AIR MINISTRY, METEOROLOGICAL OFFI

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR JANUARY, 1937.

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. h. m. s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1937. Jan.							
2		e	14 18				
		F	25				
2		e	23 22				
		F	30				
5	E	e	22 1 42				
	NE	eL	20				
	Z	eL	27				
	N	M	30 22	20	-12		
	E	M	38 3	23	-18		
	Z	M	38 5	11	+11		
		F	23 5				
7	NE	eL	6 53				
	Z	eL	7 0				
	N	M	3 32	22	-13		
		F	20				
7	Z	iP	13 31 37			7490	NE, e. Compression.
	Z	i	31 40				
	ZNE	iPP	34 10				Confused by microseisms.
	ZE	iPPP	35 57				Eastern Tibet.
	Z	i	40 3				35°N., 97°E. (U.S.C.G.S.)
	N	iS	40 31				
	E	i	40 37				
	ZE	i	40 40				
	N	iSS	44 43				
	E	i	44 51				
	Z	i	46 17				
	ZNE	iSSS	48 5				
	ZNE	L	50				

FORM 3717.

H.832.W.8071.100.2/37.G.p.923

KEW OBSERVATORY, RICHMOND, SUR

SEISMOLOGICAL BULLETIN.

JANUARY , 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
Jan.									
7	N	M	14	3	9	19	>260*		*Maxima passing beyond
(Contd)	Z	M		3	34	18	-350		limits of registration.
	E	M		6	33	20	>200*		
	ZNE	eL2	15	49					Via antipodes.
	N	M		59	7	20	+8		
	Z	M		59	20	20	+15		
	E	M		59	27	20	+16		
		F	17	15					
8	ZNE	eL	16	8					
		F		30					
11	-	-	14	12	to)				No records.
			14	31	)				
19		e	23	2					Confused by microseisms.
		F		15					
23		e	11	33					Confused by microseisms.
	NE	L		50					
	Z	L		59					
	E	M	12	0	30	31	-36		
	N	M		4	56	28	-54		
		F	13	25					
25	Z	i	6	56	12				Confused by microseisms.
	Z	i		56	27				
	NE	e	7	6	29				
	NE	e		8	26				
	N	e		14	4				
	E	i		14	26				
	NE	i		19	25				
	ZNE	L		39					
	N	M		49	56	25	+61		
	E	M		58	36	20	+29		
		F	9	35					

(sgd)

F.J.W. Whipple.

Superintendent,
5th February, 1937.

FORM 3718.

AIR MINISTRY, METEOROLOGICAL OFFIC

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

File

SEISMOLOGICAL BULLETIN FOR FEBRUARY, 1937.

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.	$\frac{Ak}{\pi l}$
		sec.	sec.		sec^{-1}
N.	5 Sept. 1934	24.7	24.5	+.01	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.
1937			h. m. s.	sec.	μ	km.	
Feb.							
1	NE	eL	10 14				
	Z	eL	21				
		F	55				
1		e	21 47				Possibly not seismic.
		F	22 22				
7	NE	e	5 3 13				
	ZNE	eL	19				
		F	50				
10	ZNE	eL	8 22				
	N	M	24 56	14	+9		
	E	M	25 44	13	+11		
		F	45				
12		e	6 5				Very small.
		F	30				
18	-	-	9 31 to				No records.
			16 58				
21	Z	iP	7 14 53			8850	Dilatation. NE, e.
	ZNE	i	15 1				
	ZNE	i	15 18				Kurile Islands.
	Z	i	16 51				45°N., 148°E. (U.S.C.G.S.)
	ZNE	iPPP	21 23				
	N	iS	24 56				
	ZE	i	25 8				
	NE	i	25 12				
	ZNE	i	26 4				
	ZNE	i	27 8				
	N	i	30 50				
	ZE	i	31 16				

FORM 3717.

H844W807/1003-37 Gp923.

KEW OBSERVATORY, RICHMOND, SUI

SEISMOLOGICAL BULLETIN.

FEBRUARY , 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
Feb.	NE	eL	7	36					
21	Z	i		36	43				
(Cond)	Z	eL		40					
	Z	M		55	52	20	+120		
	N	M	8	2	39	15	+125		
	E	M		12	39	20	+125		
		F	12	0					
21	NE	e	22	51	24				
	NE	eL	23	13					
	Z	eL		17					
		F		45					
22	E	e	3	16	27				No "Z" record.
	NE	eL		37					
		F	4	15					
22	NE	eL	5	19					No "Z" record.
		F		50					
22	Z	e	13	36	12				
	NE	e		40	22				
	NE	eL	14	4					
	E	M		8	33	27	+6		
	Z	eL		10					
		F		50					
23	Z	iP	1	0	30			9050	Compression. NE, e.
	N	iSKS		10	33				
	E	iS		10	43				
	N	eSS		16	27				
	NE	eL		30					
	E	M		33	31	24	-14		
	Z	eL		34					
	N	M		38	21	18	+12		
	Z	M		44	13	16	+8		
		F	2	55					
27	ZNE	eL	2	7					
		F		20					

(sgd)

F.J.W. Whipple.

Superintendent,
6th March, 1937.

FORM 3718.

M.O. 414.

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR MARCH, 1937.

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.	AMPLITUDE.	Δ	REMARKS.
			h. m. s.	sec.	μ	km.	
1937.							
Mar.	E	iP	15 52 24			9030	Wood-Anderson record.
9	E	eP	52 25				Galitzin record.
	Z	iP	52 26				Compression.
	ZE	i	52 33				
	NE	eS	16 2 36				
	E	eSS	7 56				large movement.
	ZNE	eL	14				Pacific Ocean off Central
	E	M	20 4	24	+15		America.
	Z	M	23 3	19	+12		9°N., 84°W. (U.S.C.G.S.).
		F	17 25				
10		e	5 30				Very small.
		F	45				
14	E	i	12 19 56				
	ZE	i	22 12				
	NE	eL	35				
	Z	eL	41				
	E	M	48 0	25	-14		
	Z	M	48 16	26	-16		
		F	13 35				
16	ZNE	eL	16 42				
		F	17 0				
17		e	14 46				Very small.
		F	15 0				
19	ZNE	eL	19 3				
		F	40				
21		e	16 47				
		F	17 15				

H859W8039.1004-37.G.923.

M.O. 414.

KEW OBSERVATORY, RICHMOND, SUR

SEISMOLOGICAL BULLETIN.

MARCH, 1937.

DATE.	COMPT.	PHASE.	G.M.T.	PERIOD.	AMPLITUDE.	Δ	REMARKS.
			h. m. s.	sec.	μ	km.	
March							
21	ZNE	eL	20 12				
		F	40				
23	ZNE	e	1 14 54				
	E	e	21 49				
	NE	e	26 19				
	ZNE	eL	42				
	E	M	45 46	28	+5		
	Z	M	48 36	20	+5		
	N	M	49 6	21	+3		
		F	2 25				
24			9 23 to 11 23				No records.
24	Z	eL	14 44				Very small.
		F	55				
25	ZNE	eL	17 30				
	N	M	33 35	17	+4		
		F	55				
28	ZNE	eL	19 1				
		F	15				
29	ZNE	eL	6 56				
		F	7 20				
29	ZNE	e	8 13 0				
	ZNE	e	13 51				
	ZE	e	15 23				Surface waves very small.
		F	55				

(sgd)

F.J.W. Whipple.

Superintendent,
5th April, 1937.

FORM 3718.

M.O. 414.

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR APRIL, 1937.

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.

NOTE.

The "constants" marked * were valid up to April 12, when the horizontal seismographs were transferred to the new underground house.

DATE.	COMPT.	PHASE.	G.M.T. h. m. s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1937.							
April	ZNE	eL	18 36				
1.		F	19 0				
3.		e	4 54				
		F	6 5				
3.		e	12 7				
		F	25				
3.		e	22 0				
		F	20				
5.	Z	iPP	7 16 26			13000	Dilatation. NE, e.
	Z	iSP	26 5				
	NE	iPS	26 8				
	Z	iPPS	27 13				
	N	iSS	32 35				
	NE	iPPP	33 26				By path 180°
	NE	eSSS	38				
	NE	eL	43				
	Z	eL	49				
	E	M	55 32	28	+48		
	N	M	56 25	30	-61		
	Z	M	8 11 55	16	+18		
		F	9 55				
7.		e	18 47				
		F	19 15				
9.		e	14 55				Very small.
		F	15 10				
11.		e	6 25				
		F	55				

FORM 3717.

M.O. 414.

KEW OBSERVATORY, RICHMOND, SURREY

SEISMOLOGICAL BULLETIN.

APRIL, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
April 11.		e	16	48					
		F	17	0					
12.	-	-	8	37	to				No records.
			14	18					
16.	ZNE	ePKP	3	20	42			(16000)	Oceania.
	Z	i		20	52				12°S., 177°W. (Strasbourg).
	N	i		20	58				Deep focus.
	ZN	$iPKP_2$		21	6				By path of greater deviation.
	Z	i		22	34				
	ZNE	iPP		24	32				Large movement.
	Z	i		25	54				
	Z	iSKS		28	6				
	Z	i		33	8				
	Z	i		34	30				
	N	i		34	43				
	Z	i		35	55				
	NE	iSS		43	6				Large movement.
	N	i		43	43				
	NE	i		45	13				
	E	i		45	54				
	N	i		47	2				
	NE	i		48	38				
	ZNE	eL		51					Poorly developed.
	E	M	4	1	47	22	(+120)		
	N	M		14	41	26	+65		
	Z	M		40	17	19	-17		
		F	7	15					
28.		e	2	48					
		F	3	0					
29.		e	1	16					
		F		55					
29.	ZNE	iP	18	16	13			2370	Atlantic Ocean near 55°N.,
	Z	i		16	17				30°W. (Strasbourg).
	NE	iS		20	8				
	ZNE	L		21					
	E	M		22	41	17	(-30)		
	Z	M		22	55	16	+18		
		F	-	-	-				Overlapped by next shock.
29.	ZNE	iP	19	4	6			8150	
	NE	iS		13	33				
	NE	iSS		18	24				
	NE	L		22					
	Z	L		29					
	E	M		30	23	30	(-53)		
	Z	M		34	31	24	-35		
		F	-	-	-				Overlapped by next shock.
29.	NE	i	20	39	18				
	ZNE	eL	21	16					
		F	22	30					

(sgd)
F.J.W. Whipple.
Superintendent,
5th May, 1937.

FORM 3718.

M.O. 414

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON. 17 JUN 1937 File

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR MAY, 1937.

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.	$\frac{Ak}{\pi l}$
		sec.	sec.		sec^{-1}
N.	5 Sept. 1934	24.7	24.5*	+.01*	46.7*
E.	6 Sept. 1934	24.8	24.8*	-.01*	42.6*
Z.	11 Sept. 1934	13.0	13.1	+.01	109.

NOTE.

The "constants" marked * were valid up to April 12, when the horizontal seismographs were transferred to the new underground house.

DATE.	COMPT.	PHASE.	G.M.T.	PERIOD.	AMPLITUDE.	Δ	REMARKS.
1937			h. m. s.	sec.	μ	km.	
May 1	ZNE	eL	13 21				
		F	45				
1	ZNE	eL	16 13				Very small.
		F	30				
1/2	ZNE	eL	23 55				
		F	0 35				
4	E	e	5 28 47				
	NE	eL	36				
	Z	eL	41				
	E	M	42 34	30	(-8)		
	Z	M	51 5	17	+4		
		F	6 50				
7	Z	e	14 22 26				Compression.
	ZNE	eL	51				
		F	15 20				
7		e	18 53				Very small
		F	19 20				
7	ZNE	eL	22 47				
		F	23 5				
9	ZN	i	14 58 58				Compression.
	NE	e	15 9 1				
	E	i	9 10				Z, e.
	NE	eL	28				
	Z	eL	31				
	E	M	3 47	23	(+12)		
	Z	M	39 41	19	-6		
		F	17 45				

FORM 3717.

M.O. 414

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

May, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
May									
12	Z	i	3	5	34				Compression. NE, e. Onset doubtful.
	E	e		15	8				
	NE	eL		36					
	Z	eL		44					
		F	4	25					
12		e	13	55					Very small.
		F	14	45					
13		e	10	0					Very small.
		F		20					
16	Z	e	11	59	14				
	ZNE	eL	13	0					
		F	14	15					
21	NE	e	2	21	23				
	NE	eL		42					
	Z	eL		50					
		F	3	10					
23	NE	eL	8	35					
	Z	eL		40					
		F	9	20					
23	Z	eP	11	2	38			2670	
	ZNE	iS		6	56				
	ZNE	L		10					
		F		40					
24	E	e	1	4					
	NE	eL		8					
	Z	eL		16					
		F		55					
27	NE	eL	5	16					
	Z	eL		26					
		F	6	0					
28	Z	i	15	47	42				Compression. No "N-S" or "E-W" records. Surface waves very small.
	Z	e		48	20				
		F	16	40					
29	NE	i	20	18	30				
	NE	i		19	18				
	NE	eL		44					
	Z	eL		52					
		F	21	30					
29	ZNE	eL	15	32					
		F		50					
31		e	6	13					Very small.
		F		20					
31	ZNE	e	16	4	10				
	NE	eL		29					
	Z	eL		34					
		F	17	35					

(sgd).
F.J.W. Whipple.
Superintendent,
5th June, 1937.

FORM 3713.

31,80,39,4520,125 6/37

M.O.

AIR MINISTRY, METEOROLOGICAL OFFICE, LONDON

File

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR JUNE, 1937.

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.	$\frac{Ak}{\pi l}$
		sec.	sec.		sec-1
N.	3rd June 1937	24.7	8.0	0.0	-
E.	18th Apl. 1937	24.8	8.0	0.0	-
Z.	11th Sep. 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.
1937			h. m. s.	sec.	μ	km.	
June 1.	ZNE	eL	15 49				Very small.
		F	16 15				
2.	ZNE	iP	1 26 34			2360	
	ZE	eS	30 28				
	ZNE	L	31				
		F	2 10				
7.		e	16 45				
		F	17 10				
7.		e	22 6				Not very distant.
		F	10				
8.	ZE	iP	22 41 27			8430	Compression.
	ZE	i	42 12				
	E	i	42 30				
	NE	iS	51 9				
	E	i	52 25				
	ZNE	eL	23 2				Poorly developed.
		F	55				
13/14.	ZNE	ePP	23 36 20			(13000)	
	Z	ePPP	39 33				
	ZNE	eSP	46 42				
	NE	eL	0 7				
	Z	eL	10				
		F	45				
14.	Z	e	13 30 9				
	ZNE	eL	14 24				
		F	15 50				

FORM 3717.

50,6039 4520,125,6p. 946, M & S. 7/37.

M.O. 414.

KEW OBSERVATORY, RICHMOND, SURRE

SEISMOLOGICAL BULLETIN.

JUNE, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
June 19.	Z	e	17	26	8				
	NE	e		49	2				Surface waves very small.
		F	18	15					
21.	ZNE	iP	15	26	2			9800	Compression.
	ZNE	i		26	14				Amplitudes of iP as read in mm :- Z N E
	ZNE	eSKS		36	28				+3.8 +0.3 +1.0
	ZNE	iS		36	51				Azimuth about WSW.
	Z	iSP		38	0				Northern Peru.
	E	iSS		43	7				Possibly SPSP.
	Z	i		43	27				
	N	L		51					7°S., 79°W. (Strasbourg).
	ZE	L		56					
	E	M		58	47	29	+		
	N	M		59	20	27	+		
	Z	M	16	5	57	18	-83		
		F	20	30					
22.		e	6	2					Very small.
		F		45					
24.	ZE	iP	13	23	47				Compression.
	ZE	i		25	38				
	Z	i		25	50				
	NE	i		35	39				Pacific Ocean off Costa Rica.
	N	L		47					8°N.,84°W. (U.S.C.G.S.)
	ZE	L		52					
	Z	M	14	1	4	17	-4		
		F		55					
24.	ZE	iP	20	6	8			3160	Compression to ENE.
	ZNE	iS		11	2				
	E	i		12	52				North Atlantic.
	NE	i		13	22				36°N.,36°W. (U.S.C.G.S.)
	N	i		15	37				
	ZNE	L		15					
	Z	M		16	11	16	-7		
		F	21	30					
26.		e	19	33					Possibly not seismic.
		F		50					
28.	ZNE	eL	20	39					
		F		50					
30.		e	14	55					
		F	15	30					

(sgd).

F.J.W. Whipple.

Superintendent,
6th July, 1937.

FORM 3718.

M.O. 414.

AIR MINISTRY, METEOROLOGICAL OFFICE. LONDON.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR JULY, 1937.

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.	$\frac{Ak}{\pi l}$
		sec.	sec.		sec^{-1}
N.	3rd June 1937	24.7	8.0	0.0	-
E.	18th Apl. 1937	24.8	8.0	0.0	-
Z.	11th Sep. 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.
1937			h. m. s.	sec.	μ	km.	
July							
1		e	6 42				
		F	7 10				
1	ZE	iP	9 59 34			2330	Dilatation.
	N	iS	10 3 25				
	ZNE	L	4				
		F	40				
1	ZE	iP	12 2 52			9970	Compression.
	Z	iPP	6 34				
	E	iSKS	13 25				
	NE	iS	13 49				
	ZN	eSP	14 40				
	NE	eL	33				
	Z	eL	44				
	Z	M	53 27	17	+5		
	ZNE	eL_2	14 9				Via antipodes.
		F	40				
2	ZN	i	2 56 38				Dilatation.
	Z	i	59 40				
	N	i	3 0 19				
	Z	i	11 44				
	NE	e	18 20				
	NE	eL	37				
	Z	eL	45				
	E	M	59 36	23	+		
	N	M	4 3 25	19	-		
	Z	M	9 2	19	+10		
		F	5 35				

FORM 3717.
86,8039,4-520,125,6p.946,M&S. 8/37.

M.O. 414.

KEW OBSERVATORY, RICHMOND, SUR

SEISMOLOGICAL BULLETIN.

JULY, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
July.									
4	Z	i	6	15	4				Dilatation.
	Z	i		17	47				
	N	i		18	17				
	ZN	i		18	33				
	N	eL		40					
	ZE	eL		45					Oceania.
	Z	i	7	1	32				13°S.,163°E. (U.S.C.G.S.)
	N	M		19	26	20	-		
	Z	M		19	50	18	+9		
		F	10	40					
6		e	7	3					Not very distant.
		F		15					
9	NE	i	1	43	45				Very small. Felt around Birmingham.
	NE	i		44	7				
		F		45					
10	Z	e	21	2	22				
	N	eL		35					
	ZE	eL		43					
		F	22	30					
11	Z	eP	13	52	31			9830	
	Z	ePP		56	2				
	N	eSKS	14	2	55				
	ZE	eS		3	21				
	NE	ePS		4	32				
	ZNE	eL		26					
		F	15	40					
11	Z	e	17	32	4				
	NE	i		42	35				
	N	eL		48					
	ZE	eL		56					
		F	18	45					
12	Z	e	0	26(11)					
	N	e		35	11				
	N	eL		49					
	ZE	eL		56					
		F	1	25					
12	N	e	12	23	6				
	ZNE	e		23	19				
	ZNE	L		26					
		F		40					
14	Z	i	22	41	13				Compression.
	E	e		52	1				
	ZNE	eL	23	15					
		F		45					
16	N	eL	11	9					
	ZE	eL		13					
		F		45					

FORM 3718.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
July. 17		e	17	19					Very small.
		F		30					
19	NE	e	3	33					
	N	eL		50					
	ZE	eL		56					
	Z	M	4	7	35	15	+2		
		F		55					
19	Z	eL	10	52					No records of horizontal components.
	Z	M	11	2	13	20	+5		
		F		45					
19	ZNE	iP	19	47	32			9300	Compression.
	ZNE	ipP		48	14				
	NE	iS		57	34				Azimuth about west-south-west.
	Z	i		57	39				
	ZE	ipS		58	26				Ecuador.
	ZE	isS		59	6				0°.,77°W. (U.S.C.G.S.)
	E	i	2	0	27				
	E	i		2	28				Depth of focus about 200 Km.
	E	iSS		3	0				
	NE	isSS		4	14				
	N	i		5	52				
	E	i		7	20				
	E	i		8	1				
	ZNE	eL		10					
	Z	M		17	23	18	+11		Surface waves small.
		F	21	45					
20	NE	i	7	7	33				
	ZNE	i		7	50				
	E	e		8	19				
	Z	i		8	34				
	N	i		9	4				
	N	i		9	21				
	N	i		9	34				
	ZNE	L		10					
		F		20					
22	NE	e	13	21					
	ZNE	eL		36					
		F	14	0					
22	ZNE	iP	17	19	47			6830	Dilatation. Amplitudes of iP as read in mm :- Z -2.3 N +1.1 E -0.2 Azimuth about north by west.
	ZNE	i		20	13				
	ZNE	iPP		22	1				
	ZNE	iPPP		23	33				
	N	e		26	16				
	ZNE	i		26	56				
	ZNE	iS		28	7				
	ZE	iSP		28	17				Felt in Fairbanks, Alaska. 65°N., 149°W. (U.S.C.G.S.).
	E	i		28	52				
	N	i		29	12				
	N	iSS		31	56				
	Z	i		32	27				
	N	i		33	4				
	E	i		35	12				
	E	i		35	32				

M.O. 414.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JULY, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
July.									
22	ZNE	i	17	36	32				
(Contd).	ZNE	L		38					
	E	M		39	52	32	-		
	N	M		44	28	22	+		
	Z	M		47	5	18	+140		
		F	21	50					
25	Z	e	13	23	49				
	Z	e		26	13				
	ZNE	eL		46					
		F	14	40					
26	ZNE	iP	3	59	10			8800	Compression.
	ZNE	ipP		59	34				Amplitudes of iP as read in mm :-
	NE	iS	4	9	2				Z N E
	Z	iS		9	4				+4.2 (-0.3) +1.9
	E	i		9	16				Azimuth about west by north.
	Z	i		9	53				Destructive in Maltrata,
	E	isS		10	1				Mexico.
	N	eL		20					20°N.,96°W. (U.S.C.G.S.)
	ZE	L		24					Depth of focus about 100 Km.
	Z	M		33	53	18	+21		
	E	M		34	0	18	-		
		F	6	55					
26		e	9	25					
		F	10	10					
26	Z	iP	20	9	3			9350	Compression. NE, e.
	ZNE	i		9	10				Amplitudes in mm of movements
	ZNE	i		9	28				at 20h 9m 10s.
	ZNE	iPP		12	22				Z N E
	ZNE	iPPP		14	16				-6.2 +1.1 +0.7
	N	iSKS		19	25				Azimuth about north-east by
	NE	iS		19	31				Small. north.
	ZNE	i		19	50				North Pacific Ocean.
	Z	eSP		20	11				
	N	eSS		28	35				
	NE	L		36					
	Z	L		39					
	E	M		42	12	28	+		
	Z	M		48	17	23	+58		
	N	M		48	24	22	+		
		F	22	35					
30		e	14	23					
		F	16	35					
31		e	11	40					Very small.
		F	12	10					

FORM 3718.

M.O. 414.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

JULY, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
July. 31	ZNE	e	20	47	39				
	Z	e		57	13				
	NE	i		57	26				
	NE	e	21	5	55				
	Z	e		13	28				
	NE	L		14					
	Z	L		19					
	N	M		19	2	17	+		
	E	M		19	51	15	+		
	Z	M		24	44	13	+41		
		F	23	20					

(sgd).

F.J.W. Whipple.

7th August, 1937.

FORM 3718.

M.O. 414.

AIR MINISTRY, METEOROLOGICAL OFFICE

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR AUGUST, 1937.

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.	$\frac{Ak}{\pi l}$
		sec.	sec.		sec^{-1}
N.	3rd June 1937	24.7	8.0	0.0	-
E.	18th Apl. 1937	24.8	8.0	0.0	-
Z.	11th Sep. 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. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1937									
Aug. 1	ZNE	eP	10	52	57			8500	
	Z	e	11	2	(33)				
	ZNE	iS		2	42				Repetition from Chinese earthquake of July 31d 20h.
	E	e		11	33				
	Z	e		18	44				
	NE	L		19					
	Z	L		24					
	N	M		24	18	17	+		
	E	M		28	1	15	-		
	Z	M		29	56	13	+23		
		F	13	5					
2	ZNE	eL	10	31					
		F	11	5					
2	ZN	iP	15	57	40			8550	Compression.
	NE	eS	16	7	28				
	ZNE	eL		23					
	Z	M		37	7	20	+4		
		F	17	20					
4/5	ZNE	i	23	48	11				Compression.
	Z	e		51	46				
	NE	i		58	30				
	NE	i		58	51				
	N	i		58	59				
	ZNE	eL	0	30					
		F	1	25					

FORM 3717.

109, 8039, 4520, 125, Gp. 946, M & S, 9/37.

M.O. 414.

KEW OBSERVATORY, RICHMOND, SURREY.

SEISMOLOGICAL BULLETIN. AUGUST, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
Aug.									
5	ZNE	e	15	2	50				
	Z	i		5	3				
	ZNE	i		5	26				
	Z	i		7	2				
	Z	e		8	10				
	Z	e		13	43				
	Z	i		15	59				
	N	e		23	7				
	N	e		27	36				
	ZNE	eL		30					
	Z	M		52	59	25	+7		
		F	17	20					
9		e	13	30					Very small.
		F	14	10					
9		e	14	53					
		F.	16	15					
11	Z	i	1	9	32				Dilatation. NE, e.
	ZE	e		11	42				
	ZNE	i		14	20				
	ZE	i		16	18				
	NE	i		19	12				
	NE	i		20	20				
	ZNE	i		22	48				large movement.
	ZNE	i		24	0				
	Z	i		26	38				
	NE	i		26	51				
	Z	i		27	48				
	ZNE	i		28	52				
	ZNE	eL		33					
	Z	M	2	6	45	18	-13		
		F	4	15					
12		e	1	10					Very small.
		F		35					
13		e	12	8					Very small.
		F	13	50					
15	NE	e	5	16					
	ZNE	eL		21					
	Z	M		26	20	17	+5		
		F		45					
15		e	12	18					Very small.
		F		40					

FORM 3718.

SEISMOLOGICAL BULLETIN.

AUGUST, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
Aug. 16*	Z	e	11	55					
		F	12	35					
17*	Z	eL	14	1					
		F		40					
18*	Z	e	15	16	0				
	Z	eL		33					
		F	16	10					
20	ZN	i	6	51	43				Compression.
	ZN	i		55	45				
	N	e	7	4	39				
	N	e		9	24				
	Z	e		10	5				
	ZNE	eL		27					Surface waves small and irregular.
		F	8	20					
20*	Z	eP	12	12	51				
	Z	i		13	23				
	Z	i		14	52				
	Z	i		17	54				Destructive in Manila.
	Z	i		23	5				
	Z	i		25	46				
	Z	i		27	12				17°N., 122°E. (U.S.C.G.S.).
	Z	i		34	28				
	Z	i		36	59				
	Z	i		38	13				
	Z	e		38	49				
	Z	i		44	42				
	Z	L		47					
	Z	M	13	0	7	19	>300		Maximum exceeded limits of registration.
		F	16	55					
21		e	7	13					Very small.
		F	8	10					
21		e	11	20					Very small.
		F	12	15					
21/22	NE	e	23	26	4				No "Z" record.
	NE	eL		43					
		F	0	20					
22	Z	eP	11	40	59			5930	
	NE	eS		48	31				
	Z	eSP		48	35				
	ZNE	eL		54					
		F	12	45					
23	Z	e	16	57	7				
	ZNE	eL	17	55					Very small.
		F	19	15					

* No records of horizontal components during standardisation, etc.

FORM 3718.

SEISMOLOGICAL BULLETIN.

AUGUST, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
Aug. 24	Z	i	18	47	34				Dilatation. NE, e.
	Z	i		47	47				
	NE	i		47	54				
	ZNE	i		48	18				
	Z	i		48	56				
	Z	i		49	8				
	Z	e	19	1	53				
	N	eL		35					
	ZE	eL		42					
	Z	M		51	24	19	+6		
		F	21	25					
24	ZNE	eL	23	19					
		F		55					
26	ZNE	e	19	30					
	ZNE	eL		39					
	Z	M		48	47	24	+9		
		F	20	20					
31	Z	e	2	48	17				
	ZNE	eL	3	40					
		F	4	50					
31	Z	i	14	26	49				No records of horizontal components.
	Z	eL		44					
	Z	M	15	2	19	20	-20		
		F	16	45					

(sgd).

A.W. Lee.

Officer in Charge.

6th September, 1937.

FORM 3718.

M.O. 214.

AIR MINISTRY, METEOROLOGICAL OFFICE.

File

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR SEPTEMBER, 1937.

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.	$\frac{Ak}{\pi l}$
		sec.	sec.		sec-1
N.	1937, Aug. 26	24.3	8.1	0.00	72.4
E.	1937, Aug. 26	24.6	8.2	0.00	68.8
Z.	1937, Sep. 18	13.1	13.0	+0.05	68.9

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.
1937			h.	m.	s.	sec.	μ	km.	
Sep.	Z	iPKP$_1$	8	58	42			17000	Compression.
1	Z	iPKP$_2$		58	54				By path of greater deviation.
	Z	i		59	26				Kermadec Islands.
	Z	i		59	38				31°S., 179°W. (U.S.C.G.S.).
	Z	iPKS	9	3	6				
	Z	e		21	6				
	N	eL		46					
	ZE	eL		52					
	N	M	10	10	23	21	+12		
	Z	M		10	28	21	-20		
		F	11	20					
1		e	18	45					
		F		55					
1	ZNE	eL	23	5					
		F		50					
3	Z	iP	18	59	56			8400	Dilatation. NE, e.
	ZN	i	19	0	16				
	ZNE	i		0	30				
	ZN	i		0	53				Aleutian Islands.
	ZNE	iPPP		5	12				52°N., 177°W. (U.S.C.G.S.).
	NE	iS		9	36				
	E	iPS		9	54				
	Z	i		10	29				
	Z	i		10	43				
	ZNE	i		10	59				
	N	iSS		15	27				
	E	eL		21					
	ZN	iL		25	27				Very large.
	N	M		25	23	34	+71		
	Z	M		25	36	38	-130		
	E	M		29	19	30	+54		

FORM 3717.

128, 8039, 4520, 125, gp 846, M & S, 10/37.

SEISMOLOGICAL BULLETIN.

SEPTEMBER, 1937.

DATE.	COMPT.	PHASE.	C.M.T.	PERIOD.	AMPLITUDE.	Δ	REMARKS.
1937			h. m. s.	sec.	μ	km.	
Sep.	N	M	19 35 59	23	+47		
3	Z	M	36 17	24	+54		
(Cond)	Z	eL2	21 2				Via antipodes.
		F	22 15				
4	Z	i	6 34 3				
	NE	eL	7 23				
	Z	eL	27				
	Z	M	39 12	20	+10		
		F	8 25				
8	NE	i	0 11 59				From records of Wood-Anderson instruments. Very small. Felt around Horsham Sussex.
		F	13				
8	Z	e	0 54 49				
	NE	i	1 4 43				
	NE	i	5 41				
	NE	e	7 19				
	ZN	i	8 15				
	ZN	i	9 14				
	N	i	11 33				
	ZNE	eL	25				
	E	M	32 46	19	-19		
	N	M	38 1	22	+16		
	Z	M	40 31	18	-13		
		F	3 30				
9		e	17 8				Very small.
		F	25				
15	E	iP	12 44 5			(15000)	Manihiki Islands.
	NE	iPP	49 34				9°S., 161°W. (U.S.C.G.S.)
	E	i	49 48				
	NE	iPKS	50 21				
	E	iSS	13 6 22				
	NE	eL	13				
		F	- - -				
15**	-	-	13 23 to				No records.
			16 58				
16	ZE	iP	0 0 57			8800	
	E	i	7 50				
	NE	i	10 44				Guatemala.
	E	iS	10 57				14°N., 91°W. (U.S.C.G.S.)
	E	i	11 13				
	E	i	11 41				
	N	eL	22				
	ZE	eL	27				
	N	M	41 21	16	+10		
		F	1 15				
16*	-	-	8 25 to				No records.
			17 38				
17*	-	-	8 20 to				No. records.
			16 55				

FORM 3718.

M.O. 414.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN.

SEPTEMBER, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1937									
Sep. 18*	-	-	8	20	to				No records.
			12	53					
20*	-	-	8	38	to				No records.
			16	3					
21		e	10	6					
		F	11	40					
23	ZNE	i	13	25	9				Dilatation.
	ZNE	i		27	18				
	NE	i		27	39				
	NE	i		28	33				0°.,150°W. (U.S.C.G.S.)
	ZNE	i		28	41				
	ZNE	L	14	6					
	N	M		15	54	27	-35		
		F	16	45					
24*	-	-	10	30	to				No records.
			12	0					
25	ZNE	iP	4	33	57			2000	Compression. Azimuth slightly south of west. North Atlantic Ocean.
	ZNE	iS		37	20				
	ZNE	L		38					
	N	M		39	33	11	+23		
	Z	M		40	42	11	-16		
		F	5	25					
27	NE	i	9	20	16				Tabulations from Wood-Anderson records. Galitzin instruments under adjustment.
	NE	i		21	11				
	NE	eL		48					
		F	11	45					
27	NE	e	20	45					Very small.
		F		55					
28	NE	e	6	43					
	ZNE	eL		58					
	E	M	7	6	35	38	+18		
		F		50					
28	ZNE	eL	19	1					
		F		35					
29		e	12	1					
	ZNE	L		9					
		F		25					
30	ZNE	eL	22	58					
		F	23	25					

** Removal of Z seismograph to new underground house.

* Adjustment and standardisation of Galitzin instruments.

(sgd).

F.J.W. Whipple.

Superintendent.
6th October, 1937.

FORM 3718.

M.O. 414.

AIR MINISTRY, METEOROLOGICAL OFFICE, LO

File in Hall

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR OCTOBER, 1937.

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.	1937, Aug. 26	24.3 sec.	8.1 sec.	0.00	72.4 sec^{-1}
E.	1937, Aug. 26	24.6	8.2	0.00	68.8
Z.	1937, Sep. 18	13.1	13.0	+0.05	68.9

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. h. m. s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1937. Oct. 1		e	16 22				Very small.
		F	35				
1	ZNE	eL	20 38				
		F	21 35				
5	NE	eL	6 58				Gulf of California. 22°N. 108°W. (U.S.C.G.S.).
	Z	eL	7 3				
		F	40				
6	ZNE	e	17 26 20				
	NE	i	27 22				
	NE	eL	18 2				
	Z	eL	13				
		F	19 50				
9	ZNE	eL	19 25				Very small.
		F	50				
11	ZNE	eL	22 22				
		F	50				
12	ZNE	eL	16 35				
		F	17 10				
12	ZE	e	21 4 20				Very small.
	ZE	i	4 46				
	NE	i	14 46				
	N	i	15 36				
	NE	eL	30				
	Z	eL	40				
		F	22 15				

FORM 3717.

153,8039,4520,125 11/37.

SEISMOLOGICAL BULLETIN.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD sec.	AMPLI-TUDE. μ	Δ km.	REMARKS.
Oct. 17	ZNE	i	4	59	48				
	ZNE	e	5	10	11				
	NE	eL		29					
	Z	eL		36					
	E	M		39	36	23	-13		
		F	6	25					
20		e	1	53					
		F	2	20					
23	ZNE	eL	18	21					
		F	19	0					
24	ZNE	eL	12	0					Alaska. 62°N. 150°W.(U.S.C.G.S.)
		F		30					
25		e	12	0					Very small.
		F		25					
26		e	0	1					Very small.
		F		20					
29	N	e	7	42	11				
	ZNE	eL		53					
		F	8	5					

(sgd)

A.W. LEE.

Officer-in-Charge.

4th November, 1937.

FORM 3718.

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR NOVEMBER, 1937.

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.	1937, Aug. 26	24.3 sec.	8.1 sec.	0.00	72.4 sec^{-1}
E.	1937, Aug. 26	24.6	8.2	0.00	68.8
Z.	1937, Sep. 18	13.1	13.0	+0.05	68.9

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.
1937			h. m. s.	sec.	μ	km.	
Nov.		e	7 50				
10		F	8 15				
11	ZNE	eL	0 35				
		F	1 20				
13	ZNE	eL	10 25				
		F	11 40				
14	Z	iP	11 6 56			5700	NE, e. Compression.
	ZE	iPcP	8 12				Destructive in Chitral,
	ZN	iPP	8 56				North West India.
	NE	iS	13 56				36.5°N., 70.5°E. with focal
	N	iScS	16 20				depth 220 Km.
	N	eSS	17 45				(Strasbourg).
	ZNE	L	20				
	N	M	26 33	13	+62		
		F	12 40				
15	NE	e	21 55				No "Z" record.
	NE	eL	22 7				
	N	M	10 27	13	+13		
		F	55				
18		e	3 53				Possibly not seismic.
		F	4 20				
21	ZNE	L	19 39				
		F	55				
26	ZNE	eL	11 27				
		F	12 0				

FORM 3717.

181, 3039, 4520, 125, 6946, M & S, 12/37.

KEW OBSERVATORY, RICHMOND, SURREY,

SEISMOLOGICAL BULLETIN.

NOVEMBER, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
Nov. 27	ZNE	eL	14	30					
		F	15	10					
28	NE	eL	6	15					No "Z" record.
		F	7	0					
30	N	i	1	3	43				
	NE	eL		21					
	Z	eL		30					
	N	M		41	11	18	+10		
		F	2	15					
30	E	i	13	7	58				
	N	i		15	13				
	ZNE	L		23					
	N	M		32	42	16	+29		
	Z	M		32	44	16	+14		
		F	14	25					

(sgd).

F.J.W. Whipple.

Superintendent,
4th December, 1937.

FORM 3718.

AIR MINISTRY, METEOROLOGICAL OFFICE. LON

KEW OBSERVATORY, RICHMOND, SURREY, ENGLAND.

SEISMOLOGICAL BULLETIN FOR DECEMBER, 1937.

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.	$\frac{Ak}{\pi l}$
		sec.	sec.		sec-1
N.	1937, Dec. 14	24.2	8.1	0.00	77.3
E.	1937, Dec. 15	24.8	8.3	0.00	76.3
Z.	1937, Dec. 30	13.3	13.0	-0.01	75.4

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.
1937			h. m. s.	sec.	μ	km.	
Dec. 4	-	-	11 8 to 13 8				No records.
8	Z	i	8 45 9				Observations of N and E from Wood-Anderson instruments. Horizontal Galitzin instruments not recording.
	N	i	45 24				
	Z	i	48 46				
	NE	eL	9 15				
	Z	L	22				
	Z	M	30 24	16	+99		
		F	10 30				
8	-	-	14 47 to 16 55				No records.
8	NZ	eL	21 27				No "E-W" record.
		F	55				
10	-	-	14 30 to 16 51				No records.
10	ZNE	i	18 8 6				Confused by microseisms.
	E	i	8 44				
	ZNE	i	9 6				
	ZE	i	10 50				Possibly L.
	E	M	10 51	14	+22		
	N	i	11 13				
		F	15				
13	-	-	9 12 to 16 11				No records.

FORM 3717.
2/0,6039,4580,125,6p946, M&S,1/38.

KEW OBSERVATORY, RICHMOND, SURREY.

SEISMOLOGICAL BULLETIN.

DECEMBER, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
Dec. 13	E	i	19	17	21				
	NE	i		17	57				
	ZNE	e		19	5				
	NE	e		30	35				
	NE	eL$_Q$		35					
	E	M		43	15	22	+35		
	ZNE	L$_R$		44					
	E	M		48	36	17	+63		
	Z	M		52	18	16	+55		
		F	20	40					
13	ZNE	eL	23	12					
		F		45					
14	-	-	9	55	to				No records.
			16	50					
16	E	iP	17	40	35			2530	No "Z" record.
	NE	iS		44	42				
	NE	L		49					
	E	M		51	7	20	+10		
		F	18	0					
17	-	-	10	15	to				No records.
			16	50					
18	ZE	iP	13	26	38				Compression.
	Z	i		27	29				
	E	i		28	34				
	E	i		33	40				
	NE	i		37	27				
	NE	L$_Q$		44					
	N	M		45	55	15	-42		
	E	M		45	55	15	+18		
	ZNE	L$_R$		46					
	N	M		48	52	15	-32		
	E	M		48	52	15	-41		
	Z	M		48	54	15	+48		
		F	14	25					
22	ZNE	e	3	50	16				Confused by microseisms.
	NE	i	4	0	41				
	NE	L		17					17°N.,106°W.(U.S.C.G.S.)
	Z	L		22					
	E	M		26	18	18	+17		
		F	5	10					
23	ZNE	iP	13	30	20			9230	Compression. Amplitudes of iP as read in mm :- Z +4.8 N (-0.7) E +2.7 Azimuth about West by North. Destructive in Mexico.
	ZNE	i		30	33				
	ZNE	iPP		33	30				
	NE	iS		40	42				
	Z	i		40	53				
	ZN	i		41	5				
	E	iPS		41	15				
	Z	iPPS		41	37				
	N	i		45	14				
	E	iSS		45	54				
	NE	L		49					
	ZNE	i		53	34				

FORM 3718.

SEISMOLOGICAL BULLETIN.

DECEMBER, 1937.

DATE.	COMPT.	PHASE.	G.M.T. h.	m.	s.	PERIOD. sec.	AMPLITUDE. μ	Δ km.	REMARKS.
1937									
Dec.	Z	L	13	56					
23	N	M	14	5	14	23	+125		
(Contd)	E	M		5	27	21	+330		
	Z	M		5	33	21	+330		
		F	16	45					
24		e	0	2					
		F		20					
24	E	e	6	36	11			10000	Confused by microseisms.
	E	eSKS		44	2				
	ZNE	iS		44	28				
	N	eL		58					10°S.,76°W.(U.S.C.G.S.)
	ZE	eL	7	3					
	E	M		9	38	19	-23		
	Z	M		9	52	19	+29		
		F	8	15					
25	ZNE	eL	10	28					
		F		55					
26	NE	eL	22	27					
		F	23	5					
27	ZNE	eL	0	21					
		F		50					
28		e	3	55					
		F	4	35					
28	ZNE	iP	6	29	8			6250	Dilatation.
	Z	ePP		31	6				
	N	iS		36	58				
	ZE	i		37	8				
	E	iS_cS		39	7				
	NE	e		43	22				
	ZNE	L		45					
	Z	M		46	38	26	+26		
	N	M		47	33	14	-17		
	E	M		47	46	15	+15		
		F	8	5					
30	E	e	2	13	12				Not very distant.
	E	i		13	45				
	N	i		13	52				
	E	i		14	7				
	E	i		14	26				
	NE	i		14	37				
		F		16					
30	-	-	10	28	to				No records.
			13	4					
31	ZE	iP	17	53	45			9280	Compression.
	Z	iPP		56	56				
	NE	iS	18	4	9				
	ZNE	eL		20					
		F	19	15					

(sgd).
F.J.W. Whipple,
Superintendent,
6th January, 1938.

FORM 3718.

Stock reply

~~2~~ copies.

Dear Sir,

The Astronomer Royal for Scotland has asked me to thank you for your very interesting letter of 3rd July.

You will find a description of the more common forms of solar haloes and "mock suns" in the "Meteorological Observer's ~~Handbook~~" published by H.M. Stationery Office. They are produced by refraction and reflections of the rays of the sun by ice crystals, ~~The example you describe is~~ and can take a variety of forms, some of which ~~are very rare occurrences~~ very rarely occur.

Your letter has been forwarded to the Meteorological Office, Air Ministry.

Yours faithfully,

Assistant i/c Meteorology.

SEISMOLOGICAL BULLETIN.

No. 4 ..... October - December, 1937.

King's College Observatory
Aberdeen.

No.	Date	Phase	Time G.M.T. h.	m.	s.	Period s.	Ampl. A E μ	Δ km.	Remarks
73	Dec. 23	iP	13	30	8			79.1°	
		iPR_1		33	10			8790	
		i		34	21				
		iPR_2		34	57				
		e		36	47				
		iPR_3		38	25				
		i		39	20				
		iS		40	7	9	67		
		iSR_1		45	27				
		iSR_2		48	43				
		i		51	11				
		i		53	8				
		L		55	18	35	145		
		M_1	14	0	17	30	350		
		M_2		2	38	24	232		
		M_3		5	17	21	313		
		M_4		9	16	20	175		
		M_5		10	7	20	167		
		M_6		14	4	20	97		
		M_7		14	55	15	65		
		M_8		16	25	15	48		
		M_9		19	26	15	60		
		M_{10}		22	7	15	45		
		M_{11}		25	54	15	34		Several minor maxima beyond this reading.
		F	16	8	-				