

ESKDALEMUIR OBSERVATORY.

Seismological Bulletin for January 1924.



Date	Phase	G. M. T. h. m. s.	Period secs.	A _N	A _E	Δ km.	Remarks.
2		9 2 to 9 10					Small disturbance.
4		12 45 to 12 55					Traces of waves.
7		10					Record spoiled by clock defects.
14	P ✓ S SR L ₁ M ₁ F	21 2 52 21 13 2 21 19 21 29 21 43 23 45	20	55		9000	
18	e e L F	15 12 31 15 16 15 23 15 45					
20	e F	22 55 23 15					Very feeble disturbance.
21	P _N i _z e _F iS _N F	2 3 32 2 5 19 2 12 9 2 12 15 3 25				7280	
22	e L F	11 16 11 20 11 40					Confused by microseisms.
		5 10 to 5 30					Disturbance confused by microseisms.
23	eP e(PR ₁) S i L M _E F	2 8 56 2 13 5 2 19 22 2 21 56 2 37 3 0 4 50	18		28	79320	
30	e e e e(?L) F	0 27 7 0 32 0 35.5 0 41 1					
30		5 to 6					Traces of disturbance.

ESKDALEMUIR OBSERVATORY.

Seismological Bulletin for February 1924.



Date	Phase	G. M. T. h. m. s.	Period secs.	A _N	A _E	Δ km.	Remarks.
9	L F	23 26 23 40					
11	e e L F	6 36 16 6 52 7 5 8					
13	e L	23 20 23 48					
14	F	0 40					
14	L F	19 35 20					
16	e L F	9 10 50 9 13 9 35					
16		10 15 to 10 20					Traces of very feebly developed waves.
18	?P ?S L M _E M _N F	17 10 45 17 15 50 17 20 17 26 30 17 26 55 18 10	16 16	17	17		
19	e i(s) e L F	7 7 7 12 54 7 14 48 7 17.5 8					
	e _E M _N F	15 38 24 15 41 15 45	10	5			
26		23 25 to 23 35					Very feebly developed traces.
27		0 31 to 0 45					Very feebly developed traces.

ESKDALEMUIR OBSERVATORY.

Seismological Bulletin for March 1924.



Date	Phase	G. M. T. h. m. s.	Period secs.	A _N	A _E	Δ km.	Remarks.
4	P _z L _z ?L _z F	10 19 42 10 44 12 27 13 10					No horizontal component records.
10	e F	18 22 11 18 26					
11	?S _E L _N F	11 2 54 11 14 12					
12	iP _z F	13 56 59 14 40					No horizontal component record.
13	e _z F	13 15 13 30					
16	e _z ?P i _z ?S F	10 22 19 10 26 1 11				?2220	
22	i _z i _z L _A F	12 56 17 13 13 2 13 16 14					Two shocks.
25		14 to 16					Traces of disturbance on Vertical component.
26		20 30 to 22					Traces of disturbance on Vertical component.
3	?P _z L _z F	5 4 34 5 8 5 30					
30	e _z L _z F	0 19 0 44 1 30					

ESKDALEMUIR OBSERVATORY.

Seismological Bulletin for April 1924.



Date	Phase	G. M. T. h. m. s.	Period secs.	A _N	A _E	△ km.	Remarks.
1	e F	4 53 50 5					
2	e e F	22 9 35 22 12 20 22 20					
2		2 to 3					Traces.
2	L F	3 14 3 40					
4	e F	22 45.7 23					
6		22 to 22 30					Traces of waves.
8	L F	9 50 10					Confused by microseisms and wind.
10	e _E L F	20 22 52 20 48 21 30					
11	e F	7 26 58 7 37					
11		14 7 to 14 18					Waves of small amplitude.
11		17 56 to 18 2					Waves of small amplitude.
12	e L F	22 13 22 57 24					
13	e i _F e L F	14 6 40 14 12 54 14 16 14 41 16 30					
14		5 30 to 6					Very feebly developed traces.
14		10 14 to 10 40					Traces.
14	P i (PR ₁) S F	16 34 52 16 39 14 16 45 32 21					Record too confused for identification of other phases.
15		12 54 to 12 57					A few waves confused by microseisms.
15	L F	21 51 22 25.					

Seismological Bulletin for April, 1924 (contd.).



Date	Phase	G. M. T. h. m. s.	Period secs.	A _N	A _E	Δ km.	Remarks.
20	P ✓ ?PR ₂ S L M _N F	14 36 59 14 40 34 14 45 2 14 55 15 4 38 15 45	20	12		6500	
28	L F	9 9 9 20					
28	e L F	17 38 19 17 42 18					
28	L M _N F	10 2 10 4 10 25	15	5			
29		10 30 to 11					Feebly developed waves.
29	L F	11 40 11 50					
29	e e e(?L) F	21 12 30 21 16 2 21 21 22 40					
30	e F	4 24 7 35					Recurring trains of waves of small amplitude.

HWL Absalom

ESKDALEMUIR OBSERVATORY.

Seismological Bulletin for May, 1924.



Date	Phase	G. M. T. h. m. s.	Period secs	A _N	A _F	A _Z	Δ Km.	Remarks.
1		4 30 to 6						Traces.
2		2 50 to 4						Traces of disturbance.
3		12 to 12 45						Long waves. No record before 12h.
3		16 14 to 16 23						Traces of waves.
	iP _N	17 10 30						Other phases not recognisable.
	iP _E	17 10 35						
	i _N	17 12 40						
	F _N	20						
5	e F	4 43 4 52						
6	eP e S L M _N F _N	16 23 5 16 26.5 16 33 27 16 51 17 0 49 19	23	47			(9230)	eP very doubtful.
7		3 to 4						Very feeble traces.
7	e L F	4 12 4 17 5 15						
7	e e L F	6 34 23 6 43 21 6 57 7 20						
14	L F	2 28 3 15						

Seismological Bulletin for July, 1924.



Date	Phase	G. M. T. h. m. s.	Period secs	A _N	A _E	A ₂	Δ Km.	Remarks.
1	e L F	3 46 34 3 59 4 30						
3	P PR PR S F	4 50 12 4 52 23 4 53 38 4 58 21 7 30					6620	Azimuth, from initial P displacements, 24° N of E or S of W. ? epicentre 38° N, 88° E (approx).
3	L F	8 37 9						
5		15 30 to 16						Small disturbance.
5	e e L F	23 9 19 23 13 47 23 34 24 50						
6	eP S L F	14 30 31 14 49 9 14 55 16 30					8370	Azimuth a few degrees S of W or N of E.
6	P PR ₁ S SR ₁ L F	18 41 9 18 43 7 18 48 26 18 52 11 ? 20 10					5600	Time marker failed. Times by measurement on E trace only. Similarity to disturbance on 12th July but movements smaller.
7	e? L F	3 2.8 3 37 5						
8	e? L F	21 6 21 53 23 5						
11	iP PR S L F	19 54 46 19 56 51 20 2 49 20 11 24		+	+	-	6510	P preceded by slow movement beginning 19h 54m 4ls G.M.T. Azimuth 21° N of E. Epicentre 37° N, 84° E. O 19h 44m 46s G.M.T.
12	L F	9 35 10						
12		11 1 to 11 13						Slight disturbance.
12	P PR S SR L M _N	15 21 34 15 23 34 15 28 50 15 32 38 15 36 15 44 & 45	23	-	-	+	5620	Azimuth 15° or 16° E of N. Epicentre 72° E, 40° N. Probably repetition of shock on 6th.

July (contd.,)



Date	Phase	G. M. T. h. m. s.	Period secs	A_N	A_E	A_Z	Δ Km.	Remarks
14		0 to 1						Traces of waves.
14	e L F	3 1 36 3 5.5 3 30						
15	L F	22 10 22 30						
16		1 to 3						Very feebly developed traces.
17	e_z e_z L F	12 14 13 12 18 31 12 42 13 20						
18	L F	21 39 21 50						
19	i(P) e?S L F	2 54 26 2 57 51 2 58.7 3 15					72020	
19		12 57 to 13 6						A few L waves.
20	e L F	9 41 10 26 11 40						
21	e L F	1 1 1 21 2 10						
22	P e e iS L F	4 16 28 4 17 23 4 26 14 4 26 24 4 39 5 30					8520	? azimuth ^{about} 27 27° N of E or S of W. L indistinct.
22	eP _E e _E e S SR L M _N M _E F	14 36 48 14 37 16 14 40 32 14 47 26 14 53.5 15 3 15 12 27 15 12 55 16 40	23 22	54	39		9560	
24	e_z (P) i _E i _E i _E (?S) F	5 15 19 5 16 30 5 20 20 5 30 49 8 30						Presumably very distant. L L not clearly shown.
25	e(P) e _P (S) L F	19 40 46 19 44 28 19 45.5 20					(2200)	
25	L	22 0						

July (contd.)



Date	Phase	G. M. T.			Period secs	A _N	A _E	A ₂	Δ Km.	Remarks.
		h.	m.	s.						
26	e	3	25	16						
	L	3	51							
	F	4	30							
27	e	21	49	30						
	L	21	50							
	F	22	12							
28	?e	19	28	10						
	L	19	30							
	F	19	39							
	L	19	43							
	F	19	55							
29	e	5	38							
	e	5	48							
	L?	6	8							
	F	8								
31	L	0	4							
	F	0	20							

H. L. Absalom



Traces.
Traces.
Large disturbances, confused by faintness and superposition of two component traces.
Well developed disturbance.
Well developed disturbance.
Initial P displacements suggest arrival 17° N or E or S of S. 1 epicentre Kurile Is. or Kamchatka.

Seismological Bulletin for June, 1924.



Date	Phase	G. M. T. h. m. s.	Period secs	A _N	A _E	A _Z	Δ Km.	Remarks.
4	e ^P e ^E L ^E F	16 21 42 16 31 45 16 48 17 30					(8850)	
9		21 52 to 22 5						Feeble traces.
15		14 14 to 14 28						Feeble traces.
16	L F	20 14 20 30						
17		21 37 to 21 50						Feeble traces of L waves.
20	e L F	16 39 33 16 46 17 30						
22	e(?S) L F	13 47 37 14 8 14 50						
22	e ^E e ^E	17 1 17 17 4 19						Other phases not well developed.
22	e(P) S L F	22 41 2 22 50 47 ? 24					(8500)	
24		22 to 23						Traces.
25		3 10 to 3 18						Traces.
25	L F	7 29 7 38						
26	P F	1 57 39 6						Large disturbance: confused by faintness and superposition of two component traces.
30		4 to 4 30						Feebly developed disturbance.
30		12 10 to 12 30						Feebly developed disturbance.
30	eP S ^E S ^N SR SR L	15 56 4 16 5 43 16 5 48 16 10 42 16 16 16 22					8380 } 8480 }	Initial P displacements suggest azimuth 17° E of N or W of S. ? epicentre Kurile Is. or Kamchatka.

METEOROLOGICAL OFFICE OBSERVATORIES.

Station:—

LOCKERBIE (L.M. & S. Caledn. Ry.)
18 MILES.

THE OBSERVATORY,

Post and Money Order Office:—
ESKDALEMUIR.

ESKDALEMUIR,

Telegrams:—

OBSERVATORY, ESKDALEMUIR.

LANGHOLM,

Telephone:—

ESKDALEMUIR 3.

DUMFRIESSHIRE.

Please refer to

No.....

ESKDALEMUIR OBSERVATORY.

Lat. $55^{\circ} 19' N.$

Long. $3^{\circ} 12' W$ of Greenwich.

Instruments: Galitzin pendulums, with galvanometric registration, arranged to record earth displacement in the north, east and vertical directions.

Escondido
Earthquake.

Observatory
Bulletin.

August 1924.



Day	Phase	L. M. S. h. m. s.	Period secs.	A _N	A _E	Δ Km.	Remarks.
1		1 30 to 2					Traces of waves.
3		22 to 22 15					Traces of waves.
5	L F	1 41.5 1 55					
6	e _N e _N e _N e L F	0 41 43 0 45 31 0 55 1 4 14 1 39 2 50					
6	L F	3 59 4 50					
9	L F	15 4 15 15					
10	e _N e _N F	6 32 6 35.5 9					
11	e F	2 39.5 3 10					Very feeble disturbance
12		16 38 to 16 42					Very slight disturbance
12	e L F	18 41 41 19 1 19 30					
13	P e S L F	13 41 57 13 45 13 51 23 14 7 15 30		-		8130	Azimuth approximately North.
13	L F	16 37 17 30					
14	P S L F	0 8 54 0 17 52 0 31 ?				- 7570	Azimuth approximately East.

Erdalemu
Earthquake

Observatory
Bulletin

August 1924.



Day	Phase	h.	m.	s.	Period secs.	A _N	A _E	Δ km.	Remarks.
4.	e(PS) L F	1	6	11					
		1	22						
		3							
14.	P PR ₁ PR ₂ S SR ₁ L M _N M _N F	18	15	4				9220	
		18	18	34					
		18	20	14					
		18	25	25					
		18	31.5						
		18	43						
		18	51		24	56			
		19	1		18	56			
		22.							
14.	eP e(PR ₁) e(PR ₂) S SR	23	39	57				9220	? same origin as preceding earthquake
		23	43	8					
		23	45	3					
		23	50	18					
		23	56						
15	L M _N M _E M _N F	0.	8						
		0	20	41	20	8			
		0	24	38	16		9		
		0	28	23		8			
		1	30						
17.	eP eS _E eS _N e L	1	58	34					Records from two shocks overlap. ? both shocks from same origin as on August 14 th .
		2	8	50					
		2	8	59					
		-	15						
		2	28						
17	eP S F	2	23	8					
		2	33	4					
		4							
17		12	15						Waves of small amplitude.
		13							
21.	e e e F	19	3						Record failed before end of disturbance.
		19	12.5						
		19	17						
		?							
24.	L F	0	1						
		0	10						

Essexdale
Earthquake

Observatory
Bulletin



August 1924.

Day.	Phase	h.	m.	s.	Period secs	A _N	A _E	Δ km	Remarks.
25	e	2	38	15					During to adjustments of timing clock the times given require correction. The correction is uncertain but approximate value is probably +2 minutes.
	i	2	44	39					
	i	2	47	30					
	i	2	48	25					
	i _N	2	53	20					
	L	3	7						
	M _E	3	20		15		-24		
	M _N	3	26		16	20			
	F	5							
25	eP	14	43	27				9240	
	S	14	53	50					
	L	15	9	(30)					
	M _N	15	18	24	20	12			
	M _E	15	17	56	20		12		
	F	17							
25	iP	23	18	9				7720	
	iS _N	23	27	14					
	L	23	36						
	F	1							
27		0	to						Feebly developed waves.
		0	30						
27	P	22	38	59				2500	
	S	22	43	4					
	L	22	44.5						
	F	23	45						
28		18	56	to					Traces of irregular waves.
		19	20						
29	e	0	13						
	L	0	30						
	F	1	25						
30	eP	3	19	3				?9520	
	e	3	29	23					
	i(S)	3	29	39					
	SR	3	38						
	L	3	50						
	M _N	4	9	10	20	102			
	M _N	4	13	4	18	46			
	F	6	30						

METEOROLOGICAL OFFICE OBSERVATORIES.



Station:—
LOCKERBIE (L.M. & S. Caledn. Ry.)
18 MILES.

Post and Money Order Office:—
ESKDALEMUIR.

Telegrams:—
OBSERVATORY, ESKDALEMUIR.

Telephone:—
ESKDALEMUIR 3.

THE OBSERVATORY,
ESKDALEMUIR,
LANGHOLM,
DUMFRIESSHIRE.

Please refer to

No.....

EARTHQUAKE BULLETIN

Latitude 55° 19' N.

Longitude 3° 12' W.

Height above sea level 242 m.

Instruments: Two horizontal and one vertical

Galilei pendulums with galvanometric
registration.

Jerusalem
Earthquake

Observatory
Bulletin



September 1924.

Day	Phase	L.M.T.			Period secs	A _N	A _E	D Km.	Remarks
		h.	m.	s.					
14	e(?S)	13	34		18	9		Overlapped by next shock.	
	e(?SR ₁)	13	39						
	L	13	54						
	M _N	14	8						
	F	?							
14	L	15			25	13			
	M _N	15	5						
	M _N	15	14						
	F	16							
19	L	8	6						
	F	8	30						
23	?e	23	19						
	F	23	35						
24	?e	19	3	55					
	L	19	22						
	F	20							
20	e	4	44	45					
	L	5	23						
	F	6	30						
27	?e	4	27						
	e	4	39.5						
	L	4	45						
	F	5	30						
27	L	13	56						
	F	14	30						
28	i _E (P)	13	38	19			?2000		
	e	13	41						
	i _E (S)	13	41	38 42					
	M	13	43						
	F	14	10						

Esnevalenur
Earthquake

Observatory
Bulletin

September 1924.



Day	Phase	G. N.	M. M.	S. P.	Period sec	A _N	A _E	Δ Km.	Remarks.
2.	e L F	22 22 23	21 53 30	22					
3		0 1	15						Traces of disturbance.
3	L F	2 3	56 15						
4	L F	1 1	30 45						
4	?eP ₂ L ₂ F	16 16 17	4 7.5	(30)					
6	e(L) F	3 4	16						
6	e L F	5 5 5	3 10 40	7					
6	?e L F	11 11 12	36 54 10	46					
6	L F	12 12	41 55						
6	e L F	19 20 21	58 38 45	47					
7	e L F	2 2 3	10 38 30	38					
10	L F	12 12	13 30						
14	L F	3 3	14 35						
14		5 5	25 35	15					Traces of waves.

Essexdamun

Observatory

Earthquake

Bulletin

October 1924.



Day	Phase	L. M. S.			Period secs.	AN	AE	Δ Km.	Remarks.
		h.	m.	s.					
8	L	21	4					Barie: phase lost. Record failed.	
	MN	21	10	1	25	-58			
	MN	21	11	0	20	36			
	ME	21	11	6	20		25		
	F	22	40						
9	L	6	1						
	F	6	15						
12	eP	19	44	21			?(6500)		
	S	19	52.5						
	SR	19	56						
	i(L)	19	59	5					
	F	21	30						
13	iP	16	26	38			5510		
	iS	16	33	48					
	F	18							
18	L	20	21						
	F	20	55						
18	eP _E	23	17	41			8790		
	S _N	23	27	41					
	L	23	45						
19	F	0	30						
19	L	15	48						
	F	16	20						
20	P _N	20	3	53			7690		
	iS	20	12	57					
	SR ₁	20	17.5						
	SR ₂	20	20.8						
	L	20	26						
	F	21	30						
23		12	27	to				Traces of waves	
		12	35						
25	e	19	18						
	e(L)	19	24						
	F	20							
26		19	to					Feltle disturbance	
		20							
27	e	20	23	2					
	e	20	30	28					
	e	20	39	37					
	L	20	48						
	F	22							

Cordaleman

Observatory

Earthquake

Bulletin

November 1924



Day	Phase	L. M. S. h. m. p.	Period sec.	AN	AE	Δ Kmi.	Remarks.
4	L F	4 12 4 30					
5	eN L F	18 58 59 19 4.5 19 20					
6	L F	8 16 8 30					
6	L F	23 10 23 16					
13		Between 9 40 and 11					Disturbance confused by large microseisms.
15	L F	18 42 18 50					
16	e F	23 32 24					
20		Between 20 30 and 21 30					Disturbance. Record before 20h 55m lost owing to clock failure.
25	e e F	17 47 11 17 49.5 18 10					
28		13 to 14					Disturbance confused by large microseisms.
28		19 30 to 20 30					Disturbance confused by large microseisms.
28	L F	21 59 22 10					

Erethraean
Earthquake

Observatory
Bulletin

December 1924.



Day	Phase	L. M. T. h. m. s.	Period secs.	AN	AE	Δ Km.	Remarks.
11	L F	18 33 19 15					
11		23 30 to 23 40					A few waves.
12.	?L ✓ L M _E F	2 24.6 2 28 2 30 2 40	16		6		
12		3 36 to 3 41					Slight disturbance.
13.		0 44 to 1					Waves, confused by microseisms.
14.		9 20 to 10					Slight disturbance, confused by microseisms.
15.	L F	21 11 23					
17.	L L F	6 7 6 11 6 20					
27	i(?S) F	11 43.5 12 (30)					Confused by very large microseisms.
28		23 24					Disturbance confused by very large microseisms.