

Volcanological Research Department,
Regional Research Centre,
Imperial College of Tropical Agriculture,
Trinidad, B. W. I.

JAN 1959

Seismological Bulletin.

ALL stations are equipped with Williams Vertical seismometers and recorders, with
the following characteristics:
Sensitivity period 1.0 sec.
Velocity sensitivity (maximum) 150 cm/sec.
Magnification (maximum) 30,000.
The sensitivities at the stations are given in the following table:
Station Name, Location, Latitude, Longitude, Sensitivity, Magnification
The location in longitude and the paper speed is given in the
and the station are listed in the reverse order, approximately 11 radio reception
results, or actually observed.
The Trinidad station has been operated at the following temporary offset
from 1.1.58 to 1.1.59 as lat. 10° 43' N long. 61° 31' W and
from 1.1.59 to 1.8.59 as lat. 10° 43' N long. 61° 31' W.

STATIONS REPORTING

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

EQUIPMENT

All stations are equipped with Willmore Vertical seismometers and recorders, with the following characteristics.

- Seismometer period1.0 secs.
- Galvanometer period0.25 secs.
- Velocity Sensitivity (maximum) 1450 cms/cm/sec.
- Magnification (maximum).....30,000.

The sensitivities at the stations are varied to suit local conditions and the maximum values given above should be multiplied by the following factors:

Trinidad 1/10th; Grenada, St. Vincent, St. Lucia, Barbados, Dominica, Antigua, 1/3rd.

The recording is photographic and the paper speed is 53mm/min.

WWV time signals are marked on the records daily, automatically if radio reception permits, or manually otherwise.

The Trinidad station has been operated at the following temporary sites:

- From 1.4.53 to 1.1.55 at Lat. 10° 40.1' N Long. 61° 31.2' W and
- from 1.1.55 to 1.9.58 at Lat. 10° 44.7' N Long. 61° 33.8' W

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1959 JAN 1	TRIN	eP	02.18.32		75.5°	USCGS Gives H: 02.06.42 E: 83½° N 8° W
	3 TRIN	eP	02.33.16			
	3 TRIN	iP iS	02.38.39 02.38.52			Trinidad Region
	ST. VIN	eP eS	02.38.(49) 02.39.(08)			
	3 ST. VIN	eP	11.24.(02)		31.2°	USCGS Gives H: 11.17.38 E: 14½° S 75½° W
	TRIN	ePP	11.24.33		28.6°	
	3 TRIN	iP iS	13.59.22 13.59.27	d		Trinidad Region
	ST. VIN	eP eS	13.59.(54) 14.00.(21)			
	3 BARB	e	18.31.(38)			
	3 TRIN	iP iS	19.50.23 19.50.35	c	1.26°	H: 19.50.06 E: 10.9° N 62.8° W
	GREN	iP	19.50.27		1.57°	
	ST. VIN	eP iS i	19.50.(43) 19.51.(10) 19.51.(15)		2.73°	
	4 TRIN	iP iS	03.44.34 03.44.49	d	1.38°	H: 03.44.15 E: 10.7° N 63.0° W
	GREN	iP	03.44.39		1.76°	
	ST. VIN	iP	03.44.(55)	d	2.93°	
	6 GREN	iP iS	23.00.21 23.00.37			
	7 GREN	iP	05.57.38			
	8 ST. LUC	iP	01.34.23		1.35°	Felt: Trinidad, St. Vincent
	ST. VIN	iP	01.34.34		1.98°	H: 01.34.07 E: 14.6° N 60.5° W
	BARB	iP	01.34.39		2.05°	Depth: About 120 km
	GREN	iP	01.34.49	c	3.07°	
	TRIN	iP	01.35.04	d	4.18°	
	9 TRIN	iP	16.27.55			
	ST. VIN	iP	16.28.(04)			
	10 TRIN	iP iS	23.15.39 23.15.49			Trinidad Region
	ST. LUC	iP iS	23.16.13 23.16.47			
	11 DOM	eP	07.28.(14)		27.7°	USCGS Gives H: 07.22.40 E: 15° N 90° W
	TRIN	eP	07.28.19		28.0°	Depth: About 200 km
	ST. LUC	eP	07.28.20		28.2°	
	BARB	eP	07.28.33		29.7°	
	12 TRIN	iP iS	01.50.15 01.50.22		0.80°	H: 01.50.05 E: 10.1° N 61.1° W
	GREN	eP	01.50.(33)		2.05°	
	ST. VIN	eP i	01.50.46 01.51.25		3.10°	
	ST. LUC	eP	01.51.(01)		3.95°	

d ←
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>
1959					
JAN 12	TRIN	iP iS	05.21.02 05.21.10	c	Trinidad Region
	GREN	eP iS	05.21.(15) 05.21.(29)		
13	TRIN	eP	08.39.02		21.7°
	GREN	eP	08.39.(04)		21.7°
	ST. VIN	eP	08.39.08		22.2°
	DOM	eP	08.39.09		22.5°
	BARB	eP	08.39.21		23.8°
13	DOM	iP i i	08.59.38 09.01.40 09.01.53		
13	TRIN	e	16.35.44		
	GREN	i	16.35.44		
	ST. VIN	eP	16.35.50		
	BARB	eP	16.36.(02)		
15	GREN	iP	01.55.15	d	
17	ST. VIN	eP	21.54.43		
18	GREN	iP iS	01.49.43 01.50.03	c	
	TRIN	eP i	01.49.52 01.49.55		
18	TRIN	iP	08.55.53		
	GREN	eP	08.56.12		
18	GREN	eP'	15.00.47		145.0°
	ST. VIN	iP'	15.00.47		145.8°
18	ST. VIN	eP'	19.45.25		145.8°
					USCGS Gives H: 14.41.06 E: 5°S 152½°E
19	DOM	iP	06.45.40	c	
	ST. VIN	eP i	06.45.56 06.46.25		
21	TRIN	eP	15.06.24		
21	ST. VIN	eP	15.14.05		
22	GREN	eP iS	10.59.07 10.59.22		
22	ST. LUC	iP iS	20.46.49 20.47.07		
23	TRIN	eP	10.24.41		
23	ST. LUC	eP i	10.38.30 10.41.34		
	DOM	iP i	10.38.39 10.41.42		
23	ST. LUC	e	10.54.48		
24	DOM	iP iS	09.15.08 09.15.21	d	North Windwards Region
	ST. LUC	eP iS	09.15.24 09.15.49		

USCGS Gives H: 08.34.08
E: 9°N 83½°W
Depth: About 100 km

USCGS Gives H: 14.41.06
E: 5°S 152½°E

USCGS Gives H: 19.25.45
E: 5°S 152½°E

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1959						
JAN 24	✓ DOM	eP	20.02.47		39.5°	USCGS Gives H: 19.55.14 E: 37½° N 24½° W
	✗ ST. LUC	iP	20.02.52		39.8°	
	✓ GREN	eP	20.03.06		42.0°	
	✗ TRIN	eP	20.03.(15)		42.5°	
25	TRIN	iP	16.45.24			
26	TRIN	i	13.49.18			
	ST. VIN	eP	13.49.22			
26	DOM	i(P)	15.12.50			
		i	15.13.10			
	ST. VIN	eP	15.13.09			
		iS	15.13.58			
26	GREN	eP	17.51.08		20.0°	USCGS Gives H: 17.46.51 E: 1° S 77° W Depth: About 200 km
	TRIN	i	17.51.17		19.5°	
27	✗ DOM	iP	00.22.15		07.5°	Felt: San Juan Puerto Rico USCGS Gives H: 00.20.22 E: 18° N 68½° W Depth: About 100 km
		iS	00.23.33			
	ST. LUC	eP	00.22.23		08.3°	
		i	00.23.47			
		i	00.34.45			
	✓ ST. VIN	eP	00.22.24		08.5°	
		i	00.23.52			
		i	00.31.18			
	✓ GREN	eP	00.22.30		09.0°	
		iS	00.24.01			
		T	00.34.54			
	✓ TRIN	eP	00.22.50		10.0°	
		iS	00.24.35			
	✓ BARB	eP	00.22.(53)		09.3°	
		i	00.24.40			
27	GREN	eP	02.22.32			
		iS	02.22.44			
27	ST. VIN	iP	09.58.00	d	0.92°	H: 09.57.47 E: 12.7° N 60.8° W Depth: About 75 km
	GREN	iP	09.58.05		1.29°	
		iS	09.58.18			
	BARB	iP	09.58.11	d	1.46°	
		i	09.58.18			
		iS	09.58.23			
	ST. LUC	iP	09.58.15	d	1.50°	
		iS	09.58.35			
	TRIN	iP	09.58.17		2.18	
		iS	09.58.39			
28	✗ GREN	eP	10.12.33		45.7°	USCGS Gives H: 10.04.10 E: 30½° S 79° W
	✓ DOM	iP	10.12.56		49.0°	
29	BARB	iP	07.17.28	c		
	ST. VIN	iP	07.17.43			
		i	07.17.59			
29	ST. VIN	eP	12.23.00		0.83°	H: 12.22.49 E: 12.9° N 60.5° W
		iS	12.23.10			
	ST. LUC	iP	12.23.06		1.28°	
		iS	12.23.20			
	GREN	iP	12.23.09		1.50°	
		iS	12.23.25			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1959						
JAN 29	ST. LUC	eP	23.35.44		69.6°	USCGS Gives H: 23.24.30 E: 71° N 8° E
	ST. VIN	eP	23.35.46		71.0°	
	TRIN	eP	23.36.05		72.0°	
30	DCM	iP iS	02.35.28 02.35.42	c		
30	TRIN	eP	15.12.12			
	ST. VIN	e	15.12.25			
	ST. LUC	eP	15.12.31			
30	ST. VIN	eP	16.23.34		41.0°	USCGS Gives H: 16.15.58 E: 26½° S 71° W Depth: About 100 km
	ST. LUC	iP	16.23.42		41.7°	
31	ST. VIN	iP	01.24.26	d		

Volcanological Research Department,
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Trinidad, B. W. I.

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Seismological Bulletin.

The Trinidad station has been operated at the following frequency
from 1.1.55 to 1.1.56 at lat. 10° 31' N long. 61° 21' W and
from 1.1.56 to 1.1.57 at lat. 10° 31' N long. 61° 21' W

STATIONS REPORTING

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

EQUIPMENT

All stations are equipped with Willmore Vertical seismometers and recorders, with the following characteristics.

- Seismometer period1.0 secs.
- Galvanometer period0.25 secs.
- Velocity Sensitivity (maximum) 1450 cms/cm/sec.
- Magnification (maximum).....30,000.

The sensitivities at the stations are varied to suit local conditions and the maximum values given above should be multiplied by the following factors:

Trinidad 1/10th; Grenada, St. Vincent, St. Lucia, Barbados, Dominica, Antigua, 1/3rd.

The recording is photographic and the paper speed is 53mm/min.

WWV time signals are marked on the records daily, automatically if radio reception permits, or manually otherwise.

The Trinidad station has been operated at the following temporary sites:

- From 1.4.53 to 1.1.55 at Lat. 10° 40.1' N Long. 61° 31.2' W and
- from 1.1.55 to 1.9.58 at Lat. 10° 44.7' N Long. 61° 33.8' W

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
FEB 3	ST. VIN	iP iS	12.13.56 12.14.25		
4	TRIN	e	06.41.(42)		Very Small
5	BARB	eP	01.37.26		1.54° H: 01.37.01
	ST. VIN	iP iS	01.37.34 01.38.01		2.42° E: 12.4° N 59.4° W Depth: About 150 km
	GREN	eP iS	01.37.38 01.38.05		2.72°
6	TRIN	iP	21.04.31		
7	TRIN	eP i	09.42.19 09.42.23		24.5° Felt: Guayquil
	GREN	iP	09.42.(24)		25.2° USCGS Gives H: 09.36.51 E: 4° S 81½° W
	ST. VIN	eP	09.42.35		26.5°
	DOM	iP	09.42.(43)		27.6°
7	TRIN	iP	18.00.22	c	
8	TRIN	iP	08.32.42	c	
11	TRIN	eP iS	01.11.07 01.11.26		
12	TRIN	e	08.06.41		Small
13	ST. VIN	eP i	23.32.58 23.33.09		
16	ST. VIN	eP	00.44.57		25.0° USCGS Gives H: 00.39.32
	BARB	eP	00.45.06		26.0° E: 1° S 81½° W
16	GREN	iP	09.01.57		
	ST. VIN	eP e	09.02.16 09.02.36		
16	ST. VIN	iP iS	21.54.49 21.55.16		
17	TRIN	eP	02.56.58		Very Small USCGS Gives H: 02.51.57 E: Ecuador
18	TRIN	iP iS	04.29.09 04.29.22		Trinidad Region
	ST. VIN	iP iS	04.29.29 04.29.58		
20	ST. VIN	eP	04.21.03		44.7° USCGS Gives H: 04.12.54 E: 30½° S 71° W Depth: About 100 km
21	BARB	iP	04.59.35		
22	TRIN	iP iS	03.34.32 03.34.48		
23	ST. VIN	eP ₂	02.18.29		148.2° Felt: Kandrian and Waldini
	TRIN	eP ₂	02.18.30		148.5° USCGS Gives H: 01.58.38 E: 5½° S 150° E
23	TRIN	e e	03.22.01 03.24.06		

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T</u>	<u>MOTION</u>	<u>DISTANCE</u>
1959					
FEB 23	BARB	eP	07.52.(34)		
	ST. VIN	eP	07.52.57		
		iP	07.52.59		
	TRIN	eP	07.53.09		
25	ST. VIN	iP	12.28.04		
		i	12.28.27		
		i	12.28.36		
27	ST. VIN	eP	14.57.(21)		

USCGS Gives H: 07.49.45
E: Atlantic Ocean about 900
miles East of Leewards.

STATION NAME	LONGITUDE (EAST)	LATITUDE (NORTH)	HEIGHT (M)
STATION 1	78° 00' W	10° 30' N	1000
STATION 2	78° 00' W	10° 30' N	1000
STATION 3	78° 00' W	10° 30' N	1000
STATION 4	78° 00' W	10° 30' N	1000
STATION 5	78° 00' W	10° 30' N	1000
STATION 6	78° 00' W	10° 30' N	1000
STATION 7	78° 00' W	10° 30' N	1000
STATION 8	78° 00' W	10° 30' N	1000
STATION 9	78° 00' W	10° 30' N	1000
STATION 10	78° 00' W	10° 30' N	1000

Volcanological Research Department,
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MAR 1959

Seismological Bulletin.

The sensitivities of the stations are varied to suit local conditions and the
 stations which have been provided by the following factors:
 The recording is photographic and the paper used is 23x31cm.
 The time signals are carried on the records daily, and especially in the reception
 periods, or specially otherwise.
 *The Trinidad station has been operated at the following frequency: 1000
 from 1.1.55 to 1.9.58 at lat. 10° 30' N long. 78° 00' W
 from 1.1.55 to 1.1.58 at lat. 10° 30' N long. 78° 00' W

STATIONS REPORTING

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

EQUIPMENT

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Seismometer period1.0 secs.
 Galvanometer period.....0.25 secs.
 Velocity Sensitivity (maximum) 1450 cms/cm/sec.
 Magnification (maximum).....30,000.

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Trinidad 1/10th; Grenada, St. Vincent, St. Lucia, Barbados, Dominica, Antigua, 1/3rd.

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From 1.4.53 to 1.1.55 at Lat. 10° 40.1' N Long. 61° 31.2' W and

from 1.1.55 to 1.9.58 at Lat. 10° 44.7' N Long. 61° 33.8' W

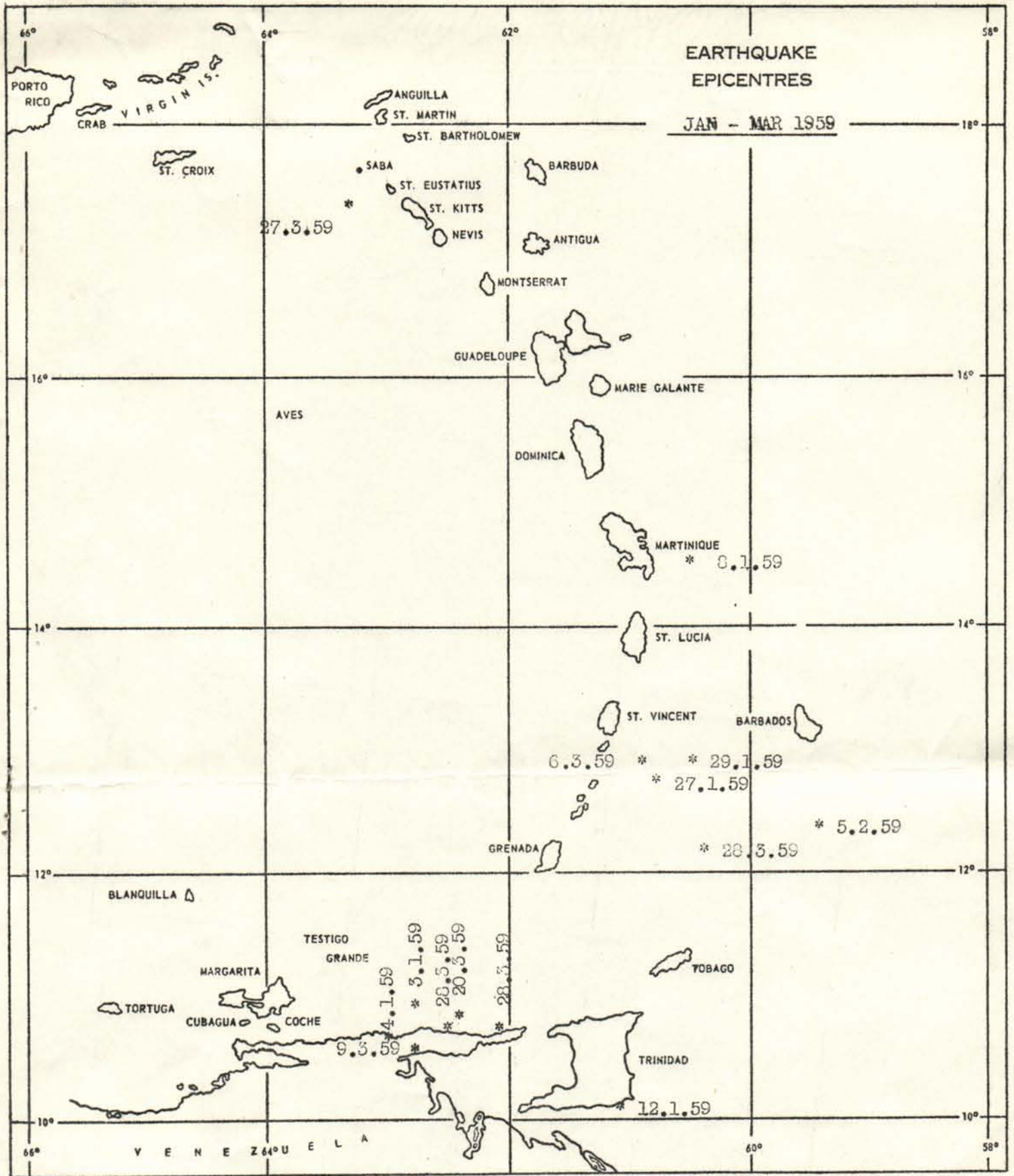
<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1959						
MAR 2	GREN	iP iS	04.45.01 04.45.13			Trinidad Region
	TRIN	iP iS	04.45.03 04.45.15			
2	GREN	eP e	08.08.29 08.08.43			
2	TRIN	eP i	11.07.03 11.07.19			
	GREN	eP iS	11.07.(10) 11.07.29			
2	TRIN	iP i i	12.28.18 12.28.30 12.28.31	d		
4	GREN	eP eS	08.17.36 08.17.52			
4	GREN	iP iS	08.52.15 08.52.34	c		
6	ST. VIN	iP iS	09.50.(48) 09.50.(59)	c	0.84°	H: 09.50.37 E: 12.9°N 60.9°W Depth: About 75 km
	GREN	iP	09.50.55		1.36°	
	TRIN	eP iS	09.51.08 09.51.36		2.32°	
6	GREN	eP	20.26.05			
	TRIN	iP i	20.26.06 20.26.31			
8	GREN	eP	23.08.24		26.8°	USCGS Gives H: 23.02.42 E: 11½°S 75½°W
9	TRIN	iP iS	04.35.40 04.35.46	d		Trinidad Region
9	GREN	iP	06.13.46			
9	TRIN	iP iS	06.23.20 06.23.34	c	1.65°	H: 06.22.58 E: 10.6°N 62.8°W Depth: About 100 km
	GREN	eP iS	06.23.25 06.23.42		2.02°	
	ST. VIN	eP	06.23.40		3.14°	
9	GREN	e	08.29.(09)			
12	TRIN	iP iS	07.32.39 07.32.54	c		
	GREN	iP iS	07.32.40 07.32.57	c		
13	ST. VIN	e	15.46.35			Small
17	GREN	eP	13.10.42		75.5°	USCGS Gives H: 12.58.57 E: 57°S 25°W
	ST. VIN	eP	13.10.48		77.3°	Small
17	ST. VIN	iP	23.12.15	d		
18	GREN	eP iS	05.04.56 05.05.23			
	TRIN	iP	05.05.(01)			
18	ST. VIN	eP iP iS	15.29.39 15.29.40 15.30.00			

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
MAR 19	ST. VIN	iP i	01.05.11 01.05.40	d		
	GREN	eP	01.05.27			
19	GREN	iP	23.55.15	d		Felt: Trinidad
	TRIN	iP iS	23.55.(26) 23.55.(43)	c		
20	GREN	eP iS	06.56.19 06.56.34			
20	TRIN	iP iS	19.00.09 19.00.24	d	1.37°	H: 18.59.51 E: 10.9° N 62.4° W Depth: About 100 km
	GREN	iP iS	19.00.12 19.00.28		1.60°	
	ST. VIN	eP	19.00.27		2.70°	
26	ST. VIN	eP iP	15.36.01 15.36.03			
27	TRIN	eP iS	02.44.02 02.44.21			
	GREN	eP iS	02.44.05 02.44.26			
	ST. VIN	eP	02.44.(24)			
27	ST. VIN	iP i iS	07.03.16 07.03.26 07.04.10	d	4.68°	Felt: Antigua H: 07.02.13 E: 17.4° N 63.3° W Depth: About 50 km
	GREN	iP	07.03.28		5.55°	
	TRIN	eP iS	07.03.47 07.05.02		6.98°	
28	GREN	iP iS	05.58.48 05.58.59			
28	GREN	iP i	12.12.27 12.12.38			
28	ST. VIN	eP	18.58.(23)		1.87°	H: 18.57.58 E: 12.2° N 60.4° W Depth: About 150 km
	GREN	eP iS	18.58.(23) 18.58.42		1.88°	
	TRIN	eP e	18.58.28 18.59.01		2.25°	
28	TRIN	iP iS	21.02.34 21.02.46	c	1.05°	H: 21.02.18 E: 10.8° N 62.5° W
	GREN	iP	21.02.39		1.39°	
	ST. VIN	eP iS	21.02.55 21.03.21		2.60°	
29	ST. VIN	iP i	05.41.47 05.47.56	c	6.76°	Felt: Puerto Rico and Virgin Islands
	GREN	eP i iS	05.41.58 05.41.59 05.43.16		7.60°	H: 05.40.15 E: 19.2° N 64.3° W
	TRIN	eP i iS	05.42.18 05.42.21 05.43.49		9.03°	
29	TRIN	iP i i	19.08.14 19.08.28 19.08.32		1.31°	H: 19.07.57 E: 10.8° N 62.1° W Depth: About 125 km
	GREN	iP iS	19.08.19 19.08.36		1.67°	
	ST. VIN	eP	19.08.33		2.70°	

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1959					
MAR 29	GREN	iP	23.45.37		
30	TRIN	eP	07.23.06		
	GREN	eP	07.23.08		
	ST. VIN	eP	07.23.19		
31	TRIN	iP	04.28.34	c	
		iS	04.28.46		
	GREN	eP	04.28.35		
		iS	04.28.47		

Small
 USCGS Gives H: 07.18.20
 E: Near South
 Coast of Panama

Trinidad Region



STATIONING

(HUB) *

(HUB)

(HUB) (ST. VIN)

(HUB) (ST. PETER)

(HUB) (HUB)

(HUB) (HUB)

(HUB) (HUB)

(HUB) (HUB)

EQUIPMENT

Volcanological Research Department,
Regional Research Centre,
Imperial College of Tropical Agriculture,
Trinidad, T. W. I.

All stations are equipped with Willmore Vertical instruments and recorders with
the following characteristics.

APR 1959

Seismological Bulletin.

Stationing
Equipment
Velocity sensitivity (centimeters per second)
Sensitivity (centimeters)

The following stations are listed in the following order:
Stationing
Equipment
Velocity sensitivity (centimeters per second)
Sensitivity (centimeters)

STATIONS REPORTING

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

EQUIPMENT

All stations are equipped with Willmore Vertical seismometers and recorders, with the following characteristics.

- Seismometer period1.0 secs.
- Galvanometer period.....0.25 secs.
- Velocity Sensitivity (maximum) 1450 cms/cm/sec.
- Magnification (maximum).....30,000.

The sensitivities at the stations are varied to suit local conditions and the maximum values given above should be multiplied by the following factors:

Trinidad 1/10th; Grenada, St. Vincent, St. Lucia, Barbados, Dominica, Antigua, 1/3rd.

The recording is photographic and the paper speed is 53mm/min.

WWV time signals are marked on the records daily, automatically if radio reception permits, or manually otherwise.

*The Trinidad station has been operated at the following temporary sites:

- From 1.4.53 to 1.1.55 at Lat. 10° 40.1' N Long. 61° 31.2' W and
- from 1.1.55 to 1.9.58 at Lat. 10° 44.7' N Long. 61° 33.8' W

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
APR 1	ST. VIN	iP	00.42.02		40.2°	USCGS Gives H: 00.34.18 E: 27½°N 21°W
	GREN	eP	00.42.09		41.5°	
	TRIN	eP	00.42.18		42.0°	
1	TRIN	iP	00.54.33		1.73°	H: 00.54.10 E: 10.9°N 63.0°W Depth: About 75 km
		iS	00.54.47			
	GREN	iP	00.54.34		1.80°	
	ST. VIN	iP	00.54.49	a	2.91°	
		iS	00.55.18			
1	TRIN	eP	03.28.33			
		iS	03.28.51			
	GREN	eP	03.28.44			
1	ST. VIN	eP	10.36.41			
		i	10.37.02			
1	ST. VIN	iP	19.00.54			
		iS	19.01.16			
2	ST. VIN	iP	01.53.21	d		North Windwards Region
		iS	01.53.42			
	GREN	iP	01.53.37			
	TRIN	eP	01.53.56			
		iS	01.54.42			
	TRIN	iP	15.19.26		1.75°	H: 15.19.04 E: 11.0°N 62.9°W Depth: About 100 km
	iS	15.19.42				
	GREN	iP	15.19.27		1.77°	
		iS	15.19.44			
	ST. VIN	iP	15.19.41	d	2.84°	
		e	15.20.05			
		i	15.20.14			
4	GREN	eP	02.50.43			
		iS	02.50.52			
4	TRIN	iP	04.22.17			Trinidad Region
		iS	04.22.26			
5	ST. VIN	iP	17.22.43	d		
		iS	17.22.58			
6	TRIN	e	13.56.(00)		13.0°	USCGS Gives H: 13.52.04 E: 2½°N 72°W
	GREN	e	13.56.09		13.5°	
	ST. VIN	e	13.56.11		15.0°	
7	TRIN	iP	02.44.40	c		
		iS	02.44.55			
	GREN	iP	02.44.47	c		
		iS	02.45.06			
7	TRIN	eP	10.32.46			
	GREN	eP	10.32.46			
		i	10.32.49			
8	GREN	iP	01.06.29			
8	ST. VIN	eP	11.55.01		64.2°	USCGS Gives H: 11.44.25 E: 50½°S 73°W
9	ST. VIN	eP	17.41.06		21.5°	USCGS Gives H: 17.36.10 E: 7°N 82°W

DATE 1959	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
✓ 11 AFR	GREN	eP	09.29.54		21.0°	USCGS Gives H: 09.25.08 E: 9½° N 83° W
	ST. VIN	eP	09.30.02		21.7°	Small
	11 ST. VIN	e	09.53.(37)			
	11 GREN	ePPP	14.49.09		10.7°	USCGS Gives H: 14.46.16 E: 7° N 71½° W
	ST. VIN	iPP	14.49.17		11.8°	
✓ 12	GREN	eP	10.01.17		32.5°	Mexico: Damage at Cordoba USCGS Gives H: 09.54.51 E: 17½° N 95° W Depth: About 100 km
	ST. VIN	iP	10.01.19		32.7°	
	13 GREN	eP iS	01.41.53 01.42.08			
	13 TRIN	iP	18.08.49			Felt: Trinidad
	ST. VIN	iP i	18.09.24 18.09.56			
	14 GREN	iP	10.26.19	c	1.11°	H: 10.26.04 E: 11.4° N 61.9° W Depth: About 100 km
	TRIN	iP iS	10.26.21 10.26.34	c	1.27°	
	ST. VIN	iP iS i	10.26.32 10.26.57 10.27.03	d	2.09°	
	15 ST. VIN	eP	11.11.53			
	15 GREN	eP eS	15.47.49 15.47.57			
	15 ST. VIN	e	21.38.17			
	16 ST. VIN	eP	12.18.00			
✓ 16	ST. VIN	eP'	16.33.26		152.0°	USCGS Gives H: 16.13.56 E: 12½° N 143° E Depth: About 100 km
	16 ST. VIN	eP iP iS	21.02.16 21.02.17 21.02.40			
	17 TRIN	iP iS	01.55.22 01.55.29			Trinidad Region
	17 ST. VIN	iP	23.12.15	d		
	18 ST. VIN	eP	05.17.10			
✓ 18	TRIN	eP'	06.37.35		144.3°	Felt: Rabaul, Londolovit USCGS Gives H: 06.17.51 E: 4½° S 154° E
	18 ST. VIN	eP iP iS	15.29.39 15.29.40 15.30.00			
	18 TRIN	iP	08.29.19			
	20 GREN	eP	02.47.34			
	TRIN	iP iS	02.47.48 02.48.02			
✓ 20	ST. KIT	eP'	03.47.32		146.4°	Felt: Walindi USCGS Gives H: 03.27.52 E: 6° S 149½° E Depth: About 100 km
	TRIN	e	03.47.(40)		149.0°	

DATE 1959	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
APR 20	GREN	eP	04.26.02		21.5°	USCGS Gives H: 04.21.10 E: 8½°N 83°W
	TRIN	eP	04.26.03		21.5°	
	ST. KIT.	eP	04.26.09		21.6°	
21	ST. KIT.	eP iS	13.51.19 13.51.38			
21	ST. VIN	iP i i	12.04.31 12.05.05 02.05.14			
22	ST. VIN	eP	17.27.06		12.2°	Small USCGS Gives H: 17.24.05 E: 7½°N 72°W
22	ST. KIT.	i	18.10.58			
22	ST. KIT	iP	19.06.56		23.7°	USCGS Gives H: 19.01.41 E: 11½°N 86½°W
	ST. VIN	eP	19.07.(05)		24.5°	
22	ST. KIT.	eP	20.37.17		62.8°	USCGS Gives H: 20.26.46 E: 56½°S 97½°W
23	ST. KIT.	iP	23.26.57	d		
23	ST. KIT	iP	23.50.03			
24	ST. KIT.	eP	06.57.27			
24	ST. VIN	eP	09.24.(04)			Small
24	ST. KIT.	eP	09.36.47		23.7°	USCGS Gives H: 09.31.33 E: 11½°N 86½°W
	GREN	eP	09.36.51		24.3°	
24	ST. KIT.	iP	15.38.13			
25	ANT	iP i	01.08.33 01.09.01	c		
25	ST. KIT	eP	06.07.02		3.40°	Felt: San Juan: Puerto Rico H: 06.06.17 E: 19.3°N 65.6°W
	ANT	eP iS	06.07.13 06.07.55		4.21°	
	ST. VIN	eP	06.07.59		7.42°	
	GREN	eP	06.08.09		8.15°	
	TRIN	eP	06.08.30		9.56°	
	ST. KIT	iP eS	21.50.44 21.51.07	d		
26	ANT	eP	01.51.19			
	ST. KIT.	eP iS	01.51.24 01.51.46			
26	GREN	eP iS	10.19.06 10.19.17			
	ST. VIN	eP e	10.19.18 10.19.40			
	TRIN	i	10.19.35			
26	ST. KIT.	eP' i	20.59.44 21.03.14		137.8°	Near East Coast of Formosa 2 killed: Minor damages at Taipui. USCGS Gives H: 20.40.38 E: 25°N 122½°E Depth: About 150 km
	ANT	eP' e	20.59.44 21.03.14		137.8°	
	ST. VIN	iP' i i i	20.59.54 21.00.10 21.00.35 21.01.18		141.8°	
	GREN	eP'	20.59.55		143.0°	
	TRIN	eP'	21.00.00		144.2°	

DATE 1959	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
APR 27	ST. KIT.	eP	00.06.09			
27	ANT	eP ₁	10.08.16	.	165.5°	USCGS Gives H: 09.48.09 E: 7°S 129°E
		eP ₂	10.09.15			
	ST. VIN	iP'	10.08.18		168.2°	
27	ST. KIT.	eP	20.14.54			
		iS	20.15.16			
	ANT	eP	20.14.57			
28	ANT	eP	02.26.20			
		i	02.26.40			
	ST. KIT.	iP	02.26.25			
		iS	02.26.47			
28	GREN	eP	02.36.13			
		iS	02.36.29			
28	ST. KIT	eP	03.17.34			
		iS	03.17.54			
	ANT	eP	03.17.(43)			
28	ANT	iP	08.00.49			Leeward Islands Region
		iS	08.00.58			
	ST. KIT.	iP	08.00.52			
		iS	08.01.04			
28	ST. KIT	eP	08.17.26			
28	GREN	iP	10.19.28		2.17°	H: 10.18.59 E: 10.3°N 63.0°W
		iS	10.19.49			
	ST. VIN	iP	10.19.45		3.36°	
		iS	10.20.18			
		mT	10.21.56			
	ANT	eP	10.20.33		6.96°	
28	ST. KIT.	eP	11.15.28		29.2°	USCGS Gives H: 11.09.30 E: 15°N 93°W
	ANT	eP	11.15.(34)		30.0°	
	GREN	eP	11.15.41		30.5°	Small
	ST. VIN	eP	11.15.48		31.0°	Small
28	ANT	iP'	13.20.25		144.2°	Felt: Rabaul and Karlai USCGS Gives H: 13.00.57 E: 5°S 152½°S Depth: About 100 km
	ST. VIN	eP'	13.20.(30)		145.8°	
	TRIN	eP'	13.20.32		146.0°	
28	ANT	iP	21.01.16	c		
		i	21.01.25			
29	GREN	eP	06.56.45			
	ST. VIN	eP	06.57.05			
		e	06.57.41			
29	ANT	eP	21.23.37			
		i	21.24.03			
30	ANT	eP	00.18.02			
30	ANT	iP	05.07.42	d		
		e	05.08.06			
30	ST. VIN	eP	13.37.18		75.0°	USCGS Gives H: 13.25.35 E: 55½°S 26°W
	ANT	iP	13.37.39		78.5°	
	ST. KIT	iP	13.37.42	d	79.5°	

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1959					
APR 30	ST. KIT	eP	15.04.50		
	ANT	eP	15.05.01		
30	ST. KIT	eP	17.23.10		
		eS	17.23.29		
	ANT	e	17.23.15		
30	ST. KIT	eP	21.48.07		

STATION	LONGITUDE	LATITUDE	INSTRUMENT
ST. MICHAEL	106° 30' W	19° 00' N	(S)
ST. JOHN	106° 30' W	18° 30' N	(S)
ST. GEORGE	106° 30' W	18° 00' N	(S)
ST. PETER	106° 30' W	17° 30' N	(S)
ST. ANDREW	106° 30' W	17° 00' N	(S)
ST. DAVID	106° 30' W	16° 30' N	(S)
ST. ELIZABETH	106° 30' W	16° 00' N	(S)
ST. MARY	106° 30' W	15° 30' N	(S)
ST. ANNE	106° 30' W	15° 00' N	(S)
ST. CATHERINE	106° 30' W	14° 30' N	(S)
ST. MARGARET	106° 30' W	14° 00' N	(S)
ST. ANTHONY	106° 30' W	13° 30' N	(S)
ST. PATRICK	106° 30' W	13° 00' N	(S)
ST. BRUNO	106° 30' W	12° 30' N	(S)
ST. VINCENT	106° 30' W	12° 00' N	(S)
ST. THEODORE	106° 30' W	11° 30' N	(S)
ST. NICHOLAS	106° 30' W	11° 00' N	(S)
ST. JUSTINE	106° 30' W	10° 30' N	(S)
ST. JAMES	106° 30' W	10° 00' N	(S)
ST. JOHN THE BAPTIST	106° 30' W	9° 30' N	(S)
ST. MICHAEL'S	106° 30' W	9° 00' N	(S)
ST. GEORGE'S	106° 30' W	8° 30' N	(S)
ST. PETER'S	106° 30' W	8° 00' N	(S)
ST. ANDREW'S	106° 30' W	7° 30' N	(S)
ST. DAVID'S	106° 30' W	7° 00' N	(S)
ST. ELIZABETH'S	106° 30' W	6° 30' N	(S)
ST. MARY'S	106° 30' W	6° 00' N	(S)
ST. ANNE'S	106° 30' W	5° 30' N	(S)
ST. CATHERINE'S	106° 30' W	5° 00' N	(S)
ST. MARGARET'S	106° 30' W	4° 30' N	(S)
ST. ANTHONY'S	106° 30' W	4° 00' N	(S)
ST. PATRICK'S	106° 30' W	3° 30' N	(S)
ST. BRUNO'S	106° 30' W	3° 00' N	(S)
ST. VINCENT'S	106° 30' W	2° 30' N	(S)
ST. THEODORE'S	106° 30' W	2° 00' N	(S)
ST. NICHOLAS'S	106° 30' W	1° 30' N	(S)
ST. JUSTINE'S	106° 30' W	1° 00' N	(S)
ST. JAMES'S	106° 30' W	0° 30' N	(S)
ST. JOHN THE BAPTIST'S	106° 30' W	0° 00' N	(S)

SEISMIC RESEARCH UNIT
 Regional Research Centre,
 I. C. T. A.
 Trinidad, West Indies.

Preliminary Seismological Bulletin.
 MAY 1959
 All other stations have a similar equipment recording vertical component only.
 Magnification is 10,000 at 5 cycles / sec except at stations where it is
 5,000 at 5 cycles / sec.

from January 1958 to January 1959 at 10° 40' North 61° 30' West
 from January 1958 to January 1959 at 10° 42' North 61° 32' 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.
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.

DATE 1959	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE
MAY 1	ANT	iP	00.28.41		
	ST. KIT	eP	02.28.27		
	ST. KIT	eP	04.51.49		2.5°
		eS	04.52.14		
	ANT	eP	04.51.55		2.9°
	TRIN	eP	05.42.30		
	ST. KIT	eP	06.55.47		2.3°
		iS	06.56.10		
	ANT	eP	06.55.52		2.6°
	ANT	iP	08.59.13		0.6°
	ST. KIT	eP	08.59.19		1.0°
		eS	08.59.28		
	ST. KIT	iP	02.07.10	c	
	ST. KIT	i	17.03.22		
	ST. KIT	iP	22.19.40	c	3.0°
	ANT	eP	22.19.44		3.2°
		iS	22.20.16		
	ST. KIT	iP	23.28.08	d	
		i	23.28.24		
	ST. KIT	e	01.50.(24)		
	ST. KIT	eP	04.46.37		24.2°
	GREN	eP	04.46.46		25.2°
		e	04.47.03		
	ANT	eP	04.46.(46)		25.5°
	DOM	eP	04.46.48		25.5°
	ST. VIN	eP	04.46.49		25.6°
	TRIN	eP	04.46.50		25.8°
	ANT	eP	05.12.13		1.3°
		iS	05.12.26		
	ST. KIT	iP	05.12.19	c	1.7°
	DOM	eP	05.12.(42)		3.5°
	ST. VIN	e	05.13.(08)		
	ANT	eP	05.16.26		
	ST. KIT	eP	05.16.29		
	ST. KIT	e	07.51.(43)		
	ANT	eP	00.18.22		0.8°
		iS	00.18.30		
	ST. KIT	eP	00.18.24		1.0°
	ST. KIT	e	01.02.(50)		
	ANT	eP	07.29.(39)		101.8°
	ST. KIT	iP	07.29.42		101.5°
		e(PP)	07.33.30		
	DOM	eP	07.29.51		103.8°
	ST. VIN	eP	07.29.57		105.7°
		e	07.33.12		
		e(PP)	07.34.11		
	GREN	eP	07.30.(04)		106.5°
		e(PP)	07.34.24		
	TRIN	eP	07.30.10		109.3°
		e(PP)	07.34.35		

Felt: San Miguel, San Vicente
El Salvador.
USCGS Gives H: 04.41.24
E: 12½°N 87½°W
Depth: About 100 km

Small
Small

Near East Coast of Kamchatka
1 killed and 13 injured.
USCGS Gives H: 07.15.42
E: 52½°N 159½°E
Depth: About 60 km

DATE 1959	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
MAY 4	ST. VIN	iP	17.30.09	d	1.3°			
		iS	17.30.22					
4	ST. KIT	eP	20.24.(50)		3.8°			
		iS	20.25.12					
	ANT	eP	20.24.55		4.2°			
		i	20.25.02					
5	ST. VIN	iP	02.55.09	c	1.96°	H: 02.54.43 E: 15.0° N 60.6° W		
		iS	02.55.34					
	BARB	eP	02.55.(14)		2.09°			
	ANT	iP	02.55.15	c	2.44°			
		i	02.55.19					
		i	02.55.26					
		iS	02.55.45					
	ST. KIT	iP	02.55.25	c	3.11°			
		iS	02.56.01					
	GREN	iP	02.55.25		3.18°			
	TRIN	eP	02.55.43		4.43°			
		iS	02.56.33					
	5	TRIN	iP	14.45.32			1.67°	H: 14.45.09 E: 11.1° N 62.1° W Depth: About 150 km
			iS	14.45.50				
	GREN	iP	14.45.33		1.75°			
iS		14.45.50						
ST. VIN	iP	14.45.45	d	2.64°				
	iS	14.46.14						
	MP	14.48.12						
DOM	eP	14.46.(13)		4.25°				
6	ST. KIT	e	12.44.42					
6	ST. KIT	iP	16.16.30	d				
7	ST. KIT	eP	01.51.29					
8	ANT	eP	17.23.37		1.96°	H: 17.23.11 E: 16.3° N 61.8° W Depth: About 200 km		
		iP	17.23.38					
	ST. KIT	iP	17.23.41	c	2.22°			
	ST. VIN	iP	17.23.59	d	3.60°			
		iS	17.24.36					
	GREN	iP	17.24.10		4.56°			
	TRIN	iP	17.24.31		5.89°			
		iS	17.25.32					
9	ST. KIT	iP	12.36.24	c				
9	ST. VIN	iP	12.40.41	c	1.75°	H: 12.40.17 E: 13.1° N 60.4° W Depth: About 170 km		
		iS	12.40.57					
	BARB	iP	12.40.45		1.75°			
		iS	12.41.04					
	GREN	iP	12.40.48		2.27°			
		iS	12.41.08					
	TRIN	i	12.41.05		3.04°			
	ANT	iP	12.41.19		4.55°			
		iS	12.41.19					
	9	ST. KIT	iP	16.46.33				
			i	16.46.54				
	10	TRIN	eP	08.22.56			1.3°	
iS			08.23.11					
GREN		eP	08.23.00		1.6°			
		iP	08.23.01					
		iS	08.23.14					
		iS	08.23.14					

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>		
MAY 10	GREN	eP	10.22.30		1.1°		
		eS	10.22.41				
	TRIN	eP	10.22.(35)		1.5°		
		iS	10.22.54				
	11	ST. KIT	eP	05.39.00			
		ANT	eP	05.39.07			
		i	05.39.34				
11	TRIN	eP	08.56.03				
	GREN	eP	08.56.25				
		i	08.56.26				
		i	08.56.42				
12	TRIN	e	03.46.30		15.5°	USCGS Gives H: 03.42.47	
	ST. VIN	eP	03.46.41		16.5°	E: 7 $\frac{1}{2}$ ° N 77° W	
	ANT	eP	03.46.(59)		17.7°	Small	
	BARB	e(PP)	03.47.(16)		18.0°	Small	
						18.0°	Very Small
12	TRIN	eP	09.53.(45)		34.3°	USCGS Gives H: 09.46.51	
	GREN	eP	09.53.50		35.5°	E: 23 $\frac{1}{2}$ ° S 64 $\frac{1}{2}$ ° W	
		ePP	09.55.16				
	ST. VIN	eP	09.54.02		37.0°		
	ANT	eP	09.54.(36)		41.0°		
13	TRIN	iP	07.08.16	d			
14	ANT	eP	05.47.07				
14	ANT	eP	06.48.55		77.5°	USCGS Gives H: 06.36.57	
	ST. KIT	eP	06.48.58		78.0°	E: 35 $\frac{1}{2}$ ° N 24 $\frac{1}{2}$ ° E	
	TRIN	eP	06.49.13		81.0°	Very Small	
15	ST. KIT	iP	03.15.30		3.1°		
		iS	03.16.01				
	ANT	eP	03.15.39		3.8°		
		iP	03.15.40				
		i	03.16.18				
15	TRIN	iP	04.02.07				
		e	04.02.22				
15	ST. KIT	eP	17.51.41				
		i	17.52.31				
15	ST. KIT	iP	18.38.32				
		eP	18.38.38				
		i	18.39.00				
		i	18.39.14				
	ST VIN	e	18.39.(37)				
	TRIN	e	18.40.10				
15	ST. KIT	e	18.59.07				
15	TRIN	iP	19.17.07				
	ST. VIN	eP	19.17.25				
15	ST. KIT	eP	19.50.41				
15	ANT	iP	23.05.48		0.6°		
		iS	23.05.54				
	ST. KIT	iP	23.05.53	d	0.9°		
		iS	23.06.02				

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
MAY 15	ANT	eP i	23.44.51 23.44.57		
✓ 16	ANT	eP'	06.35.55		143.5°
	ST. VIN	eP'	06.35.(56)		144.8°
	TRIN	eP' i	06.35.56 06.36.06		145.0°
	ST. KIT	e	06.36.01		142.2°
	✓ BARB	eP'	06.36.04		146.2°
16	ST. KIT	eP iS	08.15.31 08.15.41		1.1°
17	ANT	iP iS	10.21.09 10.21.19	c	1.1°
17	ST. KIT	eP iS	12.18.06 12.18.21		1.5°
17	ST. KIT	e	18.37.10		
17	ST. KIT	iP	20.40.39	d	
17	BARB	eP	21.04.53		
18	ST. KIT	e	08.18.25		
18	TRIN	iP iS	15.55.18 15.55.30		1.2°
18	ANT	iP iS	23.19.54 23.20.14		2.0°
19	ANT	eP iP	07.17.14 07.17.15		
19	ST. VIN	eP	17.39.04		
20	TRIN	eP i	09.29.15 09.29.34		
	GREN	eP	09.29.22		
20	✓ GREN	eP	11.32.50		
20	ANT	eP	21.32.38		
21	✓ GREN	eP	11.42.08		
	✓ ST. VIN	e	11.42.(10)		
21	TRIN	iP	21.20.53		
	ST. VIN	eP	21.21.16		
23	TRIN	iP iS	01.44.25 01.44.41		1.6°
23	ST. VIN	iP iS	01.53.06 01.53.29	d	2.3°
23	GREN	iP	07.21.39		1.33°
	ST. VIN	iP iS i	07.21.55 07.22.20 07.22.30	d	2.50°
	BARB	eP	07.22.09		3.25°
	ANT	eP	07.22.(48)		6.41°

USCGS Gives H: 06.16.23
E: 4 $\frac{1}{2}$ ° S 153 $\frac{1}{2}$ ° E
Depth: About 60 km

USCGS Gives H: 11.34.23
E: Chile-Argentina
Border
Depth: About 60 km
Small

H: 07.21.21
E: 10.7° N 61.8° W

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
MAY 23	GREN	eP	09.20.35			
	ST. VIN	eP	09.20.51			
23	GREN	eP	09.56.02		1.46°	H: 09.55.46
		iP	09.56.03			E: 10.9°N 62.4°W
	ST. VIN	iP	09.56.20	c	2.51°	
		i	09.57.13			
		MT	09.58.44			
	BARB	iP	09.56.38		3.52°	
	ANT	iP	09.57.11	d	6.24°	
23	GREN	eP	10.47.48			
	ST. VIN	eP	10.48.05			
23	TRIN	eP	19.03.15		0.88°	H: 19.03.03
	GREN	eP	19.03.23		1.45°	E: 10.7°N 62.3°W
	ST. VIN	eP	19.03.39		2.66°	
24	ANT	iP	00.10.15	d	4.14°	Felt: San Juan, Puerto Rico
	ST. VIN	iP	00.11.03		7.68°	H: 00.09.18
		i	00.16.28			E: 20.0°N 65.0°W
	GREN	iP	00.11.14		8.50°	
		i	00.17.03			
	BARB	eP	00.11.(19)		8.59°	
	TRIN	eP	00.11.36		9.92°	
24	GREN	iP	02.58.35			
		i	02.58.49			
24	GREN	eP	03.47.55		1.9°	
		iS	03.48.14			
24	ST. VIN	eP	19.16.29			
		e	19.16.40			
24	ANT	iP	19.24.16		33.6°	Oaxaca, Mexico 1 killed, 10
		eS	19.29.33			injured, minor property
	GREN	eP	19.24.23		34.5°	damage. Felt also in Mexico
		e	19.29.52			City.
	ST. VIN	iP	19.24.26		34.7°	USCGS Gives H. 19.17.40
						E: 17½°N 97°W
	TRIN	eP	19.24.30		35.0°	Depth: About 100 km
		e	19.29.58			
	BARB	eP	19.24.(41)		36.2°	
24	BARB	iP	20.46.55	d		
25	GREN	eP	03.55.10		4.9°	
		iS	03.55.58			
	TRIN	iP	03.55.12		5.0°	
		i	03.55.27			
25	GREN	eP	11.15.54		1.6°	
		iS	11.16.10			
26	ST. VIN	iP	04.03.25	c	1.0°	
		iS	04.03.35			
26	ST. VIN	iP	05.28.43	c	4.16°	H: 05.27.46
		i	05.28.54			E: 17.3°N 61.3°W
		i	05.29.36			
	BARB	iP	05.28.51	d	4.50°	
		i	05.29.53			
	GREN	iP	05.28.58		5.30°	
		iS	05.29.50			
	TRIN	eP	05.29.20		6.67°	
		iS	05.30.30			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1959					
MAY 26	ST. VIN	eP	07.56.23		
		i	07.57.04		
		i	07.57.16		
	GREN	eP	07.56.40		Small
	TRIN	eP	07.57.(02)		Very Small
		e	07.58.08		Very Small
27	TRIN	eP	04.14.55		
		e	04.16.57		
27	ST. VIN	eP	12.56.10		2.0°
		iS	12.56.30		
28	TRIN	eP	04.09.(47)		
		i	04.09.51		
		e	04.12.13		USCGS Gives H: 04.06.15 E: Columbia
	ST. VIN	e	04.10.00		
	BARB	e	04.10.19		
28	TRIN	eP	08.58.(31)		
28	ST. VIN	iP	22.15.23	c	1.2°
		iS	22.15.35		
	BARB	eP	22.15.(33)		1.6°
28	ST. VIN	eP	22.22.15		2.7°
		iS	22.22.42		
28	ST. VIN	eP	22.33.58		2.8°
		iS	22.34.26		
29	ST. VIN	eP	19.03.40		2.6°
		iS	19.04.06		
30	ANT	eP	20.21.50		
	ST. KIT	iP	20.21.58		
31	ANT	eP	05.40.(38)		17.8°
					Small
	ST. VIN	eP	05.40.52		19.0°
	TRIN	eP	05.41.07		20.5°
					Small
31	ST. KIT	eP	20.13.57		2.1°
		iS	20.14.18		

1958	W 11.16° N 10.01°	1958	W 11.16° N 10.01°
1958	W 11.16° N 10.01°	1958	W 11.16° N 10.01°
1958	W 11.16° N 10.01°	1958	W 11.16° N 10.01°
1958	W 11.16° N 10.01°	1958	W 11.16° N 10.01°
1958	W 11.16° N 10.01°	1958	W 11.16° N 10.01°
1958	W 11.16° N 10.01°	1958	W 11.16° N 10.01°
1958	W 11.16° N 10.01°	1958	W 11.16° N 10.01°
1958	W 11.16° N 10.01°	1958	W 11.16° N 10.01°
1958	W 11.16° N 10.01°	1958	W 11.16° N 10.01°
1958	W 11.16° N 10.01°	1958	W 11.16° N 10.01°

SEISMIC RESEARCH UNIT

Regional Research Centre,

I. C. T. A.

Trinidad, West Indies.

- JUN 1959

Preliminary Seismological Bulletin.

... and ...

... and ...

... and ...

... and ...

From Jan 1958 to Jan 1959 at 10° 40' N, 61° 30' W

From Jan 1958 to Jan 1959 at 10° 44' 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

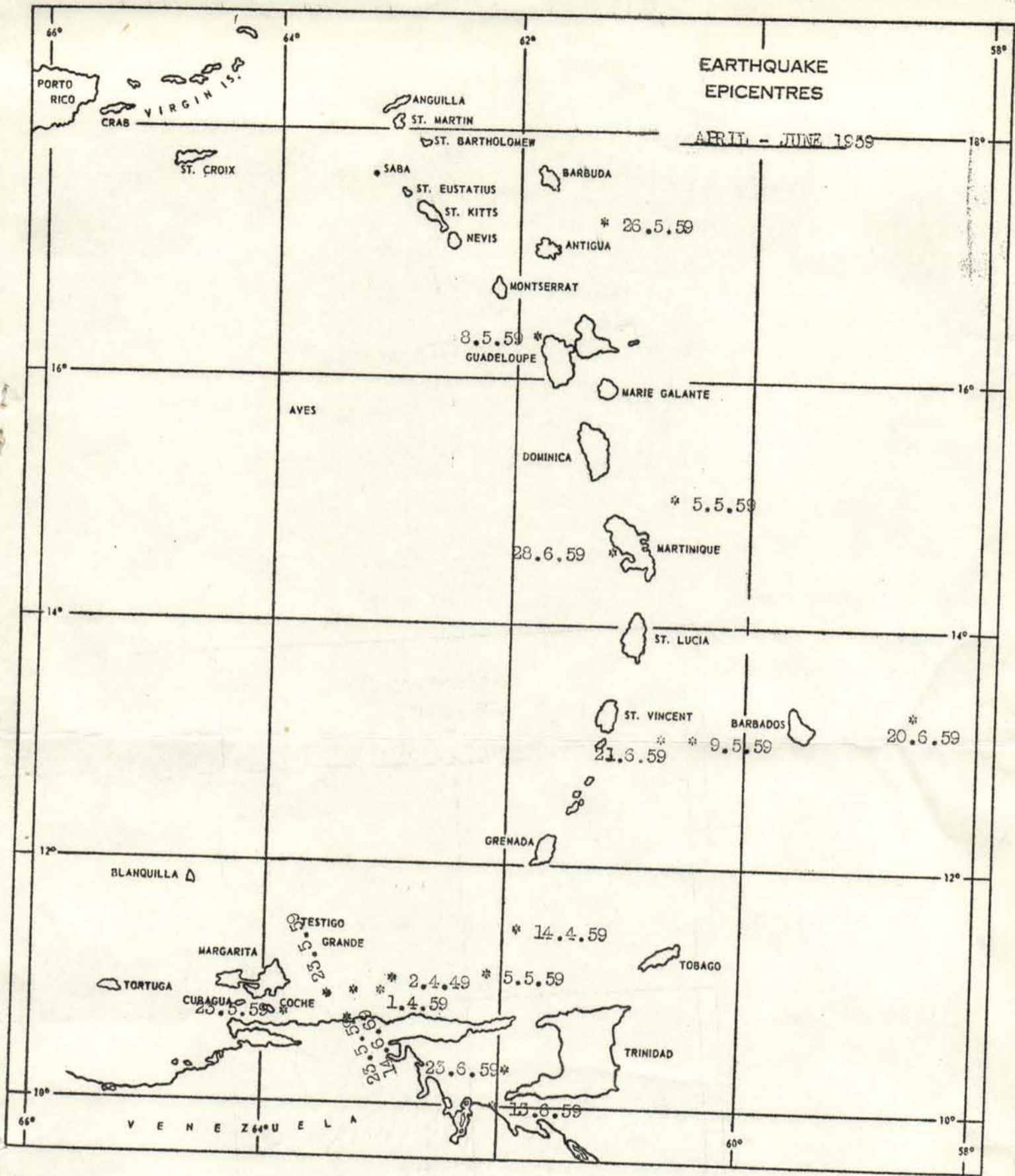
From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
JUNE 1	TRIN	eP iS	01.59.58 02.00.18		2.1°	
	ST. VIN	eP eS	02.00.14 02.00.46		3.2°	
1	ST. VIN	iP'	05.50.21		144.8°	USCGS Gives H: 05.31.30 E: 4° S 153° E Depth: About 400 km
	TRIN	eP'	05.50.24		145.0°	
	BARB	eP'	05.50.31		146.5°	
1	ST. KIT	iP iS	09.19.21 09.19.34	d	1.3°	
1	TRIN	iP iS	11.04.53 11.05.02		0.9°	
1	ST. VIN	eP'	12.51.(16)		144.3°	USCGS Gives H: 12.32.25 E: 6° S 154° E Depth: About 400 km
2	TRIN	eP	05.51.(45)		54.6°	Small USCGS Gives H: 05.42.26 E: 43° S 72° W Depth: About 150 km
	GREN	eP	05.52.(00)		56.0°	Very Small
	ST. VIN	eP	05.52.01		57.4°	Small
	ST. KIT	iP	05.52.18	c	60.6°	
3	TRIN	e(P) e e	03.47.45 03.50.57 03.56.10		16.6°	USCGS Gives H: 03.43.42 E: 4° N 77° W
	GREN	eP	03.47.47		17.3°	
	ST. VIN	eP	03.47.57		17.7°	
	ST. KIT	eP	03.48.12		19.0°	
	BARB	eP	03.48.13		19.5°	
3	ST. KIT	iP iS	07.31.10 07.31.24	d	1.4°	
5	TRIN	e e	03.39.52 03.40.56			
5	GREN	iP iS	07.41.05 07.41.18		1.3°	
6	ST. VIN	iP iS	21.58.00 21.58.03	d	0.3°	
6	ST. KIT	eP	23.02.27			
6	ST. KIT	eP eS	23.40.29 23.40.58		2.9°	
7	ST. VIN	iP iS	18.27.09 18.27.26	d	1.7°	
7	ST. KIT	iP	20.20.26			
7	ST. KIT	iP	21.56.17			
8	TRIN	eP	10.44.14			
9	ST. KIT	iP	00.49.13	c		
9	ST. KIT	iP	06.56.13	e		
9	ST. VIN	iP iS	20.27.31 20.27.44	d	1.3°	
	GREN	iP iS	20.27.32 20.27.47	d	1.5°	

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
JUNE 11	ST. VIN	iP	20.15.48		1.7°	
		iS	20.16.05			
12	ST. VIN	eP	01.02.08			
		e	01.02.31			
12	ST. KIT	iP	01.21.01	d	1.0°	
		iS	01.21.11			
13	GREN	eP	20.26.57		2.0°	H: 20.26.29 E: About 10°N 62°W
		iP	20.26.58			
		iS	20.27.16			
	ST. VIN	iP	20.27.14	c	3.3°	
		iS	20.27.46			
	ST. KIT	eP	20.28.11		7.5°	
		iS	20.29.26			
14	GREN	eP	00.18.29		33.2°	South West Bolivia, 1 killed. Minor damage in Northern Chile USCGS Gives H: 00.11.57 E: 20½°S 68°W
		e	00.18.32			
		i	00.18.35			
	ST. VIN	eP	00.18.(39)		34.5°	
		i	00.19.15			
		i	00.23.59			
	BARB	iP	00.18.49	c	34.4°	
		i	00.19.51			
		e	00.23.00			
	ANT	iP	00.19.11		38.0°	
	ST. KIT	eP	00.19.11		38.1°	
		iP	00.19.15			
		i	00.24.53			
14	GREN	iP	19.53.59	c	1.24°	H: 19.53.43 E: 10.9°N 61.2°W
	ST. VIN	iP	19.54.12	d	2.26°	
		iS	19.54.34			
	BARB	eP	19.54.24		2.73°	
	ANT	eP	19.55.08		6.24°	
		eS	19.56.11			
	ST. KIT	iP	19.55.13		6.57°	
		iS	19.56.19			
15	ST. VIN	eP	04.17.09			
15	ST. KIT	iP	19.51.03		1.6°	
		iS	19.51.19			
16	GREN	eP	02.41.30		1.7°	
		iP	02.41.31			
		iS	02.41.47			
16	GREN	iP	22.51.15		1.1°	
		iS	22.51.25			
	ST. VIN	eP	22.51.27		2.3°	
		i	22.51.51			
17	ST. VIN	iP	04.10.27	d	1.8°	
		iS	04.10.44			
19	ST. KIT	eP	01.42.57		22.0°	USCGS Gives H: 01.37.51 E: 6°N 82½°W
	ST. VIN	eP	01.43.00		22.2°	
19	BARB	iP	10.48.11			
19	ST. KIT	iP	21.00.28	c	2.0°	
		iS	21.00.48			

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>		
JUNE 20	BARB	iP	14.29.13		1.10°	H: 14.28.55	
	ST. VIN	iP	14.29.32		2.73°	E: 13.3° N 58.5° W	
		iS	14.30.00				
	GREN	iP	14.29.41		3.43°		
	ST. KIT	e	14.30.(13)		5.72°		
20	GREN	e	21.13.28			Very Small	
21	ST. VIN	iP	14.04.26	c			
21	BARB	iP	18.02.09	d	1.13°	H: 18.01.51	
	GREN	iP	18.02.10	d	1.45°	E: 13.0° N 60.7° W	
		iS	18.02.27			Depth About 40 km	
	TRIN	eP	18.02.24		2.47°		
		iS	18.02.50				
ST. KIT	iP	18.02.56	d	4.76°			
		i	18.02.58				
21	BARB	iP	21.13.06	c			
22	TRIN	eP	03.28.10		24.4°	USCGS Gives H: 03.22.51 E: 4° S 81° W	
	GREN	eP	03.28.13		25.0°		
		iP	03.28.15				
22	ST. KIT	iP	14.40.09	d	1.6°		
		iS	14.40.25				
23	ST. VIN	iP	00.14.32		1.1°		
		iS	00.14.43				
23	TRIN	iP	18.51.56	c	1.51°	H: 18.51.35	
		iS	18.52.14			E: 10.2° N 61.9° W	
	GREN	iP	18.52.06		2.27°	Depth: About 150 km	
	ST. VIN	eP	18.52.20		3.31°		
25	BARB	iP	16.26.14				
28	TRIN	iP	14.11.24	d	1.3°		
		iS	14.11.36				
28	BARB	iP	16.30.36				
28	BARB	eP	18.36.38		1.0°		
		ST. VIN	iP	18.36.49		2.0°	
			i	18.36.52			
			iS	18.37.09			
28	ST. KIT	iP	19.42.50				
28	ST. VIN	eP'	20.03.28		174.5°	USCGS Gives H: 19.43.22 E: 9½° S 122½° E	
	TRIN	eP'	20.03.38		175.8°		Very Small
28	ST. VIN	iP	23.44.33	d	2.32°	H: 23.44.02	
		iS	23.44.54			E: 14.6° N 61.1° W	
	BARB	iP	23.44.43	d	2.78°	Depth: About 200 km	
	TRIN	iP	23.45.01	c	4.37°		
		iS	23.45.42				
29	ST. VIN	iP	14.26.16		2.6°		
		iS	14.26.42				
29	ST. KIT	iP	14.35.18				

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1959						
JUNE 30	TRIN	eP	22.44.20		9.9°	Very Small
		e	22.46.10			Very Small
						USCGS Gives H: 22.42.02
						E: 8½° N 71½° W
						Depth: About 60 km
	ST. VIN	eP	22.44.33		11.0°	Very Small
30	ST. KIT	eP	08.57.15		1.3°	
		iS	08.57.28			
30	ST. KIT	iP	09.48.14		0.7°	
		iS	09.48.21			



STATION REPORTS

ST. JOHN'S	(ST. JOHN'S)	ST. JOHN'S
ST. GEORGE'S	(ST. GEORGE'S)	ST. GEORGE'S
ST. MARK'S	(ST. MARK'S)	ST. MARK'S
ST. PETER'S	(ST. PETER'S)	ST. PETER'S
ST. PAUL'S	(ST. PAUL'S)	ST. PAUL'S
ST. ANDREW'S	(ST. ANDREW'S)	ST. ANDREW'S
ST. DAVID'S	(ST. DAVID'S)	ST. DAVID'S
ST. JAMES'S	(ST. JAMES'S)	ST. JAMES'S
ST. MICHAEL'S	(ST. MICHAEL'S)	ST. MICHAEL'S
ST. NICHOLAS'S	(ST. NICHOLAS'S)	ST. NICHOLAS'S
ST. RICHARD'S	(ST. RICHARD'S)	ST. RICHARD'S
ST. THOMAS'S	(ST. THOMAS'S)	ST. THOMAS'S
ST. VINCENT'S	(ST. VINCENT'S)	ST. VINCENT'S
ST. WALTER'S	(ST. WALTER'S)	ST. WALTER'S
ST. JOHN'S	(ST. JOHN'S)	ST. JOHN'S
ST. GEORGE'S	(ST. GEORGE'S)	ST. GEORGE'S
ST. MARK'S	(ST. MARK'S)	ST. MARK'S
ST. PETER'S	(ST. PETER'S)	ST. PETER'S
ST. PAUL'S	(ST. PAUL'S)	ST. PAUL'S
ST. ANDREW'S	(ST. ANDREW'S)	ST. ANDREW'S
ST. DAVID'S	(ST. DAVID'S)	ST. DAVID'S
ST. JAMES'S	(ST. JAMES'S)	ST. JAMES'S
ST. MICHAEL'S	(ST. MICHAEL'S)	ST. MICHAEL'S
ST. NICHOLAS'S	(ST. NICHOLAS'S)	ST. NICHOLAS'S
ST. RICHARD'S	(ST. RICHARD'S)	ST. RICHARD'S
ST. THOMAS'S	(ST. THOMAS'S)	ST. THOMAS'S
ST. VINCENT'S	(ST. VINCENT'S)	ST. VINCENT'S
ST. WALTER'S	(ST. WALTER'S)	ST. WALTER'S

SEISMIC RESEARCH UNIT
 Regional Research Centre,
 I. C. T. A.
 Trinidad, West Indies.

JUL 1959

STATION REPORTS

Preliminary Seismological Bulletin.
 This bulletin is preliminary and is subject to change.
 All other stations have similar equipment.
 Magnification is 10,000 at 5 cycles / sec.

From January 1958 to January 1959 at 10° North of 21° West
 From January 1958 to January 1959 at 10° North of 21° 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.
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.

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1959						
JULY 1	ST. KIT	iP	01.13.37		2.2°	
	ST. VIN	eP	01.14.33		6.3°	
		e	01.19.39			
	TRIN	eP	01.15.07		8.8°	Very Small
1	ST. KIT	iP	01.29.58			
1	ST. KIT	eP	02.48.29			
	TRIN	eP	02.48.52			
1	ST. KIT	eP	06.00.54			
1	BARB	iP	15.49.52			
2	ST. KIT	eP	03.30.28		0.7°	
		iS	03.30.35			
2	ST. KIT	iP	15.27.26	c	1.1°	
		iS	15.27.37			
4	BARB	iP	21.26.00			
4	ST. KIT	iP	21.58.37			
5	ST. KIT	iP	03.41.19			
6	TRIN	eP	09.16.45		37.3°	USCGS Gives H: 09.10.17
		e	09.18.49			E: 26½°S 61½°W
		e	09.21.10			Depth: About 600 km
		e	09.21.37			
	ST. VIN	eP	09.17.03		39.9°	
		i	09.18.56			
		i	09.21.19			
		i	09.21.47			
	BARB	iP	09.17.08		39.6°	
		i	09.18.36			
		i	09.18.59			
		i	09.22.32			
	ST. KIT	iP	09.17.35		44.0°	
		i	09.19.10			
		i	09.21.32			
		i	09.22.03			
6	TRIN	eP	09.29.55		37.3°	USCGS Gives H: 09.23.27
		e	09.31.59			E: 26½°S 61½°W
		e	09.34.48			Depth: About 600 km
		e	09.35.27			
	ST. VIN	iP	09.30.15	d	39.9°	
		i	09.32.07			
		i	09.34.58			
		i	09.35.34			
	BARB	iP	09.30.17		39.6°	
		i	09.32.05			
		i	09.35.01			
		i	09.35.31			
	ST. KIT	iP	09.30.44	d	44.0°	
		i	09.32.20			
		i	09.34.39			
		i	09.35.14			
6	TRIN	eP	18.06.29			Small
	ST. VIN	e	18.06.(40)			Very Small
6	ST KIT	eP	19.43.40		2.1°	
		iS	19.44.01			

DATE 1959	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
JULY 7	ST. KIT	iP iS	15.34.05 15.34.21		1.6°	
9	TRIN	iP	16.11.36	c	52.2°	USCGS Gives H. 16.05.18 E: 20 $\frac{1}{2}$ ° S 68° W Depth: About 100 km
	ST. VIN	iP eS	16.11.57 16.17.11		34.4°	
	BARB	eP	16.12.03		34.4°	
	ANT	eP iP	16.12.28 16.12.30		38.0°	
		i	16.13.44			
	ST. KIT	iP i i	16.12.30 16.12.58 16.13.12		38.1°	
9	BARB	iP	16.26.44			
10	TRIN	iP iS	01.28.49 01.29.07		1.8°	
11	TRIN	iP	00.55.42	c		
13	ANT	iP	05.33.04			
13	ANT	eP	12.41.41		88.5°	USCGS Gives H: 12.28.45 E: 52° N 172 $\frac{1}{2}$ ° W
17	TRIN	eP	22.54.50		10.4°	USCGS Gives H: 22.52.08 E: 7 $\frac{1}{2}$ ° N 71 $\frac{1}{2}$ ° W
18	BARB	eP'	20.14.35		151.3°	USCGS Gives H: 19.54.45 E: 15 $\frac{1}{2}$ ° N 120 $\frac{1}{2}$ ° E
	ST. VIN	eP'	20.14.36		151.0°	Small
	TRIN	eP'	20.14.38		153.8°	
19	TRIN	eP i i i	15.11.41 15.11.47 15.14.58 15.18.20		27.3°	USCGS Gives H: 15.06.10 E: 15° S 70 $\frac{1}{2}$ ° W Depth: About 200 km
	ST. VIN	eP i i i	15.12.01 15.12.06 15.15.02 15.16.46		29.7°	
	BARB	eP eS i	15.12.08 15.13.46 15.17.17		30.0°	
19	TRIN	eP e(PcP)	15.41.48 15.45.04		28.0°	Small Small
	ST. VIN	eP	15.42.09		30.2°	USCGS Gives H: 15.36.17 E: 15 $\frac{1}{2}$ ° S 71° W Depth: About 200 km
20	TRIN	eP e	00.09.34 00.11.04			Small Small
20	ST. VIN	eP'	03.00.18		168.5°	USCGS Gives H: 02.40.13 E: 6° S 110° E
	TRIN	eP' eP' ₂	03.00.20 03.01.43		170.2°	
21	TRIN	iP	02.38.32			
	ST. VIN	eP	02.39.04			
21	ST. VIN	eP	09.20.00		9.0°	Felt: Puerto Rico
	BARB	eP	09.20.21		10.2°	USCGS Gives H: 09.17.51 E: 19° N 68 $\frac{1}{2}$ ° W
	TRIN	eP i	09.20.26 09.21.17		10.5°	

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1959 JULY 22	ST. VIN	iP'	23.22.04		145.8°	Felt: New Britain USCGS Gives H: 23.02.27 E: 5° S 152½° E Depth: About 60 km
23	TRIN	eP	03.52.03		11.8°	Small USCGS Gives H: 03.48.12 E: 3° N 71° W Depth: About 60 km
24	ST. VIN	eP	01.33.33		62.0°	USCGS Gives H: 01.25.09 E: 41° N 125½° W
25	BARB	iP	18.08.32			
	ST. VIN	iP	18.08.51	c		
		i	18.10.54			
25	BARB	eP	18.18.29			
26	ST. VIN	iP	07.32.57	c		
	BARB	e	07.33.05			
26	ST. VIN	iP	09.28.38	d		
	BARB	eP	09.28.54			
26	ST. VIN	iP	09.37.08	d		
	BARB	iP	09.37.23			
		i	09.38.27			
28	TRIN	eP	08.56.42		1.9°	
		iS	08.57.01			
	ST. VIN	eP	08.57.00	d	3.3°	
30	ST. VIN	iP	14.53.12			
	BARB	iP	14.53.25			
		i	14.55.19			
30	ST. VIN	eP	15.23.03			
30	ST. VIN	iP	21.15.16	c	3.3°	
		iS	21.15.49			

SEISMIC RESEARCH UNIT

TRINIDAD (TRIN) LAT. 10° 30' N LONG. 61° 34' W
 GRENADA (GREN) LAT. 12° 02' N LONG. 61° 11' W
 ST. VINCENT (ST. VIN) LAT. 13° 10' N LONG. 61° 16' W
 ST. LUCIA (ST. LUC) LAT. 13° 00' N LONG. 61° 00' W
 BARBADOES (BARB) LAT. 13° 00' N LONG. 59° 30' W
 DOMINICA (DOM) LAT. 15° 30' N LONG. 61° 30' W
 AUSTRIA (AUS) LAT. 15° 30' N LONG. 61° 30' W
 ST. LUCIA (ST. LUC) LAT. 13° 00' N LONG. 61° 00' W

SEISMIC RESEARCH UNIT
 Regional Research Centre,
 I. C. T. A.
 Trinidad, West Indies.

AUG 1959

Preliminary Seismological Bulletin.

Magnification in 10,000 at 5 degrees \ see except at Barbados where it is
 5,000 at 5 degrees \ see

From Jan 1955 to Jan 1958 at 10° 40' N, 61° 30' W
 From Jan 1958 to Jan 1959 at 10° 40' 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.

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1959					
AUG 1	ST. VIN	eP	13.19.05		
	2 ST. VIN	eP	20.32.06		
	GREN	eP	20.32.21		USCGS Gives H: 20.29.55
	BARB	eP	20.32.28		E: About 150 miles
	TRIN	eP	20.32.33		North of Puerto Ri
		e	20.34.23		
	2 TRIN	eP	23.35.(21)		1.3°
		iS	23.35.39		
	GREN	iP	23.35.32		2.2°
		iS	23.35.54		
	6 TRIN	eP	01.22.53		1.5°
		eS	01.23.08		
	6 ST. VIN	eP	04.08.27		
	TRIN	eP	04.08.28		Small
	7 TRIN	iP	13.45.35		0.73°
		iS	13.45.46		H: 13.45.25
	GREN	iP	13.45.36		0.81°
	ST. VIN	iP	13.45.51	d	1.91°
	BARB	eP	13.46.(05)		2.67°
	8 TRIN	iP	06.46.26	d	0.76°
		iS	06.46.34		H: 06.46.16
	GREN	eP	06.46.35		1.45°
		iS	06.46.49		E: 11.3° N 61.6° W
	ST. VIN	eP	06.46.50		2.51°
	11 ST. VIN	eP	08.10.50		7.2°
	TRIN	eP	08.11.20		9.5°
					USCGS Gives H: 08.09.02
					E: 19 1/2° N 65° W
	11 TRIN	iP	11.04.16		1.2°
		iS	11.04.28		
	GREN	iP	11.04.20		1.5°
		iS	11.04.35		
	12 TRIN	eP	02.06.02		23.5°
		eS	02.10.(18)		Small
					Very Small
					USCGS Gives H: 02.00.52
					E: 3° S 80 1/2° W
	13 ST. VIN	iP	13.25.47		
		i	13.26.07		
	14 ST. VIN	eP	00.44.00		
	14 ST. VIN	eP	12.43.30		
		i	12.43.40		
	14 TRIN	eP	22.25.49		
	15 TRIN	eP	06.36.14		
	15 TRIN	eP	07.31.05		
	15 ST. VIN	eP'	09.16.37		143.5°
					Felt: Formosa; 16 killed,
					many injured and extensive
					property damage.
					USCGS Gives H: 08.57.04
					E: 23° N 121° E
	BARB	eP'	09.16.45		144.0°
	TRIN	eP'	09.16.46		146.3°
		e	09.20.12		
	GREN	eP'	09.16.(49)		145.1°
					Very Small

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1959 AUG 15	TRIN	iP iS	11.24.23 11.24.37		1.4°	
15	ST. VIN	eP i	23.01.40 23.01.48			USCGS Gives H: 22.55.45 E: About 100 miles off coast of Costa Rica.
	GREN	iP	23.01.44			
15	GREN	eP iS	23.27.48 23.28.05		1.8°	
17	GREN	iP iS	00.22.18 00.22.33		1.6°	
	TRIN	eP iS	00.22.19 00.22.35		1.6°	
17	TRIN	eP'	01.22(18)		146.7°	Felt: Fomosa USCGS Gives H: 01.02.37 E: 22½° N 121° E
17	TRIN	e	01.45.(32)			
17	TRIN	e	08.44.(59)			
17	TRIN	eP' eP' e	21.24.10 21.24.13 21.29.37		143.0°	USCGS Gives H: 21.04.40 E: 7½° S 156° E
	ST. VIN	eP' e	21.24.11 21.29.34		143.1°	
	BARB	eP'	21.24.(22)		144.9°	
18	TRIN	eP'	00.49.46		168.5°	USCGS Gives H: 00.30.00 E: 0° 123° E Depth: About 200 km
18	ST. VIN	eP'	00.53.17		144.8°	USCGS Gives H: 00.33.43 E: 22° N 121½° E
	TRIN	eP' eP' e	00.53.21 00.53.23 00.54.10		147.2°	
	BARB	eP'	00.53.22		145.0°	
	GREN	eP'	00.53.24		146.0°	
18	TRIN	iP iS	04.26.22 04.26.34		1.2°	
18	ST. VIN	eP	06.46.30		52.0°	Felt: Yellowstone Park Wyoming. Many killed and injured. Major Property damage.
	GREN	eP	06.46.(36)		53.3°	USCGS Gives H: 06.37.13 E: 44½° N 111° W
	TRIN	eP e i e	06.46.40 06.46.43 06.46.47 06.53.55		54.2°	
	BARB	e	06.46.41		53.5°	
18	ST. VIN	e(P) e(PPP)	08.05.(33) 08.06.46		52.5°	Very Small Felt: Yellowstone Aftershock USCGS Gives H: 07.54.32 E: 45° N 111° W
	TRIN	e(P) e(PcP)	08.05.41 08.06.50		54.5°	
18	TRIN	e	08.51.02		54.0°	Felt: Yellowstone aftershock USCGS Gives H: 08.41.50 E: 45° N 110½° W
18	TRIN	iP iS	14.47.09 14.47.22		1.3°	
	ST. VIN	eP	14.47.31		2.9°	

DATE 1959	STATION	PHASE	TIME G.M.T	MOTION	DISTANCE	
AUG. 18	ST. VIN	eP	15.35.25		52.1°	Small Yellowstone "aftershock" USCGS Gives H: 15.26.06 E: 44½° N 111° W
	TRIN	eP	15.35.34		54.0°	
19	TRIN	iP iS	10.16.42 10.16.58		1.6°	
20	ST. VIN	iP	09.14.45			USCGS Gives H: 08.54.59 E: New Britain
20	GREN	iP iS	11.08.45 11.08.59		1.9°	
21	TRIN	iP	09.24.23	c	1.4°	
		iS	09.24.36			
	GREN	eP	09.24.29		1.8°	
		iS	09.24.48			
21	GREN	iP	17.41.36		2.42°	H: 17.41.03 E: 9.8° N 62.6° W Depth: About 50 km
	ST. VIN	eP	17.41.52		3.62°	
		iP iS	17.41.53 17.42.24			
	BARB	eP	17.42.07		4.45°	
iP		17.42.09				
22	GREN	iP	00.19.39		1.0°	
		iS	00.19.49			
	ST. VIN	eP	00.19.52		3.2°	
23	TRIN	iP	19.37.48	c	3.0°	
		iS	19.38.18			
	ST. VIN	eP	19.37.50		3.2°	
		iP i	19.37.52 19.38.31			
26	GREN	eP	08.32.02		32.2°	Vera Cruz, Mexico, 40 killed, Many injured, extensive damage throughout Tehuantepec Isthmus. USCGS Gives H: 08.25.30 E: 18° N 94½° W
	ST. VIN	eP	08.32.03		32.1°	
	TRIN	eP	08.32.06		32.9°	
	BARB	eP	08.32.17		34.0°	
28	TRIN	iP	07.48.57	c	2.26°	H: 07.48.27 E: 8.7° N 62.4° W Depth: About 75 km
	GREN	iP	07.49.(12)	d	3.46°	
	ST. VIN	iP	07.49.30	c	4.64°	
		iS	07.50.16			
	BARB	eP	07.49.42		5.22°	
		eP	07.49.45			
28	TRIN	iP	12.58.58		1.3°	
		iS	12.59.11			
	GREN	iP	12.59.04		1.7°	
		iS	12.59.22			
28	TRIN	iP	17.10.52	c	1.37°	H: 17.10.34 E: 9.5° N 62.1° W
	GREN	eP	17.11.09		2.60°	
		iS	17.11.30			
	ST. VIN	eP	17.11.25		3.79°	
29	TRIN	iP	16.49.44	d	1.42°	H: 16.49.24 E: 10.4° N 62.8° W
		iS	16.49.57			
	GREN	eP	16.49.51		1.93°	
		ST. VIN	eP	16.50.07		3.13°
30	GREN	eP eS	23.38.02 23.38.18		1.6°	
31	TRIN	iP	03.31.10	c		

SEISMIC RESEARCH UNIT

Regional Research Centre,

I. C. T. A.

Trinidad, West Indies.

- SEP 1959

Preliminary Seismological Bulletin.

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

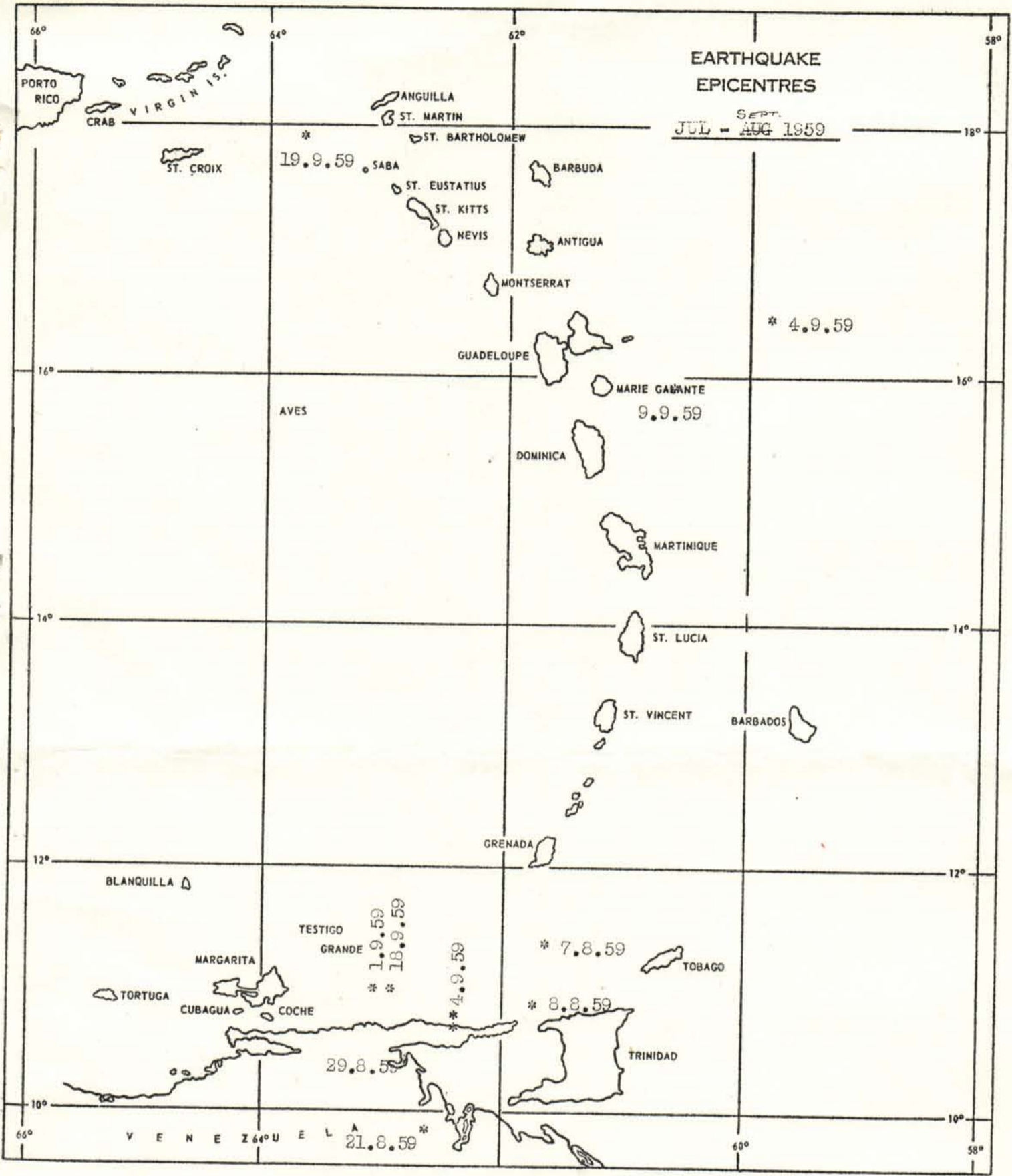
From 1st January 1955 to 1st September 1958 at 10° 44.7' North 61° 33.2' West.

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE			
1959 SEPT	1	GREN	eP	00.57.41		26.0°	Felt: Huancayo Peru USCGS Gives H: 00.52.04 E: 11°S 74½°W	
	+	ST. VIN	eP	00.58.02		28.0°		
	1	ST. VIN	eP	10.51.40		7.5°	USCGS Gives H: 10.49.43 E: 20°N 64½°W	
	+	GREN	eP	10.51.51		8.4°		
	+	BARB	eP	10.51.56		8.5°		
			iP	10.51.58				
	1	ST. VIN	eP	11.48.44				
	1	TRIN	iP	21.41.59	c	1.95°	H: 21.41.33 E: 11.0°N 63.0°W Depth: About 125 km	
			iS	21.42.21				
		GREN	eP	21.41.(59)		1.97°		
		ST. VIN	eP	21.42.13		2.96°		
	2	TRIN	e(PP)	08.18.18		80.2°	USCGS Gives H: 08.03.00 E: 60°N 151°W	
			e	08.18.21				
	2	ST. VIN	eP	09.33.32		7.4°	Puerto Rico aftershock USCGS Gives H: 09.31.36 E: 20°N 65°W	
	+		iPP	09.33.39				
	GREN	iP	09.33.41		8.7°			
	BARB	eP	09.33.48		9.3°			
	TRIN	eP	09.34.06		9.8°			
		iPP	09.34.09					
4	ST. VIN	eP ₂	09.12.29		146.0°	USCGS Gives H: 08.52.55 E: 4½°S 152°E Depth: About 100 km		
	TRIN	eP ₂	09.12.31		146.2°			
		e	09.12.43					
4	ST. VIN	eP	18.54.12		39.9°	USCGS Gives H: 18.26.41 E: 1°S 24°W		
4	TRIN	iP	14.42.36	d	1.20°	H: 14.42.19 E: 10.7°N 62.4°W Depth: About 75 km		
		iS	14.42.49					
	GREN	eP	14.42.42		1.63°			
	ST. VIN	eP	14.42.57		2.78°			
4	TRIN	iP	17.55.59	c	1.16°	H: 17.55.43 E: 10.8°N 62.4°W Depth: About 75 km		
		iS	17.56.11					
	GREN	eP	17.56.(04)		1.51°			
		iS	17.56.20					
	ST. VIN	eP	17.56.19		2.67°			
4	ST. VIN	iP	11.20.16		3.47°	H: 11.19.30 E: 16.4°N 59.8°W		
		iS	11.20.34					
	BARB	eP	11.20.17		3.23°			
		i	11.20.47					
	GREN	eP	11.20.33		4.68°			
		iS	11.21.06					
	TRIN	eP	11.20.50		5.90°			
		i	11.20.54					
		iS	11.21.34					
9	DOM	iP	23.12.35					
9	DOM	iP	23.17.23		1.35°	H: 23.17.05 E: 15.9°N 60.6°W Depth: About 100 km		
		iS	23.17.36					
	ANT	eP	23.17.32		1.96°			
		iS	23.17.49					
	ST. KIT	iP	23.17.41		2.69°			
		iS	23.18.07					

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1959						
SEPT 10	DOM	eP iS	04.06.53 04.07.09		1.4°	
10	ST. KIT	eP'	05.54.32		142.3°	USCGS Gives H: 05.35.04 E: 6 $\frac{1}{2}$ ° S 154 $\frac{1}{2}$ ° E
X	DOM	eP'	05.54.(35)		143.9°	
	ANT	iP'	05.54.35		142.9°	
	GREN	eP'	05.54.35		143.9°	
	ST. VIN	eP'	05.54.37		144.2°	
	TRIN	eP'	05.54.39		144.7°	
	BARB	iP'	05.54.47		146.0°	
10	ST. KIT	eP iS	07.16.37 07.17.15		3.8°	
	ANT	eP	07.16.46		4.5°	
10	TRIN	iP	20.48.12			
11	TRIN	eP	01.15.34			
11	TRIN	iP iS	02.05.53 02.06.05		1.3°	
	GREN	iP iS	02.05.56 02.06.12	d	1.5°	
11	TRIN	iP iS	13.30.26 13.30.40		1.4°	
12	ST. VIN	eP	01.47.40		34.0°	USCGS Gives H: 01.41.03 E: 20° S 68° W Depth: About 150 km
12	ANT	eP'	02.13.42		148.7°	USCGS Gives H: 01.53.47 Small E: 3° S 146 $\frac{1}{2}$ ° E
	ST. VIN	eP'	02.13.42		150.8°	
	TRIN	eP'	02.13.(47)		151.3°	
13	DOM	eP e	04.49.24 04.49.32			
	ST. VIN	eP	04.49.52			
14	TRIN	eP'	14.28.29		117.2°	USCGS H: 14.09.39 E: 28 $\frac{1}{2}$ ° S 177° W
X	ST. VIN	eP'	14.28.30		118.3°	
	e		14.39.12			
	ANT	eP'	14.28.35		119.9°	
15	ST. VIN	eP i	07.12.(02) 07.12.27			
15	TRIN	eP'	11.23.21		119.9°	USCGS Gives H: 11.05.33 E: 21 $\frac{1}{2}$ ° S 179 $\frac{1}{2}$ ° W Depth: About 600 km
X	ST. VIN	eP'	11.23.22		121.1°	
	ANT	iP'	11.23.23		121.2°	
16	TRIN	e	18.21.57			
	ST. VIN	e	18.22.08			
17	ST. VIN	eP iS	05.32.21 05.32.33		1.3°	
17	TRIN	iP iS	09.23.15 09.23.20	c	0.5°	
	GREN	eP e	09.23.29 09.23.46		1.6°	

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
SEPT. 17	ANT	iP	18.33.27		2.4°	
		iS	18.33.51			
	ST. KIT	iP	18.33.40		3.3°	
		iS	18.34.13			
18	TRIN	iP	04.02.41	c	1.53°	H: 04.02.20 E: 11.0° N 62.9° W
		iS	04.02.55			
	GREN	iP	04.02.41	d	1.59°	
		iS	04.02.58			
	ST. VIN	iP	04.02.57	d	2.74°	
	BARB	e	04.03.(14)		3.92°	
18	TRIN	eP	12.12.53		75.0°	USCGS Gives H: 12.01.11 E: 57½° S 24° W
	ST. VIN	eP	12.13.04		77.0°	
	ST. KIT	eP	12.13.39		81.5°	
18	ST. VIN	iP	17.10.59			
		i	17.11.13			
	DOM	eP	17.11.22			
19	ST. KIT	iP	04.48.21	d	1.55°	H: 04.47.59 E: 17.9° N 63.7° W Depth: About 125 km
		iS	04.48.37			
	ANT	iP	04.48.29		2.21°	
		iS	04.48.50			
	DOM	iP	04.48.48		3.58°	
	ST. VIN	eP	04.49.13		5.39°	
	GREN	eP	04.49.24		6.25°	
19	TRIN	iP	05.47.48			
	GREN	eP	05.48.01			
	ST. VIN	eP	05.48.19			
19	TRIN	eP	18.17.23			
		i	18.17.28			
20	ST. VIN	eP	02.10.24		1.3°	
		iS	02.10.37			
21	ST. VIN	e	02.28.11			Very Small
	ST. KIT	eP	02.28.18			
	GREN	eP	02.28.20			Small
	TRIN	eP	02.28.24			
21	GREN	iP	15.31.58			
		i	15.32.16			
25	ST. VIN	eP'	02.56.26		144.3°	USCGS Gives H: 02.36.48 E: 22° N 122° E
	GREN	eP'	02.56.29		144.6°	
	BARB	eP'	02.56.30		145.9°	
	TRIN	iP'	02.56.33		147.1°	
26	ST. VIN	eP	08.31.(25)		64.2°	Very Small USCGS Gives H: 08.20.51 E: 43½° N 128½° W
	TRIN	eP	08.31.(43)		66.1°	Small
26	ST. VIN	eP	10.25.03		36.0°	Felt: Antofagasta USCGS Gives H: 10.18.20 E: 22° S 68½° W Depth: About 150 km
		e	10.25.32			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1959					
SEP 27	ST. VIN	iP	12.57.11		1.1°
		iS	12.57.22		
29	ST. KIT	iP	05.24.46		



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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

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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> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
OGT 2	GREN	e	02.19.(31)			Small
	TRIN	eP	02.19.32			
	ST. VIN	eP	02.19.44			
4	ST. KIT	iP iS	00.37.02 00.37.33	c	3.1°	
	DOM	eP	00.37.15		4.1°	
4	ST. KIT	eP iS	01.48.43 01.49.30		4.7°	
4	ST. KIT	iP i	04.27.14 04.27.30			
4	GREN	eP i i	20.57.19 20.57.35 20.57.39			
5	GREN	iP iS	12.45.45 12.45.56		1.1°	
	TRIN	eP iS	12.45.(57) 12.46.(11)		2.0°	
6	GREN	eP	01.36.59			
7	ST. KIT	eP iS	02.56.32 02.56.56		2.3°	
7	ST. VIN	eP	08.42.25		75.0°	USCGS Gives H: 08.30.41 E: 41° N 20° E
	GREN	eP	08.42.(32)		76.0°	
7	ST. KIT	eP	08.51.55			
7	ST. VIN	eP i i	13.05.14 13.05.18 13.05.25			
8	ST. VIN	iP i	02.18.41 02.19.10		2.10°	H: 02.18.13 E: 15.0° N 61.1° W Depth: About 110 km
	BARB	iP	02.18.52		2.56°	
	ST. KIT	iP	02.18.53		2.95°	
	GREN	eP iP iS	02.18.(53) 02.18.(55) 02.19.(33)		3.21°	
	TRIN	iP iS	02.19.14 02.20.01		4.49°	
8	GREN	eP	07.57.(35)			
9	ST. KIT	iP	14.52.03			
10	ST. KIT	eP iS	15.06.20 15.06.32		1.2°	
11	GREN	eP iS	01.21.04 01.21.23		1.60°	H: 01.20.42 E: 11.1° N 62.7° W Depth: About 100 km
	TRIN	iP iS	01.21.04 01.21.20	c	1.62°	
	ST. VIN	eP e	01.21.18 01.21.45		2.64°	
11	GREN	eP i	09.38.20 09.38.35			
11	ST. KIT	eP iS	13.46.40 13.46.59		1.9°	

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1959						
OCT 11	TRIN	e	20.20.21		117.0°	USCGS Gives H: 20.03.25 E: 28½°S 176½°W
	GREN	eP	20.20.(36)		117.2°	
		i	20.20.(40)			
12	GREN	e	01.37.(18)			
14	ST. KIT	eP	02.43.42		2.0°	
		iS	02.44.02			
15	ST. VIN	eP	00.41.38		2.1°	
		iP	00.41.41			
		iS	00.41.59			
	GREN	iP	00.41.55		3.5°	
		i	00.42.23			
15	TRIN	iP	02.21.35		2.1°	
		iS	02.21.56			
	GREN	eP	02.21.40		2.5°	
		i	02.22.04			
15	TRIN	eP [†]	06.35.44		168.5°	Small USCGS Gives H: 06.15.32 E: ½°N 120½°E
16	TRIN	eP	08.56.12			
		i	08.56.19			
		e	08.58.35			
	GREN	eP	08.56.15			
		i	08.56.22			
	ST. VIN	e	08.56.26			
17	TRIN	e	01.35.35			Small
17	TRIN	eP	14.55.07		1.8°	
		iS	14.55.25			
17	TRIN	iP	23.28.36	c	1.4°	
		iS	23.28.50			
18	TRIN	e	13.44.28			Very Small
18	TRIN	e	13.55.18			Very Small
18	TRIN	eP	21.27.26			
19	TRIN	eP	16.06.52		70.6°	Small USCGS Gives H: 15.55.30 E: 54½°S 29°W
	ST. VIN	eP	16.06.58		73.0°	
	ST. KIT	eP	16.07.27		77.7°	
		e	16.07.32			
19	ST. KIT	eP	23.34.36			
21	ST. VIN	e	05.47.03			
23	ST. KIT	iP	13.41.29		0.7°	
		iS	13.41.36			
23	TRIN	eP	14.48.13		1.9°	
		iS	14.48.32			
23	ST. KIT	iP	17.55.49		1.1°	
		iS	17.56.00			
24	ST. KIT	eP	03.30.23			
24	TRIN	iP	15.03.26	c	1.4°	
		iS	15.03.40			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
1959 OCT 24	TRIN	iP iS	15.23.36 15.24.12		3.6°	
	ST. KIT	iP i	15.23.51 15.24.46		4.8°	
25	ST. KIT	eP i	06.54.34 06.54.35			USCGS Gives H: 06.51.09 E: Atlantic Ocean North of Azores
27	TRIN	iP iS	08.09.51 08.10.05	c	1.22°	H: 08.09.35 E: 9.8° N 62.3° W
	GREN	eP iS	08.10.06 08.10.28		2.29°	
	ST. VIN	eP	08.10.22		3.50°	
27	TRIN	iP	09.49.58	c		
	ST. VIN	eP	09.50.30			
27	TRIN	iP iS	14.17.07 14.17.12	d	0.6°	
27	ST. VIN	eP eS	14.35.20 14.35.39		1.9°	
27	TRIN	iP eS	15.21.05 15.21.18		1.41°	H: 15.20.45 E: 11.0° N 62.2° W Depth: About 125 km
	GREN	iP iS	15.21.07 15.21.23		1.61°	
	ST. VIN	eP eS	15.21.21 15.21.47		2.63°	
28	ST. KIT	eP iP i	02.15.20 02.15.23 02.16.03			
28	GREN	iP iS	05.27.32 05.27.49	d	1.5°	
	TRIN	iP iS	05.27.33 05.27.48	c	1.6°	
29	GREN	eP iS	06.41.02 06.41.19		1.8°	
30	ST. VIN	eP ₂	00.52.28		151.0°	Small USCGS Gives H: 00.32.29 E: 8½° N 138° E
30	GREN	iP iS	01.26.08 01.26.28		2.1°	
	ST. VIN	eP eS	01.26.13 01.26.38		2.5°	
30	TRIN	eP	05.25.56		24.1°	USCGS Gives H: 05.20.36
	GREN	eP e	05.25.(57) 05.26.21		24.5°	E: 4° S 80½° W
	ST. VIN	eP	05.26.08		25.8°	Very Small
31	ST. KIT	eP iS	00.29.02 00.29.14		1.2°	
31	ST. VIN	eP iP iS	12.47.21 12.47.22 12.47.36		1.4°	
31	ST. VIN	ePP	18.36.07		19.7°	USCGS Gives H: 18.31.18 E: 2° N 77½° W Depth: About 100 km

1959 W 12.30° N 10.00° E 10.00° E 10.00° E
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NOV 1959

Preliminary Seismological Bulletin.

This bulletin is preliminary and is subject to change. It is intended to provide a rapid summary of the seismic activity in the Caribbean region during the period from 1 January to 31 December 1959. The data are based on the records of the stations listed in the Appendix. The magnitude scale used is the surface wave magnitude scale, M_s , defined by the International Geophysical Commission. The epicentres are plotted on a map of the Caribbean region. The focal mechanism solutions for the earthquakes of magnitude $M_s \geq 4.0$ are given in the Appendix. The seismicity in the Caribbean region during 1959 was characterized by a high level of activity, particularly in the northern part of the region. The most significant earthquakes were those of magnitude $M_s 6.0$ and $M_s 5.5$ which occurred on 11 January and 15 February respectively. The seismicity was also characterized by a high level of activity in the southern part of the region, particularly in the area of the Lesser Antilles. The seismicity in the Caribbean region during 1959 was characterized by a high level of activity, particularly in the northern part of the region.

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.

DATE	STATION	PHASE	TIME G.M.T.	MOTION	DISTANCE	
1959						
NOV 2	ST. VIN	eP iS	03.25.05 03.25.19		1.4°	
2	ST. KIT	eP' i	20.23.06 20.23.23		144.5°	USCGS Gives H: 20.03.32 E: 5 $\frac{1}{2}$ °S 151 $\frac{1}{2}$ °E Depth: About 60 km
	GREN	eP'	20.23.11		146.5°	
	ST. VIN	eP' i	20.23.12 20.23.29		146.6°	
	TRIN	eP'	20.23.14		147.3°	
	BARB	eP'	20.23.21		148.5°	
3	ST. KIT	eP'	10.00.18		171.0°	USCGS Gives H: 09.40.05 E: 10 $\frac{1}{2}$ °S 111°E
	ST. VIN	eP' ePP	10.00.18 10.05.34		171.5°	
3	ST. KIT	iP	17.33.50	c		
6	GREN	eP	03.23.00			
	ST. VIN	eP	03.23.11			
7	GREN	iP iS	12.30.22 12.30.38		1.6°	
12	GREN	iP iS	05.52.07 05.52.23		1.6°	
12	BARB	e	09.01.(42)			
15	BARB	eP	17.20.33		74.9°	Felt: Greece and Italy Slight damage
	GREN	e	17.20.(40)		72.9°	USCGS Gives H: 17.08.41 E: 37 $\frac{1}{2}$ °N 20 $\frac{1}{2}$ °E
16	GREN	eP	01.07.(53)		47.4°	USCGS Gives H: 00.59.22 E: 35°S 70°W Depth: About 100 km
17	TRIN	eP i	07.11.31 07.11.36			
18	GREN	eP iS	18.05.22 18.05.53		3.1°	
18	GREN	eP	18.23.56			
18	TRIN	eP	23.10.16			
	GREN	eP i	23.10.25 23.10.50			
19	TRIN	iP iS	03.34.51 03.35.03		1.3°	
	GREN	eP iS	03.34.54 03.35.10		1.6°	
19	GREN	iP iS	11.03.28 11.03.39		1.1°	
19	GREN	eP' eP' ₂	11.28.21 11.28.29		151.8°	USCGS Gives H: 11.08.32 E: 5 $\frac{1}{2}$ °S 146°E
	TRIN	eP'	11.28.30		152.5°	
	BARB	e	11.29.13		153.5°	
21	TRIN	eP i	14.47.10 14.47.13			
	GREN	e	14.47.13			
	ST. VIN	e	14.47.25			Very Small
	BARB	e	14.47.42			Very Small

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
NOV 23	GREN	iP	00.13.06			
		i.	00.13.23		1.26°	H: 00.12.49
	TRIN	iP	00.13.08		1.42°	E: 11.3°N 62.5°W Depth: About 75 km
	ST. VIN	iP	00.13.21	c	2.34°	
23	TRIN	iP	03.10.36		1.33°	H: 03.10.17
		iS	03.10.48			E: 10.7°N 62.6°W Depth: About 75 km
	GREN	iP	03.10.40		1.68°	
		iS	03.10.56			
		i	03.10.59			
	ST. VIN	iP	03.10.56		2.82°	
		e	03.11.30			
23	GREN	eP	04.38.20		1.6°	
		eS	04.38.36			
	ST. VIN	iP	04.38.22		1.8°	
23	DOM	eP	05.27.28			
	ST. VIN	eP	05.27.55			
24	DOM	eP	03.06.38			
	ST. VIN	eP	03.07.03			
	GREN	eP	03.07.14			Very Small
	TRIN	eP	03.07.37			Very Small
25	ANT	iP	16.24.08	d	0.8°	
		iS	16.24.16			
26	ANT	eP ¹	07.26.(30)		161.0°	Small USCGS Gives H: 07.06.19 E: 5 $\frac{1}{2}$ °S 102 $\frac{1}{2}$ °E
26	ANT	eP ¹ ₂	23.30.00		161.0°	Small USCGS Gives H: 23.09.23 E: 5 $\frac{1}{2}$ °S 103°E
28	ANT	iP	02.52.42			
	DOM	iP	02.52.57			
/ST. VIN	/ST. VIN	iP	02.53.17			
		e	02.54.20			
		e	02.58.57			
		e	02.59.07			
/GREN	eP	02.53.26				
/BARB	e	02.53.(36)			Very Small	
/TRIN	eP	02.53.48			Very Small	
28	TRIN	eP	12.42.34		40.5°	USCGS Gives H: 12.34.53 E: 28 $\frac{1}{2}$ °S 71°W
	GREN	eP	12.42.(44)		41.4°	Small
/ST. VIN	eP	12.42.53		42.9°		
28	ANT	eP	23.16.47		1.5°	
		iS	23.17.02			
29	ST. VIN	eP	01.31.52		1.0°	
		eS	01.32.01			
30	TRIN	eP	05.01.16			
	GREN	eP	05.01.(32)			

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1959 NOV 30	TRIN	iP	10.43.21	c	
	ST. VIN	eP	10.43.53		
	BARB	e	10.44.(17)		Very Small
	ANT	eP	10.44.47		
		e	10.46.04		
	ST. KIT	eP	10.44.58		
		i	10.45.05		

		OUTSTANDING SEISMIC			
1958	W 11.30	15	10.00	(1958)	10.00
1959	W 11.30	15	10.00	(1959)	10.00
1960	W 11.30	15	10.00	(1960)	10.00
SEISMIC RESEARCH UNIT					
1961	W 11.30	15	10.00	(1961)	10.00
1962	W 11.30	15	10.00	(1962)	10.00
1963	W 11.30	15	10.00	(1963)	10.00
1964	W 11.30	15	10.00	(1964)	10.00
1965	W 11.30	15	10.00	(1965)	10.00
1966	W 11.30	15	10.00	(1966)	10.00
1967	W 11.30	15	10.00	(1967)	10.00
1968	W 11.30	15	10.00	(1968)	10.00
1969	W 11.30	15	10.00	(1969)	10.00

SEISMIC RESEARCH UNIT

Regional Research Centre,

I. C. T. A.

Trinidad, West Indies.

DEC 1959

INTERNATIONAL SEISMOLOGICAL CENTRE

Preliminary Seismological Bulletin.

This bulletin is prepared by the International Seismological Centre (ISC) from the preliminary reports of the National Centres for Earthquake Information (NCEI) and the International Geophysical Institute (IGI). It is intended to provide a rapid summary of the seismicity of the world for the period from 1 January to 31 December of each year. The data are based on the preliminary reports received from the NCEI and IGI, and are subject to change as more information becomes available.

The following table gives a summary of the seismicity of the world for the period from 1 January to 31 December 1959. The data are based on the preliminary reports received from the NCEI and IGI, and are subject to change as more information becomes available.

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.

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
DEC 1	TRIN	eP	14.24.(09)			USCGS Gives H: 14.19.30 E: About 250 miles West of Jamaica
1	ST. KIT	iP	19.49.30			
2	ST. KIT	iP i	03.52.07 03.52.13			
2	DOM	eP'	09.54.12		165.1°	USCGS Gives H: 09.34.00 E: 1°S 123°E
	TRIN	eP'	09.54.(14)		169.6°	
2	TRIN	eP	17.08.39			
	ST. KIT	eP	17.09.43			
3	ANT	iP iS	15.49.10 15.49.20		1.0°	
	ST. KIT	eP iS	15.49.23 15.49.44		2.0°	
3	TRIN	iP iS	17.51.36 17.51.51		1.56°	H: 17.51.15 E: 10.6°N 63.0°W
	GREN	iP iS	17.51.41 17.52.00		1.88°	
	ST. VIN	eP	17.51.56		3.05°	
4	GREN	iP iS	07.26.52 07.27.02	d	0.86°	H: 07.26.40 E: 11.8°N 62.2°W Depth: About 75 km
	TRIN	iP iS	07.27.02 07.27.17		1.57°	
	ST. VIN	eP	07.27.04		1.77°	
4	ST. VIN	iP iS	14.00.33 14.00.51		1.7°	
4	TRIN	eP	16.17.39			Small
4	DOM	iP	19.45.12		1.20°	H: 19.44.54
	ST. VIN	iP iS	19.45.16 19.45.35	c	1.58°	E: 14.5°N 60.8°W Depth: About 80 km
	BARB	iP iS	19.45.24 19.45.51		1.94°	
	GREN	iP iS	19.45.(31) 19.46.(02)		2.72°	
	ANT	iP iS	19.45.34 19.46.06	d	2.89°	
	ST. KIT	eP	19.45.(43)		3.45°	
	TRIN	eP iS	19.45.49 19.46.31		3.96°	
5	TRIN	eP	07.56.31			Small
7	GREN	eP	06.25.00			
8	GREN	eP iS	05.48.57 05.49.13		1.6°	
9	ANT	eP e	00.18.40 00.19:55			
9	TRIN	iP iS	05.16.11 05.16.25		1.4°	
10	ST. KIT	iP iS	06.46.55 06.47.20	d	2.5	
	ANT	eP iS	06.47.05 06.47.36		3.2°	

<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
DEC 10	TRIN	e	16.37.22			Very Small
		e	16.37.26			Small
10	ANT	iP	20.04.39		2.1°	
		i	20.04.51			
		iS	20.04.58			
	ST. KIT	iP	20.04.43	c	2.4°	
		iS	20.05.09			
11	DOM	iP	17.42.(38)		1.32°	H: 17.42.20
	ST. VIN	iP	17.42.40	c	1.49°	E: 14.4° N 60.4° W
		iS	17.42.59			
		i	17.43.04			
	ST. KIT	iP	17.43.10		3.69°	
	TRIN	eP	17.43.(20)		3.82°	
11	TRIN	eP	22.18.22			
		i	22.18.42			
11	DOM	eP	22.33.(49)		1.6°	
		iS	22.33.57			
	ST. VIN	eP	22.34.03		2.7°	
		iS	22.34.31			
	ANT	iP	22.34.06	c	2.8°	
		iS	22.34.35			
14	ANT	eP ¹	18.18.13		156.3°	USCGS Gives H: 17.58.33 E: 5 ¹ / ₂ ° N 125 ¹ / ₂ ° E Depth: About 200 km
	ST. VIN	eP ¹	18.18.18		160.0°	
		eP ²	18.18.58			
	TRIN	eP ¹	18.18.20		162.5°	
		eP ²	18.19.09			
14	ANT	eP	22.13.35		86.3°	USCGS Gives H: 22.00.50 E: 52 ¹ / ₂ ° N 168° W
	DOM	eP	22.13.(45)		87.9°	
		i	22.13.58			
	ST. VIN	eP	22.13.48		89.7°	
	TRIN	eP	22.14.00		91.5°	
14	TRIN	eP	23.33.45		74.1°	USCGS Gives H: 23.21.56 E: 59 ¹ / ₂ ° S 31° W
	ST. VIN	eP	23.33.57		76.5°	
	BARB	eP	23.33.(58)		76.1°	
	DOM	eP	23.34.10		78.9°	
	ANT	eP	23.34.18		80.5°	
	ST. KIT	eP	23.34.21		81.5°	
		ePP	23.37.31			
15	ST. VIN	eP	00.52.44			
16	ANT	iP	14.02.34			
		i	14.02.40			
	ST. KIT	iP	14.02.43			
16	TRIN	eP	23.53.35		1.3°	
		eS	23.53.49			
	GREN	eP	23.53.43		1.9°	
		iS	23.54.02			
17	ST. VIN	eP ²	02.50.49		145.2°	USCGS Gives H: 02.31.02 E: 21 ¹ / ₂ ° N 121° E
	TRIN	eP ¹	02.50.49		147.9°	
18	ANT	iP	02.03.46			
		i	02.03.58			

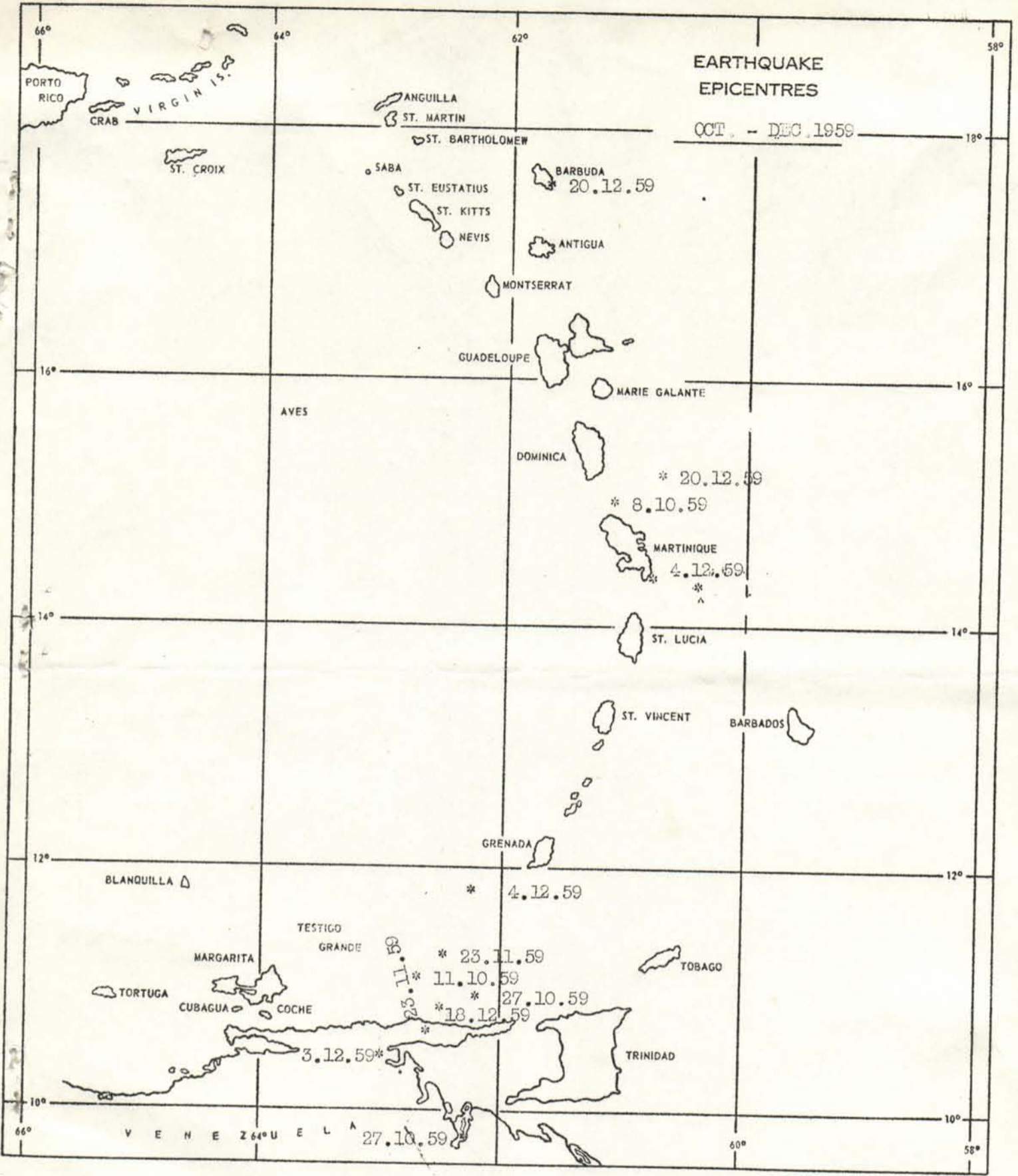
<u>DATE</u> 1959	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>	
DEC 18	TRIN	iP	15.48.41	c	1.17°	H: 15.48.25 E: 10.9° N 62.5° W Depth: About 50 km
		iS	15.48.53			
	GREN	iP	15.48.43		1.41°	
	ST. VIN	eP	15.49.00		2.57°	
18	ST. VIN	eP	16.37.51		89.1°	
	TRIN	eP	16.38.00		91.1°	
18	GREN	iP	17.52.58		1.4°	
		TRIN	eP	17.53.01		1.6°
		iS	17.53.17			
18	TRIN	eP	18.01.36			
		i	18.01.53			
		GREN	eP	18.01.49		
19	ST. KIT	eP	13.48.25			
		ANT	eP	13.48.37		
		i	13.48.40			
			i	13.50.19		
	ST. VIN	eP	13.49.20			
		e	13.51.17			
	GREN	eP	13.49.24			
		e	13.51.25			
	TRIN	eP	13.49.32			
		e	13.51.51			
20	ST. KIT	eP	10.07.06			
		i	10.07.17			
	ANT	eP	10.07.16			
		e	10.07.57			
20	ST. VIN	iP	10.39.59		2.61°	
		iS	10.40.28			
	ANT	eP	10.40.00		2.73°	H: 10.39.24 E: 15.2° N 60.7° W Depth: About 175 km
		iS	10.40.26			
	ST. KIT	iP	10.40.09		3.29°	
20	TRIN	iP	11.34.41			Felt: Trinidad
	ST. VIN	eP	11.35.03			
20	ANT	iP	16.38.05		0.46°	
	ST. KIT	iP	16.38.14		1.07°	
	ST. VIN	iP	16.39.01		4.35°	
	BARB	eP	16.39.(09)		4.81°	
	GREN	eP	16.39.(15)		5.37°	
	TRIN	eP	16.39.(37)		6.84°	
		i	16.39.43			
	i	16.41.01				
20	ST. KIT	iP	23.56.40		1.2°	
		ANT	iP	23.56.42		1.3°
		iS	23.56.55			
21	ST. VIN	eP	03.45.48			
21	ST. KIT	iP	12.27.23			
		ANT	iP	12.27.35		
22	ST. VIN	eP	23.27.01			
		ANT	eP	23.27.(02)		

<u>DATE</u>	<u>STATION</u>	<u>PHASE</u>	<u>TIME G.M.T.</u>	<u>MOTION</u>	<u>DISTANCE</u>
1959					
DEC. 23	ST. KIT	eP	02.48.51		
	ANT.	eP	02.49.(07)		
25	BARB	e	03.11.54		Very Small
	ST. VIN	e	03.12.14		
	GREN	e	03.13.02		
25	ST. VIN	iP	03.31.34	d	1.60°
		iS	03.31.52		
	BARB	eP	03.31.38		1.62°
	GREN	iP	03.31.(52)		2.74°
	ANT	eP	03.31.55		3.17°
	ST. KIT	eP	03.32.(01)		3.73°
	TRIN	eP	03.32.(08)		3.89°
25	TRIN	eP	10.25.49		36.6°
	ST. VIN	eP	10.26.09		39.2°
	ST. KIT	eP	10.26.38		43.0°
	ANT	eP	10.26.41		42.7°
26	ST. VIN	eP	02.11.39		
26	GREN	iP	03.02.28		
		i	03.02.49		
27	TRIN	eP	12.45.46		38.5°
		e	12.47.44		
	GREN	iP	12.45.56		39.9°
	ST. VIN	eP	12.46.06		41.2°
		i	12.47.51		
	BARB	eP	12.46.08		41.1°
	ANT	iP	12.46.34		43.9°
	ST. KIT	eP	12.46.36		45.0°
29	ANT	iP	08.49.28		1.9°
		iS	08.49.46		
	ST. KIT	eP	08.49.36		2.5°

H: 03.31.12
E: 14.4⁵N 60.4⁰W
Depth: About 75 km

Felt: Antofagasta
USCGS Gives H: 10.18.35
E: 25¹/₂S 67⁰W

USCGS Gives H: 12.39.09
E: 28⁰S 63⁰W
Depth: 650 km



* Epicentres for 11.12.59 and 25.12.59