

SEISMOLOGICAL BULLETIN FOR..... JANUARY,..... 1934.

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: 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 .	PENDULUM FREE PERIOD T.	DAMPING CONSTANT μ ² .	$\frac{Ak}{\pi l}$
N.	3 Oct., 1933	sec. 24.7	sec. 24.9	-.04	sec. ⁻¹ 47.1
E.	3 Oct., 1933	24.8	24.8	-.04	43.3
Z.	4 Oct., 1933	13.0	12.3	+.13	109.

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK (MORRISON);
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.	
Jan. 1	N	e F	4 59 5 2				Felt in Biarritz. Recorded only by experimental Wood-Anderson instrument.
2	NE N ZE N	e eL eL M F	21 11 19 23 30 29 22 5	15	+9		
3	N E E NE Z	iP iS i eL eL F	9 53 36 10 2 42 3 17 12 20 11 5			7730	
12	ZNE N	eL M F	14 11 16 50 40	18	-15		Confused by microseisms.
15	ZN Z ZN E N E Z N NE Z N E N E ZNE	eP iP iPP iPP i i i i iS iS i i i eL	8 54 20 54 25 57 12 57 15 58 38 58 50 58 55 9 1 50 3 16 3 18 4 35 4 41 6 37 7 18 9			7530	Disturbed by microseisms. Bombay = 1630 Km. Epicentre determined from Kew and Bombay, 26.8°N., 86.3°E. Near Churia Ghati Hills. Very destructive in North Eastern India.

SEISMOLOGICAL BULLETIN.

JANUARY (Contd.) 1934.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			H.	M.	S.				
15 contd.	ZNE	M	20-33			(20±)	300		Maxima doubtful; traces very faint and passing off lower edge of chart.
		F	13	15					
16		e	19	33					
		F	20	00					
19	NE	e	18	24					
		eL		29					
	Z	eL		34					
		M	40	3	15	-20			
	F	19	5						
19/20	NE	e	23	25					
		eL		38					
	Z	eL		43					
		F	0	5					
20	NE	eL	7	40					
		eL		48					
	Z	F	8	5					
28		e	14	55					
		F	15	25					
28	Z	iP	19	22	29			9170	Compression. Destructive in southern and central Mexico. 17°N., 100°W. (U.S.C.G.S.)
	NE	iP		22	31				
	Z	iPP		25	39				
	NE	eS		32	48				
	E	eSS		38	10				
	E	eSSS		41	58				
	ZNE	eL		49					
	E	M		52	7	30	-30		
	N	M		52	33	27	-27		
	N	M		56	3	25	-40		
	Z	M		56	20	25	-54		
	E	M		56	30	24	+47		
	Z	M	20	1	6	17	+45		
	E	M		1	21	18	-48		
N	M		2	22	19	+32			
	F	22	0						
30		e	20	28				(8000)	Very small. Felt in Nevada 39°N., 119°W. (U.S.C.G.S.)
		NE	eS		38	5			
		NE	eSS		42	(33)			
	NE	eSSS		45	12				
	ZNE	eL		48					
	N	M		55	29	29	-14		
	E	M		56	1	26	+18		
	N	M		58	40	22	-25		
	Z	M		59	29	17	+18		
		F	22	40					
31	ZN	e	11	3					
		eL		16					
	Z	M	23	44	23	-8			
	N	M	26	12	20	-8			
		M	27	50	20	+4			
		F	12	15					



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: 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 .	PENDULUM FREE PERIOD T.	DAMPING CONSTANT μ ² .	Ak / πl
	3 Oct., 1933	24.7 ^{sec.}	24.9 ^{sec.}	-.04	47.1 ^{sec⁻¹}
	3 Oct., 1933	24.8	24.8	-.04	43.3
	4 Oct., 1933	13.0	12.3	+.13	109.

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

DATE.	COMP.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
Feb. 2	NE	eL	15	51	12	33	+16		
		M	16	0					
2	E	M		5	9	34	-18		
		eL		5	13				
2	F	F		8					
		eL		40					
2	F	F	17	10					
		eL		30					
2	F	F	20	0					
		eL		35					
3	NE	e	14	54	16	26	+22	2230	P and S phases from experimental Wood-Anderson instrument. Felt in Central Albania. Large movements.
		i		55	41				
	NE	e	15	12	13				
	E	eL		32					
	N	eL		37					
	N	M		43	5				
	E	M		46	20				
	N	M		46	58				
	N	M		47	29				
	N	M		50	14				
	E	M		50	15				
	N	M		50	29				
4	N	iP	17	15		17	+19		
		iS		9	39				
	L		43	4					
	NE	i		44	44				
	E	M		45	27				
	F		48	35					
	F		10	15					

SEISMOLOGICAL BULLETIN.

February (contd) 19 34.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			H.	M.	S.				
Feb.	4	Z E	iP	13	35	17		4690	
		NE	iS		41	42			
		NE	e		44	53			
		NE	eL		47				
		Z	eL		50				
		N	M		52	41	25	-33	
		N	M		54	13	20	-36	
		E	M		54	24	17	+31	
			F		15	0			
		4		e	23	5			
		F			35				
	9	NE	eL	10	32				
	Z	eL			37				
	N	M		42	36	24	+12		
		F		11	5				
	12		e	12	11				
	NE	L			14				
	E	M		15	32	28	+10		
	N	M		16	12	25	+16		
	Z	L			17				
		F		13	0				
	13	ZNE	e	9	56	24			
		ZNE	eL	10	1				
		E	M		2	43	-8		
			F		20				
	14	ZNE	iP	4	12	54		10110	Compression.
		ZNE	iPcP		13	7			China Sea, 18°N., 118°E.
		ZNE	iPP		16	38			(U.S.C.G.S.)
		NE	eSKS		23	28			
		ZNE	iSKKS		23	44			
		Z	iS		23	57			
		NE	iPS		25	7			
		NE	iPPS		25	57			
		E	eSS		29	18			
		NE	eL		38				
		Z	eL		46				
		N	M		49	35	25	+150	
		E	M		49	49	25	+170	
		N	M		51	15	23	-270	
		N	M		58	7	20	+210	
		Z	M		58	57	16	+270*	
		E	M		59	8	16	+190*	
		Z	M		59	39	14	+220*	
			F		7	(30)			
	14		e	18	3				
		F			30				
	14		e	23	5				
		F			20				
	16		e	7	28				
		F		8	5				

SEISMOLOGICAL BULLETIN.

February (contd) 1934.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			H.	M.	S.				
Feb. 19		e F	11	25					
				55					
20		e F	4	8					
				35					
21	NE ZNE N	e L M F	0	49	50	16	-5		
				54					
			1	30					
21	ZNE ZNE ZNE N	eP eS L M F	11	42	26			2770	
				46	52				
				51		14	+8		
			12	10					
22	ZNE ZNE Z	e eL M F	8	14		14	-6		
				20					
				31	38				
			9	5					
24		e F	1	2					
				30					
24	ZNE ZNE NE E N NE E NE NE E N Z N E N Z E N Z	iP iPP eSKS eS iS iSS eSSS i L M M L M M M M M M M F	6	37	26			10650	Compression. Marianne Islands. 21°N., 145°E. (U.S.C.G.S.)
				41	29				
				47	50				
				48	53				
				48	57				
				55	48				
				59	24				
			7	2	44				
				9					
				13	52	31	+100		
				14	8	33	+73		
				15					
				18	39	21	+64		
				18	39	21	+83		
				27	51	20	+94		
				28	26	18	+100		
				28	29	19	+98		
				32	27	17	+57		
				34	3	15	+36		
			10	30					
25		e F	17	14					
				35					
28	ZN Z NE NE NE NE Z N E N E	e e e e e eL eL M M M M	14	41	24				
				43	29				
				53	11				
				59	8				
			15	1	18				
				5					
				13					
				24	22	37	+39		
				27	7	34	-50		
				30	35	29	-68		
				33	43	24	+62		

KEW OBSERVATORY, RICHMOND, SL

SEISMOLOGICAL BULLETIN.

February...(contd.)1934.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			H.	M.	S.	SEC.	μ		
Feb. 28 contd.	N	M	34	2		22	-42		
	Z	M	34	28		24	+36		
	Z	M	36	0		24	-42		
		F	17	40					

F.J.W. Whipple,
Superintendent.

6th. March, 1934.

SEISMOLOGICAL BULLETIN FOR.....M.....



From the ISC collection scanned by SISMO5

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: 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 .	PENDULUM FREE PERIOD T .	DAMPING CONSTANT μ^2 .	$\frac{Ak}{\pi l}$
N.	3 Oct., 1933	24.7 ^{sec.}	24.9 ^{sec.}	-.04	47.1 ^{sec⁻¹}
E.	3 Oct., 1933	24.8	24.8	-.04	43.3
Z.	4 Oct., 1933	13.0	12.3	+.13	109.

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK (MORRISON);
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.				
March	1	e	4	53				Very small; possibly not seismic.	
		F	5	15					
1	E	e	20	36			-5		
		eL		45					
	Z	eL		52					
		M	54	24	22				
1	ZNE	e	22	4	23		-7	Chile. 39°S., 73°W (U.S.C.G.S.) Probably deep focus.	
		e		11	12				
	E	i		11	20				
	Z	i		13	46				
	NE	e		19	00				
	NE	eL		24					
4	Z	eL		30			-7	Surface waves poorly developed	
		F	23	45					
	NE	e	7	2					
		eL		10					
4	Z	eL		15			-7		
		F	8	10					
	NE	eL	11	49					
4	Z	eL		53			-7		
		eL		53					
	E	M	12	1	25	21			
5	Z	iP'	12	6	20		-7	(19000) Compression.	
		i		6	34				
	Z	eP ₂ '		7	38				
	ZNE	iPP		11	18				
	ZNE	iPPP		15	41				
	NE	iSKKS		19	36				
	N	eSKSP		21	52				

SEISMOLOGICAL BULLETIN.

March (contd.) 1934

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
March									
5	N	ePS	25	4					Felt in North Island of New Zealand.
contd.	Z	iSP	25	13					
	NE	iSS	32	12					
	NE	ePSS	33	36					
	N	e	37	22					
	N	iSSS	44	2					
	NE	L	57						
	Z	L	13	8					
	N	M	19	49	24	+99			
	N	M	27	37	21	+90			
	E	M	28	38	20	+125			
	Z	M	33	44	19	-105			
	N	M	36	53	19	+100			
	E	M	37	19	18	+96			
	Z	M	37	33	18	+105			
		F	15	20					
7/8	NE	e	23	3				Central America. 14°N., 88°W (U.S.C.G.S.)	
	NE	eL	12						
	Z	eL	21						
	E	M	22	39	23	+8			
	Z	M	25	11	18	-7			
		F	0	5					
8		e	3	7					
		F	20						
9		e	14	45				Very small; possibly not seismic.	
		F	15	15					
12	NE	e	15	15				Confused by microseisms.	
	NE	eL	33						
	Z	eL	40					Near Great Salt Lake, Utah. 41.7°N., 112.6°W. (U.S.C.G.S.)	
	N	M	43	39	18	+26			
	E	M	46	19	15	-20			
		F	16	40					
12		e	18	49					
		F	19	20					
13	NE	e	13	52	21				
	NE	eL	14	17					
	Z	eL	22						
	N	M	27	3	24	+12			
		F	15	55					
15		e	12	17				Disturbed by wind and microseisms.	
		F	40						
20	NE	e	3	16	52			Confused by microseisms.	
	NE	eL	41						
	Z	eL	47						
	N	M	55	39	20	+11			
		F	4	25					
21		e	1	40					
		F	55						

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
March 24	Z	e	12	23	49				
	ZNE	i		26	57				
	ZNE	i		27	26				
	N	e		36	30				
	NE	e		37	10				
	Z	e		41	5				
	NE	i		42	34				
	E	i		44	36				
	NE	eL		57					
	Z	eL	13	9					
	E	M		13	35	29	+49		
	N	M		13	56	29	-73		
	N	M		18	31	25	+57		
	N	M		32	48	19	+40		
	Z	M		32	55	20	-50		
	E	M		40	4	20	-41		
	F		15	40					
29	ZE	eP	20	10	(59)			2030	In minute break; uncertain to ±1 sec.
	ZE	iP		11	2				
	ZE	iPP		11	35				
	ZN	eS		14	25				Destructive in the
	E	iS		14	27				Balkans.
	ZE	i		14	45				
	ZNE	i		15	10				
	NE	L		15	20				
	F		30						

F. J. W. Whipple,
Superintendent.

6th. April, 1934.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR.....A.P.R.I.L.....19./34

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: 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 .	PENDULUM FREE PERIOD T .	DAMPING CONSTANT μ^2 .	$\frac{Ak}{\pi l}$
N.	3 Oct., 1933	24. ^{sec.} 7	24. ^{sec.} 9	-.04	47. ^{sec⁻¹} 1
E.	3 Oct., 1933	24.8	24.8	-.04	43.3
Z.	4 Oct., 1933	13.0	12.3	+.13	109.

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK (MORRISON);
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.				
3		e F	8	15	40				
3		e F	18	26	50				
3		e F	23	12	50				
4/5			-	-	-				No records: 4d. 17h. to 5d. 7h.
6	Z	i	19	22	2				
	N	e	32	20					
	ZE	e	32	29					
	Z	e	33	27					
	NE	eL	49						
	Z	eL	53						
	E	M	55	43		30	+ 6		
		F	20	25					
9	Z	e	15	59	38				
	E	e	16	11	21				
	ZNE	eL	27						
	E	M	30	43		27	- 8		
	Z	M	31	1		26	+10		
	N	M	34	6		22	- 5		
		F	17	10					
9		e F	17	28	35				Very small, possibly not seismic.
10		e F	6	16	35				

M.O. 373

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

APRIL (contd.) 1934

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
10	ZNE	e	10	51	43				
	ZNE	eL	11	17					
	N	M	33	18		20	+ 8		
		F	12	00					
10	Z	e	21	31	21			} Emergent on horizontal components. No surface waves.	
	Z	i	31	28					
	Z	i	32	8					
	E	e	52	44					
	E	i	54	58					
		F	22	10					
11	NE	eL	4	10					
	Z	eL		18					
		F		30					
15/16	Z	eP	22	29	47			11800 Philippine Islands. 8°N., 127°E. (Strasbourg).	
	ZNE	ePP	34	15					
	NE	iSKS	40	27					
	ZNE	ePS	43	17					
	NE	eSS	49	10					
	N	L		59					
	E	L	23	2					
	Z	L		7					
	N	M		6	48	43	+120		
	E	M		7	11	39	+ 80		
	N	M		10	30	29	+ 99		
	E	M		19	22	24	- 97		
	E	M		21	57	21	- 95		
	N	M		21	58	18	- 85		
	Z	M		22	13	19	- 95		
Z	M		24	50	18	+ 77			
	F		1	15					
16	NE	eL	4	51					
	Z	eL	5	00					
		F		30					
16			-	-	-			10h. 39m. to 13h. 11m. no records.	
16	NE	eL	14	26					
	Z	eL		35					
		F		45					
17	ZE	eP	2	41	11				
	ZNE	eL		45					
	E	M		46	3	25	+ 2		
		F		55					
18		e	13	00				Very small, possibly not seismic.	
		F		30					
20	ZNE	eL	15	20					
		F		35					
24	NE	e	18	47					
	ZNE	eL		52					
	N	M	19	2	52	20	- 5		
		F		55					

SEISMOLOGICAL BULLETIN.

APRIL (contd.) 19 34.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
26	NE	e	14	38				No "Z" record.	
	NE	eL		43					
		F		55					
26	NE	e	21	41	18			No "Z" record.	
	NE	eL	22	10					
	N	M	21	21		21	+ 4	Possibly more than one shock.	
		F	23	25					
27	Z	e	21	7					
	NE	e		13	00				
	N	e		26	40				
	NE	eL		59					
	Z	eL	22	5					
	N	M		16	38	23	+5		
28		F		45					
		F	16	17					
28		F		40					
		F	19	9					
		F		30					

F.J.W. Whipple,
Superintendent.

4th. May, 1934.

M.O.....373.....

EDINBURGH.
14 JUN 1934
File

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR.....M.A.Y.....1934.

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: 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 .	PENDULUM FREE PERIOD T.	DAMPING CONSTANT μ ² .	$\frac{Ak}{\pi l}$
N.	3 Oct., 1933	^{sec.} 24.7	^{sec.} 24.9	-.04	^{sec⁻¹} 47.1
E.	3 Oct., 1933	24.8	24.8	-.04	43.3
Z.	4 Oct., 1933	13.0	12.3	+.13	109.

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK (MORRISON);
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.				
May 1		e F	4	14					
1	Z NE	i e F	7	17	53			Not very distant.	
1	E ZN E	i e i F	7	28	12 42 33			Not very distant.	
3	NE Z	eL eL F	2	22					
4	ZNE Z ZNE N E ZN N Z E N Z	iP iPP iS i L L M M M M M eL F	4	46	42 4 20 20 5 7 5 17 30 6 12 4 55	30 30 28 19 18	-97 +97 -58 -51 +50	7170	Amplitudes of iP as read in mm:- Z N E -7.0 +2.2 -1.1 Azimuth = 331°. 61°N., 148°W (U.S.C.G.S.) Via the Antipodes.
5	Z	e F	16	0				Very small; possibly not seismic.	

SEISMOLOGICAL BULLETIN.

MAY (Contd.).....19 34.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
May									
9	ZNE	e eL F	16	55					
			17	3					
				30					
11			-	-	-			5h. 20m. to 9h. 40m. no records.	
11		e F	18	1				Very small	
				10					
11	E	e F	21	8	12			Very small, not very distant.	
				11					
13	ZNE	e	9	23	21				
	NE	i		24	34				
	NE	eL		58					
	Z	eL	10	4					
	N	M		10	58	30	-14		
		F		11	20				
14		e F	13	56					
			14	15					
14	ZNE	e	22	23	53				
	NE	i		32	50				
	NE	eL		40					
	E	M		46	13	37	+12		
	Z	eL		49					
		F		23	40				
19	NE	e	1	39	44				
	E	eL		46					
	ZN	eL		50					
		F		2	15				
20	NE	e	19	9	49				
	ZNE	L		11					
	N	M		11	49	19	- 5		
	E	M		12	32	18	+ 5		
		F		25					
21		e F	5	28					
				40					
21	ZN	eP	10	11	59			2290	
	NE	eS		15	47				
	ZNE	L		17					
	E	M		18	44	17	+ 4		
		F		35					
22		e F	2	18				Very small; possibly not seismic.	
				30					
22	ZN	e	11	19	31				
	NE	eL		25	34				
	ZNE	L		28					
	N	M		29	00	25	+ 8		
		F		12	00				



SEISMOLOGICAL BULLETIN.

MAY (Contd.) 19 34.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI TUDE.	Δ	REMARKS.
			h.	m.	s.				
May 30		e F	12	23				Very small.	
				40					
31		e F	13	30					
				40					
31		e F	15	7					
				20					

F.J.W. Whipple,
Superintendent.

6th. June, 1934.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND. *File*

SEISMOLOGICAL BULLETIN FOR.....J.U.N.E.....1934..

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: 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 .	PENDULUM FREE PERIOD T.	DAMPING CONSTANT μ ² .	$\frac{Ak}{\pi l}$
N.	3 Oct., 1933	24. ^{sec.} 7	24. ^{sec.} 9	-.04	47. ^{sec⁻¹} 1
E.	3 Oct., 1933	24.8	24.8	-.04	43.3
Z.	4 Oct., 1933	13.0	12.3	+.13	109.

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK (MORRISON); 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.				
June 1	Z	e	6	5	58	13	+1		
	ZNE	e		6	33				
	ZNE	e		15	20				
	E	e		24	11				
	ZNE	eL		33					
	Z	M		43	6				
2	ZNE	iP	13	46	40	23	-51	2050	
	ZNE	i		46	49				
	E	iS		50	8				
	E	L		50	46				
	N	L		51	16				
	Z	L		51	19				
	N	M		51	48				
	E	M		52	19				
	N	M		53	24				
	Z	M		53	25				
2	Z	F	16	5		16	-32		
	Z	e	16	56	12				
	ZNE	eL	17	18					
2	ZNE	F	18	15		18	15		
	ZNE	eL	21	27					
2	ZNE	F	22	40		22	40		
	Z	e	16	34	59				
3	Z	F	17	5		17	5		
	Z	e	22	0					
4	NE	eL		6		22	0		
	Z	eL		11					
	Z	F		35					

Amplitudes as read in mm:
 N E Z
 iP +0.7 -0.3 -1.2
 i -5.2 +2.0 +5.3
 Azimuth about 337°, giving epicentre near 68°N., 19°W.

Felt in Northern Iceland.

Horizontal components disturbed by wind.

Very small; possibly not seismic.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
June 5/6	Z	e	23	45					
	ZNE	eL F		49 00	5				
6	ZNE	eL	4	30					
		F	5	30					
6	ZNE	eL	7	9					
		F		45					
8	Z	e	3	21	35				Not very distant.
	E	e		21	59				
	N	e		22	5				
	NE	e		22	19				
	NE	e		22	47				
	NE	e		22	58				
	N	L		23	14				
	E	L		23	22				
	Z	L		23	35				
	Z	M		23	46	8	+1		
	Z	F			27				
8	NE	eS	5	9	46				
	NE	eL		20					
	Z	eL		25					
	E	M		32	57	17	-9		
	E	F		6	35				
8	ZNE	eL	16	44					
		F		55					
9	Z	i	13	17	37				
	ZNE	i		19	41				
	ZNE	i		20	23				
	NE	i		20	58				
	Z	e		22	55				
	NE	e		36	27				
	ZNE	eL		50					
	N	M		14	5	9	23	+13	
	Z	M			11	59	21	-5	
	Z	F		15	45				
13	ZNE	iP	2	3	3			8780	Compression. Sea of Okhotsk. (Strasbourg). 48°N., 148°E.
	ZNE	iS		13	2				
	ZNE	eL		29					
	E	M		34	30	29	-14		
	N	M		36	(3)	28	-22		
	N	F		3	55				
13	ZNE	e	9	9	40				Felt in Northern Italy.
	ZNE	e		9	59				
	ZNE	i		10	43				
	E	i		11	35				
	E	L		13					
	E	F		15					
13/14	ZE	eP	22	19	30			5680	Amplitudes of iP as read in mm. N E Z (+0.1) -0.7 +2.0 Azimuth about east.
	ZNE	iP		19	32				
	Z	i		19	49				



DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ
			h.	m.	s.			
June 13/14 contd.	ZE	iPP	22	21	36			Afghanistan. 29.5°N., 63.5°E. (Strasbourg.)
	E	iS		26	49			
	NE	i		26	51			
	Z	iSP		26	55			
	NE	iScS		29	14			
	ZE	i		31	34			
	ZNE	eL		34				
	E	M		39	53	31	-42	
	N	M		45	26	19	-60	
	Z	M		51	57	11	-16	
		F	1	30				
14		e	22	16				Very small.
		F		25				
15	NE	eL	3	45				
	Z	eL		58				
		F	4	30				
15	NE	eL	6	45				
	Z	eL		50				
		F	7	15				
16		e	5	56			Very small.	
		F	6	15				
17	NE	e	15	7	27			
	ZNE	eL		17				
		F		40				
18	ZN	iP	9	24	50		6890	Alaska. 62°N., 150°W. (U.S.C.G.S.)
	NE	iS		33	13			
	NE	iPS		33	47			
	ZNE	eL		45				
	N	M		49	8	30	-7	
		F	10	45				
19	ZE	eP	18	48	44		2890	Emergent on "Z" and "N" components.
	E	iS		53	19			
	NE	L		56				
	Z	L		57				
	N	M		57	35	17	-11	
		F	19	20				
22	ZNE	eL	19	10				Horizontal components disturbed by wind.
		F		40				
23	ZNE	e	5	39	40			
	NE	eL		50				
	E	M		56	33	26	-10	
	Z	eL		57				
	N	M		58	26	13	+13	
		F	6	55				
24	Z	eL	2	26			Horizontal components disturbed by wind.	
		F	3	5				
24	Z	e	4	46				
		F	5	40				

KEW OBSERVATORY, RICHMOND, SUR.

SEISMOLOGICAL BULLETIN.

JUNE (Contd.) 19 34.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
June 24	Z	iP	6	12	46			10110	Dilatation. Emergent on horizontal components. Argentina. 23°S., 68°W. (U.S.C.G.S.)
	Z	i		13	13				
	Z	iPP		16	35				
	NE	iSKS		23	14				
	NE	iS		23	49				
	Z	iSP		25	10				
	E	iSS		30	23				
	ZNE	eL		38					
	N	M		48	39	25	-22		
	Z	M		50	9	25	-46		
24		F		50	14	24	+37		
				9	0				
24		F		14	46			Very small.	
				15	10				
25	Z	e	15	30	13				
	ZNE	eL		36					
	N	M		38	13	12	+ 3		
27		F		50					
			NE	e	1	21	33		
			N	e		25	21		
			NE	eL	2	4			
			Z	eL		13			
27		F		20	4	20	+2		
				3	30				
29	Z	i	8	42	45			Deep focus.	
	Z	i		44	7				
	Z	e		46	5				
	Z	e		47	6				
	NE	e		50	45				
	ZNE	i		52	37				
	Z	i		53	50				
	ZNE	i		54	31				
	ZE	e		56	49				
	ZE	e		58	5				
	ZNE	e		9	2	41			
		eL		(12)					
29		F		10	10			very small.	
				13	1				
29		F		15				Very small.	
30	Z	e	10	35	32				
	ZNE	eL		40					
		F		11	5				
30	Z	e	12	16	0			Horizontal components disturbed by wind.	
	ZNE	eL		21					
		F		55					
30	Z	e	13	35				F.J.W. Whipple, Superintendent.	
	ZNE	eL		40					
		F		14	10				

5th. July, 1934.

KEW OBSERVATORY, RICHMOND, SUR



From the ISC collection scanned by SISMO5

SEISMOLOGICAL BULLETIN FOR..... J U L Y 19..... 34.

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: 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	PENDULUM FREE PERIOD T	DAMPING CONSTANT μ^2	$\frac{Ak}{\pi l}$
N.	3 Oct., 1933	^{sec.} 24.7	^{sec.} 24.9	-.04	^{sec⁻¹} 47.1
E.	3 Oct., 1933	24.8	24.8	-.04	43.3
Z.	4 Oct., 1933	13.0	12.3	+.13	109.

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK (MORRISON);
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.
1	ZNE	eL	20	50						
		F	21	40						
3	ZNE	eL	4	30						
		F	5	0						
4	Z NE Z	e	2	1	2					
		eL		30						
		eL		36						
		F	4	20						
6/7	ZNE ZNE NE NE NE NE Z E N Z	eP	23	0	44			8400	Pacific Ocean off southern Oregon 42°N., 126 °W. (U.S.C.G.S.)	
		ePP		4	2					
		eS	10	24						
		i	10	32						
		eSS	15	22						
		L	22							
		L	26							
		M	30	17	18					+38
		M	30	41	18					-61
		M	35	3	15					-69
F	2	55								
12	NE Z	e	10	30					No records 7d. 14h. 59m. to 12d. 9h. 27m.	
		eL		36						
		eL		40						
		F	11	20						
12	F	e	15	30						
		F		50						
13	F	e	11	4					Very small; possibly not seismic.	
		F		15						



JULY (Contd.) 1957

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
13		e F	13	19					Very small; possibly not seismic.
				25					
16	Z ZNE	e eL F	8	31	30				9230 Amplitudes of iP as read in mm. :- N E Z (0.0) +3.0 +7.0 Azimuth about west. Destructive in Chiriqui Province, Panama.
			9	4					
				40					
18	ZE	iP	1	48	29				
	ZE	iPP		51	28				
	ZNE	i		58	41				
	N	iS		58	51				
	N	i	2	5	39				
	ZNE	eL		13					
	E	M		13	12	39	+380		
	N	M		17	24	23	-165		
	Z	M		18	29	15	+155		
	E	M		19	29	21	+170		
	Z	M		20	9	15	+180		
	N	M		23	31	19	-160		
		F	-	-	-				Overlapped by next shock.
18	Z NE ZNE E N Z	iP eS eL M M M F	4	12	46				8670 Confused by coda of preceding shock.
				22	40				
				37					
				42	9	21	-25		
				46	39	18	+15		
				54	33	17	-27		
			8	0					
18		eL F	16	45					9070 Amplitudes of iP as read in mm. :- N E Z 0.0 +0.7 +2.2 Azimuth about west. Repetition from 18d. 1h.
18	ZE	iP	17	11	45				
	Z	i		11	59				
	N	i		21	46				
	NE	iS		21	59				
	E	iPS		23	28				
	E	iSS		27	23				
	ZNE	L		35					
	N	M		35	44	24	-35		
	E	M		42	4	23	+46		
	N	M		43	57	19	+27		
	E	M		43	58	21	+43		
	Z	M		44	2	19	+41		
	Z	M		45	47	19	+43		
		F	-	-	-				Overlapped by next shock.
18	Z NE NE E NE E NE NE NE Z Z	iP' iPP iPKS iPPP i iSS iPSS iSSS L i eL	19	59	36				(15500) Dilatation. Emergent on horizontal components. Oceania.
			20	2	46				
				3	38				
				5	45				
				16	35				
				21	26				
				22	26				
				26	48				
				34					
				37	58				
				47					

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.		
			h.	m.	s.					sec.	μ
18	N E Z	M M M F	20	53	to	-	>350		Maxima doubtful. Traces very faint and confused by overlapping. Overlapped by following shocks. Later phases obscured by coda of previous shock.		
			21	6							
			20	55	58					26	+630
			-	-	-						
19	Z ZN NE	i e i F	0	26	18						
				29	5						
				29	54						
			-	-	-						
19	Z Z N NE Z N E N Z	i i i eL eL M M M M F	1	47	18						
					56					54	
			2	3	34						
					15						
					25						
				25	34				31	+67	
				25	52				30	+76	
				27	29				28	+67	
				43	3				18	-38	
				5	0						
19	Z Z ZNE	e e eL F	6	4	39						
					7				42		
					22						
			-	-	-						
19	Z NE NE NE Z E N Z	i e e eL eL M M M M F	7	56	27						
					59				54		
			8	17	35						
					44						
					50						
			9	0	57				20	+12	
				1	23				19	+17	
				3	32				18	+21	
				10	55						
				23	17				12		
20		e F	0	15							
			1	10							
20	Z ZNE	e eL F	2	22	38						
					53						
			3	50							
20		e F	5	30							
					35						
20		e F	14	25							
					15				0		
20	NE Z E N Z	e eL eL M M M F	18	30							
			19	13							
				20							
				57	20				25	-9	
			20	17	4				18	+6	
				30	59				17	+5	
	21	45									

SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMO5

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
21	NE Z	eL eL F	5	27					
				32					
				50					
21	Z ZNE NE NE NE E N E NE Z E N Z	e i i i i i i i i L L M M M F	6	37	46				
				41	46				
				49	37				
				58	56				
			7	0	23				
				1	19				
				4	14				
				4	26				
				11					
				14					
				27	28	25	+140		
				34	17	20	+59		
				50	1	18	+61		
			-	-	-				Overlapped by next shock.
21	ZE N NE E ZE E NE ZNE N Z E Z	iP e e i i i e eL M M M M F	10	51	3				
				54	54				Amplitudes of iP as read in
			11	1	9				mm. :- N E Z
				1	43				0.0 +1.1 +2.0
				2	6				Azimuth about west.
				2	43				
				6	10				
				15					
				19	37	20	+25		
				20	2	21	+44		
				21	8	22	-42		
				33	18	17	-40		
			14	50					
22	Z ZNE NE Z N	e e eL eL M F	3	17	14				
				20	54				
			4	3					
				11					
			5	8	56	16	+2		
				40					
22	Z ZNE ZNE ZNE NE ZE NE N Z F	i i i i i i eL M eL F	20	5	39				
				6	36				Compression. Emergent on
				7	2				horizontal components.
				12	41				
				14	15				
				14	28				
				22					very
				22		21	-6		Surface waves/poorly
				27	46				developed.
				28					
			21	10					
23	Z ZNE NE Z N	eP eS eL eL M F	18	30	43			5830	
				38	10				
				44					
				46					
				46	7	14	-4		
			19	45					



SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
24		e F	3	25					
27		e F	2	52				Very small.	
			3	25					
27		e F	13	45					
			14	50					
28	ZNE	e	2	27	23				
	ZNE	eL		35					
	N	M		39	44	18	+3		
		F	3	10					
28		e F	16	10				Very small.	
				35					
28/29	ZN	iP	21	48	21			8000 Amplitudes of iP as read in mm. :- N E Z -1.0 (+0.2) +2.7 Azimuth between N and NNW. Alaska, 56°N., 157°W. (U.S.C.G.S). Via the Antipodes.	
	ZN	i		51	6				
	ZNE	iS		57	41				
	E	L	22	11					
	E	M		12	44	32	-35		
	N Z	L		14					
	N	M		16	25	27	+57		
	E	M		16	32	26	-34		
	Z	M		16	59	26	-56		
	Z	M		22	12	18	-63		
	N	M		22	34	19	-56		
		eL ₂	0	2					
		F ₂	1	0					
30	ZNE	eL	2	23					
		F		35					
30	ZNE	eL	3	13					
		F		25					
30	ZNE	eL	4	4					
		F		20					
30	ZNE	eL	4	49					
		F	5	10					
31	NE	eL	6	49					
	Z	eL		55					
		F	7	25					
31	ZNE	e	12	13	17			Very small.	
		F	13	15					

F.J.W. Whipple,
Superintendent.

7th. Aug., 1934.

SEISMOLOGICAL BULLETIN FOR.....



From the ISC collection scanned by SISMO

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: 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 .	PENDULUM FREE PERIOD T .	DAMPING CONSTANT μ^2 .	$\frac{Ak}{\pi l}$
N.	3 Oct., 1933	24.7 ^{sec.}	24.9 ^{sec.}	-.04	47.1 ^{sec⁻¹}
E.	3 Oct., 1933	24.8	24.8	-.04	43.3
Z.	4 Oct., 1933	13.0	12.3	+.13	109.

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

DATE.	COMP.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
Aug.						sec.	μ	km.	
3	Z ZNE	e eL F	7	23	56				Horizontal components disturbed by wind.
				50					
			8	40					
4	Z NE Z	e eL eL F	13	30					
			14	5					
			15	11					
			15	35					
5	Z ZNE	e eL F	12	19	16				
				46					
			13	15					
6		e F	17	34					Very small.
				45					
"	ZNE ZNE N ZNE N NE Z E N Z	e e e e e eL eL M M M F	3	59	25				
			4	2	35				
				18	38				
				21	18				
				26	23				
				43					
				50					
			5	1	1	22	+19		
				1	45	22	+30		
				1	50	21	-29		
			7	20					
7	Z NE Z N Z	e eL eL M M F	11	59	47				
			12	17					
				22					
				25	10	12	-13		
				26	44	12	-13		
			13	40					

SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMO5

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
Aug. 9		e F	20	39			"		
			21	30					
10		e F	23	29					Very small.
				55					
11	Z	e	8	31	18				
	NE	eL		58					
	Z	eL	9	6					
	N	M		13	48	19	+21		
	Z	M		16	7	16	+16		
		F	10	20					
11	ZNE	i	12	20	9				
	Z	e		25	19				
	ZNE	eL		30					
		F	-	-	-				Overlapped by next shock.
11	Z	e	13	3	36				
	ZNE	eL		7					
	N	M		15	29	22	+14		
		F	14	30					
11		e F	15	26					
				40					
12		e F	14	57					Very small; possibly not seismic.
			15	10					
13	ZNE	e	0	3	36				
	ZNE	e		7	46				
	ZNE	e		16	48				
	NE	eL		39					
	Z	eL		44					
	E	M		53	12	27	-56		
	N	M		55	46	19	-36		
	Z	M		56	0	20	-39		
		F	2	35					
14	ZNE	i	9	9	1				
	NE	eL	10	1					
	Z	eL		11					
		F	11	5					
15	ZNE	eL	11	44					
		F	12	20					
16		i	2	16	41				Very small. Felt in northern and central Scotland. Measurements taken from experimental Wood-Anderson instrument.
		i		16	56				
		i		17	3				
		i		17	26				
		i		17	49				
		F		20					
18	NE	eL	3	23					
	Z	eL		29					
		F		55					
19/20	ZNE	eL	23	44					
		F	0	5					

KEW OBSERVATORY, RICHMOND, SURF

SEISMOLOGICAL BULLETIN.

AUGUST, 1934.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
Aug. 21	NE	eL	20	22		24	-5	Horizontal components disturbed by wind.	
	Z	eL		26					
	N	M	25	19					
		F	21	0					
22		e	8	2				Very small; possibly not seismic.	
		F		10					
23		e	23	29					
		F		40					
24	ZNE	e	0	8	7	18	+5		
	ZNE	e		11	7				
	NE	eL		56					
	Z	eL	1	2					
	Z	M		12	56				
		F	2	20					
26	NE	eL	2	6		16	+4		
	Z	eL		13					
	Z	M	20	11					
		F		50					
28		e	12	6					
		F		20					
31	ZNE	eP	5	9	50				3810 Dilatation. Amplitudes of iP as read in mm. :- N E Z -2.3 +1.0 +2.8 Azimuth about 335° Baffin Bay.
	ZNE	iP		9	58				
	ZNE	ePP		11	27				
	ZNE	iS		15	26				
	ZNE	L		20					
	E	M	20	20		27	+48		
	N	M	20	43		27	+62		
	N	M	24	35		17	+41		
	E	M	25	44		13	+42		
	Z	M	26	53		13	+37		
		F	7	5					
31	ZN	e	15	6	42	16	-77		
	NE	e		17	28				
	NE	eL		21					
	Z	eL		26					
	N	M	27	0					
	E	M	27	1					
	Z	M	29	51					
	E	M	29	54					
		F	16	40		17	+36		

F. J. Scrase,
for Superintendent.

5th. Sept., 1934.

KEW OBSERVATORY, RICHMOND, SURREY, I



From the ISC collection scanned by SISMO5

SEISMOLOGICAL BULLETIN FOR SEPTEMBER 1934.

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: 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 .	PENDULUM FREE PERIOD T .	DAMPING CONSTANT μ^2 .	$\frac{Ak}{\pi l}$
N.	5 Sept. 1934	24.7 ^{sec.}	24.5 ^{sec.}	+0.01.	46.7 ^{sec⁻¹}
E.	6 Sept. 1934	24.8	24.8	-0.01.	42.6
Z.	11 Sept. 1934	13.0	13.1	+0.01.	109.

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK (MORRISON).
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.				
Sept. 1		e F	7	55					
			8	15					
1	ZNE	e	11	56	46				
	ZNE	eL	12	5					
		F	45						
4	ZN	e	16	54	34				
	ZNE	eL	17	50					
		F	19	5					
6	ZNE	e	2	41					
	NE	eL	3	12					
	Z	eL	18						
		F	35						
7	ZN	i	3	43	2				
	NE	e	46	6					
	ZNE	eL	47						
	E	M	47	38	15	-7			
	Z	M	50	16	8	-4			
		F	4	10					
7		e	20	31					
		F	40						
8	NE	e	7	7					
	Z	eL	11						
		eL	15						
		F	30						
8	Z	e	11	33	56				
	Z	i	34	24					
	ZNE	eL	12	34					
		F	13	40					

No records during standardisation, etc.,
5d. 13h. 10m. - 15h. 31m.
6d. 8h. 28m. - 16h. 33m.



SEISMOLOGICAL BULLETIN.

SE 1934.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
Sept. 11	ZNE	eL F	1	29					
				35					
12	NE	eL	15	15					
	Z	eL		17					
	E	M	24	13	13	+5			
	Z	M	24	15	13	-5			
		F		45					
12		e	16	32					Very small; possibly not seismic.
		F		35					
12	NE	eL	18	32					
	Z	eL		39					
		F		55					
13		e	3	52					
		F		10					
13		e	15	9					
		F		30					
15	NE	eP	7	9	26			9070	No "Z" record. Mexico, 20°N., 105°W. (U.S.C.G.S.)
	NE	eS		19	40				
	NE	eL		34					
	E	M	45	23	18	+20			
	N	M	45	48	19	+9			
		F	8	35					
16		e	14	2					
		F		35					
21	NE	e	13	2	34				Very small, traces on "Z" record.
	NE	e		3	14				
	NE	e		3	52				
		F		50					
23		e	1	54					
		F		2	5				
23	Z	e	8	18	54				
	Z	e		29	9				
	ZNE	eL	9	23					
		F	10	0					
26	Z	e	7	37	10				
	NE	e		44	33				
	NE	e		47	42				
	ZNE	eL		53					
		F	8	45					
27	ZNE	eL	23	18					
		F		35					

F.J.W. Whipple,
Superintendent.

4th. October, 1934.



KEW OBSERVATORY, RICHMOND, SUR.

SEISMOLOGICAL BULLETIN FOR..... OCTOBER..... 1934.

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: 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 .	PENDULUM FREE PERIOD T.	DAMPING CONSTANT μ ² .	$\frac{Ak}{\pi l}$
N.	5 Sept., 1934	sec. 24.7	sec. 24.5	+ .01	sec ⁻¹ 46.7
E.	6 Sept., 1934	24.8	24.8	- .01	42.6
Z.	11 Sept., 1934	13.0	13.1	+ .01	109.

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK (MORRISON);
 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.				
5	Z	e	20	38	11	22	-10	2190	
	E	e		48	9				
	NE	eL	21	8					
	Z	eL		12					
	E	M		13	28				
	N	M		15	8				
5	Z	M	20	10	17	+ 4			
		F		50					
5	Z	e	22	42					
		F	23	25					
6	ZE	eP	0	24	3	17	- 4		
	NE	iS		27	42				
	ZNE	eL		29					
	E	M		30	8				
	N	M		30	46				
		F		50					
6	ZNE	e	13	5	57	24	+ 7		
	E	eL		12					
	ZN	eL		15					
	N	M		15	27				
	E	M		16	17				
		F		50					
7	Z	e	11	3		16	+ 5		
		F		15					
8	Z	e	7	22					
		F		30					



DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ
			h.	m.	s.			
10	Z	i	16	0	57			Compression. Emergent on horizontal components.
	Z	i		1	1			
	Z	i		1	20			
	ZN	e		3	5			
	N	i		10	50			
	ZN	e		14	21			
	N	e		17	2			
	E	i		23	36			
	ZN	i		24	14			
	NE	e		28	0			
	E	e		29	24			
ZNE	eL		32				Irregular.	
	M		36	27	26	-22		
N	F		18	25				
18	Z	e	8	8	41			
	Z	e		11	39			
	NE	eL		52				
	Z	eL		59				
	N	M		9	19	5	19	+ 7
	Z	M			23	22	20	- 8
	E	M			27	8	18	+ 7
19	NE	eL		21	29			
	N	M			32	4	21	+ 7
	Z	eL			35			
21		F			50			
		e	18	48				
26		F	19	10				
	Z	i	17	24	2			Emergent on horizontal components.
	Z	i		27	43			
	N	e		34	49			
	ZNE	i		36	0			
	E	e		45	36			
	NE	eL		54				
	Z	eL		59				
	E	M		59	35	28	+29	
	N	M		59	47	28	+22	
	E	M	18	8	49	19	+21	
	N	M		9	9	16	+23	
	Z	M		9	13	17	-23	
		F		50				
27		e	11	5				
		F		35				
29	NE	eL	0	23				
	Z	eL		30				
		F		45				
29	NE	eL	3	13				
	N	M		17	13	22	- 6	
	Z	eL		18				
29		F		40				
	NE	e	16	22				
	NE	eL		33				
	N	M		36	3	29	-20	
	F		17	38				
	F		17	0				

F. J. W. Whipple. Superintendent. 3rd. Nov., 1934.



SEISMOLOGICAL BULLETIN FOR.....NOVEMBER.....1934.....

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: 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	PENDULUM FREE PERIOD T.	DAMPING CONSTANT μ ² .	$\frac{Ak}{\pi l}$
N.	5 Sept., 1934	sec. 24.7	sec. 24.5	+ .01	sec ⁻¹ 46.7
E.	6 Sept., 1934	24.8	24.8	- .01	42.6
Z.	11 Sept., 1934	13.0	13.1	+ .01	109.

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK (MORRISON); 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.				
Nov. 4 *	Z	e	3	13		19	-7	km.	
	NE	eL		35					
	Z	eL		42					
	N	M	49	21					
Nov. 4 *	NE	eL	4	25		20	+10		* Confused by wind.
	Z	eL		30					
	N	M	5	9	58				
		F		45					
5/6	Z	e	23	14	16	19	-7		
	NE	e		25	12				
	NE	e		33	2				
	ZNE	eL		37	0				
	N	M		40					
	E	M	54	9					
	Z	M	54	39					
7		F	58	41		18	+7		
		e	0	50					
		F	14	40					
9				45					
	ZN	i	13	46	0				
	ZN	eL		54					
		F	14	0					Dilatation. No E-W record.



SEISMOLOGICAL BULLETIN.

November 1954.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
Nov. 10	ZE	e	15	44	25				
	ZNE	L		49					
	N	M	50	9		20	+7		
	Z	M	50	37		20	-8		
	E	M	50	42		18	+7		
		F	16	20					
12	ZNE	e	7	27					
	NE	L		34					
	N	M	34	21		40	(-30)		
	Z	L	36						
	N	M	38	56		19	-20		
	E	M	38	59		21	+20		
	Z	M	43	3		14	+9		
		F	8	35					
16	ZNE	eL	10	53					
		F	11	35					
16	Z	e	14	16	28				
	NE	eL		42					
	Z	eL		47					
	N	M	48	23		26	-10		
	E	M	48	47		26	+9		
		F	16	15					
18	ZNE	iP	3	30	9			5430	Compression.
	ZE	i		31	22				Turkestan. 37°N., 66.5°E.
	ZE	i		33	0				(Strasbourg).
	E	iS		37	14				
	ZN	iS		37	16				
	E	e		38	34				Surface waves poorly
	NE	e		41	7				developed.
	N	M		52	17		19	-10	
			F	4	20				
18	NE	e	15	36					
	NE	eL		42					
	Z	eL		49					
		F	16	5					
18/19	Z	i	22	59	17				Compression.
	ZNE	e	23	1	26				Felt in Sydney, Australia.
	Z	i		2	32				Emergent on horizontal
	NE	e		8	36				components
	NE	eL		36					
	Z	eL		43					
	Z	M	49	17		27	-15		
	N	M	50	57		25	-13		
	E	M	53	52		25	+6		
		F	1	0					
21	E	e	22	36	22				
	ZNE	eL		43					
		F		55					
24	ZNE	eL	14	1					
	N	M		8	48		19	+4	
		F		45					



SEISMOLOGICAL BULLETIN.

November (contd.) 1934.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h.	m.	s.				
Nov 26	NE	eL	13	0					
	Z	eL		5					
	N	M F	10	6	19	-7			
27	ZNE	ePP	6	33	22			12200	Philippine Islands. 1°S., 127°E. (U.S.C.G.S.)
	ZNE	eSKS		39	16				
	ZNE	eSP		42	37				
	NE	eL	7	3					
	Z	eL		7					
	N	M	14	18	27	-16			
	E	M	15	21	26	-13			
	Z	M	26	37	19	-9			
		F	8	0					
	30	ZE	iP	2	17	53			9280
N		eP		17	53				
ZNE		i		17	55				
ZN		e		19	11				
NE		eSKS		28	14				
NE		iS		28	17				large movement
NE		eSS		33	45				
N		eL		40					
ZE		eL		42					
N		M		47	40	27	+99		
E		M		49	33	25	+93		
Z	M F		54	3	17	-74			
			-	-	-				Overlapped by next shock.
30	Z	iP	3	1	6				Emergent on Galitzin horizontal components; clearly recorded by experi- mental Wood-Anderson seismo- graph (N-S component) Felt at Ancona, Italy.
	NE	i		4	12				
	N	i		4	59				
	NE	i		6	45				
		F		5	5				

F. J. Scrase,
for Superintendent.

6th. Dec., 1934.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.**SEISMOLOGICAL BULLETIN FOR.....DECEMBER.....19.34.**

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: 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 .	PENDULUM FREE PERIOD T .	DAMPING CONSTANT μ^2 .	$\frac{Ak}{\pi l}$
N.	5 Sept., 1934	sec. 24.7	sec. 24.5	+ .01	sec ⁻¹ 46.7
E.	6 Sept., 1934	24.8	24.8	- .01	42.6
Z.	11 Sept., 2934	13.0	13.1	+ .01	109.

TIME SERVICE: MINUTE TIME-MARKS ARE MADE ELECTROMAGNETICALLY BY CONTACT CLOCK (MORRISON);
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.				
Dec. 1		e	19	53					
		F	20	5					
3	ZN	eP	2	50	27	18	+ 5	Central America 15°N., 89°W. (U.S.C.G.S.)	
	ZNE	eL	3	18					
	E	M	28	5					
		F	4	5					
4	NE	e	17	48	8	23	-16	Northern Chile 19°S., 70°W. (U.S.C.G.S.)	
	NE	e	48	43					
	ZNE	e	49	58					
	NE	eL	18	8					
	Z	eL	11						
	E	M	13	50					
	Z	M	14	8	23				+ 7
	N	M	14	37	21				-12
8		e	10	24		7330			
		F		45					
15	Z	eP	2	8	25	28	+210	Amplitudes of iP as read in mm.:- N E Z -0.7 -1.2 +2.0 giving azimuth = 62° ±5°. Tibet, 31.5°N., 89°E. (Strasbourg).	
	ZNE	iP		8	31				
	N	eS	17	11					
	NE	iS	17	16					
	Z	i	17	22					
	Z	e	21	53					
	N	i	24	3					
	NE	i	24	27					
	Z	i	24	34					
	NE	i	24	40					
	ZNE	eL	28						
	E	M	33	53	24				>320
	N	M	34	6	20				+145
E	M	36	39						

SEISMOLOGICAL BULLETIN.

DECEMBER (contd) 1934.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
Dec 15	N	M	37	24		15	-270		
	N	M	38	29		15	+230		
	Z	M	39	14		15	+120		
	E	M	40	1		17	+155		
	Z	M	40	13		14	+105		
	Z	M F	42 47			11	- 63		
			4	(30)					
17	NE	eL	16	49				Masked by microseisms.	
	Z	eL		58					
	N	M F	17 18	7 0	6	23	+ 13		
21		e F	13	17 25				Very small.	
22	ZNE	e	14	52	21			Pacific Ocean off Central America. 8°N., 89°W. (U.S.C.G.S.).	
	ZNE	e		57	16				
	NE	e	15	0	37				
	N	eL		2					
	E	e		2	14				
	ZE	eL		5					
	E	M		10	8	23	-35		
	Z	M		10	13	23	-40		
	N	M F		12 16	47	19	+20		
23	ZNE	e	10	16	5			Surface waves small.	
	ZNE	i		16	10				
	N	i		17	7				
	Z	e		18	6				
	NE	eL		30					
	Z	eL F		36 11	0				
23		e F	23	48 0	0				
24	ZNE	e	16	0	45			Confused by microseisms.	
	N	i		2	41				
	NE	i		2	53				
	NE	i		3	16				
	N	M F		4 10	33	14	+16		
25		e F	7	28 50				Possibly not seismic.	
28		e F	12	50 13	30				
30	Z	e	14	20	42			Disturbed by wind and microseisms. California.	
	Z	eL		24	52				
	NE	L		28					
	Z	L		31					
	N	M		36	33	17	+35		
	E	M		37	21	17	+25		
	Z	M F		39 15	19	15	+26		



SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI-TUDE.	Δ	REMARKS.
			h.	m.	s.				
Dec. 31	ZNE	eP	18	58	8			8570	Mexico.
	ZNE	ePP	19	1	38				
	NE	eS		7	57				
	NE	iS		8	2				
	Z	e		9	4				
	N	eSS		12	48				
	NE	L		18					
	Z	L		25		20	-135		
	N	M		26	54	17	-140		
	E	M		29	27	16	+120		
	N	M		30	28	16	+120		
Z	M		30	29	15	-110			
	F		23	0					

F.J.W. Whipple,
Superintendent.
5th. Jan., 1935.