SEISMOLOGICAL OBSERVATORY

RATHFARNHAM CASTLE

BULLETIN

for January 1 to March 31, 1957

Rathfarnham

Co. Dublin, Ireland

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Jan. 2	ZN	iP	00	50	58	D?	53N 168·5W
	Z	e		51	02	C	H = 00 39 22
	NE	eS	01	00	36		D = 8200 km
	N	ePS		01	12		
	NE	eL		14	00		
	NE	M		28	00		18s.
	ZN	iP	02	29	10	C	53N 168W
	Z	i		29	20		H = 02 17 35
	Z	iPcP		29	27		D = 8200 km
	Z	ePP		31	48		
	NE	iS		38	49		
	N	iPS		39	25		
	E	eLQ		47	00		
	N	eLR		51	20		
	NE	M	03	06	00		20s. 30μ
	Z	iP	03	24	27	D?	In minute mark
	Z	iPcP		24	42		
	Z	iP	03	42	08	C	
	ZN	iP	04	00	19	C	53N 168W
	Z	iPcP		00	34		H = 03 48 44
	Z	ePP		02	57		D = 8200 km
	NE	eS		09	59		
	NE	eSS		15	02		
	N	eL		23	00		
	NE	M		29	30		20s. 40μ
	Z	iP	04	15	05		
	Z	iPcP		15	21		
	Z	i	14	29	51		
3	Z	iP	00	52	36	C	
	Jan.3rd 09 hrs. - Jan.5th 09 hrs. no Z record.						
	N	iP	12	59	20	D	44N 130E
	N	iPcP		59	27		H = 12 48 27
	N	ipP	13	01	20		h = 600 km
	N	i		02	12	C	D = 8400 km
	EN	iS		08	15		9S(N)W movement
	E	e		10	20		
	N	e		16	30		
6	Z	e	00	29	30		Indistinct

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Jan. 8	Z	i	01	34	17		
	Z	i	17	42	28		
9	NS	eL	08	30	-		Earlier phases when changing records.
13	Z	eP	11	47	47		V. small
	Z	e		48	49		
	Z	i	14	37	56		Seismic?
14	Z	i	00	30	43		
	Z	i	05	49	51		
19	Z	iPKP	05	35	15	D	
		i		35	39		
20	Z	e	18	23	26		Microseisms
22	Z	i	11	31	33		Local explosion?
23	Z	eP?	17	32	34		Microseisms
25	Z	iP	03	48	33		
	Z	i		48	45		
	Z	i		49	27		
28	Z	iP?	18	38	40		Microseisms
	Z	i		40	11		
	Z	iP?	23	30	33		
Feb. 2	Z	ePKP	12	05	30		
	Z	e		05	56		
	Z	e		07	02		
3	Z	iP?	17	36	40	D	Microseisms
5	Z	iPKP	04	21	07		
	Z	iP	04	59	07	D	
6	Z	iP	20	45	20	D	
	Z	e		46	25		
7	Z	i	16	30	55	C	
9	Z	ePKP	13	49	(50)		Faint

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Feb. 9 (contd.)	Z	i	16	49	41	C	
10	Z	iP	05	53	47	D?	
	Z	i		53	53	C	
	NS	eL	05	59	30		
	NS	e	22	52	20		
	NS	eS		58	39		Foreshock
	NS	e	23	04	54		Microseisms
	NS	eL		16	00		
	E	ePP	23	08	30		
	E	iPP		11	15		10·5N 126·5E
	NE	eSKS		15	52		H = 22 50 52 D = 11700 km
	NE	e	23	16	12		
	NE	eSS		24	20		
	NE	eSSS		29	25		
	NE	eL		39	30		
	NE	M		49	00		20s. 40μ
11	NE	eL	01	57	00		
	NE	eL	04	45	00		
	Z	iPn	15	43	48		H = 15 43 00
	Z	iPg		43	56		52·8N 1·3W D = 330 km.
	Z	i		44	02		
	Z	i		44	10		
	Z	iSn		44	27		
		F		48	00		
13	Z	iPn	00	00	30	D	
	Z	iPg?		00	35		Repetition
	Z	iSn?		01	14		
	Z	iPKP	12	56	28	D	
	Z	i		56	52		
16	Z	e	23	02	38		
17	Z	iP	15	58	39	C	D = 8500 km
	Z	epP		58	57		
	NS	eS	16	08	29		Oaxaca
	E	L		25	-		16N 96W
	M			34	30		H = 15 46 45
18	E	eL	15	11	00		Very small
	E	M		12	30		

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Feb.19	Z	iP	00	02	26		16S 72W
	Z	e		02	33		H = 05 17 18
	Z	i		03	26		h = 100 km.
	ZE	iP	07	49	32	D?	D = 2950 km.
	Z	i		49	45	D?	36·5N 22E
	Z	e		49	59		H = 07 43 54
	N	eS		54	20		
	N	eL		57	10		
	NE	eL		58	00		
	NE	M		59	25		
20	NE	eL	04	50	10		No Z record.
	NE	M		53	00		
21	Z	iP	14	41	31	D	
	Z	ePKP	19	56	32		
23	Z	i(P?)	05	09	35	D	
	E	eP	20	39	28		Microseisms
	E	ePP		42	(57)		No Z record.
	NE	eSKS		49	50		D = 10500 km.
	NE	eSS		56	30		24N 122E
	N	eLQ	21	03	20		H = 20 26 12
	E	eLR		10	00		
	N	M		13	00		24s. 70μ
	NE	M		23	00		18s. 50μ
Mar. 2	Z	iP	00	38	14	D	18·5N 78W
	Z	i		38	20	D	H = 00 27 33
	Z	iPcP		38	39	D	D = 7300 km.
	Z	e		38	57		
	ZE	iPP		40	43	D	
	EN	eS		47	03		
	E	e		47	47		
	NE	eSS		51	20		
	E	eLR	01	01	10		
	E	M		07	00		
	E	M		13	00		
	Z	iPKP	08	29	37	D	6S 151E
	Z	e		29	52		H = 08 10 24
3	Z	i	03	32	33	D	
4	Z	iP	12	31	09		D = 3600 km.
	N	eS		36	41		31·5N 38·5W
	N	e(SS)		38	18		H = 12 24 35

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Mar. 4 (contd.)	NE	eL	12	39	30		Very small
	N	M		41	20		
8	ZE	iP	12	19	34	C	D = 2700km
	Z	i		19	50		39·5N 22·8E (BCIS)
	ZE	iPP		20	05	C?	H = 12 14 14
	Z	iPP?		20	18		
	E	i		21	43		
	NE	iS		23	54		
	NE	i		24	31		
	NE	iSS		24	52		
	E	i		25	30		
	N	eLQ		26	00		
	E	eLR		27	20		
	NE	M		27	40		20s. 250μ
	Z	iP	12	26	32	C	D = 2700 km
	N	iS		30	52		Repetition (BCIS)
	N	eLQ		33	10		H = 12 21 14
	NE	eLR		34	15		
	NE	eLg		34	50		
	N	M		35	10		15s. 300μ
	NE	eL		37	00		
	NE	M		37	30		10s. 170μ
	Z	iP	20	43	18		Repetition
	NE	iS		47	38		H = 20 38 02
	NE	eL		49	30		
	Z	iP	23	40	27	C	Repetition
	Z	i		40	53		H = 23 35 11
	Z	i		41	35		
	NE	iS		44	47		
	NE	eL		46	00		
9	Z	iP?	01	10	53		
	Z	iP	04	07	02	C	
	Z	iP	04	33	51	C	
				33	53		
	Z	i	04	39	18	C	
	Z	i	07	11	47	D	
	Z	iP	14	16	35	D	
	Z	e		17	39		

Date	Comp.	Phase	G. M. T.	Type	Remarks
1957			h. m. s.		
Mar. 9	ZN	iP	14 34 09		D = 8350 km
(contd.)	ZN	iP	34 17		51N 175W
	ZN	iPP	36 59	C	H = 14 22 27
	NE	iS	44 10		Multiple shock
	NE	iSS	49 20		
	E	eLQ	54 20		
	NZ	eLR	58 00		
	E	M	15 08 00		30s. 150μ
	N	M	15 10		15s. 400μ
	NE	M	21 30		15s. 500μ
	NE	M	25 30		18s. 550μ
	Z	iP	14 38 49		
	Z	iP	14 39 48		
	Z	iP	14 44 13		
	Z	iP	14 45 (10)		
	Z	iP	14 46 53		
	Z	iP	14 47 38		
	Z	iP	15 22 20		
	Z	iP	15 30 45		
	Z	iP	15 53 33		
	Z	iP	16 17 47		
	Z	iP	16 44 20		
	Z	iP	16 57 21		
	Z	i?	17 24 23		
	Z	iP	17 33 08		
	Z	iP	17 50 39		
The following are probable interpretations of the very many impulses recorded at this time.					
	Z	iP	18 03 45		
	Z	iP	18 05 56		
	Z	iP	18 08 46		
	Z	iP	18 13 37		
	Z	iP	18 38 36		
	Z	i!	18 40 58		
	Z	iP?	18 56 08		
	Z	iP	19 04 47		
	Z	iP	19 10 13		
	Z	iP	19 14 03		
	Z	iP	19 17 50		
	Z	iP	19 19 05		
	Z	iP	19 36 54		
	Z	iP	19 44 54		
	Z	iP	19 46 27		
	Z	iP	19 54 04		

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Mar. 9	Z	iP	20	12	41		
(contd.)	Z	iP	20	33	42		
	Z	iP	20	50	56	C	D = 8350 km
	Z	iPP		53	48	C	
	NE	iS	21	00	38		
	N	i		01	19		
	NE	iSS		05	41		
	NE	iSSS		09	10		
	E	eLQ		11	00		
	N	eLR		15	12		
	NE	M		18	00		27s. 80μ
	NE	M		24	00		20s. 100μ
	NE	M		29	00		20s. 100μ
	Z	iP	21	53	27		
	Z	iP	22	07	56		
	Z	iP	22	27	19		
	Z	i	22	50	16		
	Z	iP	23	11	16		
10	Z	iP	01	28	36		
	Z	iP	01	33	44		
	Z	iP	03	17	53		
	Z	i		18	02		
	Z	iP	03	20	41		
	Z	iP	03	39	38		
	Z	iP	05	53	54		
	Z	iP	06	35	22		
	Z	iP	09	35	24		
	Z	iP	10	48	38		
	Z	iP	11	32	28	D?	D = 8300 km
	Z	i		32	44		52N 171W
	Z	i		34	44		H = 11 19 57
	NE	eS		42	08		
	N	eL		55	00		
	Z	iP	11	37	07		
	Z	iP	12	24	22		
	Z	iP	12	47	51	D	
	Z	iP	12	57	23	D	
	Z	iP	13	02	31	D	
	Z	iP	13	22	01	C	
	Z	iP	13	31	23	C	

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Mar.10	Z	iP	13	40	18	C	
(contd.)	Z	iP	14	21	18	C	
	Z	iP	14	57	33	C	
	Z	iP	15	38	04	D	
	Z	i		38	26		
	Z	iP	18	09	02	C	
	Z	iP	19	23	21	C	
	Z	iP	19	30	22	C	
	Z	iP	19	52	37		
	Z	iP	21	08	33	C	
	Z	iP	21	44	07	D	
	Z	eP	23	40	10		
	Z	iP	23	48	32	C	
11	Z	iP	00	19	49	D	
	Z	iP	02	43	53	D	
	NZ	iP	03	24	28	D	51N 177W
	Z	i		24	51		03 12 41
	Z	i		26	17		
	N	iS		34	14		
	EN	i		34	49		
	NE	i		39	10		
	E	e		46	20		
	N	eLR		48	00		
	N	M		53	40		20s. 50μ
	NE	M	04	05	10		18s. 50μ
	Z	iP	03	46	51		
	Z	iP	04	07	15	D?	
	Z	iP	05	02	23	C	
	Z	eP	06	11	27		
	Z	iP	07	19	48	C	
	Z	iP	07	50	53	D	
	Z	eP	09	35	32		Doubtful
	Z	iP	10	10	19		53N 164½W
	NE	iS		20	09		09 58 42
	Z	iP	15	07	05	D	51½N 178½W
	NE	iS		16	51		14 55 19
	Z	iP	15	47	41	C?	
12	Z	iP	01	14	18	D	
	Z	iP	01	58	32	C	Very small
	Z	iP	05	23	45	D	

Date	Comp.	Phase	G. M. T. h.	m.	s.	Type	Remarks
1957							
Mar.12	Z	iP	07	40	31	DC	
(contd.)	NE	iS	07	49	20		
	Z	iP	07	51	04	C	
	Z	eP	10	50	10		
	Z	iP	11	56	26	D??	51N 177W
	NE	iS	12	06	14		
	Z	iP	12	57	44	C	
	Z	iP	15	31	51		
	Z	iPKP	19	30	02	D	
	Z	iP	20	11	56		
	Z	eP	21	35	08	C?	Small
	Z	ipP		35	52	D	
13	Z	iP	03	44	41	D	
	Z	iP	15	53	52	D?	51·5N 179W
	NE	iS	16	03	42		15 42 05
	Z	i	19	06	00		
	Z	i		07	18		
	Z	iP	20	11	21		
14	Z	i	00	47	38		Seismic?
	Z	iP	02	58	23	D	53·5N 163·5W
	Z	i		58	34		02 46 55
	Z	i	06	14	22		
	Z	iP	14	59	32	C	Multiple
	NE	iS		09	17		51·5N 177W 14 47 55
	Z	iP?	16	30	21		
15	Z	iP	03	03	40	C	
	Z	iP	04	24	43	C	
16	Z	iP	02	44	54		
	Z	i	09	43	17	C	

Date	Comp.	Phase	G. M. T.	Type	Remarks
1957			h. m. s.		
Mar.17	Z	i	00 10 46		
	Z	iP	08 05 (40)		Disturbed
	Z	e	15 23 23		Microseisms
	Z	iP	16 28 47	D	"
	Z	iP	22 56 43	D	" 54N 166W
	NE	iS	23 06 (23)		22 44 44
18	Z	iP	02 37 06	D	
	Z	i	37 43		
	Z	eP	23 22 55		Microseisms. Doubtful.
19	Z	iP	11 40 37	C	
	Z	iP	13 02 35	C	51·5N 175W
	NE	iS	12 23		H = 12 50 51 D = 8450 km
	Z	iP	17 15 50	C?	
21	Z	iP	12 43 12	C?	52N 171W H = 12 31 30
	Z	iP?	15 57 48	C	Small
22	Z	iP	14 32 33	C	54N 166W
	NE	eS	41 50		H = 14 21 06
	E	eL	51 00		D = 7900 km
23	Z	iPKP	05 32 09		5S 131E
	Z	i	32 56		H = 05 12 31
	Z	e	38 07		
24	Z	e	04 57 14		
	E	eL	08 55 00		Changing records.
	Z	iP	11 17 46	D	
	Z	iPcP?	18 15	C	
	Z	iP	11 48 27	D	
	Z	i	49 01		
	Z	iP	16 44 08	C	
25	Z	iP	00 51 00	D	
	Z	e	06 51 18		

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Mar.26	Z	iP	02	59	38	D	
	Z	eP	03	16	44		
	Z	iP	16	13	47		
	Z	i		13	58		
27	Z	iPKP	07	51	28	C	
28	Z	e	13	27	11		Seismic?
	Z	iP	20	19	59	C	
	Z	iP	22	31	21		29·5N 22·75E
	Z	iPP		31	55		H = 22 26 00
	Z	eS		35	43		(B.C.I.S.)
	NE	eL		44	00		D = 2700 km
29	ZN	iP	05	21	57	C	D = 8100 km
	Z	i		22	01	D	53N 167W
	Z	i		22	56		H = 05 10 28
	ZNE	iS		31	31		
	N	L		46	30		40s.
	N	M		51	20		25s. 150μ
	Z	iP	23	01	25	D	53N 169W
	Z	i		01	37		H = 22 49 51
	ENZ	eS		10	59		D = 8100 km
30	Z	iP	00	54	27	D	
	Z	i		54	39		
	Z	eP	09	38	37		
31	Z	eP	10	20	13		Microseisms.

R. E. Ingram, S.J.

Records from the Seismological Observatory,
Rathfarnham Castle,
Co. Dublin, Ireland.

APRIL 1957

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Apr. 1	Z	iP	11	47	30	C	
	Z	pP		47	53	D	
	Z	iP	19	16	34	C	
2	Z	iP	00	51	28	C?	
	Z	ipP		51	41	D	
	Z	iP	12	03	30	C	
	Z	iP	20	28	42	C?	
	Z	ipP		28	54	D	
	Z	iP?	21	29	19	C	
	Z	iP	21	39	40	C	
4	Z	iP	00	23	43	D	
	NE	eS		32	53		
	Z	iP	07	04	09	D	
5	Z	P	03	01	(15)		Beginning in hour mark.
	Z	$iPKP_1$	07	50	04	C	26·5S 177W
	Z	$iPKP_2$		50	12	D	H = 07 30 22
	Z	$ipPKP_2$		50	31		
	Z	isPKP		50	48		
7	Z	iP	07	45	35	C	
8	EZ	eP	20	29	(55)		Disturbed
9	NZ	iP	00	36	56	D	1·0s 3·5μ
	Z	ipP		38	44	C	30·5N 138·5E
	Z	iPP		40	41	C	H = 00 24 39 h = 450 km
	N	iS		47	19		D = 10100 km
	Z	i	02	39	45		
	Z	iP	11	14	01	D	
	Z	iP	20	35	33	D?	
	Z	ipP?		35	44		
10	NE	eP	03	37	00		No Z record from 00 hrs
	NE	eL	04	06	00		- 08 hrs.

Date	Comp.	Phase	G. M. T. h.	m.	s.	Type	Remarks
1957							
Apr.10 (contd.)	E	eP	05	24	10		D = 8800
	NE	eS		34	11		15½N 98W
	Z	iP	09	21	10		D = 8800 km
	Z	i		21	23		51N 177W
	NZ	eS		31	12		H = 09 09 18
	Z	i	11	40	54		Small foreshock (?)
	ZN	iP		41	00	C	D = 7500 km
	Z	i		41	23		56N 154W
	E	iS		50	00		H = 11 29 58
	N	eSSS		58	00		
	Z	i	12	08	12		
11	Z	iP	02	56	48		
13	Z	iP	05	25	09	D	
	Z	eP	18	42	51		
14	Z	iP	07	22	46	D	H = 07 11 58
	Z	iPcP		24	23		D = 7500 km
	NE	eS		31	46		
	N	eLQ		48	00		
	E	eLR		51	00		
	Z	eP	08	35	10		Small
	Z	iP	16	47	45	D	
	Z	iPKP	19	37	27	C	1s. 0·5μ D = 15700 km
	Z	i		40	45		15·5S 173W
	NEZ	iPP		41	08	D	H = 19 17 57
	Z	$iPPP_2$		52	26		
	NZ	eLR	20	28	00		50s.
		M		38	00		25s. 100μ
	Z	iP	21	10	53	D	
15	Z	iP	10	50	22	C	
	Z	iP	18	24	19	C	
	Z	iP	21	44	41	D	
		i		44	55	D	
	Z	iP'P'?	22	11	47		
16	Z	iP	04	17	22		D = 12000 km
	Z	ipP		19	41		4·5S 107·5E
	Z	iPKP		21	25		H = 04 04 04
	Z	ePP		21	52		h = 600 km
	Z	ipPP		23	44		
17	Z	i	04	40	39		Seismic?

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Apr.17	Z	iPKP	08	27	20	D	
(contd.)	Z	iP	13	36	32	D	
18	Z	i	07	12	12		Very small
19	Z	iP	15	56	35	D	D = 8300 km
	NE	iS		06	15		
	NZ	iP	22	31	04	D	0·7s 4·5μ
	Z	i!		31	16		D = 8300
		iPP		33	58		52N 166·5W
	N	iS		40	33		22 19 26
	N	eLR		55	30		
	N	M	23	06	30		20s 30μ
20	Z	e	12	50	10		
21	Z	iP	21	23	38	D	7N 72W
	EZ	i!		23	42	C	H = 21 12 26
	NE	iS		32	56		D = 7850 km
	Z	iP'P'		51	30		
22	Z	i	00	49	16		
	Z	iP	01	53	05		
	Z	i	05	42	54		Seismic?
	Z	iP	13	54	25		
	Z	e	15	50	30		
24	ZE	iP	19	16	22	C	D = 3300 km
	Z	i		16	30		H = 19 10 16 (BCIS)
	Z	i		16	38		36·3N 29·1E
	Z	i		17	30		
	NE	iS		21	26		
	N	iLQ		23	50		30s
	N	M		25	15		55s. 300μ
25	EZ	iP	02	31	39	C	
	Z	ipP		31	59		D = 3200
	Z	i(P?)		34	43		H = 02 25 44
	E	iS		36	35		36·3N 29·1E (BCIS)
	Z	i(P?)		38	21		h = 100 km
	N	iLQ		39	10		
	NE	iLg		42	35		
		M		43	30		20s. 500μ
	Z	iP	07	27	06		

Date	Comp.	Phase	G. M. T.	Type	Remarks
1957			h. m. s.		
Apr. 26	Z	iP	06 39 57		Repetition
	Z	iP?	09 30 45		
	Z	iP	15 20 34	D	
27	Z	iPKP	11 50 28		
28	Z	ePP	01 43 13		
	Z	iP	15 00 31		
	Z	iP	20 15 33	D	
29	Z	iP	04 41 41		
	Z	iP	09 34 28		
	Z	e	19 40 41		

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MAY 1957

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
May 1	Z.	iP	23	39	44	C	
2	Z	iP	02	33	43	D	
	Z	iP	04	02	00	D	72N 67·5W
				07	08		03 55 34 D = 3600 km
	Z	$iPKP_1$	10	53	54	C?	
	Z	i		54	06		
	Z	iP	11	40	49	D	
	Z	i		41	01		
	Z	iP	11	50	30	D?	
	Z	iPKP	21	54	07		D = 13000 km
	Z	i		54	15		7S 120E
				55	03		H = 21 36 25
	Z	ipPKP		56	47		h = 600 km
	NZ	iSKS	22	00	01		
3	Z	eP	07	22	15		
	Z	e(P)	16	26	37		
4	Z	e	15	03	24		
6	Z	i	01	40	47		
7	Z	iP	05	48	21	C	
	Z	i		48	35	C	
	Z	iP	09	21	38	C	
	Z	e	22	37	36		
8	Z	eP	14	33	(37)		Doubtful beginning
	Z	i		34	13		
11	Z	i	18	51	22		Seismic?
12	NE	eL	07	30	00		
	NE	eL	08	04	20		
	Z	iPP	11	48	10		D = 12,200 km
	NZ	ePS		57	36		8·5S 107E 11 29 07
13	Z	iP	02	32	22	D?	
17	Z	iPKP	03	01	30	D?	

Date	Comp.	Phase	G. M. T. h.	m.	s.	Type	Remarks
1957							
May 18	Z	iP	05	35	49	C	
	Z	i		36	06	C	
20	Z	eP	02	02	47		Very small
	Z	eP	20	02	24		
	Z	i		03	00		
21	Z	e(pP)	01	26	25		
	Z	iPP	01	29	50		
	Z	iP	11	48	44		D = 2300 km
	Z	iPP		49	06		38½N 14E (B.C.I.S.)
	Z	eS		52	34		H = 11 44 06
	Z	eP	13	29	27		
	Z	i		29	48		
	Z	i		30	32		
22	NZ	iP	13	41	38	C	D = 8600 km
	NE	iS		51	31		50N 177W H = 13 29 44
24	Z	iP	02	49	28	C	3N 76·5W H = 02 37 37
	NEZ	iS		59	24		D = 8600 km
	Z	iP	03	48	02		
	Z	i	21	13	04		
26	Z	i	06	39	01		Small foreshock?
	EZ	iP	06	39	25	D	41N 31E H = 06 33 31
	Z	iPP		40	03	C	D = 3100 km
	NE	iS		44	13		
26	08.30 hrs - 18.30 hrs no photographic record.						
	Z	e	21	13	16		
27	Z	iP?	06	38	33		
	Z	eP	11	07	27		
28	Z	iP	01	31	03	D	
	Z	iP	06	03	24	D	D = 8500 km
	Z	i		03	34	C	25·5N 95E
	N	eS		13	18		H = 05 51 30
	Z	iP	06	31	36		
	Z	iP	19	30	47	C	
	Z	ePKP	23	38	53		
29	Z	iP	18	44	47	C	
	Z	iPP(pP?)		45	23	C	D = 3000 km Deep?

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
May 29 (contd.)	Z	i	18	45	36		
	Z	eS		49	20		
30	Z	$iPKP_1$	00	38	37		20S 175W
	Z	$iPKP_2$		38	49		H = 00 18 52
	Z	i	15	27	35		Seismic?
	Z	i		27	56		
	Z	iP	18	12	59		Very small
	Z		20	00	(30)		Beginning in hour mark
	Z	eP	23	17	13		
31	Z	iP	02	28	49	D	D = 10600 km
	Z	ipP		30	59		h = 600 km
	Z	ePP		32	46		
	Z	ePPP		34	33		
	Z	iP	03	21	35		
	Z	iP	22	09	26	D?	
	Z	iP	22	28	58		
	Z	i		29	22		

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Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
June 1	Z	eP	05	32	42		Very faint
	Z	eP	21	14	08		
2	Z	iP	01	17	46		
	NE	eS		22	26		
4	Z	eP	00	52	55	D	
	Z	iPKP	17	23	42	C	1·0S 0·6μ
	Z	i		24	52	D	17·5S 178W
	Z	ePP		28	35		h = 550 km H = 17 05 02
5	EZ	e(P)	07	20	(16·5)		3s. 0·5μ 52·5N 35W
	EZ	iP		20	27	C	H = 07 16 17
	NEZ	iS		23	44		D = 2000 km
	Z	iP	14	09	19	C	
	Z	ePP		12	34		
6	Z	iP	03	42	10	C?	
	Z	iP	05	50	06		Small
7	Z	iP	00	12	59		
	Z	iPKP	21	11	59		
	Z	i		12	05		
8	Z	iPKP	22	46	03	C	
9	05.30 hrs to June 11th 08.00 No records.						
11	Z	$iPKP_1$	15	09	39	C	
	Z	$iPKP_2$		10	08		
	Z	i		10	20		
	Z	iPP		13	38		
	Z	iP	19	03	25		
12	Z	iP	00	05	43	C	
	NE	eSS		21	30		
	Z	iP	08	40	56	C	9170 km
	NE	eS		51	09		41·5N 142·5E H = 08 28 34
13	Z	e	10	34	43		Seismic?
				35	03		
	Z	iP	10	52	25	C	
	Z	i		52	38		51·5N 175W
	Z	i		54	41	C	H = 10 40 38 D = 8400 km
	E	eS	11	02	03		
	N	iSS		07	13		
	N	eLR		15	00		
	N	M		32	00		18s. 50μ

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
June14	Z	eP	06	36	03		Small
15	Z	iP	18	29	59		
18	Z	iP	02	24	54	C	14·5N 96E
	Z	ePP		28	06		H = 02 12 12 D = 9700 km
	Z	(P)	15	00	(50)		In hour mark
	Z	iPKP	18	16	16	D	
	Z	i		17	34		
19	Z	iPKP	01	49	41		
	Z	i		49	46		
	Z	ePKP	08	21	08		
	Z	e		23	34		
21	Z	i	16	06	42		)
	Z	i		07	32		) Local disturbances?
	Z	i		08	16		)
	Z	iP	18	50	06	C	
		i		50	19		
22	Z	iP	06	30	55	C	16N 94W
	Z	i(pP)		31	22		H = 06 19 06
23	Z	e	00	09	26		
	Z	ePP		10	40		D = 13400 km 1·5S 137E
	NE	eSKS		16	08		H = 23 50 23
	Z	eP	03	37	26		
24	Z	iP	10	01	36		
	Z	epP		02	00		
	Z	eP?	11	21	27		
	Z	i		21	52		
27	NEZ	iP	00	19	45	D	(Z) 8s. 50μ
	NEZ	iPP		22	11		
	NEZ	i		23	18		(N) 12s. 120μ
	NE	iS		28	02		(N) 20s. 150μ
	NE	iSS		31	57		
	NE	eSSS		34	22		
	N	eLQ		38	20		50s.
	E	eLR		40	10		
	NE	iL		42	00		
	NE	M		47	30		18s. 700μ D = 6700 km
							56·5N 116E H = 00 09 28
	Z	e	07	19	29		
28	Z	e	16	05	48		

Date	Comp.	Phase	G. M. T.	Type	Remarks
1957			h. m. s.		
June29	ZNE	P	08 00 (00)		Changing records
	Z	iP	08 42 55		
	Z	iP	11 01 27	D	
	Z	iP	22 44 09		
	Z	iP	22 56 44		
	Z	eP	23 41 00		
	Z	iP	23 50 46		
	Z	i	50 52		

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JULY 1957

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
July 1	Z	i	13	15	28	D	
	Z	e	16	21	40	D?	
	Z	iP	19	42	11	C	1·5S 0·4μ
	Z	ipP		42	34	D	25N 94E.
	Z	i!		42	48		H = 19 : 30 : 16
2	ZE	iP	00	50	32	C	10S 30μ
	Z	i		50	48	C	36N 53E
	Z	iPP		52	18	D	H = 00 : 42 : 23
	NE	iS		57	07		
3	Z	i	01	59	37		
	Z	$iPKP_1$	06	21	30	D	
	Z	$iPKP_2$		21	39	C	
	Z	iP	12	36	32	C	1·5S 1·0μ H = 12 : 24 : 37 50·5N 179W
7	Z	iP	06	05	41	C	
	Z	ePKP	16	30	31		
	Z	e		33	51		
8	Z	i	15	42	28		
9	Z	i	10	11	44		Seismic?
	Z	iP	20	39	33		
	Z	eP	21	24	48		
	Z	i	21	26	02		
	Z	e	22	36	27		
10	Z	i	06	10	18		
	Z	eP	09	15	53		8N 82·5W
	NE	eS		25	35		H = 09 : 04 : 08
11	Z	i	17	20	20	C	Seismic?
12	Z	i	18	30	51	D	
13	Z	iP	01	11	19	C	
	Z	i		11	27	D	

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
July 14	Z	iP	02	39	(00)		Time doubtful.
	Z	$iPKP_1$	06	43	32	D	
	Z	$iPKP_2$		43	41	D?	
	Z	i		43	54		
	Z	ipPKP		44	10	D?	
	Z	i		44	44		
	Z	iPP		47	30	C	
	Z	ePKP	08	30	43	D	
	Z	i		30	52		
	Z	iPP		34	47	D	
	Z	iPKP	10	02	18		
15	Z	iP?	09	40	46		Very small
20	Z	iP	11	24	35	C?	
	Z	iPKP	15	58	28		
		i		58	45		
22	Z	$ePKP_1$	06	36	59		
	Z	$iPKP_2$		37	37		
	Z	e	14	11	10		
23	Z	eP	00	56	59	C	1·0S 1·3μ
24	Z	e	02	11	43		Very faint
	Z	i	10	17	05		Seismic?
	Z	ePKP	11	22	06		
25	Z	iP	07	54	10		
	Z	e	22	30	52		
27	Z	e	08	58	38		
	Z	iPKP	19	02	17		
28	Z	iP	08	52	05	C	D = 8700 km
	Z	iP		52	20	D	17N 99W
	Z	iPP		55	01		H = 08 : 40 : 04
	Z	i		56	06		
	NE	iS	09	03	05		
	Z	iP	10	11	06		
29	Z	iP	17	28	39	C	6S 2μ
	Z	i		29	09		

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AUGUST 1957

Date	Comp.	Phase	G. M. T.	Type	Remarks
1957			h. m. s.		
Aug. 3	Z	i	08 36 55		
4	Z	e	06 18 50		Poor recording.
	Z	e	21 28 30		
7	Z	iPKP	19 59 29	C	1·0S 1·1μ
	Z	e	20 01 36		
8	Z	i	22 42 47		
	Z	e	22 43 51		
9	Z	i	02 39 16	?	Doubtful.
	Z	iP	11 11 44	C	46N 151E h = 100 km H = 10 : 59 : 46
10	Z	eP	00 13 35	D	Repetition.
	Z	ePKP	04 14 53		
	Z	eP?	10 05 20		
11	Z		05 33 42		
	Z	$iPKP_1$	21 57 52	D	1·8s 0·1μ 17·5S 169E
	Z	$iPKP_2$	58 00	C	H = 21 : 38 : 05
12	Z	iP	08 09 47	C?	
	Z	iP?	11 31 49		
13	Z	i	02 52 52		
	Z	iP	12 10 24		
14	Z	e	01 16 58		
	Z	iP	02 50 33		Very small
		i	52 47		35·7N 28E (BCIS) H = 02 : 44 : 30
	Z	iPKP	18 46 18		
	Z	iP	20 40 31		
	Z	iP	21 10 47		
15	Z	iPKP	21 05 52		Microseisms
16	Z	iP	06 31 00		
	Z	iP	23 44 41	C	10·5N 104W
	Z	iPP	48 24		H = 23 : 31 : 55 D = 9800 km

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Aug.17	Z	e	18	51	16		
18	Z	iP	21	23	21		H = 21 : 10 : 42
	Z	i		23	58		
	Z	iP	21	54	18	C	50N 157E
	NE	iS		04	12		H = 21 : 42 : 30 D = 8600
19	Z	iP?	03	38	58		
	Z	iP	21	43	40	C	
	Z	ipP		43	55	D	
20	Z	e?	10	30	40		
	Z	iPKP	12	21	17	C	H = 12 : 01 : 54
	NEZ	iSKP		24	43		10S 161E 15100 km.
	Z	iP	15	29	(21)		Disturbed.
	Z	i?	22	28	46		
	Z	iP	22	42	06		
	Z	i		42	40		
21	Z	iP	15	46	07	C?	
	Z	iP	19	42	51	C	51·5N 171W
	Z	ipP?		43	07		H = 19 : 31 : 08
22	Z	e	18	35	34		Irregular
23	Z	i	01	46	43		Seismic?
	Z	iPKP	02	19	12	D	
25	Z	i	21	26	08		
26	Z	iP	11	41	41		19S 63W
	Z	i		43	29		H = 11 : 28 : 50
	Z	eP	14	11	11		
	Z	e		11	29		
28	Z	e	09	32	46		
29	Z	i	00	02	46		
30	Z	iP	16	27	20	C	39N 73E
	Z	i		27	25		H = 16 : 17 : 56
	NE	iS		34	54		
	Z	iP	20	17	25		

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SEPTEMBER 1957

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Sep. 2	Z	e	00	16	44		
	Z	i		17	03		
	Z	i	00	52	51		
	Z	iP	14	31	51	D	
	Z	i(pP)		32	15		
	Z	iP	21	36	43	C	37N 71E
	Z	ipP		37	34		H = 21 27 36
	NE	eS		44	06		h = 200 km D = 5800 km
3	Z	i	15	00	21	C	
6	Z	iP	05	06	29		
	Z	ipP		06	42		
7	Z	iP	07	00	23	D?	
	Z	i		04	27		
	Z	eP	10	18	31		
8	Z	i	23	55	36		
12	Z	e	00	40	00		Strong microseisms
18	Z	iP	01	11	35		
19	NZ	e	17	43	00		Disturbed
20	Z	iP	08	37	26	D	Small
21	Z	eP	20	23	07		40½N 34½E
	NZ	eS		28	21		20 16 53
	Z	e		29	20		D = 3300 km
24	EZ	ePKP	08	39	(40)		Strong microseisms
	EZ	iPP		40	(20)		5·5N 127·5E
	NE	ePS		49	34		H = 08 21 05
	NE	eLQ	09	06	-		D = 12200 km

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Sep.24	NE	iLg	09	20			
(contd.)	NE	M		25	30		20s. 250μ
25	Z	eP	05	57	10		34N 38·5W
	NE	eS	06	02	14		H = 05 50 56
	N	eLR		03	30		D = 3300 km
	NE	M		05	10		20s. 50μ
	NE	eL	17	30	00		
27	Z	iP	05	39	21	C	
	NZ	e(S)		48	42		
28	Z	iP	00	39	42	C	
	Z	i		40	04		
	Z	iPKP	14	38	39	D?	5s. 10μ 16400 km
	Z	ipPKP		41	00		h = 650 km
	Z	iPP		42	00		20·5S 178·5W H = 14 20 00
	Z	iPKP	15	02	41		
	Z	iP	22	53	09		
29	Z	$iPKP_1$	08	32	08		4s. 2μ
	Z	$iPKP_2$		32	19		
	Z	i	13	40	18		Seismic?

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OCTOBER 1957

Date	Comp.	Phase	G. M. T.	Type		Remarks
1957			h. m. s.			
Oct. 2	Z	iP	12 38 19	D?	3S 0·5μ	
	ZN	eS	46 50		D = 6900km	
	Z	iP	21 11 37			
	Z	i	14 11			
4	Z	iPKP	01 20 04	C		
	Z	iP	05 36 24	C?	1S 0·2μ	
	NZ	eS	44 57		D = 6900km	
	NE	M	06 20 -		20S 20μ	
5	Z	iP	00 07 25	C		
	Z	e	08 09			
	Z	iP	11 43 04	C	34½N 26½E	
	Z	e	43 36		H = 11 36 46	
	Z	eS	48 14		D = 3300km	
	NE	eL	53 -			
	Z	e	16 58 42			Very small
6	Z	iP	01 04 28	D		
	Z	iP	21 39 39	D		
	Z	i	42 53			
7	Z	iP	13 31 39	D		
	Z	ipP	31 51	D		
	Z	$iPKP_1$	17 07 22	C	20S 179W	
	Z	$iPKP_2$	07 26		H = 16 48 47	
					h = 650km	
	Z	i	18 50 55			
10	Z	iPKP	04 05 33	D		
	Z	iP	05 56 15			
	Z	iP	07 50 02			
	Z	ipP	50 24			
	Z	iP	19 05 (30)			Minute marks failed

Date	Comp.	Phase	G. M. T.	Type		Remarks
1957			h. m. s.			
Oct.13	Z	iP	04 31 20			
15	Z	e	06 15 40			Microseisms
17	NE	e	14 46 30			Microseisms very strong
18	Z	e	17 34 12			
	Z	e	17 52 11			
19	Z	iP	18 41 59	C		Small
	Z	i	42 12		D = 10200km	
	Z	ePP	45 39		23·5N 122E	
	ZE	eLR	19 24 30		H = 18 28 50	
	ZE	M	27 30		18S 50μ	
	Z	iP	21 53 55	D	3S 2μ	
	Z	i	54 06		D = 8800km	
	Z	e	54 22		44·5N 146E	
	Z	ipP	54 37	C	H = 21 41 59	
	ZN	eS	20 03 (40)		h = 150	
20	Z	iP	12 13 28	D?		Atlantic Ocean
	Z	e	14 49		11·5N 42W	
	NE	eS	20 58		H = 12 04 22	
	E	eLR	25 30		D = 5800km	
	NE	M	27 -		24S 20μ	
21	Z	e	14 32 37			Microseisms
22	Z	iP	20 56 (34)			
23	Z	i(P?)	04 49 05	C		
	Z	iP	06 08 28			
	Z	i	06 49 39			
24 Oct. 08 hrs — 26 Oct. 08 hrs No Z record.						
26	Z	iPKP	08 44 55			
	Z	i	49 08			
	Z	e	14 47 04			
27	Z	iP	22 43 40			Strong microseisms
29	Z	iP(?)	02 36 46			

Date	Comp.	Phase	G. M. T.	Type		Remarks
1957			h. m. s.			
Oct.30	Z	eP	01 49 26			Strong microseisms
	Z	eL	59 00			
	Z	i	07 37 26			" "
31	Z	iP	10 20 06		2S 0·1μ.	
	Z	e	16 38 46			

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om the Seismological Observatory,
Rathfarnham Castle,
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NOVEMBER 1957

Date	Comp.	Phase	G. M. T.	Type		Remarks
1957			h. m. s.			
Nov. 2	Z	ePKP	18 50 (00)			Time by measurement.
6	Z	iP	13 25 08			
	NE	eL	55 00			
7	NE	eL	07 45 00			
10	Z	i	00 01 34			
	Z	iPKP	02 56 16		1·1S 1·0μ	
	Z	ePKP	05 48 05	C		
	Z	eP	08 39 54			
	Z	iP	10 32 52			
	Z	i	12 05 37			Very small
	Z	iP	19 32 58			
	N	e	45 43			
	Z	i	22 22 05	C		Seismic?
	Z	e	22 41			
12	Z	iP(?)	00 45 06	D		
13	Z	iPKP	17 42 23	C	4S 3μ	
	Z	i	42 59		33S 179W	
	NEZ	eSKKS	54 08		H = 17 22 41	
	NE	eSS	18 07 20			
14	Z	i	05 36 46			
15	Z	i	08 17 31			Seismic?
	Z	iP	16 42 09	D		
	Z	i	42 49			
	Z	i	43 02			
17	Z	iP	06 09 00	C	49N 148·5E	
	Z	ipP	10 25		H = 05 57 48	
					h = 350km	
18	Z	i	15 23 22			

Date	Comp.	Phase	G. M. T. h.	m.	s.	Type		Remarks
1957								
Nov.20	Z	iP	12	51	56	C		Microseisms
	Z	e		52	06	D	54N 165W	
	Z	i		52	51		H = 12 40 23	
	NE	iS		01	27		D = 8300km	
23	Z	eP	01	10	23			Microseisms
	NE	eL		35	00			
25	Z	ePP	22	54	40			Ill defined
	NE	eSS	23	10	05		1·5S 116E	
	N	eL		28	00		H = 22 35 00	
26	Z	ePP	05	29	00			
	Z	e		32	48			
	NE	eL	06	01	00			
	Z	iP	08	20	51	D?		Foreshocks of Nov.27, 03.
	Z	e		21	37		H = 08 15 22	
	Z	eP	11	55	27		H = 11 50 02	
	Z	eLM	12	06	00			
27	Z	eP	03	13	27	D	39·3N 22·8E	
	Z	i		13	37		H = 03 08 03	
	NZ	eS		17	59		D = 2800km	
29	Z	e	18	03	25			
	NZ	iP	22	32	25	D	2·5S 5μ 21S 66W	
	Z	ipP		33	23	C	H = 22 19 38	
	Z	isP		33	36		h = 200km	
	Z	i		36	06		D = 10100km	
	Z	iPP		36	55	C		
	NEZ	iSKS		42	31	SW		Difficult interpretation
	NE	iS		44	15			
	NE	e		46	12			
	NE	eSS		49	40			
	NE	eG?		58	00			
	Z	iPKPPKP		58	04	C		
30	Z	iP	02	11	39			
	Z	e	22	09	33			
	NE	eL		38				

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Records from the Seismological Observatory,
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DECEMBER 1957

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Dec. 1	Z	i	01	04	49		
	Z	eP	01	12	25		
	Z	eP	01	21	10		
	Z	i	04	19	49		
2	Z	e	12	55	20		
3	Z	e	05	51	54		
4	ZNE	iP	03	48	14	C	0·6 s. 14 μ (Z)
	ZE	iPP		50	51		45·5N 99·5E
	NE	iPPP		52	04		H = 03 37 45
	N	e		56	24		D = 7100 km
	NE	iS		57	02		
	NE	iSS	04	01	22		
	N	eLQ		06	25		90 s.
	E	eIR		08	10		25 s.
	NE	iLg		12	30		Pens knocked off N.E.
	Z	M	04	19	00		18 s. >500 μ
	Z	iP?	04	03	15		
	Z	iP?	04	39	27		
	Z	i	05	11	41		
	Z	iP	09	19	54		
	Z	iP	13	30	56		
	Z	eP	22	27	28		
5	Z	e	14	09	06		Indistinct
	Z	i	19	22	48		Seismic?
6	Z	iP	04	01	40	C	
	Z	iP	08	48	34		
	Z	ipP?		48	46		
	Z	i	21	33	09		Small
	Z	e		34	27		

Date	Comp.	Phase	G. M. T.			Type	Remarks
1957			h.	m.	s.		
Dec.10	Z	ePP	14	57	30		6S 154·5E
	NE	eL	15	32	-		H = 14 35 57
12	Z	i	08	00	59		
	Z	i	22	17	49		
13	Z	iP	01	43	19	C	7N 76W
	Z	ipP		43	34		H = 01 31 57
	Z	iPcP?		44	24	D	h = 100 km
	EZ	iP	01	52	53	C	0·5 s. 1 μ 34·5N 48E
	Z	i		53	31	D	H = 01 44 59
	E	iPP		54	33	C?	D = 4700 km
	NE	iS		59	21		
	NE	eSS	02	02	04		
	N	eLQ		10	20		
	E	eLR		11	00		
	NE	M		17	00		14 s. 150 μ
	Z	i	11	33	31		Local disturbance. Seismic?
	Z	iP	20	38	14	D	
14	Z	i	17	36	58		
17	Z	eP	05	21	37	D?	53·5N 162E
	Z	e		21	59		H = 05 10 11
	Z	e		22	24		Microseisms
	NZ	iPKP	14	09	28	C	12·5S 166·5E
	Z	ipPKP		10	00		H = 13 50 12
	NZ	iPP		12	29	C	h = 100 km
	Z	ipPP		13	01	C	D = 15500 km
	N	iSKS		15	26		
	Z	iSKKP		21	25	D	
	NZ	iPPS		24	52		(PP 12 s. 9 μ)
	NE	eSS		31	15		
	NE	eL		55	30		
21	Z	eP	16	08	54		
23	Z	iP	12	39	54	C	35N 36·5W
	NE	iS		44	34		H = 12 34 03
	NE	i		46	01		D = 3050 km
	N	eL		47	28		
	NE	M		48	30		12 s. 30 μ
25	Z	e	13	55	40		
	Z	iP	16	36	39	C	
	Z	i		37	33		

Date	Comp.	Phase	G. M. T.	Type	Remarks
1957			h. m. s.		
Dec. 26	Z	iPKP	12 29 52	C	
30	Z	e	14 57 35		
31	Z	iP	10 25 08		58N 32W
	Z	iPP	25 18		H = 10 21 35
	NE	(eS)	(28 08)		S doubtful. D = 1650 km
	Z	eP	13 10 58		
	Z	iPKP	14 48 13		
	Z	e	56 02		

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