AIR MINISTRY, METEOROLOGICAL OFFI

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR JANUARY, 1952

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.S.L. 5m.

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

INSTRUMENTS: (i) GALITZIN APERIODIC SEISMOGRAPHS, PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FÜRST B. GALITZIN "VORLESUNGEN ÜBER SEISMOMETRIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ak}{wl}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+ 0.05	52.8
E.	26 July 1951	17.4	18.7	+ 0.01	66.7
Z.	2 August 1951	14.1	11.8	+ 0.18	143.

(ii) VERTICAL SEISMOGRAPH, PERIOD 1·5 SECS., DIRECT OPTICAL REGISTRATION (ZV.).

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK.
TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1	ZNE	e	03	00	–				Microseisms.
		F		25	–				
1	ZNE	e	07	55	–				Microseisms.
		F	08	15	–				
3	ZNE	eL	06	16	–				Microseisms.
	N	M		34	02	18	+ 5		
		F	07	10	–				
4	ZV,	iPKP$_1$	06	07	26				Microseisms.
	ZV,	iPKP$_2$		07	34				
	ZNE	e(L)	07	10	–				
		F	08	00	–				
11	NE	e	01	21	–				Small; microseisms.
		F		35	–				
12	ZV,Z	iP	20	23	26			8,510	e,NE.
	NE	eS		33	15				Microseisms.
	NE	ePS		33	53				Aleutian Islands,
	ZNE	eSSS		43	31				53°N, 167°W. (U.S.C.G.S).
	ZNE	eL		50	–				
	E	M		56	56	17	+ 8		
	N	M	21	01	58	17	+ 7		
		F	23	25	–				
13	ZV,	iP	04	17	11			9,200	Compression.
	ZV,	ePP		20	57				Large microseisms.
	NE	eS		27	34				East of Formosa.
	NE	ePS		27	53				22°N, 124½°E. (U.S.C.G.S)

Form 8717.

M.O.

KEW OBSERVATORY, RICHMOND, SURREY,

SEISMOLOGICAL BULLETIN.

JANUARY, . 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
(contd)									
13	ZNE	ePPS	04	29	19				
	ZNE	e		29	49				
	N	e(SS)		34	03				
	ZNE	eL		43	-				
	N	M		52	32	29	+ 85		
	E	M		53	26	27	- 65		
		F	07	10	-				
									Large microseisms.
15	NE	eL	03	10	-				
		F		35	-				
									Large microseisms.
17	NE	e	06	00	-				Possibly not seismic.
		F		30	-				
									Microseisms;
19	Z	e	08	05	-				possibly not seismic.
		F		20	-				
									19d. 09h. 12m. to
19/20	-	-	-	-	-				20d. 10d. 11m. No
									Galitzin records.
									Microseisms.
20	ZNE	e	15	15	-				
		F		20	-				
21	ZN,Z	iP	03	54	46			8,430	e,N.
	Z	ePP		57	46				Microseisms.
	NE	eS	04	04	31				Aleutian Islands.
	NE	ePS		05	08				53°N, 166½°W. Depth about
	ZNE	eSS		10	00				60 Km. (U.S.C.G.S).
	ZNE	eSSS		13	34				
	ZNE	eL		20	-				
	E	M		28	13	18	+ 5		
	N	M		33	15	16	+ 3		
		F	05	40					
									Microseisms.
23	ZV,Z	eP	03	39	56				
	ZNE	eL	04	02					
		F		30					
									Small.
24	ZNE	e	09	55					
		F	10	10					
									Microseisms.
26	ZNE	e	15	13					
		F	16	05					
									Microseisms.
28	ZNE	eP	06	30	16				
	ZNE	eL		35					
		F		45					
									Microseisms.
29	ZNE	e(L)	01	55					
		F	02	20					
									Microseisms.
31	ZV,	eP	20	28	53				
	ZNE	eL		55	-				Overlapped.
		F	-	-	-				
								6,570	Large microseisms.
31	ZV,	eP	21	05	45				
	ZNE	ePP		06	48				
	E	eS		13	52				

FORM 3718.

KEW OBSERVATORY, RICHMOND, SU

SEISMOLOGICAL BULLETIN.

JANUARY, 1952

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
(contd)									
31	NE	ePS	21	14	08				
	ZNE	eL		21	-				
	N'	M		35	14	15	- 13		
		F	23	00	-				

AIR MINISTRY, METEOROLOGICAL OFFICE

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR FEBRUARY, 1952

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.S.L. 5m.

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

INSTRUMENTS: (i) GALITZIN APERIODIC SEISMOGRAPHS, PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FÜRST B. GALITZIN "VORLESUNGEN ÜBER SEISMOMETRIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ak}{wl}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+ 0.05	52.8
E.	26 July 1951	17.4	18.7	+ 0.01	66.7
Z.	2 August 1951	14.1	11.8	+ 0.18	143.

(ii) VERTICAL SEISMOGRAPH, PERIOD 1·5 SECS., DIRECT OPTICAL REGISTRATION (ZV.).

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK.
TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
2	ZNE	e	10	53	-				Microseisms.
		F	11	35	-				
3	ZNE	eL	00	00	-				Microseisms.
		F		30	-				
3	NE	e	20	56	49				Microseisms.
		F	21	10	-				
4	ZNE	e	19	54	-				Microseisms.
		F	20	10	-				
5	ZNE	e	05	20	-				Microseisms.
		F		30	-				
5	ZNE	e	17	45	-				
		F	18	20	-				
6	NE	e	06	02	01				
	ZNE	e		04	32				
	ZNE	e(L)		06	30				
		F		20	-				
6	ZNE	eL	08	15	-				
		F		35	-				
8	ZNE	eL	20	50	-				Microseisms,
		F	21	30	-				

M.O. 558

KEW OBSERVATORY, RICHMOND, SURREY,

SEISMOLOGICAL BULLETIN.

FEBRUARY, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
10	ZV,	i(P)	06	14	55			(2,500)	
	ZNE	e(S)		18	46				
	ZNE	e		19	02				
	ZNE	eL		21	-				
		F		45	-				
11	ZV,	iP	07	18	47				
	ZV,Z	e		21	20				
	NE	e		25	21				
	NE	e		28	33				
	NE	e		33	02				
	ZNE	e(L)		35	-				
		F	08	45	-				
11	ZNE	e	16	55	-				
		F	17	40	-				
14	Z	eP	03	54	04			(12,000)	Compression.
	Z	e		54	14				
	Z	e		54	48				
	ZV,Z	ePKP		58	11				Diffuse.
	Z	iPP		59	02				
	Z	i	04	00	31				Flores Sea, north of Timor Island 8°S, 125°E.(U.S.C.G.S).
	N	eSKKS		06	07				
	ZNE	iPPS		09	30				
	NE	eSS		14	38				
	NE	eSSS		19	30				Large.
	NE	e		26	23				
	NE	eLQ		28	-				
	ZNE	eLR		40	-				
	N	M		42	20	33	+ 75		
	E	M		48	00	25	+ 40		
	Z	M		57	01	20	- 28		
		F	07	30	-				
14	ZV,	iP	21	14	38			8,100	Northwestern Colombia. 7½°N, 76½°W. (U.S.C.G.S).
	NE	eS		24	05				
	ZV,ZNE	ePS		24	16				
	ZNE	eL		40	-				
		F	22	35	-				
17	ZV,Z	e	17	48	21				
	NE	e	18	01	16				
	ZNE	eL		15	-				
	Z	M		24	35	16	+ 2		
		F	19	15	-				
18	ZNE	e	02	52	-				
		F	03	10	-				
22	ZNE	e	00	15	-				
		F		40	-				
22	ZNE	e	12	46	-				
		F	13	30	-				
24	ZV,	i	21	28	35				Small.
	ZV,	i		28	50				Western Germany.
		F		32	-				Shown on Galitzins.

FORM 3718.

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
25	ZV,ZNE	iPKP$_1$	01	36	40			(16,000)	Compression Tonga Islands. 17°S, 173½°W. (U.S.C.G.S).
	ZV,	iPKP$_2$		37	00				
	ZV,ZNE	ePP		39	58				
	ZNE	iPKS		44	50				
	ZNE	ePPP		49	58				> 180°
	ZNE	iSS		58	32				
	ZNE	ePSS		59	38				
	ZNE	eSSS	02	04	18				
	ZNE	eL		20	-				
	N	M		36	33	20	+ 12		
	Z	M		39	35	22	- 12		
	E	M		39	41	20	+ 5		
		F	04	30	-				
26	ZV,Z	iP	11	43	33			(14,000)	Compression.
	ZV,Z	i		44	32				
	ZV,Z	i		44	59				e. N,E.
	ZV,Z	iPP		47	04				e. N,E.
	ZNE	i		47	38				
	ZNE	iSKS		53	33				
	ZNE	iSKKS		55	25				
	ZNE	ePPS		59	41				
	ZNE	eSSS	12	08	56				
	ZNE	eL		15	-				
	Z	M		19	25	20	- 8		
	N	M		19	34	21	+ 5		
		F	14	10	-				
26	ZV,Z	eP	15	51	18			(10,000)	
	ZNE	e(S)	16	02	15				
	NE	ePPS		06	57				
	NE	eSS		09	32				
	ZNE	eL		13	-				
	E	M		21	40	18	+ 7		
	Z	M		21	48	21	+ 9		
	N	M		22	27	20	+ 7		
		F	17	30	-				
26	ZNE	e	17	55	-				Small.
		F	18	25	-				
26	ZNE	e	22	10	-				
	ZNE	eL		23	-				
		F	23	20	-				
28	ZNE	e	01	30	-				Small.
		F	02	00	-				

FORM 3718.

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AIR MINISTRY, METEOROLOGICAL OFFICE,

KEW OBSERVATORY, RICHMOND, SURRE..,

SEISMOLOGICAL BULLETIN FOR MARCH, 1952

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.S.L. 5m.

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

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TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1	ZNE	e	03	37	(52)				Microseisms.
	ZNE	eL		45	-				
		F	04	00	-				
1	ZNE	eL	16	10	-				Microseisms.
		F		50	-				
2	ZNE	e(L)	04	27	-				Large microseisms.
		F		55	-				
2	ZNE	e(L)	19	30	-				Large microseisms.
		F	20	10	-				
3	ZNE	e(L)	08	32	-				Large microseisms.
		F	10	20	-				
3	ZNE	e(L)	18	15	-				Microseisms.
		F	19	00	-				
4	ZV,ZNE	eP	01	35	02			(9,280)	Microseisms.
	ZV,ZNE	i		35	13				
	ZV,ZNE	i		35	25				Near east coast of Hokkaido, Japan. 42½°N, 143½°E. (U.S.C.G.S).
	ZV,ZNE	e		36	09				
	ZV,ZNE	i		37	32				
	ZV,ZNE	i		37	45				
	ZV,ZNE	iPP		38	35				
	ZV,ZNE	ePPP		40	43				
	ZV,ZNE	e(S)		45	29				
	ZV,ZNE	iPS		46	05				
	ZV,ZNE	iPPS		46	13				

(contd)

Form 3717.

SEISMOLOGICAL BULLETIN.

MARCH, 19 26.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
(contd)									
4	ZV,ZNE	e	01	47	35				
	ZV,ZNE	eSS		52	14				
	ZV,ZNE	eSSS		57	19				Possibly more than one shock.
	ZV,ZNE	eL	02	01	–				
	E	M		(03)	–	(24)	(>650)		Amplitudes very faint; measurements doubtful.
	N	M		(07)	–	(24)	(>620)		
	Z	M		(11)	–	(24)	(>570)		
		F	09	30	–				
4	ZNE	e	17	03	53				Microseisms.
	NE	e		09	41				
	ZNE	eL		16	–				
	N	M		17	58	23	+ 5		
		F	18	15	–				
4	ZNE	e	19	10	–				Microseisms.
		F		25	–				
4	ZV,	iP	20	08	38			9,220	e,ZNE.
	ZV,	i		08	53				e,ZNE.
	ZV,	i		09	06				e,ZNE.
	N	ePP		11	21				
	NE	eSKS		18	48				Microseisms.
	NE	eS		19	02				East coast of Hokkaido,
	Z	ePS		19	16				Japan. 42°N, 146°E.
	NE	eSS		23	58				(U.S.C.G.S).
	ZNE	eSSS		28	43				
	ZNE	eL		36	–				
	N	M		43	17	21	+ 26		
	E	M		43	37	21	– 38		
		F	23	10	–				
5	ZNE	eP	04	01	34			9,280	Microseisms,
	NE	eSKS		11	45				
	NE	eS		12	01				
	ZNE	eL		31	–				
	E	M		36	30	20	– 8		
		F	06	55	–				
5	NE	e	09	39	41				Microseisms.
	ZNE	eL		58	–				
	N	M	10	04	28	12	+ 4		
		F		45	–				
5	ZV,	iP	16	07	39			(6720)	Microseisms.
	NE	e(S)		15	53				
	NE	e		16	52				Doubtful; probably more than one shock.
	ZNE	eL		23	–				
	N	M		47	52	17	+ 9		
		F	17	55	–				
5	ZNE	e	18	45	–				Microseisms.
		F	19	05	–				
5	ZNE	e	21	35	–				Microseisms.
		F	22	00	–				

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
7	ZV,Z	eP	07	45	12			9,220	Microseisms.
	NE	iS		55	36				
	NE	iPS		56	32				Honshu, Japan.
	NE	eSSS	08	06	01				36°N, 136½°E. (U.S.C.G.S).
	NE	e		13	48				
	ZNE	eL		17	-				
	E	M		23	23	15	- 19		
	N	M		25	30	15	- 22		
	Z	M		30	35	14	- 13		
		F	19	20	-				
7	ZNE	e	09	25	-				Microseisms.
		F	10	00	-				
7	ZNE	eL	19	00	-				Microseisms.
	N	M		07	39	18	+ 2		
		F		40	-				
7	ZNE	e	20	30	-				Microseisms.
		F	21	05	-				
8	ZNE	e	11	40	-				Microseisms.
		F	12	10	-				
9	ZNE	e	04	57	-				Microseisms.
		F	05	10	-				
9	ZNE	e(L)	05	53	-				Microseisms.
	N	M		56	47	15	- 5		
		F	06	15	-				
9	ZV,Z	iP	17	16	07			(9,460)	Compression. e, NE.
	ZNE	e		16	25				
	ZNE	ePP		19	17				Microseisms.
	ZNE	i		21	29				
	NE	iSKS		26	21				
	NE	e(S)		26	43				
	ZV,ZNE	ePS		27	45				
	ZNE	e		31	49				
	ZNE	eSS		32	39				
	ZNE	eL		40	-				
	E	M		50	59	24	- 95		
	N	M		51	49	26	+150		
	Z	M		52	18	26	-90		
		F	-	-	-				Overlapped.
9	ZV,	eP	20	10	55			7,200	Microseisms.
	NE	eS		19	35				Alaska-Canada border.
	NE	eL		34	-				59½°N, 136°W (U.S.C.G.S).
	M	M		38	00	20	+ 10		
	N	F	21	55	-				
10	ZNE	e	18	45	-				Microseisms.
		F	19	15	-				
10	NE'	e	20	05	-				Microseisms.
		F		15	-				

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
11	ZNE	e	20	55	-				Microseisms.
		F	21	55	-				
12	ZNE	e	01	50	-				Small.
		F	02	20	-				
12	ZV,Z	iP	12	17	15				Microseisms.
	ZNE	eL		22	-				
		F		35	-				
13	ZNE	e	02	25	-				Microseisms.
		F		40	-				
13	ZNE	e	06	42	(07)				Microseisms.
		F		55	-				
13	ZNE	e	07	23	-				Microseisms.
		F		35	-				
13	ZNE	eP	14	11	09			(9,700)	Microseisms.
	NE	e		19	55				East China Sea,
	ZNE	e(SKS)		21	29				28½°N, 127°W.
	ZNE	eL		40	-				Depth about 200 Km.
		F	15	25	-				(U.S.C.G.S).
14	ZNE	e(L)	18	50	-				Microseisms.
		F	19	10	-				
14	ZNE	eL	21	40	-				Microseisms.
		F	22	15	-				
15	ZNE	e	11	40	25				Microseisms.
	ZNE	eL		56	-				
	N	M	12	13	38	25	- 12		
		F	13	10	-				
16	ZNE	eL	22	53	-				
		F	23	20	-				
19	ZV,	iP	01	32	32			2,780	e, ZNE.
	ZV,Z	e		32	54				
	ZNE	iS		36	55				
	ZV,ZNE	e		37	01				
	ZNE	eL		39	-				
	N	M		40	42	17	+ 14		
		F	02	15	-				
19	ZNE	e	08	20	-				Microseisms.
		F		50	-				
19	ZV,	i	09	03	41				Microseisms.
	NE	e		35	23				
	ZNE	eL		42	-				
	N	M		49	46	17	+ 6		
		F	10	40	-				

FORM 3718.

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
19	ZV,ZNE	iP	11	11	22			9,640	Compression,
	ZV,ZNE	i		11	26				Microseisms.
	ZV,ZNE	ePP		15	07				
	ZV,ZNE	e		15	38				
	NE	eSKS		21	55				
	ZV,ZNE	eS		22	05				Large.
	ZV,Z	e		22	15				
	ZV,ZNE	e		24	35				
	ZNE	e		29	31				
	ZNE	eL		47	-				
	E	M	12	03	23	16	- 105		
	Z	M		04	58	16	- 175		
	N	M		06	32	16	- 175		Very faint.
		F	16	00	-				
20	ZNE	e	22	00	-				Microseisms.
		F		10	-				
21	NE	e	00	24	55				Microseisms.
	ZNE	eL		45	-				
		F	01	55	-				
21	NE	e	16	56	11				Microseisms.
	ZNE	eL		19	-				
	N	M		28	59	20	+ 3		
		F	18	35	-				
22	NE	e	07	57	39				Microseisms;
	ZNE	e		58	32				possibly not seismic.
		F	08	40	-				
22	NE	e	18	46	19				Microseisms.
	ZNE	eL		57	-				
	N	M	19	10	11	18	- 2		
		F	20	00	-				
23	NE	e	16	00	00				Microseisms.
	ZNE	eL		12	-				
	E	M		24	05	22	+ 4		
		F	17	05	-				
25	ZNE	e	03	44	42				Small.
	ZNE	eL		48	-				
		F	04	00	-				
25	Z	i	04	27	30				
	Z	i		28	36				
		F	05	55	-				
26	ZNE	e	10	35	-				
	ZNE	eL		40	-				
		F	11	10	-				
27	NE	e	16	27	17				
	ZNE	eL		40	-				
	N	M		45	40	18	+ 4		
		F	17	05	-				
29	NE	e	05	45	-				Microseisms.
		F	06	10	-				Possibly not seismic.

FORM 3718.

DS 14715/1/R94 140 4/52 CL

KEW OBSERVATORY, RICHMOND, SURREY

SEISMOLOGICAL BULLETIN FOR APRIL, 1952

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.S.L. 5m.

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

INSTRUMENTS: (i) GALITZIN APERIODIC SEISMOGRAPHS, PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FÜRST B. GALITZIN "VORLESUNGEN ÜBER SEISMOMETRIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ak}{\pi l}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+ 0.05	52.8
E.	26 July 1951	17.4	18.7	+ 0.01	66.7
Z.	2 August 1951	14.1	11.8	+ 0.18	143.

(ii) VERTICAL SEISMOGRAPH, PERIOD 1·5 SECS., DIRECT OPTICAL REGISTRATION (ZV.).

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK.
TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1	ZNE	e	04	30	08				Small.
		F		40	–				
1	NE	e	15	07	–				
	ZNE	eL		28	–				
		F	16	00	–				
1	ZNE	eL	21	05	–				
		F		35	–				
2	ZNE	eL	19	15	–				
		F		40	–				
3	ZNE	e	03	30	–				
		F		40	–				
4	ZV,	iP	03	04	42			(8,390)	Compression. e,NE.
	ZV,	iPeP		04	58				No Z record.
	NE	e(S)		14	25				
	NE	eL		30	–				
	N	M		45	28	18	+ 2		
		F	04	25	–				
4	NE	e	08	38	–				No Z record.
		F	09	05	–				
4	ZNE	eL	20	40	–				Microseisms.
		F	21	00	–				
5	ZNE	e	01	11	–				Microseisms.
		F		20	–				

Form 3717.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
3	ZV,ZNE	e(P)	10	18	41				
	ZNE	eL		54	-				
	N	M	11	06	53	19	- 5		
		F		30	-				
9	ZNE	e	08	17	-				
		F		30	-				
10	ZV,	iP	06	10	32			(9,220)	Microseisms.
	ZNE	e(S)		20	53				
	NE	e		32	02				
	ZNE	eL		40	-				
	Z	M		56	25	16	+ 13		
		F	07	55	-				
12	ZV, Z	eP	01	40	02			9,535	Microseisms.
	NE	eS		50	41				
	NE	eSS		56	30				
	ZNE	eL	02	07	-				
		F		55	-				
12	NE	e	11	20	-				Microseisms.
		F		50	-				
14	ZNE	eL	08	40	-				Microseisms,
		F	09	15	-				
15	ZV, Z	iP	00	08	55			7,820	Microseisms.
	ZV,ZNE	eS		18	07				
	ZV,ZNE	ePS		19	10				
	ZNE	eL		45	-				
	N	M		57	27	21	+ 6		
		F	02	30	-				Possibly another shock.
15	ZV, Z	iP	06	12	07			8,890	Microseisms.
	NE	eS		22	15				Hokkaido, Japan, 43°N.,
	NE	ePS		22	34				143½°E. (U.S.C.G.S).
	ZNE	eL		45	-				
	N	M		48	31	23	+ 3		
		F	07	25	-				
15	Z	e(P)	19	20	18				Microseisms.
	Z	ePP		23	16				Sandwich Islands region.
	ZNE	eSKS		29	18				56°S, 24°W. (U.S.C.G.S).
	ZNE	eS		30	51				Phases doubtful.
	ZNE	eSS		36	55				
	NE	eSS		40	47				
	ZNE	eL		52	-				
	N	M	20	04	56	17	- 9		
	Z	M		05	04	17	+ 8		
		F	21	25	-				
16	ZNE	e	00	30	-				
		F		45	-				

SEISMOLOGICAL BULLETIN.

.....17...

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
16	ZV,Z	iP	03	52	58			8,790	Kurile Islands region.
	NE	eS	04	02	31				47°N, 154°E. (U.S.C.G.S).
	ZNE	eL		20	-				
		F	05	05	-				
16	ZNE	e	12	05	-				Small.
		F		30	-				
16	ZNE	e	15	10	-				Small.
		F		50	-				
16	ZNE	e	17	40	-				Small.
		F	18	45	-				
16	ZNE	e	21	55	-				Small.
		F	22	20	-				
17	ZNE	e	04	50	-				Small.
		F	05	20	-				
17	ZNE	e	09	53	-				Small.
		F	10	10	-				
18	ZNE	e	13	05	-				Small.
		F		25	-				
18	ZV,Z	e(PKP)	16	18	16				
	ZNE	e(SKKS)		28	33				
	ZNE	eL		55	-				
	N	M	17	03	43	20	- 3		
		F	18	00	-				
18	ZNE	e	20	40	-				Small.
		F		55	-				
19	ZV,ZNE	iP	10	10	22			8,055	Colombia-Venezuela border.
	ZV,ZNE	iPcP		10	29				7°N, 71½°W. Depth about 60Km
	ZV,	i		10	41				(U.S.C.G.S).
	ZV,ZNE	ePP		13	09				
	ZNE	iS		19	47				
	ZV,ZNE	iPS		20	24				
	ZNE	eSS		24	05				
	ZNE	e(SSS)		25	57				
	ZNE	eL		29	-				
	N	M		43	01	18	+11		
		F	-	-	-				Overlapped.
19	ZNE	eL	12	15	-				
	N	M		27	24	22	- 4		
		F	13	55	-				
19	ZV,Z	e	19	54	58				
	NE	e	20	00	45				
	ZNE	e		12	11				
	ZNE	eL		20	-				
	N	M		26	16	20	- 1		
		F	21	10	-				

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
20	ZNE	e	10	55	-				Microseisms.
		F	11	30	-				
23	ZNE	eL	16	40	-				
		F		55	-				
25	ZNE	e	03	45	-				Small.
		F		55	-				
25	ZNE	e	06	45	-				Small.
		F	07	00	-				
27	ZNE	eL	14	05	-				Microseisms.
		F	15	00	-				
28	ZV,Z	iP	11	06	33			8,820	e,NE.
	ZV,ZNE	ePcP		06	56				
	ZV,ZNE	ePP		09	38				
	NE	eS		16	37				
	E	ePS		17	06				
	ZNE	e(PPS)		17	59				
	NE	eSS		23	24				
	ZNE	eL		34	-				
	N	M		42	34	25	+ 8		
	Z	M		42	39	26	- 6		
		F	12	35	-				
29	ZV,Z	iP	02	47	50			(10,000)	Compression. eNE.
	ZV,ZNE	esP		48	58				Focal depth about 200 Km.
	ZV,ZNE	ePP		51	22				
	NE	iSKS		57	54				
	ZNE	iS		58	14				
	NE	iPS		59	52				
	ZV,ZNE	ePPS	03	00	15				
	ZNE	eL		07	-				Poorly developed.
		F	04	35	-				
29	ZNE	e	20	35	-				
		F		55	-				
30	NE	e	14	20	-				Small.
		F	15	40	-				

FORM 3718.

DS 18154/1/R94 140 5/52CL

AIR MINISTRY, METEOROLOGICAL OFFICE

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR MAY, 1952

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.S.L. 5m.

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

INSTRUMENTS: (i) GALITZIN APERIODIC SEISMOGRAPHS, PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FÜRST B. GALITZIN "VORLESUNGEN ÜBER SEISMOMETRIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ak}{\pi l}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+ 0.05	52.8
E.	26 July 1951	17.4	18.7	+ 0.01	66.7
Z.	2 August 1951	14.1	11.8	+ 0.18	143.

(ii) VERTICAL SEISMOGRAPH, PERIOD 1·5 SECS., DIRECT OPTICAL REGISTRATION (ZV.).

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK.
TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1	ZNE	e	16	25	–				Small.
		F	17	00	–				
3	ZNE	e	13	00	–				Small.
		F		15	–				
4	ZNE	e	07	55	–				Small.
		F	08	15	–				
4	ZV, Z	e	14	03	39				Small; doubtful.
	ZNE	e		09	50				
		F		20	–				
4	ZV, Z	e(PP)	14	35	34				Tonga Islands region. $24\frac{1}{2}$°S, $177\frac{1}{2}$°W. (U.S.C.G.S.).
	ZV,ZNE	e(SKS)		40	06				
	ZNE	e(SSS)	15	00	02				
	Z	e		01	54				
	ZNE	eL		30	–				
	N	M		40	07	22	+ 4		
		F	17	10	–				
5	ZNE	e	02	10	–				Small.
		F		35	–				
6	ZNE	e	18	00	–				Small.
		F		15	–				
6	ZNE	e	23	10	–				Small.
		F		20	–				

Form 3717.

KEW OBSERVATORY, RICHMOND, SURREY.

SEISMOLOGICAL BULLETIN.

MAY, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
8	ZV,	iP	01	11	23			9,090	Microseisms.
	ZV,Z	iP_cP'		11	38				Honshu, Japan.
	ZV,ZNE	eS		21	41				35½°N, 140°E,.
	NE	ePS		21	57				Depth about 60Km.
	ZNE	eL		39	-				(U.S.C.G.S).
	N	M		50	04	26	- 3		
		F	02	15	-				
8	ZNE	e	16	27	-				Small.
		F		50	-				
8	ZV,Z	eP	21	29	50			(12,000)	Microseismic.
	ZNE	i(SKS)		39	09				Molucca Passage
	ZNE	i(PS)		40	11				2½°N, 127°E. (U.S.C.G.S).
	ZNE	e(PS)		40	57				
	ZNE	eSS		49	01				
	ZNE	eL		55	-				
	N	M	22	10	48	28	+ 10		
		F	23	15	-				
9	ZNE	eL	04	50	-				
		F	05	55	-				
9	ZV,Z	i	18	06	48				
	ZV,Z	i		06	57				
	ZV,ZNE	e		09	15				Overlapped.
		F	-	-	-				
9	ZV,ZNE	i	18	10	10				
	ZNE	i		10	24				
	ZNE	i		10	49				
	NE	i		19	11				
	ZNE	eL		27	-				
	N	M		56	40	27	- 40		
	Z	M	19	04	09	25	+ 29		
	E	M		07	34	20	- 11		
		F	20	45	-				
10	NE	e	07	25	-				Possibly not seismic.
		F		55	-				
11	ZNE	e	14	54	02				Small.
		F	15	00	-				
13	ZNE	e	15	00	-				Small.
		F		45	-				
13	ZV,Z	iP	19	43	41			9,220	Compression, e,NE.
	ZNE	eS		54	05				Costa Rica.
	E	e		59	24				10½°N, 85°W.
	ZNE	iSS	20	00	06				Depth about 100Km.
	NE	e		02	10				(U.S.C.G.S).
	ZNE	eL		07	-				
	N	M		15	16	19	+ 7		
		F	22	45	-				

FORM 3718.

KEW OBSERVATORY, RICHMOND, SU

SEISMOLOGICAL BULLETIN.

MAY, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
14	ZV, Z	iP	00	49	15			9070	Compression. e,NE.
	ZV,ZNE	e		49	32				Near coast of Hokkaido,
	ZNE	iS		59	32				Japan. 43°N, 145½°E.
	NE	ePS	01	00	41				(U.S.C.G.S).
	ZNE	eL		15	-				
	N	M		23	57	22	+ 6		
		F	03	50	-				
14	ZNE	eL	21	45	-				
		F	22	35	-				
15	ZNE	e	11	13	-				
		F		25	-				
15	ZNE	e	19	00	-				
		F		55	-				
16	ZNE	e	06	15	-				
		F	07	05	-				
16	ZNE	e	10	55	-				
		F	11	25	-				
16	ZNE	e	11	35	-				Small.
		F		50	-				
16	ZNE	e	14	40	-				
		F	15	00	-				
16	ZNE	eL	16	55	-				Small.
		F	17	20	-				
16	ZNE	e	18	35	-				Small.
		F	19	10	-				
16	ZV,ZNE	iP	20	57	40			9,200	Dilatation.
	ZNE	iPcP		57	57				Off Coast of Panama.
	ZNE	e		58	31				6½°N., 79°W.(U.S.C.G.S).
	NE	eS	21	07	12				
	ZNE	eSP		07	57				
	ZNE	eSS		12	37				
	ZNE	eL		15	-				
	E	M		25	59	18	+ 4		
		F	23	15	-				
17	ZNE	e	06	55	-				Small.
		F	07	25	-				
17	ZV, Z	iP	10	00	34			8,980	Compression. e,NE.
	NE	eS		10	46				Near Hokkaido, Japan.
	NE	ePS		11	03				42½°N, 144½°E.
	NE	eSS		16	09				(U.S.C.G.S).
	ZNE	eL		25	-				
	N	M		34	56	25	+ 9		
		F	12	05	-				
19	ZNE	e	16	05	-				
		F		40	-				

FORM 3718.

M.O. 55[illegible]

KEW OBSERVATORY, RICHMOND, SURRE

SEISMOLOGICAL BULLETIN.

MAY, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
19	ZV,ZNE	iP	18	44	41			9,120	Compression.
	ZV,Z	iPcP		44	58				e, NE.
	ZV,Z	iPP		47	45				e, NE.
	NE	eS		54	55				Near Hokkaido, Japan.
	ZV,ZNE	ePS		56	00				43°N, 144½°E. (U.S.C.G.S).
	ZNE	eSS	19	01	23				
	NE	eSSS		04	13				
	NE	e		11	01				
	ZNE	eL		12	–				
	E	M		18	44	24	- 55		
	N	M		26	45	19	- 40		
	Z	M		27	07	18	+ 35		
		F	22	55	–				
20	ZNE	e	15	50	–				
		F	16	25	–				
20	ZNE	e	19	15	–				Small.
		F		30	–				
22/23	ZV,Z	eP	23	21	11			10,000	
	NE	eSKS		31	38				
	NE	eS		32	10				
	ZNE	eL		50	–				
	N	M	00	00	23	21	- 6		
		F	01	10	–				
23	ZV,	iP	04	33	35				
	ZV,	i		33	50				
	ZNE	eL	05	02	–				
		F		50	–				
23	ZNE	e	16	05	–				Small.
		F		30	–				
23	ZV,Z	iP	20	43	22				e, NE.
	ZV,Z	i		44	26				e, NE.
		F		55	–				
23	ZNE	e	23	05	–				Small.
		F		30	–				
24	ZV,Z	iP	02	12	28			(9,890)	
	NE	e(SKS)		23	20				
	ZNE	eL		45	–				
		F	03	50	–				
24	ZV,Z	eP	16	19	19				
	ZNE	e(PP)		25	11				
	ZNE	e(SKS)		30	40				
	ZNE	eL		50	–				
	N	M	17	07	26	23	+ 10		
		F	19	20	–				
25	ZNE	e	07	50	–				
		F	08	20	–				
25	ZNE	e	16	50	–				
		F	17	20	–				

FORM 3718.

KEW OBSERVATORY, RICHMOND, SU

SEISMOLOGICAL BULLETIN.

MAY, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
26	ZV,Z	iP	02	57	53			9,000	
	ZV,Z	ePPP	03	02	21				
	ZNE	eS		07	07				
	NE	eSSS		15	25				
	ZNE	eL		25	-				
	N	M		31	56	16	- 3		
		F	04	15	-				
28	ZV,	iP	07	53	19				
	ZV,	i		57	37				
		F	-	-	-				Overlapped.
28	ZV,Z	iP	08	11	05			(9,500)	Dilatation.
	ZV,Z	ipP		13	50				Central Honshu, Japan.
	ZV,Z	isP		14	28				31½°N., 136°W.
	ZV,ZNE	eSKS		20	53				Depth about 400Km.
	ZV,ZNE	eSP		22	00				(U.S.C.G.S).
	ZNE	esPP		23	02				
	ZNE	eL		40	-				Poorly marked.
		F	09	45	-				
30	ZNE	e	02	05	-				
		F		25	-				
31	ZNE	e(L)	06	10	-				Microseisms.
	N	M		34	36	24	+ 3		
		F	07	25	-				
31	ZNE	e	13	05	—				Small.
		F		15	-				

FORM 3718.

DS 19168/1/R94 140 6/52 CL

SEISMOLOGICAL BULLETIN FOR JUNE,

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.S.L. 5m.

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

INSTRUMENTS: (i) GALITZIN APERIODIC SEISMOGRAPHS, PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FÜRST B. GALITZIN "VORLESUNGEN ÜBER SEISMOMETRIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ak}{\pi l}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+ 0.05	52.8
E.	26 July 1951	17.4	18.7	+ 0.01	66.7
Z.	2 August 1951	14.1	11.8	+ 0.18	143.

(ii) VERTICAL SEISMOGRAPH, PERIOD 1·5 SECS., DIRECT OPTICAL REGISTRATION (ZV.).

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK.
TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
2	ZNE	e	03	35	–				Small.
		F		55	–				
2	ZNE	e	10	37	45				Microseisms.
	ZNE	eL		45	–				
		F		55	–				
2	Z	e	10	58	49				Microseisms.
	ZNE	eL	11	10	–				
		F		35	–				
2	ZNE	e	18	20	–				Microseisms.
		F		35	–				
3	ZNE	e	06	01	16				
	ZNE	e(L)		06	09				
		F		15	–				
4	ZV,	iP	06	29	27				e, Z.
	ZV,	i		29	32				e, Z.
	ZNE	eL		50	–				
		F	07	20	–				
4	Z	e	20	40	06				
	ZNE	e(L)		43	–				
		F		55	–				
5	ZV,Z	i P	06	08	29			8,590	Near west coast of Colombia. 6°N, 77½°W. Depth about 60Km (U.S.C.G.S).
	NE	eS		18	22				
	ZNE	eL		35	–				
		F	07	05	–				

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
5	ZNE	e	10	15	-				Small.
		F		30	-				
6	ZNE	e(L)	10	50	-				
		F	11	05	-				
9	ZNE	e	14	58	38				
	ZNE	e	15	03	14				
		F		15	-				
10	ZV,Z	iPKP	10	18	03			(16,000)	e, NE.
	ZNE	ePP		20	54				Fiji Islands region.
	ZNE	e		26	44				15½°S, 178½°W. (U.S.C.G.S).
	ZNE	e		30	22				
	NE	eSS		40	31				
	ZNE	eSSS		45	38				
	ZNE	e		49	02				
	ZNE	eL	11	05	-				
	N	M		17	27	22	+ 6		
	Z	M		17	29	22	- 4		
		F	13	00	-				
11	ZV,Z	iP	00	45	39			(12,500)	e, NE.
	ZV,Z	iPP		49	48				e, NE.
	NE	eSKS		56	14				
	NE	eSP		59	03				
	NE	e	01	04	18				
	NE	eSS		04	58				
	ZNE	eL		15	-				
	Z	M		32	32	18	- 10		
	E	M		37	13	17	- 10		
		F	04	30	-				
12	ZNE	e	11	10	17				
	ZNE	e(L)		17	-				
		F		30	-				
13	Z	eP	01	12	10			(2,540)	
	ZNE	e(S)		16	13				
	ZNE	eL		20	-				
		F		30	-				
14	ZNE	eL	08	(45)	-				Doubtful; synchronome clock stopped.
		F	09	05	-				
15	ZV,Z	iP	15	26	54			7,550	Dilatation.
	NE	eS		35	53				
	ZNE	eL		52	-				
		F	16	25	-				
15	ZNE	e	17	07	-				Small.
		F		25	-				
16	ZV,	i(P)	03	57	15				Commencement indistinct on Galitzins.
	ZV,	i		57	22				
	ZV,	i		57	32				
		F	04	20	-				

SEISMOLOGICAL BULLETIN.

JUNE, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
17	Z	e	04	31	15				
	ZNE	e		36	04				
	Z	e		49	51				
	ZNE	eL	05	25	-				
		F	06	25	-				
17	ZNE	e	07	58	-				
		F	08	10	-				
17	ZV,Z	e	12	29	29				Doubtful.
	Z	e		33	02				
	ZNE	eL	13	00	-				
		F	14	00	-				
17	ZNE	eL	22	45	-				Small.
		F	23	10	-				
18	ZNE	e	04	45	-				Small.
		F	05	05	-				
19	ZV,ZNE	eP	12	25	01			8,610	
	ZNE	eS		34	56				
	NE	eSS		40	04				
	ZNE	eL		48	-				
	N	M		57	05	27	- 120		
		F	15	30	-				
19	ZV,ZNE	e	21	25	05				Doubtful.
	ZNE	e		35	04				
	ZNE	eL		55	-				
	N	M	22	08	11	21	- 6		
		F	23	50	-				
20	ZV,Z	iP	05	59	16			9,780	e, NE.
	ZV,Z	iPP	06	02	46				e, NE.
	NE	eS		10	05				
	NE	ePS		11	03				
	ZNE	eSS		16	11				
	ZNE	eL		28	-				
	N	M		43	49	17	+ 40		
	Z	M		43	53	16	- 35		
		F	08	20	-				
21	ZV,Z	iP	06	41	10				e, NE. Compression
	Z	ePP		44	07				Probably deep focus.
	NE	e(S)		51	10				
	NE	ePPS		53	32				
	ZNE	eL	07	05	-				
	N	M		19	58	18	- 3		
		F	18	15	-				
22	ZV,Z	iP	10	20	24			8,760	Rarefraction.
	NE	iS		30	25				
	ZNE	eL		50	-				
		F	12	15	-				

KEW OBSERVATORY, RICHMOND, SURI

SEISMOLOGICAL BULLETIN.

JUNE, 1952

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
22/23	ZV, ZNE	iP	21	54	04			8,760	Compression.
	ZNE	iPcP		54	41				
	ZNE	ePPP	22	00	23				
	ZNE	iS		04	05				
	ZNE	eSS		09	07				
	ZNE	eL		15	-				
	N	M		32	59	19	- 45		
	Z	M		35	36	17	+ 30		
	E	M		35	21	18	+ 35		
		F	02	10	-				
23	ZV, Z	e(PP)	12	19	38				
	NE	e(S)		26	52				
	ZNE	eL		45	-				
	Z	M	13	00	52	14	- 5		
		F		45	-				
24	ZV, ZNE	eP	16	41	13				
	Z	ePKP		44	16				
	NE	eSKS		51	13				
	ZNE	eL	17	10	-				
		F	18	10	-				
25/26	ZV, Z	eP	23	31	31			8,240	
	ZNE	eS		41	06				
	ZNE	eL		50	-				
	N	M		59	43	30	- 10		
		F	01	45	-				
26	ZNE	e	13	15	-				
		F		30	-				
26	ZNE	e(P)	15	37	34			(3,055)	
	ZNE	e(S)		42	15				
	ZNE	eL		43.6					
	N	M		44	27	14	- 6		
		F	16	30	-				
27	ZV, ZNE	e(P)	13	13	56				
	ZNE	eL		20	-				
		F		40	-				
30	ZNE	e	21	(15)	-				Doubtful; synchronome clock stopped.
		F	22	(30)	-				

FORM 3718.

DS 22844/1/R94 140 7/52 GL

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.

LITHOLOGIC FOUNDATION : RIVER GRAVEL RESTING ON

INSTRUMENTS : (i) GALITZIN APERIODIC SEISMOGRAPHS, PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS : FOR NOTATION SEE FÜRST B. GALITZIN " VORLESUNGEN ÜBER SEISMOMETRIE "

(LEIPZIG, 1914) OR G. W. WALKER " MODERN SEISMOLOGY " (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ak}{\pi I}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+0.05	52.8
E.	26 July 1951	17.4	18.7	+0.01	66.7
Z.	2 August1951	14.1	11.8	+0.18	143.

(ii) VERTICAL SEISMOGRAPH, PERIOD 1·5 SECS., DIRECT OPTICAL REGISTRATION (ZV.).

TIME SERVICE : MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK.
TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
2	ZNE	e	02	50	–				Small
		F	03	10	–				
3	ZV,Z	iP	01	04	23			8,650	Near West coast of Columbia
	ZV	iP$_c$P		04	37				5½°N. 78°W. (U.S.C.G.S.)
	ZNE	eS		14	19				
	NE	e		25	05				
	ZNE	eL		30	–				
		F	02	10	–				
4	ZV,ZNE	e	05	04	40				Small
		F		15	–				
4	ZNE	e	20	40	–				Small
		F		50	–				
5	ZV,Z	iP	17	28	34				Compression.
	ZV,Z	ipP		29	21				Hindu Kush, Afghanistan
	ZV,Z	isP		29	40				36½°N. 71°E.
	ZV,	iPP		31	12				Depth about 200 Km
	ZV,Z	isPP		32	33				(U.S.C.G.S.)
	ZV,Z	iPPP		33	22				
	ZNE	eL		40	–				
		F	18	40	–				
5/6	ZNE	eL	23	56	–				Small
		F	00	20	–				
6	ZNE	e(S)	06	27	37				
	ZNE	eL		36	–				
		F	07	30	–				

Form 3717.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
7	ZNE	eL	03	30	-				Small
		F	04	05	-				
8	ZV,Z	ePKP	15	59	50				
	ZNE	eL	16	55	-				
		F	17	15	-				
8	ZNE	e	21	10	-				Small
		F		20	-				
9	ZV,Z	iP	18	27	24			(8,780)	
	NE	i(S)		37	25				Possibly SKS.
	ZNE	eL		49	-				Off coast of Panama
	E	M		55	34	23	+4		7½°N. 82°W. (U.S.C.G.S.)
		F	19	50	-				
9	ZV,Z	eP	20	48	55			(8,770)	Aftershock
	NE	e(S)		58	55				Possibly SKS
	ZNE	eL	21	10	-				
		F		55	-				
10	ZV,Z	iP	16	03	57				
	ZV,Z	i		04	01				
	ZV,Z	i		04	07				
	ZV,Z	i		06	34				
	ZV,Z	i		06	44				
		F		25	-				
13	ZV,Z	iPP	12	17	44			(15,800)	NE,e.Compression
	ZV,	i		18	03				ZNE,e.
	ZV,Z	i		18	57				NE,e.
	ZV,Z	i		19	25				NE,e.
	ZV,Z	iPPP		21	11				NE,e.
	ZV,	iSKS		22	45				ZNE,e.
	ZNE	ePS		28	51				New Hebrides Islands
	ZNE	eSS		36	05				18½°S, 169½°E. (U.S.C.G.S.)
	NE	eSSS		41	11				
	ZNE	eL		55	-				
		F	14	30	-				
13	Z	ePP	17	54	20			(12,500)	Ceram Sea
	Z	ePPP		56	19				3°S, 128°E. (U.S.C.G.S.)
	ZNE	ePPS	18	05	15				
	NE	eSS		10	05				
	ZNE	eSSS		14	07				
	ZNE	eL		20	-				
	N	M		49	43	22	-8		
		F	20	30	-				
15	Z	eP	06	18	35				Near Coast of Guatemala
	ZNE	eL		40	-				14½°N, 92½°W. (U.S.C.G.S.)
	Z	M		51	58	19	-2		
		F	07	45	-				
16	ZNE	e	02	10	-				Small
		F		25	-				

KEW OBSERVATORY, RICHMOND, SU

SEISMOLOGICAL BULLETIN. JULY 1952

DATE.	COMPT.	PHASE.	G.M.T h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
17	ZV,Z	iP	16	22	25			(9,400)	NE,e. Dilatation
	ZV,Z	i		22	46				NE,e.
	ZV,ZNE	ePP		25	44				
	NE	iSKS		32	51				Southern Honshu ,Japan.
	NE	iS		33	22				34½°N, 136°E.
	ZNE	ePS		34	21				Depth about 100 km.
	NE	eSSS		44	28				(U.S.C.G.S.)
	NE	eLq		50	-				
	Z	eLr		54	-				
	N	M		55	47	27	-16		
		F	19	20	-				
18	ZV,Z	i	05	37	19				
	ZNE	eL	06	35	-				
		F	07	15	-				
18	ZNE	e	09	50	-				Small
		F	10	15	-				
18	ZV,Z	ePP	19	00	22				Easter Island region
	ZNE	ePS		10	02				23°S, 114½°W. (U.S.C.G.S.)
	ZNE	eL		38	-				
	Z	M		52	11	18	+4		
		F	20	20	-				
20	ZNE	e	07	00	-				Small
		F		40	-				
20	ZNE	e	11	20	-				Small
		F		30	-				
21	ZV,ZNE	iP	12	04	17			8,730	Compression.
	ZV,ZNE	i		04	23				
	ZV,ZNE	i		04	34				California.
	ZV,ZNE	iPP		07	21				35.1°N, 118.9°W.
	ZV,ZNE	iPPP		08	52				(Pasadena).
	ZV,ZNE	iS		14	17				
	ZNE	iPS		14	44				
	ZNE	eSS		19	48				
	ZNE	e		22	45				
	ZNE	eSSS		23	42				
	ZNE	e		24	58				
	ZNE	eL		27	-				
	N	M		33	48	26	(+600)		
	E	M		39	24	17	(+200)		
	Z	M		39	31	16	(+270)		
		F	17	00	-				
21	ZNE	e	20	35	-				
		F	21	05	-				
21	ZNE	e	22	05	-				Small.
		F		25	-				
22/23	ZV,Z	eP	23	09	58				
	ZV,ZNE	e		20	00				Doubtful.
	ZNE	eL	00	00	-				
		F	-	-	-				Overlapped.

FORM 3718.

	ZNE	e	9				
	ZNE	e	-				
	N	M	9	17	- 3		
		F	-				
23	ZNE	e	0				
	ZNE	e	-				
		P	-				
24	ZV,Z	i	4			8,980	NE,e.
	ZV,	i	9				
	ZV,Z	i	8				NE,e.
	ZNE	e	3				Off Japan.
	ZNE	e	6				42½°N., 145½°E.
	ZNE	e	5				Depth about 60 Km.
	ZNE	e	1				(U.S.C.G.S).
	ZNE	e	9				
	ZNE	e	-				
	N	M	0	26	+ 7		
		F	-				
25	ZNE	e	-				Small.
25	ZNE	e	-				
		F	-				
25	ZNE	e	3				
	ZNE	e	-				
		P	-				Overlapped.
25	ZNE	e	-				
		F	-				
27	ZNE	e	-				
		F	-				
27	ZV,Z	i	x				
	ZV,Z	i	x				
	ZNE	e	x				
	E	i	x				
	ZNE	e	x				
		F	-				
28	ZNE	e	-				Small.
		F	-				
29	NE	e					
	ZNE	e					
	ZNE	e					
	ZNE	e					
	ZNE	e					
	N	M		17	+ 7		
		F					

FORM 3718.

M.O. 558

KEW OBSERVATORY, RICHMOND, SUR[illegible]

SEISMOLOGICAL BULLETIN.

JULY, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
29	ZNE	e	20	35	–				Small.
		F	21	30	–				
31	ZNE	e	12	41	34				
	ZNE	eL		50	–				
		F	13	40	–				

FORM 3718.

DS 314·56 /1/R94 140 8/52 CL

SEISMOLOGICAL BULLETIN FOR AUGUST

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.S.L. 5m.

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

INSTRUMENTS: (i) GALITZIN APERIODIC SEISMOGRAPHS, PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FURST B. GALITZIN "VORLESUNGEN ÜBER SEISMOMETRIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ak}{\pi l}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+0.05	52.8
E.	26 July 1951	17.4	18.7	+0.01	66.7
Z.	2 August 1951	14.1	11.8	+0.18	143.

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SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
3	NE	e	13	56	14				
	ZNE	eL	14	02	–				
		F		30	–				
6	ZNE	eL	05	30	–				Small.
		F		55	–				
6	ZNE	e	07	55	–				Small.
		F	08	20	–				
7	ZV,Z	iP	22	05	49			9,280	Near east coast of Hokkaido, Japan. 43°N., 144½°E. (U.S.C.G.S).
	NE	eS		16	16				
	ZNE	eL		35	–				
		F	23	20	–				
13	ZNE	eL	03	40	–				
		F		55	–				
13	ZNE	eL	21	30	–				
		F	22	10	–				
14	ZV,Z	eP	16	14	17			9,950	
	ZNE	ePP		18	12				
	E	eSKS		24	48				
	ZNE	eS		25	14				
	ZNE	eL		55	–				
		F	17	25	–				
14/15	ZV,Z	iPKP	23	35	55			(14,000)	Solomon Islands 6°S., 155°E. (U.S.C.G.S).
	ZNE	ePP		38	12				
	ZNE	ePKS		39	18				

Form 3717.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	
14/15 (Contd)	ZNE	eL	00	15	—				
	N	M		25	27	27	- 5		
		F	01	40	-				
16	Z	ePP	14	13	35				
	ZNE	eL		50	-				
	N	M	15	17	02	19	+ 3		
		F	16	45	-				
17	ZV,ZNE	iP	16	13	05			7,520	Eastern Tibet.
	ZV,ZNE	iPcP		13	12				30½°N., 91½°E. (U.S.C.G.S).
	ZV,ZNE	iPP		15	37				
	ZNE	iPPP		17	39				
	ZNE	iS		22	02				Large.
	ZV,ZNE	iScS		22	11				
	ZNE	ePS		22	31				
	ZNE	eSS		27	25				
	ZNE	eSSS		29	51				Large.
	ZNE	eL		33	-				
	N	M		39	28	27	(+450)		
	E	M		46	09	18	(+200)		
	Z	M		46	18	17	(+170)		
		F	20	50	-				
18	NE	e(S)	13	32	21				Microseisms.
	ZNE	eL		50	-				
	N	M	14	05	28	20	+ 3		
		F	15	40	-				
19	Z	e	11	09	10				
	ZNE	eL		40	-				
		F	12	20	-				
20	ZV,ZNE	iP	15	37	02			8,890	
	ZV,ZNE	iPcP		37	23				
	ZV,ZNE	ePP		39	50				
	ZNE	eSKS		46	36				
	ZNE	eS		47	10				
	ZNE	eSS		51	16				
	ZNE	eSSS		57	41				
	ZNE	eL		59	-				
	N	M	16	09	19	17	+ 20		
	E	M		10	08	16	- 19		
	Z	M		10	10	16	- 21		
		F	18	55	-				
21	ZNE	e	23	30	-				Small.
		F		55	-				
22/23	ZV,	e	23	16	06				
	ZNE	eL		20	-				
		F	00	05	-				
23	ZNE	eL	14	55	-				
		F	15	30	-				
23	ZNE	eL	18	10	-				Small.
		F		30	-				

FORM 3718.

SEISMOLOGICAL BULLETIN.

AUGUST, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
24	ZV,Z	iPKP	13	03	17				
	ZNE	eL		40	-				
		F	14	05	-				
24	ZV,	iP	20	49	49			(3,100)	
	ZNE	e(S)		54	33				
	ZNE	eL		58	-				
		F	21	10	-				
25	ZV,Z	iP	01	56	10			7,800	Compression.
	NE	eS	02	05	21				
	ZNE	eL		25	-				
		F		50	-				
25	ZV,	i	18	02	16				Possibly not seismic.
		F		04	-				
27	ZV,Z	iP	11	39	13				Dilatation.
	ZV,Z	i		39	31				
	ZNE	eL	12	05	-				
		F		50	-				
27	ZNE	eL	17	30	-				
		F	18	00	-				
28	ZV,	e(P)	02	55	07				Microseisms.
	ZNE	e(L)		56	-				
		F	03	05	-				
28	ZV,	i(PKP)	11	04	10				Compression.
	ZV,	i		04	22				Microseisms.
	ZV,	i		04	29				
	NE	e		13	29				
	ZNE	eL		30	-				
		F	11	50	-				
28	ZNE	eL	13	55	-				Microseisms.
		F	14	25	-				
28	ZNE	eL	15	10	-				Microseisms.
	N	M		25	19	18	- 3		
		F	17	10	-				
29	NE	e	05	52	00				Microseisms.
	ZNE	eL	06	15	-				
		F	07	05	-				
29	ZNE	e	17	00	-				Small.
		F		20	-				
31	NE	e	03	50	-				Small.
		F	04	10	-				
31	ZV,Z	iP	16	21	39			9,800	
	ZV,Z	i		21	52				
	NE	eSKS		32	00				
	NE	eS		32	29				
	ZNE	eL		50	-				
	N	M		57	54	24	+ 5		
		F	17	30	-				

FORM 3718.

KEW OBSERVATORY, RICHMOND, SUR

SEISMOLOGICAL BULLETIN FOR SEPTEMBER, 1952

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.S.L. 5m.

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

INSTRUMENTS: (I) GALITZIN APERIODIC SEISMOGRAPHS, PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FÜRST B. GALITZIN "VORLESUNGEN ÜBER SEISMOMETRIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ah}{wI}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+0.05	52.8
E.	26 July 1951	17.4	18.7	+0.01	66.7
Z.	2 August 1951	14.1	11.8	+0.18	143.

(II) VERTICAL SEISMOGRAPH, PERIOD 1·5 SECS., DIRECT OPTICAL REGISTRATION (ZV.).

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK.
TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
2	ZNE	e	23	28	56				Small.
	ZNE	e		32	57				
		F		40	–				
7	ZNE	e	03	01	17				
	ZNE	eL		50	–				
	N	M	04	04	56	19	+ 1		
		F	06	00	–				
9	ZV,ZNE	iP	13	06	50			8,710	Compression.
	ZV,ZNE	i		07	03				
	ZV,ZNE	i		07	25				Near coast of Costa Rica.
	ZV,ZNE	iP		10	15				9°N, 84½°W. (U.S.C.G.S).
	ZNE	e		14	49				
	ZV,ZNE	iS		16	49				
	ZV,ZNE	i(PS)		18	07				
	ZNE	eSS		22	11				Large on E.
	ZNE	e		25	27				
	ZNE	e		28	10				Large on N.
	ZNE	eL		34	–				
	N	M		41	06	20	+ 15		
	E	M		41	30	19	– 27		
	Z	M		41	34	19	+ 22		
		F	17	30	–				
10	ZNE	eL	19	45	–				
		F	20	20	–				
11	ZNE	eL	19	05	–				
		F		30	–				

Form 3717.

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
11/12	Z	iPP	22	46	42				Dilatation.
	ZNE	ePPP		50	50				Kermadec Islands.
	ZNE	ePS	23	01	36				29°S, 177°W. (U.S.C.G.S).
	NE	eSS		10	57				
	NE	eSSP		12	08				
	ZNE	eL		50	-				
	N	M		58	07	19	+ 4		
		F	01	25	-				
14	ZV,	i	08	21	49				Doubtful.
	ZNE	e		27	31				
		F		40	-				
14	ZNE	e(S)	09	53	57				
	ZNE	eL	10	07	-				
	N	M		13	07	14	+ 6		
		F	11	00	-				
15	ZNE	e	04	48	59				
	ZNE	e(L)	05	00	-				
		F		20	-				
15	ZV,	iP	11	37	47				
	ZNE	e		51	50				
	ZNE	eL		57	-				
	N	M	12	05	46	15	+ 4		
		F		50	-				
15	ZNE	e	14	46	-				Small.
		F	15	10	-				
19	ZNE	e	19	20	-				Small.
		F		45	-				
20	ZV, Z	e	13	57	52				
	ZNE	eL	14	18	-				
		F	15	25	-				
21	ZV, ZNE	iP	02	43	23			(10,000)	Compression.
	ZNE	ipP		43	29				Depth of focus about 250 km.
	ZNE	isP		44	58				
	ZNE	ePP		46	24				
	ZV, ZNE	ePPP		48	58				
	ZV, ZNE	iSKS		53	32				
	ZNE	iS		54	04				
	ZNE	iPS		55	24				
	ZNE	ePPS		56	30				
	ZNE	e		57	20				
	NE	eSS		58	20				
	ZNE	eL	03	09	-				
	N	M		23	29	18	+ 9		
	Z	M		29	24	18	+ 6		
		F	05	30	-				
21	Z	e	11	38	03				Doubtful.
	Z	e		43	56				Microseisms.
	Z	e		51	47				
	ZNE	eL	12	07	-				
		F		55	-				

M.O.

KEW OBSERVATORY, RICHMOND, SI

SEISMOLOGICAL BULLETIN.

SEPTEMBER, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
22	ZNE	eL	12	17	-				Microseisms.
		F	13	15	-				
23	ZNE	e	20	41	07				Microseisms.
		F	21	00	-				
27	ZV,ZNE	iP	19	17	31			8,350	Microseisms.
	ZV,ZNE	ePcP		17	45				
	ZNE	eS		27	10				
	ZNE	ePS		27	42				
	ZNE	eL		43	-				
	E	M		59	44	18	+ 3		
		F		45	-				
28	ZNE	e	02	55	-				Microseisms.
		F	03	10	-				
28	ZNE	e	20	00	-				Microseisms.
		F		10	-				
30	ZV,Z	iP	13	03	48			8,335	Microseisms.
	ZV,	iPP		06	32				
	ZV,ZNE	eS		13	28				
	NE	ePS		14	02				
	NE	eSS		19	26				
	NE	eSSS		22	19				
	ZNE	eL		25	-				
	N	M		39	20	16	- 33		
	Z	M		39	(56)	12	+ 23		Faint.
	E	M		39	58	14	- 25		
		F	15	15	-				

FORM 3718.

DS 37837/1/R94 140 10/52 CL

M.O. 558

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR OCTOBER, 1952

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.S.L. 5m.

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

INSTRUMENTS: (i) GALITZIN APERIODIC SEISMOGRAPHS. PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FÜRST B. GALITZIN "VORLESUNGEN ÜBER SEISMOMETRIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1 sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ak}{wl}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+0.05	52.8
E.	26 July 1951	17.4	18.7	+0.01	66.7
Z.	2 August 1951	14.1	11.8	+0.18	143.

(ii) VERTICAL SEISMOGRAPH, PERIOD 1·5 SECS., DIRECT OPTICAL REGISTRATION (ZV.).

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK.
TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1	ZNE	eL	10	05	–				Microseisms.
	N	M		17	18	18	± 3		
		F	11	05	–				
1	ZNE	e	13	55	–				Microseisms.
		F	14	15	–				
2	ZNE	eL	14	35	–				Small.
		F	15	20	–				
3	ZV, ZE	eP	07	49	00			(9,065)	Off South Coast of Panema.
	ZV, Z	e		49	05				6½°N., 83°W.
	ZE	ePP		51	37				(U.S.C.G.S.)
	ZE	e(S)		59	16				
	ZNE	eL	08	15	–				
		F	09	00					
√4	Z	eS	04	24	49				Microseisms.
	ZNE	ePS		27	21				
	ZNE	eL		35	–				
	E	M		37	25	18	+ 3		
		F	05	25	–				
4	ZNE	e	20	20	–				
		F		40	–				
5	ZNE	e	10	30	–				
		F		55	–				

Form 3717.

32

M.O. 558

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

OCTOBER, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
5	Z	iP	10	59	51			2,140	ZV, NE. e. Near West
	NE	eS	11	03	22				Coast of Greece.
	ZNE	ePS		03	37				
	ZNE	eL		07	-				
	N	M		07	50	14	+ 9		
	Z	M		10	12	10	+ 6		
		F	12	05	-				
5	ZV,Z	iP	22	15	05			8,390	Chinghai Province, China.
	ZV,Z	i		15	12				37°N., 93°E.
	NE	eS		24	48				(U.S.C.G.S).
	ZNE	eSS		29	46				
	ZNE	eL		38	-				
	E	M		45	05	13	+ 4		
	Z	M		46	23	11	- 5		
		F	23	45	-				
6	ZNE	e	02	40	-				Small.
		F	03	30	-				
6	ZNE	e	19	55	-				Small.
		F	20	10	-				
7	Z	e	16	13	01				Small.
	N	e		15	32				
	ZNE	e(L)		20	-				
		F		35	-				
7	ZV,Z	e	18	13	00				
	ZNE	eL		36	-				
	N	M		40	12	19	- 3		
		F	19	00	-				
8	ZNE	eL	15	07	-				
	Z	M		10	52	13	- 2		
		F	15	25	-				
10	ZV,Z	eP	11	56	42			2,220	Off West coast of Greece.
	ZV,ZNE	eS	12	00	19				
	ZNE	eL		04	-				
	E	M		04	06	18	+ 5		
		F		40	-				
10	Z	e(PKP)	16	15	09				Microseisms.
	ZNE	e		17	52				Possibly more than one shock.
		e		26	05				
		e		37	25				
	ZNE	eL	17	05	-				
	E	M		19	30	18	- 3		
		F	18	20	-				
10 ?	ZV,Z	iP	18	57	00			6,300	Microseisms.
		eS	19	04	51				Central Pakistan .
		ePS		05	28				30½°N., 69°E.
	ZNE	eL		10	-				(U.S.C.G.S).
	N	M		23	29	19	+20		
	Z	M		25	55	16	- 9		
		F	20	50	-				

FORM 3718.

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
11	ZNE	eL	01	07	-				Microseisms.
	N	M		19	51	26	+ 6		
		F	02	45	-				
11/12	-	-	(21 to	05	-)				Galitzins not traversing.
			(10	14	-)				
13	ZV,Z	eP	16	45	02			4,445	Microseisms.
	ZV,Z	ePP		46	34				
	ZNE	eS		51	06				
	ZNE	eL		52	-				
	N	M		54	17	15	-10		
		F	17	10	-				
14	ZNE	eL	00	50	-				Microseisms.
		F	01	45	-				
15	ZNE	eL	00	35	-				Microseisms.
		F	01	15	-				
15	ZNE	e	03	40	-				Small.
		F		50	-				
15	ZNE	e	18	10	-				Small.
		F		30	-				
18	ZV,Z	iPKP$_1$	05	42	05				NE, e.
	ZV,Z	iPKP$_2$		42	22				
	ZV,Z	iPP		45	30				NE, e.
	ZV,ZNE	eSKSP		55	48				
	ZNE	e	06	01	48				
	ZNE	ePPS		04	32				
	ZNE	eSS		10	31				Phases doubtful.
	NE	ePSS		11	48				
	NE	eSSS		31	52				
	ZNE	eL		35	-				
	N	M		45	24	21	+ 4		
		F	08	10	-				
18	ZV,Z	eP	12	07	06			5,590	Microseisms.
	ZNE	eS		14	18				
	N	eSS		18	01				
	ZNE	eL		19	-				
	N	M		20	06	27	- 7		
		F	13	10	-				
18	ZNE	e	21	40	-				Small.
		F	22	10	-				
19	ZNE	e	03	45	-				Small.
		F	04	00	-				
21	ZNE	e	02	50	-				Small.
		F	03	30	-				
22	ZNE	e	04	24	53				Microseisms.
	ZNE	eL		28	-				
		F		45	-				

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
22	NE	e	17	12	12				Microseisms.
	NE	eL		15	-				No Z record.
		F		50	-				
25/26	-	-	(21	05	-)				Galitzins not traversing.
			(09	12	-)				
26	ZV,	i	08	53	15				Microseisms.
	ZV,	i		54	26				
	ZV,	i		54	59				
		F	09	00	-				
26	NE	e	13	43	08				Microseisms.
	NE	e		52	31				
	ZNE	eL	14	05	-				
		F		40	-				
26	ZNE	eL	15	17	-				Microseisms.
		F		40	-				
26	Z	eP	16	02	08				Microseisms.
	ZV,Z E	ePP		05	36				
	ZNE	ePPP		08	51				
	ZNE	eSPP		16	03				
	ZNE	eSS		21	37				
	ZNE	eL		30	-				
	E	M		41	33	23	+11		
	N	M		43	54	23	+11		
	Z	M		48	52	17	+ 6		
		F	17	30	-				
26	ZV, Z	iP	18	14	34			9,110	Microseisms.
	ZV, Z	ePP		17	53				
	ZNE	eS		24	53				
	ZNE	ePS		25	59				
	ZNE	eL		43	-				
	N	M		50	40	21	+15		
	E	M		50	52	21	+22		
		F	-	-	-				Overlapped.
26	ZNE	eL	20	00	-				Microseisms.
	E	M		07	45	23	+ 7		
	N	M		10	44	23	- 7		
		F	-	-	-				Overlapped.
26	ZNE	e	22	45	-				Small.
		F	23	05	-				
27	ZV,Z	iP	03	29	44			9,260	
	ZNE	ePP		33	02				
	ZNE	eS		40	10				
	ZNE	ePS		41	10				
	NE	eSS		45	40				
	NE	eSSS		49	06				
	ZNE	eL		56	-				
	N	M	04	08	27	23	+12		
		F	05	20	-				

			h.	m.	s.	sec.	μ	km	
28	ZNE	e	04	55	-				Microseisms.
		F	05	55	-				
28	ZNE	eL	07	10	-				Microseisms.
	E	M		19	32	21	+ 7		
	N	M		19	44	21	± 8		
		F	08	30	-				
28	ZNE	eL	17	25	-				Microseisms.
		F		55	-				
29	ZNE	e	20	15	-				Microseisms.
		F	21	30	-				
31	ZV,Z	eP	16	49	42			9,320	Microseisms.
	Z	ePP		53	07				
	Z	e(PPP)		57	21				
	NE	eS	17	00	11				
	ZNE	ePS		01	19				
	NE	eSS		06	05				
	NE	eSSS		09	17				
	ZNE	eL		15	-				
	N	M		26	18	19	+12		
	E	M		26	36	21	-12		
		F	18	20	-				

FORM 3718.

DS38903/1/R... 11/52CL

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

INSTRUMENTS: (i) GALITZIN APERIODIC SEISMOGRAPHS, PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FÜRST B. GALITZIN "VORLESUNGEN ÜBER SEISMOMETRIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ak}{\pi I}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+0.05	52.8
E.	26 July 1951	17.4	18.7	+0.01	66.7
Z.	2 August 1951	14.1	11.8	+0.18	143.

(ii) VERTICAL SEISMOGRAPH, PERIOD 1·5 SECS., DIRECT OPTICAL REGISTRATION (ZV.).

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK.
TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1	NE	e	00	12	12				Microseisms.
	ZNE	e		20	30				
	ZNE	eL		30	-				
	N	M		35	13	16	- 10		
		F	01	30	-				
2	ZV,Z	iPKP1	00	05	17			(17,000)	Microseisms.
	ZV,	iPKP2		05	30				Fiji Islands region.
	ZNE	eSS		28	21				23½°S., 178°W.
	NE	e		29	32				Depth about 150Km.
	ZNE	eL	01	10	-				(U.S.C.G.S).
		F		45	-				
4	ZV,ZN	iP	17	10	11			8,850	E e. Compression.
	ZV,ZNE	iPcP		10	17				Microseisms.
	ZV,ZNE	i		10	32				Numerous aftershocks.
	ZV,	i		11	01				Near east coast of
	ZV,	i(PPP)		14	45				Kamchatka. Seismic
	ZV,	i		15	29				sea waves. 52½°N., 159°E.
	ZV,	i		15	46				(U.S.C.G.S).
	ZV,	i		17	29				Chiefly from S.P.V. readings.
	ZV,	i		18	33				
	ZV,ZNE	iS		20	17				
	ZV,	i(PS)		21	44				
	ZV,	i(PPS)		22	51				
	ZV,	i(SS)		26	23				
	ZV,	eL		33	-				
	Z	M		(39)	-	(26)	(600)		
	N	M		(53)	-	(25)	(350)		
	E	M		(57)	-	(25)	(450)		
		F	-	-	-				Overlapped.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	
4	ZV,	iP	17	36	14				
	ZV,	iP		37	36				
	ZV,	iP		48	15				
	ZV,	iP		50	31				
	ZV,	iP		52	43				
	ZV,	iP	18	40	31				Among the numerous later shocks may be mentioned.
	ZV,	eP	19	52	21				
	ZV,	iP	21	00	39				
	ZV,	iP		12	35				
	ZV,	eP	22	04	41				
	ZV,	iP	23	40	54				
5	ZV,	iP	06	51	03				
	ZV,	iP	11	58	29				
5	ZNE	eP	02	31	59			8,860	Microseisms.
	NE	e		41	27				
	NE	eS		42	08				
	ZNE	eL		55	-				
	E	M	03	07	13	21	+ 4		
	Z	M		13	45	17	+ 3		
	N	M		13	49	17	+ 4		Overlapped.
		F	-	-	-				
5	ZV,Z	eP	03	41	35			8,410	Microseisms.
	E	eS	03	51	19				
	ZNE	eL	04	12	-				
	E	M		18	23	18	+ 4		
		F	-	-	-				Overlapped.
5	ZV,Z	iP	06	09	45			8,500	Microseisms.
	E	e		12	43				
	NE	eS		19	39				
	ZNE	eL		35	-				
	N	M		51	02	18	+12		
		F	-	-	-				Overlapped.
5	ZNE	eL	10	10	-				Microseisms.
		F	-	-	-				Overlapped.
5	ZV,Z	i(P)	11	58	28				Microseisms.
	ZNE	e(L)	12	(08)	-				
		F	-	-	-				Overlapped.
5	Z	eP	12	59	52				Microseisms.
		F	-	-	-				Overlapped.
5	ZV,ZNE	iP	13	18	10				Microseisms.
	Z	e		18	23				
	ZNE	eL		26	-				
	E	M		54	54	17	+17		
	N	M		59	26	19	+18		
	Z	M		59	32	17	+15		
		F	-	-	-				Overlapped.
5	ZV,	iP	15	00	34				Z,e. Microseisms.
		F	16	15	-				
5	ZNE	e	16	45	-				Microseisms.
		F	17	10	-				

FORM 3718.

M.O. 558

KEW OBSERVATORY, RICHMOND, SUI

SEISMOLOGICAL BULLETIN.

NOVEMBER, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
5	ZNE	e(P)	18	31	59				Microseisms.
	ZNE	eL	19	45	-				
	N	M		55	33	19	± 5		
		F	-	-	-				Overlapped.
5	ZV,	e(P)	20	22	29				Microseisms.
	ZV,	i		42	21				
	Z	e	21	00	51				
		F	22	20	-				
5/6	ZNE	eL	23	15	-				Microseisms.
	N	M		31	02	20	- 7		
		F	00	45	-				
6	ZV,	e(P)	01	10	46				Microseisms.
		F		14	-				
6	ZNE	e	03	10	-				Microseisms.
		F	05	00	-				
6	ZNE	e	06	15	-				Microseisms.
	ZNE	eL		26	-				
		F	07	30	-				
6	ZNE	e	14	40	-				Microseisms.
		F	15	30	-				
6	ZV,Z	eP	19	57	50				Microseisms. Near north
	ZNE	eL	20	20	-				coast of New Guinea.
	N	M		56	46	25	-26		5°S., 145½°E.
		F	22	30	-				(U.S.C.G.S).
7	ZNE	eL	01	05	-				Microseisms.
		F	04	55	-				
7	ZNE	e	12	55	-				Microseisms.
		F	13	40	-				
7	Z	eP	14	20	19			9,610	Microseisms.
	NE	e		29	27				
	NE	eS		31	01				
	NE	ePS		32	22				
	ZNE	eL		45	-				
	N	M		55	32	24	- 7		
		F	15	50	-				
7	ZNE	eL	21	30	-				Microseisms,
	E	M	21	43	09	16	- 8		
		F	-	-	-				Overlapped.
7	ZNE	e	22	01	10				Microseisms.
		F	-	-	-				Overlapped.
7/8	ZNE	eP	22	17	30			8,730	Microseisms.
	ZNE	e		17	56				
	ZNE	eS		27	30				
	ZNE	eL		50	-				
	N	M	22	57	25	18	+10		
		F	-	-	-				Overlapped.

FORM 3718.

SEISMOLOGICAL BULLETIN.

NOVEMBER, 1952

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
8	ZNE	e	00	35	-				Microseisms.
		F	01	45	-				
8	ZNE	e	05	30	-				Microseisms.
		F	06	30	-				
8	ZNE	e(L)	17	45	-				Microseisms.
	N	M		54	50	19	- 3		
		F	18	50	-				
8	ZV,Z	iP	19	45	23			8,680	NE, e. Microseisms.
	ZNE	ePP		49	04				
	NE	eS		55	22				
	ZNE	ePS		56	48				
	NE	eSS	20	01	10				
	ZNE	eL		12	-				
	N	M		26	00	19	+16		
	Z	M		26	02	19	-10		
	E	M		26	31	19	- 9		
		F	22	10	-				
9	ZV,Z	iP	00	34	18			8,410	Microseisms.
	ZV,Z	iPcP		34	30				
	ZNE	eS		44	02				
	ZNE	e(PPS)		46	52				
	ZNE	eL	01	00	-				
	N	M		14	33	19	- 5		
		F	-	-	-				Overlapped.
9	ZNE	eL	01	55	-				Microseisms.
	N	M	02	03	26	21	- 4		
		F	03	00	-				
9	ZNE	eL	05	15	-				Microseisms.
	Z	M		27	05	19	- 4		
		F	07	30	-				
9	ZV,	i(P)	15	34	38				Microseisms.
	ZV,	i		43	22				
	ZNE	eL	16	07	-				
	N	M		14	51	19	+ 3		
		F	17	15	-				
9	ZNE	e	18	57	-				Microseisms.
		F	19	24	-				
9	ZNE	eL	21	20	-				Microseisms.
		F	22	40	-				
10	ZV,Z	i(P)	01	06	59				Microseisms.
	ZV,Z	i		07	12				
	ZNE	eL		40	-				
		F	02	20	-				
10	ZNE	e	04	20	-				Microseisms.
		F		30	-				
10	Z	e(P)	06	14	04				Microseisms.
	ZNE	eL		50	-				
		F	07	50	-				

FORM 3718.

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
10	ZNE	e	10	30	–				Small.
		F	11	10.	–				
10	Z	e(P)	20	48	37				
	ZNE	eL	21	10	–				
		F	22	00	–				
11	ZNE	e	01	30	–				Small.
		F	02	30	–				
11	ZNE	e	20	05	–				
		F		30	–				
12	ZNE	e	00	50	–				Small.
		F	01	30	–				
12	ZE	e(P)	13	47	12				Small.
		F	14	10	–				
12	Z	e(P)	17	02	22				Small.
	ZNE	eL		30	–				
		F	18	30	–				
13	ZNE	e	00	02	–				Small.
		F		10	–				
13	ZV,Z	iP	08	10	38			8,370	Near south coast of Kamchatka. 50½°N., 157°E. (U.S.C.G.S).
	ZNE	eS		20	20				
	ZNE	ePS		21	22				
	ZNE	eSS		26	52				
	ZNE	eL		35	–				
	N	M		42	14	26	– 10		
		F	11	30	–				
13	Z	e(P)	15	45	22				
	ZNE	eL	16	12	–				
		F		55	–				
13/14	ZV,Z	iP	22	37	28				
	ZV,Z	i		37	41				
	ZNE	e		40	24				
	ZNE	eL	23	10	–				
		F	00	10	–				
15	ZNE	e	01	52	–				Small.
		F	02	05	–				
15	ZNE	e	05	45	–				Small.
		F	07	05	–				
16	Z	e	02	35	–				Small.
		F		55	–				
16	ZNE	e	04	55	–				
		F	05	30	–				
16	ZV,Z	eP	07	59	42			8,730	
	ZV,Z	e	08	01	14				
	ZV,ZNE	eS		09	42				
	NE	eSS		17	26				

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
(cont'd)									
16	ZNE	eL	08	43	-				
	N	M		56	58	19	+ 4		
		F	10	00	-				
16	ZNE	e(P)	15	22	30				Small.
		F		55	-				
17	ZNE	e	12	53	-				Small.
		F	13	10	-				
17	ZNE	e	14	05	-				Small.
		F		25	-				
18	ZV, Z	iP	08	25	24				
	ZV, Z	iPcP		25	35				
	ZNE	eL		55	-				
	N	M	09	07	39	18	+ 2		
		F	10	20	-				
18	ZNE	e	18	15	-				Small.
		F		30	-				
19	ZNE	e	07	05	-				Small.
		F		30	-				
19	ZNE	eL	11	00	-				
		F		30	-				
19	ZNE	e	17	50	-				Small.
		F	18	30	-				
20	ZNE	e	07	55	-				
		F	08	30	-				
20	ZNE	e	12	05	-				
		F		55	-				
20	ZV, Z	iP	15	49	15			9,315	NE, e.
	ZV, ZNE	ePP		52	14				Off coast of Nicaragua.
	ZNE	eS		59	44				12½°N., 88°W. Depth about
	NE	eSP	16	00	08				60 Km. (U.S.C.G.S).
	ZNE	eSS		04	44				
	ZNE	eSSS		08	24				
	ZNE	eL		12	-				
	N	M		19	12	20	+ 6		
	E	M		22	03	18	- 8		
	Z	M		22	05	18	- 7		
		F	17	30	-				
20	ZNE	e	17	45	-				Small.
		F	18	05	-				
21	ZNE	e	03	20	-				Small.
		F		30	-				
21	ZNE	e	04	05	-				
		F		40	-				
21	ZNE	e	18	00	-				Small.
		F		30	-				

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
22	ZNE	e	06	10	-				Small.
		F		30	-				
22	ZV,Z	iP	07	58	48			8,650	
	Z	ePP	08	00	56				
	ZNE	eS		08	44				
	ZNE	eL		25	-				
	N	M		32	47	19	- 6		
		F	09	20	-				
28	ZV,	e(P)	08	17	35				Microseisms.
	ZNE	eL		48	-				
	N	M	09	00	27	14	- 3		
		F		45	-				
29	ZV,	iP	08	34	24			(8,700)	Microseisms.
	ZV,	iPcP		34	38				
	ZV,	i(S)		44	22				
	NE	eL		55	-				
	N	M	09	08	17	18	-50		
	E	M		08	17	18	+33		
		F	11	30	-				
29/30	ZV,Z	iP	23	57	45			7,870	NE,e. Microseisms.
	ZV,Z	iPcP		57	57				NE,e.
	Z	e		58	19				
	ZNE	ePP	00	00	22				
	ZNE	ePPP		02	04				
	ZNE	eS		07	00				
	ZNE	ePS		07	24				
	ZNE	eSKS		08	18				
	ZNE	eSS		11	24				
	ZNE	eSSS		15	00				
	ZNE	eL		18	-				
	E	M		31	15	19	-55		
	Z	M		31	16	18	+55		
	N	M		31	28	19	-45		
		F	03	15	-				
30	ZV,	eP	19	40	29				Microseisms.
	ZNE	eL	20	13	-				
	Z	M		21	14	16	+ 3		
		F	21	00	-				

FORM 3718.

DS42812/1/R94 140 12/52 Ck

AIR MINISTRY, METEOROLOGICAL OF

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR DECEMBER, 1952

Lat. 51° 28′ 6″ N, Long. 0° 18′ 47″ W, Height above M.S.L. 5m.

LITHOLOGIC FOUNDATION: RIVER GRAVEL RESTING ON LONDON CLAY.

INSTRUMENTS: (I) GALITZIN APERIODIC SEISMOGRAPHS, PHOTO-GALVANOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FÜRST B. GALITZIN "VORLESUNGEN ÜBER SEISMOMETRIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1913).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T_1. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2.	$\frac{Ak}{\pi l}$ sec.$^{-1}$
N.	23 July 1951	21.6	23.3	+0.05	52.8
E.	26 July 1951	17.4	18.7	+0.01	66.7
Z.	2 August 1951	14.1	11.8	+0.18	143.

(II) VERTICAL SEISMOGRAPH, PERIOD 1·5 SECS., DIRECT OPTICAL REGISTRATION (ZV.).

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK.
TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM GREENWICH OBSERVATORY.
SEISMOMETRIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
2	NE	e	19	51	17				Microseisms.
	ZNE	e		53	42				
	ZNE	eL	20	06	–				
		F		20	–				
3	ZNE	e	22	50	–				Microseisms.
		F	23	30	–				
4	ZV,Z	iP	04	04	00			7,460	Microseisms.
	ZNE	eS		12	54				Aleutian Islands.
	ZNE	ePS		13	57				52°N, 178°E.
	ZNE	eL		25	–				(U.S.C.G.S),
		F	05	05	–				
4	ZNE	e	07	55	–				Small.
		F	08	15	–				
4	ZNE	e	11	40	–				Small.
		F	12	25	–				
5	ZNE	e	21	05	–				Small.
		F	22	40	–				
6	ZNE	e	04	10	–				Microseisms.
	ZNE	eL		20	–				
		F		50	–				

Form 8717.

DS 44029/1

KEW OBSERVATORY, RICHMOND, SURREY

SEISMOLOGICAL BULLETIN.

DECEMBER, 1952

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
6	ZV,Z	iPKP	11	00	40			(15,000)	Compression.
	ZV,Z	e		00	50				Microseisms.
	ZV,ZNE	ePP		03	12				Solomon Islands
	ZV,ZNE	iPKS		04	26				8°S., 157°E.
	ZNE	e(SKKS)		09	18				(U.S.C.G.S).
	ZNE	e(SKKKS)		09	54				
	ZNE	ePPS		14	52				
	ZNE	e		16	50				
	NE	e		18	50				
	NE	eSS		20	56				
	ZNE	ePSS		21	33				
	ZNE	eSSS		27	14				Large on N-S.
	ZNE	e		31	22				Large on N-S.
	ZNE	eL		38	-				
	E	M		43	29	36	+ 85		
	N	M		43	53	38	+ 80		
	N	M		57	14	22	+ 35		
	Z	M		58	51	24	- 25		
		F	14	30	-				
6	ZNE	e	21	12	05				Microseisms.
	ZNE	eL		55	-				
		F	23	10	-				
7	ZV,Z	iP	01	02	10			8,410	Compression. NE,e.
	ZNE	e		03	39				Microseisms.
	ZNE	e(PPP)		06	46				
	ZNE	eS		11	54				
	ZNE	ePS		12	44				
	NE	eSS		17	22				
	ZNE	eL		25	-				
	N	M		38	33	22	- 13		
		F	04	00	-				
7	ZNE	eL	17	18	-				Microseisms.
		F	18	15	-				
8	ZNE	e(S)	15	41	06				Microseisms.
	ZNE	eL		50	-				China Burma border.
	N	M		53	32	22	+ 9		23°N. 99½°E. (U.S.C.G.S).
		F	16	40	-				
10	ZV,ZN	iP	06	02	39			2,440	E,e. Microseisms.
	ZN,ZN	iPP		03	00				E,e.
	ZN	iPPP		04	00				Jan Mayen Island region.
	ZNE	eS		06	22				71°N., 7°W. (U.S.C.G.S).
	ZV,ZNE	eSS		06	50				
	ZNE	eL		08	-				
	E	M		09	58	18	- 23		
	Z	M		10	12	13	+ 20		
	N	M		13	48	14	- 15		
		F	07	30	-				
11	ZV,	iP	09	10	12				Microseisms.
	ZNE	eL		35	-				Changing charts.
	N	M		49	34	22	- 10		Kurile Islands.
	Z	M		49	48	20	+ 6		49°N., 155°E. (U.S.C.G.S).
		F	11	30	-				

FORM 3718

DS 44029/1

M.O. 558

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

DECEMBER, 19 52

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
12	ZV,	i(P)	20	43	56				Microseisms.
	ZNE	eL	21	20	-				
		F		45	-				
15	ZNE	eL	10	30	-				Microseisms.
		F	11	15	-				
16	-	-	-	-	-				Record broken by power cuts; 07h. 23m. to 16h. 35m.
16	ZNE	eL	16	(35)	-				Beginning lost.
		F	19	30	-				Microseisms.
17/18	ZV,ZNE	iP	23	09	30			2,800	Microseisms.
	ZV,ZNE	iPP		10	03				Near south coast of Crete, 34½°N., 24.0°E. (U.S.C.G.S).
	ZV,ZNE	e		10	32				
	ZV,ZNE	iS		13	43				
	ZNE	e		14	19				
	ZNE	e(SS)		15	11				
	ZNE	eL		16	-				
	N	M		20	56	19	- 75		
	E	M		20	59	19	- 110		
	Z	M		21	06	16	- 70		
		F	03	00	-				
19	ZNE	eL	09	55	-				Microseisms.
		F	13	00	-				
22	ZNE	e	10	50	-				Microseisms.
		F	11	20	-				
22/23	ZV,Z	iP	22	36	20			8,665	Microseisms.
	NE	eS		46	17				
	NE	ePS		46	28				
	ZNE	eL	03	05	-				
	E	M		11	31	21	+ 4		
		F	00	15	-				
24	ZNE	eL	09	40	-				Microseisms.
		F	10	15	-				
24	ZNE	eL	15	18	-				Microseisms.
		F		40	-				
24	ZV,	ePKP	18	58	53				Microseisms.
	ZV,ZNE	ePKS	19	02	06				Phases doubtful.
	ZNE	ePS		11	11				
	ZNE	eSS		18	58				
	ZNE	eSSS		23	25				
	ZNE	eL		25	-				
	N	M		24	28	25	- 60		
	Z	M		56	28	25	- 40		
	E	M		56	48	25	+ 35		
		F	-	-	-				Overlapped.
24	ZNE	eL	22	40	-				Microseisms.
		F	23	30	-				

FORM 3718.

DS 44029/1

M.O. 558

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

DECEMBER, 1952

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
25	NE	e	02	57	04				Microseisms.
	NE	e	03	15	49				
	ZNE	eL		30	-				
		F	-	-	-				Overlapped.
25	ZNE	e(L)	04	25	-				Microseisms.
		F	05	25	-				
25/26	NE	eS	22	40	09				Microseisms.
	NE	eSS		48	09				Doubtful, ePZV.
	ZNE	eL		50	-				22h. 32m. 25s.
	N	M	23	01	58	16	+ 11		
	E	M		02	06	16	- 10		
	Z	M		02	08	14	+ 11		
		F	00	30	-				
26	ZNE	eL	04	53	-				Microseisms.
		F	05	30	-				
27	ZNE	eL	02	00	-				Microseisms.
		F	03	00	-				
28	ZNE	e	05	15	-				Microseisms.
		F	06	20	-				
28	ZNE	e PKP	15	20	00				Microseisms.
	ZNE	e SKKS		29	38				
	ZNE	e SSS		45	56				
	ZNE	eL		50	-				
	E	M		55	28	20	- 9		
	N	M		58	27	30	+ 14		
	Z	M	16	11	27	17	- 5		
		F		30	-				
28	ZNE	e(L)	19	10	-				Microseisms.
		F	20	15	-				
29	ZV,Z	eP	02	21	16			(9,040)	Microseisms.
	ZNE	e (S)		31	31				
	NE	e SS		36	15				
	ZNE	eL		50	-				
	E	M	03	04	01	16	+ 2		
		F		55	-				
29	NE	e	07	00	-				Microseisms.
		F		10	-				
29	ZV,Z	e	09	31	15				Microseisms.
	ZNE	eL	10	05	-				
		F	11	00	-				
30	Z	e	12	20	20				Microseisms.
	Z	e		23	40				
	NE	e		29	22				
	NE	e		31	01				
	ZNE	eL		40	-				
		F	13	40	-				

FORM 3718.

DS 44029/1

M.O. 556

KEW OBSERVATORY, RICHMOND, SUR

SEISMOLOGICAL BULLETIN.

DECEMBER, 1952

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLI-TUDE. μ	Δ km.	REMARKS.
31	ZV,	eP	14	52	59			2,900	Microseisms.
	ZV,	e		57	01				
	ZNE	eS		58	29				
	ZNE	e(SS)		58	55				
	ZNE	eL	15	02	-				
	N	M		02	46	18	+ 4		
		F		15	-				
31	ZV,	eP	17	23	02			2,890	Microseisms.
	ZV,	ePP		24	15				Repetition.
	ZV,ZNE	eS		28	31				
	NE	eSS		29	21				
	ZNE	eL		30	-				
	N	M		32	46	17	+ 7		
		F	18	00	-				
31	ZNE	eL	22	28	-				Microseisms.
		F	23	00	-				

FORM 3718.

DS 44029/11/ R94 140 1/53 CL