

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	+0.01	^{sec⁻¹} 46.7
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.	COMP.	PHASE.	G.M.T.	PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h. m. s.	sec.	μ	km.	
Jan. 2	N Z E	eL eL M F	0 48 0 50 49 55 1 20	29	-6		Confused by microseisms.
2	N Z	eL eL F	18 27 35 55				
2/3	N N N N E	i i eL M M F	22 59 6 23 0 52 16 21 15 39 31 1 15	36 19	+20 +14		No "Z" record.
1/3	-	-	10 12 to 12 36				No records.
1/4	N N E N E N Z E N Z	e i i L M M L M M M F	6 5 37 11 55 15 58 22 26 20 26 42 29 30 17 34 18 39 6 8 0	44 33 23 24 19	-62 -15 -21 -20 +23		Confused by microseisms.
1/4	-	-	10 31 to 16 36				No records.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	
			h.	m.	s.				
Jan. 14	Z NE Z N	i eL eL M F	18	0	46				
				50					
				58					
			19	11	49	18	+6		
			20	20					
15	-	-	10	16	to				No records.
			12	34					
15	-	-	13	40	to				No records.
			15	48					
15	NE Z	eL eL F	16	1					
				6					
			17	0					
19/ 20	ZE	e F	23	48					Possibly not seismic.
			0	5					No "N-S" record.
20	ZE ZE E Z	e L M M F	9	13	10				No "N-S" record.
				15		17	-13		
				16	30	11	-8		
				18	27				
				40					
20	Z NE NE NE Z N E Z	e e i L L M M M F	17	15	1				Confused by wind and microseisms.
				21	30				
				21	36				
				46					
				51					
				58	16	26	-41		
				58	48	26	-30		
				59	7	28	-41		
			18	35					
22		e F	16	52					
			17	25					
27	ZNE	eL F	16	19					Confused by microseisms.
				45					
27	NE Z	eL eL F	20	0					Confused by microseisms.
				6					
				25					
(sgd)									
F.J.W. Whipple,									
Superintendent,									
4th February, 1936.									



KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR FEBRUARY, 1936.

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.}	+ .01	46.7 ^{sec⁻¹}
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.	sec.	μ	km.	
Feb. 7	Z	i	1 7 47				
	ZNE	eL	2 0				
	N	M	8 48		+3		
		F	3 15				
7	ZNE	e	9 17 1				
	NE	e	21 31				
	E	i	24 37				
	ZNE	i	24 59				
	N	i	25 7				
	ZNE	eL	28				
	N	M	39 44	22	-51		
	Z	M	41 4	18	+37		
	E	M	43 36	18	-42		
		F	11 5				
8	NE	eL	13 14				Confused by wind and microseisms.
	Z	eL	17				
		F	40				
12	ZN	e	11 2 45				Confused by microseisms.
	N	e	11 50				
	N	e	12 29				
	ZE	e	14 9				No surface waves.
		F	55				
15	Z	e	13 5				Commencement indefinite.
	ZNE	i	7 11				
	ZE	e	9 30				
	ZNE	e	12 42				
	NE	i	13 59				
	NE	i	16 53				
	Z	i	16 56				
	E	e	19 9				

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	
			h.	m.	s.	sec.	"	km.	
Feb.									
15	NE	e	24	1					
	NE	eL	36						
	Z	eL	41						
	E	M	55	29	21	-68			
	N	M	14	1	16	21	+83		
	Z	M	3	19	20	+56			
		eL	47						
	E	M	57	17	20	+13			
	Z	M	58	4	20	+13			
	N	M	58	19	19	+11			
		F	16	20					
16		e	14	36					
		F	40						
21	NE	eL	1	53					
	Z	eL	58						
	N	M	58	49	16	-4			
		F	2	20					
21	NE	eL	7	2					
	Z	eL	6						
		F	30						
21	Z	e	17	18	28				
	ZNE	e	28	12					
	E	e	48	52					
	NE	L	59						
	Z	L	18	2					
	E	M	3	38	32	+23			
	Z	M	9	58	23	+16			
	N	M	10	55	24	+18			
		F	19	15					
22	Z	i	15	52	8				
	ZE	i	53	34					
	E	i	16	4	2				
	E	e	7	45					
	E	i	19	40					
	N	i	19	44					
	E	i	23	3					
	NE	i	25	15					
	NE	L	42						
	Z	L	51						
	E	M	17	14	39	19	+36		
	N	M	14	46	19	-41			
	Z	M	15	33	19	+53			
		F	18	25					
22	Z	e	19	43	12				
	Z	e	50	6					
	E	e	54	41					
	ZNE	eL	20	9					
		F	-	-	-				

Via antipodes.

Very small.
Possibly not seismic.

Possibly not seismic.

Poorly developed.
Overlapped by next shock.

FEBRUARY, 19 36.

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI-TUDE.	Δ	REMARKS.
			h.	m.	s.				
Feb. 22	NE NE Z Z	e	20	41					
		eL		50					
		eL	21	1					
		M		5	2	24	+10		
		F		50					
27	NE E Z	eL	11	6					Confused by microseisms.
		M		11	24	26	+9		
		eL		13					
		F		35					
28		e	3	41					
		F	4	0					
28	NE N Z	eL	17	12					
		M		16	37	23	+6		
		eL		20					
		F		40					

(sgd)

F.J.W. Whipple,
Superintendent,
5th March, 1936.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.**SEISMOLOGICAL BULLETIN FOR.....MARCH,.....1936.**

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. ^{sec} 7	24. ^{sec} 5	+0.01	45. ^{sec-1} 7
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

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.	
Mar. 1.	Z	e	11 16				
	NE	eL	35				
	Z	eL	42				
	N	M	48 36	18	+7		
	E	M	49 30	19	+8		
	Z	M	50 16	18	+6		
		F	12 55				
2.	Z	iP	3 31 25				Compression. Small on N-S component.
	Z	i	31 43				
	E	i	41 37				
	NE	i	41 45				
	Z	e	41 59				
	N	i	42 41				
	NE	e	47 15				
	N	e	50 39				
	E	e	50 59				
	E	L	55				
	ZN	L	4 0				
	E	M	5 12	24	+55		
	N	M	5 46	24	+36		
	N	M	13 36	17	+34		
	Z	M	13 40	17	-35		
		F	6 10				
6.	Z	e	14 45 25				
	ZNE	eL	15 45				
		F	16 40				
8.	NE	eL	1 12				Very small.
	Z	eL	23				
		F	30				

MARCH, 19 36.

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
Mars									
10.	NE	eL	8	40					Very small.
	Z	eL		45					
		F	9	10					
10.		e	12	50					Very small.
		F	13	10					
10.	Z	e	20	48	13				
	NE	eL	21	16					
	Z	eL		21					
	E	M	21	59	24	+8			
	N	M	22	32	24	+6			
	Z	M	29	46	15	+4			
		F	22	10					
11.	NE	eL	1	29					
	Z	eL		33					
		F	2	0					
14.		e	10	15					Very small.
		F		35					
17.		e	20	28					
	NE	eL		40					
	Z	eL		50					
		F	21	10					
18.		e	13	17					Very small.
		F		30					
18.		e	14	52					Very small.
		F	15	5					
20.		e	18	15					Very small.
		F		30					
20.	NE	e	19	14					
	NE	eL		20					
	Z	eL		23					
		F	20	0					
21.	Z	i	0	16	9				Emergent on horizontal
	ZNE	eL		59					components.
	N	M	1	11	13	21	+8		
	Z	M		12	29	20	+8		
	ZNE	eL2		52					Via Antipodes.
		F	-	-	-				Overlapped by next shock.
21.	NE	e	2	16	5				
	ZNE	L		29					
		F	3	15					
22.		e	5	22					Very small.
		F		35					
22.	Z	e	13	21					
	NE	eL		25					
	Z	eL		32					
		F	14	25					



SEISMOLOGICAL BULLETIN.

MARCH, 19 36.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
Mar. 24.		e F	22 53 23 10						Very small.
25.	ZNE ZN ZNE N Z E	eP eS L M M M F	8 46 9 49 53 51 51 57 52 12 52 18 - - -		20 18 17	+4 +6 -6		2250	Overlapped by next shock.
25.	ZNE N Z ZNE E N E Z	iP iS i L M M M M F	9 3 15 6 59 7 7 8 8 31 8 57 9 34 9 47 10 10		25 19 18 16	+27 -25 +35 -33		2250	Amplitudes of iP as read in mm :- N. E. Z. -2.5 +3.0 +4.0 Azimuth about 307°. North Atlantic Ocean, south- west of Iceland.
25.	ZNE ZNE	e L F	11 37 27 43 12 5						
25/26.	Z ZNE	e L F	23 56 18 0 2 25						
26.	ZE	eL F	9 49 55						
27.		e F	3 5 45						
29.		e F	21 35 45						
(sgd)									
F.J.W. Whipple,									
Superintendent,									
6th April 1936.									

FORM 3718.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR.....APRIL.....1936.

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)
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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
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.	
April 1	ZNE	iP	2 23 49			11770	Amplitudes of iP as read in mm :- N. E. Z. -0.7 -1.0 +2.7 giving azimuth about 57°. By path greater than 180°. Uncertain: trace very faint. Via antipodes.
	ZNE	iPP	28 21				
	NE	iSKS	34 29				
	NE	iSKKS	35 18				
	N	iS	36 1				
	ZE	iSP	37 34				
	N	iPS	37 41				
	NE	iPPS	38 49				
	N	iSS	43 39				
	NE	i	43 55				
	E	i	44 42				
	N	i	45 3				
	E	iPPP	46 17				
	NE	iSSS	47 39				
	N	iSSSS	50 47				
	E	i	53 19				
	N	i	53 57				
	NE	L	58				
	E	M	3 2 31	37	-210		
	Z	L	4				
	N	M	- - -	(20)	250		
	E	M	6 18	30	-175		
	Z	M	11 17	31	+300		
	Z	M	17 4	21	-260		
	ZNE	eL ₂	4 18				
	E	M	23 37	21	-34		
	Z	M	23 43	19	-27		
	ZNE	eL ₃	6 22				
		F	55				

SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMOS

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
April						sec.	μ	km.	
1	ZN	ePP	20	30	2			(12500)	
	NE	eSKS		36	1				
	ZNE	iPS		39	9				
	E	eSS		46	4				
	ZNE	eL		55					
	E	M	21	13	35	23	+30		
	Z	M		18	54	20	-23		
	N	M		18	58	20	-31		
		F	22	40					
2	ZN	e	6	40					
	NE	eL	7	15					
	Z	eL		22					
	N	M		29	6	24	-13		
	Z	M		29	12	25	+11		
	E	M		31	46	23	+8		
		F	8	55					
7		e	2	53					Very small.
		F	3	10					
8	ZE	eP	4	21	35			2190	
	NE	eS		25	14				
	ZNE	eL		27					
	N	M		28	14	13	+9		
		F		50					
9		e	1	20					Very small.
		F		35					
9	ZNE	eL	8	30	±				Time marks failed.
		F	9	0					
9	Z	i	16	25	9				Dilatation.
	NE	eL	17	18					Surface waves small and
	Z	eL		25					indefinite.
		F	18	25					
10		e	17	50					Very small.
		F	18	10					
10		e	20	34					
	NE	eL		40					
	Z	L		43	28				
		F	21	5					
12		e	0	36					Very small.
		F	1	5					
12	ZNE	eP	21	5	38			(12500)	
	ZNE	iPP		10	14				
	ZE	iPPP		12	38				
	N	iPPP		12	42				
	NE	iPS		19	47				
	Z	iSPP		20	36				
	NE	iPPS		20	44				
	E	iSS		25	44				
	N	iSS		25	54				
	Z	iSS		26	2				

SEISMOLOGICAL BULLETIN.

APRIL, 1936.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI-TUDE.	Δ	REMARKS.
			h.	m.	s.				
April 12 (Contd)	NE	eSSS	21	30	9				
	ZNE	L		43					
	E	M		46	26	32	-42		
	N	M		59	12	21	-38		
	Z	M	22	1	38	18	-40		
		F	23	45					
15	ZNE	eP	16	7	37			2150	
	E	eS		11	13				
	ZNE	eL		14					
		F		30					
15	NE	eL	19	56					
	Z	L	20	4					
		F		25					
16	NE	eL	1	55					
	Z	eL	2	2					
		F		25					
16		e	14	7					Very small.
		F		20					
16		e	21	0					Very small.
		F		20					
19	Z	eP	5	23	25			15000	Diffracted.
	Z	iPKP		26	30				
	ZNE	iPP		28	54				
	ZNE	iPKS		29	58				
	NE	i		30	44				
	NE	eSKKS		35	28				
	NE	iSKSP		38	58				
	NE	iPPS		40	47				
	NE	eSS		46	30				
	E	iSKSP		48	44				
	NE	iSSS		53	6				By path greater than 180°.
	Z	iSSS		53	10				
	N	e		57	2				
	NE	L	6	0					
	Z	L		12					
	E	M		9	22	38	+185		
	N	M		9	42	38	+120		
	N	M		19	29	26	+100		
	E	M		23	48	23	+55		
	Z	M		32	1	20	-67		
		F	-	-	-				Overlapped by next shock.

DATE.	COMPT.	PHASE.	C.M.T.			PERIOD.	AMPLI- TUDE.	Δ
			h.	m.	s.	sec.	μ	km.
April 19	ZNE NE NE NE Z E N E Z	eP eS eSS eL eL M M M M F	9	15	30			10400
				26	46			
				32	36			
				38				
				44				
				51	58	24	+17	
				52	45	24	-35	
				59	55	19	+16	
			10	0	1	19	-12	
			11	45				
21	ZNE N ZNE	eP eS eL F	2	23	20			9090
				33	35			
				43				
				55				
22		e F	10	28				Disturbed by wind and microseisms.
				50				
23/24	Z N N ZE	iP eS L eL F	23	26	26			9540
				37	3			
				42				
				48				
			0	30				
27	ZNE NE NE NE Z N E	eP eS eSSS eL eL M M F	0	10	57			8520
				20	43			
				29	34			
				34				
				39				
				39	53	30	-50	
				39	53	30	+46	
			1	45				
27	ZNE	eL F	7	9				
				45				
28	Z NE NE Z	e e eL eL F	6	12	53			Possibly microseismic.
				19	6			
				43				
				51				
			8	0				
(sgd)								
F.J.W. Whipple,								
Superintendent,								
6th April, 1936.								

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR M. A. Y., 1936.



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
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.	
May 5	ZNE N	eL M F	20 48 58 42 21 25	22	-3		
7		e F	2 22 35				Very small.
8	ZE ZE N NE NE NE	i e e i e e F	9 37 45 38 53 42 45 45 6 10 5 21 8 30 30				No surface waves.
8		e F	16 6 25				
11	ZNE Z ZNE Z NE NE E ZN E N Z	e e e e e e eL L M M M F	17 46 35 48 41 49 53 58 40 18 6 21 14 53 25 30 37 12 37 25 46 42 20 10	32 27 20	+9 -15 +16		

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ km.	REMARKS.
			h.	m.	s.				
May, 28	NE	eL	13	19					
	Z	eL		23					
		F		40					
28	Z	eP	19	2	2			10070	Pacific Ocean south of Mexico. 8°N., 104°W. (U.S.C.G.S.).
	NE	eSKS		12	39				
	NE	iS		13	3				
	NE	eSS		18	57				
	ZNE	eL		26					
	E	M		32	13	40	+24		
	Z	M		34	5	30	+17		
	N	M		35	7	30	-24		
		F	21	50					
									(sgd)
									F.J.W. Whipple,
									Superintendent,
									5th June, 1936.

Lat. 51° 28' 3" N, Long. 0° 18' 41" W. Height above

LITHOLOGIC FOUNDATION: RIVER GRAVELS RESTING ON LOESS CLAY.

INSTRUMENTS: GALITZIN APHEROID SEISMOGRAPH PHOTO-GALITZINOMETRIC REGISTRATION, THREE COMPONENTS.

CONSTANTS: FOR NOTATION SEE FÜRST & GALITZIN "VORLESUNGEN ÜBER SEISMOLOGIE" (LEIPZIG, 1914) OR G. W. WALKER "MODERN SEISMOLOGY" (LONDON, 1933).

COMPONENT.	DATE FROM WHICH CONSTANTS APPLY.	GALITZINOMETER FREE PERIOD T_0	PENDULUM FREE PERIOD T_1	DAMPING CONSTANT β	$\frac{Ak}{\pi I}$
N.	5 Sept., 1934	24.7 ¹¹²	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 ELECTROVIBRATORICALLY BY PORTABLE CLOCK.

TIME COMPARISONS ARE MADE DAILY WITH SIGNALS FROM CREECHVIEW OBSERVATORY.

SEISMOLOGIC READINGS CAN BE DETERMINED TO THE NEAREST SECOND.

DATE.	COMPT.	PHASE.	G.M.T.	PERIOD.	AMPLITUDE	Δ	REMARKS.
May			h. m. s.	SEC.	μ	KEL	
5	ZNE	eL	20 43				
	N	M	53 42	22	-5		
		F	21 25				
7		e	2 22				Very small.
		F	35				
8	ZE	i	9 37 45				
	ZE	e	33 53				
	N	e	42 45				
	NE	i	45 6				
	NE	e	10 5 21				No surface waves.
	NE	e	3 30				
		F	30				
8		e	16 5				
		F	25				
11	ZNE	e	17 43 35				
	Z	e	43 41				
	ZNE	e	49 53				
	Z	e	53 40				
	NE	e	18 5 21				
	NE	e	14 53				
	E	eL	26				
	ZN	L	30				
	E	M	37 12	32	-9		
	N	M	37 25	37	-1.5		
	Z	M	46 42	30	-1.6		
		F	20 10				

SEISMOLOGICAL BULLETIN.

M A Y . 19 36.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
May. 16	NE	i	7	27	19				No "Z" record.
	NE	e		35	58				
	NE	L		41					
	N	M		46	12	29	+56		
	E	M		46	43	29	-55		
		F	9	30					
19	NE	e	21	17	43				No "Z" record.
	NE	eL		48					
		F	23	15					
20	NE	e	3	27	13				No "Z" record.
	NE	i		28	10				
	E	e		35	29				
	NE	i		45	6				
	E	i		50	3				
	N	i		52	3				
	NE	L		59					
	E	M	4	13	1	29	+25		
	N	M		17	43	24	+17		
		F	6	20					
21	NE	eL	3	55					No "Z" record.
		F	4	25					
22	Z	e	1	33					
	NE	eL	2	0					
	Z	eL		6					
		F	3	5					
22/23	Z	e	23	41	58				
	NE	eL	0	35					
	Z	eL		41					
		F	1	40					
25	NE	e	3	32					No "Z" record.
	NE	eL		58					
	E	M	4	14	28	23	-8		
	N	M		15	54	22	+8		
		F	5	25					
27	Z	iP	6	29	52			7130	Compression; emergent on horizontal components. Widely felt in north-eastern India. Himalayas. 29°N., 84°E. (Strasbourg).
	ZNE	iPPP		34	1				
	NE	iS		38	28				
	Z	eS		38	33				
	NE	i		39	47				
	NE	eSS		43	48				
	N	iSSS		45	35				
	NE	L		46					
	Z	L		49					
	N	M		56	28	17	-160		
	E	M		56	28	17	+82		
	E	M	7	0	26	19	-88		
	Z	M		0	44	17	-95		
		F	10	15					

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR JUNE 1936.

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 .	$\frac{1k}{T}$
N.	5 Sept. 1934	sec. 24.7	sec. 24.5	+0.01	sec-1 45.7
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
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.	
June 1	Z	i	11 40 41				Very small.
	Z	e	42 14				
		F	50				
3	ZN	eP	3 7 51			9090	
	NE	eS	18 6				
	E	ePS	18 42				
	ZNE	eL	33				
	E	M	38 6	35	+11		
	N	M	45 43	24	+7		
		F	4 20				
3	ZNE	eP	9 27 8			8800	Compression.
	Z	ePP	30 13				Pacific Ocean off Northern California.
	E	eS	37 8				40°N., 127°W.(U.S.C.G.S.).
	ZNE	eL	51				
	E	M	55 57	20	-8		
	Z	M	10 0 45	16	+9		
	N	M	0 51	16	+8		
		F	11 0				Very small.
4		e	14 0				
		F	20				
5	Z	e	13 44				Horizontal components disturbed by wind.
		F	14 0				
5	Z	e	14 50				Horizontal components disturbed by wind.
		F	16 10				
6	NE	e	16 35 25				
	NE	eL	38				
	Z	L	41				
		F	17 5				



J U N E , 1939.

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.		μ	km.	
June. 7	ZN NE ZNE	eP eS L F	4	3	36			2490	
				7	40				
				9					
				25					
7	ZNE ZNE ZNE E	eP eS L M F	4	43	11			2390	
				47	7				
				48					
				53	14	18	+3		
			5	30					
9		e F	0	39					Very small.
				55					
9	Z ZE NE N NE Z	e e e e eL eL F	16	49	55				
				53	50				
			17	1	7				
				6	53				
				28					
				34					
			18	25					
10	NE N NE Z N	e e eL eL M F	3	34	41				
				46	11				
				50					
				57					
			4	4	55	19	-11		
				40					
10	ZE Z ZNE N Z N NE ZNE N E Z Z Z	e i i e e e e L M M M L ₂ M F	8	42	7				NE, e.
				44	9				
				44	48				
				51	55				
				55	0				
			9	2	7				
				16	21				
				21					
				23	20	40	+22		
				24	2	38	-51		
				34	14	22	+14		
			10	17					Via Antipodes.
				17	51	24	+12		
			11	20					
10	ZNE ZNE N	e eL M F	17	40					
				46					
				46	58	19	-5		
			18	10					
10	NE NE N	e L M F	19	5					No "Z" record.
				7					
				8	8	19	-5		
				25					
11	ZNE N	eL M F	10	18					
				18	59	20	+3		
				35					

SEISMOLOGICAL BULLETIN.

J U N E , 1936

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
June. 13	Z ZNE ZNE N	eP eS eL M F	0	38	4			2810	
				42	33				
				47					
				48	51	22	+4		
			1	5					
14	Z N ZNE	eP eS eL F	2	39	12			8900	
				49	17				
			3	2					
				45					
14	Z ZNE ZNE E Z N	eP eS L M M M F	17	7	40			3660	
				13	7				
				16					
				18	42	22	-9		
				21	9	14	-7		
				21	32	17	+11		
			18	0					
16	Z NE Z E	e eL eL M F	0	55	38				Possibly not seismic.
			1	46					
				49					
				57	30	22	+3		
			2	50					
18		e F	15	35					
				55					
19	Z ZNE	e eL F	16	46	19				
			17	15					
			18	0					
20	ZNE NE ZNE	eP eS eL F	6	37	19			2410	Compression.
				41	17				
				43					
			7	25					
20	ZNE NE ZNE	eP eS eL F	8	30	2			2670	
				34	20				
				36					
			9	5					
20	ZNE ZNE	i L F	14	6	0				
				10	30				
				30					
22	N N	L M F	7	15					
				15	53	27	-6		
				20					
22	ZE NE Z NE Z E	eP eS eS L L M F	19	36	26			5630	Compression.
				43	42				
				43	45				
				49					
				51					
				51	18	28	+6		
			20	40					



SEISMOLOGICAL BULLETIN.

J U N E , 19 00.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
June. 23		e F	19	1					Very small.
				10					
27	ZNE	eP	3	23	20			2160	Compression.
	ZNE	iS		26	57				
	ZNE	L		31					
	N	M		32	15	21	+5		
	E	M		33	8	15	+5		
	Z	M		33	43	13	+5		
		F	4	20					
27	Z	iP	21	25	44			8950	Compression. NE, e.
	NE	iS		35	52				
	ZNE	eL		55					
		F	22	40					
28	Z	eP	8	23	26			9930	
	NE	eS		34	21				
	NE	eL		48					
	Z	eL		56					
		F	10	15					
28		e F	18	15					Very small.
				40					
29	ZE	i	14	38	52				Compression.
	ZNE	i		40	11				
	ZE	i		42	1				
	NE	e		47	32				
	ZNE	eL		50					
	N	M	15	1	8	19	-8		Long waves poorly developed.
		F	16	20					
30	Z	iP	15	18	31			8450	Compression; NE, e.
	Z	i		19	38				
	Z	iPP		21	28				
	N	iPP		21	38				
	ZN	iPPP		23	26				
	NE	iS		28	14				South of Kamchatka. 51°N., 160°E. (U.S.C.G.S.)
	Z	iS		28	16				
	NE	iSS		33	2				
	NE	iSSS		36	36				
	E	L		38					
	ZN	L		42					
	E	M		52	21	23	+130		
	N	M		55	56	23	+125		
	Z	M	16	1	39	16	+92		
	ZNE	L ₂	17	29					Via Antipodes.
	Z	M		29	30	23	-22		
	N	M		29	38	24	+17		
		F	-	-	-				Overlapped by next shock.
30	ZNE	eP	19	34	34			5110	
	NE	eS		41	22				
	E	eSS		45	41				
	ZNE	eL		49					
	N	M		57	36	17	+31		
	E	M		57	45	18	+19		
		F	21	15					

12 AUG 1936

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

SEISMOLOGICAL BULLETIN FOR.....J U L Y.....19 36.

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 .	$\frac{4k}{\pi l}$
N.	5 Sept. 1934	24. ^{sec.} 7	24. ^{sec.} 5	+.01	46. ^{sec⁻¹} 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
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.	A	REMARKS.
July 2/3		e F	h. m. s. 23 50 0 5	sec.	"	km.	Very small.
3	Z Z NE Z N	e e eL L M F	3 20 52 21 27 59 4 7 15 28 5 30	22	+6	12000	Compression.
5	Z ZNE NE Z NE NE E NE Z E Z N	eP iPP iSKS iPS i eSS e L L M M M F	19 9 31 13 58 20 27 23 28 23 47 30 28 39 12 43 49 53 31 57 10 57 16 21 40	26 27 28	-29 -43 -36		Celebes. 2°N, 123°E. (U.S.C.G.S.)
6		e F	2 54 3 15				Very small.
10	ZNE NE ZNE	eP eS eL F	3 10 25 13 58 15 30			2110	
12	Z ZNE	e eL F	3 2 1 4 3 5 15				



SEISMOLOGICAL BULLETIN.

J U L Y , 19 3 6 .

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
July 13	ZE	iP	11	25	46			11000	Compression.
	ZNE	ePP		29	50				
	NE	e		36	23				Pacific Ocean off Northern
	NE	iSKS		36	29				Chile.
	Z	iSKKS		36	47				24°S, 71°W. (U.S.C.G.S.).
	Z	i		38	50				
	ZNE	iPS		38	57				
	E	iSS		44	35				
	N	i		47	31				
	NE	L		51					
	N	M		57	31	31	+210		
	Z	L		59					
	E	M	12	3	38	24	+150		
	Z	M		6	55	19	+150		
		F	16	0					
14		e	23	25					Very small.
		F		35					
15		e	2	40					
		F	3	5					
16	ZNE	eL	7	45					
	Z	M		48	47	15	-4		
		F	8	10					
21	Z	e	0	19	20				
	NE	e		33					
	NE	eL		40					
	Z	eL		45					
		F	1	5					
22	Z	e	6	38	32				
	ZNE	eL	7	40					
		F	8	35					
23	ZNE	e	6	40	6				
	ZNE	eL	7	41					
		F	9	0					
26	ZE	iP	7	50	27			10780	Compression.
	ZNE	ePP		54	38				
	NE	eS	8	1	59				Pacific Ocean of Northern
	ZE	iPS		2	16				Chile.
	ZNE	iPPS		3	57				24°S, 71°W. (U.S.C.G.S.)
	NE	eSS		8	40				
	E	eSSS		12	10				
	NE	e		17	37				
	NE	L		20					
	Z	eL		23					
	E	M		31	25	20	+19		
	N	M		31	33	19	-14		
	Z	M		31	39	19	-23		
		F	10	40					

SEISMOLOGICAL BULLETIN.

J U L Y , 1936.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
July 28	ZNE	ePKP	5	39	5	22	+6	15000	Via Antipodes.
	Z	ePP		41	36				
	NE	eSKKS		48	58				
	ZNE	eL	6	22					
	N	M		26	56				
	ZNE	eL ₂ F	7	13 45					
28	ZNE	ePKP	8	13	17			15000	Via Antipodes.
	Z	ePP		15	52				
	NE	eSKKS		23	10				
	ZNE	eL		55					
	ZNE	eL ₂ F	9 10	46 25					
	30	NE	e	14	22				
NE		eL	15	5					
Z		eL		15					
		F	16	20					
31	NE	eL	18	19		21	+5		
	Z	eL		23					
	N	M		23	7				
		F	19	5					
(sgd) A.W. Lee, Officer-in-Charge. 6th August, 1936.									

FORM 3718.



SEISMOLOGICAL BULLETIN FOR AUGUST, 1936.

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 .	$\frac{Ak}{\tau^2}$
N.	5 Sept. 1934	sec. 24.7	sec. 24.5	+0.01	sec. 46.7
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.
August			h. m. s.	sec.	μ	km.	
1	NE	e	6 51 12				
	NE	eL	7 1				
	Z	eL	5				
	N	M	5 40	17	-9		
		F	8 0				
1	NE	eL	8 43				
	Z	eL	47				
		F	9 30				
4	Z	e	14 30 54				
	NE	e	40 1				
	ZNE	eL	15 0				
	N	M	8 54	16	-7		
	Z	M	9 15	16	+8		
		F	50				
5		e	4 7				
		F	20				Very small.
8	ZNE	e	4 18 18				
	NE	e	22 50				
	ZNE	e	23 4				
	ZNE	eL	25				
	N	M	25 33	30	+15		
	E	M	30 16	14	+11		
	Z	M	30 21	13	+9		
		F	5 5				
9	NE	eL	16 55				
	Z	eL	17 00				
	N	M	5 47	18	+2		
		F	30				

SEISMOLOGICAL BULLETIN.

AUGUST, 1936.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
Aug. 10		e F	6	42	6				
12		e F	22	34	19				
13		e F	16	57					Very small.
13	ZNE	eP	20	16	50			11050	
	NE	ePP	20	56					
	Z	ePP	21	7					
	NE	eSKS	26	58					
	NE	eS	28	33					
	NE	ePS	30	24					Mindanao.
	ZE	ePPS	31	8					8°N., 127°E. (Manila).
	ZE	eSS	35	56					
	NE	L	53						
	Z	L	58						
	N	M	21	10	54	18	-24		
	E	M	10	55		17	-28		
	Z	M	10	59		17	+34		
		F	23	0					
14/15	NE	e	23	7					No "Z" record.
	NE	eL		25					
	N	M		42	2	17	-4		
		F	0	20					
17	NE	e	14	26					No "Z" record.
	NE	eL	15	5					
	N	M		25	52	19	+5		
		F	16	30					
18	NE	eL	7	46					No "Z" record.
	E	M		57	24	17	-5		
		F	8	20					
20	NE	eL	2	29					No "Z" record.
		F		50					
20/21		e	23	57					Very small.
		F	0	15					
21		e	13	3					Very small.
		F		15					
22	Z	iP	7	4	37			9950	Dilation. e. NE.
	ZNE	iPP		8	14				
	NE	eSKS		15	4				Formosa.
	NE	eSKKS		15	11				22°N., 121°E. (U.S.C.G.S.).
	N	iS		15	33				
	Z	iSP		16	32				
	N	iSS		21	48				
	E	iSS		22	28				
	NE	eSSS		26	44				
	NE	eL		30					
	Z	eL		39					
	E	M		48	50	19	+150		



SEISMOLOGICAL BULLETIN.

AUGUST, 1936.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	μ	km.	
Aug. 22 (Contd)	N	M	7	50	8	19	-180		
	Z	M		50	10	19	+185		
		F	10	30+					
22	NE	eL	11	53					
	Z	eL	12	0					
		F		25					
23/24	ZNE	iP	21	25	6			9650	Compression.
	ZE	i		25	28				
	ZE	ePP		28	54				
	ZE	e		32	18				
	ZE	eSKS		35	28				
	ZNE	iS		35	48				
	E	ePS		36	38				
	E	ePPS		37	5				
	Z	iPPS		37	15				
	NE	iSS		41	3				
	ZE	i		41	27				
	E	e		42	27				
	N	i		48	20				
	ZNE	eL		50					
	N	M	22	2	30	27	+80		
	Z	M		10	39	9	-14		
	E	M		12	52	19	-39		
	ZNE	eL ₂	23	30					Via antipodes.
		F		0	35				
24/25	Z	e	22	43	55				
	Z	e		47	2				
	ZNE	eL	23	39					
	N	M		55	36	18	+9		
	Z	M		55	38	18	+7		
25		F	1	5					
	ZNE	e	19	2	53				
	ZNE	eL	20	3					
26		F	21	15					
	Z	e	11	47	2				Very small.
	ZNE	eL	12	22					
26		F		55					
		e	21	54					
	ZNE	eL	22	7					
28		F		25					
	Z	e	6	58	6				
	Z	e	7	0	27				
	ZNE	e		1	29				
	ZNE	eL		50					
28		F	8	55					
	ZNE	e	22	20	18				Not very distant.
	N	e		21	17				
	E	e		21	22				
	ZN	e		21	32				
	Z	e		21	58				
	ZNE	L	22	2					
		F	28						



DATE.	C O I I P T.	P H A S E.	G. M. T.			P E R I O D.	A M P L I - T U D E.	Δ
			h.	m.	s.			
Aug.							μ	km.
29	2 NE	eL F	13	6				
				30				
29		e F	22	41				
			23	25				
30	2 NE	eL F	17	56				
			18	20				
30		e F	21	50				
			22	10				

Very small.

Very small.

Very small.

(sgd)

F.J.W. Whipple,

Superintendent.

5th September, 1936

SEISMOLOGICAL BULLETIN FOR.....SEPTEMBER.....1936..

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
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.
Sept.			h. m. s.	sec.	μ	km.	
2		e F	13 37 50				
3	ZNE	eL F	5 48 6 10				
3	ZNE	eL F	13 43 14 35				
3		e F	20 51 21 5				
4	Z Z EZ Z ZNE Z N	e e e e eL M M F	8' 23 21 27 27 33 44 34 51 56 9 12 31 13 2 11 10	15 18	+5 -8		
5	Z ZNE	e eL F	4 36 7 5 5 25				
5		e F	22 47 23 15				Very small.
6	ZNE N	eL M F	4 57 57 16 5 10	19	+3		

SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMO

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.	sec.	"	km.	
Sept. 6	Z ZNE E Z	e eL M M F	17	59	35				
			18	55					
			19	11	21	18	+4		
			11	33		18	-4		
			20	15					
7		e F	13	17					Very small.
			25						
8	ZNE	eL F	17	5					
			20						
12	NE Z E	eL eL M F	18	43					
			48						
			51	41		18	+5		
			19	20					
13		e F	4	10					Very small.
			15						
15		e F	14	10					Very small.
			15						
16	Z NE NE ZNE	e e e eL F	9	42	17				
			10	6	25				
			8	3					
			40						
			11	35					
17		e F	8	25					Very small.
			45						
18		e F	18	38					
			19	15					
18	Z NE E Z NE Z N	e e i i eL eL M F	18	52	2				
			19	2	8				
			2	34					
			3	48					
			22						
			25						
			41	50		16	+7		
			20	55					
19	Z ZNE E E NE N E NE Z Z N ZNE N E Z	iP e e eSKS iS i i iPS iSP iSPP eSS eL M M M F	1	14	57				
			19	8					
			24	54					
			25	28					
			25	54					
			26	5					
			26	40					
			27	7					
			27	11					
			27	49					
			32	4					
			38						
			53	46		27	-76		
			2	9	38	17	+54		
			17	13		20	-54		
			5	30					

9970 Compression.
NW of Sumatra (Strasbourg).

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.	
			h.	m.	s.					sec.
Sept. 19	NE ZNE N	e eL M F	6	53	12	25	-6	2890	Very small.	
			7	18						
			22	13						
			8	20						
19		e F	15	25	45					Dilatation. eN.
21	ZE ZE ZNE N	iP iS L M F	11	46	51	23	-8			Dilatation. eNE.
				51	26					
				53						
				55	38					
			12	30						
21	Z ZE ZNE N	iP iS L M F	12	32	33	18	+3			
				37	8					
				40						
				43	8					
			13	30						
21	ZNE	eL F	16	19						Overlapped by next shock.
			-	-	-					
21	Z ZNE	i eL F	16	49	1					Overlapped by next shock.
			17	38						
			-	-	-					
21	ZNE	eL F	18	20						
			19	0						
21	ZNE	eL F	20	38						
			21	0						
22	Z ZE ZNE	eP eS eL F	12	2	17				2890	
				6	52					
				9						
				25					Very small.	
23		e F	6	57						
			7	10						
25	E ZN E	eL eL M F	13	23		33	-11			
				28						
				28	55					
			14	50						
(sgd)										
F.J.W. Whipple,										
Superintendent.										
6th October, 1936.										

FORM 3718.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

File

SEISMOLOGICAL BULLETIN FOR.....OCTOBER.....1936.

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.	AMPLI-TUDE.	Δ	REMARKS.
			h. m. s.	sec.	μ	km.	
Oct. 3		e F	15 54 16 5				Not very distant.
3	Z NE E ZE NE NE NE N Z E Z N	i e e i e e e L M L M M M F	22 9 20 15 13 18 29 19 29 24 30 33 31 44 11 46 47 0 55 59 41 59 45 23 0 50 40	27 18 19 20	+13 -13 +15 +22		Compression. E.e.
4	ZNE	eL F	7 55 8 5				
5	Z ZN Z Z NE NE N E N E ZNE E Z N	i e i i e e e e e e i eL M M M F	0 13 30 18 37 23 45 26 15 37 48 38 46 42 19 44 19 46 12 53 1 1 9 18 45 18 50 25 58 2 25	24 24 19	+9 +5 -9		Compression.

SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMOS

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
Oct. 5	ZNE	eL F	7	3					
				30					
5	Z	iP	9	58	54			12000	Compression.
	Z	iPP	10	3	32				
	Z	i		3	56				
	NE	e		8	1				N.E. e.
	NE	eSKKS	10	30					
	ZNE	iPS	12	51					Molucca Islands.
	ZNE	iPPS	13	56					1°N., 127°E. (U.S.C.G.S.)
	NE	eSS	19	59					
	N	eSSS	23	51					
	ZNE	eL	26						
	E	M	47	16		26	-48		
	N	M	51	34		26	+55		
	Z	M	52	57		21	+48		
		F	12	40					
10		e	4	2					
		F		30					Very small.
11		e	3	5					
		F		40					
13	NE	eL	7	30					
	Z	eL		41					
		F		55					
14/15	ZNE	e	22	35	30				
	NE	eL	23	31					
	Z	eL		36					
		F	0	15					
15	ZNE	eL	22	3					
	E	M		9	55	23	+5		Confused by microseisms.
		F		40					
16	NE	eL	12	57					
	Z	eL	13	4					
	N	M		6	20	31	+9		
		F		30					
18+	ZNE	eP	3	12	44			1150	Destructive in Northern Italy.
	E	iP _Q		13	0				
	E	iP*(1)		13	9				
	N	iP*(1)		13	13				
	Z	iP*(2)		13	25				
	E	iPg		13	50				
	ZNE	iPs		14	20				
	ZNE	iS		14	39				
	ZE	iS _Q		15	5				
	ZN	iS*(1)		15	19				
	NE	iS*(2)		15	41				
	NE	i		15	51				
	NE	i		15	56				
	E	iSg		16	9				

+ The notation for the additional pulses in the records of a near shock is that of H. Jeffreys, London, Mon. Not. R. Astr. Soc. Geophys. Supp., 3, No. 3, 1933.

SEISMOLOGICAL BULLETIN.

OCTOBER, 1936.

DATE.	COMPT.	PHASE.	G.M.T.	PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h. m. s.	sec.	"	km.	
Oct. 18 (Contd.)	ZNE E Z	L M M F	3 16 26 16 44 16 50 30	8 7	+40 +47		
18		e F	17 2 30				
19	ZNE	eL F	6 51 7 5				
19		e F	7 11 15				Very small.
19	Z Z ZNE N Z E	i i eL M M M F	12 24 0 33 35 13 2 16 43 16 48 17 40 14 30	24 23 23	-14 +11 +15		Compression. Horizontal components disturbed by wind.
21	Z	eL F	14 40 15 5				No "N-S" record.
22	ZNE ZNE	e eL F	4 15 51 24 55				
22/23	Z ZNE ZNE N E Z ZN	iP eS L M M M i F	23 53 41 57 7 58 59 46 59 58 0 0 16 1 1 - - -	14 12 11	-7 -10 -5	2030	Dilatation. N. e.
23	Z ZNE ZNE N E Z ZN	iF eS L M M M i F	0 4 28 7 54 9 9 33 10 56 11 3 11 48 1 5	15 12 14	-12 -15 -9	2030	Overlapped by next shock. Dilatation. N. e.
23	Z Z Z E N ZNE Z NE N NE Z	iP i iPP iS iS iPS i i(SKS) e eL eL	6 35 6 35 18 37 33 43 48 43 52 44 5 44 29 45 11 51 41 55 57			7250	Compression. N, E. e. N, E. e. Alaska. 62°N., 149°W. (U.S.C.G.S.)



SEISMOLOGICAL BULLETIN.

OCTOBER , 1936.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ km.	REMARKS.
			h.	m.	s.				
Oct. 23 (Contd.)	E N Z ZNE	M M M eL ₂ F	7	4	14	18	" -47 +89 -96		Via antipodes.
			9	1	29	18			
			10	30					
23	ZNE	eL F	17	0					) Confused by wind and) microseisms.)
				15					
23	ZNE	eL F	20	55					
			21	30					
24	ZNE	eL F	14	18					) Dilatation. Azimuth about) North.)
				30					
26	ZNE	eL F	20	31					
				55					
26	ZN ZN N E ZNE E Z N	iP iPP e eS L M M M F	23	10	18			2290	Dilatation. Azimuth about North.
				10	36				
				13	56				
				14	6				
				15					Dilatation. N, E. e.
				17	25	15	+28		
				20	46	13	+24		
				21	14	13	+28		
				55					Dilatation. N, E. e.
29	NE N ZE E	e eL eL M F	6	15	12				
				27					
				31					
				33	13	22	+5		
			7	5					Dilatation. N, E. e.
30	Z NE ZE NE E N NE Z E N Z	i e e e e e eL eL M M M F	18	57	30				
			19	5	26				
				8	17				
				13	19				
				17	6				Very small.
				18	47				
				27					
				31					
				36	0	33	+22		(sgd) F.J.W. Whipple, Superintendent, 6th November, 1936.
				41	50	25	-25		
				51	4	16	+9		
				21	20				
31	Z	e F	16	29					Very small.
				40					

SEISMOLOGICAL BULLETIN FOR NOVEMBER, 1936.

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.}	+ .01	46.7 ^{sec⁻¹}
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

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.	
Novr. 1	NE Z	eL eL F	17	1	5				
					35				
2	ZN ZN N ZN ZNE N E E ZN N E Z	iP i ePP e iS ePS eSS eL eL M M M F	15	9	54 59 56 52 11 46 6 31 36 49 14 19			9130	Compression. E, e.
						20 19 18	-45 +38 -41		
			18	0					
2/3	ZNE Z Z ZN NE ZNE NE E ZN E Z NE Z E N Z	iP i i iPP iS i i iSS i e eL eL M M M F	20	58	30 52 27 45 53 11 9 39 26 41 31 21 24 35 30 59 55			9250	Compression. Amplitudes of iP as read in mm :- Z. N. E. +6.5 -1.9 -1.0 Azimuth about 30° E. of N. Felt in Northern Japan. 38°N., 142°E., (U.S.C.G.S.)
						37 31 22	+280 +160 -101		
			0	55					

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
Novr. 3		e F	5	18					
			6	0					
11	ZNE	eL F	17	41					
				55					
13	ZN ZN Z N NE ZN NE N NE E Z N E Z	iP i iPP iPP iS i eSS i eL M eL M M M F	12	42	54			8130	Compression. Amplitudes of iP as read in mm :- Z. N. E. +1.8 -0.9 (0.0) Bering Sea. 56°N., 165°E..(Strasbourg).
				44	24				
				45	38				
				45	48				
				52	20				
				52	30				
				56	54				
				57	23				
			13	0					
				4	4	33	+185		
				5					
				15	20	20	-100		
				15	20	20	+100		
				24	18	14	+78		
			16	20					
17		e F	5	39					Very small.
				45					
18	ZNE ZNE E	e eL M F	16	0	8				Confused by wind and microseisms.
				7					
				7	39	18	+7		
				25					
19	ZE ZE E E NE NE N ZE E Z N	iP iPP iS i SS eSSS L L M M M F	21	22	26			8710	Compression. Amplitudes of iP as read in mm :- Z. N. E. +1.8 (0.0) -0.9 Azimuth about west. Central America. 14°N., 91°W., (U.S.C.G.S.).
				25	19				
				32	22				
				34	18				
				37	39				
				41	17				
				44					
				48					
				57	31	21	+40		
				57	35	21	+39		
				57	46	20	+21		
			23	55					
21		e F	22	30					Very small.
				55					
22	ZE N E N ZNE E N Z	iP ePS e e eL M M M F	18	31	24			8700	Compression. Central America. 14°N., 90°W., (U.S.C.G.S.)
				42	11				
				43	17				
				50	20				
				51					
			19	4	55	20	-10		
				6	32	22	-10		
				7	47	18	-12		
				45					



DATE.	COM. T.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ km.
			h.	m.	s.			
Novr. 26	NE ZNE N	e	2	33	57	23	+6	
		eL		45				
		M		47	39			
		F	3	30				
28	ZNE	eL	12	2				
		F		15				
29/30	NE Z	eL	23	36				
		eL		44				
		F	0	5				

(sgd)

F.J. Scrase.

for Superintendent.
5th December, 1936.

SEISMOLOGICAL BULLETIN FOR.....DECEMBER 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 .	$\frac{Ak}{\pi I}$
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

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.	
Dec. 1	NE Z	eL eL F	0 45 55 1 20				Confused by microseisms.
8/9	-	-	- - -				No records 8d 9h 30m to 9d 10h 30m.
13	ZNE	eL F	22 25 23 0				Confused by wind and microseisms.
20	ZNE E	eL M F	3 23 36 11 55	17	+7		Confused by wind and microseisms.
21	N ZNE N	e eL M F	19 31 38 35 44 35 20 25	16	+9		Large microseisms. Pacific Ocean off North America. 53°N., 133°W. (U.S.C.G.S.).
25	ZNE E Z	eL M M F	20 45 54 9 54 21 21 10	17 17	+5 +5		
26/27	Z Z Z Z N NE NE E ZN E	i i i i e e e e e e	23 12 27 16 46 22 44 30 22 31 47 37 3 37 49 43 21 44 55 51 47				Dilatation. N.E.e. Possibly more than one shock.



SEISMOLOGICAL BULLETIN.

DECEMBER 1, 1937.

DATE.	COMPT.	PHASE.	G.M.T.			PERIOD.	AMPLI- TUDE.	Δ	REMARKS.
			h.	m.	s.				
Dec. 26/27 Contd.	ZNE	eL	0	2					
	N	M		25	39	22	+12		
	Z	M		28	52	20	+8		
	E	M	1	5	37	25	-16		
		F		55					
28	ZNE	eL	0	38					
		F		55					
29	ZNE	e	15	6	51				
	Z	e		9	0				
	ZNE	e		10	10				
	Z	i		11	3				
	Z	i		24	16				
	N	e		26	21				
	Z	i		37	31				
	ZNE	eL		40					
	N	M		52	46	29	-27		
	E	M		53	24	26	-26		
	Z	M	16	11	53	20	-14		
		F	17	45					

(sgd)

F.J.W. Whipple.
Superintendent,
5th January, 1937.