

E- JAN 1965

~~E- FEB 1965~~

Geological Survey Office,  
Department of Mines,  
Union of South Africa.

SEISMOLOGICAL BULLETIN.

The data herewith give the results from a network of seismographs intended particularly for the study of earthquakes occurring in or near South Africa. This bulletin, however, is prepared regularly and will be sent to interested organisations on request.

Station	Grahamstown (GRH)	Pietermaritz- burg (PIE)	Kimberley (KIM)
Lat:	33°18.6'S	29°37.2'S	28°45.1'S
Long:	26°34.5'E	30°23.8'E	24°46.8'E
Lithologic foundation.	Dwyka Shale	Soft Ecca Shale	Dolerite boulders embedded in decayed dolerite
Height:	558 m.	656 m.	1321 m.
Instrument:	Benioff S.P. vertical with short and long period recorders	Benioff S.P. vertical	Benioff S.P. vertical
Seismo. Officer:	Professor of Physics	Professor of Physics	Rev. Br. T.N. Purcell
Institution:	Rhodes University	Natal University	Christian Brothers College

Notes: "Earth tremors" originating in the mining district of the Witwatersrand are recorded several times daily by the Pretoria station, and less frequently by others. These are not dealt with in this bulletin.

Data are occasionally reported herein by courtesy of the Union Observatory, Johannesburg, which operates a 200kg. Wiechert Horizontal seismograph. This station is called J, and is at 26°10.9'S, 28°04.5'E, height 1806 metres.

All times given are G.M.T.

The supervision of this network and bulletin is at present in the hands of the undersigned, to whom all inquiries should be addressed.

Address:

Bernard Price Institute of Geophysical Research,  
University of the Witwatersrand,  
Johannesburg.  
South Africa.

H.O. Oliver.  
Seismological Officer.

January, 1965.

Date	Station	Phase	h. m. s.			Arc	C/R	Remarks.
			G.	M.	T.			
1	Kim	eP	21	49	22	67	R	USCGS H=21 38 29.2 35.7N, 4.4E
		iP			26		R	Algeria h=10Km Mag 5½
1	Pie	e(i)	22	11	34			
5	Kim	i	02	53	52		R	
5	Pie	e(i)	19	05	35			
5	Kim	e	22	00	32			
		i			47			
	Pie	e			46			
8	Kim	iP	18	57	55	46°	R	USCGS H=18 49 46 59.4S, 24.0W South Sandwich Is. region h=39Km Mag 5.9
10	Pie	i	12	56	36			
10	Pie	(e)iPKP	13	55	17	121°		
	Kim	iPKP			27	124°	R	USCGS H=13 36 30.7 13.5S, 166.6E New Hebrides Is. h=32Km Mag 6¼
11	Kim	i	17	17	06		C	
	Pie	i			09		C	
12	Kim	iP	13	44	45	83°	R	USCGS H=13 32 24 27.6N, 88.0E Nepal h=23Km
14	Pie	i	09	21	06			
15	Pie	i	19	30	36			
	Kim	iP			32 43	43°		USCGS H=19 24 33 2.0S, 12.3W North of Ascension Is h33Km Mag 5.1
15	Pie	e(i)	23	15	06			
15	Kim	iP	23	58	21	67°		USCGS H=23 47 27.8 35.7N, 4.3E Algeria h31Km Mag 4.7
16	Pie	e	10	51	36			
16	Pie	i	11	14	07		C	
16	Kim	iP	11	40	48	45°	R	USCGS H=11 32 37.4 56.6S 27.4W South Sandwich Is reg. h=101Km Mag 6.1
17	Kim	iPKP <sub>1</sub>	02	33	16	148°	C	USCGS H=02 13 28.6 58.3N, 151.8W Kodiak Is region h33Km Mag 5.3
17	Pie	i	21	19	10		C	
17	Pie	i	23	15	31		R	
19	Kim	iP	15	30	28	77°	R	USCGS H=15 18 41.6 28.1S, 66.8W Catanara Province Argentine h146Km Mag 5.2
20	Pie	e	01	03	06			
23	Grh	i	07	23	-			
23	Pie	iPKP	08	24	36	133°		USCGS H=08 03 39.9 16.3S, 174.5W Tonga Is. h119Km Mag 4.8
24	Kim	i	00	24	55		C	
	Pie	i			25 24			
30	Kim	i	01	18	04			
	Pie	i			18			

A.A. ATTRIDGE.  
21/6/65



February, 1965.

Date	Station	Phase	h. G.	m. N.	s. P.	Arc Dist	C/R	Remarks.
4	Pie	oP	03	36	59	80°		USCGS H=03 25 00.8 51.8S, 139.7 E. South of Australia h=33Km Mag 5.9
4	Pie	i	05	13	42			
4	PTE	iPKP <sub>1</sub>	05	21	03	147°	R	USCGS H=05 01 21.8 51.3N, 178.6E Rat Is. h=40Km Mag 7 $\frac{1}{2}$
4	Grh	i		25	(15)			
4	Kim	i	06	06	59		R	
4	Kim	i	06	24	47		R	
4	Kim	iPKP <sub>1</sub>	06	56	43	150°	R	USCGS H=06 37 05.4 Rat Is. after shock h=35Km Mag 5.7
4	Kim	iPKP <sub>1</sub>	07	31	12	150°		USCGS H=07 11 22.7 Rat Is aftershock h=35Km Mag 5.9
4	Kim	iPKP <sub>1</sub>	07	34	42	150°		USCGS H=07 14 58.7 Rat Is. aftershock h=25Km Mag 5.9
4	Kim	iPKP <sub>1</sub>	07	42	52	150°		USCGS H=07 23 12.3 Rat Is. aftershock h=25Km Mag 5.5
4	Kim	i	08	23	13			
4	Kim	iPKP <sub>1</sub>	08	53	24	150°	R	USCGS H=08 33 40.9 Rat Is. aftershock h=30Km Mag 5.7
4	Kim	iPKP <sub>1</sub>	08	56	47	150°	C	USCGS H=08 37 14.5 Rat Is. aftershock h=35Km Mag 5.1
4	Kim	i	08	59	14		R	
4	Kim	i	09	00	25		R	
4	Kim	(e)i	09	18	59		R	
4	Kim	iPKP <sub>1</sub>	09	55	07	150°	R	USCGS H=0935 20.3 Rat Is aftershock h=30Km Mag 5.2
4	Kim	i	09	57	14			
4	Kim	iPKP <sub>1</sub>	10	11	49	150°		USCGS H=09 52 02.9 Rat Is. aftershock h=30Km Mag 5.6
4	Kim	iPKP <sub>1</sub>	11	01	20	150°	R	USCGS H=10 41 33.9 Rat Is. aftershock h=35Km Mag 5.1
4	Kim	iPKP <sub>1</sub>	11	20	14	150°		USCGS H=11 00 27.6 Rat Is. aftershock h=40Km Mag 5.1
4	Kim	iPKP <sub>1</sub>	12	08	11	150°	R	USCGS H=11 48 23.9 Rat Is. aftershock h=40Km Mag 4.7
4	Kim	iPKP <sub>1</sub>	12	17	52	150°	C	USCGS H=11 58 06.9 Rat Is. aftershock h=40Km Mag 5.1
4	Kim	iPKP <sub>1</sub>	12	23	43	150°		USCGS H=12 06 04.3 Rat Is aftershock h=25Km Mag 6 $\frac{1}{2}$
4	Kim	iPKP <sub>1</sub>	13	10	42	150°	C	USCGS H=12 50 57.5 Rat Is. aftershock h=25Km Mag 5.2
4	Kim	iPKP <sub>1</sub>	14	37	59	150°	C	USCGS H=14 18 27.9 Rat Is. aftershock h=30Km Mag 6 $\frac{1}{2}$
4	Kim	iPKP <sub>1</sub>	16	11	00	150°	R	USCGS H=15 51 25.5 Rat Is. aftershock h=40 n Mag 6 $\frac{1}{2}$
4	Kim	(e)i	17	24	24		R	
4	Kim	i	18	53	55		C	
4	Kim	i	19	07	54		C	
4	Kim	i	19	56	10		C	
4	Kim	o	20	14	16			
4	Kim	i	20	17	34		C	
4	Kim	i	20	52	11			
4	Kim	(e)i	21	06	47			
4	Kim	i	21	49	23			
4	Kim	o	21	55	06			
4	Kim	i	22	49	48		R	
5	Kim	i	00	51	18		R	
5	Kim	i	03	18	21		C	
5	Kim	iPKP <sub>1</sub>	06	44	59	150°		USCGS H=06 25 23 Rat Is. aftershock h=40Km Mag 5.5
5	Kim	i	07	36	57		R	
5	Kim	i	07	51	18			

February, 1965 Cont.

Date	Station	Phase	h. G.	n. M.	s. T.	Arc Dist	C/R	Remarks
5	Kin	i	09	11	05		C	
5	Pie	iPKP <sub>1</sub>	09	51	36	150°	R	USCGS H=09 32 09.3 Rat Is. aftershock h=41Km Mag 5.5
5	Kin	i	11	10	06			
5	Kin	iPKP <sub>1</sub>	13	58	25	150°	R	USCGS H=13 38 46.7 Rat Is. aftershock h=35Km Mag 5.5
5	Kin	iPKP <sub>1</sub>	14	11	29	150°	R	USCGS H=13 51 43.6 Rat Is. aftershock h=35Km Mag 5.9
5	Kin	e	14	48	25			
5	Kin	i	18	35	50		C	
5	Kin	e	18	43	47			
5	Kin	i	19	20	29		R	
5	Pie	i	21	06	30			
5	Kin	i			56		R	
5	Kin	iPKP <sub>1</sub>	22	08	16	150°	R	USCGS H=21 48 25.6 51.1N, 178.3E Rat Is aftershock h=25Km Mag 5.4
5	Kin	i	22	35	48		C	
6	Kin	i	01	35	19			
6	Kin	i	02	00	24		R	
6	Pie	i			24			
6	Kin	i	03	42	11			
6	Kin	i	04	22	36		R	
6	Kin	i	06	43	19		R	
6	Kin	i	06	47	56		C	
6	Kin	i	07	34	25		C	
6	Kin	i	09	06	34		R	
6	Kin	i	09	14	23			
6	Kin	i	12	42	09		C	
6	Kin	i	14	30	50			
6	Kin	iPKP <sub>1</sub>	17	10	18	154°		
6	Grh	iPKP <sub>1</sub>			27	156°		USCGS H=16 50 29 53.3N, 161.3 W South of Alaska h=33Km Mag 6.5
6	Pie	i	17	15	05			
6	Kin	e	18	27	40			
6	Kin	i	18	30	44		R	
6	Kin	e	19	39	38			
6	Kin	i	22	46	00		C	
6	Kin	i	23	43	27			
7	Kin	i	00	07	59		R	
7	Kin	i	02	36	38		C	
7	Kin	i	04	31	04		C	
7	Kin	i	06	18	39			
7	Kin	e	09	45	08			
7	Kin	i			13		R	
7	Kin	iPKP <sub>1</sub>	16	23	42	150°	R	USCGS H=16 03 52.3 51.3N, 179E Rat Is aftershock h=40Km Mag 5.1
7	Kin	e	17	32	49			
8	Kin	i	07	42	52		R	
8	Kin	e	10	29	05			
12	Kin	i	01	14	50			
15	Kin	(c)i	01	44	57			
15	Pie	e	13	08	(04)			
17	Kin	i	10	38	06			
18	Kin	eP	04	39	11	85°		USCGS H=04 26 33.5 25.0N, 94.3E India- Burma border region h=36Km Mag 5.4
18	Kin	i			24			
18	Pie	iPKP <sub>1</sub>	23	33	22	147°	R	USCGS H=23 13 36.3 51.4N, 179.1E Rat Is. aftershock h=28Km Mag 6.0
18	Kin	iPKP <sub>1</sub>			26	150°	C	
19	Pie	i	19	12	26			

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February, 1965 Cont.

Date	Station	Phase	h. m. s. Arc			C/ R Remarks.
			G.	M.	T. Dist	
22	Kin	i	09	34	32	
23	Grh	i	22	24	04	
	Kin	i			05	
	Pie	i			26	
24	Kin	i	21	43	04	
25	Pie	i	05	20	30	
25	Kin	i	05	41	54	

A.A. ATTRIDGE.  
21/7/65.



MAR - MAY 1965

E - JUN

Johannesburg  
-- APR 1965Geological Survey Office,  
Department of Mines,  
P.O. Box 401,  
Pretoria,  
Republic of South Africa.SEISMOLOGICAL BULLETIN

The data herewith give the results from a network of seismographs intended particularly for the study of earthquakes occurring in or near South Africa. This bulletin, however, is prepared regularly and will be sent to interested organisations on request.

Stations	Pretoria (PRE)	Grahamstown (GRH)	Pietermaritz- burg (PIE)	Kimberley (KIM)	Windhoek (WIN)
Lat:	25°45.2'S	33°18.6'S	29°37.2'S	28°45.1'S	22°34'S
Long:	28°11.4'E	26°34.5'E	30°23.8'E	24°46.8'E	17°03'E
Lithologic foundation	Weathered Shale	Dwyka Shale	Soft Ecca Shale	Dolerite boulders embedded in decayed dolerite	Micha Schist
Height:	1350 m.	558 m.	656 m.	1321 m.	1728 m.
Instrument:	Willmore S.P. Vert- ical and horizontal	Benioff S.P. vert- ical with short and long period recorders	Benioff S.P. vertical	Benioff S.P. vertical	Benioff S.P. verti- cal.
Seismo. Officer:	The Director	Professor of Physics	Professor of Physics	Rev.Br. N.G. Alter	Offi- cer in Charge
Institution:	Geologi- cal Survey Office	Rhodes University	Natal University	Christian Brothers College	Weath- er Office

Notes: "Earth tremors" originating in the mining district of the Witwatersrand are recorded several times daily by the Pretoria Station, and less frequently by others. These are not dealt with in this bulletin.

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University of the Witwatersrand,  
Jan Smuts Avenue,  
Johannesburg, South Africa.

H.O. Oliver. *Oliver*  
Seismological Officer. *Oliver*



MARCH 1965

430

Date	Station	Phase	h. G.	m. M.	s. T.	Arc. Dist.	C/R	Remarks
1	Pie	e	08	19	(03)			
1	Kim	i	19	42	43			
1	Kim	iPP	21	51	54	120°	R	USCGS H = 21-32-11.8 15.4N, 92.5 W. Mexico Guatemala Region, h=93k, Mag 6
3	Kim	ePKP i	15	34	02 07	118°	C	USCGS H=15-14-09.7 5.5S, 151.9E. New Britain region h=44 km. Mag 7
3	Pie	e i	16	33	(43) 43 14			
3	Kim	i	17	08	03			
3	Kim	i	19	33	43		R	
5	Pie	e	06	34	50			
5	Kim	i	14	03	28		C	
5	Kim	iP	14	44	10	76°	R	USCGS H=14-32-19.2 27.0S, 63.3W. San- tiago del Estero Province, Argentine h=573k. Mag 5½
5	Kim	e i	18	19	59 20 02		C	
9	Pie	e	18	30	42			
11	Pie	e(i)	17	19	(03)			
11	Kim	i	17	13	20		R	
14	Grh	i	15	05	-			
14	Kim	i	15	31	06			
14	Pie	iP	16	04	34	75°	C	USCGS H=15-53-06.6 36.3N, 70.7E. Hindu Kush region. h=219km. Mag 7½
14	Kim	iP			44	78°	R	
16	Kim	i	17	05	21			
16	Pie	e(i)		07	06			
16	Kim	iPKP <sub>1</sub>	18	43	59	149°		USCGS H=18-24-15.2 52.1N, 175.0E. Rat Is. h=36 km. Mag 4.9
17	Kim	i	14	46	52		C	
18	Kim	iP	12	48	58	45°		USCGS H=12-40-49.3 55.8S, 26.7W. South Sandwich Is. Region. h=92km. Mag 5.7
19	Pie	e(i)	13	28	41			
21	Pie	e(i)P	11	21	46	99°		USCGS H=11-08-16.2 1.5S, 126.5E Molucca Sea h=33 km. Mag 6¾
21	Kim	eP			58	104°		USCGS H=02-44-47.5 13.5S, 173.4W Tonga Is. h=51 km. Mag 6½
22	Kim	iPKP	03	04	00	135°		
22	Pie	e	03	45	(03)			
22	Kim	iP	23	08	33	81°		USCGS H=22-56-26.5 31.9S, 71.5W. Near coast of central Chile. h=46 km Mag 6.
22	Pie	iP			53	85°		
23	Pie	e	00	55	(33)			
24	Kim	iPKP <sub>2</sub>	13	49	56	154°	R	USCGS H=13-30-04.5 57.8S 148.6W Gulf of Alaska h=13 km Mag 5.0
26	Kim	i	21	53	40			





March, 1965  
(continued.)

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Date	Station	Phase	h. G:	m. M.	s. T	Arc. Dist.	C/R	Remarks
28	Kim	i	10	12	53		C	
28	Kim	e	13	42	15			
		i			25			
28	Grh	i	13	33	09			
28	Kim	iP	13	45	17	81°	C	USCGS H=13-33-14.6 32.4S, 71.2W. Near coast of central Chile. h=6.km. Mag 7.
29	Kim	i	11	06	44		R	
29	Pie	e	11	20	(03)			
29	Kim	i	14	52	24		R	
30	Grh	i	02	14	46			
30	Pie	i	02	46	44			
	Kim	i			49		C	
30	Pie	e	03	44	41			
	Kim	e(i)			54			
31	Grh	i	09	57	17			
	Kim	i			16		R	
	Pie	i		58	25		R	
31	Kim	i	10	05	59		C	

31st August, 1965

A.A. Attridge



APRIL 1965

432

Date	Station	Phase	h. G	m. M.	s. T.	Arc. Dist.	C/R	Remarks
1	Pie	e i	22	04	(03) 07 (03)			
4	Pie Kim	ePKP <sub>2</sub> i iPKP <sub>2</sub>	13	50	12 15 19	145° 148°		USCGS H=13-30-37.8 51.9N, 175.2E Rat Is. h=40km Mag 6
4	Kim	iP	20	22	43	94°	R	USCGS H=20-09-41.1 8.2 S, 74.5W. Peru- Brazil border region h=143 km. Mag 5.3
5	Pie Kim	e i	03	32	53 50 03 36 13			
6	Pie	iP	09	55	24	90°		USCGS H=09-42-28.2 0.5S, 119.9E. Northern Celebes. h=33 km. Mag 6.
6	Pie	e i	10	06	(23) 24 (43)			
6	Pie Kim	iPKP <sub>2</sub> iPKP <sub>2</sub>	13	38	46 51	150° 152°	C	USCGS H=13-19-02.3 51.3N, 179.8W. And- reonof Is. h=46 km. Mag 5.2
8	Kim	iPKP <sub>2</sub>	14	03	32	148°	C	USCGS H=13-43-52.8 52.2 N, 173.5 E, Near Is. H=46 km. Mag 6
9	Pie	e	11	42	(33)			
9	Pie	e	23	42	(43)			
		i	24	32	(33)			
10	Kim	e	01	07	29			
		i			31		R	
	Pie	e			37			
13	Kim	iPKP <sub>2</sub>	18	15	26	150°	C	USCGS H=17-55-32.9 50.7 N, 177.2 E Rat Is. h=32 km. Mag 5.1
15	Pie	i	22	38	(05)			
18	Kim	iP	09	47	42	45°		USCGS H=09-39-18.7 59.8 S, 26.8 W South Sandwich Is. Region h = 29 km. Mag 5 1/2
18	Kim	iP	12	15	19	45°		USCGS H=12-41-54.9 59.7 S, 26.4 W S. Sandwich Region h=25 km. Mag 6
25	Kim	iPKP <sub>2</sub>	02	03	14	151°	R	USCGS H=01-43-28 51.5 N, 178.8 E Rat Is. region h = 49 km. Mag 5.2
25	Kim	i	10	06	47			
25	Kim	e	21	35	27			
		i			37			
26	Kim	iPKP <sub>2</sub>	02	17	00	151°		USCGS H=01-57-14.4 58.9 N, 142.7 W Gulf of Alaska h = 33 km. Mag 5.3

April 1965 (continued)

Date	Station	Phase	h. G.	m. M.	s. T.	Arc. Dist.	C/R	Remarks.
26	Kim	i	17	10	35			
		i			47			
		i		11	32			
26	Kim	iPKP <sub>2</sub>	20	48	54	154°	R	USCGS H=20-29-07.4 54.5 N, 162.2 W Alaska Peninsula h=53 km. Mag 5.9
26	Kim	iPKP <sub>2</sub>	23	18	02	151°	R	USCGS H=22-58-13.4 51.3 N, 179.0 E Rat Is. h = 48 km Mag 5.1.
27	Kim	i	14	19	36		R	
28	Kim	e	01	56	33			
		i	02	00	20			
	Pie	i	01	59	02			
29	Kim	i	15	48	21			
	Pie	i			28			
29	Kim	i	16	00	31		R	
30	Kim	e	13	52	39			Traces

31 Aug. 1965

A.A. Attridge



MAY 1965

Date	Station	Phase	h. G.	m. M.	s. T.	Arc. Dist.	C/R	Remarks
1	Pie	iPKP <sub>1</sub>	21	47	41	150°	C	USCGS H=21 27 54.4 60.4 N, 146.0 W S. Alaska h = 33 km., Mag 5.3
3	Kim	i	01	21	29		C	
3	Pie	e	10	59	(11)			
3	Kim	e	15	25	19			
3	Kim	iP	16	21	12	81°	R	USCGS H=16 09 09 24.2 S, 67.8 W Chile Argentine border region h = 114 km. Mag 5.6
6	Kim	e	12	41	23			
		i		46	29			
	Pie	e(i)		45	41			
7	Kim	iP	13	10	37	45°		USCGS H=13 02 24.5 56.0 S, 27.6 W S. Sandwich Island Region. h = 102 km. Mag 5.9
8	Kim	eP	11	45	13	82°		USCGS H=11 32 57 28.0 S, 70.8 W near coast of N.Chile h=35 km. Mag 5.4
11	Pie	iPKP <sub>1</sub>	17	57	21	152°		USCGS H=17 37 38.3 61.4 N, 149.6 W S. Alaska h = 58 km. Mag 5.5
12	Kim	e	09	02	30			
		i		04	11			
13	Kim	iP	02	34	31	78°	R	USCGS H=02 23 23 19.3 S, 63.8 W S. Bolivia h = 589 km. Mag 5.1
13	Pie	e	23	06	(40)			
17	Pie	e	01	09	13			
17	Pie	e(i)	17	27	36			
17	Kim	ePKP	17	37	(50)	107°		USCGS H=17 19 25.9 22.5 N, 121.3 E. Taiwan Region. h = 21 km. Mag 6.2
17	Grh	e	19	04	18			
18	Pie	eP	01	09	(11)	21°		USCGS H=01 04 14.6 17.6 S, 49.9 E. Malagasay Republic h = 33 km. Mag 5.5
20	Kim	ePKP	00	59	10	124°		USCGS H=00.40 10.9 14.7 S, 167.4 E New Hebrides Is. h = 16 km. Mag 5.6
		i			13			
20	Grh	e(i)	01	48	28			
24	Pie	iPKP <sub>1</sub>	00	05	51	144°		USCGS H=23 46 12 52.2 N, 175.0 e. Near Is. h = 22 km. Mag 6.0
	Kim	iPKP <sub>1</sub>			55	148°		
24	Pie	e	00	58	40			
24	Pie	e	23	48	10			
25	Pie	e	09	04	39			
25	Kim	iPKP <sub>1</sub>	13	27	37	150°	C	USCGS H=13 07 49.3 51.3 N, 178.7E Rat Is. h= 40 km. Mag 5.5
26	Pie	e	20	03	09			
29	Pie	e	02	50	(44)			
29	Pie	e	16	20	(54)			

Geological Survey Office,  
 Department of Mines,  
 P.O. Box 401,  
 Pretoria,  
 Republic of South Africa.

-- JUN 1965

E- JUL 1965

*South Africa*  
*June July 1965*

SEISMOLOGICAL BULLETIN.

The data herewith give the results from a network of seismographs intended particularly for the study of earthquakes occurring in or near South Africa. This bulletin, however, is prepared regularly and will be sent to interested organizations on request.

<u>Stations</u>	<u>Pretoria</u> (PRE)	<u>Windhoek</u> (WIN)
Lat:	25°45.2'S	22°34'S
Long:	28°11.4'E	17°06'E
Lithologic foundation	Weathered Shale (Pretoria series)	Mica Schist
Height:	1350 m.	1728 m.
Instrument:	Willmore S.P. vertical and horizontal	Benioff S.P. vertical
Seismo. Officer	The Director	Officer in Charge
Institution:	Geological Survey Office	Weather Office

Notes: "Earth tremors" originating in the mining district of the Witwatersrand are recorded several times daily by the Pretoria station, and less frequently by others. These are not dealt with in this bulletin.

Data are occasionally reported herein by courtesy of the Republic Observatory, Johannesburg, which operates a 200 kg. Wiechert Horizontal seismograph. This station is called J, and is at 26°10.9'S, 28°04.5'E, height 1806 meters.

All times given are G.M.T.

The supervision of this network and bulletin is at present in the hands of the undersigned, to whom all inquiries should be addressed.

Address: Bernard Price Institute of Geophysical Research,  
 University of the Witwatersrand,  
 Jan Smuts Avenue,  
 Johannesburg, South Africa.

H.O. Oliver  
Seismological Officer.



June - July, 1965.

Date	Station	Phase	h. G.	n. M.	s. T.	Arc Dist	C/R	Remarks.
June 20	WIN	iPKP <sub>1</sub>	18	24	12.0	146		USCGS H=18 04 35.7 42.8N, 126.5W Off Coast of Oregon ht 33Km Mag 5.6
21	WIN	iP <sup>n</sup>	11	22	35.5			Central Africa.
		iS <sup>n</sup>		23	33.3			
		iS <sup>n</sup>		25	25.0			
23	WIN	iPKP <sub>1</sub>	11	28	51.4	146		USCGS H=11 09 15.3 56.6N, 152.9W. Kodiak Is. region ht 36Km Mag 5.7
23	WIN	i	12	43	02.0			
25	WIN	e	02	21	22.0			Lake Nyasa
		i		28	(17.5)			
27	WIN	iP	09	52	21.1	33		USCGS H=09 45 48.0 54.5S 5.6E Bouvet Is region ht 33Km Mag 5.9
27	WIN	i	15	05	21.1			
28	WIN	oPKP	03	52	44.7	129		USCG SH=03 33 36.5 5.1S, 153.0E New Ireland region ht 50Km Mag 6.1
28	WIN	i	03	56	03.0			
30	WIN	e	24	02	05.5			
30	WIN	i	08	53	10.6		R	
	PRE	i	09	08	03.2			
		i			17.5			
30	PRE	iPKP <sub>1</sub>	17	30	24.3	147		USCGS H=17 10 53.1 51.8N, 176.5E Rat Is. Aleution Is. ht 59Km Mag 5.4
		i			40.7			
	WIN	iPKP <sub>1</sub>			31.9	149		
July 1	PRE	e	20	23	53.1			
1	PRE	e	23	25	45.5			
2	WIN	iPKP <sub>1</sub>	20	39	20.8	148		USCGS H=20 19 41.8 52.0N, 175.3 E Rat Is. Aleution Is. ht 40Km Mag 4.3
2	PRE	i	20	54	12.4			
2	WIN	iPKP <sub>1</sub>	21	18	20.5	150		USCGSH=20 58 40.0 53.1N, 167.7W Fox Is. ht 59Km Mag 6.6
		i			24.5			
3	PRE	e	11	38	48.5			
5	WIN	e	09	36	07.0			
6	PRE	oP	03	29	17.0	64		USCGS H=03 18 44.6 38.7N, 22.6E Greece ht 28Km Mag 5.9
6	PRE	e	04	27	57.0			
6	WIN	i	05	28	55.5			
		i			59.5			
6	PRE	iPKP	18	54	42.0	123		USCGS H=18 36 47.3 4.5S, 155.1E Solomon Is. ht 510Km Mag 6.5
	WIN	oPKP			50.5	133		
		i		55	03.0			
		i		57	41.5			
7	WIN	i	12	20	41.0			
		i			47.6			
7	PRE	i	23	11	42.0			
	WIN	i		12	38.0			
8	PRE	i	23	55	02.4			
12	PRE	Traces	01	35	30.0			
12	PRE	e	07	26	14.5			
12	WIN	e	14	08	49.6			
12	PRE	i	14	09	29.9		C	

June - July, 1965.

Date	Station	Phase	h. G.	m. M.	s. T.	Arc Dist	C/R	Remarks.
13	PRE	eP	08	16	17.0			North Lake Nyasa
		iS <sup>n</sup>		19	12.5			
		iS <sup>n</sup>		20	40.9			
	WIN	cP <sup>1</sup>		17	12.4			
		iS		23	23.6			
13	PRE	iP	14	29	00.4	63	R	USCGS H=14 18 58.2 37.5N, 27.8E Turkey h+16Km Mag 4.6
		iP P			11.7			
14	WIN	iPKP <sub>1</sub>	18	15	44.0	151	C	USCGS H=17 55 51.1 52.6N, 168.6W Fox Is. Aleution Is. h+8Km Mag 5.3
	PRE	iPKP <sub>1</sub>			44.5	150		
14	PRE	cPKP <sub>1</sub>	18	21	21.5	152		USCGS H=18 01 30.7 56.6N, 168.6W Fox Is. Aleution Is. h+27Km Mag 5.1
22	WIN	iPKP <sub>1</sub>	01	38	33.1	149		USCGS H= 01 18 50.9 51.0N, 176.0E Rat Is. h+33Km Mag 5.6
23	PRE	i	05	10	24.5			
23	PRE	i	17	19	47.0			
23	PRE	cP	20	14	58.0			Central Africa
		iS <sup>n</sup>		18	21.5			
		iS <sup>n</sup>		20	37.5			
23	WIN	i <sup>1</sup>	20	16	05.4			
		i			15.1			
25	WIN	i	03	53	00.9		R	
25	WIN	c	13	30	38.8			
25	WIN	iPKP <sub>1</sub>	22	06	26.0	149		USCGS H=21 46 45.3 51.4N, 176.0E Rat Is. h+ 37Km Mag 5.3
26	PRE	Traces	13	31	51.5			
26	PRE	Traces	14	51	15.0			
26	PRE	i	22	06	18.5		C	
27	PRE	i	11	40	04.0		R	
27	PRE	c	12	47	05.5			
28	PRE	i	22	40	32.0		R	
28	WIN	i		41	27.4		R	
29	PRE	i	08	49	12.4			
29	PRE	i	15	28	27.0		R	
	WIN	c			27.9			
30	WIN	i	05	57	26.5			
30	WIN	i	07	12	20.9			
30	WIN	i	08	30	06.0			
30	WIN	i	19	10	35.6		C	
30	PRE	i	19	11	18.5		C	
31	PRE	Traces	11	21	(00.9)			

H.O. OLIVER.  
W. WAGNER.



-- JUL 1965  
-- AUG 1965

*Sou*  
Geological Survey Office, *July - Aug*  
Department of Mines, *1965.*  
P.O. Box 401,  
Pretoria,  
Republic of South Africa.

SEISMOLOGICAL BULLETIN

The data herewith give the results from a network of seismographs intended particularly for the study of earthquakes occurring in or near South Africa. This bulletin, however, is prepared regularly and will be sent to interested organisations on request.

<u>Stations</u>	<u>Pretoria (PRE)</u>	<u>Grahamstown (GRH)</u>	<u>Pietermaritz- burg (PIE)</u>	<u>Kimberley (KIM)</u>	<u>Windhoek (WIN)</u>
Lat:	25°45.2'S	33°18.6'S	29°37.2'S	28°45.1'S	22°34'S
Long:	28°11.4'E	26°34.5'E	30°23.8'E	24°43.8'E	17°03'E
Lithologic foundation	Weathered Shale	Dwyka Shale	Soft Ecca Shale	Dolerite boulders embedded in decayed dolerite	Micha Schist
Height:	1350 m.	558 m.	656 m.	1321 m.	1728 m.
Instrument:	Willmore S.P. Vert- ical and horizontal	Benioff S.P. vert- ical with short and long period recorders	Benioff S.P. vertical	Benioff S.P. vertical	Benioff S.P. verti- cal.
Seismo. Officer:	The Director	Professor of Physics	Professor of Physics	Rev.Br. N.G. Alter	Offi- cer in Charge
Institution:	Geologi- cal Survey Office	Rhodes University	Natal University	Christian Brothers College	Weath- er Office

Notes: "Earth tremors" originating in the mining district of the Witwatersrand are recorded several times daily by the Pretoria Station, and less frequently by others. These are not dealt with in this bulletin.

Data are occasionally reported herein by courtesy of the Republic Observatory, Johannesburg, which operates a 200 kg. Wiechert Horizontal seismograph. This station is called J, and is at 26°10.9'S, 28°04.5'E, height 1806 metres.

All times given are G.M.T.

The supervision of this network and bulletin is at present in the hands of the undersigned, to whom all inquiries should be addressed.

Address:

Bernard Price Institute of Geophysical Research,  
University of the Witwatersrand,  
Jan Smuts Avenue,  
Johannesburg, South Africa.

H.O. Oliver.

Seismological Officer.

CORRIGENDA: The specifications for  
bulletin for WINDHOEK and PRETORIA should read as follows:

Instrument: Vertical S.P. (1.0 sec.) seismometer: Geotech  
Model 1051

Two horizontal S.P. (1.0 sec.) seismometers:  
Geotech Model 1101

Vertical L.P. (30 sec.) Seismometer: Sprengnether

Two horizontal L.P. (30 sec.) Seismometers:  
Sprengnether

Galvanometers for SP System, 0.75 sec.

Galvanometers for LP System, 100.0 sec.

Seismological  
Officer

: The Director, Geological Survey,  
P.O. Box 401, PRETORIA.



JULY 1965

437

Date	Station	Phase	h. G.	m. M.	s. T.	Arc. Dist.	C/R	Remarks
1	Grh	ePP	23	26	(26)	68°		USCGS. H=23 12 45.4 33.0 S, 163.7 W. S. Pacific Cordillera h = 33 km. Mag 6 $\frac{3}{4}$
<del>2</del>	<del>Grh</del>	<del>e(i)</del>	<del>19</del>	<del>03</del>	<del>(06)</del>			
<del>2</del>	<del>Pie</del>	<del>ePKP<sub>1</sub></del>	<del>20</del>	<del>39</del>	<del>14</del>	<del>153°</del>		USCGS. H=20 19 41.8 52.0 N, 175.3 E. Rat Is. h=40 km. Mag 5 $\frac{1}{4}$
<del>2</del>	<del>Pie</del>	<del>ePKP<sub>1</sub></del>	<del>21</del>	<del>18</del>	<del>19</del>	<del>155°</del>		USCGS. H=20 58 40 53.1 N, 167.7 W.
	Kim	iPKP <sub>1</sub>			29	153°	C	Fox Is. h = 59 km. Mag 7.
					26C			
4	Kim	e	17	30	25			
<del>5</del>	<del>Kim</del>	<del>iP</del>	<del>20</del>	<del>40</del>	<del>03</del>	<del>78°</del>		USCGS. H=20 28 13.5 33.6 S, 70.5 W. Chile-Argentine Border regions h=99 km, Mag 4.3
<del>6</del>	<del>Kim</del>	<del>iP</del>	<del>03</del>	<del>29</del>	<del>34</del>	<del>68°</del>		USCGS. H=03 18 44.6 38.7 N, 22.6 E. Greece. h=28 km. Mag 6 $\frac{1}{4}$
<del>6</del>	<del>Kim</del>	<del>iPKP</del>	<del>18</del>	<del>54</del>	<del>45D</del>	<del>122°</del>	R	USCGS. H=18 36 47.3 4.5 S, 155.1 E. Solomon Is. h = 510 km. Mag 6 $\frac{1}{4}$
<del>7</del>	<del>Kim</del>	<del>eP</del>	<del>12</del>	<del>19</del>	<del>45</del>	<del>70°</del>		USCGS. H=12 08 34.3 49.7 S, 117.1 E. South of Australia h = 33 km. Mag 5.3
					53		R	USCGS. H=13 57 14.7 28.4 S, 68.2 W. La Rioja Province, Argentina. h = 118 km. Mag 5 $\frac{3}{4}$
<del>12</del>	<del>Kim</del>	<del>iP</del>	<del>14</del>	<del>09</del>	<del>08D</del>	<del>68</del>	R	
13	Kim	e	07	20	(46)			
					22			
					46			
<del>13</del>	<del>Pie</del>	<del>iP</del>	<del>14</del>	<del>29</del>	<del>05</del>	<del>62°</del>		USCGS. H=14 18 58.2 37.5 N, 27.8 E. Turkey. h = 16 km. Mag -.
16	Pie	e	23	34	(07)			
17	Pie	e	08	15	37			
<del>17</del>	<del>Kim</del>	<del>ePKP</del>	<del>13</del>	<del>06</del>	<del>16</del>	<del>121°</del>		USCGS. H=12 47 49.4 7.2 S, 153.6 E. New Britain region. h = 28 km. Mag 5.7
17	Pie	e	13	42	(07)			
18	Pie	e	13	(32)	(07)			
18	Kim	e	16	25	16			
19	Pie	e	05	(07)	(07)			
<del>19</del>	<del>Kim</del>	<del>(e)iP</del>	<del>12</del>	<del>49</del>	<del>22</del>	<del>78°</del>		USCGS. H=12 37 18.9. 28.0 S, 68.8 W. La Rioja Province, Argentina. h = 62 km. Mag 5.3
<del>23</del>	<del>Pie</del>	<del>eP</del>	<del>20</del>	<del>15</del>	<del>20</del>	<del>21°</del>		USCGS. H=20 10 29.1 10.1 S, 41.1 E. N.W. of Malagonay Republic. h = 33 km. Mag 4.1.



July 1965 continued.

438

Date	Station	Phase	h. G.	m. M.	s. T.	Arc. Dist.	C/ R	Remarks
25	Pie	ePKP <sub>1</sub> i	22	06	(12) 24	153°	C	USCGS. H = 21 46 45.3 51.4 N, 173.0 e. Rat Is. h = 37 km. Mag 5 $\frac{3}{4}$
28	Pie	iP	22	40	23.1	72°	R	USCGS. H = 22 29 04.9 2.2 S, 101.8 E. Southern Sumatra. h=110 km. Mag . 5.8
29	Pie	e i	08	49	02 19			USCGS. H = 08 29 22.1 51.2 N, 171.3 W. Fox Is. h = 23 km. Mag 6.4
29	Grh	e	09	47	-			

A.A. Atteridge  
15th October, 1965.

AUGUST 65



AUGUST 1965.

439

Date	Station	Phase	h. G.	m. M.	s. T.	Arc. Dist.	C/ R.	Remarks
2	Pie	iP	13	32	32	85°		USCGS. H = 13 19 54.7 56.2 S, 158.2 E. Macquarie Is. region. h = 33 km. Mag .7
5	Pie	e(i)	00	27	20			
5	Pie	eP	19	57	34	41°		USCGS. H = 19 49 48. 7.8 S, 68.1 E. Chagos Archipelago region. h = 33 km. Mag 5.2
6	Kim	i	05	07	41		C	
6	Kim	e	07	10	06			
8	Kim	e	05	42	12			
8	Pie	i	08	09	12		C	
8	Pie	e	23	30	04			
9	Pie	eP	23	24	58	25°		USCGS H = 23 12 18.4 28.3 S, 71.0 W. Central Chile. h = 15 km. Mag 5.3
10	Pie	(e)i	12	41	51			
11	Pie	i	04	01	03			
11	Grh	e(i)	04	11	42			
11	Kim	e	15	49	49			
		i			59		R	
11	Kim	iPKP <sub>1</sub>	18	49	24	154°	R	USCGS. H = 18 29 40.1 59.6 N, 145.8 W. Gulf of Alaska. h = 25km. Mag 5.5
11	Pie	ePP	20	12	43	118°		USCGS H = 19 52 29.8 15.7 S, 167.1 E. New Hebrides Is. h = 33 km. Mag 6 <sup>+</sup>
		i		22	14			
11	Kim	i	20	32	52		R	
11	Pie	ePKP	22	50	44	118°		USCGS. H = 22 31 48.9 15.8 S, 167.2 E. New Hebrides Is. h = 33 km. Mag 7 <sup>+</sup>
	Grh	e(i)	22	53	(06)			
11	Kim	i	23	50	44		R	
12	Kim	iP	03	36	42	26°	R	USCGS. H = 03 31 16. 3.5 S, 29.4 E. Lake Tanganyika region. h = 33 km. Mag 4.9.
12	Kim	e	08	18	29			
		i		20	40		R	
12	Pie	i	08	21	48			
		i		31	08			
12	Grh	e	08	28	(21)			

August 1965 continued.

440

Date	Station	Phase	h. G.	m. M.	s. T	Arc. Dist.	C/ R	Remarks.
(12)	Kim	ePKP i	13	15	57 11	115°	R	USCGS. H= 12 57 09.7 5.3 S, 150.2 E. New Bri- tain Region. h=41 km. Mag 6.
12	Grh Pie Kim	e i (e)i	13	24	(20) 26 25			
(12)	Kim	iPKP	18	23	50	123°		USCGS, H = 18 04 56.1 18.0 s, 167.4 E. New Hebrides Is, h = 45 km. Mag 5.3
12	Pie	e	19	01	20			
13	Pie	e	12	20	52			
(13)	Kim	ePKP i	12	59	14 23	123°		USCGS. H= 12 40 08.3 15.9 S, 166.8 E. New Hebrides Is, h = 33 km. Mag 7.
(13)	Grh	iPKP	13	01	13	118°		
13	Pie	e	18	51	(37)			
13	Pie	e	22	57	(07)			
16	Grh	e	12	33	(15)			
16	Kim Pie	i i	12	45	25 01		R R	
16	Pie	e i	12 13	53	(36) (46)			
17	Pie	i	13	46	03		C	
18	Kim Pie	e e	00	12	03 31			
(18)	Kim	ePKP	15	10	30	123		USCGS. H = 14 51 29.3 16.0 S, 167.0 E. New Hebrides Is. h = 5 km. Mag. 6.
(20)	Kim	eP	06	07	57	99°		USCGS. H = 05 54 50. 5.7 S, 128.6 E. Banda Sea. h=32 km. Mag 6.5.
(20)	Kim	iP	09	55	07	85°	R	USCGS. H = 09 42 48.5 19.0 S, 69.1 W. Northern Chile. h = 33 km. Mag 6.0
20	Kim	e	10	05	26			
(20)	Kim	iPKP	21	40	45	125°	C	USCGS. H = 21 21 50.9 22.9 S, 176.3 W. South of Fiji Is. h = 77 km. Mag 6.2
23	Kim	e	16	05	19			
23	Kim	i	20	04	59			
23	Grh	e(1)	20	07	(56)			
27	Kim	i	12	44	08			
27	Kim	i	15	50	52			
29	Pie	e	13	43	(08)			
30	Pie	e	04	27	(56)			
31	Pie	e	08	05	(53)			

 A.A. Atteridge  
 18th October, 1965.



-- SEP 1965

*South*



From the ISC collection scanned by SISMOS

Geological Survey Office,  
Department of Mines,  
P.O. Box 401,  
Pretoria,  
Republic of South Africa.

SEISMOLOGICAL BULLETIN

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<u>Stations</u>	<u>Pretoria (PRE)</u>	<u>Grahamstown (GRH)</u>	<u>Pietermaritz- burg (PIE)</u>	<u>Kimberley (KIM)</u>	<u>Windhoek (WIN)</u>
Lat:	25°45.2'S	33°18.6'S	29°37.2'S	28°45.1'S	22°34'S
Long:	28°11.4'E	26°34.5'E	30°23.8'E	24°46.8'E	17°06'E
Lithologic foundation	Weathered Shale	Dwyka Shale	Soft Ecca Shale	Dolerite boulders embedded in decayed dolerite	Micha Schist
Height:	1350 m.	558 m.	656 m.	1321 m.	1728 m.
Instrument:	Willmore S.P. Vert- ical and horizontal	Benioff S.P. vert- ical with short and long period recorders	Benioff S.P. vertical	Benioff S.P. vertical	Benioff S.P. verti- cal.
Seismo. Officer:	The Director	Professor of Physics	Professor of Physics	Rev.Br. N.G. Alter	Offi- cer in Charge
Institution:	Geologi- cal Survey Office	Rhodes University	Natal University	Christian Brothers College	Weath- er Office

Notes: "Earth tremors" originating in the mining district of the Witwatersrand are recorded several times daily by the Pretoria Station, and less frequently by others. These are not dealt with in this bulletin.

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All times given are G.M.T.

The supervision of this network and bulletin is at present in the hands of the undersigned, to whom all inquiries should be addressed.

Address:

Bernard Price Institute of Geophysical Research,  
University of the Witwatersrand,  
Jan Smuts Avenue,  
Johannesburg, South Africa.

H.O. Oliver.

Seismological Officer.

CORRIGENDA: The specifications for instruments in the bulletin for WINDHOEK and PRETORIA should read as follows:

Instrument: Vertical S.P. (1.0 sec.) seismometer: Geotech  
Model 1051

Two horizontal S.P. (1.0 sec.) seismometers:  
Geotech Model 1101

Vertical L.P. (30 sec.) Seismometer: Sprengnether

Two horizontal L.P. (30 sec.) Seismometers:  
Sprengnether

Galvanometers for SP System, 0.75 sec.

Galvanometers for LP System, 100.0 sec.

Seismological  
Officer

: The Director, Geological Survey,  
P.O. Box 401, Pretoria.

September, 1965.

Date	Station	Phase	h. G.	m. M.	s. T.	Arc Dist.	R/C	Remarks
2	PRE KIM PIE WIN	i i i i	04	46	09.5 12 15 17.5		R C C	
4	WIN	e	04	08	34.4			
4	PRE WIN	iPKP <sub>2</sub> ePKP <sub>1</sub>	08	08	34.0 34.4	150 153	R	USCGS H = 07 48 45.1 52.0 N 170.4 W. Fox Is. h ± 38 Mag 5.2
4	PRE	ePKP	10	39	05.0	135		USCGS H = 10 19 51.3 46.6 N 153.5 E Kurile Is. h ± 27 Mag 5.5
4	WIN PRE PIE	i e i	14	52	20.0 28.5 41.0	148 147 151	C	USCGS H = 14 32 47.9 58.2 N, 152.6 W. Kodiak Is. h ± 19 Mag 6.1
8	WIN PRE	iPKP <sub>1</sub> iPKP <sub>1</sub>	03	45 46	55.0 05.4	149 150	C	USCGS H = 03 26 20.7 57.5 N, 152.1 W. Kodiak Is. h ± 25 Mag 5.6
8	WIN PRE	i i	11	36	14.5 22.5		R	
11	PRE WIN	ePKP t	07	11 15	45.0 00.0	118 128		USCGS H = 06 53 01.5 5.3 S 153.0 E. New Britain region h ± 67, Mag. 6.3
12	PRE KIM WIN	ePKP ePKP ePKP	08	58 59	54.5 58 15.5	117 118 128	R	USCGS H = 08 40 12.8 6.3 S, 151.6 E. New Britain region. h ± 48, Mag. 6.2
12	PIE KIM PRE WIN	eP eP iP iP	22	10 11	44 47 48.0 58.1	45 49 46 55	R R C	USCGS H = 22 02 34.3 6.4 S, 70.8 E. Chagos Archipelago h ± 33, Mag. 6.1
13	PRE	ePKP <sub>2</sub>	01	05	41	151		USCGS H = 00 45 56 51.9 N, 171.9 W. Fox Is. h ± 79, Mag 4.6
13	KIM	e	13	16	04			
13	PRE WIN	e e	13	27	15.0 16.0			
14	PRE	ePKP	14	37	42.4	142		USCGS H = 14 18 03.5 51.4 N, 174.6 E. Near Is. Aleutian Is. h ± 11, Mag. 5.2
15	PRE	ePKP <sub>2</sub>	13	41	45.5	150		USCGS H = 13 21 57.1 52.1 N, 170.6 W. Fox Is. h ± 33, Mag. 4.4
17	PRE	ePKP <sub>2</sub>	01	33	33	152		USCGS H = 01 13 45 54.2 N, 162.7 W. Alaska h ± 50, Mag. 4.6



September 1965 (Contd.)

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Date	Station	Phase	H. G.	m. M.	s. T.	Arc Dist.	R/ C	Remarks
17	Kim	ePcP	11	27	14	99		USCGS H= 11 13 56.4 77.6 W, 1.45 S Ecuador h ± 190, Mag 6.0
	PRE	ePcP			39.6	103		
(17)	PRE	ePKP	15	37	29.2	125		USCGS H= 15 18 38.4 36.3 N, 141.2 E, near Honshu, Japan. h ± 66 mag 5.2
(17)	PIE	ePKP	16	39	43	124		USCGS H = 16 21 21.9
	KIM	iPKP			51.0	129	R	36.3 N, 141.1 E
	PRE	iPKP		40	13.4	124		Near Honshu, Japan
	WIN	ePKP			27.6	132		h ± 72, Mag 5.8
17	PRE	ePKP <sub>2</sub>	19	14	08.0	154		USCGS H = 18 54 25.2 51.0 N, 178.0 W Aleutian I's. h ± 33 mag 4.8
18	PRE	e	16	28	03.0			Probably Central Africa
	WIN	e			07.5			
	KIM	e		32	54			
18	PRE	iPKP <sub>2</sub>	21	06	18.5	146		USCGS H = 20 46 39.2 59.5 N, 145.1 W Alaska h ± 22, Mag 5.3
19	PRE	ePcP	08	59	23.0	74		USCGS H = 08 47 49.4 0.9 S, 99.7 E, S. Sum- atra, h ± 93, mag. 5.3
19	PRE	i	22	04	21.4			
20	WIN	e	11	03	54.5			
(21)	PRE	iP	01	52	40.5	111		USCGS H = 01 38 30.2
	KIM	iP		56	49	115		29.1 N, 128.2 E, East China sea h ± 197
	WIN	iP			57.9	119		Mag 6.0
21	PRE	i	13	13	10.5			
22	PRE	iPcP	04	37	11.5	84		USCGS H = 04 24 47.8 20.8 N, 99.3 E, Burma h ± 35, Mag 5.5
(22)	PRE	ePKP	20	20	31.4	117		USCGS H = 20 01 49.3
	KIM	ePKP			34	118		5.4 S, 151.5 E, New Britain h ± 57, Mag 6.5
(22)	PRE	ePKP	22	26	55.0	125		USCGS H = 22 08 01.1
	KIM	ePKP		27	01	128		36.4 N, 141.3 E, Honshu Japan, h ± 44, Mag 4.6
23	PRE	e	09	22	40.5			
(24)	PRE	iP	20	49	34.0	73		USCGS H = 20 38 07.6 5.2 N, 96.1 E, N. Sum- atra, h ± 33, Mag 5.2
26	KIM	iPP	21	42	30	51		USCGS H = 21 33 54.4
	PIE	iPP			48	54		54.8 S, 38.2 W, S.
	PRE	iPcP		43	31.0	55	R	Georgia I's. h ± 33, Mag 6.3
(27)	PIE	iPKP <sub>1</sub>	05	28	20	148		USCGS H = 05 09 13.3
	PRE	iPKP <sub>1</sub>			44.0	148	R	51.9 N, 175.5 E, Rat Is. Aleutian I's.
	KIM	iPKP <sub>1</sub>			57	152		h ± 41, Mag 5.5
28	KIM	e	10	01	28			
28	PRE	e	11	26	26.0			
	KIM	t			00			

Sept. 1965 (Contd.)

5

Date	Station	Phase	h. G.	m. M.	s. T.	Arc Dist.	C/ R	Remarks
29	PRE	ePKP <sub>2</sub>	14	09	11.5	151	R	USCGS H = 13 49 26.6 52.5 N, 170.7 W, Fox I's. h ± 62, Mag 4.9
29	PRE	t	15	35	28.0			
30	PRE	e	24	07	19.5			

H.O. Oliver  
Winifred Wagner.

OCT 1965

Geological Survey Office,  
Department of Mines,  
P.O. Box 401,  
Pretoria,  
Republic of South Africa.

SEISMOLOGICAL BULLETIN

The data herewith give the results from a network of seismographs intended particularly for the study of earthquakes occurring in or near South Africa. This bulletin, however, is prepared regularly and will be sent to interested organisations on request.

<u>Stations</u>	<u>Pretoria (PRE)</u>	<u>Grahamstown (GRH)</u>	<u>Pietermaritz- burg (PIE)</u>	<u>Kimberley (KIM)</u>	<u>Windhoek (WIN)</u>
Lat:	25°45.2'S	33°18.6'S	29°37.2'S	28°45.1'S	22°34'S
Long:	28°11.4'E	26°34.5'E	30°23.8'E	24°46.8'E	17°06'E
Lithologic foundation	Weathered Shale	Dwyka Shale	Soft Ecca Shale	Dolerite boulders embedded in decayed dolerite	Micha Schist
Height:	1350 m.	558 m.	656 m.	1321 m.	1728 m.
Instrument:	Willmore S.P. Vert- ical and horizontal	Benioff S.P. vert- ical with short and long period recorders	Benioff S.P. vertical	Benioff S.P. vertical	Benioff S.P. verti- cal.
Seismo. Officer:	The Director	Professor of Physics	Professor of Physics	Rev.Br. N.G. Alter	Offi- cer in Charge
Institution:	Geologi- cal Survey Office	Rhodes University	Natal University	Christian Brothers College	Weath- er Office

Notes: "Earth tremors" originating in the mining district of the Witwatersrand are recorded several times daily by the Pretoria Station, and less frequently by others. These are not dealt with in this bulletin.

Data are occasionally reported herein by courtesy of the Republic Observatory, Johannesburg, which operates a 200 kg. Wiechert Horizontal seismograph. This station is called J, and is at 26°10.9'S, 28°04.5'E, height 1806 metres.

All times given are G.M.T.

The supervision of this network and bulletin is at present in the hands of the undersigned, to whom all inquiries should be addressed.

Address:

Bernard Price Institute of Geophysical Research,  
University of the Witwatersrand,  
Jan Smuts Avenue,  
Johannesburg, South Africa.

H.O. Oliver.

Seismological Officer.



4

October 1965.

Date	Station	Phase	h. G.	m. M.	s. T.	Arc Dist.	R/C	Remarks
1	GRH	iPKP <sub>1</sub>	09	11	33	154		USCGS H = 08.52.05.8 50.1N 178.3E. Rat Is. Aleutian Is. h = 32 Mag 6.3 USCGS H = 13.14.27.8 50.9 N 178.8 E Rat Is. Aleutian Is. h = 39 Mag 4.7 USCGS H = 13.22.28.5 20.0 S 174.4 E New Hebrides h=553 Mag 6.2
	PIE	iPKP <sub>1</sub>			47	149		
	KIM	iPKP <sub>1</sub>			50	154		
	WIN	iPKP <sub>1</sub>			52.8	150		
1	PRE	iPKP <sub>2</sub>	13	34	09.0	149		
1	KIM	iPKP	13	40	25	123		USCGS H = 22 34 25.5 60.7 S 24.9 W. South Sandwich Is. region h = 33 Mag 6.0
	PRE	ePKP			26.0	124		
	WIN	ePKP			44.5	132		
1	GRH	iPPP	22	42	52	44		USCGS H = 05 12 22.5 38.2 S, 48.4E Atlantic - Indian Rise h = 20 Mag 5.5
	WIN	iPPP		43	02.1	49		
3	PIE	eP	05	16	23	18		USCGS H = 03 39 02.2 36.0 S, 72.5 W Near coast of Central Chil h = 33, Mag 5.2
	PRE	iP		17	12.0	22		
	KIM	iP			17	22		
	WIN	iP		18	43.5	31		
3	KIM		15	04	53			
3	WIN	i	16	26	46.0			R
	KIM	i			51			
	PRE	i		27	14.9			
	GRH	i		28	17			
4	WIN	e	20	25	16.1			
5	WIN	eP	03	50	52.5	76		R
	PRE	eP		51	29.5	83		
5	PRE	e	07	56	04.0			
5	PRE	iP	09	52	07.9	42		USCGS H = 09 44 30.0 9.3 S, 67.2 E Mid Indian Rise h = 33 Mag 5.1
	WIN	t			0.0	51		
5	PRE	i	23	20	30			
	WIN	t		20	00			
6	PRE	iP	15	46	16.9	76		USCGS H = 15 35 04.1 36.5 N, 70.2 E. Hindu Kush region h = 203 Mag 5.2
6	WIN	e	16	39	05.0			
7	PRE	iP	03	49	09.5	94		USCGS H = 03 35 59.6 12.6 N, 114.5 E South China Sea h = 17 Mag 5.9

October 1965 (Contd.)

Date	Station	Phase	h. G.	m. M.	s. T.	Arc Dist.	R/C	Remarks
7	PRE	iPKP <sub>2</sub>	14	26	05.0	151		USCGS H = 14 06 02.2 52.2 N, 169.5 W. Fox Is. Aleutian Is, h = 23, Mag 4.6
7	PRE WIN PIE	iPKP <sub>2</sub> iPKP <sub>2</sub> ePKP <sub>2</sub>	20	11	37.9 41.0 43	148 149 150	R	USCGS H = 19 51 57.0 51.7 N, 176.1 W. Andreanof Is. Aleutian Is., h = 63 Mag 4.7
8	PRE	i	18	52	18.2			
10	GRH KIM WIN PRE	iScS iScS iSS iSS	17	33	43 59 14.5 31.5	42 45 47 49	R	USCGS H = 17 25 44.0 59.1 S, 24.8 W. South Sandwich Is. h = 55, Mag 5.7
11	GRH	t	02	34	00			
12	WIN PRE KIM	iPKP <sub>2</sub> iPKP <sub>2</sub> iPKP <sub>1</sub>	14	00	38.0 46.5 54.0	147 150 153		USCGS H = 13 40 55.9 56.3 N, 153.7 W. Kodiak Is. region h = 11, Mag. 5.3
12	PIE	i	17	34	15			
18	PRE	iPP	22	07	51.0	100		USCGS H = 21 50 04.5 1.1 S, 127.9 E. Halmahera h = 33 Mag 5.9
18	PRE	i	23	27	51.0			
19	PRE	t	03	49	00			
19	PRE PIE WIN KIM GRH	iPKP <sub>2</sub> iPKP <sub>2</sub> iPKP <sub>2</sub> iPKP <sub>2</sub> iPKP <sub>2</sub>	21	08	15.0 21 22.0 28 38	145 147 148 150 152	R C R	USCGS H = 20 48 47.4 52.3 N, 174.3 E. Near Is. Aleutian Is. h = 8 Mag 4.2
20	PRE KIM WIN	t	11	27 28	57.0 00 03.5	150 155 152	R	USCGS H = 11 08 11.1 51.6 N, 173.8W Andreanof Is. Aleutian Is. h = 32 Mag 5.4
22	WIN KIM	t i	18	48	12.0 23		R	USCGS H = 18 35 54.5 25.0 S, 71.3 W. Coast N. Chile. h = 13 Mag 5.1
23	WIN PRE	i i	06	20	37.0 40.5			
23	WIN KIM PRE	iPcP iP eP	07	05 06	31.9 50.0 10.0	77 80 85	R	USCGS H = 06 53 32.8 29.4 S, 71.6 W. Near Coast Chile h = 33 Mag 5.5
23	PRE WIN	eP eP	08	27 28	32.0 09.5	84 92		USCGS H = 08 15 02.3 54.9 S, 146.1 E Macquarie Is. h = 33 Mag 5.4



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October 1965 (contd.)

Date	Station	Phase	h. G.	m. M.	t. T.	Arc Dist.	R/C	Remarks			
23	KIM	e	08	45	(44)						
	PRE			46	18.0						
	WIN	t		47	00						
23	PRE	e	10	25	04.0						
	WIN	t		29	00						
23	WIN	iP	15	46	34.9	77	G	USCGS H = 15 34 47.2			
	KIM	iP			51 C				80		
	PRE	iP			47				11.6 D	84	R
25	WIN	t	13	53	00						
25	PRE	e	15	40	13.0						
25	PRE	iPKP <sub>1</sub>	19	02	51.0 C	153	G	USCGS H = 18 43 02.9 53.2 N, 164.7 W. Unimak Is. region h = 61 Mag 4.8			
25	PRE	i	22	53	09.5		R				
	PIE	i			10						
	KIM	i			19						
	GRH	t			54				00		
26	WIN	iP	12	27	05.9	79		USCGS H = 12 15 08.3			
	KIM	iP			26				83		
	PRE	eP			57.5				87	24.4 S, 70.22 W. Coast N. Chile h = 55 Mag 5.2	
26	WIN	e	22	53	12.5						
28	PRE	i	02	06	16.0						
	WIN	i			24.0						
	KIM	i			29						
28	PRE	e	20	01	14.0						
29	PRE	e	19	05	01.5						
29	PRE	i	21	19	40.0			Operation Longshot			
	WIN	i			42.5						
	PIE	i			46						
	KIM	i									
31	WIN	iP	13	59	42.5	78	O	USCGS H = 13 47 56.8			
	KIM	iP			14				00	04 C	82
	PRE	iP							24.5 D	86	R
31	PRE	i	17	34	30.5						
	WIN	e		35	41.0						

Winifred Wagner

H.O. Oliver.



South Africa No



From the ISC collection scanned by SISMOS

NOV 1965

Geological Survey Office,  
Department of Mines,  
P.O. Box 401,  
Pretoria,  
Republic of South Africa.

SEISMOLOGICAL BULLETIN

The data herewith give the results from a network of seismographs intended particularly for the study of earthquakes occurring in or near South Africa. This bulletin, however, is prepared regularly and will be sent to interested organisations on request.

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Lat:	25°45.2'S	33°18.6'S	29°37.2'S	28°45.1'S	22°34'S
Long:	28°11.4'E	26°34.5'E	30°23.8'E	24°46.8'E	17°06'E
Lithologic foundation	Weathered Shale	Dwyka Shale	Soft Ecca Shale	Dolerite boulders embedded in decayed dolerite	Micha Schist
Height:	1350 m.	558 m.	656 m.	1321 m.	1728 m.
Instrument:	Willmore S.P. Vert- ical and horizontal	Benioff S.P. vert- ical with short and long period recorders	Benioff S.P. vertical	Benioff S.P. vertical	Benioff S.P. verti- cal.
Seismo. Officer:	The Director	Professor of Physics	Professor of Physics	Rev.Br. N.G. Alter	Offi- cer in Charge
Institution:	Geologi- cal Survey Office	Rhodes University	Natal University	Christian Brothers College	Weath- er Office

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Address:

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University of the Witwatersrand,  
Jan Smuts Avenue,  
Johannesburg, South Africa.

H.O. Oliver.

Seismological Officer.

CORRIGENDA: The specifications for instruments in the bulletin for WINDHOEK and PRETORIA should read as follows:

Instrument: Vertical S.P. (1.0 sec.) seismometer: Geotech Model 1051

Two horizontal S.P. (1.0 sec.) seismometers: Geotech Model 1101

Vertical L.P. (30 sec.) Seismometer: Sprengnether

Two horizontal L.P. (30 sec.) Seismometers: Sprengnether

Galvanometers for SP System, 0.75 sec.

Galvanometers for LP System, 100.0 sec.

Seismological  
Officer

: The Director, Geological Survey,  
P.O. Box 401, Pretoria.

November 1965

(7)

Date	Station	Phase	h. G.	m. M.	s. T.	Arc Dist.	R/ C	Remarks
1	WIN	ePP	18	23	48.0	130 km		USCG H = 18 03 09.6, 24.1 S, 178.9 E, South of Fiji Islands. h = 546 km. Mag 5.6
2	WIN	e	01	09	49.5			
2	PRE	ePcP	03	38	53.5	64		USCGS H = 03 27 07.2, 39.6 N 25.2 E. Aegean Sea h = 11 km. Mag 4.6
3	WIN	iP	01	50	38.5	85		USCGS H = 01 39
	KIM	iP		51	11	91		02.5, 9.1 S, 71.4
	GRH	iP			13	92	C	W. Peru-Brazil
	PRE	iP			22.9	95	D R	border. h = 583 km
	PIE	iP			29	96	D R	Mag 5.2
3	PRE	i	02	08	19.6		R	
4	GRH	t	06	57	00			
	KIM	i			52		C	
	PRE	e		58	26.0			
4	KIM	e	14	09	24			
	WIN	e			25.0		C	
	PRE	t		10	01.0			
4	WIN	i	15	07	16.5		C	
	PRE	i		08	32.9		C	
4	PRE	iP	20	25	34.1	49	D R	USCGS H = 20 16 48.0, 57.9 S, 24.8 W. S. Sandwich I's. h = 33 km, mag 4.6
6	PRE	iPKP	22	49	54.6	145	C	USCGS H = 22 30 20.5, 51.4 N, 176. 7 E, Rat I's. Aleutian I's. h = 40 km. Mag 5.0
8	PIE	iP	04	05	00	18		USCGS H = 04 01 00
	PRE	iP			46.0	22	D R	46.8 S, 33.7 E. Prince Edward I's. h = 70 km. Mag 4.3
9	PRE	e	01	31	01.5			Mozambique Border
	WIN	i			37.0			
	KIM	i			57			
9	PRE	e	04	26	45.0			
9	WIN	ePKP <sub>1</sub>	11	57	54.6	148	C	USCGS H = 11 38 14.8, 51.8 N 174.4 E, Near I's Aleutian I's h = 33 km. Mag 5.1
	KIM	t		58	00			USCGS H = 01 32 59.3 22.8 S, 172.6 E Loyalty I's. h = 62 km. Mag 5.4
11	KIM	iPP	01	51	47	120	R	
11	KIM	e	03	03	47		R	
	PRE	i			58.0		C	
	WIN	i		04	(30.5)		C	



November 1965 (Cont'd)

(8)

Date	Station	Phase	h. G.	m. M.	s. T.	Arc Dist.	R/ C	Remarks
12	PRE	ePP	18	11	15.0	123	C	USCGS H=17 52 24.1 30.5 N, 140.2 E Honshu Japan h = 40 km. Mag 6.6
13	PRE	t	03	02	11.0			
13	PIE	iP	04	46	49 C	90	C	USCGS H= 04 33 53.0 43.8 N, 87.8 E. N. Sinkiang prov- ince, China. h= 59, Mag 6 $\frac{3}{4}$
13	PRE	eP	06	24	50.5 C	63	C	USCGS H=06 14 25.0 26.2 N, 65.1 E. W. Pakistan h = 615 km. Mag 5.2
13	PRE	e	11	03	38.5			
13	WIN	i	18	11	23.0		R	
	KIM	i			42		C	
	GRH				43		C	
	PIE	i	12	03			C	
	PRE	i			04.0		R	
15	WIN	iP	11	26	36.0 C	41	C	USCGS H=11 18 49.9
	KIM	iP		27	46 C	50	C	0.3 S, 18.7 W. Mid
	PRE	iP			57.5 C	51	C	Atlantic ridge
	GRH	iP	28	18	D	53	R	h = 24 km. Mag 5.6
	PIE	iP			23 D	55	R	
16	PRE	iPcP	01	15	06.0	74		USCGS H=01 03 55.7
	PIE	iPcP			19	76	R	36.4 N, 71.2 E.
	KIM	iPcP			28	79	R	Afghanistan USSR
	WIN	iPcP			28.5	79	C	border. h = 241 km. Mag. 5.5
16	KIM	i	02	57	39			Central Africa
	PIE	t	03	00	00			
16	WIN	eP	15	36	39.5 C	77	C	USCGS H=15 24 42.9
	KIM	iP		37	30 C	86	C	31.0 N, 41.5 W.
	PRE	iP			31.9 C	86	C	North Atlantic Ridge h = 17 km. Mag 6.0
16	KIM	i	20	18	07		R	
	PRE	i			40			
	WIN	e			43.5		C	
18	WIN	ePKP	22	17	31.9 C	140	C	USCGS H=21 58 12.4
	PIE	t		18	00			53.9 N, 160.7 E
	GRH	t			.00			East of Kamchatka h = 12 km. Mag 6.0
19	PRE	iP	15	29	14.0	148		USCGS H=15 11 44.5
	KIM	iP		31	35 C	154	C	50.2 N, 177.7 E Rat Is. h = 33 km. Mag 5.1
19	PRE	iPn	17	30	33.0			Central Africa
		iSn		33	18.0			
		<del>iS1</del>		<del>35</del>	<del>05.5</del>			
	KIM	epn		33	25			
		<del>epi</del>		<del>37</del>	<del>34</del>			
		iSn		39	00			
		<del>iS1</del>		<del>40</del>	<del>07</del>			
	WIN	e		33	29.5			
	PIE	e		36	48			

November 1965 (cont'd). (9)

Date	Station	Phase	h. G.	m. M.	s. T.	Arc. Dist.	R/ R	Remarks
20	PRE	iP	15	18	56.5	D 98	R	USCGS H=15 05 39.0 7.3 S, 129.2 E. Banda Sea
	KIM	iP		19	06	D 100	R	
21	PRE	iP	10	45	19.0	D 100	R	USCGS H=10 31 49.7 6.1 S, 130.4 E. Banda Sea h = 132 km, Mag 6.1
	WIN	eP		48	(12.5)	C 110	C	
	PIE	eP			57	D 97	R	
21	WIN	i	11	01	23.5		C	h = 93, Mag. 6.3
21	PRE	i	21	03	04.4		R	
22	KIM	iP	12	06	59	C 24	C	USCGS H=12 01 44.2 5.2 S, 15.7 E, S.W. Coast of Africa h = 33 km, Mag 5.5
	PRE	iP		07	32.5	D 23	R	
	WIN	iP			47.0	D 17	R	
22	WIN	iPKP <sub>2</sub>	14	20	07.5	150	R	USCGS H=14 00 27.0 52.0 N, 176.1 W. Andreanof I's. h = 49 km, Mag 5.5
	PRE	iPKP <sub>2</sub>			09.0	148		
	KIM	ePKP <sub>2</sub>			13	152	R	
	PIE	iPKP <sub>2</sub>			44	150		
22	PRE	i	18	59	34.0			
22	PRE	iPKP <sub>2</sub>	20	45	09.5	147		USCGS H=20 25 30.4 51.3 N, 179.8 W Andreanof I's. h = 40 km, Mag. 5.9
	PIE	ePKP <sub>2</sub>			15	148	C	
	WIN	iPKP <sub>2</sub>			15.1	151		
	KIM	iPKP <sub>2</sub>			22	151	R	
22	PRE	iPKP <sub>2</sub>	20	59	30.5	148		USCGS H=20 39 48.0 51.4 N, 179.9 W. Andreanof I's. h = 13 km, Mag. 5.4
	WIN	iPKP <sub>2</sub>			36.5	153	C	
	KIM	ePKP <sub>2</sub>			42	153	C	
23	PRE	iPKP <sub>2</sub>	02	37	28.0	148		USCGS H=02 17 49.4 51.4 N, 179.7 W. Andreanof I's. h = 48 km, Mag. 5.6
	WIN	iPKP <sub>2</sub>			32.9	151	R	
	PIE	ePKP <sub>2</sub>			34	149		
	KIM	iPKP <sub>2</sub>			39	151	R	
23	PRE	i	16	43	10.5		C	
	WIN	i		44	04.9		C	
24	WIN	ePKP <sub>2</sub>	14	57	04.9	151	C	USCGS H=14 37 10.9 Andreanof I's 51.6 N, 174.2 W. h=34 km, Mag. 4.6
24	PRE	i	20	05	25.0		R	
24	WIN	e	21	45	52.5		C	
25	PRE	iPKP <sub>1</sub>	12	47	47.0	D 149	R	USCGS H=12 28 03.3 51.8 N, 174.4 W Andreanof I's. h = 44 km, Mag 4.7
	WIN	ePKP <sub>1</sub>			50.0	C 151	C	
25	PRE	eP	21	32	29.0	C 41	C	USCGS H=21 24 50 57.8 S, 7.5 W S.W. Atlantic Ocean h = 33 km, Mag 4.9
26	PRE	iPKP <sub>2</sub>	01	46	20	151	C	USCGS H=01 26 32.8 51.8 N, 174.2 W Andreanof I's h = 27 km, Mag 4.1
26	PIE	t	08	50	00			



November 1965 (cont'd)

(10)

1

Date	Station	Phase	h. G.	m. M.	s. T.	Dist.	R/ C	Remarks.
28	WIN	i	04	08	22.5		R	
	KIM	i			27		C	
	PIE	i			43			
	PRE	i			47.5			
26	WIN	i	05	33	02.0		C	
	PRE	i			18.6		C	
	KIM	i			38		C	
	PIE	e			44			
30	WIN	i	11	52	50.5		C	
		i			53.1			
30	PRE	i	11	54	39.0		R	
	KIM	t			00			

H.O. Oliver  
 Winifred Wagner.

11th January, 1966.



DEC 1965

SOUTH A



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DEC. 17 00

Geological Survey Office,  
Department of Mines,  
P.O. Box 401,  
Pretoria,  
Republic of South Africa.

SEISMOLOGICAL BULLETIN

The data herewith give the results from a network of seismographs intended particularly for the study of earthquakes occurring in or near South Africa. This bulletin, however, is prepared regularly and will be sent to interested organisations on request.

Stations	Pretoria (PRE)	Grahamstown (GRH)	Pietermaritz- burg (PIE)	Kimberley (KIM)	Windhoek (WIN)
Lat:	25°45.2'S	33°18.6'S	29°37.2'S	28°45.1'S	22°34'S
Long:	28°11.4'E	26°34.5'E	30°23.8'E	24°46.8'E	17°06'E
Lithologic foundation	Weathered Shale	Dwyka Shale	Soft Ecca Shale	Dolerite boulders embedded in decayed dolerite	Micha Schist
Height:	1350 m.	558 m.	656 m.	1321 m.	1728 m.
Instrument:	Willmore S.P. Vert- ical and horizontal	Benioff S.P. vert- ical with short and long period recorders	Benioff S.P. vertical	Benioff S.P. vertical	Benioff S.P. verti- cal.
Seismo. Officer:	The Director	Professor of Physics	Professor of Physics	Rev.Br. N.G. Alter	Offi- cer in Charge
Institution:	Geologi- cal Survey Office	Rhodes University	Natal University	Christian Brothers College	Weath- er Office

Notes: "Earth tremors" originating in the mining district of the Witwatersrand are recorded several times daily by the Pretoria Station, and less frequently by others. These are not dealt with in this bulletin.

Data are occasionally reported herein by courtesy of the Republic Observatory, Johannesburg, which operates a 200 kg. Wiechert Horizontal seismograph. This station is called J, and is at 26°10.9'S, 28°04.5'E, height 1806 metres.

All times given are G.M.T.

The supervision of this network and bulletin is at present in the hands of the undersigned, to whom all inquiries should be addressed.

Address:

Bernard Price Institute of Geophysical Research,  
University of the Witwatersrand,  
Jan Smuts Avenue,  
Johannesburg, South Africa.

H.O. Oliver.

Seismological Officer.

December 1965

(11)

Date	Station	Phase	h. G.	m. M.	s. T.	Arc Dist.	R/ C	Remarks			
2	WIN	iP	24	48	24.1	81 D	R	USCGS H = 24 36 30, 16.4 S, 69.6 W, Peru Bolivia border h = 196 km. Mag 5.2			
	PRE	iPcP	49	08.5	90		R				
2	PRE	iPKP <sub>2</sub>	06	18	18.0	147	R	USCGS H = 05 58 41.5 51.3 N, 176.3 E, Rat Is. Aleutian Is. h = 17 km. Mag 5.1			
3	PRE	iPcP	21	29	04.0	73	R	USCGS H = 21 17 33.6 36.3 N, 69.5 E, Hindu Kush region h = 19 km. Mag 5.5			
4	PRE	iPKP <sub>2</sub>	02	31	41.5	150	C	USCGS H = 02 11 49.9 51.3 N, 170.6 W, Fox Is. Aleutian Is. h = 18 km. Mag 5.5			
	WIN	iPKP <sub>2</sub>							42.0	152	
5	PRE	iPKP <sub>2</sub>	18	34	17.0	145	C	USCGS H = 18 14 50.2 52.6 N, 173.2 E, Near Is. Aleutian Is. h = 36 km. Mag 5.5			
	PIE	iPKP <sub>2</sub>							23	146	
	WIN	iPKP <sub>2</sub>							25.0	146	
	KIM	iPKP <sub>2</sub>							29	149	
5	PRE	iPcP	22	13	41.9	80	C	USCGS H = 22 01 27.7 23.3 N, 94.5 E, Burma-India border region h = 13 km. Mag 5.5			
	WIN	iPcP							14	20.5	88
6	PRE	ePKP <sub>1</sub>	24	43	50.0	151 D	R	USCGS H = 00 24 05 53.5 N, 164.3 W, Unimak Is. h = 114 km. Mag 4.1			
6	PRE	iPKP <sub>2</sub>	01	42	12.5	147	C	USCGS H = 01 22 36.0 50.6 N, 177.4 E, Rat Is. Aleutian Is. h = 37 km. Mag 5.1			
6	PRE	t	11	55	00			Mexican Coast			
	WIN	t							55	00	
	KIM	t							56	00	
7	PRE	t	11	04	00			Northern Chile			
7	KIM	t	12	44	00			Fiji Islands.			
7	PIE	iP	21	29	06	15		USCGS H = 21 25 34 43.4 S, 38.5 E, Prince Edward Island. h = 22 km. Mag 5.0			
	KIM	eP							51	18	
	PRE	iP							30	03.0	19
	WIN	t							31	00	26
8	WIN	iP	18	23	53.5 D	118	R	USCGS H = 18 05 26.1 37.1 S, 177.5 E, East coast of N. Is. N.Z. h = 165 km. Mag 5.8			
9	PIE	iP	02	56	18	15		USCGS H = 02 52 43.8 43.5 S, 31.0 E, Prince Edward Is. h = 33 km. Mag 5.3			
	KIM	iP							57	01	16
	PRE	iP								12.4	18
	WIN	iP							58	31.0	24



December 1965 (cont'd) (12)

Date	Station	Phase	h. G.	m. M.	s. T.	Arc Dist.	R/ C	Remarks
9	PRE WIN	iPP iPP	13	33	18.5 43.5	128 136	C C	USCGS H = 13 12 55.5 18.0 S, 178.2 W, Fiji Is. region, h = 650 km. Mag 5.6
9	PRE	iP	20	38	21.0	83	R	USCGS H = 20 26 04.0 27.5 N, 92.5 E, India-China border h = 22 km. Mag 5.3
10	PRE	e	22	12	13.5			
12	PRE	iPKP <sub>1</sub>	01	07	41.0	149		USCGS H = 00 48 01.7 51.5 N, 178.9 W, Andreanof Is. Aleutian Is. h = 50 km. Mag 5.0
12	PRE	t	10	39	00			
12	PRE WIN	iP iP	22	41 43	55.0 29.0	29 40	R C	USCGS H = 22 35 58.5 29.3 S, 60.6 E, Atlantic-Indian rise h = 33 km. Mag 5.3
13	PRE	t	11	13	00			Kurōle Is.
13	PRE PIE	i t	15	17	06 00		R	
15	PRE KIM	iP iP	04	55 56	46 07	80 84	C C	USCGS H = 04 43 47 22.2 N, 94.6 E, Burma h = 106 km. Mag 5.3
19	PIE GRH PRE WIN	eP iP iP iP	22	14	17 36 41.4 16	42 44 45 55	R C C	USCGS H = 22 06 32.7 32.2 S, 78.8 E, Mid- Indian Rise, h = 33 km. Mag 5.8
20	WIN PRE	iP iP	24	18 19	41.0 02.0	64 66	R R	USCGS H = 24 08 15.2 40.2 N, 24.8 E, Aogean Sea, h = 33 km. Mag 5.3
22	PRE	e	24	33	10.5			
22	PRE	iPKS	24	51	55.0	137		USCGS H = 00 28 46.2 52.4 N, 160.5 E, E. coast of Kamchatka h = 33 km. Mag 4.7
22	WIN	i	16	06	41.0		C	
22	WIN	i	20	00	51.5		R	
23	PRE WIN	i i	17	48 50	(28) 29.0			Mozambique
23	PIE GRH	iPKP <sub>2</sub> iPKP <sub>2</sub>	21 21	07 44	22 03	150 153	R R	USCGS H = 20 47 37.5 60.5 N, 141.0 W, S. Alaska h = 33 km. Mag 5.4
24	PRE	i	03	15	59.0		R	C/A
25	GRH PRE WIN	i i i	19	38	39 45.5 49.0		C R R	



December 1965 (cont'd) (13)

Date	Station	Phase	h. G.	m. M.	s. T.	Arc Dist.	R/ C	Remarks
26	WIN	t	02	15	00			
26	PRE	iPKP	04	11	54.0	117	C	USCGS H = 03 53 16.6 5.5 S, 151.4 E, New Britain region h = 133 km. Mag 6.0
	WIN	iPKP				127	R	
27	PRE	i	20	29	33.5		C	
28	WIN	i	11	35	26.0		C	
	PRE	i				28.0		
28	PRE	iP	20	48	06.1	122		USCGS H = 20 32 24.7 27.8 N, 141.8 E, Bonin Is. region. h = 36 km. Mag 5.9
30	WIN	iPKP <sub>2</sub>	02	26	17.5	149	C	USCGS H = 02 06 31.1 54.1 N, 164.3 W Unimak Is. h = 28 km. Mag 5.6
	PRE	iPKP <sub>2</sub>				151	C	
	PRE	iPKP <sub>2</sub>				153	C	
30	WIN	iP	06	28	15.0	83	R	USCGS H = 06 16 03.9 16.8 S, 71.2 W, S.Peru h = 118 km. Mag 5.7
	PRE	iPeP				91	C	
30	PRE	iPKP <sub>2</sub>	16	53	26.0	148	R	USCGS H = 16 33 43.4 58.1 N, 152.4 W, Kodiak Is. region h = 33 km. Mag 5.4

H.O. Oliver

Winifred Wagner.

2nd February, 1966