Republic of South Africa
Department of Mines

Republiek van Suid-Afrika
Departement van Mynwese

Seismological Bulletin

April 1968

Seismologiese Bulletin

April 1968

Issued by and obtainable from

DIRECTOR
GEOLOGICAL SURVEY
PRIVATE BAG 112
PRETORIA

Uitgegee deur en verkrygbaar vanaf
DIREKTEUR
GEOLOGIESE OPNAME
PRIVAATSAK 112
PRETORIA

SEISMOLOGICAL BULLETIN

The data given herein were obtained from a network of seismograph stations of which details are given in the attached table. In the bulletin data on tremors originating in the gold mining areas have not been included. This bulletin is prepared regularly and will be sent to interested organisations on request.

SEISMOLOGIESE BULLETIN

Die gegewens hierin verstrek is verkry van n netwerk seismograafstasies waarvan besonderhede in die aangehegte tabel verstrek word. In die bulletin is gegewens oor skokke wat in die goudmyngebiede plaasvind weggelaat. Hierdie bulletin word gereeld saamgestel en sal op aanvraag aan belanghebbende organisasies gestuur word.

Locality	Longitude	Latitude	Elevation above sea level	Foundation	Instrument
Pretoria (PRE)	28° 11.4'E	25° 45.2'S	1333m	Weathered shale, Pretoria series.	Geotech 1051 short period (1.0 sec.) vertical seismometer. Two Geotech 1101 short period (1.0 sec.) horizontal seismometers. Sprengnether long period (15 sec.) vertical and two horizontal seismometers. Galvanometers for S.P. system 0.75 sec. Galvometers for L.P. system 100.0 sec. magnification S.P. 50,000 L.P. 1500.
Windhoek (WIN)	17° 06'E	22° 34'S	1728m	Damara mica schist	Instruments and magnification as Pretoria.
Grahamstown (GRM)	26° 34.4'E	33° 18.8'S	610 m	Witteberg quartzite	Instruments same as Pretoria. Magnification: S.P.25,000 L.P.750.
Pietermaritzburg (PTM)	30° 24.2'E	29° 37.6'S	671 m	Ecca shale	Benioff short period vertical magnification about 6000.
Kimberley (KIM)	24° 46.8'E	28° 45.1'S	1321m	Dolorite boulders in decomposed dolerite.	Benioff S.P. vertical magnification about 6,000.
Bloemfontein (BLF)	26° 11.3'E	29° 6.5'S	1420	Weathered dolerite	Benioff S.P. vertical magnification about 6,000.
Hendrik Verwoerd Dam (HVD)	25° 29.7'E	30° 36.3'S	1378m	Dolerite	Three component short period Willmore magnification about 20,000.
P.K. le Roux Dam (PKR)	24° 44.5'E	30° 0.2'S	1267m	Dolerite	Benioff short period vertical magnification about 6,000.

Plek	Lengte-graad.	Breedte-graad.	Hoogte bo seevlak	Fondament	Instrument
Pretoria (PRE)	28° 11.4'O	25° 45.2'S	1333m	Verweerde skalie, Serie Pretoria	Geotech 1051 kort-periode (1.0 sek.) vertikale seismometer. Twee Geotech 1101 kort-periode (1.0 sek.) horisontale seismometer. Sprengnether lang-periode (15 sek.) vertikale en twee horisontale seismometers. Galvanometers vir kort-periode sisteem 0.75 sek. Galvanometers vir lang-periode sisteem 100.0 sek. Vergroting kort-periode 50,000. Vergroting lang-periode 1500.
Windhoek (WIN)	17° 06'O	22° 34'S	1728m	Mikaskis Sisteem Damara	Dieselfde as Pretoria.
Grahamstad (GRM)	26° 34.4'O	33° 18.8'S	610m	Witteberg kwartsiet	Dieselfde as Pretoria.
Pietermaritzburg (PTM)	30° 24.2'O	29° 37.6'S	671m	Eccaskalie	Benioff kort-periode vertikaal.
Kimberley (KIM)	24° 46.8'O	28° 45.1'S	1321m	Dolerietrotsblokke in verweerde doleriet.	Benioff kort-periode vertikaal.
Bloemfontein (BLF)	26° 11.3'O	29° 6.5'S	1420m	Verweerde doleriet	Benioff kort-periode vertikaal.
Hendrik Verwoerddam (HVD)	25° 29.7'O	30° 36.3'S	1378m	Doleriet	Drie-komponent kort-periode Willmore.
P.K. le Rouxdam (PKR)	24° 44.5'O	30° 0.2'S	1267m	Doleriet	Benioff kort-periode vertikaal.

APRIL 1968

Date Datum	Station Stasie	Phase Fase	G.M.T/G T H.M.S. U.M.S.	Arc distance Degrees/Boogafstand grade	C/D	Remarks Opmerkings
01	PRE	EP	00 57 10.1			-
	PRE	EPKP	01 00 43.0	113.7	C	USCGSH=00 42 04.2
	WIN	EPKP	01 01 00.0	121.5		32.5N. 132.2E Depth 33 KM
	KIM	IPKP	01 00 10.5	117.3		Mag.- Shikoku Japan.
	PRE	E(P)	04 01 42.2	25.5		USCGSH=03 56 12.0 0.4S. 33.9 E. Depth-MaG.49 Probably N.E. Lake Victoria.
	PRE	E(P)KP	07 31 54.6	113.4		USCGSH=07 13 17.6
	WIN	EPKP	07 32 12.5	121.3		32.3 N. 132.1E. Depth 32 KM. Mag. 5.7 Shikoku Japan.
	PTM	IP	08 44 34.1		D	-
02	PRE	E(P)	20 29 23.9			Probably Kariba.
03	PRE	IPKP	16 44 15.3	142.6	C	USCGSH=16 24 45.7
	WIN	PKP	16 44 24.1	145.8		51.7N. 174.2E.Depth 38 KM. Mag. 5.3 Near Islands, Aleutian Islands.
04	PRE	E(P)KP	09 19 53.6	140.6		USCGSH=090008.3 55.5N. 155.1W. Depth 27 KM. Mag. 4.5 South of Alaska.
	PRE	E(P)	16 43 09.9			Probably Lake of Tanganyika
05	PRE	EPKP[2]	19 51 09.3	149	C	USCGSH=193122.7
	WIN	EPKP	19 50 58.7	144.6		56.8N. 151.5W Depth 14 KM. Mag 4.9 Kodiak Islands Region.
06	PRE	IPKP	23 07 39.9	140.9	C	USCGSH=22 48 06.8
		EPKP	23 07 47.3	143	C	51.4N. 176.6E.Depth 42 KM. Mag. 4.7 Rat Islands, Aleutian Isleds
07	PRE	IPKP	04 59 53.2	145.5	C	USCGSH=04 40 19.3
	WIN	IPKP	05 00 02.0	147.5	D	51.5N. 176.5E.Depth 33 KM. Mag. 5.3 Rat Islands, Aleutian Islands.
	KIM	IPKP[2]	05 00 06.5	149		
	BLF	IPKP[2]	05 00 05.3	148.5		
08	PRE	IPPP	14 33 16.9	18.5		USCGSH=14 27 28.0
	WIN	EPPP	14 33 54.7	22	D	53.5 S.24.9E Depth 36 KM.

Date Datum	Station Stasie	Phase Fase	G.M.T/G T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstand grade	C/D	Remarks Opmerkings
08	GRM	E(P)SS	14 32 05.4	10.7		Mag. 5.1
	KIM	IPPP	14 32 49.1	15		South of Africa
09	PRE	IPKP[1]	02 48 47.6	148	D	USCGSH=02 28 58.9
	WIN	EPKP	02 48 14.4	137.6		33.1 N. 116.1W. Depth 20 KM.
	GRM	IPKP[2]	02 48 49.9	149	D	Mag. 6.1
	KIM	IPKP[2]	02 48 50.9	146.5		Southern California
	PTM	IPKP[2]	02 48 42.1	148		
	PRE	IPKP	11 45 38.0	129		USCGSH=11 27 39.0 17.8S178.2W
	WIN	EPKP	11 45 41.0	136.5		Depth 650 KM. Mag. 5.2 Fiji Islands Region.
10	WIN	(E)(P)	01 25 06.5	50.7		USCGSH=011604.0 8.3N. 58.9E. Depth 33 KM. Mag. 4.9 Carlsberg Ridge.
	PRE	EP	16 54 03.8	83		USCGSH=16 41 41.8
	WIN	IP	16 53 35.9	77.8		41.7S. 75.5W Depth 29 KM. Mag. 4.7 Off Coast of Southern Chile.
12	PRE	(E)(P)	23 55 05.6			
13	PRE	E(P)	02 10 13.4			
	PRE	EP	23 43 37.4	82		USCGSH= 23 31 31.0 24.6N. 94.8E. Depth 123 KM. Mag. 4.7 Burma India Border Region.
14	PRE	IPKP	08 56 05.0	121	D	USCGSH=083712.2 33.4N. 141.4E. Depth 44 KM. Mag 5.4 off East Coast of Honshu Japan
14	PRE	E(P)	13 23 55.5	121		USCGSH= 13 05 08.0 33.4N 141.4E. Depth 141 KM Mag. 5.4 Off East Coast of Honshu Japan.
	PRE	E(P)	19 42 14.5			-
	PRE	IP	23 32 12.1		D	-
15	WIN	IP(DIF)	08 01 03.5	105	D	USCGSH=074740.3 Depth 35 KM Mag. 4.9 Near Coast of Northern Peru.
	WIN	E(P)	13 22 34.9			-
	PRE	IP	17 02 26.4			-
	PRE	E(P)PP	13 12 21.8	48.8		USCGSH=13 00 27.9 58.6S 25.2W Depth 33 KM Mag.4.8 South Sandwich Island Region.

Date Datum	Station Stasie	Phase Fase	G.M.T/G T H.M.S. U.M.S.	Arc Distant degrees/Boog- afstand grade	C/D	Remarks Opmerkings
15	PRE	IP	14 06 43.7	42.5	D	USCGSH=13 58 40.3 5.1S - 68.4E Depth 33 KM Mag.5.2 Chagos Archipelago Region.
17	PRE	IP	09 23 03.1	67.5	C	USCGSH=09 12 04.3 35.2N 3.7W Depth 16KM Mag. 5.0 Straits of Gibralter
	WIN	IP	09 22 18.7	60.8		
	KIM	IP	09 23 09.9	69		
	PRE	EP	1314	19.2		
	PRE	IP	13 22 51.8	73.4	D	USCGSH=131126.2 36.4 N 71.5 E. Depth 113 Km. Mag.5.2 Afghanistan USSR Border Region.
	WIN	IP	13 23 14.1	77.5	D	
18	WIN	EP	08 42 38.7			
	PRE	EP	14 24 47.4			
	PRE	EP	15 36 42.5			
	PRE	EP	16 13 04.8			
	PRE	EP	16 38 40.2			
	PRE	EP	17 07 57.0			
~~19~~	~~PRE~~	~~IPPP~~	~~08 15 53.0~~	~~39.7~~	C	USCGSH=08 08 22.2 42.7S 16.0W Depth 33KM Mag. 5.2 South Atlantic Ridge.
	~~WIN~~	~~IPPP~~	~~08 15 04.8~~	~~39.6~~	C	
	KIM	IP	08 15 18.6	36		
	PRE	E(P)	0908	46.2		
	PRE	IP	09 11 59.3	39.6	D	USCGSH=0904 27.3 42.6S 16.0W Depth 33 KM Mag. 5.6 South Atlantic Ridge
	~~WIN~~	~~EPPP~~	~~09 11 10.1~~	~~34~~	D	
	GRM	EP	09 11 15.0	35		
	KIM	IP	09 11 22.6	36		
	PTM	IP	09 11 53.8	39		
	PRE	EP	11 19 13.6		D	
20	PRE	IP	01 10 07.7	50.5	C	USCGSH=01 01 31.2 56.1S 27.4W. Depth. 186 KM Mag.5.1 South Sandwich Islands Region.
	PRE	IP	07 27 21.9		D	
	WIN	IP	07 26 55.5		D	
	PRE	EP	10 30 20.0	81	C	USCGSH=10 18 01.1 38.3N 26.6W Depth 33 KM. Mag 4.9 Azores Islands Region
	WIN	E(P)	10 29 10.2	71.7		

Date Datum	Station Stasie	Phase Fase	G.M.T/G T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstand grade	C/D	Remarks Opmerkings
20	PRE	E(P)KP	12 44 21.4	139.8		USCGSH=12 25 10.1
	WIN	E(P)KP	12 44 34.0	140		15.7S 172.6W Depth 30 KM Mag. 5.7 Samoa Islands Region.
	PRE	E(P)	13 11 12.9			
	PRE	EP	13 59 53.9	20.4		USCGSH=13 55 09.5
	~~WIN~~	~~IPPP~~	~~14 00 42.4~~	~~25.5~~		7.7S. 38.8E
	KIM	EP	14 00 33.9	27.8	C	Depth 33 KM Mag. 4.5 Tanganyika.
	PRE	E(P)	19 26 07.5			
	WIN	EP	19 26 46.8			
	PRE	E(P)	19 57 41.1	37		USCGSH=19 50 31.0
	WIN	IP	19 56 13.8	27	D	19.9S 11.8W Depth 33 KM Mag. 4.9 South Atlantic Ridge.
	WIN	E(P)	21 57 30.8	37		USCGSH=21 51 43.0
						19.3S 11.8W Depth 33 KM. Mag. 4.8 South Atlantic Ridge.
	WIN	EP	22 18 35.7	27		USCGSH=22 12 53.6
						19.9S 11.9W Depth 33 KM. Mag. 4.7 South Atlantic Ridge.
21	~~PRE~~	~~E(P)PP~~	~~08 53 01.7~~	~~123.5~~		USCGSH=0834 03.5
						38.6N. 143.0E Depth 42 KM. Mag 5.3 off East Coast of Honshu Japan.
	WIN	EP	0936 39.8	88		USCGSH=0924 35.5
						23.4S 70.5W Depth 41 KM Mag 5.5 Near Coast of Northern Chile.
	PRE	EP	22 40 17.0			Probably near Coast
	WIN	EP	22 39 48.5			of Peru.
23	PRE	E(P)KP	01 47 52.0	145		USCGSH=01 28 26.0
						N.51.5 E.176.3 Depth 33 KM Mag 4.3 Rat Islands, Aleutian Isl.
	PRE	IP	06 56 36.3	73.6	C	USCGSH=06 45 11.5
						36.3N 71.2E Depth 114 KM Mag. 5.2 Afghanistan-USSR. Border Region.

Date Datum	Station Stasie	Phase Fase	G.M.T/G T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstand grade	C/D	Remarks Opmerkings
23	PRE	E(P)	12 49 43.9	60		USCGSH=12 39 47.3 27.7N 56.7E Depth 52 KM Mag.5.1 Southern Iran.
	KIM	IP	12 50 11.2	63.5		
	PRE	IPKP[1]	20 48 54.4	147.5	C	USCGSH=20 29 14.5 58.7N 150.0W
	WIN	IPKP	20 48 43.0	142.5		
	KIM	IPKP[2]	20 49 05.2	150		Depth 23 KM Mag 6.3 Gulf of Alaska
	PTM	IPKP[1]	20 49 03.8	152		
24	PRE	IP	03 12 20.5	143	C	USCGSH=03 04 17.3 5.1S 68.3E Depth 33 KM Mag. 4.9 Chagos Archipelago Region.
	~~PRE~~	~~IPCP~~	~~08 28 39.9~~	~~64.5~~	C	USCGSH=08 18 02.5
	~~WIN~~	~~IPCP~~	~~08 28 24.5~~	~~61.8~~	D	39.3N 24.9E
	KIM	IP	08 29 00.4	67.4		Depth 17 KM Mag. 5.2 Aegean Sea.
	PRE	IP	1939 53.1	43.0	D	USCGSH=19 31 49.5 5.0S. 68.4E. Depth 33KM Mag. 4.9. Chagos Archipelago Region.
	PRE	E(P)SS	19 48 17.0	7		USCGSH=19 45 21.0 24.4S 37.2E. Mag 3.6 Probably S. Mocambique Channel.
25	WIN	E(P)KP	21 43 59.8	140		USCGSH=21 25 36.1 15.2S 173.1W.Depth 33 KM. Mag. 5.2. Tonga Islands.
26	WIN	E(P)KP	01 01 59.2	140		USCGSH=00 42 34.9 15.3S 173.1W Depth 5.3KM. Mag. 1.1 Tonga Islands.
	PRE	IP	03 08 56.1	63		USCGSH=02 58 22.1 35.1N. 50.2E Depth 21 KM Mag 5.3 Iran.
	WIN	IP	03 09 05.9	64.3		
	WIN	E(P)	12 01 06.6			
	PRE	IP	12 06 47.8	92		USCGSH=11 54 47.7 14.4S 70.5W Depth 212 KM. Mag 4.9 Peru.
	WIN	IP	12 07 31.5	83	D	
	KIM	IP	12 07 04.0	88.4		
	PRE	IP	13 14 05.5		C	
	PRE	IP	13 24 27.2	51	C	USCGSH=13 15 23.3 0.2S 18.7W Depth 33 KM Mag. - Central Mid. Atlantic Ridge.
	WIN	EP	13 23 06.5	40	C	
	GRM	E(P)	13 24 42.3	53.7		

Date Datum	Station Stasie	Phase Fase	G.M.T. H.M.S.	Arc Distant Degrees/Boog-afstand grade	D/C	Remarks Opmerkings
26	PRE	IPKP^2	15 19 44.5	148	D	USCGSH=15 00 00.0
	WIN	EPKP	15 18 45.8	137		33.3N. 116.5W
	GRM	EPKP^2	15 19 46.7	149.5		Depth 0 KM Mag 5.4
	KIM	IPKP^2	15 19 42.1	147		Southern Nevada
	PRE	E(P)	18 07 12.5			Probably near coast
	WIN	E(P)	18 06 58.1			of Michoacan. MEXICO
28	PRE	IPKP	04 37 53.6	153.5	D	USCGSH=04 18 15.7
	WIN	IPKP^2	04 38 06.5	156	D	44.8N 174.5E.
	KIM	IPKP^1	04 38 04.2	151		Depth 39 KM Mag. -
						North Pacific Ocean.
29	PRE	IPKP^2	00 41 30.8	152	C	USCGSH=00 21 36.6
						39.5N. 122.1 W.
						Depth 15KM Mag 5.0
						Northern California.
	PRE	E(P)	04 32 21.0			
	PRE	IP	14 44 05.3		D	
	PRE	EP	17 12 44.7	66		USCGSH=17 01 57.6
	WIN	IP	17 12 47.0	66	D	39.2N. 44.3E Depth
	KIM	E(P)	17 13 03.0	69.5		34 KM. Mag. 5.3
						N.W. Iran-USSR. Bor-
						der region.
	PRE	E(P)	18 40 25.5			
30	~~PRE~~	~~E(P)SS~~	~~00 57 35.1~~	~~10.5~~		USCGSH=00 53 18.0
	~~WIN~~	~~E(P)PP~~	~~00 56 16.4~~	~~11~~		15.1S, 26.8E Mag.3.3
						Probably Numbwa Area.
						Zambia.
	PRE	IPKP	0205 24.0	134.3	C	USCGSH=01 42 58.7
						54,3N 159.5E. Depth
						118KM Mag 5.1 Probab-
						ly Near East Coast
						of Kamchatka.
	~~PRE~~	~~E(P)PP~~	~~09 12 05.0~~	~~7~~		USCGSH=09 09 40.0
	WIN	E(P)	09 13 18.7	15		21.6S 33.6E. Depth -
						Mag. 3.6. Probably
						Save Valley, South
						Mocambique.
	PRE	EP	16 41 41.0			

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Kimberley (KIM)	24° 46.8'E	28° 45.1'S	1321m	Dolorite boulders in decomposed dolerite.	Benioff S.P. vertical magnification about 6,000.
Bloemfontein (BLF)	26° 11.3'E	29° 6.5'S	1420	Weathered dolerite	Benioff S.P. vertical magnification about 6,000.
Hendrik Verwoerd Dam (HVD)	25° 29.7'E	30° 36.3'S	1378m	Dolerite	Three component short period Willmore magnification about 20,000.
P.K. le Roux Dam (PKR)	24° 44.5'E	30° 0.2'S	1267m	Dolerite	Benioff short period vertical magnification about 6,000.

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Windhoek (WIN)	17° 06'O	22° 34'S	1728m	Mikaskis Sisteem Damara	Dieselfde as Pretoria.
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Kimberley (KIM)	24° 46.8'O	28° 45.1'S	1321m	Dolerietrotsblokke in verweerde doleriet.	Benioff kort-periode vertikaal.
Bloemfontein (BLF)	26° 11.3'O	29° 6.5'S	1420m	Verweerde doleriet	Benioff kort-periode vertikaal.
Hendrik Verwoerddam (HVD)	25° 29.7'O	30° 36.3'S	1378m	Doleriet	Drie-komponent kort-periode Willmore.
P.K. le Rouxdam (PKR)	24° 44.5'O	30° 0.2'S	1267m	Doleriet	Benioff kort-periode vertikaal.

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01	PRE	IP	00 03 31.4	82°		235117.9	38.4S 71.1W South Chile.Argentinia Border Reg. Depth 40KM Mag. 5.1
	WIN	IP	00 02 57.3	75°			
	KIM	IPPP	00 03 08.8	80°			
	PRE	EPKP	19 31 53.8	123°		191253.4	40.9N 142.5E. Near East Coast of Honshu Japan Depth 18KM Mag. 4.9
02	WIN	IPDIF	05 42 50.8	95°		052938.2	Dominican Rep Reg. Depth 82KM Mag 5.8
	PRE	E(P)	13 10 08.0	129.5°		130314.7	17.7S 178.7W Fiji Islands. Depth 50.4 Mag 4.1
	PRE	EPDIF	23 39 27.0	97.5°			
	GRM	IPDIF	23 39 27.7	96°	D	232603.6	6.4S 129.9E Banda Sea Depth 128KM Mag 5.5
	PRE	E(P)	23 43 19.6				
03	GRM	E(P)	02 15 13.8	96°		014257.0	6.9S 129.4E Banda Sea. Depth 13KM Mag 5.5
	PRE	IPP	06 08 56.1	37°	C	060129.0	47.4S 13.2W. South Atlantic Ridge Depth 23 KM Mag. 5.0
	PRE	$IPKP_2$	16 33 32.0	150°	D	161340.0	54.2N 163.3W UNImakIsl. Reg Depth 17KM Mag. 5.0
06	PRE	$IPKP_2$	11 31 47.0	148.5°	C	111200.2	51.7N 17.3W Andreanof Isl & Aleutian Isl. Depth 32KM Mag 4.1.
	WIN	$EPKP_2$	11 31 45.7	150			
	PRE	IPKP	14 56 32.2	122°		143749.8	14.6N 90.8W Guatemalia Depth 123KM Mag 5.1
	KIM	EPKP	14 56 25.0	119.5°			
	BLF	EPKP	14 56 28.2	120°			
	PRE	EP	21 00 57.4	73.5°		204945.0	36.5N 70.8E Hindu Kush Region Mag 5.0
08	PRE	IP	11 12 48.9	86°	D	110007.4	58.0S 157.7E Macquarie Island Reg. Depth 33 KM Mag. 5.7
	WIN	IPDIF	11 13 18.8	93°			
	KIM	IP	11 12 41.1	84°	D		
	PRE	E(P)	11 15 58.7				
	PRE	$EPKP^1$	12 37 05.6	154	C	121713.4	46.3N 127.9W off Coast of Oregon Depth 33 KM mag. 6.1
	WIN	IPKP	12 36 47.3	144			
	KIM	$EPKP_2$	12 37 02.1	154			

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstand grade	D/C	USCGSH	Remarks Opmerkings
08	BLF	IPKP[2]	12 37 07.0	155		121713.4	46.3N 127.9W off Coast of Oregon
	PTM	E(P)KP[1]	12 37 09.1	158			Depth 33KM Mag.6.1
	PRE	EP	22 56 33.0	73		224508.3	37.1N 71.9E Afghanistan USSR Border Reg. Depth 160 KM Mag. 5.1.
09	PRE	E(P)KP[2]	03 23 02.7	151		030302	43.4N 127.0W off Coast of Oregon
	WIN	IPKP	03 22 33.0	142.5			Depth 33KM Mag.5.2
	WIN	IPKP	07 38 53.8	123.5		071955	31.8S 178.7W Kermadec Isl. Depth 12 KM Mag 5.0
	GRM	IP	12 37 09.8		C		
	PRE	EP	13 15 56.2				
	PRE	IP	18 45 13.7	86		183233.3	18.4S 69.4W N.Chile Depth 125 KM
10	PRE	EPKP	03 29 38.8	147.5		0309560	50.2N 178.8W Andreanof Isl., Aleutian Isl. Depth 32 KM Mag. 4.3
	~~PRE~~	~~E(P)SS~~	~~08 15 14.8~~	~~25.5~~		080415	0.4S 34.3E N.E. Lake Victoria Mag. 4.9.
	~~WIN~~	~~IPSS~~	~~08 15 16.4~~	~~27.5~~			
	WIN	EP	08 18 50.8				
	PRE	IP	15 32 50.9	49	C	152401.6	55.7S 26.8W South Sandwich Isl. Reg. Depth 33 KM Mag. 5.6
	KIM	EP	15 32 18.3	45.5			
11	WIN	E(P)EP	12 24 10.8	70.5		121241.0	41.0N 49.8E Caspian Sea Depth 16 KM Mag. 5.0
	PRE	IP	13 41 10.7	79	D	133005.9	28.8S 63.1W Santiago Del Estoro
	WIN	IP	13 40 27.9	71			Prov. Arg. Depth
	KIM	IP	13 40 49.11	75	D		602 KM Mag. 5.2
	BLF	IP	13 40 54.0	75.5	D		
	PRE	E(P)KP	15 52 12.0	112		153341.0	6.4S 147.3E Eastnew Guinea Reg. Depth 76KM Mag.5.5
	WIN	IPKP	15 52 34.2	122.5			
13	PRE	EP	02 57 46.8	69		024635.7	43.5N 40.3E West Caucasas Depth 5 KM Mag. 4.8
	WIN	IP	02 57 43.6	68			
	KIM	EP	02 58 07.8	72.5			
	PRE	EP	03 11 42.6	81		025925.4	40.2S 73.2W Near coast of Central Chile Depth 33KM Mag 4.8
	WIN	E(P)	03 11 09.1	75.5			

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstand grade	D/C	USCGSH	Remarks Opmerkings
14	PRE	IP	14 19 24.7		C		
	PRE	IPKP	14 23 23.0	111	D	140506.0	29.9N 129.4E Ryukyu Isl. Depth 16.8KM Mag. 5.9
	WIN	IPKP	14 23 38.8	118.5			
	GRM	EPKP	14 23 31.0	113			
	BLF	EPKP	14 23 25.6	113			
15	PRE	IPP	07 53 38.6	10	D	075117.4	15.9S 25.9E Zambia Depth 33KM Mag. 6.1
	WIN	IPP	07 53 47.3	10.5			
	GRM	EP	07	17			
	KIM	IPPP	07 54 14.4	12.5	C		
	BLF	IPPP	07 54 18.0	13	D		
	PTM	IPPP	07 54 34.3	14.5	D		
	PKR	IP	07 54 29.4	140	D		
	PRE	IP	11 27 04.3	20	C	112226.0	5.3S 30.3E Central lake Tanganyika Mag.4.6
	WIN	EP	11 27 11.0	21			
	WIN	E(P)	11 30 47.6				
	PRE	E(P)KP	15 19 18.3	119			29.8S 179.0W Ker-madec Isl. Depth 33 Mag. 5.1
	WIN	IPKP	15 19 31.0	125.5	D	150029.9	
	PRE	EP	15 21 18.8				
	WIN	E(P)	15 21 27.6				
16	PRE	E(P)DIF	01 04 38.9	123		004855.4	40.8N 143.2E off East Coast Honshu Japan Depth 7 KM Mag. 7.2
	WIN	E(P)"	01 06 06.0	130.5			
	GRM	IPDIF	01 04 52.8	128	C		
	KIM	E(P)KP	01 08 09.3	127			
	BLF	E(P)DIF	01 06 16.0	126.5			
	PTM	E(P)KP	01 06 23.5	123.5			
	PKR	E(P)DIF	01 06 10.4	128			
	PRE	IPKP	06 55 49.1	123.5		063651.0	41.9N 143.0E Hok-kaido Japan Reg. Depth 35 KM Mag. 5.7
	WIN	EPKP	06 56 03.2	130			
	KIM	IPKP	06 55 58.0	127.5	C		
	BLF	IPKP	06 55 53.5	126.5	D		
	PKR	EPKP	06 55 59.3	128.5			
	PRE	IPKP	08 38 55.9	123.5		081956.7	41.1N 142.8E Hokkaido Japan reg. Depth 22KM Mag. 4.8
	PRE	IPKP	09 17 12.7	123.	C	085811.1	41.4N 142.7E Hok-kaido Japan reg. depth 15KM Mag.5.4
	PRE	E(P)DIF	10 55 04.5	123		103901.6	41.5N 142.7E Mag 6.3 Hokkaido Ja-pan Reg.
	PRE	IPKP	10 58 01.1	123	C	103901.6	41.5N 142.7E Hokkaido Japan Reg. Depth 33 KM.
	WIN	IPKP	10 58 05.8	130.5	D		
	GRM	IPKP	10 58 12.4	128			
	KIM	EPKP	10 57 51.0	127			
	BLF	EPKP	10 58 02.0	126.5			
	PTM	EPKP	10 58 01.5	123.5			
	PKR	EPKP	10 58 05.3	128.5			

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstand grade	C/D	USCGSH	Remarks Opmerkings
16	PRE	IPKP	16 32 45.7	125	C	161345.1	39.7N 143.6E off East Coast of Honshu Japan. Depth 29 KM Mag 5.6
	PRE	E(P)KP	17 47 11.0	124		172813.0	41.4N 143.0E Hokkaido Japan Reg. Depth 33 KM Mag 5.2
	PRE	IPKP	19 02 14.5	123	C	184321.0	Near East Coast of Honshu Japan Depth 59 KM Mag.5.7
	WIN	IPKP	19 02 24.8	131	D		
	KIM	EPKP	19 02 21.8	127.5			
	BLF	IPKP	19 02 19.5	126.5D			
	PTM	IPKP	19 02 15.5	123.5			
	PRE	IPKP	19 35 43.8	123.5C		191647.0	41.3N 142.4E Hokkaido Japan Reg. Depth 42 KM Mag.5.6
	WIN	E(P)KP	19 35 33.4	131			
	BLF	IPKP	19 35 47.0	126.5			
	WIN	EPKP	20 04 09.0	125		194523.5	12.6N 141.6E South of Mariana Isl. Depth 170 KM Mag 5.2
	PRE	IPKP	21 22 22.0	123.5	D	210324.3	41.2N 142.4E Hokkaido Japan Reg. Depth 33 KM Mag. 5.0
	PRE	IP	22 57 51.0	85.5	C	224519.2	22.8S 68.6W Northern Chile Depth 104KM Mag 4.2
	WIN	IP	22 57 09.2	77			
	KIM	EP	22 57 30.8	81.5			
	BLF	IP	22 57 34.1	82.5	C		
	PRE	IPKP	23 23 53.2	123.5	C	230454.7	39.8N 143.1E off East Coast of Honshu Japan Depth 37 KM Mag. 5.8
	WIN	IPKP	23 24 18.8	130.5	C		
	KIM	EPKP	23 24 01.9	127			
	BLF	EPKP	23 23 57.0	126.5			
	PTM	E(P)KP	23 23 52.5	123.5			
17	PRE	IPKP	11 01 46.0	123.5	C	104245	39.6N 143E off East Coast of Honshu Japan Depth 33 KM Mag. 5.34
	PRE	EPKP	13 21 34.4	123		130237.3	41.5N 143.1E Hokkaido Japan Reg. Depth 45KM Mag.5.6
18	PRE	IP	01 11 21.8	49.5	D	010229.2	55.4S 27.7W S. Sandwich Isl. Reg. Depth 33 KM Mag 5.4
	~~WIN~~	~~IPP~~	01 10 57.3	46.	C		
	KIM	IP	01 10 49.4	45.5	D		
	BLF	EP	01 10 53.4	46			
	PRE	IPKP[1]	06 10 59.4	151	C	055124.1	53.8N 168.3E Fox Isl; Aleutian Isl. Depth 131KM Mag. 4.5

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstand grade	C/D	USCGSH	Remarks Opmerkings
	PRE	E(P)KP[1]	08 18 19.3	150.5		075835.4	54.1N 164.7W Unimak Isl. Reg. depth 58KM Mag. 4.6
	PRE	EP	13 10 04.5				
19	~~WIN~~	~~IPcP~~	~~12 23 39.0~~	~~83~~	C	121109	48.9S 124.5E South of Australia Depth 33 KM.
	PRE	E(P)KP	22 35 45.1	123		2216448	40.9N 143.2E off East Coast of Honshu Japan Depth 18 KM Mag. 5.1
20	PRE	EPKP	03 35 19.8	123.5		031619.6	40.0N 144.0E off East Coast of Honshu Depth 31 KM Mag. 5.5
	~~PRE~~	~~IPP~~	~~07 32 51.6~~	~~118~~	C	071303.0	30.9S 178.3W Kermadec Isl. Reg. Depth 22KM Mag 6.0
	WIN	IP	07 32 04.8	124.5			
	KIM	IPKP	07 31 48.5	116			
	~~BLF~~	~~EPPP~~	~~07 31 44.1~~	~~115.5~~			
	PRE	EP	12 13 09.5	139.5		115355	51.9N 158.5E near east coast of Kamchatka. Depth 155KM Mag 5.3
	WIN	E(P)KP	12 13 17.6	136			
	KIM	EPKP	12 13 14.5	138			
	PKR	E(P)KP	12 13 11.5	139			
	PRE	IP	13 05 33.5	24	D	130015.5	3.2S 37.2E Tanganyika Depth 33.0 KM Mag 4.5
	PRE	IP	13 07 02.4		C		
	PRE	EPKP	20 24 31.8	117.5	D	200549.1	30.7S 178.4W Kermadec Isl. Reg. Depth 146 KM
	WIN	IPKP	20 24 47.2	125.5	D		
	~~GRM~~	~~EPP~~	~~20 24 21.3~~	~~111.5~~			
	KIM	E(P)KP	20 24 29.2	116			
	~~BLF~~	~~EPPP~~	~~20 24 27.4~~	~~115.5~~			
	~~PKR~~	~~E(P)PP~~	~~20 24 38.3~~	~~115~~			
	PRE	E(P)	20 34 11.8				
	PRE	IPKP	21 28 53.8	129	D	210944.8	44.8N 150.3E Kurile Isl. Depth 38 KM Mag. 5.8
	WIN	EPKP	21 28 58.5	135			

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstand grade	C/D	USCGSH	Opmerkings Remarks
20	GRM	EPKP	21 28 17.5	134		210944.8	44.8N 150.3E Kurile Isl. Depth 38 KM Mag. 5.8
	BLF	EPKP	21 28 58.5	132.5			
	PKR	E(P)KP	21 29 17.3	133.5			
21	PRE	EPKP	00 38 40.2	129		001934.8	44.8N 150.2E Kurile Isl. Reg. depth 33 KM Mag. 4.3
	PRE	EP	04 10 42.8	73	D	035911.5	38.9N 65.2E South East Uzbek SSR Depth 13 KM Mag 5.4
	~~WIN~~	~~IPcP~~	~~04 11 01.0~~	~~75~~	D		
	~~KIM~~	~~IPcP~~	~~04 11 05.2~~	~~76~~			
	~~BLF~~	~~IPcP~~	~~04 11 03.5~~	~~76.5~~	C		
	PKR	EP	04 11 19.0	77			
	WIN	IP	08 03 16.5	76	C	075122.0	44OS 75.5W off East Coast of Southern Chile Depth 47 KM Mag 4.5
	PRE	IPKP	08 39 10.2	129	D	082000.9	44.9 150.2E Kurile Isl. Reg. Depth 30 KM Mag. 5.1
	WIN	E(P)KP	08 39 13.0	135			
	KIM	EPKP	08 39 16.2	133.5			
	BLF	IPKP	08 39 15.8	132.5			
	PKR	E(P)KP	08 39 33.7	133.5			
	PRE	E(P)KP	11 23 16.8	129		110357.5	45.0N 150.1E Kurile Isl. Mag 4.9
	WIN	E(P)KP	11 23 04.6	135			
	PRE	EPKP	19 06 37.3	129		184730.5	44.8N 150.3E Kurile Isl. Reg. Depth 51 KM Mag. 5.2
22	WIN	E(P)KP	00 37 03.5	124		001805.9	30.4S 177.8W Kermadec Isl. Reg. Mag 4.7 KM
	PRE	EPKP	11 10 51.1	123.5		105153.3	41.5N 142.8E Hokkaido
	WIN	E(P)KP	11 11 03.5	130		~~105153.3~~	Japan Reg Depth 40 KM Mag 5.9
	BLF	IPKP	11 10 56.2	126.5	D		
	PTM	E(P)KP	11 10 54.0	123.5			
	PKR	E(P)KP	11 11 20.0	128.5			
	PRE	$EPKP_2$	13 41 41.6	149		132155.7	38.6N 116.2W Nevada Depth 13 KM Mag. 5.1
	PRE	EPKP	16 08 24.1	123.5		154925.9	41.2N 143.0E Hokkaido Japan Reg. Depth 13 KM Mag. 5.1
	PRE	E(P)cP	18 46 25.1	63		183602.6	33.0N 49.1E Western Iran Depth 6 KM Mag. 43
	WIN	E(P)cP	18 46 35.7	64			
	PRE	IPKP	19 48 21.8	123.5	D	192925.7	40.2N 142.3E Near East Coast of Honshu Depth 40 KM Mag 5.5
	WIN	EPKP	19 47 33.8	130.5			
	KIM	EPKP	19 48 29.3	127			

Date Datum	Station Stasie	Phase Fase	G.M.T/G.E.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstand grade	C/D	USCGSH	Remarks Opmerkings
23	PRE	EPDIF	17 38 29.5	106		172429.7	41.7S 171.9E South Island New Zealand Depth 21 KM Mag. 6.1
	WIN	EPDIF	17 39 05.0	112.5	D		
	GRM	EPDIF	17 38 03.2	99.5			
	KIM	E(P)DIF	17 38 16.6	103.5			
	PKR	E(P)DIF	17 38 37.9	102			
	WIN	EPKP	19 01 04.7	124.5		184301.0	30.6S 177.7W Kermadec Isl. Reg. Mag. 5.6
24	PRE	$EPKP_2$	11 36 52.5	149.5		111702.5	53.2N 163.1W Unimak Isl. Reg. Depth 33KM Mag. 4.9
	WIN	$IPKP_2$	11 36 49.7	151.	D		
	PRE	IPKP	14 25 22.5	123.5	D	140624.2	40.9N 143.0E off East Coast of Honshu Japan Depth 38 KM Mag. 5.6
	BLF	IPKP	14 25 27.5	126.5	C		
	PRE	IP	15 55 41.4	86	D	154354.2	6.8S 118.9E Flores Sea Depth 60KM Mag. 6.0
	WIN	IP	15 55 30.4	96.5	C		
	GRM	IP	15 55 45.7	86.5	D		
	KIM	IP	15 55 53.2	88	D		
	BLF	IP	15 55 46.9	87	D		
	PTM	IP	15 55 25.4	83.5	C		
	PKR	IPDIF	15 56 17.0	87.5	D		
	PRE	IP	16 13 25.6		D		
	BLF	IP	16 13 22.2		D		
	PKR	EP	16 13 31.0				
	PRE	$E(P)KP_2$	21 56 41.3	149.5		213711.2	54.2N 169.3 Komandorsky Isl. Reg. Depth 5 KM Mag 4.7
25	PRE	E(P)	08 56 26.7				6.8S 129.5E probably Banda Sea.
	PRE	EPKP	12 11 55.8	123.5		115257.4	40.1N 143.1E off East Coast of Honshu Depth 32KM Mag. 5.3
	PRE	EP	13 20 27.5				
26	PRE	EP	01 56 17.6				
	PRE	EPCP	14 54 39.0	86		144152.0	63.3S 170.7E Balleny Isl. Reg. Depth 9KM Mag.5.9
	WIN	IPDIF	14 55 06.4	92	C		
	GRM	EP	14 54 05.2	80			
	KIM	E(P)CP	14 54 29.2	84			
	PIE	EP	14 54 05.6	82			
28	WIN	E(P)KP	09 25 13.8	124		090629.9	30.9S 177.8W Kermadec Isl. Reg Depth 33 KM Mag 5.7

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstand grade	C/D	USCGSH	Remarks Opmerkings
28	PRE	IPDIF	13 41 34.2	107	D	132718.7	2.9S 139.3E Near
	GRM	IPDIF	13 41 35.8	106	C		North Coast of
	KIM	E(P)DIF	13 41 44.8	108.5			West New Guinea.
	BLF	EPDIF	13 41 38.1	107.5			Depth 65KM Mag.
	PTM	EPDIF	13 41 22.5	103			6.1
	PRE	EPKP	22 49 25.8	142		222956.8	52.2N 172.8E
	WIN	IPKP	22 49 35.2	145			Near Isl, Aleu-
	GRM	IPKP	22 49 46.5	150	C		tian Isl. Depth
	KIM	$EPKP_2$	22 49 38.0	145.5			15 KM Mag. 5.7
	PTM	$IPKP_2$	22 49 31.1	144.5	C		
30	PRE	IP	01 20 27.9	58	C	011030.0	27.8N 54.0E S.
	WIN	IP	01 20 47.8	60	D		Iran Depth 27 KM
	GRM	IPP	01 21 18.0	60.5	D		Mag. 5.2
	KIM	IP	01 20 54.7	61.5	C		
	BLF	IP	01 20 52.8	61	D		
	PRE	IPKP	05 42 56.0	129	D	052348.9	44.7N 150.3E Ku-
							rile Isl. Reg
							Depth 49KM Mag 5.8
	PRE	IP	17 50 39.0	61	C	174024.4	35.5N 28.0E
	WIN	IP	17 50 23.7	59	C		Eastern Medite-
	GRM	IP	17 51 29.7	68	D		ranean Sea Depth
	KIM	IPcP	17 50 58.7	63.5	D		21 KM Mag. 5.5
	BLF	IPcP	17 51 01.8	62.	C		
	PRE	E(P)KP	20 01 16.0	118			31.0S 177.6W
	WIN	EPKP	20 01 19.5	124.5			Kermadec Isl.
	KIM	E(P)KP	20 01 08.8	116.5			Depth 42 KM
							Mag. 6.2

Republic of South Africa
Department of Mines

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Departement van Mynwese

Seismological Bulletin

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PRETORIA

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SEISMOLOGICAL BULLETIN

The data given herein were obtained from a network of seismograph stations of which details are given in the attached table. In the bulletin data on tremors originating in the gold mining areas have not been included. This bulletin is prepared regularly and will be sent to interested organisations on request.

SEISMOLOGIESE BULLETIN

Die gegewens hierin verstrek is verkry van 'n netwerk seismograafstasies waarvan besonderhede in die aangehegte tabel verstrek word. In die bulletin is gegewens oor skokke wat in die goudmyngebiede plaasvind weggelaat. Hierdie bulletin word gereeld saamgestel en sal op aanvraag aan belanghebbende organisasies gestuur word.

Locality	Longitude	Latitude	Elevation above sea level	Foundation	Instrument
Pretoria (PRE)	28° 11.4'E	25° 45.2'S	1333m	Weathered shale, Pretoria series.	Geotech 1051 short period (1.0 sec.) vertical seismometer. Two Geotech 1101 short period (1.0 sec.) horizontal seismometers. Sprengnether long period (15 sec.) vertical and two horizontal seismometers. Galvanometers for S.P. system 0.75 sec. Galvometers for L.P. system 100.0 sec. magnification S.P. 50,000 L.P. 1500.
Windhoek (WIN)	17° 06'E	22° 34'S	1728m	Damara mica schist	Instruments and magnification as Pretoria.
Grahamstown (GRM)	26° 34.4'E	33° 18.8'S	610 m	Witteberg quartzite	Instruments same as Pretoria. Magnification: S.P.25,000 L.P.750.
Pietermaritzburg (PTM)	30° 24.2'E	29° 37.6'S	671 m	Ecca shale	Benioff short period vertical magnification about 6000.
Kimberley (KIM)	24° 46.8'E	28° 45.1'S	1321m	Dolorite boulders in decomposed dolerite.	Benioff S.P. vertical magnification about 6,000.
Bloemfontein (BLF)	26° 11.3'E	29° 6.5'S	1420	Weathered dolerite	Benioff S.P. vertical magnification about 6,000.
Hendrik Verwoerd Dam (HVD)	25° 29.7'E	30° 36.3'S	1378m	Dolerite	Three component short period Willmore magnification about 20,000.
P.K. le Roux Dam (PKR)	24° 44.5'E	30° 0.2'S	1267m	Dolerite	Benioff short period vertical magnification about 6,000.

Plek	Lengte-graad.	Breedte-graad.	Hoogte seevlak	Fondament	Instrument
Pretoria (PRE)	28° 11.4'O	25° 45.2'S	1333m	Verweerde skalie, Serie Pretoria	Geotech 1051 kort-periode (1.0 sek.) vertikale seismometer. Twee Geotech 1101 kort-periode (1.0 sek.) horisontale seismometer. Sprengnether lang-periode (15 sek.) vertikale en twee horisontale seismometers. Galvanometers vir kort-periode sisteem 0.75 sek. Galvanometers vir lang-periode sisteem 100.0 sek. Vergroting kort-periode 50,000. Vergroting lang-periode 1500.
Windhoek (WIN)	17° 06'O	22° 34'S	1728m	Mikaskis Sisteem Damara	Dieselfde as Pretoria.
Grahamstad (GRM)	26° 34.4'O	33° 18.8'S	610m	Witteberg kwartsiet	Dieselfde as Pretoria.
Pietermaritzburg (PTM)	30° 24.2'O	29° 37.6'S	671m	Eccaskalie	Benioff kort-periode vertikaal.
Kimberley (KIM)	24° 46.8'O	28° 45.1'S	1321m	Dolerietrotsblokke in verweerde doleriet.	Benioff kort-periode vertikaal.
Bloemfontein (BLF)	26° 11.3'O	29° 6.5'S	1420m	Verweerde doleriet	Benioff kort-periode vertikaal.
Hendrik Verwoerddam (HVD)	25° 29.7'O	30° 36.3'S	1378m	Doleriet	Drie-komponent kort-periode Willmore.
P.K. le Rouxdam (PKR)	24° 44.5'O	30° 0.2'S	1267m	Doleriet	Benioff kort-periode vertikaal.

JUNE/JUNIE 1968

Date Datum	Station Stasie	Phase Fase	G.M.T./G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstandgrade	C/D	USCGSH	Remarks Opmerkings
01	PRE	IPDIF	10 50 44.0	143	D	103149.0	40.2N 142.3E Mag. 5.4 Depth 50 KM NEAR East Coast of Honshu Japan.
02	BLF	EPKP	08 37 23.1	119		081836.2	8.1S 158.6E Depth 35.0 KM Mag 5.6 Solomon Isl.
04	PRE	IP	07 00 25.0	67	C	065007.0	32.7N 48.3E Western Iran Mag. 5.2 Depth 39.8KM
	WIN	EP	07 00 34.5	71.5			
	KIM	EP	07 00 48.7	71			
05	~~WIN~~	~~EPP~~	~~04 18 23.0~~	~~11~~		041528	16.6S 28.4E Kariba Mag. 3.4 Depth 33 KM.
	WIN	EP	06 27 09.7	52		061835.4	58.7S 25.7W depth 33 KM mag. 5.4 South Sandwich Isl. Reg.
	~~PRE~~	~~EPP~~	~~23 25 06.3~~	~~122~~		230406	18.9S 169.4E Depth 215 KM Mag 5.0 New Hebrides Isl.
	~~WIN~~	~~IPP~~	~~23 25 13.8~~	~~131.5~~	C		
06	PRE	IPKP	21 36 11.8	143	D	211714.0	41.3N 142.6E Depth 36.8 KM Mag.5.3 Hokkaido Japan Reg.
07	PRE	IPDIF	12 10 34.0	91	D	115729.0	Celebes 1.8S 120.1 E Depth 19.9 KM Mag. 5.1
	WIN	EPDIF	12 11 22.8	101			
	KIM	EPDIF	12 10 45.6	93.5			
	BLF	E(P)DIF	12 10 41.8	92.5			
	PTM	IPDIF	12 10 23.3	88.5			
	PKR	EPDIF	12 10 53.2	93			
	~~PRE~~	~~EPP~~	~~16 17 00.5~~	~~22~~		161154	Northern Highlands Tanzania 3.9S 36.5 E Mag 5.1
	WIN	E(P)	16 17 32.5	25			
	PRE	EPDIF	21 43 56.4	90		213050.3	Celebes 2.1S 120.5E Depth 23.3 KM Mag. 6.5
	WIN	E(P)DIF	21 44 42.6	105			
08	WIN	EPKP	00 35 49.5	128.5		001639.5	Solomon Isl. 8.8S 157.6E Depth 33 KM Mag 5.4
	KIM	IPKP	00 35 32.3	119.5	C		
	~~PRE~~	~~ISS~~	~~23 29 07.4~~	~~13~~	C	232405	South of Africa 48.8S 31.5E Depth 33KM Mag. 5.6
	~~WIN~~	~~IPP~~	~~23 29 57.3~~	~~20~~	C		
	~~KIM~~	~~ESS~~	~~23 28 40.1~~	~~11.5~~			
	~~PTM~~	~~ISS~~	~~23 28 22.3~~	~~9~~	D		
	~~PKR~~	~~ISS~~	~~23 28 34.0~~	~~10~~			
09	WIN	IP	09 38 11.8	130		091732	South of Fiji Isl. 24.1S 178.5E Mag. 5.1 Depth 580KM.

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstandgrade	C/D	USCGSH	Remarks Opmerkings
10	WIN	$IPKP_2$	13 00 27.0	149.5	D	124105.7	Alaska Peninsula
	KIM	$IPKP_2$	13 00 40.4	157	D		56.3N 161.6W Mag.
	BLF	$EPKP_2$	13 00 41.0	157.5			5.6 Depth 182KM.
	~~WIN~~	~~EL~~	~~20 19 08.3~~	~~25~~		200555	Nortern Highlands
							Tanzania Mag 4.4
							4.0S 35.3E.
12	WIN	IP	04 42 03.8	86	D	042922.6	India Eastern
	BLF	IP	04 41 43.5	82.5			Pakistan Border
							Reg. 24.9N 91.9E.
							Depth 24KM Mag.5.3
	WIN	EPKP	14 01 05.9	130.5		134150.7	Near East Coast of
	KIM	EPKP	14 00 54.9	127.5			Honshu. Japan 39.5
	BLF	EPKP	14 00 52.5	126.5			N 142.7E Depth 44KM
	PTM	EPKP	14 00 56.5	123.5			Mag 6.0
	PKR	EPKP	14 01 02.0	127.5			
	~~WIN~~	~~IPPP~~	~~14 19 38.6~~	~~39~~	C	141100.5	South Sandwich Isl.
	~~KIM~~	~~IPPP~~	~~14 19 23.2~~	~~32~~	D		Reg 59.9S 27.6W
	~~BLF~~	~~IPP~~	~~14 19 26.1~~	~~31.5~~	D		depth 25KM Mag. 5.5
	~~PTM~~	~~IPcP~~	~~14 19 40.6~~	~~30~~	C		
	~~PKR~~	~~EPPP~~	~~14 19 21.2~~	~~30~~			
	WIN	IPKP	22 16 54.2	135.5	D	215741.3	Near East Coast of
	KIM	EPKP	22 16 46.9	127.5			Honshu Japan 39.3
							N 142.8E Mag 5.7
							Depth 36.0 KM
15	KIM	IP	14 19 42.6		C		Probably Galopagos
	PTM	IP	14 19 56.0				Isl.
	PKR	IP	14 19 50.4		C		
16	KIM	EP	05 02 48.0	36		045557	Tristan da Cunha
							Reg. 36.2S 15.9W
							Mag 5.1 Depth 33KM
	KIM	EP	05 38 25.3	36		053207	Tristan da Cunha
							Reg. 35.2S 15.9W
							Mag 4.6 Depth 33 KM
	KIM	EP	19 19 50.3	27		191405	53.9S 8.7E Bouvet
	PTM	IP	19 20 05.6	28	C		Isl. Reg Depth 33KM
							Mag 5.7
17	KIM	IP	10 25 44.0	46	C	101735	56.0S 27.9W South
							Sandwich Isl. Reg.
							Mag. 5.8 Depth 142.5KM
	~~KIM~~	~~EL~~	~~12 12 06.6~~	~~27~~		115300	41.0N 143.0E Depth
							48 KM Hokkaido Japan
							Reg. Mag 5.7
	KIM	IPKP	18 28 32.6	140		180934	Santa Cruz Isl.
							Depth 33 KM Mag 5.5
							12.3S 166.7E

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstandgrade	C/D	USCGSH	Opmerkings Remarks
19	KIM	IPDIF	08 27 08.8	98	C	081335	5.6S 77.2W Mag 6.4
	PKR	IPDIF	08 27 19.2	97.5	D		Northern Peru Depth 28.2KM
	KIM	IP	13 53 17.6		C		
	KIM	IP	20 09 56.6	76.5	C	195802	Off Coast of South
	PTM	IP	20 10 11.3	79	D		Chile 43.9S 75.1W
	PKR	IPcP	20 10 04.0	76	C		Mag 5.7 Depth 24 KM
21	PTM	IP	12 51 53.0		C		
22	KIM	EL	01 00 39.7	* 8		005637.0	25.1S 15.9E Mag 3.7 Grootfontein Area S.W.A.
23	KIM	EPcS	17 13 41.3	56.5		165350.0	56.7N 152.4W Mag. 4.9 Kodiak Isl.Reg. depth 33 KM.
26	KIM	IPKP	15 59 13.8	122.5	D	154031.0	22.2S 171.4E Depth 90 KM Loyalty Isl. Reg. Mag 5.6
27	KIM	IPP	22 26 54.8	97.5	C	221004	6.1N 120.9E reg Mag
	BLF	IPP	22 26 49.3	96.5	D		5.3 Depth 60.4 KM
	PTM	IPP	22 26 32.5	93.0	C		Mindanao Philippine Isl. Reg.
28	KIM	EP	12 41 42.8				
	BLF	EP	12 41 47.1				
29	BLF	IPKP	06 40 30.4	119		062148	13.6N 90.2W Mag.4.7 Depth 97KM near Coast of Guatemala.

Republic of South Africa
Department of Mines

Republiek van Suid-Afrika
Departement van Mynwese

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PLD

Seismological Bulletin

Seismologiese Bulletin

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PRETORIA

SEISMOLOGICAL BULLETIN

The data given herein were obtained from a network of seismograph stations of which details are given in the attached table. In the bulletin data on tremors originating in the gold mining areas have not been included. This bulletin is prepared regularly and will be sent to interested organisations on request.

SEISMOLOGIESE BULLETIN

Die gegewens hierin verstrek is verkry van 'n netwerk seismograafstasies waarvan besonderhede in die aangehegte tabel verstrek word. In die bulletin is gegewens oor skokke wat in die goudmyngebiede plaasvind weggelaat. Hierdie bulletin word gereeld saamgestel en sal op aanvraag aan belanghebbende organisasies gestuur word.

Locality	Longitude	Latitude	Elevation above sea level	Foundation	Instrument
Pretoria (PRE)	28° 11.4'E	25° 45.2'S	1333m	Weathered shale, Pretoria series.	Geotech 1051 shortperiod (1.0 sec.) vertical seismometer. Two Geotech 1101 short period (1.0 sec.) horizontal seismometers. Sprengnether long period (15 sec.) vertical and two horizontal seismometers. Galvanometers for S.P. system 0.75 sec. Galvometers for L.P. system 100.0 sec. magnification S.P. 50,000 L.P. 1500.
Windhoek (WIN)	17° 06'E	22° 34'S	1728m	Damara mica schist	Instruments and magnification as Pretoria.
Grahamstown (GRM)	26° 34.4'E	33° 18.8'S	610 m	Witteberg quartzite	Instruments same as Pretoria. Magnification: S.P.25,000 L.P.750.
Pietermaritzburg (PTM)	30° 24.2'E	29° 37.6'S	671 m	Ecca shale	Benioff short period vertical magnification about 6000.
Kimberley (KIM)	24° 46.8'E	28° 45.1'S	1321m	Dolorite boulders in decomposed dolerite.	Benioff S.P. vertical magnification about 6,000.
Bloemfontein (BLF)	26° 11.3'E	29° 6.5'S	1420	Weathered dolerite	Benioff S.P. vertical magnification about 6,000.
Hendrik Verwoerd Dam (HVD)	25° 29.7'E	30° 36.3'S	1378m	Dolerite	Three component short period Willmore magnification about 20,000.
P.K. le Roux Dam (PKR)	24° 44.5'E	30° 0.2'S	1267m	Dolerite	Benioff short period vertical magnification about 6,000.

Plek	Lengte-graad.	Breedte-graad.	Hoogte bo seevlak	Fondament	Instrument
Pretoria (PRE)	28° 11.4'O	25° 45.2'S	1333m	Verweerde skalie, Serie Pretoria	Geotech 1051 kort-periode (1.0 sek.) vertikale seismometer. Twee Geotech 1101 kort-periode (1.0 sek.) horisontale seismometer. Sprengnether lang-periode (15 sek.) vertikale en twee horisontale seismometers. Galvanometers vir kort-periode sisteem 0.75 sek. Galvanometers vir lang-periode sisteem 100.0 sek. Vergroting kort-periode 50,000. Vergroting lang-periode 1500.
Windhoek (WIN)	17° 06'O	22° 34'S	1728m	Mikaskis Sisteem Damara	Dieselfde as Pretoria.
Grahamstad (GRM)	26° 34.4'O	33° 18.8'S	610m	Witteberg kwartsiet	Dieselfde as Pretoria.
Pietermaritzburg (PTM)	30° 24.2'O	29° 37.6'S	671m	Eccaskalie	Benioff kort-periode vertikaal.
Kimberley (KIM)	24° 46.8'O	28° 45.1'S	1321m	Dolerietrotsblokke in verweerde doleriet.	Benioff kort-periode vertikaal.
Bloemfontein (BLF)	26° 11.3'O	29° 6.5'S	1420m	Verweerde doleriet	Benioff kort-periode vertikaal.
Hendrik Verwoerddam (HVD)	25° 29.7'O	30° 36.3'S	1378m	Doleriet	Drie-komponent kort-periode Willmore.
P.K. le Rouxdam (PKR)	24° 44.5'O	30° 0.2'S	1267m	Doleriet	Benioff kort-periode vertikaal.

JULY/JULIE 1968

Date Datum	Phase Fase	Station Stasie	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog afstandgrade	C/D	USCGSH	Remarks Opmerkings
01	EP	BLF	04 14 01.4	79.5		040202W	Kazakh S.S.R. Mag.47.9N 48.0E 5.5Depth 33KM MAGS-5
	IPKP	PRE	11 03 58.5	120	C	104512	36.0N 139.3E Honshu Japan Mag 5.9 Depth 67.2 KM
02	IPKP	BLF	04 03 50.0	130.5	C	034449	17.6N 100.3W Cuerro Mexico Mag. 5.9
03	L	PRE	19 28 44.5	22		191725	4.8S 35.0E Mt. Hanang Area, Tanzania Mag 4.4 Depth 33 KM.
04	IP	PRE	21 58 23.9	63.5	C	214756	37.8N 23.2E South Greece Mag 5.3 Depth 33 Km.
05	$IPKP_2$	PRE	01 05 12.5	151	C	004517	34.1N 119.7W Southern California Mag. 5.7 Depth 6.0 KM.
	$IPKP_2$	KIM	01 05 07.6	149.5			
	IPKP	PRE	11 47 08.5	122.5	C	112813	38.5N 142.0E Near East Coast of Honshu Japan. Mag 5.9,Depth 42.5 KM
	EPKP	KIM	11 47 15.7	126.5			
	IPKP	BLF	11 47 14.4	125.5	D		
06	L	PRE	07 49 08.4	22.5		073752	5.0S 36.0E.Kondoa Area. Tanzania Mag. 4.4
	L	KIM	07 51 15.1	25.5			
	L	PRE	13 36 13.4	25		132422	1.3S 33.3E. Lake Victoria Mag 4.9 Depth 33 KM
	L	KIM	13 39 22.2	28			
07	$IPKP_2$	PRE	01 30 13.0	145	C	011029.5	61.3N 147.3W Southern Alaska. Mag.1.2 Depth 14.1 KM
08	EP	PRE	11 36 30.9	60		112724	28.0N 57.0E Southern Iran Mag 4.0 Depth 33KM
	IP	KIM	11 36 20.1	64			
	EP	PRE	17 25 28.4	59.5		171518	Mag 5.1 Depth 43.6KM 29.7N 51.1E S.Iran.
	IP	PRE	17 51 11.3	60	C	174106	34.4N. 52.2E. Crete Mag.5.3Depth 33 KM
	IP	KIM	17 51 29.6	63.5			
08	IP	PRE	21 44 42.5	121	C	212448	28.8N 142.5E Bonin Isl. Reg. Mag 5.3 Depth 33 KM
09	EP	KIM	06 18 24.7	21		061345	11.0S 12.0E. Off Central Angola Coast Mag 4.0
10	IP	KIM	06 48 23.1	80.5		063614	30.7S 71.3W Near Coast of Central Chile. Mag. 4.7 Depth 66 KM.

Date Datum	Phase Fase	Station Stasie	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstandgrade	C/D	USCGSH	Remarks Opmerkings
10	IP	PRE	11 24 50.5	43.5	C	111645	36.8S 78.5E Mid. Indian Rise.
	EP	WIN	11 26 11.2	53.5			Mag 5.7 Depth 33 KM
	~~IPP~~	~~KIM~~	~~11 24 30.6~~	~~44.5~~	~~D~~		
	~~IPP~~	~~PTM~~	~~11 24 23.7~~	~~39.5~~	~~C~~		
12	IPKP	PRE	01 03 37.2	122	C	004437	39.4N 143.2E. Off
	IPKP	KIM	01 03 43.6	125.5	D		East Coast of Hon-shu Japan. Mag 6.0 Depth 28.2 KM
	IPKP	PRE	04 15 27.8	122	D	035627	39.6N 143.2E Off
	EPKP	KIM	04 15 34.3	125.5			East Coast of Honshu Japan. Mag 5.5 Depth 26 KM
~~13~~	~~L~~	~~PRE~~	~~14 29 51.8~~	~~20~~		142016	5.6S 28.9E. Albert-ville Area, Congo. Mag. 4.2
15	IP	PTM	09 15 01.0		C		
~~17~~	~~L~~	~~PRE~~	~~05 29 27.9~~	~~7~~		052533	19.6S 23.6E Okavango Swamp. Mag 3.5
17	IPKP	PRE	05 37 29.3	122.5	D	051824	38.9N 143.2E. Off East Coast of Honshu Japan Mag. 4.0 Depth 33 KM
	~~L~~	~~PRE~~	~~20 24 43.3~~	~~11.5~~		201848	15.5S 33.6E. Tete Area. Mocambique Mag. 3.5
	$IPKP_2$	PRE	22 44 31.3	149	D	222443.3	56.3N 153.9W. Kodiak Isl. Reg. Mag 4.4 Depth 20 KM.
	~~ESS~~	~~PRE~~	~~23 34 37.1~~	~~8.5~~		233046	19.2S 34.4E. Beira Area, Mocambique.
	~~EPCP~~	~~WIN~~	~~23 39 15.3~~	~~16~~			
18	EP	KIM	14 50 52.5	75		143921	9.6N 40.2W Central Mid. Atlantic Ridge Mag 4.4 Depth 33 KM
	EP	PRE	17 31 55.8	72		172029	8.9N 93.9E. Nicobar Isl. Reg Mag. 4.8 Depth 33 KM
19	IP	PRE	05 07 51.9	72	D	045627	8.7N 93.6E. Nicobar
	IP	WIN	05 08 43.7	81	C		Isl. Reg. Mag 5.3
	IP	KIM	05 08 13.5	75			Depth 33 KM.
	IP	BLF	05 08 09.0	74.5	C		
	~~IPCP~~	~~PTM~~	~~05 07 50.1~~	~~71~~	~~D~~		
	E(P)	PRE	06 18 49.2	72		060722	8.9N 93.8E. Nicobar
	IP	KIM	06 18 49.4	75	C		Isl. Reg. Mag 4.8
	EP	BLF	06 19 07.2	74.5			Depth 33 KM
	IPKP	PRE	09 40 02.9	123	D	092105	13.0S 166.5E. New
	IPKP	WIN	09 40 23.3	132.5	C		Hebrides Isl. Mag
	IPKP	KIM	09 40 03.3	123	C		4.2 Depth 29.4 KM
	IPKP	BLF	09 40 00.1	122	D		

Date Datum	Phase Fase	Station Stasie	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstandgrade	C/D	USCGSH	Remarks Opmerkings
19	IP	PRE	16 53 45.7	72	C	164216	8.7N 93.7E Nicobar Isl. Reg. Mag. 5.1 Depth 7.8KM
	IP	KIM	16 54 07.7	75	D		
20	EP	PRE	03 33 23.7				
	EP	PRE	05 04 22.2	2.5		050238	24.1S 31.3E Phalaborwa, N.E. Tvl. Mag. 2.3
	IP	PRE	21 30 48.9	50.5	D	212203	57.9S 24.5W South Sandwich Isl. Reg. Mag 4.9 Depth 33 KM
	IP	KIM	21 30 16.2	46.5	C		
21	[illegible]	PRE	04 36 06.5	17		042816	8.3S 30.7E South Lake Tanganyika Mag 4.1 Depth 167.1 KM
	[illegible]	WIN	04 38 26.0	19	D		
	EP	PRE	13 39 15.9				
	EP	BLF	13 38 37.0				
	IP	PRE	17 40 41.2	81.5		172817.6	58.1S 148.3E. West of Maquarie Isl. Mag 4.0 Depth 33 KM.
	EP[illegible]	WIN	17 41 23.8	88.5			
	[illegible]	PRE	[illegible]	[illegible]		210231	49.7N 147.8E Sea of Okhotsk. Mag 4.9 Depth 576 KM
	IPP	WIN	21 23 16.0	134	C		
	IPP	KIM	21 23 [illegible]	132.5	D		
	[illegible]	BLF	[illegible]	[illegible]			
22	IP	PRE	00 03 27.0	50.5	D	235421	58.4S 29.5W South Sandwich Isl. Reg Mag 4.5 Depth 33 KM
	[illegible]	WIN	00 02 13.0	48			
	E(P)	KIM	00 02 53.7	46.5			
	[illegible]	PRE	02 56 40.0	16.5		024920	8.5S 31.3E Lake Tanganyika Area Mag 4.4
	[illegible]	WIN	02 58 11.4	18.5			
	IP	PRE	05 16 05.3	34	D	050916	54.6S 1.7E Bouvet Isl. Reg Mag 4.4 Depth 33KM
	IP	WIN	05 15 58.4	33.5	C		
	IP	KIM	05 15 29.3	30.5	D		
	IP	BLF	05 15 32.8	30.5	D		
23	E[illegible]	PRE	18 28 18.6	124		180918	39.9N 143.4E Mag 4.8 Depth 25 KM Off Coast of Honshu, Japan.
24	E(P)	WIN	09 43 14.4	79		092152	5.7S 107.5E Sundra Strait. Mag 4.4 Depth 144 KM
	EP	WIN	09 47 42.3				
	[illegible]	PRE	[illegible]	8		190914	17.4S 27.3E Kandabwe Zambia Mag 3.2
	[illegible]	WIN	[illegible]				
	[illegible]	BLF	[illegible]				
25	EP	PRE	07 38 13.2				
	E(P)	WIN	07 38 40.3				

Date Datum	Phase Fase	Station Stasie	G.M.T/G.T H.M.S. U.M.S.	Arc Distant Degrees/Boog-afstandgrade	C/D	USCGSH	Remarks Opmerkings
25	IPKP	PRE	07 41 51.5	117.5	D	072308	30.8S 178.4W Kermadec
	IPKP	WIN	07 42 03.5	124	C		Isl. Reg Mag 6.4
	IPKP	KIM	07 41 48.2	116	C		Depth 60 KM
	IPKP	BLF	07 41 47.0	115.5	D		
	IPKP	PTM	07 41 43.2	113	C		
	IP	PRE	07 52 51.6		C		
	IP	KIM	07 52 13.3		D		
	EP	PTM	07 52 25.0				
	IPKP	PRE	11 09 37.9	128	D	105031	45.7N 146.7E. Kurile
	EP	WIN	11 09 50.2	133.5			Isl. Mag 5.9 Depth
	IPKP	KIM	11 09 12.3	131			16.5 KM
26	EP	PRE	17 14 34.0	37		170725.5	22.4S 12.6W Atlantic
	IP	WIN	17 13 08.3	27.5	D		Ridge Mag 5.3 Depth
	IP	KIM	17 14 08.1	34.5	C		33 KM
	EP	BLF	17 14 17.9	35.5			
27	EP	PRE	02 56 03.0	60		024549	35.4N 27.8E. Dodo-
	IP	WIN	02 55 48.8	58	D		canese Island Mag 5.0
	EP	KIM	02 56 24.0	63.5			Depth 20.6 KM
	IP	BLF	02 56 25.5	64	D		
	EP	PTM	02 57 30.8	64.5			
	$IPKP_1$	PRE	18 01 30.5	149	D	174146	52.5N 170.6W Fox Isl.
	$IPKP_1$	WIN	18 01 30.6	153	D		Reg Mag 4.7 Depth 65
	$IPKP_1$	BLF	18 01 40.5	155.5	C		KM
28	$IPKP_1$	PRE	03 44 27.0	151.5	D	032436	52.8N 167.1W Fox Isl.
	$IPKP_1$	WIN	03 44 24.6	152	D		Aleutian Islands Mag
							4.5 Depth 33.0 KM
	EPKP	PRE	21 31 50.2	138		211238	55.4N 166.6E Koman-
	IPKP	WIN	21 31 15.7	141	D		dorsky Isl. Reg. Mag.
	IPKP	KIM	21 31 17.4	142	C		5.4 Depth 33 KM
	IPKP	BLF	21 31 43.4	141	D		
29	$IPKP_2$	PRE	03 05 28.7	146	D	024546	7.5S 148.3W Line Isl.
	$IPKP_2$	WIN	03 05 29.5	145.5	D		reg. mag 4.9 Depth 33
							KM
	$IPKP_2$	PRE	06 44 39.4	151.5	D	062447	52.9N 167W. Fox Isl.
	$IPKP_1$	WIN	06 44 37.1	152	D		Aleutian Isl. Mag. 4.7
	$IPKP_1$	PRE	22 00 27.5	151	D	214041.8	51.7N 174W Aleutian
							Isl. Andreanof Isl.
30	IPDIF	PRE	00 06 19.7	103	C	235215	0.2S 133.4E. West of New
	IPDIF	KIM	00 06 39.9	105			Guinea Reg Mag 6.1
							Depth 11.8 KM
	IP	PRE	00 10 34.3		C		
	IP	WIN	00 10 57.4		D		
	EP	KIM	00 10 35.5				
	[illegible]	[illegible]	[illegible]	[illegible]		203842	6.9S 80.5W Near
	IP[illegible]	WIN	20 52 11.2	94.5	C		Northern Coast of
	EP[illegible]	KIM	20 52 35.7	100.5			Peru Mag 5.8 Depth
							37.1 KM
31	EP	PRE	19 39 41.4	59.5		192927	35.5N 28.0E East Medi-
	IP	WIN	19 39 25.7	57.5	D		teranean Sea Mag 4.8
	EP	KIM	19 40 01.5	62.5			Depth 27 KM

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Seismologiese Bulletin

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PRETORIA

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PRETORIA

SEISMOLOGICAL BULLETIN

The data given herein were obtained from a network of seismograph stations of which details are given in the attached table. In the bulletin data on tremors originating in the gold mining areas have not been included. This bulletin is prepared regularly and will be sent to interested organisations on request.

SEISMOLOGIESE BULLETIN

Die gegewens hierin verstrek is verkry van 'n netwerk seismograafstasies waarvan besonderhede in die aangehegte tabel verstrek word. In die bulletin is gegewens oor skokke wat in die goudmyngebiede plaasvind weggelaat. Hierdie bulletin word gereeld saamgestel en sal op aanvraag aan belanghebbende organisasies gestuur word.

Locality	Longitude	Latitude	Elevation above sea level	Foundation	Instrument
Pretoria (PRE)	28° 11.4'E	25° 45.2'S	1333m	Weathered shale, Pretoria series.	Geotech 1051 shortperiod (1.0 sec.) vertical seismometer. Two Geotech 1101 short period (1.0 sec.) horizontal seismometers. Sprengnether long period (15 sec.) vertical and two horizontal seismometers. Galvanometers for S.P. system 0.75 sec. Galvometers for L.P. system 100.0 sec. magnification S.P. 50,000 L.P. 1500.
Windhoek (WIN)	17° 06'E	22° 34'S	1728m	Damara mica schist	Instruments and magnification as Pretoria.
Grahamstown (GRM)	26° 34.4'E	33° 18.8'S	610 m	Witteberg quartzite	Instruments same as Pretoria. Magnification: S.P.25,000 L.P.750.
Pietermaritzburg (PTM)	30° 24.2'E	29° 37.6'S	671 m	Ecca shale	Benioff short period vertical magnification about 6000.
Kimberley (KIM)	24° 46.8'E	28° 45.1'S	1321m	Dolorite boulders in decomposed dolerite.	Benioff S.P. vertical magnification about 6,000.
Bloemfontein (BLF)	26° 11.3'E	29° 6.5'S	1420	Weathered dolerite	Benioff S.P. vertical magnification about 6,000.
Hendrik Verwoerd Dam (HVD)	25° 29.7'E	30° 36.3'S	1378m	Dolerite	Three component short period Willmore magnification about 20,000.
P.K. le Roux Dam (PKR)	24° 44.5'E	30° 0.2'S	1267m	Dolerite	Benioff short period vertical magnification about 6,000.

Plek	Lengte-graad.	Breedte-graad.	Hoogte seevlak	Fondament	Instrument
Pretoria (PRE)	28° 11.4'O	25° 45.2'S	1333m	Verweerde skalie, Serie Pretoria	Geotech 1051 kort-periode (1.0 sek.) vertikale seismometer. Twee Geotech 1101 kort-periode (1.0 sek.) horisontale seismometer. Sprengnether lang-periode (15 sek.) vertikale en twee horisontale seismometers. Galvanometers vir kort-periode sisteem 0.75 sek. Galvanometers vir lang-periode sisteem 100.0 sek. Vergroting kort-periode 50,000. Vergroting lang-periode 1500.
Windhoek (WIN)	17° 06'O	22° 34'S	1728m	Mikaskis Sisteem Damara	Dieselfde as Pretoria.
Grahamstad (GRM)	26° 34.4'O	33° 18.8'S	610m	Witteberg kwartsiet	Dieselfde as Pretoria.
Pietermaritzburg (PTM)	30° 24.2'O	29° 37.6'S	671m	Eccaskalie	Benioff kort-periode vertikaal.
Kimberley (KIM)	24° 46.8'O	28° 45.1'S	1321m	Dolerietrotsblokke in verweerde doleriet.	Benioff kort-periode vertikaal.
Bloemfontein (BLF)	26° 11.3'O	29° 6.5'S	1420m	Verweerde doleriet	Benioff kort-periode vertikaal.
Hendrik Verwoerddam (HVD)	25° 29.7'O	30° 36.3'S	1378m	Doleriet	Drie-komponent kort-periode Willmore.
P.K. le Rouxdam (PKR)	24° 44.5'O	30° 0.2'S	1267m	Doleriet	Benioff kort-periode vertikaal.

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T. H.M.S. U.M.S.	Arc Distance Degrees/Boog-afstand	grade D/C	USCGSH	Remarks Opmerkings
OI	WIN	IPD[illegible]	00 32 12.6	121	D	001416	26.6S 177.5W South of Fiji Isl. Mag. 5.6 Depth 123.0 Km.
	PRE	IPKP	00 32 58.4	129	D		
	PRE	IPD[illegible]F	20 33 06.5	98	D	201922	16.5N 122.2E. Luzon Phil. Isl. Mag. 5.9 Depth 36.5 Km.
	PTM	EPD[illegible]F	07.0	98			
	GRM	EPD[illegible]F	23.0	100.5			
	PKR	EPD[illegible]F	28.5	103			
	BLF	IPD[illegible]F	29.3	102			
	KIM	IPD[illegible]F	48.5	103			
	WIN	EPD[illegible]F	57.4	109			
02	PRE	IP	13 40 37.0	61.5	D	133023	27.5N 60.9E Southern Iran Mag. 5.7 Depth 62.0 Km.
	PTM	IP	52.0	64	D		
	WIN	IP	41 02.0	65.5	D		
	BLF	IP	02.0	65.5	D		
	KIM	IP	03.3	65.5	C		
	PKR	IP	08.8	66.5	C		
	GRM	IP	23.0	68	C		
	WIN	EPKP	14 25 29.8	118		140644	16.6N 97.7W Oxaca Mexico Mag. 6.3 Depth 40.0 Km.
	KIM	IPKP	42.0	126	C		
	PKR	IPKP	42.3	126	C		
	BLF	IPKP	45.3	126.5	D		
	GRM	EPKP	45.5	127.5			
	PRE	EPKP	50.5	128.5	C		
	PTM	EPKP	56.4	130			
	PRE	IP	16 13 25.5		D		Distant.
	PRE	PKP_2	17 35 23.5	149		171529	57.0N 151.5W Kodiak Isl. Reg. Mag. 4.8 Depth 15.2 Km.
03	PRE	EP[illegible]	05 09 00.0	109		045433	25.6N 128.5E. Rynkyn Isl. Mag. 6.4 Depth 18.5 Km.
	PKR	EPKP	12 40.8	112			
	BLF	EPKP	13 09.3	111.2			
	GRM	IPKP	10.8	112	C		
	KIM	IPKP	12.0	112	C		
	WIN	EPKP	20.8	117			
	PRE	IP[illegible]	06 38 51.4	100	D	062506	16.5N 122.3E Luzon Phil Isl. Mag. 5.9 37.4 Km.
	PRE	EP	22 17 02.0				
04	PRE	IPD[illegible]F	11 55 02.2	99.5	D	114125	6.6N 126.8E Mindanao Philippine Isls. Mag. 5.7 Depth 106.8 Km
	GRM	IP[illegible]F	14.8	101	C		
	WIN	E(P)[illegible]F	53.5	109.5			
	PRE	EP	16 31 05.4	18.5		162638.5	40.7S 43.3E Atlantic - Indian rise Mag. 4.4 Depth 33 Km.
	WIN	E(P)	32 44.0	27.5			
	PRE	EP	18 29 03.8	60		181838	35.4 N 27.9E
	WIN	IP	34.3	58	C		

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T. H.M.S. U.M.S.	Arc Distance Degrees/Boog-afstand grade	D/C	USCGSH	Remarks Opmerkings
05	GRM	IP	00 02 58.3	23.5	D	235740	53.0S 9.6E SW of Africa Mag. 4.9 Depth 33.0 Km.
	KIM	EP	00 03 15.3	27			
	PRE	IP	52.3	30.5	D		
	WIN	IP	55.8	30.5	D		
05	PRE	E(P)	14 47 54.1	16		144400	10.0S 33.9E N Lake of Malawi. Mag. 4.9 Depth 33.0 Km.
	WIN	IP	48 42.0	20	D		
	PRE	IPKP	16 35 44.0	114.5	D	161705	33.3N 132.2E Shikoku Japan Mag. 6.3 Depth 41.4 Km.
	WIN	IPKP	58.0	122	C		
	WIN	IP	16 45 55.1		D		
06	PRE	EP	08 43 02.8	44.5		083442	13.9N 51.5E Eastern Gulf Aden Mag. 4.9 Depth 33 Km.
	KIM	EP	43 36.2	48.5			
	WIN	IP	37.7	49	D		
	WIN	IP	21 39 46.0	28	D	213354	25.6S 13.8W South Atlantic Ridge Mag. 4.9 Depth 33 Km.
	PRE	IP	41 07.5	37	D		
07	PRE	IPKP	08 19 12.0	124	D	080013	43.1 N 144.6E Hokkaido Japan Reg. Mag. 5.6 Kepth 54 Km.
	WIN	IPKP	25.0	130	D		
08	PRE	IPKP	05 14 03.4	122	D	045510	36.4N 141.4E Near East Coast of Honshu Japan Mag. 5.4 Depth 41 Km.
09	PRE	EP	02 37 30.2	80.5		022453	25.2N 94.4E Burma-India Border Reg. Mag. 4.7 Depth 33 Km.
09	WIN	IP	07 25 16.8	77	C	071325	32.3S 71.6W Coast of Central Chile. Mag. 4.4 Depth 53.2 Km.
	KIM	IP	36.8	80	D		
	PRE	IP	53.5	83.5	D		

Date Datum	Station Stasie	Phase Fase	G.M.T./G.T. H.M.S. U.M.S.	Arc Distance Degrees/Boog Afstand grade	D/C	USCGSH	Remarks Opmerkings
09	PRE	EP	10 41 10.3				
	PRE	E(P)	16 58 38.4				
10	PRE	EP	02 20 36.6	97		020704.3	1.4N 126.2E
	BLF	EP	56.1	99			Molucca Pas.
	WIN	EP	21 13.3	107			Mag. 6.3
	KIM	EP	[illegible]	100			Depth 33 Km.
	PRE	EP	04 19 31.8	97		040551	1.3N 126.5E
	KIM	EP	33.9	100			Molucca Passage Mag. 5.7 Depth 33 Km.
	PRE	EP	06 05 24.5	97		055447.9	1.5N 126.2E
	KIM	EP	29.9	100			Molucca Passage Mag. 6.2 Depth 33 Km.
11	WIN	IP	02 54 22.2	84.8	C	024153	15.2S 74.0W
	KIM	EP	40.8	90			Near Cost of
	PRE	IP	55 27.0	93.5	D		Peru Mag. 5.6 Depth 91 Km
	WIN	IPKP	12 56 10.6	147	C	123728	52.1N 179.9W
	PRE	IPKP	51.0	145	D		Andreanof
	KIM	IPKP	57 01.0	150	D		Aleutian Isls.
	PKR	EPKP	01.8	152.5			Mag. 5.5
	BLF	IPKP	03.0	150.5	C		Depth 158.5 Km.
	WIN	EP	16 25 04.0	6.5		162125	20.3S 22.4E
	PRE	E(P)	38.0	7.5			Okavango Swamp Botswana. Mag. 3.2
	PRE	EP	20 14 19.9	96.5		200043.4	1.6N 126.1E Molucca Passage Mag. 5.9 44 Km.
12	PRE	IP	06 47 28.4		D		
	WIN	EP	09 51 23.1	12.5		094822	10.3S 13.3E
	PRE	IP	53 07.1	21	C		Angola Mag. 4.4 Depth 33 Km.
	PRE	EP	13 10 19.1				
	PRE	EP	15 14 38.5				Dist.

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T. H.M.S. U.M.S.	Arc Distance Degrees/Boogafstand grade	D/C	USCGSH	Remarks Opmerkings
12	GRM	EP	17 27 07.5	19.5		172236.3	52.6S 25.5E
	PRE	IP	28 15.6	27	C		South of
	KIM	EP	49.9	24			Africa Mag.
	WIN	EP	53.9	31			4.8 Depth 33 Km.
	WIN	EP[illegible]	18 26 10.3	124.5		180710.6	31.4S 177.9W Kermadec Isls. Mag. 4.9 Depth 33 Km.
14	WIN	EPKP	08 57 41.7	125		083848	18.5N 102.8W
	PRE	EPKP	59.8	135			Michoacan Mexico Mag 5.4 Depth 72.2 Km
	PRE	IP	17 20 35.3	26	C	171455	52.4S 26.6E
	WIN	IP	21 12.0	30	D		South of Africa Mag. 4.3 Depth 21 Km.
	BLF	EP[illegible]	22 27 11.9	92.5		221419	0.2N 119.8E
	PRE	IP[illegible]	26.0	91	D		North Celebes
	PKR	EP[illegible]	41.0	93.5			Mag. 6.0
	KIM	IP[illegible]	44.1	93.5	C		Depth 23 Km.
15	WIN	IP	02 39 36.2	57.5	D	022945	35.3N 26.3E
	PRE	IP	52.5	60	D		Crete. Mag. 4.8
	KIM	EP	40 13.2	63			Depth 67.2 Km.
	PRE	E(P)	05 54 19.9				
	KIM	IPKP	07 09 15.3	123	D	065039	23.8S 177.4W
	PRE	IPKP	19.5	125	D		South of Fiji
	WIN	IPKP	34.1	132.5	C		Isls. Mag. 5.5 Depth 188 Km.
	WIN	EP	10 19 11.5				
	KIM	IP	36.4		D		
	PRE	IP	20 11.4		D		
15	PRE	IP[illegible]	11 53 36.3	91	C	114027	0.2S 120.0E Northern Celebes Mag. 5.3 Depth 10.6 Km.
	PRE	IP	16 35 55.7		C		
	KIM	IP	19 47 11.3	33	D	194045	49.3S 8.1W south
	WIN	EP	22.7	33			Atlantic Ridge
	PRE	IP	49.7	36	D		Mag. 5.0 33 Km.

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T. H.M.S. U.M.S.	Arc Distance Degrees/Boog Afstand grade	D/C	USCGSH	Remarks Opmerkings
15	KIM	IP	20 39 03.0	33	D	203236	49.3S 8.0W South Atlantic Ridge Mag. 5.1 33 Km.
	PRE	EP	40.3	36.5			
	PRE	EP[illegible]	21 39 05.3	91		212600	0.1N 120E Northern Celebes. Mag. 5.3 Depth 33 Km.
16	[illegible]	[illegible]	[illegible]	[illegible]		222623	16.2S 34.8E Shire Valley Malawi. Mag. 3.3.
17	PRE	E(P)[illegible]	04 14 12.0	97		040036.3	1.4N 126.3E Molucca Passage Mag. 5.7 Depth 33 Km.
	PRE	EP	13 07 30.0				
18	PRE	IP	14 31 05.5	78.5	D	141859	26.4N 90.6E East India Mag. 5.2 Depth 31 Km.
	WIN	IP	14 31 41.3	85	D		
	PRE	E[illegible]	18 27 21.4	123		180835.3	12.7S 166.2E Santa Cruz Isl. Mag. 5.2 Depth 34.6 Km.
	WIN	E[illegible]	18 27 54.0	135			
	PRE	IPKP	18 56 24.0	120.5	D	183830.6	10.1S 159.9E Solomon Isls Mag. 6.2 Depth 537.6 Km.
	PKR	IPKP	25.9	120	D		
	KIM	IPKP	26.4	120.5			
	WIN	EPKP	29.5	130			
	WIN	IP	19 25 20.8		C		Dist.
19	PRE	EP	10 10 17.9	44		100246	9.0S 66.1E Mid Indian Rise Mag. 4.6 Depth 33 Km.
	WIN	IP	16 02 36.4		D		
20	WIN	IPKP	15 44 30.0	117.5		152531.5	31.2S 178.4W Kermadec Isls. Mag. 5.1 Depth 33 Km.
21	WIN	E[illegible]	18 15 55.7	175.5		175648	30.9S 179.1W Kermadec Isls Mag. 5.3 Depth 33 Km

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T. H.M.S. U.M.S.	Arc Distance Degrees/Boog afstand grade	D/C	USCGSH	Remarks Opmerkings
22	WIN	IPKP	14 18 56.5	142.5	C	140006.8	53.0N 171.0E
	PRE	IPKP	19 41.0	140.5	D		Near Isls
	KIM	IPKP	42.1	144	C		Aleutian Isls.
	PKR	EPKP	50.5	144.5			Mag. 5.4
							Depth 33 Km.
	WIN	IPP	22 47 32.3	7.0	D	224555.8	19.8S 23.3E
	PRE	EPP	46.8	6.5			Botswana
	KIM	IPP	48.06.8	9.0	C		Republic
	PKR	IPP	23.6	10	C		Mag. 3.2
							Depth 33.
23	WIN	IP	22 47 32.5	73.5	C	2236513	21.8S 63.5W
	PKR	IP	54.2	78.5	C		Salta Province
	KIM	IP	57.1	78	C		Argentina Mag.
	BLF	IP	48 05.3	79	C		5.8 Depth
	PRE	IP	07.6	82	D		537 Km.
	PTM	IP	19.0	82.5	C		
	GRM	IPcP	49 15.4	78.5	D		
	WIN	IP	23 25 32.5	73	D	231453	21.8S 63.5W
	PKR	IP	54.4	78.5	D		Southern Boli-
	KIM	IP	56.8	78	D		via Mag. 5.2
	PRE	IP	26 28.0	82	D		Depth 541 Km.
24	WIN	IP	19 40 38.5	76	D	192858	23.9S 67.7W
	PRE	IP	41 21.4	84	D		Chili-Argentina
							Border Reg.
							Mag. 4.6
							Depth 118.4 Km.
25.	PRE	IPKP	09 26 30.5	124.5	D	090731	40.1N 143.2E
							Off East Coast
							of Honshu Mag.
							5.4 Depth
							33 Km.
	PRE	IPKP	09 32 47.5	124	D	091348.5	40.1 N 143.3E
							Off East Coast
							of Honshu,
							Japan Mag. 5.2
							Depth 30.8 Km.
	PRE	EP	17 57 34.5	83.5		175505	30.4N 94.8E
							Tibet Mag. 4.8
							Depth 18.9 Km.
26	PRE	E(P)	06 09 03.0	58		055909.7	26.7N 55.0E
							Iran Mag. 4.6
							Depth 33 Km.

Date Datum	Station Stasie	Phase Fase	B.M.T/G.T. H.M.S. U.M.S.	Arc Distance Degrees/Boog afstand grade	D/C	USCGSH	Remarks Opmerkings
27	WIN	EPKP	14 05 03.3	128		134547.8	12.3N 144.3E South of Marianna Isls Mag. 5.6 Depth 15.6 Km.
28	PRE	EPD[illegible]	20 56 04.2	100		204216.7	15.6N 122.0E Philippine Isls Mag. 5.7 Depth 14.5 Km.
	[illegible]	[illegible]	21 [illegible]	[illegible]	213417 Goetz Obs.		14.0S 26.2E Busongo Swamp Area, Zambia Mag. 3.2
	PRE	EP	21 21 50.5				
	WIN	EP	22 33 21.4				Felt at Otjiwarongo.
	PRE		22 38 21.4				
	WIN	EPKP	23 04 16.3	140		224340.2	59.7N 139.7W South Eastern Alaska. Mag. 4.4 Depth 38.0 Km.
	PKR	$IPKP_2$	41.0	148.5	D		
	KIM	$IPKP_2$	42.9	147	D		
	PRE	$IPKP_2$	47.6	144	C		
	BLF	$IPKP_2$	48.0	148	D		
	GRM	$EPKP_2$	58.7	152.5	D		
30	PRE	EP	00 10 23.6	85		235748.1	44.4S 82.1W West Chili Rise Mag. 4.8 Depth 33 Km.
	PRE	E(P)	21 13 26.3				
	WIN	EP	22 11 01.5	52	C	220220	14.6N 56.3E Asalian Sea Mag. 5.2 Depth 33 Km.
	KIM	IP	33.2	51.5			
	PRE	EP	39.5	47.5			
31	PKR	EP	10 58 00.0	70.5		104737	34.0N 59.0E Iran Mag 6.0 Depth 13.1 Km.
	PRE	EP	26.7	66			
	KIM	EP	38.1	70			
	WIN	IP	46.6	69			
	BLF	EP	53.0	70			
	PRE	EP	11 45 21.7	66		113432.9	33.9N 59.2 E Iran Mag 5.5 Depth 24.2 Km.
	WIN	IP	40.1	69	C		
	KIM	IP	45.8	70	C		

Date Datum	Station Stasie	Phase Fase	G.M.T/G.T. H.M.S. U.M.S.	Arc Distance Degrees/Boogafstand grade	D/C	USCGSH	Remarks Opmerkings
31	PRE	E(P)	13 33 49.0	66		132259	34.1N 59.4E Japan Mag 4.8 Depth 33 Km.
	PRE	EP	13 40 11.5				
	PRE WIN	EP E	14 17 06.5 26.0	66 69		140616	34.1N 59.4E Iran Mag. 5.0 Depth 18 Km