., eSR_1E = +27m.29s., MZ = +51·0m., MN = +55·5m. Zagreb eNW = +14m.2s., eNE = +14m.58s., and +17m.47s. = PR_2 − 9s., eSNE = +23m.35s. = PS +14s., MNW = +51·6m. Uccle MN = +55·8m. Kew PR_1Z = +15m.46s., SR_1E = +28m.16s., SR_2E = +31m.47s., LN = +43·4m., LZ = +46·4m. Oxford PR_1 = +15m.41s. Chicago eE? = +28m.49s., eE = +40m.49s. Florissant eZ = +13m.19s. and = +25m.58s. Ottawa e = +35m.25s. = SR_2 − 33s. Toronto eE = +35m.47s. = SR_2 − 15s. Georgetown iZ = +20m.33s. Charlottesville eE = +55m.43s., ME = +57·5m. Granada PR_1 = +17m.37s. San Fernando MN = +57·6m.

Aug. 28d. Readings also at 5h. (Scoresby Sund (2)), 6h. (Manila), 7h. (Rocca di Papa), 11h. (near Reykjavik), 13h. (Nagasaki), 15h. (Scoresby Sund (3)), 18h. (Batavia), 19h. (La Paz), 21h. (Mizusawa and near Taihoku), 22h. (Scoresby Sund).

Aug. 29d. 10h. 9m. 42s. Epicentre 22°·5S. 177°·5W.

A = −·923, B = −·040, C = −·383; D = −·044, E = +·999; G = +·382, H = +·017, K = −·924.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Suva	E.	5·8	318	i 1 30	0	i 2 36	− 3	i 3·1	3·6
	N.	5·8	318	i 1 30	0	i 2 42	+ 3	—	3·3
Apia		10·2	33	—	—	—	—	—	3·3
Wellington	E.	19·9	197	—	—	i 8 22	+ 1	—	—
Riverview		29·7	241	—	—	e 11 12	−17	e 15·7	23·8
Batavia		74·0	270	i 11 55	+13	i 22 49	?	—	—
Zi-ka-wei	Z.	79·4	311	e 11 40	−35	—	—	—	—
Ekaterinburg		125·9	325	e 18 39	[−29]	e 25 28	[−34]	e 69·3	81·3
Pulkovo		137·9	340	e 18 57	[−39]	—	—	81·3	93·3
Theodosia		145·0	319	e 19 13	[−35]	—	—	—	—
Simferopol		145·8	319	e 19 15	[−35]	—	—	—	—
Yalta		146·0	319	e 19 11	[−39]	—	—	—	—
Copenhagen		146·0	350	19 10	[−40]	—	—	80·3	—
Ksara		148·6	300	e 19 22	[−32]	—	—	—	—
De Bilt	Z.	150·4	357	e 19 22	[−34]	—	—	—	—
Vienna	Z.	152·0	340	i 19 28	[−31]	—	—	—	—
Strasbourg		153·6	352	e 19 18?	[−43]	e 20 18?	?[P]	—	—
Paris		153·7	0	i 19 29	[−32]	—	—	—	—
Rocca di Papa		158·9	339	i 20 6	[− 1]	e 28 42	?PR_2	—	90·9

Additional readings and note: Wellington iN = +8m.24s., iE = +15m.29s. Batavia i = +12m.46s.; readings being given without phase. Pulkovo i = +22m.29s. = PR_1 +8s. De Bilt eZ = +20m.14s. = [P] +18s. Rocca di Papa e = +19m.37s.

Aug. 29d. 10h. 45m. 25s. Epicentre 5°·6N. 126°·3E. (as on 1923 Oct. 4d.).

A = −·589, B = +·802, C = +·098; D = +·806, E = +·592; G = −·058, H = +·079, K = −·995.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		10·4	330	e 2 45	+ 9	e 5 39	+59	e 7·1	—
Hong Kong		20·4	326	4 46	0	8 32	0	—	14·1
Batavia		22·7	239	i 5 17	+ 4	—	—	—	—
Phu-Lien		24·4	310	5 15	−17	(9 35?)	−17	9·6	—
Zi-ka-wei	Z.	25·9	350	e 5 35	−12	—	—	—	18·6
Ekaterinburg		72·1	329	e 11 27	− 4	e 20 50	− 1	e 33·6	45·6
Pulkovo		88·2	330	e 12 56	−10	e 22 56	[−20]	45·6	57·6
De Bilt	Z.	103·8	327	—	—	—	—	e 63·6	—

Manila gives also PR_2 = +2m.56s., SR_1 = +5m.59s.

Aug. 29d. 19h. 47m. 13s. Epicentre 24°·7N. 121°·7E. (as on 20d.).

A = −·477, B = +·773, C = +·418; D = +·851, E = +·525; G = −·220, H = +·355, K = −·908.

The *depth* of focus 0·010 used on previous days with this epicentre is retained.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	+0·3	0·3	334	0 19	+10	—	—	0·6	0·7
Zi-ka-wei	Z.	0·0	6·5	358	e 1 40	+ 1	3 20	+23	—	5·1
Hong Kong		0·0	7·2	252	1 47?	− 2	3 59	+44	4·4	5·4
Manila		−0·1	10·1	184	e 2 28	− 2	i 5 58	+89	i 7·8	9·8
Phu-Lien		−0·2	14·4	257	e 3 27	− 2	e 6 30	+17	7·3	—
Kobe		−0·2	15·3	46	e 3 47?	+ 7	—	—	—	—
Irkutsk		−0·7	30·6	339	—	—	—	—	e 16·9	—
Andijan		−0·9	43·8	305	e 8 12	− 5	—	—	—	—
Bombay		−0·9	45·5	275	13 16	?	21 6	?	29·6	32·8
Tashkent		−0·9	46·2	307	i 8 35	0	e 15 16	− 3	22·8	31·0
Ekaterinburg		−1·1	53·8	325	10 29	+65	17 16	+24	21·5	34·6
Pulkovo		−1·3	69·5	329	11 10	+ 5	—	—	35·8	44·7
Helsingfors		−1·3	71·9	330	—	—	—	—	e 36·8	—
Konigsberg		−1·3	76·0	325	—	—	—	—	e 47·8	49·8
Upsala	N.	−1·3	78·4	331	—	—	—	—	e 41·8	—
Copenhagen		−1·3	79·8	329	—	—	—	—	42·8	—
Scoresby Sund		−1·3	81·4	350	—	—	—	—	42·8	—
Hamburg		−1·3	82·2	327	—	—	—	—	e 42·8	52·8
Cheb		−1·4	82·6	323	—	—	—	—	e 47·8	54·8
Gottingen		−1·4	83·2	325	—	—	—	—	e 44·3	53·6
De Bilt		−1·4	85·4	327	12 36	− 6	e 23 5	− 3	e 41·8	54·9
Strasbourg		−1·4	86·0	324	—	—	—	—	e 38·8	—
Uccle		−1·4	86·5	326	—	—	e 22 23	[−43]	e 44·8	—
Rocca di Papa		−1·4	86·7	316	—	—	—	—	e 50·0	61·4
Piacenza		−1·4	86·8	320	—	—	—	—	—	58·4
Edinburgh		−1·4	86·8	333	—	—	—	—	e 47·8	—
Stonyhurst		−1·4	87·9	330	—	—	—	—	e 48·8	57·3
Kew		−1·4	88·4	329	—	—	—	—	e 47·8	—
Oxford		−1·4	88·7	329	—	—	—	—	e 46·8	57·5
Paris		−1·4	88·7	325	—	—	—	—	e 45·8	58·8
Tortosa	N.	−1·4	94·7	320	—	—	—	—	e 52·8	62·2
Granada		−1·5	99·6	320	—	—	—	—	e 54·8	64·8
Ottawa		−1·5	108·2	13	—	—	—	—	e 57·8	—
Toronto		−1·5	109·0	16	—	—	—	—	—	70·8
Georgetown	Z.	—	114·0	16	—	—	—	—	e 54·6	—

Additional readings: Zi-ka-wei eZ = +2m.22s., 1Z = +2m.47s., +4m.2s., and +4m.28s. Hong Kong e = +3m.37s. Manila SR_1N = +6m.32s. Tashkent e = +10m.21s. = PR_1 − 4s. and +18m.20s. = SR_1 − 16s. Gottingen eN = +45m.17s., eE = +53m.17s. De Bilt ePR_1Z = +15m.57s., MN2 = +56·2m. Paris L = +52·8m.

Aug. 29d. Readings also at 0h. (Ekaterinburg, Nagoya, near Akita, and Mizusawa), 1h. (De Bilt, Uccle, Irkutsk, Pulkovo, Copenhagen, Kucino, and La Paz), 5h. (Andijan, Christchurch, Wellington, Apia (2), Suva, and Batavia), 6h. (Suva and Scoresby Sund), 7h. (De Bilt, Zagreb, and Suva), 9h. (Mizusawa and Wellington), 10h. (Apia), 14h. (Lick), 15h. (Mizusawa), 16h. (Lick (2)), 18h. (Apia, Scoresby Sund, and Lick), 19h. (Taihoku and near Wellington), 22h. (Rocca di Papa), 23h. (Copenhagen, Scoresby Sund, De Bilt, Uccle, Strasbourg, and near Santiago).

Aug. 30d. Readings at 1h. (near Taihoku), 2h. (near Trenta), 4h. (Bombay), 5h. (De Bilt, Copenhagen, and Phu-Lien), 7h. (Adelaide, Melbourne, Riverview, Christchurch, Victoria, La Paz, Tashkent, Ekaterinburg, Scoresby Sund, Taihoku (2), and near Trenta (2)), 8h. (De Bilt, Paris, Georgetown, Ottawa, and Toronto), 11h. and 15h. (Taihoku), 16h. (near Andijan), 17h. and 20h. (2) (Taihoku), 21h. (Piacenza), 22h. (Taihoku), 23h. (Granada and Taihoku).

Aug. 31d. 3h. 3m. 9s. (I) } Epicentre 34°·0N. 131°·0E.
3h. 7m. 36s. (II) } (as on 1926 April 6d.).

$A = -\cdot544$, $B = +\cdot626$, $C = +\cdot559$; $D = +\cdot755$, $E = +\cdot656$; $G = -\cdot367$, $H = +\cdot422$, $K = -\cdot829$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Hukuoka	0·6	229	0 7	− 2	0 20	+ 3	—	0·4
II		0·6	229	0 7	− 2	0 21	+ 4	—	0·4
I	Matuyama	1·5	97	e 0 16	− 7	—	—	—	0·6
II		1·5	97	i 0 15	− 8	—	—	—	0·6
I	Nagasaki	1·6	216	0 23	− 1	0 48	+ 3	—	—
II		1·6	216	0 28	+ 4	0 49	+ 5	—	—
I	Koti	2·2	102	—	—	e 0 55	− 5	—	—
II		2·2	102	—	—	e 0 14	−46	—	—
II	Sumoto	3·3	83	e 1 20	?S	(e 1 20)	−11	e 1·4	1·5
II	Kobe E.	3·5	83	—	—	e 1 37	0	—	—
II	Toyooka	3·5	62	e 0 47	− 8	(i 31)	− 6	1·5	1·6

No additional readings.

Aug. 31d. 19h. 16m. 26s. Epicentre 11°·5S. 14°·7W. (as on 1928 April 3d.).

$A = +\cdot948$, $B = -\cdot249$, $C = -\cdot199$; $D = -\cdot254$, $E = -\cdot967$; $G = -\cdot193$, $H = +\cdot051$, $K = -\cdot981$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Malaga		49·2	11	—	—	18 46	?	21·5	—
Sucre		49·2	256	—	—	—	—	23·6	27·9
Granada		49·8	11	i 15 45	?S	(i 15 45)	−31	e 21·6	28·6
Algiers		51·1	20	—	—	—	—	25·6	—
Alicante		51·7	15	—	—	—	—	e 20·5	—
La Paz		52·0	260	9 35	+15	—	—	24·6	29·0
Toledo	N.W.	52·3	11	—	—	—	—	e 19·6	—
Tortosa	N.	54·2	15	—	—	—	—	e 19·6	31·4
Rocca di Papa		58·9	25	—	—	(e 18 8)	− 2	i 30·2	31·2
Moncalieri		60·0	19	—	—	—	—	e 29·1	—
Piacenza		60·7	20	—	—	—	—	e 29·6	—
Paris		62·2	13	—	—	—	—	e 31·6	33·6
Strasbourg		63·3	17	—	—	—	—	e 29·6	—
Kew		64·2	10	—	—	—	—	e 28·6	—
Uccle		64·5	14	—	—	—	—	e 29·6	—
Feldberg	N.	64·9	17	—	—	e 19 15	− 9	—	33·6
De Bilt		65·8	14	—	—	e 19 37	+ 2	e 29·6	33·3
Oheb		66·0	19	—	—	—	—	e 33·6	—
Hamburg		68·4	16	—	—	—	—	e 24·6	35·6
Copenhagen		70·9	16	—	—	20 34	− 3	31·6	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Georgetown	z.	76·8	316	—	—	e 30 52	?SR_2	e 37·8	—
Ottawa		79·0	321	—	—	—	—	e 33·6	—
Pulkovo		79·8	21	e 13 17	+59	e 22 7	−14	—	48·4
Scoresby Sund		82·2	357	—	—	23 16	+28	37·6	—
Ekaterinburg		91·8	32	—	—	e 23 48	[+ 9]	e 41·9	51·8
Tashkent		93·1	49	—	—	e 24 26	? Σ	e 48·0	58·4
Irkutsk		116·6	36	—	—	—	—	e 91·7	—

Additional readings and note : Granada S = +·17m.44s. Rocca di Papa S is given as eL. Paris MN = +36·6m. De Bilt eSR_1 = +23m.53s., MNZ = +40·3m. Ekaterinburg e = +30m.21s. = SR_1 − 33s.

Aug. 31d. Readings also at 0h. (Mizusawa and near Wellington), 11h. (near Apia), 12h. (Bombay), 15h. (Matuyama), 16h. (La Paz), 17h. (Mizusawa and near La Paz), 19h. (Bombay), 20h. (Tashkent), 21h. (Ekaterinburg, Irkutsk, and Andijan), 22h. (near Tananarive).

Sept. 1d. 3h. 18m. 8s. Epicentre 8°·0S. 122°·0E. (as on 1928 Nov. 28d.).

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

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Amboina	7·5	55	i 1 53	− 1	i 2 34	−50	—	—
Batavia	15·2	276	e 5 12	?	—	—	i 7·0	—
Manila	22·6	357	e 5 13	+ 1	—	—	—	—
Ekaterinburg	81·8	331	e 12 31	+ 2	22 41	− 3	33·9	—
Sucre	152·1	165	19 57	[− 2]	—	—	—	—
La Paz	153·5	158	19 55	[− 5]	i 26 26	[−17]	—	—

No additional readings.

Sept. 1d. 9h. 42m. 18s. Epicentre 45°·1N. 147°·2E. (as on 1926 Feb. 6d.).

A = −·593, B = +·382, C = +·708 ; D = +·542, E = +·841 ; G = −·595, H = +·384, K = −·706.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mizusawa	E.	7·5	219	1 58	+ 4	3 31	+ 7	—	—
Akita		7·5	227	e 3 41	?S	(e 3 41)	+17	4·3	—
Ekaterinburg		51·9	316	e 9 13	− 6	e 17 15	?PS	e 23·7	36·3
Kucino		63·0	323	—	—	—	—	e 36·1	40·5
Pulkovo		63·2	330	—	—	—	—	34·7	41·8
Copenhagen		72·2	335	—	—	—	—	35·7	—
De Bilt		77·5	337	e 11 54	−10	—	—	e 44·7	48·7
Uccle		78·8	337	—	—	—	—	e 43·7	—
Strasbourg		79·9	334	—	—	—	—	e 43·7	—
Paris		81·1	337	—	—	—	—	e 46·7	—
Granada		93·7	337	—	—	—	—	e 51·7	54·7

Additional readings : Mizusawa SN = +3m.32s. De Bilt MZ = +48·8m.

Sept. 1d. Readings also at 0h. and 1h. (Akita and Mizusawa), 3h. (near Sucre and near Taihoku), 4h. and 7h. (Taihoku), 8h. (Mizusawa and Sitka), 9h. (near Zagreb), 11h. (Taihoku), 12h. (Suva and near Wellington), 14h. (Victoria and near Yalta), 15h. (Apia, Suva, and Wellington ; these and most of the 16h. and 17h. readings for this day belong to a shock in S.W. Pacific, the readings within 90° of the epicentral district are not adequate to allow of a formal determination). 16h. (Christchurch, Adelaide, Melbourne, Riverview, Perth, Honolulu T.H., Taihoku, Zi-ka-wei, Bombay, Tashkent, Irkutsk, Ekaterinburg, Simferopol, Theodosia, Yalta, Pulkovo, Copenhagen, Scoresby Sund, Kew, De Bilt, Strasbourg, Paris, Toledo, Granada, Georgetown, Ottawa, Toronto, Victoria, La Paz, and Sucre), 17h. (Cheb, Uccle, Oxford, Kew, Ivigtut, Piacenza, Trenta, Rocca di Papa, Alicante, Granada, Toledo, and San Fernando), 20h. (near Lick), 21h. (Bergen, near Sumoto, and near Taihoku), 22h. (near Mizusawa).

Sept. 2d. 5h. 51m. 57s. Epicentre 46°·3N. 14°·0E. (given by De Bilt).

A = +·670, B = +·167, C = +·723; D = +·242, E = −·970; G = +·701, H = +·175, K = −·691.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Laibach	E.	0·4	126	e −0 18	−24	i 0 4	− 7	—	0·3
Treviso		1·4	243	i 0 28	+ 7	i 0 50	+11	—	1·4
Venice		1·4	232	i 0 35	+14	0 57	+18	—	2·0
Zagreb		1·5	109	e 0 22	− 1	i 0 41	− 1	—	0·7
Padova		1·8	239	e 0 38	+10	1 6	+15	—	—
Innsbruck		2·0	299	i 0 41	+10	1 7	+12	—	—
Vienna		2·5	39	e 0 35	− 4	1 4	− 5	—	1·4
Chur		3·1	280	e 0 52	+ 3	i 1 50	+24	—	—
Florence	Z.	3·2	219	—	—	—	—	e 1·6	3·1
Ravensburg		3·3	299	e 0 56	+ 4	i 1 32	+ 1	—	1·8
Piacenza		3·3	249	—	—	e 1 31	0	—	3·4
Cheb		3·9	345	e 1 9	+ 8	e 1 57	+10	—	2·1
Zurich		3·9	288	i 1 0	− 1	i 1 45	− 2	—	—
Hohenheim		4·0	311	e 1 5	+ 3	1 48	− 2	—	2·2
Karlsruhe		4·6	309	1 28	+17	2 21	+15	e 2·4	—
Moncalieri		4·6	256	e 0 53	−18	—	—	—	—
Rocca di Papa		4·7	192	e 0 20	−53	2 46	?L	(2·8)	3·0
Jena	E.	4·8	341	i 1 12	− 2	i 2 17	+ 6	e 2·4	2·6
Strasbourg		4·8	301	1 33	+19	2 36	?L	(2·6)	—
Besançon		5·5	282	e 1 44	+19	—	—	—	—
Hamburg		7·7	342	—	—	—	—	e 4·0	5·8
Uccle		7·8	309	—	—	e 3 3?	−28	—	—
Paris		8·1	293	e 2 3?	0	—	—	—	—
De Bilt		8·2	318	—	—	—	—	e 4·0	—
Copenhagen		9·4	354	—	—	4 3?	−10	—	—

Additional readings: Zagreb iP = +24s., i = +28s. Vienna PR_1 = +39s., P_2S = +52s., PS = +56s., PS_2 = +1m.9s., SR_1 = +1m.12s., MN = +1·5m. Florence S = +2m.11s. Ravensburg P* = +1m.2s., P = +1m.7s., S* = +1m.41s., iS = +1m.48s. Cheb e = +1m.36s. Hohenheim P* = +1m.13s., P = +1m.19s., i = +1m.34s., iE = +1m.56s., S* = +2m.2s., iS = +2m.8s. Jena iPE = +1m.16s., iE = +1m.23s., i = +2m.3s., iE = +2m.6s. Strasbourg SR_1? = +2m.42s., SR_2? = +3m.0s.

Sept. 2d. 11h. 12m. 30s. Epicentre 8°·3N. 126°·9E. (as on 1929 July 9d.).

A = −·594, B = +·791, C = +·144; D = +·800, E = +·600; G = −·087, H = +·115, K = −·990.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		8·6	318	2 24	+14	i 3 57	+ 4	—	—
Amboina		12·0	174	3 31	+32	6 7	+48	(6·1)	—
Taihoku	E.	17·5	344	e 3 18	−53	(6 18)	−71	6·3	—
Hong Kong		18·6	320	4 21	− 3	7 53	0	—	13·7
Phu-Lien		23·2	305	e 5 14	− 5	e 9 26	− 3	11·0	16·8
Zi-ka-wei	Z.	23·5	348	i 5 18	− 5	i 9 38	+ 3	14·3	23·3
Nagasaki		24·6	6	5 30	− 4	9 48	− 7	—	—
Batavia		24·7	235	i 5 34	− 1	—	—	16·1	—
Hukuoka		25·5	7	5 33	−10	10 7	− 6	—	18·1
Koti		26·0	13	5 40	− 8	10 5	−17	—	—
Sumoto		27·1	15	e 5 48	−11	e 10 22	−21	—	17·0
Kobe		27·4	15	5 55	− 7	e 10 39	− 9	e 14·8	23·0
Osaka		27·6	16	6 14	+10	(10 35)	−17	10·6	16·8
Toyooka	N.	28·2	14	e 6 3	− 7	—	—	e 16·5	—
Nagoya		28·4	18	e 6 17	+ 5	—	—	—	—
Akita		33·6	20	e 7 14	+13	e 15 14	?	—	—
Calcutta	E.	39·6	296	7 47	− 4	13 27	−33	22·9	—
	N.	39·6	296	7 55	+ 4	13 29	−31	—	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Perth		41·6	194	—	—	i 14 10	−19	17·1	—
Adelaide		44·6	166	e 8 37	+ 7	i 14 59	−11	20·2	26·5
Colombo		46·6	272	8 39	− 5	15 19	−17	27·8	33·8
Irkutsk		47·7	342	8 51	− 1	15 44	− 6	22·0	32·0
Hyderabad		48·0	287	8 50	− 4	15 48	− 6	25·5	33·6
Riverview		48·0	152	—	—	i 15 49	− 5	—	31·4
Sydney		48·0	152	—	—	15 36	−18	19·2	19·8
Melbourne		49·1	161	e 8 46	−15	i 16 5	− 2	—	27·0
Agra	E.	49·8	300	e 8 0	−66	15 41	−35	e 27·1	34·5
Dehra Dun		50·6	305	16 10	?S	(16 10)	−16	30·5	37·5
Andijan		57·9	314	e 10 15	+17	e 17 52	− 6	—	—
Tashkent		60·5	314	10 19	+ 3	i 18 35	+ 5	e 31·5	35·6
Wellington	E.	66·2	142	—	—	20 52	[+10]	33·5	—
Ekaterinburg		70·2	329	11 21	+ 3	i 20 30	+ 2	28·5	39·5
Honolulu T.H.	E.	73·4	70	e 11 15	−23	e 21 18	+11	e 33·5	35·5
Kucino		82·6	326	e 12 44	+10	22 52	− 1	34·5	47·6
Pulkovo		86·1	330	12 56	+ 2	i 23 20	−11	37·5	51·9
Ksara		86·2	304	e 13 0	+ 6	23 27	− 5	43·5	—
Sitka	E.	87·2	33	e 23 21	?[S]	(e 23 21)	[+11]	—	—
Helsingfors		88·6	331	e 13 1	− 7	23 47	−12	e 40·2	—
Upsala	N.	92·3	332	—	—	e 24 15	−23	e 49·5	51·4
Konigsberg		92·5	326	—	—	e 24 27	−13	e 49·5	58·5
Copenhagen		96·5	330	—	—	24 18	[+13]	47·5	—
Victoria	E.	96·6	39	14 12?	+20	24 20	[+14]	45·4	57·0
Potsdam		97·5	326	—	—	—	—	—	53·5
Zagreb		98·2	319	e 13 56	− 5	—	—	e 53·5	—
Scoresby Sund		98·4	350	—	—	24 30	[+15]	—	—
Hamburg		98·6	329	—	—	e 22 30?	?PR_2	e 51·5	62·5
Cheb		98·8	324	—	—	e 21 30?	?	e 53·5	63·5
Gottingen		99·5	326	—	—	—	—	48·5	—
Feldberg	N.	101·1	326	—	—	e 22 52	?PR_2	—	59·2
De Bilt		101·9	328	—	—	e 24 51	[+18]	e 52·5	66·0
Rocca di Papa		101·9	317	e 17 48	?PR_1	—	—	e 65·1	71·8
Florence	Z.	102·1	319	e 14 0	−21	e 18 28	?PR_1	62·5	68·5
Strasbourg		102·2	325	e 14 11	−10	24 45	[+10]	47·5	—
Piacenza		102·6	320	—	—	24 46	[+10]	55·5	67·0
Uccle		103·0	327	—	—	e 25 0	[+22]	e 50·5	57·6
Edinburgh		103·8	334	—	—	—	—	e 59·5	—
Moncalieri		103·9	320	e 17 40	[−21]	e 24 40	[− 2]	—	63·5
		103·9	320	e 17 41	[−20]	e 24 55	[+13]	44·5	—
Stonyhurst		104·7	332	—	—	—	—	e 56·5	—
Paris		105·0	325	e 18 30?	?PR_1	e 26 12	−30	56·5	61·5
Kew		105·1	330	—	—	e 25 0	[+12]	55·5	—
Oxford		105·4	330	—	—	e 25 1	[+12]	e 57·3	67·7
Tortosa	N.	110·5	320	e 26 30?	?S	(e 26 30)	−63	e 50·5	60·6
Alicante		112·5	318	—	—	—	—	e 51·4	—
Toledo		113·9	320	e 21 59	?	—	—	—	64·3
Almeria		114·5	317	e 19 56	?PR_1	e 29 28	?PS	e 73·6	77·1
Granada		115·2	318	e 13 42	?	—	—	e 59·5	—
Ottawa		122·6	17	—	—	e 26 6	[+14]	e 63·5	—
Toronto		122·9	21	—	—	26 9	[+16]	—	—
Georgetown	Z.	127·8	23	i 20 25	?	—	—	e 60·5	86·7

Additional readings: Phu-Lien MN = +15·5m. Zi-ka-wei iZ = +9m.56s. and +18m.14s. Batavia iP = +5m.37s., i = +5m.48s. and +7m.8s. Sumoto MNZ = +16·6m. Kobe MNW = +21·9m. Osaka MN = +18·9m. Adelaide iSR_1 = +18m.20s. $-SR_1$ − 2s., MN = +29·2m. Hyderabad MN = +33·7m. Riverview iSR_1 = +18m.47s., +19m.18s., and +19m.31s., MN = +28·0m. Melbourne i = +11m.30s., e = +19m.40s. $-SR_1$ − 9s. Agra eN = +9m.25s. Wellington iSN = +20m.55s. Honolulu T.H., eN = +21m.30s., +35m.52s., and +43m.6s., MN = +44·4m. Pulkovo S_cP_cS = +23m.13s. Helsingfors S_cP_cS = +23m.34s., iSN = +23m.46s., $S_cP_cP_cSE$ = +23m.56s., S_cS = +24m.10s.,

Continued on next page.

PSE = +24m.44s., PPS = +25m.10s., SR_1E = +29m.41s. Upsala ME = +59·0m. Konigsberg eN = +25m.30s.? = PS − 7s., +28m.6s., and +29m.33s., MN = +51·5m. Copenhagen +24m.54s. = Σ+9s. Zagreb eNE = +18m.2s. = PR_1 +0s., and +29m.58s. Scoresby Sund +25m.20s. = S − 20s. De Bilt ePR_1Z = +18m.30s., MN = +63·6m. Rocca di Papa e = +19m.10s., i = +19m.39s. Strasbourg ePR_1 = +18m.47s., $S_cP_cP_cS$ = +25m.49s., PPS = +29m.23s. Uccle i = +25m.55s. = Σ+26s. Paris MN = +58·5m. Kew eZ = +22m.30s.? eEN = +26m.6s. = Σ+24s., LZ = +63·5m. Oxford i = +25m.59s. = Σ+15s. Ottawa e = +30m.36s. and +37m.30s.? = SR_1 +10s. Georgetown iZ = +22m.39s. and +33m.57s.

Sept. 2d. 20h. 16m. 8s. Epicentre 33°·7N. 135°·2E. (as on 1929 June 17d.).

A = −·590, B = +·586, C = +·555.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Sumoto	0·7	338	i 0 12	+ 1	0 21	+ 1	—	0·4
Kobe	1·0	359	0 15	0	—	—	0·5	0·5
Osaka	1·0	12	0 16	+ 1	—	—	0·5	1·0
Muroto	1·0	242	i 0 15	0	i 0 26	− 2	—	—
Koti	1·4	264	—	—	0 36	− 3	—	—

Osaka gives also MN = +0·9m., MZ = +1·4m.

Sept. 2d. Readings also at 0h. (Tashkent), 1h. (near Andijan), 2h. (Ekaterinburg, Andijan, Tashkent, Ksara, and Kucino), 4h. (Suva and near Tacubaya), 5h. (Melbourne, Christchurch, and Wellington), 7h. (Simferopol, near Yalta, and near Medan), 9h. (Andijan and Taihoku), 15h. (Nagoya).

Sept. 3d. 12h. 7m. 32s. Epicentre **26°·4N. 62°·3E.**

A = +·416, B = +·793, C = +·445; D = +·885, E = −·465;
G = +·207, H = +·394, K = −·896.

A depth of focus 0·020 has been assumed.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Bombay		−0·3	12·3	125	3 1	+ 2	6 23	+64	8·1	9·5
Agra	N.	−0·4	14·1	83	3 5	−17	5 54	− 7	7·6	7·8
Dehra Dun		−0·5	14·4	70	3 38	+13	6 8	+ 2	8·5	10·5
Tashkent		−0·6	15·9	20	i 3 43	0	i 6 39	0	—	9·7
Andijan		−0·6	16·1	29	e 3 56	+10	—	—	e 9·0	11·4
Hyderabad		−0·6	17·4	117	4 11	+ 9	7 33	+20	9·9	12·6
Kodaikanal		−0·9	21·6	136	2 40	?	—	—	9·2	11·3
Calcutta	E.	−1·0	24·0	94	5 9	− 8	9 40	+15	—	—
	N.	−1·0	24·0	94	5 18	+ 1	9 42	+17	—	—
Ksara		−1·0	24·0	295	5 16	− 1	i 9 31	+ 6	—	—
Colombo		−1·1	25·7	136	3 38	−116	(10 10)	+15	10·2	10·6
Helwan		−1·2	27·5	284	5 45	− 6	i 10 24	− 4	—	18·9
Theodosia		−1·3	28·5	318	5 58	− 2	e 10 36	− 9	—	—
Yalta		−1·3	28·9	316	6 1	− 3	10 44	− 8	—	—
Simferopol		−1·3	29·2	317	6 3	− 4	10 47	−10	—	—
Ekaterinburg		−1·4	30·4	358	i 6 13	− 5	i 11 11	− 6	12·5	19·0
Entebbe		−1·7	39·0	233	7 44	+12	—	—	—	25·4
Pulkovo		−1·7	39·9	336	7 34	− 6	13 30	−11	18·5	24·7
Trenta		−1·7	40·2	301	i 7 38	− 4	e 13 28	−17	—	—
Irkutsk		−1·7	40·6	40	i 7 47	+ 2	i 13 55	+ 4	18·2	—
Phu-Lien		−1·7	40·8	89	e 7 48	+ 1	—	—	16·5	—
Catania		−1·7	41·1	299	e 7 49	− 1	—	—	—	—
Zagreb		−1·8	41·4	310	e 7 48	− 3	e 13 51	− 9	e 26·5	—
Konigsberg		−1·8	41·5	325	e 7 52	0	e 13 57	− 5	e 20·1	26·5

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.
Vienna		−1·8	41·7	317	i 7 50	− 4	17 47	+42	e 27·5	37·5
Helsingfors		−1·8	42·2	334	7 56	− 2	14 7	− 6	e 19·0	—
Rocca di Papa		−1·8	43·2	304	e 7 52	−14	14 10	−17	28·5	—
Padova		−1·9	44·1	310	e 7 11	−61	e 14 40	+ 2	27·5	—
Florence		−1·9	44·4	308	e 8 3	−12	14 46	+ 4	26·0	27·5
Cheb		−1·9	44·6	318	e 13 28?	?	—	—	—	—
Upsala		−1·9	45·2	331	e 8 15	− 5	e 14 42	−10	—	26·8
Jena	E.	−1·9	45·3	318	e 8 18	− 3	e 14 55	+ 1	e 24·5	31·0
	N.	−1·9	45·3	318	e 8 24	+ 3	e 14 56	+ 2	e 22·5	30·0
Chur		−1·9	46·0	311	e 8 21	− 6	e 14 54	− 9	—	—
Ravensburg		−1·9	46·0	314	e 8 28?	+ 1	e 14 56	− 7	e 28·5	—
Hohenheim	E.	−2·0	46·4	315	e 8 28?	− 1	—	—	—	—
Gottingen		−2·0	46·5	319	7 10	−80	—	—	—	—
Zurich		−2·0	46·7	311	e 8 30	− 1	e 15 10	− 1	—	—
Hamburg		−2·0	46·9	320	e 8 29	− 3	i 15 17	+ 3	e 24·0	32·5
Moncalieri		−2·0	47·0	309	8 25	− 8	15 5	−10	17·8	—
		−2·0	47·0	309	e 8 39	+ 6	e 15 8	− 7	19·5	—
Hong Kong		−2·0	47·1	85	8 26	− 8	15 3	−13	e 23·5	32·0
Feldberg	N.	−2·0	47·2	316	8 27	− 7	e 15 9	− 9	e 20·4	33·0
Strasbourg		−2·0	47·4	315	8 29	− 7	15 22	+ 2	21·5	—
Tananarive		−2·0	47·6	199	—	—	15 24	+ 2	—	20·5
Neuchatel		−2·0	47·8	311	e 8 35	− 4	e 15 24	− 1	—	—
Besançon		−2·0	48·4	311	8 41	− 2	—	—	—	—
De Bilt		−2·1	49·5	319	8 55	+ 5	15 54	+ 8	e 27·5	28·5
Uccle		−2·1	49·8	317	8 54	+ 2	i 15 58	+ 8	e 22·5	—
Algiers		−2·1	50·7	298	9 2	+ 4	16 9	+ 8	—	—
Paris		−2·1	50·8	314	i 9 1	+ 3	e 16 11	+ 9	26·5	32·5
Zi-ka-wei	Z.	−2·1	51·0	69	i 9 10	+11	20 50	?SR$_2$	31·1	34·1
Bergen		−2·1	51·1	330	i 8 59	− 1	—	—	—	32·5
Tortosa	N.	−2·2	52·3	305	9 16	+ 8	16 31	+11	—	—
Kew		−2·2	52·8	317	i 9 17	+ 6	i 16 37	+11	28·5	—
Alicante		−2·2	53·3	301	e 9 34	+20	e 17 13	+41	—	—
Oxford		−2·2	53·4	317	i 9 18	+ 4	i 16 43	+ 9	e 30·2	36·4
Stonyhurst		−2·2	54·2	319	—	—	i 16 49	+ 5	—	—
Dyce		−2·3	54·4	324	—	—	i 17 23	?PS	29·0	36·0
Edinburgh		−2·3	54·8	322	—	—	e 17 4	+14	30·5	40·5
Almeria		−2·3	55·0	299	9 33	+ 9	e 17 8	+16	—	—
Granada		−2·3	55·9	299	i 9 43	+13	i 17 17	+13	e 30·5	35·5
Toledo		−2·3	55·9	302	e 9 36	+ 6	e 17 17	+13	e 24·6	—
Malaga		−2·3	56·7	299	e 9 32	− 3	17 28	+14	20·5	—
San Fernando	E.	−2·4	58·1	299	—	—	—	—	—	37·5
Scoresby Sund		−2·5	63·3	339	10 34	+16	19 2	+29	34·5	—
Ottawa	N.	−2·9	98·6	331	—	—	—	—	e 49·5	—
Victoria	N.	−3·0	105·0	5	—	—	—	—	60·9	66·8
La Paz		—	133·1	272	e 19 12	[−13]	—	—	—	—

Additional readings: Hyderabad MN = +11·9m. Ksara iSN = +9m.33s. Colombo S = +5m.58s. Zagreb eNE = +10m.14s., eLNW = +23·5m. Konigsberg eZ = +9m.11s., ePR$_1$E = +9m.22s., ePR$_1$É = +10m.2s., eE = +14m.21s., eSR$_1$E = +17m.25s., eN = +17m.28s., eSR$_2$ = +18m.18s., MN = +28·5m. Vienna iN = +9m.50s., PPS = +18m.50s., SR$_1$? = +22m.8s., SR$_2$? = +25m.55s. Helsingfors e = +8m.8s., PR$_1$ = +9m.50s., e = +14m.22s., SR$_1$ = +16m.46s., SR$_2$ = +17m.31s. Rocca di Papa i = +8m.1s. Jena iPE = +8m.20s. Ravensburg e = +18m.56s. Hong Kong MN = +27·0m. Feldberg iN = +19m.22s. Tananarive EN = +15m.42s., N = +18m.16s., E = +19m.10s., +19m.28s., and +19m.43s. De Bilt eSR$_1$ = +19m.35s., eLN = +23·5m., MN = +32·1m. Kew P$_c$PEZ = +9m.31s., PSEN = +17m.1s., LZ = +30·5m. Malaga P = +9m.44s. San Fernando MN = +36·0m. Scoresby Sund +26m.4s.

Sept. 3d. 20h. 39m. 0s. Epicentre 31°·0S. 71°·0W. (as on 1929 July 15d.).

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

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Santiago	2·5	171	i 0 37	− 2	1 11	+ 2	1·4	—
La Plata	11·7	113	2 38	−17	e 5 36	+24	6·1	—
Sucre	13·0	25	e 3 58	+45	6 1	+17	7·1	8·0
La Paz	14·7	11	e 3 32	− 3	6 0	−25	7·2	8·4
Rio de Janeiro	26·0	79	e 11 0	?S	(e 11 0)	+38	15·7	17·8
Lick	83·1	323	—	—	—	—	e 40·0	—
Toledo	94·1	45	e 5 4	?	—	—	—	—
Paris	103·1	41	—	—	—	—	59·0	—
De Bilt	106·3	40	e 14 0?	−41	—	—	—	—
Copenhagen	111·7	37	—	—	—	—	69·0	—

Rio de Janeiro gives also SN = +14m.38s., SE = +14m.52s.

Sept. 3d. Readings also at 1h. (Ksara), 4h. (Andijan, Ekaterinburg, Irkutsk, and Tashkent), 6h. (Lick), 11h. (La Paz and La Plata), 12h. (near Amboina), 15h. (Tortosa), 16h. (near Manila).

Sept. 4d. 22h. 24m. 42s. Epicentre 43°·0N. 67°·0E. (deduced by comparison with the epicentre 44°·3N. 67°·3E. of 1929 June 5d.).

$A = +·286$, $B = +·673$, $C = +·682$; $D = +·921$, $E = -·391$; $G = +·266$, $H = +·628$, $K = -·731$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Tashkent	2·5	135	i 1 57	+78	—	—	3·3	4·1
Andijan	4·8	124	e 1 29	+15	i 2 21	+10	2·6	3·3
Ekaterinburg	14·4	346	3 36	+ 4	e 6 8	−10	6·8	9·3
Theodosia	22·7	286	e 5 19	+ 6	—	—	—	—
Simferopol	23·6	286	e 5 24	0	9 40	+ 4	—	—
Yalta	23·6	285	e 5 27	+ 3	—	—	—	—
Bombay	24·6	167	5 33	− 1	9 52	− 3	12·5	16·3
Ksara N.	25·8	260	e 5 50	+ 4	e 10 49	+31	16·3	—
Irkutsk	26·4	57	—	—	e 10 50	+20	15·1	—
Hyderabad	27·3	155	10 32	?S	(10 32)	−14	—	17·1
Pulkovo	27·8	320	6 3	− 3	10 45	−10	14·3	17·4
Helsingfors	30·5	320	e 7 33	+60	e 12 17	+34	15·7	—
Konigsberg	32·0	310	—	—	13 0	+52	e 18·3	23·3
Upsala N.	34·0	319	—	—	—	—	e 14·3	—
Vienna Z.	35·1	299	—	—	—	—	e 23·3	—
Zagreb N.E.	35·9	294	e 7 9	−12	—	—	e 24·2	—
Copenhagen	36·6	311	—	—	11 18?	−120	—	—
Cheb	37·3	301	—	—	—	—	e 20·3	24·3
Hamburg	38·3	308	—	—	e 15 18?	?	e 20·2	28·5
Gottingen	38·6	306	—	—	—	—	—	21·3
Rocca di Papa	39·4	289	i 7 46	− 4	—	—	e 22·3	30·5
Hohenheim N.	39·6	300	—	—	—	—	e 17·3	—
Ravensburg	39·6	299	—	—	—	—	e 18·3	—
Chur	39·9	297	e 7 48	− 6	—	—	—	—
Zurich	40·4	298	e 7 53	− 5	—	—	—	—
Strasbourg	40·6	300	e 9 18?	+78	—	—	e 25·3	—
De Bilt	41·4	306	e 9 18?	+72	e 14 28	+ 1	e 22·3	28·6
Moncalieri	41·7	295	—	—	e 16 18?	?	e 25·5	—
Uccle	42·2	305	—	—	e 17 18?	?SR_1	e 24·3	—
Paris	43·9	302	—	—	—	—	e 19·7	29·3
Kew	44·8	306	—	—	e 18 36	?SR_1	26·3	—
Oxford	45·3	306	—	—	e 18 44	?SR_1	e 25·0	31·3
Edinburgh	45·3	314	—	—	e 19 18?	?SR_2	—	30·3
Stonyhurst	45·4	310	—	—	e 17 18?	?	—	—
Scoresby Sund	49·7	335	—	—	20 18?	?SR_1	e 29·3	—
Granada	52·7	290	—	—	(e 17 18?)	+26	e 17·3	36·3
Ottawa	85·6	335	—	—	—	—	38·3	—

For Notes see next page.

NOTES TO SEPT. 4d. 22h. 24m. 42s.

Additional readings: Irkutsk e = +11m.28s. = SR_1 − 10s., and +14m.22s. Hyderabad MN = +17·7m. Konigsberg N = +13m.30s. and +17m.45s., E = +15m.42s. and +17m.42s., MN = +21·3m. Zagreb eNE = +8m.34s. Cheb eL = +23·3m. Hamburg MN = +28·0m. De Bilt eSR_1 = +17m.21s., MZ = +29·4m. Paris L = +27·3m. Kew LZ = +28·3m. Ottawa eE = +31m.18s.?, eN = +35m.18s.?

Sept. 4d. Readings also at 1h. (near Nagasaki), 8h. (Suva and Wellington), 9h. (Scoresby Sund), 12h. and 13h. (Taihoku), 15h. (Taihoku and near La Paz), 18h. (La Paz), 21h. (Florissant), 23h. (Andijan).

Sept. 5d. Readings at 0h. (Andijan), 2h. (Johannesburg and near Sumoto), 6h. (Koti), 8h. (La Paz and near Taihoku), 10h. (De Bilt, Paris, Scoresby Sund, Georgetown, Ottawa, Toronto, Ann Arbor, Victoria, Florissant, near Chicago, near Chihuahua, and near Tucson), 11h. (Akita), 12h. (Sitka, Taihoku, near Matuyama, Sumoto, Koti, and Hukuoka), 14h. (De Bilt, Uccle, Paris, Kew, Strasbourg, Copenhagen, Pulkovo, Tashkent, Entebbe, and Scoresby Sund), 15h. (Cheb and Lick), 16h. (Lick), 17h. (Apia, De Bilt, Copenhagen, Pulkovo, Tashkent, Ekaterinburg, Simferopol, Yalta, and near Ksara), 19h. (Alicante, Malaga, and Toledo), 21h. (Alicante and Wellington), 22h. (Lick), 23h. (Suva, La Paz, and Sucre).

Sept. 6d. Readings at 3h. (La Paz and La Plata), 6h. (La Paz (2)), 8h. (Andijan and near Samarkand), 9h. (Alicante and Entebbe), 12h. (De Bilt, Copenhagen, Pulkovo, Kucino, Ekaterinburg, Irkutsk, near Andijan, Samarkand, near Akita, and Mizusawa), 15h. (Entebbe), 16h. (Andijan).

Sept. 7d. Readings at 2h. (near Manila), 11h. (near Nagasaki), 15h. (La Paz), 16h. (La Paz, Irkutsk, Pulkovo, Ekaterinburg, and Samarkand), 17h. (Simferopol, Theodosia, Yalta (4), Wellington, and near Almeria), 18h. (Almeria, near Ksara, and near La Paz), 19h. (Suva).

Sept. 8d. 8h. 34m. 30s. Epicentre 30°·2N. 140°·3E. (as on 1928 Nov. 1d.).

A = −·665, B = +·552, C = +·503; D = +·639, E = +·769; G = −·387, H = +·321, K = −·864.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		5·7	331	e 1 6	−22	(2 44)	+ 8	2·7	—
Osaka		6·1	317	1 32	− 1	(2 37)	− 9	2·6	3·0
Kobe		6·3	318	2 46	?S	(2 46)	− 6	—	—
Mizusawa	E.	8·9	5	2 15	0	4 0	− 1	—	—
Akita		9·5	0	e 2 19	− 4	(4 8)	− 8	4·1	—

Additional readings: Osaka MN = +3·4m. Mizusawa SN = +3m.59s.

Sept. 8d. 17h. 10m. 45s. Epicentre 34°·0N. 141°·5E. (as on 1927 July 27d.).

A = −·649, B = +·516, C = +·559; D = +·623, E = +·783;
G = −·438, H = +·348, K = −·829.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Nagoya		4·0	288	e 1 7	+ 5	—	—	—	—
Mizusawa	E.	5·1	357	1 20	+ 1	2 21	+ 1	—	—
Osaka		5·1	279	1 38	+19	—	—	2·6	3·6
Kobe		5·3	279	e 2 13	?S	(e 2 13)	−12	—	4·1
Sumoto		5·5	275	1 25	0	2 32	+ 1	—	2·8
Akita		5·8	350	e 1 36	+ 6	—	—	2·9	—
Zi-ka-wei	Z.	17·1	266	e 4 1	− 5	7 27	+ 7	—	12·3
Hong Kong		26·7	251	—	—	e 10 34	− 1	e 16·2	19·2
Irkutsk		32·2	316	e 6 17	−33	e 11 53	−18	e 16·0	21·6
Tashkent		56·0	300	—	—	—	—	29·2	41·0
Ekaterinburg		57·3	321	i 9 30	−24	e 17 50	0	28·2	—
Kucino		69·3	325	—	—	—	—	e 36·2	39·2
Pulkovo		70·6	330	—	—	—	—	39·2	—
Copenhagen		81·2	334	—	—	—	—	44·2	—
De Bilt		85·9	335	—	—	—	—	e 46·2	—
Uccle		87·2	335	—	—	—	—	e 47·2	—
Kew	Z.	88·2	339	—	—	—	—	57·2	—
La Paz		148·2	64	9 41	[−12]	—	—	—	—

Additional readings: Mizusawa SN = +2m.27s. Osaka MN = +3·5m.
Tashkent e = +20m.3s. and +27m.27s.

Sept. 8d. 22h. 54m. 16s. Epicentre 42°·0N. 36°·9E. (given by the Crimean stations).

A = +·594, B = +·446, C = +·669; D = +·600, E = −·800;
G = +·535, H = +·402, K = −·743.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Theodosia		3·2	341	—	—	—	—	1·8	—
Yalta		3·2	323	e 0 49	− 1	—	—	1·6	—
Simferopol		3·5	326	0 56	+ 1	—	—	1·8	—
Ksara		8·2	186	e 2 8	+ 4	3 21	−21	3·8	—
Pulkovo		18·2	349	—	—	e 7 44	0	11·7	—
Florence	Z.	18·8	284	—	—	—	—	e 10·7	—
Copenhagen		20·9	319	—	—	—	—	11·7	—
Ekaterinburg		21·2	38	e 4 50	− 5	e 8 58	+10	11·7	—
De Bilt		23·6	306	—	—	e 9 39	+ 3	e 14·7	—

Additional readings: Pulkovo e = +10m.22s. Ekaterinburg i = +9m.4s.,
De Bilt eZ = +9m.16s. = SR_1 − 14s., eLN = +13·7m.

Sept. 8d. Readings also at 2h. (La Paz and Nagoya), 6h. (De Bilt), 7h. (near Tacubaya), 8h. (Scoresby Sund), 10h. (Ann Arbor, Chicago, Georgetown, Toronto, Florissant, Tucson, and Victoria), 11h. (Fordham, Ottawa, Tucson (2), Scoresby Sund, and Paris), 12h. (Georgetown, Ottawa, Toronto, and near Tacubaya), 14h. (Ekaterinburg, Irkutsk, Scoresby Sund, Florissant, Fordham, Georgetown, Ottawa, Toronto, and Victoria), 15h. (Kucino, Tashkent, Georgetown, and Ottawa), 17h. (Samarkand), 19h. (Christchurch and near Wellington), 20h. (Georgetown, Ottawa, and Toronto), 21h. (Florissant), 22h. (Entebbe and Tashkent).

Sept. 9d. 3h. 28m. 15s. Epicentre 2°·4N. 98°·8E. (as on 1924 July 21d.).

A = −·153, B = +·987, C = +·042; D = +·988, E = +·153;
G = −·006, H = +·041, K = −·999.

Felt in district of Tapanoeli in the Malay Peninsula.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Medan		1·2	354	i 2 57	?	i 3 54	?	—	—
Batavia		11·8	137	e 5 5	? S	(e 5 5)	− 9	i 6·6	—
Colombo		19·4	284	4 34	0	8 19	+ 9	—	14·9
Phu-Lien		19·9	22	4 45?	+ 5	—	—	12·8	—
Hong Kong		24·9	36	10 27	?S	(10 27)	+26	e 15·6	20·3
Bombay		30·2	307	5 46	−44	11 22	−15	16·9	17·8
Zi-ka-wei	z.	35·8	35	—	—	—	—	e 16·9	25·0
Andijan		44·8	332	e 8 26	− 6	—	—	—	—
Tashkent		47·1	331	—	—	—	—	e 35·8	41·8
Irkutsk		50·1	5	e 5 31	?	(e 17 27)	+67	e 17·4	22·2
Ekaterinburg		62·3	339	i 10 35	+ 8	19 7	+15	29·8	39·0
Kucino		72·0	330	—	—	e 21 53	[+26]	e 39·2	—
Pulkovo		77·3	332	—	—	—	—	47·8	—
Copenhagen		86·0	326	—	—	—	—	55·8	—
De Bilt		90·3	322	e 11 48	?	e 24 7	−10	e 51·8	—
Uccle		90·9	321	—	—	—	—	e 55·8	—
Scoresby Sund		97·5	345	—	—	—	—	61·8	—
Ottawa	N.	132·0	354	—	—	—	—	e 86·8	—
Georgetown	z.	138·5	355	—	—	—	—	e 82·8	—

Additional readings: Tashkent e = +18m.33s. = SR_1 − 38s., i = +25m.57s., e = +29m.33s. Ekaterinburg i = +10m.42s. De Bilt eLN = +50·8m.

Sept. 9d. 18h. 57m. 45s. Epicentre 25°·5N. 98°·5E. (compare Oct. 16d.).

A = −·133, B = +·893, C = +·431; D = +·989, E = +·148;
G = −·064, H = +·426, K = −·903.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Phu-Lien		8·9	120	—	—	3 45	−16	—	—
Calcutta	E.	9·7	254	3 44	+78	6 46	?	—	—
	N.	9·7	254	3 41	+75	6 59	?	—	—
Hong Kong		14·7	99	—	—	—	—	—	8·7
Bombay		24·6	260	4 30	−64	10 5	+10	e 15·2	15·6
Andijan		26·3	311	e 5 15	−36	—	—	—	—
Irkutsk		27·1	8	—	—	(e 10 39)	− 4	e 10·6	11·4
Tashkent		28·8	311	—	—	e 11 15?	+ 2	17·2	20·2
Samarkand		29·8	306	e 6 20	− 6	—	—	—	—
Ekaterinburg		41·4	330	8 12	+ 6	e 14 25	− 2	20·2	—
Pulkovo		57·3	327	—	—	—	—	30·2	—
Copenhagen		67·0	323	—	—	—	—	32·2	—
Entebbe		68·5	261	—	—	22 7?	?	—	22·6
De Bilt		72·1	320	—	—	—	—	e 40·2	40·8

Tashkent gives also e = +13m.39s.

Sept. 9d. Readings also at 1h. (Ottawa), 2h. (near Sumoto and Toyooka), 3h. (near Sumoto), 5h. (Lick and near Wellington), 7h. (Andijan and Samarkand), 8h. (Hong Kong, Phu-Lien, Bombay, Ekaterinburg, Irkutsk, Kucino, Andijan, Tashkent, Samarkand, and De Bilt), 9h. (Ekaterinburg, Entebbe, and Mizusawa), 10h. and 11h. (Graz), 13h. (Christchurch and near Wellington), 18h. (Georgetown and Ottawa), 21h. (Ksara and near Manila).

Sept. 10d. 20h. 22m. 34s. Epicentre 34°·0S. 57°·0E. (as on 1929 June 6d.).

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Tananarive		17·3	329	i 4 23	+14	e 7 26	+ 1	—	8·7
Cape Town		31·7	262	—	—	—	—	—	17·4
Entebbe		41·1	321	7 58	− 6	—	—	—	23·8
Colombo		46·3	32	15 16	?S	(15 16)	−16	—	23·1
Bombay		55·0	19	9 41	+ 2	17 16	− 5	28·2	29·3
Hyderabad		55·4	25	9 39	− 3	—	—	—	28·0
Ksara		70·6	341	11 29	+ 8	e 20 57	?PS	—	—
Samarkand		74·2	9	e 11 41	− 2	—	—	—	—
Andijan		75·6	13	e 11 58	+ 5	—	—	—	—
Tashkent		76·1	10	11 58	+ 2	21 38	0	39·4	43·4
Hong Kong	E.	78·3	53	—	—	—	—	—	52·9
Theodosia		81·4	346	e 12 30	+ 3	—	—	—	—
Simferopol		81·6	346	e 12 26	− 2	—	—	—	—
Trenta		82·3	330	e 12 41	+ 9	—	—	—	—
Wellington	E.	85·5	139	—	—	—	—	43·4	—
Rocca di Papa		85·9	329	e 12 51	− 2	23 14	−15	e 46·7	55·5
Algiers		86·8	320	—	—	—	—	e 52·4	55·4
Zagreb		88·0	334	e 13 3	− 2	e 23 50	− 2	—	—
Florence		88·2	330	e 13 6	0	(24 56)	?PS	—	24·9
Alicante		89·8	320	—	—	—	—	e 50·4	—
Vienna	Z.	89·8	335	i 13 11	− 4	—	—	—	—
Moncalieri		90·7	328	e 14 0	+40	—	—	e 52·9	—
Granada		90·8	317	13 19	− 1	—	—	43·4	47·4
Ekaterinburg		90·9	3	i 13 16	− 5	24 8	−15	36·4	54·6
Tortosa	N.	91·1	321	—	—	23 51	[+16]	e 42·4	52·8
Kucino		91·2	350	e 13 23	+ 1	e 24 18	− 8	39·2	58·0
San Fernando	E.	91·8	315	—	—	—	—	—	60·7
Cheb		92·8	333	—	—	—	—	e 57·4	—
Strasbourg		93·5	330	e 13 26?	− 9	e 23 26?	[−23]	52·4	—
Irkutsk		95·6	27	—	—	—	—	e 50·6	—
Paris		95·9	329	e 13 43	− 5	—	—	57·4	—
Pulkovo		96·3	348	e 13 36	−15	24 16	[+12]	49·4	57·2
Uccle		96·6	330	—	—	e 23 26?	[−40]	e 47·4	—
De Bilt		97·3	332	e 13 49	− 7	—	—	e 49·4	62·1
Copenhagen		97·4	338	17 50	?PR_1	24 32	[+22]	49·4	—
Kew		99·1	328	e 13 56	−10	e 18 2	?PR_1	e 55·4	—
Edinburgh		103·4	330	—	—	—	—	e 62·4	—
Scoresby Sund		118·3	338	20 20	?PR_1	—	—	61·4	—
Ottawa		142·5	302	e 32 50	?	e 41 26	?SR_1	e 74·4	—
Georgetown	Z.	143·1	291	i 19 46	[+ 1]	i 36 36	?	e 74·2	83·0
Toronto	N.	145·1	299	—	—	e 42 4	?SR_1	75·0	—
Victoria	E.	165·6	1	—	—	—	—	90·8	96·3

Additional readings: Tananarive eSR_1 = +7m.50s., iSR_2 = +7m.55s. Hyderabad MN = +28·3m. Hong Kong MN = +46·9m. Wellington LN = +40·4m. Zagreb eNE = +13m.6s., eNW = +16m.8s., eLNW = +23m.14s. = [S] − 1s. Granada PR_1 = +16m.37s. Ekaterinburg eS_6P_6S = +23m.26s., PS = +25m.25s., SR_1 = +30m.20s. Kucino ePR_1 = +17m.9s., eS_6P_6S = +23m.46s. San Fernando MN = +57·0m. Pulkovo PS = +26m.24s. De Bilt ePR_1Z = +17m.49s., MZ = +63·0m., MN = +70·2m.

Sept. 10d. Readings also at 4h. (Apia), 5h. (Messina), 8h. (near Kobe), 9h. (Ekaterinburg and La Paz), 10h. (Yalta), 11h. (Andijan), 12h. (Yalta and near Manila), 16h. (Yalta), 19h. (Georgetown and Melbourne), 20h. (De Bilt), 22h. (Copenhagen and Scoresby Sund).

Sept. 11d. 22h. 18m. 42s. Epicentre 24°·7N. 121°·7E. (as on Aug. 29d.).

A = −·477, B = +·773, C = +·418; D = +·851, E = +·525; G = −·220, H = +·355, K = −·908.

The depth of focus 0·010 associated with this epicentre is retained.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	E.	+0·3	0·3	334	0 20	+11	0 33	+16	0·7	0·8
Zi-ka-wei	Z.	0·0	6·5	358	e 1 46	+ 7	3 22	+25	—	4·9
Hong Kong		0·0	7·2	252	1 38	−11	3 12	− 3	—	5·4
Manila		−0·1	10·1	184	e 2 28	− 2	e 4 11	−18	—	16·6
Nagasaki		−0·1	10·7	40	2 49	+11	e 5 0	+15	7·6	10·6
Hukuoka		−0·1	11·7	39	3 2	+ 9	e 5 16	+ 7	e 6·7	10·1
Koti		−0·2	13·6	47	—	—	—	—	e 6·8	—
Phu-Lien		−0·2	14·4	257	e 3 20	− 9	e 6 25	+12	7·3	9·5
Sumoto		−0·2	15·0	47	e 4 0	+24	—	—	e 10·6	11·3
Kobe		−0·2	15·3	46	—	—	e 7 21	+47	e 13·3	17·1
Calcutta	E.	−0·7	30·5	275	e 11 52	?S	(e 11 52)	+21	20·9	—
	N.	−0·7	30·5	275	e 11 54	?S	(e 11 54)	+23	20·1	—
Medan		−0·7	30·5	230	11 14	?S	(11 14)	−17	—	—
Irkutsk		−0·7	30·6	339	6 18	− 9	11 28	− 4	16·8	19·8
Dehra Dun		−0·8	38·9	290	13 28	?S	(13 28)	−11	21·3	24·3
Agra	N.	−0·8	39·1	285	—	—	13 12	−30	22·1	26·0
Hyderabad		−0·8	40·8	270	—	—	13 55	−12	—	26·1
Andijan		−0·9	43·8	305	e 8 19	+ 2	e 14 47	0	—	—
Bombay		−0·9	45·5	275	8 0	−30	15 6	− 4	24·8	27·9
Samarkand		−1·0	47·8	304	e 8 43	− 3	e 15 41	+ 3	—	—
Ekaterinburg		−1·1	53·8	325	i 9 30	+ 6	17 8	+16	25·3	35·6
Kucino		−1·2	66·4	323	—	—	19 53	+26	36·1	42·4
Pulkovo		−1·3	69·5	329	11 14	+ 9	20 21	+17	33·3	44·4
Helsingfors		−1·3	71·9	330	e 11 24	+ 3	e 20 48	+15	e 40·8	
Upsala	N.	−1·3	75·5	331		—	—	—	e 41·3	48·8
Konigsberg		−1·3	76·0	325	—	—	—	—	e 44·3	49·3
Copenhagen		−1·3	79·8	329	—	—	22 19	+13	41·3	—
Vienna		−1·3	81·3	321	e 12 18	− 1	22 41	+18	—	60·3
Scoresby Sund		−1·3	81·4	350	—	—	22 40	+16	41·3	—
Hamburg		−1·3	82·2	327	—	—	e 21 18?	−76	e 42·3	52·3
Cheb		−1·4	82·6	323	—	—	—	—	e 43·3	53·3
Zagreb		−1·4	82·6	319	e 12 30	+ 4	e 22 48	+11	e 46·3	—
De Bilt		−1·4	85·4	327	e 12 53	+11	e 23 5	− 3	e 46·3	54·6
Strasbourg		−1·4	86·0	324	e 12 18?	−28	e 23 18?	+ 3	45·3	55·6
Uccle		−1·4	86·5	326	—	—	e 23 18?	− 2	e 47·3	—
Florence	Z.	−1·4	86·5	318	13 0	+11	e 24 18	?PS	48·3	53·3
Rocca di Papa		−1·4	86·7	316	e 12 51	+ 1	e 24 4	?PS	e 46·8	55·0
Edinburgh		−1·4	86·8	333	—	—	e 23 28	+ 5	47·3	56·3
Kew		−1·4	88·4	329	—	—	e 23 23	−18	47·3	—
Oxford		−1·4	88·7	329	—	—	23 23	−21	e 47·3	58·1
Paris		−1·4	88·7	325	e 15 18?	?	—	—	47·3	55·3
Tortosa	N.	−1·4	94·7	320	—	—	—	—	e 54·3	62·7
Algiers		−1·4	95·6	316	—	—	—	—	—	38·3
Toledo	N.E.	−1·5	98·0	321	—	—	—	—	e 52·3	63·7
Almeria		−1·5	98·6	319	—	—	—	—	e 64·0	95·4
Granada		−1·5	99·6	320	—	—	e 24 3	[−19]	55·3	66·8
San Fernando		−1·5	101·6	320	—	—	56 50	?L	(56·8)	66·6
Ottawa		−1·5	108·2	13	—	—	—	—	e 55·3	—
Toronto		−1·5	109·0	16	—	—	—	—	—	60·3
Georgetown		—	114·0	16	—	—	e 38 29	?	e 61·5	76·6

For Notes see next page.

NOTES TO SEPT. 11d. 22h. 18m. 42s.

Additional readings: Zi-ka-wei iZ = +2m.28s., +3m.58s., and +4m.14s., MN = +5·3m. Hong Kong MN = +5·1m. Nagasaki MN = +11·0m., MZ = +11·1m. Phu-Lien MN = +9·0m. Sumoto MZ = +11·0m., MN = +12·3m. Medan i = +20m.23s. and +22m.12s. Agra LE = +23·0m., ME = +26·3m. Hyderabad MN = +25·3m. Kucino e = +24m.18s. = $SR_1 - 18$s. and +27m.23s. Upsala ME = +48·4m. Helsingfors PS = +21m.19s. Konigsberg N = +39m.42s., +40m.42s., and +42m.33s., MN = +46·3m. Cheb eL = +51·3m. Zagreb eNE = +12m.36s. and +22m.54s. De Bilt MN = +54·3m., MZ = +56·5m. Kew LZ = +53·3m. Oxford eE = +23m.43s. = $\Sigma - 8$s. Toledo MNW = +63·1m. Granada e = +34m.24s. and +36m.15s. San Fernando MN = +65·8m.

Sept. 11d. Readings also at 9h. and 10h. (Messina), 15h. (Sumoto), 22h. (Taihoku).

Sept. 12d. Readings at 1h. (Andijan, Samarkand, and Phu-Lien), 3h. (Taihoku), 4h. (Ekaterinburg, Irkutsk, Phu-Lien, and near Taihoku (3)), 5h. (Tucson, Copenhagen, near Taihoku (2), and near Sumoto), 6h. (Taihoku and Alicante), 9h. (Messina (2) and near Manila), 10h. (Messina (3)), 12h. (Andijan and near Samarkand), 16h. and 17h. (Messina), 20h. (Kucino, Ekaterinburg, La Paz, La Plata, and Sucre), 21h. (Granada and near Manila (3)), 22h. (Simferopol, Theodosia, Andijan, near Samarkand, and near Yalta), 23h. (near Simferopol, Theodosia, and Yalta).

Sept. 13d. Readings at 0h. (Ekaterinburg, Irkutsk, Kucino, Pulkovo, Akita, and near Mizusawa), 1h. (Mizusawa, Taihoku, Copenhagen, De Bilt, Uccle, and Paris), 2h. (Ekaterinburg, near Nagasaki, near Simferopol, Theodosia, and Yalta), 3h. (Copenhagen, De Bilt, Uccle, and Pulkovo), 5h. (near Kobe), 6h. (near Wellington), 12h. (near Tananarive), 16h. and 20h. (Taihoku).

Sept. 14d. 0h. 15m. 36s. Epicentre 24°·7N. 121°·7E. (as on Sept. 11d.).

The *depth* of focus 0·010 is retained.

	Corr. for Focus	Δ	Az.	P.	O–C.	S.	O–C.	L	M.
	°	°	°	m. s.	s.	m. s.	s.	m.	m.
Taihoku	+0·3	0·3	334	e 0 11	+ 2	—	—	0·4	0·5
Zi-ka-wei	0·0	6·5	358	e 2 2	+23	—	—	—	4·0
Hong Kong	0·0	7·2	252	1 35	−14	i 3 37	+22	i 4·4	5·5
Phu-Lien	−0·2	14·4	257	—	—	—	—	6·4	—
Irkutsk	−0·7	30·6	339	—	—	—	—	16·0	19·6
Bombay	−0·9	45·5	275	e 18 15	?SR_1	—	—	—	—
Ekaterinburg	−1·1	53·8	325	e 9 21	− 3	e 17 3	+11	29·4	34·5
Kucino	−1·2	66·4	324	—	—	—	—	e 41·1	—
Pulkovo	−1·3	69·5	329	e 11 46	+42	—	—	—	43·8
Copenhagen	−1·3	79·8	329	—	—	—	—	44·4	—
Cheb	−1·4	82·6	323	—	—	—	—	e 50·4	—
De Bilt	−1·4	85·4	327	—	—	—	—	e 48·4	—
Strasbourg	−1·4	86·0	324	—	—	—	—	e 54·4	—
Uccle	−1·4	86·5	326	—	—	—	—	e 47·4	—
Paris	−1·4	88·7	325	—	—	—	—	e 55·4	—
Granada	−1·5	99·6	320	—	—	—	—	62·4	—

No additional readings.

Sept. 14d. 2h. 12m. 0s. Epicentre 8°·2S. 152°·5E. (as on 1928 May 17d.).

A = −·878, B = +·457, C = −·143; D = +·462, E = +·887; G = +·126, H = −·066, K = −·990.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Riverview		25·6	183	e 5 42	− 2	10 4	−10	e 13·4	16·1
Suva		27·0	114	8 0?	?	—	—	—	—
Adelaide		29·6	203	e 6 45	+21	e 11 18	− 9	e 13·2	19·5
Melbourne		30·4	191	—	—	e 12 30	+49	14·7	16·3
Wellington		38·5	152	—	—	—	—	18·0	—
Christchurch		39·5	157	—	—	e 13 4	−55	21·5	23·8
Batavia		45·3	270	i 8 54	+19	i 14 42	−37	—	—
Andijan		88·4	313	e 13 8	+ 1	—	—	—	—
Victoria	E.	92·3	41	—	—	—	—	41·8	44·8
Ekaterinburg		97·9	327	e 17 1	?PR_1	e 26 27	+52	40·0	60·9
Kucino		110·5	328	—	—	—	—	e 55·3	—
Pulkovo		112·9	335	—	—	—	—	59·0	—
Scoresby Sund		117·6	357	—	—	—	—	60·0	—
Toronto	N.	122·7	42	—	—	—	—	57·5	—
Copenhagen		123·1	334	—	—	—	—	60·0	—
Ottawa		124·4	38	—	—	—	—	e 55·0	—
Georgetown	Z.	126·1	46	—	—	i 48 18	?SR_2	e 63·5	—
De Bilt		128·7	334	—	—	—	—	e 59·0	70·4
Strasbourg		129·9	330	—	—	—	—	e 72·0	—
Uccle		129·9	334	—	—	—	—	e 60·0	—
Kew		131·3	338	—	—	—	—	e 67·0	—
Paris		132·2	334	—	—	—	—	e 79·0	—
Granada		143·9	326	—	—	—	—	e 82·0	86·0

Additional readings: Riverview SR_1 = +11m.10s. Adelaide MN = +14·8m. Melbourne e = +10m.43s. Christchurch e = +16m.28s. = SR_1 − 8s. Ekaterinburg phrases are given as "e" simply.

Sept. 14d. Readings also at 0h. (Taihoku), 1h. (Taihoku (3) and near Wellington), 2h. (near Santiago), 3h. (near Sumoto), 5h. (Georgetown and Taihoku), 6h. (near Sumoto), 7h. (Taihoku and Messina), 8h. (Messina), 9h. (Ekaterinburg), 10h., 11h., and 12h. (Taihoku), 13h. (Scoresby Sund and Taihoku), 16h. (Taihoku), 20h. (Suva), 22h. and 23h. (2) (Taihoku).

Sept. 15d. 13h. 9m. 48s. Epicentre 39°·0N. 39°·5E.

A = +·600, B = +·494, C = +·629; D = +·636, E = −·772; G = +·486, H = +·400, K = −·777.

		△	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Ksara	E.	5·9	210	1 58	+27	i 3 39	+58	4·3	—
Theodosia		6·8	334	1 43	− 1	(2 50)	−15	2·8	3·1
Yalta		6·8	326	1 49	+ 5	(2 55)	−10	2·9	—
Simferopol		7·1	328	1 48	0	(2 57)	−16	3·0	7·3
Helwan		11·3	219	3 6	+17	7 14	?L_1	(7·2)	13·6
Belgrade		15·3	300	(e 3 49)	+ 6	(e 6 47)	+ 8	(e 9·0)	—
Kucino		16·8	[illegible]	e 4 3	+ 1	6 35	−38	e 8·3	9·8
Trenta		17·9	[illegible]	e 4 22	+ 6	9 52	+134	—	—
Zagreb		18·5	299	e 4 29	+ 6	i 7 59	+ 8	i 9·6	12·1
Vienna		19·0	306	e 4 31	+ 2	i 8 4	+ 2	—	14·2
Catania		19·1	273	e 5 34	+64	—	—	—	—
Graz		19·2	303	i 4 32	+ 1	e 8 9	+ 3	11·2	12·1
Naples	E.	19·4	284	e 4 45	+11	e 7 45	−25	—	—
Casamicciola		19·6	283	4 39	+ 3	6 27	−108	7·4	—
Laibach	N.	19·6	299	e 4 37	+ 1	e 8 21	+ 6	e 12·7	—
Konigsberg	E.	20·3	327	e 4 39	− 6	i 8 31	+ 2	e 10·2	11·5
	N.	20·3	327	e 4 43	− 2	e 8 29	0	e 10·2	12·4
	Z.	20·3	327	e 4 44	− 1	e 8 44	+15	e 10·2	10·5

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Rocca di Papa		20·5	286	i 4 50	+ 3	i 8 44	+10	10·8	14·7
Venice		21·0	296	5 8	+15	8 56	+12	—	—
Treviso		21·1	297	i 4 58	+ 4	8 32	−14	—	—
Samarkand		21·2	80	e 5 19	+24	—	—	—	—
Padova		21·3	296	e 5 2	+ 5	9 2	+12	—	—
Florence		21·6	292	i 5 3	+ 3	8 12	−45	13·2	15·2
Pulkovo		21·6	347	4 56	− 4	8 26	−31	10·2	17·0
Cheb		22·1	309	e 5 5	− 1	e 9 10	+ 3	e 12·2	15·2
Potsdam		22·6	315	i 4 59	−13	—	—	—	—
Ekaterinburg		22·6	31	i 5 15	+ 3	i 9 17	0	10·2	18·4
Jena	E.	22·8	311	e 5 12	− 3	e 9 12	− 9	e 13·2	17·7
	N.	22·8	311	e 5 12	− 3	e 9 24	+ 3	e 13·2	15·4
Piacenza		22·8	295	5 23	+ 8	9 19	− 2	12·8	17·4
Helsingfors		23·0	341	5 13	− 4	e 8 59	−26	—	—
Chur		23·1	299	5 18	0	e 9 26	− 1	—	—
Ravensburg		23·2	302	e 5 14	− 5	e 9 25	− 4	e 13·5	—
Hohenheim		23·7	304	e 5 21	− 4	e 9 34	− 4	e 14·2	—
Zurich		23·8	301	5 24	− 2	e 9 48	+ 8	—	—
Moncalieri		24·2	295	5 16	−14	e 9 41	− 7	13·0	17·4
		24·2	295	5 32	+ 2	9 46	− 2	14·0	—
Karlsruhe		24·3	305	5 33	+ 2	—	—	—	—
Copenhagen		24·5	322	5 29	− 4	9 47	− 7	—	—
Strasbourg		24·6	303	e 5 28	− 6	i 9 51	− 4	e 13·2	—
Hamburg		24·8	316	e 5 31	− 5	e 9 55	− 4	e 15·2	18·0
Neuchatel		24·9	299	e 5 34	− 3	e 9 51	−10	—	—
Upsala		25·1	334	e 5 32	− 7	e 9 47	−18	—	16·5
Besançon		25·6	300	5 45	+ 1	10 15	+ 1	16·2	—
De Bilt		27·0	310	5 59	+ 1	10 40	− 1	e 13·2	18·8
Uccle		27·2	307	e 5 57	− 3	10 32	−13	e 14·2	—
Paris		28·1	303	—	—	(e 11 12?)	+11	e 11·2	16·2
Algiers		28·6	277	—	—	—	—	e 15·2	18·2
Tortosa	N.	29·7	286	—	—	—	—	e 12·2	19·4
Kew		30·2	307	—	—	e 11 24	−13	13·2	—
Alicante		31·0	282	—	—	—	—	e 16·1	—
Stonyhurst		31·9	311	—	—	e 11 51	−16	—	—
Edinburgh		32·7	316	—	—	—	—	e 20·2	—
Almeria		32·8	280	e 6 43	−12	e 11 23	−58	—	23·1
Toledo		33·3	285	—	—	—	—	e 14·0	23·7
Granada		33·6	280	5 47	−74	10 11	?	17·3	18·6
Bombay		35·1	115	e 8 48	?PR_1	13 3	+ 6	15·9	—
San Fernando	N.	35·8	280	—	—	—	—	—	32·6
Entebbe		39·5	192	—	—	—	—	19·2	23·2
Irkutsk		45·6	50	e 8 41	+ 4	e 15 23	+ 1	21·1	32·7
Ottawa		77·6	319	—	—	—	—	e 34·2	—
Toronto		80·6	320	—	—	—	—	36·3	—
Georgetown	Z.	82·8	316	—	—	—	—	e 34·5	—

Additional readings and note: Belgrade readings have been *diminished* by 2m. Zagreb eNW = +4m.55s., iNE = +4m.59s., eNW = +5m.19s., iNW = +5m.43s. and +5m.57s., e = +6m.32s., eNE = +6m.58s., +8m.15s., +8m.49s., +10m.35s., +10m.51s., and +11m.21s., eL = +11·5m. Vienna iP = +4m.33s., P_cP? = +5m.37s., PR_2 = +6m.42s., PR_4? = +7m.46s., S = +11m.36s., PS = +12m.5s. Konigsberg ePR_1N = +5m.9s., eZ = +7m.39s., eE = +8m.16s., eN = +8m.20s., eE = +8m.57s. Rocca di Papa eS? = +7m.46s. Helsingfors e = +5m.20s. and +9m.20s. Ravensburg e = +10m.17s. = SR_1 − 1s. Hamburg iN = +11m.41s., MZ = +17·8m., MN = +18·4m. Upsala iP = +5m.40s., eSN = +9m.51s. De Bilt MN = +17·0m., MZ = +18·7m. Kew e = +11m.48s., LZ = +19·2m.

Sept. 15d. Readings also at 0h. (near Manila), 2h. (near Amboina and near Taihoku), 5h. (near Manila), 6h. (near La Paz and Sucre), 7h. (La Paz and Zagreb), 9h. (near Manila), 12h. (Samarkand), 13h. (near Manila), 15h. (Taihoku, Ekaterinburg, Tashkent, and Phu-Lien), 16h. (La Paz, Christchurch, and near Wellington), 17h. (La Paz and Sucre), 19h. (Taihoku), 22h. (Andijan and Samarkand), 23h. (Mineo, near Catania, and Trenta).

Sept. 16d. 3h. 44m. 33s. Epicentre 1°·2S. 82°·0W.

$A = +\cdot139$, $B = -\cdot990$, $C = -\cdot021$; $D = -\cdot990$, $E = -\cdot139$; $G = -\cdot003$, $H = +\cdot021$, $K = -1\cdot000$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
La Paz		20·5	139	4 47	0	i 8 35	+ 1	10·6	13·2
Sucre		24·2	138	e 5 30	0	9 48	0	12·4	14·1
Georgetown	Z.	40·4	7	—	—	e 15 29	+76	25·9	—
La Plata		40·5	149	13 55?	?S	(13 55?)	−19	27·5	—
Tucson	E.	43·2	323	—	—	—	—	e 26·8	—
Harvard		44·7	12	—	—	i 15 12	+ 1	—	—
Toronto	E.	44·9	3	—	—	i 15 10	− 4	e 23·5	—
Ottawa	E.	46·9	7	—	—	i 15 38	− 2	23·5	—
De Bilt		89·2	39	e 13 14	+ 3	e 24 0	− 5	e 46·5	—

Additional readings: Sucre iN = +10m.9s. Tucson eLN? = +27·0m. Toronto eE = +18m.30s. = SR_1 + 2s. Ottawa eE = +18m.45s. = SR_1 − 23s., eN = +19m.51s., LN = +28·5m. De Bilt eLN = +40·5m.

Sept. 16d. 11h. 11m. 4s. Epicentre 47°·1N. 9°·7E.

$A = +\cdot671$, $B = +\cdot115$, $C = +\cdot733$.

	Δ	Az.	P.	O−C.	S.	O−C.
	°	°	m. s.	s.	m. s.	s.
Chur	0·3	204	i 0 5	0	i 0 10	+ 2
Ravensburg	0·7	355	e 0 11	0	i 0 18	− 2
Zurich	0·8	290	i 0 10	− 2	i 0 20	− 2
Hohenheim	1·7	349	e 0 36	+10	i 0 47	− 1
Neuchatel	1·9	267	i 0 31	+ 2	i 0 54	+ 1
Strasbourg	1·9	319	—	—	e 0 56?	+ 3

Ravensburg gives also iN = +21s., i = +25s.

Sept. 16d. 17h. 19m. 4s. Epicentre 44°·5N. 11°·0E. (as on Aug. 17d.).

$A = +\cdot700$, $B = +\cdot136$, $C = +\cdot701$; $D = +\cdot191$, $E = -\cdot982$; $G = +\cdot688$, $H = +\cdot134$, $K = -\cdot713$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Florence	Z.	0·7	166	0 5	− 6	—	—	—	0·4
Livorno		1·1	207	0 28	+11	0 40	+ 9	—	—
Padova		1·1	35	e 0 16	− 1	i 0 28	− 3	—	—
Piacenza		1·1	300	e 0 16	− 1	0 32	+ 1	—	1·2
Venice		1·3	45	e 0 18	− 2	0 34	− 2	—	—
Treviso		1·4	36	0 21	0	e 0 38	− 1	—	—
Moncalieri		2·4	290	e 0 37	0	—	—	—	—
Chur		2·6	337	e 0 39	− 2	e 1 27	+15	—	—
Rome		2·8	157	e 0 37	− 7	(1 6)	−11	—	1·9
Rocca di Papa		3·0	154	0 43	− 4	1 45	+22	—	1·8
Zurich		3·3	330	e 0 56	+ 4	—	—	—	—
Ravensburg		3·4	344	e 1 9	+16	—	—	i 1·9	—
Neuchatel	N.	3·7	313	i 0 56	− 2	i 1 41	− 1	—	—
Zagreb		3·8	68	e 1 4	+ 5	e 1 46	+ 2	e 2·0	2·0
Besançon		4·4	310	—	—	1 56?	− 5	—	—
Hohenheim		4·4	345	e 1 20	+12	—	—	e 2·4	—
Strasbourg		4·6	336	—	—	e 2 6	0	i 2·7	—
Karlsruhe		4·8	340	2 34	?L	—	—	(2·6)	—
Vienna	Z.	5·2	44	e 1 55	+35	—	—	—	—
De Bilt		8·5	335	—	—	—	—	e 5·9	—

Additional readings: Chur ePE = +47s. Rome gives P as e and S as P. Rocca di Papa e = +13s. Ravensburg i = +2m.4s. Zagreb ePNW = +1m.6s.

Sept. 16d. Readings also at 0h. (Andijan, Samarkand, Ekaterinburg, Ksara, and near Rocca di Papa), 1h. (Copenhagen, Pulkovo, near Manila, and near Wellington), 2h. (near Tashkent), 3h. (Suva), 5h. (near Sumoto), 6h. (Andijan, Tashkent, Samarkand, Ekaterinburg, and near Batavia), 8h. (Suva, Ekaterinburg, Tashkent, and near Zagreb), 9h. (Apia, Suva, and Taihoku), 10h. (Taihoku and near Toyooka), 11h. (Ksara), 12h. (Mizusawa and near Ksara), 13h. (near Batavia and near Belgrade), 16h. (Wellington), 17h. (Taihoku), 19h. (Apia and Suva), 20h. (Belgrade and Riverview).

Sept. 17d. 19h. 17m. 25s. Epicentre 49°·7N. 132°·0W.

A = −·433, B = −·481, C = +·763; D = −·743, E = +·669; G = −·510, H = −·567, K = −·647.

The longitude is uncertain.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Victoria		5·8	99	1 25	− 5	—	—	3·1	6·1
Sitka	E.	7·6	346	i 1 48	− 7	i 3 14	−12	i 3·9	—
	N.	7·6	346	e 1 59	+ 4	i 3 31	+ 5	—	—
Berkeley	E.	13·7	146	e 3 36	+14	e 6 19	+18	e 8·2	9·8
	N.	13·7	146	e 3 35	+13	e 6 30	+29	e 8·2	9·8
	Z.	13·7	146	e 3 36	+14	e 6 24	+23	e 8·3	9·8
Lick	E.	14·4	145	e 3 39	+ 7	e 6 38	+20	e 7·9	—
	Z.	14·4	145	e 3 50	+18	e 6 46	+28	e 8·1	—
Saskatoon		16·1	72	e 3 39	−14	e 6 30	−27	i 7·0	11·0
Denver		21·5	107	i 4 59	0	e 9 5	+10	i 11·4	13·4
Tucson		23·5	130	i 5 24	+ 1	i 9 46	+11	e 13·1	—
		23·5	130	i 5 24	+ 1	i 9 47	+12	e 12·8	—
Chihuahua		28·8	127	(5 55)	−21	(10 59)	−14	(13·2)	(17·6)
Florissant		31·3	94	e 6 24	−17	i 11 32	−24	e 15·6	16·2
Chicago		31·5	88	i 6 25	−18	i 11 28	−32	15·0	—
Ann Arbor		33·7	83	e 6 41	−21	i 12 11	−25	e 15·9	18·5
Honolulu T.H.	N.	35·0	226	e 7 23	+10	e 13 9	+14	i 16·2	—
Toronto		35·8	79	e 6 57	−23	i 12 37	−30	16·8	19·1
Guadalajara		36·8	131	(7 27)	− 1	(13 23)	+ 2	(16·2)	(23·6)
Ottawa		37·3	75	e 7 15	−17	i 12 58	−30	e 17·1	20·4
Charlottesville	E.	39·4	86	e 7 43	− 7	e 13 35	−22	i 19·7	—
	N.	39·4	86	e 7 43	− 7	e 13 25	−32	i 20·5	—
Georgetown		39·8	84	e 7 38	−15	i 13 51	−12	e 18·7	23·1
Tacubaya		40·0	129	7 50	− 5	14 15	+ 8	20·8	25·7
Fordham		40·8	80	i 7 40	−21	i 13 48	−30	19·5	24·6
Harvard		41·7	76	i 7 51	−18	i 14 5	−26	—	—
Vera Cruz		41·8	124	—	—	(14 10?)	−22	(16·6)	(27·0)
Ivigtut		45·3	42	10 29	?PR_1	14 59	−20	—	—
Scoresby Sund		49·9	25	—	—	16 11	− 7	24·6	—
Port au Prince		56·5	100	—	—	—	—	e 30·4	35·8
Bergen		64·7	21	11 5	+22	20 13	+52	—	38·6
Dyce		65·4	28	e 10 48	+ 1	19 22	− 8	e 30·1	39·8
Kobe		66·0	297	—	—	—	—	—	35·6
Edinburgh		66·2	29	—	—	e 19 47	+ 7	30·6	39·4
Irkutsk		67·5	328	e 11 3	+ 2	i 20 5	+ 9	31·2	52·0
Koti		67·7	297	e 11 11	+ 9	—	—	—	—
Upsala		67·8	16	e 11 7	+ 4	e 20 1	+ 1	e 32·6	42·9
Stonyhurst		68·1	30	e 11 14	+ 9	20 15	+12	27·6	40·1
Bidston		68·3	30	—	—	20 0	− 6	27·6	44·4
Helsingfors		68·6	12	e 11 7	− 1	e 20 11	+ 2	e 34·3	—
Pulkovo		69·6	10	11 13	− 2	20 15	− 6	29·6	41·7
Oxford		70·3	30	e 11 21	+ 2	20 25	− 5	e 28·4	45·6
Copenhagen		70·5	20	11 19	− 1	20 35	+ 3	—	—
Kew		70·9	30	11 24	+ 2	e 20 33	− 4	30·1	40·3
De Bilt		71·9	26	11 32	+ 3	20 47	− 2	e 29·6	35·5
Hamburg		71·9	24	e 11 35	+ 6	e 21 1	+12	e 29·6	—

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		72·5	221	11 9	−24	20 51	− 5	35·6	37·6
Uccle		72·8	27	e 11 36	+ 1	20 53	− 8	29·6	35·5
Ekaterinburg		73·0	354	i 11 34	− 2	i 20 59	− 3	30·6	49·6
Konigsberg	E.	73·0	16	e 11 53	+17	21 7	+ 5	e 34·6	48·6
	N.	73·0	16	e 11 35	− 1	21 16	+14	e 34·6	47·6
Potsdam		73·8	21	—	—	e 21 5	− 7	e 34·6	44·6
Gottingen		73·8	24	e 21 35?	?S	(e 21 35?)	+23	e 44·4	45·8
Paris		74·0	30	e 11 40	− 2	e 21 22	+ 8	31·6	34·6
Feldberg	N.	74·5	26	e 11 35	−11	—	—	—	62·7
Jena	E.	74·8	24	e 12 3	+15	e 21 35	+11	e 34·6	38·4
	N.	74·8	24	—	—	e 21 35	+11	e 32·6	48·9
	Z.	74·8	24	e 11 49	+ 1	—	—	e 42·6	49·1
Karlsruhe		75·6	25	12 2	+ 9	21 49	+16	e 42·6	—
Cheb		75·7	23	e 12 10	+17	e 21 46	+12	e 31·6	49·1
Strasbourg		75·8	26	e 11 51	− 3	i 21 43	+ 8	e 32·6	47·8
Hohenheim		76·1	25	e 11 50	− 6	e 21 51	+13	e 37·6	50·0
Zi-ka-wei		76·3	304	e 12 1	+ 4	i 22 1	+20	37·6	62·0
Neuchatel		76·4	29	e 12 3	+ 6	e 21 59	+17	—	—
Besançon		76·6	28	11 57	− 2	—	—	31·6	—
Ravensburg		77·0	26	e 11 55	− 6	e 22 1	+12	e 35·6	48·1
Zurich		77·2	28	e 12 2	0	e 21 58	+ 7	—	—
Chur		77·9	28	e 11 58	− 8	e 22 12	+13	—	—
Vienna		78·4	21	i 12 9	0	22 6	+ 1	e 39·6	47·1
Moncalieri		79·1	29	e 12 8	− 6	22 4	− 9	30·6	48·6
		79·1	29	e 12 9	− 5	22 9	− 4	32·7	51·5
Graz		79·2	22	e 12 9	− 5	e 22 11	− 3	36·6	48·5
Toledo		79·4	38	e 12 10	− 5	22 6	−10	e 32·6	44·0
Piacenza		79·6	27	12 20	+ 3	22 24	+ 5	32·2	50·2
Treviso		79·7	25	e 12 17	0	22 16	− 4	40·6	50·6
Venice		79·9	25	e 12 35?	+17	—	—	—	—
Padova		79·9	25	e 12 22	+ 4	22 23	+ 1	—	—
Laibach	N.	80·0	23	—	—	—	—	e 44·1	48·6
Barcelona		80·4	33	e 12 32	+11	e 22 24	− 4	e 35·2	48·6
Tortosa	N.	80·4	35	12 20	− 1	22 20	− 8	33·3	49·3
Zagreb		80·6	22	e 12 25	+ 2	e 22 24	− 6	e 40·2	45·6
Suva	N.	80·7	229	e 12 59	+36	e 22 23	− 8	37·6	40·6
Florence	Z.	81·2	26	12 27	+ 1	22 20	−17	38·6	46·6
San Fernando		81·5	41	11 24	−64	22 24	−17	37·4	56·9
Granada		82·0	40	i 12 29	− 1	i 22 58	+12	38·6	53·2
Malaga		82·0	40	12 30	0	22 28	−18	31·6	—
Alicante		82·1	37	e 12 35	+ 4	e 22 45	− 2	e 34·1	52·1
Belgrade	N.	82·5	19	e 11 38	−55	e 20 35	?	e 41·1	49·2
Almeria		82·7	39	i 12 33	− 1	22 48	− 6	38·4	46·8
Rome		83·3	26	e 12 40	+ 2	i 23 0	0	e 51·1	57·3
Rocca di Papa		83·5	26	e 12 33	− 6	e 22 58	− 5	e 37·1	57·6
Theodosia		84·6	10	12 46	0	e 23 6	− 9	e 40·4	—
Simferopol		84·6	10	12 49	+ 3	23 9	− 6	—	—
Naples	E.	84·8	25	e 13 35	+48	e 23 35	+18	47·6	—
Algiers		84·9	35	12 43	− 4	e 23 5	−13	e 41·6	48·6
Yalta		85·2	10	e 12 56	+ 7	e 23 26	+ 5	—	—
La Paz	E.	86·8	120	13 2	+ 4	i 23 43	+ 4	44·2	56·8
	N.	86·8	120	13 2	+ 4	i 23 38	− 1	32·6	58·4
Tashkent		87·2	345	i 13 2	+ 2	e 23 29	−14	e 41·6	52·4
Hong Kong		87·3	303	13 6	+ 5	23 34	−10	e 46·6	52·2
Andijan		87·5	343	e 12 58	− 4	—	—	—	—
Samarkand		89·2	347	e 13 11	0	—	—	—	—
Manila		89·5	293	e 13 22	+ 9	i 24 10	+ 1	—	—
Sucre		90·5	120	13 22	+ 3	i 24 16	− 3	44·9	54·5
Phu-Lien		92·6	308	e 14 7	+37	e 24 28	−13	44·6	—
Ksara	N.	95·7	10	13 20	−27	24 5	[+ 4]	43·1	—
Calcutta	E.	99·4	324	e 13 7	−60	24 37	[+16]	—	—
Wellington		101·2	219	—	—	25 25	? Σ	53·8	57·8

Continued on next page.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Rio de Janeiro E.	106·5	106	—	—	e 26 5	? Σ	e 47·6	62·2
N.	106·5	106	—	—	e 26 13	? Σ	e 46·2	58·6
La Plata	106·9	125	—	—	—	—	51·6	—
Riverview	107·6	239	—	—	—	—	50·1	60·3
Hyderabad	107·6	331	—	—	—	—	54·8	69·3
Bombay	107·9	336	6 22	?	19 7	?PR$_1$	50·4	75·7
Melbourne	113·9	240	—	—	e 28 5	+ 4	53·2	72·9
Batavia	114·5	291	e 20 17	?PR$_1$	e 29 17	?PS	—	—
Adelaide	115·5	246	e 22 41	?	26 1	[+31]	48·6	68·1
Colombo	117·0	324	26 11	?S	(26 11)	[+36]	51·4	72·1
Perth	127·6	264	27 35?	? Σ	—	—	—	—
Entebbe	128·5	20	22 35?	?	—	—	—	—
Tananarive	149·2	0	21 20	?	—	—	e 43·3	51·3
Johannesburg	151·9	41	—	—	—	—	—	98·6
Cape Town	153·2	65	—	—	—	—	—	86·6

Additional readings and notes: Berkeley eE = +4m.35s., eZ = +4m.39s., eN = +4m.44s., eZ = +6m.49s., eN = +6m.51s., eZ = +7m.20s., eN = +7m.21s., eE = +7m.27s. Lick eE = +4m.11s., eZ = +4m.24s., eE = +9m.12s., eZ = +11m.16s., and +12m.18s., eE = +12m.26s., eZ = +15m.8s., eE = +17m.8s. Saskatoon i = +7m.53s., MN = +14·0m.; T$_o$ = 19h.17m.32s. Denver iPE = +5m.1s., iPR$_1$N = +5m.25s., iPR$_1$ = +5m.35s., iS = +9m.15s., iSN = +9m.16s. iSR$_1$N = +10m.6s., iSR$_2$N = +10m.32s., iLN = +11·7m. Tucson ePR$_1$N = +6m.5s., ePR$_1$E = +6m.11s., eE = +10m.20s., eN = +11m.4s. Chihuahua readings have been *diminished* by 2m. Florissant iPZ = +6m.25s., ePN = +6m.26s., iZ = +7m.6s., iPR$_1$E = +7m.17s., iPR$_1$Z = +7m.23s., iN = +11m.20s., iSZ = +11m.37s., eSR$_1$EN = +13m.29s., iSR$_1$E = +13m.30s. Chicago iPR$_1$E = +7m.22s., iPR$_1$N = +7m.24s., iSN = +11m.31s., iSR$_1$E = +13m.31s. Ann Arbor ePR$_1$ = +7m.41s., iSR$_1$ = +13m.53s., iE = +14m.59s. = SR$_3$ − 1s., iL?N = +16·1m., MN = +18·4m.; T$_o$ = 19h.17m.12s. Honolulu T.H. ePR$_1$N = +8m.22s., SR$_1$N = +15m.4s. Toronto iE = +7m.13s. and +7m.27s., MN = +21·3m.; T$_o$ = 19h.17m.13s. Guadalajara readings have been *increased* by 1m. Ottawa i = +7m.39s., iN = +13m.10s., eLN = +16·6m., MZ = +18·4m.; T$_o$ = 19h.17m.27s. Charlottesville ePR$_1$E = +9m.9s., ePR$_1$N = +9m.11s., eSR$_1$E = +16m.17s., eSR$_1$N = +16m.23s., eE = +18m.31s., eN = +18m.44s. Georgetown iSZ = +13m.58s., iSR$_1$Z = +16m.41s. Fordham PR$_1$ = +9m.28s., iEN = +16m.38s., MN = +25·6m. Vera Cruz readings have been *increased* by 2m. Ivigtut SR$_1$ = +18m.11s. Scoresby Sund eN = +16m.20s., +19m.29s. Kobe ePR$_1$? = +12m.35s.? Upsala eLN = +31·6m., MN = +42·8m. Helsingfors eSN = +19m.55s. Oxford ePR$_1$ = +14m.1s. Kew LZ = +32·6m., MN = +44·1m., MZ = +44·4m. De Bilt MN = +36·5m., MZ = +44·5m. Apia e = +32m.7s. and +34m.9s. Uccle SR$_1$ = +25m.35s.?, MN = +36·6m. Konigsberg eN = +13m.5s. and +13m.59s., ePR$_3$ = +16m.59s., ePSN = +21m.44s., e = +23m.9s. Gottingen eLN = +43·4m., eLZ = +44·1m. Jena eZ = +14m.22s. Strasbourg iPS = +22m.13s. Hohenheim MN = +48·1m. Zi-ka-wei iZ = +13m.1s., +14m.33s., +15m.19s., PR$_1$ + 0s. and +16m.55s. = PR$_2$ − 12s. Ravensburg eE = +13m.50s. and +14m.21s., ePR$_1$N = +14m.57s., eN = +23m.15s., L = +38·6m., MN = +47·6m. Vienna i = +14m.11s., +16m.23s., and +24m.15s. Moncalieri (first line) MN = +48·1m. Toledo P = +12m.15s., iS = +22m.23s., MNW +44·2m. Barcelona MN = +48·0m. Tortosa ME = +49·8m. Zagreb e = +14m.22s. San Fernando MN = +44·9m. Belgrade eN = +14m.26s. and +22m.31s. = S − 21s. Rome i = +12m.46s. Rocca di Papa e = +12m.26s., iP = +12m.37s., S = +23m.17s. La Paz PR$_1$E = +16m.23s., PR$_1$N = +18m.11s., SR$_1$N = +29m.41s. Tashkent e = +14m.35s. Sucre eP? = +13m.5s., PR$_1$ = +17m.3s., S = +23m.58s. = [S] + 27s., iPS = +25m.7s. Calcutta ePN = +12m.39s. Wellington iE = +29m.10s., SR$_1$N = +36m.15s. Riverview e = +22m.41s., eSR$_1$ = +34m.41s., eL = +45·3m., MN = +67·3m. Hyderabad MN = +66·7m. Melbourne i = +36m.15s., e = +46m.45s. Adelaide e = +33m.49s. and +44m.50s., MN = +70·7m. Colombo S = +36m.10s. = SR$_1$ + 0s. Tananarive e = +22m.41s., +23m.0s. = PR$_1$ − 32s., +30m.32s. and +37m.40s.

Sept. 17d. Readings also at 0h. (near Batavia), 2h. (Ksara), 4h. (Apia and near Taihoku), 5h. (Scoresby Sund, Ann Arbor, Charlottesville, Georgetown, Ottawa, Toronto, Victoria, Vera Cruz, and near Tacubaya), 6h. (Copenhagen, De Bilt, Uccle, Paris, Strasbourg, Kew, and Granada), 9h. (Apia and near Medan), 12h. (Ekaterinburg), 13h. (De Bilt, Granada, Scoresby Sund, Kucino, Irkutsk, and Taihoku), 14h. (near Taihoku), 16h. (Taihoku, Kobe, Osaka, and Nagoya), 17h. (2) and 18h. (near Taihoku), 20h. (near Sumoto), 21h. (Granada), 22h. (Edinburgh, Phu-Lien, and Taihoku (2)).

Sept. 18d. Readings at 1h. (near Batavia), 5h. (Andijan, Samarkand, and near La Paz), 6h. (Apia), 9h. (Ekaterinburg, Irkutsk, and near Taihoku), 10h. and 11h. (Taihoku), 15h. (near Barcelona and near Victoria), 16h. (Georgetown, Ottawa, and Samarkand), 17h. (Georgetown, Ottawa, Toronto, and near Victoria), 19h. (Suva), 23h. (La Paz, La Plata, and near Santiago).

Sept. 19d. 11h. 3m. 30s. Epicentre 8°·0N. 128°·5E.

$A = -\cdot616$, $B = +\cdot775$, $C = +\cdot139$; $D = +\cdot783$, $E = +\cdot623$; $G = -\cdot087$, $H = +\cdot109$, $K = -\cdot990$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila	9·9	312	2 30	+ 1	i 4 29	+ 3	5·5	—
Hong Kong	19·9	318	4 39	− 1	—	—	e 9·6	12·4
Zi-ka-wei z.	24·1	345	e 5 28	− 1	9 36	−10	—	—
Batavia	25·8	237	e 5 49	+ 3	i 10 24	+ 6	—	—
Tashkent	61·8	315	—	—	—	—	e 32·5	38·2
Ekaterinburg	71·3	329	11 37	+12	19 39	−63	32·5	—
Kucino	83·7	326	—	—	—	—	e 44·0	46·8
De Bilt	103·0	329	—	—	—	—	e 51·5	—
Uccle	104·1	328	—	—	—	—	e 48·5	—

Additional readings: Hong Kong MN = +10·8m. Batavia i = +6m.47s.

Sept. 19d. Readings also at 1h. (near Lick), 2h. (La Paz), 4h. (near Tacubaya), 5h., 6h., 7h., and 8h. (4) (near Taihoku), 9h. (Andijan (2), Samarkand, and Taihoku (3)), 10h. (Andijan and Taihoku), 11h. (Taihoku), 13h. (La Paz), 18h. (Nagoya and near Osaka), 19h. (Wellington).

Sept. 20d. 4h. 9m. 30s. Epicentre 30°·5N. 131°·0E. (as on 1927 Sept. 17d.).

$A = -\cdot565$, $B = +\cdot650$, $C = +\cdot508$; $D = +\cdot755$, $E = +\cdot656$; $G = -\cdot333$, $H = +\cdot383$, $K = -\cdot862$.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Nagasaki	2·4	337	e 0 35	− 2	1 9	+ 3	—	1·4
Hukuoka	3·1	351	e 0 48	− 1	e 1 25	− 1	—	—
Matuyama	3·6	24	e 1 2	+ 6	—	—	—	1·9
Koti	3·7	34	e 1 .5?	+ 7	—	—	e 1·9	—
Sumoto	5·0	40	e 1 56	+39	2 45	+28	(2·8)	3·0
Kobe N.E.	5·4	39	—	—	—	—	i 3·0	3·2
Osaka	5·6	41	2 7	iS	(2 7)	−27	3·4	4·3
Toyooka	6·0	31	e 1 34	+ 2	—	—	3·1	3·4
Nagoya	6·8	45	e 1 40	− 4	—	—	3·9	—
Irkutsk	29·2	326	—	—	—	—	e 13·0	16·0
Ekaterinburg	54·3	322	9 34	− 1	e 21 31	iSR$_4$	—	—
Kucino	66·8	323	—	—	—	—	e 35·5	42·0
Pulkovo	69·0	330	—	—	—	—	42·5	—
Copenhagen	79·2	330	—	—	—	—	44·5	—

Additional readings: Nagasaki MN = +1·5m. Matuyama eP = +1m.3s., iPR$_4$ = +1m.20s., MZ = +2·2m. Osaka MZ = +4·2m., MN = +4·5m, Kucino eL = +3$\S$·0m,

Sept. 20d. Readings also at 1h. (Nagoya and near Osaka), 2h. (Andijan, Samarkand, and near Sumoto), 3h. (Nagoya), 4h. (Taihoku, Wellington, near Andijan, and Samarkand), 5h. (Ekaterinburg and Ksara), 11h. and 12h. (near Rocca di Papa), 14h. (Taihoku, Samarkand, near Andijan, and near Osaka), 20h. (Suva), 21h. (Ekaterinburg and Samarkand).

Sept. 21d. 7h. 22m. 15s. Epicentre 34°·4N. 132°·8E.

A = −·561, B = +·605, C = +·565.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
								0·5
Matuyama	0·6	184	i 0 10	+ 1				1·0
Sumoto	1·7	92	—	—	0 55	+ 7	—	1·0
Kobe	1·9	82	—	—	e 0 53	0	1·0	0·9
Toyooka	2·0	56	0 29	− 2	(0 52)	− 3	0·9	0·9
Osaka	2·2	84	e 1 8	?S	(e 1 8)	+ 8	1·2	1·2

Kobe gives also i = +59s.

Sept. 21d. 18h. 54m. 11s. Epicentre 11°·5N. 126°·2E. (given by Manila).

A = −·579, B = +·791, C = +·199; D = +·807, E = +·591;
G = −·118, H = +·161, K = −·980.

A *depth* of focus 0·020 has been assumed.

		Corr. for Focus	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	°	m. s.	s.	m. s.	s.	m.	m.
Manila		0·0	6·0	302	i 1 38	+ 6	i 2 58	+14	—	—
Taihoku	E.	−0·4	14·3	342	e 3 42	+17	e 6 22	+16	—	—
Hong Kong		−0·5	15·8	315	3 45	+ 2	6 40	+ 1	—	—
Zi-ka-wei	Z.	−0·8	20·2	348	4 39	+ 5	8 23	+13	—	—
Phu-Lien		−0·9	21·0	299	4 35	− 7	e 8 14	−11	9·3	—
Batavia		−1·2	26·2	228	e 5 12	−26	9 16	−47	i 12·0	—
Medan		−1·3	28·4	256	5 30	−29	e 11 26	+43	—	—
Akita		−1·4	30·8	22	e 7 51	+89	—	—	—	—
Irkutsk		−1·9	44·5	341	e 8 7	− 8	(e 14 19)	−24	e 14·3	—
Bombay		−2·2	51·9	286	10 2	+57	15 58	−17	21·3	—
Melbourne		−2·2	52·3	162	—	—	i 15 49	−31	26·6	28·0
Andijan		−2·3	55·3	311	e 9 26	0	e 16 55	− 1	—	—
Samarkand		−2·4	59·1	311	e 9 50	0	e 17 41	− 1	—	—
Ekaterinburg		−2·5	67·1	329	i 10 45	+ 3	i 19 24	+ 4	27·8	36·4
Kucino		−2·7	79·6	326	—	—	e 21 19	−29	e 34·1	—
Copenhagen		−2·8	93·3	330	—	—	—	—	—	53·8

Additional readings: Zi-ka-wei iZ = +5m.45s. Batavia i = +5m.53s. and +6m.17s. = PR_1 +5s. Kucino e = +19m.49s. and +24m.31s.

Sept. 21d. Readings also at 1h. (Akita, Ekaterinburg, and Samarkand), 2h. (Kucino), 4h. (Taihoku (2)), 5h. (La Paz, Lick, Ekaterinburg, Irkutsk, and near Manila), 6h. (Ekaterinburg, Irkutsk (2), and Kucino), 8h. (near Sumoto), 10h. (near Wellington), 12h. (Suva), 16h. (Charlottesville, Georgetown, Fordham, Ottawa, Toronto, Ann Arbor, Chicago, Florissant, Sitka, Victoria, Ekaterinburg, and near Taihoku), 17h. (Scoresby Sund and Taihoku), 18h. (Andijan), 20h. (near Andijan and Samarkand), 21h. (Lick, near Manila, and near Wellington), 22h. (La Paz and near Andijan).

Sept. 22d. Readings at 2h. (Adelaide, Melbourne, Riverview, and Bombay), 5h. (near Simferopol, Theodosia, and Yalta), 8h. (near Andijan, Samarkand, near Simferopol, Theodosia, and Yalta), 13h. (Scoresby Sund, near Andijan, Tashkent, and Samarkand), 14h. (Ekaterinburg), 16h. (Lick, Ottawa, and Victoria), 17h. (Georgetown, Toronto, and Taihoku), 18h. (Samarkand and near Santiago), 21h. (Lick, Victoria, Ottawa, and Toronto), 22h. (near Batavia).

Sept. 23d. Readings at 0h. (Andijan, Samarkand, Tashkent, and Ekaterinburg), 5h. (Honolulu T.H.), 6h. (near Rocca di Papa), 7h. (Samarkand, Mizusawa, near Manila, and near Honolulu T.H.), 8h. (Lick), 9h. (Paris), 10h. (Florissant and Rocca di Papa), 11h. (near Samarkand), 13h. (La Plata, near La Paz, and Sucre), 14h. (near Wellington), 15h. (Manila and Taihoku), 16h. (Fordham, Georgetown, Ottawa, Toronto, and near Victoria), 18h. (La Paz and near Victoria), 23h. (Apia, Suva, Victoria, Ottawa (2), and Toronto (2)).

Sept. 24d. 1h. 28m. 30s. Epicentre 17°·0S. 177°·5W. (as on 1926 Feb. 12d.).

$A = -\cdot955$, $B = -\cdot042$, $C = -\cdot292$; $D = -\cdot044$, $E = +\cdot999$; $G = +\cdot292$, $H = +\cdot013$, $K = -\cdot956$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Apia		6·3	62	e 1 30	− 6	e 2 52	0	—	7·3
Wellington	N.	25·2	194	—	—	i 10 27	+20	—	—
Christchurch		27·8	195	—	—	—	—	—	19·6
Riverview		32·7	232	e 8 6	?PR_1	e 12 31	+12	e 14·9	20·4
Melbourne		38·9	230	—	—	—	—	i 16·8	21·5
Adelaide		42·9	237	e 8 28?	+11	e 14 20	−27	18·5	27·1
Irkutsk		96·4	323	—	—	—	—	46·0	54·1
Toronto		107·3	49	—	—	—	—	55·5	—
Hyderabad	E.	108·0	282	(14 42)	− 6	—	—	—	14·7
Georgetown	Z.	108·5	53	—	—	—	—	e 50·7	—
Ottawa	N.	110·1	46	—	—	—	—	e 52·0	—
Bombay		113·6	283	e 16 30?	?	—	—	—	—
Ekaterinburg		121·4	327	e 20 40	?PR_1	e 37 35	?SR_1	52·5	68·9
Pulkovo		132·7	341	e 19 37	[+13]	—	—	21·5	—
Copenhagen		140·6	350	—	—	—	—	68·5	—
De Bilt		144·8	357	i 19 43	[− 5]	—	—	e 73·5	86·1
Uccle		146·2	358	—	—	—	—	e 77·5	—
Vienna	Z.	146·8	343	e 19 47	[− 4]	—	—	—	—
Paris		148·2	1	e 19 57	[+ 4]	—	—	82·5	—
San Fernando	E.	159·1	20	—	—	—	—	—	117·6
Granada		159·1	14	e 20 43	[+36]	i 32 46	?	73·5	85·5

Additional readings: Apia MZ = +4·3m. MN = +9·2m. Riverview MN = +23·0m. Adelaide MN = +24·4m. Ekaterinburg i = +20m.48s. = PR_1 +14s. Pulkovo e = +16m.19s. De Bilt MN = +89·5m.

Sept. 24d. 13h. 51m. 55s. Epicentre 36°·5N. 75°·0E. (as on 1928 April 12d.).

$A = +\cdot208$, $B = +\cdot776$, $C = +\cdot595$; $D = +\cdot966$, $E = -\cdot259$; $G = +\cdot154$, $H = +\cdot575$, $K = -\cdot804$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Andijan		4·3	331	i 1 29	+22	—	—	i 2·3	—
Dehra Dun		6·6	157	2 35	?S	(2 35)	−25	3·9	4·1
Samarkand		7·0	300	i 1 28	−18	—	—	i 2·3	5·3
Bombay		17·7	187	4 11	− 2	7 29	− 4	9·3	12·3
Calcutta	E.	18·2	137	5 48	+89	8 46	+62	—	—
	N.	18·2	137	5 52	+93	8 37	+53	—	—
Hyderabad		19·3	170	4 35	+ 2	8 13	+ 5	10·6	14·5
Ekaterinburg		22·5	339	i 4 53	−18	i 8 39	−36	—	—
Irkutsk		25·9	43	e 5 58	+11	—	—	e 7·9	—
Theodosia		30·8	301	e 6 37	+ 1	—	—	—	—
Simferopol		31·7	300	e 6 39	− 5	—	—	—	—
Yalta		31·7	300	e 6 44	0	—	—	—	—
Ksara	E.	31·8	275	6 41	− 4	(12 2)	− 3	12·0	—
Pulkovo		36·7	324	6 51	−37	(12 5)	−75	12·1	—
Copenhagen		45·5	316	—	—	14 5?	−76	—	—

Additional readings: Dehra Dun S = +3m.15s. Hyderabad MN = +13·9m. Irkutsk e = +6m.44s. Ksara S? = +10m.35s. Pulkovo e = +8m.57s. = PR_1 +14s.

Sept. 24d. Readings also at 1h. (La Paz, Samarkand, Tananarive, and near Toyooka), 2h. (near Chur and near Sumoto), 5h. (Andijan and Fordham), 17h. (Georgetown, Ottawa, and Toronto), 18h. (Honolulu T.H.).

Sept. 25d. Readings at 0h. (Honolulu T.H.), 1h. (Andijan, Samarkand, Taihoku, and Florissant), 4h. (Taihoku and near Manila), 6h. (Taihoku), 8h. (La Paz and near Sucre), 10h. (Entebbe), 11h. (Sucre), 15h. (near Andijan), 16h. (near Toyooka), 17h. (Mizusawa), 19h. (near Santiago), 20h. (Taihoku), 22h. (near Tacubaya), 23h. (Wellington).

Sept. 26d. 4h. 50m. 54s. Epicentre 19°·5N. 154°·8W. (compare 1929 Oct. 6d.).

$A = -\cdot 853$, $B = -\cdot 401$, $C = +\cdot 334$; $D = -\cdot 426$, $E = +\cdot 905$; $G = -\cdot 302$, $H = -\cdot 142$, $K = -\cdot 943$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Honolulu T.H.		3·3	304	i 0 42	−10	i 1 9	−22	i 1·8	—
Berkeley	Z.	33·6	50	e 6 52	− 9	—	—	e 16·0	—
Lick	E.	33·9	51	e 7 0	− 4	—	—	e 18·0	—
	N.	33·9	51	e 7 8	+ 4	—	—	e 16·8	—
Victoria		38·4	35	7 45	+ 4	13 38	− 6	20·1	22·9
Sitka	E.	40·2	18	i 7 37	−20	e 13 6	−64	i 17·1	21·4
Tucson		41·2	63	7 58	− 7	14 22	− 2	17·8	—
Florissant		58·3	56	e 10 4	+ 3	18 10	+ 7	e 27·1	—
Chicago	E.	60·3	52	—	—	i 18 37	+10	30·3	—
Ann Arbor	N.	63·2	51	—	—	—	—	e 30·8	—
Toronto	N.	66·3	50	—	—	e 19 44	+ 3	32·4	33·6
Georgetown	Z.	68·5	55	e 11 16	+ 8	e 20 30	?PS	e 31·2	40·9
Ottawa		68·7	48	—	—	i 20 17	+ 7	e 37·1	—
Harvard	N.	72·4	50	—	—	i 21 11	+16	e 35·3	—
Irkutsk		81·0	323	—	—	—	—	42·5	—
La Paz		92·5	107	i 13 23	− 7	—	—	—	—
Ekaterinburg		98·1	341	e 17 10	[−29]	—	—	47·1	61·0
Pulkovo		100·6	357	—	—	—	—	57·1	—
Copenhagen		104·0	7	—	—	—	—	57·1	—
De Bilt		106·3	13	e 18 54	?PR_1	e 25 6	[+13]	e 56·1	—
Uccle		107·3	15	—	—	e 25 6?	[+ 8]	e 54·1	—
Paris		108·7	16	e 19 6?	?PR_1	—	—	58·1	—
Strasbourg		110·2	13	—	—	—	—	e 59·1	—
Toledo		114·7	25	e 19 48	?PR_1	—	—	—	—
Florence	Z.	115·4	11	e 19 56	?PR_1	29 36	?PS	66·1	70·1
Granada		117·2	26	i 20 6	?PR_1	30 57	?PS	e 60·1	67·1
Malaga		117·2	27	e 20 21	?PR_1	e 31 41	?	—	—
Almeria		117·9	25	e 20 2	?PR_1	30 6	?PS	—	60·2

Additional readings: Honolulu T.H. iLN = +1·2m. Berkeley eN = +14m.15s. = SR_1 −11s., eE = +15m.53s. Sitka eSR_2E = +14m.42s. = S +32s. Tucson PR_1N = +10m.10s. = PR_2 +3s., SN = +14m.21s. Florissant eE = +19m.36s. = [S] −6s., iN = +19m.54s., eLN = +26·1m. Chicago iSN = +18m.38s., eSR_2N = +25m.38s., LN = +29·6m. Ottawa eLN? = +33·1m. Ekaterinburg e = +35m.37s. Pulkovo e = +48m.9s. and +53m.55s. De Bilt eN = +28m.14s. = PS −2s. Uccle e = +28m.6s.? = PS −22s. and +34m.6s.? = SR_1 −3s. Almeria PR_1? = +22m.49s.

Sept. 26d. 7h. 47m. 0s. Epicentre 34°·5S. 178°·5E.

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

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Wellington	E.	7·4	202	i 1 53	+ 1	i 3 23	+ 2	i 4·0	5·8
	N.	7·4	202	i 2 2	+10	i 3 32	+11	i 4·2	6·9
Christchurch		10·1	205	e 2 30	− 1	4 25	− 7	5·5	—
Suva	E.	16·4	0	i 4 36	+39	e 8 12	+68	—	—
Apia		22·4	26	5 14	+ 4	9 26	+13	12·3	14·2
Riverview		22·6	264	e 5 8	− 4	i 9 31	+14	e 14·0	15·5
Melbourne		27·1	253	i 6 3	+ 4	—	—	—	20·6
Adelaide		32·5	257	—	—	e 13 0?	+44	18·2	20·4
Perth		51·6	254	34 0?	?L	—	—	(34·0)	—
Manila		73·4	302	e 12 48	+70	(21 30)	+23	21·5	—
La Paz		98·8	117	e 13 31	−33	—	—	—	—
Toronto		121·1	55	—	—	—	—	50·0	—
Ottawa	E.	124·1	54	—	—	e 38 0?	?SR_1	64·0	—
Ekaterinburg		133·2	320	i 19 16	[−10]	—	—	57·0	—
Pulkovo		147·3	331	19 43	[− 8]	—	—	—	—
Ksara	E.	149·2	280	e 19 42	[−12]	—	—	—	—
Simferopol		150·9	302	e 19 55	[− 2]	—	—	—	—
Yalta		150·9	301	e 19 57	[0]	—	—	—	—
Vienna	Z.	160·8	322	e 19 58	[−11]	—	—	—	—
De Bilt		161·8	347	i 19 59	[−10]	—	—	e 99·0	—
Strasbourg		164·3	337	e 20 2	[− 9]	—	—	e 86·0	—
Paris		165·3	350	e 24 58	?PR_1	—	—	96·0	—
Florence	Z.	166·4	317	e 18 45	?	25 0	?PR_1	—	53·0
Granada		176·9	33	i 20 5	[−12]	—	—	78·0	108·0

Additional readings: Wellington iN = +2m.21s., iE = +2m.31s., T_gE = 7h.46m.59s., T_gN = 7h.47m.8s. Suva eSN = +8m.18s. Apia MN = +14·5m. Riverview MN = +15·4m. Melbourne i = +6m.46s. = PR_1 + 5s. Adelaide e = +14m.50s., MN = +21·3m. Ottawa eN = +58m.30s. Ekaterinburg iPR_1 = +22m.49s. Pulkovo PR_1 = +22m.9s. Vienna iZ = +20m.51s. De Bilt eZ = +20m.53s., iPR_1Z = +24m.39s. Strasbourg e = +21m.7s. Granada i = +21m.51s. and +25m.48s. = PR_1 − 27s.

Sept. 26d. Readings also at 12h. (Georgetown, Ottawa, Tucson, Victoria, near Tacubaya (4), and Oaxaca (3)), 14h. (Andijan, Samarkand, and Vera Cruz (2)), 15h. (Ann Arbor, Georgetown, Tucson, Ottawa, Toronto, Fordham, and Copenhagen), 16h. (Victoria, Scoresby Sund, Kew, De Bilt, and Strasbourg), 19h. (Georgetown, Ottawa, Toronto, and Ekaterinburg), 20h. (Taihoku, Ann Arbor, Florissant, Georgetown, Ottawa, Toronto, near Berkeley, Lick, Tucson, Victoria, and near Honolulu T.H.), 23h. (La Paz and near Tacubaya).

Sept. 27d. 23h. 16m. 3s. Epicentre 25°·5N. 110°·5W. (as on 1925 Aug. 29d.).

A = −·316, B = −·845, C = +·431; D = −·937, E = +·350; G = −·151, H = −·403, K = −·903.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Mazatlan		4·4	120	(1 30?)	+22	(2 15)	+14	(2·3)	(2·4)
Chihuahua		5·0	50	0 54	−23	—	—	1·9	2·5
Tucson		6·7	357	e 1 52	+10	e 3 31	+29	i 4·0	—
Guadalajara		8·0	125	—	—	—	—	(4·3)	(5·2)
Manzanillo		8·6	137	(1 45)	−25	(3 21?)	−32	(3·5)	(5·1)
Tacubaya		12·1	118	2 47	−13	5 14	− 7	5·4	7·6
Vera Cruz		14·7	112	(3 11)	−24	(5 55)	−30	(6·3)	(7·9)
Denver		14·9	17	e 4 41	+63	e 7 35	+65	e 9·0	—
Lick		15·1	324	e 2 58	−42	e 6 10	−24	—	—
Berkeley	Z.	15·9	324	(e 4 0)	+ 9	—	—	e 7·6	10·9
Florissant		21·5	47	e 4 52	− 7	i 8 49	− 6	—	11·2
		21·5	47	e 4 55	− 4	e 8 47	− 8	—	11·2
St. Louis		21·5	47	e 5 55	+56	e 9 49	+54	—	11·1

Continued on next page.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Chicago	E.	24·9	43	5 35	− 2	i 9 49	−12	12·7	—
	N.	24·9	43	5 33	− 4	i 9 48	−13	12·4	—
Victoria	E.	25·0	340	5 46	+ 8	10 14	+11	13·4	15·9
Ann Arbor		27·6	46	—	—	e 10 33	−19	e 14·0	16·0
Charlottesville	E.	29·8	57	—	—	e 11 12	−19	i 14·6	—
	N.	29·8	57	—	—	e 10 57	−34	i 15·6	—
Georgetown	Z.	31·0	56	e 6 23	−15	i 12 19	+28	—	18·4
Toronto		31·1	45	e 6 27	−12	e 11 25	−28	14·1	17·0
Fordham		33·9	54	e 7 17	+13	e 12 25	−14	17·8	19·6
Ottawa		34·2	45	e 6 51	−16	i 12 13	−30	e 16·2	19·4
Sitka	E.	36·2	338	—	—	—	—	e 21·1	—
Harvard	E.	36·3	51	e 7 14	−10	e 12 56	−18	e 17·0	—
Ivigtut		54·6	31	—	—	22 9	?SR_1	26·0	—
La Paz		58·9	131	10 4	0	18 14	+ 4	30·0	44·4
Sucre		62·6	131	e 10 25	− 4	18 47	− 9	31·6	37·9
Scoresby Sund		65·5	21	—	—	19 57?	+26	34·0	—
Edinburgh		78·1	33	—	—	—	—	e 37·0	—
Stonyhurst		79·4	35	—	—	—	—	39·0	—
Oxford		81·1	37	—	—	e 22 37	+ 1	e 33·6	47·4
Rio de Janeiro	E.	81·2	120	—	—	—	—	e 39·0	—
Kew		81·8	36	e 12 24	− 5	e 22 39	− 5	37·0	—
De Bilt		84·2	33	e 12 45	+ 2	e 23 8	− 2	e 35·0	49·6
Uccle		84·6	35	—	—	e 23 7	− 8	e 35·0	48·6
Paris		84·7	38	e 12 48	+ 2	—	—	40·0	50·0
Upsala	N.	84·7	23	—	—	—	—	e 42·0	—
Copenhagen		85·4	28	—	—	23 27	+ 4	38·0	—
Toledo		85·4	47	—	—	e 23 14	− 9	e 38·6	42·7
San Fernando	E.	85·6	51	—	—	—	—	—	54·0
Hamburg		85·7	30	—	—	—	—	e 42·0	51·0
Malaga		86·7	50	13 6	+ 9	23 52	+14	e 32·0	—
Helsingfors		86·9	20	—	—	—	—	e 44·0	—
Feldberg	N.	87·0	35	—	—	e 26 19	?	—	46·0
Gottingen		87·0	31	—	—	—	—	41·0	47·0
Granada		87·0	50	e 13 2	+ 3	23 41	0	43·0	45·0
Strasbourg		87·7	36	e 14 57?	?	—	—	e 36·0	—
Tortosa	N.	87·9	45	—	—	—	—	e 37·0	51·7
Hohenheim		88·3	35	—	—	—	—	42·0	—
Alicante		88·5	47	—	—	—	—	e 41·9	—
Pulkovo		88·8	19	—	—	—	—	37·0	52·2
Cheb		89·1	32	—	—	e 24 57?	?PS	e 39·0	53·0
Ravensburg		89·1	36	—	—	—	—	42·0	—
Moncalieri		89·8	39	e 13 57?	+42	—	—	—	48·0
Piacenza		90·9	37	—	—	—	—	43·4	55·4
Florence		92·7	38	e 14 27	+56	—	—	47·0	53·0
Zagreb		93·8	34	—	—	—	—	e 41·0	48·0
Rocca di Papa		94·7	39	—	—	—	—	e 47·4	58·2
Irkutsk		96·5	340	(e 14 33)	+41	—	—	e 14·6	72·8
Ekaterinburg		97·3	5	e 17 49	?PR_1	e 24 26	[+17]	40·0	59·8
Tashkent		113·2	0	—	—	—	—	e 39·0	66·0
Bombay		135·4	356	—	—	—	—	e 66·0	—

Additional readings and notes : Mazatlan readings have been *diminished* by 2m. Tucson ePE = +1m.53s., iE = +2m.18s., iN = +2m.19s., iLN = +4·1m. Guadalajara readings have been *increased* by 2m. Manzanillo readings have been *increased* by 1m. Vera Cruz readings have been *increased* by 3m. Denver eE = +4m.48s. Lick eN = +3m.57s.?, +7m.16s., +10m.16s., and +13m.17s., eE = +7m.13s. and +9m.39s. Berkeley eEN = +4m.2s., eE = +7m.20s., EN = +7m.56s., ME = +10·6m., MN = +11·0m., true P is given as ePR_1?Z. Florissant (first line) iPN = +4m.54s., iNZ = +4m.56s., iPR_1NZ = +5m.16s., iN = +8m.55s., and +9m.29s. =SR_1 − 9s. Ann Arbor eE = +9m.9s., eN = +12m.3s. =SR_1 − 3s., eE = +12m.15s., e = +12m.57s., eL?N = +13·6m., MN = +15·0m. Charlottesville eN = +11m.53s. Georgetown iZ = +6m.43s., SR_1Z = +14m.23s. Toronto eN = +13m.6s., iLN = +15·5m. ; T_o =23h.16m.4s. Fordham MZ = +21·1m. Ottawa eN = +14m.23s. =SR_1 − 17s., eLN = +15·8m., MN = +18·4m. ; T_o = 23h.16m.7s. Oxford MN = +42·0m. Kew LZ = +41·0m. De Bilt MNZ = +46·8m. Uccle MN = +44·0m. Toledo MNW = +43·0m. San Fernando MN = +49·5m. Hamburg MN = +45·0m. Ekaterinburg e = +26m.40s. =PS +6s., +31m.55s. =SR_1 − 8s., and +36m.18s.

Sept. 27d. Readings also at 3h. (near Kobe and Samarkand (2)), 7h. (near Wellington), 10h. (Zagreb and near Taihoku), 14h. (Apia and Suva), 15h. (near La Paz and near Taranto), 17h. (Ekaterinburg, Andijan (2), and Tashkent).

Sept. 28d. 14h. 56m. 18s. Epicentre 48°·0N. 137°·0E.

A = −·489, B = +·456, C = +·743 ; D = +·682, E = +·731 ; G = −·544, H = +·507, K = −·669.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
Akita		8·6	164	e 2 6	− 4	(i 3 39)	−14	i 3·6	4·0
Mizusawa	E.	9·4	160	2 11	−11	3 40	−33	—	—
Toyooka		12·6	188	3 14	+ 7	(5 47)	+13	5·8	5·9
Nagoya		12·8	180	e 3 8	− 2	5 34	− 5	—	—
Osaka		13·4	184	3 18	0	(5 58)	+ 5	6·0	7·2
Kobe		13·4	187	3 16	− 2	5 57	+ 4	—	—
Sumoto		13·8	187	e 3 24	+ 1	6 8	+ 5	—	6·2
Koti		14·7	191	3 38	+ 3	6 32	+ 7	—	—
Nagasaki		16·2	202	4 4	+ 9	e 7 19	+19	—	7·4
Zi-ka-wei	Z.	20·6	221	e 5 0	+12	10 50	?L	(10·8)	—
Irkutsk		21·2	294	e 5 21	+26	e 9 33	?SR_1	16·6	—
Manila		36·0	207	e 12 31	?S	(e 12 31)	−39	—	—
Ekaterinburg		44·9	311	(i 8 29)	− 3	(i 15 11)	− 3	—	—
Andijan		45·8	285	e 8 38	− 1	—	—	—	—
Samarkand		49·4	288	i 9 11	+ 8	i 16 27	+16	—	—
Bombay		58·9	265	e 16 56	?S	(e 16 56)	−74	—	—
Theodosia		64·4	310	10 43	+ 2	e 20 7	[−21]	—	—
Simferopol		65·2	310	10 47	+ 1	20 12	[−23]	—	—
Yalta		65·4	310	i 10 47	0	—	—	—	—
Vienna	Z.	70·8	323	11 14	− 8	—	—	—	—
Ksara	E.	72·2	300	e 11 28	− 3	20 49	− 3	—	—
La Paz		142·4	42	18 38	[−66]	—	—	—	—

Additional readings and note: Akita ePEN = +2m.9s., MNZ = +3·8m. Mizusawa SN = +3m.41s. Osaka MN = +7·0m. Nagasaki PR_1 = +4m.21s. Ekaterinburg readings have been *increased* by 6m.

Sept. 28d. Readings also at 0h. (near Nagasaki), 6h. (Andijan and Samarkand), 8h. (2) and 9h. (near Honolulu T.H.), 11h. (Adelaide, Amboina, and Batavia), 12h. (Melbourne), 15h. (Wellington), 16h. (Ekaterinburg, Irkutsk, and Taihoku), 17h. (Nagoya and Honolulu T.H.), 19h. (near Medan), 22h. (Florissant, Georgetown, Ottawa, Toronto, Tucson, and near Tacubaya).

Sept. 29d. Readings at 0h. (near Sumoto, near Andijan, and Samarkand), 1h. (near Honolulu T.H.), 3h. (near La Paz), 4h. (near Honolulu T.H.), 6h. (Riverview), 7h. (near Taihoku), 8h. and 10h. (Entebbe), 14h. (near Tacubaya), 16h. (Alicante and near Honolulu T.H.), 19h. (Georgetown, Ottawa, and Toronto).

Sept. 30d. 15h. 58m. 40s. Epicentre 34°·3N. 131°·7E.

A = −·550, B = +·617, C = +·564 ; D = +·747, E = +·665 ; G = −·375, H = +·421, K = −·826.

	Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
	°	°	m. s.	s.	m. s.	s.	m.	m.
Matuyama	1·0	118	—	—	i 0 27	− 1	—	0·7
Hukuoka	1·2	236	0 19	+ 1	0 33	0	—	0·6
Koti	1·7	116	i 0 26	0	i 0 46	− 2	—	—
Muroto	2·3	117	0 28	− 8	0 55	− 8	—	—
Sumoto	2·6	89	0 42	+ 1	1 13	+ 1	—	1·2
Toyooka	2·9	64	e 1 10	+25	—	—	1·4	1·7
Kobe	2·9	82	0 46	+ 1	(1 23)	+ 3	1·4	1·9
Osaka	3·2	82	e 0 51	+ 1	(1 31)	+ 3	1·5	1·9
Nagoya	4·4	77	—	—	e 1 37	−24	—	—

Additional readings: Sumoto MZ = +1·4m. Toyooka MN = +1·6m.

Sept. 30d. 20h. 13m. 12s. (I)
21h. 35m. 45s. (II) } **Epicentre 37°·3N. 4°·0W. (as on 1928 Dec. 25d.).**

$A = +\cdot 793$, $B = -\cdot 055$, $C = +\cdot 606$.

		Δ	Az.	P.	O−C.	S.	O−C.	L.	M.
		°	°	m. s.	s.	m. s.	s.	m.	m.
I	Granada	0·3	110	i 0 5	0	i 0 7	− 1	—	0·3
II		0·3	110	i 0 6	+ 1	i 0 8	0	—	0·2
I	Malaga	0·7	210	0 18	+ 7	0 30	+10	—	0·5
II		0·7	210	0 23	+12	0 34	+14	—	—
I	Almeria	1·4	110	0 21	0	i 0 39	0	—	—
II		1·4	110	0 21	0	i 0 39	0	—	—

Additional readings: Granada I MN = +0·4m. Almeria I $PR_1 = +33$s., $SR_1 = +42$s., PS = +49s., $SR_1 = +58$s., $SR_2 = +1$m.4s., II $PR_1 = +24$s., $PR_2 = +33$s., $SR_1 = +50$s., $SR_2 = +59$s.

Sept. 30d. Readings also at 3h. (Wellington), 4h. (Suva and Wellington), 5h. (Bombay, near Samarkand, and near Sumoto), 9h. (near Honolulu T.H.), 11h. (Andijan), 14h. (Andijan and near Samarkand), 15h. (La Plata and near Ksara), 17h. (near Simferopol, Theodosia, and Yalta), 20h. (near Oaxaca), 22h. (Samarkand and near Honolulu T.H.).

TABLE.

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

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