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METEOROLOGICAL DEPARTMENT

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OCTOBER—DECEMBER, 1940

CONTENTS

	Pages.
Introduction and tables	71
Agra	73
Bombay	77
Calcutta	82
Colombo	86
Dehra Dun	88
Hyderabad	89
Kodaikanal	91
Non-instrumental Reports	93

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INTRODUCTION.

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 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°49' 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.	77°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	33 : 1	
	E	Milne-Shaw	0.45	12	350	40 : 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	18 : 1 20 : 1	{ for October and November. for December.
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	

UPPER AIR OBSERVATORY, AGRA.



October, 1940.

1940.							1940.									
Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	
			h. m. s.	Sec.	μ	Km.					h. m. s.	Sec.	μ	Km.		
Oct. 1	E	P ₁ '	11 02 49	...	...	16610	Slight. △ from P- and SS.	Oct. 4	E	SKKS	08 25 45	...	...	...
		SKP	06 05	...	...	...				PPS?	34 19	...	...	...
		SKKS	13 09	...	...	...				SS	38 25	...	...	...
		PSKS	16 52	...	...	...			N	Mn	09 22 22	22	78	...	
		SS	25 38	...	...	...			E	Mn	22 50	20	78	...	
		Mn	Between.							F	11 14	...	...	...
			12 09 13	20	6	...			"	5	E	e	09 00 03	...	Slight.	
			to 11 40	...	...	...					Mn	02 34	8	5	...
		F	59	...	...	...					F	20	...	...	...
"	1	F	13 38 07	...	...	...			"	5	E	eP*	14 49 51	...	Slight.
		F	14 02	...	...	...					P	50 14	...	...	...
"	1	E	21 56 15	...	...	...	Slight.				S	51 15	...	...	...
		i	22 06 31	...	...	...					S*	52 01	...	...	...
		i	07 17	...	...	...					Mn	52 49	8	10	...
		i	12 50	...	...	...					F	Mixed up with the following shock.			
		L	23 45	...	...	...			"	5	E	e	15 33 49	...	Slight. First part of the record lost in the coda of the previous shock.
		Mn	39 33	17	5	...					Mn	Between.	16 06 50	...	...
"	2	i	01 02 03	...	...	...	Slight.						to 07 49	...	...
		i(S?)	11 38	...	...	...			"	6	E	e	08 15 03	...	Slight.
		F	02 00	...	...	...							Between.	16 35	...
"	2	E	04 15 02	...	...	...	Slight. Very distant.						to 17 09	...	...
		Mn	Between.			...							F	27	...	
			43 30	...	...	...			"	6	E	e	08 32 27	...	Feeble.
			to 44 48	...	...	...							F	37	...
		F	05 25	...	...	...			"	6	E	e	10 57 07	...	Slight.
"	2	K	06 10 31	Very Feeble.						Mn	11 08 13	15	5
		e	12 07	...	...	...							F	23	...
		F	15	...	...	...			"	6	E	eP'	15 58 15	...	Slight. △ from P' and SS.
"	2	E	10 45 27	...	...	...	Slight. Very distant.						SKP	16 01 50	...
		Mn	11 36 11	...	...	...							SKKS	08 38	...
"	2	E	11 18 31	...	...	145	Superimposed shock. Slight.						i	13 15	...
		P	18 39	...	...	...							SS	20 50	...
		P	1 51							Mn	17 08 07	17	4
		S	19 01	...	...	...			"	6	E	F	18 14	...	...
"	4	E	01 12 44	...	...	...	Feeble. Last part of the record lost while changing chart.						F	18 14	...
"	4	E	04 38 48	1390	Moderate.			"	7	E	eP	06 51 48	...	Slight. Deep focus type.
		eP	41 06	...	...	...							S	58 56	...
	N, E	S	43 09	...	...	...							ScS?	07 01 26	...
	N	Mn	44 36	10	75	...			"	11	E	eP'	19 01 07	...	Moderate. △ from P' and SS.	
	E	Mn	05 11	...	...	...							SKP	04 36	...
	N	F	46	...	...	...							SKKS	11 52	...
"	4	E	08 14 47	...	...	17155	Moderate. △ from P ₁ ' and SS.						PsKS	15 06	...
	N	e	14 57	...	...	...							i	20 05	...
	E	P ₁ '	15 03	...	...	...							SS	24 32	...
		PP	18 32							Mn	20 03 56	20	17
				...	...	...							F	21 58	...

UPPER AIR OBSERVATORY, AGRA.

Date.	Compt.	Phase.	G. M. T.			Remarks.	Date.	Compt.	Phase.	G. M. T.			Remarks.
			Per.	Amp.	Δ					Per.	Amp.	Δ	
October, 1940—contd.													
1940. Oct. 15	E	e	h. m. s.	Sec.	μ	Km.							
		F	07 11 44	...	...	...	1940. Oct. 27	E	SSS	h. m. s.	Sec.	μ	Km.
		eP	38 ...	...	...	...			Mn	06 22 30	...	...	...
" 18	E	S	12 32 10	...	...	3280	" 27	E	F	07 03 46	20	26	...
		SS	37 04	...	...	...	" 27	E	e	08 38 ...	...	...	...
		M	38 40	...	...	...	" 27	E	i	20 17 39	...	...	Slight.
		Mn	43 27	...	...	...	" 30	E	F	21 04 ...	...	...	...
		F	46 24	14	9	...	" 30	E	eP	46 ...	...	...	...
" 20	E	e	13 34	...	...	...	" 30	E	ePP	03 24 47	...	...	10520
		i	03 38 14	...	...	...			SKS	28 18	...	...	...
		F	39 34	...	...	...			PS	34 50	...	...	...
" 20	E	e	46 ...	...	...	...			SS	36 40	...	...	...
" 20	E	i	04 27 29	...	...	...			M	42 12	...	...	...
" 20	E	i	11 14 15	...	...	...			Mn	04 03 32	...	...	...
" 22	E	P	06 44 59	...	...	4845	" 30	E	e	07 49	15	7	...
		PPP	47 19	...	...	...	" 30	E	F	05 18 ...	...	...	...
		S	51 29	...	...	...	" 30	E	F	05 25 40	...	...	...
		SS	54 39	...	...	...	" 31	E	IP	30 ...	...	...	...
" 24	E	P'	20 26 43	...	...	17120	" 31	E	e	05 27 21	...	...	2855
		SKP	30 13	...	...	...	" 31	E	S	27 24	...	...	...
		SKKS	37 04	...	...	...	" 31	E	i	31 47	...	...	...
		SS	50 15	...	...	...	" 31	E	SS?	31 50	...	...	...
		Mn	21 28 04	...	...	...	" 31	E	M ₁	33 18	...	...	...
		F	F Mixed up with the following shock.			...	" 31	E	M ₂	38 05	15	12	...
" 24	E	e	22 05 52	...	...	...	" 31	E	M ₃	40 19	...	...	...
		Mn?	07 44	...	...	...	" 31	E	F	41 02	10	10	...
" 27	E	eP'	05 55 15	...	...	16300	" 31	E	F	08 15 ...	...	...	...
		PP	58 34	...	...	...	" 31	E	F	55 ...	...	...	...
		SS	06 17 36	...	...	...	" 31	E	P	10 45 47	...	...	1035
		F	Feeble. Beginning lost in the coda of the previous shock.			...	" 31	E	P?	46 42	...	...	Moderate.
		F	Moderate. Δ from P' and SS.			...	" 31	E	IS	47 31	...	...	...
		F	Slight. Δ from P' and SS.			...	" 31	E	F	11 21 ...	...	...	...
November.													
1940 Nov. 4	N, E	IP	08 32 45	...	...	1145	1940. Nov. 8	E	ISKS	58 25	...	...	...
	N	pP	32 53	...	...	...	" 8	E	S?	11 01 27	...	...	...
	N, E	S	34 40	...	...	...	" 8	E	PS?	03 11	...	...	...
	N, E	eS	34 57	...	...	...	" 8	E	PPS?	05 11	...	...	...
	E	F	55 ...	...	...	...	" 8	E	SS	09 55	...	...	...
	N	F	09 02 ...	...	...	...	" 8	E	L?	32 46	...	...	...
" 6	E	iP	16 16 07	...	...	2635	" 9	E	Mn	49 01	...	...	...
		S	20 16	...	...	...	" 9	E	F	12 57	...	...	...
		Mn	26 00	13	16	...	" 9	E	e	11 16 10	...	...	Very slight.
		F	17 04	...	...	...	" 9	E	i	22 36	...	...	...
" 7	E	e	14 06 22	...	...	...	" 10	N	eP	24 31	...	...	...
		PPP?	08 25	...	...	...	" 10	N	iP	12 13	...	...	...
		IS	13 03	...	...	...	" 10	N, E	i	01 47 05	...	...	4935
		ScS?	15 17	...	...	...	" 10	N	i	47 11	...	...	Destructive Rumanian earthquake. Depth of focus of the order of 150 km.
		Mn	32 06	15	07	...	" 10	N	pP	47 37	...	...	...
		F	15 50	...	...	...	" 10	N, E	eP	48 06	...	...	...
" 8	E	e	10 51 56	...	...	...	" 10	N, E	eP	48 06	...	...	...
		F	Slight. Very distant.			...	" 10	N, E	eP	48 06	...	...	...



Date.	Compt.	Phase.	G. M. T.			Remarks.	Date.	Compt.	Phase.	G. M. T.			Remarks.
			Per.	Amp.	Δ					Per.	Amp.	Δ	
November, 1940—contd.													
1940. Nov. 10	E	PP	h. m. s.	Sec.	μ	Km.	1940. Nov. 18	E	eS?	h. m. s.	Sec.	μ	Km.
		PPP	01 49 03	...	...	...	" 18	E	iP	13 20 28	...	...	...
		S	49 34	...	...	...	" 18	E	iPP	12 56 05	...	...	5735
		N, E	49 42	...	...	...	" 18	E	iS	58 05	...	...	Slight. Direction of first motion E.
		N	53 39	...	...	...	" 18	E	SS	13 03 26	...	...	...
		N, E	54 35	...	...	...	" 19	E	L	06 57	...	...	...
		N, E	54 39	...	...	...	" 19	E	iP	12 05	...	...	...
		E	56 52	...	...	...	" 19	E	i	15 10 59	...	...	5845
		E	57 13	...	...	...	" 19	E	i	11 04	...	...	Moderate. Direction of first motion W.
		N	57 39	...	...	...	" 19	E	PP	13 01	...	...	...
		R	Lost while changing chart.			...	" 19	E	iS	18 26	...	...	...
" 10	E	i	06 47 46	...	...	...	" 19	E	SS	22 19	...	...	...
		F	58 ...	...	...	...	" 19	E	i	22 58	...	...	...
" 13	E	eP	11 41 16	...	...	2390	" 19	E	Mn	35 39	20	55	...
		S	45 44	...	...	...	" 19	E	F	Mixed up with the following shock.			...
		L	48 27	...	...	...	" 19	E	i	16 36 06	...	...	Slight.
		F	12 39	...	...	...	" 19	E	i	43 06	...	...	...
" 14	E	iP	10 43 20	...	...	6020	" 20	E	F	17 21	...	...	...
		eS	50 57	...	...	...	" 20	E	iP	18 02 32	...	...	1155
		SS	54 51	...	...	...	" 20	E	eP	03 12	...	...	Slight. Depth of focus about 160 km. Direction of first motion W.
		M	11 04 34	...	...	...	" 20	E	S	04 28	...	...	...
		Mn	Between	...	...	...	" 20	E	i	04 45	...	...	...
		F	08 00	...	...	...	" 20	E	F	35	...	...	...
		F	to 09 51	...	...	...	" 25	E	e	06 55 39	...	...	Feeble.
		F	12 02	...	...	...	" 25	E	i	07 08 29	...	...	...
" 17	E	e	06 37 20	...	...	...	" 25	E	F	29	...	...	...
		Mn	52 59	...	...	...	" 26	E	e	10 08 18	...	...	Feeble.
		F	07 41	...	...	...	" 26	E	Mn	15 13	...	...	...
" 18	E	e	05 01 02	...	...	...	" 26	E	F	38	...	...	...
		i	07 30	...	...	...	" 28	E	e	21 43 45	...	...	Slight.
" 18	E	F	Mixed up with the following shock.			...	" 28	E	Mn	46 41	10	8	...
		F	05 18 07	...	...	...	" 28	E	F	22 12	...	...	...
		F	Very feeble.			...	" 28	E	F	22 12	...	...	...
December, 1940.													
Dec. 2	E	e	12 13 23	...	...	...	Dec. 4	E	SS	13 27 47	...	...	...
		Mn	16 24	...	...	...	" 4	E	SSS	29 17	...	...	...
		F	39	...	...	...	" 4	E	L	33 43	...	...	...
" 3	E	eP	08 41 44	...	...	5820	" 4	E	M	38 55	...	...	...
		i	41 50	...	...	...	" 4	E	Mn	49 15	19	13	...
		S	48 50	...	...	...	" 4	E	F	15 01	...	...	...
		L	57 40	...	...	...	" 8	E	P	06 19 19	...	...	5255
		F	07 41	...	...	...	" 8	E	S	26 12	...	...	Slight.
" 4	E	P	13 15 46	...	...	6500	" 8	E	ScS	29 09	...	...	...
		ePP	17 56	...	...	...	" 8	E	L	34 12	...	...	...
		i	20 20	...	...	...	" 8	E	M	38 24	...	...	...
		iS	23 50	...	...	...	" 8	E	Mn	48 45	...	...	...
		ScS	25 46	...	...	...	" 8	E	F	07 38	...	...	...

UPPER AIR OBSERVATORY, AGRA.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
December, 1940—contd.															
1940.			h. m. s.	Sec.	μ	Km.		1940.			h. m. s.	Sec.	μ	Km.	
Dec. 16	E	eP	09 40 07	...	...	...	Slight.	Dec. 20-21	E	M ₁	00 17 29	...	...	...
		l	49 32	...	...	...				F	00 18 34	...	...	...
				...	...	...	Rest of the record lost in the following superimposed shock.				01 20	...	...	...
" 16	E	IP	09 55 38	...	...	2100	Slight. Direction of first motion W.	" 22	E	e	12 40 23	...	...	...	Moderate distant. Very
		S	59 11	...	...	...				e	51 48	...	...	...
		M	10 02 32	...	...	...				SKS	18 00 00	...	...	...
" 16	E	eP	20 23 18	...	...	235	Slight.			SKKS?	01 15	...	...	...
		S	23 52	...	...	...				SS	09 58	...	...	...
		S	24 03	...	...	...				l	23 59	...	...	...
		F	33	...	...	...				Mn	43 24 17 07	...	...	...
" 17	E	P	14 52 42	...	...	7065	Slight.	" 22	E	P?	19 19 10	...	...	...	Moderate distant. Very
		PeP	53 10	...	...	...				l	20 09	...	...	...
		ePP	55 00	...	...	...				l	19 23 33	...	...	...
		S	15 01 16	...	...	...				SKKS?	29 12	...	...	...
		PS	01 23	...	...	...				SS	41 10	...	...	...
		l	01 35	...	...	...				Mn	34 13	...	...	...
		ScS	02 47	...	...	...				F	20 58	...	...	...
		SS ₁	05 34	...	...	...		" 25	E	eP	23 10 09	...	...	1145	Slight.
		M	18 43	...	...	...				S	12 04	...	...	...
" 18	E	eP	03 49 34	...	...	6645	Slight.	" 27	E	e	17 02 57	...	...	...	Slight.
		S	57 46	...	...	...				F	25	...	...	...
		ScS	59 22	...	...	...		" 28	E	e	02 25 14	...	...	...	Feeble.
		eSS	04 01 42	...	...	...				F	Lost while changing chart.	...	...	...
		Mn	15 11	...	...	...		" 28	E	eP	16 48 14	...	...	7045	Moderate. Depth of focus about 80 km.
" 18	E	IP	05 42 02	...	...	6645	Slight. Direction of first motion W.	" 28	E	IP	48 17	...	...	...
		ePP	44 05	...	...	...				IP	48 29	...	...	...
		PPP?	45 56	...	...	...				PP	50 19	...	...	...
		S	50 15	...	...	...				PPP	52 00	...	...	...
		ScS	51 47	...	...	...				S	56 47	...	...	...
		SS?	54 20	...	...	...				PS	56 54	...	...	...
		L	06 00 41	...	...	...				sS	57 17	...	...	...
		M	05 50	...	...	...				ScS	58 00	...	...	...
" 19	F	IP	15 56 22	...	...	4620	Slight. Direction of first motion W.	" 28	E	e	19 10 10	...	...	...	Surface waves.
		PP	58 02	...	...	...				Mn	23 01	...	...	...
		S	10 02 38	...	...	...				F	20 12	...	...	...
		sSS?	05 47	...	...	...				P	21 44 34	...	...	2710	Feeble
		ScS	06 25	...	...	...				S	48 49	...	...	...
		L?	09 03	...	...	...				F	22 19	...	...	...
		Mn	16 35 19 10	...	...	...						...	...	...
		F	17 01	...	...	...						...	...	...
" 10	E	e	17 36 00	...	...	...	Tremor.	" 28	E	e	19 10 10	...	...	...	Surface waves.
		F	38	...	...	...				Mn	23 01	...	...	...
" 20-21	E	e	23 57 30	...	...	...	Slight.	" 28	E	P	21 44 34	...	...	2710	Feeble

UPPER AIR OBSERVATORY, AGRA.

G. CHATTERJEE, Superintending Meteorologist.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
October, 1940.															
1940.			h. m. s.	Sec.	μ	Km.		1940.			h. m. s.	Sec.	μ	Km.	
Oct. 1	N, E	IP ₁	11 02 25	...	...	...	Slight. Epc: 28° S, 72° W. H=10h. 42m. 52s. (J. S. A.)	Oct. 5	S, E	e	09 02 30	...	...	...	Slight.
		l	02 40	...	...	...			N, E	e	04 07	...	...	...
		l	02 55	...	...	...			N	Mn	07 40	7	3	...	
		l	06 20	...	...	...			E	Mn	08 04	8	...	...
		l	12 31	...	...	...			N, E	F	53	...	...	...
		Mn	12 00	...	22	2	...	" 5	N	e	14 49 01	...	...	...	Slight.
		Mn	12 00	...	...	...	...		E	e	52 37	...	...	...
		F	13 00	...	...	...	...		N	e	54 03	...	...	...
" 1-2	N, E	e	21 57 16	...	...	...	Slight.		E	l	54 53	...	...	...
		e	22 36	...	...	...			E	l	56 26	...	...	...
		Mn	52	...	...	...			N, E	F	16 55	...	...	...
		F	00 34	...	...	...		" 6	E	e	08 19 04	...	...	...	Slight.
" 2	E	e	01 02 27	...	...	...	Slight.		N	e	19 44	...	...	...
		e	12 15	...	...	...			E	e	19 53	...	...	...
		F	02 15	...	...	...			E	l	21 34	...	...	...
" 2	N, E	l	11 23 59	...	...	...	Slight.		N	e	22 31	...	...	...
		l	24 12	...	...	...			N, E	F	45	...	...	...
		F	12 10	...	...	...		" 6	N, E	IP ₁	15 58 03	...	...	16150	Moderate. Epc: 18° S, 71° W. H: 15h. 38-7m (J. S. A.)
" 3	E	e	01 27 04	...	...	...	Feeble. Surface waves.		E	IPP	16 01 23	...	...	...
		F	02 04	...	...	...			E	SKKS	08 14	...	...	...
		F	02 04	...	...	...			N	eSKKS	08 14	...	...	...
" 3-4	N	Record lost from	21 00	...	...	...			E	Mn	17 01	...	21	7	...
			02 32	...	...	...			N	Mn	05	...	...	...
" 4	N	IP	04 40 38	...	...	2500	Moderate. Epc: Near 31° N, 04° E. to the north-east of Lhasa in Tibet. O=04h. 35m. 44s.	" 7	E	IP	06 52 15	...	...	5800	Slight. Epc: Near 5°-5 N, 126°-0 E., to the south-east of Mindanao. O=6h. 43-1m.
		IS	44 36	...	...	...			N	eP	52 19	...	...	...
		ISS	45 07	...	...	...			E	l	54 32	...	...	...
		(L _Q)	45 30	...	...	...			N, E	IS	59 40	...	...	...
		L _R	46 52	...	...	...			N	l	07 00 35	...	...	...
		Mn	49 47	8	30	...			N, E	F	08 52	...	...	...
		F	06 15	...	...	...		" 7	N, E	e	10 29 05	...	...	...	Tremor.
" 4	N, E	eP ₁	08 14 33	...	...	16370	Great. Epc: 19° S, 67° W. H. O.=7h. 54m. 35s. (U. S. C. G. S.) Epc: 20°-8 S., 70°-4 W. H=7h. 54m. 45s. h=75 km. (J. S. A.)		E	e	30 57	...	...	...
		e	16 32	...	...	...			N	e	31 05	...	...	...
		ePP	18 23	...	...	...			N, E	F	40	...	...	...
		eSKKS	24 47	...	...	...		" 11	N, E	IP ₁	19 00 47	...	...	16190	Moderate. Epc: 45° S., 73° W. H. O.=18h. 41-0m. (U. S. C. G. S.) Epc: 40°-7 S., 73°-6 W. H= 18h. 41m. 17s (J. S. A.)
		ISS	3 04	...	...	...			N	IPP	04 01	...	...	...
		l	42 47	...	...	...			E	l	04 13	...	...	...
		l	48 47	...	...	...			N, E	l (PKS)	04 25	...	...	...
		L _R	00 04 17	...	...	...			N, E	l (SKKS)	11 08	...	...	...
		M ₁	16	...	22	200	...		E	SKSP	14 17	...	...	...
		M ₁	16 20	20	20	...	...		E	IPPS	16 45	...	...	...
		M ₂	19 17	21	190	...	...		N, E	ISS	23 02	...	...	...
		M ₂	19 50	20	18	...	...		N, E	LR	50 06	...	...	...
		F	10 36	...	...	...	...		N	Mn	20 06 18	15	4	...	
		F	10 36	...	...	...	...		E	Mn	10 04	10	11	...	
		F	10 36	...	...	...	...		N, E	F	21 42	...	...	...

COLABA OBSERVATORY, BOMBAY.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
October, 1940—contd.															
1940.								1940.							
Oct. 16	N	Record lost from	h. m. s.	Sec.	μ	Km.		Oct. 27	N,E	eSKSP	06 08 40	...	...	...
	E	Record lost from	00 59 ...	...	...	...			N	ISS	17 23	...	...	...
		to	07 39 ...	...	...	...			E	eSS	17 36	...	...	...
		to	00 59 ...	...	...	...			N	Mn	56 ...	...	...	...
		to	02 40 ...	...	...	...			E	M ₁	07 02 07	23	11	...	
" 18	N	e(P)	12 32 20	...	...	(3480)	Slight.		E	M ₁	26 17 19	4	...	...
	N	e	[33 14	...	...	...			E	M ₁	34 24 18	3	...	...
	E	e(S)	37 27	...	...	...			N,E	F	08 20	...	...	...
	N	e)	38 20	...	...	...		" 27	E	e	11 57 06	...	...	...	Feeble. Surface waves.
	E	i	40 08	...	...	...			E	F	12 05	...	...	...
	E	L	12 41 10	...	...	...		" 27	E	e	20 16 03	...	...	...	Slight.
	N	Mn	45 44	17	2	...			E	e	20 44	...	...	...
	E	Mn	45 53	17	3	...			N	e	22 13	...	...	...
	N,E	F	13 32	...	...	...			N	e	23 06	...	...	...
" 20	N,E	e	03 42 46	...	...	...	Feeble. Felt at Shillong and Dhubri.		E	e	23 29	...	...	...
	E	e	43 41	...	...	...			N	e	23 35	...	...	...
	N,E	F	52	...	...	...			E	e	24 04	...	...	...
" 22	N,E	IP	06 45 15	...	...	5090	Slight. Felt at Bucharest Epc: 45° 5' N., 26° 5' E., in Rumania. O= 36.9m. h=130 km. (approx.)		N	i	24 54	...	...	...
	N,E	IP	45 46	...	...	...			L	i	25 03	...	...	...
	N,E	i	47 15	...	...	...			N	e	16 06	...	...	...
	N,E	IS	51 59	...	...	...			E	i	26 19	...	...	...
	N,E	IS	52 48	...	...	...			E	i	27 39	...	...	...
	E	Mn	56 36	13	7	...		" 30	N,E	F	45	...	...	...
	N,E	F	07 50	...	...	...			N	e	03 25 06	...	...	...	Slight.
" 23	N,E	e	17 08 12	...	...	...	Feeble. Felt at Gauhati and Dibrugarh.		N	i	25 34	...	...	...
	N,E	e	12 10	...	...	...			E	e	34 14	...	...	...
	N,E	F	17 33	...	...	...			N	e	35 03	...	...	...
" 24	N,E	eP ₁	20 26 19	...	...	...	Slight. Epc: Near 33° 5' S., 73° 0' W., H=20h. 07m. h=100 km. (J. S. A.)		E ₁	e	37 00	...	...	...
	E	e	30 01	...	...	...			N	e	41 10	...	...	...
	N	e	30 20	...	...	...			E	i	41 18	...	...	...
	N,E	eSKKS	36 18	...	...	...			E	M ₁	04 04 04	17	3	...	
	E	e	40 36	...	...	...			E	M ₂	06 23	...	...	...
	N	e	42 24	...	...	...			N,E	F	05 12	...	...	...
	N	e	48 21	...	...	...		" 30	E	e	12 09 07	...	...	...	Feeble.
	E	e	49 45	...	...	...			E	e	10 44	...	...	...
	E	L	21 17 23	...	...	...			E	e	11 56	...	...	...
	E	M ₁	24	...	...	...			E	e	13 01	...	...	...
	E	M ₂	33	...	...	...			E	e	15 35	...	...	...
	N,E	F	22 20	...	...	...			E	e	17 00	...	...	...
" 24	N,E	e	22 43 51	...	...	...	Tremor.	" 31	E	e	39	...	...	...
	N,E	F	53	...	...	...			N,E	i	02 05 40	...	...	...	Tremor.
" 27	N,E	IP ₁	05 55 07	...	...	16210	Moderate. Epc: 84° 4' W., 9° 9' N., H. O=5h. 35m. 36s. (U. S. C. G. S.)	" 31	N,E	IP	05 25 53	...	...	...	2170
	N	IPP	58 24	...	...	...			E	i	28 02	...	...	...
	N,E	i	58 57	...	...	...			N,E	eS	29 24	...	...	...
	N	e	06 00 16	...	...	...			N,E	i	30 12	...	...	...
	N	i	02 43	...	...	...			N,E	i		...	...	...



COLABA OBSERVATORY, BOMBAY.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
October 1940—concl'd.															
1940.								1940.							
Oct. 31	E	Mn	05 42 46	13	9	...		Oct. 31	N,E	IS	10 46 06	...	...	...
	N,E	F	06 13	...	...	...			N,E	IS*	46 19	...	...	...
" 31	N,E	IPn	10 45 15	...	...	480	Moderate. Felt at Rajkot and other places in Kathiawar. Epc: Near 22° 5' N., 70° 4' E., in North-west Kathiawar. O=10h. 44m. 15s.		N	Mn	47	...	...	...
	N,E	IP*	45 25	...	...	...			E	Mn	47	...	...	...
	N,E	IP	45 32	...	...	...			N,E	F	12 30	...	...	...
November, 1940.															
Nov. 2	N	e	17 16 15	...	...	...	Tremor.	Nov. 7	N, E	IS	14 14 46	...	...	...
	E	e	16 30	...	...	...			N, E	1 (ScS)	10 21	...	...	...
	E	i	17 22	...	...	...			N, E	F	15 18	...	...	...
	N,E	F	Lost in microseisms.			...		" 9	E	e	10 51 07	...	...	...	Slight.
" 3	E	e	05 41 02	...	...	...	Feeble. Surface waves.		N, E	i	58 37	...	...	...
	E	Mn	48 51	14	2	...			E	Mn	11 40	...	...	...
	E	F	06 20	...	...	...			N, E	F	12 40	...	...	...
" 4	N, E	IP	08 34 09	...	...	1935	Slight. Felt at Peshawar. Epc: 36° N., 71° E in the Hindu Kush mountains. O=8h. 30. 2m. h=200 km. (approx.).	" 10	N, E	IP	01 47 24	...	...	...	5290
	E	i (aP)	35 22	...	...	...			N, E	ePP	48 00	...	...	...	Destructive in Rumania. Epc: Near 44° 5' N. 27° 0' E., in Rumania. O=1h. 39' 1m. h=150km.
	N	eS	37 18	...	...	...			N, E	IS	48 20	...	...	...
	E	IS	37 18	...	...	...			E	IPcP	49 00	...	...	...
	N	i	37 33	...	...	...			N, E	IPP	49 10	...	...	...
	E	i	37 37	...	...	...			N, E	i	49 50	...	...	...
	E	i (aS)	38 36	...	...	...			N	i	50 05	...	...	...
	E	Mn	39 41	...	...	...			N, E	i	52 41	...	...	...
	N, E	F	09 06	...	...	...			N, E	IS	54 00	...	...	...
" 6	N	eP	16 17 20	...	...	3365	Slight. Epc: 28° 5' N., 104° 0' E., in south China. O=10h. 11m. 15s.		N, E	i	54 42	...	...	...
	E	IP	18 02	...	...	...			N, E	IS	55 03	...	...	...
	E	i	18 02	...	...	...			E	IScS	57 06	...	...	...
	N	ePP	18 13	...	...	...			N, E	ISS	57 23	...	...	...
	N	ePcP	19 16	...	...	...			E	i	57 47	...	...	...
	N, E	IS	22 19	...	...	...			E	IScS	58 04	...	...	...
	N, E	i	22 34	...	...	...			N, E	F	05 23	...	...	...
	N	i	23 34	...	...	...		" 11	N, E	e	17 25 40	...	...	...	Slight.
	E	ISS	23 46	...	...	...			N, E	F	18 07	...	...	...
	N	i	24 32	...	...	...		" 13	N, E	IP	11 41 05	...	...	...	2780
	E	i	26 59	...	...	...			N, E	IS	45 25	...	...	...	Slight. Epc: 7° N., 95° E in the vicinity of Nicobar Islands. O=1h. 35' 7m.
	E	i	27 23	...	...	...			N, E	F	12 29	...	...	...
	N	IScS	28 07	...	...	...		" 14	N, E	IP	10 44 13	...	...	...	6890
	E	IScS	28 12	...	...	...			N, E	eS	52 43	...	...	...	Slight. Epc: Near Hokkaido. O=10h. 33' 9m.
	N, E	L	29	...	...	...			N, E	F	11 56	...	...	...
	E	Mn	31 10	8	2	...		" 16	N, E	Mn	03 13	...	...	...
	N	Mn	31 22	8	2	...			N, E	F	50	...	...	...
" 7	N, E	IP	14 07 15	...	...	6665	Slight. Epc: 20° 0' N., 138° 5' E., to the south of Japan. O=13h. 57m. 52s. h=450 km. (approx.).	" 17	N, E	e	06 20 23	...	...	...	Slight.
	E	i	08 54	...	...	...			N, E	Mn	46	...	...	...
	N	IS	09 34	...	...	...			N, E	F	07 58	...	...	...
	E	eS		...	...	...						...	...	...

COLABA OBSERVATORY, BOMBAY.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
November, 1940—contd.															
1940.								1940.							
Nov. 18	N, E	e (S)	05 24 33	...	...	...	Slight.	Nov. 20	N, E	IP	18 03 53	...	...	...	2030
	N, E	F	42	...	...	...	Epc: In Assam. Felt in North Bengal.		N, E	IS	04 46	...	...	...
18	N, E	IP	12 57 07	...	...	6610	Slight. Felt in Western Japan.		N, E	IS } eS	07 05	...	...	...
	N, E	IS	13 05 01	...	...	...	Epc: Near 33° 5' N., 139° 5' E. in the neighbourhood of Japan. O=12h. 47m.		N, E	I	07 08	...	...	...
	N, E	Mn	05 17	...	...	...			N, E	e	08 12	...	...	...
	N, E	F	20	...	...	...			N, E	I	09 18	...	...	...
	N, E	F	55	...	...	...			N, E	F	42	...	...	...
19	N, E	IP	15 11 59	...	...	6890	Moderate. Epc: Near 40° 7' N., 142° 3' E. H=15h. 1m. 47s. h=50km. (J. S. A.).	26	N, E	e	10 12 50	...	...	...
	N, E	e	14 23	...	...	...		27	N, E	F	48	...	...	...
	N, E	IS }	20 24	...	...	...			N, E	IP	14 53 36	...	...	8750	Slight.
	N, E	IPS	20 42	...	...	...			N, E	eP	53 40	...	...	...
	N, E	IScS	22 09	...	...	...			N, E	I	54 00	...	...	...
	N, E	ISS	24 24	...	...	...			N, E	e	56 20	...	...	...
	N, E	LQ	29 43	...	...	...			N, E	SS	15 09 00	...	...	...
	N, E	LR	32 09	...	...	...			N, E	LQ	15 21	...	...	...
	N, E	Mn	41 03	14	5	...			N, E	LR	21 24	...	...	...
	N, E	F	17 10	...	...	...			N, E	F	17 57	...	...	...
19	N, E	Mn	17 34	...	...	...	Slight.	28	N, E	e	21 48 01	...	...	...
	N, E	F	18 02	...	...	...			N, E	e	50 02	...	...	...	Slight.
	N, E	F	18 02	...	...	...			N, E	F	22 20	...	...	...

December, 1940.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
December, 1940.															
1940.								1940.							
Dec. 2-3	E	No record from	18 38	...	...	...		Dec. 16	N, E	I	09 55 34	...	...	...	Slight.
		to	00 19	...	...	...			N, E	I	58 57	...	...	...
4	N, E	eP	13 16 00	...	...	7220	Slight. Epc: 2° 5' S., 131° 0' E., in the sea to the north-east of Serang Island.	16	N, E	F	11 06	...	...	...
	N, E	IPP	18 18	...	...	...			N, E	F	20 28 34	...	...	...	Slight.
	N, E	e(S)	24 16	...	...	...			N, E	F	50	...	...	...
	N, E	I	24 31	...	...	...		17	N, E	IP	14 53 03	...	...	7410	Slight.
	N, E	I(ScS)	26 20	...	...	...			N, E	IPP	55 29	...	...	...
	N, E	eSS	28 51	...	...	...			N, E	I	57 20	...	...	...
	N, E	LQ	33 28	...	...	...			N, E	IS	15 01 55	...	...	...
	N, E	LR	36 00	...	...	...			N, E	IPS	02 12	...	...	...
	N, E	Mn	46 18	16	5	...			N, E	I	02 53	...	...	...
	N, E	Mn	49 11	15	1	...			N, E	Mn	23 00	...	...	...
	N, E	F	15 12	...	...	...			N, E	F	59	...	...	...
6	N	No record from	04 20	...	...	...		18	N, E	e(P)	03 48 35	...	...	5490	Slight.
		to	05 58	...	...	...			N, E	e(S)	55 42	...	...	...
8	N, E	IP	06 19 08	...	...	5120	Slight. Epc: 8° S., 111° E., in Java. O=6h. 10.8m.		N, E	Mn	04 07	...	...	...
	N, E	I	20 54	...	...	...			N, E	F	05 09	...	...	...
	N, E	IS	25 54	...	...	...		18	N, E	IP	05 42 16	...	...	6870	Slight.
	N, E	SS	29 14	...	...	...			N, E	IPP	44 38	...	...	...
	N, E	F	08 00	...	...	...			N, E	IS	50 40	...	...	...
	N, E	F	09 40 27	...	...	...	Feeble.		N, E	I	55 00	...	...	...
16	N, E	e	50 09	...	...	...			N, E	LR	06 03 00	...	...	...
	N, E	(S)	50 09	...	...	...			N, E	F	07 08	...	...	...
	N, E	F	50 09	...	...	...	Lost in the following shock		N, E	F	07 08	...	...	...



COLABA OBSERVATORY, BOMBAY.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
December, 1940—contd.															
1940.								1940.							
Dec. 19-20	N	No record from	14 02	...	...	...		Dec. 22	N, E	e	19 22 26	...	...	...
		to	02 37	...	...	...			N, E	e	23 43	...	...	...
19	E	IP	15 56 50	...	...	4890	Slight. Epc: 8° N., 117° E., in Sulu Sea near Palawan Island. O=15h. 48.4m.		N, E	e	23 59	...	...	...
	E	IS	16 03 22	...	...	...			N, E	e	28 51	...	...	...
	E	I	07 30	...	...	...			N, E	Mn	20 31 23	15	1	...	
	E	Mn	19 00	13	2	...			N, E	F	21 42	...	...	...
	E	F	17 00	...	...	...		25	N	IP	23 11 30	...	...	1970	Slight. Felt at Peshawar and Srinagar. Epc: in the Hindu Kush. O=23h. 7.0m.
20-21	E	e	23 56 08	...	...	...	Slight.		N, E	IS	14 42	...	...	...
	E	Mn	00 10	...	...	...			N, E	F	56	...	...	...
	E	F	01 11	...	...	...		26	N, E	IP	16 49 01	...	...	7650	Moderate. Deep Epc: near 18° N., 146° E., in the neighbourhood of Marianne Island in the Pacific Ocean. O=16h. 38.0m.
21	E	e	12 43 23	...	...	...	Slight.		N, E	IPcP	40 13	...	...	...
	E	e	47 57	...	...	...			N, E	IPP	51 11	...	...	...
	N, E	Mn	13 02	...	...	...			N, E	IS	58 05	...	...	...
	N, E	F	49	...	...	...			N, E	IScS	50 00	...	...	...
22	N, E	eP ₁	12 50 13	...	...	...	Slight. Epc: 17° S., 178° W. H. O.=12h. 31m. 35s. (U. S. C. G. S.)		N, E	e	17 03 17	...	...	...
	E	e	53 22	...	...	...			N, E	LE	11 19	...	...	...
	N, E	e	58 53	...	...	...			N, E	Mn	32 35	16	5	...	
	E	I	13 00 30	...	...	...			N	Mn	34 13	16	4	...	
	N, E	e	03 54	...	...	...		28	E	Mn	19 20 41	16	2	...	Surface Waves.
	E	LR	24 10	...	...	...			N, E	F	20 39	...	...	...
	N	Mn	46 54	15	2	...		28	E	I	21 44 41	...	...	...	Slight.
	E	Mn	48 26	15	2	...			N, E	I	49 05	...	...	...
	N, E	F	15 35	...	...	...			N, E	F	22 25	...	...	...
22	N, E	I	19 18 50	...	...	...	Slight.	29	E	Mn	19 47	...	...	...	Slight.
	N, E	e	19 58	...	...	...			N, E	F	20 24	...	...	...

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.
November, 1940—contd.															
1940.								1940.							
Nov. 19	N	M	15 28 53	...	...	...		Nov. 26	N	e	10 00 43	...	...	...	Slight, distant.
		Mn	32 33	...	...	...				Mn	11 00	...	...	...
		F	17 05	...	...	...				F	30	...	...	...
" 20	N	eP	18 04 30	...	...	2330	Slight. Focal depth about 180 Km. Felt at Peshawar.	" 27	N	eP	14 52 18	...	...	7270	Slight. M wave poor.
		IsP	05 26	...	...	...				IS	15 01 03	...	...	...
		IS	08 08	...	...	...				eScS	02 14	...	...	...
		esS	09 02	...	...	...				eSS	06 10	...	...	...
		F	18 37	...	...	...				IL	12 02	...	...	...
" 23	N	e	04 08 40	...	...	...	Tremor.	" 28	N	eP(?)	21 42 21	...	...	(1130)	Slight.
		F	50	...	...	...				eS	44 17	...	...	...
" 25	N	e	06 53 55	...	...	...	Slight, distant.	" 29	N	e	13 20 39	...	...	...	Tremor.
		Mn	07 03 05	...	...	...				F	54	...	...	...
		F	Lost in microseisms.							F	Lost in congestion.				

December, 1940.

Dec. 2	N	e	12 16 23	...	...	...	Slight, distant.	Dec. 17	N	eP	14 51 32	...	...	6000	Slight.
		M	21 08	...	...	...				IS	59 08	...	...	...
		Mn	22 20	...	...	...				eSS	15 03 03	...	...	...
		F	12 37	...	...	...				eL	10 05	...	...	...
" 3	N	e	06 41 38	...	...	...	Slight, distant.	" 18	N	M	15 06	...	...	...
		I	40 36	...	...	...				Mn	19 45 18 5	...	...	...
		F	07 21	...	...	...				F	Lost in microseisms.				
" 4	N	eP	13 14 39	...	...	5490	Slight. Focal depth about 100 km.	" 18	N	IS	03 58 51	...	...	...	Slight, distant.
		epP	15 01	...	...	...				Mn	04 20 11	...	...	...
		IS	21 44	...	...	...				F	Lost in microseisms.				
		esS	22 25	...	...	...				eP(?)	05 40 43	...	...	5670	Slight. Focal depth about 100 km.
		Mn	47 12 20 34	...	...	...				ePP	41 04	...	...	...
		F	14 55	...	...	...				IS	47 57	...	...	...
" 8	N	e(P)	06 18 07	...	...	...	Slight.	" 18	N	eSS	48 35	...	...	...
		IS	23 48	...	...	...				F	Lost in microseisms.				
		ISS	27 27				" 19	N	eP	15 55 00	3480	Slight.
		eL	33 23	...	...	...				ePcP	57 15	...	...	...
		M	37 57	...	...	...				IS	16 00 07	...	...	...
		Mn	42 11 16 12	...	...	...				e	00 20	...	...	...
		F	07 29	...	...	...				ISS	02 46	...	...	...
" 16	N	e	09 59 06	...	...	...	Slight.	" 20-21	N	eL	05 58	...	...	...
		e	59 24	...	...	...				Mn	10 39 17 10	...	...	...
		e(S)	10 02 57	...	...	...				F	46	...	...	...
		e	03 13				" 22	N	e	23 56 29	Slight, distant.	
		e(SS)	03 26	...	...	...				Mn	00 14 13	...	...	...
		M	05 59	...	...	...				F	51	...	...	...
		F	Lost in microseisms.							e(?)	12 49 48	...	...	...	Slight, very distant.
" 16	N	e	20 26 58	...	...	...	Slight, near.			I	57 03	...	...	...
		I	23 04	...	...	...				eL(?)	13 13 18	...	...	...
		F	35	...	...	...				Mn	43 18	...	...	...



International Seismological Centre
ALIPORE OBSERVATORY, CALCUTTA.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
December, 1940—contd.															
1940.								1940.							
Dec. 22	N	F	19 19 39	...	...	...	Lost in microseisms.	Dec. 27	N	e	17 09 40	...	...	...
" 22	N	e	30 02	...	...	...	Slight, very distant.	" 28	N	F	27	...	...	...
		e	21 01	...	...	...		" 28	N	e	02 26 10	...	...	...	Tremor.
		F	22 43 05	...	...	...	Tremor.	" 28	N	IP	16 47 25	...	...	6220	Moderate. First movement—south. Focal depth about 190 km.
" 23	N	e	53	...	...	...				ePP	48 00	...	...	...
		F	23 13 58	...	...	...	Slight.			IS	55 01	...	...	...
" 25	N	e(?)	15 53	...	...	...				IsS	56 18	...	...	...
		I	41	...	...	...				F	19 57	...	...	...
" 27	N	e	17 05 00	...	...	...	Slight, distant.	" 28	N	e	21 45 24	...	...	...	Tremor.
		e	07 12	...	...	...				F	22 18	...	...	...

METEOROLOGICAL OFFICE, ALIPORE,
CALCUTTA.

N. K. SUR
Meteorologist.

COLOMBO OBSERVATORY, CEYLON.

Date	Compt.	Phase	G. M. T.	Per.	Amp.	△	Remarks	Date	Compt.	Phase	G. M. T.	Per.	Amp.	△	Remarks
October, 1940.															
1940. Oct. 1	E	P ₁	h. m. s.	Sec.	mm.	Km.		1940 Oct. 11	E	PP	h. m. s.	Sec.	mm.	Km.	M uncertain of longest taken. Wave Period
		F	11 01 54	...	...	...				L	19 03 22	...	...	...
		e	35 ...	...	...	...				M	47 29	...	...	...
1	E	e	11 50 ...	...	...	...	Slight.			F	59 35	...	<0.5	...	
		F	12 33 30	...	...	...				F	21 20	...	...	...
1	E	e	21 55 30	...	...	...	Slight.	" 18-10	E	Record lost from	11 10	...	...	...
		F	23 53 30	...	...	...					00 44	...	...	...
4	E	P	04 41 48	...	...	...	Amplitude small.	" 22	E	P	06 46 53	...	...	...	L, and M cannot be picked out. Amp litude very small.
		S	46 21	...	...	...				S	54 57	...	...	...
		F	05 28 30	...	...	...				F	07 21	...	...	...
4	E	P ₁	08 14 30	...	...	...		" 27	E	e	05 55 30	...	...	...	Slight.
		L	09 04 51	...	...	...				F	07 54	...	...	...
		M	16 51	...	3.3	...		" 30	E	e	03 35	...	...	...	Slight.
		F	10 37 30	...	...	...				F	04 44	...	...	...
5	E	e	14 57 51	...	...	...	Amplitude very small.	" 31	E	P	05 27 02	...	...	...
		e	15 01 41	...	...	...				L	33 48	...	...	...
		F	14 30	...	...	...				M	37 08	...	1.0	...	
6	E	P ₁	15 58 17	...	...	...	M not pronounced, exact time doubtful.			F	06 25	...	...	...
		L	16 55 51	...	...	...				P	10 48 18	...	...	...
		M	17 00	...	<0.5	...				S	51 47	...	...	...
		F	85 30	...	...	...				L	10 53 20	...	...	...
7	E	P	06 51 17	...	...	...	The S waves commence sharply, with comparatively big amplitude.			M	56 03	...	6.1	...	
		IS	57 57	...	...	...				F	12 08 30	...	...	...
		F	07 28	...	...	...						...	...	...
November, 1940.															
Nov. 3	E	L	05 34 02	...	...	...		Nov. 11	E	e	17 19 30	...	...	...	Slight.
		M	38 36	...	0.5	...				F	41	...	...	...
		F	06 11 30	...	...	...		" 13	E	L	11 43	...	...	...	P, S lost owing to overlapping trace.
4	E	e	08 42 30	...	...	...	Slight.			M	45 30	...	0.6	...	
		F	57	...	...	...		" 14	E	e	12 15	...	...	...
6	E	P	16 17 33	...	...	...	Amplitude small.	" 17	E	I	06 19 30	...	...	...	Commencement fairly sharp.
		S?	22 37	...	...	...				F	51 30	...	...	...
		F	56	...	...	...		" 19	E	e	15 21	...	...	...	Slight.
7	E	P	14 07 12	...	...	...	L waves very weak.	" 20	E	e	16 17	...	...	...
		S?	14 37	...	...	...				F	28	...	...	...	Slight.
		F	15 13	...	...	...		" 27	E	P	14 52 51	...	...	...
8	E	P?	10 57 42	...	...	...	M not pronounced; given approximately.	" 29	E	P	16 20	...	...	...	S, L, M cannot be picked out. Amp litude very small.
		M	11 30	...	<0.5	...				F	13 17 19	...	...	...
		F	53	...	...	...				M	19 04?	...	...	...	Reported to have been felt as a slight tremor at Bandara-wela. Maximum uncertain owing to fading caused by vibrations of short-period.
10	E	P	01 49 00	...	...	...				F	30	...	...	...
		S	57 04	...	...	...						...	...	...
		L	02 14 49	...	...	...						...	...	...
		M	18 04	...	4.0	...						...	...	...
		F	04 59 30	...	...	...						...	...	...

COLOMBO OBSERVATORY, CEYLON.

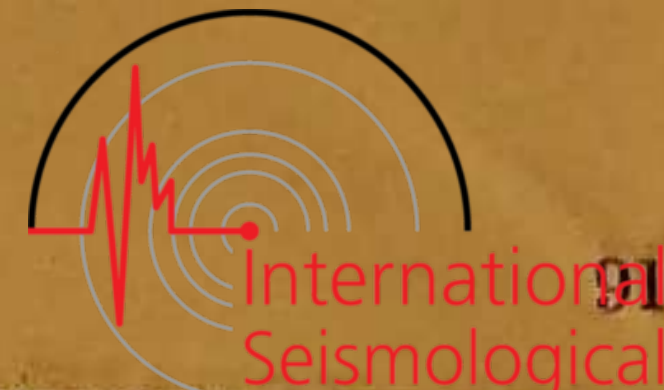
Date	Compt.	Phase	G. M. T.	Per.	Amp.	△	Remarks	Date	Compt.	Phase	G. M. T.	Per.	Amp.	△	Remarks
December, 1940.															
1940. Dec. 3	E	e	06 41 30	...	...	...	Slight.	1940. Dec. 18	E	IP	05 41 09	...	...	...	L, M, cannot be identified. Amplitude small.
		F	07 14	...	...	...				IS	48 34	...	...	...
" 4	E	P	13 14 57	...	...	...		" 19	E	e	15 50	...	...	...	Slight.
		S	22 20	...	...	...				F	16 40	...	...	...
		L	26 20	...	...	...		" 20-21	E	e	23 53	...	...	...	Slight.
		M	41 35	...	1.0	...				F	00 41	...	...	...
		F	14 42 30	...	...	...		" 22	E	P ₁	12 50 19	...	...	...	M not very pronounced and uncertain.
8	E	e	06 17 30	...	...	...	Slight.			L	13 17 49	...	...	...
		F	07 37 30	...	...	...		" 29	E	I	19 19 04	...	...	...	L, M very weak and uncertain.
10	E	e	17 00	...	...	...	Slight.			I	20 03	...	...	...
		F	17 30	...	...	...		" 16	E	e	10 02 30	...	...	...
" 16	E	e	10 02 30	...	...	...	Slight.			I	20 09	...	...	...
		F	22	...	...	...		" 17	E	P	14 52 07	...	...	...	S, L, M cannot be identified. Amplitude small.
" 17	E	P	14 52 07	...	...	...				F	16 05	...	...	...
		F	16 05	...	...	...		" 18	E	P	03 48 31	...	...	...
" 18	E	P	03 48 31	...	...	...				S	55 51	...	...	...
		S	55 51	...	...	...				L	04 04 21	...	...	...
		L	04 04 21	...	...	...				M	08 36	...	<0.5	...	
		M	08 36	...	...	...		" 28	E	P	16 48 36	...	...	...	IS waves commence with comparatively big amplitude.
		F	42	...	...	...				IS	57 20	...	...	...
		F	19 40	...	...	...				L	17 09 49	...	...	...
		F	19 40	...	...	...				M	15 29	...	1.0	...	
		F	19 40	...	...	...				F	19 40	...	...	...

COLOMBO OBSERVATORY,
CEYLON.

D. T. E. DASSANAYAKE,
Superintendent.

NIZAMIAH OBSERVATORY, HYDERABAD, DECCAN.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
November, 1940—contd.															
1940.								1940.							
Nov. 10	N	SS	h. m. s.	Sec.	μ	Km.		Nov. 19	E,N	P	15 11 36	...	...	...	6550
	N	L	01 53 38	...	...	...			E	PP	13 42	...	...	...	...
	N	M	02 03 23	...	...	...			E,N	S	19 43	...	...	...	...
	N	F	06 36	18	56	...			E	PS	10 50	...	...	...	...
			04 21	...	...	...			E	ScS	21 42	...	...	...	...
" 10	N	M	14 02 25	13	3	...			N	SS	23 36	...	...	...	...
" 11	E	M	17 34 08	12	3	...			E	L	29 58	...	...	...	...
" 13	E	e	11 34 51	...	...	...			E	M	33 58	15	10	...	...
" 13	E,N	P	11 40 03	...	...	...		" 19	E	M	16 41 02	9	2	...	...
	E	L	45 08	...	...	...		" 20	N	P	18 04 20	...	...	...	2210
	E	M	46 49	18	5	...			N	PP	05 17	...	...	...	...
	N	M	48 53	16	5	...			N	S	07 56	...	...	...	...
	E	F	12 36	...	...	...			N	L	09 23	...	...	...	...
" 14	N	M	11 08 00	15	4	...			N	M	10 23	...	...	...	...
" 16	N	M	03 17 21	15	5	...			N	F	26	...	...	...	...
" 17	N	M	06 41 42	20	9	...		" 27	E	P	14 53 06	...	...	...	8760
" 18	E	P	12 56 39	...	...	6180			E	PP	56 03	...	...	...	...
	E	PP	58 57	...	...	...			E	S	15 03 06	...	...	...	...
	E,N	S	13 04 25	...	...	...			E	PS	03 31	...	...	...	...
	E	ScS	06 17	...	...	...			E	SS	07 44	...	...	...	...
	E	SS	08 01	...	...	...			E	L	18 38	...	...	...	...
	E	L	15 07	...	...	...			E	M	25 32	21	9	...	...
	N	M	17 58	20	7	...		" 28	E	M	21 51 18	6	3	...	...
	E	M	17 50	10	6	...			N	M	50 46	6	3	...	...
December, 1940.															
Dec. 2	N	M	12 22 45	8	2	...		Dec. 17	N	M	16 37	8	2	...	...
" 4	E,N	P	13 15 21	...	...	6190			N	F	51 21	...	...	...	...
	E	S	23 08	...	...	...		" 18	E	M	04 11 20	16	5	...	...
	E	PS	23 22	...	...	...		" 18	E	P	05 41 38	...	...	6260	Hour uncertain on account of overlapping of lines.
	N	ScS	25 11	...	...	...			E	S	49 30	...	...	...	...
	E	SS	27 17	...	...	...			E	ScS	51 25	...	...	...	...
	N	L	33 11	...	...	...			E	SS	53 08	...	...	...	...
	N	M	37 21	12	3	...		" 19	A slight shock at 15 h. G. M. T. Times not available on account of absence of breaks.						
	N	M	38 36	18	8	...		" 21	A slight shock at 00 h. G. M. T. Times not available on account of absence of breaks.						
	E	M	14 29	...	...	...		" 22	Two slight shocks. Hour breaks absent.						
" 8	N	M	06 37 33	16	4	...		" 25	E	S	23 15 35	...	...	...	...
" 10	E	M	17 10 14	10	3	...			E	M	21 34	12	3	...	...
" 10	N	M	10 34	10	2	...		" 28	E,N	P	16 48 25	...	...	7220	Antipodal waves of the previous shock
" 16	E	M	10 07 35	9	2	...			E,N	S	57 08	...	...	...	...
" 17	E	P	14 52 26	...	...	6780			E	ScS	58 07	...	...	...	...
	N	S	15 00 45	...	...	...			E	L	17 10 24	...	...	...	...
	N	PS	00 57	...	...	...			N	M	18 11	15	7	...	...
	N	ScS	02 10	...	...	...			E	M	19 11	18	13	...	...
	E	SS	04 26	...	...	...		" 28	E	M	19 16 07	15	4	...	...
	E	L	11 41	...	...	...								...	...



KODAIKANAL OBSERVATORY, KODAIKANAL.

Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
October, 1940.															
1940.								1940.							
Oct. 1	L	E	11 02	...	...	...	Feeble.	Oct. 7	E	Mn	07 18 42	19	4	...	...
			15 51	...	...	...	...			F	08 10	...	...	...	...
" 1-2	E	e	21 52	...	...	...	Tremors.	" 7	E	e	10 28	...	...	...	Tremors
			00 15	...	...	...	...			F	42	...	...	...	...
" 2	E	e	11 18	...	...	...	Tremors.	" 11	E	eP ₁ '	19 01 15	...	...	15500	...
			47	...	...	...	...			IPP	04 13	...	...	...	...
" 4	E	eP	04 41 14	...	...	2860	...			SS	22 44	...	...	...	...
			45 40	...	...	...	...			SSS	27 51	...	...	...	...
			48 09	...	...	...	...			L	47 29	...	...	...	...
			49 00	10	28	...	...			M	59 37	19	15	...	...
			05 46	...	...	...	...			F	21 56	...	...	...	...
" 4	E	eP ₁ '	08 14 43	...	...	14100	...	" 22	E	IP	06 46 23	...	...	6060	First movement to East.
			24 48	...	...	...	...			IS	54 03	...	...	...	...
			30 26	...	...	...	...			M	?	...	...	...	...
			37 54	...	...	...	...			F	07 46	...	...	...	...
			09 01 54	...	...	...	...	" 24	E	e	20 36	...	...	...	Tremors.
			16 54	21	90	...	...			F	22 00	...	...	...	...
			11 10	...	...	...	...	" 27	E	e	05 55 31	...	...	...	Feeble, distant.
			08 59	...	...	...	Tremors.			F	08 28	...	...	...	...
" 5	E	e	08 59	...	...	...	Tremors.	" 30	E	e	03 25	...	...	...	Tremors.
			09 25	...	...	...	...			F	05 08	...	...	...	...
" 5	E	e	14 54	...	...	...	Tremors.	" 31	E	IP	05 26 30	...	...	2460	First movement to East.
			17 03	...	...	...	...			IS	30 25	...	...	...	...
" 6	E	e	08 15	...	...	...	Tremors.			IL	32 32	...	...	...	...
			44	...	...	...	...			Mn	34 49	10	19	...	...
" 6	E	e	15 48	...	...	...	Tremors.			F	07 19	...	...	...	...
			18 04	...	...	...	...	" 31	E	eP	10 47 30	...	...	1540	...
" 7	E	IP	06 51 38	...	...	5240	First movement to East.			S	50 02	...	...	...	...
			53 26	...	...	...	...			IL	51 17	...	...	...	...
			58 30	...	...	...	...			M	52 18	6	42	...	...
			07 05 45	...	...	...	...			F	12 40	...	...	...	...
November, 1940.															
Nov. 3	E	1(P)	05 32 12	...	...	(2200)	First movement to East.	Nov. 7	E	e	14 07	...	...	...	Tremors.
		(S)	35 45	...	...	...	...			F	15 05	...	...	...	...
		L	37 43	...	...	...	...	" 8	E	e	10 58	...	...	...	Tremors.
		M	39 15	15	3	...	...			F	11 48	...	...	...	...
		F	06 16	...	...	...	...	" 10	E	IP	01 48 35	...	...	6080	First movement to East; Epicentre: Rumania.
" 3	E	e	10 13	...	...	...	Tremors.			IS	56 15	...	...	...	...
		F	28	...	...	...	...			ISS	59 10	...	...	...	...
" 4	E	e	03 53	...	...	...	Feeble.			IL	02 04 12	...	...	...	...
		F	00 04	...	...	...	...			M	08 15	26	297	...	...
" 6	E	e	16 17	...	...	...	Tremors.	" 13	E	eP	11 39 43	...	...	...	...
		F	55	...	...	...	...							...	...

KODAIKANAL OBSERVATORY, KODAIKANAL.

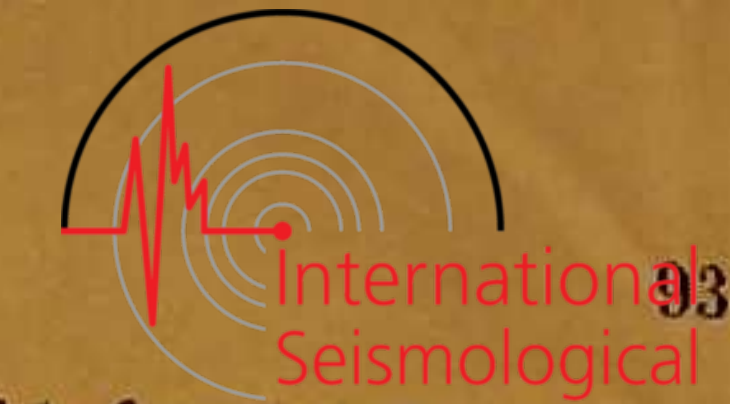
Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.	Date.	Compt.	Phase.	G. M. T.	Per.	Amp.	△	Remarks.
November, 1940—contd.															
1940.								1940.							
Nov. 13	E	e	h. m. s.	Sec.	μ	Km.		Nov. 20	E	e	h. m. s.	Sec.	μ	Km.	
		L	11 43 36	...	...	...				i	11 15	...	...	...
		M	44 47	...	...	...				IL	12 43	...	...	...
		F	46 30	17	6	...				M	14 05	6	6	...	
			12 40	...	...	...				F	30	...	...	...
" 17	E	e	06 20	...	...	...	Tremors.	" 27	E	IP	14 53 18	...	...	8,350	First movement to West.
		F	07 27	...	...	...				IS	15 02 58	...	...	...
" 18	E	e	12 57	...	...	...	Tremors.			IPS	03 24	...	...	...
		F	13 30	...	...	...				SS	07 45	...	...	...
" 19	E	IP	15 12 10	...	...	7,150	First movement to East.			L	17 18	...	...	...
		IS	20 48	...	...	...				Mn	28 03	19	7	...	
		IPS	21 00	...	...	...				F	16 43	...	...	...
		SS	24 56	...	...	...		" 28	E	e	21 56	...	...	...	Tremors.
		L	31 55	...	...	...				F	22 10	...	...	...
		Mn	42 31	10	7	...						...	...	...
		F	17 05	...	...	...						...	...	...

December, 1940.

Dec. 4	E	eP	13 15 19	...	...	6,300		Dec. 18	E	IP	05 40 30	...	...	6,210	First movement to East.
		IS	23 12	...	...	...				IS	48 18	...	...	...
		L	31 44	...	...	...				eL	58 15	...	...	...
		Mn	41 30	18	12	...				Mn	06 06 49	16	2	...	
		F	14 16	...	...	...				F	07 06	...	...	...
" 8	E	IP	06 18 11	...	...	4,060	First movement to East.	" 19	E	e	15 56	...	...	...	Feeble.
		IS	23 54	...	...	...				F	16 45	...	...	...
		L	29 06	...	...	...		" 20-21	R	e	23 54	...	...	...	Tremors.
		Mn	33 04	18	5	...				F	00 37	...	...	...
		F	07 34	...	...	...		" 22	E	e	12 50	...	...	...	Feeble.
" 10	E	e	17 04	...	...	...	Tremors.	" 22	E	F	14 27	...	...	...
		F	31	...	...	...		" 27	E	e	19 19	...	...	...	Feeble.
" 16	E	e	09 49	...	...	...	Tremors.	" 27	E	F	20 32	...	...	...
		F	01 21	...	...	...		" 28	E	e	17 13	...	...	...	Tremors.
" 17	E	IP	14 52 25	...	...	6,850	First movement to West.			F	19 05	...	...	...
		S	15 00 47	...	...	...		" 28	E	IP	16 48 41	...	...	7,380	First movement to East.
		L	11 55	...	...	...				IS	57 31	...	...	...
		M	16 42	15	3	...				IL	17 10 47	...	...	...
		F	16 07	...	...	...				M	15 20	...	22	24	...
" 18	E	e	03 47 40	...	...	...	Feeble.			F	19 50	...	...	...
		F	04 18	...	...	...					...	...	...	...

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.
	1940.	H. M.	Sec.					1940.	H. M.	Sec.			
Dhubri	Oct. 4	22 15	10	6	2		Srinagar	Nov. 4	08 30		1	5	1
Dhubri	" 20	03 32	10	6	2		Cherrapunji	" 18	05 33		2-3	3	2
Shillong	" 20	03 33	2-3	6	1		Shillong	" 17	23 40		3	3	1
Gauhati	" 23	17 00	30	6	2		Peshawar Cantt.	" 18	05 15		5-7	5	1
Dibrugarh	" 23	17 07	2	6	2		Srinagar	" 20	18 03		20	3	1
Dwarka	" 31	10 50	1	4	1		Srinagar	" 20	18 04		2	6	2
Barmer	" 31	10 40	5-6	5	1		Cherat	" 20	18 07		10	5	1
Badhanpur	" 31	10 45	30	...	1		Kabul	" 20	18 15		3	4	1
Bhuj	" 31	10 45	7	7	3		Gauhati	Dec. 19	17 07		35	6	1
Sheo (Jodhpur)	" 31	10 55	3	3	3		Peshawar	" 25	23 10		3-5	3	1
Peshawar	Nov. 4	08 23	40	4	2		Srinagar	" 25	23 11		2	7	1
							Drosh	" 25	23 14		3	5	2

J. M. SIL,
Meteorologist, Poona.