

N.O. 614

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR JANUARY 1956

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.	25 August 1954	21.7	21.2	+0.01	54.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD. sec.	AMPLI- TITUDE. μ	Δ km.	REMARKS.		
			h.	m.	s.						
3	NE	eL	14	54	-				Very small.		
		F	15	05	-						
3	ZV	iP	15	53	09		(8500)		Small.		
	ZV	i	15	53	24						48½°N., 155°E. Kurile Islands, U.S.C.G.S.
	NE	eL	16	25	-						
		F	17	15	-						
5	NE	e	01	43	-				Small.		
		N	eL	01	50					-	
		F	02	10	-						
5	ZV	eP	20	31	50				Small. 72°N., 1½°E. Arctic Ocean. U.S.C.G.S.		
6	ZV	eP	05	47	41				Small. 36½°N., 11°W. Off coast of Portugal. U.S.C.G.S.		
6	ZV	iP	12	20	36		2500		Confused by microseisms.		
	ZV	i	12	20	49						
	ZV	ePP	12	21	14						
	E	e(PcP)	12	24	34						
	NZ	eS	12	24	42						
	N	eL	12	26	-						
	N	eL2	12	27.7	-						
	E	M	12	28	-					16	6
	N	M	12	28	-					15	29
	Z	M	12	30	-					8	10
	F	12	45	-				40½°N., 26°E. Greece-Turkey border. U.S.C.G.S.			

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JANUARY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
6	ZV	eP	14	48	15				Small. Confused by microseisms. South western Black Sea. Near coast of Turkey. U.S.C.G.S.
	NE	eL	15	03	-				
		F		25	-				
7	ZV	eP	16	51	10				Small. 65½°N., 133½°W. Yukon. U.S.C.G.S.
	E	eL	17	08	-				
		F		25	-				
8	ZV,Z	iP	07	23	50			9200	Compression. 17°N., 99½°W. Guerrero. Mexico. Many injured and heavy damage at Acapulco. Mag. 6½(Pas). U.S.C.G.S.
	E	e		34	05				
	E	eSKS		34	13				
	E	e		34	31				
	N	eSS		39	17				
	E	e		39	48				
	N	eSSS		42	57				
	N	eLQ		47	-				
	E	eLR		50	-				
	ZNE	eL2		57	-				
	N	M		57½	-	24	8		
	E	M	08	1½	-	19	6		
		F		50	-				
8	ZV,Z	iP	21	07	28.5			10300	Dilatation. Depth about 60 Km. 19°S., 70°W. Northern Chile. Slight damage at Arica. Mag. 7¼(Pas). U.S.C.G.S.
	ZV,Z	ipP		07	45				
	ZV	i		08	01				
	Z	iPP		11	13				
	Z	ipPP		11	30				
	Z	iPPP		13	24				
	Z	e		15	29				
	E	eSKS		18	02				
	E	iSKKS		18	18				
	N	iS		18	26				
	NE	i		18	34				
	E	iPS		19	45				
	E	iPPS		20	31				
	Z	i		20	42				
	N	iSS		25	01				
	NE	eLQ		30	-				
NE	eLR		35	-					
E	eL2		41½	-					
N	M		45½	-	21	18			
E	M		46	-	20	18			
Z	M		46	-	18	9			
	F		23	40	-				
9	NE	e	12	35	-				Confused by strong microseisms. 23°S., 179°E. Fiji Islands region. U.S.C.G.S.
		F	13	35	-				
9	NE	e	13	50	-				Small. Confused by strong microseisms.
	NE	eL		59	-				
		F	14	20	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JANUARY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
10	ZV	eP	08	12	21				Small. 52.8°N., 1.4°W. Derbyshire tremor. Ho = 08h. 11m. 51s. Nature No. 4500.
10	ZV	ePKP ₁	09	12	27			17000	PKP phases very small.
	ZV	e		12	39				
	ZV	ePKP ₂		12	53				Part of the beginning lost in chart changing.
	ZV	e		13	13				
	ZV	eSKKS		23	11				
	ZV,Z	ePPS		29	24				Confused by strong microseisms.
	N	i		30	43				
	N	i		33	14				
	E	iSS		36	11				
	N	i		37	39				
	E	iSSS		42	14				
	N	i		46	12				
	E	i		46	41				25°S., 176°W. Tonga Islands region.
	E	i		49	39				Mag. 7 $\frac{3}{4}$ (Pas) U.S.C.G.S.
	E	i		53	07				
	E	eLQ		56	-				
	N	eLR	10	05	-				
	N	eL ₂		14	-				
	E	M		22 $\frac{1}{2}$	-	21	40		
	N	M		48	-	20	41		
	Z	M		50	-	16	21		
		F	12	35	-				
11	ZV,Z	eP	06	22	55			9600	Confused by microseisms.
	ZV	e		22	58				
	E	eSKS		33	22				
	NE	eS		33	32				7 $\frac{1}{2}$ °N., 94°E. Nicobar Islands. U.S.C.G.S.
	E	ePPS		35	00				
	N	eLQ		46	-				
	NE	eL ₂		57	-				
	E	M	07	09	-	20	10		
	N	M		09	-	20	11		
		F		55	-				
12	ZV,Z	iP	05	49	22			1550	Dilatation.
	ZV,Z	ePP		49	35				
	N	e(S)		51	58				S very small.
	N	eL		52.1	-				
	E	eLR		53.3	-				
	N	i		53	23				47 $\frac{1}{2}$ °N., 20°E. Northern Hungary. Heavy casualties and minor property damage. U.S.C.G.S.
	ZV,E	i		53	33				
	ZV,Z	i		53	39				
	N	M		53.7	-	15	26		The channel waves are large and clear on short period vertical instrument.
	ZV	i		53	49				
	ZV	i		53	57				
	N	i		54	08				
	ZV,Z	i (Rg)		54	10				
	Z	M		54.2	-	8	8		
	E	M		54.4	-	11	7		
	ZV	e		54	33				
	ZV,E	e(PcP)		54	48				
		F	06	30	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JANUARY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
13	ZV	eP	03	39	06			7900	57½°N., 163°E. Near east coast of Kamchatka.U.S.C.G.S.
	N	eS		48	21				
	NE	eSKS		48	30				
	N	eSS		53	13				
	NE	eL		59	-				
	NE	eL2	04	09	-				
		F		45	-				
13	NE	e	07	42	-				Very small. 29°S., 167½°E. Kingston Islands region. U.S.C.G.S.
		F	08	15	-				
14	NE	e	14	30	45				Small. Confused by microseisms. 51½°N., 173°W. Aleutian Islands.U.S.C.G.S. Overlapped by next shock.
	NE	eL		40	-				
	NE	eL		51	-				
		F		-	-				
14	NEZ	eL	14	58	-				Small. Confused by microseisms. 43°N., 145°E. Near east coast of Hokkaido, Japan.U.S.C.G.S.
		F	15	45	-				
16	ZV,ZE	eP	23	50	13			9400	Compression. Dilatation. ½°S., 80½°W. Near coast of Ecuador. Heavy property damage at Portoviejo and Bahia de Caraquez. Mag. 7¼-7½(Pas) U.S.C.G.S.
	ZV,ZE	iP		50	17				
	ZV,Z	i		50	27				
	ZV,Z	i		50	34				
	ZV	i		50	47				
	Z	i		51	09				
	ZV,Z	iPP		53	30				
	ZV,Z	i		53	47				
	ZV,Z	i		54	02				
17	E	iSKS	00	00	33				
	Z	i		00	36				
	N	iS		00	39				
	E	i(ScS)		00	51				
	Z	i		00	53				
	Z	i		01	00				
	E	i		01	11				
	E	iPS		01	32				
	Z	i		01	37				
	Z	i		01	56				
	E	iPPS		01	58				
	N	iSS		05	59				
	E	e		06	36				
	N	e		08	58				
	E	i		09	03				
	N	iSSS		09	50				
	Z	i(PKKS)		11	43				
	N	eLQ		12	8	-			
	E	eLR		15	0	-			
	Z	eP'P'P'		16	45				
E	eL2		18	½	-				
E	M		20	½	-	26	85		
N	M		27	½	-	18	43		
Z	M		30	-	-	17	31		
		F	03	10	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JANUARY, 1956.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
17	NE E	e	08	40	-				Very small. Pacific Ocean, about 1000 miles southwest of Galapagos Islands. U.S.C.G.S.
		eLR		51	-				
		F	09	10	-				
18	NE E	eL	08	50	-				Small.
		eL2	09	00	-				
		F		15	-				
19	NE	eL	20	25	-				Small.
		F	20	30	-				
23	N E N	e	04	08	53				Small. 55½°N., 161½°E. Near east coast of Kamchatka. U.S.C.G.S.
		eL		19	-				
		eL2		27	-				
		F	05	05	-				
27	N N	e	10	34	-				Small.
		eL		36	-				
		F		50	-				
27	NE	e	14	15	-				Very small.
		F		35	-				
27	NE	e	15	10	-				Very small.
		F		30	-				
27	E	eL	15	36	-				Very small.
		F	16	00	-				
28	NE NE	e	05	15	-				Very small.
		eL		19	-				
		F		50	-				
28	NE	eL	08	46	-				Small.
		F	09	25	-				
29	NE	eL	23	11	-				Small.
		F		35	-				
30	N N NE	e	09	36	-				
		eL	10	00	-				
		eL		14	-				
		F	11	05	-				
31	ZV ZV ZV,N ZV	e(Sn)	02	30	11				Very small.
		e		31	46				
		i		32	08				
		e		32	10				
		F		34	-				

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR FEBRUARY, 1956.

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 .	$\frac{Ak}{w}$ sec. ⁻¹
N.	25 August 1954	21.7	21.2	+0.01	54.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
1	ZV	ePKP ₁	01	52	43			11500	Large 20°S., 169°E. Loyalty Islands. U.S.C.G.S.
	ZV	iPKP ₂		52	45				
	N	e(L ₂) F	02	56	-				
1	ZV	eP	13	55	11			1900	Depth about 350 Km. PP large. 19°N., 145½°E. Marianas Islands, depth about 350 Km. Mag. 6½-7 (Pas) U.S.C.G.S.
	ZV, NE	e		59	29				
	ZV, Z	iPP		59	33				
	ZV	e		59	48				
	Z	ePPP	14	01	46				
	NE	eSKS		05	16				
	N	e(S)		06	11				
	ZN	eSP		07	59				
	E	ePS		08	42				
	E	e		09	09				
	N	e		09	26				
	NE	iPPS		10	36				
	N	ePKKP		10	57				
N	eSS		13	42					
N	eL ₂ F	15	10	-					
1	ZV, Z	iP	15	14	32			1900	Deep. PP Large. 38½°N., 15½°E. Straits of Messina, Italy. U.S.C.G.S.
	ZV	i		14	38				
	ZV	iPP		14	44				
	ZV	i		14	51				
	ZV	iPPP		14	55				
	ZV	i		15	10				
	ZV	i		15	16				
	ZV	i		15	22				
ZV	i		15	29					

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

FEBRUARY, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
contd.						sec.	μ	km.	
1	N	eS	15	17	44				
	N	eL		18 ¹ / ₂	-				
	N	e(PoS)		22	49				
		F		30	-				
2	NE	eL	03	43	-				Small.
		F	04	00	-				17 ¹ / ₂ °N., 46 ¹ / ₂ °W. Atlantic Ocean. U.S.C.G.S.
2	N	e	19	30	-				Small. Confused by
	E	eL		38	-				microseisms.
		F	20	00	-				
3	NE	e	13	35	-				Small.
		F		50	-				Eastern Iraq. U.S.C.G.S.
9	ZV,Z	eP	14	44	53			8900	
	ZV	1P		44	57				
	ZV,Z	e		45	13				
	ZV	ePP		47	53				
	E	eS		54	52				Small.
	N	1S		54	55				
	E	1SKS		55	03				
	ZNE	eSP		55	35				
	NE	1PPS		55	52				
	E	eSS		49	49				
	E	eSSS	15	03	05				32°N., 116°W. Lower California. Minor damage in Imperial Valley. Mag. 6 ³ / ₄ -7 (Pas) U.S.C.G.S.
	Z	ePKKP		03	34				
	E	1		03	42				
	NE	e		05	37				
	N	1(PKKS)		06	57				
	Z	e		06	59				
	N	eLQ		07	-				
	NE	eLR		09 ¹ / ₂	-				
	N	eL2		14	-				
	E	1		17	-	17	75		
	N	1		18	-	15	112		
	E	1		18	-	15	43		
		F	16	45	-				
9	NE	e	16	50	-				Lower California
		F	18	00	-				aftershock. U.S.C.G.S.
10	ZV,Z	1P	00	15	20			9500	Depth about 50 Km.
	ZV	ePP		15	33				
	ZV	ePP		18	39				
	NE	eL		45	-				37°N., 142°E. Off coast of Honshu, Japan. Depth about 60 Km. U.S.C.G.S.
	NE	eL		50	-				
		F	01	25	-				
12	ZV,Z	eP	12	02	45			10900	
	ZV,Z	e		06	21				
	ZV,Z	ePP		06	34				
	ZV,Z	e		06	52				
	E	eSKS		13	25				
	NE	eSKKS		13	51				
	N	1S		14	07				
	ZE	1SP		14	48				
	E	1		15	02				
	N	1		15	05				19°N., 119 ¹ / ₂ °E. Off north west coast of Luzon. Mag. 6 ¹ / ₄ -6 ¹ / ₂ (Pas) U.S.C.G.S.

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

FEBRUARY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
contd.									
✓12	Z	i	12	15	07				
	NE	e		15	20				
	N	ePP8		15	53				
	N	eSS		19.7	-				
	NE	eL		34	-				
	E	M		49	-	16	19		
	N	M		49	-	15	28		
	Z	M		49	-	15	14		
		F	13	30	-				
12	NE	e	20	30	-				Small.
		F		50	-				Luzon aftershock. U.S.C.G.S.
13	NE	e	04	40	-				Small.
		F		50	-				Luzon aftershock. U.S.C.G.S.
13	N	eL	15	12	-				Small.
	NE	eL ₂		18	-				Luzon aftershock. U.S.C.G.S.
		F		40	-				
13	E	e	23	37	-				Very small.
		F		55	-				Luzon aftershock. U.S.C.G.S.
14	ZV	eP	01	05	32				35½°N., 139½°E. Near east coast of Honshu, Japan.
	ZV	e			47				U.S.C.G.S.
✓14	ZV	eP	09	57	02			2070	
	ZV	e		57	13				
	NE	eS	10	00	25				
	E	eL _Q		01	-				37°N., 1½°E. Near coast of Algiers. U.S.C.G.S.
	ZV	ePcP		01	55				
	E	M		02	-	14	5		
	NZ	eL ₂		03	-				
	N	M		03½	-	11	4		
	Z	M		04½	-	8	4		
	Z	eScP		05	26				
		F		10	-				
14	NE	eL	13	20	-				Small.
		F		35	-				Luzon aftershock. U.S.C.G.S.
14	ZV, Z	eP	18	45	52			8900	
	NE	eS		55	52				
	NE	eLR	19	09	-				
	N	i		12	02				31½°N., 115½°W. Lower California aftershock.
	ZNE	eL ₂		17	-				Mag. 6.4 (Pas). U.S.C.G.S.
	E	M		19	-	16	11		
	N	M		19	-	16	16		
	Z	M		19	-	16	7		
		F	20	10	-				
15	ZV, Z	iP	01	32	53			8900	
	N	eS		42	54				
	E	e		42	59				
	NE	eLR		57	-				
	N	e		58	56				
	N	e	02	00	02				
	ZNE	eL ₂		04	-				
	E	M		05	-	16	9		

6

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.SEISMOLOGICAL BULLETIN.

FEBRUARY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
contd. ✓ 15	Z	M	02	05	-	16	5		
	N	M		06	-	16	10		
		F		50	-				
15	ZV	iP	15	57	50				Small. Confused by microseisms. 28°N., 53°E. Southern Iran. U.S.C.G.S.
	ZV	i		57	55				
	ZV	i		58	06				
	NE	e(ScS)	16	07	47				
	N	e		07	59				
	F		45	-					
15	ZV	e(S*)	17	43	47				43.1°N., 0.5°W. Pyrenees B.C.I.S.
	ZV	eL _g		44	08				
	ZV	iR _g		44	32				
	ZV	i		44	38				
15	E	e	21	32	-			Very small. Confused by microseisms. 13½°S., 111½°W. Pacific Ocean. U.S.C.G.S.	
		F		55	-				
15	N	e	21	55	-			Very small. Confused by microseisms.	
		F	22	15	-				
✓ 17	N	e	10	19	21			Ne 47°S., 15°W. South Atlantic Ocean. U.S.C.G.S.	
	E	i(S)		19	25				
	NE	e		22	02				
	NE	e		22	13				
	NE	e		22	37				
	E	e(SS)		26	02				
	NE	eL		37	-				
	N	M		43	-	20	7		
	E	M		49	-	21	7		
	Z	M		49	-	19	4		
	F		11	50	-				
✓ 18	ZV,Z	iP	07	46	36			10000 Depth 480 Km. 30°N., 137½°E. South of Honshu, Japan. Depth about 450 Km. Mag. 7¼-7½ (Pas) U.S.C.G.S.	
	ZV,Z	iPP		48	26				
	ZV,Z	esP		49	17				
	ZV,Z	iPP		50	21				
	Z	iPPP		51	53				
	Z	iPPP		52	22				
	Z	isPP		52	46				
	Z	iPPP		53	44				
	N	isKS		56	20	13	47		
	E	isKS		56	21	12	34		
	N	is		56	47	12	45		
	E	is		56	50	12	31		
	ZNE	isP		58	03				
	N	ipS		59	00				
	N	isS		59	57				
	N	isS	08	03	08				
	N	isSS		05	33				
	N	isSS		06	53				
	E	isSS		06	55				
	ZV,Z	iP'P'		12	11				
ZNE	eL		28	-					
	F		10	15	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

FEBRUARY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
19	ZV,Z	eP	02	29	12			7800	Ne 52°N., 131½°W. Queen Charlotte Islands. Mag. 6¾ (Pas). U.S.C.G.S.
	ZV,Z	e(PcP)		29	40				
	Z	ePP		31	57				
	E	iS		38	21				
	Z	ePS		38	48				
	N	eSS		42	43				
	NE	eL		49	-				
	NE	eL2		54	-				
	N	M	03	00	-	16	31		
	E	M		00½	-	16	25		
Z	M		03	-	12	12			
		F	04	15	-				
19	ZV	eP	04	24	23			7500	Small. 58½°N., 154°W. Alaska Peninsula. U.S.C.G.S.
	ZV	e		24	32				
	ZV	e(PcP)		24	46				
	ZV	ePP		27	09				
	E	eS		33	16				
	NE	eL		45	-				
	ZNE	eL2		53	-				
		F	05	30	-				
20	ZNE	e	01	35	-			Very small.	
		F		42	-				
20	NE	eL	08	44	-			Small.	
		F	09	15	-				
20	ZV,Z	eP	20	36	53			2860	39½°N., 30½°E. Turkey, four killed and many injured with extensive property damage at Eski Shehr. U.S.C.G.S.
	ZV,ZNE	iP		36	57				
	ZV,Z	i		37	23				
	ZV,Z	i		37	35				
	E	eS		41	17				
	NE	iS		41	21				
	N	eLQ		42½	-				
	N	eL2		45	-				
	N	M		46½	-	12	66		
	E	M		47½	-	10	46		
	Z	M		47½	-	10	33		
		F	21	45	-				
	22	NE	e	00	16	-			
		F		25	-				
22	NE	e	10	45	-			Small.	
		F	11	15	-				
22	ZV	iP	01	28	16			4180	31°N., 42°W. North Atlantic Ocean. U.S.C.G.S.
	ZV	e		28	24				
	ZV	e		29	40				
	Z	e		29	50				
	NE	eS		34	03				
	N	iSS		36	53				
	NE	eL		37	-				
	ZNE	eLR		39	-				
		F	02	30	-				

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

FEBRUARY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
24	NE	eL F	10 11	45 20	-				Small.
25	NE	e F	20 21	50 05	-				Very small.
√ 29	ZV,Z ZV ZV,Z N E E N E N Z	iP e i(pP) eS i e eL M M M F	21	02 03 03 12 12 12 27 40 40 40	57 15 33 25 37 43 - - - -			8200	Confused by microseisms. Possibly deeper than normal.
						22			15
						22			10
						22			13
			-	-	-				Overlapped by next shock.
29	N	eL F	22	05 25	- -				Small.

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.
KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.
SEISMOLOGICAL BULLETIN FOR MARCH, 1956.

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. sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ^2 .	$\frac{Ak}{\pi I}$ sec. ⁻¹
N.	25 August 1954	21.7	21.2	+0.01	51.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD. sec.	AMPLI- TUDE. μ	Δ km.	REMARKS.
			h.	m.	s.				
1	NE	e F	13	10	-				Small. Confused by microseism. Southern Iran, U.S.C.G.S.
2	ZV NE NE NE	iP e(s) e eL F	12	06	47		(6900)		Small. Confused by strong microseisms. 63½°N., 149½°W. Alaska. U.S.C.G.S.
2	ZV NE	iP eL F	15	01	20				Confused by strong microseisms. 45½°N., 149½°E. Kurile Islands. U.S.C.G.S.
3	ZV ZV NE N E	ePKP e eL M M F	00	25	24				Confused by strong microseisms. 15°S., 173½°W. Samoa Islands region. Mag. 6¾(Pas). U.S.C.G.S.
3	NE	e F	02	03	-				Small. Confused by microseisms.
3	ZV ZV ZV	eP e e	04	24	08				Small. Local.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

..... MARCH, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
3	ZV	eP	10	25	37				Small. 23½°N., 94½°E. Burma-India border aftershock. U.S.C.G.S.
	N	eL		52	-				
	NE	eL		58	-				
		F	11	20	-				
3	ZV	iP	18	26	51			2530 Confused by microseisms.	
	ZV	e		26	59				
	E	iS		30	53				
	NE	eL		32	-				
	N	eL		34	-				
	E	M		33½	-	18	8		
	N	M		34	-	14	5		
	Z	M		34	-	14	5		
	F		50	-					
5	NE	e	04	25	-			Very small. 52°N., 159½°E. Near south-east coast of Kamchatka. U.S.C.G.S.	
		F		45	-				
5	N	e(s)	07	29	29			37°N., 77°E. Southern Sinkiang Province, China. U.S.C.G.S.	
	NE	eL		40	-				
	E	M		43½	-	19	8		
	N	M		43½	-	19	19		
	Z	M		49	-	12	5		
		F	08	15	-				
5	ZV,Z	iP	23	41	53			8900 44½°N., 144°E. Near north coast of Hokkaido, Japan. Mag. 6½-6¾ (Pas). U.S.C.G.S.	
	ZV,Z	i		41	57				
	ZV	i		42	01				
	ZV	i		42	11				
	N	eS		51	53				
	E	iSKS		52	00				
	NE	e		52	24				
	N	e		52	56				
	E	eLR	00	07	-				
	NE	eL2		13	-				
6	E	M		16	-	21	10		
	N	M		17	-	20	8		
	Z	M		26	-	12	3		
		F		55	-				
6	ZV	iP	09	04	03			Small. 28°N., 52½°E. Southern Iran. U.S.C.G.S. overlapped by aftershock.	
	NE	eL		22	-				
		F		-	-				
6	NE	eL	09	30	-			Iran aftershock. U.S.C.G.S.	
		F		50	-				
6	ZV	iP	21	01	39			Iran aftershock. U.S.C.G.S.	
7	ZV	i	14	12	55			Small.	
13	ZV,Z	iP	13	25	26			8800 7°N., 82°W. Off south coast of Panama. U.S.C.G.S.	
	ZV	i		25	31				
	ZV	i		25	35				
	NE	eS		35	22				
	N	eSKS		35	40				
	N	ePS		36	11				
	E	e		36	19				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

MARCH, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
contd.									
✓ 13	N	e	13	36	52				
	E	eSS		40	42				
	E	eSSS		44	17				
	NE	eL		46	-				
	N	M		49	-	24	9		
	E	M		55	-	24	12		
	Z	M		55	-	22	11		
		F	14	40	-				
16	N	eL	19	50½	-				Small. Lebanon foreshock.
		F	-	-	-				
16	N	eL	20	01½	-				Small.
		F	20	18	-				34°N., 36°E. Lebanon. Many killed, extensive property damage. U.S.C.G.S.
19	NE	eL	18	41	-				Small. Confused by microseisms.
	ENZ	eL2		50	-				
		F	19	15	-				
19	NE	e	19	32	-				Very small. Confused by microseisms.
		F		45	-				
21	N	eL	05	11	-				Small. 41°N., 48½°E. Azerbaijan U.S.S.R. U.S.C.G.S.
	NE	eL2		14	-				
		F		30	-				
21	N	eL	19	10	-				Small.
	NE	eL		18	-				
		F		45	-				
22	ZV,Z	iP	06	46	29			9650	Depth 90 Km. 3½°S., 79°W. Ecuador. Mag. 6¼(Pas). Depth about 100 Km. U.S.C.G.S.
	ZV,Z	ipP		46	53				
	ZV,Z	esP		47	02				
	E	eSKS		56	48				
	N	eS		56	57				
	E	esSKS		57	26				
	E	iPPS		58	46				
	E	i		59	30				
	E	eSS	07	02	38				
	E	eSSS		06	24				
	N	eLQ		09	-				
	E	eL		14½	-				
		F		50	-				
23	NE	eL	06	18	-				
		F		40	-				
30	E	eL	08	14	-				Very small.
		F		22	-				

M.O. 614

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.
KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.
SEISMOLOGICAL BULLETIN FOR APRIL, 19 56

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, 1918).

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.	25 August 1954	21.7	21.2	+0.01	54.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD. sec.	AMPLI- TUDE. μ	Δ km.	REMARKS.
			h.	m.	s.				
1	NE	eL F	12	12	-			Small.	
1	N	e F	19	56	-			Small.	
2	ZV,Z	iP	11	03	12		10300	2°N., 97°E. Off coast of Sumatra. U.S.C.G.S.	
	ZV	i		03	28				
	ZV,Z	iPP		06	58				
	N	eS		14	11				
	E	e		14	19				
	N	e		14	47				
	N	eSS		20	30				
	NE	eL2		42	-				
	N	M		50	-	20	8		
	E	M		53	-	20	7		
	Z	M		55	-	15	4		
		F	12	35	-				
2	ZV	iP	11	15	33			Southern Tibet. U.S.C.G.S.	
6	ZV,Z	iP	07	20	21		5710	Compression. Depth 220 Km.	
	ZV	i		20	27				
	ZV,Z	ipP		21	09				
	Z	ePP		22	19				
	ZV,Z	epPP		23	08				
	Z	ePPP		23	32				
	N	iS		27	22				
	Z	i(PS)		27	26				
	N	esS		28	46				
	N	iScS		29	45				
	N	eSS		31	21				

contd.

Form 3717.

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

APRIL, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
contd. 6	E N N	e esSS eL F	07	32	21 25 32½				
			08	20	-				
7	NE	e F	00	40	-				Very small.
				55	-				
7	NE	eL F	19	33	-				Small. 32°S., 180°.
			20	15	-				Kermadec Islands. U.S.C.G.S.
10	ZV ZV,Z E ZE N N	eP ipP iSKS iSP eSS eL F	13	29	38 13 01 22 21		10900		Depth about 130 Km. Confused by microseisms.
				40	01				3°S., 102°E. Near south coast of Sumatra. U.S.C.G.S.
			14	08	-				
				35	-				
11	N	e F	02	12	-				Very small.
				20	-				39°N., 70°E. Tadzhik. U.S.S.R.
									U.S.C.G.S.
11	NE	eL F	18	31	-				Small.
				40	-				35½°S., 54½°E. Indian Ocean.
									U.S.C.G.S.
12	NE	eL F	05	55	-				Small.
			06	10	-				22°S., 72½°W. Off coast of Chile.
									U.S.C.G.S.
12	ZV ZV NE	iP i eL F	22	42	07 13		(4400)		Very small.
				42	13				37°N., 50°E. Northern Iran.
				58	-				U.S.C.G.S.
			23	15	-				
13	NE	e F	07	15	-				Very small.
				27	-				
14	N	eL F	04	21	-				Small.
				30	-				
16	NE	e F	14	31	-				Very small.
				40	-				
18	N N	eL eL F	11	45	-				Small.
				48	-				52°N., 178°W. Aleutian Islands.
			12	25	-				U.S.C.G.S.
19	ZV E NZ	eP eL eL F	18	42	29				Small.
				47	-				37.2°N., 3.7°W. Southern Spain.
				48½	-				B.C.I.S.
				55	-				
22	NE ZNE	eL eL2 F	05	45	-				Small.
				56	-				6°S., 151½°E. New Britain.
			06	20	-				U.S.C.G.S.

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

APRIL, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
22	ZV,Z	iP	17	33	31			8300	54°N., 162°W. South of Alaska Peninsula. Mag. 6 (Pas). U.S.C.G.S.
	ZV,Z	e		33	46				
	N	eS		43	05				
	NE	i (ScS)		43	42				
	Z	e (PPS)		43	56				
	N	eSS		47	49				
	N	eL		52	-				
	E	eL ₂	18	03	-				
	N	M		09 ¹ / ₂	-	18	6		
	Z	M		12 ¹ / ₂	-	16	4		
22	E	eL	20	09	-			Very small.	
	N	eL		12	-				
23	ZV,Z	iP	03	43	57			9050	42½°N., 144½°E. Off east coast of Hokkaido. Mag. 6½-6¾ (Pas). U.S.C.G.S.
	ZV	e		44	12				
	ZV	e		44	22				
	ZV	e		44	43				
	N	eS		54	05				
	E	iSKS		54	07				
	E	i (ScS)		54	29				
	Z	e		54	50				
	Z	e		55	22				
	E	eL	04	08	-				
	ZNE	eL ₂		16	-				
	N	M		20 ¹ / ₂	-	19	9		
23	NE	e	22	00	-			Very small.	
		F		10	-				
25	NE	eL	08	12½	-			Small.	
		F		18	-				
25	Z	ePKP	08	49	43			Small. 17°S. 175°E. Fiji Islands. U.S.C.G.S.	
	NE	eL	09	50	-				
		F	10	25	-				
26	NE	e	03	06	-			Very small.	
		F		10	-				
29	ZV,Z	iP	22	04	06			Small.	

M.O. 614

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR MAY, 1956

Lat. 51° 28' 8" 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 _y sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ ² .	A _k w _l sec. ⁻¹
N.	25 August 1954	21.7	21.2	+0.01	54.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
1	NE	e F	03	43 55	- -				Very small. 4½°S., 103°E. Sumatra. U.S.C.G.S.
4	ZV	e(P)	23	26	14				Very small. Local. Felt in south east Suffolk.
	ZV	i		26	15				
	ZV	e		26	31				
	ZV	e		26	37				
5	N	e F	04	35 50	- -				Very small. 15½°S., 173°W. Samoa Islands. U.S.C.G.S.
6	ZV	eP	21	08	56				Small. 54½°N., 162½°W. Unimak Island region. Alaska. U.S.C.G.S.
	NE	eL F		34	-				
			22	35	-				
7	NE	e	11	36	-				46½°S., 96°E. South Indian Ocean. Mag. 6½(Pas). U.S.C.G.S.
	N	eL		51	-				
	NE	eL	12	07	-				
	N	M		18½	-	19	11		
	E	M		19	-	19	9		
	Z	M F		20½	-	18	6		
			13	15	-				
7	NE	e F	17	50	-				Very small.
			18	10	-				
8	ZV, Z	iP	20	58	29				Iran. U.S.C.G.S.

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

MAY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
11	N	eL F	16	34 50	-				Small.
13	ZV NE NE N E Z	iP eL eL M M M F	08	00 19½ 24 27 29½ 29½	10 - - - - -				30°N., 70°E. Central Pakistan. U.S.C.G.S.
						18 16 16	11 7 7		
15	ZV ZV NE NE	eP e eS e F	18	39 39 42 46 57	02 19 42 30 -			2230	Small. Greece. Foreshock. 37½°N., 21°E. U.S.C.G.S.
15	ZV ZV NE NE NE N E	eP e eS eL e M M F	23	01 02 05 08 09 09½ 10 25	42 01 22 - 12 - - -			2230	Greece. 38°N., 22°E. U.S.C.G.S.
						13 13	8 4		
16	NE	e F	16 17	55 20	- -				Very small.
17	ZV NE	eP eL F	06	13 46 58	07 - -				Very small. 16½°S., 72°W. Peru. U.S.C.G.S.
18	NE	e F	19 20	22 10	- -				Small.
18	ZV,Z ZV,Z N N EZ	iP i eL i e F	22	13 13 19 20 21 35	06 14 - 04 47 -				Small. Near east coast of Greece. U.S.C.G.S.
19	ZV,Z ZV,Z ZV,Z ZV,Z NE NE NE	iPKP i ePP iPKS i eL eL F	01	49 50 52 53 53	53 04 08 15 31				Small. 7°S., 156°E. Solomon Islands. U.S.C.G.S.
			02	29	-				
			03	39	-				
			03	50	-				
22	N N E NZ N Z E	e eL eL eL M M M F	03 04	29 09 12 14	14 - - -				15½°S., 173°W. Samoa Islands. Mag. 6½(Pas). U.S.C.G.S.
						19 19 19	8 5 4		
			05	25	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

MAY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.	
			h.	m.	s.					
22	ZV	ePKP	13	54	23			14100	Depth about 500 Km. 4°S., 152½°E. New Ireland. U.S.C.G.S.	
	ZV,Z	epPKP		56	16					
	ZV,Z	ePP		56	32					
	Z	isPKP		56	53					
	N	ePKS		57	42					
	ZV,Z	epPP		58	12					
	NE	eSKS	14	00	26					
	NE	i(S)		02	35					
	NE	e		06	11					
	E	esPS		09	08					
	NE	e		15	18					
		F		15	10	-				
23	N	eL	00	13	-			Very small.		
		F		20	-					
23	ZV,ZNE	iPKP	21	07	16			(16500)	Compression. Deep. Large on ZV.	
	ZV,ZN	i		09	01					
	ZN	i		09	38					
	ZV,Z	i		10	19					
	ZV,ZN	i		10	38					
	N	i		11	10					
	ZV	i		11	49					
	NZ	i		12	51					
	Z	i		14	51					
	N	i		16	34					
	N	i		22	52					
	E	i		28	53					
	E	i		31	36					
	E	i		36	52					
	N	i		37	18					
		F		23	50	-				
	24	NE	eL	03	07	-				
		F		25	-					
26	ZV	iP	18	42	47			Small.		
	N	eL		46	-					
	E	eL		47	-					
		F		55	-					
26	ZV,Z	ePKP	20	40	01			(16500)	Depth about 620 Km.	
	ZV,Z	i		40	07					
	ZV,Z	ipPKP		42	26					
	ZV	i		42	38					
	ZV	i		42	45					
	Z	ePP		43	51					
	N	i		49	26					
	ZV	i		50	27					
	Z	e(pPS)		56	27					
	ZN	e(sPS)		57	32					
	N	e		59	27					
	E	i(SS)	21	01	46					
		F	22	10	-					
28	Z	iP	13	42	50			Very small.		
	NE	eL	14	18	-					
		F		40	-					
30	N	eL	05	53	-			Very small.		
		F	06	00	-					

No. 614

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.
KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.
SEISMOLOGICAL BULLETIN FOR JUNE 1956.

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, 1918).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALVANOMETER FREE PERIOD T ₁ sec.	PENDULUM FREE PERIOD T. sec.	DAMPING CONSTANT μ ² .	$\frac{Ak}{w}$ sec. ⁻¹
N.	25 August 1954	21.7	21.2	+0.01	54.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD.	AMPLITUDE.	Δ	REMARKS.	
			h.	m.	s.					
1	N	eL	10	55	-			Very small. 64°N., 22°W. Iceland. U.S.C.G.S.		
		eL	10	56	-					
		F	11	10	-					
3	ZV	eP	05	27	42		(4800)	79½°N., 118½°W. Arctic Ocean. U.S.C.G.S.		
		e(s)		34	08					
		eL		45	-					
		F	06	15	-					
3	N	e	20	22	-			Very small.		
		F	21	00	-					
4	ZV, Z	iP	07	21	13		8,800	52°N., 170½°W. Fox Islands, Aleutian Islands. Mag. 6¼(Pas) U.S.C.G.S.		
		eS		31	10					
		e		31	33					
		i		31	49					
		eSS		36	03					
		e		40	09					
		eL2		52½	-					
		M	08	01	-				16	5
		M		02	-				18	7
		M		02	-				17	4
4	NE	eL	13	20	-			Small. 31°S., 178°W. Kermadec Islands. U.S.C.G.S.		
		F	14	50	-					

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JUNE, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
5	ZV,Z	e	06	28	25				Small. 51°S., 112½°W. Pacific Ocean Mag. 6¼-6½(Pas). U.S.C.G.S.
	E	eL2	07	07	-				
		F	08	15	-				
8	ZV,Z	iP	04	16	26				Small. 35°N., 67½°E. Afganistan foreshock. U.S.C.G.S.
	ZV,Z	ePcP		17	38				
	N	eL		33	-				
	E	eL		37	-				
		F		55	-				
8	ZV	eP	14	06	42			11400	Small. Depth about 140Km. 30°S., 70°W. Argentina- Chile border region. U.S.C.G.S.
	ZV	ipP		07	18				
	N	e(S)		18	10				
	NE	eL		45	-				
		F		15	30	-			
9	Z	iP	10	22	27			11600	30½°S., 70½°W. Central Chile. Mag. 6¾(Pas). h about 150Km. U.S.C.G.S.
	Z	ePP		26	38				
	NE	eSKS		33	13				
	N	eS		34	17				
	E	i		35	59				
	Z	i		36	48				
	N	eSS		41	21				
	NE	eL		56	-				
	ZE	eL	11	01	-				
	E	M		05 ¹ / ₂	-	21	19		
	Z	M		08 ¹ / ₂	-	20	16		
N	M		09 ¹ / ₂	-	18	17			
	F		13	05	-				
9	ZV,ZE	iP	23	22	49			5640	Compression. 35½°N., 67½°E. Afganistan. Mag. 7¼-7½(Pas). U.S.C.G.S.
	ZV,Z	iPcP		24	10				
	ZV,ZE	iPP		24	48				
	Z	iScP		28	15				
	N	iS		30	01				
	E	i		30	05				
	E	i		33	31				
	ZN	iSS		33	56				
	N	i		34	24				
	N	eL		37	-				
	E	eL		38	-				
	EZ	eL		42	-				
	N	M		42½	-	27	960		
E	M		44	-	22	348			
Z	M		48½	-	16	525			
10		F	03	25	-				
10	ZV	iP	00	02	37				Afganistan aftershock. U.S.C.G.S.
10	ZV	iP	01	10	35				Afganistan aftershock. U.S.C.G.S.
10	NE	eL	14	14	-				Very small.
				25	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JUNE, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.		
			h.	m.	s.					sec.	μ
11	ZV,Z	eP	01	16	57			3090	Very small. 34½°N., 26½°E. Near south coast of Creete. U.S.C.G.S.		
	ZV	e		17	13						
	E	eS		21	36						
	N	eL		25½	-						
		F		35	-						
11	ZV	eP	03	06	11				Very small. Afganistan aftershock. U.S.C.G.S.		
	N	eL		26	-						
		F		40	-						
11	ZV,ZE	eP	08	26	33			2230	52°N., 31½°W. North Atlantic Ocean. U.S.C.G.S.		
	N	iS		30	12						
	N	eL		30½	-						
	E	eL		31	-						
	E	M		32½	-					17	4
	N	M		34½	-					10	7
	Z	M		37½	-					10	3
		F		09	10					-	
11	NE	eL	10	46	-				Very small. 27½°S., 69°W. Chile-Argentina border. U.S.C.G.S.		
		F		11	20					-	
11	NE	e	23	23	-				Very small. 50½°N., 89°E. Southern Siberia. U.S.C.G.S.		
		F		35	-						
12	NE	eL	03	49	-				Very small. Assam. U.S.C.G.S.		
		F		04	05					-	
12	ZNE	eL	09	50	-				Small. 9°S., 110°W. Eastern Pacific Ocean. U.S.C.G.S.		
		F		10	20					-	
13	N	eL	12	55	-				Small. ½°S., 124½°E. Near coast of Celebes. U.S.C.G.S.		
		F		13	40					-	
13	NE	eL	18	30	-				Very small. 6°S., 147°E. Near coast of New Guinea. U.S.C.G.S.		
		F		19	10					-	
15	Z	ePKP	15	55	25				Very small. South of Tonga Islands. h about 200 Km. U.S.C.G.S.		
	N	eL		16	53					-	
	E	eL		17	03					-	
		F		45	-						
16	ZV,Z	eP	06	32	24			(9850)	Small. 28½°N., 131½°E. Ryukyu Islands. U.S.C.G.S.		
	NE	e(S)		43	08						
	Z	ePS		44	17						
	NE	eL		07	03					-	
	NE	eL		08	-						
		F		50	-						
16	NE	e	21	03	-				Very small. South of Tonga Islands. U.S.C.G.S.		
		F		25	-						

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JUNE, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
19	NE	e F	01	18	-				Very small.
				50	-				
20	Z	e	16	49	28				Very small.
	Z	e F		50	27				
				52					
20	ZE	e	22	35	30				Very small.
	NE	eL		40	-				
		F		50	-				
21	E	e F	21	42	-				Very small.
				55	-				
22	NE	e F	00	57	-				Very small.
			01	10	-				
23	ZV,ZN	iP	02	29	27			8100	Compression.
	ZV,Z	iPcP		29	45				
	ZV,Z	iPP		32	07				
	NE	eS		38	50				
	NE	eSS		43	38				56½°N., 163½°E. Near east coast of Kamchatka.
	NE	eSSS		46	44				Mag. 6½(Pas). U.S.C.G.S.
	E	eLQ		48	-				
	N	eLR		53	-				
	NE	eL2		58	-				
	E	M	03	03	-	19	19		
	N	M		03	-	19	16		
	Z	M		11	-	13	5		
		F	04	30	-				
24	NE	e F	13	40	-				Very small.
			14	15	-				
24	ZV,Z	i(PKS)	21	21	17				Small.
	ZV	e		21	29				
	NE	eL	22	05	-				7°S., 155°E. Solomon Islands.
		F	23	20	-				U.S.C.G.S.
25	N	e F	11	02½	-				Very small.
				10	-				
25	N	eL F	13	20	-				Very small.
				30	-				Eastern Iran. U.S.C.G.S.
26	ZV	iP	00	19	50				Small.
26	NE	eL F	01	59	-				Very small.
			02	07	-				
26	ZNE	e	06	38½	-				Very small.
				50	-				
27	NE	eL F	19	45	-				Very small.
			20	05	-				Southern Formosa. U.S.C.G.S.
27	NE	e F	23	42	-				Very small.
				50	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JUNE, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
28	N	eL	17	50.8	-				Small.
	ZE	eL		52.2	-				
	F		18	05	-				
V 28	ZV,Z	iP	23	10	13			7900	49°N., 129½°W. Off coast of Vancouver Island, British Columbia. Mag. 6¼-6½(Pas). U.S.C.G.S.
	ZV	i		10	18				
	ZV	i		10	28				
	ZV,Z	ePP		12	49				
	ZV,Z	ePPP		14	26				
	NE	eS		19	27				
	NE	eScS		20	12				
	E	eSS		24	12				
	N	e		24	27				
	E	eSSS		27	37				
	N	e		27	47				
	NE	eL		29	-				
	ZNE	eL2		38	-				
	E	M		40	1½	17	16		
N	M		41	1½	17	22			
Z	M		41	½	16	17			
29		F	01	15	-				
29	ZV	eP	02	27	15			Small. 28°N., 57°E. Southern Iran. U.S.C.G.S. overlapped by next shock.	
	ZV	e		27	28				
	NE	eL		44	-				
	F		-	-	-				
V 29	NE	eL	03	05	-			(1800)	Small.
	ZN	eL		16	-				
	N	M		19	1½	16	6		
	E	M		20	½	16	5		
	Z	M		20	½	15	4		
	F			55	-				
30	ZV	eP	01	55	17			(1800)	Small.
	ZV	e		55	40				
	N	eL		59	-				
	ZE	e(ScS)	02	07	21				
	F			20	-				
30	N	e	03	37	-			Very small.	
	F			45	-				

Station	Time	Phase	Amplitude	Duration	Quality	Remarks
11055 (005)	1973 08 20 00:00	P	0.1	10	1	
11055 (005)	1973 08 20 00:00	S	0.1	10	1	
11055 (005)	1973 08 20 00:00	W	0.1	10	1	
11055 (005)	1973 08 20 00:00	N	0.1	10	1	
11055 (005)	1973 08 20 00:00	E	0.1	10	1	
11055 (005)	1973 08 20 00:00	S	0.1	10	1	
11055 (005)	1973 08 20 00:00	P	0.1	10	1	
11055 (005)	1973 08 20 00:00	W	0.1	10	1	
11055 (005)	1973 08 20 00:00	N	0.1	10	1	
11055 (005)	1973 08 20 00:00	E	0.1	10	1	

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.SEISMOLOGICAL BULLETIN FOR JULY, 19 56

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.	25 August 1954	21.7	21.2	+0.01	54.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD. sec.	AMPLI- TITUDE. "	Δ km.	REMARKS.
			h.	m.	s.				
3	NE	e	00	40	-			Small.	
		F	01	15	-				
3	NE	eL	16	29	-			Very small. 13½°N., 91°W. Near coast of Guatemala. U.S.C.G.S.	
		F		55	-				
3	ZV	iP	23	35	00	5780		Depth 230 Km. 36½°N., 71°E. Hindu Kush. U.S.C.G.S.	
	ZV	eP		35	50				
	ZV,Z	e		36	11				
	ZV	ePP		36	58				
	ZV,Z	e		37	53				
	N	eS		42	05				
4	NE	eL		46	-				
		F	00	05	-				
4	ZV,Z	iPKP	00	58	49			18°S., 178½°W. Fiji Islands, h about 450 Km. U.S.C.G.S.	
		i		58	52				
4	NE	eL	04	05	-			Very small. 7°S., 155½°E. Solomon Islands. U.S.C.G.S.	
		F		40	-				
4	NE	e	04	50	-			Very small. Solomon Islands aftershock. U.S.C.G.S.	
		F	05	30	-				
6	NE	eL	03	03	-			Very small. 42½°N., 126°W. Off coast of Oregon. U.S.C.G.S.	
		F		15	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN. JULY, 1956.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
7	NE	e F	10 11	48 20	- -				Very small.
8	ZV ZV N	eP e eL F	13	10 10 17 25	04 08 - -				Very small. Aegean Sea foreshock.
9	ZV,ZNE ZNE ZNE ZNE ZE E E NZ NZ ZV,ZNE ZV	1P i 1PP 1PPP i i(PcP) iS i i eL eL F	03	16 17 17 17 19 20 21 21 21 21 21 ¹ / ₂ 25 ¹ / ₂ 30	54 02 28 41 11 34 02 16 22 - - -		2610		Compression. 37°N., 26°E. Aegean Sea. 42 killed and many injured. Several towns destroyed on Thira and Ios Islands. Mag.8 (Pas). U.S.C.G.S. Maxima passing beyond limits of registration.
9	ZV	1P	03	29	18				Compression. Large Aegean Sea aftershock.
9	ZV ZV	eP e	06	24 24	20 25				Aegean Sea aftershock.
9	ZV	1P	06	28	00				" " "
9	ZV	eP	07	41	44				" " "
9	ZV E N N N	eP e(S) e eL F	09	50 54 54 58 ¹ / ₂ 05	25 40 44 - -		(2700)		" " "
9	ZV,ZE ZV,Z Z ZV ZV N N E N N E Z E N Z	1P ipP esP i ePP eS esS iScS eSS eL eL eL M M M F	10	06 06 07 07 09 15 15 16 19 23.7 25.5 26.8 28 ¹ / ₂ 29 29 25	42 56 01 07 06 15 39 33 35 - - - - - - -		7150		Dilatation. Depth 50 Km. 20°N., 73°W. Near coast of Haiti. Mag. 6 ¹ / ₂ -6 ³ / ₄ (Pas). U.S.C.G.S.
						22 20 22	13 6 9		

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JULY, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
9	ZV N	eP F	11	36	07				Very small. Aegean Sea aftershock.
9	ZV E N	eP e(S) e F	20	15	39			(2800)	Very small. Aegean Sea aftershock. overlapped by next shock.
9	ZV ZV ZV NE Z NE	eP i i eS e eL F	20	19	07			2800	Small. Aegean Sea aftershock.
9	ZV NE N	eP eS eL F	20	53	20			2790	Small. Aegean Sea aftershock.
9	ZV NE	eP eS F	21	33	56			2820	Very small. Aegean Sea aftershock.
10	ZV NE	eP e F	02	04	54				Very small. Aegean Sea aftershock.
10	ZV,Z E N Z NE N	iP eS e e eL e(SoS) F	03	06	41			2780	Compression. Small. Aegean Sea aftershock.
12	ZV NE	iP eL F	15	13	04				23°N., 94°E. Central Burma. U.S.C.G.S.
12	NE N	e eL F	17	45	-				Small. Confused by microseisms.
14	E NE	e eL F	19	10	38				Very small. Aegean Sea aftershock.
14	NE	e F	22	55	-				Very small. 20°N., 121½°E. Philippine Islands. U.S.C.G.S.
16	NE	e F	00	36	-				Very small.

M.O. 614 ²⁰

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

..... JULY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
16	ZV N	eP eL F	05	26	26				Very small.
✓ 16	ZV,Z Z ZV Z Z N NE N NE NE N E Z	eP i i iPP e(PPP) iS iScS iSS eL eL M M M F	15	19	00			8540	23½°N., 96°E. Central Burma. 30 killed and major property damage at Mandalay and Sagaing. U.S.C.G.S.
						16 21 14	132 95 55		
17	NE	e F	03	31	-				Very small.
17	Z ZV,Z Z ZV ZV ZV ZV Z Z ZNE NE NE E ZE Z E Z N N	epP iPKP ePP e e e e(pPKP) epPP ePPP eSKS i(S) ipSKS esSKS iSP i eSPP esSP ess i F	07	50	11			13000	Depth about 480 Km. 7°S., 126½°E. Banda Sea. h about 450 Km. Mag. 6¾(Pas). U.S.C.G.S.
			08	00	37				
			10	15	-				
17	Z ZN NE	eP eS eL F	15	24	22			2600	Very small. 41°N., 27°W. Azores region. U.S.C.G.S.
18	Z NE	ePKP eL F	00	46	38				Very small. 5°S., 151°E. New Britain . U.S.C.G.S.
			01	33	-				
			02	00	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JULY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
✓ 18	Z	e(P)	06	34	26			13000	Depth about 150 Km. Multiple shock ? Ee 5°S., 130°E. Banda Sea. Mag. 7¼-7½ (Pas). U.S.C.G.S.
	Z	e(sP)		35	20				
	Z	ePKP		38	09				
	Z	iPKP		38	12				
	Z	iPP		39	23				
	ZE	i		39	32				
	Z	epPP		39	58				
	ZE	i		40	07				
	ZNE	i		40	26				
	Z	e		41	05				
	Z	i		41	24				
	ZE	i		42	22				
	ZE	e		44	22				
	ZNE	eSKS		44	42				
	Z	iSKKS		45	38				
	E	i		47	04				
	E	eSP		48	31				
	EN	e		49	14				
	ZNE	iSPP		49	46				
	N	eSS		55	16				
ZE	e		56	26					
N	eSSS		59	26					
N	eL	07	08	-					
NE	eL		20	-					
N	M		24	-	20	29			
E	M		26	-	23	59			
Z	M		32	-	19	15			
	F		10	15					
19	NE	eL	21	31	-			Small. 15°N., 120½°E. Philippine Islands. U.S.C.G.S.	
		F	22	10	-				
19	ZV,Z	iP	23	38	32			(9040) Dilatation. Small. 9½°N., 84½°W. Near coast of Costa Rica. Mag. 6(Berk) U.S.C.G.S.	
	ZV,Z	i		38	40				
	ZV	e		38	45				
20	NE	e(s)		48	44			U.S.C.G.S.	
	N	eL	00	00	-				
		F	01	10	-				
19	ZV,Z	eP	23	50	09			Very small. 9½°N., 85°W. Near coast of Costa Rica. U.S.C.G.S.	
	ZV	e		50	18				
	ZV	e		50	31				
21	ZV,Z	eP	00	18	10			6170 Small. 1°N., 26°W. Mid-Atlantic Ocean. U.S.C.G.S.	
	N	eS		25	51				
	NE	eL		32	-				
		F	01	10	-				
✓ 21	ZV,Z	iP	15	42	36			6760 Compression. 23°N., 70°E. Western India. Many killed and major property damage at Anjar. Mag. 6½(Pas). U.S.C.G.S.	
	ZV,Z	i		42	43				
	ZV,Z	ePcP		43	10				
	ZV,Z	e		43	30				
	ZV,Z	ePP		44	51				
	NE	eS		50	49				
	E	eSS		54	39				
	NE	eL	16	11	-				
	E	M		18	-	15	13		
	N	M		18	-	15	11		
Z	M		18	-	14	15			
	F		17	45	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JULY, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.	
			h.	m.	s.					sec.
22	ZV, Z	iP	03	34	14			2820	Small. Aegean Sea aftershock. U.S.C.G.S.	
	E	eS		38	36					
	ZN	e		38	43					
	N	eL		42	-					
			04	00	-					
22	Z	e(PP)	09	41	53				Very small. 19°S., 69°W. Northern Chile. h about 100 km. Mag. 6-6½ (Pas) U.S.C.G.S.	
	Z	e		42	28					
	NE	e(SKS)		48	35					
	NE	e(S)		49	22					
		F		10	25	-				
√ 23	N	e	20	03	05				Small. 24°S., 102°W. Easter Island region. Mag. 6¾ (Pas). U.S.C.G.S.	
	N	eL		17	-					
	E	M		36	-	19	5			
	N	M		36	-	19	4			
	Z	M		36	-	19	5			
	F		22	15	-					
24	NE	eL	19	58	-				Very small. 1°N., 126½°E. Molucca Passage. U.S.C.G.S.	
		F	20	20	-					
28	NE	eL	00	37	-				Very small. Marianas Islands aftershock.	
		F		55	-					
28	N	e	03	05	-				Very small.	
		F		20	-					
30	EN	eS	05	50	46			17	15	P phase obscured by microseisms. Aegean Sea aftershock. U.S.C.G.S.
	N	eL		52	-					
	N	M		55.3	-					
	NE	e(ScS)		57	28					
	F		06	20	-					
√ 30	ZNE	eS	09	24	36			17	68	P phase lost in chart changing. Confused by microseism. 37°N., 26°E. Aegean Sea aftershock. U.S.C.G.S.
	N	i		24	44					
	N	eL		27.0	-					
	N	M		29.0	-	17	68			
	E	M		30.5	-	18	28			
	F		10	25	-					
30	NE	eS	10	49	38			17	12	P phase obscured by microseisms. 36½°N., 26°E. Aegean Sea aftershock. U.S.C.G.S.
	NE	eL		51½	-					
	N	M		54	-					
		F		11	20	-				

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR AUGUST, 1956

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 .	$\frac{Ak}{wI}$ sec. ⁻¹
N.	25 August 1954	21.7	21.2	+0.01	51.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
1	ZV	e(Sg)	09	44	39	sec.	μ	km.	Small. 48° 18'N, 9° 0.5'E. Strasbourg.
1	NE	eL F	21 22	40 15	- -				Small. Confused by microseisms.
2	N	eL F	21	20 35	- -				Very small.
3	N	eL F	18 19	35 05	- -				Very small.
4	NE	eL F	10 12	48 15	- -				Small. 51°S., 150½°E. New Britain. U.S.C.G.S.
4	NE	eL F	17	13 22	- -				Very small.
5	NE	eL F	09 10	54 20	- -				Very small. 41°N., 144°E. Japan. U.S.C.G.S.
6	NE	e F	17 18	58 30	- -				Very small. Ryukyu Islands. U.S.C.G.S.
8	NE	eL	23	33 55	- -				Very small. 32°N., 67°E. Afganistan. U.S.C.G.S.
9	NE	eL F	03 04	50 00	- -				Very small.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

AUGUST, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
9	N	eL F	23	14	-				Very small. Kermadec Islands overlapped by next shock.
9	ZV,Z	iPKP	23	19	51			16000	Depth about 260 Km. 15°S., 176°W. Samoa Islands region. h about 250 Km. Mag. 6 $\frac{3}{4}$ (Pas). U.S.C.G.S.
	ZV,Z	ipPKP		20	58				
	ZV,Z	ePP		23	04				
	ZV,Z	ipPP		24	17				
	ZN	ipPKS		24	45				
	Z	e(SKS)		26	41				
	N	e		27	03				
	N	i		29	34				
	N	eSKKP		31	38				
	Z	e(SKSP)		32	35				
	ZE	e(pSP)		34	33				
	Z	eFSP		36	09				
	E	eSS		41	32				
	E	eSSS		43	01				
	E	e		43	27				
	E	eSSS		47	03				
	E	e		48	45				
	N	e		49	23				
10		F	01	20	-				
12	ZV,Z	ePKP	00	45	05				Depth about 230 Km. 19°S., 176°W. Tonga Islands. U.S.C.G.S.
	ZV	epPKP		46	06				
12	NE	e(SKS)	17	23	08				P phases weak and obscured by microseisms. 34°N., 138°E. Near south coast of Honshu, Japan. Mag. 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ (Pas). USCGS.
	E	e		23	24				
	N	e		23	31				
	NE	eSS		28	42				
	N	e		35	28				
	NE	eL		40	-				
	NE	eL2		46	-				
	E	M		49	-	20	21		
	N	M		49	-	20	16		
	Z	M		58 $\frac{1}{2}$	-	13	7		
		F	19	10	-				
14	Z	e(PP)	03	09	16				Prince Edward Islands. South Indian Ocean. USCGS.
	N	e(SS)		23	34				
	N	eL		35	-				
	NE	eL		40	-				
	E	M		50	-	17	7		
	N	M		58 $\frac{1}{2}$	-	16	12		
	Z	M		58 $\frac{1}{2}$	-	16	7		
	N	eW2	04	51	-				
	N	eM(W2)	05	08	-	21	3		
		F		20	-				
15	E	i(SKS)	05	43	48				Small. 0°. 101 $\frac{1}{2}$ °E. Sumatra h about 300 Km. U.S.C.G.S.
	E	e(SKKS)		44	16				
	NE	e(S)		44	39				
	E	e		45	59				
	NE	e		46	41				
		F	06	40	-				

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.
SEISMOLOGICAL BULLETIN.

AUGUST, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
✓ 15	Z	ePP	11	10	16			12200	Depth about 90 Km. 1°S., 123°E. Northern Celebes. U.S.C.G.S.
	Z	e(sPP)		10	48				
	NE	eSKS		16	09				
	NE	eS		17	44				
	Z	eSP		19	29				
	E	e		20	06				
	Z	eSPP		20	32				
	ZNE	e		21	28				
	NE	eSS		25	36				
	NE	e(SSS)		29	34				
	NE	eL		44	-				
	E	M		49 $\frac{1}{2}$	-	26	6		
	N	M		49 $\frac{1}{2}$	-	26	9		
	F		-	-			overlapped by next shock.		
✓ 15	ZV	eP	12	06	18			1700	43 $\frac{1}{2}$ °N., 16 $\frac{1}{2}$ °E. Near coast of Yugoslavia. U.S.C.G.S. Lg phases very clear on ZV instrument.
	ZV	ePP		06	27				
	N	eS		09	07				
	ZV	i		09	13				
	ZV	i		09	33				
	ZV,NZ	i		09	52				
	ZV,NZ	i		10	13				
	ZV,ZNE	i(Lg1)		10	34				
	ZV	i		10	45				
	ZV,ZN	i		10	53				
	ZV,ZNE	i(Lg2)		11	15				
	ZV,Z	i(Lg2)		11	23				
	ZV,ZN	i		11	36				
	ZV,N	i		11	48				
	ZV,Z	i(Rg)		12	03				
	E	M		12.1	-	14	9		
N	M		12.1	-	12	12			
Z	M		12.1	-	10	7			
	F		12	40	-				
✓ 15	ZV,Z	iP	13	24	25			8890	Compression. 46°N., 151°E. Kurile Islands. Mag. 6 $\frac{1}{4}$ (Pas). U.S.C.G.S.
	ZV,Z	i(PcP)		24	38				
	N	eS		34	25				
	ZE	eSKS		34	44				
	N	ePS		35	10				
	N	ePPS		35	28				
	N	eSS		40	14				
	NE	eL		48	-				
	NE	eL2		54	-				
	E	M	14	03 $\frac{1}{2}$	-	17	7		
	N	M		10	-	16	7		
Z	M		10	-	14	4			
	F	15	00	-					
16	ZV	eP	00	43	47			2260	
	NE	eS		47	29				
	N	eL		50 $\frac{1}{2}$	-				
	NE	eL		51 $\frac{1}{2}$	-				
	E	M		52.0	-	14	6		
	N	M		52.0	-	15	22		
	Z	M		52.0	-	12	3		
	F	01	20	-					

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

AUGUST, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
16	ZV E NE	eP e(S) eL F	02	13	33 16 30 18.5 - 30 -			1790	Small. 37°N., 8½°W. Near coast of Portugal. U.S.C.G.S.
17	ZE NE. NE NE E Z N	eP eS e eL M M M F	01	28	01 32 02 32 18 33.3 - 35.1 - 35.3 - 36.3 - 00 -			2510	
17	ZE NE Z NE NE E Z N	eP eS e eL M M M F	02	04	24 08 25 08 28 08 40 09.6 - 11.6 - 11.7 - 12.2 - 30 -			2510	Aftershock of preceding shock.
19	N	eL F	06 07	42	- 20 -				Very small. 21½°S., 179°W. Fiji Islands. U.S.C.G.S.
20	ZV,Z ZV N E NE N E	iP e eS e e(SCS) eL eL F	05	45	47 46 04 55 38 55 42 56 01 06 08 - 11 - 45 -			8690	Small. 7½°N., 80°W. Near south coast of Panama. U.S.C.G.S.
20	E	eL F	07 08	45	- 10 -				Very small. Panama aftershock. U.S.C.G.S.
21	NE	eL F	00 01	59	- 30 -				Very small.
21	NE	e F	12	07	- 25 -				Very small. 49½°N., 156°E. Kurile Islands. U.S.C.G.S.
22	ZV N E	eP eL eL F	19 20	51	43 16 - 20 - 30 -				Very small.
23	Z Z NE NE NE NE NE N E	iP ePP eSKS eS eSP eSS eSSS eL eL	14	01	26 04 49 11 41 12 05 13 11 18½ - 21½ - 27 - 31 -			(10000)	Compression. Intermediate depth.

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

AUGUST, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
contd. 23	E	M	14	37	-	20	6		
✓	N	M		37	-	20	3		
	Z	M		37½	-	20	5		
		F	15	40	-				
✓ 24	ZV,ZN	eP	04	39	22			8540 53°N., 172½°E. Near Islands. Aleutian Islands. Mag. 6½(Pas) U.S.C.G.S.	
	ZV,Z	i		39	25				
	ZV	e		39	45				
	Z	iPP		42	10				
	Z	ePPP		44	04				
	Z	i(Pa)		45	37				
	EN	eS		49	06				
	N	e		49	13				
	EN	eSKS		49	37				
	Z	eSP		49	53				
	N	ePPS		50	07				
	N	eSS		54	19				
	N	eSSS		57	49				
	N	e(SKKS)	05	04	37				
	N	eL		00	-				
	NE	eL		03½	-				
	NZ	eL2		08	-				
	N	M		23	-	19	12		
	E	M		25	-	16	6		
	Z	M		25	-	16	5		
	NE	eW2	06	45	-				
		F	07	35	-				
26	NE	eL	22	17	-			Very small.	
		F		30	-				
28	NE	e	01	38	-			Very small.	
		F	02	00	-				
30	ZV,Z	iP	04	36	03			8300 Compression.	
	ZV,Z	e		36	14				
	E	eS		45	37				
	N	e		45	49				
	E	eL		55	-				
	NE	eL2	05	05	-				
		F	-	-	-				
								overlapped by next shock.	
30	NE	eL	05	58	-			Small.	
		F	06	50	-				
30	ZV	eP	17	42	05			Very small.	
	ZV	e		42	11				
	NE	eL		48	-				
		F	18	00	-				
30	ZV	eP	18	16	30			Very small.	
	ZV	e		16	36				
	NE	eL		22	-				
		F	18	35	-				

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR SEPTEMBER, 19 56

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 .	$\frac{Ak}{w}$ sec. ⁻¹
N.	25 August 1954	21.7	21.2	+0.01	54.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD. sec.	AMPLITUDE.	Δ km.	REMARKS.
			h.	m.	s.				
1	ZV, Z	eP	00	36	05				15½°N., 147½°E. Marianas Islands aftershock. U.S.C.G.S.
		ePP		40	27				
3	N	e(S)	18	49	57				Very small. Near south coast of Greece. U.S.C.G.S.
		eL		53	-				
		F	19	00	-				
5	N	eL	14	19½	-				Very small.
		F		30	-				
6	N ZE N N E	e(S)	11	56	20		22		37°N., 26½°E. Dodecanese Islands. U.S.C.G.S.
		e		56	23				
		eL		58½	-				
		M	18	00.8	-				
		M		02.1	-				
6	N	F		35	-				Small. Dodecanese Islands. Aftershock. U.S.C.G.S.
		e(S)	13	08	36				
		eL		12	-				
6	NE	F		25	-				Very small.
		e	17	42	-				
7	ZV	F	18	20	-				Depth about 250 Km. 18°S., 176½°W. Fiji Islands. U.S.C.G.S.
		ePKP	04	13	32				
		epPKP		14	37				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.
SEISMOLOGICAL BULLETIN.

SEPTEMBER, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
8	ZV E N	eP eS e F	18	13	41			3050	Very small. 76½°N., 7°E. Arctic Ocean, west of Spitsbergen. U.S.C.G.S.
9	NE	eL F	18 19	35 05	- -				Very small. 3°N., 129°E. Halmahera. U.S.C.G.S.
10	NE	eL F	03 04	25 10	- -				Very small.
10	NE NE	e eL F	14 15	28 47 15	- - -				Very small. 11½°N., 103½°W. Pacific Ocean. South of Mexico. U.S.C.G.S.
11	NE	e F	00 01	35 00	- -				Very small. 8½°N., 83°W. Costa Rica - Panama border. U.S.C.G.S.
11	NE	e F	01 02	10 15	- -				Very small. 25½°S., 175½°W. Tonga Islands region. U.S.C.G.S.
11	ZV, Z ZV, Z NE	ePKP e eL F	02 03 04	52 52 44 50	09 13 - -				Small. 16½°S., 178°E. Fiji Islands. Mag. 6(Pas) U.S.C.G.S.
11	N	eL F	07 08	47½ 00	- -				Small.
11	Z E NE	eP e(SKS) eL F	10 12	06 17 34 15	42 01 - -				Small. 14°N., 91°W. Guatemala h about 100 Km. Mag. 6¼-6½ (Pas) U.S.C.G.S.
11	ZV, Z ZV Z NE N	ePKP e ePKS e eL F	16 17	03 03 07 20 54 25	47 51 36 50 - -				Small. 17°S., 169°E. New Hebrides. Mag. 6(Pas) U.S.C.G.S.
11	ZV, Z Z NE E N NE E N Z	eP ePP eS eSKS ePS eL M M M F	21 22	15 18 25 26 26 35 52 56 56 30	52 57 40 04 31 - - - - -			8620	49½°N., 155°E. Northern Kurile Islands. Mag. 6¼(Pas). U.S.C.G.S.
						21 19 19	6 8 5		

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

SEPTEMBER, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
15	E NE NE	iSKS eS eL F	08	02	38				Small. 20°S., 69°W. Northern Chile. Mag. 6 $\frac{3}{4}$ (Pas) h about 100 Km. U.S.C.G.S.
✓ 16	ZV,Z ZV,Z ZV,Z ZV,Z Z N E N E N N N N N E N Z	iP i e ePP ePcS iS i eScS eSS e i e eLQ M M M F	08	46	35			5920	Compression. 34°N., 69 $\frac{1}{2}$ °E. Afganista: Mag. 6 $\frac{1}{4}$ -6 $\frac{1}{2}$ (Pas) U.S.C.G
				46	50				
				47	21				
				48	34				
				51	33				
				54	03				
				54	09				
				56	23				
				57	36				
				57	49				
			09	00	52				
				01	-				
				11 $\frac{1}{2}$	-	15		26	
				11 $\frac{1}{2}$	-	15		34	
				13	-	13		26	
			10	35	-				
16	N	e F	14	45	-				Very small. Afganistan aftershock. U.S.C.G.S.
			15	15	-				
16	ZV,Z NE N	eP eS eL F	18	12	58			2820	Small. 36 $\frac{1}{2}$ °N., 26°E. Aegean Sea U.S.C.G.S.
				17	20				
				21	-				
				35	-				
19 20	ZV,Z NE NE NE	iP eS eSS eL F	23 00	59 08	19 44			8320	Small. Depth about 130 K 22°N., 94 $\frac{1}{2}$ °E. Central Bu U.S.C.G.S.
				09	40				
				17	-				
				45	-				
20	NE	eL F	03 04	53 20	- -				Small.
20	N	e F	11 12	50 05	- -				Very small.
20	NE	e F	20 21	51 10	- -				Very small.
✓ 20	ZV,Z ZV,Z ZV,Z ZV,Z NE NE E E N Z	iP e e e(P) e(S) eL eL M M M F	22	03	48			(8500)	Small. 51 $\frac{1}{2}$ °N., 159 $\frac{1}{2}$ °E. Near sout coast of Kamchatka. Mag. 6 $\frac{1}{4}$ (Pas). U.S.C.G.S.
				04	06				
				04	17				
				06	40				
				13	30				
				30	-				
				39	-				
				43	-				
				46	-	18			
				46	-	18			
				-	-	16			
						3			
						4			
						2			

overlapped by next shock.

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.
SEISMOLOGICAL BULLETIN.

SEPTEMBER, 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
20	ZV, Z	e(P)	23	13	07				
	N	e(S)		20	38			(5980)	
	E	e		20	40				
	NE	eLQ		26½	-				
	N	M		30	-	28	11		
	E	M		43½	-	13	7		
	Z	M		43½	-	12	4		
		F	00	35	-				
21	ZV, Z	eP	19	24	21				
									26½°S., 63°W. Argentina. h about 600 Km. U.S.C.G.S.
22	NE	eL	16	22	-				
		F		40	-				Small. 38½°N., 69°E. Tadzhik. U.S.S.R. U.S.C.G.S.
24	NE	eL	07	13	-				
		F		50	-				Small. 15½°. 173½°W. Samoa Islands. Mag. 6 (Pas) U.S.C.G.S.
	NE	e	08	00	-				
		F	09	15	-				Very small.
	ZV, Z	eP	10	29	51			5920	
	N	eS		37	19				
	E	e		37	26				
	Z	e		37	30				
	N	eL		45	-	15	3		34°N., 69°E. Afganistan. U.S.C.G.S.
	E	M		56	-	15	4		
	N	M		56	-	14	4		
	Z	M		56	-				
		F	11	30	-				
5	NE	e	13	34	-				Very small.
		F		45	-				
5	NE	e	05	50	-				Very small. 30½°N., 142°E. Off south coast of Honshu. U.S.C.G.S.
		F	06	20	-				
	NE	e	09	27	-				Small. Confused by microseisms.
	NE	eL		46	-				
		F	10	40	-				
	ZV	eP	21	33	24			(9500)	Small. Confused by microseisms.
		e(S)		43	52				
	E	eL	22	03	-				
		F		35	-				
	NE	e	23	25	-				Very small. Confused by microseisms.
		F		35	-				
	ZV, Z	iP	23	33	32			9530	Compression. Confused by microseism.
	ZV	e		33	42				
	ZV	e		33	51				
	ZV	e		34	09				
	ZV	e		36	54				
	N	e(S)		44	01				
	NE	e		44	21				
	NE	eL	00	02	-				
	NE	F		25	-				

DS48558/1/R94 140 10/56CL

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR OCTOBER, 1956

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, 1918).

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.	25 August 1954	21.7	21.2	+0.01	54.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.	sec.		km.	
2	ZV,Z N	iP eL F	15	08	01				Small. 53°N., 159°E. Near southeast coast of Kamchatka. Mag. 6¼-6½ (Pas). U.S.C.G.S.
7	N	e F	22	35	-				Very small. 13°S., 167°E. New Hebrides Islands. U.S.C.G.S.
8	ZV,Z ZV,Z Z E NE	ePKP i e e(SS) eL F	15	15	38				Small. 19½°S., 174½°W. Tonga Islands. U.S.C.G.S.
9	NE	e F	07	40	-				Very small. 19½°S. 174°W. Tonga Islands. U.S.C.G.S.
9	N	e F	11	13	-				Very small. 25°N., 46°W. Atlantic Ocean. U.S.C.G.S.
10	ZV,Z NE	iP eL F	15	41	54				Dilatation. Small. 28½°N., 77½°E. Northern India. U.S.C.G.S.
11	ZV,ZNE ZV,Z Z ZV,ZN ZNE ZNE ZNE	iP i iP iPP iPPP iS i(SKS)	02	36	35		3860		Compression. Depth = 100 Km. 46°N., 150½°E. Kurile Islands. h about 100 Km. Mag. 7¼-7½ (Pas.) U.S.C.G.S.

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

OCTOBER, 19 56.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
(contd.)						sec.	μ	km.	
✓ 11	NE	isS	02	47	13				
	NE	isP		47	34				
	NE	iPS		47	52				
	N	iSS		51	40				
	N	isSS		52	30				
	NE	eLQ		59	-				
	NE	eL	03	06	-				
	E	M		09	-	24	84		
	N	M		13	-	20	68		
	Z	M		14	-	21	40		
		F	05	40	-				
✓ 11	ZV,Z	eP	17	00	46			8550	
	Z	ePP		03	43				
	N	iS		10	30				Ee
	N	eSS		15	20				
	N	eSSS		19.0	-				40 ¹⁰ N., 126 ¹⁰ W. Off Cape
	NE	eLQ		19 ¹ / ₂	-				Mendocino, California. Mag. 6 (Pas)
	NE	eLR		22	-				U.S.C.G.S.
	ZNE	eL2		29	-				
	E	M		30	-	21	26		
	N	M		31	-	18	21		
	Z	M		33	-	16	10		
		F	19	00	-				
✓ 12	E	eSKS	03	04	32				Small.
	N	eS		02	06				
	ZE	ePS		03	25				
	ZE	ePPS		03	58				15°S., 74 ¹⁰ W. Near coast of
	NE	eLQ		17	-				Central Peru. Mag. 6 ¹ / ₂ (Pas).
	ZNE	eL2		25	-				U.S.C.G.S.
	E	M		28	-	20	5		
	N	M		30	-	18	5		
	Z	M		32	-	17	5		
		F	04	25	-				
✓ 12	ZV	eP	12	35	06			(9100)	
	E	e(SKS)		45	20				
	E	eL	13	02	-				42 ¹⁰ N., 144 ¹⁰ E. Near east coast of
	NE	eL2		08 ¹ / ₂	-				Hokkaido. Mag. 6 ¹ / ₂ -6 ¹ / ₂ (Pas).
	E	M		13	-	18	4		U.S.C.G.S.
	N	M		16	-	18	6		
	Z	M		17	-	18	3		
		F		55	-				
13	ZV	iP	08	30	11			(5700)	Dilatation.
	ZV	e		30	45				36 ¹⁰ N., 71°E. Hindu Kush.
	N	e(S)		37	26				Afganistan. U.S.C.G.S.
		F	09	00	-				
13	ZV	eP	15	24	23				Very small.
	NE	eL		55	-				49 ¹⁰ N., 156°E. Northern Kurile
		F	16	15	-				Islands. U.S.C.G.S.
13	NE	eL	19	55	-				Small. 50°S., 149 ¹⁰ E.
		F	20	25	-				New Britain. U.S.C.G.S.

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

OCTOBER, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
14	NE	e	21	48	-				Very small. 38°N., 141½°E. Off coast of Honshu, Japan. U.S.C.G.S.
		F	22	10	-				
15	NE	eL	07	46	-				Very small.
		F	55	-	-				
15	NE	e	08	42	-				Very small. Philippine Islands. U.S.C.G.S.
		F	09	10	-				
19	ZV	iPKP1	12	19	16				Compression. Confused by microseisms. 21°S., 179°W. Fiji Islands. h about 650 Km. Mag. 6 (Pas) U.S.C.G.S.
	ZV,Z	iPKP2	19	19	23				
	ZV	i	19	19	28				
	NE	eSKKS	27	38	-				
19	ZV	ePKP	14	25	14				Small. Confused by microseisms. 56½°S., 122°W. South Pacific Ocean. U.S.C.G.S.
	NE	eL	15	07	-				
	E	eL2	19	-	-				
		F	16	25	-				
19	ZV,Z	iP	20	59	28			8560 Compression. 52°N., 177°E. Rat Islands, Aleutian Islands. Mag. 6¾ (Pas). U.S.C.G.S.	
	E	eS	21	09	13				
	N	i	10	36	-				
	E	eSS	14	06	-				
	N	i	17	39	-				
	E	eLQ	20	-	-				
	E	e	26	52	-				
	ZNE	eL2	28	-	-				
	E	M	43	-	18	9			
	N	M	44	-	18	12			
	Z	M	45	-	16	8			
20	NE	eL	00	40	-				Very small. 42½°N., 127°W. Off coast of Oregon. U.S.C.G.S.
		F	50	-	-				
22	N	eL	13	40	-				Confused by strong microseisms. 9½°S., 150°E. New Guinea. U.S.C.G.S.
		M	58	-	20	3			
		F	14	55	-	22	5		
23	N	e	05	05	-				
		F	10	-	-				
23	N	eL	09	28	-				Small. 13½°N., 120½°E. Philippine Islands. U.S.C.G.S.
		F	10	10	-				
24	ZV,Z	i (PP)	14	57	16			(8800) P phase missed due to break in recording. Confused by microseisms. Ne. Ne. 12°N., 87°W. Near coast of Nicaragua. Mag. 7¼ (Pas). U.S.C.G.S.	
	ZV,Z	i	57	36	-				
	NE	e (S)	15	04	02				
	E	i	04	38	-				
	E	i	05	04	-				
	NE	eSS	09	20	-				
	E	i	09	46	-				
	E	i	12	58	-				
	N	iSSS	13	06	-				
	N	i	15	37	-				
N	i	15	40	-					
N	i	17	08	-					

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

.....OCTOBER,.....19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
(contd.)									
✓ 24	ZNE	eLR	15	18	-				
	N	i		20	21				
	ZN	eL ₂		23½	-				
	N	M		24	-	21	84		
	E	M		26½	-	19	170		
	Z	M		26½	-	19	124		
		F	17	50	-				
✓ 25	N	e	05	44	-				Confused by microseisms.
	NE	eSS		48.7	-				
	N	eL _Q		55	-				
	E	eLR		59	-				Nicaragua aftershock.
	N	eL ₂	06	03	-				Mag. 6¼-6½ (Pas). U.S.C.G.S.
	N	M		04½	-	21	7		
	Z	M		05½	-	20	14		
	E	M		06	-	19	14		
		F		45	-				
✓ 26	Z	ePKP	23	09	57			15800	
	Z	e		10	17				
	Z	e(PP)		12	56				14°S., 167°E. New Hebrides
	N	e		13	11				Islands. Mag. 6½ (Pas). U.S.C.G.S.
	N	ePKS		13	36				
	NE	eSS		31	34				
	NE	eLR		59	-				
27	N	M	00	10½	-	24	6		
	E	M		13½	-	23	9		
		F	01	15	-				
27	N	eL	16	09	-				Small. Confused by microseisms.
	ZNE	eL ₂		14	-				
		F		32	-				
28	ZV,Z	iPKP ₁	03	48	39			18500	Confused by microseisms.
	ZV,Z	ePKP ₂		49	52				
	ZV,Z	ePP		53	28				
	N	eSKKS	04	00	22				via antipodes.
	N	eSKKKS		03	50				
	N	iPPS		07	18				
	N	eSS		14	08				via antipodes.
	N	eSS		17	58				
	NE	eSSP		19	18				
	N	eSSS		20	38				via antipodes.
	N	eSSS		26.7	-				
	N	eL		33	-				
	ZNE	eL		47	-				32°S., 179°W. Kermadec Islands.
	E	M		59½	-	24	9		Mag. 6½ (Pas). U.S.C.G.S.
	N	M	05	02½	-	20	12		
	Z	M		02½	-	20	7		
		F	06	00	-				
28	ZV	eP	07	02	33				Small.
✓ 28	NE	e(SKS)	11	10	35				Confused by strong microseisms.
	N	eL		32	-				14°N., 123½°E. Luzon, Philippine
	NE	eL ₂		37	-				Islands. U.S.C.G.S.
	E	M		39½	-	24	10		
	N	M		39½	-	24	13		
		F	12	20	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

OCTOBER, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
29	NE	e	07	44	45	20	5	5250	Confused by microseisms.
	NE	eL		47 $\frac{1}{2}$	-				
	NE	eL		48 $\frac{1}{2}$	-				
	N	M		49.2	-				
		F	08	00	-				
29	NE	eL	16	27	-				Small. Confused by strong microseisms.
		F		35	-				
30	NE	e	00	17	-				Small. Confused by strong microseisms.
		F		30	-				
31	ZV,Z	iP	14	12	21	20	30	5250	Dilatation. Multiple shock. Probably deeper than normal.
	ZV,Z	i		12	27				
	ZV,Z	i		12	36				
	ZV,Z	i		12	41				
	ZV,Z	i		12	49				
	ZV	e		13	20				
	ZV,Z	i		13	42				
	Z	iPP		14	16				
	Z	i		14	44				
	ZE	iPcS		17	31				
	ZNE	iS		19	11				
	ZNE	i		19	18				
	ZNE	i		19	27				
	E	i		19	32				
	NE	iScS		22	11				
	N	eSS		22	31				
	NE	e		22	45				
	NE	i		22	56				
	N	eLQ		24	-				
	E	e		26	11				
N	eL ₂	30	-						
N	M	34	-						
E	M	34 $\frac{1}{2}$	-						
Z	M	44	-						
	F	16	30	-					
31	ZV	iP	14	30	59	14	12	5250	Small. Aftershock of preceding shock.
	ZV	i		31	19				

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.
KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.
SEISMOLOGICAL BULLETIN FOR DECEMBER, 1956.

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	$\frac{Ak}{\pi I}$ sec. ⁻¹
N.	25 August, 1954	21.7	21.2	+0.01	54.4
E.	26 August, 1954	21.3	21.4	+0.01	52.6
Z.	1 Sept. 1954	11.3	11.4	+0.05	115.

(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.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.	sec.		km.	
1	ZNE	eL ₂ F	22	12	-				Small. 17 $\frac{1}{2}$ °S., 72 $\frac{1}{2}$ °W. Off coast of southern Peru. U.S.C.G.S.
				25	-				
2	N	eL F	03	35	-				Small. 52 $\frac{1}{2}$ °N., 169°W. Fox Islands foreshock. U.S.C.G.S.
			04	10	-				
3	NE	eL F	08	01	-				Small. 53 $\frac{1}{2}$ °N., 169°W. Fox Islands, Aleutians Islands. U.S.C.G.S.
				40	-				
4	N	eL F	11	16	-				Very small. 45 $\frac{1}{2}$ °S. 106°W. South Pacific Ocean. U.S.C.G.S.
				40	-				
4	N E	eL eL F	23	36	-				Small. 15°N., 92°W. Guatamala. h about 150 Km. Mag. 6 (Pas). U.S.C.G.S.
				39	-				
				55	-				
✓ 8	ZV,Z E N N N E N E N Z NE	eP eS iPS eSS eSSS eL _Q eL M M M eL F	16	22	25			8800	
				32	21				
				33	12				
				37	42				
				41	23				
				43	-				
				48	-				
			17	8 $\frac{1}{2}$	-	18	11		
				9	-	17	13		
				9	-	17	11		
			18	35	-				
			19	05	-				via antipodes.

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

DECEMBER, 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.		
			h.	m.	s.						
16	ZV	iP	01	53	46			(8800)	Compression. Confused by very strong microseisms.		
	ZV	e		53	58						
	E	e(S)	02	03	42						
	E	eSS		08	-						
	E	eL		16	-						
	E	M		22	-						
		F		40	-						
V 18	ZV,Z	e(P)	02	44	32			(10800)	Confused by very strong microseisms. 25½°S., 68½°W. Chile-Argentina border. Mag. 7-7½(Pas).U.S.C.G.S.		
	N	i(SKS)		55	22						
	NE	i(SKKS)		55	40						
	NE	e(S)		56	10						
	NE	e		56	27						
	NE	e		56	35						
	NE	e		57	45						
	ZE	iPPS		57	51						
	NE	eSS	03	03.0	-						
	NE	eL		14	-						
	NE	eL		20	-						
	N	M		21½	-					28	36
	Z	M		23	-					26	36
E	M		24	-	25	41					
		F	05	00	-						
18	N	eL	18	12	-				Small. Confused by microseisms.		
		F		25	-						
18	NE	eL	20	22	-				Small. Confused by microseisms. 36°S., 77°E. South Indian Ocean. U.S.C.G.S.		
		F		50	-						
19	ZV	eP	01	29	59				51½°N., 157°E. Southern Kamchatka. U.S.C.G.S.		
20	ZV	ePKP	11	20	24				Small.		
		eL		12	25					-	
		F		13	30					-	
21	NE	eL	04	07	-				Small. 28°N., 96½°E. Burma-Pakistan border. U.S.C.G.S.		
		F		15	-						
✓ 21	ZV,Z	eP	09	10	08			(7700)	Some phases lost due to break in recording between 09.14 - 09.25 51°N., 131°W. Queen Charlotte Islands. Mag. 6¾(Pas).U.S.C.G.S. via antipodes. Small. 34°N., 139°E. Honshu, Japan. U.S.C.G.S..		
		i		10	16						
		i(PcP)		10	35						
		i		27	20						
		eL		31	-						
		M		40	-					18	43
		M		41	-					15	19
		M		44	-					14	19
		i(PKSKS)		46	42						
		eL		11	32					-	
F	12	05	-								
21	NE	eL	20	57	-				Small. 34°N., 139°E. Honshu, Japan. U.S.C.G.S..		
		F		21	25					-	

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

DECEMBER, 1956.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
✓ 22	N	eSS	23	40 $\frac{1}{2}$	-				
	NE	eL		58	-				
23	E	M	00	06	-	20	9		33 $\frac{1}{2}$ °N., 139°E. Honshu aftershock.
	N	M		08	-	15	7		U.S.C.G.S.
		F		45	-				
23	-	-	-	-	-				08h. 58m. - 16h. 23m. break in recording due to power cut.
25	NE	e	03	06	-				Very small.
		F		15	-				
✓ 25	Z	M	09	43 $\frac{1}{2}$	-	18	50		48 $\frac{1}{2}$ °N., 28°W. North Atlantic
	E	M		43 $\frac{1}{2}$	-	18	58		Ocean. Mag. 6 $\frac{1}{2}$ (Pas). U.S.C.G.S.
	N	M		44	-	12	54		
		F	11	00	-				Beginning lost in break for chart changing.
✓ 27	ZV,Z	ePKP	00	33	35			16500	Depth about 200 Km.
	ZV,Z	iPKP		33	44				
	ZV,Z	i		34	13				
	ZV,Z	ipPKP		34	33				Confused by microseisms.
	ZV,Z	i		34	57				
	ZV,Z	i		35	42				
	ZV,Z	ePP		37	27				
	N	eSKKS		43	24				
	N	e(SKKP)		44	28				
	NE	i		46	32				
	NZ	ePPS		50	05				
	E	iSS		56	29	16	37		
	E	i		57	07				
	E	esSS		57	57				
	NE	eSSS	01	02	10				
	NE	e		18	09				
		F	02	35	-				
27	NE	eL	10	21	-				Small. Confused by microseisms.
		F		35	-				
27	N	eL	22	16	-				Small. Confused by microseisms.
	NE	eL		22	-				
		F		55	-				
28	N	e	15	17	-				Confused by strong microseisms.
	N	eL		44	-				
	E	eL		55	-				
	N	M	16	00	-	22	17		
	E	M		04	-	19	8		
		F		55	-				
28	N	e	19	50	-				Small. Confused by strong
	E	eL	20	09	-				microseisms.
		F		20	-				
✓ 29	ZV	e(PKP)	20	42	16				Confused by strong microseisms.
	NE	eL	21	40	-				
	N	M		53	-	20	5		
		F	22	20	-				
30	E	eL	22	42	-				Very small. Confused by
FORM 3718.		F	23	00	-				microseisms.

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR NOVEMBER 1956

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 .	A _h — πl sec. ⁻¹
N.	25 August 1954	21.7	21.2	+0.01	54.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
Z.	1 September 1954	11.3	11.4	+0.05	115.

(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.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
1	ZV	iP	06	01	13				27½° N., 53½° E. Southern Iran aftershock. USCGS
√ 2	ZV, Z	iP	16	09	15	18	7	(2400)	39° N., 23° E. Near East Coast of Greece. Extensive property damage at Volos. USCGS
	Z	ePP		09	46				
	NE	e(S)		13	07				
	N	e(PcP)		13	21				
	N	eL		15	-				
	E	eL		16	-				
	N	M F		16.2- 25	-				
2	N	eL F	17	36 40	- -			Small. Greece aftershock.	
4	ZV, Z	iPKP ₁	07	25	30				Small. Depth = 100 Km.
	ZV, Z	iPKP ₂		25	35				
	ZV, Z	epPKP ₁		25	59				
	ZN	e(PKS)		29	21				
	E	e(SS)		48	23				
	NE	eL F		08 09	21 30				
5	ZV, ZE	e(Sg)	19	51	08				Small 47° N., 12¾° E. Carinthia, Austria. BCIS
	N	eL		51	-				
	ZV, Z	eLg F		51 54	21				
6	NE	eL F	15	27 40	- -				Very small. 5½° S., 132½° E. Banda Sea. USCGS.

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

November 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
8	ZV	ePKP	07	09	14				Depth about 490 Km. 18°S., 178°W. Fiji Islands USCGS
	ZV	epPKP		11	11				
8	NE	e	16	36	-				Small. 9°N., 126°E. Philippine Islands. USCGS
		F	17	00	-				
9	NE	eL	06	14	-				Small. Confused by strong microseisms. 36°N., 34½°W. North Atlantic Ocean. USCGS
		F		25	-				
✓ 9	ZV,Z	iP	13	18	04			8800 Depth = 150Km. Confused by strong microseisms. 17°N., 94°W. Southern Mexico. Mag.6 (Berk) h about 150 Km. USCGS	
	ZV,Z	ipP		18	43				
	NE	eS		27	50				
	NE	e		28	09				
	M	eSS		33.0	-				
	N	eL		39.0	-				
	N	M		39½	-	28	18		
	E	eL ₂		49½	-				
	E	M		53	-	18	10		
	Z	M		53	-	18	8		
		F	14	40	-				
10	NE	e	15	20	-				Small. Confused by strong microseisms. 16°N., 121°E. Philippine. USCGS
		F		20	-				
11	ZV,Z	iP	19	27	37				Compression. Small. 44°N., 149°E. Kurile Islands USCGS
	NE	eL		30	-				
		F	20	30	-				
13	ZV,Z	iPKP	10	15	06				Compression. Small 48½°S., 124°E. Indian Ocean. USCGS
	ZV,Z	ePP		18	23				
	NE	eL	11	16	-				
		F	12	00	-				
✓ 14	ZV,Z	iP	01	00	26			5800 Dilatation. Depth about 220 Km. 36°N., 71°E. Hindu Kush h about 200 Km. USCGS	
	ZV	i		00	37				
	ZV,Z	epP		01	15				
	NE	eS		07	38				
	NE	e		08	23				
	NE	eSS		11	19				
	N	eSS		12	23				
	N	eL		15	-				
	E	M		22	-	20	5		
	N	M		22	-	20	7		
		F		45	-				
16	ZV,Z	iP	12	05	22				Dilatation. Small. 8½°N., 71°W. Northwestern Venezuela. USCGS
	NE	eL		34	-				
		F	13	10	-				
17	ZE	eL	08	47½	-				Small
		F		50	-				

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

November 19 56

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.		
			h.	m.	s.						
✓ 17	ZV	eP	20	38	15			(7700)	54 ¹ / ₂ °N., 134°W. Queen Charlotte Islands region. Mag 6 ¹ / ₂ (Pas) USCGS.		
	ZV	e		38	34						
	N	e(S)		47	19						
	N	eSS		51	40						
	NE	eL		59	-						
	N	eL2	21	04	-						
	N	M		05	-					18	9
	E	M		07	-					14	9
	Z	M		07	-					14	6
	Z	F	22	05	-						
18	N	e	05	45	-			Small			
	ZNE	eL2		53	-						
	ZNE	F	06	00	-						
18	NE	eL	19	40	-			Small			
		F	20	40	-						
18	NE	eL	22	10	-			Small 28 ¹ / ₂ °N., 129 ¹ / ₂ °E. Kurile Islands. USCGS			
		F		30	-						
19	NE	e	12	45	-			Small 12 ¹ / ₂ °N., 143 ¹ / ₂ °E. Marianas Islands. USCGS			
		F	13	25	-						
20	N	e(S)	23	29	53	15 16	6 4	Small. Confused by microseisms. Aegean Sea.			
	N	eL		32	-						
	ZE	eL		34	-						
	N	M		34	-						
	E	M		35 ¹ / ₂	-						
	E	F		50	-						
21	ZV,Z	eP	07	45	58			Small. Confused by microseisms. 38°N., 142°E. Near coast of Northern Honshu. USCGS			
	ZV,Z	e		46	11						
	E	i(PS)		56	49						
	NE	eL	08	13	-						
	NE	eL2		22	-						
	NE	F	09	10	-						
24	NE	e	22	05	-			Very small. confused by microseisms.			
		F	23	00	-						
25	NE	eL	15	26	-			Small. Confused by strong microseisms.			
		F-		40	-						
26	E	eL	19	35	-			Small. Confused by strong microseisms.			
		F		50	-						
26	ZV,Z	ePKP	23	49	31			Confused by very strong microseisms.			
	ZV	e		49	48						
27	E	eL	00	30	-						
	N	eL2		53	-						
	N	F	01	40	-						

M.O. 614

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

November 1956

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
✓ 28	ZV,Z	iP	19	39	09			(8600)	Compression. Confused by strong microseisms.
	N	e(S)		48	58				
	N	eL	20	06	-				
	E	eL		10	-				
	E	M		18 $\frac{1}{2}$	-	18	10		
	N	M		18 $\frac{1}{2}$	-	18	4		
	Z	M		18 $\frac{1}{2}$	-	18	9		
	F		50	-					
✓ 29	NE	eL	09	59	-			P phases lost in chart changing.	
	NE	eL ₂	10	08	-				
	E	M		10 $\frac{1}{2}$	-	18	13		
	N	M		10 $\frac{1}{2}$	-	18	12		
		F		11	15	-			