S C O T T B A S E

77° 51'S, 166° 48'E, altitude 109 feet

SEISMOLOGICAL BULLETIN

January 1958

Instrument	Component	Symbol	To (sec)	Tg (sec)
Benioff	Vertical	z	0.6	0.2
	"	Z	0.6	25.0
Benioff	Horizontal (N-S)	n	0.5	0.2
		N	0.5	10.0
Benioff	Horizontal (E-W)	e	0.6	0.2
		E	0.6	25.0

Recordings on 35 mm film (speed 15 mm/min.); enlarged 8 times in viewer.
Trace amplitudes are in millimetres as measured from viewer screen.
Periods in seconds.

Directions of first movements are indicated by small letters immediately after the last figures of the phase arrival times; as follows:

u = ground movement up
d = " " down
n = " " to north
s = " " to south
e = " " to east
w = " " to west

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	
Jan.	1	eP	z	10	19	17							
	1	e	zne	21	40.3								Tremors
	1	eP	z	23	12	52							
	2	eP	zn	11	36	02							
	2	e	zn	15	06	50							
	2	eP	zn	19	05	57							
	2	ePKP	zn	21	29	35							
		PKKS	zn		43	21ds	2.2	$\frac{1}{3}$		1.4		$\frac{1}{2}$	
	2	e(P)	zn	22	03	57							
	2	e(PKP)	zn	22	48	16							
		e	zn		53	37ds							
	3	e(PKP)	n	02	15	00							
	3	iP	zn	17	58	36d	3	$\frac{2}{3}$					
	3	e	n	21	15	54							
	3	i	zn	22	13	12							
	4	iP	zn	03	39	57							
	4	iP	zn	23	33	02							

1958 Date		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
Jan.	5	e	zn	05	03	45						
	5	iP	zn	08	16	43u	1.6	1¼				
	5	e	z	11	50	11						
	5	i(P)	zn	20	25	14						
	7	e	zne	00	57	45						
	7	iP	zn	00	58	25u	2	⅔				
		e	zne			11						
	7	i	e	00	59	21						
	7	iP	z	03	43	19						
	7	e	zne	07	24	35						
		i	zne			52						
		i!	zne		25	08						
		i!	zne			15						
	7	eP	z	08	30	20						
	7	iP	zne	11	50	41ne			1	½	2	⅔
	7	e	zne	13	10	56						
	7	iP	zne	13	13	7uw	2.5	½			2	½
	7	iP	z	19	01	58						
	8	eP	zne	02	54	48						
	8	e	z	02	59	35						
	8	e	zne	12	12	37						
	9	iP	zn	11	25	17						
		e	e			20						
	10	eP	zn	21	10	16						
	10	e	zn	21	54	41						
	11	iP	zne	13	28	23d	3.5	1				
		PcP	z		29	16						
		PP	z		30	25						
		PPP	zn		31	42						
		PcS	zn		32	28						
		iS	zne		35	58ue	4.8	6				
		ScS	e		37	48						
		ScS	nne		37	56						
		(Lq)	e		41							
	13	eP	z	03	05	29						
	14	iP	z	06	04	36u	3	⅔				
	14	iP	z	07	28	44d	3.8	½				
	15	iP	zne	19	26	33de	9.5	1¼				
		PP	z		29	37						
		iS	ne		36	35						
		L	n		50	00						
		Lr	z		50	35						
		Lr	e		51	45						
	15	iP	zne	22	26	21u	1.4	¾				
		eS	e		35	03						
		(ScS)	e		36	17						
		L	z		50	00						
	15	iP	zne	24	10	39						
	16	iP	ze	11	14	10u	2.4	¾				
	17	e	z	04	26	33						
	17	eP	ze	07	21	36						
		(PPP)	z		22	55						
			z		23	33						
		PcP	zn		24	43						
		eS	ne		26	39						
		Lr	zne		29	00						
	17	eP	zne	13	06	56						

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
Jan.	18	eP	Zz	15	26	06						
		PP	Z		28	38						
		PPP	Z		30	10						
	19	eP	Zze	14	21	05						
		PPP	Z		26	00						
		L	ZNE		53							
	20	eP	z	02	30	46						
	20	eP	zne	03	07	31						
		e	Z		09	33						
		e	E			47						
		L	E		12	30						
	20	eP	zne	10	03	51						
	21	e	zne	20	28	48						
	22	eP	z	18	14	55						
	23	iP	z	23	54	54						
	24	iP	z	06	57	09						
	24	e(P)	z	18	11	47						
	24	iP	z	24	02	52½u	3		⅔			
	26	eP	z	04	50	28						
	30	iP	z	22	50	12u	3		1			
	31	iP	z	06	40	03						

SCOTT BASE

77°51'S, 166°48'E, Altitude 109 feet

SEISMOLOGICAL BULLETIN

February, 1958

Instrument	Component	Symbol	To (sec)	Tg (see)
Bernoff	Vertical	z	0.6	0.2
	"	Z	0.6	25.0
Bernoff	Horizontal	n	0.5	0.2
	(N-S)	N	0.5	10.0
Bernoff	Horizontal	e	0.6	0.2
	(E-W)	E	0.6	25.0

Recordings on 35 mm. film (speed 15mm./min.) enlarged 8 times in viewer.

Trace amplitudes are in millimetres as measured from viewer screen. Periods in seconds.

Directions of first movements are indicated by small letters immediately after the last figures of the phase arrival times; as follows:

u = ground movement up
d = " " down
n = " " to north
s = " " to south
e = " " to east
w = " " to west

Date 1958	Phase		Time (U.T.) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
FEB. 2	eP	z	08	30	56							
2	eP	z	09	34	55							
2	eP	zne	13	16	16							
2	eP	z	18	27	34							
2	e	z	23	23	08							
3	eP	ze	03	23	02							
	iP	n			07							
5	eP	zne	03	57	10							
5	eP	zne	04	16	44							
	iPP	z		17	07							
	iPPP	ze			20							
	iS	z		20	26							
	i(PcP)	z		21	17							Maybe SS
	iSSS	z			40							
5	e	zn	08	20	54.5							Tremors
5	iP	zne	13	24	53							
6	e	zne	08	05	55							
6	iP	zne	16	08	54d	5						$1\frac{1}{3}$
7	iP	z	01	19	07u							
	iPcP	ze		20	36u	4						1
7	e(P)	z	05	41	28							
	e	ne			32							
7	iP	n	06	52	30							
	i(PP)	n		53	43							
7	eP	e	07	49	20							
7	e(P)	z	10	42	53							
8	iP	zne	22	24	26							
	iS	zn		27	16							
11	eP	n	16	40	31							
11	eP	z	17	48	53							
12	iP	z	02	40	12d	3						$\frac{1}{2}$
12	eP	z	22	34	11							
13	e	z	00	40	45							
13	iP	z	06	35	40u	3						$\frac{2}{3}$
16	i(P)	z	22	27	08d	3						$\frac{2}{3}$
17	i	e	00	36	40							
17	i(P)	zne	00	49	17							
17	e	ze	08	13	15							

Date	Phase		Time (U.T.) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
FEB. 19	eP	zne	03	29	03							
19	iP	z	19	39	14u	2	1¼					
23	e(P)	zne	15	43	22							
25	e(P)	z	17	15	26							

Note: Owing to equipment trouble there are no records for 21st February

SCOTT BASE

77° 51'S, 166° 48'E, altitude 109 feet

SEISMOLOGICAL BULLETIN

MARCH 1958

Instrument	Component	Symbol	To (sec)	Tg (sec)
Benioff	Vertical	z	0.6	0.2
	"	Z	0.6	25.0
Benioff	Horizontal (N-S)	n	0.5	0.2
		N	0.5	10.0
Benioff	Horizontal (E-W)	e	0.6	0.2
		E	0.6	25.0

Recordings on 35 mm film (speed 15 mm/min.); enlarged 8 times in viewer.
Trace amplitudes are in millimetres as measured from viewer screen.
Periods in seconds.

Directions of first movements are indicated by small letters immediately after the last figures of the phase arrival times; as follows:

u = ground movement up
d = " " down
n = " " to north
s = " " to south
e = " " to east
w = " " to west

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
MARCH 1	eP	zn	16	24	29							
1	eP	z	17	25	32							
3	iP	z	05	01	13u	2.5	1					
7	eP	z	17	40	39							
11	eP	ze	00	44								
11	iP	Ze	14	09	42u	3.5	1½					
	iPcP	z		10	18u							
13	iP	z	00	57	39u	3	⅔					
13	iP	z	06	18	38							
14	iP	z	12	25	07							
16	iP	z	14	51	38d	2	⅓					
16	iP	ze	16	03	42½d	2	½					
18	eP	z	09	38	27							
18	eP	zn	21	33	05							
20	eP	z	01	57	13							
20	e	z	18	41	18							
22	eP	zn	08	40	08							
22	eP	zn	17	59	20							
22	eP	zn	21	45	45							
23	eP	zn	08	56	15							
23	iP	zn	09	50	56							
	e	zn		51	23							
	e	zn			41							
	e	zn		52	12							
	i	zn			52							

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
MARCH	23	eP	zn	21	19	13							
	23	eP	zn	22	12	12							
	23	eP	zn	22	47	10							
	24	iP	z	15	14	23d	18	$\frac{1}{4}$					
	26	iP	zn	14	16	39d	1.5	$\frac{1}{3}$					
	27	eP	zn	21	29	04							
	28	iPKP iPP	z z	12	25	05d 55	2	1					
	28	eP	z	14	55	19							
	30	eP	zn	14	04	37							
	31	eP	z	07	58	18							
	31	eP	z	13	04	25							
	31	eP	z	15	27	50							

SCOTT BASE

77° 51'S, 166° 48'E, altitude 109 feet

SEISMOLOGICAL BULLETIN

April 1958

Instrument	Component	Symbol	To (sec)	Tg (sec)
Benioff	Vertical	z	0.6	0.2
"	"	Z	0.6	25.0
Benioff	Horizontal (N-S)	n	0.5	0.2
		N	0.5	10.0
Benioff	Horizontal (E-W)	e	0.6	0.2
		E	0.6	25.0

Recordings on 35 mm. film (speed 15 mm/min.); enlarged 8 times in viewer. Trace amplitudes are in millimetres as measured from viewer screen. Periods in seconds.

Directions of initial movements are indicated by small letters immediately after the last figures of the phase arrival times; as follows:-

u = ground movement up
d = " " down
n = " " to north
s = " " to south
e = " " to east
w = " " to west

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
APRIL 2	eP	zn	07	07	26						
2	iP	zn	07	09	21						
2	eP	zn	17	41	37						
3	eP	z	05	34	01						
3	eP	z	08	21	58						
3	eP	z	22	56	08						
5	eP	z	19	55	09						
	i	z		59	49						
7	iPKP	ZN	15	50	20						
	L	ZN	16	45	28						
8	iP	z	13	31	18d	3.5	2/3				
8	eP	z	17	37	47						
9	iP	z	13	14	55u	1.8	1/2				
9	eP	z	16	11	46						
9	eP	z	18	10	29						
10	eP	z	01	11	45						
10	eP	z	03	46	18						
	e	z		47	14						
10	e	z	04	59	54						
10	iP	zn	13	30	10						
10	e	z	16	07	56						
10	eP	zn	17	10	06						
10	eP	z	19	20	09						
10	iP	z	20	38	10d	1.2	2/3				
11	eP	z	11	53	49						

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	
APRIL 11	eP	z	14	38	58							
11	iP	z	23	36	34 u	2	1					
12	e	z	03	50	45							
12	e	z	22	38	30							
13	eP	z	09	27	04							
13	e	z	09	53	55							
14	eP	z	03	49	05							
14	e	z	19	28	25							
14	iP	z	19	32	26 u	1	$\frac{2}{3}$					
14	e	z	22	08	40							
15	eP	z	07	04	15							
16	e	z	01	15	15							
16	eP	z	07	04	15							
16	eP	z	17	55	35							
17	eP	z	06	33	09							
17	e	z	07	27	38							
17	e	z	09	38	04							
17	eP	z	10	16	18							
	PKKP	z		32	04							
	e	z			20							
17	e(P)	z	13	18	25							
17	(PKKS)	z	14	38	15							
17	eP	z	17	18	27							
	e	z			32							
17	e(P)	z	18	52	28							
18	i(P)	n	02	36	30							
18	e	zn	05	45	19							
18	eP	z	07	41	11							
	PcP	z		43	07							
18	eP	zn	13	29	52							
	e	zn		30	08							
18	eP	zn	17	17	48							
18	PKP	z	18	08	41							
18	eP	zn	18	45	30							
18	iP	zn	20	05	13							
18	e	z	22	03	18							
19	iP	zn	09	00	25							
19	iP	zn	09	10	50.5u	2	$\frac{1}{2}$					
19	eP	z	11	00	47							
19	eP	z	11	43	28							
19	iP	z	14	51	14u	2.5	$\frac{1}{2}$					
20	i(P)	zn	10	50	14							
20	eP	zn	11	12	50							
	i	zn		13	41 d	1.5	$\frac{1}{2}$					
	e	z		18	50							
20	e	z	14	00	17							
20	e	z	16	54	28							Tremors
20	iP	z	21	22	58							
	PcP	z		24	49d	3.2	1					
	S	z		28	33d	1.5	$1\frac{1}{4}$					
21	eP	zn	08	49	13							
21	iP	zn	10	11	12 u	2	$\frac{3}{4}$					
21	eP	z	11	12	31							

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
APRIL 21	eP	zn	20	05	19						
21	eP	z	20	25	21						
21	(SKKKS)	z	20	59	31						
21	e	z	22	36	49						
21	eP	zn	22	49	30						
22	eP	zn	00	08	44						
22	eP	z	05	49	40						
22	eP	z	06	18	23						
22	eP	zn	07	46	41						
22	eP	z	21	24	23						
22	iP	zn	23	18	23n			1.2	$\frac{2}{3}$		
23	e	z	12	00	46						
23	e	z	13	31	46						
23	eP	z	14	10	41						
23	eP	z	19	24	06						
23	eP	z	21	58	46						
24	eP	z	07	35	39						
24	iP	n	08	02	59n			$\frac{1}{2}$	2		
24	eP	zn	13	19	24						
24	eP	z	21	58	12						
	e	z			56						
24	eP	zn	22	59	33						
25	iP	zn	00	49	54						
	e	zn		50	21						
	i	zn			45						
	i	z		52	59						
25	iP	n	00	59	17 s			2.5	$\frac{2}{3}$		
25	eP	zn	01	01	13						
	e	zn			24						
25	eP	z	11	51	17						
26	iP	zn	09	36	16						
26	e	z	10	46	45						
26	PKPPKP	z	17	48	23						
27	iP	zn	08	22	38d	1.5	$\frac{3}{4}$				
28	eP	z	06	15	07						
28	eP	z	09	47	42						
28	eP	z	11	39	47						
28	iP	z	12	00	16						
	e(PP)	n		03	12						
	ePP	Z			40						
	eS	En		10	48						
	PPS	nN		12	14						
	Lr	ZE		28	40						
28	eP	z	12	43	15						
28	eP	z	13	28	48						
	e	z		29	47						
	e	z		31	48						
29	eP	zn	04	57	08						
29	eP	z	05	33	18						
	e	z		46	51						
29	eP	z	06	35	37						
29	eP	z	11	51	14						
29	eP	z	20	40	06						

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
APRIL 29	iP	z	22	22	52u	2.5	$\frac{3}{4}$				
30	eP	z	05	04	35						
30	eP	z	05	57	44						
30	eP	z	06	46	37						
	e	z		51	31						
30	iP	z	19	39	12						
30	eP	z	22	59	22						

SCOTT BASE

77° 51'S, 166° 48'E, Altitude 109 feet

SEISMOLOGICAL BULLETIN

May 1958

Instrument	Component	Symbol	To (sec)	Tg (sec)
Benioff	Vertical	z	0.6	0.2
	"	Z	0.6	25.0
Benioff	Horizontal (N-S)	n	0.5	0.2
		N	0.5	10.0
Benioff	Horizontal (E-W)	e	0.6	0.2
		E	0.6	25.0

Recordings on 35 mm film (speed 15 mm/min); enlarged 8 times in viewer.
Trace amplitudes are in millimetres as measured from viewer screen.
Periods in seconds.

Directions of first movements are indicated by small letters immediately after the last figures of the phase arrival times; as follows:-

u = ground movement up
d = " " down
n = " " to north
s = " " to south
e = " " to east
w = " " to west

Date 1958	Phase	Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
May 1	iP	Ezne	00	39	32.5dn	17		1¼	2	1	
	PcP	n		40	33						
	PP	n		43	13						
	eS	Nn		48	02						
1	eP	Zz	01	08	11						
1	eP	z	09	43	05						
1	eP	z	19	42	31						
1	iP	z	21	17	10						
1	eP	z	22	30	09						
2	eP	z	23	59	12						
3	eP	zn	10	01	58						
3	iP	n	12	09	51						
3	eP	zn	12	57	48						
4	eP	z	14	59	50						
5	eP	z	06	44	42						
5	eP	z	11	31	07						
5	eP	z	11	47	20						
5	eP	z	17	01	00						
6	eP	z	22	54	21						
7	eP	z	06	17	09						
7	eP	z	08	17	07						

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
May	7		z			35							
	7	e	z	08	18	48							
	7	eP	z	11	10	34							
	8	iP	z	01	13	54							
	8	eP	z	07	19	25							
	8	iP	ZNEzne	12	52	03							
		PP	z		54	20							
		eS	NE	13	01	25							
	8	eP	z	14	44	54							
	9	iP	z	04	51	10u	1.2	$\frac{2}{3}$					
		PcP	z		52	16							
	9	eP	z	05	19	25							
	9	iP	z	18	52	49u	2	1					
	10	eP	z	05	57	24							
	10	eP	z	09	52	41							
	10	eP	z	13	52	06							
	10	iP	z	23	14	17d	2	1					
	11	eP	z	00	48	18							
	11	ePKP	z	05	43	30							
	11	ePKP	z	05	56	38							
	11	eP	z	06	38	11							
	11	iP	zn	10	09	34							
	11	iP	z	15	59	42d	2.2	$\frac{2}{3}$					
	11	eP	z	21	34	11							
	12	eP	z	03	46	22							
	12	eP	z	05	35	14							
	12	eP	z	09	39	25							
	12	eP	zn	10	41	40							
	12	eP	zne	16	21	12							
	12	eP	zn	16	43	59							
	12	eP	z	21	11	45							
	12	eP	z	21	40	25							
	12	eP	z	22	39	50							
	13	eP	zne	06	13	39							
	13	eP	zne	12	08	25							
	13	eP	zne	19	01	41							
	13	eP	zne	19	45	55							
	14	eP	zn	04	09	45							
	14	eP	z	10	49	20							

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
May 14	eP	zn	13	25	25							
14	iP	zn	15	58	07n			2	$\frac{2}{3}$			
14	eP	zne	16	45	07							
14	eP	z	17	19	57							
14	iP	zn	21	01	41							
	i	zn			51							
	e	zn		12	36							
14	iP	z	21	29	26d	2.2	$\frac{1}{3}$					
14	eP	zn	22	18	15							Tremors
15	eP	z	03	30	48							
15	eP	zn	09	54	27							
15	e	zn	10	48	25							
15	eP	z	15	56	36							
16	eP	zne	13	01	13							
16	eP	ZNzne	13	31	50							
	e	z		32	19							
16	eP	z	18	21	32							
16	eP	z	18	57	03							
16	eP	ze	22	40	57							
17	iP	zn	17	53	54.u	2.5	1					
	PcP	z		54	11							
17	eP	z	20	58	50							
17	e	zn	22	00	10							
17	eP	z	23	02	42							
18	eP	ZNEzne	02	43	34							
	(PcS)	z		49	50							
	eS	ZNe		52	20							
	Lr	Z	03	05	00							
18	eP	ze	03	41	58							
18	iP	z	05	37	20u	2	1					
18	e	zn	08	42	51							
18	iP	ZNzne	12	31	59u	5.5	$1\frac{1}{4}$					
	L	Z		54	30							
18	iP	zn	19	43	32n			2	$\frac{3}{4}$			
18	e	z	20	05	58							
19	eP	zn	00	16	41							
19	eP	z	10	02	07							
19	eP	z	11	49	05							
19	eP	zn	13	00	24							
20	eP	z	05	53	22							
20	eP	z	12	20	41							

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
May 20	eP	z	16	41	14							
20	iP	z	21	56	46d	1	½					
21	eP	z	03	45	54							
21	eP	z	13	20	41							
	e	z		30	03							
21	eP	z	14	55	57							
21	iP	z	23	27	40							
	e	z		32	28							
22	eP	z	04	55	37							
22	iP	z	13	49	03u	2	⅔					
22	eP	zn	16	59	32							
23	eP	z	08	59	25							
23	eP	z	12	20	26							
23	iP	zn	12	53	09dn	1.2	⅔	2.6	¾			
	e	z		56	10							
23	iP	zn	15	59	08							
24	iP	z	05	04	05							
24	e(P)	zn	05	28	14							
24	eP	z	07	35	42							
24	eP	Nzne	08	32	02							
24	eP	z	16	44	33							
25	eP	z	06	24	42							
25	eP	ZNzne	21	24	52							
	e(S)			33	55							
26	eP	z	04	44	09							
26	iP	zn	09	02	52d	2	1					
26	ePKP	z	11	15	45							
	i(PKS)	z		18	55							
26	eP	zn	17	40	43							
26	eP	zne	20	37	40							
27	eP	ze	04	26	10							
28	eP	z	06	47	45							
28	eP	z	12	42	51							
28	eP	zne	15	52	29							
29	iP	z	11	31	18d	2.5	⅔					
29	eP	z	15	53	55							
29	eP	z	16	22	50							
29	iP	z	19	16	55							
30	eP	z	05	26	42							

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
May 30	eP	z	06	01	50							
30	ePKP	z	18	24	06							
	PKS	z		27	27							
31	eP	z	14	21	18							
31	iP	zne	19	42	57d	2.5	1					
	PP	zn		45	25							
	eS	ne		51	40							
	SoS	z		52	12							
	SS	e		56	20							
	PKPPKP	z	20	12	00							
31	eP	z	22	13	32							

SCOTT BASE

77° 51'S, 166° 48'E, altitude 109 feet

SEISMOLOGICAL BULLETIN

June 1958

Instrument	Component	Symbol	To (sec.)	Tg (sec.)
Benioff	Vertical	z	0.8	0.2
"	"	Z	0.8	25.0
Benioff	Horizontal (N-S)	n	0.8	0.2
		N	0.8	10.0
Benioff	Horizontal (E-W)	e	0.8	0.2
		E	0.8	25.0

Recordings on 35 mm film (speed 15 mm/min); enlarged 8 times in viewer. Trace amplitudes are in millimetres as measured from viewer screen. Periods in seconds.

Directions of initial movements are indicated by small letters immediately after the last figures of the phase arrival times; as follows:

u = ground movement up
d = " " down
n = " " to north
s = " " to south
e = " " to east
w = " " to west

Date 1958	Phase	Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
JUNE 1	eP		z	10	52	09				
1	eP		z	12	46	28				
2	eP		zn	10	01	15				
2	eP		zn	12	46	12				
2	eP		zn	13	05	52				
2	eP		zn	14	09	20				
2	iP		zn	17	16	11u	2	2/3		
2	eP		zn	21	51	22				
3	e		z	00	43	43				
3	eP		zn	09	03	25				
3	iP		ZNzne	19	42	17d	5	1½		
	(PPP)		z		45	23				
	eS		Nn		50	53				
	L		ZN	20	06	00				
4	PKP		z	14	49	11				
	PKS		z		52	26				
5	eP		z	07	25	11				
5	eP		zn	08	32	05				
5	iP		ZNEzn	10	51	53us	5	2	4	2
	e		n		52	30				
	eS		ZNE		56	36				
5	e		zn	17	22	23				
6	eP		z	09	29	30				

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
JUNE	25	eP	z	02	23	42d	1.6	½				
	25	eP	z	02	34	19						
	25	eP	z	09	37	38						
	25	eP	ZNzn	09	48	17						
		PP	z		51	26						
		eS	Nn		58	07						
		SS	N	10	02	26						
		SSS	Nzn		06	46						
		L	Z		08	17						
		L	N		15	48						
	25	eP	z	12	55	28						
	25	eP	z	21	05	06						
	25	eP	z	23	10	30						
	26	iP	z	01	27	31u	1	¾				
	26	iP	zn	04	08	21d	3	1				
	26	eP	zn	04	56	24						
	26	ePKP	z	04	57	24						
		i	z			56						
		PP	zn		58	17						
		PKS	zn	05	00	37						
		PPP	zn		01	35						
	26	eP	zn	22	37	30						
	27	eP	zn	00	43	43						
	27	iP	zn	18	23	06u	2	¾				
	27	eP	zn	19	54	35						
	28	iP	z	05	21	17u	2.5	1				
	28	eP	zn	08	41	15						
	28	eP	zn	10	07	15						
	29	eP	z	03	37	47						
	29	eP	zn	09	25	02						
	29	eP	zn	11	00	26						
		e	zn			52						
		e	zn		12	20						
	29	eP	zn	12	51	08						
	29	eP	z	23	27	42						
	30	eP	zn	04	02	54						
	30	eP	zn	06	57	50						
	30	ePKP	z	09	01	54						
		PP	z		04	27						
		PKS	z		05	12						
	30	iP	zn	09	54	45d	4	⅓				
	30	eP	z	20	02	10						

SCOTT BASE

77° 51'S, 166° 48'E, altitude 109 feet

SEISMOLOGICAL BULLETIN

July 1958

Instrument	Component	Symbol	To (sec.)	Tg (sec.)
Benioff	Vertical	z	0.8	0.2
	"	Z	0.8	25.0
Benioff	Horizontal (N-S)	n	0.8	0.2
		N	0.8	10.0
Benioff	Horizontal (E-W)	e	0.8	0.2
		E	0.8	25.0

Recordings on 35 mm film (speed 15 mm/min.); enlarged 8 times in viewer. Trace amplitudes are in millimetres as measured from viewer screen. Periods in seconds.

Directions of first movements are indicated by small letters immediately after the last figures of the phase arrival times, as follows:

u = ground movement up
d = " " down
s = " " to south
n = " " to north
e = " " to east
w = " " to west

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
JULY	1	ePKP	zn	06	12	16						
		ePKS	zn		15	35						
	1	eP	zn	20	18	28						
	2	eP	zn	04	05	24						
	2	iP	zn	04	57	38d	3.5	$\frac{3}{4}$				
	2	iP	zn	16	51	40u	2	1				
	3	eP	zn	05	56	58						
	3	iP	ZNzne	06	36	01d	8	1				
		ePP	zn		38	54						
		ePPP	zn		40	33						
		eS	Nn		42	38						
		iScS	Nzn		45	13s			5	3		
	3	eP	zn	10	29	38						
		Lr	N		36	55						
	3	eP	z	16	08	09						
	4	eP	zn	00	29	35						
	4	eP	zn	02	34	33						
	4	iP	ZNzne	13	09	13u	5	$\frac{3}{4}$				
		e(S)	z		10	52						
		L	N		13	00						
		ePcP	z		15	11						
	4	eP	zn	18	46	51						
	5	eP	zn	00	45	32						

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
JUNE	6	eP	z	12	35	29						
	6	eP	zn	16	42	33						
		e	zn			42						
	6	e	n	22	10	00						
	7	eP	z	09	25	08						
	7	eP	zn	13	00	50						
		PPP	Zz		02	08						
		S	ZNn		06	18						
		L	Zzn		08	13						
		L	ZNE		09	15						
		ScS	n		12	08						
	7	eP	zn	18	39	10						
	8	PKP	z	00	58	00						
		PKS	z	01	01	32						
	8	eP	zn	19	20	36						
	8	PPP	z	21	42	56						
	9	eP	zn	05	06	15						
	9	eP	z	10	50	11						
	9	eP	zn	18	26	30						
	10	eP	zn	04	08	49						
	10	eP	zn	04	21	41						
		L	N		45	00						
	10	eP	zn	07	27	15						
	10	eP	zn	17	00	08						
	11	eP	z	03	52	03						
	11	eP	z	06	38	04						
	11	eP	zn	11	20	05						
		e	zn		22	43						
	11	eP	z	13	30	48						
	12	eP	z	16	56	47						
	12	eP	z	17	54	20						
	12	e	zn	19	02	17						
	13	eP	z	07	46	48						
	13	eP	zn	11	05	14						
		e(S)	z		09	05						
	13	eP	z	11	53	56						
	14	eP	z	16	39	00						
	15	eP	z	02	15	17						
	15	eP	z	11	43	47						
	15	iP	ZNne	15	03	58u	3.2	$2\frac{1}{2}$				
		iPP	Nz		05	48u	6	$2\frac{1}{2}$				
		iS	Nne		11	37n					5.5	5
	15	eP	z	17	32	09						

Date 1958		Phase	Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
JUNE	15	eP	z	18	57	02					
	16	iP	zn	01	20	34d	2.5	$\frac{2}{3}$			
	16	e	zn	03	14	24					
	16	iP	z	07	24	05.5d	1.5	1			
	16	eP	Nzne	16	54	40					
	17	eP	zn	10	09	20					
		e	zn		11	30					
	18	eP	z	05	49	24					
	18	eP	z	10	15	15					
	18	e	z	16	21	05					
	19	ePKP	ZNzn	05	37	06					
		PP	z		39	15					
		PKS	z		40	40					
		(SKKS)	Nzn		45	14					
	19	iP	z	07	56	37u	2	1			
	19	iP	zn	11	21	46u	3	$\frac{3}{4}$			
	19	eP	z	13	39	38					
	19	eP	zn	18	08	03					
		(PcP)	zn		10	10					
		eS	n		15	22					
		Lr	N		16	55					
	20	eP	z	00	58	22					
	20	eP	z	14	10	35					
	20	eP	z	17	41	35					
	21	eP	z	14	27	54					
	21	eP	z	17	08	57					
	22	eP	z	09	41	54					
	23	eP	zn	05	08	18					
	23	iP	zn	07	29	27u	2.5	1			
	23	iP	zn	19	02	36u	3.5	$\frac{2}{3}$			
	23	eP	z	19	26	56					
	23	eP	z	22	39	54					
	23	eP	zn	23	16	46					
	24	eP	zn	00	20	41					
	24	eP	zn	05	22	48					
	24	eP	zn	06	26	12					
	24	eP	zn	06	45	19					
	24	eP	zn	16	08	53					
	24	eP	zn	18	22	53					
	24	e	zn	22	19	25					
	24	iP	zn	22	19	28d	5	$\frac{3}{4}$			

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
JULY	5	eP		zn	04	55	10					
	5	iP		zn	14	01	29u	1.5	1			
	5	eP		zn	21	52	00					
	6	JP		zn	08	44	43					
	6	eP		zn	16	22	53					
	8	eP		z	05	22	22					
	8	eP		zn	06	16	22					
	8	iP		zn	12	36	54.5d	1.5	$\frac{3}{4}$			
		e		zn		37	08					
	8	eP		zn	19	32	11					
		L		N		38	16					
	8	e		z	22	56	18					
	8	iP		ZNzn	22	58	12					
	9	iP		zn	01	17	41u	1.4	$1\frac{1}{3}$			
	9	eP		z	06	27	45					
	9	iP		zn	14	03	28d	2	$\frac{3}{4}$			
	10	ePKP		zn	06	35	21					
		Lq		NE	07	17	00					
		Lr		znNE		20	00					
		Lr		Z		22	00					
	10	iP		z	14	59	44					
	11	eP		z	07	19	08					
	11	eP		zn	12	39	23					
	11	eP		Zzn	18	36	13					
		L		ZNE		42	21					
	11	iP		zn	19	22	12d	2	$1\frac{1}{4}$			
		eS		Z		31	55					
	12	eP		zn	01	01	08					
	12	eP		z	03	43	02					
	12	eP		zn	12	33	55					
	12	eP		zn	13	09	10					
	13	iP		zn	12	14	43u	1.5	1			
	14	eP		z	14	59	18					
	14	eP		zn	20	25	00					
	15	e		z	09	42	05					
	15	eP		z	12	19	46					
	15	eP		z	14	12	46					
	16	eP		zn	08	02	15					
		eS		zn		13	31					
	16	eP		zn	13	04	27					
		(SSS)		z		21	02					
	16	iP		zn	17	05	08d	1.4	1			

DATE 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
JULY	16	iP	zn	18	51	11u	2	1				
	17	eP	z	16	04	09						
	17	ePKP	z	21	18	32						
		ePKS	z		23	52						
	18	ePKP	z	00	58	40						
		ePKS	z	01	02	17						
	18	eP	z	02	00	24						
	18	eP	zn	08	01	40						
	18	eP	z	09	45	41						
	19	iP	zn	00	58	27						
	19	iP	ZNzne	06	41	49						
		iPcP	z		42	28						
	19	e(P)	zn	09	12	12						
		e	z		13	04						
	19	eP	ZNzne	18	29	01						
		eS	ne		39	06						
		L	Z		59	00						
		e(SKKS)	z		59	14						
	19	eP	z	20	06	39						
	19	eP	z	22	26	13						
	20	eP	z	11	06	34						
	20	eP	z	11	54	29						
	20	eP	z	12	23	12						
	21	eP	z	04	18	31						
	21	ePKP	z	07	43	54						
	21	ePKP	z	14	56	27						
		ePKS	z		59	45						
	21	e	z	18	40	50						
	21	iP	z	18	43	32d	3.4	1				
	21	e(P)	z	19	50	57						
	22	eP	z	06	44	29						
	22	eP	z	07	31	56						
	22	eP	z	15	02	49						
	23	ePKP	z	10	46	30						
	24	eP	z	03	03	47						
	24	eP	zn	06	07	36						
	25	eP	z	00	57	29						
	26	eP	zne	06	22	42						
	26	iP	zn	17	48	39						
		PPP	z		53	29						
		iS	zn		58	25						
		(PPS)	z	18	03	13						
		SS	z		05	47						
		SSS	z		06	51						
		SKKS	z		15	00						
		(PKPPKP)	z		17	20						

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
~~1958~~ JULY	27	eP	z	00	31	32						
		eP	z	17	29	48						
		eP	z	20	13	00						
	28	eP	z	04	56	15						
		iP	zn	17	33	52d	4	$\frac{3}{4}$				
		PP	z		35	35						
		(PPP)	z		40	21						
		eS	zn		41	25						
		ScS	z		43	26						
	28	iP	z	18	44	06d	2	1				
	28	eP	z	21	32	25						
	29	eP	zn	00	40	09						
	29	eP	zn	03	28	26						
		e(S)	z		37	30						
	29	eP •	zn	10	59	24						
	30	iP	ZNzne	04	56	45u	4	1				
		e	zn		58	10						
		PP	z		59	52						
		eS	Nzn	05	06	36						
	30	eP	z	15	17	58						
	31	eP	z	12	11	34						

SCOTT BASE

77° 51'S, 166° 48'E, Altitude 109 feet

SEISMOLOGICAL BULLETIN

August 1958

Instrument	Component	Symbol	To (sec.)	Tg (sec.)
Benioff	Vertical	z	0.8	0.2
	"	Z	0.8	25.0
Benioff	Horizontal (N-S)	n	0.8	0.2
		N	0.8	10.0
Benioff	Horizontal (E-W)	e	0.8	0.2
		E	0.8	25.0

Recordings on 35 mm film (speed 15 mm/min.); enlarged 8 times in viewer.
Trace amplitudes are in millimetres as measured from viewer screen.
Periods in seconds.

Directions of first movements are indicated by small letters immediately after the last figures of the phase arrival times, as follows:-

u = ground movement up
d = " " down
n = " " to north
s = " " to south
e = " " to east
w = " " to west

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
AUGUST 1	eP	ZNzn	05	47	32						
	ePcP	Zz		49	00						
	eS	ZNzn		55	35						
	L	N	06	02	38						
1	eP	z	14	36	52						
	PcP	z		38	34						
	(PP)	z		39	10						
3	iP	ZNEzn	01	15	17.5						
	PP	z		17	11						
	PPP	z		18	09						
	eS	ZNEzn		22	33						
	ScS	ZNEz		24	10						
	SS	z			42						
4	eP	zn	03	33	30						
4	iP	zn	04	24	44u	2	$\frac{3}{4}$				
	eS	N		34	08						
4	eP	z	08	54	10						
4	eP	z	16	15	26						
4	eP	z	21	05	44						
5	eP	z	17	31	21						
6	eP	z	10	02	09						
6	eP	ZNn	21	19	35						
	ePP	ZN		22	11						
	eS	ZNn		28	05						
	ePKPPKP	ZN		48							
6	eP	ZNn	22	01	33						
8	eP	zn	12	29	26						

Date 1958		Phase	Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
AUGUST	9	eP	ZNz	12	57	15					
	9	eP	zn	18	48	55					
	9	eP	z	22	59	49					
	10	eP	z	18	17	32					
	10	eP	z	19	22	52.5d	1	½			
	11	eP	z	08	03	21					
	11	eP	z	09	26	20					
	12	eP	zn	19	37	26.5					
	13	eP	z	04	02	54					
	13	iP	z	08	43	59d	2.2	¾			
	13	eP	zn	14	58	44					
	13	iP	z	17	00	40					
	13	ePKP	z	20	32	08					
	13	eP	z	22	07	49					
		ePcP	z		08	32					
	14	eP	z	00	41	52					
	14	eP	zn	09	54	50					
	14	iP	zn	12	54	04u	3	1			
	14	ePKP	Zzn	15	14	21					
		ePKS	Zz		17	41					
		ePKKP	z		24	11					
	15	ePKP	ZNzn	20	14	49					
		ePPP	z		19	13					
	15	iP	ZNEzne	22	41	24u	6.5	1¼			
		PPP	z		48	13					
		iS	Nzne		51	26					
		PS	Nzn		52	38					
		Lq	NE	23	04	28					
		PKPPKP	z		07	50					
		Lr	ZNE		13	30					
	15	eP	z	23	28	12					
	16	eP	z	11	23	13					
	16	ePKP	zne	13	34	31					
		ePKS	z		37	03					
		eSKS	z		40	24					
	16	ePKP	zne	19	32	55					
		ePKS	Zz		36	14					
	17	eP	z	02	11	21					
	17	ePKP	z	09	26	50					
		PP	z		27	46					
		PPP	z		31	08					
	17	eP	z	12	32	34					
	17	iP	z	16	04	49					
	17	eP	zn	18	12	53					
		ePPP	z		18	07					
		eS	z		22	30					

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
AUGUST 16	eP	ZNzn	21	19	07						
	ePP	z		21	58						
	ePPP	z		22	12						
17	eP	z	22	24	41						
18	eP	z	15	63	55						
18	(SoSPKP)	z	20	40	18						
19	wP	zn	04	55	49						
19	eP	ze	11	59	57						
19	e(SSS)	z	16	48	49						
19	eP	zne	22	00	08						
	eS	ze		10	05						
19	eP	z	23	07	09						
20	eP	ZNEzne	03	50	41						
	eS	ZNEne		59	26						
20	e(SS)	z	09	59	13						
20	eP	zne	10	40	56						
20	e	zn	14	29	20						
20	eP	zn	17	49	06						
21	eP	ZNzne	01	18	32						
	eS	n		26	15						
21	eP	zn	04	12	59						
21	iP	ZNEzne	21	08	59u	4		1			
	ePcP	z		09	51						
	iS	ZNEzne		17	02						
	eScS	ZN		18	44						
	eSKKS	z		37	41						
	ePKPPKP	z		38	14						
22	eP	z	00	08	08						
22	eP	z	10	06	59						
22	eP	z	14	40	13						
22	eP	zn	22	28	07						
	eS	Nn		38	05						
22	iP	z	23	28	55d	2		1			
	e(SoS)	z		39	06						
23	eP	z	08	10	01						
23	eScSPKP	z	22	31	33						
24	eP	z	04	34	31						
24	e	z	13	21	20						
24	e	z	16	25	11						
25	eP	z	06	36	47						
25	eP	z	07	21	56						
25	eP	zn	08	15	45						
25	eP	z	08	36	15						
25	eP	zn	18	53	03						

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te
AUGUST 26	iP	zn	12	31	19u	4	1½				
	eS	z		41	20						
26	eP	zn	12	55	38						
26	e(P)	zn	13	34	44						
	e(S)	z		41	55						
26	eP	z	14	52	28						
26	iP	z	15	08	31u	3	1				
26	iP	zne	18	06	11u	5.5	1½				
	eS	Nn		14	15						
26	e	z	21	38	04						
26	eP	z	23	33	54						
26	eP	zn	23	42	14						
	ePcS	ZN		45	48						
	eSS	zn		55	45						
27	ePKP	zn	15	36	01						
	ePP	zn		38	45						
	eSKS	z		43	20						
28	eP	z	09	46	40						
28	eP	zn	17	05	27						
29	eP	zo	09	47	49						
29	eP	Nzne	12	34	59						
	eS	zn		45	00						
29	eP	zne	13	02	32						
	ePP	zn		05	10						
	eS	z		12	17						
29	eP	z	14	49	47						
30	eP	z	12	39	10						
	e	z		41	02						
30	eP	z	14	42	59						
31	eP	z	16	30	47						
31	ePKP	zne	23	19	48.5						
	eSKKS	zne		36	44						

SCOTT BASE

77°51' S, 166°48' E, altitude 109 feet

SEISMOLOGICAL BULLETIN

September 1958

Instrument	Component	Symbol	To (see)	Tg (see)
Bernioff	Vertical	z	0.8	0.2
	"	Z	0.8	25.0
Bernioff	Horizontal (N -S)	n	0.8	0.2
		N	0.8	10.0
Bernioff	Horizontal (E -N)	e	0.8	0.2
		E	0.8	25.0

Recordings on 35 m.m. film (speed 15 m.m./min.) enlarged eight times in viewer.

Trace amphitudes are in millimetres as measured from viewer screen. Periods in seconds.

Directions of first movements are indicated by small letters immediately after the last figures of the phase arrival times; as follows:-

u = ground movement up.
d = " " down.
n = " " to north
s = " " to south
e = " " to east
w = " " to west

Date 1958		Phase		Time (U.T.) h.	m.	s.	Az	Tz	An	Tn	Ae	Te
September	1	eP	z	01	06	45						
		ePcS	z		10	56						
	1	eP	z	14	03	07						
	2	iP	zne	02	38	39d			2	1		
	2	eP	zn	03	07	51						
	2	eP	zn	12	01	49						
	2	eP	zn	14	37	10						
		eS	Nn		46	35						
	3	eP	zn	06	18	43						
	3	e	z	23	00	00						
	4	eP	z	14	03	07						
	4	eP	ZNEzne	22	01	45						
		PP	z		04	18						
		PPP	z		05	45						
		eS	ZNEzne		10	31						
		ScS	N		11	26						
		SS	E		14	51						
		Lr	ZNE		22	00						
		PKPPKP	zne		30	38						
		SKKS	zne		34	45						
	4	iP	zn	23	19	44u			4	1		
	5	eP	z	13	13	55						
	5	eP	z	13	20	17						
	5	eP	z	22	46	38						
	6	eP	zn	00	24	30						
	6	eP	zn	03	28	27						
	7	eP	zn	06	54	45						
	8	ePKP	z	05	44	46						
	8	eP	z	22	35	29						
	9	eSKS	zn	22	49	57						
		eSKSP	zn		54	53						
	11	eP	zn	18	14	38						
	11	eP	z	23	47	23						
	12	eP	zn	00	49	16						
	12	eP	z	05	46	43						
		L	ZE	06	03							
	14	ePKP	zn	14	40	54						
	14	eP	zn	18	07	58						
	14	eP	zn	21	44	33						

Date 1958		Phase		Time (U.T.) h.	m.	s.	Az	Tz	An	Tn	Ae	Te
September	15	eP	zn	16	56	32						
	15	eP	z	18	04	30						
	15	eP	z	18	19	04						
	15	iP	NEzn	19	57	12d	8	1				
		e(PP)	Z		59	32						
		eS	NEzn	20	06	37						
		eScS	z		08	05						
		ePPS	n		11	09						
		ePKKS	z		15	22						
		eSKKS	z		23	20						
		(L)	z		25	47						
	16	eP	z	12	55	11						
	16	eP	zn	16	14	11						
	17	eP	z	04	58	54						
		i(S)	zn		59	28						
	17	eP	z	14	24	31						
	17	e	z	15	17	37						
	17	eP	z	16	14	23						
	17	eP	z	17	49	17						
	18	eP	zn	03	43	58						
	18	eP	zn	07	03	00						
	18	eP	zn	14	12	42						
	18	eP	zn	21	37	23						
		ePcP	zn			32						
	18	eP	zn	23	55	25						
	19	eP	zn	08	24	55						
	19	e	z	23	18	48						
	20	eP	ZNzn	17	20	50						
		ePPP	Nz		25	46						
		iS	NEz		30	15						
		eSS	N		34	13						
	21	eP	z	13	39	26						
	21	eP	zn	16	22	21						
	22	iP	z	07	11	20d		4	1			
	22	iP!	ZNEzne	19	14	02dn		135	1¾		6.5	2
		(PcP)	ze		15	44						
		eS	NE n		20	57						
		(ScS)	N		24	20						
		L	ZE		26	48						

Date 1958		Phase		Time (U.T.) h. m. s.			Az	Tz	An	Tn	Ae	Te
September	23	eP	z	16	38	07						
	24	eP	z	12	33	40						
	24	eP	z	15	46	59						
	24	eP	zn	16	39	49						
	25	e	z	07	37	51						
	25	e	z	08	25	59						
	25	eP	z	15	24	00						
	25	iP	z	20	34	25d			1.3	1		
	25	eP	z	21	04	18						
	26	eP	zn	13	48	42						
	26	e	zn	17	08	07						
	27	eP	zn	07	47	53						
	27	iP	Zzn	14	05	24d			2.9	1		
		e(S)	Nn		12	23						
	27	e	zn	19	50	50						
	28	Short period records missing										
	29	eP	ZNzn	20	37	05						
		e(S)	zn		50	48						
	30	eP	zn	07	21	09						
	30	eP	zn	08	56	42						
	30	eP	z	09	30	40						
	30	e	zn	14	37	08						
	30	eP	zn	16	14	49						
	30	e	zn	18	13	06						

SCOTT BASE

77° 51'S, 166° 48'E, altitude 109 feet

SEISMOLOGICAL BULLETIN

October 1958

Instrument	Component	Symbol	To (sec)	Tg (sec)
Benioff	Vertical	z	0.8	0.2
"	"	Z	0.8	25.0
Benioff	Horizontal (N-S)	n	0.8	0.2
		N	0.8	10.0
Benioff	Horizontal (E-W)	e	0.8	0.2
		E	0.8	25.0

Recordings on 35 mm film (speed 15 mm/min.); enlarged 8 times in viewer. Trace amplitudes are in millimetres as measured from viewer screen. Periods in seconds.

Directions of initial movements are indicated by small letters immediately after the last figures of the phase arrival times, as follows:

u = ground movement up
d = " " down
n = " " to north
s = " " to south
e = " " to east
w = " " to west

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
OCT.	1	eP	(z)	06	42	29	10	$2\frac{1}{2}$					
	1	P	ZNEzn	09	34	40							
		ePP	Z			59							
		ePPP	Z		35	14							
		eS	ZNE		38	47							
		eL	ZNE		41	16	18	14					
	1	ePKP	(z)	18	06	26							
	2	P	Zzn	04	33	37u							
		eP	N			40							
		e	N		34	$32\frac{1}{2}$							
		e?	n			36							
		ePP	Z		35	24							
		ePP	N			26							
		ePP	n			29							
		e(PP)	zN			40							
		e	N		37	$02\frac{1}{2}$							
		eS	E		40	$14\frac{1}{2}$							
		eSS	E		43	30							
		eSS	Z			40							
		eL	nE		47.5								
		eL	ZN		47.7								
		ePKPSKS	E	05	12	47							
	2	P	Zz	15	13	$50\frac{1}{2}$u							
		eP	N			$53\frac{1}{2}$							
	2	eP	zn	17	54	49							
	2	eP	zn	21	05	33							
	3	eP	z	02	51	$33\frac{1}{2}$							

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
OCT	3	eP	z	04	11	41½							
		e	n			48							
		eS	n		12	02							
		eS	z			09							
	3	P	Zz	11	36	58d							
		eP	n		37	02							
		e(pP)	n			23							
	3	eP	z	11	53	20½							Local ?
		eS	n			54							
		eS	z			58							
		e ?	N		54	06							
		e(S*)	N			15							
		e(S*)	n			23							
	3	eP	zn	17	40	39							
	3	e(P)	z	18	42	10							Local ?
		e	n			19							
	3	e	z	22	57	12							Local ?
	4	P	z	01	01	09d							
		eP	n			10½							
		e	N			30½							
		epP	Zn			34							
		e	n		02	04½							
	4	P	Zzn	04	14	45d							
	4	eP	z	06	03	28½							
		e	n		04	03							Traces only
	4	e	z	11	15	07½							
		e	n			18							
	4	P	z	14	30	20u							
		e(PcP)	n			25							
		ei	zn		32	04½d							
	4	e(SKP)	z	15	30	09							
		e	n			21							
	4	ei	Zzn	18	30	13d							
	6	iP	Zzn	00	55	25dn							
		e(pP)	n			48½							
		i(PcP)	Zz		56	55½d							Traces only on Z.
	6	iP	Zzn	02	17	26u							Traces only on Z
		epP?	z		18	20							
	6	e	z	06	24	49							? seismic
		e	n			58							? "
	6	e	N	07	22	40½							Traces
		eL	N		24.0								
		eL	Z		27ca								
	6	e	z	12	36	17							? seismic
	6	ePn	z	16	15	26							? seismic
		ePn	n			30½							
		eP	z			34							
		eP	n			37							
		S	z		16	02							
		eS	n			03½							
	6	e	z	19	07	39½							? seismic
	6	ePKP	z	19	12ca								Vague traces
	7	e	z	03	16	40							? seismic
		e	n			42½							

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
OCT.	7	P?	z	11	25	00½							? seismic
	7	P	z	12	44	11½d	1½	1½					
		P	Z			12 d	7	4					
		eP	n			14½			1	1½			
		eP	N			20			4	2			
		e?	N		46	03½							
		PP	N		47	34½							
		eS	Zn		53	39½	1	8	3	8			
		eS	N			40			1½	8			
		eSKS?	n		54	15½			1	7			
		SKS	N			16½			1½	8			
		e(PS)	Z			22	18	6					
		SS	N		58	14½							
		e?	N	13	00	27½							
		eLr	Z		08.7		15	25					
		e(PKPPKS)	N		15	42½							
		eL	Z		16.2		1¼	18					
	7	eP	zn	13	58	24							
	7	eP	n	16	16	36½							
	7	eP	z	22	43	51							
		e			44	09							
	8	eP	zn	03	22	08							
		e	z		23	49							
		e ?			24	39							
		e			33	29							
	8	eP	zn	04	53	01							
	8	e	z	10	13	55½							? seismic
		e	n		14	02½							
	8	eP	z	10	56	35½							Local ?
		eP	n			42							
		S	zn		57	08½							
	8	eP	z	11	21	46½							
		e	n			53½							
	8	P	zn	14	12	08d							
		ePcP	z			21½							
	8	eP	z	15	47	12½							
		P	ZNn			13½d							
		e(pP)?	Z			39½							
	8	e	n	22	36	41							
	9	eP	zZ	04	18	46							
	9	eP	z	08	25	15½							? seismic
		eP	n			17							
		e	z			25							
		e	(z)			30½							
	9	P	Zn	11	28	48d	1¼	2	1½	1¼			
		iP	zN			48½u	3½	2	.4	1½			
		eP	E			52					3	1½	
		i?	n		29	09½			2	1¼			
		i?	n			21			2	1¼			
		e	Z			55	1	5					
		ePcP	N		30	21½			1	3½			
		ePP	Z			49	1½	4					
		eS	Z		35	07	.5	8					
		e(S)	E			38					.5	10	
		eLq	E		39	31					.7	18	
		eLr	E		43.5						.8	20	
		eLr	ZN		44.0		1½	19	¾	16			
	9	e	n	14	12	11½							

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
OCT.	9	eP	z	14	23	29							? seismic
	9	P	z	14	54	28u							
		i	(z)			30½							
	10	iPKP	z	08	49	30½d	.8	¾					
	10	eP	z	11	48	08							
	11	e(P)	z	01	01	19							? seismic
		e(S)			02	53½							
	11	eP	z	07	29	52							? seismic
		e	n		30	04							
	11	iP	zn	14	49	02½u	2	1¼	2	1			
		P	Z			02½u	1	3					
		e(PcP)	NE			07			.3	1	.1	1	
	11	eP	zn	15	03	04							? seismic
		e	zn			09							
	11	e	n	18	34	03							? seismic
	11	eP	zn	19	02	35							
	11	eP	z	21	49	22							
	11	eP	z	22	59	23							? seismic
		e?	n			27½							
	12	eP	zn	00	36	13							Local, seismic ?
		e	zn			28							
		iS	n			34½							
	12	P	zn	09	54	44							
		ePKKP	z	10	15	05½							
	12	iP	zn	12	59	23u							
		e	n			59							
	12	eP	n	14	53	00½							? seismic
	12	ePKP	z	15	36	46	.2	½					
		ePKP	n			48½			.4	1			
		e(PP)	zn		37	13½	1	2					
		e(PP)	Z			15	.5	2					
		eSKKS	N		44	02			1	7			
		e	N		45	29½			.4	7			
		ePKKP	z		47	57½	.4	1					
	12	eP	zn	17	37	36							
	13	eP	zn	01	32	23							? seismic
	13	eP	z	04	19	48							? seismic
	13	P	Zzn	05	37	34½d							
		PP	zn		39	35							
	13	e?	n	14	56	51½							
	13	e	n	15	21	26½							? seismic
	14	eP	zn	09	01	10½							? seismic
		eS	zn			19½							
	14	ePKP	zn	09	25	36½							
		e?	z			54							
		(PP)	zn		26	10½							
		ePP	n			42							
	14	P	zn	11	29	19							
		iS	zn			21							Local, seismic ?

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
OCT.	14	e	n	17	04	28½							? seismic
	14	eP	zn	19	40	49							
	14	eP	Z	20	19	54							? seismic
		e	n		20	11							
		e	n			27½							
	15	P	zn	02	03	16							
	15	eP	zn	02	30	13½							
	15	eP	zn	03	05	05½							
		e?	zn			10							
	15	eP	z	06	25	45							
	15	e	zn	11	35	53							? seismic
		e?	zn		36	27							
	15	eiP	zn	11	40	09u							
		ePcP?	z		41	35½							
	15	eP	zn	16	54	04							Local, seismic?
		e	n			08							
		S	zn			10½							
	15	eP	zn	17	13	18½							
		e	zn			29							
	16	eP	zn	01	54	41							? seismic
		eS	zn		55	04½							
		e	zn			08½							
	16	eP	zn	02	01	45							
	16	iP	ZNzn	18	12	47½d							
		ePcP?	N		13	37							
		ePKKP?			37	54½							
	16	P	zn	23	02	32							
	17	iP	ZNEzn	10	33	19d							
		iPcP?	z		34	04½							
		e(PS)	E		42.3								
	17	P	zn	12	41	13d							
	17	eP	zn	17	28	38							Local
		e(S)	zn		29	13							
		e	n			30½							
		iS	zn			37½							
	18	e	zn	01	00	05							? seismic
	18	eP?	Z	17	38	07							
		P	Zzn			08d							
		e	zn			22							
		e	N		39	33½							
	18	P	Zzn	19	09	34d							
		e?	zn		10	07							
		ePP	n		11	30							
		e	z			37½							
	19	eiP	zn	01	36	00½							
	19	eP	ZNE	01	56	41							
		eP	zn			42							
		e	ZN		57	11							
		e	ZE			29							
		e?	N		58	12							
		e	E		59	04							

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
OCT.		e	NE	02	00	19							
		e?	n			28							
		eL	n			55							
		eL	Z		01	02							
		eL	E			18							
		eL	N			55							
		eL	Z		03	47							
	19	eP	z	02	04	07							
	19	iP	zn	04	43	12us							
		iS	zn			15½n							
		i	zn			20							
	19	eP	Zn	11	50	53							
		epP	zn			57							
		isP	ZNEz		51	09							
		ePP	N		52	17							
		e(PcP)	Zz			40							
		e(PPP)	N		53	31							
		e	n			46							
	19	(P)	zn	14	42	24							
	19	eP	zn	21	14	13½							
		e	z		15	04							
		e?	n			37							
		e	z		19	42½							
	20	PKP	zn	01	14	44u	.5	1	.2	1			
		ePKP	Z			44	.2	5					
		iPKS	zn		18	03u	.7	1½	.5	1½			
		PKS	Z			03d	.7	3					
		PKKP	z		24	39	.3	1½					
		PKKP	NE			44			.5	1½	.2	1½	
		i(PcSPKP)	zn		25	58	2	2	2	1½			May be part of next
		e(PKPPKP)	n		33	29			¾	4			earthquake
	20	iP	zn	01	24	08u	2	1	1¼	1			
		iP	ZNE			08½u	1	5	.2	2½			Very small on E.
		ePP	Z		27	10	.6	4					
		e(S)	n		33	29			¾	4			
		eS	NE			35			.8	6	.5	8	
		ePS	NE		34	09			1½	8	.6	7	
		ePS	n			10			1	6			
		eLr	E		49.1						.7	22	
	20	P	zn	03	07	23u							
	21	iP	ZNEzne	06	26	25dw							
		e	N			50							
		iS	NEne		35	42½n							
		eSKS	Nn		36	09							
	21	eP	zn	11	18	24½							
	21	e?	n	12	52	36							Local, seismic?
		e(P)	zn			52½							
		e	z			56½							
		eS	zn		53	27½							
		e(S)*	n		54	00							
	21	eP	Zzn	15	52	11½							
		ePcP	zn			21½							
		e	n			28½							
		e	N			37½							
		e?	n	16	03	50							
	21	iP	ZNzn	17	41	41us							
		epP	Nn		42	04½							
		ePcP	z			57½							
		e	z		46	21							
	21	eP	z	21	43	29							
		eS	n		44	04½							
		S	zn			06							

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
OCT.	22	eP	zn	11	30	52							
		eS	zn		31	26½							
	22	iP	ZNzn	23	53	17½ds	1	5	.6	5			
		e	N		54	24½			.6	5			
	23	iP	zn	16	55	47½dn							
	23	eP?	z	17	56	12½							
		eP	zn			15							
		eS	n		58	42							
	23	P	zn	19	49	08d							? seismic
		e	zn		51	42							
	24	iP	zn	09	07	59d							
	24	eP	zn	16	19	13							? seismic
		eS				29							
	24	eP	zn	21	25	24½							
		ePcP	zn			32½							
		e(pP)	Nn			47							
		e	n		26	25½							
		e	N		27	19							
	25	eP	zn	06	24	40½							Local, seismic ?
	25	eP	z	06	37	18							
		e	n			22							
	25	eP	zn	06	54	24½							Local, seismic ?
		eS	zn			36½							
	25	eP?	z	12	33	33							" "
		e	n			40							
	26	eP	zn	00	55	09½							" "
	26	eP	ZNzn	02	30	24							
	26	eP	zn	09	22	03							
		e	n			23							
	26	eP	zn	12	52	24½							
		e	Z		54	03½							
		e(S)	zn			18½							
		e(S)	N			19							
		e	n			50							
	26	ePKP	zn	15	43	56							
	26	eP	zn	19	00	10½							
	26	eP	zn	21	52	24½							
		S?	zn			57½							Local, seismic ?
	27	eP	zn	15	14	21							
	27	eP	zn	16	10	08							Local, seismic ?
	28	eP	n	01	29	19							
	28	eP	z	04	19	24							
		eP	Z			25½							
		e	NEn			29							
		e	z		20	34½							
		e?	Z		21	26½							
		e?	Z		22	57							
		e(S)	NE		23	16½							
		eLq	NE		24.2								
		eLr	E		26.7								

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
OCT.	28	eP	z	07	09	33							
		e(S)	z		11	58							
	28	eP	n	11	05	45½							
	28	eP	n	15	50	41							
	28	eP	n	19	29	41							
		e	n		32	38							? seismic
	28	eP	n	22	09	04½							
		eS	Nn			40½							
		e	N		10	42							
	29	e?	n	06	01	48½							
		e	NE		02.0								
		e?	n		03	36							
		e	n		05	43							
		e	n		07.4								
		eL	E		07.7								
		eL	n		08.6								
	29	e	n	06	25	11							
	29	PKP	zn	08	03	19½	.9	1	.6	1			
		ePKP	Z			19½	.4	2½					
		ePKS	ZN		06	30	.5	3	.5	9			
		ePKS	zn			38	.8	2	.7	2			
		ePcPPKP?	N		11	38			.5	7			
		eSKKS	N		12	23			.6	7			
	29	ePKP	z	08	14	23	.5	1½					
		e	n			39½			.4	2			
		e	zn		16	04	.4	1	.4	1			
		e(PP)	n			30			.4	1¼			
		ePP	z			40	.7	2					
	30	e	e	04	04	09							? seismic
	30	e	z	06	51	22							? seismic
	30	eP	zne	08	23	47½							
		eP	NE			50½							
		e?	E		26	34							
		e	E		28	04							
		eL	E		29.8								
		eL	e		30.5								
	30	e?	zne	10	14	27½							? seismic
		P	zne			59½u							
	30	(P)	e	17	51	29							
	30	(P)	z	23	10	28½d							? seismic
	31	eP	zne	04	13	05							Local, seismic?
		S	zne			12							
	31	P	zne	14	54	23							" "
	31	P	z	18	02	48							" "
		e	e			51½							
		eS	zne			53½							
	31	eP	zne	19	14	45							
		eSKS	NE		24	32							
		e	N		25	26							
		e?	N			49							
		e	E		26	23½							
		e	N			51							
		e	E		27	21							
		e	N		31	00							
		e	E		40	08							
		eL	E		45.2								

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
OCT. 31	PKP	zn	23	57	42u							
	ePP	e		58	17							
	ePP	E		58.3								
	ePKS	N	24	01	26							

SCOTT BASE

77° 51'S, 166° 48'E, altitude 109 feet

SEISMOLOGICAL BULLETIN

November 1958

Instrument	Component	Symbol	To (sec.)	Tg (sec.)
Benioff	Vertical	z	1	0.2
	"	Z	1	25.0
Benioff	Horizontal (N-S)	n	1	0.2
		N	1	10.0
Benioff	Horizontal (E-W)	e	1	0.2
		E	1	25.0

Recordings on 35 mm film (speed 15 mm/min.), enlarged 8 times in viewer.
Trace amplitudes are in millimetres as measured from viewer screen. Periods in seconds.

Directions of first movements are indicated by small letters immediately after the last figures of the phase arrival times, as follows:

u = ground movement up
d = " " down
n = " " to north
s = " " to south
e = " " to east
w = " " to west.

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
NOV.	1	P		ne	02	03	19						? seismic.
	1	eP		z	03	50	23	0.6	1½				
		e		ne			26½			0.4	1½		
		e		NE			30			0.5	6	1	8
		ePcP		zne			34	1	3	0.5	1¼	1½	1½
		e		e			41½					4	2
		e		zn			44	1½	3	1	2		
		e		n		51	10			1½	2		
		e		e		56	45½					2½	6
		e		e		57	33					2	6
		eS		nE	04	00	00			1½	7	2½	10
		e		N			04			2	7		
		e		e			17½					3	6
		e		n			56			1½	5		
		e		N		01	00			1½	6		
		e		E			52					3	8
		e		n		03	14			1	5		
		e		n		04	08			0.6	7		
		e		n			43			0.9	7		
		e(L)		E		11.3						1	18
	1	eP		z	06	18	36	0.4	0.6				
	1	eP?		z	06	27	41½						
		P		z			44½						
	1	P		zne	12	18	33d						
		epP?		z			44						
	1	P		zne	12	25	52½d						
		e		z		33	49½						
		eS		z		34	08½						
		ePS		N			21						
		ePS		n			24						
		ePPS		z			32						

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
NOV.	1	eP	zn	12	26	46	4	¾	0.4	1			
		P	N			46			1	7			
		i(pP)	zne			56	14	1	0.7	1	1	1	
		ePcP	n		27	17			0.8	1			
		e	n			31½			0.3	1½			
		eiS	ze		35	01	0.8	5			1¼	6	
		eS	n			04			0.6	4			
		eiS	NE			04			1½	6	3	12	
		ePPS	z			43½	0.5	6					
		ScS	e		36	34					0.8	7	
		eScS	N			39			1½	6			
		eScS	nE			39½			0.5	5	3	14	
		e	z			56	1	4					
		e	e		37	18					0.6	6	
		e	e			56					0.7	6	
		eL	NE		49½				1	13	3½	15	
		ePKPPKP	z		56	10	0.3	1					
	1	P	zne	12	39	21½							
		epP	z			32							
		e	n		40	06							
	1	eP	z	12	42	31							
		(pP)	z			41							
	1	eP	z	12	47	56½							
		e(pP)	z		48	06							
	1	eP	zn	13	52	35							? seismic
		i	ze			37							
		i	zne			40							
		e	e		53	20½							
	1	P	zne	16	00	24u	1	¾					
		pP?	zn			33							
		(pP)	ze			36							
		PcP	ne		01	03							
	1	eP	z	16	07	27							
	1	eP	n	16	23	55							? seismic
	1	P	z	17	36	10d							
	1	P	z	18	11	24							
	1	P	z	19	36	19d							
	1	P	z	19	49	50d							
	1	eP	ne	21	25	16							? seismic
	1	eP	z	21	39	01½							
		(pP)	z			10							
	1	eP	z	23	39	04							
	2	eP	z	03	36	06							
		(S)	z			13u							
	2	iP	zn	08	09	15u							
	3	eP	ze	00	34	22							
		(S)	z			28u							
	3	eP	ze	03	35	15							
	3	iP	ze	04	09	12u							
		pP	z			34							
		(S)	N		16	17							
	3	eP	e	17	42	40							
	4	eP	zne	02	27	54							

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
NOV.	4	eP	zne	03	05	13½							
	4	eP	zn	12	48	25½							
	4	eP	zn	14	26	05½							
	4	eP	ze	16	55	49½							
	4	eP	zn	19	57	56							
	4	iP	zne	20	06	06							
		i	z			19u							
	4	P	ze	23	02	20	0.7	2			0.4	1½	
		P	Z			20	0.3	5					
		pP	z			29	2.5	2					
		e(pP	ne			43					0.3	2	0.7 1½
		e(pP	N			43					0.2	2½	
		ePP	e		03	40					0.8	2½	
		ePPP	NE		04	06					0.2	3	0.6 3
		ePcP	e			16					1	3	
		eS	NE		08	37					0.2	12	0.6 13
		eLq	E		11	37					1.1	13	
		eLr	NE		13.0						0.1	15	1 14
	4	eP	zne	23	45	03½							
	5	eP	ze	04	38	03							
	5	eP	e	08	12	06½							
	5	eP	ne	13	10	14							
	6	eP	ze	00	04	37							
		(S)	z			45							
	6	P	ze	10	07	10							
	6	iP	ze	15	41	21d							
		eS	z		50	16½							
		eS	e			24							
	6	eP	ze	17	20	28							
	6	eP	Z	23	13	34	1	12					
		eP	ze			43	0.4	1½			0.2	1½	
		iPKP	zne		17	00d	30	1¾	0.5	2	9	1½	Strong.
		eiPKP	ZNE			00½d	6	6	0.2	2½	0.9	7	
		pPKP	ZE			21	3	3			1	2	
		e	ZE		18	23	3	7			1½	10	
		i	z			38d	10	1½					
		PP	ZNE			56	6½	28	0.4	6	7	18	
		iPP	zne		19	08u	19	2	0.8	2	0.7	2	
		PKS	ZNE		21	02	6	9	0.5	8	5	10	
		eSKS	e		24	01					4	2½	
		iSKS	E			06e					10	18	
		PcPPKP	NE		25	36n			2.3	11	12	16	
		PcPPKP	n			37s			0.8	6			
		SKKS	Ne			55n			0.3	12	3	4	
		SKKKS	ZN		26	10	6	13	0.7	8			
		SKKKS	n			12			0.5	6			
		iPKKP	zne			58uw	9	1	0.2	1	4	1½	
		ePKKP	Z		27.1		5	15					
		PKKP2	E		27	18e					7	12	
		ScSP	ZNE		28	36n	42	17	2	11	30	14	
		ScSP	zn			39½	6	11	0.7	5			
		ScSP	e			45w					4	10	
		PS	N		29	02n			1.3	9			
		SP	zne			04	6	6	0.6	4	5	4	
		PPS	ZE		30	30	18	14			11	9	
		ePPS	ne			31			0.5	5	5	7	
		ePPS	z			46	16	3					
		ePKKS	n		31	20			0.4	3			
		PKKS	E			27					9	16	

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	Aa	Tn	Ae	Te	Remarks
NOV.	ePKPScS	E		32	34							
	PPP	Z		34	16	11	10					
	PcPPKP	zne		34	22	15	3	0.3	4	5	3½	
	PcPPKP	Z			33	8	4					
	(SKKS)	Z			44	14	3					
	SKKS	zne			51	10	2	0.3	3	5	3	
	ePcSPKP?	n		35	15			0.2	3			
	iPcSPKP	ne			26s			2	4	6	3	
	PcSPKP	NE			27n			2.2	9	19	17	
	PKPPKP	zE			54	5	3			40	17	Strong
	SS	ZNE		36.1		13	28	2.2	29	35	27	"
	SS	e		36	15					5	6	
	SKKKS	zE		37	42	3.5	3			10	15	
	e	e		28	14					1.8	8	
	e	E		38.6						16	19	
	SKSSKS	Z		39	00	10	27					
	PKPPKS	ZE		40.0		14	26			16	15	
	PKPPKS2	Z		43	35	11	29					
	e	z		46	44	0.3	0.8					Separate shock ?
	e	Z		47.0		8	20					
	e	z		48	53	0.5	1					Separate shock ?
	e	E		49.2						15	45	
	eL	ZNE		53.0		41	23	1	22	35	24	
	e?	N		57	40n			2	26			Artificial ?
7	PKP	ze	00	55	10½							
	PP	ze		56	46							
	PKS	zé		58	37							
	PKKP	z	01	05	08							
7	PKP	z	01	20	57							
	PKS	z		24	20							
	SKS	z		28	19							
7	(PKP)	z	01	32	43							
	e	z			58							
	PKS	z		36	14							
	PKKP	z		42	03							
7	PKP	z	02	01	54							
	e	e		02	30							
	eSS?	E		16	27							
7	PKP	z	02	14	32							
7	PKP	z	03	09	46							
7	PKP	z	05	18	50							
	e	e		19	21							
	e	z		23	48							
7	P?	ze	07	56	28							
	PKP	z		59	33							
7	PKS	z	10	51	40							
7	PKP	ze	11	43	17							
8	iPKP	zne	09	42	02u							
	PKS	zn		45	22u							
	ePS	z		54	13							
9	P	zne	07	25	27							
	(S)				33							
9	P	zne	09	59	27							
9	P	zne	15	17	39							
10	P	zne	03	34	22							
	S			35	19							
12	eP	ne	00	33	08							Local? seismic?

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
NOV. 12	eP	ne	01	51	00							Local? seismic?
12	eP	ne	06	47	18½							
12	eP	ne	10	51	02							
	e(S)	ne	11	00	51							
12	eP	ne	18	23	15							
12	ePKP	ne	20	42	25			0.9	1	0.6	1	
	e	ne			55			1.5	2½	1.4	1½	
	PKS	ne		46	25			0.3	2½	1	2½	
	SKS	ne		49	28			1	4½	0.6	3½	
	ePKKP	n		52	34			0.4	1			
	PKKP2	n			49			0.5	1			
	eScSP?	ne		53	22			0.6	4½	0.5	1½	
	ePPS	e		55	28					0.8	5½	
	ePKKS	n			48			0.3	1½			
	SKKS?	n		59	42½			0.4	2½			
	e(PcSPKP)	n	21	00	38			0.9	2½			
	Lq	E		16.6						0.9	21	
	Lr	NE		27.0				1.5	20	2	20	
12	ePKP	ne	21	42	25							
12	(P)	ne	22	42	59							Local seismic?
12	ePKP?	n	23	51	20							
	e(PcPPKP)	ne		58	58							? seismic
	e(SKKKS)	ne	24	00	07							" "
	e(SKKKS)	n		10	43							" "
12	eP	ne	23	55	40							Local, seismic?
13	eP	n	00	27	04							" "
13	ePKP	zne	03	15	25							
13	iPKP	zne	04	23	34½u			1.1	1½			
	ePP	z		25	17			0.4	2			
13	iP	zne	08	42	08u							
	eS	ze		50	38							
	ePPS	ze		51	13							
	eScS	ze			41							
13	iP	zne	16	29	50u							
13	eP	zne	17	13	42½							
13	ePP?	zne	18	55	39							
14	P	zne	00	02	26½							
14	P	z	01	53	35½							
	e(S)			57	55							? seismic
14	eP	ze	05	14	03½			1.5	1			
	ePcP?	e			47					1	1½	
14	PKP	z	05	53	50½							
14	iP	ze	14	00	01u			0.7	1½			
	(pP)	z			08½			2.2	1½			
	PcP	ze			17			4	1½			
	e	ze			30			4.5	2			
	iPP?	z		02	52			2	1			
	eS	e		09	28					0.7	6	
	eScS	e		10	09					1	3	
15	eP	z	03	00	44							
	S	zne		01	19							
15	eP	zne	08	28	47							

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
NOV.	15	iPKP	zne	09	19	42	2	1	0.2	½	0.2	1	
		e	zne			47	0.4	1	0.4	1	0.2	1	
		(pPKP)	zne		20	02	1	1	0.4	1	0.3	1	
	15	eP	zne	17	43	12							
		S	zne			17							
	15	eP	zne	19	25	34½							
		i(pP)	z			54							
	16	P	zne	02	41	30							
		e	zne		42	32							
	16	ePKP?	z	05	06	27							
		e(PKP)	z			39½							
	16	eP	z	12	58	26							Local, seismic?
		(S)	zne			39							
	16	P	z	15	24	27½d							
	16	eP	z	16	30	41							? seismic
		e	ne			56							
		(S)	ze		31	00							
		e	zne			08							
	16	eP	z	17	06	03							Local, seismic?
		S	zne			12							
	16	eP	z	17	23	13							" "
		S	z			22							
	16	iP	zne	17	55	18½dnw	3	1	0.9	1	0.5	1	
		P	ZN			18½	0.4	2½	0.4	4			
		e	ZE			25			0.7	3½	0.3	3½	
		e	z			28½	1.6	1					
		e(PcP	ZNE		56	09	0.6	4	0.4	4½	0.6	4	
		(PcP)	e			09					1	1	
		e	zne			13	1	2½	1.2	2	0.8	2	
		S	ne	18	03	52½ne			1.1	5	0.7	4	
		S	ZNE			53se	0.2	8	1.5	6	1	6	
		ePS	e		04	11					0.7	5	
		PS	ZE			13	0.1	4½			1.7	6	
		ePPS	N			38			0.7	5			
		ePPS	n			38			0.7	5			
		e(ScS)	n		05	14			0.7	5			
		e	e			33½					0.7	5	
		e	NE			34			0.7	6	1	6	
	16	eP	Z	18	12	21	0.3	3½					
		P	zn			21½d	0.7	1					
		e	zne			28½	1.3	2					
		e	NE			38			0.5	2			
		ePcP	ZE		13	22	0.2	4					
		e	zne			35	0.5	2½					
		eS	NEe		20	24½					0.3	3	
		ScS?	E		22	25							
		e(ScS)	E			35							
	16	eP	Z	18	24	22							
		e				26½							
	16	ePKP?	Z	20	42	57							
		e(SKS)	zn		49	03							Local, seismic?
		e(SKS)	ne			09½							" "
	17	iP	zneZNE	09	57	30d	2.5	1½					
		ePcP	n			58			0.3	1½			
		e	e		58	23					0.3	1½	
		eS	E	10	06	33					0.2	7	
		eLr	E		18.7						0.5	14	
		ePKPPKP	Z		25	51	0.6	2½					
	17	eP	zne	17	04	38½							

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
NOV.	17	P	zne	18	54	45½							
		e			55	00							
	17	eP	z	19	44	09							
	17	eP	ze	22	08	57½							
		e	ne		09	11½							
		eL	E		23.7								
	18	ePKP	z	08	04	30							
		e			05	18							
	18	ePKP?	z	08	15	13½							
		e				53							
	18	e(P)	zne	13	35	54½							? seismic
		e(S)	zne		36	30							
	18	ePKP	z	18	52	15							
	19	iP	zne	01	45	28½u							
		i	ne			42							
		ePcP	zn		46	01							
		e(PKPPKP)	zn	02	13	09½							
	19	P	zne	04	02	32½							
		e(PcS)	z		07	15½							
	19	P	zne	07	43	20½							
		e	z			30							
	19	eP	zne	09	16	00							Local, seismic?
	19	PKP	zne	09	42	44d							
		pPKP	z			57½u							
		ePP?	z		44	31							
		e	n		52	25							
		ePKKP	z			41							
	19	PKP	zne	15	21	32½							
		epPKP	zn			43							
		e(PP)	n		24	16							
	19	P	zne	19	40	33½							
	19	P	zne	20	34	05							Local, seismic?
	19	eP	zne	22	06	35							? seismic
	20	eP	zne	06	46	31							" "
	20	ePKP?	zne	14	37	04							
	20	ePKP?	zne	23	23	17							? seismic
	22	P	Zzne	00	15	50	1	1					
		(PcP)	z			53½	1.3	1					
		eS	neE		25	18							
		e	n		26	46							
		eL	E		41.5								
	22	P	zneZNE	02	08	45½u	2	2					
		ePcP	zeZE		09	00½	3	2					
		ePP	nN		11	45							
		ePS	N		18	28							
	23	ePKP?	z	22	37	24							
	24	iP	zneZNE	06	56	45d							
		ePcP?	z		58	36							
		iPcS	z	07	02	18							
		eS	NE			57½							
		e	N		03	41							
		e	N		04	41							

												1.1	8
											0.4	5	
												0.3	19
											1	2½	
											0.7	6	

Date 1958		Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
NOV.		eLq	E		06.3								
		eLr	E		09.8								
		Lr	ZN		10.2								
	24	eP	z	17	55	22							
	25	P	zne	13	24	39½u							
	25	eP	zne	13	26	09½							
		ePcP	ze			19½							
	26	eP	zn	00	28	40½							
		e	zne			49							
	26	eP	zne	21	32	51½							
		eL	NE		40.2								
		eL	Z		41	55							
		e	n		44	06							
		e	n			44							
	26	P	zne	21	43	16							
		(S)	zne			21							Volcanic explosion?
	26	P	zne	21	58	49½							
		e(S)				54½							" "
	26	P	zne	22	01	07							
		iS				13½							" "
	27	eP	neNE	06	45	03							
		e	e		46	17½							
		eL	NE		48.7								
	27	eP	ne	07	07	24½							
		e?	E		47	18							
		eL	E		47.8								
	27	P	neNE	13	45	12	1.5	0.8					
		e(PP)	ne			31	2.5	2					
		e(PPP)	e			57½			1.5	2			
		e	N		46	41	1	5					
		iS	eE		48	25½			1.7	3			
		S	nN			29½							
		e(SS)	N			57½	1.3	6					
		eL	NE		49.0		3.5	11					
		e	ne		49	04			1	4			
	27	eP?	e	15	10	40							
		e	e		11	11½							
	28	P	zne	10	44	37½							Volcanic?
		(S)	zne			44							
	28	P	zne	15	06	25							
		e	znZ			35							
		e	n		07	07½							
		eL	ZN		10.2								
	28	P	zneZ	15	20	50							
		e	z			59							
		e	neN		21	06							
		e(S)	nN		24	04½							
		eL	ZN		24.6								
	28	eP	zne	15	57	16							
	28	eP	zne	17	12	47½							
		e	ZNE		13	18							
	29	P	zne	03	34	22							Volcanic?
	29	iP	zneZ	04	55	39½d							
		PcP	z		56	54							
		eS?	ne	05	02	38							

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
NOV. 30	eP	zne	01	14	10							Volcanic ?
30	ePKP	ze	01	57	17	0.6	-			0.2	3	
	ePP?	z			58	0.9	1½					
	ePP	e		51	03					0.5	1.3	
	PKKP	z	02	02	27	0.5	2½					
30	P	zne	05	35	10							Volcanic ?

SCOTT BASE

77° 51'S, 166° 48'E, altitude 109 feet

SEISMOLOGICAL BULLETIN

December 1958

Instrument	Component	Symbol	To (sec.)	Tg (sec.)
Benioff	Vertical	z	1	0.2
"	"	Z	1	25.0
Benioff	Horizontal (N-S)	n	1	0.2
		N	1	10.0
Benioff	Horizontal (E-W)	e	1	0.2
		E	1	25.0

Recordings on 35 mm film (speed 15 mm/min.); enlarged 8 times in viewer.
Trace amplitudes are in millimetres as measured from viewer screen.
Periods in seconds.

Directions of initial movements are indicated by small letters immediately after the last figures of the phase arrival times, as follows:

u = ground movement up
d = " " down
n = " " to north
s = " " to south
e = " " to east
w = " " to west

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	Ah	Tn	Ae	Te	Remarks
DEC. 1	P	zne	04	55	04½u	1.2	1.5					
	ePcS?	E	05	00	40					0.4	3	
	eS?	e		02	25½					0.4	1.5	
	eS?	n			47							Very small
2	eP?	zne	09	56	13							
3	P	ze	20	44	42							
4	Pn	zne	01	20	10d							
	eP*	zne			14							
	eSn?	n			30							
	eSn	zn			31½							
	S*	zneZN			36½							
	e	neE			40½							
	i	zeE			49½							
4	eP	zne	12	40	33							
5	eP?	N	07	02	12							
	eP	zne			17½							? seismic
	i	n			25½							
6	eP	zne	01	11	32½							
7	P	z	02	53	25							
	e(PcP)	ne			35							
	e(PcP)	ze			46							
8	P	zneZ	03	20	39u							
9	eP?	z	08	12	09½	0.5	0.7					
9	eP	z	12	28	17							
10	iP	zne	07	10	24d	9	0.7	7	0.7	5.5	0.7	
	eP	ZN			24½	0.4	0.7	2	8			
	i	ZE			26u	6	4			0.6	3	
	pP	ZN		11	21u	7	9	5	0.8			
	ipP	ze			23½	11	2.5			3	0.7	
	PcP	ze		12	14	10	1			4	2	

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
DEC.	e	Z			35	2.3	4					
	i(ScP)	z		15	33	7	2.5					
	iS	zne		16	20ne	6	4.5	17	4.5	7	4	
	iS	ZNE			21½us	4.5	5	20	7	4	8	
	(SP)	ZE			42½	4.5	8			0.6	3	
	e	E		17	32					2	5	
	i	Z			46	4	8					
	e?	N		18	44			5	7			
	iG	NE		19	47			11	9	3	19	
	eLr	NE		21.1				4	13	4	17	
10	iP	zne	14	51	23d							
13	P	zne	09	15	58	3	1.5					
	e?	e		16	24					1.5	2	
14	iP	ze	07	21	02½u	3	1.6			0.5	0.8	
	eS	NE		28.7				0.8	5	0.6	10	
	e?	N		30.4				0.7	7			
	eLr	ZE		38.0		1.5	20			1	20	
15	ePKP?	z	08	09	03							Local?
	i?	z			06½							
15	P?	z	12	49	11½							
	eP	z			14							
	i	zn			16							
	iPcP	z		50	39							
	eS	n		55	56							
18	eP	ze	07	29	28							
18	P	znZN	19	34	21u							
	epP	zn			34							
	ePcP	Z		35	00							
	eS	eNE		43	07½							
	e(PPS)	eNE		44	28							
19	P	zneZNE	00	49	34							
	e(S)	N		55	21							
19	iP!	zne	04	24	28d							Explosion?
19	eP	z	09	59	03	0.8	1					
	eL	NE	10	13.7						0.5	12.5	
19	ePn?	z	19	31	08							
	eP	zne			14							
	eP	zn			26							
	e(Sn)	ne			34							
	eSn	zne			35½							
	eS	zn			45							
21	eP?	z	13	13	22½							
	e	ze			32							
21	e(P)	zne	15	02	44							? seismic.
23	eP?	z	03	40	52							
24	eP?	z	01	24	39							
	e(P)	z			49½							
24	P	zne	20	45	30d							
24	iP	z	22	21	07							
25	P	zne	08	17	05½	5.5	1.2	1.2	1	0.7	1	
	P	Z			05½d	1.3	5					
	ePcP	ze			16	6	2			0.8	1	
	ePcP	Z			17½	1.5	2.5					
	PcP	ne			19			1.5	1	2.2	2	
	e	Z			30	1.5	3.5					
	e	e			49					2	2	

Date 1958	Phase		Time (UT) h	m	s	Az	Tz	An	Tn	Ae	Te	Remarks
DEC.	eS	Z		26	33	1.1	6					
	eS	ne			34			1.2	5	1	5	
	ePS	N			45½							
	ePS	Z			48	1	7					
	ePS	n			53			2.5	6			
	ePPS	n		27	10			2	6			
	eLr	Z		37ca		0.8	20					
26	P	ze	05	59	57							
	e	z	06	01	53½							
	eS	eE		10	10							
26	eP	z	12	54	54							Local
	eS	zne		55	32½							
28	iP	zne	06	54	14½							
	eS	ZE	07	02	12							
29	P	zneZ	22	51	15u							
	e	Z		52	06½							
	eSKS	N	23	01	44							
	e(PS)	N		02	54							
30	iP	zeZN	08	47	33½d	4	1.8			0.7	1	
	i	zneE			42½	4	1.1	1	1.5	1.1	1.2	
	e	neNE			54							
	ePcP?	nN		48	30			1.5	2			
	eS?	N		55	09			0.5	4			
	eLr	Z	09	05.0		0.5	20					
30	P	zne	16	17	13½u							
31	eP?	z	01	44	44							
	e(P)	z		45	14							
31	iP!	zne	01	54	54½d	14	0.6					
	iP	Z			56u	1	2					
	e	nN		55	29					2.5	2.5	
	i?	z			49	3	0.6					
	PcP	zZN		56	14½	6	2.5					
	eS	neNE	02	02	16					3.5	3	
	eScS	N		03	52					1.5	5	
	ePKPPKP?	Z		26	44	1.3	4					