

M.O. 582

27 FEB 1954

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR JANUARY, 1954

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 .	$\frac{Ak}{\pi l}$ 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.	PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h. m. s.	sec.	μ	km.	
1	ZV, Z ZE, Z ZNE NE	iPP ipPP ePS eL F	13 24 16 24 38 33 45 14 02 - 30 -			(12670)	NE, e. Small. Sawoe Sea. 8½°S, 124°E Depth about 100 Kms. (U.S.C.G.S.).
2	ZV, Z ZE NE	i(P) i(S) eL F	01 18 45 23 21 26 23 35 -			(3000)	Small. N, e.
3	NE	e F	05 36 - 06 50 -				Microseisms, Small.
6	ZV NE	iP eL F	15 59 24 16 11 22 30 -				NE, e. Microseisms, small South west of Spitzbergen 76°N, 7°E. (U.S.C.G.S.).
6	NE NE E	e e e F	22 52 - 23 00 - 08 - - - -				Microseisms, small.
7	N	eL F	07 56 - 08 25 -				Microseisms, small. About 500 mls south of Fiji Islands (U.S.C.G.S.).
7	NE	e F	10 42 - 11 15 -				Microseisms, small.
7	E	e F	11 45 - 12 15 -				Microseisms, small.

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SEISMOLOGICAL BULLETIN.

JANUARY, 19 54

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			h.	m.	s.				
11	NE	eL F	17	52	-				Small. Ryuku Islands region 23°N., 126°E. (U.S.C.G.S).
12	ZV,Z Z Z ZNE	iPKP iPKP2 eFP eL F	14	40	33			18,800	NE,e. Foreshock of 00h. 33m. E,e. 24s. Off South Island, NE,e. New Zealand. 49°S., 165°E. (U.S.C.G.S). Break in records (1447-1537).
12/13	NE ZNE	eS e F	23	56	-				Near Wheeler Ridge, California Minor property damage. 35.0°N., 119.1°W. (U.S.C.G.S) Overlapped.
13	ZV,Z ZV,Z E ZV E ZE ZNE NE NE NE ZNE	iPKP iPKP2 ePKS iPP iSKSP e iSS e e eLQ eLR F	00	33	24			18800	Confused, phases doubtful. E,e. Off South Island, New Zealand. 49°S., 165°E. (U.S.C.G.S).
13	NE NE	e e F	13	26	-				Microseisms, small.
13	NE	e F	17	22	-				Microseisms, small..
17	NE	eL F	18	17	-				Felt, Fort Jameson N.Rhodesia 13½°S., 33°E.
18	NE	eL F	14	28	11				Small. Near west coast Greece. Felt. (U.S.C.G.S).
20	NE	eL F	05	00	-				Small. Pacific Ocean, South of Mexico. 8½°N., 103½°W. (U.S.C.G.S).
23	ZV NE	iP eL F	16	15	42				
23	ZV NE	iP eL F	17	21	06				Repeat of 16h. 15m. 42s.
24	NE	e F	13	44	-				Small.
31	NE	e F	12	23	-				Small.

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

EDINBURGH

7 APR 1954

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.
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Lat. 51° 28' 6" N, Long. 0° 18' 47" W, Height above M.S.L. 5m.

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			h.	m.	s.	sec.	μ	km.	
1	ZV, Z	1P	01	20	32			(11,200)	deeper than normal.
	ZNE	ePP		24	46				
	ZNE	eSKS		31	03				
	NE	e		37	31				Volcano Islands
	NE	eSS		38	45				24½°N., 142½°E. (U.S.C.G.S).
	NE	eSSS		42	35				
	NE	e		47	35				
	ZNE	eLQ		57	-				
	ZNE	eLR	02	01	-				
	N	M		00	59	17	46		
		F	03	50	-				
1	NE	eL	05	14	-				Small. Aftershock of
		F		25	-				01h 20m 32s. 24½°N., 142½°E.
5	ZV, Z	ePKP	09	38	59			(14,000)	
	ZV, Z	1PKS		42	14				NE, e.
	NE	1SKKS		47	56				
	NE	eSSS	10	05	28				New Britain
	NE	e		15	-				4½°S., 153°E. (U.S.C.G.S).
		F	11	55	-				
5	ZV	1P	15	30	27				
	N	eS		39	-				
	NE	e		52	-				
	NE	eL		58	-				
		F	16	30	-				
9	N	e	23	40	49				
	NE	e		42	08				
	ZN	e		43	30				
	ZE	e		44	26				
		F		50	-				

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SEISMOLOGICAL BULLETIN.

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			h.	m.	s.	sec.	μ	km.	
11	ZV, ZE	iP	00	41	10			7500	Compression.
	ZV, Z	iPP		43	39				
	ZV, ZNE	iPPF		45	12				
	ZNE	iS		50	06				
	NE	e		52	58				
	NE	eSS		54	43				
	ZNE	i		57	17				
	ZNE	eL	01	01	-				
	N	M		06	42	24	190		
	Z	M		12	29	13	78		
	E	M		14	34	16	112		
		F	03	20	-				
15	NE	e	16	01	-				Small.
		F		10	-				
15	NE	e	18	52	-				Small.
		F	19	00	-				
15	NE	e	20	14	-				Small.
		F	21	10	-				
17	NE	e	02	24	-				Small.
	ZE	e		32	-				
		F	03	00	-				
19	ZV, ZE	eP	00	52	38			(8780)	
	ZNE	eS	01	02	42				
	ZNE	eSS		07	40				
	ZNE	e		11	26				
	NE	eL		19	-				
	E	M		23	17	20	39		
		F	02	50	-				
19	NE	eP	13	59	32			(1780)	Small.
	NE	eS	14	02	30				
	NE	eL		03	14				
		F		10	-				
19	NE	e(L)	15	09	-				Small.
		F		55	-				
19	ZV	iPKP	19	28	22				NE, e. Microseisms.
	NE	iPKP2		30	12				
	E	eSKKS		40	44				N, e.
	E	e		43	52				
	ZNE	e		45	36				
	NE	e		50	47				
	E	i		51	58				N, e.
	ZNE	i	20	00	29				
	N	e		04	26				E, e.
	E	e		06	22				
	NE	e		25	10				
	ZNE	eLQ		32	-				
	ZNE	eLR		36	-				
		F	-	-	-				Overlapped.

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			h.	m.	s.				
19	ZV	e	21	47	-	21	34		
	NE	e		57	-				
	ZNE	i	22	00	37				
	NE	e		01	56				
	NE	e		05	-				
	N	e		08	-				
	NE	eL		12	-				
	E	M		15	41				
20	NE	F	23	00	-				
		e	02	40	-				
		F	03	00	-				
20	ZV	i	18	52	55				
	ZNE	i		55	55				
	Z	e		56	52				
	NE	i		58	57				
	NE	i	19	00	17				
	ZV, ZNE	i		03	03				
	E	e		05	35				
	NE	e		07	12				
	ZE	e		10	08				
	NE	e		12	54				
	NE	e		18	11				
	NE	e		22	09				
	NE	e		24	06				
	NE	eL		34	-				
		F	21	00	-				
20	NE	e	22	52	46				Small.
	ZNE	eL		57	-				
		F	23	40	-				
22	ZV	e	06	24	19				Small.
	NE	eL		57	-				
		F	07	15	-				
22	NE	e	11	13	-				Small.
		F		30	-				
22	NE	e	12	28	19				
	ZN	e		32	00				
	ZN	e		33	12				
	N	e		38	52				
	NE	e		48	41				
	NE	e		55	-				
		F	13	40	-				
23	ZV	i	06	51	46				
	N	e	07	09	-				
	NE	eL		15	-				
		F		45	-				
24	N	eL	18	16	-				Small.
		F		25	-				

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			h.	m.	s.				
25	ZV	i	11	55	27				Microseisms. Small.
	N	e	12	00	-				
	NE	e		13	-				
		F		25	-				
23	N	e	00	47	-				Small.
	NE	e		55	-				
		F	01	10	-				
28	ZV	e	01	12	(10)				
	NE	eL		39	-				
		F	02	15	-				

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			h.	m.	s.	sec.	μ	km.	
1	NE	e F	07	09	-				Small.
			07	32	-				
3	ZV	iPKP	06	22	03			(13,830)	Central New Guinea 5½°S., 142½°E. (U.S.C.G.S).
	Z	i		22	08				
	Z	e		23	36				
	ZV, NE	iFP		23	55				
	NE	iPKS		25	18				
	Z	iPPP		26	28				
	N	e		26	59				
	E	i		30	56				
	N	e		31	38				
	N	e		33	30				
	E	iPS		33	54				
	Z	i		35	12				
	E	eLQ	07	02	20				
	NE	eLR		06	30				
	E	M		10	-	22	21		
	N	M		17	-	22	26		
	Z	M		18	-	22	27		
		F	09	10	-				
7	N	e	00	54	36				Small.
	E	e		58	14				
7	E	e	01	47	20				Small.
	E	e		52	12				
	E	eL	02	17	14				
		F		30	-				

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1954 International
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			h.	m.	s.				
8	ZV	iP	08	21	54		μ	2230	Microseisms. Near west coast of Greece 38°N., 20½°E. Minor damage in Cephalonia (U.S.C.G.S).
	NE	iS		25	32				
	NE	iLQ		28	09				
	NE	eLR		29	55				
		F		40	-				
9	ZV	iP	02	31	26			6350	Atlantic Ocean, northeast of Brazil 1½°N., 30½°W. E,e. (U.S.C.G.S).
	NE	iS		39	20				
	N	iScS		41	22				
	E	eSS		43	58				
	NE	eLQ		45	50				
	NE	eLR		47	55				
		F	03	14	30				
9	ZV	i	05	51	17				Off southeast coast of Kamchatka 50°N., 157°E. (U.S.C.G.S).
	E	i		58	14				
	N	e	06	01	36				
	N	eL		19	22				
	N			23	54				
	N			25	55				
		F	06	48	-				
11	ZV	i	14	36	36				Airborne shock-wave
13	NE	e	01	33	30				Microseisms. Small. Southern Pakistan (U.S.C.C.S)
14	ZV,Z	iPKP	09	12	15				Fiji Islands 16°S., 179°W. (U.S.C.G.S).
	ZV	e		12	36				
	Z	ePKS		16	02				
	Z	eSKSSKS		42	44				
	NE	eLQ	10	10	-				
	NE	eLR	10	17	30				
		F	10	26	30				
14	NE	e	18	10	08				Small. Off southeast coast of Kamchatka 51°N., 160°E. (U.S.C.G.S).
	NE	eL		17	24				
		F	19	05	-				
21/22	ZV,ZNE	iP	23	53	54			8200	Dilatation. Possibly a second shock Depth about 80 Km. Manipur, India. Felt at Calcutta Long waves irregular.
	Z	i		54	21				
	N	iPP		56	08				
	E	i		56	26				
	N	i		56	58				
	Z	iPPP		58	29				
	E	i		59	07				
	ZV,ZNE	iS	00	02	54				
	N	i		03	04				
	N	i		04	04				
	E	eSS		07	42				
	Z	e		07	52				
	ZNE	eL		20	-				
	N	M		24	-	16	69		
	E	M		28	-	15	26		
		F	02	20	-				

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			h.	m.	s.				
26	E	e	02	48	52				Small.
	N	e		53	03				
		F	04	30	-				
28	ZV,Z	eP	20	48	19			(8530)	Aleutian Islands.
	EN	eS		58	09				
	E	i	21	00	42				
	N	eSS		03	04				
	N	e		06	23				
	N	eL		10	07				
	N	e		11	45				
	NE	eL		21	29				
	E	M		28	-	17	5		
	N	M		34	-	17	9		
		F	22	20	-				
29	ZV,ZNE	iP	06	20	11			1475	Dilatation. Felt at Gibraltar
	E	iS		22	39				
	N	iS		22	43				
	N	eL		24	29				
	E	M		28	39	10	81		
	N	M		28	54	11	65		
	Z	M		29	-	9	46		
		F	08	25	-				
30	N	e	19	09	53				Small.
	NE	e		15	36				
	NE	eL		33	13				
		F		55	-				
31	ZV,Z	iP	18	36	00			6730	Arabian Sea.
	ZV,ZNE	i		36	06				
	ZV,ZNE	iPPP		39	53				
	NE	eS		44	14				
	Z	ePS		44	26				
	Z	iScS		45	48				
	NE	iSS		48	10				
	N	eLQ		50	50				
	NE	eLR		54	28				
	E	M	19	04	-	17	59		
	Z	M		06	-	20	37		
	N	M		11	-	16	69		
		F	21	25	-				

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			h.	m.	s.	sec.	μ	km.	
1	NE	e	00	56	-				Microseisms, Small.
	N	e	01	12	-				
	NE	e		18	-				
		F		25	-				
1	(ZV	i	01	41	49)				Microseisms, small.
	NE	e	02	05	-				
		F		10	-				
1	NE	e	09	09	-				Microseisms, small.
		F		30	-				
1	NE	eSS	14	33	-				North of Puerto Rico, 19½°N, 67°W. Depth about 60 Kms. (U.S.C.G.S).
	ZNE	eL		39	-				
		F		55	-				
1	NE	eS	18	41	-				Kurile Islands 46½°N, 153½°E. Depth about 60 Kms. (U.S.C.G.S).
	NE	eL	19	00	-				
		F		40	-				
2	NE	eL	16	22	-				Small, Kermadec Islands, 28½°S. 177°W. Depth about 60 Kms (U.S.C.G.S).
		F		45	-				
4	ZE	i	17	24	51				Small.
	NE	e		37	-				
		F	18	05	-				

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APRIL, 1954

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
4/5	ZV,Z NE	1P eL F	23	26	16				N,e. Compression. Near south coast of Hokkaido Japan. Felt. 42°N, 142½°E. (U.S.C.G.S).
5	NE	e F	17 18	45 25	-				Small.
6	NE	e(s) F	14 15	48 05	-				Small. Southern Iran (U.S.C.G.S).
6	NE	e F	15 16	53 20	-				Small.
6	E	e F	17 18	49 00	-				Small.
8	N	e F	04	32 40	-				Small.
8	NE	eL F	17 18	38 00	-				Small. Easter Islands region 23½°S, 116°W. (U.S.C.G.S).
8	N	e F	18 19	38 00	-				Small.
9	N	eL F	08	11 20	-				Small. Off north coast of Luzon, Philippine Islands. 19½°N, 121½°E. (U.S.C.G.S).
11	NE	eLQ F	04	03 45	-				Small. Solomon Islands. 7°S, 155°E. (U.S.C.G.S).
11	NE	e F	04 05	57 20	-				Small.
11	ZV,Z ZV,Z ZNE ZNE ZNE NE	1P 1pP 1S eScS eSS e F	10	35 35 44 45 48 51	42 52 02 33 09 01			6825	NE,e. Dilatation. Arabian Sea. 12°N, 58°E. (U.S.C.G.S).
			-	-	-				Overlapped.
11	ZVZNE ZV ZV,Z ZV,E ZV,ZE Z ZV ZE	1P 1 1pP 1sP ePcP ePPP 1ScP eS F	11	02 02 02 03 03 05 07 10	19 29 39 07 25 26 07 01			5700	Compression. Hindu Kush 37°N, 70½°E. Depth about 60 Kms(U.S.C.G.S)
13	(ZV E	e eL F	13 14	42 12 20	41) - -				Seismic?

M.O. 582

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

APRIL, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.		μ	km.	
13	ZV,Z NE	i e F	15	38	33				Small
				16	15				
				30	-				
14	ZV,Z NE	iP eL F	13	37	22				Small, Andaman Islands
			14	11	-				region 10°N, 93°E.(U.S.C.G.S)
				30	-				
14	NE	e F	17	55	-				Small.
			18	00	-				
15	NE	e F	08	31	-				Small.
			09	15	-				
17	ZV Z NE E N NE	iP i eS e e eL F	20	22	36			8,550	NE,e. Andreanof Islands,
				28	42				Aleutian Islands. Felt on
				32	24				Adak. 51½°N, 179°W.
				43	02				
				50	02				
				56	-				
			-	-	-				Overlapped.
17	ZV,Z ZV Z	iP i eS F	20	57	34			8,550	E,e. Second shock
				57	39				
			21	07	22				
			23	20	-				
18	N	e F	04	31	-				Small.
			05	00	-				
23	E ZNE	e e F	20	04	-				Small.
				06	-				
				10	-				
24	NE	eL F	18	22	-				Small.
				45	-				
25	ZV,Z NE E NE NE N NE ZNE	iP eS eScS eSS eLQ e eLR e F	00	37	24			5920	
				44	54				
				47	23				
				48	40				
				50	24				
				51	50				
				54	02				
				56	-				
			01	45	-				
25	ZNE	eL F	21	15	-				Small. Central California.
				30	-				Minor damage.
26	ZV,Z ZV ZV N NE NE NE ZNE	iP iPcP isP esPP eS e e eL F	20	36	28			8,300	Ne, e. Compression
				36	36				deeper than normal.
				37	08				
				40	02				
				46	02				
				49	34				
				55	52				
			21	00	-				
				50	-				

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KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

APRIL, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE	Δ	REMARKS.
			h.	m.	s.				
27	ZV,Z	1P	10	18	42			9,200	E,e. Dilatation. Depth about 100 Kms.
	ZV	1PcP		18	46				
	Z	1pP		19	06				
	ZE	1PP		22	08				
	Z	i		24	42				
	ZNE	eS(sos)		28	50				
	N	e(LQ)		41	-				
	ZE	eLR		45	-				
27		F	11	30	-				(18000) Small.
	Z	e(PKP)	21	41	31				
	ZV	e		42					
	NE	e(SS)	22	06	25				
	E	e		12	42				
	ZNE	eL		49	-				
		F	23	40	-				
29	ZVZ	eP	11	01	49			8800	Bay of California.
	Z	ePP		04	55				
	ZNE	eS		11	52				
	NE	eSS		17	02				
	NE	e		22	38				
	NE	eL		25	-				
	N	M		32	-	30	60		
		F	-	-	-				
29	ZV,Z	1P	11	46	52			8900	Second shock.
	ZV,ZE	1PP		49	58				
	N	eS		57	02				
	N	eSS	12	02	-				
	NE	eL		08	-				
	N	M		19	-	22	122		
		F	14	50	-				
30	ZVZNE	eP	13	07	08			2,330	Dilatation Thessaly Greece About 20 killed. Extensive property damage.
	ZVZNE	1!!		07	14				
	ZNE	iS		10	54				
	ZNE	eL		13	-				
	E	M		14	-	18	>264		
	N	M		14	-	15	>333		
	Z	M		16	-	16	>359		
		F	15	20	-				
30	NE	e	16	02	-				Small.
	N	eL		11	-				
		F		45	-				
30	ZV,Z	1P	19	38	04			7,200	
	ZE	ePPP		41	52				
	NE	e		44	21				
	Z	e		45	01				
	Z	e		46	05				
	ZE	eS		46	45				
		F		55	-				
30/1	ZV,E	1P	23	13	56				
	Z	1PcP		14	25				
	Z	ePP		16	39				
	NE	e		21	31				
	NE	eSS		27	01				
	NE	eL		33	-				
		F	00	30	-				

EDINBURGH

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON. 3 JUL 1954 R6

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR MAY, 19 54

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.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
1	NE	eF	15	37	51				Small.
				48	-				
1	NE	eF	18	53	-				Small.
			19	07	-				
1	ZV	iP	20	58	39			(2790)	Small. 36½°N., 26°E.
	ZNE	iS	21	03	01				Aegean Sea (U.S.C.G.S.).
	NE	eL		05	31				
		F		24	-				
2	E	e	10	35	36				Microseisms. Small.
	E	e		50	06				
		F	11	30	-				
2	E	eS	18	11	31				Microseisms. Small.
	E	iSS		16	43				4°N., 94½°E. Off NW coast
	NE	eL		45	31				Sumatra. (U.S.C.G.S.).
		F	19	05	-				
3	NE	eL	05	38	10				Microseisms. Small. Near
		F		50	-				South coast of Greece.
									36°N., 21½°E. (U.S.C.G.S.).
3	NE	eL	09	04	10				Microseisms. Small. Near
		F		16	-				South coast of Greece.
									36½°N., 21°E. (U.S.C.G.S.).
3	NE	e	13	42	40				Small. Dodecanese Islands.
		F		51	30				Felt. 36°N., 27°E. (U.S.C.G.S.)

M.O. 582

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

MAY, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.		μ	km.	
3	ZVZ NE E NE E N Z	iP ePP iS eL M M M F	15	41 43 51	31 55 16			(8420)	Off Southeast coast of Kamchatka 51½°N., 159½°E. (U.S.C.G.S).
			16	14	-	18	12		
				19	06	18	11		
				19	16	18	9		
			17	05	-				
3	N	eL F	18	57	-				Microseisms. Small. 31°N., 98½°E. Sikang Province, China. (U.S.C.G.S).
			19	09	-				
4	ZV Z ZVZ NZ ZNE E E N Z	iP. I i iP II i eS II e M M M F	16	47 48 50 52 53	58 36 03 33 48			(2300)	Two shocks, Central Greece. 40°N., 21½°E. (U.S.C.G.S).
				54	09	16	18		
				56	47	10	7		
				57	12	8	5		
			17	15	-				
4	NE	eL F	23	55 59	40 30				Small. Central Greece. (U.S.C.G.S).
5	ZVZ Z NE N NE E Z N	iP ePP eS e eL M M M F	13	22 25 32 49 56	11 11 17 39 29			(8800)	27½°N., 112½°W. (U.S.C.G.S). Felt in California.
				57	15	17	12		
				57	18	16	10		
				58	-	15	8		
			14	39	-				
8	NE Z	e e F	22	16 17 25	13 53 -				Small.
9	ZV,ZN Z N N E Z	iP e eS eL eL eL F	14	19 23 23 24 25 26	10 10 00 38 18 18			(2390)	Small. 71°N., 12°W. Near Jan Mayen Island.
				55	-				
10	NE	e F	07 08	32 05	-				Small.
12	ZV E NE	e e e F	02	21 24 28 33	21 52 47 -				Small.

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KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

MAY, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
13	ZVZE ZNE N E Z	iP iS M M M F	14	58	47			8780	Oaxaca Mexico 17°N, 95½°W. (U.S.C.G.S).
			15	08	49				
				28	-	26	6		
				30	-	24	12		
				30	-	24	11		
			16	05	-				
14	ZV,ZNE Z Z Z NE N NE E N Z	iP iP iS ePP eS iPPS eL M M M F	22	51	38			(9500)	Dilatation. Honshu. Japan. felt. 36°N., 137°E. Depth 250 Kms. (U.S.C.G.S).
				52	36				
				53	02				
				54	46				
			23	01	44				E, e.
				03	28				
				20	-	16	6		
				28	13	16	5		
				30	-	16	5		
				37	17	12	5		
			24	20	-				
15	ZNE ZNE E M	e eL M M F	12	33	45				
				37	25				
				37	57	16	3		
				37	57	16	8		
				50	-				
16	NE	eL F	00	11	-				Small.
			01	10	-				
19	Z ZN Z E NE ZE ZN NE NE Z N E	eP iPg i iS i i i i(Sg) i M M M F	09	36	43			(740)	ZV not recording. Switzerland felt 46°N., 7¼°E. (BCIS)
				37	19				
				37	32				
				38	04				
				38	20				
				38	33				
				38	41				
				38	47				
				39	02				
				40	-	7	12		
				40	-	6	15		
				40	-	6	19		
			10	00	-				
21	NE	eL F	16	41	-				Small.
			17	05	-				
22	NE	e F	11	28	-				Small.
			12	00	-				
23	NE	eL F	07	51	-				Small.
			08	20	-				
24	ZV ZNE Z	i e i F	14	48	47				Small.
				52	29				
				53	14				
				58	-				

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KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN. MAY, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
25	ZVZE	iP	22	08	08	16 10 10	9 10 8	2330	Compressional N, e. Greece.
	Z	i		09	44				
	Z	i		10	25				
	ZNE	iS		11	53				
	NE	eL		14	34				
	N	M		14	56				
	E	M		16	51				
	Z	M		16	51				
		F	22	40	-				
26	ZNE	e	02	29	18				Small.
		F		58	-				
27	NE	e	23	02	-				Small.
		F		12	-				
28	Z	e	07	52	37				Small.
	NE	eL		54	07				
		F	08	05	-				
31	Z	e	16	08	13	19 19 19	2 3 3		E,e.
	Z	e		17	42				
	E	e		23	49				
	NE	eL		48	-				
	N	M	17	05	-				
	E	M		05	-				
	Z	M		05	-				
		F	17	20	-				

30 JUL 1954 *RL*AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.SEISMOLOGICAL BULLETIN FOR JUNE, 1954

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

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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).

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E.	26 July 1951	17.4	18.7	+0.01	66.7
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(ii) VERTICAL SEISMOGRAPH, PERIOD 1.5 SECS., DIRECT OPTICAL REGISTRATION (ZV).

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DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	"	km.	
4	ZV,ZE	iP	07	03	49			10,110	Compression. Galapagos Islands. 1°S., 91½°W. (U.S.C.G.S).
	NE	iS		14	52				
	NE	e		16	17				
	E	e		17	51				
	NE	eL		30	-				
	N	M		42	-	17	2		
	E	M		42	-	17	6		
	Z	M		42	-	17	4		
		F	08	10	-				
4	NE	eL	16	38	17				Small. Central Gulf of California (U.S.C.G.S).
		F	17	10	-				
4	ZNE	e	21	25	-				Small. Gulf of California. (U.S.C.G.S).
		F		35	-				
5	ZV,Z	iP	02	00	53				Small. Near coast of Mexico 18°N., 102½°W. (U.S.C.G.S).
5	ZN	i	14	13	47				
	NE	e		16	37				Small.
		F		24	-				
6	ZV,Z	iPKP	17	09	36			13,000	Compression. New Guinea. 3½°S., 136½°E.
	Z	iPP		11	02				
	E	1SKS		16	38				
	E	18KKS		17	54				
	ZNE	ePS		20	47				
	NE	eSS		27	37				
	NE	eLQ		45	-				
	NE	eLR		51	-				
	E	M		53	00	24	34		

M.O. 582

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JUNE, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.		μ		
Contd.						sec.		km.	
6	N	M	17	53	-	24	21		
	Z	M	18	03	-	24	27		
		F	19	55	-				
7	ZV,Z	iPKP	10	33	50			13,600	Small. New Britain
	ZV	iPP		35	49				3½°S., 152½°E.
	ZV,Z	i		35	58				Depth about 450 Km.
	Z	i		36	26				(U.S.C.G.S).
	ZV,Z	iSPP		38	00				
	ZV	iPPP		38	28				
	NE	eScS		40	16				
	NE	i		42	6				
	NE	i (SSS)		54	56				
		F	11	34	-				
10	ZNE	e	04	56	-				Small. North Atlantic Ocean.
		F	05	05	-				33½°N., 38°W. (U.S.C.G.S).
15	ZV,Z	iP	13	42	29			(9660)	Dilatation. Small.
	Z	iSP		43	02				Peru 5°S, 77°W. Depth about
	NE	eS		52	52				100 Km. (U.S.C.G.S).
	NE	iPS		53	46				
	ZE	i		54	46				
		F	14	35	-				
17	ZV,Z	iP	01	53	39			7890	Small. Kodiak Islands.
	NE	iS	02	02	55				56°N., 159½°W. (U.S.C.G.S).
	NE	eL		27	-				
		F	03	25	-				
19	NE	eL	02	42	-				Small. Off south coast of
		F	03	16	-				Kyushu, Japan. 30½°N.,
									130°E. (U.S.C.G.S).
20	ZV,Z	i(P)	22	17	17			(5930)	Small.
	ZNE	i(S)		24	47				
	NE	eL		36	17				
		F	23	05	-				
21	ZV	i(P)	02	01	52			(9270)	Small.
	ZV	i		02	23				
	ZV,Z	i(PP)		05	41				
	NE	i(S)		12	19				
	NE	eL		37	-				
		F		57	-				
28	NE	eL	06	30	-				Small.
		F	07	16	-				
30	Z	iP	13	36	25			6390	Small.
	ZNE	iS		44	16				
	Z	iScS		46	07				
	NE	eSS		48	09				
	NE	eL	14	02	-				
		F		42	-				

M.O. 582

2 SEP 1954

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AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR JULY, 19 54

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

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DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TITUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
1	NE	eL F	04	00	-				Small. Off east coast of Kamchatka 52°N, 159½°E. (U.S.C.G.S).
				25	-				
1	NE	eL F	06	09	-				Small. Off east coast of Formosa 23½°N, 122°E. (U.S.C.G.S).
				30	-				
2	Z	eP	02	58	(54)			(11,000)	13½°N., 123½°E.
	ZNE	ePKP	03	02	(52)				SE Luzon, Phillipines
	E	eSKS		09	43				Islands. Many casualties,
	NE	ePS		12	48				extensive property damage.
	E	e		17	06				(U.S.C.G.S).
	NE	e		25	-				
	NE	e(LQ)		31	-				
	NE	eLR		38	-				
		F	05	15	-				
3	N	eSS	00	55	-				Small. Uganda-Belgian Congo
	NE	eL	01	03	-				border region. (U.S.C.G.S).
		F		40	-				
3	NE	eL	22	07	-				Small. Near northeast coast
		F		25	-				Luzon 18°N., 121°E. (U.S.C.G.S)
3/4	ZV, Z	iP	22	45	28				Near southwest coast Java
	Z	iPKP		48	38				6½°S., 106°E. Depth about
	Z	iPKS		52	02				100 Kms. (U.S.C.G.S).
	E	eSKS		56	-				
	ZE	e	23	05	-				
	NE	e		16	-				

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JULY, 1954

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
Contd.						sec.	μ	km.	
3/4	NE N	eL M F	23 01	26 34 10	- - -	24	28		
6	ZNE	eL F	05	14 30	- -				Small. Bismarck Sea 3°S., 148°E., (U.S.C.G.S).
6	ZV,ZNE ZN NE N N NE N	iP ePP iS eSS e eL M F	08 09 11	16 19 26 31 44 48 00 15	43 37 48 40 30 - - -	17	19	8,800	Compression. Kurile Islands 46½°N., 153½°E. Depth about 100 Kms. (U.S.C.G.S).
6	ZV,ZNE Z E ZNE	iP ePP eS eL F	11 12	25 29 34 51 55	00 39 42 - -			(8,350)	Near Fallon, Nevada. Several injured and moderate property damage 39½°N., 118½°W. (U.S.C.G.S).
6	N	e F	13 14	35 15	- -				Small. Nevada aftershock 39½°N., 119°W. (U.S.C.G.S).
6	ZV,ZNE NE ZNE	iP eS eL F	22 23	19 29 45 40	23 05 - -			8,350	Dilatation. Nevada aftershock 39½°N., 118½°W. (U.S.C.G.S).
8	ZNE	eL F	20	17 20	- -				Small. Nevada aftershock 39½°N., 118½°W. (U.S.C.G.S).
9	ZV,Z N	iPKP e(L) F	12 13 14	40 32 00	07 - -				Small. Tonga Islands region 16°S., 174½°W. Depth about 100 Kms. (U.S.C.G.S).
9	ZV,Z	iP F	15 16	50 45	38 -				Small. Off east coast Hokkaido Japan 43½°N., 147°E (U.S.C.G.S).
9	ZV E	eP iS F	18 19	40 50 00	41 29 -			(8,500)	Small. Off northwest coast Honshu, Japan. 41°N., 138½°E (U.S.C.G.S).
10	ZNE	eL F	16 17	57 20	- -				Small. Off coast central Chile (U.S.C.G.S).
10	ZV,Z ZV,Z	iP iP F	23	05 06 35	39 27 -				NE, e. Small. Hindu Kush 37°N., 70½°E. Depth about 200 Kms. (U.S.C.G.S).
12	ZNE	eL F	18	25 55	- -				Small.
13	Z NE Z	ePP eSKS e F	08 10	25 31 55 55	51 - 27 -				Small. New Britain region 3°S., 151°E. (U.S.C.G.S).

M.O. 582

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JULY, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
13	ZNE	eL F	22 23	55 15	- -				Small.
15	Z ZNE	e eL F	00 01 02	24 24 15	- - -				Small.
17	NE N NE NE NE	eP eS eSS eL e F	13 14	34 43 48 58 01 10	- - - - - -				Small.
18	N	eL F	07	11 50	- -				Small. Near east coast Kamchatka 55°N., 161½°E. (U.S.C.G.S).
18	ZV,Z Z NE NE	iP ePP eS eL F	09 10	20 23 30 48 40	21 46 55 - -			(9400)	Near east coast of Honshu, Japan. Felt 35½°N., 140½°E. (U.S.C.G.S).
18	NE NE	e eL F	11 12	48 52 10	- - -				Small.
18	NE	eL F	13	31 40	- -				Small.
18	ZN Z E ZN Z N NE	e i i i i e eL F	14 15	47 47(51) 51 51 53 53 55 10	16 02 09 16 40 31 -				
21	ZV,Z N NE ZE	i e e e(L) F	04 05	50 00 20 27 40	39 - - - -				Dilatation. Small.
23	ZE Z NE NE ZNE	iP ePP eSKS ePS eL F	04 05 06	46 51 58 00 25 05	26 38 22 48 - -				
23	ZNE	eL F	15	15 30	- -				Small.
26	Z NE NE NE	iPP eS ePS eSS	20	34 42 44 50	59 32 12 32				E,e.

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

JULY, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ		REMARKS.
			h.	m.	s.				km.	
Contd.						sec.	μ			
26	NE ZNE	e(LQ) eLR F	21	04	-					
				12	-					
				50	-					
26	ZV,Z ZE NE	eP eS eL F	22	19	12			(6,100)		Small.
				26	52					
				33	-					
				50	-					
29	ZV,Z (Z NE NE	i e e e(L) F	03	46	21					
				50	12					
				56	10					
				17	-					
			-	-	-					Overlapped.
29	ZV ZV,Z ZV ZV ZV,Z ZV,NE ZN	iP iPP iPPP i i iS iL F	04	44	15			1390		
				44	24					
				44	33					
				44	51					
				46	09					
				46	36					
				47	16					
				55	-					
30	E E ZNE ZNE	e e e(LQ) eLR F	09	16	16					Initial phases lost in chart changing.
				23	-					
				44	-					
				49	-					
			11	05	-					
31	ZV,ZE	iP	01	11	07			7,780		N,e
	ZNE	iS		20	17					
	ZNE	eSS		24	59					
	ZE	e		27	53					
	N	e		28	53					
	ZNE	eL		33	-					
	E	M		38	-	20	80			
	N	M		38	-	21	91			
	Z	M		44	-	16	60			
		F	03	30	-					

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

9 SEP 1954

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR AUGUST, 1954

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.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
1	NE	e(L) F	04	32 45	- =				Small. Northern New Guinea. 3°S., 140°E. (U.S.C.G.S).
3	ZNE	eL F	00	30 40	- -				Small. Southeast of Easter Island. 37°S., 99½°W. (U.S.C.G.S)
3	ZV, Z	iP	18	22	54			2370	Northern Greece
	ZV	ePP		23	21				40°N., 25°E. (U.S.C.G.S).
	E	iS		26	47				N, e.
	Z	iS		26	51				
		F	19	15	-				
5	ZV	e	03	52	(59)				Small. Repeat of 18h. 22m.
	(E	e		57	25)				54s.
	NE	e(L)		59	-				
		F	04	10	-				
5	ZV, Z	iP	04	17	37				Repeat of 18h. 22m. 54s.
	ZNE	eS		21	26				
	NE	e		24	21				
	ZNE	eL		26	-				
		F		40	-				
5	ZV, Z	iP	04	42	16				Repeat of 18h. 22m. 54s.
	ZV, ZE	i		42	19				
	ZV	iPP		42	37				
	N	e		49	07				
	ZNE	eL		51	-				
		F	05	00	-				
5	ZV, Z	iP	09	01	42				Rat Islands. Aleutians.
	NE	eL		38	-				52°N., 176°E. Depth about
		F	10	15	-				60 Kms. (U.S.C.G.S).

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN. AUGUST, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
5	ZV,Z	eP	20	44	37			(2915)	Small. Near east coast of Turkey (U.S.C.G.S).
	NE	eS		49	14				
	N	e(LQ)		53	-				
	NE	e(LR)		56	-				
		F	21	05	-				
6	ZNE	e	00	50	-				
	NE	eL		55	-				
		F	01	20	-				
6	ZV,Z	1	16	06	10				Small.
	ZNE	e		14	-				
		F		20	-				
6	ZV,Z	1P	16	29	29			(6300)	Small. Mid-Atlantic Ocean. 1°S., 23½°W, (U.S.C.G.S).
	NE	eS		37	20				
	NE	eL		55	-				
		F	17	10	-				
6	NE	e	17	58	-				Small.
		F	18	05	-				
6	ZNE	e	19	30	-				Small.
		F		40	-				
9	ZV,Z	1P	19	28	26			8335	Compression. Off east coast Kamchatka. Depth about 60 Kms. 53°N., 161°E. (U.S.C.G.S).
	ZV	1pP		28	45				
	ZV	1sP		28	51				
	E	1S		37	55				
	NE	eLQ		48	-				
	ZNE	eL	20	03	-				
		F		55	-				
10	Z	1	07	39	21				Small.
		F	-	-	-				
12/13	ZV,Z	1	23	29	56				Small.
	ZNE	e	00	09	-				
	NE	e(LQ)		38	-				
	NE	eLR		44	-				
		F	02	10	-				
14/15	NE	eL	23	59	-				Small.
		F	00	30	-				
16	NE	eL	09	32	-				Small.
		F		40	-				
17	N	eL	06	50	-				Small. No. E. Record.
		F	07	50	-				
18	ZV,Z	1PKP	05	01	03				Dilatation. No E. Record.
	ZV	1PKP2		01	58				
	Z	1		02	43				
	Z	1		06	09				
	N	e		12	08				
	N	e		25	18				
	N	eL		56	-				
		F	07	05	-				

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

AUGUST, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
19	NE	e F	21	14	-				Small.
20	ZV,Z Z ZNE	iP eS eL F	19	26	09			(2385)	Jan Mayen Island region.
				30	03				
				32	-				
				50	-				
20	ZV,Z E ZNE	iP eS eL F	20	28	48			(2395)	Repeat
				32	43				
				35	-				Overlapped.
			-	-	-				
20	ZV,Z E ZNE	iP eS eL F	20	41	06			(2345)	Repeat
				44	57				
				47	-				Overlapped.
			-	-	-				
20	ZV,Z E ZNE	iP eS eL F	20	46	57			(2385)	Repeat
				50	51				
				53	-				Overlapped.
			-	-	-				
20	ZV,Z E ZNE	iP eS eL F	20	50	57			(2385)	Repeat.
				54	51				
				57	-				
			21	05	-				
20	ZV ZNE	iP eL F	21	09	19				Small. Repeat.
				15	-				
				20	-				
20	Z ZNE	iP eL F	21	52	01				Repeat.
				58	-				
			22	10	-				
20	ZV,Z E ZNE	iP eS eL F	22	13	48			(2325)	Repeat.
				17	37				
				20	-				
				35	-				
20	ZV,Z E NE	iP eS eL F	22	44	31			(2395)	Repeat.
				48	26				
				50	-				
			23	00	-				
20	ZV,Z N ZNE	iP eS eL F	23	00	(55)			(2385)	Repeat.
				07	49				
				09	-				
				30	-				
20	NE	eL F	23	46	-				Small. repeat ?
				55	-				
21	ZV,Z ZV,ZN E ZNE	iP iPP eS eL F	00	30	13			(2370)	N,e. Repeat.
				30	42				
				34	06				
				36	-				
			01	20	-				

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

AUGUST, 1954

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
21	ZV,Z E ZNE	iP eS eL F	04	17	52			(2325)	Repeat.
				21	41				
				24	-				
				35	-				
21	ZV,Z ZE ZNE	iP eS eL F	07	24	25			(2335)	NE,e. Repeat.
				28	15				
				30	-				
			08	05	-				
21	ZNE	eL F	13	02	-				Repeat ? Overlapped.
			-	-	-				
21	ZV,ZN E ZNE	iP eS eL F	13	09	44			(2345)	Repeat.
				13	35				
				15	-				
				25	-				
21	ZV ZNE	iP eL F	14	05	01				Small, repeat.
				11	-				
				20	-				
21	ZV,Z E ZNE	iP eS eL F	17	44	44			(2360)	Repeat.
				48	36				
				50	-				
			18	05	-				
21	ZV,Z E ZNE	iP eS eL F	22	55	33			(2325)	Repeat. Jan Mayen Island region 72°N., 13°W. (U.S.C.G.S).
				59	22				
			23	01	-				
				35	-				
22	ZV,Z E ZNE	iP eS eL F	02	56	21			(2360)	Repeat.
			03	00	13				
				02	-				
				15	-				
22	ZNE	eL F	08	57	-				Small, repeat ?
			09	05	-				
22	ZV,ZN E ZNE	eP eS eL F	10	12	40			(2345)	Repeat.
				16	31				
				18	-				
				35	-				
22	ZV,Z E ZNE	iP eS eL F	12	44	18			(2385)	
				48	12				
				50	-				
			13	05	-				
22	ZV ZNE	iP eL F	18	25	53				Small, repeat.
				32	-				
				40	-				
22/23	ZV ZNE	iP eL F	23	56	51				Small, repeat.
			00	02	-				
				10	-				

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

AUGUST, 19 52

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
24	ZV,Z	1P	06	03	11			8430	Dilatation. Lovelock, Nevada.
	Z	i		03	38				
	ZE	1PP		06	06				
	ZNE	iS		12	56				
	NE	eSS		17	47				
	NE	e		21	20				
		F	-	-	-				Overlapped.
24	ZV	1P	06	22	48			2595	Confused by previous shock. Lost in chart changing.
	Z	iS		26	58				
	ZNE	eL		29	-				
		F	-	-	-				
29	NE	e	00	03	-				Small.
		F		40	-				
30	ZV	i	08	09	36				
		F	-	-	-				
31	ZV,Z	1P	22	32	14				
	NE	eS		41	53				
	NE	e		50	17				
	NE	eL		55	-				
		F	23	55	-				

NOTE

Some loss of record was entailed on 18 days between 11th and 31st August (mainly between the hours of 0830 Z and 1630 Z) by adjustment and calibration of the three Galitzin Seismographs after a period of three years.

INTERNATIONAL SEISMOLOGICAL CENTRE

REPORT

STATION DATA

STATION	NAME	LOCATION	COORDINATES	INSTRUMENT	PERIOD	REMARKS
1	...	...	...	...	...	...
2	...	...	...	...	...	...
3	...	...	...	...	...	...
4	...	...	...	...	...	...
5	...	...	...	...	...	...
6	...	...	...	...	...	...
7	...	...	...	...	...	...
8	...	...	...	...	...	...
9	...	...	...	...	...	...
10	...	...	...	...	...	...
11	...	...	...	...	...	...
12	...	...	...	...	...	...
13	...	...	...	...	...	...
14	...	...	...	...	...	...
15	...	...	...	...	...	...
16	...	...	...	...	...	...
17	...	...	...	...	...	...
18	...	...	...	...	...	...
19	...	...	...	...	...	...
20	...	...	...	...	...	...
21	...	...	...	...	...	...
22	...	...	...	...	...	...
23	...	...	...	...	...	...
24	...	...	...	...	...	...
25	...	...	...	...	...	...
26	...	...	...	...	...	...
27	...	...	...	...	...	...
28	...	...	...	...	...	...
29	...	...	...	...	...	...
30	...	...	...	...	...	...
31	...	...	...	...	...	...
32	...	...	...	...	...	...
33	...	...	...	...	...	...
34	...	...	...	...	...	...
35	...	...	...	...	...	...
36	...	...	...	...	...	...
37	...	...	...	...	...	...
38	...	...	...	...	...	...
39	...	...	...	...	...	...
40	...	...	...	...	...	...
41	...	...	...	...	...	...
42	...	...	...	...	...	...
43	...	...	...	...	...	...
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54	...	...	...	...	...	...
55	...	...	...	...	...	...
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60	...	...	...	...	...	...
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63	...	...	...	...	...	...
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65	...	...	...	...	...	...
66	...	...	...	...	...	...
67	...	...	...	...	...	...
68	...	...	...	...	...	...
69	...	...	...	...	...	...
70	...	...	...	...	...	...
71	...	...	...	...	...	...
72	...	...	...	...	...	...
73	...	...	...	...	...	...
74	...	...	...	...	...	...
75	...	...	...	...	...	...
76	...	...	...	...	...	...
77	...	...	...	...	...	...
78	...	...	...	...	...	...
79	...	...	...	...	...	...
80	...	...	...	...	...	...
81	...	...	...	...	...	...
82	...	...	...	...	...	...
83	...	...	...	...	...	...
84	...	...	...	...	...	...
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86	...	...	...	...	...	...
87	...	...	...	...	...	...
88	...	...	...	...	...	...
89	...	...	...	...	...	...
90	...	...	...	...	...	...
91	...	...	...	...	...	...
92	...	...	...	...	...	...
93	...	...	...	...	...	...
94	...	...	...	...	...	...
95	...	...	...	...	...	...
96	...	...	...	...	...	...
97	...	...	...	...	...	...
98	...	...	...	...	...	...
99	...	...	...	...	...	...
100	...	...	...	...	...	...

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR SEPTEMBER, 1954

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.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
1	NE	eL F	05 06	56 15	- -				Small.
2	ZV, Z ZV ZV, E NE NE Z	i i i i i e F	01 02	58 00	30 20 52 12 51 12 -				Small. NE, e.
4	ZV ZV ZV ZV ZV ZV, Z ZV, Z E N ZV, NE NE NE NE NE	i i(P) i(PKP) i i i(PP) i e e e(PS) e(SS) e eLQ eLR F	03 04 06	41 43 47 48 48 49 49 55 56 59 05 10 22 30 -	45 46 47 14 46 22 45 27 50 10 37 14 - - -			(13200)	New Guinea 3°S., 139½°E. (U.S.C.G.S.). Z not recording 03h. 50m. until 11h. 18m.
4	ZV ZV NE NE	i(P) i(PcP) e(S) eL F	06 07	54 55 02 19 45	26 57 48 32 -			(6860)	Nepal 28°N., 83.5°E. (U.S.C.G.S.).

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

SEPTEMBER, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
4	NE	eL	09	38	-				Small. SE of Formosa 21½°N., 122½°E. (U.S.C.G.S).
		F	10	15	-				
4	NE	eL	14	23	-				Small. Santa Cruz Islands 11½°S., 160°E. (U.S.C.G.S).
		F	15	20	-				
5	ZV,Z	iPKP	08	05	22			16,420	Fiji region 19°S., 176°E. (U.S.C.G.S.). N,e.
	ZV,ZE	iPKP2		05	26				
	Z	eFKS		09	34				
	E	iSS		27	59				
	NE	eLQ		58	-				
	ZNE	eLR	09	08	-				
		F	10	10	-				
6	ZNE	e	07	27	-				Small.
		F		55	-				
6	NE	eL	15	05	-				Small.
		F		10	-				
6	Z	i	17	00	08				Small.
	N	e		02	59				
	NE	eL		36	-				
		F	18	10	-				
6	ZV,Z	iP	18	42	35			8280	NE,e Near SE Coast of Kamchatka 51°N., 158°E. (U.S.C.G.S.).
	NE	iS		52	11				
	NE	e	19	06	-				
	ZNE	eL		15	-				
		F	20	05	-				
7	ZE	i	00	04	13				N,e.
7	E	i	00	32	11				
	NE	e	01	03	-				
	ZNE	eL		07	33				
		F		55	-				
9	ZV,ZE	eP	01	08	15			(1720)	Dil. Az.175° Comp. Near Orleansville, Algeria,1600 killed; major property damage 36°N., 1½°E. (U.S.C.G.S.).
	ZV,ZE	iP!		08	24				
	ZV,N	i		09	11				
	Z	i		09	19				
	ZV	i		09	43				
	E	i(S)		10	58				
	ZV	i		11	08				
	NE	i		11	17				
	Z,NE	i		11	34				
	E	i		12	09				
	N	i		12	41				
	ZV	i(PcP)		13	26				
	ZV	i(Pg)		13	36				
	ZV	i		14	29				
	ZV	i		15	25				
	ZV	i(ScP)		16	58				
	E	M		13	-	18	734		
	N	M		14	-	16	266		
	Z	M		17	30	8	133		

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

SEPTEMBER, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS
			h.	m.	s.		μ	km.	
9	ZV	e	01	53	31				Aftershock? overlapped.
9	ZV	e	02	56	08				Aftershock overlapped.
	Z	i		56	20				
	EN	eL	03	00	23				
9	NE	eL	03	58	-				Aftershock
	NE	eL	04	06	-				
	ZNE	eL		13	-				
		F		55	-				
9	ZV,Z	1P	09	32	27				Dilatation.Small. Aftershock.
	N	1S		35	31				E,e.
	E	eL		36	33				
		F		50	-				
9	ZV	i	18	22	43				
10	ZV,Z	e	05	47	38				Dilatation. Aftershock
	ZV,ZN	1P		47	45				Compression.
	ZV,Z	i		48	12				
	ZNE	i(s)		50	34				
	NE	i		51	35				
	E	M		53	-	13	54		
	N	M		54	-	12	169		
	Z	M		54	-	12	148		
		F	07	40	-				
12	ZNE	e	02	50	-				Small.
		F	03	10	-				
12	ZV	1P	07	56	17			9180	Ze Off SE Hokkaido Japan
	Z	i		57	12				41°N., 143°E.(U.S.C.G.S).
	NE	1S	08	06	34				
	NE	eSS		11	54				
	NE	eLQ		25	-				
	ZNE	eLR		32	-				
	E	M		33	30	17	7		
	N	M		38	30	17	11		
	Z	M		38	30	17	11		
13	ZV,Z	1PKP	02	29	28			16,570	NE,e. Dilatation. Depth about
	ZV,Z	1pPKP		30	18				160 Km.
	ZN	i(SKP)		33	04				Tonga Islands 21°S.,
	ZN	iPPP		36	46				175½°W. (U.S.C.G.S.).
	ZN	e(SKP)		40	42				
	E	e		44	06				
	E	e		51	04				
	E	iSS		51	59				
	N	i		52	04				
	E	eSSS		53	12				
	ZE	e		56	54				
		F	04	25	-				
13	Z	e	18	32	34				Small.
	ZNE	e		35	24				
	NE	e		42	34				
	NE	eLQ	19	04	-				
	ZNE	eLR		11	-				
		F		40	-				

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

SEPTEMBER, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
14	ZV	e	00	58	56			(12000)	
	ZV,Z	i(P)	01	00	40				
	Z	i(PP)		05	11				NE,e.
	Z	i		05	40				
	NE	e(SKS)		11	58				Z,e.
	NE	eLQ		36	-				
	ZNE	eLR		46	34				
	E	M		47	44	16	4		
	N	M		47	44	16	7		
	Z	M		47	44	16	7	-	
		F	02	20	-				
14	NE	eL	07	43	-				Small.
	ZNE	eL		52	-				
		F	08	50	-				
15	ZV,ZNE	iPKP	18	14	47			(16000)	Deeper than usual.
	ZV,Z	i		15	11				Fiji Islands 18°S., 178½°N.
	ZV	e		15	19				Depth about 600 Km (U.S.C.G.S)
	ZN	e(SKS)		18	16				
	Z	ePPS		30	42				
	Z	e		33	12				
	E	eSS		36	24				
		F	19	15	-				
16	ZV	i	22	22	00				Small, Microseisms.
	E	eL		26	-				
		F		35	-				
17	NE	eL	02	15	-				Small. Microseisms.
		F		40	-				New Ireland area 4½°S., 153½°E. (U.S.C.G.S.).
17	NE	eL	08	16	-				Small. Microseisms. Near
		F	09	-	-				N. Coast of Formosa; felt. 25°N., 122°E. (U.S.C.G.S.).
17	ZV	i	11	22	36			16570	Dilatation.
	ZV,Z	i!PKP		22	42				NE,e. Compression. Depth
	Z	iPKP		23	44				about 200 Kms.
	ZN	i(PP)		26	19				Fiji Islands region 20½°S.,
	E	iSS		45	14				177½°W. (U.S.C.G.S.).
	E	esSS		46	56				N,e.
	E	e	12	05	24				
		F	13	30	-				
18	N	e	01	36	35				Small.
		F		38	-				
18	NE	e	16	20	-				Small.
		F		55	-				
18	E	e	19	10	-				Small.
		e		14	-				
		F		20	-				
20	ZV	e	00	14	57				Small.
	ZV	i		15	29				
	NE	e		20	35				
	Z	e		21	35				
		F		55	-				

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

SEPTEMBER, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
20	NE	e(1S)	01	08	15				Small. Celebes 1½°S., 120½°E. (U.S.C.G.S.).
	N	e		25	17				
	NE	eL		37	-				
		F	02	15	-				
23	ZV,Z	iP	21	55	37			8720	Compression.
	NE	iS	22	05	33				
	NE	eSS		10	12				
	NE	e		26	-				
	ZNE	eL		33	-				
	N	M	22	36	30	18	22		
	E	M		36	30	18	11		
	Z	M		36	30	18	13		
		F	23	35	-				
28	NE	e	01	04	25				Small.
	E	e		05	35				
	NE	eL		09	35				
		F		45	-				
28	NE	e	14	11	-				Small.
		F	15	10	-				

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR OCTOBER, 1954

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) GALITZIV 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).

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N.	25 August 1954	21.7	21.2	+0.01	54.4
E.	26 August 1954	21.3	21.4	+0.01	52.6
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(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	Z	ePKP	03	15	05				Santa Cruz Islands. N, e. 11° S., 166° E. (U.S.C.G.S.)
	Z	iPP		17	51				
	N	ePKS		18	33				
	N	e		31	33				
	E	e		35	(05)				
	NE	eSS		37	57				
	E	e(LQ)	04	02	-				
	NE	eLR		10	-				
		F	05	45	-				
1	NE	eL	08	01	-				Small. Samoa Islands, Felt: Apia. Depth about 60 Kms. 14½° S., 173° W. (U.S.C.G.S.)
		F		25	-				
3	ZV, Z	ePKP	03	07	25				Santa Cruz Islands 10° S., 166° E. (U.S.C.G.S.)
	ZNE	ePP		10	16				
	E	e(HFKP)		27	56				
	NE	e(SKSKS)		33	-				
	N	i		37	45				
	E	e		43	-				
	NE	e		50	-				
	ZNE	eLQ		54	-				
		F	05	45	-				
3	ZV, ZNE	iP	11	29	26			7,240	Dilatation. Kenai Peninsular, ZN, e. Alaska. Minor damage at Anchorage, Seward Valdez and Aftershock? Homer. Depth about 100 60° N., 151° W. Kms. (U.S.C.G.S.).
	E	iS		38	08				
	E	eLQ		45	51				
	NE	eLR		50	-				
	ZV	i(P)		58	01				
		F	13	10	-				

M.O. 582

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

OCTOBER, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
4	NE	e F	02	20 45	- -				Small.
12	ZV,Z E	1P e(S) F	19	27 29 35	14 (41) -				Small.
13	NE	e F	22	37 50	- -				Small.
14	Z NE	1PP e(L) F	01 02 03	55 34 05	13 - -				Small. Banda Sea 7°S., 128°E. (U.S.C.G.S.)
16	ZV,Z N ZNE	1P 1S eL F	00	32 36 39 50	52 52 - -		2,450		Jan Mayen Island region 71°N., 14°W. (U.S.C.G.S.).
16	ZV N NE	1P 1S eL F	20	20 24 26 35	14 13 - -		2,450		Z,e. Repeat of 00hr. 32m. 52s. Jan Mayen aftershock. 71°N., 14°W. (U.S.C.G.S.).
17/18	N NE NE	e e eL F	23 00	19 34 39 25	49 - - -				Microseisms.
19	ZV,ZE N ZNE	1P 1S eL F	17 18	52 56 57 30	47 33 - -		2300		N,e. ZE,e.
21	N NE	e e F	00 01 02	46 13 20	- - -				Confused by microseisms. South of Honshu, Japan. 31°N., 141°E. (U.S.C.G.S.).
21	E NE	eS eL F	07	14 30 50	- - -				Confused by microseisms. Guatemala 14°N., 90½°W. Depth about 60 Kms. (U.S.C.G.S.)
21	ZVZ E	1P eL F	18	05 09 15	36 - -				
24	N N	e eL F	10	20 25 45	- - -				Lower California. Felt: San Diego and Imperial Counties, California. 31½°N., 116°W. (U.S.C.G.S.).
24	NE	i F	11	17 25	13 -				Small.
24	N	e F	23	50 55	- -				Small.
30	NE	e F	22	34 50	- -				Small.
30/31	NE	e F	23 00	55 15	- -				Small.

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

3 JAN 1955
K6

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR NOVEMBER, 1954

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.).

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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.			PERIOD.	AMPLI-TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
31/1	ZV	e	23	32	33				New Hebrides 18½°S., 170°E. Comp. (U.S.C.G.S.)
	Z,ZV	iPKP		32	28				
	N	e	00	30	-				
		F	01	15	-				
1	NE	eL	21	38	-				Small. off Guatemala 14°N., 92°W. Depth about 60 kms. (U.S.C.G.S.)
		F		55	-				
2	Z	iPP	08	43	51			(12800)	ZV,E,e. Sumbawa Islands region 7½°S., 119°E. (U.S.C.G.S.) N,e. Beginning of long waves lost during changing of recording paper 0910-0920.
	E	eSKS		49	35				
	E	eSKKS		50	59				
	Z,E	i(PS)		53	29				
	ZNE	e(SS)		59	43				
	ZNE	L							
	N	M		39	30	20	19		
	E	M		39	30	20	15		
	Z	M		40	-	20	13		
		F	11	20	-				
6	NE	eL	13	53	-				Small.
		F	14	05	-				
12	ZV	iP	12	39	00				Other phases obscured by microseisms. California, felt. 31½°N., 116°W. (U.S.C.G.S.)
	NE	eL	13	03	-				
	Z	eL		11	-				
	N	M	12	30	18	18			
	E	M	12	30	18	14			
	Z	M	13	-	18	12			
		F	45	-	-				

M.O. 582.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

NOVEMBER, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
12	NE	e F	23	03	-				Small. Microseisms.
				20	-				
18	ZV,Z	iP	05	31	53			7,760	N,e. Small. Depth about
	ZV,Z	iPP		32	19				70 Km.
	Z	iS		40	53				NE,e.
	NE	e(SKS)		41	47				
	N	i		47	21				
	NE	eL		59	-				
	ZNE	eL,	06	09	-				
		F		40	-				
18	ZV	iP	20	57	27			(9240)	Small. Honshu Japan
	ZV	ePPP	21	02	47				39°N., 142°E. (U.S.C.G.S.)
	NE	eS		07	40				
	NE	i		18	02				
	NE	eL		26	-				
		F		55	-				
19	ZV,Z	iP	06	07	11			8710	Small. Depth about 500 kms.
	ZV,Z	iPP		09	05				ZN,e.
	E	iS		16	23				
	NE	eSP		17	12				
	NE	esS		19	52				
		F	07	00	-				
21	NE	e	09	03	-				Small.
		F		50	-				ZV not recording.
23	NE	e	11	02	-				Small. Microseisms.
		F		20	-				
23	NE	e	21	50	-				Small. Microseisms.
		F	22	30	-				
25	ZV	iP	11	28	31			8600	Z,e.
	ZNE	ePP		31	30				N,e.
	E	iPPP		32	54				ZN,e.
	N	iS		38	22				
	NE	eSS		43	18				
	NE	e		45	34				
	NE	eLQ		50	-				
	ZNE	eLR		56	36				
	E	M		57	30	19	48		
	N	M		59	30	17	54		
	Z	M	12	03	-	15	30		
		F	14	25	-				
25	E	e	21	30	-				Small. Microseisms.
		F		50	-				

M.O. 582

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR DECEMBER, 19 54

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

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

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(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.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
3	NE ZNE NE	eL e e F	22	06	51 10 17 10 48 20 -				Microseisms. Kirghiz, U.S.S.R. 41½°N., 74½°E. (U.S.C.G.S.)
4	NE	eL F	08 09	01 00	- -				Microseisms. New Britain region 5°S., 152½°E. (U.S.C.G.S.).
4	ZV E E N E N NE	iP i i iS i e eL F	18	41	31 42 33 47 36 50 10 52 04 57 - 19 01 15 -			7300	Microseisms. Near Trinidad. One killed several injured and extensive property damage. 11°N., 61°W. Depth about 60kms.(U.S.C.G.S.)
6	N	e F	03 04	57 15	- -				Small.
7	N	e F	01	03 20	- -				Small.
10	ZV E NE	iP eS eL F	13	11	48 21 13 32 - 50 -			8050	West of Jamaica 18½°N., 81½°W.(U.S.C.G.S.)

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KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

DECEMBER, 19 54

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
11	N E NE	eS eSS eL F	03	49	12				Off coast of Liberia (U.S.C.G.S.)
			04	35	-				
V 11	ZVZNE NE NE N E Z	iP iS eL M M M F	13	01	37			2170	Compression from NW. North Atlantic Ocean 52 $\frac{1}{2}$ °N., 32°W.(U.S.C.G.S.)
				05	13				
				07	-	14	76		
				08	-	15	54		
				08	-	12	43		
				09	-				
			14	30	-				
16	E	e F	08	25	-				Small. Tonga Islands region 24°S., 175°W.(U.S.C.G.S.)
				40	-				
16	ZV,ZN N N Z NE NE NE E N Z	iP I e e iP II iS I iS II eL M M M F	11	18	57			8300	Compression from NW. Nevada. Felt Pasadena, Los Angeles. Two shocks: I,II.
				20	19				
				22	25				
				23	13				
				28	33				
				32	49				
				42	-	16	126		
				56	-	15	153		
				56	-	15	150		
				56	-				
			14	45	-				
19	NE NE	e eL F	10	46	46				Small.
			11	14	-				
			12	35	-				
21	NE	e F	02	19	-				Microseisms, small.
				25	-				
V 21	ZV ZV,Z N NE NE N NE E N Z	eP iP iPP eS iS eSS eL M M M F	20	08	11			8445	Microseisms. California.
				08	14				
				11	02				
				17	56				
				18	00				
				22	56				
				33	-	14	42		
				42	-	14	59		
				42	-	15	56		
				42	-				
			22	30	-				
23	ZV E NE	iP eS eL F	16	32	(01)			2200	Microseisms. Commenced in time break. Pelopenessus. Felt.
				35	36				
				39	-				
				55	-				
28	ZV E N	i(P) i(S) i(PcS) F	01	19	53			(2050)	Small.
				23	20				
				29	01				
			-	-	-				Overlapped.
28	NE	eL F	01	57	-				Confused with overlapping.
			03	30	-				

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DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
29	NE	e	12	45	-		μ	km.	Small.
		F	13	15	-				
30	(ZV N	e	02	11	49)				Small.
		e		17	41				
		F		25	-				
30	N N NE	e	11	12	21				Small.
		e		14	53				
		eL		19	-				
		F		40	-				
30	E	e	11	53	53				Small.
		F	12	55	-				

