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1961	W 10.00	10	10.00	W 10.00	10	10.00	W 10.00	10
1961	W 11.00	10	11.00	W 11.00	10	11.00	W 11.00	10
1961	W 12.00	10	12.00	W 12.00	10	12.00	W 12.00	10
1961	W 13.00	10	13.00	W 13.00	10	13.00	W 13.00	10
1961	W 14.00	10	14.00	W 14.00	10	14.00	W 14.00	10
1961	W 15.00	10	15.00	W 15.00	10	15.00	W 15.00	10
1961	W 16.00	10	16.00	W 16.00	10	16.00	W 16.00	10
1961	W 17.00	10	17.00	W 17.00	10	17.00	W 17.00	10
1961	W 18.00	10	18.00	W 18.00	10	18.00	W 18.00	10
1961	W 19.00	10	19.00	W 19.00	10	19.00	W 19.00	10
1961	W 20.00	10	20.00	W 20.00	10	20.00	W 20.00	10

UNIVERSITY COLLEGE OF THE WEST INDIES

SEISMIC RESEARCH UNIT

Trinidad, West Indies.

JAN 1961

Preliminary Seismological Bulletin.

All stations are equipped with Wilcox type I second period galvanometers and 2 second period galvanometers recording at 60 cycles/sec. Magnification is 10,000 at 60 cycles/sec. except at Barbados where it is 2,000 at 60 cycles/sec.

Stations are grouped to the first decimal place of a degree when this is justified. Other wise to one half of a degree.

Regions are grouped to one kilometer and origin times to one tenth of a second.

Intensity scale in two Modified Mercalli intensity scales.

*The Trinidad station has been operated in the past at the temporary sites given below:

From Jan 1951 to Jan January 1952 at 10° 10' N, 78° 15' W.

From Jan January 1952 to Jan September 1952 at 10° 10' N, 78° 15' W.

STATIONS REPORTING

TRINIDAD	(TRIN)*	LAT. 10° 39.0' N	LONG. 61° 24.1' W	27m.
GRENADA	(GREN)	LAT. 12° 02.7' N	LONG. 61° 44.1' W	30m.
ST. VINCENT	(ST. VIN)	LAT. 13° 10.2' N	LONG. 61° 15.5' W	10m.
BARBADOS	(BARB)	LAT. 13° 07.4' N	LONG. 59° 35.6' W	70m
DOMINICA	(DOM)	LAT. 15° 17.7' N	LONG. 61° 23.5' W	40m
ANTIGUA	(ANT)	LAT. 17° 08.6' N	LONG. 61° 50.1' W	27m
ST. KITTS	(ST. KIT)	LAT. 17° 20.3' N	LONG. 62° 43.7' W	

EQUIPMENT

All stations are equipped with Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

EPICENTRES are quoted to the first decimal place of a degree when this is justified, other wise to one half of a degree.

Depths are quoted to one kilometer and origin times to one tenth of a second.

Intensity Scale in use: Modified Mercalli Intensity Scale.

*The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West.

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1961								
JAN 1	TRIN	eP	01.41.59		2.1°			
		eS	01.42.20					
1	TRIN	eP	11.13.59					
1	TRIN	eP	15.23.17					
1	ST. KIT	iP	16.59.33		2.6°			
		iS	17.00.00					
	TRIN	eP	17.00.45		7.7°			
1	TRIN	eP	21.03.20		1.1°			
		iS	21.03.32					
2	ST. KIT	eP	00.34.15					
2	TRIN	eP' 2	21.11.44		143.5°	USCGS Gives H: -20.51.59		
						E: 6.8° S 150.3° E		
						Depth: About 62 km		
2	ST. KIT	eP	22.45.09					
2	TRIN	eP	23.03.23		1.1°			
		iS	23.03.40					
3	ST. KIT	iP	06.49.23					
	ST. VIN	eP	06.49.59					
		e	06.50.43					
	BARB	eP	06.50.31					
	TRIN	iP	06.50.38					
3	ST. KIT	iP	06.53.34	d				
3	ST. KIT	iP	06.55.20					

D = K
C = A

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>			
1916								
JAN 3	ST. KIT	iP	07.44.16	d				
	TRIN	eP	07.45.27					
3	ST. KIT	iP	08.48.28	c				
	ST. VIN	eP	08.49.01					
	TRIN	iP	08.49.39					
3	ST. KIT	iP	13.44.18		2.67°		H: 13.43.41	
		iS	13.44.49				E: 18.0° N 60.0° W	
	ST. VIN	eP	13.44.51		5.01°		Magnitude: 6.4	
	TRIN	eP	13.45.27		7.51°			
		eS	13.46.47					
3	ST. KIT	iP	13.48.27					
	ST. VIN	eP	13.48.59					
	TRIN	eP	13.49.37					
3	ST. KIT	iP	21.14.40					
4	TRIN	iP	07.07.44		1.3°			
		iS	07.07.57					
	ST. VIN	eP	07.07.59		2.4°			
4	TRIN	eP	17.02.53					
4	TRIN	iP	17.10.31		0.5°			
		iS	17.10.36					
5	TRIN	eP	02.37.57		3.2°			
		iS	02.38.30					

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
JAN 5	ST. KIT	eP	14.19.29		90.6°	Felt: Adak USCGS Gives H: 14.06.26
X	ST. VIN	eP	14.19.47		95.0°	E: 51.6°N 176.3°W Depth: About 37 km.
X	TRIN	eP	14.19.56		97.0°	
5	ST. VIN	eP'	16.13.(40)		154.5°	Felt: New Guinea USCGS gives H: 15.53.56
X	ST. KIT	eP'	16.13.41		151.7°	E: 4.1°S 143.0°E Depth: About 108 km.
X	TRIN	eP'	16.13.41		155.2°	
		i	16.14.40			
5	TRIN	eP'	18.16.59		130.5°	USCGS Gives H: 17.57.57
X		i	18.17.01			E: 21.2°S 169.3°E Depth: About 123 km.
X	ST. KIT	eP'	18.17.02		130.8°	
5	ST. KIT	eP	18.20.22			
5	TRIN	eP'	18.33.45		130.6°	USCGS Gives H: 18.14.43
X	ST. KIT	eP'	18.33.46		131.0°	E: 21.0°S 169.1°E Depth: About 124 km.
5	TRIN	eP	22.07.22			
5	ST. KIT	eP	22.47.51		2.2°	
		iS	22.48.13			
6	TRIN	eP	08.17.20		1.7°	
		iS	08.17.38			
7	TRIN	eP	18.23.28		74.2°	USCGS Gives H: 18.16.51
X	ST. VIN	eP	18.23.42		76.5°	E: 57.2°S 25.3°W Depth: About 94 km.
X	ST. KIT	eP	18.29.06		80.8°	
7	ST. KIT	eP	21.05.16		1.6°	
		iS	21.05.32			

<u>DATE</u> 1961	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>		
JAN 8	TRIN	eP	06.43.10		0.8°		
		eS	06.43.18				
8	TRIN	eP	21.15.39				
9	TRIN	eP	07.46.46		0.4°		
		iS	07.48.51				
9	ST. KIT	iP	11.07.26	d	1.61°	H: 11.07.03	
	ST. VIN	eP	11.08.06		4.54°	E: 17.7° N 61.1° W	
	BARB	eP	11.08.14		4.82°	Depth about 25 km.	
	TRIN	eP	11.08.43		7.05°	Magnitude: 6.4	
		iP	11.08.45				
9	ST. KIT	iP	11.11.38		1.7°	USCGS Gives H: 11.11.13	
	ST. VIN	eP	11.12.15		4.4°	E: 17.6° N 61.0° W	
	BARB	eP	11.12.31		4.6°	Depth: About 52 km.	
	TRIN	eP	11.12.54		7.0°		
9	ST. VIN	e	11.22.14				
	ST. KIT	iP	11.22.31				
9	ST. KIT	iP	11.24.34		0.81°	H: 11.24.23	
	ST. VIN	eP	11.25.17		3.86°	E: 17.0° N 62.0° W	
	TRIN	eP	11.25.52		6.34°	Magnitude: 5.6	
9	ST. KIT	iP	12.39.52		1.3°		
		iS	12.40.05				
9	ST. VIN	eP	12.53.08				
9	ST. VIN	eP	13.01.40				

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1961								
JAN 9	TRIN	eP	16.23.58		3.2°			
		eS	16.24.31					
9	ST. KIT	iP	17.27.46		2.5°			
		iS	17.28.12					
9	ST. KIT	iP	19.22.34		1.7°	USCGS gives H: 19.22.06		
	ST. VIN	eP	19.23.13		4.6°	E: 17.8°N 61.0°W		
	BARB	eP	19.23.20		4.9°	Depth: About 31 km		
	TRIN	eP	19.23.52		7.2°			
		iP	19.23.54					
		iS	19.25.05					
9	ST. KIT	iP	19.25.25		1.1°	USCGS gives H: 19.25.00		
	ST. VIN	iP	19.26.06	d	4.6°	E: 17.7°N 61.6°W		
	BARB	eP	19.26.14		5.0°	Depth: About 31 km		
	TRIN	eP	19.26.43		7.1°			
		iS	19.28.02					
9	ST. KIT	eP	19.38.40		2.0°			
		iS	19.39.01					
9	ST. KIT	iP	19.49.43		0.89°	H: 19.49.31		
	ST. VIN	eP	19.50.23		3.74°	E: 16.8°N 61.9°W		
	TRIN	eP	19.50.58		6.22°	Magnitude: 5.5		
9	ST. KIT	iP	20.05.39					
9	ST. KIT	iP	20.11.31		1.6°			
		iS	20.11.48					

<u>DATE</u> 1961	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	<u>SCALE</u>	<u>WAVE</u>	<u>AMPL</u> IDG
JAN 9	ST. KIT	iP	20.42.08		2.0°			
		iS	20.42.29					
9	ST. KIT	eP	20.55.20		2.1°			
		iS	20.55.41					
10	ST. KIT	eP	06.22.33		2.2°			
		eS	06.22.56					
10	ST. KIT	iP	08.01.07		1.7°			
		iS	08.01.25					
	ST. VIN	e	08.01.49					
10	ST. KIT	eP	08.25.13		2.1°			
		iS	08.25.34					
10	TRIN	e	10.55.47					
10	ST. KIT	iP	11.09.42		0.92°			
	ST. VIN	eP	11.10.21		3.71°		H: 11.09.29 E: 16.8 N 61.9 W Magnitude: 5.9	
	TRIN	eP	11.10.58		6.20°			
10	ST. KIT	eP	11.15.43		2.2°			
		eS	11.16.06					
10	TRIN	eP	14.21.44					
		e	14.28.48					
X 10	ST. KIT	iP	14.33.10		2.3°			
		iS	14.33.33					
10	ST. VIN	eP	18.33.17					

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	<u>DEPTH</u>	<u>MAGNITUDE</u>	<u>SCALE</u>
1961								
JAN 10	ST. KIT	eP	23.04.23		2.4°			
		iS	23.04.48					
10	ST. VIN	eP	23.10.56					
11	ST. KIT	eP	00.05.05		2.4°			
		iS	00.05.30					
11	ST. KIT	eP	06.50.00		2.3°			
		iS	06.50.24					
11	ST. KIT	eP	08.48.14		2.4°			
		iS	08.48.38					
11	ST. KIT	iP	09.58.30		2.3°			
		iS	09.58.54					
11	DOM	e	10.38.05					
	TRIN	iP	10.38.08	d	0.9			
		iS	10.38.17					
11	ST. KIT	iP	11.02.10		1.6°			
		iS	11.02.27					
	DOM	eP	11.02.21		2.4°			
11	ST. KIT	eP	15.19.22		2.1°			
		iS	15.19.43					
11	ST. KIT	iP	16.25.45		2.1°			
		iS	16.26.07					
11	ST. KIT	eP	17.17.36		2.0°			
		iS	17.17.56					

<u>DATE</u> 1961	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	<u>BEARNG</u>	<u>WAVELEN</u>	<u>PERI</u>
JAN 11	ST. KIT	iP	18.00.49		1.9°			
		eS	18.01.08					
11	ST. KIT	iP	19.22.39	d	2.1°			
		iS	19.23.00					
11	TRIN	iP	20.26.23		0.7°			
		iS	20.26.31					
11	ST. KIT	iP	21.54.07		2.2°			
		iS	21.54.30					
12	TRIN	iP	09.39.10	d	1.4°			
		iS	09.39.25	c				
12	TRIN	eP	19.03.35					
12	TRIN	eP	22.06.03					
13	ST. VIN	eP	10.54.55					
13	ST. VIN	eP	11.21.53					
13	ST. KIT	iP	13.57.25	c	2.0°			
		iS	13.37.46					
14	TRIN	eP	00.26.33		2.2°			
		iS	00.26.55					
14	ST. KIT	eP	03.23.44		2.1°			
		iS	03.24.05					
14	TRIN	eP'	05.52.14		145.7°			

USCGS Gives H: 05.23.43
 E: 5.4° S 152.9° E
 Depth: About 81 km.

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>			
1961								
JAN 14	TRIN	eP	07.34.39		0.7°			
		iS	07.34.46					
	ST. VIN	eP	07.34.53		1.6°			
14	TRIN	iP	12.19.20		1.0°			
		iS	12.19.30					
14	TRIN	iP	12.32.39	d	1.3°			
		iS	12.32.53					
14	TRIN	eP	16.20.13		12.2°			
		i	16.20.22					
		i	16.22.44					
	ST. VIN	eP	16.20.28		13.4°			
	DOM	eP	16.20.44		14.2°			
	ST. KIT	eP	16.20.45		14.5°			
	BARB	eP	16.20.48		14.6°			
14	TRIN	iP	21.00.54	d	1.1°			
		iS	21.01.05					
	ST. VIN	eP	21.01.07		2.0°			
		iS	21.01.27					
15	ST. KIT	iP	05.56.41		0.88°			
	ST. VIN	eP	05.57.22		3.74°			
	BARB	e	05.57.28		4.36°			
	GREN	eP	05.57.38		4.80°			
	TRIN	eP	05.57.56		6.22°			
		i	05.58.01					

USCGS gives H: 16.17.26
 E: 6.7° N 73.0° W
 Depth: About 177 km.

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1961								
JAN 15	ST. KIT	eP	06.37.31		2.2°			
		iS	06.37.53					
15	DOM	eP	07.56.53		4.2°			
		iP	07.56.56					
		iS	07.57.36					
X 15	ST. KIT	e	17.03.35		130.7°		USCGS Gives H: 16.44.45	
	TRIN	eP	17.03.39		130.3°		E: 20.4° S 169.5° E	Depth: About 182 km.
15	ST. VIN	eP	18.50(08)		2.7°		H: 18.49.30	
	ST. KIT	eP	18.50(09)		2.9°		E: 15.1° N 60.2° W	Depth: About 75 km.
		iS	18.50.38				Magnitude: 5.5	
	TRIN	eP	18.50.(44)		5.2°			
		e	18.51.42					
16	ST. KIT	iP	13.05.59		2.1°			
		iS	13.06.21					
X 16	TRIN	iP	16.28.19	d	0.8°			
		iS	16.29.27					
16	ST. KIT	iP	17.16.19		2.3°			
		iS	17.16.43					
X 17	BARB	eP	06.51.53		0.44°		H: 06.51.43	
	ST. VIN	eP	06.52.12				E: 12.9° N 59.2° W	Magnitude: 4.4
		e	06.52.38		2.02°			
	TRIN	eP	06.52.27					
		i	06.53.16		3.09°			
17	ST. KIT	eP	07.07.31		2.1°			
		eS	07.07.52					

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1961								
JAN 17	TRIN	eP	07.44.32		2.9 ⁰			H: 07.43.51
		iP	07.44.34					E: About 10° N 64° W
		iS	07.45.02					Depth: About 100 km.
								Magnitude: 5.8
	ST. VIN	eP	07.44.49		4.3 ⁰			
	ST. KIT	eP	07.45.35		7.4 ⁰			
17	TRIN	iP	09.31.09	a	1.2 ⁰			
		iS	09.31.21					
18	ST. KIT	eP	03.24.27		2.2 ⁰			
		iS	03.24.49					
18	ST. KIT	eP	07.15.24		2.0			
		iS	07.15.45					
18	TRIN	iP	20.38.04		1.2 ⁰			
		iS	20.38.17					
18	ST. KIT	iP	23.30.58		2.2 ⁰			
		iS	23.31.20					
19	TRIN	eP	01.39.02		2.5 ⁰			
		iS	01.39.25					
20	ST. VIN	eP	15.04.07		1.4 ⁰			
		iS	15.04.21					
	GRIN	iP	15.04.07		1.4 ⁰			
		iS	15.04.21					
	TRIN	e	15.04.43					
20	ST. VIN	eP	17.21.27					
X	TRIN	eP	17.21.31					

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17-4.2

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DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1961								
JAN 20	TRIN	iP	22.45.58		0.6°			
		iS	22.46.04					
	21 TRIN	iP	07.43.11		0.5°			
		iS	07.43.17					
	21 TRIN	iP	08.11.12		0.7°			
		iS	08.11.19					
	21. TRIN	eP	14.52.42		21.4°		USOGS Gives H; 14.47.57	
	ST. VIN	eP	14.52.47		21.6°		E: 8.6° N 82.8° W	Depth: About 40 km
	22 TRIN	e	03.46.54					
		e	04.04.51					
		e	04.38.08					
	22 TRIN	eP	20.55.05					
	22 TRIN	eP	22.31.04					
	22 TRIN	eP	22.52.35					
		i	22.52.52					
	22 TRIN	eP	23.25.40					
		e	23.27.01					
	22 TRIN	eP	23.41.48					
	23 TRIN	eP	00.07.02					
	23 TRIN	eP	00.35.24					
		e	00.36.48					

X 22-34²

X 3-24²

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<u>DATE</u> 1961	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>			
JAN 23	TRIN	eP	01.15.38			Small		
		e	01.16.51					
23	TRIN	eP	02.49.42					
24	GREN	eP	23.17.30		21.2°	USCGS Gives H: 23.12.49 E: 8.3°N 82.9°W Depth: About 78 km.		
	TRIN	eP	23.17.31		21.4°			
	ST. V IN	eP	23.17.40		21.9°			
25	TRIN	eP	03.51.33		22.0°	USCGS Gives H: 03.46.46 E: 0° 80.2°W		
26	TRIN	iP	00.04.53	c				
	GREN	eP	00.05.00					
26	ST. VIN	eF	10.48.18					
		e	10.48.42					
	TRIN	eF	10.48.54					
26	TRIN	iP	11.39.30	d	0.7°			
		iS	11.39.37					
26	ST. VIN	e	18.42.11					
26	TRIN	eP'	19.08.01		130.0°	USCGS Gives H: 18.48.57 E: 20.7°S 169.5°E Depth: About 106 km.		
27	TRIN	eP	01.11.47					
27	TRIN	eP'	14.14.50		146.5°	USCGS Gives H: 13.55.16 E: 5.5°S 151.9°E Depth: About 118 km.		

DATE	STATION	PHASE	TIME G.M.T	MOTION	DISTANCE	REMARKS
1961						
JAN 28	TRIN	eP	03.30.34		28.3°	USCGS Gives H: 03.24.39
X	GREN	eP	03.30.41		29.0°	E: 13.6°S 76.6°W Depth: About 35 km.
	BARG	eP	03.31.01		31.4°	
X	28 TRIN	eP	14.17.16		69.0°	USCGS Gives H: 14.06.21 E: 45.0°S 1105.8°W Depth: About 144 km
	28 TRIN	iP	15.15.02	c	0.8°	
		iS	15.13.10			
	GREN	eP	15.13.17		1.9°	
	28 TRIN	iP	16.16.54	d	1.0°	
		iS	16.17.05			
	GREN	iP	16.16.58		1.4°	
		iS	16.17.12			
	28 TRIN	iP	17.13.36	d	0.8°	
		iS	17.13.44			
	GREN	eP	17.13.57		2.3°	
	28 TRIN	eP	23.50.40			
X	29 TRIN	eP	13.37.22		95.8°	USCGS Gives H: 13.23.55 E: 51.8°N 175.9°W Depth: About 41 km.
	30 TRIN	iP	02.08.10	c	1.1°	
		iS	02.08.22			
	GREN	eP	02.08.16		1.6°	
		iS	02.08.32			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1961 JAN 30	TRIN	eP	09.10.08		
31	TRIN	eP	01.01.00		82.6°
31	TRIN	eP	14.13.53		1.7°
		iS	14.14.10		

USCGS Gives H:00.48.37
E: 55.8° N 153.9° W
Depth: About 26 km.

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STATION	LONGITUDE	LATITUDE	DEPTH	INSTRUMENT	REMARKS
ST. VICTOR	78° 15' W	11° 15' N	10	(VIB)	
ST. VICTOR	78° 15' W	11° 15' N	10	(VIB)	
ST. VICTOR	78° 15' W	11° 15' N	10	(VIB)	
ST. VICTOR	78° 15' W	11° 15' N	10	(VIB)	
ST. VICTOR	78° 15' W	11° 15' N	10	(VIB)	
ST. VICTOR	78° 15' W	11° 15' N	10	(VIB)	
ST. VICTOR	78° 15' W	11° 15' N	10	(VIB)	
ST. VICTOR	78° 15' W	11° 15' N	10	(VIB)	
ST. VICTOR	78° 15' W	11° 15' N	10	(VIB)	
ST. VICTOR	78° 15' W	11° 15' N	10	(VIB)	

UNIVERSITY COLLEGE OF THE WEST INDIES

SEISMIC RESEARCH UNIT

Trinidad, West Indies.

- FEB 1961

Preliminary Seismological Bulletin.

All stations are equipped with Williams type 2 second period seismometers and 4 second period galvanometers recording at 200/sec.

Magnification is 10,000 at 200/sec. range at Barbados station. It is 2,000 at 200/sec.

Stations are grouped to the first focal plane of a degree, and other also to one half of a degree.

Depth are quoted to one kilometer but depth times to one tenth of a second.

Intensity scale is one; Modified Mercalli Intensity Scale.

*The Trinidad station has been operated in the past at the temporary site given from last January 1959 to last September 1959 at 11° 15' North 78° 15' West.

STATIONS REPORTING

TRINIDAD	(TRIN)*	LAT. 10° 39.0' N	LONG. 61° 24.1' W	27m.
GRENADA	(GREN)	LAT. 12° 02.7' N	LONG. 61° 44.1' W	30m.
ST. VINCENT	(ST. VIN)	LAT. 13° 10.2' N	LONG. 61° 15.5' W	10m.
BARBADOS	(BARB)	LAT. 13° 07.4' N	LONG. 59° 35.6' W	70m
DOMINICA	(DOM)	LAT. 15° 17.7' N	LONG. 61° 23.5' W	40m
ANTIGUA	(ANT)	LAT. 17° 08.6' N	LONG. 61° 50.1' W	27m
ST. KITTS	(ST. KIT)	LAT. 17° 20.3' N	LONG. 62° 43.7' W	

EQUIPMENT

All stations are equipped with Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

EPICENTRES are quoted to the first decimal place of a degree when this is justified, other wise to one half of a degree.

Depths are quoted to one kilometer and origin times to one tenth of a second.

Intensity Scale in use: Modified Mercalli Intensity Scale.

*The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West.

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
FEB 1	TRIN	eP'	05.13.20		146.3°		USCGS Gives H: 04.53.44		
							E: 11.9° N 143.7° E		
							Depth: About 95 km.		
	1 TRIN	eP	09.17.12						
	GREN	e	09.17.29						
	1 TRIN	iP	15.02.30		1.43°		H: 15.02.11		
		iS	15.02.44				E: 10.9° N 62.3° W		
	GREN	iP	15.02.35		1.67°		Depth: About 125 km.		
		iS	15.02.52				Magnitude: 4.3		
	ST. VIN	eP	15.02.49		2.70°				
	2 TRIN	eP	02.03.01						
	2 ST. VIN	eP	08.45.14		0.10°		H: 08.45.13		
	GREN	eP	08.45.29		1.18°		E: 13.2° N 61.4° W		
	TRIN	eP	08.45.48		2.53°		Magnitude: (3.7)		
	2 TRIN	eP'	11.32.57		144.0°		USCGS Gives H: 11.13.32		
							E: 13.6° N 145.3° E		
							Depth: About 131 km.		
	4 TRIN	eP	01.19.01		30.0°		USCGS Gives H: 01.13.05		
	GREN	eP	01.19.12		31.2°		E: 18.3° S 69.3° W		
	ST. VIN	eP	01.19.20		32.7°		Depth: About 178 km.		
	4 ST. VIN	eP	01.49.27						
	4 TRIN	eP	06.57.53		1.2°				
		iS	06.58.05						
	GREN	eP	06.57.58		1.7°				
		iS	06.58.15						
	4 TRIN	eP'	09.11.04		138.1°		USCGS Gives H: 08.51.49		
		e	09.11.37				E: 24.7° N 95.3° E		
							Depth: About 162 km.		

4 X TRIN

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
FEB 4	TRIN	eP	10.06.02		1.1°	
		iS	10.06.13			
	4 TRIN	eP'	19.28.58		145.2°	Felt: Off east coast of Formosa. USCGS Gives H: 19.09.13 E: 24.0°N 122.7°E Depth: About 14 km.
	5 BARB	eP	07.41.38		1.1°	
	ST. VIN	iP	07.41.46	c	1.6°	
		iS	07.42.03			
	5 TRIN	iP	15.43.18		21.2°	USCGS Gives H: 15.38.34 E: 8.0°N 82.8°W Depth: About 49 km.
		i	15.43.24			
		eS	15.47.17			
	GREN	iP	15.43.19		21.3°	
	ST. VIN	eP	15.43.25		21.6°	
	BARB	eP	15.43.41		23.4°	
	5 TRIN	iP	19.11.08			
	GREN	eP	19.11.09			
	6 TRIN	eP	10.36.09		30.7°	USCGS Gives H: 10.30.07 E: 19.2°S 68.6°W Depth: About 181 km.
	GREN	eP	10.36.19		31.9°	
	ST. VIN	eP	10.36.28		33.3°	
	6 TRIN	iP	14.46.35	d	1.1°	
		iS	14.46.47			
	6 GREN	eP'	19.48.15		144.0°	USCGS Gives H: 19.29.33 E: 4.8°S 154.2°E Depth: About 470 km.
	TRIN	eP'	19.48.19		144.1°	
	ST. VIN	eP'	19.48.19		144.2°	
	BARB	eP'	19.48.27		145.7°	

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
FEB 6	✓ GREN	eP'	22.04.36		143.1°	Felt: Solomon Islands.
	✓ ST. VIN	eP'	22.04.38		143.5°	USCGS Gives H: 21.45.14 E: 6.8° S 155.3° E
	✓ TRIN	eP'	22.04.40		143.6°	Depth: About 59 km.
		e	22.04.43			
	✓ BARB	eP'	22.04.48		144.9°	
7	TRIN	iP	10.34.39			
7	TRIN	iP	12.19.52	d	1.5°	
		iS	12.20.08			
7	TRIN	eP	14.02.34			
7	TRIN	eP'	15.48.10		145.6°	USCGS Gives H: 15.28.33 E: 23.5° N 121.0° E
						Depth: About 38 km.
7	TRIN	iP	18.26.23	d	1.4°	
		iS	18.26.38			
8	✓ TRIN	eP	02.39.43		1.9°	
		iS	02.40.02			
8	TRIN	eP'	02.55.40		132.0°	USCGS Gives H: 02.36.41 E: 15.3° S 167.5° E
						Depth: About 162 km.
8	TRIN	eP	02.58.56			
8	✓ TRIN	eP	08.08.38		21.2°	USCGS Gives H: 08.04.14 E: 10.6° S 71.0° W
	✓ GREN	eP	08.08.47		24.2°	Depth: About 669 km.
		e	08.10.22			
	✓ ST. VIN	eP	08.08.57		25.6°	
	✓ BARB	eP	08.09.07		26.0°	
		eS	08.12.54			

<u>DATE</u> 1961	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
FEB 8	TRIN	iP	11.55.36	d	1.2°				
		iS	11.55.48						
8	GREN	iP	23.17.45	c	3.87°		H: 23.16.50		
		iS	23.18.23				E: 12.3° N 65.2° W		
	ST. VIN	iP	23.17.51	d	4.35°		Depth: About 200 km.		
		iS	23.18.40				Magnitude: 6.5		
	TRIN	iP	23.17.54	d	4.49°				
		iS	23.18.41						
	BARB	eP	23.18.16		5.85°				
9	TRIN	eP	07.34.22						
9	TRIN	eP	18.34.38						
		e	18.35.33						
10	TRIN	iP	09.59.41	d	1.3°				
		iS	09.59.55						
11	TRIN	eP	09.03.13						
12	GREN	iP	10.09.47	c	1.0°				
		iS	10.09.58						
	ST. VIN	eP	10.09.57		1.8°				
		iS	10.10.15						
12	TRIN	eP	10.10.56		1.4°				
		iS	10.11.10						
12	ST. KIT	eP	13.17.39		127.5°		USCGS Gives H: 12.57.15		
							E: 13.1° S 171.8° E		
							Depth: About 598 km.		
13	TRIN	iP	04.08.40	c	1.2°				
		iS	04.08.53						

X ✓

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961 FEB 13	GREN	eP e	18.18.19 18.18.36		0.1°				
	TRIN	eP iS	18.18.24 18.18.29		0.4°				
14	TRIN	iP iS	08.34.01 08.34.15	c	1.52°	H: 08.35.39 E: 11.0° N 62.7° W Depth: about 75 km.			
	GREN	iP iS	08.34.02 08.34.19	c	1.57°	Magnitude: 4.7			
	ST. VIN	eP	08.34.17		2.67°				
14	TRIN	iP iS	09.04.32 09.04.38		0.6°				
14	TRIN	e	19.38.27						
14	ST. KIT	iP iS	20.45.18 20.45.35		1.6°				
15	BARB	eP	00.02.38						
15	ST. VIN	iP iS	12.33.56 12.34.27	c	2.60°	H: 12.33.19 E: 15.6° N 60.7° W Depth: About 75 km.			
	ST. KIT	iP	12.33.56	c	2.67°	Magnitude: 5.0			
	BARB	e	12.34.04		2.80°				
	GREN	iP	12.34.12		3.76°				
	TRIN	iP iS	12.34.30 12.35.24	c	5.06°				
15	TRIN	iP iS	23.15.28 23.15.34	c	0.6°				
17	TRIN	eP i	06.14.43 06.14.50		12.4°	USCGS Gives H: 06.11.36 E: 6.5° N 73.5° W Depth: About 25. km.			
	GREN	eP	06.14.50		12.6°				
	ST. VIN	eP	06.15.04		13.6°				

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	<u>HAZ</u>	<u>SEAF</u>	<u>WAVE</u>	<u>TIME</u>
1961									
FEB 17	BARB	e	18.38.46						
	ST. VIN	eP	18.38.51						
17	ST. VIN	eP	19.19.04						
	BARB	eP	19.19.10						
17	ST. VIN	eP	19.55.22						
	BARB	eP	19.55.52						
17	TRIN	iP	08.24.13	c	1.2°				
		iS	08.24.25						
	GREN	eP	08.24.16		1.6°				
		iS	08.24.32						
18	TRIN	eP	09.06.54						
		i	09.06.58						
18	ST. VIN	eP	09.48.46						
	BARB	eP	09.48.47						
	GREN	eP	09.49.08						
	TRIN	eP	09.49.17						
18	TRIN	eP	19.48.06		3.5°				
		iS	19.48.42						
19	TRIN	eP	00.33.24						
19	TRIN	eP	16.08.22		2.7°				
		iS	16.08.50						
	ST. VIN	eP	16.08.26		3.1°				
19	TRIN	iP	17.13.44		1.1°				
		iS	17.13.56						
20	TRIN	eP	02.55.00						

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961						
FEB 20	ST. KIT	eP	12.10.27			
	TRIN	eP	12.11.56			
X	20 TRIN	eP	18.33.33			
X	ST. VIN	eP	18.33.53			
	20 ST. VIN	iP iS	18.54.50 18.55.12		2.20°	H: 18.54.19 E: 15.0° N 60.2° W Depth: About 80 km Magnitude: 5.6
	BARB	eP	18.54.52		2.09°	
	ST. KIT	iP	18.55.08		3.45°	
	TRIN	eP i	18.55.23 18.56.17		4.55°	
X	20 TRIN	eP e	22.31.42 22.37.13		20.8°	USCGE Gives H: 22.27.00 E: 2.5° S 77.6° W Depth: About 50 km.
	21 ST. VIN	eP eS	10.49.42 10.50.12		2.93°	H: 10.49.01 E: 15.7° N 59.8° W Magnitude: 5.7
	ST. KIT	iP iS	10.49.46 10.50.19		3.22°	
	TRIN	eP	10.50.16		5.33°	
	21 ST. VIN	e	16.49.56			
	21 TRIN	iP iS	18.05.54 18.06.06	d	1.2°	
	21 ST. KIT	iP iS	18.42.34 18.42.49		1.5°	
	21 ST. KIT	iP iS	22.06.07 22.06.30		2.3°	
	TRIN	eP	22.07.27		5.0°	

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
FEB 21	TRIN	iP	23.29.04	d	1.1°	Felt: Tobago
		iS	23.29.15			Intensity: IV
	ST. VIN	eP	23.29.24		2.5°	
22	TRIN	eP	02.13.30		1.2°	
		eS	02.13.42			
23	ST. KIT	eP	08.10.51		2.8°	
		iS	08.11.20			
	ST. VIN	eP	08.11.02		3.5°	
23	TRIN	iP	15.56.38		1.3°	
		iS	15.56.51			
23	TRIN	eP	19.33.12			Small
23	ST. VIN	eP	21.09.06			
24	ST. KIT	iP	00.29.04			
X 24	TRIN	eP'	03.23.43		142.8°	USCGS Gives H: 03.04.12 E: 26.1° N 125.4° E Depth: about 25 km.
24	TRIN	iP	06.27.38	d	0.4°	
		iS	06.27.43			
X 26	TRIN	eP	05.59.21			
26	TRIN	iP	13.45.30	d	0.83°	H: 13.45.18
		iS	13.45.39			E: 11.0° N 62.2° W
	ST. VIN	eP	13.45.51		2.32°	Magnitude: 5.7
	ST. KIT	iP	13.46.48		6.35°	
X 26	TRIN	eP'	18.30.04		136.3°	1 killed, several injured, and extensive property damage at Miyazaki. 3 ft. Tsunami observed in South West Shikoku. USCGS Gives H: 18.10.49 E: 31.4° N 131.2° E Depth: About 54 km.

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 FEB 26	TRIN	eP ₂	21.21.04		153.1°	Felt: Luzon, Philippine Islands. USCGS Gives H: 21.01.05 E: 16.0°N 121.6°E Depth: About 32 km
	27 TRIN	eP iP iS	01.10.41 01.10.47 01.13.10		12.0°	USCGS Gives H: 01.07.51 E: 6.7°N 73.0°W Depth: About 200 km
	ST. VIN	eP	01.10.55		13.1°	
	ST. KIT	eP	01.11.11		14.3°	
	BARB	eP	01.11.21		14.5°	
	27 TRIN	eP iS	07.57.00 07.57.08		0.8°	
	27 TRIN	eP	15.49.14		22.7°	Minor damage at San Jose. USCGS Gives H: 15.44.20 E: 9.8°N 84.4°W Depth: About 97 km.
	ST. VIN	eP	15.49.14		22.8°	
	28 ST. KIT	eP iS	03.58.57 03.59.31		3.3°	
	TRIN	eP	04.00.29		9.8°	
	28 TRIN	iP iS	21.52.57 21.53.09		1.1°	
	ST. VIN	eP	21.53.18		2.6°	
	28 TRIN	eP	22.07.49			
	28 TRIN	eP	23.54.26			
	28 TRIN	eP iS	23.58.23 23.58.31		0.8°	

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UNIVERSITY COLLEGE OF THE WEST INDIES

SEISMIC RESEARCH UNIT

Trinidad, West Indies.

MAR 1961

Preliminary Seismological Bulletin.

All stations are equipped with minimum 1 second period galvanometers and 2 second period galvanometers recording at 0.5 gals/sec. Magnification is 10,000 at 2 gals/sec. except at Barbados where it is 5,000 at 2 gals/sec. Data are plotted to the first decimal place of a degree when this is justified. Data are plotted to one kilometre and one-tenth of a degree. Intensity data in this bulletin are based on the intensity scale. The Trinidad station has been operated in the past at the frequency of two cycles per second. From Jan 1958 to Jan 1961, the frequency was 10 cycles per second. From Jan 1961 to Jan 1962, the frequency was 20 cycles per second.

STATIONS REPORTING

TRINIDAD	(TRIN)*	LAT. 10° 39.0' N	LONG. 61° 24.1' W	27m.
GRENADA	(GREN)	LAT. 12° 02.7' N	LONG. 61° 44.1' W	30m.
ST. VINCENT	(ST. VIN)	LAT. 13° 10.2' N	LONG. 61° 15.5' W	10m.
BARBADOS	(BARB)	LAT. 13° 07.4' N	LONG. 59° 35.6' W	70m
DOMINICA	(DOM)	LAT. 15° 17.7' N	LONG. 61° 23.5' W	40m
ANTIGUA	(ANT)	LAT. 17° 08.6' N	LONG. 61° 50.1' W	27m
ST. KITTS	(ST. KIT)	LAT. 17° 20.3' N	LONG. 62° 43.7' W	

EQUIPMENT

All stations are equipped with Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

EPICENTRES are quoted to the first decimal place of a degree when this is justified, other wise to one half of a degree.

Depths are quoted to one kilometer and origin times to one tenth of a second.

Intensity Scale in use: Modified Mercalli Intensity Scale.

*The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West.

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

<u>DATE</u> 1961	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
MAR 1	TRIN	eP'	00.43.01		145.9°	USCGS gives H: 00.23.43 E: 13.2° N 143.2° E Depth about 221 km.
2	TRIN	eP iP	22.52.10 22.52.12			
3	BARB	eP	05.00.43		1.6°	
	ST. VIN	eP iS	05.01.00 05.01.31		3.0°	
4	TRIN	eP	08.01.08			
5	TRIN	eP i	10.31.09 10.31.21			
5	TRIN	iP iS	20.13.20 20.13.26		0.6°	
6	BARB	e	21.13.35			
	SE. VIN	iP	21.14.30	d	2.7°	
	ST. KIT	eP	21.14.47		5.4°	
	TRIN	e	21.15.06			
6	TRIN	eP iS	23.40.31 23.40.45		1.4°	
7	TRIN	iP iS	05.02.26 05.02.28	d	0.2°	
7	TRIN	eP eS	06.03.28 06.03.39		1.1°	
7	TRIN	iP iS	08.47.12 08.47.25		1.3°	
7	TRIN	eP'	10.29.23		116.3	USCGS gives H: 10.10.39 E: 28.2° S 175.7° W Depth about 43 km.
		ePS	10.40.00			

(Handwritten marks: a red 'X' and a blue checkmark)

			<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961						
MAR 7	TRIN	eP'	23.31.31		145.1°	Felt New Britain Region USCGS gives H: 23.12.00 E: 4.7°S 153.2° E Depth about 90 km.
		iP'	23.31.35			
		eFP	23.35.10			
	ST. VIN	eP'	23.31.31		145.2°	
8	TRIN	iP	00.46.54		1.4°	
		iS	00.47.09			
8	TRIN	eP	07.01.38		1.7°	
		iS	07.01.55			
8	TRIN	eP	11.26.48			
	ST. VIN	eP	11.26.49			
		e	11.29.03			
8	TRIN	eP	18.50.11		1.5°	
		iP	18.50.14			
		iS	18.50.27			
8	TRIN	eP	18.51.57		1.2°	
		iS	18.52.09			
9	TRIN	eP	03.13.26			
	ST. VIN	eP	03.14.01			
9	BARB	eP	04.03.22		17.8°	USCGS gives H: 03.59.09 E: 10.9° N 41.7° W Depth about 27 km.
	TRIN	eP	04.03.36		19.2°	
	ST. VIN	eP	04.03.41		19.3°	
	ST. KIT	eP	04.03.58		21.6°	
9	BARB	e	04.20.31			
10	ST. VIN	iP	03.44.07		2.39°	H: 03.43.34 E: 15° N 61.7° W Depth: About 175 km Magnitude: 5.2.
		i	03.44.38			
	BARB	eP	03.44.17		2.82°	
	ST. KIT	eP	03.44.20		3.27°	
		e	03.44.56			
	TRIN	iP	03.44.39		4.60°	
		iS	03.45.27			

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
MAR10	BARB	eP	22.12.02			
11	ST. KIT	eP	00.30.37			
	TRIN	eP	00.31.56		Small	
11	TRIN	eP	22.10.11			
		i	22.10.17			
	ST. VIN	e	22.10.24			
12	ST. VIN	e	09.51.16			
12	TRIN	eP	17.38.04			
12	TRIN	iP	19.39.46		0.6°	
		iS	19.39.52			
12	TRIN	eP	22.44.45		1.5°	
		eS	22.45.00			
13	TRIN	eP'	05.10.53		145.3°	USCGS gives H: 04.51.14 E: 5.2° S 153.3° E Depth about 25 km.
13	ST. KIT	eP	08.11.33		42.3°	USCGS gives H: 08.03.44 E: 19.2° N 107.3° W Depth about 49 km.
13	ST. VIN	iP	22.19.38		2.3°	
		iS	22.20.02			
14	TRIN	iP	09.32.01		1.2°	
		iS	09.32.14			
14	TRIN	iP	17.47.33			
	ST. VIN	iP	17.47.36			
15	ST. KIT	eP'	10.34.33		144.7°	Felt: Rabaul.
	ST. VIN	eP'	10.34.40		147.0°	U.SCGS gives H: 10.14.56
	TRIN	eP'	10.34.40		147.0°	E: 3.3° S 150.7° E Depth about 21 km.

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1961

			<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
MAR15	ST. KIT	eP	13.20.28		143.5°	Felt: Karalai and Rabaul. USCGS gives H: 13.01.02 E: 4.4° S 152.5° E Depth about 99 km.
	ST. VIN	eP	13.20.32		145.8°	
	TRIN	eP	13.20.34		146.0°	
	BARB	eP	13.20.38		147.4°	
15	TRIN	iP	15.26.28			
		iS	15.26.46		1.7°	
	ST. VIN	iP	15.26.31		2.0°	
	TRIN	iS	15.26.46			
15	TRIN	eP	16.31.37			
15	TRIN	eP	20.21.38		(1.1°)	
		iS	20.21.(49)			
16	TRIN	eP	10.42.14		1.2°	
		iP	10.42.17			
		iS	10.42.26			
X 16	ST. VIN	iP	11.19.58			
X 16	TRIN	eP	14.05.43		176.0°	Flores Island. Some casualties and major property damage at Ende. USCGS gives H: 13.45.36 E: 8.2° S 122.0° E Depth about 74 km.
17	ST. VIN	iP	05.43.23		1.6°	
	TRIN	iP	05.43.27		1.9°	
		iS	05.43.46			
17	ST. KIT	eP	05.58.39		1.7°	
		iS	05.58.56			
17	TRIN	eP	13.58.33		2.63°	H: 13.57.56
	ST. VIN	eP	13.58.42		3.26°	E: 11.3° N 64.0° W
	ST. KIT	eP	13.59.23		6.15°	Magnitude 5.6
17	TRIN	iP	17.37.33		1.4°	
		iS	17.37.47			
X 17	TRIN	iP	22.59.11		0.7°	
		iS	22.59.19			
18	TRIN	eP	08.03.26			



TIME G.M.T. MOTION DISTANCE

MAR 19 ST. KIT iP 08.27.30
 iS 08.27.46

1.6°

20 TRIN eP 00.28.41
 iS 00.28.56

1.4°

X 20 ST. KIT eP 06.21.29
 TRIN eP 06.21.35
 ST. VIN eP 06.21.40

23.5°
24.2°
24.5°

Felt: Managua.
USCGS gives H: 06.16.24
 E: 11.5° N
 86.3° W

Depth about 122 km.

20 TRIN eP 06.30.06
 iS 06.30.20

1.4°

X 20 TRIN eP 16.18.07
 e 16.22.11

20 TRIN iP 18.33.33
 iS 18.33.46
 ST. VIN ep 18.33.55
 i 18.34.28

1.3°
2.8°

21 TRIN e 00.39.03

21 ST. KIT iP 04.42.07
 iS 04.42.23

1.5°

21 ST. KIT iP 11.19.44
 TRIN eP 11.21.03

21 ST. KIT iP 13.05.30
 iS 13.05.48

1.7°

21 ST. KIT iP 13.58.49
 iS 13.59.05

1.6°

21 ST. KIT iP 14.15.14

22 ST. KIT iP 17.21.(04)
 iS 17.21.(16)

1.1°

24 TRIN eP 02.18.11

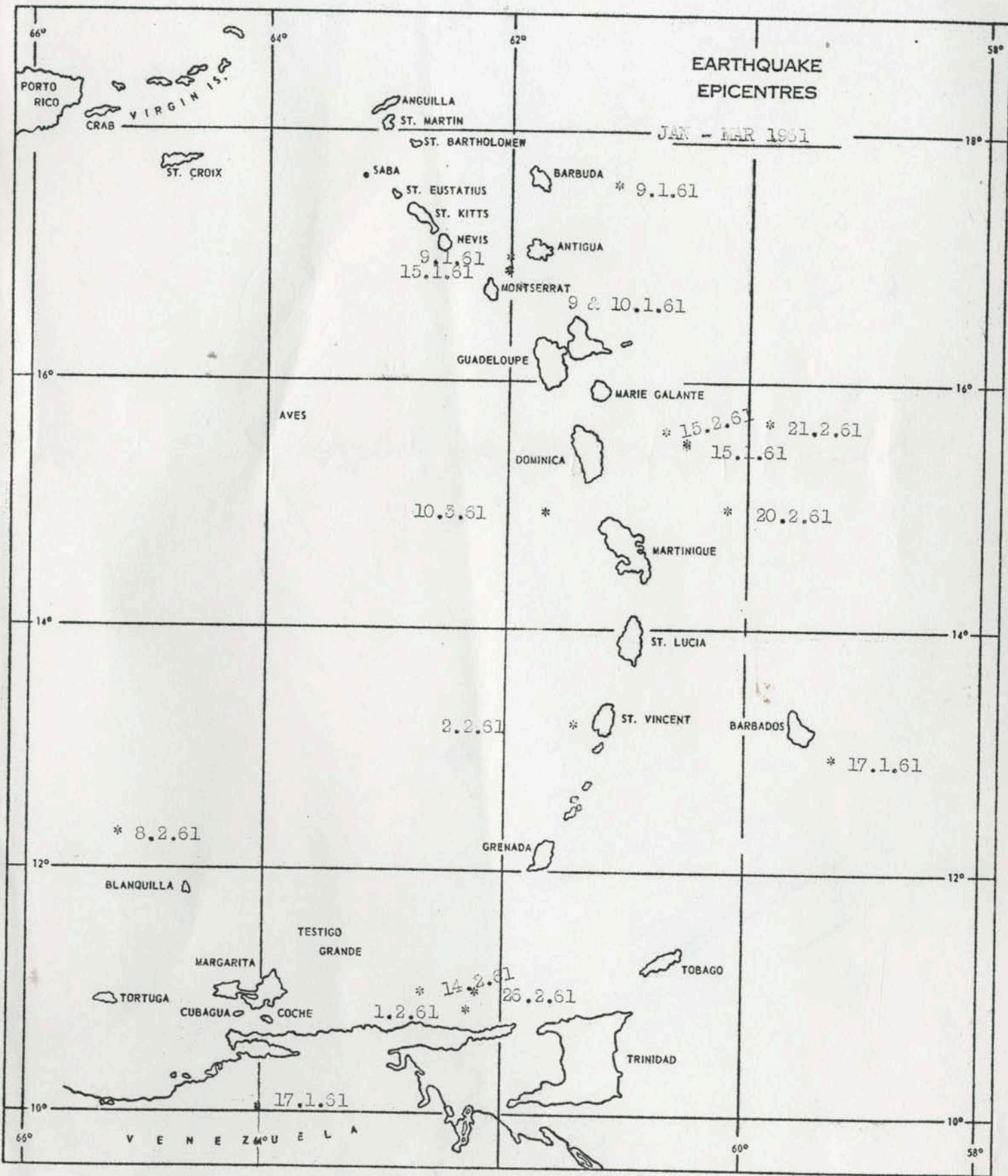
23.2°

USCGS gives H: 02.13.14
 E: 8.5° S
 74.7° W

Depth about 175 km.

			09.29.26	1.3°	
		iS	09.29.40		
24	TRIN	iP	17.01.17	1.3°	
		iS	17.01.31		
25	TRIN	eP	02.14.49	22.2°	USCGS gives H: 02.10.00
		ePP	02.15.17		E; 2.1° S
					79.4° W
					Depth about 25 km.
25	ST. VIN	eP	06.05.36		
		e	06.07.04		
25	ST. KIT	iP	23.03.38	0.7°	
		iS	23.03.45		
27	ST. VIN	iP	06.40.28	2.6°	
		iS	06.40.55		
28	TRIN	iP	08.36.39	1.4°	
		iS	08.36.53		
28	ST. VIN	eP ¹	09.55.55	165.9°	USCGS gives H: 09.35.55
		eP ²	09.56.55		E: 0.2° N
	BARB	eP ¹	09.55.59	166.8°	123.6° E
	TRIN	eP ¹	09.55.58	168.2°	Depth about 83 km.
		eP ²	09.57.11		
		ePP	10.00.56		
28	TRIN	iP	12.16.47	1.1°	
		iS	12.16.58		
28	ST. VIN	eP	12.42.32	104.3°	USCGS gives H: 12.29.13
	BARB	eP	12.42.37	105.8°	E: 51.7° N
	TRIN	eP	12.42.39	106.3°	176.2° W
					Depth about 60 km.
28	TRIN	iP	15.58.53	0.8°	
		iS	15.59.02		
	ST. VIN	iP	15.59.13	2.2°	
		iS	15.59.36		
28	TRIN	eP	21.08.30		
		e	21.13.44		
	BARB	eP	21.08.39		
	ST. VIN	eP	21.08.51		
		e	21.14.26		
	ST. KIT	eP	21.09 (23)		

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1961					
MAR 28	TRIN	iP	21.40.40		0.6°
		iS	21.40.46		
29	TRIN	eP	04.53.28		2.1°
		iS	04.53.50		
29	TRIN	iP	19.28.22		1.3°
		iS	19.28.36		
30	TRIN	iP	10.17.19		0.9°
		iS	10.17.28		
30	TRIN	eP	20.48.13		1.2°
		iS	20.48.25		
31	TRIN	iP	23.41.16		1.1°
		iS	23.41.28		



Cepid 4/61

STATION	LONGITUDE	LATITUDE	INSTRUMENT
TRINIDAD	106° 30' W	10° 30' N	(KIRK)
CHAMA	106° 30' W	10° 30' N	(KIRK)
ST. VINCENT	106° 30' W	10° 30' N	(KIRK)
BARBADOS	106° 30' W	10° 30' N	(KIRK)
DOMINGA	106° 30' W	10° 30' N	(KIRK)
ARICA	106° 30' W	10° 30' N	(KIRK)
ST. KITTS	106° 30' W	10° 30' N	(KIRK)

UNIVERSITY COLLEGE OF THE WEST INDIES

SEISMIC RESEARCH UNIT

Trinidad, West Indies.

APR 1961

Preliminary Seismological Bulletin.

All stations are equipped with Wilcox-Watts 1 second period magnetometers and 1 second period galvanometers recording at 60 cycles/sec. Magnification is 10,000 at 5 cycles/sec, except at Barbados where it is 5,000 at 5 cycles/sec.

Amplitudes are quoted to the first decimal place of a degree when this is justified, other wise to one half of a degree.

Times are quoted to one kilometer and eight times to one tenth of a second.

Intensity scale in West Indies is as follows:

The Trinidad station has been organized in the past at the temporary name given below:

From Jan 1955 to Jan January 1956 at 10° 40' N, 106° 30' W.

From Jan January 1956 to Jan January 1958 at 10° 40' N, 106° 30' W.

STATIONS REPORTING

TRINIDAD	(TRIN)*	LAT. 10° 39.0' N	LONG. 61° 24.1' W	27m.
GRENADA	(GREN)	LAT. 12° 02.7' N	LONG. 61° 44.1' W	30m.
ST. VINCENT	(ST. VIN)	LAT. 13° 10.2' N	LONG. 61° 15.5' W	10m.
BARBADOS	(BARB)	LAT. 13° 07.4' N	LONG. 59° 35.6' W	70m
DOMINICA	(DOM)	LAT. 15° 17.7' N	LONG. 61° 23.5' W	40m
ANTIGUA	(ANT)	LAT. 17° 08.6' N	LONG. 61° 50.1' W	27m
ST. KITTS	(ST. KIT)	LAT. 17° 20.3' N	LONG. 62° 43.7' W	

EQUIPMENT

All stations are equipped with Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

EPICENTRES are quoted to the first decimal place of a degree when this is justified, other wise to one half of a degree.

Depths are quoted to one kilometer and origin times to one tenth of a second.

Intensity Scale in use: Modified Mercalli Intensity Scale.

*The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West.

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

YEAR	DATE	STATION	TYPE	TIME G.M.T.	MOTION	DISTANCE	REMARKS
1961	APR 1	TRIN	ePP	15.38.19		116.8°	USCGS gives H: 15.18.23 E: 39.6°N 77.7°E Depth: About 21 km
			eSKSP	15.48.08			
	2	BARB	eP	20.56.37		2.24°	H: 20.56.02 E: 14.6° N 57.9° W Magnitude: 5.3.
		ST. VIN	eP	20.56.53		3.62°	
			iS	20.57.50			
		TRIN	iP	20.57.17		5.26°	
	2	TRIN	eP	22.13.50		1.0°	
			iS	22.14.00			
	3	TRIN	eP	01.13.17		12.0°	USCGS gives H: 01.10.32 E: 6.8°N 72.9°W Depth: About 221 km Depth about 221 km.
			iPP	01.13.25			
		ST. VIN	eP	01.13.52		13.0°	
		BARB	eP	01.13.53		14.4°	
	3	TRIN	iP	01.25.40			
	3	TRIN	iP	03.24.39			
	3	ST. VIN	iP	11.18.40		1.55°	H: 11.18.18 E: 14.2° N 61.1° W Magnitude 4.4
			iS	11.18.57			
		BARB	ei	11.18.52		2.17°	
		TRIN	iP	11.19.11		3.76°	
			iS	11.19.48			
	3	ST. VIN	eP	14.43.33			
			i	14.43.44			
	4	TRIN	eP	08.55.01		1.1°	
			iS	08.55.13			
	4	TRIN	iP	09.47.33		0.7°	
			iS	09.47.41			
	4	TRIN	eP	10.54.51		149.0°	Felt: New Britain Region USCGS gives H: 10.35.11 E: 5.9°S 149.4°E Depth: About 124 km.
	4	ST. KIT	eP	20.03.46		1.8°	
			eS	20.04.05			
	4	TRIN	eP	23.31.57			

1961
 APR 6 ✓ ST. KIT eP 04.14.35 58.0°
 ✓ ST. VIN eP 04.14.39 61.5°
 ✓ ST. VIN eP 04.14.58 61.5°
 USCGS gives H: 04.04.46
 E: 40.1° N
 124.8° W
 Depth about 73 km.

6 ST. KIT iP 08.43.32 1.7°
 is 08.43.50

6 ST. VIN eP 09.38.19 3.30°
 TRIN eP 09.38.37 4.56°
 is 09.39.25
 ST. KIT eP 09.38.56 5.93°
 eS 09.39.59
 H: 09.37.33
 E: 13.7° N 57.9° W
 Depth about 73 km.

6 TRIN eP 11.31.36 1.1°
 is 11.31.47

6 TRIN iP 19.47.18 1.3°
 is 19.47.32

6 TRIN eP 21.15.47 2.1°
 is 21.16.09

7 TRIN eP 15.01.33

7 ST. VIN eP 18.19.30

7 ST. VIN e 18.25.19

7 TRIN iP 19.16.26 1.3°
 is 19.16.39

ST. VIN e 19.16.46

8 TRIN eP 03.12.00 22.8°
 USCGS gives H: 03.06.50
 E: 2.6° S
 81.0° W
 Depth about 25 km.

8 TRIN eP 04.27.02 21.8°
 Several injured and extensive property damage in Southern Chimbarazo Province.
 USCGS Gives H: 04.22.09
 E: 2.2° S 79.2° W
 Depth: About 25 km.

8 TRIN eP 04.51.56 21.8°
 USCGS gives H: 04.47.02
 E: 2.1° S
 79.1° W
 Depth about 24 km.

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE
1961 APR 8	TRIN	eP	09.08.42		21.8°
	8 TRIN	iP iS	11.56.14 11.56.28		1.4°
	8 TRIN	iP iS	14.24.51 14.24.59		0.8°
	ST. VIN	e	14.25.15		
	8 TRIN	eP	18.08.38		49.7°
	ST. VIN	eP	18.08.57		52.5°
	BARB	e	18.10.01		52.7°
	8 TRIN	eP ₁ e	21.56.03 21.56.31		143.5°
	9 TRIN	eP	14.54.46		
	9 TRIN	iP iS	21.59.13 21.59.29		1.5°
	ST. VIN	eP	21.59.45		3.7°
	10 TRIN	iP iS	05.49.29 05.49.36		0.7°
	11 TRIN	iP iS	01.13.42 01.14.00		1.8°
	11 TRIN	eP eS	07.37.19 07.38.07		4.6°
	11 TRIN	iP iS	09.58.25 09.58.38		1.3°
	11 TRIN	iP	14.13.18		
	11 TRIN	iP	18.09.29		0.9°

USCGS gives H: 09.03.49
E: 2.1°S 79.1°W
Depth: About 24 km.

USCGS gives H: 17.59.47
E: 38.2°S 72.7°W
Depth: About 60 km.

USCGS gives H: 21.36.42
E: 14.8°N 145.1°E
Depth: About 105 km.

Small.

1961	BASE	TIME G.M.T.	MOTION	DISTANCE	
APR 11 TRIN	iP	20.10.01		0.6°	
	iS	20.10.07			
12 TRIN	iP	03.04.40		1.2°	
	iS	03.04.53			
ST. VIN	eP	03.05.02		2.9°	
	iS	03.05.32			
12 TRIN	eP	10.45.03		09.8°	USCGS gives H: 10.42.44 E: 18.8°N 67.3°W Depth: About 74 km.
ANT	e	10.45.03		05.5°	
12 TRIN	eP	11.39.44		12.5°	USCGS Gives H: 11.36.44 E: 6.9°N 73.5°W Depth: About 35 km.
	iPP	11.39.51			
12 TRIN	iP	12.02.12		1.3°	
	iS	12.02.25			
12 ST. KIT	eP	22.25.54		25.8°	Minor damage at El. Salvador and southern El Salvador. <i>222-115</i> USCGS Gives H: 24.20.34 E: 13.1°N 88.9°W Depth: About 122 km.
	eIP	22.26.15			
	eFCS	22.53.00			
ANT	eP	22.26.05		26.5°	
TRIN	eP	22.26.06		27.3°	
	ePCF	22.29.31			
	eSCF	22.33.04			
ST. VIN	eP	22.26.(13)		27.2°	
12 ST. VIN	eP	22.45.52			
13 ST. VIN	eP	06.25.55		2.7°	
	TRIN	eP	06.26.03	3.2°	
		eS	06.26.37		
13 ANT	iP	12.43.09		0.9°	
	ST. KIT	iP	12.43.24	2.0°	
	iS	12.43.45			

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TIME G.M.T. MOTION DISTANCE

DATE	STATION	TYPE	TIME	MOTION	DISTANCE	REMARKS
APR 14	TRIN	eP	01.29.30			
14	ANT	iP	02.47.26	c	2.36°	H: 02.46.52 E: 15.5° N 60.7° W Depth about 150 km. Magnitude 4.9
	V	iS	02.47.48			
	ST. VIN	iP	02.47.31	c	2.77°	
	ST. KIT	iI	02.47.34		2.97°	
		eS	02.48.04			
14	TRIN	eP	17.20.20		1.0°	
		iP	17.20.22			
		iS	17.20.30			
15	TRIN	iP	09.43.09		1.3°	
		iS	09.43.22			
15	ANT	iP	10.05.51		0.8°	
		iS	10.06.00			
	ST. KIT	eP	10.06.58		1.4°	
		iS	10.06.12			
16	ANT	eP	07.02.19			
	ST. KIT	eP	07.02.20			
16	TRIN	iP	08.58.09		1.6°	
		iS	08.58.25			
16	ANT	eP	10.27.03			
16	TRIN	eP	21.15.15		1.6°	
		iS	21.15.32			
17	TRIN	iP	09.52.26		1.7°	
		iS	09.52.43			
17	TRIN	eP	10.14.22		1.2°	
		iS	10.14.35			
	ST. VIN	eP	10.14.32		1.9°	



		SE	TIME G.M.T.	MOTION	DISTANCE		
1961							
APR17	ST. KIT	eP	14.30.44		1.5°		
		iS	14.30.59				
	ANT	eP	14.30.54		2.5°		
		iS	14.31.19				
17	TRIN	eP	14.41.23		1.4°		
		eS	14.41.37				
17	TRIN	iP	20.29.41		1.2°		
		iS	20.29.54				
17	TRIN	eP	20.41.30		32.2°	USCGS gives H: 20.35.15	
	ST. VIN	eP	20.41.51			E: 20.8° S	
						68.5° W	
						Depth about 200 km.	
18	TRIN	iP	08.04.37		1.8°		
		iS	08.04.56				
18	ANT	iP	10.45.58		2.34°	H: 10.45.25	
		iS	10.46.22			E: 16.0° N 59.9° W	
						Depth about 100 km.	
	ST. KIT	iP	10.46.09		3.14°	Magnitude 4.4	
	ST. VIN	iP	10.46.11		3.27°		
		iS	10.46.44				
	TRIN	eP	10.46.44		5.64°		
19	TRIN	iP	10.30.08		1.3°		
		iS	10.50.21				
19	TRIN	eP	13.29.43				
20	TRIN	eP	06.57.05				
20	ANT	eP	23.57.29				
	ST. KIT	eP	23.57.40				
21	TRIN	iP	17.41.27		1.2°		
		iS	17.41.40				



YEAR	DATE	TIME G.M.T.	MOTION	DISTANCE	STATION	AMPLITUDE	PERIOD	SLIP
1961	APR 21	TRIN	eP	18.50.08				
			i	18.50.15				
	X ² 21	TRIN	iP	20.39.22				
	22	TRIN	e	00.49.38				
	22	ST. KIT	iP	04.19.02		2.3°		
			iS	04.19.26				
		ANT	eP	04.19.11		2.8°		
	22	TRIN	iP	08.54.24		1.9°		
			iS	08.54.44				
	22	TRIN	e	11.34.41				
	22	ANT	iP	14.26.(07)		(1.4°)		
		ST. KIT	iP	14.26.12		1.7°		
			iS	14.26.30				
	22	TRIN	eP	18.17.51		1.3°		
			iS	18.18.04				
	22	TRIN	iP	18.50.11		0.8°		
			iS	18.50.19				
	22	TRIN	eP	19.06.43		23.4°		USCGS gives H: 19.01.34 E: 2.8° S 80.8° W Depth about 30 km.
	22	GREN	iP	21.19.24		1.3°		
			iS	21.19.37		1.2°		
		TRIN	iP	21.19.24				
			iS	21.19.38				

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	<u>NOVATE</u>	<u>ST.M</u>
1961							
APR22	TRIN	iP	23.05.12		1.3°		
		iS	23.05.26				
	GRIN	eP	23.05.18		1.9°		
		iS	23.05.37				
23	TRIN	iP	02.52.32		1.1°		
		iS	02.52.44				
	GRIN	iP	02.52.37		1.6°		
		iS	02.52.54				
23	TRIN	eP	07.27.36				
		i	07.27.42				
24	ANT	eP	05.51.35		2.1°		
		eS	05.51.56				
25	TRIN	eP	09.44.23				
		e	09.46.07				
25	ANT	iP	22.12.(51)	d	.98°		
		iS	22.12.(58)				
	ST. KIT	iP	22.13.00	d	1.43°		
		iS	22.13.15				
	ST. VIN	eP	22.13.48		4.85°		
	TRIN	eP	22.14.23		7.37°		
25	ANT	eP	23.13.(15)		(1.0°)		
	ST. KIT	eP	23.13.25		1.7°		
		iS	23.13.42				
26	ANT	eP	00.19.(58)				
	ST. KIT	eP	00.20.06				
26	ANT	eP	02.23.(01)				
	ST. KIT	eP	02.23.09				

H: 22.12.40
 E: 18.0° N 61.4° W
 Magnitude 5.8



<u>YEAR</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1961					
APR26	ANT	iP	03.28.(11)		(1.1°)
		iS	03.28.(20)		
	ST. KIT	iP	03.28.20		1.7°
		iS	03.28.38		
	ST. VIN	eP	03.29.09		5.3°
27	TRIN	e	18.06.48		
28	ANT	iP	06.10.20		1.1°
		iS	06.10.30		
	ST. KIT	iP	06.10.25		1.5°
28	ST. VIN	eP	12.59.30		
28	ST. VIN	eP	14.15.02		
29	TRIN	e	01.14.44		
	GREN	eP	01.15.43		1.6°
		iS	01.16.00		
29	TRIN	eP	08.07.31		1.2°
		iS	08.07.44		
	GREN	eP	08.07.43		2.0°
29	TRIN	iP	23.18.36		
30	TRIN	eP	07.42.35		47.8°
30	TRIN	iP	20.04.10		
30	ST. KIT	iP	21.11.06		0.3°
		iS	21.11.10		

X ✓

USCGS gives H: 07.33.54
 E: 52.0° N
 31.9° W
 Depth about 38 km.

Copied by

STATION IDENTIFICATION	
ST. KILTS	(ST. KILTS)
ST. VINCEN	(ST. VINCEN)
UNIVERSITY COLLEGE OF THE WEST INDIES	
SEISMIC RESEARCH UNIT	
Trinidad, West Indies.	
ST. KILTS	(ST. KILTS)

- MAY 1961

Preliminary Seismological Bulletin.

All stations are equipped with Williamson type 2 second period electromagnets and a second period galvanometer recording at 200/sec. Magnification is 10,000 at 2 cycles/sec, except at Barbados where it is 5,000 at 2 cycles/sec.

Amplitudes are quoted to the first decimal place of a degree when this is justified, other wise to one half of a degree. Depths are quoted to one kilometer and origin times to one tenth of a second.

Intensity scale is used Modified Mercalli Intensity scale.

The Trinidad station has been operated in the past at the University since 1954.

From January 1955 to January 1960 the station was operated at the University of the West Indies, St. Augustine, Trinidad.

STATIONS REPORTING

TRINIDAD	(TRIN)*	LAT. 10° 39.0' N	LONG. 61° 24.1' W	27m.
GRENADA	(GREN)	LAT. 12° 02.7' N	LONG. 61° 44.1' W	30m.
ST. VINCENT	(ST. VIN)	LAT. 13° 10.2' N	LONG. 61° 15.5' W	10m.
BARBADOS	(BARB)	LAT. 13° 07.4' N	LONG. 59° 35.6' W	70m
DOMINICA	(DOM)	LAT. 15° 17.7' N	LONG. 61° 23.5' W	40m
ANTIGUA	(ANT)	LAT. 17° 08.6' N	LONG. 61° 50.1' W	27m
ST. KITTS	(ST. KIT)	LAT. 17° 20.3' N	LONG. 62° 43.7' W	

EQUIPMENT

All stations are equipped with Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

EPICENTRES are quoted to the first decimal place of a degree when this is justified, other wise to one half of a degree.

Depths are quoted to one kilometer and origin times to one tenth of a second.

Intensity Scale in use: Modified Mercalli Intensity Scale.

*The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West.

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.



1961 STATION PHASE TIME G.M.T. MOTION DISTANCE

MAY 1	TRIN	iP	08.52.01		0.8°
		iS	08.52.09		
	GREN	eP	08.52.07		1.4°
		iS	08.52.21		
1	ST. VIN	eP	17.05.09		
		i	17.05.12		
2	TRIN	iP	06.30.46		1.2°
		iS	06.30.58		
	GREN	iP	06.30.48		1.4°
		iS	06.31.02		
2	TRIN	iP	08.46.26		1.2°
		iS	08.46.38		
2	TRIN	eP	20.19.52		
2	TRIN	e	23.14.31		
3	ST. VIN	eP	16.27.51		
3	ST. VIN	eP	17.06.30		
4	ST. KIT	eP	00.12.55		
	ANT	e	00.13.02		
4	TRIN	iP	00.28.02		1.2°
		iS	00.28.14		
4	TRIN	eP	06.50.20		
4	ANT	eP	07.04.00		14.5°
✓	ST. VIN	eP	07.04.07		14.9°
✓	ST. KIT	eP	07.04.13		15.6°
✓	DOM	eP	07.04.(13)		14.6°
✓	GREN	eP	07.04.17		15.8°
✓	TRIN	eP	07.04.22		16.0°

Small.

USCGS gives H: 07.00.33
 E: 17.7° N
 46.4° W
 Depth about 19 km.



SE TIME G.M.T. MOTION DISTANCE

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MAY 4 DOM eP 07.18.(16)

ANT eP 07.18.39

ST. VIN e 07.18.55

4 DOM eP 07.33.(17)

ANT e 07.33.33

ST. VIN eP 07.33.53

4 ST. KIT iP 10.38.20

iS 10.38.31

4 TRIN eP 20.26.00

1.0°

USCGS gives H: 20.20.37
E: 5.1°S 81.0°W
Depth: About 49 km.

5 DOM eP 00.43.25

0.88°

H: 00.43.13
E: 15.0° N 60.5° W
Magnitude 5.2

ST. VIN iP 00.43.40

2.00°

ANT eP 00.43.(47)

2.48°

ST. KIT eP 00.43.57

3.13°

GREN eP 00.43.59

3.21°

TRIN eP 00.44.(19)

4.45°

5 TRIN iP 06.19.20

1.1°

iS 06.19.32

GREN iP 06.19.25

1.7°

iS 06.19.42

5 TRIN iP 08.30.48

0.7°

iS 08.30.56

GREN eP 08.30.57

1.3°

iS 08.31.10

5 GREN eP 12.42.45

1.6°

iS 12.43.02

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
MAY 5	ST. KIT	iP	20.32.31		0.7°	
		iS	20.32.38			
	DOM	e	20.33.(12)			
	7 / GREN	eP'	00.45.03		143.9°	USCGS gives H: 00.25.41
	ST. VIN	eP'	00.45.04		144.2°	E: 6.1° S 154.4° E
	TRIN	eP'	00.45.06		144.3°	Depth: About 123 km.
	DOM	eP'	00.45.(06)		144.0°	
	BARB	eP'	00.45.11		145.7°	
	7 / TRIN	eP	04.52.18			
	7 TRIN	iP	07.58.26		1.2°	
		iS	07.58.38			
	7 GREN	eP	08.59.35		1.1°	
		eS	08.59.46			
	TRIN	eP	08.59.54		2.5° "	Very Small.
	7 / TRIN	eP'	10.42.42		161.7°	USCGS gives H: 10.22.44
	ST. KIT	eP'	10.42.48		155.6°	E: 5.8° N 126.8° E
	DOM	eP'	10.43.(08)		157.4°	Depth: About 89 km.
	7 / ST. VIN	e	12.28.21			
	TRIN	eP	12.28.36			
	7 DOM	e	12.42.(15)			
	ST. VIN	e	12.42.41			
	7 DOM	eP	12.52.(59)			
	ST. KIT	eP	12.53.11			
	7 ST. VIN	eP	13.25.28		14.1°	USCGS gives H: 115.22.05
	TRIN	eP	13.25.40		15.0°	E: 16.0° N 46.9° E
						Depth: About 39 km.



DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1961								
MAY 7	TRIN	eP	13.38.46		0.9°			
		iS	13.38.56					
	DOM	e	13.39.(22)					
7	TRIN	e	15.10.33			Small.		
7	GREN	iP	19.01.35		1.2°			
		iS	19.01.48					
	TRIN	eP	19.01.47		2.1°			
		iS	19.02.09					
7	TRIN	iP	22.10.52		1.7°			
		iS	22.11.10					
X 8	TRIN	e	19.42.27					
9	TRIN	iP	04.46.32		1.3°			
		iS	04.46.46					
	GREN	eP	04.46.36		1.7°			
		iS	04.46.54					
10	TRIN	iP	03.43.48		0.9°			
		iS	03.43.57					
10	TRIN	eP	08.58.17		0.7°			
						USCGS gives H: 08.55.59		
						E: 9.1°N 71.1°W		
						Depth: About 50 km.		
10	TRIN	e	10.57.41					
11	TRIN	iP	04.59.10		1.11°			
		iS	04.59.21			H: 04.58.54		
						E: 11.4°N 60.5°W		
	GREN	iP	04.59.13		1.37°	Magnitude 4.5		
		iS	04.59.28					
	ST. VIN	eP	04.59.22		1.95°			
		e	04.59.47					

Date	Station	Type	Time	Phase	USCGS H	USCGS E	USCGS Depth
MAY 11	TRIN	eP	08.47.14	49.1°	08.38.27	37.2° S 73.6° W	47 km
		e	09.10.25				
		L	09.23.00				
	GREN	eP	08.47.24	50.4°			
MAY 11	ST. VIN	eP	08.47.31	51.6°			
	ST. KIT	eP	08.47.58	55.1°			
12	TRIN	iP	00.21.33	0.6°			
		iS	00.21.39				
12	GREN	eP	01.45.25	1.5°			
		iS	01.45.40				
12	TRIN	eP	01.45.28	1.6°			
		iS	01.45.45				
12	ST. KIT	iP	02.00.08				
12	TRIN	eP	02.59.11	1.3°			
		iS	02.59.24				
12	GREN	eP	02.59.15	1.7°			
		iS	02.59.32				
12	ST. KIT	iP	08.23.40	1.2°			
		iS	08.23.52				
12	TRIN	iP	15.51.29	0.8°			
		iS	15.51.37				
12	ST. VIN	eP	18.05.27	1.3°			
		iS	18.05.40				
13	TRIN	eP	19.38.44	144.0°	19.19.37	25.3° N 122.6° E	261 km

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1961

MAY14 DOM

SE TIME G.M.T. MOTION DISTANCE

eP 04.42.(46)

14 TRIN

eP 16.50.52

iS 16.51.04

GREN

eP 16.50.53

i 16.51.10

14 TRIN

iP 21.20.49

iS 21.21.13

GREN

eP 21.21.02

iS 21.21.36

ST.VIN

eP 21.21.19

iS 21.22.06

ST. KIT

eP 21.22.11

15 DOM

iP 02.01.(46) d

iS 02.01.(48)

16 ST. KIT

eP 03.40.30

eS 03.40.57

17 TRIN

iP 13.19.52

iS 13.20.07

GREN

iP 13.19.57 c

iS 13.20.15

17 ANT

iP 18.29.21

ST. KIT

iP 18.29.30

iS 18.29.44

17 ANT

iP 19.19.07

ST. KIT

iP 19.19.27

iS 19.19.42

H: 21.20.15
E: 9.1° N 63.3° W
Magnitude 5.9

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE		
1961							
MAY 17	TRIN	eP	19.37.22		1.5°		
		iP	19.37.24				
		iS	19.37.38				
	GRIN	eP	19.37.27		2.0°		
		iS	19.37.47				
17	DOM	eP	21.01.(34)		1.82°	H: 21.01.13	
		iS	21.01.(58)			E: 15.8° N 59.6° W	
	ANT	eP	21.01.49		2.57°	Magnitude: 5.4	
		iS	21.02.15				
	ST. VIN	ep	21.01.57		3.08°		
		iS	21.02.28				
	ST. KIT	eP	21.02.01		3.41°		
19	ANT	eP	05.51.19				
	ST. KIT	iP	05.51.27				
19	ST. KIT	iP	08.33.39				
19	ST. KIT	eP	09.31.00		25.6°	USCGS gives H: 09.25.27	
	TRIN	eP	09.31.11		26.7°	E: 11.3° N 88.3° W	
	DOM	eP	09.31.(23)		26.5°	Depth: About 34 km	
19	TRIN	eP	15.57.02				
19	TRIN	eP	18.25.37		1.1°		
		iS	18.25.48				
19	ANT	iP	21.53.40		0.79°	H: 21.53.29	
		iS	21.53.48			E: 16.9° N 61.1° W	
	DOM	eP	21.53.(51)		1.60°	Magnitude: 5.2	
	ST. KIT	iP	21.53.53		1.66°		

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
MAY 20	ST. KIT	iF	12.07.08			
	21 TRIN	eF	17.46.37	24.0°		USCGS gives H: 17.41.28 E: 3.1° S 80.9° W Depth: About 27 km.
	21 TRIN	iI	19.10.32	0.5°		
		iS	19.10.37			
	21 DOM	eF'	21.59.42	145.6°		Minor damage in Sydney
	ST. KIT	eF'	21.59.43	145.8°		USCGS Gives H: 21.40.03 E: 3.5° S 150.4° E Depth: About 27 km
		iF' ₂	21.59.4			
	ANT	eP' ₂	21.59.45	146.3°		
		iF' ₂	21.59.48			
	22 ANT	iF	01.31.(03)			
	ST. KIT	iI	01.31.13			
	22 GREN	eF.	03.41.30			
		i	03.41.38			
	22 ANT	iF	04.13.(54)	(1.1°)		
	ST. KIT	iF	04.13.59	1.5°		
		iS	04.14.14			
	22 TRIN	iF	04.33.22	1.3°		
		iS	04.33.36			
	GREN	eF	04.33.24	1.6°		
		iS	04.33.41			
	22 TRIN	iF	10.36.29	1.5°		
		iS	10.36.42			
	GREN	eF	10.36.31	1.5°		
		iS	10.36.47			



			TIME G.M.T.	MOTION	DISTANCE				
1961									
MAY22	ST. VIN	eF	12.53.22		1.6°				
		eS	12.53.38						
22	TRIN	eF	14.17.56			Small.			
22	TRIN	iF	15.04.38		1.33°	H: 15.04.19			
		iS	15.04.51			E: 10.8° N 62.6° W			
						Depth about 50 km.			
	GREN	iF	15.04.42.		1.60°	Magnitude 4.7			
		iS	15.04.58						
	ST. VIN	eF	15.04.59		2.77°				
22	TRIN	iF	18.11.46		0.7°				
		iS	18.11.53						
22	TRIN	eF	22.55.51		0.6°				
		iS	22.55.58						
	GREN	eF	22.55.59		1.2°	Very Small.			
23	ANT	eF	02.57.(26)		79.9°	Moderate property.			
	ST. KIT	eF	02.57.28		80.2°	damage in Rhodes area and south western Turkey.			
	DOM	eF	02.57.(29.)		80.5°	USCGS gives H: 02.45.16			
						E: 36.4° N 28.3° E			
						Depth: About 49 km.			
	ST. VIN	eF	02.57.32		81.8°				
	GREN	eF	02.57.41		83.1°				
	TRIN	eF	02.57.46		83.5°				
23	ST. KIT	eF	03.45.13		22.0°	USCGS gives H: 03.40.26			
		t	04.07.29			E: 9.8° N 28.3° E			
	GREN	eF	03.45.14		22.1°	Depth: About 136 km.			
	TRIN	eF	03.45.15		22.4°				
	ST. VIN	eF	03.45.21		22.7°				
	DOM	eF	03.45.(21)		22.9°				
		t	04.08.(34)						
	ANT	eF	03.45.(21)		23.0°				
		t	04.07.55						
	BARB	eF	03.45.35		24.2°				

			<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
MAY23	ST. KIT	eP	03.47.58						
		t	04.10.25						
	TRIN	eP	03.47.58						
		iP	03.47.59						
	GREN	eF	03.47.58						
	ST. VIN	eP	03.48.02						
		t	04.09.47						
	ANT	eF	03.48.(05)						
		t	04.11.27						
	DOM	eF	03.48.(14)						
		t	04.11.(17)						
	BARB	eP	03.48.19						
23	TRIN	e	03.57.08						
23	ST. KIT	e	04.19.03						
	DOM	e	04.20.(10)						
23	ST. VIN	eP	15.55.28						
23	ST. KIT	iP	16.50.06		24.4°				
	GREN	eP	16.50.15		25.0°				
	TRIN	eP	16.50.16		25.4°				
		iP	16.50.19						
		eS	16.54.37						
		l	16.59.00						
	ANT	eP	16.50.(17)		25.1°				
	DOM	eP	16.50.(17.)		25.3°				
	ST. VIN	eP	16.50.18		25.5°				
		i	16.50.39						
	BARB	eP	16.50.34		26.8°				
24	ST. VIN	eP	16.12.46		0.6°				
		eS	16.12.52						

Small.

Felt at Managua and south eastern El. Salvador.

USCGS gives H: 16.44.59
E: 12.6° 87.3° W
Depth: About 138 km.

DATE	STATION	HLSE	TIME G.M.T.	MOTION	DISTANCE				
1961									
MAY 25	DOM	eF	10.36.(51)						
25	TRIN	iF	21.13.29		0.87°		H: 21.13.17		
		iS	21.13.39				E: 11.2° N 61.6° W		
	GREN	eF	21.13.33		1.11°		Depth: About 75 km.		
		iS	21.13.44				Magnitude: 3.9		
	ST. VIN	eF	21.13.46		2.13°				
26	ST. KIT	eF	05.12.11		28.3°		USCGS gives H: 05.06.27		
	/ ANT	eF	05.12.(18)		29.0°		E: 15.4° N 91.9° W		
	/ DOM	eF	05.12.(22)		29.4°		Depth: About 123 km.		
	✓ GREN	eF	05.12.22		29.8°				
	/ ST. VIN	eF	05.12.23		29.9°				
	✓ TRIN	eF	05.12.26		30.2°				
26	TRIN	iF	05.38.36		0.7°				
		iS	05.38.42						
26	TRIN	iF	08.14.28		0.7°				
		iS	08.14.35						
26	TRIN	eF	08.46.36		22.7°		USCGS gives H: 08.42.15		
	GREN	eF	08.46.44		23.9°		E: 10.1° S 70.0° W		
							Depth: About 673 km.		
26	ST. VIN	eF	16.21.12		1.6°				
		iS	16.21.28						
26	ST. VIN	iF	18.22.43	d	1.0°				
		iS	18.22.54						
	GREN	iF	18.22.54		1.7°				
		iS	18.23.12						

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
MAY 26	TRIN	iP	19.17.38		1.2°				
		iS	19.17.51						
	GREN	eP	19.17.41		1.5°				
		iS	19.17.57						
27	DOM	eP	03.02.(50)						
27	ST. VIN	eP	13.40.28						
27	ST. VIN	eP	16.21.31						
27	ST. VIN	eP	22.14.19						
27	GREN	iP	23.33.13		0.99°	H: 23,32.59			
		iS	23.33.24			E: 12.3° N 61.4° W			
	ST. VIN	iP	23.33.17		1.27°	Depth about 100 km.			
		iS	23.33.32			Magnitude 3.9			
	TRIN	iP	23.33.25		1.87°				
		iS	23.33.45						
28	TRIN	i	02.59.05						
28	ST. VIN	eP	07.27.49		1.5°				
		eS	07.28.04						
28	TRIN	iP	10.48.25						
29	DOM	iP	00.54.08		1.39°	H: 00.53.49			
	ST. VIN	eP	00.54.23		2.42°	E: 15.2° N 61.1° W			
		eS	00.54.47			Depth about 150 km.			
	ST. KIT	iP	00.54.31		3.00°	Magnitude 5.2			
29	ST. KIT	iP	01.41.14		1.5°				
		iS	01.41.30						

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961						
MAY 29	GREN	eP	07.37.25		52.0°	Small.
	TRIN	e	07.37.42		50.5°	Felt Near the coast of southern Chile, Temuco and Valdivia. USCGS gives H: 07.28.12 E: 39.6° 73.4° W Depth about 13 km.
29	DOM	eP	09.18.59		1.3°	
		iS	09.19.12			
	ST. KIT	eP	09.19.11		2.4°	
		iS	09.19.35			
29	TRIN	i	11.43.35			
30	TRIN	iP	04.32.19		0.2°	
		iS	04.32.20			
30	TRIN	iP	06.14.35		0.1°	
		iS	06.14.37			
30	TRIN	e	18.41.02			Small.
51 31	ANT	eP'	19.35.(30)		145.3°	Felt: New Britain USCGS Gives H: 19.15.57 E: 5.3°S 151.6°E Depth: About 56 km
	ST. VIN	eP'	19.35.(33)		146.5°	
	TRIN	eP'	19.35.36		146.8°	
31	TRIN	eP'	21.21.37		145.9°	Small. USCGS gives H: 21.02.10 E: 12.8°N 143.5°E Depth: About 138 km.

typed

STATIONS RECEIVING	TRINIDAD
(1951)	GRANADA
(1951)	ST. VINCENT
(1951)	BARBADOS
(1951)	DOMINICA
(1951)	ANTIGUA
(1951)	ST. KITTS

UNIVERSITY COLLEGE OF THE WEST INDIES

SEISMIC RESEARCH UNIT

Trinidad, West Indies.

- JUN 1951

Preliminary Seismological Bulletin.

The Trinidad station has been operated at the base of the country since 1951. It has recorded earthquakes of magnitude 2.5 to 4.0. The largest earthquake was recorded on 10/06/51 at 3:00 AM with a magnitude of 4.0. It was felt over a large area of the island. The earthquake was recorded on other stations at Barbados, St. Vincent, Antigua, St. Kitts, and Dominica. The earthquake was felt in the West Indies and the Caribbean Sea. The earthquake was felt in the West Indies and the Caribbean Sea. The earthquake was felt in the West Indies and the Caribbean Sea.

STATIONS REPORTING

TRINIDAD	(TRIN)*	LAT. 10° 39.0' N	LONG. 61° 24.1' W	27m.
GRENADA	(GREN)	LAT. 12° 02.7' N	LONG. 61° 44.1' W	30m.
ST. VINCENT	(ST. VIN)	LAT. 13° 10.2' N	LONG. 61° 15.5' W	10m.
BARBADOS	(BARB)	LAT. 13° 07.4' N	LONG. 59° 35.6' W	70m
DOMINICA	(DOM)	LAT. 15° 17.7' N	LONG. 61° 23.5' W	40m
ANTIGUA	(ANT)	LAT. 17° 08.6' N	LONG. 61° 50.1' W	27m
ST. KITTS	(ST. KIT)	LAT. 17° 20.3' N	LONG. 62° 43.7' W	

EQUIPMENT

All stations are equipped with Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

EPICENTRES are quoted to the first decimal place of a degree when this is justified, other wise to one half of a degree.

Depths are quoted to one kilometer and origin times to one tenth of a second.

Intensity Scale in use: Modified Mercalli Intensity Scale.

*The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West.

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.



DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
JUN	1 ✓ ST. KIT	eP	10.04.20		6.7°				
	✓ DOM	eP	10.04.(47)		(8.7°)				
	✓ ST. VIN	eP	10.05.(07)		(10.1°)				
	✓ GREN	eP	10.05.13		10.5°				
	✓ TRIN	iP	10.05.32		11.9°				
		iS	10.07.34						
	1 TRIN	iP	10.59.13		0.74°	H: 10.59.02			
		iS	10.59.21			E: 10.6° N 60.7° W			
						Magnitude: 5.5			
	GREN	iP	10.59.27		1.77°				
		iS	10.59.45						
	ST. VIN	iP	10.59.39		2.62°				
		eS	11.00.06						
	1 TRIN	eP	23.57.01		0.7°				
		eS	23.57.08						
	2 TRIN	e	00.16.47						
	2 TRIN	e	05.42.22						
	2 TRIN	eP	18.31.18		22.7°	USCGS gives H: 18.26.09			
						E: 2.9° S 79.9° W			
						Depth: About 25 km.			
	2 TRIN	iP	19.07.02		0.9°				
		iS	19.07.11						
	GREN	eP	19.07.06		1.3°				
		iS	19.07.19						
	2 ST. VIN	eP	20.11.22		1.4°				
		eS	20.11.36						

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
JUN	2 TRIN	iP	22.38.23		1.2°				
		iS	22.38.36						
	3 TRIN	eP'	06.14.59		146.8°	USCGS gives	H: 05.55.13		
							E: 4.3° S		
							151.1° E		
							Depth about 18 km.		
	3 ST. VIN	eP	16.46.28		1.5°				
	TRIN	eP	16.46.48		2.9°				
		iS	16.47.18						
	3 TRIN	iP	18.32.39		0.1°				
		iS	18.32.40						
	3 TRIN	eP	21.31.09		0.9°				
		iS	21.31.18						
	4 TRIN	eP'	07.52.04		123.5°	USCGS gives	H: 07.33.05		
							E: 33.8° N		
							81.8° E		
							Depth. ab. ut 46 km.		
	6 ANT	eP	00.27.16						
	ST. KIT	eP	00.27.25						
	6 ANT	iP	00.34.02		1.77°	H: 00.33.58			
	ST. KIT	iP	00.34.12		2.37°	E: 18.3° N 60.5° W			
						Depth: About 50 km.			
						Magnitude: 5.7			
		iS	00.34.54						
	DOM	eP	00.34.(14)		3.09°				
		iS	00.34.(50)						
	ST. VIN	iP	00.34.51		5.16°				
		eS	00.35.46						
	BARB	e	00.35.04		5.20°	Small			
	GREN	eP	00.35.07		6.34°				
	TRIN	eP	00.35.(29)		7.65°				
		eS	00.36.47						

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE
1961					
JUN 7	TRIN	iP	07.05.00		1.4°
		iS	07.05.15		
	GREN	eP	07.05.07		1.9°
		iS	07.05.27		
	7 ST. KIT	iP	07.23.(34)		1.6°
		iS	07.23.(51)		
	7 ST. VIN	eP	14.24.38		53.4°
	ANT	eP	14.24.49		55.0°
					USCGS gives H: 14.15.19 E: 5.4°S 11.6°W Depth: About 17 km.
	7 ST. VIN	eP	18.15.33		1.4°
		eS	18.15.47		
	8 TRIN	iP	23.43.40		0.8°
		iS	23.43.48		
	GREN	eP	23.43.49		1.3°
		iS	23.44.02		
	9 TRIN	eP	05.58.47		21.4°
					USCGS gives H: 05.53.56 E: 0.4° N 80.3°W Depth: About 15 km.
	9 ST. VIN	eP	13.24.24		1.0°
		iS	13.24.34		
	9 TRIN	eP	13.30.37		
		e	13.31.21		
	9 TRIN	eP'	15.37.44		152.1°
					Small USCGS Gives H: 15.17.51 E: 5.5° N 95.8° E Depth: About 100 km.



TIME G.M.T. MOTION DISTANCE

JUN 9	TRIN	iP	23.13.18		1.47°	H: 23.12.57
		iS	23.13.32			E: 10.6° N 62.9° W
						Magnitude: 5.3
	GREN	iP	23.13.23		1.83°	
		iS	23.13.42			
	ST. VIN	eP	23.13.39		3.02°	
10	ST. KIT	iP	06.21.21		0.9°	
		iS	06.21.31			
	ANT	iP	06.21.(25)		1.0°	
		iS	06.21.(36)			
10	GREN	iP	18.03.54		1.01°	H: 18.03.40
		iS	18.04.06			E: 11.8° N 62.2° W
						Depth: About 100 km.
	TRIN	eP	18.04.03		1.67°	Magnitude: (5.1)
		iP	18.04.06			
		iS	18.04.22			
	ST. VIN	eP	18.04.05		1.84°	
		iS	18.04.22			
10	TRIN	eP	18.44.32		3.0°	
		eS	18.45.02			
12	GREN	eP	10.17.50			
	TRIN	eP	10.17.56			
12	ST. KIT	iP	10.53.54		1.0°	
		iS	10.54.04			
12	ANT	iP	17.10.18		0.4°	
		iS	17.10.22			
	ST. KIT	iP	17.10.27		0.8°	
		iS	17.10.35			

		<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
1961								
JUN 13	ANT	iP	14.27.41	1.1°				
		iS	14.27.53					
	ST. KIT	iP	14.27.47	1.6°				
		iS	14.28.05					
14	TRIN	eP	01.00.34	138.2°	Small			
					USCGS gives H: 00.41.10			
					E: 24.5°N 95.0°E			
					Depth: About 52 km.			
14	ANT	iP	01.30.11	0.7°				
		iS	01.30.19					
	ST. KIT	iP	01.30.21	1.4°				
		iS	01.30.35					
14	DCM	eP	07.24.45	1.3°				
		iS	07.24.58					
	ST. KIT	e	07.25.09					
	ST. VIN	e	07.25.14					
14	ST. VIN	eP	17.53.42	0.7°				
		iS	17.53.50					
15	TRIN	eP	00.54.21	11.8°	USCGS gives H: 00.51.32			
		i	00.54.28		E: 6.8°N 73.0°W			
					Depth: About 198 km.			
	GREN	eP	00.54.29	12.0°				
15	TRIN	iP	05.48.10	0.6°				
		iS	05.48.16					
16	GREN	eP	07.17.47					

<u>DATE</u> 1961	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>		
JUN 16	TRIN	iP	07.19.59		1.35°	H: 07.19.40 E: 11.1° N 62.3° W Depth: About 100 km Magnitude: 4.8	
		iS	07.20.11				
	GREN	iP	07.20.00	d	1.42°		
		iS	07.20.13				
	ST. VIN	iP	07.20.15	d	2.49°		
		iS	07.20.44		°		
	DOM	e	07.20.44		4.38°		
	ST. KIT	eP	07.21.09		6.31°		
	16	TRIN	iP	10.34.45		12.0°	Felt at Barrancabermeja; Maracaibo, Venezuela. USCGS gives H: 10.31.56 E: 8.8°N 73.4°W Depth: About 120 km.
			i	10.37.14			
GREN		iP	10.34.45		11.9°		
		i	10.36.57				
ST. VIN		iP	10.34.53		12.5°		
DOM		iP	10.35.01		13.5°		
ST. KIT		iP	10.35.03		13.6°		
BARB		eP	10.35.16		13.9°		
		iP	10.35.20				
		i	10.38.02				
16	DOM	e	10.55.(11)				
	ST. VIN	eP	10.55.29				
16	TRIN	iP	18.27.18		1.27°	H: 18.27.00 E: 10.9° N 62.3° W Depth: About 100 km Magnitude: 4.4	
		iS	18.27.31				
	GREN	iP	18.27.22		1.53°		
		iS	18.27.38				
	ST. VIN	eP	18.27.37		2.61°		
	eS	18.28.04					

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
1961									
JUN 17	ST. VIN	eP	03.05.35		1.2°				
		eS	03.05.47						
	GREN	eP	03.05.50		2.1°				
		eS	03.06.12						
17	ANT	iP	04.15.27		1.18°	H: 04.15.11			
		iS	04.15.41			E: 18.3° N 61.5° W			
	ST. KIT	iP	04.15.32		1.48°	Magnitude: (5.4)			
		iS	04.15.46						
	DOM	eP	04.15.54		3.00°				
17	ANT	eP	05.29.05						
	ST. KIT	iP	05.29.09						
17	GREN	eP	11.02.10						
	TRIN	eP	11.02.23						
		e	11.10.13						
		e	11.12.35						
	ST. VIN	eP	11.02.39						
17	TRIN	eP	15.16.37						
		L	15.23.						
18	ST. KIT	eP	00.43.09						
	ANT	eP	00.43.(22)						
	TRIN	eP	00.44.36			Small			
18	TRIN	eP	03.31.36						
		e	03.33.10						
18	TRIN	iP	14.13.21						
	ST. KIT	e	14.13.24						

<u>DATE</u> 1961	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
JUN 18	TRIN	iP	14.47.27		0.9°				
		iS	14.47.36						
	GREN	eF	14.47.31		1.5°				
		iS	14.47.47						
18	ANT	iP	16.00.(41)		(1.5°)				
	ST. KIT	eF	16.00.54		2.4°				
		eS	16.01.18						
18	ST. VIN	e(F)	20.15.(16)		1.2°				
		eS	20.15.(28)						
18	ANT	eF	21.13.(15)						
19	ST. KIT	iP	01.46.48		2.05°				
	ANT	eF	01.47.00		2.92°	H: 01.46.19 E: 17.7° N 64.8° W Magnitude: 5.5.			
	DOM	eF	01.47.16		4.09°				
	TRIN	eF	01.48.09		7.79°	Small.			
19	ST. VIN	e	01.52.(46)						
		e	01.53.(18)						
19	ANT	eP'	02.05.(14)		148.0°	USCGS gives H: 01.45.30 E: 12.6° N 121.9° E Depth about 120 km.			
	ST. KIT	eP'	02.05.14		147.7°				
	DOM	eP'	02.05.20		149.8°				
19	TRIN	eP	09.00.03						
		e	09.00.21						
	ST. KIT	e	09.01.26						
21	ST. KIT	eP	04.02.49		23.4°	USCGS gives H: 03.57.44 E: 15.3° N 87.3° W Depth about 114 km.			
	GREN	eF	04.03.03		24.7°				

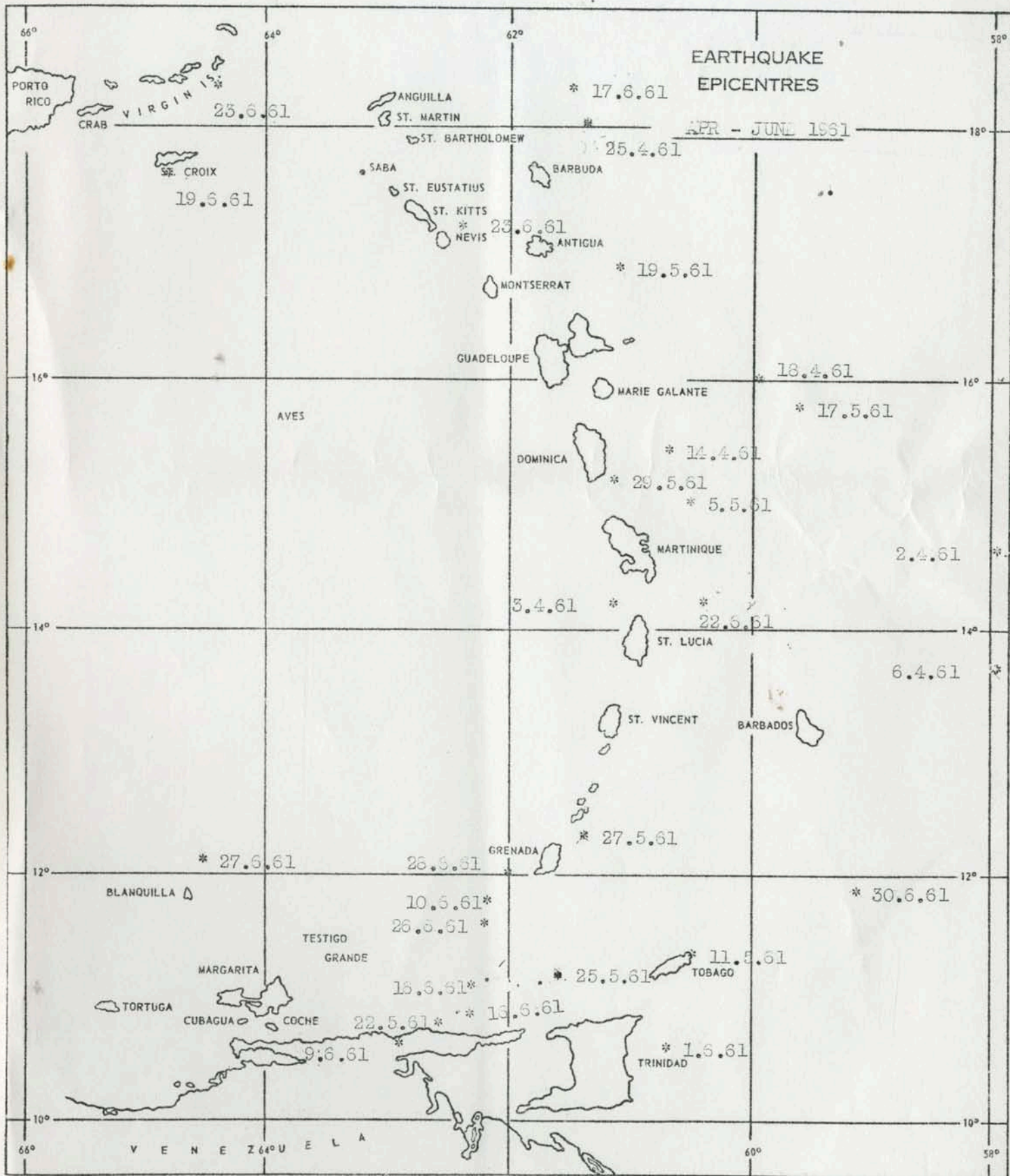
DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
JUN 21	DOM	eF	04.17.57		1.7°				
		eS	04.18.14						
	ST. VIN	e	04.18.(31)						
		e	04.18.(45)						
21	TRIN	iP	18.48.21		0.5°				
		iS	18.48.26						
X 21	TRIN	eF	20.44.57		171.1°				
						USCGS gives H: 20.25.01. E: 7.6° S 110.0° E Depth about 163 km.			
22	TRIN	iP	12.01.16		1.2°				
		iS	12.01.28						
22	ST. VIN	iP	22.39.09		1.31°				
		iS	22.39.23						
	DOM	eF	22.39.(21)		1.53°				
		eS	22.39.44						
	GREN	eF	22.39.26		2.50°				
	TRIN	eF	22.39.42		3.70°				
	ANT	e	22.39.(47)		3.29°				
	ST. KIT	e	22.39.56		3.89°				
23	ST. KIT	eP	02.26.49						
	ANT	eF	02.26.(53)						
23	TRIN	iP	02.32.38		1.3°				
		iS	02.32.51						
	GREN	eF	02.32.41		1.6°				
		iS	02.32.58						

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961						
JUN 23	ST. KIT	eF	02.58.04		0.33°	H: About 02.58.00 E: About 17.2° N 62.4° W
	ANT	eP	02.58.(12)		0.56°	Magnitude: 5.2
	DOM	e	02.58.35		2.14°	
	ST. VIN	e	02.59.(03)		4.17°	
	GREN	eP	02.59.11		5.18°	
	TRIN	eP	02.59.34		6.60°	
23	ST. KIT.	iP	03.04.07		1.90°	H: 03.03.40 E: 18.3° N 64.4° W
	ANT	eP	03.04.(15)		2.75°	Magnitude: 5.7
	ST. VIN	e	03.04.(26)		6.00°	
	DOM	eP	03.04.39		4.22°	
	GREN	eP	03.05.13		6.80°	
	TRIN	eP	03.05.36		8.22°	
23	ST. KIT	eP	06.11.20			
	TRIN	eP	06.12.28			
		e	06.14.35			
X	23 TRIN	eP	09.06.45		66.3°	USCGS gives H: 08.55.55 E: 43.9° N 128.9° W Depth: About 50 km.
X	23 TRIN	eP	09.35.33		66.0°	USCGS gives H: 09.22.50 E: 43.9° N 128.8° W Depth: About 53 km.
23	ST. KIT	iP	17.30.56		1.0°	
		iS	17.31.07			
	ANT	eP	17.31.(05)		1.6°	
		iS	17.31.(21)			
24	TRIN	iP	13.54.36		1.1°	
		iS	13.54.47			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961						
JUN 24	TRIN	e	18.43.09			
	25 TRIN	iP	02.28.48		1.4°	
		iS	02.29.03			
	25 TRIN	eP	11.01.21			
	26 DOM	eP	03.06.29		0.4°	
		eS	03.06.33			
	26 GREN	iP	08.44.46		1.30°	H: 08.44.27
		iS	08.45.01			E: 11.6° N 62.2° W
	TRIN	iP	08.44.50		1.63°	Depth: About 135 km.
		iS	08.45.06			Magnitude: 4.0
	ST. VIN	eP	08.44.58		2.17°	
	26 TRIN	e	09.52.32			
	26 TRIN	eP	16.46.41		12.6°	USCGS gives H: 16.43.41
						E: 11.2° N 74.5° W
						Depth about 89 km.
	27 TRIN	iP	01.56.43		1.1°	
		iS	01.56.54			
	GREN	eP	01.56.49		1.6°	
		iS	01.57.05			
	27 TRIN	eP	03.12.44		23.0°	USCGS gives H: 03.07.48
	GREN	eP	03.12.53		23.9°	E: 8.5° S 74.4° W
						Depth about 170 km.
	ST. VIN	eP	03.13.04		25.3°	
	BARB	eP	03.13.14		26.1°	
	ANT	eP	03.13.(30)		27.9°	

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
JUN 27	TRIN	eP	07.23.07		137.4°				
									USCGS gives H: 07.03.42
									E: 27.8° N 99.4° E
									Depth: About 33 km.
	27 GREN	eP	07.46.11		2.71°				H: 07.45.33
	ST. VIN	eP	07.46.20		3.36°				E: 12.1° N 64.5° W
									Magnitude: 5.7
		e	07.46.37						
	TRIN	eP	07.46.21		3.37°				
		i	07.46.39						
	27 TRIN	iP	20.23.24						
	28 GREN	iP	09.11.45		1.5°				
		iS	09.12.00						
	TRIN	iP	09.11.47		1.5°				
		iS	09.12.03						
	28 GREN	eP	13.22.11		1.03°				H: 13.21.56
		iS	13.22.22						E: 12.0° N 62.0° W
									Depth: About 110 km.
	ST. VIN	eP	13.22.19		1.70°				Magnitude: 3.4
		eS	13.22.36						
	TRIN	eP	13.22.21		1.75°				
	28 ST. VIN	eP	17.04.55						
	28 TRIN	eP	18.05.37						
		i	18.05.43						
		e	18.08.06						
	29 ANT	eP	02.28.(23)		2.5°				
		iS	02.28.(49)						

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961						
JUN 29	TRIN	iP	03.55.12		1.8°	
		iS	03.55.31			
	GREN	e	03.55.29			
X 29	TRIN	eP'	09.42.13		133.8°	USCGS gives H: 09.22.56 E: 13.8° S 166.0° E Depth: About 37 km.
		ePKS	09.45.43			
29	TRIN	e	18.03.56			Small
	ST. VIN	eP	18.03.56			
X 29	TRIN	eP	22.13.55			Small
30	BARB	e	16.42.25		1.34°	H: 16.41.57
	ST. VIN	iP	16.42.31	d	2.46°	E: 11.9° N 59.1° W Magnitude: 6.0..
		iS	16.42.58			
	TRIN	iP	16.42.33		2.57°	
		iS	16.42.57			
	GREN	iP	16.42.33	c	2.57°	
		iS	16.42.00			
	DOM	e(F)	16.42.(59)		4.07°	
		eS	16.43.(43)			
	ANT	eP	16.43.(20)		5.87°	
30	BARB	eP	23.17.06		3.81°	H: 23.16.09
	DOM	e	23.17.23		3.17°	E: 16.8° N 58.5° W Magnitude: 6.1
	GREN	eP	23.17.29		5.69°	
	TRIN	eP	23.17.44		6.76°	



UNIVERSITY COLLEGE OF THE WEST INDIES

SEISMIC RESEARCH UNIT

Regional Research Centre,

Trinidad, West Indies.

JUL 1961

Preliminary Seismological Bulletin.

Trinidad is equipped with three components of Williamson-Walsh I seismograph stations and 1 second period galvanometer recording at Georgetown. All other stations have similar equipment recording vertical component only.

Amplitude scale is 10,000 at 5 cm/sec except at Port Antonio where it is 5,000 at 5 cm/sec.

The Trinidad stations have been operated in the past at a frequency of 100 cps.

From Jan 1955 to Jan January 1955 at 10° 40' N, 61° 30' W. From Jan January 1955 to Jan January 1955 at 10° 44' N, 61° 32' W.

Intensity Scale is as Modified Mercalli Intensity Scale.

STATIONS REPORTING

TRINIDAD	(TRIN)*	LAT. 10° 39.0' N	LONG. 61° 24.1' W	27m.
GRENADA	(GREN)	LAT. 12° 02.7' N	LONG. 61° 44.1' W	30m.
ST. VINCENT	(ST. VIN)	LAT. 13° 10.2' N	LONG. 61° 15.5' W	10m.
ST. LUCIA	(ST. LUC)	LAT. 14° 01.7' N	LONG. 61° 00.5' W	30m.
BARBADOS	(BARB)	LAT. 13° 07.4' N	LONG. 59° 35.6' W	70m.
DOMINICA	(DOM)	LAT. 15° 17.7' N	LONG. 61° 23.5' W	40m.
ANTIGUA	(ANT)	LAT. 17° 08.6' N	LONG. 61° 50.1' W	27m.
ST. KITTS	(ST. KIT)	LAT. 17° 20.3' N	LONG. 62° 43.7' W	

EQUIPMENT

Trinidad is equipped with three components of Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

All other stations have similar equipment recording vertical component only.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

*The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

Intensity Scale in use: Modified Mercalli Intensity Scale.

DATE 1961 JULY	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1	ANT.	iP iS	06.40.(41) 06.40.(52)		1.1°				
1	✓ TRIN	eP L	13.16.38 13.26		29.2°	USCGS Gives H:	13.10.47		
							E: 15.3° S 75.0° W		
							Depth: About 146 km.		
1	TRIN	iP iS	21.56.01 21.56.07		0.6°				
2	TRIN	iP iS	04.27.37 04.27.45		0.7°				
2	ST. KIT	eP iS	14.40.(42) 14.40.(45)		0.3°				
2.	TRIN	e	21.29.32			Small			
3	TRIN	eP	08.31.13		23.5°	USCGS Gives H:	08.26.11		
							E: 3.3° S 80.5° W		
							Depth: About 25 km.		
3	TRIN	eP e	14.55.01 14.55.26						
	GRIN	eP	14.55.07						
	ST. KIT	e	14.55.(33)						
3	ST. KIT	iP iS	21.04.20 21.04.38		1.7°				
	ANT.	eP eS	21.04.(27) 21.04.(46)		1.9°				
4	TRIN	eP'	06.30.03		140.2°	Small			
						USCGS Gives H:	06.10.45		
							E: 17.9° N 146.4° E		
							Depth: About 145 km.		

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
JULY									
4	ANT	iP iS	15.41.(13) 15.41.(21)		0.8°				
	ST. KIT	iP iS	15.41.(24) 15.41.(38)		1.3°				
4	TRIN	iP iS	19.47.23 19.47.27		0.4°				
5	DOM	iP	05.02.45	d	1.03°				
	ST. VIN	iP	05.02.58	c	2.04°				
	BARB	eP iS i	05.03.02 05.03.28 05.04.54		2.05°				
	ANT	iP	05.03.06	d	2.54°				
	ST. KIT	iP	05.03.15	d	3.23°				
	GREN	iP iS	05.03.16 05.03.52	c	3.26°				
	TRIN	iP iS	05.03.33 05.04.19		4.48°				
6	ANT	e	05.54.(31)						
	ST. KIT	iP	05.54.(36)						
6	TRIN	iP iS	06.32.22 06.32.34		1.1°				
	GREN	iP iS	06.32.23 06.32.34	c	1.1°				
6	ST. KIT	iP	09.45.(13)						
6	TRIN	iP iS	16.35.17 16.35.26		0.9°				
	GREN	eP iS	16.35.19 16.35.36		1.6°				

H: 05.02.30
E: 15.0° N 60.4° W
Depth: About 25 km
Magnitude: 6.4

DATE STATION PHASE TIME G.M.T. MOTION DISTANCE

1961
JULY

6	TRIN	eP'	22.28.29		130.6°
		i	22.28.39		
		e	22.31.57		
	ST. VIN	eP'	22.28.29		131.5°
		i	22.28.40		
		e	22.32.01		
	ANT.	eP'	22.28.(35)		132.1°
		e	22.32.(04)		
	GREN	eP'	22.28.36		130.7°
	DOM	eP'	22.28.42		132.0°
	ST. KIT	eP'	22.28.42		131.0°
	BARB	eP'	22.28.46		133.0°
6	TRIN	iP	23.26.48		0.8°
		iS	23.26.56		
7	TRIN	iP	12.12.36		1.30°
		iS	12.12.49		
	GREN	iP	12.12.52		2.39°
	BARB	eP	12.13.(24)		4.27°
	DOM	eP	12.13.37		5.62°
		iS	12.14.35		
		e	12.17.52		
	ST. KIT	iP	12.14.(08)		7.60°

USCGS Gives H: 22.09.31
E: 20.0° S 169.0° E
Depth: About 47 km

H: 12.12.18
E: 9.8° N 62.3° W
Depth: About 50 km
Magnitude: 5.8

Small

USCGS Gives H: 21.13.39
E: 20.2° S 169.0° E
Depth: About 50 km

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
JULY						
7	ST. KIT	eP'	13.30.(24)		146.0°	Felt: New Britain
	ANT.	eP'	13.30.(25)		147.0°	USCGS Gives H: 13.10.44
	GREN	eP'	13.30.27		148.2°	E: 5.7°S 149.7°E
	DOM	eP'	13.30.28		148.0°	Depth: About 57 km
	ST. VIN	iP'	13.30.29		148.3°	
	TRIN	eP'	13.30.30		148.6°	
		iP2'	13.30.46			
	BARB	eP ⁺ 2	13.30.43		150.2°	Very small
7	TRIN	iP	21.51.36		1.2°	
		iS	21.51.49		2	
	GREN	eP	21.51.52		2.4°	
7	TRIN	eP	22.14.46		1.6°	
		iS	22.15.03			
	GREN	eP	22.14.49		1.7°	
		eS	22.15.06			
8	TRIN	iP	03.33.52		0.6°	
		iS	03.33.59			
	GREN.	eP	03.34.02		1.4°	
8	TRIN	eP	11.36.56		1.7°	
		iS	11.37.14			
	GREN	eP	11.37.10		2.7°	
8	TRIN	eP'	15.53.48		130.0°	USCGS Gives H: 15.34.39
		e	15.55.08			E: 20.1°S 169.8°E
						Depth: About 44 km
8	ST. VIN	e(P)	20.03.(09)		(2.2°)	
		eS	20.03.(32)			
8	TRIN	eP'	21.33.09		130.4°	USCGS Gives H: 21.13.59
						E: 20.2°S 169.0°E
						Depth: About 56 km

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961 JULY						
8	TRIN	eP'	22.07.54 ✓		130.4°	USCGS Gives H: 21.48.46 E: 20.2° S 169.0° E Depth: About 68 km
9	ANT.	iP iS	03.41.(26) 03.41.(36)		1.0°	
9	TRIN	iP iS	09.46.35 09.46.48		1.3°	
	GREN	iP iS	09.46.39 09.46.56		1.6°	
10	TRIN	iP iS	00.50.46 00.50.53		0.6°	
10	TRIN	e	04.05.38 ✓			
10	TRIN	iP iS	13.55.31 13.55.45		1.3°	
	GREN	eP eS	13.55.38 13.55.57		1.9°	
10	TRIN	iP iS	18.56.18 18.56.25		0.71°	H: 18.56.08 E: 10.9° N 61.4° W Depth: About 75 km Magnitude: 4.0
	GREN	iP iS	18.56.28 18.56.41	d	1.38°	
	ST. VIN	eP eS	18.56.42 18.57.09		2.39°	
10	ST. VIN	eP	19.43.(24)			
10	TRIN	iP iS	21.58.52 21.58.57		0.64°	H: 21.58.43 E: 10.6° N 61.9° W Depth: About 50 km Magnitude: 4.5
	GREN	iP iS	21.59.04 21.59.21		1.50°	
	ST. VIN	eP eS	21.59.21 21.59.49		2.65°	

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	<u>T.M.S. SPT</u>	<u>BEATS</u>	<u>NOTES</u>	<u>AMPL.</u>
1961									
JULY									
11	GREN	eP	07.07.00		1.1°				
		iP	07.07.02						
		iS	07.07.11						
	TRIN	eP	07.07.02		1.2°				
	ST. VIN	e	07.07.(31)						
11	ST. VIN	eP ₂ '	09.51.(26)		146.7°			USCGS Gives H: 09.31.57	
	TRIN	eP ₂ '	09.51.31		148.1°			E: 8.3°N 93.3°E Depth: About 163 km	
11	TRIN	iP	19.02.59		0.8°				
		iS	19.03.07						
11	TRIN	iP	23.39.26		1.3°				
		iS	23.39.39						
	GREN	eP	23.39.33		1.9°				
		iS	23.39.52						
13	ST. KIT	iP	01.10.(10)		1.2°				
		iS	01.10.(23)						
	ANT.	iP	01.10.(15)		1.7°				
		iS	01.10.(32)						
13	TRIN	iP	03.37.20		1.9°				
		iS	03.37.39						
13	ST. KIT	eP	09.24.49						
13	ST. VIN	eP	09.48.26		2.7°				
		eS	09.48.54						
13	TRIN	eP	10.51.41						
13	TRIN	e	22.04.14						
14	TRIN	eP'	01.26.48		146.7°			Small	
								Felt: Rabaul, New Britain	
								USCGS Gives H: 01.07.11	
								E: 5.4°S 151.9°E	
								Depth: About 77 km	

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
1961 JULY									
14	ST. VIN	e(P) eS	22.10.51 22.11.18		(2.6°)				
15	ST. VIN	eP eS	00.24.22 00.24.44		2.2°				
15	TRIN	iP	10.28.41						
15	TRIN	iP	12.42.18						
15	TRIN	i	20.26.38						
16	TRIN	eP'	14.20.45		128.4°	USCGS Gives H: 14.01.39			
						E: 22.7° S 171.2° E			
						Depth: About 56 km			
16	ST. VIN	eP eS	17.19.36 17.20.00		2.4°				
17	ST. KIT	eP	01.07.16						
	TRIN	eP	01.08.03						
17	ANT	eP iS	15.59.(19) 15.59.(29)		1.0°				
	ST. KIT	iP iS	15.59.28 15.59.47		1.8°				
17	TRIN	eP'	17.27.54		146.1°	USCGS Gives H: 17.03.17			
						E: 5.4° S 152.4° E			
						Depth: About 64 km			
17	ST. VIN	e e	17.59.01 17.59.12						
18	TRIN	iP iS	00.58.53 00.59.00		0.6°				
	ST. VIN	e(P) eS	00.59.21 00.59.42		(2.6°)				

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
1961 JULY 18	ANT	eP'	14.22.(55)		132.1°				
	TRIN	e	14.22.55		138.0°				
		eP'	14.23.04						
		eFP	14.25.49						
		L	15.09.						
	ST. VIN	eP'	14.22.57		135.7°				
		eFP	14.25.34						
	BARB	eP'	14.23.04		136.3°				
18	TRIN	eP'	14.53.27		137.6°				
	ST. VIN	e(P)	03.36.(21)		(1.3°)				
		eS	03.36.(35)						
19	TRIN	eP	15.26.51						
19	TRIN	eP	16.33.18						
		i	16.33.26						
19	ANT	iP	21.53.(21)		1.1°				
		iS	21.53.(32)						
20	TRIN	eP	02.33.20						
20	ST. KIT	iP	13.09.(26)		3.6°				
		iS	13.10.(02)						
	ANT	eP'	13.09.(40)		4.4°				
		iS	13.10.(25)						
22	ANT	eP	01.17.(42)		(1.5°)				
	ST. KIT	iP	01.17.(43)		1.5°				
		iS	01.17.(58)						

Felt: Kyushu, Japan
 USCGS Gives H: 14.03.37
 E: 29.4° N 131.6° E
 Depth: About 21 km

USCGS Gives H: 14.34.07
 E: 29.9° N 131.2° E
 Depth: About 72 km

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 JULY 22	DOM	eP eS	22.39.(09) 22.39.26		2.08°	H: About 22.38.53 E: " 14.9°N 59.3°W Magnitude: 5.0
	ST. VIN	eP eS	22.39.27 22.39.53		2.58°	
	ANT	eP	22.39.37		3.34°	
	ST. KIT	e	22.39.41		4.12°	
	TRIN	eP e	22.40.05 22.40.54		4.71	
23	TRIN	iP iS	11.52.44 11.52.58		1.4	
23	TRIN	eP' e	14.22.52 14.26.23		131.6°	Felt: New Hebrides Islands USCGS Gives H: 14.03.40 E: 18.5°S 168.2°E Depth: About 44 km
23	GREN	eP	14.48.08		61.1°	USCGS Gives H: 14.38.04 E: 6.9°N 123.5°W Depth: About 89 km
	TRIN	eP	14.48.11		61.5°	
	ST. VIN	iP	14.48.11		61.5°	
	ANT	eP	14.48.(20)		61.0°	
23	TRIN	eP iS	15.16.00 15.16.09		0.9°	
23	TRIN	eP	15.52.53			Small
23	TRIN	eP' e	22.10.19 22.13.42		131.4°	USCGS Gives H: 21.51.08 E: 18.3°S 168.3°E Depth: About 44 km
	ST. KIT	eP' e	22.10.20 22.13.51		131.6°	
	ANT	eP'	22.10.(22)		132.0°	
24	TRIN	eP iP	01.58.23 01.58.26		22.4°	Felt: Ecuador USCGS Gives H: 01.53.27 E: 2.3°S 79.6°W Depth: About 25 km

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961 JULY 24	TRIN	e(P)	02.12.16		21.0°	Small USCGS Gives H: 02.07.19 E: 1.6°S 78.5°W Depth: About 30 km
24	TRIN	eP iS	07.48.31 07.48.34		0.3°	
24	TRIN	eP ₁ eP ₂	09.08.08 09.09.13		168.0°	USCGS Gives H: 08.48.14 E: 0 124.1°E Depth: About 159 km
25	TRIN	eP e(S)	02.52.27 02.56.01		21.6°	USCGS Gives H: 02.48.14 E: 8.8°S 71.3°W Depth: About 642 km
	GRIN	eP iP	02.52.35 02.52.36		22.7°	
	DOM	eP	02.53.01		25.8°	
	ST. KIT	eP	02.53.15		27.1°	
	ANT	eP	02.53.(15)		27.3°	
25	TRIN	eP iS	03.51.33 03.51.39		0.6°	
	ST. VIN	iP	03.52.(44)		(1.4°)	
25	ST. KIT	iP iS	14.43.20 14.43.33		1.39°	H: 14.43.01 E: 17.3°N 63.1°W Depth: About 140 km Magnitude: 5.7
	ANT	iP iS	14.43.26 14.43.44		1.77°	
	DOM	eP	14.43.42		2.90°	
26	TRIN	iP iS	10.48.02 10.48.28		2.5°	
26	GRIN	eP iS	22.06.47 22.07.03		1.6°	
27	DOM	e(P) eS	01.33.54 01.34.23		(2.8°)	

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
1961 JULY									
27	DOM	eP iS	16.53.(13) 16.53.(26)		1.2°				
28	TRIN	eP'	00.53.31		141.7°	USCGS Gives H:	00.34.18		
						E:	27.0°N 126.6°E		
						Depth:	About 136 km		
28	TRIN	eP iP eS	01.09.55 01.09.58 01.13.40		20.4°	USCGS Gives H:	01.05.30		
						E:	2.2°S 77.1°W		
						Depth:	About 136 km		
	GREN	eP iP eS	01.10.01 01.10.02 01.13.51		20.9°				
	ST. VIN	eP eS	01.10.09 01.14.08		22.2°				
	BARB	eP iP	01.10.25 01.10.28		23.1°				
	DOM	eP iP	01.10.(26) 01.10.(29)		23.5°				
	ANT	eP iP eS	01.10.(38) 01.10.(40) 01.14.(51)		24.4°				
28	TRIN	iP iS	02.57.09 02.57.15		0.6°				
28	DOM	e	08.35.(37)						
28	TRIN	iP iS	09.30.54 09.31.08		1.4°				
28	ANT	iP	19.30.(39)		(1.1°)				
	ST. KIT	iP iS	19.30.(51) 19.31.(10)		1.9°				
29	ST. KIT	eP iS	15.52.35 15.52.54		1.8°				

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	T.M.D. UNIT	SEISM	STATION	TIME
1961									
JULY									
30	TRIN	eP	08.39.12	1.7°		(81).08.01	31	DM	32
		iP	08.39.15			(82).08.01	31		
		iS	08.39.29						
	GRIN	eP	08.39.20	2.4°		08.08.00	31	TRIN	32
		eS	08.39.45						
31	ST. KIT	eP	01.02.36	1.7°		01.02.10	31	TRIN	32
		iS	01.02.53			01.02.10	31		
	ANT	eP	01.02.49	3.6°		01.02.10	31		
31	ANT	eP	07.54.(34)			07.01.10	31	GRIN	
	ST. KIT	eP	07.54.45			07.01.10	31	TRIN	32
31	TRIN	iP	17.48.17	1.4°		17.01.10	31	DM	
		iS	17.48.32			17.01.10	31		
						(88).01.10	31	DM	
						(89).01.10	31		
						(90).01.10	31	DM	
						(91).01.10	31		
						(92).01.10	31		
						00.08.00	31	TRIN	32
						01.08.00	31		
						(93).08.00	31	DM	
						08.08.00	31	TRIN	32
						08.08.00	31		
						(94).08.01	31	DM	
						(95).08.01	31		
						(96).08.01	31	TRIN	32
						(97).08.01	31		
						08.08.01	31	TRIN	32
						08.08.01	31		

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UNIVERSITY COLLEGE OF THE WEST INDIES

SEISMIC RESEARCH UNIT

Regional Research Centre,

Trinidad, West Indies.

AUG 1961

Preliminary Seismological Bulletin.

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STATIONS REPORTING

TRINIDAD	(TRIN)*	LAT. $10^{\circ} 39.0'$ N	LONG. $61^{\circ} 24.1'$ W	27m.
GRENADA	(GREN)	LAT. $12^{\circ} 02.7'$ N	LONG. $61^{\circ} 44.1'$ W	30m.
ST. VINCENT	(ST. VIN)	LAT. $13^{\circ} 10.2'$ N	LONG. $61^{\circ} 15.5'$ W	10m.
ST. LUCIA	(ST. LUC)	LAT. $14^{\circ} 01.7'$ N	LONG. $61^{\circ} 00.5'$ W	30m.
BARBADOS	(BARB)	LAT. $13^{\circ} 07.4'$ N	LONG. $59^{\circ} 35.6'$ W	70m.
DOMINICA	(DOM)	LAT. $15^{\circ} 17.7'$ N	LONG. $61^{\circ} 23.5'$ W	40m.
ANTIGUA	(ANT)	LAT. $17^{\circ} 08.6'$ N	LONG. $61^{\circ} 50.1'$ W	27m.
ST. KITTS	(ST. KIT)	LAT. $17^{\circ} 20.3'$ N	LONG. $62^{\circ} 43.7'$ W	

EQUIPMENT

Trinidad is equipped with three components of Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

All other stations have similar equipment recording vertical component only.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

*The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at $10^{\circ} 40.1'$ North $61^{\circ} 31.2'$ West

From 1st January 1955 to 1st September 1958 at $10^{\circ} 44.7'$ North $61^{\circ} 33.2'$ West.

Intensity Scale in use: Modified Mercalli Intensity Scale.

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1961					
AUG 1	ST. VIN	eP	03.19.34		14.5°
	ANT.	eP	03.19.(34)		14.7°
	GREN	eP	03.19.43		15.4°
	TRIN	eP iPP	03.19.47 03.19.54		15.5°
1	TRIN	iP iS	03.30.27 03.30.39		1.2°
	GREN	eP iS	03.30.33 03.30.50		1.7°
1	DOM	e i	03.33.15 03.33.53		
1	TRIN	eP	03.38.15	Small	
1	DOM	e	03.51.56		
1	✓ ANT	eP'	05.59.(12)		138.0°
	✓ TRIN	eP' e	05.59.16 06.02.54		138.7°
	✓ ST. VIN	eP'	05.59.19		138.4°
	✓ ST. KIT	e	06.00.10		137.3°
1	TRIN	eP iS	06.39.34 06.39.47		1.2°
1	TRIN	eP eS	07.32.47 07.42.17		74.0°
	✓ GREN	eP	07.32.56		75.5°
	✓ ST. VIN	eP	07.33.03		76.3°
	✓ DOM	eP	07.33.13		78.3°
	✓ ANT	eP	07.33.(23)		80.4°
	✓ ST. KIT	eP	07.33.25		81.0°
1	TRIN	eP	09.35.56		
	GREN	eP	09.36.05		

USCGS Gives H:03.16.11
E:15.5° N 46.6° W
Depth:About 48 km

Felt: Solomon Islands region
USCGS Gives H:05.39.53
E:9.8° S 160.5° E
Depth:About 50 km

USCGS Gives H:07.21.12
E:56.8° S 25.1° W
Depth:About 44 km

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 AUG 1	TRIN	eP	09.46.14		74.1°	USCGS Gives H:09.34.41 E:57.1° S 26.1° W Depth: About 31 km
	ST. VIN	e	09.46.21		76.6°	
	GREN	eP	09.46.22		75.5°	
	DOM	eP	09.46.34		78.4°	
	ST. KIT	eP	09.46.52		81.0°	
2	TRIN	eP ePPP	02.43.02 02.47.41		74.2°	USCGS Gives H:02.31.25 E:56.7° S 24.8° W Depth: About 25 km
	GREN	eP	02.43.10		75.5°	
	ST. VIN	eP	02.43.(19)		76.5°	
	DOM	eP	02.43.31		78.5°	
	ST. KIT	eP	02.43.38		81.1°	
	ANT	eP	02.43.(39)		80.1°	
	TRIN	eP iS	11.20.39 11.20.51		1.2°	
2	ST. KIT	eP iS	22.19.12 22.19.42		2.9°	
	ANT	eP	22.19.21		3.6°	
3	ST. KIT	iP	03.09.01		4.16°	H:03.08.03 E:18.5° N 66.9° W Magnitude: 7.1
	ANT	iP	03.09.14		5.03°	
	DOM	eP i	03.09.31 03.09.37		6.19°	
	GREN	eP iP iS e	03.09.56 03.10.00 03.11.21 03.17.11		8.17°	
	BARB	eP	03.10.10		8.88°	
	TRIN	eP iP iS	03.10.17 03.10.20 03.11.55		9.51°	

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	AMPLITUDE	PERIOD	LOCATION	DEPTH
1961									
AUG 3	GREN	e	03.22.09			Very small			
	DOM	e	03.22.59						
	ST.KIT	eP	03.23.04						
	TRIN	eP	03.23.16						
3	TRIN	eP	05.43.46		1.7°				
		iP	05.43.47						
		iS	05.44.03						
	GREN	eP	05.44.00		2.7°	Very small			
X 3	ST.VIN	iP'	23.53.16		144.1°	USCGS Gives H:23.33.38 E:12.1°N 143.8°E			
X	TRIN	iP'	23.53.19		145.7°	Depth:About 20 km			
5	TRIN	iP	03.11.57		0.5°				
		iS	03.12.02						
	GREN	eP	03.12.10		1.9°				
		iS	03.12.29						
X 5	TRIN	eP	09.33.54		30.2°	Felt: Arequipa, Peru USCGS Gives H:09.27.46 E:18.8°S 63.2°W			
X	GREN	eP	09.34.04		31.4°	Depth:About 113 km			
X	ST. VIN	eP	09.34.15		32.7°				
5	ANT	iP	15.15.(50)		(1.2°)				
		iS	15.16.(03)						
	ST. KIT	iP	15.15.55		1.7°				
		iS	15.16.13						
5	TRIN	eP	16.50.02						
		i	16.50.06						
	GREN	i	16.50.08						

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
AUG 5	TRIN	iP	20.02.38		1.48°	H: 20.02.18			
	GREN	iP	20.02.43		1.78°	E: 10.7° N 62.9° W			
		iS	20.03.03			Magnitude: 4.7			
	ST. VIN	iP	20.03.00		2.96°				
		iS	20.03.29						
5	ANT	iP	22.35.(42)						
	ST. KIT	eP	22.35.57						
6	TRIN	iP	16.52.(24)		1.37°	H: 16.52.05			
		iS	16.52.(37)			E: 10.6° N 62.8° W			
	GREN	iP	16.52.30		1.81°	Magnitude: (5.4)			
		iS	16.52.48						
	ST. VIN	eP	16.52.47		3.01°				
		eS	16.53.19						
6	DOM	eP	17.21.41						
		i	17.21.43						
6	GREN	iP	23.31.21		1.6°				
		iS	23.31.38						
	TRIN	iP	23.31.(23)		(1.5°)				
		iS	23.31.(39)						
7	TRIN	iP	06.02.(03)						
	GREN	iP	06.02.25						
7	TRIN	eP	12.26.(22)						
7	TRIN	iP	17.20.(03)		(0.5°)				
		iS	17.20.(07)						
8	TRIN	iP	08.33.(57)		(1.2°)				
		iS	08.34.(09)						
8	ANT	eP	12.31.(13)		87.9°	USCGS Gives H: 12.18.19			
	ST. VIN	eP	12.31.31		91.2°	E: 50.9° 170.7° W			
	TRIN	eP	12.31.(37)		93.3°	Depth: About 24 km			

DATE 1961	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	P.M.O. TIME	STATION	PHASE	TIME G.M.T.
AUG 8	TRIN	iP	22.47.13			22.47.13	TRIN	iP	22.47.13
9	ST. KIT	iP iS	01.50.15 01.50.32		1.6°	01.50.15 01.50.32	ST. KIT	iP iS	01.50.15 01.50.32
	ANT	eP	01.50.(18)			01.50.18	ANT	eP	01.50.(18)
9	ANT	eP iS	02.18.(51) 02.19.(19)		(2.7°)	02.18.51 02.19.19	ANT	eP iS	02.18.(51) 02.19.(19)
	ST. KIT	iP iS	02.18.55 02.19.24		2.8°	02.18.55 02.19.24	ST. KIT	iP iS	02.18.55 02.19.24
9	TRIN	eP iP iS	10.36.46 10.36.47 10.36.57		1.1°	10.36.46 10.36.47 10.36.57	TRIN	eP iP iS	10.36.46 10.36.47 10.36.57
	GREN	eP iS	10.36.47 10.36.59		1.2°	10.36.47 10.36.59	GREN	eP iS	10.36.47 10.36.59
9	TRIN	eP' e	16.21.42 16.25.05		130.5°	16.21.42 16.25.05	TRIN	eP' e	16.21.42 16.25.05
						USCGS Gives H:16.02.36 E:19.1°S 168.7°E Depth:About 69 km			
10	DOM	iP iS	02.08.(47) 02.08.(49)		(0.2°)	02.08.47 02.08.49	DOM	iP iS	02.08.(47) 02.08.(49)
10	TRIN	iP iS	04.58.08 04.58.22		1.3°	04.58.08 04.58.22	TRIN	iP iS	04.58.08 04.58.22
	GREN	eP iS	04.58.10 04.58.26		1.6°	04.58.10 04.58.26	GREN	eP iS	04.58.10 04.58.26
10	GREN	iP iS	10.02.53 10.03.08		1.4°	10.02.53 10.03.08	GREN	iP iS	10.02.53 10.03.08
	TRIN	iP iS	10.03.03 10.03.23		1.9°	10.03.03 10.03.23	TRIN	iP iS	10.03.03 10.03.23
10	TRIN	eP iS	12.03.23 12.03.47		2.3°	12.03.23 12.03.47	TRIN	eP iS	12.03.23 12.03.47

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	TIME	SHAPE	MAGNITUDE	DEPTH
1961									
AUG 10	TRIN	iP	20.08.22		1.2°				
		iS	20.08.34						
	GREN	iP	20.08.26		1.5°				
		iS	20.08.42						
X 11	TRIN	eP	06.21.24		1.2°				
		iS	06.21.37						
11	ST. KIT	iP	06.33.22		2.0°				
		iS	06.33.43						
X 11	TRIN	iP	11.43.49		0.9°				
		iS	11.43.58						
	GREN	iP	11.43.54		1.3°				
		iS	11.44.07						
11	TRIN	iP	12.30.50		1.3°				
		iS	12.31.03						
	GREN	iP	12.30.51		1.5°				
		iS	12.31.07						
11	TRIN	eP	16.10.24						
11	DOM	iP	16.48.48		1.26°				
	ANT	iP	16.49.(01)		2.09°				
		iS	16.49.(24)						
	ST. KIT	iP	16.49.10		2.78°				
		iS	16.49.38						
	TRIN	eP	16.49.43		5.17°				
11	GREN	iP	19.55.07		1.2°				
		iS	19.55.20						
	TRIN	iP	19.55.14		1.6°				
		iS	19.55.31						

H:16.48.30
 E:15.7°N 60.6°W
 Depth:About 100 km
 Magnitude:4.5

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 AUG 11	TRIN	iP iS	20.34.38 20.34.51		1.3°	
	GREN	iP iS	20.34.40 20.34.57		1.6°	
12	ST. VIN	iP iS	12.16.56 12.17.05	d	0.94°	H:12.16.42 E:13.7 N 62.0°W Magnitude:(4.9)
	GREN	iP	12.17.07		1.71°	
	TRIN	eP	12.17.27		3.14°	
12	ST. KIT	iP iS	17.07.39 17.07.50		1.0°	
	ANT	iP iS	17.07.40 17.07.51		1.1°	
X 13	TRIN	eP'	06.20.36		143.8°	USCGS Gives H:06.01.02 E:25.3 N 121.5°E Depth:About 25 km
13	DOM	eP	07.50.17		1.81°	H:07.49.52
	ST. KIT	iP iS	07.50.21 07.50.42	d	2.04°	E:17.0 N 60.6°W Magnitude:(5.3)
	ST. VIN	eP	07.50.48		3.83°	
	GREN	eP	07.51.03		5.02°	
	TRIN	eP	07.51.23		6.35°	
13	DOM	iP iS	13.36.56 13.37.12		1.66°	H:13.36.33 E:14.8 N 60.4°W
	ST. VIN	iP	13.37.04	c	2.19°	Depth:About 140 km Magnitude:6.1
	ANT	iP	13.37.16		3.02°	
	GREN	iP iS	13.37.19 13.37.51	c	3.26°	
	ST. KIT	iP iS	13.37.25 13.38.02	c	3.64°	
	TRIN	iP iS	13.37.35 13.38.19		4.40°	

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
AUG 13	ANT	eP iS	15.05.(16) 15.05.(39)		(2.2°)				
	ST. KIT	iP iS	15.05.30 15.05.59		2.8°				
	TRIN	e	15.06.42		Very small				
13 13	ANT	eP iS	15.12.(12) 15.12.(35)		2.2°				
	ST. KIT	iP iS	15.12.25 15.12.57		3.1°				
13	ANT	eP	16.03.(17)						
	ST. KIT	e	16.03.29						
13	TRIN	eP i	17.33.32 17.33.35						
13	ANT	eP	22.38.(13)						
	ST. KIT	e	22.38.24						
14	TRIN	iP iS	07.33.20 07.33.27		0.7°				
14	TRIN	eP'	23.47.51		130.0°	Felt:Port Vila New Hebrides Islands region USCGS Gives H:23.28.47 E:20.3°S 169.4°E Depth:About 97 km			
15	TRIN	eP iS	08.54.17 08.54.20		0.3°				
15	DOM	eP eS	09.19.30 09.19.49		1.90°	H:09.19.03 E:15.1°N 62.0°W Depth:About 200 km			
	GREN	eP	09.19.53		3.51°	Magnitude:5.2			
	TRIN	eP iS	09.20.11 09.21.00		4.78°				

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961 AUG									
15	TRIN	iP iS	10.00.11 10.00.14		0.3°				
15	TRIN	iP iS	10.35.09 10.35.12		0.3°				
15	ANT	eP'	19.22.(55)		125.0°	USCGS Gives	H:19.03.56		
	TRIN	eP'	19.23.08		130.8°	Small	E:32.8° N 142.4° E Depth:About 39 km		
15	TRIN	eP iS	21.37.42 21.37.55		1.3°				
	GREN	iP iS	21.37.44 21.38.00	c	1.5°				
16	TRIN	eP	00.59.16						
	GREN	e	00.59.46			Very small			
16	ANT	iP iS	03.16.(14) 03.16.(19)		(0.5°)				
	ST. KIT	eP iS	03.16.28 03.16.43		1.4°				
16	TRIN	iP iS	09.02.00 09.02.04		0.4°				
16	BARB	eP	15.53.15		1.35°	Very small			
	GREN	iP iS	15.53.23 15.53.44	c	2.07°	H:15.52.54 E:13.5° N 60.6° W Depth:About 100 km Magnitude:4.3			
	TRIN	eP eS	15.53.37 15.54.09		3.11°				
17	TRIN	eP L	06.46.57 07.09.		63.2°	USCGS Gives	H:06.36.23 E:34.4° S 109.0° W Depth:About 25 km		

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	EMIT	REAFF	REPORT	REMARKS
1961									
AUG									
17	TRIN	iP	09.54.05		0.6°				
		iS	09.54.11						
17	ANT	iP	16.00.(01)	d	1.50°				
		iS	16.00.(11)						
	DOM	eP	16.00.13		2.27°				
		iS	16.00.37						
	ST. KIT	iP	16.00.15	d	2.34°				
		iS	16.00.38						
	GREN	eP	16.00.58		5.43°				
	TRIN	e	16.01.21		6.72°				
17	TRIN	eP	21.34.59						
		e	21.36.07						
18	DOM	eP	04.34.25		1.4°				
		eS	04.34.40						
18	TRIN	iP	16.27.08		1.4°				
		iS	16.27.22						
19	TRIN	eP	03.08.58						
		i	03.09.03						
19	TRIN	eP	03.57.33		1.4°				
		iS	03.57.47						
	GREN	iP	03.57.38	d	1.8°				
		iS	03.57.57						

H:16.00.41
E:17.3°N 60.3°W
Magnitude:(5.7)

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
AUG						
19	TRIN	iP	05.14.15		23.4°	USCGS Gives H:05.09.50 E:10.7°S 71.0°W Depth:About 649 km
		i	05.16.56			
		i	05.20.20			
		i	05.21.57			
	GREN	iP	05.14.24	d	24.2°	
		i	05.16.(03)			
		i	05.18.(05)			
	ST. VIN	iP	05.14.34		25.6°	
		i	05.18.(23)			
		i	05.24.(02)			
	BARB	iP	05.14.43	c	25.8°	
		i	05.18.31			
		e	05.22.26			
		e	05.26.25			
	DOM	iP	05.14.51	c	27.4°	
	ST. KIT	iP	05.15.05	d	28.8°	
	ANT	iP	05.15.(05)		28.9°	
19	ANT	eP	14.54.08		7.09°	H:14.52.28 E:18.0°N 69.1°W Depth:About 100 km Magnitude:6.9
		iP	14.54.09			
	DOM	eP	14.54.21		7.96°	
		iP	14.54.22			
		iS	14.55.44			
		T	15.05.46			
	ST. VIN	iP	14.54.32		9.03°	
		T	15.03.(26)			
	GREN	iP	14.54.38		9.33°	
		iS	14.56.12			
		T	15.03.47			
	TRIN	eP	14.54.56		10.47°	
		iP	14.54.57			
		iS	14.56.43			
	BARB	eP	14.54.59		10.45°	
		e	14.56.42			

No
Yes

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961 AUG									
19	TRIN	eP	15.53.24			Small			
						USCGS Gives H:16.01.26			
						E:11.4°S 70.6°W			
19	TRIN	iP	16.05.56		23.7°	Depth:645 km			
	GREN	iP	16.06.06		24.8°				
	ST. VIN	iP	16.06.15	a	26.1°				
20	DOM	iP	04.39.03		1.5°				
		iS	04.39.18						
	ANT	iP	04.39.(10)		(2.0°)				
	ST. VIN	e	04.39.25						
		e	04.39.54						
20	TRIN	iP	04.40.23		1.2°				
		iS	04.40.36						
	GREN	eP	04.40.27		1.7°				
		iS	04.40.44						
20	TRIN	eP	06.03.30						
20	TRIN	eP	09.14.41		23.8°	USCGS Gives H:09.10.12			
						E:11.4°S 70.8°W			
	GREN	eP	09.14.49		24.8°	Depth:About 678 km			
20	GREN	iP	13.31.16		1.6°				
		iS	13.31.33						
20	ST. VIN	iP	21.00.39	c	2.39°	H:21.00.05			
		iS	21.01.03			E:14.9°N 62.2°W			
						Depth:About 150 km			
	ANT	eP	21.00.(49)		2.60°	Magnitude:4.6			
	GREN	iP	21.00.51		3.22°				
	TRIN	iP	21.01.09		4.55°				

DATE 1961 AUG	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	SLD SMT	SLMTH	WIDTAME	WIDM
21	TRIN	iP	01.07.03		1.3°	02.21.80	95	NOI	SS
		iS	01.07.16			04.21.80	85		
	GREN	iP	01.07.10		2.0°	02.21.80	91	WIV	JS
		iS	01.07.30			04.21.80	81		
21	TRIN	iP	03.43.04		1.76°	03.43.40			
		iS	03.43.19			05.43.40			
	GREN	iP	03.43.07		1.99°	H:03.43.40 E:11.4°N 60.1°W Depth:About 100 km Magnitude:3.7			
		iS	03.43.28			05.43.40			
	ST. VIN	iP	03.43.13	d	2.32°				
		iS	03.43.38			05.43.40			
21	TRIN	eP	05.12.10		0.9°				
		iS	05.12.19			07.12.19			
21	TRIN	eP	06.26.25			Small			
21	TRIN	eP	07.59.35			Small			
21	ST. KIT	eP	09.19.15		1.7°				
		iS	09.19.33			11.19.33			
21	ANT	iP	16.57.24						
21	ST. KIT	eP	19.41.40		3.45°				
		iS	19.42.14			21.42.14			
	ANT	eP	19.41.48		4.02°	H:19.41.51 E:19.9°N 64.3°W Depth:About 200 km Magnitude:6.0			
	DOM	eP	19.42.11		5.64°				
	TRIN	eP	19.43.09		9.78°				
21	ST. VIN	eP	21.58.27						

<u>DATE</u> 1961 AUG	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	<u>LOC TIME</u>	<u>SEAF</u>	<u>WOLATE</u>	<u>STAI</u> PQI SUA
22	DOM	eP	08.13.28		1.19°	H:08.13.11			IS
		eS	08.13.46						
	ST. VIN	iP	08.13.29		1.32°	E:14.4°N 60.7°W			
		iS	08.13.48						
22	GREN	eP	08.13.47		2.53°				
	TRIN	eP	08.14.04		3.76°	Small			
22	DOM	eP	23.15.58		0.2°				
		iS	23.16.00						
22	TRIN	eP	23.23.06		1.2°				
		iS	23.23.18						
23	DOM	eP	08.00.47		1.7°				
		eS	08.01.05						
23	ST. VIN	eP	08.00.(59)		(2.1°)				
		eS	08.01.21						
23	ST. KIT	iP	09.28.(19)						
23	TRIN	iP	09.56.02		0.5°				
		iS	09.56.08						
23	ST. VIN	eP	17.17.53						
23	TRIN	iP	17.55.45						
24	TRIN	eP	04.15.36		0.6°				
		eS	04.15.42						
24	TRIN	eP	18.00.19						
24	GREN	iP	22.48.19		1.5°				
		iS	22.48.34						
24	TRIN	iP	22.48.23		1.6°				
		iS	22.48.39						

✓ ~~X~~
 ✓ ~~X~~

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961 AUG									
25	ANT	iP iS	05.08.37 05.08.56	a	1.8°				
25	TRIN	eP	07.12.15		86.8°	Small USCGS Gives H:06.59.30 E:53.5° N 161.2° W Depth:About 36 km			
26	ANT	iP	01.18.32						
26	TRIN	eP i	01.22.27 01.22.34		11.9°	USCGS Gives H:01.19.39 E:7.0° N 73.2° W Depth:About 183 km			
	GREN	eP	01.22.29		12.3°				
	ST. VIN	eP	01.22.42		13.1°				
	ANT	eP	01.23.02		14.5°				
20	TRIN	iP iS	02.21.32 02.21.54		2.2°				
	GREN	eP	02.21.45		3.1°				
26	TRIN	iP	06.54.48 06.55.05		1.79°	H:06.54.23 E:10.7° N 63.0° W Depth:About 100 km			
	GREN	eP iS	06.54.52 06.55.12		2.01°	Magnitude:3.8			
	ST. VIN	eP	06.55.06		3.10°				
26	TRIN	iP iS	17.25.55 17.26.04		0.8°				
	GREN	eP	17.26.11		1.9°				
26	GREN	eP	19.12.23						
26	TRIN	iP iS	19.56.04 19.56.18		1.4°				

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1961 AUG								
26	GREN	eP	21.59.44					
26	TRIN	iP iS	22.02.14 22.02.29		1.4°			
26	TRIN	iP iS	22.14.16 22.14.34		1.61°	H:22.13.54 E:9.6°N 62.7°W Magnitude:(5.5)		
	GREN	eP iS	22.14.30 22.14.55		2.57°			
	ST. VIN	eP	22.14.47		3.79°			
26	ST. VIN	e(P) eS	23.11.09 23.11.21		(1.1°)			
27	TRIN	eP	04.24.59		Small			
27	ANT	eP	07.57.11					
27	GREN	eP	12.42.21					
27	GREN	eP	13.40.44					
27	GREN	eP	15.52.15					
X	✓ GREN	eP i	16.40.00 16.40.12					
X	✓ TRIN	eP'	17.07.14		139.7°	USCGS Gives H:16.47.45 E:18.3°N 146.6°E Depth:About 27 km		
27	TRIN	eP iS	22.40.05 22.40.12		0.7°			
28	ANT	eP	00.25.59					

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
1961 AUG									
28	ANT	iP	05.16.06						
28	TRIN	iP e	06.33.52 06.40.33		27.1°	USCGS Gives H:06.28.19 E:15.1° S 70.2° W Depth:About 185 km			
	GREN	iP e	06.34.03 06.38.42		28.1°				
	ST. VIN	iP	06.34.14	c	29.7°				
	BARB	eP	06.34.20		29.8°				
	DOM	eP	06.34.29		31.6°				
	ANT	eP	06.34.(44)		(33.1°)				
28	TRIN	iP iS	07.32.17 07.32.33		1.5°				
28	TRIN	e	08.01.51			Small			
28	TRIN	e e	21.38.43 21.41.46						
29	TRIN	iP iS	08.32.20 08.32.35		1.4°				
	GREN	eP	08.32.35		2.4				
29	ST. KIT	e	17.14.20						
	ANT	e	17.14.37						
	TRIN	eP e e	17.15.34 17.15.41 17.17.31						

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>			
1961 AUG								
29	TRIN	iP	21.32.58		0.7°			
		iS	21.33.05					
	GREN	eP	21.33.05		1.6°			
		iS	21.33.21					
	ST. VIN	e	21.33.27		Small			
30	BARB	eP	02.04.43					
30	ANT	eP	02.38.16		84.2°	USCGS Gives	H:02.25.45	
							E:53.7 N 166.3 W	
							Depth:67 km	
	TRIN	eP	02.38.41		89.6°	Small		
30	TRIN	eP	03.50.21		21.3°	Small		
						USCGS Gives	H:03.45.26	
	ST. KIT	eP	03.50.58		25.0°		E:3.5 S 77.7° W	
							Depth:About 25 km	
31	TRIN	iP	01.53.04		23.2°	USCGS Gives	H:01.48.38	
		i	01.55.42				E:10.6 S 70.9° W	
							Depth:About 626 km	
	GREN	iP	01.53.12		24.1°			
	ST. VIN	iP	01.53.22	d	25.4°			
	BARB	iP	01.53.31	d	25.9°			
		e	01.56.16					
		iS	01.57.21					
	DOM	iP	01.53.36		27.5°			
	ST. KIT	iP	01.53.52	d	28.7°			
	ANT	iP	01.53.(53)		28.8°			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1961 AUG 31	TRIN	iP	02.01.30		22.7°
		e	02.34.47		
		e	02.43.45		
	GREN	iP	02.01.41		23.9°
		iS	02.05.23		
	ST. VIN	iP	02.01.51		25.2°
	BARB	eP	02.01.58		25.6°
		iP	02.02.02		
		i(S)	02.05.56		
	DOM	iP	02.02.12		27.1°
	ST. KIT	iP	02.02.19		28.5°
	ANT	iP	02.02.(20)		28.5°
31	TRIN	eP	03.56.08		1.4°
		iS	03.56.23		
31	TRIN	eP	15.04.34		26.3°
	GREN	eP	15.04.50		27.2°

Felt: Arequipa, Peru
 USCGS Gives H: 01.57.08
 E: 10.4° S 70.7° W
 Depth: About 629 km

USCGS Gives H: 14.59.01
 E: 9.5° S 79.0° W
 Depth: About 100 km

Topical 1961

UNIVERSITY COLLEGE OF THE WEST INDIES
 SEISMIC RESEARCH UNIT
 Regional Research Centre,
 Trinidad, West Indies.

SEP 1961

Preliminary Seismological Bulletin.

The Trinidad station has been operated in the past at the temporary sites
 from January 1957 to January 1958 at 10° 50' N, 61° 30' W
 from January 1958 to January 1959 at 10° 45' N, 61° 30' W
 from January 1959 to January 1960 at 10° 45' N, 61° 30' W
 from January 1960 to January 1961 at 10° 45' N, 61° 30' W

STATIONS REPORTING

TRINIDAD	(TRIN)*	LAT. 10° 39.0' N	LONG. 61° 24.1' W	27m.
GRENADA	(GREN)	LAT. 12° 02.7' N	LONG. 61° 44.1' W	30m.
ST. VINCENT	(ST. VIN)	LAT. 13° 10.2' N	LONG. 61° 15.5' W	10m.
ST. LUCIA	(ST. LUC)	LAT. 14° 01.7' N	LONG. 61° 00.5' W	30m.
BARBADOS	(BARB)	LAT. 13° 07.4' N	LONG. 59° 35.6' W	70m.
DOMINICA	(DOM)	LAT. 15° 17.7' N	LONG. 61° 23.5' W	40m.
ANTIGUA	(ANT)	LAT. 17° 08.6' N	LONG. 61° 50.1' W	27m.
ST. KITTS	(ST. KIT)	LAT. 17° 20.3' N	LONG. 62° 43.7' W	

EQUIPMENT

Trinidad is equipped with three components of Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

All other stations have similar equipment recording vertical component only.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

*The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

Intensity Scale in use: Modified Mercalli Intensity Scale.

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 SEPT						
1	✓ TRIN	iP	00.21.06		75.7°	USCGS Gives H: 00.09.35
	✓ GREN	iP	00.21.14	c	77.0°	E: 59.3°S 27.3°W Depth: About 131 km
	✓ BARB	eP	00.21.14		77.0°	
	✓ ST. VIN	eP	00.21.20		78.0°	
	✓ DOM	eP	00.21.31		80.0°	
	✓ ANT	eP	00.21.(42)		82.0°	
	✓ ST. KIT	iP	00.21.44		82.4°	
1	TRIN	iP iS	16.40.43 16.41.05		2.2°	
1	✓ TRIN	eP ePcP	18.56.45 18.59.46		30.7°	USCGS Gives H: 18.50.35 E: 13.5°N 92.5°W Depth: About 37 km
3	ST. KIT	eP	04.53.28		24.4°	Felt: Managua, Nicaragua USCGS Gives H: 04.48.26 E: 12.1°N 86.9°W Depth: About 124 km.
	GREN	eP	04.53.34		24.7°	
	TRIN	eP	04.53.36		25.1°	
	ST. VIN	eP	04.53.39		25.2°	
3	TRIN	eP i eS	10.22.16 10.22.24 10.24.46		13.2°	Small USCGS Gives H: 10.19.20 E: 6.4°N 73.4°W Depth: About 86 km
3	TRIN	iP iS	12.38.59 12.39.14		1.38°	H: 12.38.40 E: 9.8°N 62.5°W Magnitude: 6.5
	GREN	eP iP iS	12.39.13 12.39.17 12.39.32		2.40°	
	ST. VIN	iP iS	12.39.30 12.40.12		3.61°	
	BARB	e	12.39.50		4.40°	
	DOM	eP eS	12.39.59 12.40.57		5.63°	
	ST. KIT	eP eS	12.40.27 12.41.47		7.58°	

DATE SEPT	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
3	ST. KIT.	iP	15.13.23		1.7°	
	ANT	eP	15.13.23		1.7°	
		iS	15.13.41			
3	GREN	eP	17.25.09		1.2°	
		eS	17.25.22			
3	ST. KIT	eP	17.30.34		2.7°	
		eS	17.31.02			
3	TRIN	iP	22.09.05		0.4°	
		iS	22.09.09			
4	TRIN	iP	04.29.33		1.31°	H: 04.29.15
		iS	04.29.46			E: 10.9° N 62.7° W
	GREN	iP	04.29.36	c	1.51°	Magnitude: 5.4
		iS	04.29.52			
	ST. VIN	eP	04.29.53		2.69°	
		eS	04.30.26			
4	ST. KIT	iP	07.42.39			
4	ST. KIT	eP	10.02.18		91.0°	USCGS Gives H: 09.49.11
	ST. VIN	iP	10.02.37	d	95.3°	E: 51.4° N 178.1° W
	TRIN	eP	10.02.45		97.2°	Depth: About 35 km.
4	TRIN	eP	15.09.49			Small
4	TRIN	eP'	16.29.39		164.7°	USCGS Gives H: 16.09.20
	ST. VIN	e	16.29.46		162.9°	E: 1.3° N 127.7° E
						Depth: About 156 km.
5	TRIN	eP	02.18.17			
		e	02.19.58			
5	TRIN	eP	02.49.20		73.9°	Small
						USCGS Gives H: 02.37.35
						E: 80.0° N 2.3° W
						Depth: About 18 km.

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
SEPT 1961						
5	ST. KIT	eP	11.46.10		74.3°	Felt: Anchorage USCGS Gives H: 11.34.37 E: 59.8° N 150.6° W Depth: About 44 km
	ST. VIN	eP	11.46.34		78.2°	
	TRIN	eP	11.46.45		80.5°	
5	TRIN	eP	16.30.15		1.7°	
		iS	16.30.32			
6	TRIN	iP	05.21.05		1.4°	
		iS	05.21.19			
	GREN	iP	05.21.10		1.9°	
		iS	05.21.30			
6	TRIN	eP	15.17.44			
6	TRIN	eP	15.36.08		27.9°	Small
	ST. KIT	eP	15.36.49		32.7°	USCGS Gives H: 15.30.20 E: 10.8° S 79.1° W Depth: About 45 km
8	TRIN	eP	02.11.03		1.3°	
		iS	02.11.16			
8	TRIN	eP	06.12.55		23.1°	USCGS Gives H: 06.07.55 E: 1.5° S 81.0° W Depth: About 56 km
8	TRIN	eP	07.47.26			
8	TRIN	eP	11.57.48		73.1°	USCGS Gives H: 11.26.33 E: 56.1° S 27.3° W Depth: About 125 km.
	ST. VIN	eP	11.38.02		75.1°	
		iP	11.38.04			
	BARB	eP	11.38.03		74.5°	
	ST. KIT	iP	11.38.25		79.4°	
9	TRIN	eP	16.22.18			

YEAR	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
SEPT						
9	ANT	eP iS	22.18.22 22.18.38		1.6°	
	ST. KIT	eP iS	22.18.26 22.18.46		1.9°	
10	TRIN	eP i	04.51.25 04.53.52		33.7°	USCGS Gives H: 04.45.27 E: 22.7° S 63.1° W Depth: About 519 km.
	GREN	iP e	04.51.34 04.56.33	d	35.0°	
	ST. VIN	iP e e	04.51.43 04.53.57 04.56.46	d	36.2°	
	BARB	eP	04.51.49		36.4°	
	ANT	eP	04.52.14		39.9°	
	ST. KIT	eP	04.52.16		40.0°	
10	TRIN	eP iS	08.23.26 08.23.40		1.3°	
11	ST. KIT	iP iS	21.45.45 21.46.06	c	2.1°	
11	TRIN	iP	22.15.24	c	1.14°	Felt: Trinidad Intensity IV
	GREN	iP	22.15.25	d	1.15°	H: 22.15.08
	ST. VIN	iP iS	22.15.38 22.15.59		2.16°	E: 11.3° N 61.9° W Depth: About 90 km. Magnitude: 6.1
	BARB	iP iS i	22.15.54 22.16.24 22.16.45	d	3.01°	
	ST. KIT	eP iP i	22.16.35 22.16.37 22.17.12		6.17°	
11	ST. KIT	eP eS	22.21.54 22.22.26		3.1°	
11	TRIN	iP eS	22.34.07 22.34.20	c	1.3°	
	GREN	iP	22.34.24		2.5°	

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
1961									
SEPT									
12	TRIN	iP iS	20.48.41 20.48.48		0.7°				
12	ST. KIT	iP	20.58.41						
13	TRIN	iP iS	02.08.04 02.08.17		1.39°	H: 02.07.44 E: 10.7° N 62.8° W Depth: About 50 km.			
	GREN	iP iS	02.08.09 02.08.27	d	1.71°	Magnitude: 5.3			
	ST. VIN	eP i	02.08.25 02.09.01		2.88°				
13	TRIN	iP iS	06.51.41 06.51.55		1.36°	H: 06.51.22 E: 10.8° N 62.7° W Depth: About 50 km.			
	GREN	iP iS	06.51.45 06.52.01	d	1.59°	Magnitude: 4.4			
	ST. VIN	eP e(S)	06.52.01 06.52.34		2.75°				
13	GREN	eP	21.28.49						
13	ST. VIN	eP	21.28.56						
14	GREN	eP iP iS	00.06.28 00.06.30 00.06.51		2.31°	H: 00.05.55 E: 10.9° N 63.8° W Depth: About 50 km. Magnitude: 5.2			
	TRIN	iP iS	00.06.28 00.06.52	c	2.37°				
	ST. VIN	eP	00.06.41		3.33°				
14	ST. KIT	iP	07.16.10						
14.	TRIN	eP	13.11.52						
14	TRIN	eP	18.06.47						

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 SEPT 14	ST. VIN	iP iS	23.12.23 23.12.36		1.47°	H: 23.12.02 E: 13.7°N 61.6°W Depth: About 150 km. Magnitude: 5.0
	GREN	iP iS	23.12.31 23.12.52		2.10°	
	TRIN	iP eS	23.12.48 23.13.18	d	3.28°	
15	ST. KIT	eP	01.58.47		84.9°	USCGS Gives H: 01.46.08
	ST. VIN	eP	01.58.54		86.5°	E: 35.1°N 33.9°E Depth: About 25 km.
	GREN	eP	01.58.59		87.6°	
	TRIN	eP	01.59.03		88.0°	
15	ST. VIN	eP iS	07.59.48 08.00.00		1.2°	
15	ST. VIN	iP iS	21.28.47 21.39.03		1.0°	Small
16	GREN	e i	07.27.43 07.28.05			
16	ST. VIN	eP	13.50.17			
	GREN	e	13.50.54			
17	GREN	e i	06.01.30 06.01.57			
17	ANT	eP	06.08.55			
	ST. KIT	iP	06.09.00			
17	ST. KIT	eP'	23.41.50		148.6°	USCGS Gives H: 23.22.06
	ANT	eP'	23.41.53		149.3°	E: 5.9°S 147.4°E Depth: About 45 km.
	ST. VIN	iP'	23.41.55	d	150.6°	

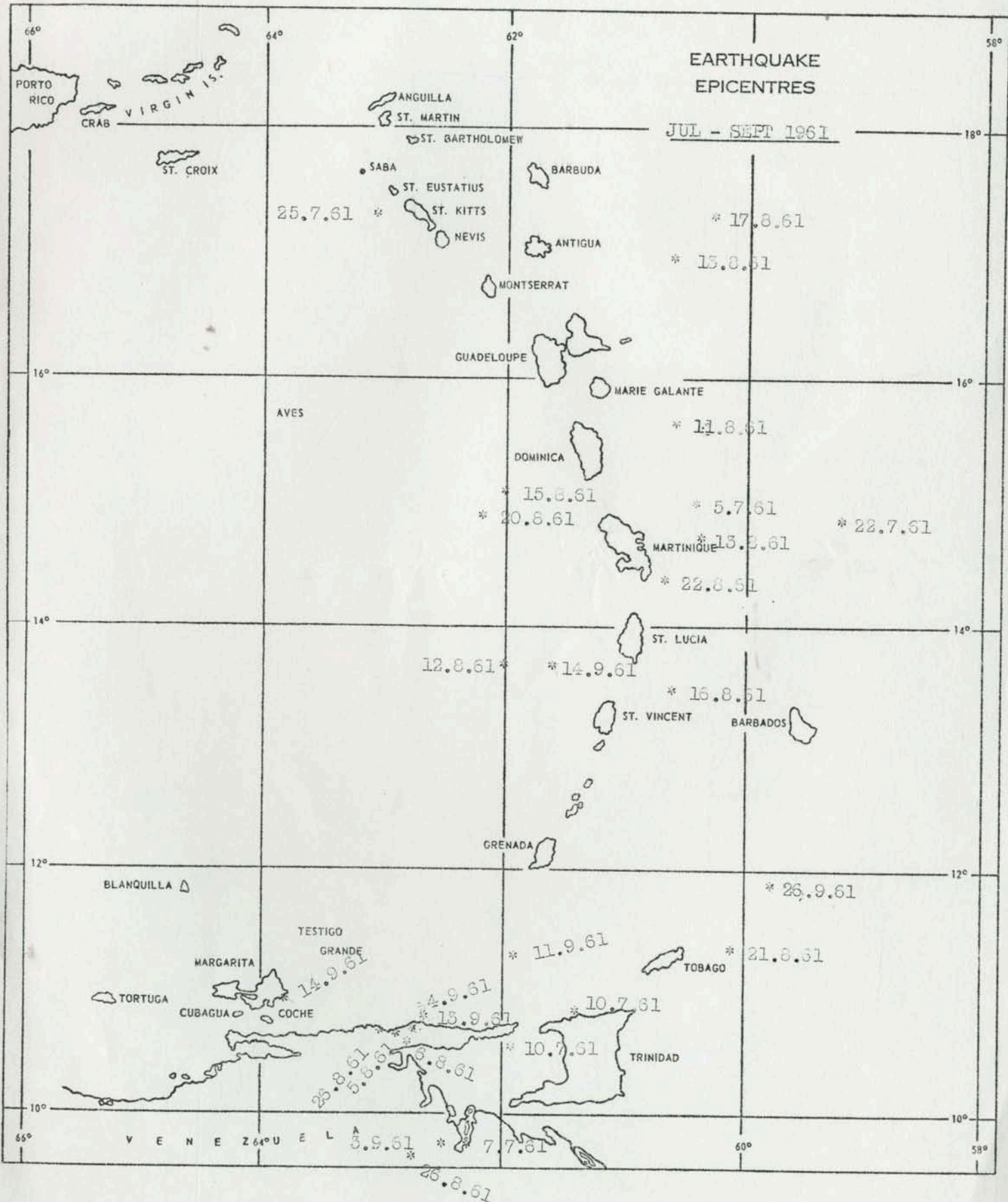
<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME. G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
1961 SEPT 19	✓ GREN	iP	02.31.34	d	32.2°				
	✓ ST. VIN	iP e	02.31.44 02.37.15		33.6°	USCGS Gives H: 02.25.49			
	✓ BARB	eP	02.31.48		33.7°	E: 20.3° S 63.2° W			
	✓ ANT	iP e	02.32.14 02.37.23		37.5°	Depth: About 609 km.			
	✓ ST. KIT	iP i	02.32.15 02.37.21		37.9°				
19	GREN	e	07.12.15						
19	✓ GREN	iP	09.51.02	c	21.3°	USCGS Gives H: 09.46.18			
	✓ ST. VIN	eP	09.51.11		21.8°	E: 6.7° N 82.4° W			
	✓ ST. KIT	iP	09.51.14		21.9°	Depth: About 33 km			
	✓ BARB	eP	09.51.31	c	23.5°				
19	GREN	eP iS	10.03.26 10.03.42		1.6°				
20	ST. KIT	iP	01.42.01						
22	GREN	iP iS	13.01.43 13.01.59		1.6°				
22	TRIN	iP iS	18.51.41 18.51.52		1.1°				
22	GREN	iP iS	19.51.23 19.51.53		2.9°				
23	ST. KIT	iP i	03.30.23 03.31.55		0.5°				
	ANT	iP iS	03.30.(29) 03.30.(40)		(1.0°)				
23	DOM	eP iP iS	23.33.(53) 23.33.(54) 23.33.(58)		(0.4°)				

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	<u>DEPTH</u>	<u>LOCATION</u>
1961 SEPT 24	TRIN	eP iS	04.25.16 04.25.28		1.2°		
24	GREN	eP	17.04.23		74.7°	USCGS Gives H: 16.52.41 E: 56.5° S 26.2° W Depth: About 25 km	
	ST. KIT	eP	17.04.52		80.4°	Small	
24	ST. VIN	eP	18.47.34				
24	✓ ST. KIT	eP	19.11.19		34.0°	Felt: Chilpanciago and Federal district.	
	✓ ST. VIN	eP	19.11.36		36.3°	USCGS Gives H: 19.04.41 E: 18.4° N 98.6° W Depth: About 81 km.	
	✓ GREN	eP	19.11.(37)		36.0°		
	✓ TRIN	eP	19.11.41		37.1°		
26	BARB	eP iP iS	15.52.28 15.52.35 15.52.41		1.22°	H: 15.52.09 E: 11.9° N 59.7° W Magnitude: (5.9)	
	ST. VIN	iP iS	15.52.37 15.52.56	c	2.03°		
	GREN	iP iS	15.52.38 15.53.01		2.06°		
	TRIN	iP iS	15.52.(45) 15.53.(09)	d	2.14°		
	DOM	eP eS	15.53.03 15.53.42		3.79°		
	ANT	eP eS	15.53.28 15.54.27		5.64°		
27	GREN	eP	02.03.(13)		40.5°	USCGS Gives H: 01.55.32 E: 19.2° N 105.1° W Depth: About 54 km.	
27	ST. KIT	iP iS	02.07.08 02.07.24		1.6°		
	ANT	eP	02.07.(13)		(1.9°)		
27	TRIN	eP	08.37.(10)				
	GREN	eP	08.37.(17)				

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 SEPT						
X 27	✓ ST. VIN	iP	12.19.34		78.3°	USCGS Gives H: 12.07.39 E: 59.4 S 24.2°W
	✓ DOM	eP	12.19.45		80.5°	Depth: About 110 km.
	DOM	eP	14.09.07			
X 27	✓ ANT	eP	19.39.(52)		86.7°	USCGS Gives H: 19.27.01 E: 52.2°N 168.7°W
	✓ ST. VIN	eP	19.40.03		89.7°	Depth: About 22 km
	ST. KIT	iP iS	00.30.59 00.31.13	c	1.3°	
	ANT	iP iS	00.31.(07) 00.31.(27)		(1.9°)	
X 28	✓ TRIN	eP'	01.43.(59)		162.0°	USCGS Gives H: 01.24.00 E: 3.9°S 102.0°E Depth: About 78 km.
	ST. KIT	eP iS	09.25.59 09.26.03		0.3°	
	ST. KIT	iP iS	02.05.32 02.05.43		1.0°	
	ANT	iP	02.05.(38)		(1.4°)	
	TRIN	eP'	09.04.(59)		145.4°	USCGS Gives H: 08.45.27 E: 13.8°N 94.0°E Depth: About 133 km.
	TRIN	iP iS	10.58.(42) 10.58.(50)	c	(0.8°)	
	DOM	iP	11.22.41			
	TRIN	iP iS	15.29.49 15.30.05	c	1.6°	
X 29	✓ TRIN	eP' e	19.26.10 19.26.32		168.4°	USCGS Gives H: 19.06.13 E: 0.5°N 122.4°E Depth: About 110 km

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
1961 SEPT 29	TRIN	iP	22.42.35	c	20.0°				
						USCGS Gives H: 22.38 .06 E: 1.7° N 79.3° W Depth; About 60 km.			
	GREN	iP	22.42.37		20.3°				
	ST. VIN	iP	22.42.47	d	21.7°				
	DOM	eP	22.43.03		22.4°				
	ST. KIT	eP	22.43.03		22.7°				
	ANT	eP	22.43.(09)		23.3°				
30	ST. KIT	iP	00.10.09	c	0.5°				
		iS	00.10.13						
	ANT	iP	00.10.(12)	c	(0.8°)				
		iS	00.10.(20)						
30	TRIN	eP	07.32.33		1.3°				
	GREN	eP	07.32.50		2.5°				
		iS	07.33.15						
	ST. VIN	e	07.33.(03)			Small			
30	TRIN	iP	14.53.06	c	1.3°				
		iS	14.53.19						
	ST. VIN	eP	14.53.27		2.8°				

29.1-36



Lopida JPS

INTERNATIONAL SEISMOLOGICAL CENTRE

UNIVERSITY COLLEGE OF THE WEST INDIES
 SEISMIC RESEARCH UNIT
 Regional Research Centre,
 Trinidad, West Indies.

OCT 1961

Preliminary Seismological Bulletin.

REVISION

The station is equipped with three components of different mass and a record period approximately 0.5 sec.

All other stations have similar equipment recording vertical motion only.

Amplification is 50,000 at 5 cycles/sec. range of motion is 10 cm.

5,000 at 5 cycles/sec.

The Trinidad station has been operated in the past at the frequency 5 cps.

Given below:

From 1st July 1955 to 1st January 1961 at 10° N, 78° W.

From 1st January 1961 to 1st September 1961 at 10° N, 78° W.

Intensity Scale is used Modified Mercalli intensity scale.

STATIONS REPORTING

TRINIDAD	(TRN)*	LAT. 10° 39.0'N	LONG. 61° 24.1'W	27m.
GRENADA	(GRE)	LAT. 12° 02.7'N	LONG. 61° 44.1'W	30m.
ST. VINCENT	(SVI)	LAT. 13° 10.2'N	LONG. 61° 15.5'W	10m.
BARBADOS	(BRB)	LAT. 13° 07.4'N	LONG. 59° 35.6'W	70m.
DOMINICA	(DOM)	LAT. 15° 17.7'N	LONG. 61° 23.5'W	40m.
ANTIGUA	(AWI)	LAT. 17° 08.6'N	LONG. 61° 50.1'W	27m.
ST. KITTS	(SKI)	LAT. 17° 20.3'N	LONG. 62° 43.7'W	
HOPE, JAMAICA	(HOP)	LAT. 18° 01' N	LONG. 76° 45' W	200m.
BEVERLEY, JAMAICA	(BEV)	LAT. 18° 27' N	LONG. 77° 18' W	123m.
BLACK RIVER, JAMAICA	(BRJ)	LAT. 18° 02' N	LONG. 77° 52' W	8m.

EQUIPMENT

Trinidad is equipped with three components of Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

All other stations have similar equipment recording vertical component only.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

* The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

Intensity Scale in use: Modified Mercalli Intensity Scale.



<u>DATE</u> 1961	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
OCT	2	GRE	eP iS	09.24.07 09.24.26		1.8°			
	2	SKI	iP	12.					
	2	SKI	iP	12.21.10					
		AWI	eP iP	12.21.(23) 12.21.(31)					
		GRE	eP	12.22.07					
	2	SKI	eP iS	21.16.55 21.17.36		4.0°			
		AWI	eP	21.17.(08)		(6.7°)			
		DOM	e	21.17.34					
	3	SVI	eP e	04.04.54 04.05.35					
	3	AWI	iP iS	04.44.16 04.44.23		0.7°			
		SKI	iP iS	04.44.18 04.44.31		1.3°			
		DOM	e	04.44.35					
	3	SKI	iP	08.43.09					
	3	AWI	iP iS	16.58.11 16.58.25		1.4°			
		SKI	iP iS	16.58.24 16.58.45		2.0°			
3	SKI	iP	17.03.33	c	0.4°				
	AWI	iP iS	17.03.39 17.03.46		0.7°				
3	TRN	iP	20.36.23	c	2.05°	H:20.35.54			
	SVI	eP i	20.36.52 20.37.52		4.16°	E:9.4° N 63.0° W		Magnitude:6.3	
	DOM	e	20.37.21		6.11°	Small			
	AWI	eP	20.37.(45)		7.82°				
	SKI	iP	20.37.46		7.93°				

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 OCT						
3	AWI	eP	22.48.18		1.2°	
3	AWI	eP	22.48.44	c	1.0°	
		iS	22.48.54			
	SKI	iP	22.48.54		2.1°	
		iS	22.49.16			
	DOM	e	22.49.07			
3	AWI	eP	22.52.43		1.1°	
		iS	22.52.55			
	SKI	eP	22.52.53		2.1°	
		eS	22.53.15			
4	AWI	eP	03.06.(36)			
	SKI	iP	03.06.42			
4	AWI	iP	03.38.54	c	1.1°	
		iS	03.39.05			
	SKI	iP	03.39.05		2.1°	
		iS	03.39.27			
4	AWI	iP	17.28.51		2.23°	H:17.28.20
		iS	17.29.14			E:16.2°N 62.0°W
	DOM	iP	17.28.51		2.29°	Depth:About 225 km
	SKI	iP	17.28.54	c	2.38°	Magnitude:5.2
		iS	17.29.19			
	SVI	iP	17.29.12		3.70°	
6	SKI	iP	23.39.19			
7	TRN	eP	06.55.48			
		i	06.56.15			
7	TRN	eP	10.00.45		22.0°	USCGS Gives H:09.55.54
	GRE	eP	10.00.48		22.2	E:0.4°S 80.2°W
	DOM	eP	10.01.10		24.0°	Depth:About 48 km
	SKI	eP	10.01.14		25.0°	

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>				
1961 OCT									
7	TRN	eP iS	11.25.33 11.25.57		2.3°				
	SVI	iP eS	11.25.48 11.26.18		3.0°				
8	AWI	iP iS	03.06.07 03.06.26		1.8°				
	SKI	iP iS	03.06.10 03.06.28		1.8°				
8	AWI	iP iS	08.48.39 08.48.59		2.04°	H:08.48.10 E:16.2°N 62.0°W Depth:About 200 km Magnitude:5.7			
	DOM	eP	08.48.39		2.07°				
	SKI	iP iS	08.48.43 08.49.07	c	2.27°				
	BRB	e	08.49.46		4.20°	Very small			
8	GRE	eP	12.49.28		43.0°	USCGS Gives H:12.41.35 E:29.9°S 71.8°W Depth:About 65 km			
	SKI	eP	12.50.05		47.8°				
8	TRN	iP iS	20.33.(57) 20.34.(08)	d	(1.1°)				
9	TRN	eP'	00.01.(30)		165.6°	USCGS Gives H:23.41.32 E:1.6°N 127.3°E Depth:About 102 km			
9	AWI	eP	05.38.(55)		(0.9°)				
	SKI	iP iS	05.39.03 05.39.18		1.5°				
9	TRN	iP iS	15.11.(40) 15.11.(54)		(1.3°)				
10	TRN	eP'	08.45.(12)		144.5°	USCGS Gives H:08.25.55 E:5.4°S 154.3°E Depth:About 154 km			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 OCT 10	DOM	iP	12.32.14		1.51°	H:12.31.53 E:15.9°N 61.0°W Depth:About 150 km Magnitude:5.1
	AWI	eP	12.32.21		2.01°	
		iP	12.32.23			
	SKI	iP	12.32.30		2.58°	
		iS	12.32.56			
	SVI	e(P)	12.32.41		3.02°	
11	SKI	iP	22.03.40		1.8°	
		iS	22.03.59			
	AWI	iP	22.03.50		2.9°	
		iS	22.04.20			
12	AWI	iP	08.03.12		1.0°	
		iS	08.03.22			
	SKI	eP	08.03.24		1.8°	
		iS	08.03.42			
	DOM	e	08.03.45			
12	SKI	iP	13.54.05	d	2.63°	H;13.53.28 E:18.8°N 65.6°W Depth:About 50 km Magnitude:6.3 Felt:San Juan, Puerto Rico
		iS	13.54.29			
	AWI	iP	13.54.17	d	3.45°	
		iS	13.54.53			
	DOM	iP	13.54.37	d	4.92°	
		iS	13.55.27			
	SVI	iP	13.55.01	d	6.67°	
		T	14.00.23			
	GRE	iP	13.55.(14)	d	7.42°	
		T	14.01.19			
12	TRN	iP	14.09.55		1.62°	H:14.09.32 E:10.5°N 63.0°W Depth:About 50 km Magnitude:6.3
	GRE	iP	14.10.01		2.03°	
	SVI	iP	14.10.17		3.19°	
		iS	14.10.48			
	DOM	iP	14.10.43	d	5.05°	
		iS	14.11.34			
	AWI	eP	14.11.09		6.73°	
		iP	14.11.12			
		iS	14.12.19			
	SKI	iP	14.11.09		6.84°	
		iS	14.12.20			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>			
1961 OCT								
12	TRN	eP iS	16.06.58 16.07.11		1.2°			
13	✓ TRN	eP	05.10.25		72.5°	USCGS Gives H:04.59.05 E:55.9° S 27.2° W Depth:About 67 km		
X	✓ GRE	iP	05.10.32		73.9°			
	✓ SVI	eP	05.10.38		75.0°			
	✓ SKI	iP	05.11.03		79.8°			
13	✓ TRN	eP	10.58.20		74.0°	USCGS Gives H:10.46.48 E:60.3° S 34.3° W Small Depth:About 44 km		
X	✓ GRE	eP	10.58.27		75.2°			
13	TRN	e i	18.58.27 18.58.51					
14	DOM	eP iS	04.02.28 04.02.31		0.5°			
14	SVI	iP iS	15.24.54 15.25.09		1.4°			
	TRN	eP	15.25.31		4.1°			
14	X ✓ TRN	eP iS	16.39.51 16.40.00		0.9°			
15	TRN	iP iS	05.09.25 05.09.40	c	1.4°			
15	TRN	eP	07.37.13					
15	DOM	e	09.24.11					
15	AWI	iP iS	21.14.32 21.14.37	c	0.5°			
	SKI	iP iS	21.14.45 21.15.01		1.5°			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 OCT 16	SKI	iP	08.10.45	c	1.69°	H:08.10.21 E:17.9°N 62.2°W Depth:About 170 km Magnitude:5.7
	AWI	iP	08.10.46		1.72°	
		iS	08.11.02			
	DOM	iP	08.11.04	c	3.12°	
		iS	08.11.33			
	SVI	iP	08.11.32		5.06°	
	BRB	eP	08.11.42		5.61°	
	GRE	iP	08.11.47	d	6.07°	
	TRN	eP	08.12.07		7.49°	
		iP	08.12.10			
16	TRN	eP	18.32.28			
17	AWI	iP	01.19.18		1.47°	H:01.18.58 E:17.3°N 60.3°W Magnitude:(5.3)
		iS	01.19.32			
	DOM	eP	01.19.29		2.22°	
	SKI	eP	01.19.31		2.31°	
		iS	01.19.55			
18	TRN	iP	08.41.20	d	0.6°	
		iS	08.41.26			
18	TRN	eP	08.49.55		1.2°	
		eS	08.50.07			
18	GRE	iP	17.00.49		49.6°	Minor damage in area between Curico and Valdivia. Small USCGS Gives H:16.52.00 E:36.7°S 72.6°W Depth:About 67 km
	SVI	iP	17.00.57		50.9°	
	BRB	eP	17.01.04		51.0°	
	DOM	eP	17.01.12		53.0°	
	AWI	eP	17.01.18		54.5°	
	SKI	eP	17.01.19		54.6°	
18	GRE	eP	18.19.22		50.1°	USCGS Gives H:18.10.30 E:36.9°S 73.5°W Depth:About 55 km
	SVI	eP	18.19.30		51.5°	
	SKI	eP	18.19.44		55.0°	

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1961 OCT 19	GRE	eP	08.40.19		50.0° USCGS Gives H:08.31.29 E:36.9° S 72.7° W Depth:About 61 km
19	GRE ✓	eP iP	11.27.57 11.27.59		49.8° USCGS Gives H:11.19.20 E:37.1° S 69.8° W Depth:About 155 km
X	SVI ✓	eP	11.28.08		51.0°
	DOM ✓	eP	11.28.21		53.0°
	SKI ✓	eP e	11.28.35 11.29.11		54.6°
19	DOM	e	11.40.51		
19	TRN	eP i e	18.03.42 18.06.28 18.08.29		
20	TRN	eP	14.30.10		
21	TRN	eP	01.52.28		
22	GRE	eP	18.23.43		
22	TRN	eP	19.02.00		Small
22	GRE	eP	19.05.36		
22	TRN	eP eS	19.21.41 19.21.53		1.2° Very small
X	TRN ✓	eP	00.20.10		74.2° USCGS Gives H:00.08.33 E:60.4° S 33.4° W Depth:About 25 km
	GRE ✓	eP	00.20.22		75.8°
	SVI ✓	eP	00.20.33		77.0°
	DOM ✓	eP	00.20.39		79.0°
	AWI ✓ SKI ✓	eP eP	00.20.47 00.20.50		81.0° 81.2°

<u>DATE</u> 1961 OCT	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
23	SKI	iP	08.48.21		1.3
	AWI	eP	08.48.24		1.5°
		iS	08.48.40		
23	TRN	eP	12.12.29		1.5°
		eS	12.12.45		
23	BRB	e	14.13.13		Small
X 23	AWI	eP	14.59.38		
23	SVI	iP	17.27.55		1.22°
		iS	17.28.08		
	BRB	eP	17.27.57		1.17
	GRE	iP	17.28.12		2.39°
iS		17.28.37			
23	GRE	iP	21.09.38	d	1.6°
		iS	21.09.54		
24	GRE	iP	00.20.56		3.0°
		iS	00.21.27		
24	GRE	iP	04.55.33		1.9°
		iS	04.55.53		
24	DOM	eP	09.18.05		1.33°
		iS	09.18.19		
	SVI	eP	09.18.19		2.32°
		eS	09.18.42		
AWI	eP	09.18.(26)		2.64°	
	eS	09.18.59			
SKI	eP	09.18.34		3.38°	
	eS	09.19.13			
24	TRN	eP	23.31.09		1.1°
		iS	23.31.20		

H:17.27.38
E:14.0° N 60.4° W
Magnitude:(4.6)
Very small

H:09.17.46
E:15.2° N 60.0° W
Magnitude:(4.8)

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 OCT						
25	TRN	eP iS	03.48.01 03.48.21		1.9°	
	GRE	e	03.48.06			Small
	SVI	e	03.48.42			
25	GRE	iP	04.08.51	d		
25	DOM	eP	06.09.11			
25	SKI	iP iS	06.09.16 06.09.19		0.3°	
	AWI	iP iS	06.09.24 06.09.34		0.9°	
25	SKI	iP iS	06.13.01 06.13.05		0.3°	
	AWI	iP iS	06.13.09 06.13.19		0.9°	
25	✓ TRN	eP e	09.00.05 09.08.04		26.4°	USCGS Gives H:08.54.37 E:9.7°S 78.6°W Depth:About 110 km
	✓ GRE	eI	09.00.13		27.5°	
	✓ BRB	eP	09.00.36		29.5°	
	✓ SVI	eP	09.00.38		28.9°	
	✓ SKI	eP	09.00.46		31.2°	
	✓ AWI	eP i	09.00.47 09.01.11		31.5°	
	✓ DOM	e	09.00.52		30.2°	
25	SKI	iP	09.04.59		0.5°	
	AWI	eP iS	09.05.06 09.05.16		1.0°	
25	SKI	iP	23.08.29			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 OCT 26	SKI	iP iS	00.36.55 00.36.58		0.4°	
	AWI	iP iS	00.37.03 00.37.11	d	0.8°	
	DOM	e	00.37.34			
26	SKI	iP iS	00.41.10 00.41.13		0.3°	
	AWI	iP	00.41.18		0.9°	
	DOM	e	00.41.46			
26	SKI	iP	00.55.59		0.5°	
	AWI	iP iS	00.56.06 00.56.16		1.0°	
26	DOM	e	00.57.51		149.0°	USCGS Gives H:00.38.20
	SKI	eP'	00.58.05		146.9°	E:3.1°S 147.4°E
	AWI	eP'	00.58.06		148.0°	Depth:About 14 km
	TRN	eP'	00.58.10		150.2°	
	SVI	eP ₂ '	00.58.23		149.6°	Small
26	TRN	iP iS	03.12.43 03.12.49	c	0.6°	
26	SKI	iP	05.55.14		0.3°	
	AWI	eP iS	05.55.23 05.55.33		0.9°	
26	GRE	eP	08.25.01		50.8°	USCGS Gives H:08.16.03
						E:37.9°S 73.4°W
						Depth:About 55 km
26	TRN	eP	18.48.49			
26	SVI	eP iS	19.18.40 19.18.46		0.5°	
	TRN	eP	19.18.44		0.8°	

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961 OCT						
26	TRN	eP	21.59.06		12.0°	USCGS Givens H:21.56.18 E:6.9° N 73.1° W Depth:About 167 km
		i	21.59.13			
		e	22.01.36			
	SVI	eP	21.59.19		12.8°	
	DOM	eP	21.59.32		14.0°	
	SKI	eP	21.59.34		14.2°	
	BRB	eP	21.59.41		14.3°	
	AWI	eP	21.59.(43)		14.7°	
26	SKI	iP	22.21.20			
	AWI	eP	22.21.28			
27	TRN	iP	00.46.21	d	0.5°	
		iS	00.46.26			
27	SKI	eP	01.00.28		1.5°	
		iS	01.00.44			
	AWI	iP	01.00.28		1.5°	
27	AWI	iP	07.33.13	d	1.2°	
		iS	07.33.25			
	SKI	iP	07.33.23	d	1.8°	
		iS	07.33.41			
	DOM	e	07.33.44			
27	SKI	iP	23.18.58		3.0°	
		iS	23.19.29			
28	DOM	iP	10.18.11		0.96°	H:10.17.57 E:15.0° N 60.5° W Magnitude:5.5
		iS	10.18.26			
	SVI	iP	10.18.25		1.96°	
		iS	10.18.48			
	BRB	e	10.18.31		2.02°	Very small
	GRE	iP	10.18.42		3.17°	
		i	10.19.24			
	SKI	iP	10.18.43	c	3.22°	
		iS	10.19.19			
	TRN	eP	10.19.(04)		4.41°	

<u>DATE</u> 1961	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>			
OCT 29	SKI	eP	09.22.32		61.4°	USCGS Gives H:09.12.16		
	AWI	eP	09.22.34		62.0°	E:49.0°N 128.7°W		
	DOM	eP	09.22.49		63.8°	Depth:About 16 km		
	TRN	eP	09.23.09		67.2°			
29	TRN	eP	15.32.47					
		i	15.33.27					
29	SKI	iP	20.34.24	o	0.4°			
		iS	20.34.28					
29	SKI	iP	20.38.20		0.3°			
		iS	20.38.23					
29	SKI	eP	23.50.39		1.4°			
		iS	23.50.53					
30	TRN	iP	03.56.25					
30	DOM	eP	20.26.39		2.19°	H:20.26.08		
		eS	20.27.06			E:16.4°N 59.5°W		
	AWI	iP	20.26.42		2.40°	Magnitude:4.7		
		iS	20.27.13					
	SKI	eP	20.26.55		3.27°			
		iS	20.27.34					
	SVI	eP	20.27.00		3.69°			
		eS	20.27.39					
30	AWI	eP'	22.55.20		129.0°	USCGS Gives H:22.36.20		
	DOM	eP'	22.55.28		130.4°	E:29.3°N 141.8°E		
	SKI	e	22.55.32		128.0°	Depth:About 80 km		
31	SKI	iP	09.36.35		1.0°			
		iS	09.36.45					
	AWI	iP	09.36.40		1.5°			
		eS	09.36.56					
31	TRN	eP	12.20.35					
31	TRN	iP	21.10.39		0.6°			
		iS	21.10.45					

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STATION REPORT

TRINIDAD (TRIN) LAT. 10° 30' N LONG. 61° 30' W

GUAYAMA (GUA) LAT. 18° 00' N LONG. 61° 30' W

UNIVERSITY COLLEGE OF THE WEST INDIES (ST. VIN) LAT. 12° 15' N LONG. 61° 15' W

SEISMIC RESEARCH UNIT (BAR) LAT. 12° 15' N LONG. 61° 15' W

DOMINICA (DOM) LAT. 15° 30' N LONG. 61° 30' W

Regional Research Centre, (ANT) LAT. 12° 15' N LONG. 61° 15' W

Trinidad, West Indies. (ST. KIT) LAT. 12° 15' N LONG. 61° 15' W

NOV 1961

Preliminary Seismological Bulletin.

All stations are equipped with 200 cycle/sec and 1/2 second period galvanometers recording at 500 cycles/sec. Magnification is 10,000 at 5 cycles/sec, except at Barbados where it is 5,000 at 5 cycles/sec.

REMARKS: are noted to the first decimal place of a degree when this is justified, other wise to one half of a degree.

Depth are noted to one kilometer and origin times to one tenth of a second.

Intensity Scale in use: Modified Mercalli Intensity Scale.

*The Trinidad station has been operated in the past at the temporary sites given below:

From Jan 1955 to Jan January 1957 at 10° 45' N, 61° 30' W.

From Jan January 1957 to Jan September 1958 at 10° 45' N, 61° 30' W.

STATIONS REPORTING

TRINIDAD	(TRIN)*	LAT. 10° 39.0' N	LONG. 61° 24.1' W	27m.
GRENADA	(GREN)	LAT. 12° 02.7' N	LONG. 61° 44.1' W	30m.
ST. VINCENT	(ST. VIN)	LAT. 13° 10.2' N	LONG. 61° 15.5' W	10m.
BARBADOS	(BARB)	LAT. 13° 07.4' N	LONG. 59° 35.6' W	70m
DOMINICA	(DOM)	LAT. 15° 17.7' N	LONG. 61° 23.5' W	40m
ANTIGUA	(ANT)	LAT. 17° 08.6' N	LONG. 61° 50.1' W	27m
ST. KITTS	(ST. KIT)	LAT. 17° 20.3' N	LONG. 62° 43.7' W	

EQUIPMENT

All stations are equipped with Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

EPICENTRES are quoted to the first decimal place of a degree when this is justified, other wise to one half of a degree.

Depths are quoted to one kilometer and origin times to one tenth of a second.

Intensity Scale in use: Modified Mercalli Intensity Scale.

*The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West.

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE		
1961							
NOV 1	DOM	eP	09.26.51		0.6°		
	AWI	eP	09.27.12		02.2°		
		iS	09.27.35				
	SKI	e	09.27.49				
1	DOM	eP	09.28.21		0.6°		
	AWI	eP	09.28.42		02.1°		
		iS	09.29.04				
1	TRN	iP	11.48.33		1.2°	Very Small	
		iS	11.48.45				
1	AWI	iP	23.30.45	d	0.9°		
		iS	23.30.53				
	SKI	eP	23.30.49		1.1°		
		iS	23.31.01				
2	SKI	iP	13.30.14		0.3°		
		iS	13.30.18				
2	SVI	eP	15.43.38				
2	SKI	iP	15.48.48		0.3°		
		iS	15.48.51				
	AWI	iP	15.48.54		1.0°		
		iS	15.49.04				
2	SKI	iP	23.03.58		0.12°	H: 23.03.56	
	AWI	iP	23.04.08	d	0.80°	E: 17.2°N 62.7°W	
	DOM	iP	23.04.28	d	2.27°	Depth: About 10 km	
		i	23.04.58			Magnitude: 6.3	
	SVI	eP	23.04.56		4.25°		
		i	23.08.33				
	BRB	eP	23.05.(13)		5.07°		
	GRE	eP	23.05.09		5.23°		
		iP	23.05.10				
		i	23.10.10				
	TRN	eP	23.05.31		6.66°		
		iP	23.05.32				
		eS	23.06.42				

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	LOC	DEPTH
1961							
NOV 2	SKI	iP	23.07.(23)		(0.5°)	Leewar Islands	aftershock
	AWI	iP	23.07.30		0.9°		
		iS	23.07.39				
2	SKI	iP	23.14.20		0.3°	Leeward Island	aftershock
		iS	23.14.23				
	AWI	iP	23.14.26		0.9°		
		eS	23.14.36				
2	SKI	iP	23.15.35		0.5°	Leeward Island	aftershock
	AWI	iP	23.15.41		1.0°		
		iS	23.15.51				
2	SKI	iP	23.16.04		0.5°	Leeward Island	aftershock
	AWI	iP	23.16.11		0.9°		
		iS	23.16.21				
2	SKI	iP	23.16.46		0.5°	Leeward Island	aftershock
	AWI	iS	23.16.53		1.0°		
		iS	23.17.03				
2	SKI	iP	23.19.21		0.3°	Leeward Island	aftershock
		iS	23.19.24				
A	AWI	eP	23.19.29		1.0°		
		iS	23.19.39				
2	SKI	iP	23.22.38		0.19°	H: 23.22.35	
	AWI	iP	23.22.44	d	0.67°	E: 17.5° N 62.5° W	
	DOM	eP	23.23.09		2.39°	Depth: About 10 km	
						Magnitude: 4.3	
2	SKI	iP	23.25.05		0.3°	Leeward Island	aftershock
		iS	23.25.09				
	AWI	iP	23.25.12	d	1.0°		
		iS	23.25.23				
2	SKI	iP	23.26.19		0.4°	Leeward Island	aftershock
	AWI	iP	23.26.26		0.9°		
		iS	23.26.35				

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
NOV 2	SKI	eP	23.28.51		0.4°	Leeward Islands aftershock
		iS	23.28.55			
2	SKI	iP	23.29.07		0.3°	Leeward Islands aftershock
		iS	23.29.11			
	AWI	eP	23.29.14		0.9°	
		iS	23.29.24			
2	SKI	iP	23.30.11		0.3°	Leeward Islands aftershock
		iS	23.30.14			
	AWI	eP	23.30.18		0.9°	
		iS	23.30.28			
2	SKI	eP	23.31.56		0.3°	Leeward Islands aftershock
		iS	23.31.59			
2	SKI	iP	23.34.54			Leeward Islands aftershock
2	SKI	iP	23.36.37		0.3°	Leeward Islands aftershock
		iS	23.36.40			
2	SKI	iP	23.38.41			Leeward Islands aftershock
2	SKI	iP	23.40.30		0.2°	Leeward Islands aftershock
		iS	23.40.32			
	AWI	eP	23.40.39		1.0°	
		iS	23.40.49			
2	SKI	iP	23.42.44		0.4°	Leeward Islands aftershock
6		iS	23.42.48			
2	SKI	iP	23.44.40		0.7°	Leeward Islands aftershock
	AWI	iP	23.44.45		1.1°	
		iS	23.44.57			
2	SKI	iP	23.45.59		0.7°	Leeward Islands aftershock
		iS	23.46.06			
2	SKI	iP	23.51.53		0.6°	Leeward Islands aftershock
	AWI	iP	23.51.58		1.0°	
		iS	23.52.09			

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
NOV 2	SKI	eP	23.55.33		0.5°	Leeward Islands aftershock
		iS	23.55.39			
3	SKI	eP	00.02.35		0.7°	Leeward Islands aftershock
		iS	00.02.43			
3	SKI	eP	00.19.47		0.4°	Leeward Islands aftershock
		iS	00.19.51			
	AWI	iP	00.19.53		0.8°	
3	SKI	eP	00.26.26		0.4°	Leeward Islands aftershock
		iS	00.26.30			
3	SKI	iP	00.28.19		0.3°	Leeward Islands aftershock
		iS	00.28.23			
	AWI	eP	00.28.27		1.0°	
		iS	00.28.37			
3	SKI	iP	00.35.13		0.5°	Leeward Islands aftershock
		iS	00.35.16			
	AWI	iP	00.35.19		1.0°	
		iS	00.35.29			
3	SKI	iP	00.54.52		0.5°	Leeward Islands aftershock
		iS	00.54.56			
3	SKI	eP	01.41.06		0.3°	Leeward Islands aftershock
		iS	01.41.09			
3	SKI	iP	01.42.13		0.4°	Leeward Islands aftershock
		iS	01.42.17			
	AWI	iP	01.42.21		0.9°	
3	SKI	iP	01.58.12		0.3°	Leeward Islands aftershock
		iS	01.58.15			
3	SKI	iP	02.01.39		0.6°	Leeward Islands aftershock
		iS	02.01.45			
	AWI	iP	02.01.48		1.0°	
		iS	02.01.59			

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	STATION	PHASE	DATE
1961								
NOV 3	SKI	iP	02.03.06		0.4°			Leeward Islands aftershock
		iS	02.03.10					
	AWI	iP	02.03.12		1.0°			
		iS	02.03.22					
3	SKI	iP	02.05.26		0.4°			Leeward Islands aftershock
		iS	02.05.30					
	AWI	eP	02.05.32		0.9°			
3	SKI	iP	02.50.08		0.3°			Leeward Islands aftershock
		iS	02.50.11					
	AWI	eP	02.50.14		0.8°			
3	SKI	iP	03.06.21		0.3°			Leeward Islands aftershock
		iS	03.06.24					
	AWI	eP	03.06.28		0.9°			
		iS	03.06.38					
3	SKI	iP	03.09.27		0.4°			Leeward Islands aftershock
		iS	03.09.31					
3	SKI	eP	03.33.01		0.4°			Leeward Islands aftershock
		iS	03.33.05					
3	SKI	iP	03.36.26		0.4°			Leeward Islands aftershock
		iS	03.36.31					
	AWI	eP	03.36.32		0.8°			
3	SKI	iP	03.57.52		0.23°			H: 03.57.48
	AWI	iP	03.57.59		0.74°			E: 17.6° N 62.5° W
	DOM	eP	03.58.24		2.51°			Depth: About 10 km
								Magnitude: 5.4
3	SKI	iP	04.21.35		0.5°			Leeward Islands aftershock
	AWI	iP	04.21.42		1.0°			
		iS	04.21.52					
3	SKI	iP	04.27.32		0.3°			Leeward Islands aftershock
		iS	04.27.35					

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
NOV 3	SKI	eP	04.28.48		0.5°	Leeward Islands aftershock
		iS	04.28.54			
	AWI	iP	04.28.54		0.9°	
3	SKI	iP	04.46.56			Leeward Islands aftershock
3	SKI	iP	04.49.13	c	0.6°	Leeward Islands aftershock
		iS	04.49.19			
	AWI	iP	04.49.20	d	1.1°	
	DOM	e	04.49.49			
3	SKI	iP	05.06.52		0.3°	Leeward Islands aftershock
		iS	05.06.55			
3	SKI	iP	05.36.52		0.19°	H: 05.36.48
	AWI	iP	05.36.57	d	0.67°	E: 17.5°N 62.5°W
	DOM	eP	05.37.22		2.39°	Depth: About 10 km
	TRN	eP	05.38.25		6.88°	Magnitude: 5.4
3						Very small
3	DOM	e	05.41.38			
	SVI	eP	05.41.42			
3	SKI	iP	05.43.59		0.4°	Leeward Islands aftershock
		iS	05.44.03			
	AWI	iP	05.44.06	d	0.9°	
		iS	05.44.15			
3	SKI	iP	05.47.44		0.4°	Leeward Islands aftershock
		iS	05.47.48			
	AWI	eP	05.47.50		0.7°	
3	SKI	iP	06.08.09		0.3°	Leeward Islands aftershock
	AWI	iP	06.08.17		0.3°	
		iS	06.08.25			
3	SKI	iP	07.01.30		0.5°	Leeward Islands aftershock
		iS	07.01.35			
	AWI	iP	07.01.38		0.9°	
	DOM	e(P)	07.02.(06)		(3.0°)	

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
NOV 3	SKI	eP	07.04.29		0.3°	Leeward Islands aftershock
		iS	07.04.32			
3	SKI	eP	07.14.25		0.5	Leeward Islands aftershock
		iS	07.14.30			
3	SKI	iP	07.20.38		0.3°	Leeward Islands aftershock
		iS	07.20.41			
3	SKI	iP	08.51.31			Leeward Islands aftershock
	AWI	iP	08.51.38	d		
	DOM	eP	08.52.(07)			
3	SKI	eP	08.55.01		0.5°	Leeward Islands aftershock
		iS	08.55.07			
3	SKI	iP	09.36.33	c	0.5°	Leeward Islands aftershock
		iS	09.36.39			
	AWI	iP	09.36.41		1.1°	
		iS	09.36.52			
	DOM	eP	09.37.(10)			
3	SKI	iP	09.38.10		0.23°	H: 09.38.05
		iS	09.38.16			E: 17.7°N 62.6°W
	AWI	iP	09.38.17		0.86°	Depth: About 10 km
	DOM	eP	09.38.42		2.61°	Magnitude: (5.6)
3	SKI	iP	12.12.53		0.3°	Leeward Islands aftershock
		iS	12.12.57			
	AWI	iP	12.13.00		1.0°	
		iS	12.13.11			
3	SKI	iP	12.24.34	d	0.23°	H: 12.24.30
		iS	12.24.37			E: 17.6°N 62.5°W
	AWI	iP	12.24.40	d	0.74°	Depth: About 10 km
		iS	12.24.49			Magnitude: 4.6
	DOM	eP	12.25.05		2.51°	Small

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE
1961					
NOV 3	SKI	iP	14.07.36		0.4°
		iS	14.07.41		
	AWI	eP	14.07.44		0.9°
		iS	14.07.54		
3	TRN	eP	16.05.34		2.4°
		iP	16.05.35		
		iS	16.06.00		
	GRE	eP	16.05.48		2.9°
		iS	16.06.18		
3	SKI	iP	16.37.49	c	0.4°
		iS	16.37.53		
	AWI	iP	16.37.58		1.1°
		iS	16.38.09		
3	SKI	iP	19.16.36		0.5°
		iS	19.16.42		
3	SKI	iP	20.45.44		0.4°
		iS	20.45.48		
3	SKI	iP	21.04.13		0.3°
		iS	21.04.16		
	AWI	iP	21.04.19		0.7°
3	SKI	iP	23.10.20		0.3°
		iS	23.10.23		
	AWI	eP	23.10.27		1.0°
		iS	23.10.37		
3	SKI	iP	23.15.40		0.4°
		iS	23.15.44		
	AWI	eP	23.15.46		1.0°
		iS	23.15.56		
4	SKI	eP	01.10.04		0.3°
		iS	01.10.08		

Leeward Islands aftershock

Leeward Islands aftershock

Leeward Islands aftershock

Leeward Islands aftershock

Leeward Islands aftershock

Leeward Islands aftershock

Leeward Islands aftershock

Leeward Islands aftershock

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE
1961					
NOV 4	SKI	iP	01.55.54		0.5° Leeward Islands aftershock
		iS	01.56.00		
	AWI	eP	01.56.00		0.9°
		iP	01.56.02		
4	SKI	iP	03.43.47		0.4° Leeward Islands aftershock
		iS	03.43.51		
4.	SKI	iP	04.00.30	c	0.3° Leeward Islands aftershock
		iS	04.00.34		
	AWI	iP	04.00.37		0.9°
		iS	04.00.47		
4	SKI	iP	04.03.46		0.4° Leeward Islands aftershock
		iS	04.03.50		
4	SKI	iP	04.58.28		Leeward Islands aftershock
4	SKI	eP	15.10.28		0.4° Leeward Islands aftershock
		iS	15.10.32		
4	SKI	iP	16.39.16		0.3° Leeward Islands aftershock
		iS	16.39.19		
5	SKI	eP	00.16.09		0.3° Leeward Islands aftershock
		iS	00.16.11		
5	SKI	iP	02.17.44		0.5° Leeward Islands aftershock
		iS	02.17.49		
5	TRN	eP	03.06.09		0.6°
		iS	03.06.15		
5	TRN	iP	08.32.56	c	0.6°
		iS	08.33.02		
5	SKI	iP	08.43.48		0.3° Leeward Islands aftershock
		iS	08.43.51		
5	SKI	eP	10.29.49		0.3° Leeward Islands aftershock
		iS	10.29.52		

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
NOV 5	GRE	iP	10.31.25	c	1.46°	H: 10.31.05			
		i	10.31.44			E: 12.1° N 60.3° W			
	SVI	eP	10.31.26		1.49°	Depth: About 50 km			
		iP	10.31.27			Magnitude: 4.3			
		i	10.31.45						
	BRB	eP	10.31.27		1.33°				
	TRN	iP	10.31.31	d	1.85°				
		iS	10.31.50						
	DOM	e	10.32.07		3.39°				
5	SKI	iP	12.59.09						
5	SKI	iP	14.20.52						
5	DOM	iP	14.54.31		1.32°	H: 14.54.12			
		iS	14.54.43			E: 16.3° N 60.5° W			
	SKI	eP	14.54.(50)		2.39°	Magnitude: 5.4			
	SVI	eP	14.54.58		3.20°				
		eS	14.55.32						
	GRE	eP	14.55.14		4.40°				
	TRN	e	14.55.38		5.69°	Very small			
5	SKI	iP	16.52.23						
	DOM	e	16.52.59						
5	TRN	e	21.10.53			Very small			
5	SKI	iP	21.13.23		2.4°				
		iS	21.13.48						
	DOM	eP	21.13.29		2.8°				
5	SKI	iP	22.19.25						
5	SKI	iP	22.49.53						
6	SKI	iP	04.08.08	c	1.7°				
		iS	04.08.25						
	DOM	e	04.08.33						

TIME G.M.T. MOTION DISTANCE

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	AMPLITUDE	PERIOD	SLIP	STATION	DATE
NOV 6	SKI	iP	04.45.06							
6	GRE	iP	05.19.15	d						
6	GRE	eP	14.49.54		1.19°					
		iS	14.50.05							
	TRN	eP	14.49.59		1.53°					
		iP	14.50.01							
		iS	14.50.17							
	SVI	eP	14.50.03		1.92°					
		iS	14.50.22							
6	SKI	iP	20.14.08		0.4°					
		iS	20.14.12							
	AWI	iP	20.14.15		0.9°					
6	TRN	iP	21.01.59	c	1.3°					
		iS	21.02.12							
	GRE	eP	21.02.08		1.7°					
		iS	21.02.25							
7	BRJ	e	05.36.27							
7	DOM	iP	10.35.02		1.1°					
		iS	10.35.13							
	AWI	iP	10.35.09		1.6°					
		iS	10.35.25							
7	SKI	iP	14.49.25		1.2°					
		iS	14.49.38							
	AWI	iP	14.49.34		1.9°					
		iS	14.49.53							
7	SKI	iP	23.40.09		0.14°					
	AWI	iP	23.40.17		0.72°					
	DOM	eP	23.40.39		2.23°					
		iP	23.40.43							
		iS	23.40.05							
	SVI	eP	23.41.06		4.23°					
	GRE	iP	23.41.19	d	5.22°					
	BRB	eP	23.41.(20)		5.01°					
	TRN	eP	23.41.41		6.65°					
		iP	23.41.42							

H: 14.49.37
 E: 11.7° N 61.7° W
 Depth: About 125 km
 Magnitude: 3.5

H: 23.40.07
 E: 17.2° N 62.6° W
 Depth: About 10 km
 Magnitude: 5.9

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE		
1961							
NOV 7	DOM	e	23.44.58				
	SVI	i	23.45.02				
	SKI	iP	23.45.38		0.5°		
	AWI	eP	23.45.45		1.0°		
		iS	23.45.55				
	GRE	e	23.46.21				
8	SKI	iP	00.10.50		0.3°		
		iS	00.10.52				
	AWI	iP	00.10.57		0.8°		
	DOM	e	00.11.26				
8	SKI	iP	00.30.24				
	AWI	iP	00.30.32				
8	SKI	iP	00.31.43		0.4°		
	AWI	eP	00.31.50		0.9°		
		iS	00.31.59				
8	SKI	iP	01.45.10		0.3°		
	AWI	iP	01.45.18		0.9°		
		iS	01.45.27				
8	SKI	iP	03.13.00		0.4°		
	AWI	eP	03.13.07		0.9°		
		iS	03.13.16				
8	SKI	iP	05.02.51				
	AWI	iP	05.02.58				
8	SKI	iP	05.48.(50)		0.13°	H: 05.48.48	
	AWI	iP	05.48.58		0.71°	E: 17.3° N 62.6° W	
		iS	05.49.08			Depth: About 10 km	
	DOM	eP	05.49.21		2.26°	Magnitude: 5.2	
		iS	05.49.48				
	SVI	e(P)	05.49.45		4.52°		
		e	05.53.52				
	GRE	iP	05.50.02		5.25°		
		e	05.55.02				
	TRN	eP	05.50.23		6.68°	Small	
		iP	05.50.25				

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	TIME	STATION	PHASE	DATE
1961									
NOV 8	SKI	iP	06.11.(56)		0.12°				
	AWI	iP	06.12.05		0.80°				
		iS	06.12.14						
	DOM	eP	06.12.(29)		2.27°				
		eS	06.12.57						
	GRE	eP	06.13.03		5.23°				
	TRN	eP	06.13.(31)		6.66°	Small			
8	SKI	iP	06.15.37		0.4°				
	AWI	eP	06.15.45		0.9°				
		iS	06.15.55						
8	SKI	iP	06.53.(48)		(0.4°)				
		iS	06.53.(52)						
	AWI	iP	06.53.56		1.0°				
		iS	06.54.06						
8	SKI	iP	07.38.22		0.13°	H: 07.38.20			
	AWI	iP	07.38.29		0.71°	E: 17.3° N 62.6° W			
	DOM	eP	07.38.52		2.28°	Depth: About 10 km			
		eS	07.39.26			Magnitude: 5.1			
	GRE	eP	07.39.33		5.28°				
	TRN	eP	07.39.55		6.71°				
8	AWI	eP	10.08.06						
8	SKI	iP	11.45.11		0.4°				
	AWI	iP	11.45.18		0.9°				
		iS	11.45.27						
8	SKI	iP	22.39.14						
8	SKI	iP	22.53.10						
9	SKI	iP	01.59.55						

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	REMARKS
1961						
NOV 9	TRN	eP	04.26.(23)		34.4°	USCGS Gives H: 04.19.42
	GRE	eP	04.26.33		35.8°	E: 22.9°S 67.9°W
		iP	04.26.37			Depth: About 84 km
	SVI	eP	04.26.42		36.8°	
	DOM	eP	04.26.56		39.0°	
9	HOP	iP	06.03.24	d	0.3°	
		iS	06.03.27			
	BRJ	e	06.03.52			Small
9	BRJ	iP	18.33.29			
		e	18.35.31			
10	TRN	eP	02.13.13		27.5°	USCGS Gives H: 02.07.35
	GRE	eP	02.13.21		28.2°	E: 14.3°S 71.9°W
	SVI	eP	02.13.32		29.7°	Depth: About 68 km
	DOM	eP	02.13.47		31.5°	
	SKI	eP	02.14.02		33.0°	
10	SKI	iP	06.50.39			
11	SKI	iP	01.33.34		0.4°	
		iS	01.33.38			
	AWI	eP	01.33.(49)		(1.4°)	
		iS	01.34.(04)			
11	SKI	iP	02.53.25		0.4°	
		iS	02.53.29			
11	SKI	iP	03.17.02		1.2°	
		iS	03.17.15			
11	DOM	eP	04.19.56		1.26°	H: 04.19.38
	AWI	iP	04.20.07	d	2.03°	E: 15.3°N 62.5°W
		iS	04.20.27			Depth: About 75 km
	SKI	eP	04.20.08		2.14°	Magnitude: 3.5
		e	04.20.36			Small

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE
1961					
NOV 11	HOP	e	12.30.01		Small
	SKI	iP	12.30.19		
	AWI	iP	12.30.(33)		
11	SKI	iP	20.58.32	0.6°	
		iS	20.58.38		
11	GRE	eP	21.52.06	23.2°	USCGS Gives H: 21.47.00 E: 8.2°S 75.0°W Depth: About 119 km
12	SKI	iP	05.04.01		
12	SKI	iP	14.24.01	1.2°	
		iS	14.24.13		
13	SKI	iP	04.50.43	0.4°	
		iS	04.50.47		
	AWI	eP	04.50.51	0.9°	
		iS	04.51.01		
13	AWI	eP	05.54.16	0.9°	
		iS	05.54.25		
	SKI	iP	05.54.25	1.4°	
		iS	05.54.40		
13	TRN	eP	08.14.39		
		e	08.16.22		
	HOP	e	08.15.02		
		e	08.17.02		
13	HOP	eP	11.28.29		
13	SKI	iP	16.06.56	1.4°	
		iS	16.07.11		
	AWI	iP	16.06.59	1.6°	
13	SKI	iP	16.54.54	0.3°	
		iS	16.54.58		
	AWI	iP	16.55.01	d 1.0°	
		iS	16.55.11		

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE
1961					
NOV 14	BRJ	iP	04.45.05		11.3°
	HOP	eP	04.45.20		11.8°
		iP	04.45.28		
		iS	04.47.36		
	TRN	eP	04.47.09		21.1°
		iP	04.47.12		
	GRE	eP	04.47.10		21.2°
	SKI	eP	04.47.16		21.7°
	SVI	eP	04.47.18		21.8°
	AWI	eP	04.47.24		22.3°
	BRB	eP	04.47.38		23.2°
14	BRJ	eP	04.54.(17)		
	HOP	e	04.54.47		
14	TRN	eP	07.14.13		Very small
14	AWI	iP	11.09.00		1.2°
		iS	11.09.12		
	SKI	iP	11.09.10		1.5°
		iS	11.09.25		
14	SVI	eP	21.43.54		2.2°
		iS	21.44.17		
	AWI	eP	21.43.(59)		(2.6°)
	SKI	eP	21.44.12		3.5°
15	AWI	eP	00.33.00		0.6°
		iS	00.33.06		
	SKI	i	00.33.28		
15	SKI	eP	07.35.43		2.8°
		iS	07.36.12		
	AWI	e	07.35.52		Small
	TRN	eP	07.36.03		4.2°

USCGS Gives H: 04.42.27
 E: 7.3° N 82.4° W
 Depth: About 29 km

DATE STATION PHASE TIME G.M.T. MOTION DISTANCE

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
NOV 15	TRN	iP	14.39.27		0.55°	H: 14.39.19
	GRE	eP	14.39.47		1.98°	E: 10.1° N 61.3° W
		iP	14.39.50			Magnitude: 5.2
		iS	14.40.08			
	SVI	eP	14.40.01		3.04°	
15	TRN	iP	16.27.12		0.6°	
		iS	16.27.18			
15	HOP	iP	17.03.24		2.2°	
		iS	17.03.47			
	BRJ	iP	17.03.25		2.4°	
		iS	17.03.50			
16	SKI	iP	08.21.22	c	6.01°	H: 08.19.53
		iS	08.22.31			E: 18.1° N 69.0° W
	AWI	iP	08.21.32		6.87°	Magnitude: 6.0
		iS	08.22.48			
	HOP	eP	08.21.41		7.42°	
	BRJ	iP	08.21.(56)		8.49°	
	SVI	eP	08.22.00		8.92°	
	BRB	eP	08.22.22		10.31°	
	TRN	eP	08.22.24		10.45°	
		iP	08.22.26			
		iS	08.24.17			
17	SKI	iP	10.43.17		0.5°	
		iS	10.43.22			
17	SKI	iP	12.19.19		0.4°	
		iS	12.19.22			
18	SKI	iP	07.08.33		1.0°	
		iS	07.08.44			
	AWI	iP	07.08.37	d	1.2°	
		iS	07.08.49			
18	SKI	iP	08.12.42		0.3°	
	AWI	iP	08.12.50	d	0.9°	
		iS	08.12.59			

TIME G.M.T. MOTION DISTANCE

Year	Station	Motion	Time G.M.T.	Distance	Notes
1961	NOV18 TRN	eP	10,39,12	23,3°	USCGS Gives H: 10,34,06 E: 8,8°S 74,7°W Depth: About 50 km
	GRE	eP	10,39,20	24,4°	
	SVI	eP	10,39,30	25,7°	
	BRB	eP	10,39,(42)	26,4°	
	BRJ	eP	10,39,45	27,1°	
		e	10,40,30		
	SKI	eP	10,39,58	28,5°	
	HOP	e	10,40,06	27,0°	
18	TRN	eP	18,27,56		
		i	18,27,59		
		e	18,28,22		
	GRE	e	18,28,04		
18	GRE	eP'	22,29,22	144,5°	Felt: deep coast of Formosa USCGS Gives H: 22,09,53 E: 23,7°N 121,8°E Depth: About 60 km
	TRN	eP'	22,29,29	145,7°	
19	TRN	eP	01,46,39	1,72°	H: 01,46,13 E: 9,7°N 62,5°W Depth: About 100 km Magnitude: 3,5
	GRE	eP	01,46,50	2,64°	
		iS	01,47,16		
	SVI	eP	01,47,06	3,80°	
19	SKI	eP	06,26,46		
19	AWI	eP	22,41,39		
19	BRJ	eP'	23,41,32	151,2°	USCGS Gives H: 23,21,56 E: 0,8°N 124,3°E Depth: About 157 km.
		e	23,41,42		
	HOP	eP'	23,41,36	152,0°	
	TRN	e	23,41,46	167,5°	
		e	23,42,50		
	SKI	e	23,42,20	160,9°	Small
20	HOP	eP	00,01,12		
		e	00,03,04		
		e	00,03,16		
	BRJ	iP	00,01,16		
		e	00,03,24		
	TRN	eP	00,01,20		Small

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
NOV 20	AWI	iP	04.04.59			
20	TRN	iP iS	05.01.04 05.01.14		1.0°	
20	SKI	eP	18.03.32		24.2°	USCGS Gives H: 17.58.18
	AWI	e	18.03.36		24.0°	E: 31.3°N 40.9°W
	SVI	eP	18.03.57		26.2°	Depth: About 44 km
	TRN	eP	18.04.07		28.0°	
	BRJ	eP	18.05.26		35.7°	
21	TRN	eP iP	06.39.14 06.39.16		2.05°	H: 06.38.45 E: 09.9°N 63.3°W
	GRE	eP iP iS	06.39.22 06.39.23 06.39.49		2.66°	Magnitude: 6.2
	SVI	eP	06.39.39		3.85°	
	AWI	eP iP	06.40.29 06.40.39		7.37°	
	SKI	eP	06.40.30		7.45°	
21	TRN	eP	06.47.06			
21	TRN	eP iP	08.04.15 08.04.17		2.87°	H: 08.03.35 E: 09.5°N 64.1°W
	GRE	eP iP iS	08.04.24 08.04.29 08.04.57		3.42°	Magnitude: 6.4
	SVI	iP iS	08.04.40 08.05.28		4.57°	
	AWI	eP	08.05.(30)		7.91°	
	SKI	iP	08.05.(32)		7.91°	
21	TRN	iP iS	08.07.46 08.08.02		1.5°	
21	TRN	eP iP iS	11.59.31 11.59.34 11.59.48		1.7°	
	GRE	e	11.59.54			

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1961								
NOV 21	AWI	iP	20.11.18		0.49°	H: 20.11.11		
	SKI	iP	20.11.29		1.28°	E: 17.4° N 61.4° W		
	SVI	iP	20.12.11		4.20°	Magnitude: 6.1		
	GRE	eP	20.12.26		5.33°			
	BRB	e	20.12.27		4.57°			
	TRN	eP	20.12.(48)		6.71°			
		eS	20.13.(58)					
21	HOP	iP	20.31.13		0.3°			
		iS	20.31.16					
	BRJ	eP	20.31.32		1.5°			
		eS	20.31.47					
21	AWI	iP	21.27.16					
22	AWI	iP	01.11.20	d	0.5°			
		iS	01.11.25					
	SKI	eP	01.11.32		1.3°			
		iS	01.11.45					
22	TRN	eP	03.14.14		1.9°			
		iP	03.14.16					
		iS	03.14.33					
	GRE	eP	03.14.23		2.5°			
22	BRJ	eP	03.57.37					
22	TRN	eP	11.43.18		1.8°			
		iS	11.43.36					
22	AWI	iP	14.58.54		1.01°	H: 14.58.39		
	DOM	eP	14.59.03		1.68°	E: 16.8° N 61.1° W		
		iS	14.59.20			Depth: About 75 km		
	SKI	iP	14.59.04		1.74°	Magnitude: 3.8		
		iS	14.59.22					
23	TRN	iP	02.17.26		2.5°			
		iS	02.16.51					
23	AWI	eP	09.43.44					

STATION NAME TIME G.M.T. MOTION DISTANCE

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
NOV 23	HOP	eP	10.38.41		10.2°	USCGS Gives H: 10.36.11 E: 11.1°N 84.7°W Depth: About 168 km
	GRE	eP	10.40.43		22.6°	
	TRN	eP	10.40.55		23.0°	
23	SKI	iP iS	13.29.40 13.29.44		0.4°	
24	SKI	eP iS	07.46.57 07.47.06		0.9°	
24	BRJ	eP	13.23.(52)			
24	BRJ	eP	19.44.18			
25	GRE	iP iS	01.54.52 01.55.03	c	1.6°	
	TRN	iP iS	01.54.58 01.55.17	d	1.9°	
25	AWI	iP	09.57.(41)		(0.8°)	
	SKI	iP iS	09.57.48 09.58.01		1.3°	
	DOM	eP eS	09.58.11 09.58.42		3.0°	
25	SKI	iP iS	11.59.50 12.00.05		1.5°	
25	BRJ	e	14.30.15		127.7°	USCGS Gives H: 14.11.23 E: 6.3°S 154.8°E Depth: About 83 km
	SVI	ee	14.30.15		143.9°	
	AWI	eP'	14.30.43		142.0°	
	TRN	eP'	14.30.47		144.0°	
	SKI	eP'	14.30.(48)		142.8°	
26	AWI	eP	06.27.57			
	SKI	e	06.28.01			
26	HOP	e(P) eS	08.20.34 08.20.57		2.2°	

TIME G.M.T. MOTION DISTANCE

DATE	STATION	TYPE	TIME	MOTION	DISTANCE
NOV 26	AWI	eP	16.33.49		
	SKI	e	16.33.57		
27	TRN	eP	00.40.01	1.8° Small	
		eS	00.40.20		
	GRE	e	00.40.(02)		
27	HOP	eP	01.10.27		
		e	01.12.26		
	TRN	eP	01.10.30		
		i	01.10.38		
		e	01.12.59		
	BRJ	eP	01.10.31		
		e	01.12.29		
	GRE	eP	01.10.(35)		
	AWI	eP	01.11.07		
27	BRJ	eP	07.00.(50)		
	HOP	e	07.01.24	Small	
27	SKI	iP	13.47.49	0.9°	
		iS	13.47.58		
	AWI	iP	13.47.55	1.2°	
27	TRN	eP	20.12.50	2.5°	
		iP	20.12.53		
	GRE	eP	20.12.55	2.8°	
		eS	20.13.24		
27	SKI	iP	20.40.16	1.2°	
		iS	20.40.28		
27	BRJ	iP	22.24.37	1.2°	
		iS	22.24.50		
28	AWI	eP	00.31.36		
28	SKI	eP	03.13.09		
	AWI	eP	03.13.20		

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1961						
NOV28	DOM	iP	04.09.39	c	1.33°	H: 04.09.20
		iS	04.09.56			E: 14.8°N 61.7°W
	SVI	iP	04.09.50	c	2.07°	Depth: About 130 km
		iS	04.10.14			Magnitude: 4.6
	AWI	iP	04.09.56	c	2.62°	
	SKI	iP	04.10.02	c	2.98°	
	GRE	iP	04.10.03	c	3.01°	
		eS	04.10.41			
	TRN	iP	04.10.21		4.33°	
		iS	04.11.09			
28	TRN	iP	09.54.13		2.14	H: 09.53.42
	GRE	iP	09.54.13		2.19°	E: 10.8°N 63.6°W
		i(S)	09.54.31			Magnitude: 5.1
	SVI	eP	09.54.29		3.27°	
		eS	09.55.02			
29	TRN	eP	05.32.51			Very small
29	GRE	eP	20.43.17		22.6°	USCGS Gives H: 20.38.07
						E: 6.9°S 75.9°W
						Depth: About 25 km
29	TRN	eP	22.14.54			
30	TRN	iP	04.47.36	c	1.04°	H: 04.47.21
		iS	04.47.47			E: 11.2°N 62.0°W
	GRE	iP	04.47.37		1.14°	Depth: About 75 km
		iS	04.47.48			Magnitude: 4.1
	SVI	eP	04.47.52		2.25°	

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SEISMIC RESEARCH UNIT

UNIVERSITY COLLEGE OF THE WEST INDIES

SEISMIC RESEARCH UNIT

Regional Research Centre,

Trinidad, West Indies.

DEC 1961

Preliminary Seismological Bulletin.

Extensive in equipped with three components of Illinois type 1 recorders.

All other stations have similar equipment recording vertical component.

Amplification is 10,000 at 5 cycles/sec. except at stations where it is 5,000 at 5 cycles/sec.

The Trinidad station has been operated in the past of the following sites:

from the 1st 1953 to the January 1958 at 10° 40' N, 78° 15' W.

from the January 1958 to the September 1958 at 10° 40' N, 78° 15' W.

Intensity Scale in use: Modified Mercalli Intensity Scale.

STATIONS REPORTING

TRINIDAD	(TRN)*	LAT. 10° 39.0'N	LONG. 61° 24.1'W	27m.
GRENADA	(GRE)	LAT. 12° 02.7'N	LONG. 61° 44.1'W	30m.
ST. VINCENT	(SVI)	LAT. 13° 10.2'N	LONG. 61° 15.5'W	10m.
BARBADOS	(BRB)	LAT. 13° 07.4'N	LONG. 59° 35.6'W	70m.
DOMINICA	(DOM)	LAT. 15° 17.7'N	LONG. 61° 23.5'W	40m.
ANTIGUA	(AWI)	LAT. 17° 08.6'N	LONG. 61° 50.1'W	27m.
ST. KITTS	(SKI)	LAT. 17° 20.3'N	LONG. 62° 43.7'W	
HOPE, JAMAICA	(HOP)	LAT. 18° 01' N	LONG. 76° 45' W	200m.
BEVERLEY, JAMAICA	(BEV)	LAT. 18° 27' N	LONG. 77° 18' W	123m.
BLACK RIVER, JAMAICA	(BRJ)	LAT. 18° 02' N	LONG. 77° 52' W	8m.

EQUIPMENT

Trinidad is equipped with three components of Willmore Watts 1 second period seismometers and $\frac{1}{4}$ second period galvanometers recording at 60mm/min.

All other stations have similar equipment recording vertical component only.

Magnification is 10,000 at 3 cycles/sec. except at Barbados where it is 3,000 at 3 cycles/sec.

* The Trinidad station has been operated in the past at the temporary sites given below:-

From 1st May 1953 to 1st January 1955 at 10° 40.1' North 61° 31.2' West

From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

Intensity Scale in use: Modified Mercalli Intensity Scale.

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1961								
DEC 1	HOF	e(P) iS	02.47.43 02.48.03		1.4°			
	BRJ	eP	02.47.50		1.5°			
1	GRE	iP eS	03.00.(29) 03.00.(40)		(1.1°)			
	TRN	eP iS	03.00.37 03.00.53		(1.5°)			
1	TRN	iP iS	11.42.40 11.42.54	d	1.3°			
1	TRN	e	20.08.(48)					
1	AWI	eP'	21.31.55		137.8°	USCGS Gives H: 21.13.04		
	TRN	eP'	21.32.(12)		142.0°	E: 26.5° N 124.9° E		
						Depth: About 206 km		
1	TRN	iP iS	22.42.(17) 22.42.(28)	c	(1.1°)			
	GRE	e(P) eS	22.42.(22) 22.42.(38)		(1.6°)			
2	AWI	iP	05.11.19					
	SKI	i	05.11.43					
2	DCM	eP eS	06.55.41 06.55.55		1.39°	H: 06.55.21		
	SVI	eP eS	06.55.54 06.56.17		2.29°	E: 15.1° N 60.2° W		
	AWI	e	06.56.03		2.66°	Depth: About 75 km		
	GRE	eP	06.56.10		3.47°	Magnitude: 3.7		
2	AWI	iP	08.41.32		1.6°			
	SKI	iP iS	08.41.41 08.42.05		2.3°			
2	AWI	eP	08.58.10					
	SKI	e	08.58.20					

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE		
1961							
DEC 2	BRJ	iP	16.50.43				
	TRN	iP	16.51.48				
	GRE	eP	16.51.50				
2	AWI	eP	21.55.24				
	DOM	eP	21.55.24				
X 3	TRN	iP	08.57.30		1.3°	Small	
		iS	08.57.43				
3	TRN	eP	08.59.49			Small	
4	TRN	eP	05.52.56				
4	SKI	eP	06.43.02				
4	SKI	iP	07.37.54		6.18°	H: 07.36.22	
		iS	07.39.09			E: 18.2°N 69.1°W	
	HOP	iP	07.38.09	d	7.31°	Magnitude: 6.6	
		iS	07.39.29				
	DOM	eP	07.38.19		7.99°		
		iS	07.39.50				
	BRJ	iP	07.38.25		8.37°		
		iS	07.40.01				
	SVI	eP	07.38.34		9.12°		
	GRE	eP	07.38.39		9.45°		
		eS	07.40.25				
	BRB	eP	07.38.54		10.52°		
	TRN	eP	07.38.56		10.65°		
		iP	07.38.58				
		iS	07.40.53				
4	TRN	eP	16.16.41		19.5°	Small	
						USCGS Gives H: 16.12.09	
						E: 0.6°N 78.3°W	
						Depth: About 25 km	
4	HOP	eP	21.43.43				

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
DEC 5	TRN	eP'	13.21.18		131.7°	Felt: Santo, New Hebrides Islands. USCGS Gives H: 13.02.32 E: 16.0°S 168.1°E Depth: About 145 km
	AWI	eP'	13.21.27		132.1°	
	5 TRN	eP	13.24.32			
	AWI	eP	13.24.34			
	DOM	e	13.24.34			
	5 TRN	iP	13.59.39		1.3°	
		iS	13.59.52			
	GRE	iP	13.59.41		1.5°	
		iS	13.59.56			
	6 AWI	e(P)	04.17.33			
	6 TRN	iP	04.45.09		0.7°	
	GRE	eP	04.45.23		1.7°	
		iS	04.45.40			
	6/GRE	eP	06.08.12			
	/TRN	iP	06.08.17			
	/HOP	eP	06.08.22			
	/BRJ	eP	06.08.23			
	6 BRJ	eP	11.17.21			
	7 TRN	iP	11.08.30		0.6°	
		iS	11.08.36			
	7 DOM	eP	12.26.38		1.3°	
		iS	12.26.51			
	SVI	iP	12.26.46		1.9°	
		iS	12.27.06			
	7 SKI	iP	22.58.20		0.4°	
		iS	22.58.24			
	AWI	eP	22.58.28		0.9°	

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DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE
1961					
DEC 8	SKI	iP	02.14.02		0.5°
		iS	02.14.07		
	AWI	eP	02.14.12		1.1°
8	SKI	iP	06.11.15		
	AWI	e	06.11.24		
8	SKI	eP	06.50.27		0.8°
		iS	06.50.35		
	AWI	eP	06.50.35		1.1°
		iS	06.50.46		
8	TRN	eP	07.03.02		1.6°
		eS	07.03.18		
3	BRJ	eP	09.38.39		
8	AWI	eP	09.51.20		1.0°
		iS	09.51.30		
	SKI	eP	09.51.(27)		(1.5°)
		iS	09.51.(43)		
X 8	AWI	eP	09.56.16		154.5°
					USCGS Gives H: 09.36.25 E: 1.8° S 139.4° E Depth: About 55 km
3	SKI	iP	11.54.(05)	c	(0.5°)
		iS	11.54.(10)		
	AWI	eP	11.54.14		1.2°
8	SKI	iP	15.59.(25)	c	(0.1°)
	AWI	iP	15.59.33		0.7°
		iS	15.59.40		
8	HOP	eP	19.04.57		1.4°
		eS	19.05.11		
8	TRN	e	23.13.34		Very small

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	DEPTH	LOCATION
1941							
DEC 9	SKI	eP	02.27.(15)		76.3°	USCGS Gives H: 02.15.22	
	AWI	eP	02.27.20		77.0°	E: 56.3° N 153.9° W	
	DOM	eP	02.27.34		78.6°	Depth: About 31 km	
	TRN	eP	02.27.42		82.3°		
9	GRE	eP	04.05.03		30.4°	USCGS Gives H: 03.58.55	
	TRN	eP	04.05.04		29.3°	E: 14.9° S 75.7° W	
		e	04.12.47			Depth: About 39 km	
	SVI	eP	04.05.15		31.7°		
		iP	04.05.21				
	BRB	eP	04.05.28		32.1°		
	BRJ	eP	04.05.28		34.0°		
	DOM	eP	04.05.33		33.4°		
	AWI	eP	04.05.41		34.5°		
	SKI	eP	04.05.(54)		34.7°		
	HOP	e	04.06.19				
9	TRN	iP	07.06.28		1.2°		
		iS	07.06.40				
	GRE	eP	07.06.28		1.3°		
9	SKI	iP	09.31.(54)	c	(0.4°)		
		iS	09.31.(58)				
	AWI	eP	09.32.02		1.0°		
		iS	09.32.12				
9	TRN	eP	11.27.46		55.8°	USCGS Gives H: 11.18.09	
	GRE	eP	11.27.52		57.0°	E: 43.7° S 75.2° W	
		iP	11.27.55			Depth: About 34 km	
	SVI	eP	11.28.00		58.3°		
		i	11.28.16				
	DOM	eP	11.28.19		60.3°		
	HOP	eP	11.28.24		61.0°		
	BRJ	eP	11.28.25		62.5°		
	AWI	eP	11.28.30		61.8°		
	SKI	eP	11.28.(30)		62.1°		
9	TRN	eP	20.07.29		120.0°	USCGS Gives H: 19.49.41	
						E: 21.7° S 179.9° E	
						Depth: About 620 km	

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	DEPTH	EPICENTRE	MAGNITUDE	SCALE
1961									
DEC 10	GRE	eP	01.59.05						
10	SVI	eP	03.22.51		2.49°		H: 03.22.16		
	SKI	eP	03.23.03		3.33°		E: 15.3°N 60.0°W		
		eS	03.23.37				Magnitude: 5.1		
	GRE	eP	03.23.08		3.69°		Small		
10	SKI	eP	03.40.(01)		(1.9°)				
		eS	03.40.(21)						
10	GRE	eP	11.41.24						
10	GRE	eP	16.46.52						
10	SKI	iP	19.20.(18)	c	(0.5°)				
		iS	19.20.(23)						
10	GRE	eP	19.50.46		1.5°				
		iS	19.51.01						
	TRN	iP	19.50.(19)		(1.6°)				
		iS	19.51.(05)						
10	SKI	iP	21.16.(23)	c	(0.3°)				
		iS	21.16.(26)						
10	BRB	eP	21.36.21		1.20°		H: 21.36.01		
	SVI	iP	21.36.(33)		2.36°		E: 12.1°N 59.2°W		
		iS	21.37.(01)				Depth: About 50 km		
	GRE	iP	21.36.37		2.55°		Magnitude: 5.1		
		iS	21.37.04						
	TRN	iP	21.36.(41)		2.65°				
		iS	21.37.(09)						
	DOM	eP	21.36.56		3.89°				
		iS	21.37.35						
10	SKI	eP	22.45.(02)		(0.3°)				
		iS	22.45.(05)						
10	TRN	iP	23.36.(57)		(0.6°)				
		iS	23.37.(03)						
	GRE	eP	23.37.13		1.8°				

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	EMIT	STATION	DATE
1961								
DEC 11	TRN	iP	05.50.(02)		(0.3°)			
		iS	05.50.(11)					
11	HOP	e	12.55.30					
11	GRE	eP	14.04.15					
11	SKI	eP	16.33.(40)		(3.3°)			
		iS	16.34.(14)					
11	SKI	eP	16.36.(58)					
11	GRE	eP	18.18.47					
11	SKI	iP	18.27.(32)		(0.3°)			
		iS	18.27.(36)					
11	AWI	iP	23.56.30					
	SKI	iP.	23.56.31	c				
12	GRE	eP	03.41.34					
	TRN	eP	03.41.53					
		i	03.43.53					
12	BRB	iP	11.18.49		1.79°			
		iS	11.19.11					
	TRN	iP	11.18.49		2.06°			
	GRE	iP	11.18.51	c	2.15°			
		iS	11.19.16					
	SVI	iP	11.18.52	c	2.29°			
		iS	11.19.13					
	DOM	eP	11.19.19		4.09°			
		iS	11.20.05					
	AWI	eP	11.19.44		5.92°			
	HOP	eP	11.22.25		17.61°			
	BRJ	eP	11.22.32		13.58°			

H: 11.18.20
 E: 11.6°N 59.8°W
 Depth: About 100 km
 Magnitude: 5.9

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE
1961					
DEC 12	TRN	iP	14.55.33		0.9°
		iS	14.55.43		
	GRE	iP	14.55.38		1.2°
		iS	14.55.51		
13	GRE	e	03.27.44		
13	SKI	iP	18.02.52		
13	SKI	iP	19.51.26	c	0.3°
		iS	19.51.29		
	AWI	iP	19.51.34		0.8°
		iS	19.51.42		
13	SKI	iP	23.18.45	c	0.3°
		iS	23.18.48		
	AWI	eP	23.18.53		1.0°
14	SKI	eP	00.49.21		
	AWI	e	00.49.30		
14	SKI	iP	01.37.29	c	0.4°
		iS	01.37.33		
	AWI	iP	01.37.39		1.0°
		iS	01.37.48		
14	SKI	iP	03.56.54	c	0.5°
		iS	03.56.59		
	AWI	eP	03.57.03		0.9°
		iS	03.57.11		
14	SKI	iP	05.14.46	c	0.5°
		iS	05.14.51		
	AWI	iP	05.14.54		1.1°
14	TRN	eP ¹	07.30.20		156.5°
	SKI	eP ¹ ₂	07.30.21		152.9°
	AWI	eP ¹ ₂	07.30.23		153.8°

Small
 USCGS Gives H: 07.10.23
 E: 3.1° S 140.9° E
 Depth: About 44 km

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	DEPTH	SHAPE	ROTATE	SLAG
1961									
DEC 14	SKI	eP	08.21.21	0.0	0.4°	10.00.00	1P		1961
		iS	08.21.26			10.00.00	1S		1961
				0.1		10.00.00	1P		1961
14	TRN	eP	11.07.54		1.1°	10.00.00	1P		1961
		iS	11.08.05	0.0		10.00.00	1S		1961
	GRE	eP	11.08.03		1.3°	10.00.00	1P		1961
14	SKI	iP	14.28.34	0.0 c	0.4°	10.00.00	1P		1961
		iS	14.28.38			10.00.00	1S		1961
	AWI	eP	14.28.43		1.0°	10.00.00	1P		1961
14	SKI	iP*	14.32.53			10.00.00	1P		1961
	AWI	eP	14.33.08	0.0		10.00.00	1P		1961
14	SKI	iP	18.14.12		0.4°	10.00.00	1P		1961
		iS	18.14.16			10.00.00	1S		1961
	AWI	iP	18.14.21		1.1°	10.00.00	1P		1961
14	SKI	iP	18.36.15		0.5°	10.00.00	1P		1961
		iS	18.36.21	c		10.00.00	1S		1961
	AWI	eP	18.36.26		1.2°	10.00.00	1P		1961
14	SKI	iP	18.36.37		0.4°	10.00.00	1P		1961
		iS	18.36.41			10.00.00	1S		1961
14	SKI	iP	19.32.03			10.00.00	1P		1961
	AWI	iP	19.32.17			10.00.00	1P		1961
14	SVI	e	19.33.10			10.00.00	1P		1961
	GRE	iP	19.33.20			10.00.00	1P		1961
	TRN	eP	19.33.42			10.00.00	1P		1961
14	SVI	eP	19.37.05			10.00.00	1P		1961
14	SKI	iP	20.00.26	0.0 c	0.5°	10.00.00	1P		1961
		iS	20.00.31			10.00.00	1S		1961

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE				
1961									
DEC 14	SKI	iP	20.03.44	c	0.6°				
		iS	20.03.51						
	AWI	iP	20.03.54		1.3°				
15	SKI	iP	09.15.08		0.3°				
		iS	09.15.11						
15	SKI	iP	10.15.23	c	0.3°				
		iS	10.15.26						
15	SKI	iP	10.41.13						
15	SVI	iP	17.32.27		3.05°				
	GRE	eP	17.32.35		3.56°				
		iS	17.32.58						
	TRN	eP	17.32.54		4.93°				
16	AWI	iP	03.03.34		0.7°				
		iS	03.03.41						
	SKI	iP	03.03.43		1.7°				
		iS	03.04.00						
16	TRN	iP	07.53.09		0.7°				
		iS	07.53.16						
	GRE	eP	07.53.27		2.0°				
16	TRN	iP	10.36.08		0.5°				
		iS	10.36.13						
16	GRE	eP	15.04.02						
16	GRE	eP	16.33.26						
17	TRN	iP	14.07.40		0.6°				
		iS	14.07.47						
X	17 GRE	eP	21.38.01		30.0°				
X	TRN	e	21.38.12						

USCGS Gives H: 21.32.02
 E: 14.4° S 75.8° W
 Depth: About 85 km

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1961								
DEC 18	HOP	iP	02.18.31	c	0.3°			
		iS	02.18.34					
18	SKI	iP	14.34.(31)		(0.49°)			
	DOM	eP	14.35.05		(2.82°)			
	SVI	e	14.35.(36)		(4.74°)			
		e	14.39.29					
	GRE	eP	14.35.42		(5.65°)			
	TRN	eP	14.36.05		(7.09°)			
18	SKI	iP	14.43.28					
18	SKI	iP	14.45.27					
18	SKI	iP	15.16.45		0.3°			
		iS	15.16.48					
18	SKI	iP	15.44.(31)					
18	SKI	iP	15.56.01					
18	SKI	iP	16.55.34	c	0.1°			
		iS	16.55.36					
18	SKI	iP	17.04.41		0.4°			
		iS	17.04.45					
18	SKI	iP	17.09.47					
18	SKI	iP	17.30.16		0.1°			
		iS	17.30.18					
18	TRN	e(P)	18.05.09					
		i	18.05.27					
18	TRN	eP	20.36.22					
								Small
19	HOP	iP	02.18.37		0.3°			
		iS	02.18.40					

H: About 14.34.24
 E: About 17.5°N 63.2°W
 Depth: About 10 km
 Magnitude: 5.6

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
DEC 19	DOM	iP	09.58.(26)		0.8°	
		iS	09.58.(35)			
	SKI	eP	09.58.51		2.7°	
		iS	09.59.19			
19	TRN	eP	19.16.07			
19	TRN	eP	22.12.20			
19	GRE	e	23.57.44			
20	GRE	iP	00.26.53	d	1.30°	H: 00.26.35
		iS	00.27.06			E: 11.5°N 62.1°W
	TRN	iP	00.26.57	d	1.60°	Depth: About 125 km
		iS	00.27.11			Magnitude: 4.4
	SVI	eP	00.27.05		2.16°	
		eS	00.27.27			
20	TRN	iP	06.06.50		1.3°	
		iS	06.07.03			
	GRE	iP	06.06.53	d	1.7°	
		iS	06.07.10			
20	GRE	eP	10.11.14			
20	HOP	eP	13.28.40		13.6°	West Central Columbia. 23 killed
		iP	13.28.44			100 injured, and moderate
		iS	13.31.02			property damage in Caldas
	GRE	iP	13.28.79	d	15.3°	Province.
		i	13.32.(01)			USCGS Gives H: 13.25.34
	TRN	iP	13.29.01	d	15.2°	E: 4.6°N 75.6°W
						Depth: About 176 km
	SVI	eP	13.29.15		16.5°	
		iP	13.29.18			
		iS	13.32.(05)			
	DOM	eP	13.29.(30)		17.8°	
		iP	13.29.(34)			
		iS	13.32.(53)			
	SKI	iP	13.29.31		17.5°	
	BRB	iP	13.29.33		17.8°	

X

E G.M.T. MOTION DISTANCE

1961	DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE		
	DEC 20	SVI	eP	17.34.04				
		DOM	eP	17.34.12				
		GRE	eP	17.34.15				
	20	SKI	iP	21.04.37	c	0.3°		
			iS	21.04.41				
	20	SKI	iP	21.13.50	c	0.5°		
			iS	21.13.55				
	21	TRN	eP	00.40.38				
	21	GRE	eP	18.42.36				
	22	SKI	iP	22.07.43				
	23	TRN	eP	09.04.58				
		HOP	eP	09.06.41				
	23	HOP	eP	14.39.09		11.9°	USCGS Gives H: 14.36.27	
			iP	14.39.12			E: 6.4°N 73.4°W	
			iS	14.41.09			Depth: About 197 km	
		GRE	eP	14.39.20		12.3°		
		TRN	iP	14.39.20		12.4°		
	23	HOP	iP	23.23.50	d	1.1°		
			iS	23.24.01				
	24	SKI	iP	10.43.33		1.0°		
			iS	10.43.43				
	24	TRN	eP	14.30.56		25.3°	USCGS Gives H: 14.25.33	
		GRE	eP	14.31.01		26.0°	E: 5.7°S 80.9°W	
		SKI	eP	14.31.31		29.0°	Depth: About 52 km	
	24	TRN	eP	17.21.13		26.3°	Small USCGS Gives H: 17.15.42	
							E: 6.0°S 81.7°W	
							Depth: About 25 km	

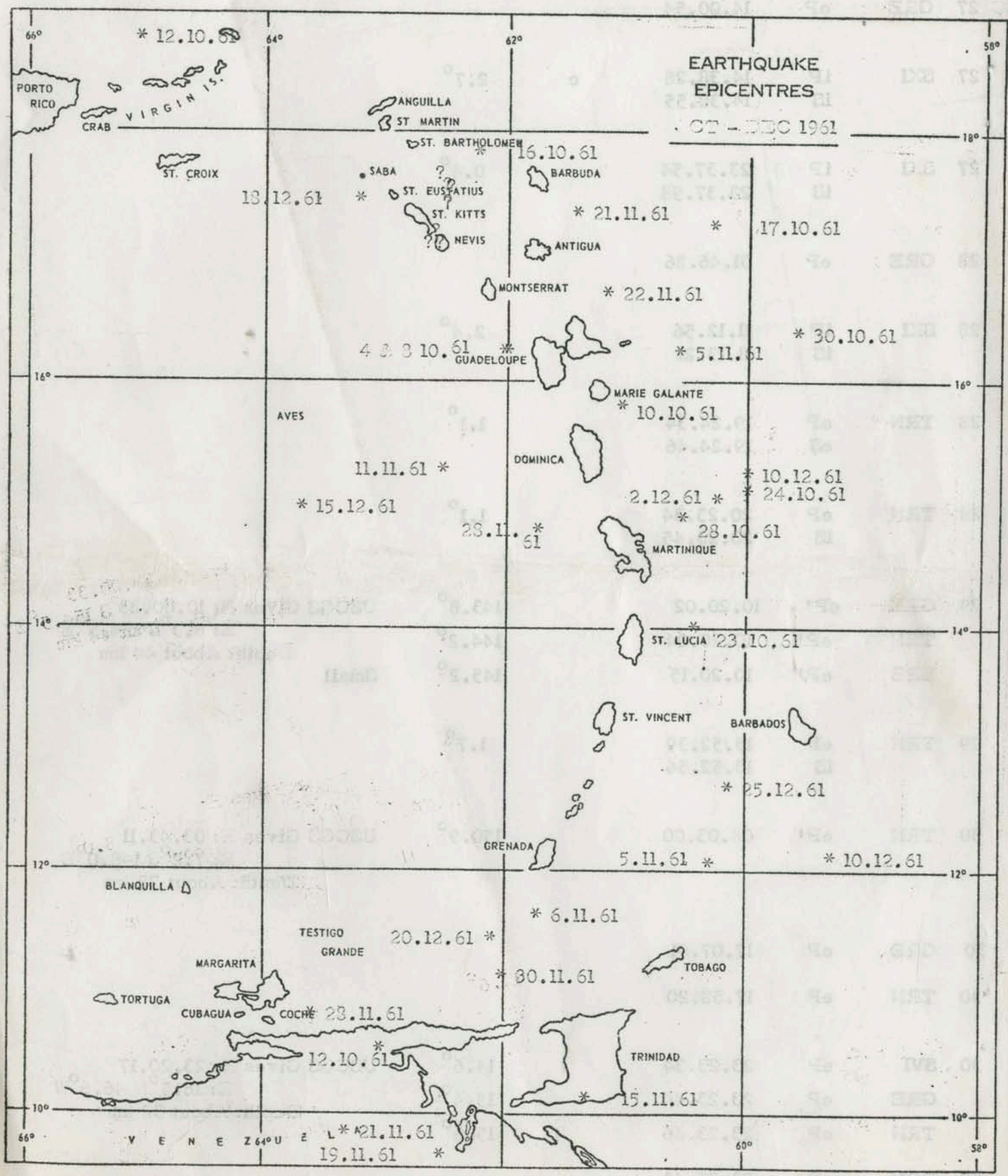
DATE STATION PHASE TIME G.M.T. MOTION DISTANCE

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1961						
DEC 24	TRN	iP	22.15.31		1.0°	
		iS	22.15.41			
	GRE	eP	22.15.37		1.2°	
		iS	22.15.50			
X 24	GRE	eP	23.52.22		51.5°	USCGS Gives H: 23.43.19 E: 38.3°S 74.6°W Depth: About 31 km
25	BRB	eP	08.32.15		0.63°	H: 08.32.04
	SVI	iP	08.32.21		1.21°	E: 12.7°N 60.1°W Magnitude: 5.6
	GRE	iP	08.32.29	d	1.75°	
		iS	08.32.47			
	TRN	e	08.32.42		2.45°	
	DOM	eP	08.32.(47)		2.85°	
		eS	08.33.21			
	SKI	e	08.33.21		5.25°	
X 26	GRE	eP'	04.44.03		170.2°	USCGS gives H: 04.24.55 E: 5.5°S 110.7°E Depth: About 566 km
	TRN	eP'	04.44.06		170.8°	
26	SKI	iP	05.38.13		1.1°	
		iS	05.38.24			
26	SKI	eP	13.47.11			
26	TRN	eP	16.48.57		1.6°	
		iS	16.49.13			
	GRE	e	16.48.58			
26	SKI	eP	20.55.52			
	TRN	eP	20.57.01			
26	GRE	iP	21.17.06		2.2°	
		iS	21.17.28			
	TRN	eP	21.17.08		2.3°	
27	SKI	iP	12.58.31			

DATE STATION PHASE TIME G.M.T. MOTION DISTANCE

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE
1961					
DEC 27	GRE	eP	14.00.54		
27	SKI	iP iS	14.38.28 14.38.55	c	2.7°
27	SKI	iP iS	23.37.54 23.37.58		0.4°
28	GRE	eP	01.46.26		
28	SKI	iP iS	11.12.56 11.13.21		2.4°
28	TRN	eP eS	19.24.34 19.24.46		1.1°
28	TRN	eP iS	20.23.34 20.23.45		1.1°
29	GRE	eP'	10.20.02		143.8°
	TRN	eP'	10.20.04		144.2°
	BRE	eP'	10.20.15		145.2°
					USCGS Gives H: 10.00.33 E: 6.3°S 154.5°E Depth: About 44 km
29	TRN	eP iS	13.52.39 13.52.56		1.7°
30	TRN	eP'	04.03.00		150.9°
					USCGS Gives H: 03.43.11 E: 7.2°S 148.0°E Depth: About 78 km
30	GRE	eP	17.07.01		
30	TRN	eP	17.58.20		
30	SVI	eP	23.23.34		14.6°
	GRE	eP	23.23.44		15.4°
	TRN	eP	23.23.46		15.6°
					USCGS Gives H: 23.20.17 E: 16.5°N 46.6°W Depth: About 32 km
30	DOM	eP	23.37.43		
31	SKI	iP iS	14.42.49 14.43.06		1.6°

DATE STATION THREE TIME G.M.T. MOTION CHARACTER



? Earthquakes of 2nd, 3rd, 7th and 8th November, 1961