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METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

APRIL JUNE, 1940.

CONTENTS.

	Pages.
Introduction and tables	25
Agra	27
Bombay	31
Calcutta	36
Colombo	40
Dehra Dun	42
Hyderabad	44
Kodaikanal	46
Non-instrumental Reports	48

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INTRODUCTION, 1944

Till the end of 1937, the seismic data from the observatories of India Meteorological Department were being published annually as Part D of the Annual Summary of the India Weather Review. Since 1938, the data are being published in the present series of the Quarterly Seismological Bulletin. With the kind co-operation of the Surveyor-General of India, the Director of the Nizamiah Observatory, Hyderabad, and of the Superintendent, Colombo Observatory, it has been possible to incorporate in the bulletin, the data of their respective observatories, viz., Dehra Dun, Hyderabad and Colombo. The instrumental seismological data are collected and edited at the Colaba Observatory, Bombay, and the non-instrumental voluntary observations at the Meteorological Office, Poona.

TABLE I.
List of Seismograph Stations.

Station.	Latitude.	Longitude.	Height above M. S. L.	Lithologic foundation.	Officer-in-charge of Observatory.
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ERRATA SLIP FOR APRIL-JUNE 1940.

- Pages.
30 On June 11, against phases PcP, SS and F, in column h under G. M. T. insert 08, 09, and 10 respectively.
33 On May 11, 1st shock, under phase, insert M₁ in the blank space against N.
42-43 In the column under Amp. read "On trace in inch" instead of " " .
43 On May 27, insert the following after iP:—

Phase.	G. M. T. m. s.	Per.	Amp.
isP	13 35	4	.005
iS	14 12	6	.025
M ₁	14 42	6	.025

Bombay	N	Milne-Shaw	0.45	12	250	20:1	
	E	Milne-Shaw	0.45	12	350	50:1	
Calcutta	N	Milne-Shaw	0.45	12	250	20:1	
	N	Omorl-Ewing	50	28	32	...	
	E	Omorl-Ewing	50	28	30	...	
Colombo	E	Milne-Shaw	0.45	12	250	22:1	for April.
						10:1	for May.
						21:1	for June.
Dehra Dun	N	Omorl	50	30	12	...	
Hyderabad	N	Milne-Shaw	0.45	12	250	20:1	
	E	Milne-Shaw	0.45	12	250	20:1	
Kodalkanal	E	Milne-Shaw	0.45	12	250	20:1	

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TABLE 1.
List of Seismograph Stations.

Station.	Latitude.	Longitude.	Height above M. S. L.	Lithologic foundation.	Officer-in-charge of Observatory.
Agra	27°8' N.	78°01' E.	163 meters	Indo-Gangetic Alluvium	Superintending Meteorologist.
Bombay	18°54' N.	72°40' E.	6 meters	Deccan Trap	Director.
Calcutta	22°32' N.	88°20' E.	(1) 7 meters (2) 6 meters.	Alluvium	Meteorologist.
Colombo	6°54' N.	79°52' E.	7 meters	Beach-Sand resting on gneiss probably decomposed.	Superintendent.
Dehra Dun	30°10' N.	78°03' E.	682 meters	Gravel	Director, Geodetic Branch, Survey of India.
Hyderabad	17°26' N.	78°27' E.	528 meters	Granite	Director, Nizamiah Observatory.
Kodalkanal	10°14' N.	17°28' E.	2343 meters	Rock	Director.

(1) Milne-Shaw, (2) Omori-Ewing.

TABLE 2.
The instruments and their constants.

Station.	Component.	Type of Instrument.	Mass.	Period.	Static magnification.	Damping ratio.	Remarks.
Agra	N	Omori-Ewing	kg. 45	secs. 31	29	1	
	E	Milne-Shaw	0.47	12	250	20:1	
Bombay	N	Milne-Shaw	0.45	12	250	29:1	
	E	Milne-Shaw	0.45	12	350	50:1	
Calcutta	N	Milne-Shaw	0.45	12	250	20:1	
	N	Omori-Ewing	50	28	32	...	
	E	Omori-Ewing	50	28	30	...	
Colombo	E	Milne-Shaw	0.45	12	250	22:1 19:1 21:1	for April. for May. for June.
Dehra Dun	N	Omori	50	30	12	...	
Hyderabad	N	Milne-Shaw	0.45	12	250	20:1	
	E	Milne-Shaw	0.45	12	250	20:1	
Kodalkanal	E	Milne-Shaw	0.45	12	250	20:1	

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UPPER AIR OBSERVATORY, AGRA.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	
April, 1940.																
1940.			h. m. s.	sec.	μ	km.		1940.			h. m. s.	sec.	μ	km.		
Apr 1	E	IP	11 29 48	...	...	7220	Moderate. Direction of first motion E. Depth of focus about 80 km.	Apr. 13	E	I	17 32 44	...	...	...
		DP	30 6	...	...	...				F	18 2	...	...	...
		PP	32 10	...	...	...		" 14	E	e	9 24 46	...	...	...	Slight.
		IS	38 31	...	...	...				Mn	26 34 9 5	...	...	...
		sS	39 10	...	...	...				F	50	...	...	...
		ScS	39 34	...	...	...		" 14	E	e	9 55 49	...	...	...	Feeble.
		SS?	42 24	...	...	...		" 14	E	e	14 11 28	...	...	...	Feeble.
		sSS	43 8	...	...	...				F	26	...	...	...
		L?	50 38	...	...	...		" 14	E	eP	14 42 43	...	...	5345	Slight.
" 1	E	I	17 40 50	...	...	...	Tremor.	" 14	E	ePPP	44 38	...	...	...
" 6	E	IP	13 48 0	...	...	2535	Slight. Direction of first motion W.			eS	49 41	...	...	...
		IS	52 1	...	...	...				M?	15 1 4	...	...	...
		Mn	58 26 15 20	...	...	...				Mn	7 25	...	...	...
		F	15 11	...	...	...				F	Mixed in the following shock.				
" 6	E	eP	18 58 37	...	...	2680	Slight.	" 14	E	e	15 14 18	...	...	...	Slight.
		S	19 2 50	...	...	...				Mn	33 12 20 6	...	...	...
		Mn	8 50 12 3	...	...	...				F	16 8	...	...	...
		F	34	...	...	...		" 16	E	IP	6 19 6	...	...	8265	Moderate. Direction of the first motion W.
" 7	E	eP	14 29 49	...	...	385	Slight.			I	19 12	...	...	...
		S	30 29	...	...	...				ePP?	19 20	...	...	...
		S	30 49	...	...	...				PP	21 49	...	...	...
		F	41	...	...	...				N, E	28 42	...	...	...
" 8	E	e	2 57 57	...	...	...	Slight.			I	29 2	...	...	...
		S	3 4 24	...	...	...				SS	33 0	...	...	...
		SS	8 7	...	...	...				SSS	37 10	...	...	...
		M	17 39	...	...	...				N	Mn ₁	47 54 24 164	...	...	Two sets of M waves.
		Mn	23 40	...	...	...				E	Mn ₁	54 10 20 115	...	...
				...	...	...				N	Mn ₂	7 28 29 21 172	...	...
				...	...	...				E	Mn ₂	29 39 20 122	...	...
" 8	E	e(P?)	9 12 53	...	...	(14855)	Slight.			E	F	10 42	...	...
		e(SS?)	33 27				E	P	21 47 13	9050	Slight. Surface waves absent.
		M?	10 7 17	...	...	...				IS	57 28	...	...	...
		F	11 15	...	...	...		" 17	E	e	11 25 32	...	...	...	Surface waves.
" 10	N, E	P	8 18 55	...	...	350	Moderate.	" 19	E	F	40	...	...	...
	N, E	S	19 34	...	...	...				e	14 59 2	...	...	...	Slight.
	N, E	S	19 54	...	...	...				Mn	15 14 52 21 9	...	...	...
	N	F	34	...	...	...		" 19	E	F	16 00	...	...	...
	E	F	54	...	...	...				F	10 30 40	...	...	...	Feeble.
" 11	E	e	9 37 10	...	...	...	Surface waves.	" 20	E	F	11 25	...	...	...
		Mn	43 10 15 8	...	...	...						...	...	...
" 13	E	P	6 36 23	...	...	4100	Slight.	" 20	E	IP	15 54 51	...	...	5455	Slight. Direction of first motion W. Surface waves poor.
		PP	37 53	...	...	...				S	15 1 56	...	...	...
		S	42 8	...	...	...				Mn	18 45	...	...	...
		SS	44 59	...	...	...				F	39	...	...	...
		Mn	52 38 13 5	...	...	...		" 20	E	e	20 10 15	...	...	...
		F	8 2	...	...	...						...	...	...

UPPER AIR OBSERVATORY, AGRA.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
June, 1940.															
1940.			h. m. s.	Sec.	μ	Km.		1940.			h. m. s.	Sec.	μ	Km.	
June 11	E	PcP	52 50	...	...	...		June 18	E	PP	14 2 3	...	...	...
		PcS?	55 44	...	...	...				PoP	2 9	...	...	...
		IS	59 51	...	...	...				i	3 3	...	...	...
		SS	3 56	...	...	...				IS	6 41	...	...	...
		F	1 24	...	...	...				SS	9 13	...	...	...
11	E	e	1 10 57	...	...	...	Feeble.			ScS	9 58	...	...	...
		F	23	...	...	...				SSS	10 21	...	...	...
12	E	e	6 9 15	...	...	...	Feeble.	16	E	eP	18 50 30	...	...	7750	Slight.
		F	39	...	...	...				eS	59 39	...	...	...
12	E	e	9 40 47	...	...	...	Very Feeble.			ePS	19 0 01	...	...	...
		F	10 5	...	...	...				e	0 33	...	...	...
12	E	e	12 12 42	...	...	...	Slight.			SSS	7 40	...	...	...
		Mn	44 40	...	...	...				Mn	25 22 20 11	...	...	...
12	E	e	12 53 55	...	...	...	Feeble, near.	22	E	iP	11 45 24	...	...	5280	Moderate. Direction of first motion W in E. Depth of focus about 200 km.
12	E	eP	14 9 8	...	...	5820	Slight.			eP	46 7	...	...	...
		S	16 34	...	...	...				PcP	46 55	...	...	...
		ScS?	18 40	...	...	...				PP	47 17	...	...	...
		i	21 1	...	...	...				SP	52 12	...	...	...
		Mn	34 30 12 0	...	...	...				IS	52 22	...	...	...
12	E	e	16 23 9	...	...	...	Feeble.			i	52 28	...	...	...
		Mn	41 58	...	...	...				sS	53 39	...	...	...
		F	17 13	...	...	...				sS	53 44	...	...	...
12	E	e	18 46 31	...	...	...	Slight.			ScS	54 57	...	...	...
		Mn	19 13 53	...	...	...				SS	56 0	...	...	...
		F	46	...	...	...				SS	56 3	...	...	...
14	E	e	7 54 27	...	...	...	Feeble.			Mn	12 3 56 26 26	...	...	...
14	E	e	16 14 40	...	...	...	Feeble.			F	13 25	...	...	...
14	E	e	17 24 15	...	...	...				F	37	...	...	...
		eS	26 21	...	...	...	Slight. Deep focus? (Time calculated by extrapolation of slope.)	23	E	e	8 58 40	...	...	...	Slight. Beginning mixed with micro-seisms.
17	E	e	10 51 58	...	...	...	Slight.			i	9 0 9	...	...	...
		e	55 21	...	...	...				F	10	...	...	...
		e	11 2 3	...	...	...				e	12 28 51	...	...	...	Slight. Beginning mixed with micro-seisms.
		M ₁	19 15	...	...	...				i	30 27	...	...	...
17	E	e	20 11 58	...	...	...	Slight.			Mn	32 51 7 13	...	...	...
		M ₁	29 43 15 7	...	...	...				F	13 2	...	...	...
		F	21 2	...	...	...				i	2 26 26	...	...	...	Slight.
17	E	e	22 45 58	...	...	...	Feeble, near. Deep focus?	25	E	Mn	32 45	...	...	...
		eS	47 24	...	...	...				F	51	...	...	...
		F	55	...	...	...				e	3 27 27	...	...	...	Feeble. Surface waves?
18	E	P	14 0 21	...	...	4680	Slight. Depth of focus about 90 km.	26	E	e	8 8 12	...	...	...	Slight. Beginning mixed with micro-seisms. Deep focus type?
		P	0 40	...	...	...				S	13 11	...	...	...
		P	0 40	...	...	...				F	9 25	...	...	...

UPPER AIR OBSERVATORY, AGRA.

G. CHATTERJEE,

Superintendent, Meteorologist.

COLABA OBSERVATORY, BOMBAY.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
April, 1940.															
1940.			h. m. s.	Sec.	μ	Km.		1940.			h. m. s.	Sec.	μ	Km.	
Apr. 1	N, E	iP	11 30 07	...	...	7680	Moderate. Epc.: 2°S., 140°E., near New Guinea. O = 11h. 19m. 09s.	Apr. 13	N, E	e	06 37 13	...	...	...	Slight.
	N, E	iPcP	30 27	...	...	...			N, E	iS	42 27	...	...	...
	N, E	i	30 57	...	...	...			N, E	i	45 30	...	...	...
	E	iPP	32 34	...	...	...			E	Mn	07 00	...	...	...
	N, E	i	38 54	...	...	...			N	Mn	02	...	...	...
	N, E	iS	39 08	...	...	...			N, E	F	59	...	...	...
	N, E	i	39 32	...	...	...		13	E	i(P)	17 26 40	...	...	...	Slight.
	E	i(ScS)	40 05	...	...	...			N, E	i(S)	30 46	...	...	...
	N, E	i	43 39	...	...	...			N, E	F	18 05	...	...	...
	N, E	LQ	46 56	...	...	...		14	N, E	e	09 28 14	...	...	...	Slight.
	N, E	LR	52 14	...	...	...			N, E	F	10 25	...	...	...
	E	Mn	12 01 30 25 7	...	...	...						...	...	...
	N	Mn	01 34 23 15	...	...	...						...	...	...
	N, E	F	14 40	...	...	...		14	E	iP	14 43 14	...	...	6000	Slight. Epc.: 9°N., 126° 50' E., by Butuan and Manila. Felt in north eastern Mindano (Manila.)
1	N, E	e	17 45 30	...	...	...			N, E	iS	50 50	...	...	...
	N, E	F	59 30	...	...	...			E	iS	55 05	...	...	...
1	N, E	iP	13 48 55	...	...	3430	Slight. Epc.: Near 27°N., 105°E., in South China. O = 13h. 42.7m.		N, E	LR	15 02 00	...	...	...
	E	i	53 32	...	...	...		14	E	iP	14 59 19	...	...	...	Superposed on the previous shock.
	N, E	i	53 43	...	...	...			N, E	F	15 07 21	...	...	...
	E	iS	53 59	...	...	...			N, E	F	16 14	...	...	...
	N	i	54 21	...	...	...						...	...	...
	N	Mn	14 00 31 15 14	...	...	...		16	N, E	iP	06 20 01	...	...	9050	Moderate. Epc.: 51°N., 176°E., in the Bering Sea. O = 6h. 7.7m. Epc.: 62.6°N., 173.8°E., H. O. = 6h. 7.7m. (U. S. C. G. S.)
	N, E	F	15 33	...	...	...			N, E	i	20 14	...	...	...
6	N, E	e	18 50 36	...	...	...	Slight.		N, E	iS	30 15	...	...	...
	N, E	e	19 04 52	...	...	...			N, E	i	30 40	...	...	...
	N, E	F	38	...	...	...			N, E	i(SKS)	39 20	...	...	...
7	E	i	14 35 06	...	...	...			N, E	IPS	30 56	...	...	...
8	N, E	e	10 04 33	...	...	...	Surface waves.		N, E	iPPS	31 26	...	...	...
	N, E	F	44	...	...	...			N, E	iS	35 06	...	...	...
10	N, E	i(S)	08 23 00	...	...	...	Slight. Epc.: Near 29°N., 81°E., in Nepal.		N, E	iLQ	39 05	...	...	...
	N, E	e	25 29	...	...	...			N	M ₁	54 44 17 91	...	...	...
	N, E	iS*	24 15	...	...	...			E	M ₁	55 10 15 32	...	...	...
	N, E	i	24 32	...	...	...			E	M ₁	59 28 16 48	...	...	...
	N, E	iS	24 47	...	...	...			N, E	F	Lost in the following shock.	...	...	...
	N, E	F	9 0	...	...	...		16	E	i(P)	06 55 38	...	...	...	Moderate. Superposed on the previous shock. Epc.: Probably the same as above.
10	N, E	e	20 00	...	...	...	Slight.		N, E	i(S)	07 05 49	...	...	...
	N, E	F	21 05	...	...	...			N	M ₁	29 26 19 110	...	...	...
11	N, E	e	09 24 32	...	...	...	Slight.		E	M ₁	34 27 19 55	...	...	...
	N	Mn	48 55 16 3	...	...	...			N	M ₁	34 27 15 43	...	...	...
	E	Mn	49	...	...	...			N, E	F	10 35	...	...	...
	N, E	F	10 27	...	...	...		17	E	iP	21 47 28	...	...	9600	Slight. Epc.: 8°S., 156°E., in the neighbourhood of Solomon Islands. O = 21h-34.8m.
11	N, E	e	13 24 0	...	...	...	Slight.		N, E	e	50 46	...	...	...	Feeble. Surface waves.
	N	e	24 31	...	...	...			N, E	F	01 25	...	...	...
	E	e	28 0	...	...	...			N, E	F	11 33 01	...	...	...	Slight.
	N, E	e	32 30	...	...	...			N, E	e	12 15	...	...	...
	N, E	F	14 10	...	...	...			N, E	F	12 15	...	...	...

COLABA OBSERVATORY, BOMBAY.

Table with columns: Date, Compt., Phase, G. M. T., Per., Amp., Δ, Remarks. Includes data for April 1940 and May 1940.

April, 1940.

May, 1940

Table with columns: Date, Compt., Phase, G. M. T., Per., Amp., Δ, Remarks. Includes data for May 1940.

COLABA OBSERVATORY, BOMBAY.

Table with columns: Date, Compt., Phase, G. M. T., Per., Amp., Δ, Remarks. Includes data for May 1940.

May, 1940.

Great. Epc. 12°S., 78°W., h=40 km. (probable) H. O.—16 h. 33m. 40s. Destructive in Lima and Callao in Peru.

Moderate. Epc. Along fault near 32°-8'N., 115°-6'W., H. O.—4h 30m 46s. (U. S. C. G. S.) Three killed and several injured in Elcentro in Southern California. Twenty killed and many injured on Mexican Border.

Moderate. First movements as read 0.4 mm to E. Epc. 23° N., 95° E., in Upper Burma. O=21h 0m 20s. h=110 km. (probable).

Slight. Epc. 53°-2'N., 172°-0'E., H. O.—13h 54m 37 s. (U. S. C. G. S.)

Slight. Epc. Near 10° S., 108° E., to the south of Java. O=18h 59-6m.

Slight. Epc. Near 44°N., 43°E Caucasus Mountains. O=22h 23'7m.

COLABA OBSERVATORY, BOMBAY.

Date.	Compt.	Phase.	G.M.T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G.M.T.	Per.	Amp.	△	Remarks.
May, 1940.															
1940.			h. m. s.	Sec.	μ	Km.		1940.			h. m. s.	Sec.	mm.	μ	
May 24	N	M	17 49 47	...	...	...		May 27	N,E	e	4 10 37	...	...	...
	E	M	50 54	...	...	...			E	M ₁	21 00	8	5	...	
	E	M ₁	53 54	24	299	...			N,E	F	40	...	...	...
	E	M ₁	57 25	23	319	...		" 27	E	e	00 03 37	...	...	...
	N	M ₁	57 50	25	105	...			E	F	45	...	...	...
	N	M ₂	18 1 56	23	140	...		" 28	N	i	00 51 50	...	...	7470	Moderate. Epc. 3°S., 135°E., in New Guinea. O=9h. 40.9m.
	N	M ₂	11 02	18	152	...			E	e		52 28	
	N	F	Lost in the following shock.						E	e	54 14	...	...	...
" 24-25	E	i	22 14 20	...	...	...	Slight. Aftershock of the previous one.		E	e	56 05	...	...	...
	N	e	17 46	...	...	...			E	e	57 44	...	...	...
	N,E	i	21 18	...	...	...			N,E	eS	10 00 45	...	...	...
	N,E	i	31 30	...	...	...			N,E	e	01 35	...	...	...
	N	F	00 30	...	...	...			N,E	SS	04 30	...	...	...
" 27	N	e	4 14 32	...	...	2050	Slight. Epc. 36.°5 N., 70.°5 E., in the Hindu-Kush mountains. O=4h. 10.6m. h=180-200 km. Felt in peshawar and Srinagar.	" 20	E	e	02 22 01	...	...	...	Slight.
	N	iP	15 27	...	...	...			N,E	e	45 01	...	...	...
	N,E	eS	17 45	...	...	...			N,E	F	03 30	...	...	...
	N	i	18 49	...	...	...						...	...	...
	N,E	e	19 16	...	...	...						...	...	...

June, 1940.

June 2	N,E	e	12 00 57	...	...	...	Slight.	June 11	N,E	iSoS	00 02 00	...	...	...
	E	e	07 00	...	...	...			E	iSS	04 10	...	...	...
	N,E	e	18 52	...	...	...			N,E	LR	12 18	...	...	...
	N,E	F	13 30	...	...	...			N,E	F	50	...	...	...
" 3	E	e	19 01 42	...	...	...	Feeble.	" 12	N,E	i	12 12 00	...	...	...	Slight.
	N,E	F	20 30	...	...	...			N,E	F	13 30	...	...	...
" 5	N	eP	11 14 24	...	...	9930	Slight. Epc. 68°N., 138°W. H. O=11h. 1m. Os. (U. S. C. G. S.)	" 12	N,E	i	14 18 34	...	...	...	Slight.
	N,E	iPP	18 04	...	...	...			N,E	F	15 47	...	...	...
	N,E	i(S)	25 20	...	...	...		" 17	N,E	e	10 47 23	...	...	...	Slight.
	N,E	i	26 11	...	...	...			N,E	e	57 12	...	...	...
	E	i	26 25	...	...	...			N,E	F	Lost in microseisms.				
	N,E	iPS	26 49	...	...	...		" 17	N,E	i	20 28 03	...	...	...	Slight.
	N,E	e	31 06	...	...	...			N,E	F	Lost in microseisms.				
	E	LR	43 26	...	...	...		" 18	N,E	iP	14 00 43	...	...	4070	Slight. Epc. 8°N. 118°E., Sulu Sea. O=13h. 52m. 34
	N,E	M	54 03	...	...	...			N,E	i	02 34	...	...	...
	N,E	F	Lost in microseisms.						N,E	i	05 30	...	...	...
" 5	E	e	14 56 04	...	...	...			N,E	iS	07 20	...	...	...
	N,E	e	15 02 33	...	...	...			E	i	09 33	...	...	...
" 7	N,E	i(S)	07 30 54	...	...	...			N,E	e	10 35	...	...	...
	N,E	F	Lost in microseisms.						E	F	Lost in microseisms.				
" 11	N,E	iP	08 52 08	...	...	...		" 18	N,E	e	19 02 05	...	...	...
	N,E	e	55 53	...	...	...	Slight. Epc. Near 8° S., 126° E. Flores Sea. O=8h. 42m. 16s.		N,E	F	Lost in microseisms.				
	N,E	iS	09 00 13	...	...	...						...	...	...

COLABA OBSERVATORY, BOMBAY.

Date.	Compt.	Phase.	G.M.T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G.M.T.	Per.	Amp.	△	Remarks.
June, 1940.															
1940.			h. m. s.	Sec.	μ	Km.		1940.			h. m. s.	Sec.	μ	Km.	
June 22-23	N		Record lost from 03h. 50m. to 04h. 17m.					June 23	N		12 20 17	...	...	...
" 22	L	iP	11 45 43	...	...	5470	Moderate. Deep? Epc. Near 1°5'N., 121°E., in the Celebes sea.		N,E	i	29 45	...	...	...
	E	i	46 17	...	...	...			N,E	e	30 20	...	...	...
	E	i	46 38	...	...	...			N,E	i	34 18	...	...	...
	E	iPP	47 40	...	...	...	O=11h. 36.8m.	" 24	E		Record lost from 00h. 25m. to 02h. 40m.				
	E	iS	52 48	...	...	...		" 25-26	N		Record lost from 23h. 47m. to 02h. 40m.				
	E	i	54 00	...	...	...		" 26	E		Record lost from 00h. 55m. to 02h. 55m.				
	E	ScS	55 20	...	...	...		" 26-27	N		Record lost from 06h. 58m. to 02h. 35m.				
	E	LQ	57 30	...	...	...		" 26-27	E		Record lost from 07h. 32m. to 02h. 55m.				
	E	LR	12 00 18	...	...	...		" 27-28	N		Record lost from 03h. 16m. to 02h. 44m.				
" 23	N	e	12 25 58	...	...	...	Slight.								
	N	e	28 10	...	...	...						
	E	i		...	...	...						

COLABA OBSERVATORY,
BOMBAY.

S. R. SAVUR,
Director.

ALIPORE OBSERVATORY, CALCUTTA.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
April, 1940.															
1940.			h. m. s.	Sec.	μ	Km.		1940.			h. m. s.	Sec.	μ	Km.	
Apr. 1	N	IP	11 28 48	...	...	6150	Moderate. First movement—north	Apr. 13	N	M	6 50 45	...	...	...	...
		IS	36 33	...	...	...	M. Waves poor.			Mn	58 39	18	17	...	...
		IScS	38 39	...	...	...				F	Lost in congestion.				
		eSS	40 10	...	...	...						
		eL	46 3	...	...	...						
		F	14 26	...	...	...						
" 1	N	e	17 40 18	...	...	...	Tremor.	" 13	N	e	17 33 45	...	...	...	Tremor.
		F	18 8	...	...	...				F	18 13	...	...	...
" 2	N	e	21 16 10	...	...	...	Slight. Distant.	" 14	N	e	4 41 53	...	...	...	Tremor.
		e	10 49	...	...	...				F	57	...	...	...
		F	43	...	...	...						
" 6	N	e	6 47 6	...	...	...	Tremor.	" 14	N	e	9 26 7	...	...	...	Slight, distant.
		F	7 1	...	...	...				e	30 47	...	...	...
										F	49	...	...	...
" 6	N	eP	13 46 1	...	...	1730	Moderate.	" 14	N	e	9 52 23	...	...	...	Tremor.
		e	48 6	...	...	...				i	58 40	...	...	...
		IS	43 52	...	...	...				F	10 17	...	...	...
		e	49 26	...	...	...						
		M	49 58	...	...	...						
		Mn	53 1	10	80	...									
		F	15 21	...	...	...						
" 6	N	eP	18 59 8	...	...	1290	Slight.	" 14	N	e	14 15 43	...	...	...	Tremor.
		eS	10 1 18	...	...	...				F	20	...	...	...
		eS*	2 8	...	...	...				i	50 29	...	...	...
		eS	2 42	...	...	...				Mn	15 0 54	...	...	...
		IPcP	5 3	...	...	...				F	16 18	...	...	...
		F	38	...	...	...						
" 7	N	e	14 28 55	...	...	...	Tremor.	" 14	N	IP	6 18 58	...	...	7850	Moderate. First movement south.
		e	35 24	...	...	...				IPcP	19 19	...	...	...
		F	53	...	...	...				ePP	21 26	...	...	...
" 10	N	eP	8 20 13	...	...	820	Slight.			IS	28 13	...	...	...
		IS	21 36	...	...	...				ePS	28 32	...	...	...
		IS*	22 16	...	...	...				eSKS	28 57	...	...	...
		IS	22 43	...	...	...				ISS	32 37	...	...	...
		ePcP	26 6	...	...	...				eL	41 30	...	...	...
		F	Lost in congestion.				...				Mn	53 15	17	139	...
" 10	N	e	20 32 34	...	...	...	Slight, very distant.	" 19	N	e(?)	14 50 2	...	...	...	Slight, distant.
		Mn	21 24 26	...	...	...				i	58 10	...	...	...
		F	53	...	...	...				Mn	15 19 50	...	...	...
" 11	N	e	9 37 10	...	...	...	Slight, distant.	" 19	N	F	Lost in microseisms.				
		F	10 15	...	...	...						
" 13	N	e	6 39 15	...	...	...	Slight.	" 20	N	e	15 53 38	...	...	...	Slight, distant.
		e	40 50	...	...	...				i	59 37	...	...	...
		IS	45 39	...	...	...				F	16 32	...	...	...
		e	48 30	...	...	...						
		i	49 20	...	...	...						
		eL	52 7	...	...	...						

ALIPORE OBSERVATORY, CALCUTTA.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
April, 1940.															
1940.			h. m. s.	Sec.	μ	Km.		1940.			h. m. s.	Sec.	μ	Km.	
Apr. 20	N	e	20 23 6	...	...	...	Slight, distant.	Apr. 27	N	e	9 48 3	...	...	...	Slight, very distant.
		Mn	30 0	...	...	...				i	58 17	...	...	...
		F	55	...	...	...				F	13 42	...	...	...
" 24	N	e	10 38 10	...	...	...	Slight, distant.	" 27	N	e	18 15 49	...	...	...	Slight, very distant.
		i	41 42	...	...	...				i	19 59	...	...	...
		F	11 29	...	...	...				i	27 52	...	...	...
" 25	N	e	18 19 40	...	...	...	Tremor.			Mn	10 21 48	...	...	...
		F	34	...	...	...				F	48	...	...	...
May, 1940.															
May. 1	N	e	19 7 47	...	...	...	Slight, distant.	May. 7	N	IL	22 43 8	...	...	...
		e	9 40	...	...	...				M	46 18	...	...	...
		F	38	...	...	...				Mn	50 15	16	13	...	
" 3	N	e	14 50 34	...	...	...	Tremor.	" 10	N	eP	19 6 57	...	...	4030	Slight.
		F	15 14	...	...	...				IS	12 38	...	...	...
" 4	N	IP	7 35 11	...	...	7070	Slight. First movement—north.	" 11	N	eP?	14 6 1	...	...	...	Slight.
		IS	44 16	...	...	...				IS	14 51	...	...	...
		ePS	44 32	...	...	...				ePS	15 2	...	...	...
		eScS	45 13	...	...	...				eSS	10 0	...	...	...
		M	8 0 46	...	...	...				eL	20 36	...	...	...
		Mn	9 31	15	20	...				M	32 12	...	...	...
		F	9 35	...	...	...				Mn	37 41	18	21	...	
" 4	N	e	17 6 59	...	...	...	Slight, distant.	" 11	N	eP	21 1 53	...	...	480	Moderate.
		e	10 9	...	...	...				IP*	2 2	...	...	...
		F	45	...	...	...				eP	2 12	...	...	...
" 4	N	eP	21 8 6	...	...	3250	Moderate.	" 13	N	e	18 30 41	...	...	...	Slight, near.
		ePP	8 55	...	...	...				F	41	...	...	...
		ePcP	11 17	...	...	...						
		IS	12 59	...	...	...						
		eSS	14 20	...	...	...						
		IL	16 48	...	...	...						
		Mn	20 13	12	164	...									
		F	23 13	...	...	...						
" 5	N	e	1 20 8	...	...	...	Tremor.	" 13	N	e	18 30 41	...	...	...	Slight, near.
		F	Lost in microseisms.				...				F	41	...	...	...
" 5	N	M	3 36 53	...	...	...	Slight, distant. Beginning lost in congestion.	" 19	N	ePKP	4 56 46	...	...	15610	Moderate. Destructive in Mexico.
		Mn	54 10	...	...	...				ePP	59 39	...	...	...
		F	Lost in congestion.				...				eSKP	5 0 16	...	...	...
" 5	N	e	6 7 2	...	...	...	Slight, distant.	" 19	N	IPPP	2 48	...	...	...
		F	Lost in congestion.				...				ePSKS	9 33	...	...	...
" 7	N	e	22 32 10	...	...	...	Slight.	" 19	N	ePPS	12 9	...	...	...
		IS	37 53	...	...	...				eSS	18 11	...	...	...
		eSS	40 10	...	...	...				IL	44 39	...	...	...

ALIPORE OBSERVATORY, CALCUTTA.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
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May, 1940.

1940.							1940.								
Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	
May 10	N	M	5 55 9	...	...	...	May 24	N	Mn	18 11 1	20	465	...	
		Mn	6 2 19	16	40	...			F	Lost in microseisms.					
		F	Lost in microseisms.							e	22 17 18	Slight, very distant.
" 19	N	IP	15 26 19	...	...	0180	" 24	N	n	23 34 21	...	...	...	Aftershock of previous one.
		e	26 47	...	...	...			F	Lost in microseisms.				
		epP	28 18	...	...	...	" 27	N	IP	4 15 3	...	...	2280	Slight. First movement—North. Focal depth about 180 km. Epicentre in the Hindukush mountains.
		isP	29 20	...	...	...			epP	15 59	...	...	...
		is	33 10	...	...	...			is	18 39	...	...	...
		e	34 10	...	...	...			esS	19 31	...	...	...
		isS	36 42	...	...	...			F	50	...	...	...
		F	Lost in microseisms.					" 28	N	eP	9 50 28	6220	Moderate. Focal depth about 150 km.
" 19	N	e	18 34 47	...	...	...			epP	51 0	...	...	...
		Mn	55 40	...	...	...			ePF	52 20	...	...	...
		F	Lost in microseisms.							is	58 7	
" 21	N	e	10 13 20	...	...	...			esS	59 9	...	...	...
		F	44	...	...	...			IL	10 8 5	...	...	...
" 23	N	e	6 17 12	...	...	...			F	12 57	...	...	...
		M	42 23	...	...	...			e	0 1 6	...	...	...	Slight, distant.
		F	Lost in microseisms.					" 29	N	Mn	17 18	
" 24	N	ePKP ₁	16 54 22	...	...	18000			F	Lost.				
		IPKP ₁	55 7	...	...	...			Mn	2 53 0	...	...	...	Slight, distant. Beginning lost.
		ISKP	57 55	...	...	...			F	3 37	...	...	...
		IPP	58 47	...	...	...			e	15 42 39	...	...	...	Slight, distant.
		eSKS	17 1 14	...	...	...			Mn	50 27	...	...	...
		IPPP	2 34	...	...	...			F	16 8	...	...	...
		IPSKS	9 10	...	...	...			e	0 0 29	...	...	...	Slight, distant.
		eSS	18 9	...	...	...			Mn	17 37	...	...	...
		ISSS	25 44	...	...	...			F	32	...	...	...
		IL	51 1	...	...	...			e	0 0 29	...	...	...
		M	18 3 23	...	...	...			Mn	17 37	...	...	...
				...	...	...			F	32	...	...	...

June, 1940.

1940.							1940.							
Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
June 2	N	e	11 58 57	...	...	...	June 5	N	eSS	11 29 34	...	...	...
		F	13 21	...	...	...			eSSS	33 22	...	...	...
" 2	N	e(?)	10 41 35	...	...	...			eL	41 34	...	...	...
		F	20 3	...	...	...			M	50 14	...	...	...
" 2	N	e	23 14 50	...	...	...			Mn	56 41 18 43	...	...	...
		F	26	...	...	...			F	13 57	...	...	...
" 3	N	e	18 27 47	...	...	...	" 5	N	eP	14 57 37	...	...	3920	Slight.
		Mn	19 28 13	...	...	...			ePP	58 49	...	...	...
		F	56	...	...	...			eS	15 3 11	...	...	...
" 5	N	eP	11 13 50	...	...	9330			eL	7 41	...	...	...
		ePP	16 59	...	...	...			M	9 57	...	...	...
		is	24 17	...	...	...			Mn	15 5 10 0	...	...	...
		eScS	24 32	...	...	...	" 6	N	F	36	...	...	...
				...	...	...			e	0 40 16	...	...	...	Slight, distant.
				...	...	...			F	55	...	...	...

ALIPORE OBSERVATORY, CALCUTTA.

Date.	Comp.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Comp.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
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June, 1940.

1940.							1940.								
Date.	Comp.	Phase.	G. M. T.	Per.	Amp.	△	Date.	Comp.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	
June 11	N	eP	8 50 58	5280	Slight.	June 18	N	eP	18 50 25	7550	Slight.
		is	57 52	...	...	...			is	59 25	...	...	...
		ISS	9 1 37	...	...	...			ePB	59 39	...	...	...
		IL	7 24	...	...	...			eSS	10 3 40	...	...	...
		Mn	20 41 14 10	...	...	...			M	17 53	...	...	...
		F	Lost in microseisms.							Mn	24 33 16 12	
" 12	N	e(?)	14 10 33	Slight, distant.	" 19	N	e	20 59 53	Slight, distant.
		Mn	27 55	...	...	...			F	21 20	...	...	...
		F	Lost in microseisms.					" 22	N	IP	11 44 1	4300	Moderate. First movement—south. L. waves poor.
" 10	N	i	13 29 52	Slight, near.			ePP	45 20	
		F	47	...	...	...			ePcP	46 18	...	...	...
" 17	N	e(?)	10 42 22	Slight, very distant.			is	40 58	
		F	12 58	...	...	...			eSS	52 28	...	...	...
" 17	N	e	13 33 57	Tremor.			isS	54 15	
		F	51	...	...	...			F	Lost in microseisms.				
" 17	N	eP	20 17 41	1850	Slight.	" 23	N	eP	12 34 19	800	Slight.
		eS	20 42	...	...	...			eP	34 55	...	...	...
		eSS	20 54	...	...	...			is	35 42	...	...	...
		eL	22 5	...	...	...			is*	36 9	...	...	...
		ePcP	22 34	...	...	...			is	36 23	...	...	...
		M	23 28	...	...	...			ePcP	41 12	...	...	...
		Mn	24 56 12 27	...	...	...			eScS	48 22	...	...	...
		F	21 6	...	...	...			F	Lost in microseisms.				
" 17-18	N	e	23 23 51	Slight, distant.	" 26	N	i	8 7 4	Slight, distant.
		F	0 1	...	...	...			i	11 7	...	...	...
" 18	N	e	0 31 24	Tremor.			F	Lost in microseisms.				
		F	0 45	...	...	...			eP?	11 15 52	...	...	540	Slight.
" 18	N	eP	13 59 18	3630	Slight.	" 27	N	is	16 50	
		i	14 1 33	...	...	...			eS	17 6	...	...	...
		e	3 57	...	...	...			eS	17 18	...	...	...
		is	4 35	...	...	...			F	Lost in microseisms.				
		M	7 34	...	...	...						
		F	15 37	...	...	...						

METEOROLOGICAL OFFICE, ALIPORE,
CALCUTTA.

S. K. PRAMANIK,
Meteorologist.

COLOMBO OBSERVATORY, CEYLON.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
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APRIL, 1940.

1940.							1940.							
Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
Apr. 1	E	P	11 29 10	...	...	...	Apr. 14	E	P	14 42 28	...	...	...
		S	37 21	...	...	...			L	15 01 36	...	...	...
		L	50 31	...	...	...			M	04 01	...	0.5	...	
		F	14 30	...	...	...			F	25	...	...	...
" 3	E	e	03 26	...	...	...	" 16	E	P	06 20 32	...	...	...	There are a number of well defined maxima appearing during a period of nearly an hour both before and after the maximum given here.
		F	04 35	...	...	...			KS?	31 00	...	...	...
" 6	E	e	11 01	...	...	...			L	51 40	...	...	...
		F	38	...	...	...			M	07 36 40	...	2.0	...	
" 6	E	P	13 48 50	...	...	...	" 17	E	P	21 46 40	...	...	...
		S	53 35	...	...	...			M?	56 54	...	0.5	...	
		L	59 50	...	...	...			F	22 17 30	...	...	...
		M	14 02 08	...	1.2	...	" 18-19	E	Record lost from to	10 08 ...	...	...	...
		F	48	...	...	...				00 59 ...	...	...	...
" 6	E	e	19 04 30	...	...	...	" 10	E	P	15 54 19	...	...	...	L and M cannot be picked out. Amplitude very small.
		F	22	...	...	...			S	16 01 01	...	...	...
" 9	E	e	13 10	...	...	...	" 24-25	E	Record lost from to	22 34 ...	...	...	...
		F	36 30	...	...	...				00 46 ...	...	...	...
" 12	E	e	07 12 30	...	...	...	" 27	E	e	09 48	...	...	...	Times uncertain due to overlapping trace.
		F	46	...	...	...			F	13 41	...	...	...
" 13	E	e	06 45 30	...	...	...	" 29-30	E	Record lost from to	16 02 ...	...	...	...
		F	07 43 30	...	...	...				00 47 ...	...	...	...

MAY, 1940.

1940.							1940.							
Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
May 1	E	e	07 57	...	...	...	May. 10	E	P	19 06 02	...	...	...	M not pronounced.
		F	08 35	...	...	...			(S?)	11 20	...	...	...
" 4	E	P	07 36 50	...	...	...			L	19 50	...	...	...
		S	47 15	...	...	...			M?	23 35	...	0.5	...	
		F	09 18 30	...	...	...			F	20 38	...	...	...
" 4	E	P	21 08 50	...	...	...	" 11	E	S	14 17 55	...	...	...	M not pronounced. Wave of the longest period taken.
		S	14 26	...	...	...			L	42 30	...	...	...
		L	18 50	...	...	...			M	51 40	...	0.5	...	
		M	24 00	...	4.6	...			E	15 18	...	...	...
		F	22 52	...	...	...	" 11	E	P	21 05 08	...	...	...	Amplitude small. L and M cannot be recognised.
" 5	E	eP	02 23 08	...	...	...			S	09 08	...	...	...
		L	03 19 30	...	...	...			F	40	...	...	...
		M	39 35	...	0.6	...	" 14-15	E	Record lost from to	17 27 ...	...	...	...
		F	04 18 30	...	...	...				00 56 ...	...	...	...
" 5	E	e	06 15 30	...	...	...	" 16-17	E	Record lost from to	16 02 ...	...	...	...
		F	49 30	...	...	...				00 50 ...	...	...	...
6-7	E	Record lost from to	21 27 ...	...	...	...	" 19	E	e	04 30	...	...	...
			00 51 ...	...	...	...			F	07 30	...	...	...
" 7	E	P	22 32 20	...	...	...	" 19	E	e	18 30	...	...	...
		S	39 20	...	...	...			F	19 30	...	...	...
		L	52 20	...	...	...			e	19 05 30	...	...	...
		M?	58 44	...	0.5	...	" 21	E	e	30	...	...	...
		F	23 57 30	...	...	...			F	30	...	...	...

COLOMBO OBSERVATORY, CEYLON.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
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May, 1940.

1940.							1940.							
Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
May. 24	E	P	16 53 50	...	...	...	May 28	E	P	09 50 55	...	...	...	M not pronounced. Wave of longest period taken.
		L	17 55 14	...	...	...			S	59 02	...	...	...
		M	59 30	...	23.0	...			L	10 11 51	...	...	...
		F	21 03	...	...	...			M	16 21	...	0.5	...	
" 24	E	e	22 18 30	...	...	...	" 28-29	E	e	23 59	...	...	...
		F	23 16	...	...	...			F	00 28	...	...	...
" 24-25	E	L	23 21	...	...	...	" 29	E	e	02 39	...	...	...
		M	31 00	...	0.7	...			F	03 28 30	...	...	...
		F	00 15	...	...	...					...	...	...
" 27	E	e	04 22 30	...	...	...					...	...	...
		F	35 30	...	...	...					...	...	...

June, 1940.

1940.							1940.							
Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
June 5	E	e	18 24	...	...	...	June 17	E	e	23 19 30	...	...	...
		F	20 01	...	...	...			F	33	...	...	...
" 5	E	e	11 20 39	...	...	...	" 15	E	IP	13 59 49	...	...	...	L and M cannot be identified. Amplitude small.
		L	48	...	...	...			IS	14 05 36	...	...	...
		M	12 04 15	...	0.5	...	" 18	E	e	19 02	...	...	...
		F	57	...	...	...			F	20 04 30	...	...	...
" 11	E	P	08 50 51	...	...	...	" 22	E	P	11 44 19	...	...	...
		L	09 08 51	...	...	...			S	50 43	...	...	...
		M	11 48	...	0.5	...	" 23	E	e	12 46 30	...	...	...
		F	47 30	...	...	...			F	12 46 30	...	...	...
" 12	E	e	14 17 30	...	...	...	" 23	E	e	12 37 30	...	...	...
		F	15 30	...	...	...			F	45	...	...	...
" 14	E	e	07 22	...	...	...	" 24-25	E	Record lost.	Exact duration uncertain due to lines overlapping.	...	...	...
		F	08 32	...	...	...	" 25	E	e	02 15 30	...	...	...
" 17	E	e	10 56 30	...	...	...			F	45 30	...	...	...
		F	11 51	...	...	...	" 26	E	P	08 05 31	...	...	...	The onset of S waves pronounced. L & M cannot be identified. Amplitude small.
" 17	E	e	20 28	...	...	...			S	09 54	...	...	...
		F	37	...	...	...			F	09 15	...	...	...

COLOMBO OBSERVATORY, }
CEYLON.

D. T. E. DASSANAYAKE,
Superintendent.

HAIG OBSERVATORY, SURVEY OF INDIA, DEHRA DUN.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.
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April, 1940.

1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.	1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.
Apr. 1	N	eP	11 30 16	77	0.002	7,383?			Apr. 10	N	eP	8 18 39	2	0.001	...		
		eS?	38 58	10	.018	...					IS	19 53	3	.014	...		
		M ₁	39 32	10	.018	...					M ₁	19 59	3	.014	...		
		F	12 33	...	...	...					F	37	...	...	...
" 1	N	eL?	17 39 45	10	0.004	...			" 16	N	eP	6 19 02	14	0.009	7947		
		M ₁	40 17	10	.004	...					eS	28 07	24	.032	...		
		F	51	...	...	...					e?	31 56	25	.024	...		
" 6	N	eP	13 48 20?	...	0.001	2,480					e?	35 54	22	.025	...		
		eS	52 15	12	.014	...					eL	42 33?	22	.175	...		
		eL	55 14	18	.015	...					M ₁	49 56	26	.190	...		
		M ₁	56 22	18	.015	...					F	Lost in succeeding shock.					
		M ₂	59 00	12	.010	...			" 16	N	eP	6 57 35?	19	0.037	7,721?		
		M ₃	14 07 41	12	.009	...					eS	7 06 33?	26	.050	...		
		F	33	...	...	...					eL	19 09?	21	.133	...		
" 7	N	eP	14 29 01	2	0.001	259					M ₁	26 36	22	.175	...		
		IS	29 31	4	.011	...					M ₂	30 52	19	.110	...		
		M ₁	29 43	4	.014	...					F	8 54	...	...	...
		F	35	...	...	...								

May, 1940.

1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.	1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.
May 4	N	eS	7 44 23	8	0.003	...			May 11	N	eL	21 09 05?	10	.005	...		
		eL	8 04 51	16	.004	...					M ₁	09 47	10	.005	...		
		M ₁	05 51	16	.004	...					M ₂	12 14	9	.005	...		
		M ₂	08 44	16	.005	...					F	42	...	...	...
		F	87	...	...	...			" 10	N	e	5 02 34	2	0.004?	...		
" 4	N	eP	21 06 02	5	0.003	1,916		Reported from Iran.			e?	16 15?	3	.004	...		
		eS	09 04?	8	.020	...					eL?	42 43	25	.02	...		
		eL	11 01	26	.180	...					M ₁	52 47	24	.03	...		
		M ₁	12 46	26	.180	...					M ₂	59 52	20	.03	...		
		F	22 09	...	...	...					F	6 48	...	...	...
" 7	N	e	22 30 08	4	0.001	...			" 19	N	e(P)	15 27 09?	...	...	...
		eS	35 40	7	.002	...					e(S)	34 23	2	.004	...		
		e?	40 31	8	.004	...					M ₁	37 37	10	.01	...		
		eL	42 58	14	.015	...					F	16 07	...	...	...
		M ₁	22 45 53	14	.015	...			" 24	N	eP	16 54 05	25	0.04	...		
		F	23 06	...	...	...					e?	57 48	26	.03	...		
" 11	N	e	14 12 47?	8	0.001	...					e?	17 04 49	24	.03	...		
		e	22 46?	9	.001	...					e?	08 10	25	.13	...		
		e?	29 13?	10	.001	...					e?	12 18	34	.17	...		
		eL	33 46?	11	.003	...					e?	17 09	30	.14	...		
		M ₁	36 40	18	.008	...					e?	21 10	38	.17	...		
		M ₂	38 48	17	.006	...					e?	30 57	30	.17	...		
		M ₃	42 37	16	.009	...					eL?	34 22	35	.11	...		
		F	15 09	...	...	...					M ₁	42 40?	26	.15	...		
" 11	N	eP	21 04 05	3	0.001	1668					M ₂	46 47	26	.32	...		
		eS	06 44	6	.003	...					M ₃	58 54	29	.26	...		
											M ₄	18 03 39	24	.33	...		

Destructive in Peru, South America.

HAIG OBSERVATORY, SURVEY OF INDIA, DEHRA DUN.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.
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May, 1940.

1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.	1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.
May 24	N	M ₁	18 10 05	24	0.44	...			" 27	N	IP	4 12 38	4	0.004	940		Felt at Peshawar.
		M ₂	18 20	23	.39	...					M ₁	4 15 24	7	0.026	...		
		F	19 26	...	...	...					F	25	...	...	...

June, 1940.

1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.	1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.
June 5	N	e	11 23 25	...	...	...			June 22	N	e?	11 55 23	10	0.016	...		
		e?	32 ?	...	...	...					eL	57 27	25	.015	...		
		e?	39 50?	...	...	...					M ₁	57 51	25	.015	...		
		eL	49 07	25	.02	...					F	12 38	...	...	...
		M ₁	53 53	28	.02	...			" 23	N	eP?	12 30 32?	8	0.001	620?		
		F	12 28	...	...	...					eL	32 20	14	.020	...		
" 22	N	eP	11 45 49	4	0.003	5704					M ₁	32 53	14	.020	...		
		eS	53 04?	9	.015	...					F	13 11	...	...	...

E. A. GLENNIE, Lt.-Col., D. S. O., R. E.,
Director, Geodetic Branch,
Survey of India

DEHRA DUN.

NIZAMIAH OBSERVATORY, HYDERABAD, DECCAN.

Date	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.
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April, 1940.

1940.	h. m. s.	Sec.	μ	Km.	1940.	h. m. s.	Sec.	μ	Km.			
Apr. 1	N, E	P	11 29 34	...	Apr. 10	E	L	8 23 57	...			
	E	PP	32 1	...		E	M	24 51	6 2			
	N, E	S	38 0	...		N	M	24 57	10 4			
	E	PS	38 19	...		N	F	45	...			
	E	ScS	39 25	...								
	E	SS	42 18	...	" 13	E	M	7 0 35	12 3			
	E	L	48 25	...		N	M	0 53	12 3			
	E	M	55 19	22 12	...							
	N	M	58 11	15 6	...	" 14	E	M	9 31 26	7 4		
	N	F	12 58	...	...					
" 9	E	P	13 48 13	...	2,600	" 16	N, E	P	6 19 48	...	8,780	
	E	PeP	52 2		N, E	S	29 49	
	E	S	52 20		N	PS	30 18	
	E	L	55 51		N	SS	35 4	
	E	M	57 19	8 4	...		N	L	45 40	
	E	F	14 42		N	M	50 45	18 49	...	
" 10	E	e(S)	8 22 25		E	M	52 35	15 26	...	
	E	i	23 43		F				Lost in the succeeding shock.	
	N	i	23 48	" 15	N	M	7 26 24	15 52	...	
							E	M	...	27 33	18 61	...

May, 1940.

May	h. m. s.	Sec.	μ	Km.	May	h. m. s.	Sec.	μ	Km.		
May 4	N, E	P	7 36 11	...	8,700	May 11	N	SS	21 54	...	
	N, E	S	46 8	...	...		E	M	39 27	15 5	
	N	M	8 6 25	15 4	...		N	M	14 39 37	16 10	
	E	M	7 20	15 5	...		N	F	15 21	...	
" 4	N, E	P	21 7 27	...	2,960	" 11	N, E	P	21 4 2	...	1,880
	N	PP	7 48	...	...		N	S	7 6	...	...
	E	PeP	10 51	...	...		N	L	8 18	...	...
	E	S	12 00	...	...		N	M	9 52	6 12	...
	N	SS	12 51	...	...		E	M	10 7	7 8	...
	N	L	15 17	...	...		N	F	42	...	...
	E	M	16 48	9 33	...	" 19	E	L	5 35 46	...	...
	N	M	18 11	10 29	...		E	M	50 28	15 7	...
	N	F	22 53	...	...		N	M	51 15	15 7	...
" 5	E	M	3 35 6	16 4	...	" 19	E	M	18 48 2	15 4	...
" 5	E	M	6 18 42	9 2	...	" 23	N	M	6 46 32	15 4	...
	N	M	18 47	9 2	...	" 24	N, E	P	16 53 58	...	17,000
" 7	N	P	22 31 2	...	4,360		E	P ₁	54 25	...	...
	N	PP	32 35	...	...		E	PP	58 7	...	...
	N	S	37 2	...	...		E	SKKS	17 5 9	...	...
	N	ScS	41 16	...	...		E	SKSP	8 24	...	...
	N	L	43 28	...	...		E	SS	18 11	...	...
	N	M	48 48	11 3	...		E	M	57 42	24 179	...
" 11	N, E	P	14 6 41	...	8,760	" 24	N	M	57 55	21 95	...
	N	PP	9 47	...	...		E	M	23 22 27	18 9	...
	N, E	S	16 41	...	...						...



NIZAMIAH OBSERVATORY, HYDERABAD, DECCAN.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	Δ	Remarks.
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May, 1940.

1940.	h. m. s.	Sec.	μ	Km.	1940.	h. m. s.	Sec.	μ	Km.	
May 27	N, E	P	4 14 59	...	2,100	May 28	E	S	59 38	...
	N, E	S	18 23	...	...		N	PS	59 57	...
	E	L	4 20 0	...	...		N	ScS	10 1 17	...
	N	M	20 46	6 5	...		E	SS	3 37	...
	E	M	21 0 0	6 6	...		N	L	10 16	...
	N	F	40	...	...		E	M	17 55	15 4
" 28	N, E	P	9 51 17	...	6,810	" 29	E	M	2 51 13	15 4
	N	PeP	52 16	...	...		N	M	55 24	13 5

June, 1940.

June	h. m. s.	Sec.	μ	Km.	June	h. m. s.	Sec.	μ	Km.		
June 2	N	M	12 30 44	16 4	...	June 18	E	P	14 0 1	...	4,420
" 3	N	M	19 28 48	17 4	...		E	PP	1 47	...	...
" 5	N	S	11 25 26	...	...		E	S	6 5	...	...
" 5	N	M	56 14	18 18	...		E	SS	9 1	...	...
" 11	N, E	P	8 51 28	...	5,770		E	ScS	9 50	...	...
	E	PP	53 21	...	...		E	L	12 1	...	...
	N, E	S	58 51	...	...		E	M	16 1 10	4	...
	E	SS	9 2 36	...	...	" 18	E	i	19 1 18	...	...
	E	L	8 50	...	...		E	M	23 49	14 4	...
	E	M	14 0 18	7	...	" 22	E	P	11 44 55	...	6,020
	N	M	14 48	18 7	...		E	PP	46 55	...	...
" 12	N, E	S	12 12 12	...	...		E	S	51 35	...	...
	N	M	31 12	15 5	...		E	PS	51 55	...	...
	E	M	33 52	18 6	...		E	SS	55 10	...	...
" 12	N, E	S	14 17 34	...	...		E	L	58 13	...	...
	N	M	33 36	19 7	...		E	M	12 5 2	16 14	...
	E	M	33 55	18 6	...		N, E	F			Masked by Microseisms.
" 14	E	M	7 54 44	10 3	...	" 23					A slight shock at 12 hours G. M. T. Hour marks absent.
" 17	E	M	11 29 15	18 6	...	" 26	E	eP	8 6 38	...	...
" 17	E	P	20 24 36	...	...		E	i	12 41	...	...
	E	L	29 43	...	...		E	i	16 39	...	...
	E	M	31 21	11 3	...		E	L	18 31	...	...
					...		E	M	21 38	15 9	...
					...		F				Masked by Microseisms.

NIZAMIAH OBSERVATORY,
HYDERABAD, DECCAN.

T. P. BHASKARA SASTRI,
Director.

KODAIKANAL OBSERVATORY, KODAIKANAL.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
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April, 1940.

1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	
Apr. 1	E	IP?	11 29 56	...	...	...	...	Important phases lost owing to time shutter sticking.	Apr. 13	E	I	6 44 42	...	...	...	...	Slight.
		F					F	7 36	Slight.
" 6	E	e	11 3	First movement to east.	" 13	E	e	17 31	Slight.
		F	15					F	52	Slight.
" 6	E	IP	13 48 51	3,300	...			" 14	E	I	14 42 44	Tremors.
		PP	49 28					F	15 53	Tremors.
		I	53 31			" 16	E	IP	6 20 25	9,780	...	First movement to west.
		IS	53 46					IPP	23 45	Tremors.
		L	56 24					IS	31 12	Tremors.
		Mn	14 0 9 20 8					SS	36 42	Tremors.
		F	15 8					L	48 19	Tremors.
" 6	H	e	19		Tremors.			Mn	7 2 9 24 125	Tremors.
		F	31	...	...	...	...	Tremors.			F	10 0	...	...	...	...	Tremors.
" 8	R	e	9 59	...	...	...	...	Tremors.	" 17	E	I	21 57 12	...	...	...	...	Tremors.
		F	10 45	...	...	...	...	Tremors.			F	22 13	...	...	...	...	Tremors.
" 9	E	I	13 12 46	...	...	...	...	Slight.	" 19	E	e	14 51	...	...	...	...	Tremors.
		F	41	...	...	...	...	Slight.			F	15 48	...	...	...	...	Tremors.
" 10	E	IS	8 25 12	...	...	...	...	Tremors.	" 24	E	e	10 33 36	...	...	...	...	Tremors.
		I	27 25	...	...	...	...	Tremors.			F	11 30	...	...	...	...	Tremors.
		L	28 13	...	...	...	...	Tremors.	" 27	E	e	9 48	...	...	...	...	Series of tremors.
		Mn	29 7 10 1	...	...	...	...	Tremors.			F	13	...	...	...	...	Series of tremors.
		F	40	...	...	...	...	Tremors.	" 27	E	e	18 17	...	...	...	...	Tremors.
" 10	E	e	20 56	...	...	...	...	Tremors.			F	19 31	...	...	...	...	Tremors.
		F	21 31	...	...	...	...	Tremors.			F	19 31	...	...	...	...	Tremors.

May, 1940.

1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.		
May 4	E	eP	7 36 45	...	...	0,250	...	Tremors. No. inputs marks.	May 6	E	e	?	...	...	...	...	...	Tremors. No. inputs marks.
		IS	47 08	...	...	...	...					F	?	...	...	...	...	Tremors. No. inputs marks.
		PS	47 43			" 7	E	e	?	Do.
		SS	52 16					F	?	Do.
		L	8 3 23			" 10	E	IP	19 6 36	4,050	First movement to west.
		Mn	18 30 18 7					IS	12 19	First movement to west.
" 4	E	e	18 12	...	...	...	...	Tremors.			L	16 52	...	...	...	...	...	Tremors.
		F	31	...	...	...	...	Tremors.			Mn	26 40 15 5	...	...	...	...	...	Tremors.
" 4	R	eP	21 8 15	...	...	3,400	...	Tremors.	" 11	E	eP	14 7 23	...	...	9,690	...	...	First movement to east.
		IS	13 16	...	...	...	...	Tremors.			I	17 42	...	...	...	...	...	First movement to east.
		ISS	14 17	...	...	...	...	Tremors.			IS	18 6	...	...	...	...	...	First movement to east.
		IL	16 43	...	...	...	...	Tremors.			I	18 17	...	...	...	...	...	First movement to east.
		M	20 4 21 80	...	...	...	...	Tremors.			L	34 5	...	...	...	...	...	First movement to east.
		F	23 16	...	...	...	...	Tremors.			Mn	49 11 22 10	...	...	...	...	...	First movement to east.
" 5	E	e	2 28	...	...	...	...	Feeble.	" 11	E	IP	21 5 5	...	...	2,400	...	...	First movement to east.
		F	4 24	...	...	...	...	Feeble.			IS	8 55	...	...	...	...	...	First movement to east.
" 5	E	e	6 13	...	...	...	...	Tremors.			L	10 46	...	...	...	...	...	First movement to east.
		F	29	...	...	...	...	Tremors.			F	10 46	...	...	...	...	...	First movement to east.



KODAIKANAL OBSERVATORY, KODAIKANAL.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
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May, 1940.

1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.		
May 11	E	Mn	21 20 57	13	2	...	...	Epc. : Peru.	May 24-25	E	SS	22 41 32	...	...	...	...	...	Epc. : Hindukush.
		F	51					SSS	47 56		
								L	23 10 13		
" 11	E	e	5 16 43			" 27	E	eP	4 15 30	3,180	...	Epc. : Hindukush.
		e	26 13					IS	20 18	Epc. : Hindukush.
		L	40 29					ISS	21 27	Epc. : Hindukush.
		M	45 59 36 50					L	23 47	Epc. : Hindukush.
		F	7 24					Mn	27 33 8 2	Epc. : Hindukush.
" 19	E	e	18 34		Feeble.	" 28	E	IP	9 51 10	6,840	...	First movement to west.
		F	19 7		Feeble.			PP	53 19	First movement to west.
" 24	E	eP ¹	16 53 50	...	...	17,050	...	Epc. : Peru.	" 28	E	IS	50 32	...	...	...	...	...	First movement to west.
		IPKS	57 39	...	...	...	...	Epc. : Peru.			IPS	59 44	...	...	...	...	...	First movement to west.
		ISKKS	17 5 7	...	...	...	...	Epc. : Peru.			ISS	10 3 24	...	...	...	...	...	First movement to west.
		ISKSP	8 18	...	...	...	...	Epc. : Peru.			L	10 58	...	...	...	...	...	First movement to west.
		ISS	17 35	...	...	...	...	Epc. : Peru.			Mn	19 50 22 24	...	...	...	...	...	First movement to west.
		ISSS	24 47	...	...	...	...	Epc. : Peru.			F	12 55	...	...	...	...	...	First movement to west.
		IL	46 31	...	...	...	...	Epc. : Peru.	" 29	E	e	0 0	...	...	...	...	...	Tremors.
		M	18 2 22 19 240	...	...	...	...	Epc. : Peru.			F	47	...	...	...	...	...	Tremors.
		F	21 45	...	...	...	...	Epc. : Peru.	" 29	E	e	0 0	...	...	...	...	...	Tremors.
" 24-25	E	eP ¹	22 17 51	...	...	17,050	...	Aftershock of previous one.	" 29	E	F	47	...	...	...	...	...	Tremors.
		PKS	21 56	...	...	...	...	Aftershock of previous one.	" 29	E	e	2 22	...	...	...	...	...	Feeble.
		SKKS	29 15	...	...	...	...	Aftershock of previous one.	" 29	E	F	3 44	...	...	...	...	...	Feeble.
		SKSP	32 20	...	...	...	...	Aftershock of previous one.	" 29	E	F	3 44	...	...	...	...	...	Feeble.

June, 1940.

1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	1940.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.		
June 5	E	e	11 16 58	...	...	...	...	Long distance earthquake. Times approximate.	June 12	E	e	14 18 38	...	...	...	...	...	First movement to east.
		F	13 14 58					e	25 39		First movement to east.
" 5	E	e	14 51	...	...	...	...	Tremors.	" 12	E	L	33 43	...	...	...	...	...	Tremors.
		F	15 29	...	...	...	...	Tremors.	" 14	E	Mn	48 38 15 3	...	...	...	...	...	Tremors.
" 7	E	e	7 39	...	...	...	...	Tremors.	" 14	E	e	7 44	...	...	...	...	...	Feeble.
		F	8 26	...	...	...	...	Tremors.	" 14	E	F	8 26	...	...	...	...	...	Feeble.
" 11	E	eP	8 51 17	...	...	5,650	...	Tremors.	" 17	E	e	10 57	...	...	...	...	...	Tremors.
		S	58 35	...	...	...	...					F	12 00	...	...	...	...	Tremors.
		L	9 7 18			" 18	E	IP	14 00 07	4,450	...	First movement to east.
		Mn	17 16 15 5					IS	06 12	First movement to east.
		F	10 2					ISS	09 03	First movement to east.
		I	12 11 20					IL	12 38	First movement to east.
" 12	E	e	18 50	...	...	...	...	Tremors.	" 18	E	Mn	20 00 10 7	...	...	...	...	...	Tremors.
		L	27 33					F	15 56	Tremors.
		M	31 48 22 6			" 18	E	e	10 24	Feeble.

KODAIKANAL OBSERVATORY, KODAIKANAL.



Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	
June, 1940.																
1940 June 22	E	IP	11 44 51	...	...	4,020	First movement to west.	1940 June 23	E	M?	12 36 10	...	...	...
		IS	51 25	...	...	...					F	46	...	...	...
		ISS	54 33	...	...	...			" 26	E	eP	8 06 39	...	...	...
		IL	58 34	...	...	...					S	Phase lost.		...	...	...
		Mn	12 08 36	18	16	...					ISS	12 01	...	...	...
		F	43	...	...	...					IL	14 42	...	...	...
" 23	L	eP	12 34 0	...	...	720	Feeble.			M	17 40	15	14	...		
		IS?	35 13	...	...	...				F	59	...	...	...

SOLAR PHYSICS OBSERVATORY,
KODAIKANAL.

A. L. NARAYAN,
Director.

The following table contains a list of earthquakes that are reported by voluntary observers from various stations :-

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity (Rossi-Forel scale).	Number of shocks.	Remarks.	Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity (Rossi-Forel scale).	Number of shocks.	Remarks.
Gauhati	1940. Apr. 19	00 09	5	5	1		Kathmandu Nepal .	1940. May 13	18 34	15	5	1	
Drosh	" 25	15 28	45	6	1		Srinagar	" 27	04 11	2	6	2	
Dibrugarh	May 13	06 45	2	6	2		Peshawar	" 27	04 13	15	4	2	

J. M. SIL,
Meteorologist, Poona.