TECHNICAL REPORT #3

CDE Seismograph Network

December 13, 1979 - July 17, 1981

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1. INTRODUCTION

At the conclusion of the first 2 years of the seismic monitoring program, this technical report was prepared;

(1) to review the performance of the network,

(2) to revalue and finalize the process of the data analysis,

(3) to extract some of the conclusions on the seismicity related to CDE hydroelectric projects. In particular, the key objectives of this report for the Tavera-Bao project are:

(3a) provide the basis for a more detailed study of the dynamic stability of the Bao Dam,

(3b) give information about the seismicity of the Tavera fault and water induced earthquakes that took place along this fault,

(3c) establish the guide lines for the real-time earthquake monitoring during the water impounding period of the Bao reservoir.

For The Rio Blanco Project

(3d) Provide basis for the design criteria of the Rio Blanco dam and power house, and

(3e) discuss the technical feasibility of the Alto Yuna Dam sight.

The data from December 13, 1979 through April 1, 1982 were analyzed and incorporated in this report.

To make this report complete by itself, some of the contents described in the previous reports (Field Reports: June 8, 1979; November 28, 1979; December 17, 1979; August 22, 1980; November 16, 1980; May 3, 1981: Preliminary Reports: #1, January 11, 1980; #2, July 20, 1980; #3, February 12, 1981) were repeated again in this text as needed. With this, the necessity for cross-referencing to the previous reports was minimized.

1.1. Geology

The Dominican Republic occupies the eastern two-thirds of the island of Hispaniola. This island is the second largest of the Greater Antilles and lies between Cuba on the west and Puerto Rico on the east (Mona Passage). The Greater Antilles form the northern part of the Caribbean island arc and consist of the islands of Cuba, Jamaica, Hispaniola and Puerto Rico.

Four mountain ranges cross the Dominican Republic from NW to SE. The Cordillera Central is the highest and longest, where Pico Durate rises to a height of 3,175 m, the highest peak in the West Indies. It is separated from the Cordillera Septentrional by the valley of La Vega Real, occupied by Yaque del Norte and Yuna rivers, one of the most fertile belts. In the SE of the Dominican Republic, there are two short mountain ranges separated by a graben which encloses Lake Enriquillo, a saline body of water 40 m below sea level.

The general geology is such that the oldest rocks exposed in a broad belt through the center of the island and the younger rocks flanking each side. The foundation is composed of igneous and metamorphic rocks, such as granite, schist and serpentine, of pre-Cretaceous age.

The strata that were folded in Late Cretaceous time were also intruded by diorites. The ruggedness and irregularities of the island were not primarily the result of folding, but of intense faulting. The Cordillera Central is much deformed, being faulted along several different axis. Faulting, accompanied by some folding, began in Late Oligocene and continued until Pliocene. The Late Cenozoic uplift resulted in the Cordillera Central being lifted considerably higher than it stands now and in the uplift of the Cordillera Septentrional. Crustal movements are still in progress.

1.2. Tectonic Setting and Seismicity

The Dominican Republic is situated in the northeastern boundary of the Caribbean plate. This boundary is well defined as a transform fault to the west of 71°W meridian. However, from 71°W to the east, the boundary becomes more complicated. Its location and nature, for instance, are not well defined near and along the island of Hispaniola.

The distribution of hypocenters and the focal mechanisms of shallow earthquakes demonstrate an eastward moving of the Caribbean plate with respect to North America, South America and the western Atlantic plates. In the Lesser Antilles, the Atlantic sea floor underthrusts the Caribbean toward the west. The seismicity of the Lesser Antilles portion of the arc clearly shows a westward dipping subduction zone, but at the northern end of the arc the activity changes orientation abruptly and trends east-west, parallel to the Puerto Rico trench (Figure 1). Near the Puerto Rico trench, the Atlantic sea floor is also underthrusting the Caribbean, but the motion is nearly parallel to the strike of

the trench. Another activity of east-west trend runs south of Puerto Rico parallel to Muertos Trench. This activity continues eastward and changes orientation to northwest and transect the eastern Hispaniola. The Dominican Republic lies along seismically active area of the Circum-Caribbean seismic belt.

In and off the shore of Hispaniola, the seismic map based on the data from World Wide Standardized Seismograph Network (WWSSN) during the period of 1963 through 1977 (Figure 1) exhibit three possible active zones. The most prominent activity runs along the northern coast of Hispaniola, which delineates the boundary of North America and Caribbean plates. Another weakly defined east-west trending lineation exists along the southern coast of Hispaniola. These two lines are roughly coincided with the extension of northern and southern margins of the Cayman Trough. The third of the active zones transect eastern Dominican Republic with northwest-southeast trending orientation. Most of the events deeper than 100 km distributed along this zone (shown by closed circles in Figure 1). This intermediate-depth earthquakes show a nearly vertical distribution of hypocenters (Sykes and Ewing, 1965).

Molnar and Sykes (1969) reported focal mechanisms for four shallow earthquakes and three intermediate-depth earthquakes in the area around the Dominican Republic and Puerto Rico. Mechanisms for shallow earthquakes are typical of those observed at island arc elsewhere in the world in that one nodal plane dips steeply and the other dips at a very shallow angle. They show predominantly underthrusting motions with slip vectors striking west-southwest. This implies a rigid body motion of the Caribbean plate in an east-northeast direction with respect to the American plate. One of the three mechanisms for

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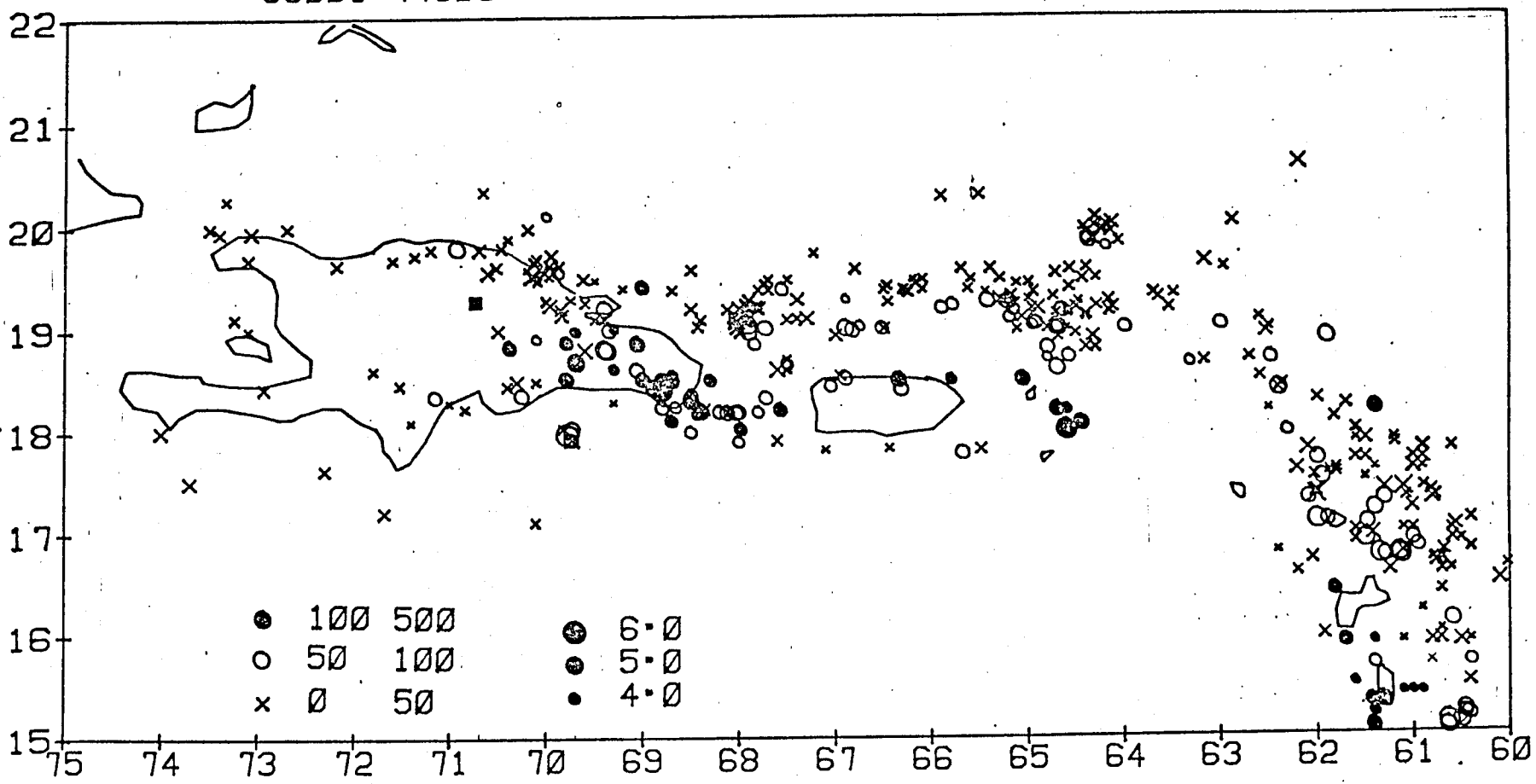
FIG 1 REGIONAL EARTHQUAKES



intermediate-depth earthquakes indicate a large component of underthrusting toward the south on a plane dipping 50° southwest. Two other solutions for intermediate-depth earthquakes, though not well determined, are different from one another and from that of previous one. This variability plus complexity in the distribution of hypocenters may indicate a contortion or disruption of the slab in this region.

2. HISTORICAL SEISMICITY

2.1. Earthquakes Located by Felt Reports; 1564-1910

From the records of earthquakes felt by the populus and the reports of damage accompanying the events, it is possible to construct a map showing the locations of earthquake-damaged areas for time period prior to instrumental locations of earthquakes. Many of the historical reports for earthquakes within Hispaniola are summarized by Taber (1922), and it is from this summary that the map of Figure 2A was constructed (with frequent reference to the original works cited by Taber). This map indicates the areas known to have experienced intensities IX-X (modified Mercalli scale), as judged from the reports, during the period 1564-1910. Frequently, researchers will associate the areas of such high intensities with the area of actual rupture during the earthquake (e.g., Kelleher, et. al., 1973), and a correlation of these intensities with rupture area can be shown to exist, in general, for recent earthquakes. In the Dominican Republic, however, the record-keeping population was not widely enough distributed to permit an accurate picture of the high-intensity isoseismals, which can be seen to cluster about the population center of the times.

The map in Figure 2A is, then, a realistic view of what population centers were severely damaged during large earthquakes in the last few centuries, but should not be taken as a map of the actual earthquake distribution during that time. At best, it indicates that large portions of Hispaniola has been visited recurringly by earthquake destruction. Specifically, in the past few centuries, northern and south-western Haiti have been repeatedly struck by damaging events, and the northwestern and southeastern parts of the Dominican Republic are frequently damaged by earthquakes. The apparent absence of large events in, say, the northeastern Dominican Republic may be more an effect of the sparse population there in historic times, rather than an absence of earthquakes. Indeed, in the next paragraph we will see that events located remotely from population centers can give rise to large intensities (estimated from damage reports) far from the epicenter itself, with no reported damage coming from the epicentral area.

2.2. Comparison of Felt Reports With Instrumentally-Determined Epicenters; 1911 and 1916

It is instructive to compare the locations of felt reports, and the earthquake locations as determined by those reports, with instrumentally-determined epicenters. The 1911 and 1916 events shown in Figure 2A were reported by Taber (1922), and his estimates for the epicentral locations of those events are marked by (x's). Gutenberg and Richter (1956) subsequently located those two events instrumentally and their locations are shown in Figure 2B. Taber's estimate for the 1911 event, in the interior of the country, is off by only 60 km, but the 1916 events, felt in Santo Domingo, were located by Taber over 150 km west of its actual

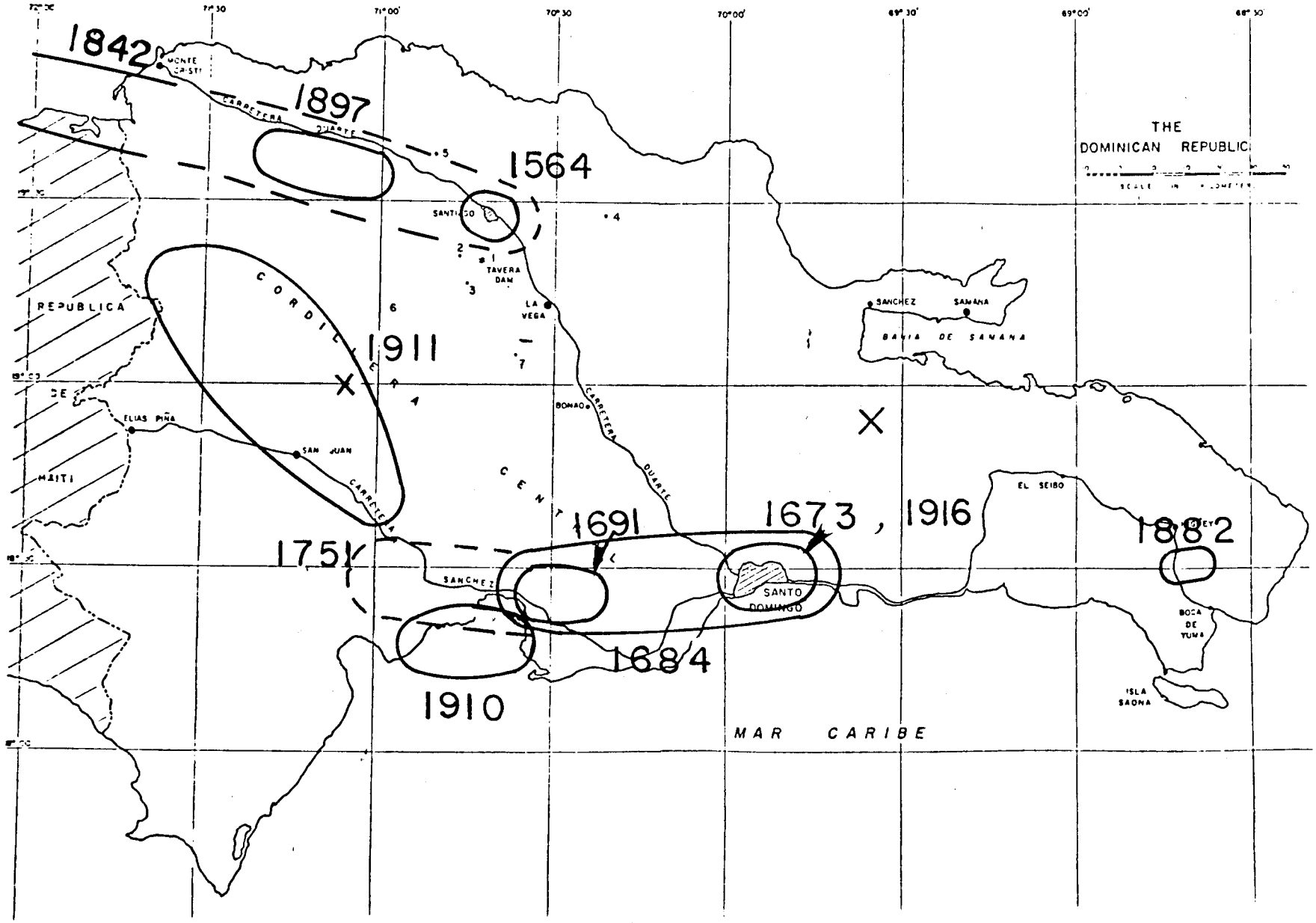


FIG. 2A FELT EARTHQUAKES 1564 - 1916

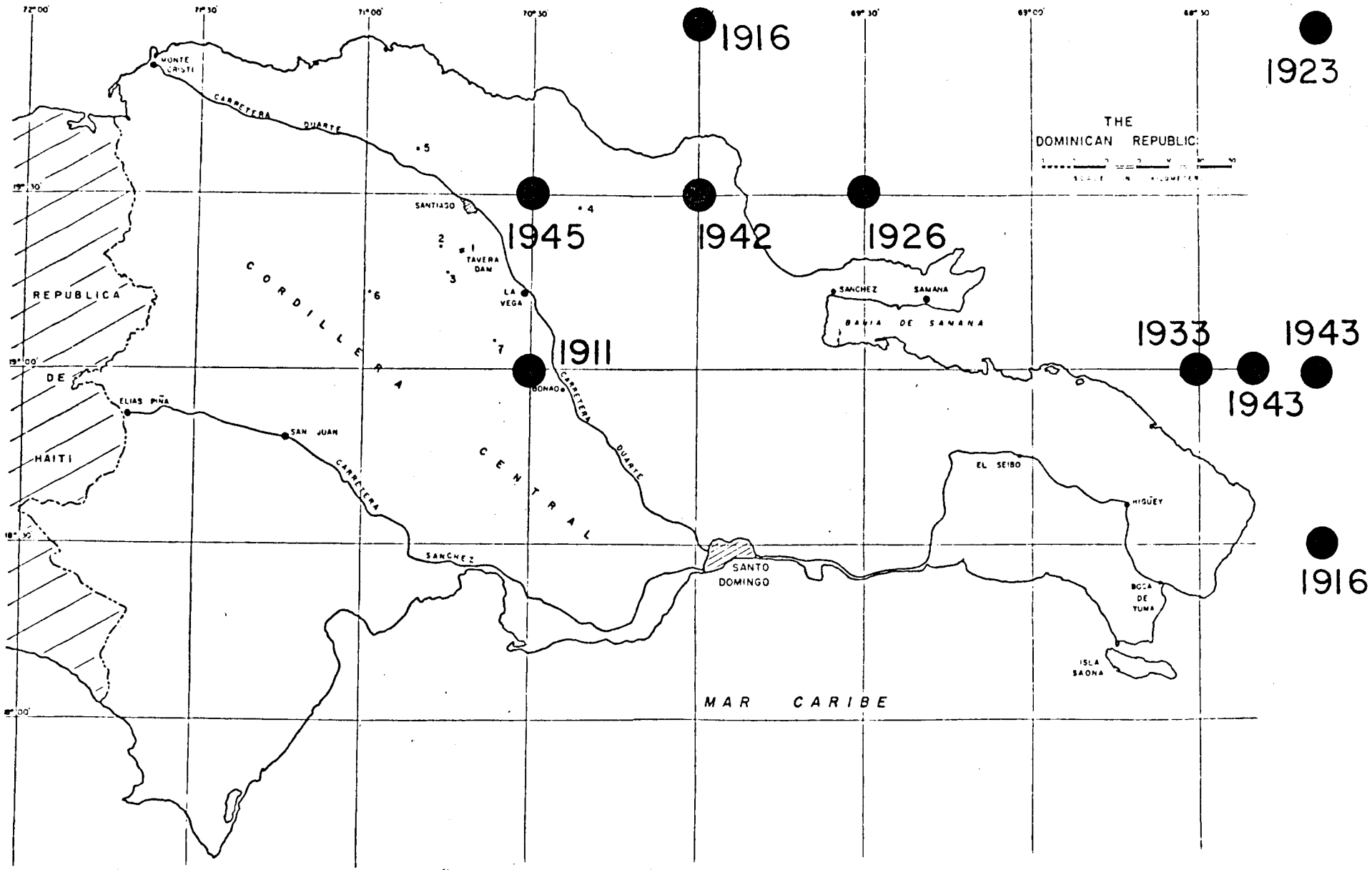


FIG. 2B INSTRUMENTALLY DETERMINED EARTHQUAKES 1911 - 1945

(m≥5.5)

location in the Mona Passage. It is likely that many of the events reported felt in the southern part of the country had their origin in the Mona Passage or well offshore to the south. Another event in 1916, located by Gutenberg and Richter (1956) off the northern coast of Dominican Republic, was not mentioned by Taber (1922).

2.3. Large Earthquakes Located Instrumentally; 1911-1945

Many earthquakes with magnitudes over 5.5 were located by instrumental observations from 1911 through 1945; the epicentral locations with a probable error of about 50 km, are shown in Figure 2B. The activity is largely located in the Mona Passage and along the northeastern coast of the country.

2.4. Large Earthquakes; 1946-1953

The period 1946 through 1953 was especially active for seismicity in the Dominican Republic and the improved capabilities of the world-wide seismograph network permits location of the aftershocks of major events, thus outlining the area of rupture. The mainshock-aftershock sequences have been relocated by Kelleher et. al., (1973) and Sykes and Ewing (1965).

The 1946 earthquake (M = 8.1) was followed by an aftershock sequence covering about 175 km x 75 km. The mainshock-aftershock pattern and the isoseismals found by Lynch and Bodle (1948) are shown in Figure 2C. In 1948 (M = 7.3) and 1953 (M 6.9) events with aftershock areas occurred within and to the northwest of the 1946 rupture area (see Figure 2D).

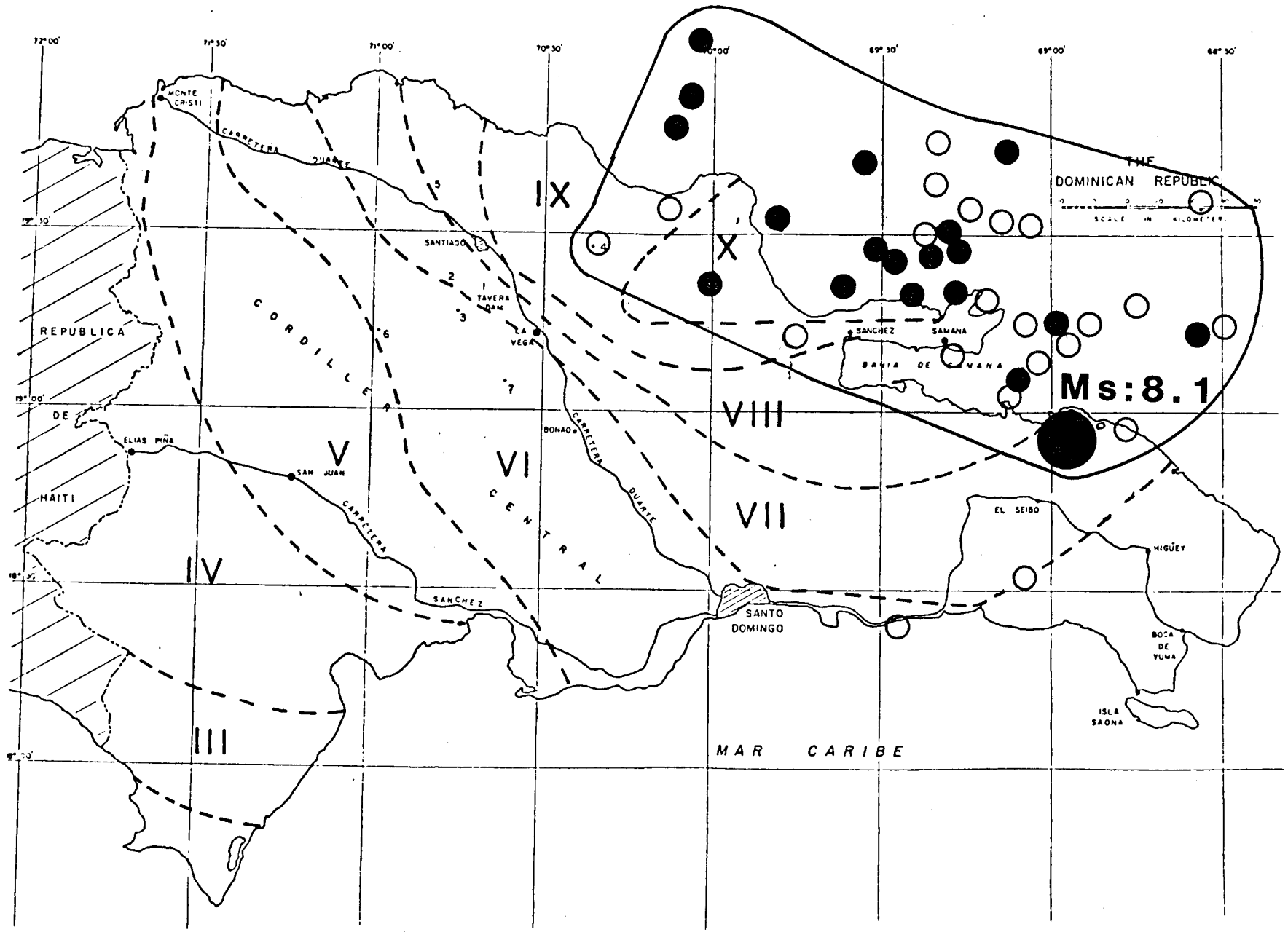


FIG. 2C **AUG. 4, 1946 SAMANA EARTHQUAKE**

DISTRIBUTION OF AFTERSHOCKS AND INTENSITY

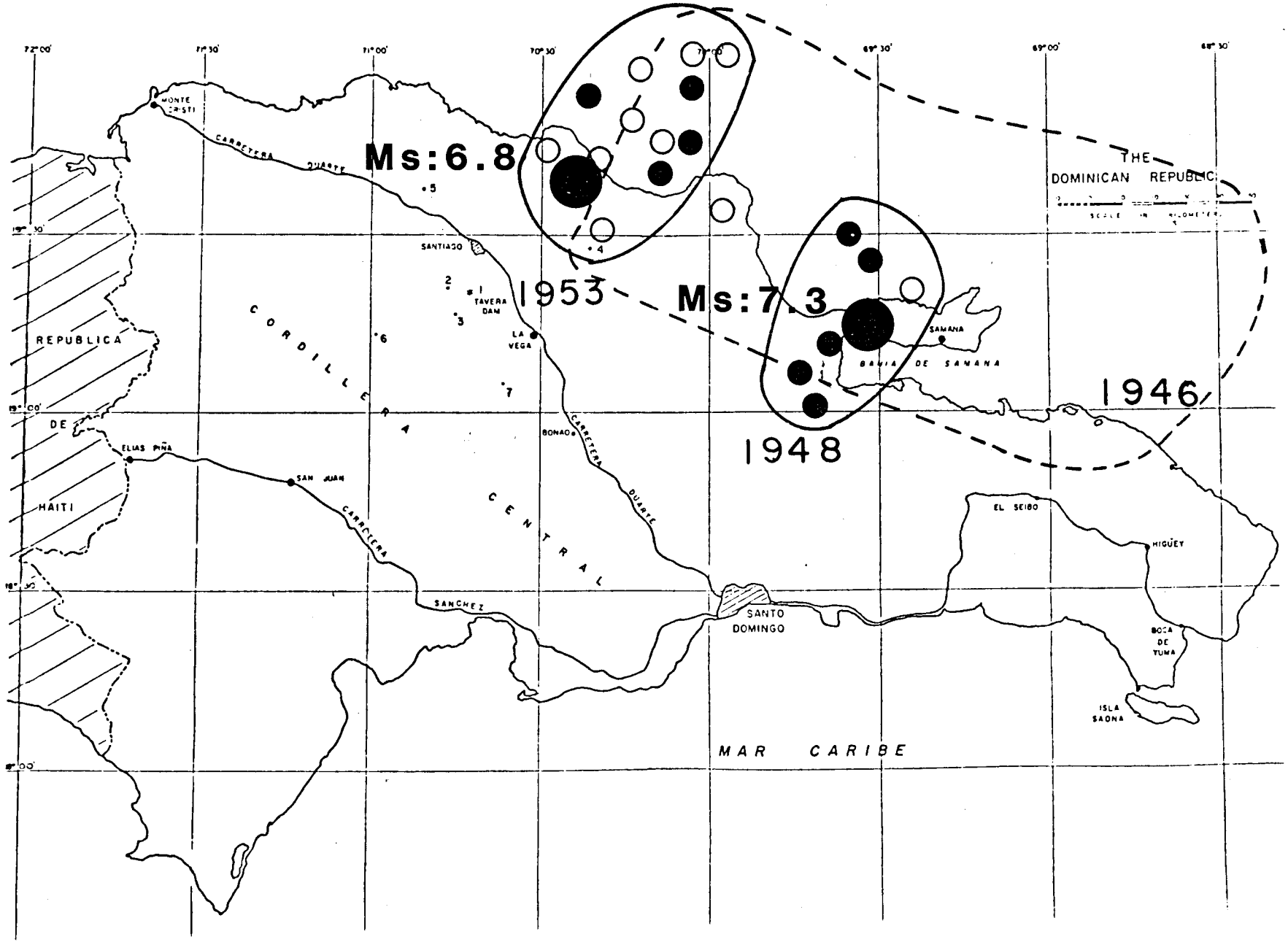


FIG. 2D AFTERSHOCKS FOLLOWING APR. 21, 1948 AND MAY 31, 1953

3. CDE SEISMOGRAPH NETWORK

3.1. Installation

Seven-station Tavera-Bao SEismograph Network (referred as station 1 through 7) was installed by the University of Texas for CDE on December 1979 to monitor the seismic activity in the area of the Tavera-Bao Project. This network was augmented by six additional stations (Rio Blanco Network, stations 8 through 13) in August 1980 to cover the proposed Rio Blanco Hydroelectric Project area and major active provinces in Central Dominican Republic. In May, 1981, two additional stations (stations 14 and 15) were installed in coordination with Corporacion Del Acuenductos y Alcantarrillado de Santo Domingo (CAASD) to cover the area of the Madrigal Dam. These stations act as an unified seismograph network, and the seismic signals from all 15 stations are transmitted back to the central recording stations and monitored and recorded by the Computerized Seismic Monitoring System (COSMOS). Table 1 and Figure 3A show the location of the CDE and CAASD Seismograph stations.

3.2. Design of the Network

3.2.1. Remote Stations

Figure 3B shows the schematic diagram of the CDE seismograph network. At a remote station, small ground movement is converted to electric signal by a geophone, amplified and modulated by a PA/VCO and then transmitted by VHF radio frequency transmitter to the central recording station. The site of a remote station is usually chosen on the considerations of (1) the optimum distribution for detection of earthquakes, (Sato and Skoko, 1965), (2) low noise and (3) line of sight to

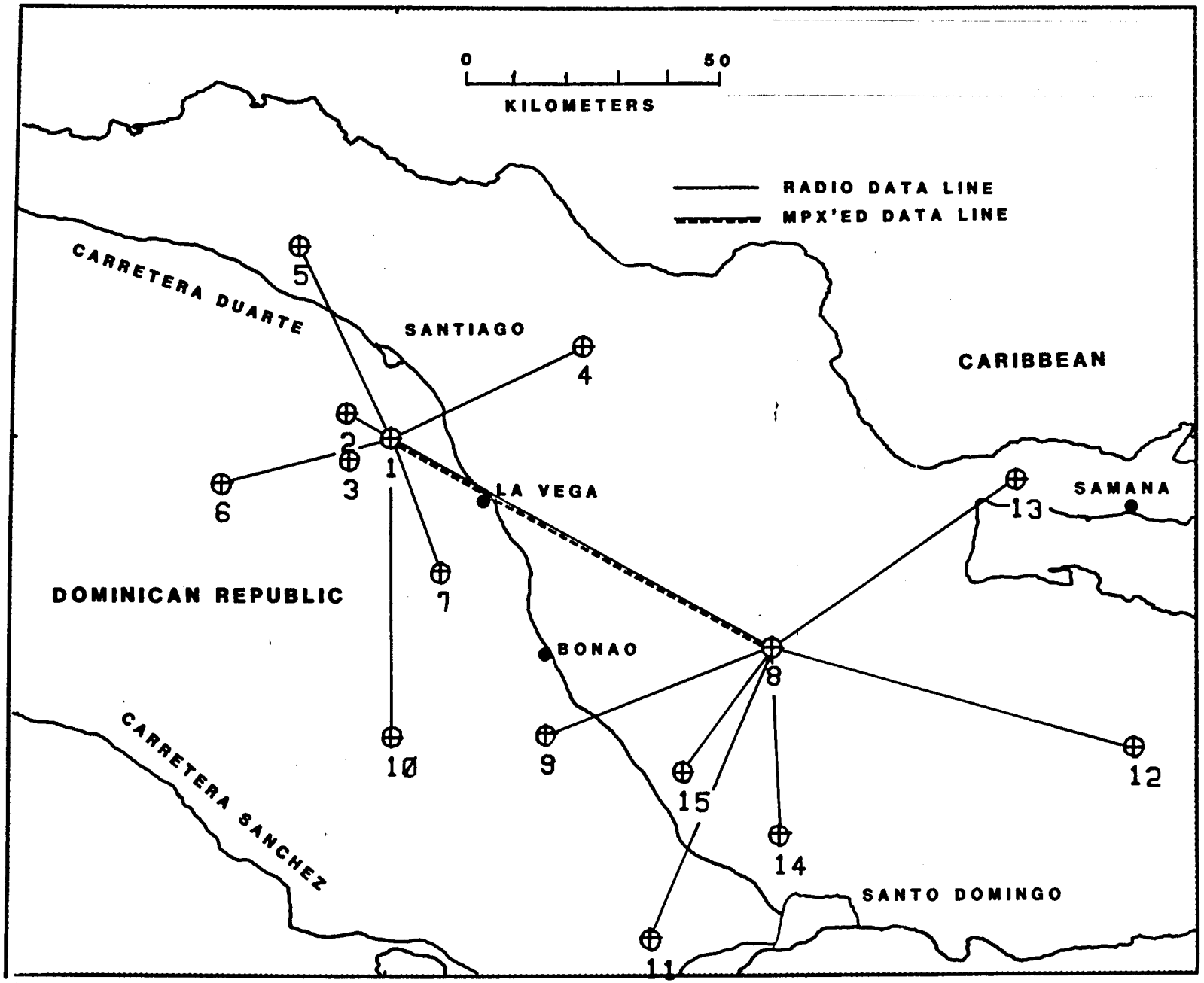


FIG. 3A CDE SEISMOGRAPH NETWORK

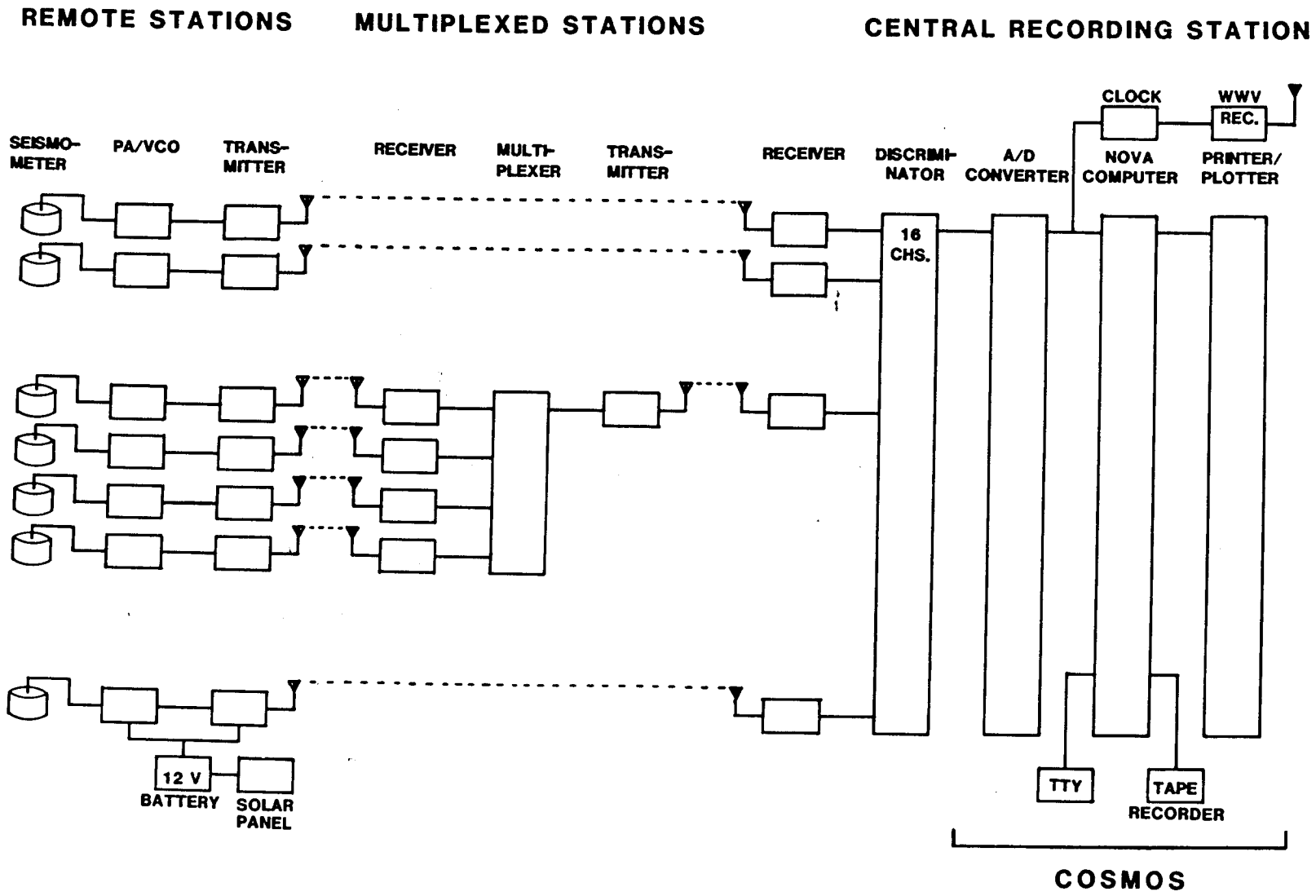


FIG. 3B CDE SEISMOGRAPH NETWORK

Table 1

August 11, 1981

DOMINICAN REPUBLIC SEISMIC NETWORK

STA #	STA NAME	MAP NAME	MAP #	ELEV	DISTANCE TO CRS (KM)	LATITUDE	LONG	MAP COORDINATES Y	MAP COORDINATES X
1	Loma Juana Nunez	La Vega	6073 I	505 M	---	19.31014	70.69688	35.95	21.73
2	Loma Piedra Clavada	San Jose de las Matas	6074 III	490 M	9.4	19.35185	70.77524	40.85	13.69
3		Janico	6073 IV	710 M	8.6	19.27246	70.76886	32.05	14.16
4		Salcedo	6174 III	800 M	40.0	19.46555	70.35776	52.90	57.51
5		Esperanza	6074 IV	660 M	56.8	19.63310	70.85974	71.98	5.02
6		Janico	6073 IV	1450 M	32.1	19.23277	70.99153	27.65	90.78
7	El Salto	Jarabacoa	6073 II	1200 M	26.9	19.08311	70.60517	10.80	31.05
8	Loma La Naviza	Hatillo	6172 I	640 M	81.1	18.95806	70.02061	96.55	92.58
9	Plan Grande	Arroyo Cana	6172 III	940 M	62.6	18.81126	70.41645	80.48	50.75
10		Sabana Queliz	6072 II	2470 M	50.0	18.80828	70.68785	80.38	22.03
11	Loma La Cuchilla de Desboronato	San Cristobal	6171 II	780 M	104.9	18.47056	70.23449	42.55	69.59
12	Loma Pena Alta	Hato Mayor del Rey	6372 III	442 M	150.1	18.78748	69.38112	77.25	59.81
13	Loma Cuesta Mala	Sanchez	6273 I	400 M	117.5	19.24052	69.58870	27.48	38.14
14	Loma Sabana	Los Alcarrizos	6171 I	323 M	105.0	18.64357	70.00783	61.70	93.70
15	Loma Los Siete Picos	Villa Alta-gracia	6172 II	800 M	80.0	18.75000	70.17730	73.50	75.94

the central recording station. If a station has no direct line of sight back to the central recording station, the signal has to be received at the repeater station which clears the line of sight both for the remote station and the central recording station. At the repeater station, as needed, the signals up to eight stations can be mixed together (multiplexed) and transmitted to the central recording station by single radio transmitter. Each multiplexed station needs to be modulated by the different frequency to avoid the interference from other stations. The multiplexer usually includes filter cards for each channel, a summing amplifier, and power supply unit. A filter card is featured by a sharp adjacent data channels. The power for remote/multiplexed stations is supplied from 12 volt battery and charged by solar panels.

3.2.2. Central Recording Stations

Upon reaching the central recording station, the signal is received by a receiver and then demodulated by a discriminator with matching frequency and fed into the Computerized Seismic Monitoring System (COSMOS). Here possible earthquakes are detected through a triggering logic and are plotted onto high-speed printer/plotter. COSMOS initiates the automatic epicenter determination program when four or more stations are set on "trigger" mode and the arrival times for P-waves, COSMOS computes a preliminary location of an earthquake without human assistance. Within the computer, the epicenter program is concurrently executed, but this epicenter determination program accupies the central processing unit only when the high-priority data scanning monitoring program is completed and the computer becomes idle before the next sampling cycle starts. In this

way, the epicenter is calculated without distrubing the main program that continues to monitor the incomming seismic signals. This automatic epicenter determination is one of the powerful features that play an important role in the real-time seismic monitoring program. The regular data analysis procedure that includes the shipment and analysis of the data, takes at least 2 months until the location of the event is determined and the information is returned to the host country. This automatic epicenter determination, on the other hand, locates the epicenter, depth and the magnitude of an earthquake and prints them out immediately. At the time of impounding a reservoir which frequently triggers a number of water induced earthquakes, such as automatic epicenter determination capability becomes very important.

While this automatic epicenter determination is an important tool for the real-time seismic monitoring program, the users of this system should bear in their minds that there are some limitations due to the structure of the computer program. The limited capability of the automatic epicenter determination in COSMOS is attributed from the following reasons;

(1) the computer program is able to identify P-wave only; no S-wave is identified and utilized in the epicenter determination process,

(2) in the computer program, the onset of "P-wave" is identified as the time when the input signal exceeds the threshold determined by the background noise. Therefore, if the onset of the signal is quite slow (as usually expected for distant earthquakes) or during the time period with noisy background (as experienced on windy weather or with animal noise), the identified "P-arrival" does not necessarily represent the true onset, actually such a mistrigger is rather common;

(3) there is a tendency that the computer identifies P-arrivals are the arrival time of the peak amplitude rather than the beginning of an onset. Accordingly, the computer identifing P-arrivals usually lags approximately 0.5 to 0.1 seconds behind the actual onset time (approximately 1/4 of the predominant period).

Due to these effects, the epicenter located by the automatic program is reasonably reliable only when;

(1) the signals are detected by more than 5 stations,

(2) the signals have sufficient S/N ratio (at least 10:1), and

(3) the earthquake is situated within the network and characterized by the high frequency onset.

Table 2 shows the comparison of the foci determined by COSMOS automatic program and the conventional, eye-ball analysis. Of 92 selected events compared, (recorded during the period from January through December, 1980) only 22 events (in class AA and A) are sufficiently close to each other. The majority of these events are generated by the explosion, for which the onset of P-arrivals is usually large and sharp. On the other hand, the number of events in class C and D, that are considered to be erroneous determination, amounts to 66, three times as many as the number of the events in classes AA and A combined. Most of these events are either events that occurred at greater distances and/or those registered with small and gradual onset. At least one misidentified reading, which is responsible for large error, was involved in the automatic epicenter determination is significantly different from the result of the eye-ball analysis. Therefore, the results from the automatic epicenter determination should be regarded as a preliminary estimate. If the preliminary results are to be utilized for more detailed analysis, it is

Table 2. Comparison of Epicenter Determined By COSMOS Program and Conventional Method

Class	*Error KM	No. of Events	No. of events that include misidentified onset by COSMOS
AA	less than 2 km	7	
A	2 km$\leq$E<10 km	15	
B	10 km$\leq$E<20 km	4	1
C	20 km$\leq$E<50 km	21	19
D	More than 50 km	45	45

*Error indicates the difference between two epicenter determinations

necessary to determine whether any errors are involved in the identification of the onset.

The revised program effective March 3, 1981 includes the function to examine and to eliminate a false identification of the arrival times. This revision automatically eliminates the readings that do not match the logical acceptable pattern of the arrival times. It is expected that an improvement of the automatic epicenter determination will be significantly improved.

3.2.3. Example of Seismograph

Figure 3C shows the sample of the CDE network. The signals from 15 stations (stations 7, 10 and 14 were not operating properly at the time of this recording) and the Binary Coded Time Signal are shown in this figure. A vertical reference line is drawn each 5 seconds. When an earthquake is dected, the COSMOS system starts to plot the seismic signals. Because of the delay time programmed in the system, the onsets of the seismic signal start to appear approximately 20 seconds after the system is triggered. When the amplitude of the signal exceeds the plotting threshold, the computer automatically reduce the plotting sensitivity of 3 db and adjust the amplitude within the threshold. If the amplitude still exceeds the maximum threshold, additional 6 db reduction is executed. The number of sensitivity reduction is shown by the number of horizontal lines shown adjacent to the seismogram. On St6, for instance, the portion covered by 2 lines illustrate the reduction of amplitude by 2 x 6 db = 18 db (or 2^2 = 4 times). The plotting continues until the amplitude of the signal gradually diminishes. When the plotting

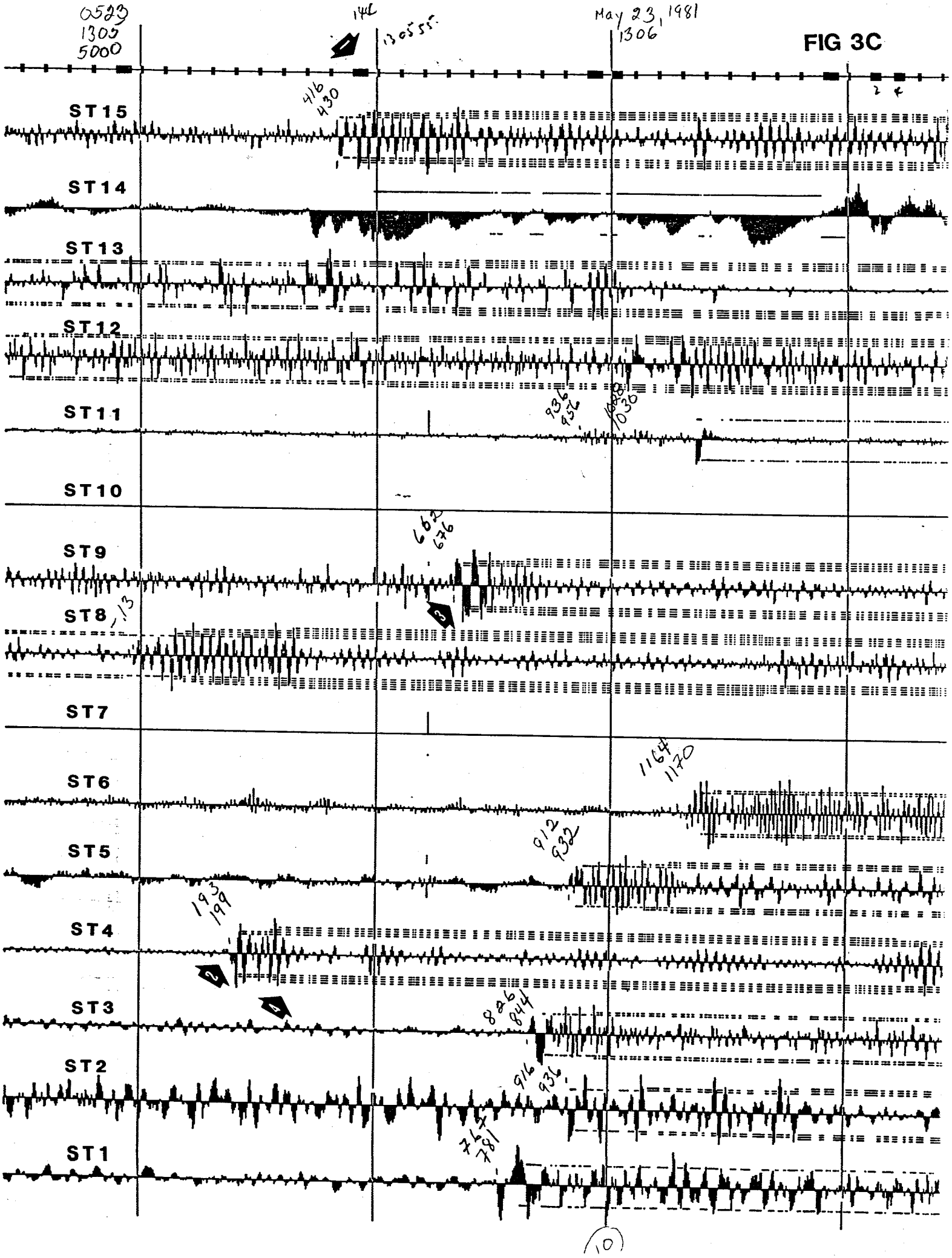
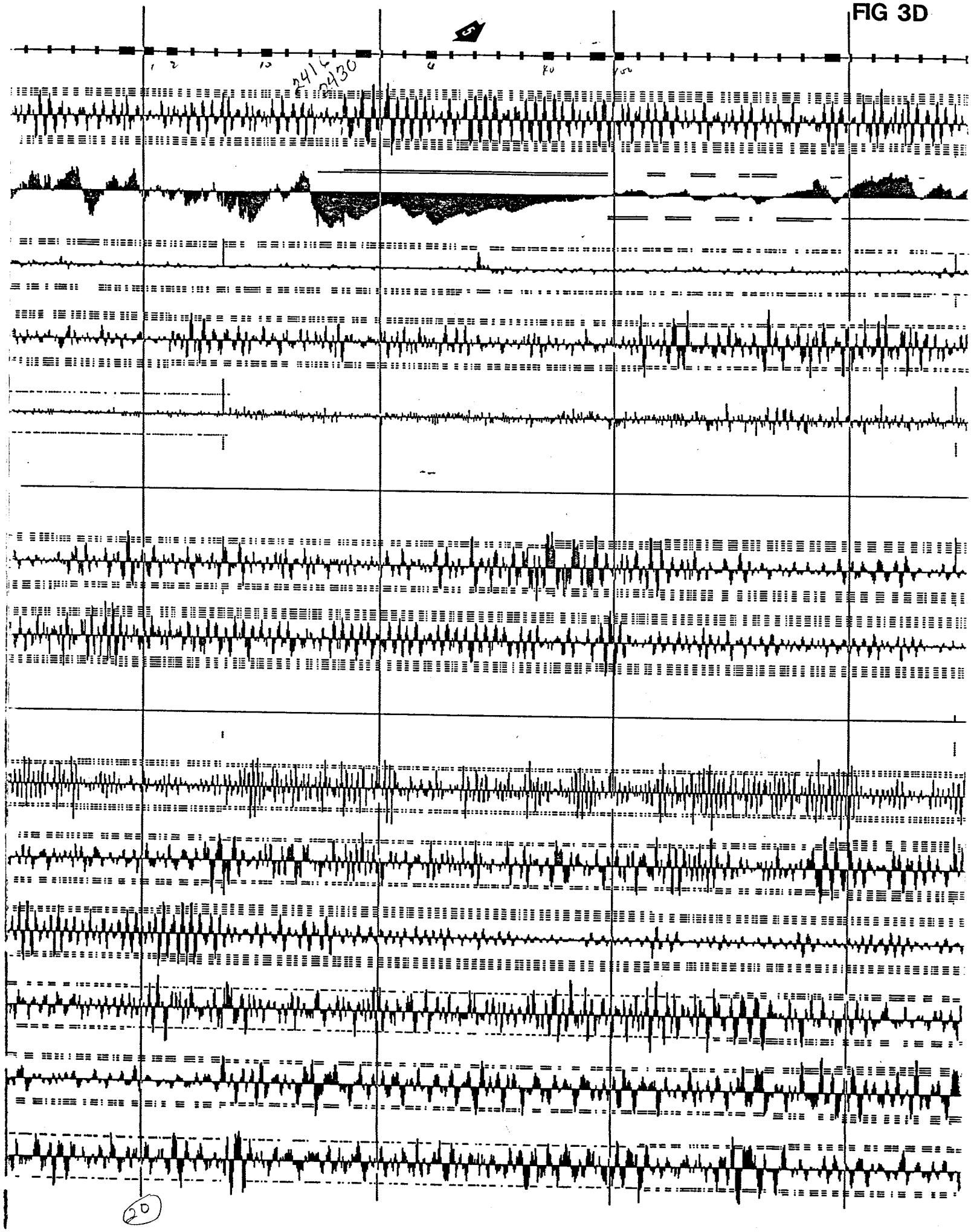

0523
1305
5000
14L
13:05:55
May 23, 1981
1306
FIG 3C
ST15
ST14
ST13
ST12
ST11
ST10
ST9
ST8
ST7
ST6
ST5
ST4
ST3
ST2
ST1
416
430
936
932
1028
1036
662
676
1164
1170
912
932
193
199
826
844
916
936
776
781

FIG 3D



CDE NETWORK COSMOS SYSTEM

INPUT DATA

YR	DAY	H	M	S	DUR	NP	ITER	MAG	MB
81	144	12	3	53.02	20	3	10	0.4	1.9

ST NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
TP	0.00	0.00	-0.07	-6.63	0.00	0.00	0.00	0.00	-1.83	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	-0.07	-6.63	0.00	0.00	0.00	0.00	-1.83	0.00	0.00	0.00	0.00	0.00	0.00
TPOC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
U/D	0	0	-1	-1	0	0	0	0	-1	0	0	0	0	0	0
DIST(KM)	75.61	83.85	83.36	43.11	98.70	107.05	71.26	41.08	73.25	94.16	98.30	86.67	42.42	75.36	67.01
MXAMP(MV)	325	147	95	160	312	29	0	6530	242	0	7	2295	2230	317	0
ML	0.00	0.00	2.01	1.37	0.00	0.00	0.00	0.00	2.25	0.00	0.00	0.00	0.00	0.00	0.00
TP-T0	0.00	0.00	-0.07	-6.63	0.00	0.00	0.00	0.00	-1.83	0.00	0.00	0.00	0.00	0.00	0.00

ORIGIN TIME

81 144 12 63 38.22

TP-T0	0.00	0.00	14.72	8.17	0.00	0.00	0.00	0.00	12.97	0.00	0.00	0.00	0.00	0.00	0.00
ML	0.00	0.00	2.01	1.37	0.00	0.00	0.00	0.00	2.25	0.00	0.00	0.00	0.00	0.00	0.00

EPICENTER	LONG(DEG)	LAT(DEG)
	-69.9793	19.3239
REF. PT. FOR X,Y	-70.6969	19.3102

	OT	X(KM)	Y(KM)	Z(KM)	DS	S
	-14.80	78.57	1.52	5.00		
ST. DIV.	0.25	1.69	0.57	0.00		0.04

ITERATION

1	-5.00	0.00	0.00	5.00	0.00	10.68
2	-6.31	6.60	-22.24	5.00	23.20	7.55
3	-9.21	15.74	-21.75	5.00	9.15	4.04
4	-11.30	24.27	-20.02	5.00	8.71	2.11
5	-12.66	30.52	-18.68	5.00	6.38	1.11
6	-13.59	35.09	-17.51	5.00	4.72	0.58
7	-14.17	38.10	-16.67	5.00	3.13	0.30
8	-14.51	39.90	-16.14	5.00	1.88	0.15
9	-14.70	40.91	-15.84	5.00	1.05	0.08
10	-14.80	41.44	-15.67	5.00	0.56	0.04

FIG 3E

is completed, the computer system prints out the epicenter, depth, origin time and magnitude as shwon in Figures 3C-3E.

3.3. Operation and Maintenance

During the period of December 13, 1979 through July 17, 1981 (582 days total), the central recording system suffered a combined total of 82 days of down time. This accounts for 14.1% of operation time. Throughout this period, the remote stations, on the other hand, (7 stations, December 13, 1979 - August 23, 1980; 13 stations, August 24, 1980 - May 1981; 15 stations, May 19, 1981 - July 17, 1981) experienced combined total of 858 stations x day of malfunction, resulting in 14.1% (=858/6081 stations x day) of down time. Appendix 1 shows the chart of the down time for COSMOS and the remote stations.

3.3.1. Central Recording Station

Cause of the problems at the central recording station was attributed to the damages generated by a thunderstorm that hit the recording station on September 23, 1980. High voltage surge knocked down A/D converter, Printer/Plotter and I/O interface board of the computer and made the recording system untenable for 51 days.

Following this experience, the grounding of the system was improved, the wiring of the power supply was modified and an isolation transformer was purchased to protect against the voltage surge. Unfortunately, the second lightning that hit occurred on April 22, 1981 only a couple of days before the isolation transformer was installed to protect the computer power line. The station again was incapacitated for 21 days.

The installation of the insulation transformer and other protective measures setup lately made the recording system more resistant for potential lightning damages. Purchase of some of the spare boards for the computer also makes it possible to repair the system more rapidly.

3.3.2. Remote Stations

The causes of the problems recognized at the remote stations are various. Majority of the problems are as follows: (1) malfunction of component equipment (PA/VCO, transmitter and receiver), (2) unstable contacts at connector pins and battery terminals caused by rust and corrosion, (3) inpregnation of antenna cable by rain water, (4) blown fuses in the solar panel circuit and low electrolyte level of the storage battery, (5) misalignment of the directional antenna.

After the Rio Blanco Network (stations 8-13) was installed, some additional difficulties arose. Due to the topography and the line of sight requirement, the signals from five stations (8, 9, 11, 12 and 13) needed to be transmitted via station 8 through a multiplexer. The adjustment of multiplexer, while tested extensively in laboratory, was affected by harsh environment and offered unexpected tough technical problems. In particular, these problems were; (1) damages to the receivers caused by the lightning (at point 8), (2) much higher power drain due to variety of equipment (multiplexer, PA/VCO, receiver and transmitter) connected together to a storage battery, (3) delicate input threshold adjustment both for multiplexer (at point 8) and discriminator (at the Central Recording Station). These problems were improved by (1) separating the batteries for multiplexer and other equipment, (2) setting up a detailed adjustment procedure for multiplexer

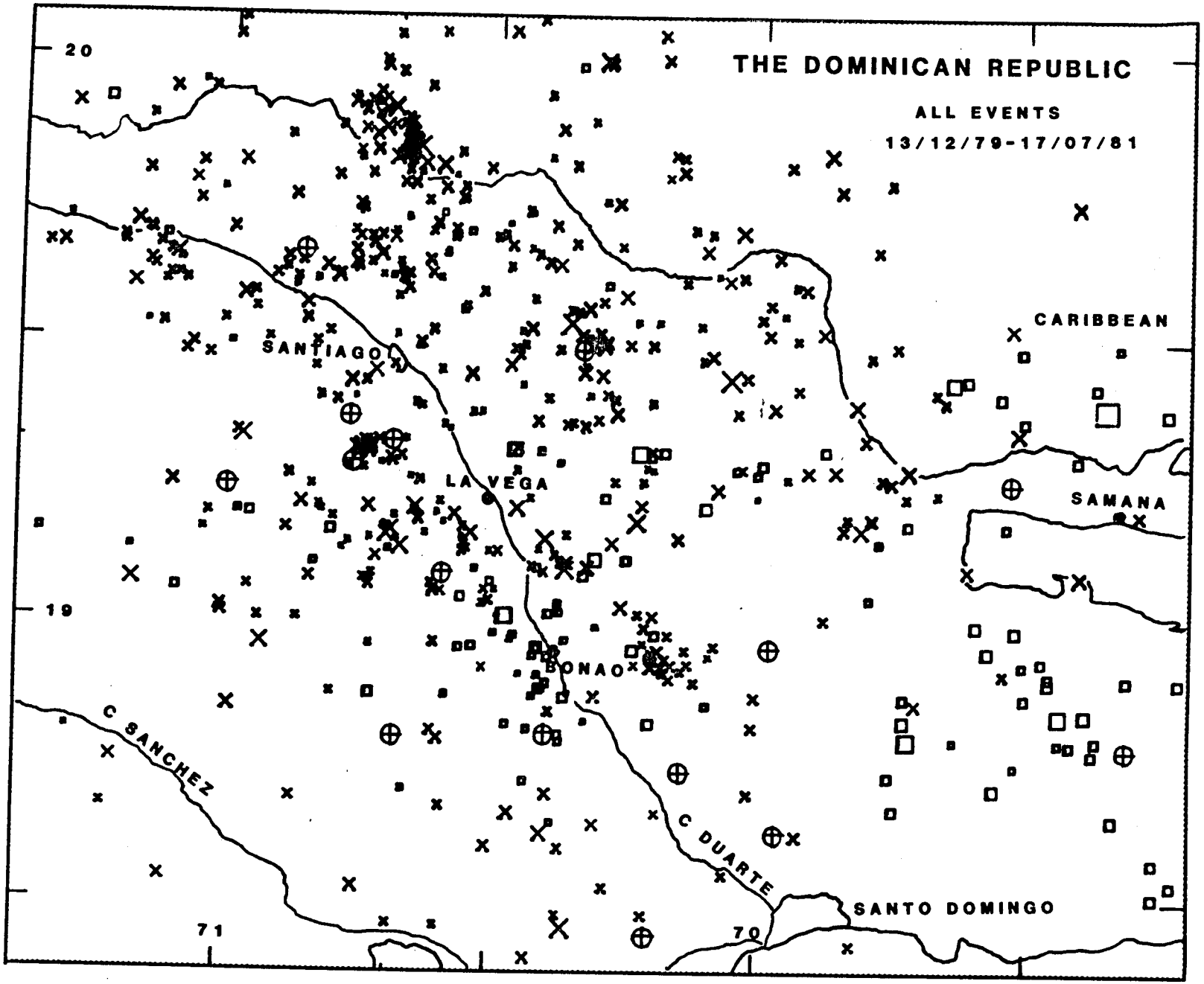

THE DOMINICAN REPUBLIC
ALL EVENTS
13/12/79-17/07/81
20
19
71
70
SANTIAGO
LA VEGA
CARIBBEAN
SAMANA
BONAO
C SANCHEZ
C DUARTE
SANTO DOMINGO

FIG. 4A

and discriminator (adjustment procedures prepared by Don McGhee, August, 1981), and as needed, (3) dividing multiplexing channels into two groups and transmit through two transmitters.

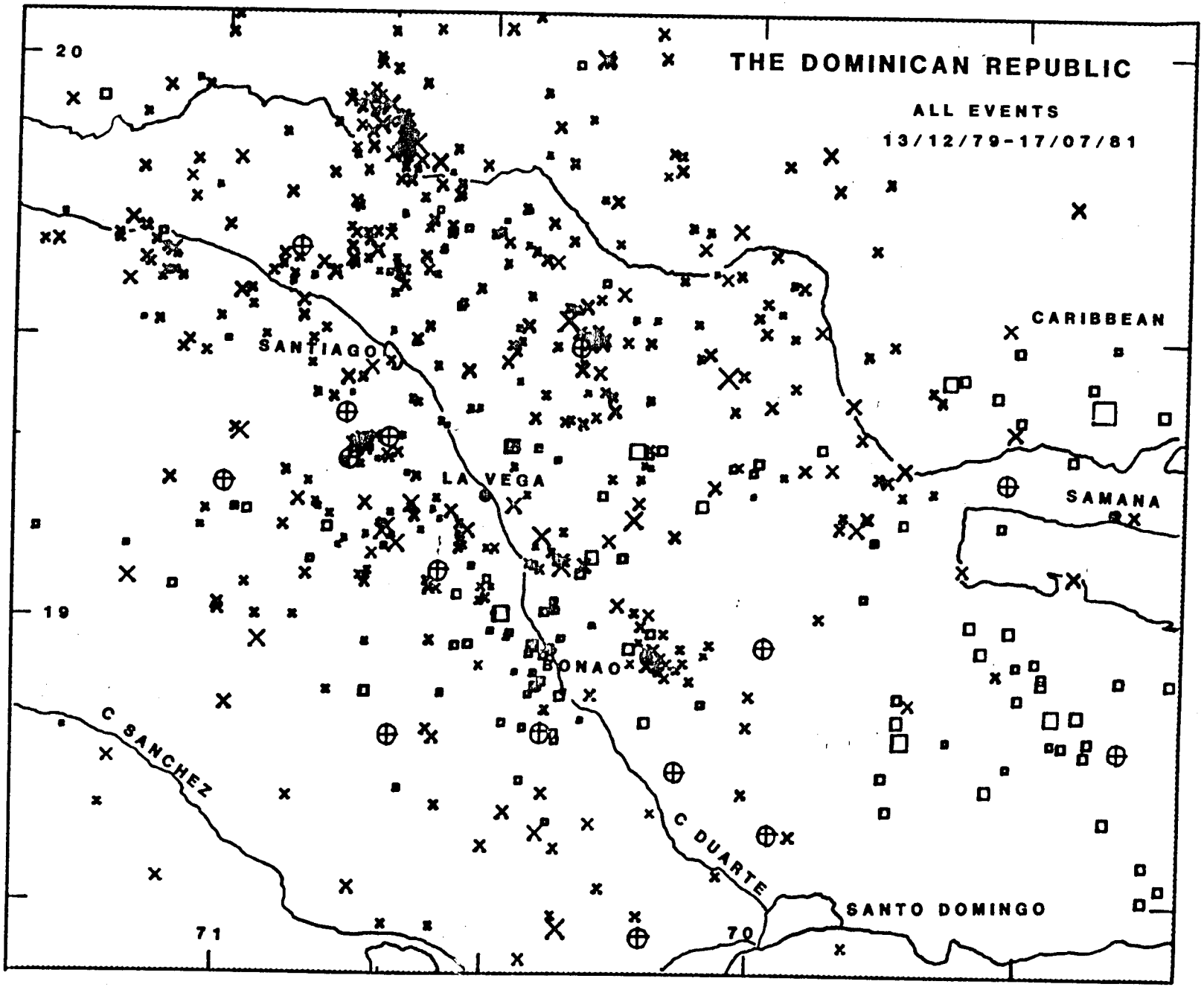
The problem of multiplexer is again examined between Ing. Sanchez and U.T. technical staff in October 1981 and it was further decided to take the following action: (4) to limit the multiplexing channels to no more than 3 channels per transmission line, (5) as needed, deploy additional filter cards between the output of MPX receiver and the discriminator at the base station.

4. DISTRIBUTION OF EARTHQUAKES RECORDED BY CDE NETWORK

During the period from December 13, 1979 through July 17, 1981, approximately 1500 events were identified and recorded by CDE seismograph network. The complete list of the earthquakes is attached in Appendix 2.

4.1. Regional Distribution of Earthquakes

Distribution of earthquakes in Central Dominican Republic is illustrated in Figure 4A and 4B. Figure 4A includes all the events located by CDE network whereas only the events with accurately located epicenters ($IQ \leq 3$ and $S < 1.0$) are shown in Figure 4B. As shown in the explanation of the symbols in Appendix 2, IQ is the quality factor of the epicenter determination. Usually IQ is judged by the number of reading, clearness of the onset, and timing resolution. Of 5 scale clasification, 1 signifies the best determination and 5 indicates very poorly con-


THE DOMINICAN REPUBLIC
ALL EVENTS
13/12/79-17/07/81
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SANTIAGO
LA VEGA
CARIBBEAN
SAMANA
BONAO
C SANCHEZ
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FIG. 4A

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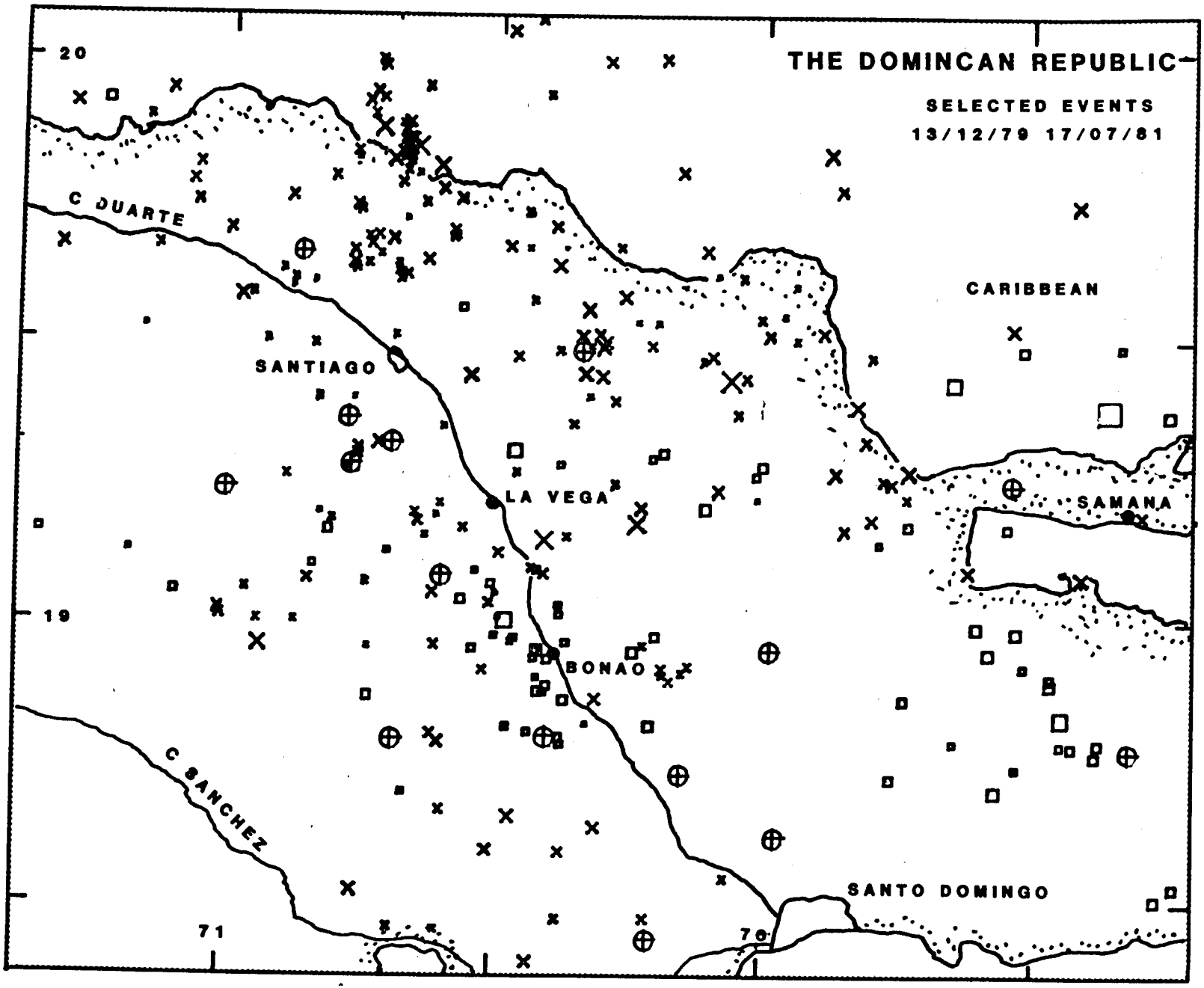

THE DOMINCAN REPUBLIC
SELECTED EVENTS
13/12/79 17/07/81
20
19
71
70
C DUARTE
SANTIAGO
LA VEGA
BONAO
C SANCHEZ
CARIBBEAN
SAMANA
SANTO DOMINGO

FIG. 4B

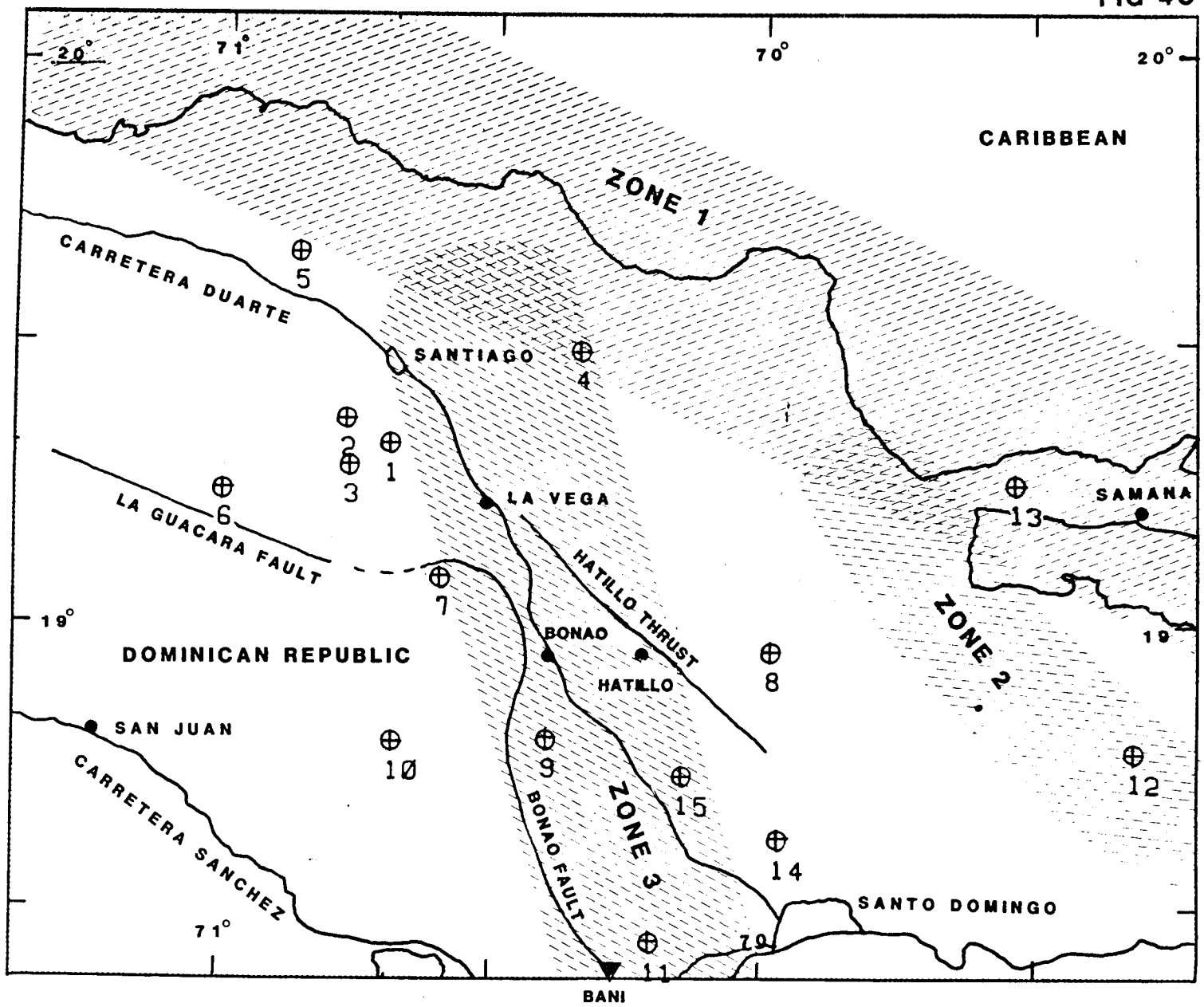
strain d determination. S is the standard error resulted from the epicenter determination and of course, the smaller is the value of 5, the better the accurracy of the epicenter. An x represents an event shallower than 60 km and an open sequence indicates an earthquake deeper than or equal to 60 km. The size of the symbol is approximately proportional to the magnitude of an earthquake.

Careful inspection of these figures indicates that there are three major seismic zones recognizable in the Dominican Republic. These active zones are quoted as Zones 1, 2 and 3 in this report and shown in Figure 4C.

ZONE 1: A widely scattered seismic activity distributes along the northern shore of the Dominican Republic. This trend is roughly oriented WNW-ESE and runs with the width of 50 to 70 km. With the exception of events located eastern-most section of the figure (north of Samana Peninsula), most of the earthquakes in this seismic zone are of shallow origins. The composite fault plane solutions of the earthquakes along this zone support left lateral strike-slip motion. These observations are in agreement with the nature of transform movement of Caribbean-North American plate boundary. This active zone, although highly scattered, is expected to constitute a segment of the Circum-Caribbean Seismic belt.

Most of the destructive earthquake occurred in the Dominican Republic during 1920 through 1945 (Figures 2B, 2C and 2D) were distributed along this plate boundary. The activity along this seismic zone is believed to be the highest in the Dominican Republic. The 1946 earthquake (M=8.1) typically indicated that this zone has a potential to sustain

FIG 4C


20°
71°
70°
20°
CARIBBEAN
ZONE 1
CARRETERA DUARTE
5
SANTIAGO
4
2
1
3
6
LA VEGA
13
SAMANA
LA GUACARA FAULT
HATILLO THRUST
7
19°
DOMINICAN REPUBLIC
BONAO
HATILLO
8
ZONE 2
19°
SAN JUAN
10
9
15
12
CARRETERA SANCHEZ
BONAO FAULT
ZONE 3
14
SANTO DOMINGO
71°
11
BANI

one of the largest earthquakes in this region. Due to the possible rupture length in the order of 400 km in this region, it is estimated that major earthquakes up to magnitude 8.5 may take place along this active zone.

ZONE 2: A number of intermediate-depth earthquakes are located in eastern Dominican Republic (near the meridian 69°30'). The distribution of these events is roughly oriented NW-SE. The presence of this seismic zone has been well known (e.g., Sykes and Ewing, 1965; Molnar and Sykes, 1969). This deep seismic zone is continuing to the activity that runs south of Puerto Rico. Along with the activity north of Puerto Rico, this linear trend defines a small sub-plate that includes eastern Dominican Republic and Puerto Rico (Figure 1). It is generally understood that the focal mechanisms for the intermediate-depth events along this zone are typical of such events in subduction zones, where the seismicity does not extend to greater depths. The focal mechanisms for the shallow focus events demonstrate thrusting in NE-SW direction and the tension axis are nearly vertical, suggesting that the subducted litothsphere, in which they presumably occur, is also nearly vertical.

ZONE 3: The activity in this zone is divided into two separate linear trends; one runs from west of La Vega and Bonao with NWN-SES trending and continues southwards. The other is La Vega through Hatillo with NW-SE orientation (see Figure 6 for details). The former is referred as La Vega-Bonao-Bani seismic zone and located approximately parallel to the Bonao fault (Figure 4C). The latter is referred as La Vega-Hatillo seismic zone and roughly parallel to the Hatillo thrust. An

additional possible lineation trending E-W can be observed west of La Vega, sub-parallel to La Guacana fault (name of fault after J.F. Lewis, 1980) but offset approximately 10 km to the north. This trend is only delineated weakly and need to have additional confirmation when more data is accumulated.

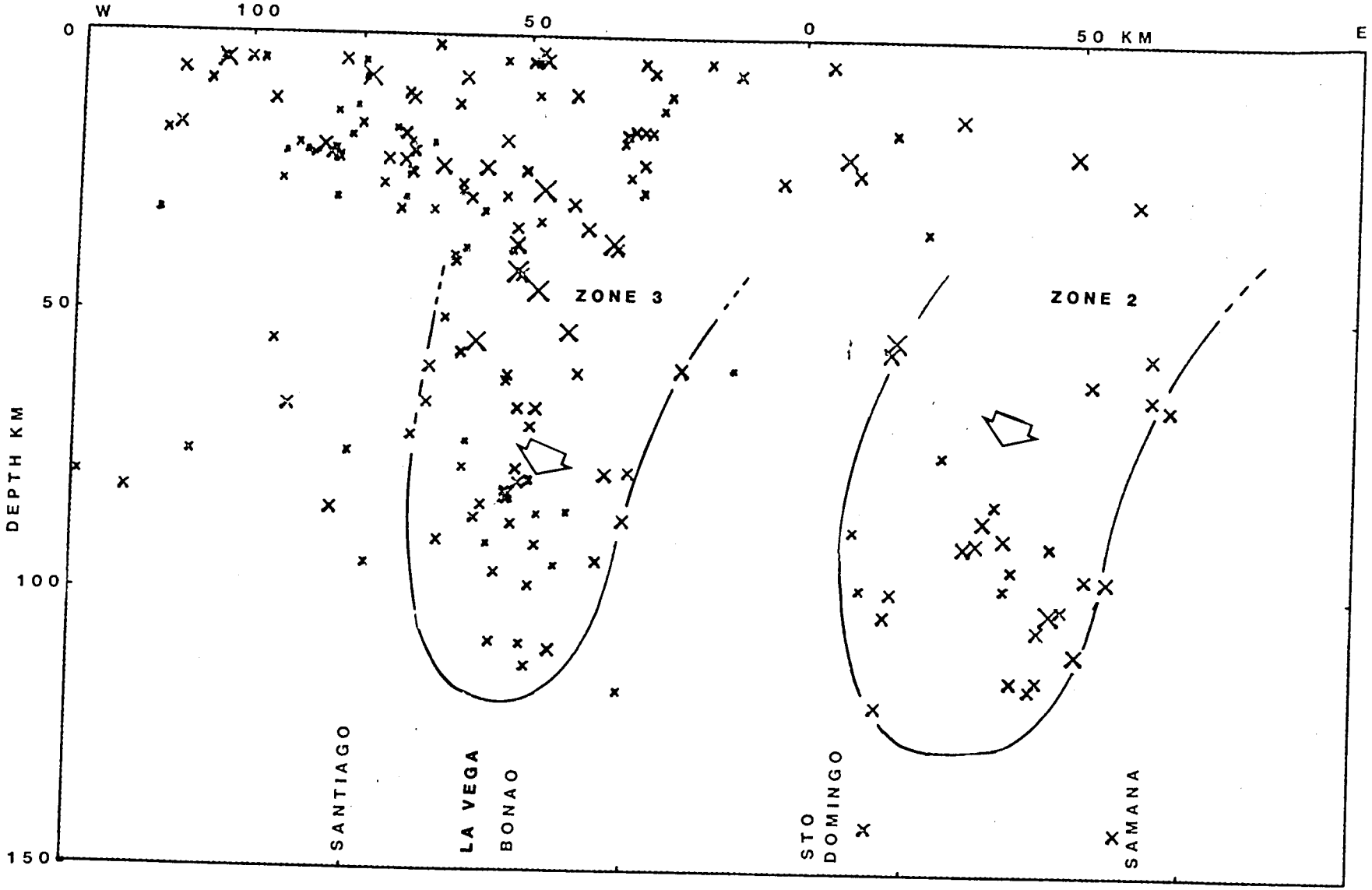
Of the two active zones mentioned above, the active trend along La Vega-Bonao-Bani lineation includes from shallow to intermediate-depth earthquakes up to the depth of 120 km. The seismic zone dips steeply with near vertical angle, resembling the profile exhibited by Zone 2.

To illustrate the nature of these steeply dipping seismic zones, the hypocenter of well located events were projected onto a vertical plane trending E-W and shown in Figure 4D. Projection covers the area 230 km long in E-W direction including both zones 2 and 3. The events lcated south of the central recording station (events with negative Y coordinates) are plotted in this figure.

In Figure 4D, one can observe clearly defined dual subduction zones, one located west of Samana and the other near Bonao and La Vega. The former corresponds to the activity in Zone 2 and the latter to Zone 3. Both subduction zones are dipping steeply to the depth of 120 km and the composite fault plane solutions of these subduction zones show near vertical normal faulting. The compression axis of the former zone is oriented approximately NE-SW, whereas Zone 3 shows E-W trending compression axis. The tension axis both subduction zones are near vertical.

The presence of the former subduction zone (Zone 2) was rather well known since the middle of 1960's, but the detailed structure of the latter (Zone 3) has never been recognized prior to this study.

FIG. 4D THE DOMINICAN REPUBLIC VERTICAL PROFILE



Location of Zone 3 and geological feature offers some interesting correlation. Towards west of Zone 3, there is an extensive exposure of metamorphic and ultramatic in igneous rocks. Such a correlation strongly supports the hypothesis that the collision of the nucleus Hispaniola (Cordillera Central) and western segment of Hispaniola occurred in the past which subsequently resulted in formation of the subduction zone and deep seated molten zone. Zone 2 may have been formed in the similar process, but no chronological correlation between the formation of two subduction zones has been established.

5. EARTHQUAKE IN THE VICINITY OF THE TAVERA-BAO PROJECT

Figure 5A and Table 3 show all the earthquakes located in the vicinity of the Tavera-Bao Project. All the events attributed from the explosions during the construction period were carefully examined and excluded from this plot to visualize the pattern of natural events. Within the grid illustrated in Figure 5A, 26 events were located and listed in Table 3.

These events show significant characteristics in spatial and temporal distributions. Majority of the events as shown in Figure 5A were distributed between the Tavera and Bao reservoir along the Tavera fault. The vertical profiles of the hypocenter distribution projected onto vertical planes further confirmed that

(1) the events are located at the shallower depths (mostly less than 5.0 km) along near vertically dipping Tavera fault (Figure 5B).

(2) The events are closely clustering near the western fringe of the Tavera reservoir (Figure 5C).

As clearly indicated in Table 3, the bulk of the events took place during the months of June and August, 1980. All of the scattered events

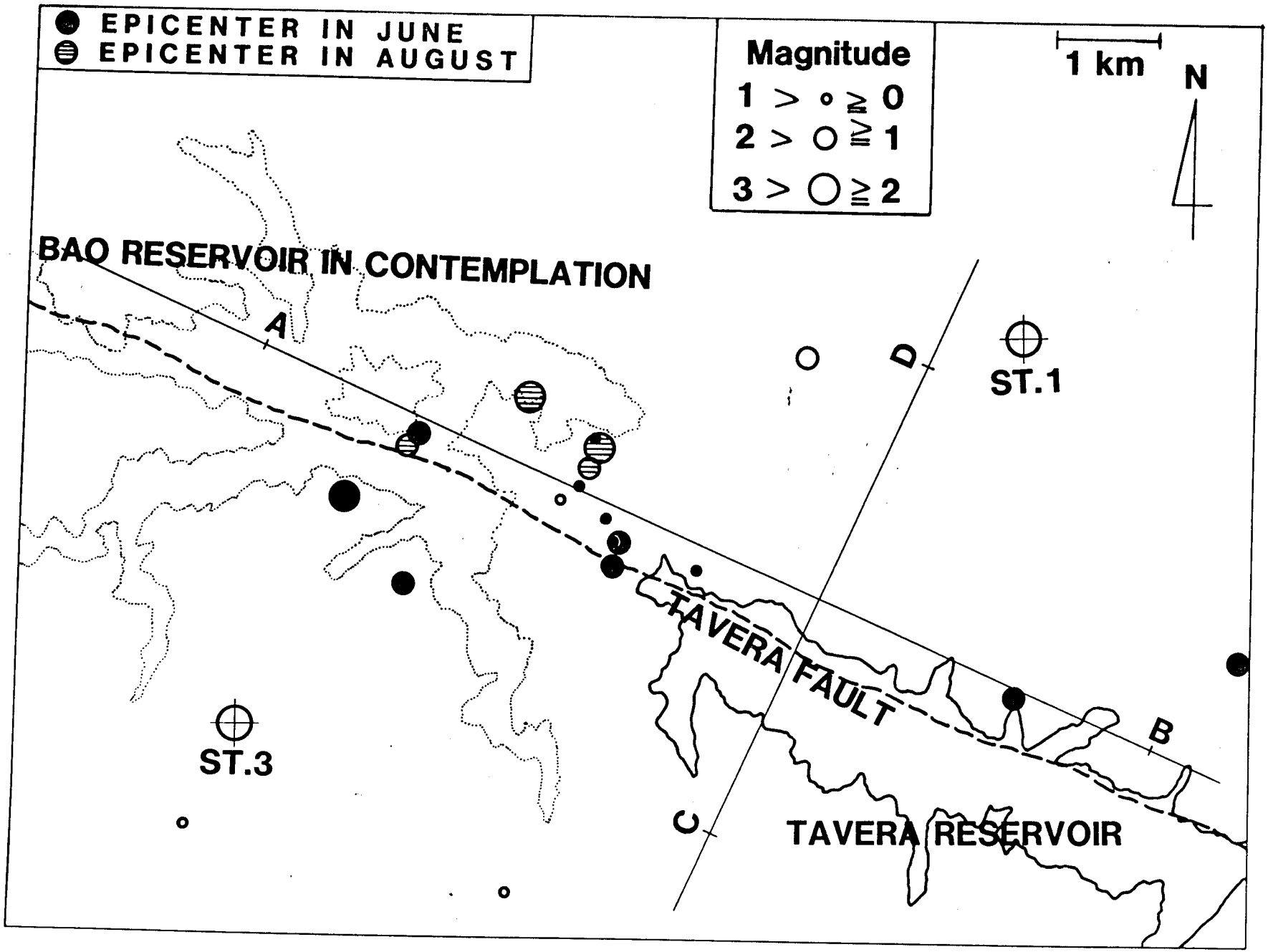


FIG. 5A EARTHQUAKES LOCATED NEAR TAVERA – BAO AREA

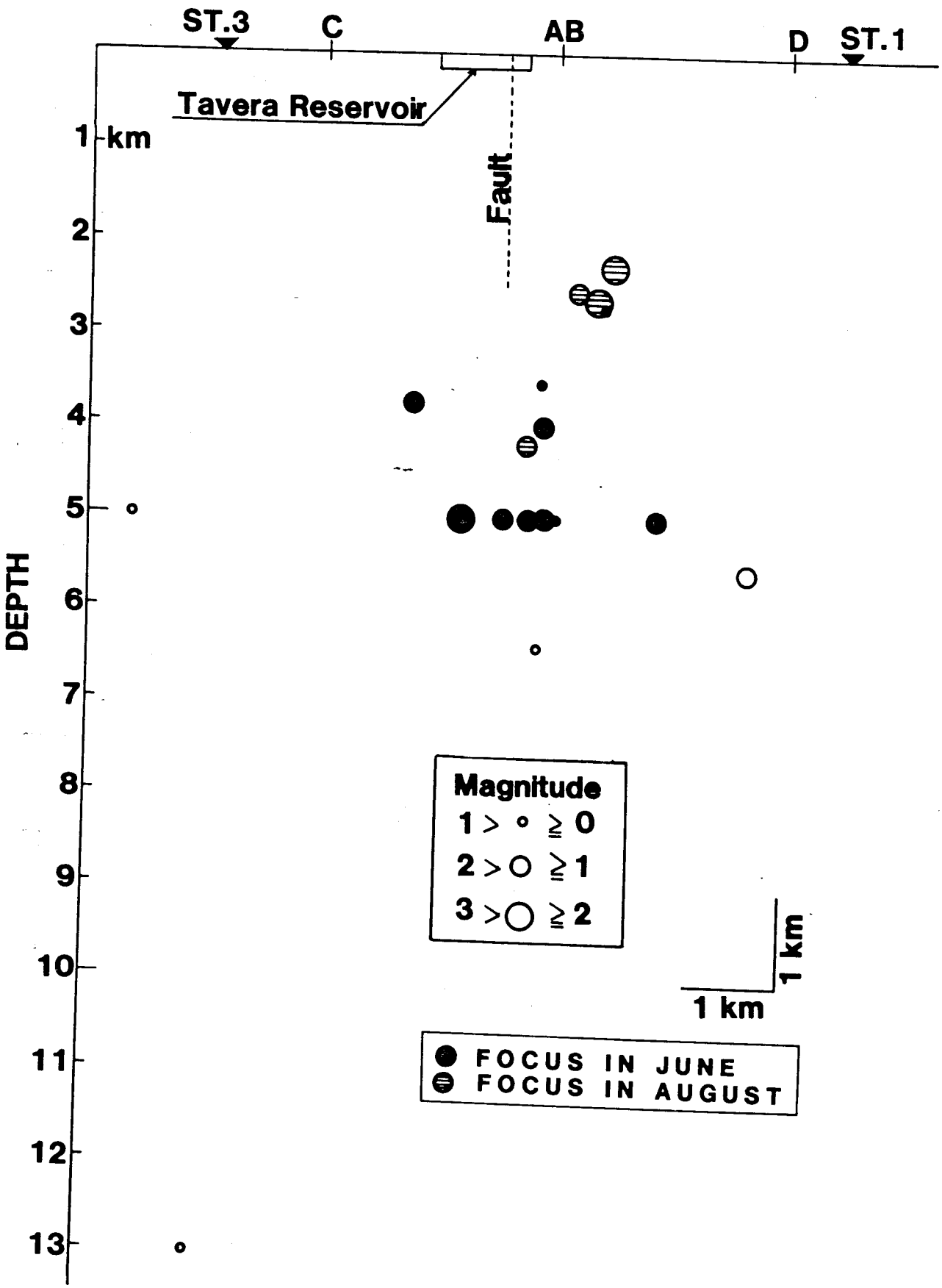


FIG. 5B VERTICAL PROFILE OF EARTHQUAKE DISTRIBUTION

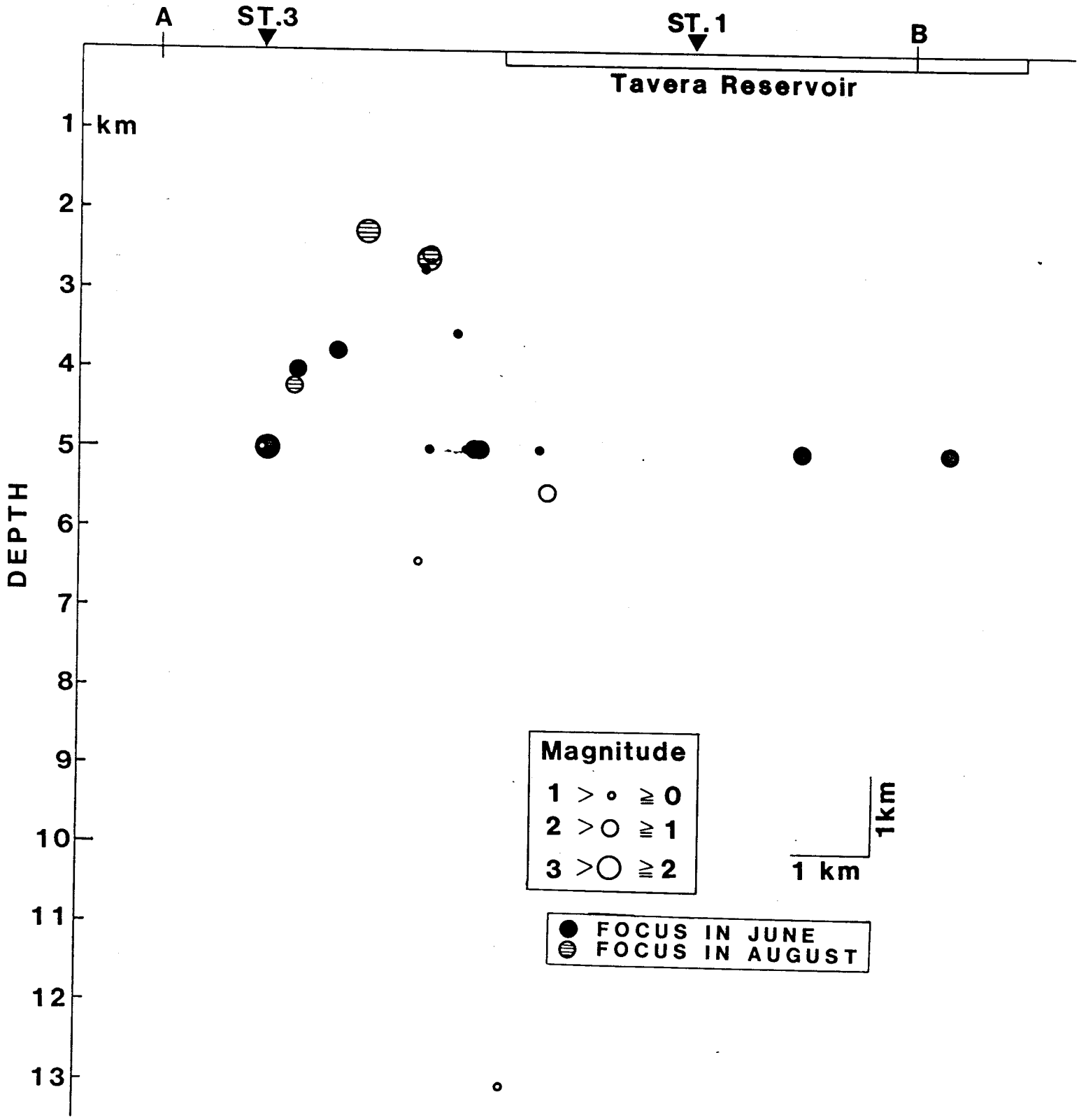


FIG. 5C VERTICAL PROFILE OF EARTHQUAKE DISTRIBUTION

outside of this time interval were located off the Tavera fault or within the midsection of the Tavera reservoir.

Two alternative interpretations but not necessary to exclude each other, were offered to explain the nature of the earthquake swarm observed during June - August, 1980, along the section of Tavera fault between two reservoirs.

The first explanation is inferred from the results of the laboratory experiment of rock fractures carried out by Mogi (1963). Mogi differentiated the temporal sequence of earthquake into three different categories (Figure 5D):

(1) Type 1: Main shock followed by aftershocks,

(2) Type 2: Main shock-aftershocks preceeded by foreshocks,

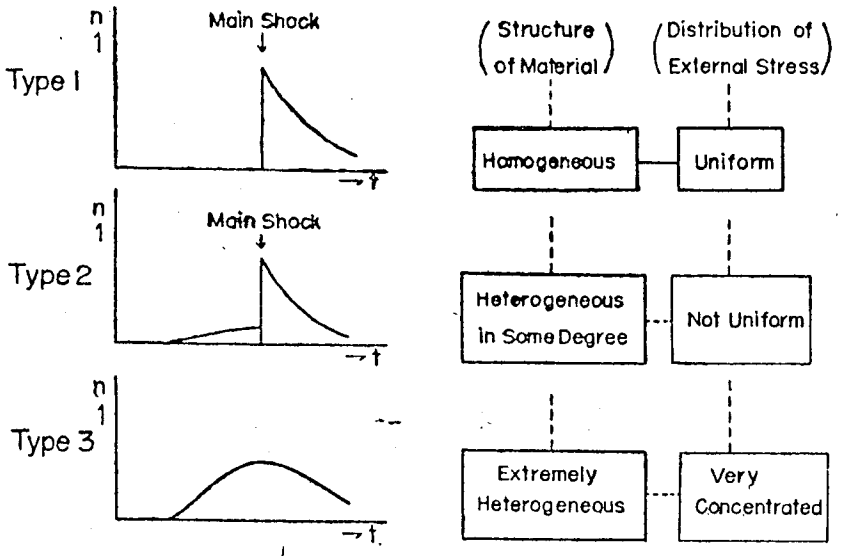
(3) Type 3: Swarm earthquakes.

He correlated these types of earthquakes to increase heterogenity of the crust. The swarm sequence, Mogi postulated, occurs when the crust is extremely heterogeneous. If an external stress is applied in an extremely heterogeneous medium, the local concentration of stress readily occurs and a large number of small earthquakes takes places without sustaining the accumulation of large strain energy. While a highly heterogeneous structure provide lesser opportunity for Type 1 and Type 2 sequences that means it is less likely to anticipate a large earhtquake, it may be susceptible for changes of pore pressure and gravity loading associated with impounding of reservoir, which may result in possible introduction of water induced earthquakes.

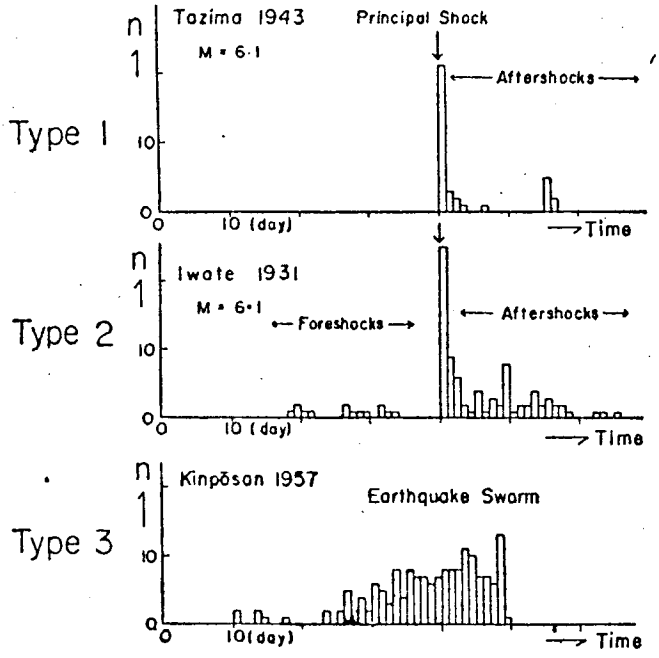
Alternative interpreation is, as supported by its spatial distribution shown in Figure 5A, the delayed permeance of water along the

FIG. 5D

Some Discussions on Aftershocks, Foreshocks and Earthquake Swarms



Three types of the successive occurrence of the elastic shocks accompanying fractures and their relations to the structures of materials and the applied stresses.



Examples of the three types of earthquake sequence.

After Mogi (1963)

extension of the Tavera fault from the Tavera reservoir. Since the Tavera reservoir has been filled since 1974, the pore pressure of the surrounding rock has been stabilized and period of major sequence of water induced earthquakes beneath the Tavera reservoir, if there were any, may have been over. The stabilization, however, has been confined in the immediate vicinity of the Tavera reservoir and the surrounding area at a greater distance yet have to go through the similar process. The delayed permeance toward the western extension of the reservoir may be responsible for the swarm of earthquakes that occurred in June and August, 1980.

A detailed measurement of water level of the Tavera reservoir during 1980, was furnished by CDE in October, 1981. By the use of this data, an abvious correlation was found between the occurrence of these events and changes of water level of the Tavera reservoir. Figure 5E shows (from the top to bottom) the water depth of the Tavera reservoir, the earthquakes that occurred in the vicinity of reservoir and changes of the water level within a 24 hour perid.

Careful inspection of Figure 5E indicates the following:

(1) the water level was lowest during the period from March to April, 1980 (at average of 57 m), and was elevated to about 68 m in average after June. No seismic activity was associated with neither the period of lowest nor the highest water level.

(2) Both earthquake swarms in June and August were closely correlated to the time when rapid changes of water level occurred.

(3) There was some time delay before earthquake swarm started following the water level reached its peak. The observed time lag for June sequence was seven days whereas four days was measured for August sequence.

Table 3. List of Earthquakes That Occurred in the Vicinity of Tavera-Bao Project

No.	File No.	YR	MO	DAY	NP	NS	IQ	Mb	ORITIN TIME SEC	X* KM	Y* KM	Z* KM	S
1	15	79	1217	430	2	2	5	.3	-0.66	-7.56	-4.16	5.00	3.05
2	69	79	1225	739	4	0	5	1.3	-2.58	0.02	-4.29	14.03	0.00
3	368	80	215	1232	3	2	2	.0	3.47	-8.32	-4.94	5.00	0.59
4	892	80	530	1622	6	0	2	1.8	2.66	-3.12	1.90	5.97	1.02
5	919	80	604	1334	4	0	4	1.5	2.33	-6.15	-1.07	4.00	0.00
6	937	80	608	1338	3	0	5	3	2.78	-3.40	-2.38	5.00	0.00
7	938	80	608	1417	3	0	5	17	3.61	-4.17	-2.11	5.00	0.00
8	939	80	608	1450	3	0	5	6	0.66	-4.56	-1.57	5.00	0.00
9	940	80	609	2258	3	0	5	23	3.11	-6.85	-1.72	5.00	0.00
10	947	80	610	2027	5	0	4	9	1.39	-4.42	-1.10	2.74	0.17
11	948	80	611	242	3	0	5	15	2.18	-0.26	-3.59	5.00	0.00
12	950	80	611	1223	3	0	5	9	1.61	-4.22	-2.11	5.00	0.00
13	954	80	611	2051	3	0	5	17	4.16	-4.21	-2.35	5.00	0.00
14	964	80	614	1920	4	0	4	6	2.41	-4.29	-1.88	3.55	0.00
15	966	80	615	1608	3	0	5	13	2.44	1.91	-3.22	5.00	0.00
16	972	80	616	1527	5	1	3	15	1.31	-6.25	-2.55	3.78	0.91
17	1030	80	702	1835	3	2	4	6	1.54	-5.18	-5.54	13.01	0.25
18	1031	80	702	1925	3	1	5	6	0.70	-4.75	-1.70	6.40	0.00
19	1104	80	810	1414	5	3	4	13	2.43	-4.47	-1.38	2.55	0.17
20	1107	80	811	1636	5	2	5	24	0.96	-4.38	-1.19	2.64	0.20
21	1109	80	811	2056	5	1	4	22	0.29	-5.06	-0.71	2.27	0.29
22	1113	80	812	1417	4	0	2	15	-0.32	-6.24	-1.21	4.22	0.00
23	1264	80	1210	1658	4	0	4	15	-0.74	-3.43	-1.87	5.00	1.25
24	1265	80	1211	1601	5	0	3	17	-0.85	-2.37	-0.27	5.53	0.17
25	1410	81	507	1408	5	0	4	8	0.37	-5.30	-0.41	8.59	0.81
26	1470	81	628	1345	3	3	4	0	1.70	-1.93	-4.47	5.02	0.04

* X and Y are measured from station 1. Eastward for positive X and northbound for positive y.

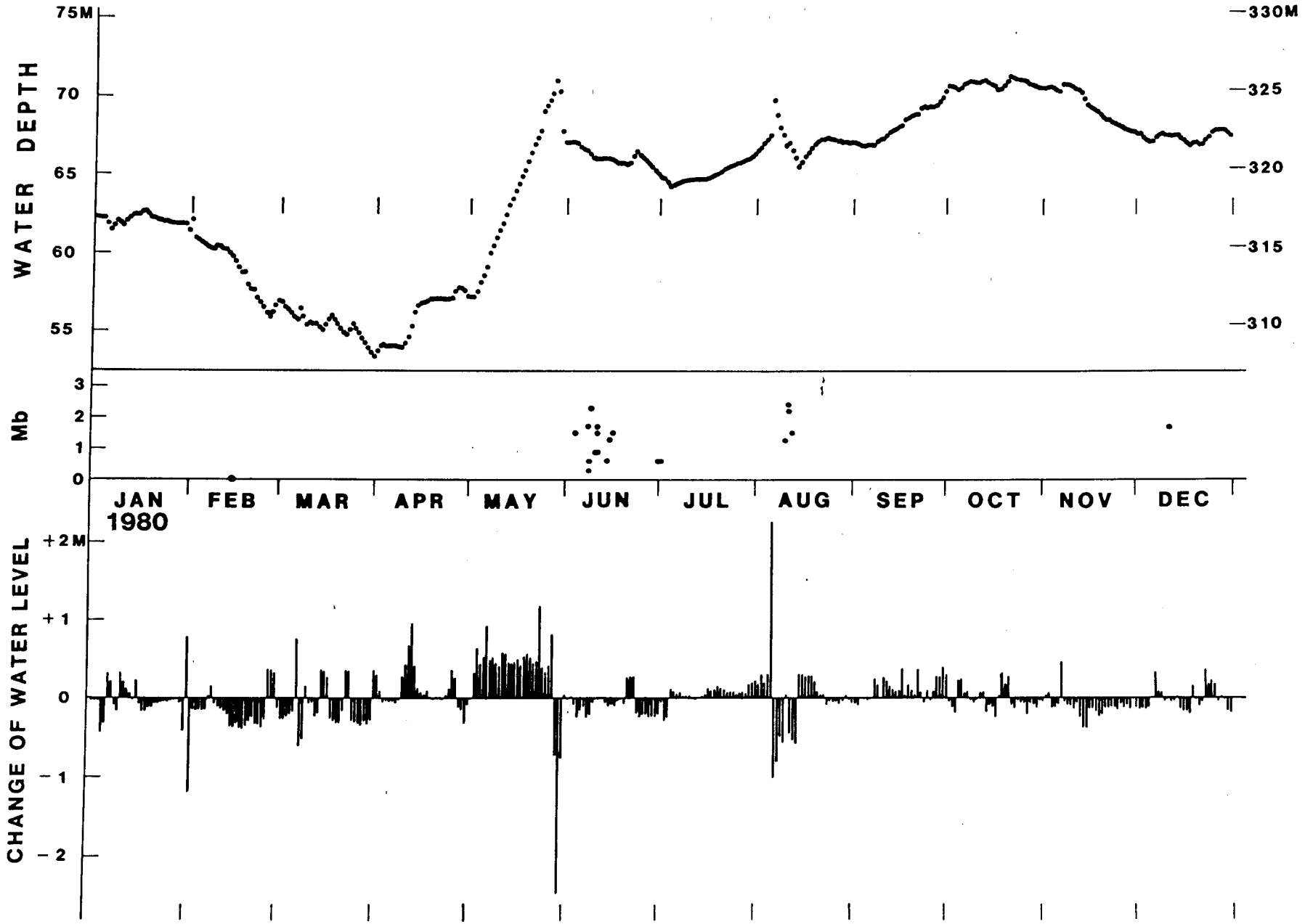


FIG. 5E CHANGE OF WATER LEVEL IN THE TAVERA RESERVOIR AND EARTHQUAKE SWARM

These observations leads us to the interpretation that the effect of an abrupt change of water level travels through the surrounding rock and reaches to the area where even such a minor change in pore pressure is sufficient to trigger earthquakes. The length of delay time is probably controlled by the distance and permeability of rocks near the fault and reservoir.

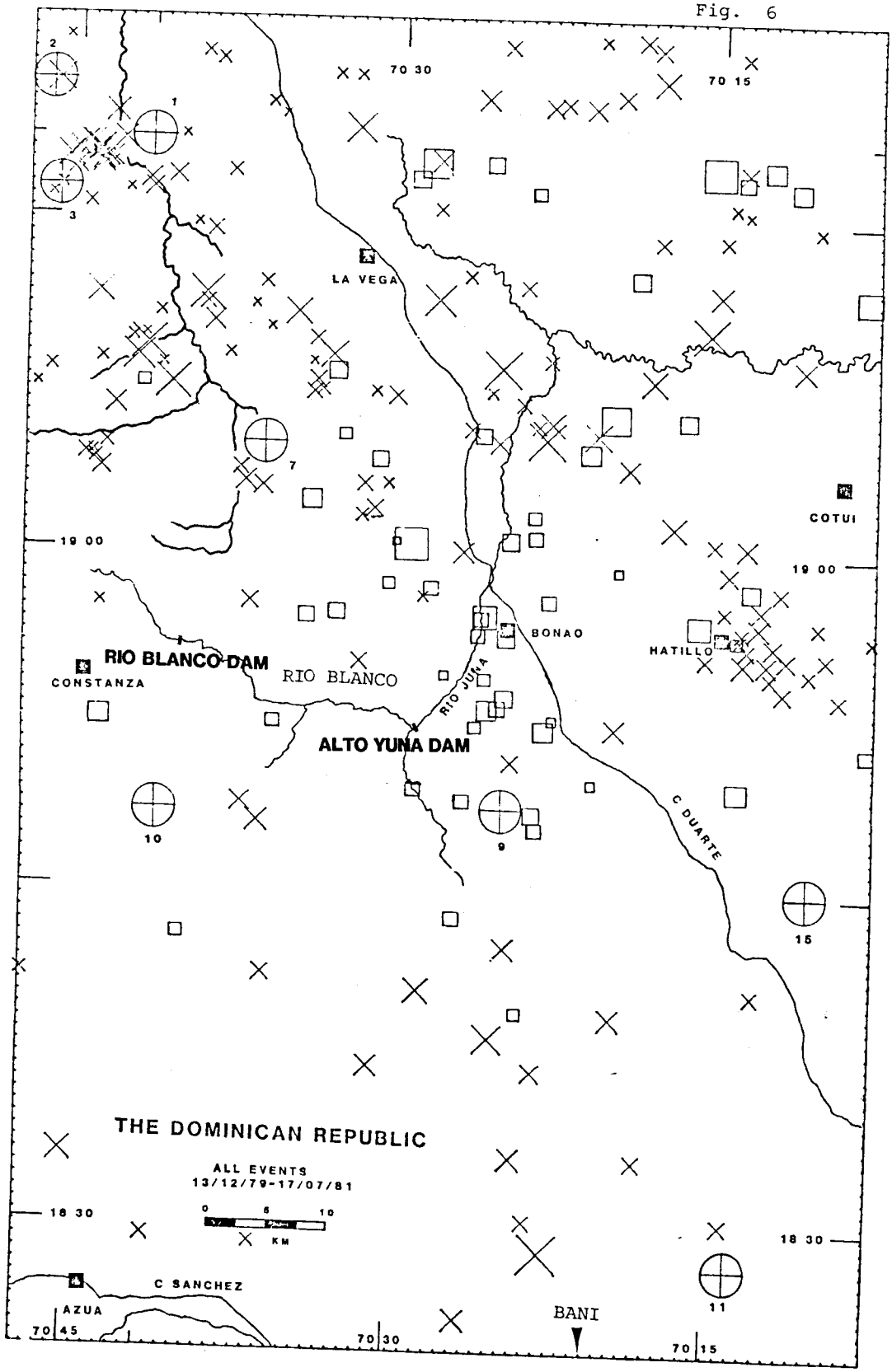
Another significant implication observed was that the induced earthquakes are rather sensitive for the abrupt changes of water level than the elevation of water level itself. Halting of generator during or following a heavy rain fall or rapid discharge, may result in a sudden surge of water level, and therefore, must be executed with a special attention to the induced earthquakes.

Although moderate level of activity was recognized along the Tavera fault (Table 3), these events were confined within the immediate vicinity of the Tavera reservoir and regarded to be the water induced earthquakes. No other activity was observed during the past 19-month period beyond several kilometers away from the reservoir. Therefore, the seismic activity of the Tavera fault is considered to be at minor level.

6. EARTHQUAKES IN THE ADJACENT AREA OF THE RIO BLANCO PROJECT

Figure 6 shows the distribution of earthquakes located in the adjacent area of the Rio Blanco Project. Of 224 events plotted in Figure 6, approximately 40% of the events were located prior to the installation of the Rio Blanco Network (August 22, 1980). Prior to the installation, the standard error of the epicenter location in the vicinity of the Rio Blanco Project is estimated at 5 to 10 km and it has been subsequently improved to less than 2 km after the installation.

Fig. 6


70 30
70 15
LA VEGA
COTUI
19 00
19 00
BONAO
HATILLO
RIO BLANCO DAM
CONSTANZA
RIO BLANCO
RIO JUNA
ALTO YUNA DAM
C DUARTE
THE DOMINICAN REPUBLIC
ALL EVENTS
13/12/79-17/07/81
0 5 10
KM
18 30
18 30
C SANCHEZ
AZUA
BANI
70 45
70 30
70 15

(1) LA VEGA-BONAO-BANI Seismic Zone - A Subduction Zone

The most active seismic zone in this region is situated at west of La Vega through west of Bonao with NWN-SES trending, and continues southward to the vicinity of Bani. This trend is nearly parallel to Boano Fault and extending approximately 90 km long. This zone includes both the shallow earthquakes and intermediate-depth earthquakes up to the depth of 120 km, and dips steeply with near vertical angle (see Figure 4D). As described in the previous section, this zone is interpreted as a subduction zone and expected to be one of the potentially hazardous tectonic elements in this region.

Utsu (1968), among others, delivered the relation between surface wave magnitude Ms and the length of rupture zone as follows:

$$Ms = 2 \log (km) + 3.6$$

Assuming that the entire length of the active zone ruptures and applying the measured value of ℓ = 90 km, the largest earthquake that may occur along this zone is estimated at M = 7.5.

Of 224 events plotted in Figure 6, approximately 40% of the events occurred prior to the installation of the Rio Blanco Network. This means that these events were located by station 1 through 7 and accordingly, the accuracy of the epicenter determination for the events located outside of the network (south of station 7) was poor. The shallow events located south of station 9 typically show such a tendency. Due to lack of accuracy in the epicenter determination, these events did not possess the sufficient constraint accurate enough to delineate an active lineament and exhibit a noticeable scatter. Due to poorly constrained lineation, the exact extension of the southern terminus of this active zone is somewhat ambigurous.

The configulation of the northern terminus of the active zone is rather complex. The active zone bends sharply west at SW of La Vega as shown by the trend of the Bonao fault (Figure 4C). This westerly trend of active zone continues for nearly 50 km long approximately parallel to La Guacara fault. The weakly defined lineation of the activity, however, is aligning 10 to 15 km north of the fault. Although there exist some events deeper than 60 km, majority of the earthquakes along E-W trending zone are shallower and clearly different from those of N-S trending activity.

A preliminary study on the composite fault plane solution along N-S trending active zone show near vertical normal faulting trending N-S. The fault plane solution along this westward trend, however, show a possible left-lateral motion. The difference in the fault plane solution provide an additional support to consider that the La Vega-Bonao-Bani zone and the westward trend are indeed different in terms of the source mechanisms and pattern of faulting.

2. LA VEGA-HATILLO Seismic Zone

Another active zone is illustrated in Figure 6 along the line through La Vega-Hatillo with NW-SW trending. This zone may extend beyond Hatillo probably as far as near station 14. Again the linear trend was less constrained beyond Hatillo in the events prior to August 1980.

This active zone is approximately parallel to the Hatillo Thrust and majority of major mining operations are distributed along this zone. Therefore, this linear trend of the activity may be the primary concern for mining industries. The level of the activity along this line,

however, is considerably less than those of La Vega-Bonai-Bani seismic zone. Some of the seismic signatures located near Hatillo resemble those from explosions and actually some of the events with suspicious features may have been originated from explosions. Due to this fact, it is very difficult to determine the seismicity along this zone by the statistical means.

7. MAGNITUDE VERSUS FREQUENCY RELATION AND ESTIMATION OF RECURRENCE TIME

7.1. Relation Between the Magnitude Scales

7.1.1. Ms Versus m_b

Currently two different magnitude scales, m_b (body wave magnitude) and Ms (surface wave magnitude), are widely used. The former, the body wave magnitude, is determined from the maximum amplitude of body waves. The NEIS earthquake data file reports m_b for almost all the events included in the file. The latter, the surface wave magnitude, on the other hand, is widely used in the engineering application but the NEIS reports Ms only for 15 to 20 percent of the events.

As early as in 1956, Gutenberg and Richter found the relation between m_b and Ms as follows:

$$m_b = 2.80 + 0.6\ Ms$$

This relation is still widely used and probably one of the most reliable ones. To find out if this relation holds in the Circum-Caribbean, the earthquakes that occurred along Central America (63°W - 80°W) during the period of 1963 through 1980 were plotted (Figure 7A). The least square fitting provided the following formula:

$$m_b = 2.85 + 0.453\ Mx$$

$$MS = 2.2.\ m_b - 6.29$$

7.1.2. m_b Versus MT

Another magnitude scale, MT, which is widely used by many operating networks, is determined from the duration time of the events. For a large event, the maximum amplitude is readily clipped and it is possible to determine neither m_b nor Ms. MT, the duration time magnitude, on the other hand, is always applicable. The drawback of this method is that it is necessary to establish an empirical formula that connects MT to another magnitude scale.

Empirically it is known that the duration time of an earthquake, τ, is correlated to the magnitude of the event in the following form:

$$MT = a + b \log \tau.$$

To find out the value of a and b, the duration times of the events with known body wave magnitude, m_b, reported by the NEIS are plotted in Figure 7B. Based on this data, the following empirical formula is given for the duration time magnitude, MT:

$$MT = -2.67 + 3.06 \log \tau \text{ (in sec)}$$

This formula is used in the determination of magnitude for the Dominican Republic seismograph network.

7.2. Recurrence Time of Earthquakes in the Dominican Republic

McCann et al. (1979) studied the seismicity and seismicity gap along the plate boundaries and evaluated the potential for future great earthquakes to occur along major plate boundaries. Hispaniola, according to their estimate, is classified as the area of the highest seismic potential (category no. 1 in six scale classification).

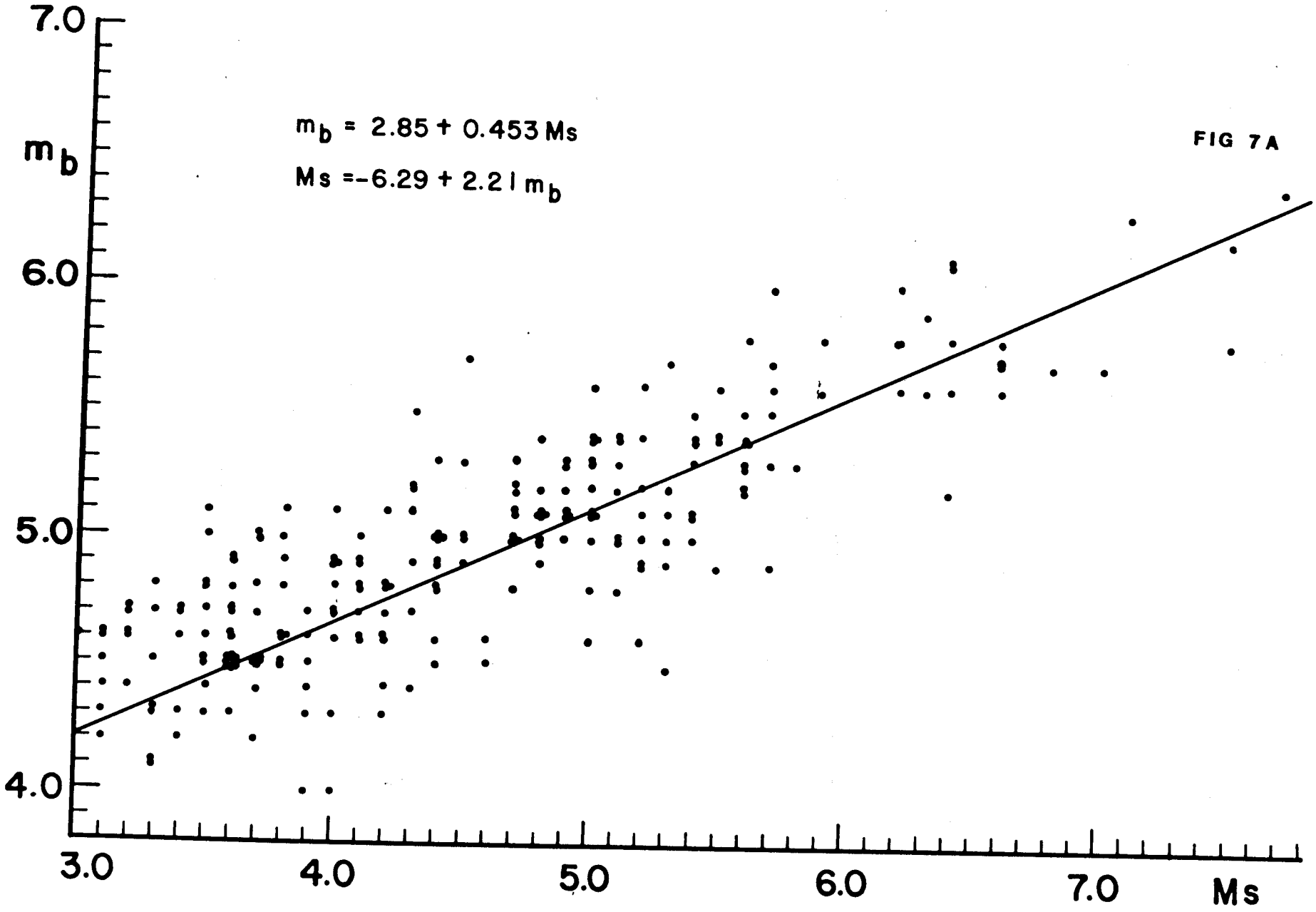
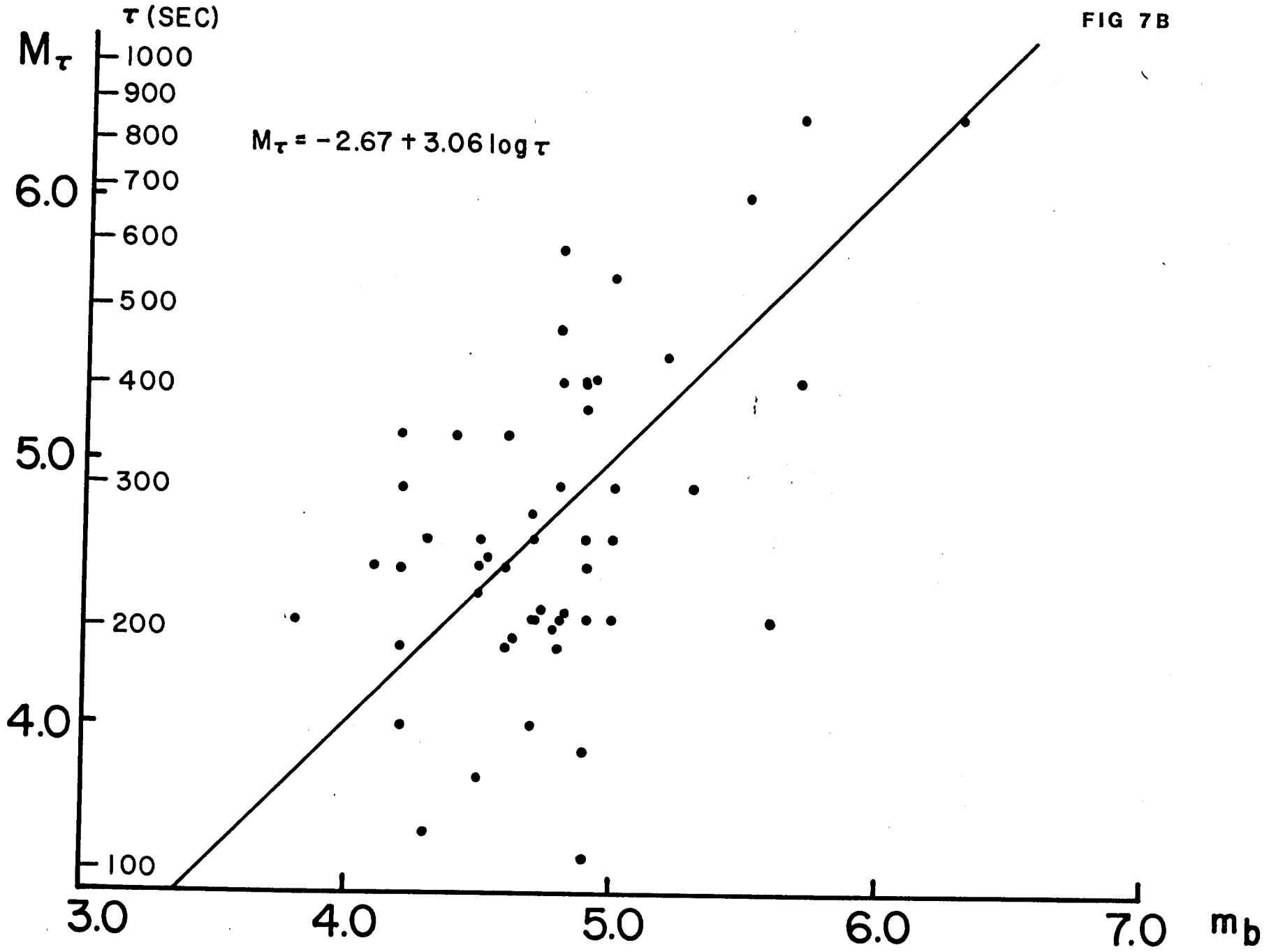


FIG 7A


τ (SEC)
FIG 7B
M_τ
1000
900
800
700
600
500
400
300
200
100
$M_\tau = -2.67 + 3.06 \log \tau$
6.0
5.0
4.0
3.0
4.0
5.0
6.0
7.0
m_b

To assess the seismic risks for a particular area, we have to rely on the statistical means. The most common used technique is to construct an empirical formula between the number of earthquakes and magnitude based on the observed data. Accumulation of data based on 19 months recording now permit us to study such a formula for each active zone.

Of active seismic trends identified in the Dominican Republic, activities of our direct concern are Zone 1 and La Vega-Bonao-Bani linearment in Zone 3. The former is situated approximately 30 km away from the Tavera-Bao Project but constitutes the most active zone in the Dominican Republic. The latter is less active but located only 10 km east of the Alta Yuna Project and interpreted as a mini-subduction zone.

Figure 7C shows the number of earthquakes versus magnitude relations for Zone 1 and Zone 3 (La Vega-Bonao-Bani linearment). From these figures we get

ZONE 1 (69°.75 - 71°.50W):

$$\log N = 3.00 - 0.705\ M_T \quad \text{(for 19-month period)}$$

or

$$\log N = 2.80 - 0.705\ M_T \quad \text{(per year)}$$

and

ZONE 3 (La Vega-Bonao-Bani linearment):

$$\log N = 2.01 - 0.529\ M_T \quad \text{(for 19-month period)}$$

or

$$\log N - 1.81 - 0.529\ M_T \quad \text{(per year)}$$

where M_T is the magnitude determined from the duration time and N is the number of earthquakes with the magnitude equal to or greater than M_T. Once this number versus magnitude relation is established, the number of earthquakes N (per year) for the specified magnitude M_T is calculated and 1/N gives the recurrence time for M_T.

FIG 7C

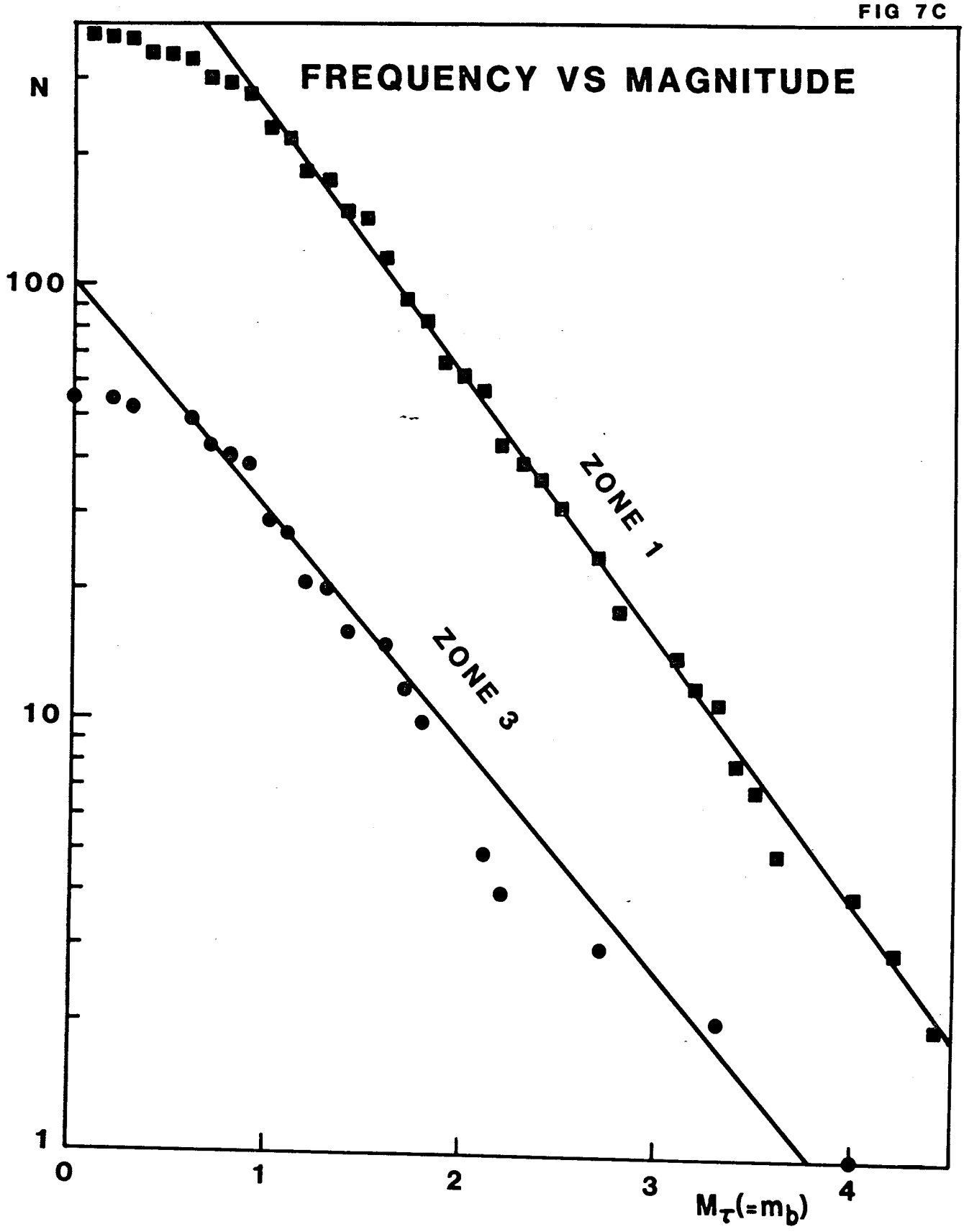


Table 4A. Recurrence Time; Zone 1 (Between 69°.75 - 71°.50W)

$$\log N = 2.80 - 0.705\ M_\tau$$

M_τ: magnitude determined by the duration time
N: number of earthquakes (per year)

M_τ (=M_b): magnitude	6.0	6.5	7.0	7.5	8.0	8.5
log N	-0.83	-1.13	-1.44	-1.74	-2.04	-2.34
N: number of eq (per year)	0.148	0.074	0.037	0.018	0.0091	0.0045
1/N: recurrence time (year)	6.77	13.6	27.3	54.7	110.	220.

Table 4B. Recurrence Time; Zone 3 (LA VEGA-BONAO-BANI ZONE)

$$\log N = 1.81 - 0.529\ M_\tau$$

M_τ (=M_b): magnitude	6.0	6.5	7.0	7.5
log N	-1.37	-1.63	-1.89	-2.16
N: number of eq (per year)	0.043	0.023	0.013	0.069
1/N: recurrence time (year)	23.1	42.6	78.3	144.

Table 4A and 4B give the calculated recurrence time for Zone 1 and Zone 3 respectively. For magnitude 7.0, for instance, the recurrence time for Zone 1 and 3 are given at 27.3 and 78.3 years respectively. These figures indicate that Zone 1 is approximately 3 times more active than Zone 3.

8. ACCELERATION

8.1. Acceleration as a Function of Magnitude and Distance

One of the most important relations in Earthquake Engineering is the relation between the peak acceleration and magnitude. Among the numerous studies, one of the equations widely used recent days is given by Estiva (1973) as follows:

$$a = 5000 \exp (0.8\ M)/(HD + 40)^2$$

a = peak ground acceleration in cm/sec^2

M = magnitude. When both m_b and Ms are given, larger value is used

HD = hypocentral distance in km.

While this formula does not specify whether the peak acceleration is vertical, transversal, or longitude, it is assumed that the value gives the largest among the different components. Another problem facing frequently is that the acceleration versus magnitude relation may differ significantly from region to region. Although this formula was established for the region of California, it was assumed that this formula still provides the first approximation in the Dominican Republic.

The relation between the peak acceleration (in g) and the distance (in km) is calculated based on Estiva's formula and shown in Figure 8. These curves show that the peak acceleration for M = 5 is less than 0.17g

even at the small distance ranges, an earthquake of M = 6 gives 0.25 g at 10 km, and 0.28 g can be observed for an earthquake of M = 7 at 30 km.

The peak acceleration of major earthquakes ($M \geq 7.0$), however, is rather a complicated matter and probably is not adequate to use Estiva's formula for near field. Among the considerations, the most important facts that may relate to the magnitude - peak acceleration relation are:

(1) When the strain accumulated within the crust reaches to roughly 10^{-4} ($\Delta\ell/\ell$), the rupture starts to develop. This ultimate strain before the rupture does not differ by the magnitude. The difference of the earthquake energy is attributed from the difference of the volume that participated in release of strain energy (earthquake volume). The increase of peak acceleration as a function of magnitude, therefore, is attributed from contribution integrated from increased earthquake volume. At modestly distant places such as the distance is comparable to the length of the rupture zone, the peak acceleration will increase proportionally to the magnitude since all the rupture zones have equally contributed. But at the near field where the peak acceleration is primarily affected by the rupture at the close ranges, the peak acceleration may not increase proportionally as the magnitude increases.

(2) For major earthquakes, it is frequently observed that the entire rupture zone does not break uniformely but breaks in several segments. These facts probably affect to surpress the peak acceleration for major earthquakes.

FIG 8

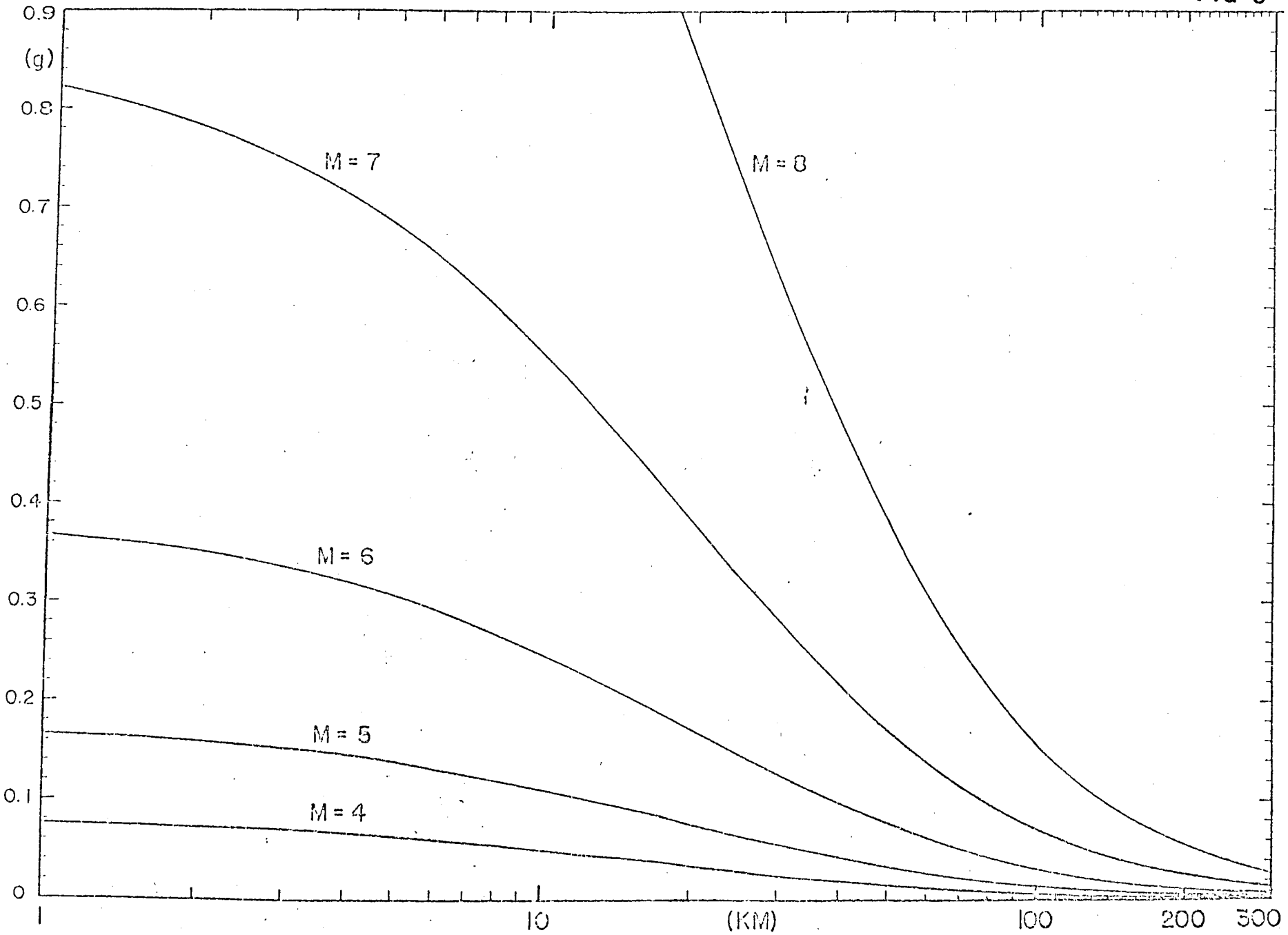


TABLE 5A TAVERA-BAO

ACCELERATIONS FROM EARTHQUAKES AT A REFERENCE POINT: TAVERA BAO

1638 1962 2131 1731 -6880 -7280 1931 -7080 0.010 1

NO	YR	MO	HM	SEC	LAT	LON	DEPTH	MB	MS	MO	ED	HD	ACC	G
1	1911	10 6	1016	120	1900	-7050	0	0	0	70	46.61	46.61	180.26	0.1839
2	1916	1130	1318	0	2000	-7000	0	0	0	68	113.43	113.43	48.95	0.0499
3	1926	324	541	210	1950	-6950	0	0	0	56	138.14	138.14	13.90	0.0142
4	1939	11 7	1543	570	1800	-7250	0	0	0	56	230.60	230.60	6.03	0.0061
5	1942	7 5	2316	100	1950	-7000	50	0	0	56	86.61	100.01	22.51	0.0230
6	1945	122	747	530	1950	-7050	0	0	0	60	37.88	37.88	100.18	0.1022
7	1946	8 4	1751	50	1925	-6900	0	0	0	81	189.30	189.30	62.00	0.0633
8	1946	8 8	1328	280	1950	-6950	25	0	0	79	138.14	140.38	85.37	0.0871
9	1948	421	2022	20	1925	-6925	40	0	0	73	163.05	167.88	39.78	0.0406
10	1950	813	1643	252	1959	-7003	43	0	0	49	86.58	96.67	13.49	0.0138
11	1951	820	855	519	1932	-6939	66	0	0	38	148.17	162.20	2.56	0.0026
12	1951	921	422	118	1949	-7019	52	0	0	43	67.09	84.88	10.00	0.0102
13	1952	1214	1038	398	1900	-6899	0	0	0	44	193.45	193.45	3.10	0.0032
14	1953	531	1958	350	2000	-7050	33	0	0	68	82.57	88.92	69.32	0.0707
15	1953	6 1	2033	338	1977	-7027	0	0	0	37	75.39	75.39	7.25	0.0074
16	1953	6 2	2215	540	1964	-7015	0	0	0	45	77.39	77.39	13.28	0.0135
17	1953	6 5	1815	501	1971	-7047	0	0	0	37	56.20	56.20	10.43	0.0106
18	1953	6 7	1223	594	1991	-7006	16	0	0	55	102.14	103.38	19.81	0.0202
19	1953	611	1746	00	2001	-6994	0	0	0	37	118.87	118.87	3.82	0.0039
20	1954	425	956	279	1950	-6920	0	0	0	35	161.01	161.01	2.03	0.0021
21	1954	722	2229	94	2000	-7001	88	0	0	42	112.65	130.58	4.95	0.0050
22	1954	925	1922	249	1974	-6961	68	0	0	37	133.64	149.95	2.67	0.0027
23	1954	11 8	215	265	1977	-7124	13	0	0	38	68.72	69.94	8.65	0.0088
24	1954	12 4	1810	242	1956	-6941	1	0	0	41	148.55	148.56	3.74	0.0038
25	1955	9 3	523	154	1946	-6944	54	0	0	44	143.81	153.61	4.51	0.0046
26	1956	313	140	341	1999	-7008	0	0	0	39	106.59	106.59	5.27	0.0054
27	1956	8 1	2028	318	1904	-7104	28	0	0	42	39.11	48.10	18.55	0.0189
28	1959	1219	1346	219	1958	-7158	24	0	0	41	87.18	90.42	7.81	0.0080
29	1960	914	153	213	1966	-7017	0	0	0	44	76.64	76.64	12.42	0.0127
30	1961	6 1	10 2	420	1930	-6930	21	0	0	44	157.63	159.03	4.26	0.0044
31	1961	819	1452	297	1800	-6880	100	0	0	55	255.99	274.83	4.11	0.0042
32	1961	1116	819	541	1850	-6880	152	0	0	60	228.95	274.82	6.13	0.0063
33	1962	1 8	1 0	227	1840	-7040	32	0	0	65	109.15	113.75	38.34	0.0391

TABLE 5B TAVERA-BAO

ACCELERATION FROM EARTHQUAKES AT A REFRENCE POINT: TAVERA-BAO

63001 80305 2180 1760 -6860 -7280 1931 -7070 0.010

NO	YR	MD	HM	SEC	LAT	LON	DEPTH	MB	MS	ED	HD	ACC	G
1	1963	1115	1816	450	2010	-7000	50	37	0	114.13	124.60	3.56	0.0036
2	1963	1128	244	363	1910	-6940	48	43	0	138.66	146.73	4.47	0.0046
3	1963	1128	318	597	1910	-6950	33	41	0	128.30	132.48	4.47	0.0046
4	1964	118	2236	176	1880	-6940	95	53	0	148.00	175.87	7.45	0.0076
5	1964	425	2129	304	1980	-7120	35	43	0	75.44	83.17	10.28	0.0105
6	1964	531	1030	250	1920	-6940	83	50	0	137.20	160.35	6.80	0.0069
7	1964	8 3	148	233	1980	-7070	7	52	0	54.22	54.67	35.75	0.0365
8	1964	824	831	58	1840	-6880	179	46	0	224.10	286.81	1.86	0.0019
9	1964	10 9	1127	570	1840	-6890	178	43	0	214.74	278.92	1.53	0.0016
10	1964	1018	707	318	1940	-6870	33	43	0	210.35	212.92	2.44	0.0025
11	1964	1222	801	126	1840	-6880	115	56	0	224.10	251.89	5.18	0.0053
12	1965	521	723	293	1970	-7160	33	42	0	103.85	108.97	6.49	0.0066
13	1965	6 3	1057	85	1850	-7030	27	53	0	99.03	102.65	17.05	0.0174
14	1965	610	2053	415	1890	-7010	63	37	0	77.74	100.06	4.92	0.0050
15	1965	612	1031	73	2000	-7270	33	46	0	223.18	225.61	2.81	0.0029
16	1965	616	1412	398	1810	-6870	116	42	0	249.84	275.45	1.45	0.0015
17	1965	630	959	349	1850	-6870	122	47	0	228.95	259.43	2.40	0.0024
18	1965	11 7	443	511	1860	-7180	35	41	0	139.97	144.28	3.91	0.0040
19	1965	1210	346	43	1850	-6900	145	47	0	200.26	247.24	2.60	0.0027
20	1966	4 1	137	281	1860	-6930	140	39	0	167.06	217.96	1.70	0.0017
21	1966	416	1131	592	1900	-7050	27	49	0	40.24	48.46	32.21	0.0329
22	1966	5 2	2339	76	1900	-6930	142	37	0	151.20	207.42	1.58	0.0016
23	1966	610	534	189	1990	-7040	11	38	0	72.47	73.30	8.14	0.0083
24	1966	617	114	22	1850	-6880	110	46	0	219.30	245.34	2.43	0.0025
25	1967	316	2259	92	1954	-6997	33	40	0	80.77	87.25	7.57	0.0077
26	1967	419	2157	45	1867	-6969	103	51	0	127.76	164.11	7.10	0.0072
27	1967	5 6	1400	393	1926	-6996	23	53	0	77.97	81.29	23.59	0.0241
28	1967	511	1354	2	1931	-6975	33	42	0	99.83	105.14	6.83	0.0070
29	1967	513	1836	139	1851	-6979	103	46	0	130.48	166.23	4.66	0.0048
30	1967	517	1119	350	1964	-6987	18	45	0	94.47	96.17	9.87	0.0101
31	1967	10 4	153	197	1930	-7000	19	43	0	73.57	75.98	11.59	0.0118
32	1967	11 6	1811	505	1850	-7010	33	40	0	109.67	114.53	5.14	0.0052
33	1968	5 2	529	382	1880	-6960	0	58	0	128.79	128.79	18.17	0.0185
34	1968	724	822	285	1971	-7010	27	45	0	76.97	81.57	12.38	0.0126
35	1968	10 9	1328	229	1887	-6979	143	44	0	107.42	178.85	3.53	0.0036
36	1968	1016	155	327	1915	-6984	36	52	0	92.13	98.92	16.60	0.0169
37	1969	1 8	722	455	1824	-7084	41	40	0	119.31	126.16	4.44	0.0045
38	1969	215	1117	96	1974	-7137	33	43	0	84.90	91.09	9.07	0.0093
39	1969	1027	1937	385	1842	-6876	176	44	0	226.90	287.15	1.58	0.0016
40	1969	1030	2141	552	1853	-6869	145	40	0	228.63	270.74	1.27	0.0013
41	1970	214	2103	432	1942	-6901	117	44	0	177.95	212.97	2.64	0.0027
42	1970	322	1014	342	1825	-6866	58	42	0	244.96	251.73	1.69	0.0017
43	1970	9 1	2311	390	1942	-6921	33	38	0	157.00	160.43	2.60	0.0027
44	1971	611	1256	43	1797	-6978	57	61	0	177.21	186.16	12.87	0.0131
45	1971	611	1623	368	1803	-6973	53	49	0	174.72	182.59	5.09	0.0052

46	1971	6.1	1927	72	1804	-69?2	43	41	0	168.41	173.82	..91	0.0030
47	1971	613	1014	499	1792	-6974	54	46	0	184.16	191.92	3.69	0.0038
48	1971	615	1851	246	1799	-6974	61	47	0	177.73	187.91	4.13	0.0042
49	1971	9 4	659	101	1998	-7019	33	47	0	91.41	97.19	11.41	0.0116
50	1971	913	418	19	1793	-6973	48	57	0	183.82	189.99	9.04	0.0092
51	1972	223	730	492	1824	-6880	73	45	0	232.68	243.86	2.27	0.0023
52	1972	227	709	275	1762	-7230	17	47	0	252.04	252.61	2.51	0.0026
53	1972	3 7	241	466	1847	-7152	33	42	0	126.89	131.11	4.92	0.0050
54	1972	6 7	616	98	1928	-6960	33	43	0	115.65	120.27	6.07	0.0062
55	1972	918	536	533	1954	-7012	13	48	46	66.01	67.28	20.21	0.0206
56	1972	919	136	524	1954	-7015	33	58	61	63.11	71.22	53.21	0.0543
57	1972	920	1914	134	1967	-7012	33	49	0	72.75	79.89	17.53	0.0179
58	1972	926	335	495	1964	-6997	44	46	0	84.89	95.61	10.78	0.0110
59	1972	930	2033	233	1957	-6988	55	43	0	90.78	106.14	7.30	0.0075
60	1972	1110	1847	151	1949	-7009	33	40	0	67.09	74.77	9.31	0.0095
61	1973	6 2	2007	305	1958	-7061	40	52	53	31.33	50.81	42.08	0.0429
62	1973	11 2	1514	471	1951	-6962	30	49	0	115.56	119.39	9.92	0.0101
63	1974	118	1652	431	1879	-6937	82	53	0	151.35	172.13	7.71	0.0079
64	1974	214	749	403	1974	-6995	7	51	44	91.97	92.24	16.91	0.0173
65	1974	220	1611	268	1958	-7002	18	49	0	77.40	79.46	17.66	0.0180
66	1974	422	607	244	1882	-7038	112	45	0	63.82	128.91	6.41	0.0065
67	1974	624	1702	369	1965	-7218	33	47	35	159.85	163.22	5.20	0.0053
68	1975	315	1639	269	1899	-6935	64	46	0	146.35	159.73	4.97	0.0051
69	1975	318	419	397	1920	-6985	39	47	48	90.18	98.25	12.17	0.0124
70	1975	410	1116	53	1846	-7040	33	45	0	99.22	104.56	8.76	0.0089
71	1975	521	2358	355	1981	-7047	33	45	33	60.36	68.79	15.46	0.0158
72	1975	813	507	176	1963	-7052	33	47	0	40.13	51.96	25.39	0.0259
73	1975	914	342	90	1860	-6906	95	47	0	189.74	212.19	3.38	0.0034
74	1975	922	542	593	2034	-7066	34	43	32	114.04	119.00	6.17	0.0063
75	1975	1031	2258	474	1898	-6970	137	38	0	111.35	176.54	2.23	0.0023
76	1976	615	33	493	1886	-6906	111	47	0	179.61	211.14	3.40	0.0035
77	1976	7 2	1238	129	1980	-7093	57	50	0	59.35	82.29	18.26	0.0186
78	1976	1231	1632	503	1826	-6885	85	51	0	227.00	242.40	3.71	0.0038
79	1977	2 5	1542	443	1962	-7018	33	50	48	64.47	72.43	21.60	0.0220
80	1977	531	1047	290	1937	-6950	53	49	34	126.25	136.93	8.05	0.0082
81	1977	6 6	638	461	1938	-6948	49	49	42	128.41	137.44	8.00	0.0082
82	1977	626	1015	390	1934	-6931	35	47	42	146.09	150.23	5.93	0.0061
83	1977	626	1321	132	1946	-6921	33	48	0	157.38	160.80	5.77	0.0059
84	1977	9 3	1533	434	1834	-7115	50	45	0	117.34	127.55	6.52	0.0067
85	1977	9 8	803	541	1843	-6888	128	49	0	215.07	250.27	2.99	0.0031
86	1977	1017	630	521	1836	-7025	58	47	40	115.32	129.08	7.51	0.0077
87	1977	12 3	1235	382	1913	-6959	81	50	0	118.39	143.45	8.11	0.0083
88	1978	6 5	2211	195	1983	-7062	33	46	0	58.15	66.86	17.36	0.0177
89	1978	721	358	261	1961	-7012	33	47	0	69.35	76.80	15.74	0.0161
90	1979	315	658	313	1838	-6866	111	49	0	238.33	262.91	2.75	0.0028
91	1979	323	1932	311	1798	-6904	80	61	0	228.76	242.34	8.26	0.0084
92	1979	514	257	114	1872	-7050	87	42	0	68.59	110.79	6.33	0.0065
93	1979	522	413	496	1825	-6883	209	44	0	229.39	310.32	1.38	0.0014
94	1979	11 5	151	129	1782	-6861	104	59	0	275.40	294.39	5.02	0.0051
95	1979	1117	1417	294	1868	-6957	99	51	0	137.89	169.75	6.72	0.0069
96	1980	214	109	452	1847	-6877	128	47	0	223.56	257.61	2.42	0.0025
97	1980	720	501	103	1772	-6897	28	50	0	253.61	255.15	3.13	0.0032
98	1980	927	625	367	1847	-6893	159	49	0	208.35	262.09	2.76	0.0028

TABLE 6A ALTO YUNA

ACCELERATIONS FROM EARTHQUAKES AT A REFERENCE POINT: RIO BLANCO

1638 1962 2090 1680 -6840 -7248 1887 -7048 0.010

NO	YR	MO	HM	SEC	LAT	LON	DEPTH	MB	MS	MD	ED	HD	ACC	G
1	1911	10 6	1016	120	1900	-7050	0	0	0	70	14.54	14.54	454.60	0.4639
2	1916	1130	1318	0	2000	-7000	0	0	0	68	134.81	134.81	37.71	0.0385
3	1926	324	541	210	1950	-6950	0	0	0	56	124.42	124.42	16.32	0.0167
4	1933	721	729	50	1900	-6850	100	0	0	58	209.03	231.72	7.01	0.0072
5	1942	7 5	2316	100	1950	-7000	50	0	0	56	86.07	99.53	22.66	0.0231
6	1945	122	747	530	1950	-7050	0	0	0	60	69.74	69.74	50.45	0.0515
7	1946	8 4	1751	50	1925	-6900	0	0	0	81	161.34	161.34	80.42	0.0821
8	1946	8 8	1328	280	1950	-6950	25	0	0	79	124.42	126.91	99.71	0.1017
9	1946	10 4	1445	260	1875	-6850	50	0	0	70	209.12	215.01	20.79	0.0212
10	1948	421	2022	20	1925	-6925	40	0	0	73	136.11	141.86	51.97	0.0530
11	1950	813	1643	252	1959	-7003	43	0	0	49	92.65	102.15	12.47	0.0127
12	1951	820	855	519	1932	-6939	66	0	0	38	125.03	141.38	3.18	0.0032
13	1951	921	422	118	1949	-7019	52	0	0	43	75.07	91.32	9.04	0.0092
14	1952	1214	1038	398	1900	-6899	0	0	0	44	157.59	157.59	4.33	0.0044
15	1953	531	1958	350	2000	-7050	33	0	0	68	125.05	129.33	40.19	0.0410
16	1953	6 1	2033	338	1977	-7027	0	0	0	37	102.00	102.00	4.79	0.0049
17	1953	6 2	2215	540	1964	-7015	0	0	0	45	91.99	91.99	10.50	0.0107
18	1953	6 5	1815	501	1971	-7047	0	0	0	37	92.95	92.95	5.46	0.0056
19	1953	6 7	1223	594	1991	-7006	16	0	0	55	123.24	124.27	15.09	0.0154
20	1953	611	1746	80	2001	-6994	0	0	0	37	138.29	138.29	3.04	0.0031
21	1954	425	956	279	1958	-6928	0	0	0	35	144.17	144.17	2.42	0.0025
22	1954	722	2229	94	2000	-7001	66	0	0	42	134.42	149.75	4.00	0.0041
23	1954	925	1922	249	1974	-6961	60	0	0	37	132.76	149.16	2.70	0.0028
24	1954	11 8	215	265	1977	-7124	13	0	0	38	127.65	128.31	3.69	0.0038
25	1954	12 4	1810	242	1956	-6941	1	0	0	41	135.96	135.97	4.29	0.0044
26	1955	9 3	523	154	1946	-6944	54	0	0	44	127.38	138.36	5.31	0.0054
27	1956	313	140	341	1999	-7008	0	0	0	39	130.85	130.85	3.88	0.0040
28	1956	8 1	2028	318	1904	-7104	28	0	0	42	61.90	67.94	12.35	0.0126
29	1959	1219	1346	219	1958	-7158	24	0	0	41	139.81	141.86	4.02	0.0041
30	1960	914	153	213	1966	-7017	0	0	0	44	93.29	93.29	9.51	0.0097
31	1961	6 1	10 2	420	1930	-6930	21	0	0	44	132.97	134.62	5.54	0.0057
32	1961	819	1452	297	1800	-6880	100	0	0	55	201.89	225.30	5.79	0.0059
33	1961	1116	819	541	1850	-6880	152	0	0	60	181.87	237.03	7.92	0.0081
34	1962	1 8	1 0	227	1840	-7040	32	0	0	65	52.68	61.64	87.73	0.0895

ACCELERATION FROM EARTHQUAKES AT A REFRENCE POINT: RIO BLANCO

TABLE 6B ALTO YUNA

63001 80305 2090 1680 -6840 -7248 1887 -7048 0.010

NO	YR	MD	HM	SEC	LAT	LON	DEPTH	MB	MS	ED	HD	ACC	G
1	1963	1115	1816	450	2010	-7000	50	37	0	145.12	153.49	2.58	0.0026
2	1963	1128	244	363	1910	-6940	48	43	0	116.53	126.03	5.66	0.0058
3	1963	1128	318	597	1910	-6950	33	41	0	106.28	111.28	5.81	0.0059
4	1964	118	2236	176	1880	-6940	95	53	0	114.08	148.46	9.77	0.0100
5	1964	425	2129	304	1980	-7120	35	43	0	127.72	132.43	5.24	0.0054
6	1964	531	1030	250	1920	-6940	83	50	0	119.40	145.41	7.94	0.0081
7	1964	8 3	148	233	1980	-7070	7	52	0	105.47	105.70	15.09	0.0154
8	1964	824	831	58	1840	-6880	179	46	0	184.73	257.23	2.24	0.0023
9	1964	10 9	1127	570	1840	-6890	178	43	0	174.63	249.36	1.86	0.0019
10	1964	1018	707	318	1940	-6870	33	43	0	196.22	198.97	2.73	0.0028
11	1964	11 5	847	60	1820	-6840	183	48	0	231.77	295.30	2.07	0.0021
12	1964	1222	801	126	1840	-6880	115	56	0	184.73	217.60	6.65	0.0068
13	1965	1 1	1002	498	1960	-6850	33	45	0	223.28	225.71	2.59	0.0026
14	1965	521	723	293	1970	-7160	33	42	0	149.30	152.90	3.87	0.0039
15	1965	6 3	1057	85	1850	-7030	27	53	0	45.13	52.59	40.48	0.0413
16	1965	610	2053	415	1890	-7010	63	37	0	40.17	74.72	7.33	0.0075
17	1965	616	1412	398	1810	-6870	116	42	0	206.38	236.75	1.88	0.0019
18	1965	630	959	349	1850	-6870	122	47	0	192.16	227.62	3.00	0.0031
19	1965	11 7	443	511	1860	-7180	35	41	0	142.36	146.60	3.82	0.0039
20	1965	1210	346	43	1850	-6900	145	47	0	161.39	216.96	3.25	0.0033
21	1966	4 1	137	281	1860	-6930	140	39	0	127.97	189.67	2.15	0.0022
22	1966	416	1131	592	1900	-7050	27	49	0	14.54	30.66	50.47	0.0515
23	1966	5 2	2339	76	1900	-6930	142	37	0	125.11	189.25	1.84	0.0019
24	1966	5 8	448	385	1710	-7010	33	41	0	199.94	202.64	2.26	0.0023
25	1966	610	534	189	1990	-7040	11	38	0	114.28	114.80	4.36	0.0045
26	1966	617	114	22	1850	-6880	110	46	0	181.87	212.55	3.11	0.0032
27	1966	620	608	206	1800	-6850	60	42	0	230.24	237.93	1.86	0.0019
28	1966	1120	725	564	1820	-6840	96	47	0	231.77	250.86	2.54	0.0026
29	1966	12 7	2354	356	1830	-6850	139	50	0	218.28	258.78	3.06	0.0031
30	1967	316	2259	92	1954	-6997	33	40	0	91.50	97.27	6.51	0.0066
31	1967	419	2157	45	1867	-6969	103	51	0	86.18	134.30	9.73	0.0099
32	1967	5 6	1400	393	1926	-6996	23	53	0	69.69	73.39	26.99	0.0275
33	1967	511	1354	2	1931	-6975	33	42	0	90.94	96.74	7.70	0.0079
34	1967	513	1836	139	1851	-6979	103	46	0	82.97	132.26	6.68	0.0068
35	1967	517	1119	350	1964	-6987	18	45	0	106.63	108.14	8.34	0.0085
36	1967	815	323	523	1920	-6850	39	49	0	211.59	215.15	3.87	0.0039
37	1967	10 4	153	197	1930	-7000	19	43	0	69.39	71.94	12.44	0.0127
38	1967	11 6	1811	505	1850	-7010	33	40	0	57.29	66.12	10.89	0.0111
39	1968	5 2	529	382	1880	-6960	0	58	0	93.06	93.06	29.24	0.0298
40	1968	724	822	285	1971	-7010	27	45	0	101.16	104.70	8.74	0.0089
41	1968	10 9	1328	229	1887	-6979	143	44	0	72.70	160.42	4.21	0.0043
42	1968	1016	155	327	1915	-6984	36	52	0	74.16	82.43	21.37	0.0218
43	1969	1 8	722	455	1824	-7084	41	40	0	79.39	89.35	7.33	0.0075
44	1969	215	1117	96	1974	-7137	33	43	0	134.22	138.21	4.91	0.0050
45	1969	1027	1937	385	1842	-6876	176	44	0	188.17	257.65	1.91	0.0019

46	1969	10 3	2141	552	1853	-68[illegible]	145	40	0	192.50	241.00	1.55	0.0016
47	1970	214	2103	432	1942	-6901	117	44	0	166.17	203.23	2.86	0.0029
48	1970	322	1014	342	1825	-6866	58	42	0	203.99	212.08	2.27	0.0023
49	1970	7 5	419	351	1909	-6840	33	46	0	220.36	222.82	2.87	0.0029
50	1970	7 5	610	350	1903	-6843	33	46	0	216.62	219.12	2.95	0.0030
51	1970	9 1	2311	390	1942	-6921	33	38	0	146.80	150.46	2.88	0.0029
52	1971	2 2	147	440	1817	-6844	93	38	0	228.89	247.06	1.27	0.0013
53	1971	611	1256	43	1797	-6978	57	61	0	124.04	136.51	21.13	0.0216
54	1971	611	1623	368	1803	-6973	53	49	0	122.12	133.13	8.41	0.0086
55	1971	611	1927	72	1804	-6982	43	41	0	115.30	123.05	5.00	0.0051
56	1971	613	1014	499	1792	-6974	54	46	0	131.00	141.70	6.00	0.0061
57	1971	615	1851	246	1799	-6974	61	47	0	124.87	138.97	6.70	0.0068
58	1971	9 4	659	101	1998	-7019	33	47	0	126.54	130.77	7.36	0.0075
59	1971	913	418	19	1793	-6973	48	57	0	130.75	139.29	14.87	0.0152
60	1972	223	730	492	1824	-6880	73	45	0	190.55	204.05	3.07	0.0031
61	1972	227	709	275	1762	-7230	17	47	0	237.01	237.62	2.79	0.0028
62	1972	3 7	241	466	1847	-7152	33	42	0	118.30	122.82	5.43	0.0055
63	1972	6 7	616	98	1928	-6960	33	43	0	103.12	108.27	7.09	0.0072
64	1972	918	536	533	1954	-7012	13	48	46	83.24	84.25	15.07	0.0154
65	1972	919	136	524	1954	-7015	33	58	61	81.85	88.25	40.01	0.0408
66	1972	920	1914	134	1967	-7012	33	49	0	96.27	101.77	12.54	0.0128
67	1972	926	335	495	1964	-6997	44	46	0	100.66	109.86	8.83	0.0090
68	1972	930	2033	233	1957	-6988	55	43	0	99.89	114.03	6.57	0.0067
69	1972	1110	1847	151	1949	-7009	33	40	0	79.93	86.47	7.67	0.0078
70	1973	6 2	2007	305	1958	-7061	40	52	53	79.74	89.21	20.79	0.0212
71	1973	7 2	1822	104	1720	-7168	25	48	0	224.25	225.63	3.30	0.0034
72	1973	11 2	1514	471	1951	-6962	30	49	0	114.86	118.72	10.00	0.0102
73	1974	118	1652	431	1879	-6937	82	53	0	117.32	143.13	10.35	0.0106
74	1974	214	749	403	1974	-6995	7	51	44	111.21	111.43	12.90	0.0132
75	1974	220	1611	268	1958	-7002	18	49	0	92.25	93.99	14.04	0.0143
76	1974	318	757	586	1837	-6849	137	40	0	217.15	256.75	1.39	0.0014
77	1974	422	607	244	1882	-7038	112	45	0	11.90	112.63	7.86	0.0080
78	1974	624	1702	369	1965	-7218	33	47	35	198.45	201.17	3.69	0.0038
79	1975	315	1639	269	1899	-6935	64	46	0	119.76	135.79	6.42	0.0065
80	1975	318	419	397	1920	-6985	39	47	48	75.70	85.16	14.85	0.0152
81	1975	410	1116	53	1846	-7040	33	45	0	46.14	56.73	19.56	0.0200
82	1975	521	2358	355	1981	-7047	33	45	33	104.01	109.12	8.23	0.0084
83	1975	813	507	176	1963	-7052	33	47	0	84.20	90.43	12.62	0.0129
84	1975	914	342	90	1860	-6906	95	47	0	152.69	179.83	4.44	0.0045
85	1975	922	542	593	2034	-7066	34	43	32	163.74	167.24	3.63	0.0037
86	1975	1031	2258	474	1898	-6970	137	38	0	83.05	160.21	2.61	0.0027
87	1976	615	33	493	1886	-6906	111	47	0	149.62	186.30	4.19	0.0043
88	1976	7 2	1238	129	1980	-7093	57	50	0	113.24	126.78	9.81	0.0100
89	1976	1231	1632	503	1826	-6885	85	51	0	184.82	203.43	4.99	0.0051
90	1977	2 5	1542	443	1962	-7018	33	50	48	88.78	94.71	15.04	0.0154
91	1977	531	1047	290	1937	-6950	53	49	34	117.01	128.45	8.88	0.0091
92	1977	6 6	638	461	1938	-6948	49	49	42	119.38	129.05	8.82	0.0090
93	1977	626	1015	390	1934	-6931	35	47	42	133.64	138.14	6.77	0.0069
94	1977	626	1321	132	1946	-6921	33	48	0	148.67	152.29	6.29	0.0064
95	1977	9 3	1533	434	1834	-7115	50	45	0	91.86	104.59	8.75	0.0089
96	1977	9 8	803	541	1843	-6888	128	49	0	175.68	217.37	3.80	0.0039
97	1977	1017	630	521	1836	-7025	58	47	40	61.43	84.48	13.86	0.0141
98	1977	12 3	1235	382	1913	-6959	81	50	0	98.02	127.16	9.77	0.0100
99	1978	6 5	2211	195	1983	-7062	33	46	0	107.23	112.20	8.56	0.0087

101	1979	315	658	313	1838	-6866	111	49	0	199.55	228.34	3.50	0.0036
102	1979	323	1932	311	1798	-6904	80	61	0	181.21	198.09	11.61	0.0118
103	1979	514	257	114	1872	-7050	87	42	0	16.73	88.59	8.70	0.0089
104	1979	522	413	496	1825	-6883	209	44	0	187.19	280.57	1.64	0.0017
105	1979	731	16	555	1845	-6852	138	48	0	211.93	252.90	2.71	0.0028
106	1979	11 5	151	129	1782	-6861	104	59	0	229.26	251.74	6.59	0.0067
107	1979	1117	1417	294	1868	-6957	99	51	0	98.21	139.45	9.18	0.0094
108	1980	214	109	452	1847	-6877	128	47	0	185.74	225.57	3.04	0.0031
109	1980	720	501	103	1772	-6897	28	50	0	204.14	206.06	4.51	0.0046
110	1980	927	625	367	1847	-6893	159	49	0	169.39	232.32	3.40	0.0035

Project Sight (18°.53'N, 70°.40'N) are shown in Table 6A and 7A (1911 through 1962) and Table 6B and 7B (1963 through 1980) respectively.

The most significant event in Table 6A and 7A was the earthquake of October 6, 1911 (Ms = 7.0). This event was located only 14.5 km away from Alto Yuna Project sight and the peak acceleration was estimated at 0.464g. The location determined by the fault report (Figure 2A) for this 1911 event was situated 60 km west of the earthquake occurred along the La Vega-Banao-Bani zone but at moderately greater depths (probably 40 to 60 km). Due to the lateral heterogeneity of the crustal structure, the "anomalous" isoseismal was observed and relatively stronger intensity was felt towards west.

Under such an interpretation, the maximum peak acceleration for all 1911 events was reestimated. At the hypocentral distance 50 km rather than 14 km (for Z = 0 km as shown in Table 6A), the peak acceleration is now given at 0.175 g for the Alto Yuna Project. Of ten events (including 1911 earthquakes mentioned above) that exhibited the peak acceleration greater than 0.04 g, six events were located along Zone 1 and four others were distributed along La Vega Bonao-Bani seismic zone (Zone 3). While the distance to the Septentrional fault is at least 55 km from the Alto Yuna Project sight, the La Vega-Bonao-Bani zone is running only 10 km east of the project sight. However, a major earthquake that may occur along Zone 3 has the tendency to have moderately greater depth which significantly reduces the estimate of acceleration from Zone 3. The activity level of Zone 1 is estimated at 3 times more active than Zone 3 (section 7.2). However, due to the closeness to the project, Zone 3 will be more serious concern to the Rio Blanco and Alto Yuna Projects.

9. CONCLUSION

(1) Since its installation in December 1979, the CDE seismograph network operated for the past 19-month period. The operational record of 85.9% was attained. Damages caused by two lightning hits (September 1980 and April 1981) have attributed most of the down times.

(2) With the improved protective measures, COSMOS became more resistant for the lightning damages. Various problems at the remote stations were identified and plan for improved operational procedure was discussed.

(3) During the period from December 13, 1979 through July 17, 1981, approximately 1500 events were detected and recorded by the network. The accumulation of the data now permits us to draw the following conclusions:

(4) Three major active seismic zones (Figure 4C) were identified in the Dominican Republic. Zone 1 is located along the North American-Caribbean plate boundary and characterized by shallow, left lateral transform faulting. Spatial distributions and composite fault plane solutions of earthquakes in Zone 2 and 3 indicate that these active zones are the subduction zones dipping steeply up to the depth of 120 km. The strike of the former is NW-SE and the latter is approximately N-S. The latter is referred as La Vega-Bonao-Bani seismic zone.

(5) The number of earthquakes versus magnitude relations for Zone 1 and Zone 3 (La Vega-Bonao-Bani zone) were constructed based on 19-month data.

ZONE 1: $\log N$ (per year) $= 2.80 - 0.705\ M_T$

ZONE 3: $\log N$ (per year) $= 1.81 - 0.529\ M_T$

The recurrence time calculated from these relations (Table 4A and 4B) for magnitude 7.0, for instance, are 27.3 and 78.3 years for Zone 1 and Zone 3 respectively.

(6) It is concluded that the seismic activity along Zone 1 is the highest in the Dominican republic; actually most of the destructive earthquakes were reported along this zone in the historic time. The record of the historic earthquakes show that this zone will sustain an earthquake up to magnitude 8.5.

(7) The length of the La Vega-Bonao-Bani seismic zone is estimated at 90 km and an earthquake up to magnitude 7.5 may take place along this zone. The largest event occured along this zone in the historical time was 1911 earthquake with the magnitude 7.0. The discrepancy between the felt zone and instrumentally located epicenter may indicate that this earthquake occurred at intermediate depth.

(8) Twenty-six events were located in the vicinity of the Tavera Dam. Most of them were interpreted as the water induced earthquakes resulted from sharp change of water level in the Tavera reservoir and delayed permeance. With the exception of these events, no seismic activity was correlated along the extension of the Tavera fualt.

(9) The calculated acceleration at the Tavera Dam Sight inferred from the NEIS earthquakes file from 1911 through 1980 indicated that the highest peak acceleration was given by 1911 earthquake at 0.183 g. This event was located along the La Vega-Bonao-Bani seismic zone. However, eight additional events that showed the acceleration 0.04 g and greater were distributed along Zone 1.

(10) For the proposed Rio Blanco and Alto Yuna projects, the most serious concern will be La Vega-Bonao-Bani seismic zone. This zone runs

10 km east of the proposed Alto Yuna project dam sight and will sustain an earthquake up to magnitude 7.5. Actually, the calculated acceleration at the Alto Yuna dam sight for 1911 earthquake (location and depth as inferred by NEIS data file) was as great as 0.464 g. However, with the modified hypocentral distance of 50 km, this estimate was received to 0.175 g.

10. RECOMMENDATIONS

(1) To study the nature of the events occurred or could occur in the vicinity of the Tavera and Bao reservoirs, it is highly desirable to examine the correlation between the seismicity and water level of the reservoir. Following the release of the 1980 data, similar data including precipitation, run off and water level of the Tavera and Bao reservoir (when started impounding) be released to the University of Texas as soon as they become available.

(2) During the period of water loading to the Bao reservoir, the results of the automatic epicenter determination should be carefully monitored whether any indication of increased seismicity could be recognized. If any changes in the pattern of seismicity is found, Dr. Matumoto should be advised immediately. The COSMOS data should be shipped to Galveston without delay (on bi-weekly basis) to assure the rapid and more detailed data analysis.

(3) To ensure the capability of maintaining the seismic monitoring program by the personnel from the host country, it is recommended that CDE

should send qualified personnel to the University of Texas for long term training. The training can be carried out with or without degree program.

(4) The results of CDE seismic monitoring program proved to have an important implications not only for CDE projects but also other major economic programs and mining operations. It is strongly recommended that a multi-institutional coordination with a possible federal and industrial support be considered for continued operation in the future.

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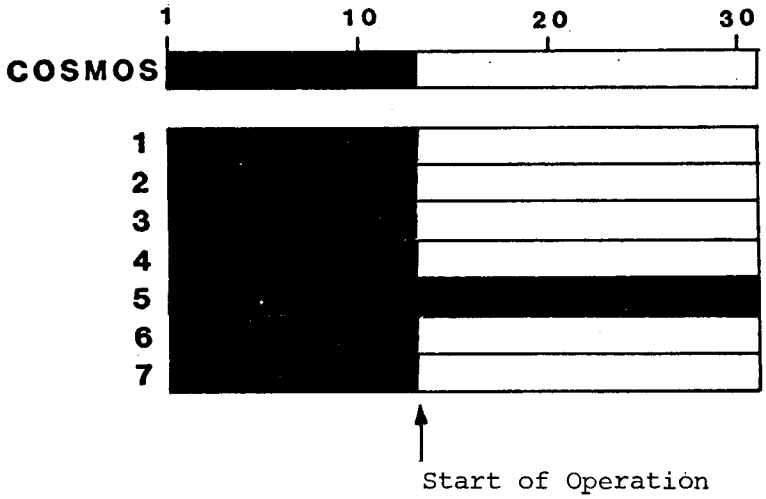
APPENDIX 1 DOWN TIME OF THE CDE NETWORK

NORMAL OPERATION

NON-OPERATION PERIOD

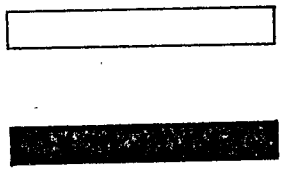
DEC. 1979



NOTES

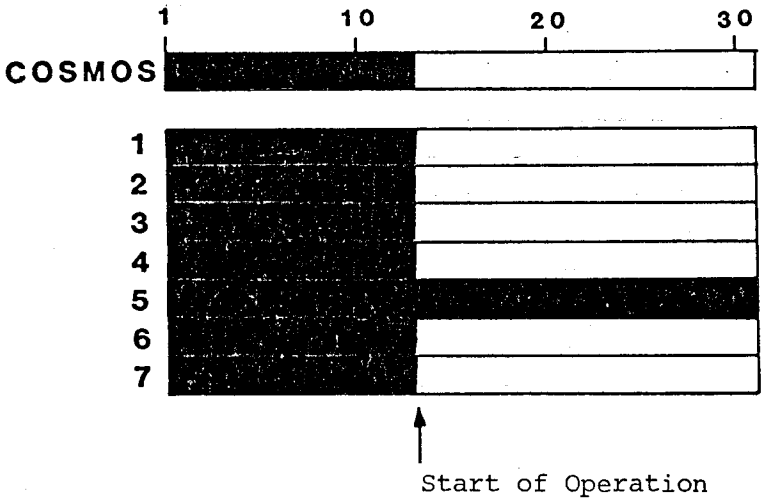
1) Operations initialized 13 Dec. 1979

FIG 3D DOWN TIME OF THE CDE NETWORK



NORMAL OPERATION

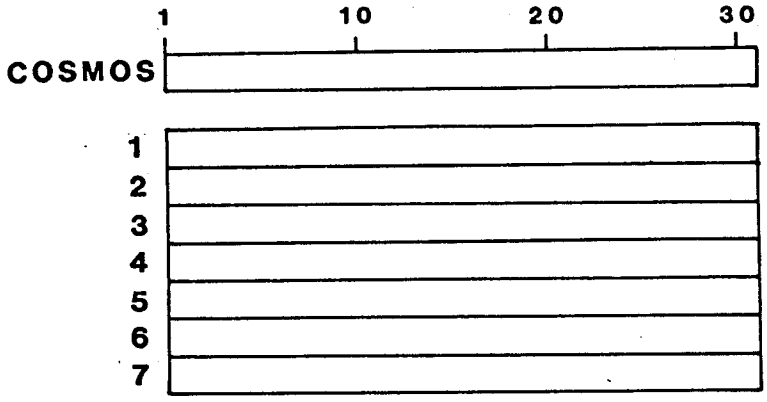
NON-OPERATION PERIOD



NOTES

1) Operations initialized 13 Dec. 1979

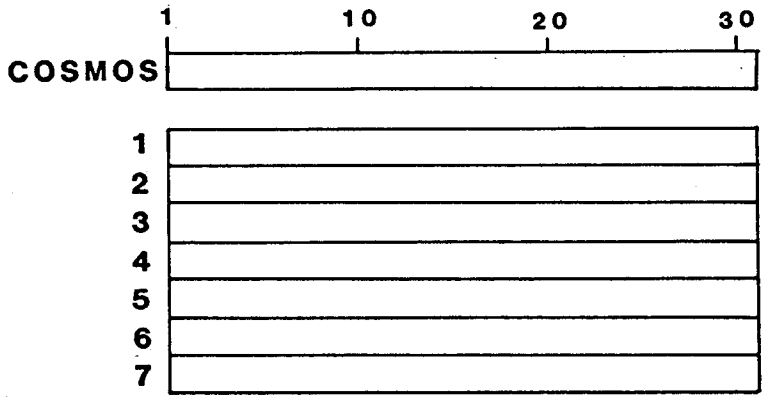
JAN. 1980



NOTES

NORMAL OPERATOIN

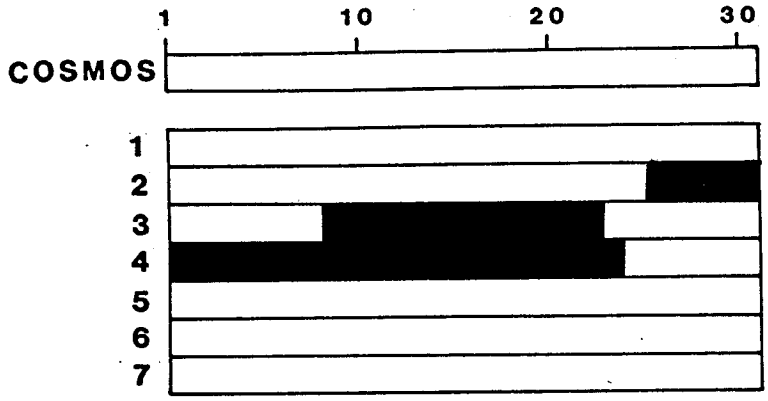
FEB. 1980



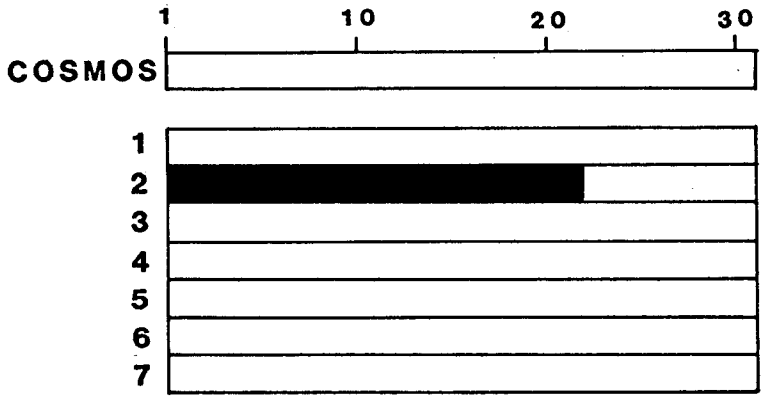
NORMAL OPERATION

NOTES

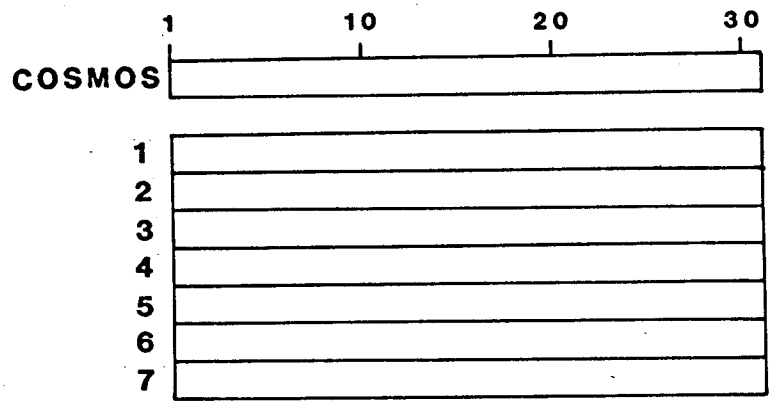
MAR. 1980



APR. 1980



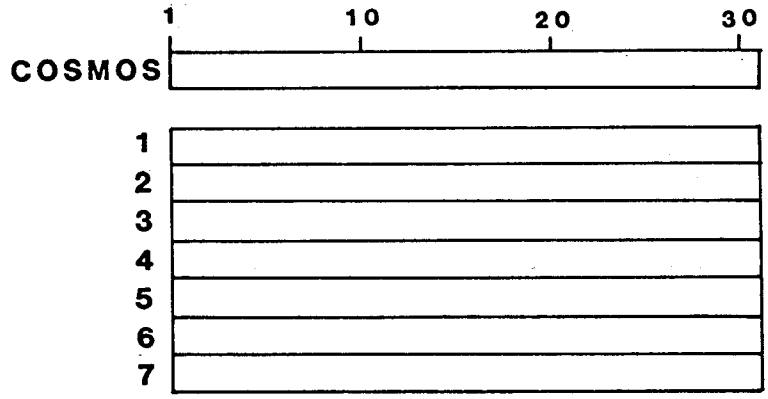
MAY 1980



NOTES

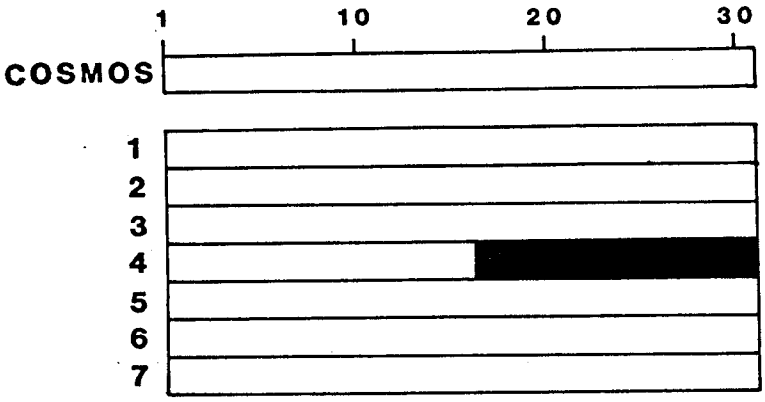
NORMAL OPERATION

JUN. 1980

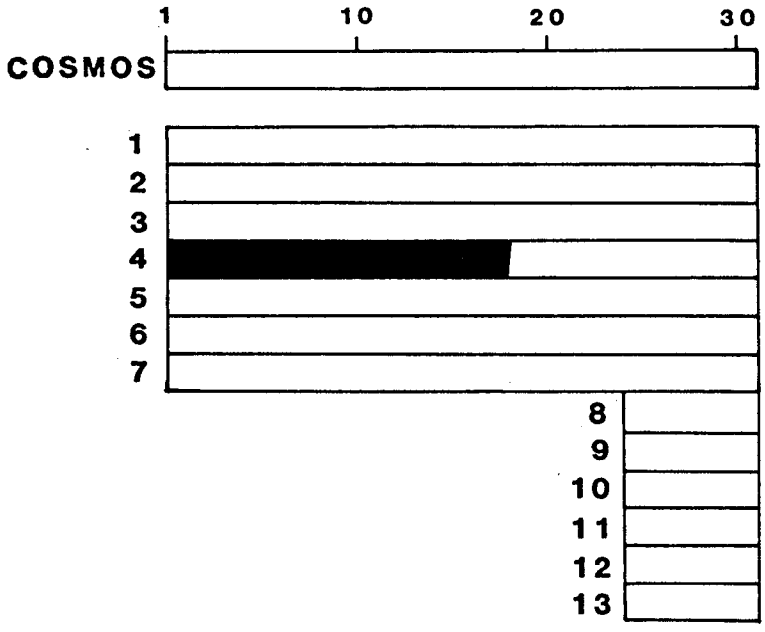


NORMAL OPERATION

JUL. 1980



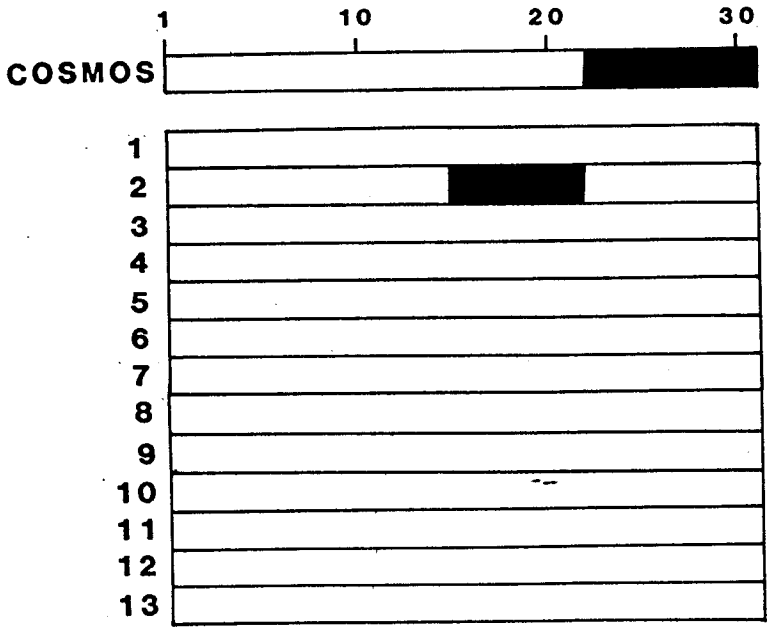
AUG. 1980



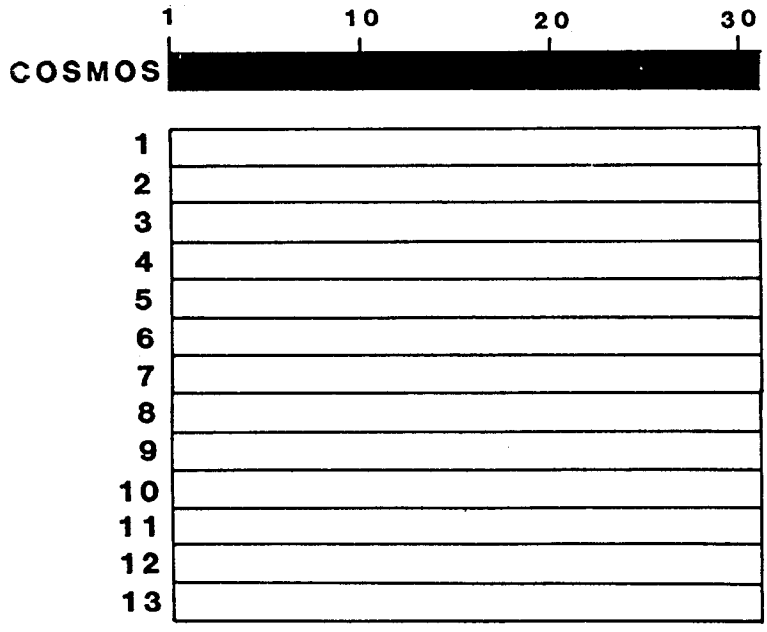
NOTES

1) Stations 8-13 brought on line on August 24, 1980

SEP. 1980



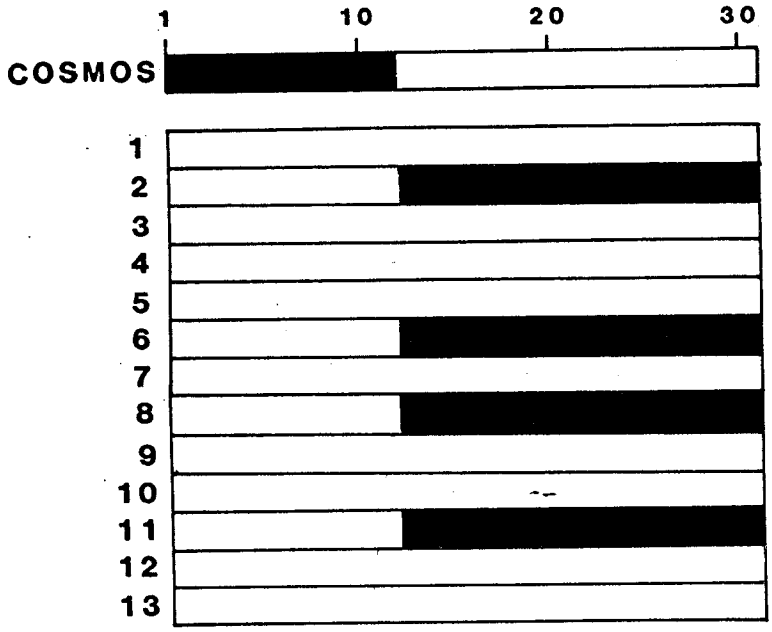
OCT. 1980



NOTES

1) Lightning hit the central recording station on September 23 and damaged COSMOS system

NOV. 1980

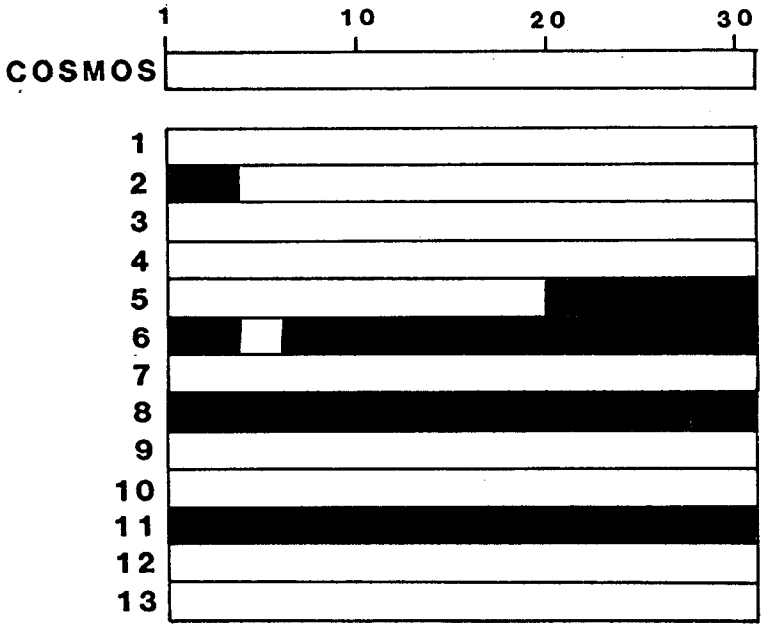


NOTES

1) System repaired on November 12, 1981.

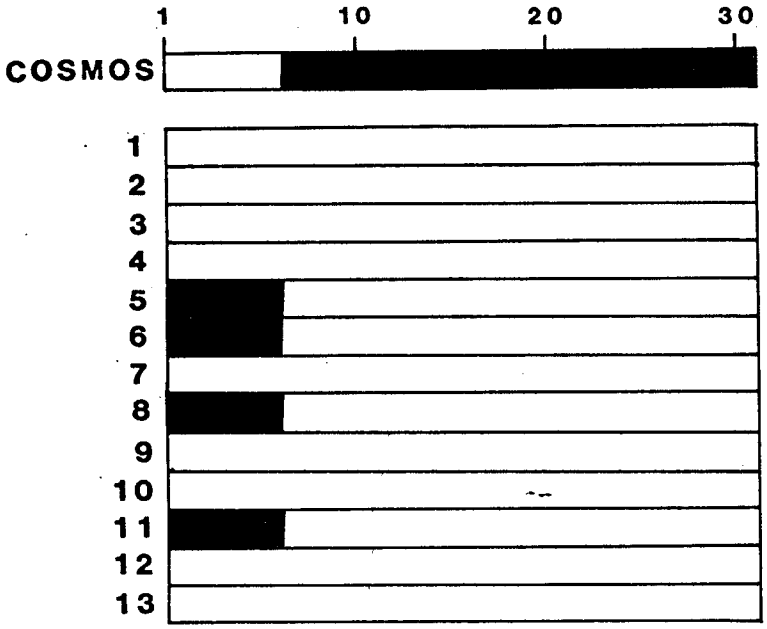
2) Stations 2, 6, 8 and 11 are bad.

DEC. 1980



1) Stations 5, 6, 8 and 11 are bad.

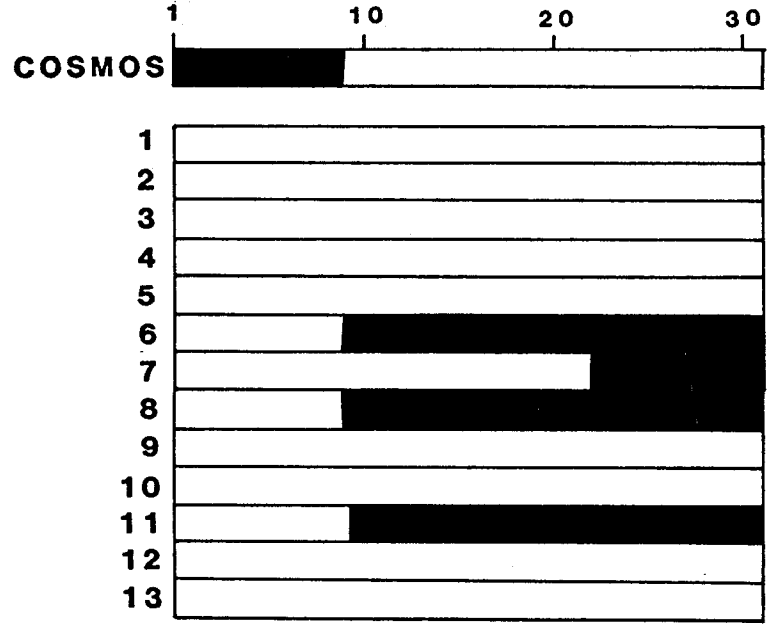
JAN. 1981



NOTES

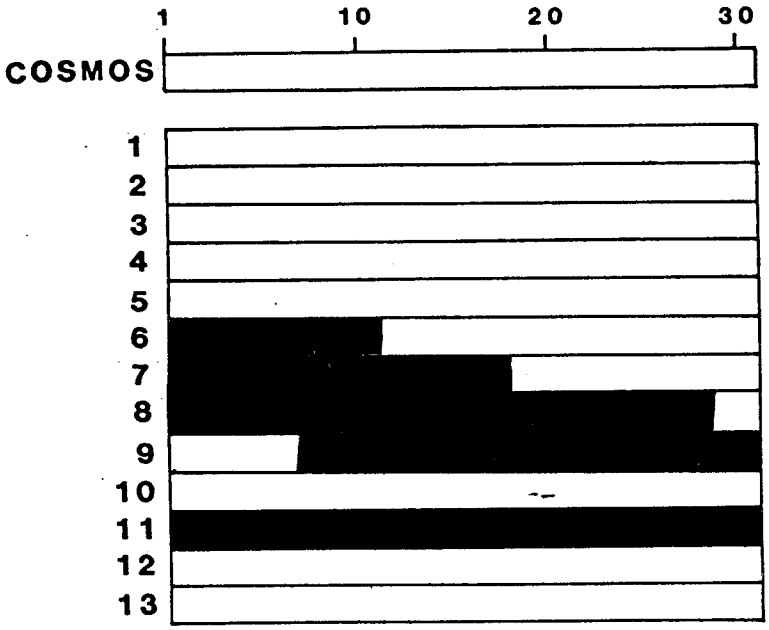
1) COSMOS data lost in shipment; Jan. 6 - Feb. 8, 1981

FEB. 1981



1) Stations 6, 8 and 11 are bad.

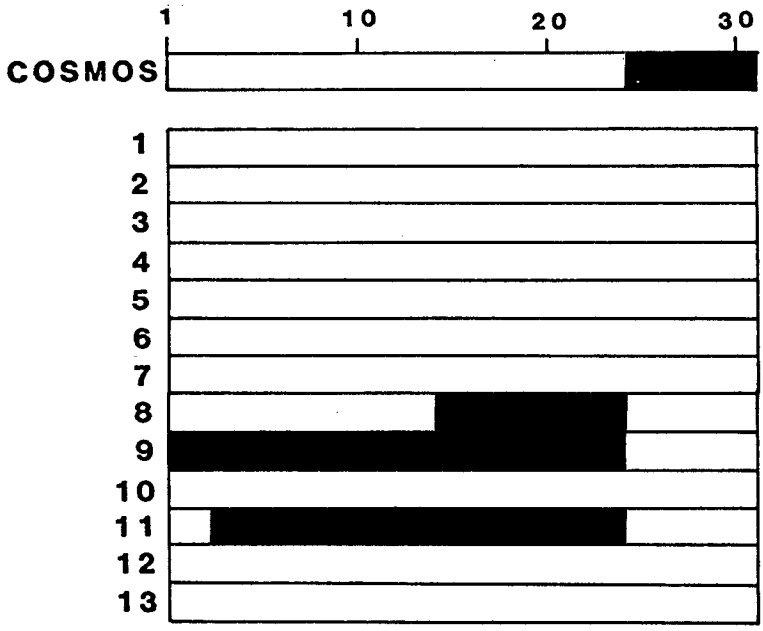
MAR. 1981



NOTES

1) Stations 6, 7, 8, 9 and 11 are bad.

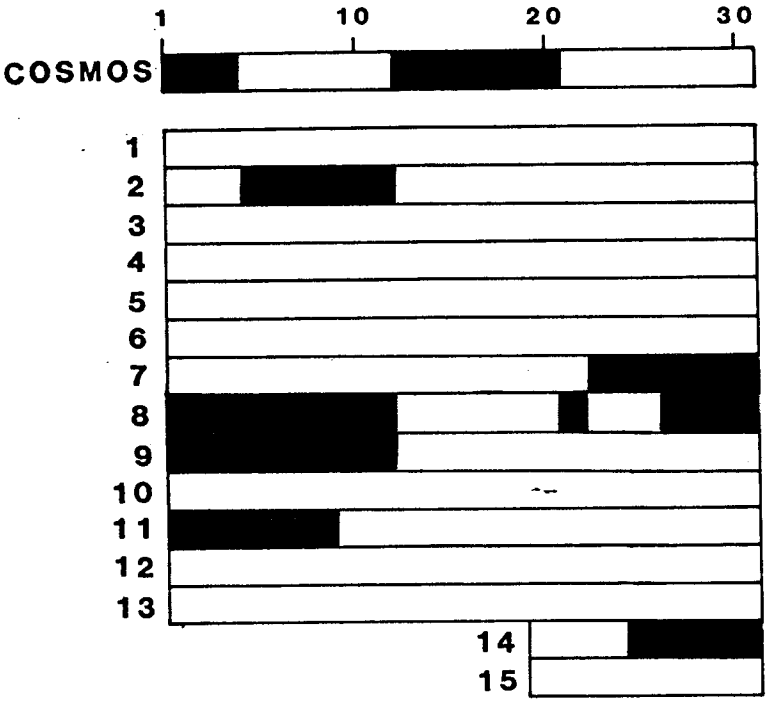
APR. 1981



1) Second lightning hit central recording station on April 22, 1981. COSMOS down; April 22 - May 4, 1981.

2) Stations 8, 9 and 11 are bad.

MAY 1981

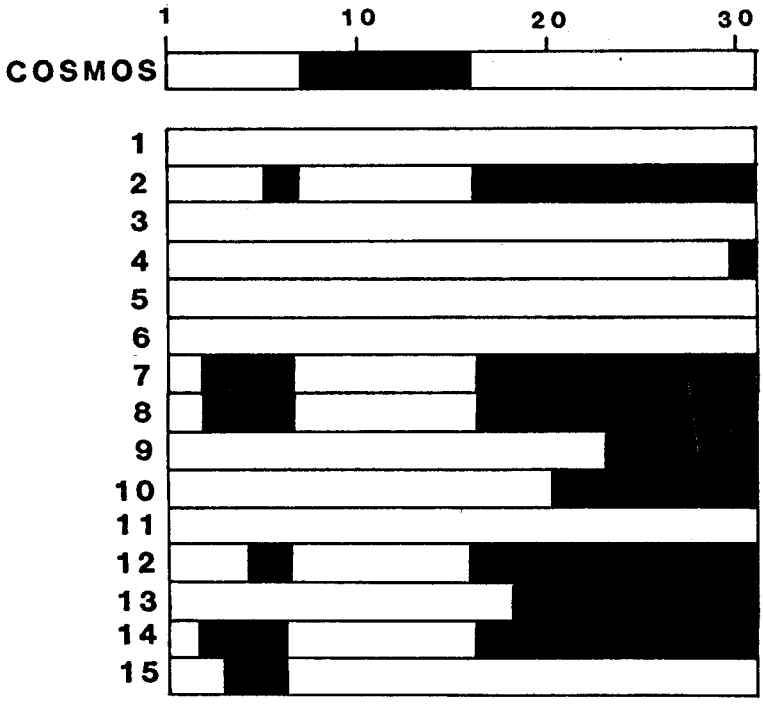


NOTES

1) Stations 14 and 15 brought on line on May 19, 1981.

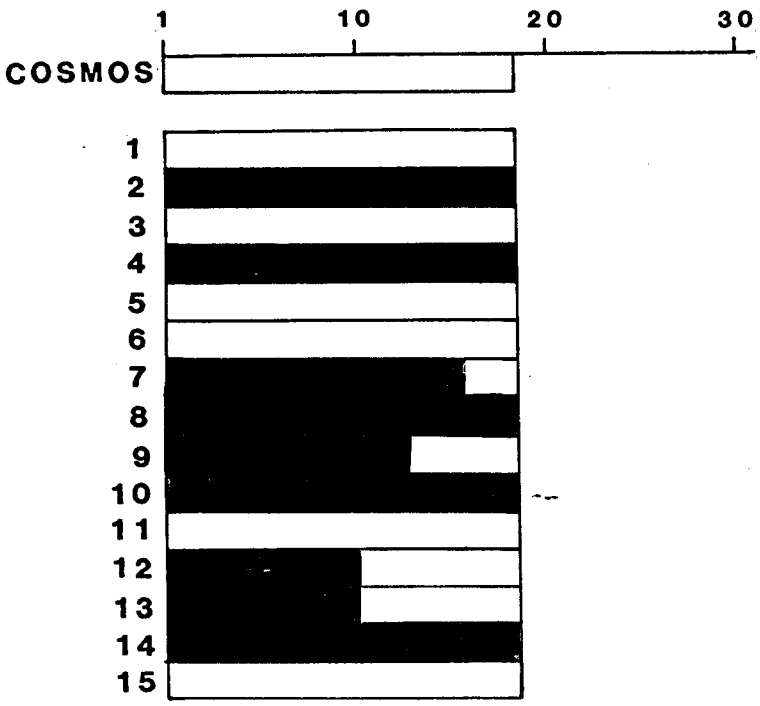
2) COSMOS down; May 11 - May 20, 1981.

JUN. 1981



1) COSMOS down; June 5 - June 12.

2) Problem developed at the multiplexed station (station 8)



NOTES

1) Problem developed at the multiplexed station (station 8).

Appendix 2. List of earthquakes recorded by the CDE/CAASD Seismograph Network

December 13, 1979 - July 17, 1981

COLUMN	ABBREVIATION	DESCRIPTION
1	NO	Identification number
2	YR	Year
3	MD	Month and Day
4	HM	Hour and minutes, G.M.T. (to calculate local time, subtract 4 hours)
5	S	Second of origin time, a decimal point should be assumed between 2nd and 3rd digit
6	NP	Number of P-arrival reading
7	NS	Number of S-arrival reading
8	IQ	Quality number, ranging 1 through 5, 1 being the most accurate reading. 6 indicates a distance earthquake and 7 is an event generated by explosion.
9	ITR	Number of iterations carried out during the epicenter
10	MAG	Magnitude x 10; magnitude is calculated based on the duration time
11	LONG	Longitude of epicenter (in degree)
12	LAT	Latitude of epicenter (in degree)
13	X	Distance measured from the central station (eastward positive)
14	Y	Distance measured from the central station (northward positive)
15	DEPTH	Depth; if a negative depth is obtained during the iteration process, the epicenter program automatically fixes the depth at 5.0 km and X, Y are calculated.
16	DX	Standard error for X (in km)
17	DY	Standard error for Y (in km)
18	DZ	Standard error for Z (in km)
19	S	Standard error for origin time (in sec)

DR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1	79	1213	1136	3809	2	2	4	10	1.1	-70.232	19.034	50.9	-30.5	5.0	0.7	0.9	0.0	0.03
2	79	1213	1327	3189	2	2	7	2	0.1	-70.765	19.272	-7.6	-4.2	5.0	1310.0	1310.0	0.0	1.24
3	79	1213	1329	2274	5	2	4	10	1.8	-69.345	18.902	148.0	-45.1	168.4	19.9	23.6	17.9	0.40
4	79	1214	1451	4982	2	1	5	10	0.6	-70.265	19.238	47.2	-7.9	5.0	0.3	0.1	0.0	0.00
5	79	1216	728	1758	3	0	6	10	1.3	-70.755	19.162	-6.4	-16.4	5.0	0.0	0.0	0.0	0.00
6	79	1216	1254	3097	5	0	6	10	2.2	-70.974	19.182	-30.4	-14.2	20.5	8.3	2.3	13.7	0.21
7	79	1216	1840	458	5	2	4	10	1.8	-69.984	19.255	78.0	-6.1	18.9	5.6	2.9	2.5	0.24
8	79	1216	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
9	79	1216	1850	4452	5	1	7	10	0.3	-70.738	19.304	-4.6	-0.7	2.9	0.4	0.5	0.4	0.14
10	79	1216	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
11	79	1216	2108	3435	2	1	4	10	1.1	-70.099	19.259	65.4	-5.6	5.0	0.9	0.3	0.0	0.02
12	79	1216	2121	5997	4	2	3	10	2.1	-69.938	19.256	83.1	-6.0	28.5	2.1	1.7	4.0	0.09
13	79	1217	307	2393	3	1	5	10	0.9	-70.499	19.604	21.6	32.5	5.0	1.1	4.9	0.0	0.20
14	79	1217	339	4644	4	1	4	10	2.1	-69.454	18.664	136.0	-71.4	97.1	19.0	54.7	81.8	0.17
15	79	1217	430	933	2	2	5	2	-9.3	0.000	0.000	-7.6	-4.2	5.0	1310.0	1310.0	0.0	3.05
16	79	1217	614	5299	3	0	6	10	2.5	-71.017	19.540	-35.1	25.4	5.0	0.1	0.1	0.0	0.00
17	79	1217	653	5345	4	2	3	10	0.3	-70.691	19.489	0.6	19.8	28.3	2.1	4.1	4.1	0.14
18	79	1217	701	1062	5	1	3	5	2.2	-70.668	18.191	3.1	-123.7	48.7	27.2	32.4	37.9	0.80
19	79	1217	1102	1682	5	0	6	10	2.5	-70.978	18.833	-30.9	-52.7	44.1	5.0	8.7	6.7	0.07
20	79	1217	2139	3509	4	2	4	5	0.9	0.000	0.000	129.1	-145.8	123.3	192.9	264.4	201.2	6.87
21	79	1217	2253	4225	3	2	4	10	0.0	-70.248	19.257	49.1	-5.8	5.0	4.0	2.2	0.0	0.20
22	79	1218	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
23	79	1218	136	1246	3	1	5	10	1.3	-70.673	19.567	2.5	28.5	36.6	0.1	0.2	0.2	0.00
24	79	1218	448	1894	3	1	4	10	1.1	-70.105	19.256	64.8	-5.9	110.1	0.3	0.3	0.2	0.00
25	79	1218	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
26	79	1218	1042	4498	2	1	5	10	1.1	-70.863	18.701	-18.2	-67.3	5.0	0.2	0.2	0.0	0.00
27	79	1218	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
28	79	1218	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
29	79	1218	1313	4857	6	2	1	10	0.5	-70.698	19.598	0.9	31.9	27.4	1.7	3.1	4.8	0.23
30	79	1218	1445	3000	3	0	6	4	1.3	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	31.40
31	79	1218	1445	5117	3	2	7	9	0.3	-70.668	19.204	3.1	-11.7	5.0	2.8	1.8	0.0	0.30
32	79	1218	1642	1667	3	1	5	2	1.5	0.000	0.000	1310.0	1310.0	100.0	1310.0	1310.0	1310.0	1052.70
33	79	1218	2228	1000	5	2	2	10	0.6	-70.515	18.979	19.8	-36.6	77.8	5.0	7.3	7.1	0.29
34	79	1219	46	2328	6	2	2	10	0.9	-70.445	18.953	27.5	-39.4	82.0	4.3	6.5	5.8	0.25
35	79	1219	643	4313	5	0	6	10	2.5	-70.787	18.992	-10.0	-35.1	43.1	4.0	14.8	45.5	0.30
36	79	1219	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
37	79	1219	1020	1249	5	1	3	10	0.7	-70.406	19.271	31.8	-4.3	58.2	19.4	14.1	17.6	0.57
38	79	1219	1344	1145	5	1	7	10	0.6	-70.752	19.305	-6.1	-0.5	2.8	0.5	0.6	0.5	0.16
39	79	1219	1511	3783	4	1	7	10	0.9	-70.740	19.296	-4.7	-1.5	5.0	15.4	32.2	32.0	1.25
40	79	1219	1554	4101	4	1	4	10	0.6	-70.691	19.554	0.5	27.0	39.1	1.4	2.4	2.3	0.05
41	79	1219	2011	4000	4	0	5	2	1.8	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	1310.00
42	79	1220	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
43	79	1221	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
44	79	1221	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
45	79	1221	726	5386	5	2	3	10	1.1	-70.762	19.603	-7.2	32.4	23.1	2.5	4.7	4.3	0.21
46	79	1221	1142	5899	4	1	4	10	1.3	-70.424	19.011	29.9	-33.0	80.5	7.8	8.9	7.5	0.23
47	79	1221	1527	1915	5	2	7	10	0.4	-70.741	19.303	-4.8	-0.7	2.5	0.4	0.5	0.5	0.15
48	79	1221	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
49	79	1222	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
50	79	1222	302	1980	5	1	4	10	1.6	-69.336	18.593	143.5	-79.3	64.1	25.1	67.6	149.9	0.34

DR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
51	79	1222	559	5172	3	3	4	10	0.0	-70.574	19.144	13.4	-18.4	19.6	0.1	0.1	0.1	0.09
52	79	1222	700	1205	4	1	4	10	1.3	-70.258	20.049	40.0	81.7	48.8	16.1	17.2	56.8	0.22
53	79	1222	800	1644	4	1	4	10	1.3	-70.741	19.762	-4.9	50.0	49.7	10.9	13.4	22.0	0.30
54	79	1222	1004	2202	3	1	5	10	2.2	0.000	0.000	174.1	-89.4	5.0	129.0	116.9	0.0	2.99
55	79	1222	1654	425	6	1	2	10	1.6	0.000	0.000	75.7	-57.8	22.2	132.5	114.0	48.2	3.01
56	79	1222	1659	4085	4	1	4	10	0.9	-70.205	19.789	53.8	53.0	5.0	15.1	12.3	0.0	0.53
57	79	1222	1823	5745	5	2	2	7	2.2	0.000	0.000	41.1	114.4	61.0	281.2	459.0	707.0	3.82
58	79	1222	2252	3412	3	1	4	10	0.6	-70.700	19.536	-0.4	30.6	68.3	0.9	1.0	0.6	0.01
59	79	1223	240	3604	5	2	3	10	0.9	-70.394	18.967	33.1	-37.9	91.6	6.9	6.8	4.9	0.20
60	79	1223	449	275	5	1	5	10	3.3	-68.269	19.442	265.8	14.7	77.0	51.6	107.5	134.6	0.33
61	79	1223	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
62	79	1223	1118	2067	6	1	2	10	0.9	-70.455	19.094	26.5	-23.8	29.1	1.3	1.9	2.8	0.13
63	79	1223	1119	4121	4	1	4	10	0.3	-70.527	19.122	18.5	-20.8	28.4	3.4	1.9	3.4	0.12
64	79	1223	1154	4154	5	1	3	10	3.1	-69.734	19.412	105.4	11.3	143.3	33.6	25.5	33.8	0.85
65	79	1223	1613	2115	4	1	4	10	0.6	-70.833	19.233	-15.0	-8.5	16.7	0.8	1.9	3.2	0.14
66	79	1224	2300	3688	4	1	4	10	1.1	-71.090	19.657	-43.1	39.4	50.1	6.7	13.6	23.6	0.28
67	79	1225	404	2875	5	1	5	10	2.5	-67.440	19.246	356.5	-117.7	282.5	21.5	26.2	25.2	0.15
68	79	1225	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
69	79	1225	739	4742	4	0	5	10	1.3	-70.696	19.271	0.0	-4.3	14.0	0.1	0.1	0.1	0.00
70	79	1225	1311	5504	6	1	2	10	3.0	-71.398	19.186	-76.8	-13.7	63.1	10.9	9.0	7.6	0.33
71	79	1225	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
72	79	1225	1852	3332	5	1	3	10	0.9	-70.483	18.976	23.4	-36.9	84.5	5.2	9.2	8.4	0.26
73	79	1226	235	342	6	3	1	10	1.5	-70.663	19.631	3.6	35.6	5.0	6.3	14.0	9.0	1.14
74	79	1226	258	232	5	1	3	10	0.6	-70.911	19.491	-23.5	18.9	33.9	2.7	6.2	5.9	0.17
75	79	1226	627	5495	5	0	4	5	1.6	-69.243	18.357	159.2	-105.4	44.3	527.7	415.7	514.3	1.70
76	79	1226	928	4209	3	1	5	10	0.9	-70.237	18.675	50.3	-70.2	5.0	8.0	9.6	0.0	0.36
77	79	1226	1242	494	2	1	5	10	0.3	-70.259	19.262	47.9	-5.2	5.0	0.1	0.0	0.0	0.00
78	79	1226	1422	2819	4	1	4	10	0.9	-70.616	19.697	8.8	42.8	53.2	12.7	16.9	17.8	0.30
79	79	1226	1654	2184	4	1	4	10	0.9	-70.566	19.664	14.3	39.2	61.0	4.0	6.1	4.7	0.09
80	79	1226	1716	1451	6	1	2	10	1.8	-70.699	19.653	-0.3	37.9	27.3	1.6	4.2	5.1	0.20
81	79	1226	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
82	79	1226	1900	3388	3	1	5	10	0.9	-70.276	18.925	46.0	-42.5	27.4	0.1	0.2	0.2	0.00
83	79	1226	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
84	79	1226	2109	3234	2	1	5	1	0.6	0.000	0.000	-31.0	-8.6	5.0	0.0	0.0	0.0	11.93
85	79	1226	2200	2635	4	1	4	6	0.6	0.000	0.000	-236.6	-331.0	148.3	1310.0	1310.0	1310.0	75.17
86	79	1226	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
87	79	1226	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
88	79	1226	2302	2339	3	1	4	10	1.1	0.000	0.000	100.4	-72.4	5.0	138.1	94.5	0.0	4.58
89	79	1227	1443	951	3	2	4	2	1.3	0.000	0.000	-588.2	1310.0	1310.0	1310.0	1310.0	1310.0	885.09
90	79	1227	1500	3751	3	1	5	10	0.6	-70.359	19.851	37.0	59.9	5.0	8.2	12.7	0.0	0.44
91	79	1227	1501	3314	5	2	2	10	1.1	-70.217	18.901	52.5	-45.1	17.6	2.9	3.8	2.9	0.21
92	79	1227	2022	4296	4	1	4	10	2.2	-70.172	20.043	57.4	81.1	107.3	21.5	45.7	25.4	9.23
93	79	1227	2222	2123	6	1	2	10	1.6	-69.922	19.159	84.0	-15.7	5.0	21.0	11.6	0.0	0.85
94	79	1228	218	3417	5	1	3	10	2.1	-70.138	19.225	61.2	-9.3	20.1	4.9	2.5	2.0	0.17
95	79	1228	247	1205	5	0	5	10	2.1	-69.453	18.657	136.2	-72.1	137.1	127.7	77.1	121.8	0.23
96	00	108	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
97	80	109	111	3546	3	2	5	5	2.1	0.000	0.000	-6.5	30.2	28.1	650.2	1310.0	354.0	8.97
98	80	110	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
99	80	110	1107	5594	5	2	2	10	1.3	-70.433	19.084	28.8	-25.0	34.8	8.6	5.4	6.2	0.36
100	80	110	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
101	80	110		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
102	80	111		1154		5026	3	1	5	10	1.5	-71.043	19.471	-38.0	17.8	33.4	0.5	0.4	0.5	0.00
103	80	111		1305		2016	4	1	7	10	0.6	-70.753	19.302	-6.2	-0.9	4.6	0.4	0.5	1.4	0.09
104	80	111		1510		5320	2	1	5	1	2.7	0.000	0.000	0.0	0.0	5.0	0.0	0.0	0.0	53.23
105	80	111		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
106	80	111		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
107	80	112		2132		3714	3	1	5	5	2.2	-71.609	18.194	-100.0	-123.4	65.6	237.2	128.9	386.8	1.50
108	80	112		2325		1203	3	1	4	10	1.1	-70.576	18.954	13.1	-39.3	66.2	0.9	1.0	0.7	0.01
109	80	113		16		3500	2	1	5	10	1.6	-64.174	23.070	714.2	415.9	5.0	48.3	81.1	0.0	0.08
110	80	113		649		1969	3	2	4	10	0.8	-71.012	19.185	-34.5	-13.8	17.8	0.9	1.0	1.9	0.03
111	80	113		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
112	80	113		1745		3620	5	0	4	10	3.7	-70.398	19.087	32.7	-24.6	46.0	10.7	2.2	7.5	0.06
113	80	113		2136		1254	4	1	4	10	0.9	-70.744	19.072	-5.2	-26.3	22.0	0.8	0.9	2.8	0.07
114	80	114		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
115	80	115		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
116	80	115		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
117	80	115		1607		2062	4	1	4	10	2.7	-69.622	19.324	117.6	1.5	5.0	6.6	8.2	0.0	0.23
118	80	115		323		590	4	0	4	10	3.3	-70.955	19.315	-28.3	0.6	5.0	2.8	4.3	0.0	0.18
119	80	116		358		1730	4	0	6	10	4.2	-70.419	19.347	30.3	4.1	37.1	1.5	0.9	1.3	0.00
120	80	116		412		3727	3	0	5	10	2.9	-70.706	19.145	-1.0	-18.2	5.0	0.1	0.1	0.0	0.00
121	80	116		0		0	0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
122	80	116		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
123	80	116		1025		3514	3	1	5	10	3.5	-69.725	18.129	106.4	-130.5	5.0	44.5	32.5	0.0	0.84
124	80	116		1035		2302	3	1	5	10	3.3	-70.271	19.289	46.5	-2.3	67.4	0.8	1.2	0.6	0.01
125	80	116		1343		1148	4	0	5	10	3.3	-70.655	19.193	4.5	-12.9	25.4	0.1	0.1	0.3	0.00
126	80	116		1355		1385	5	2	7	8	1.6	-70.737	19.305	-4.5	-0.5	5.0	0.9	1.1	0.0	0.24
127	80	116		1414		1198	5	2	2	10	1.3	-70.685	19.747	1.2	48.4	39.7	2.4	4.1	4.1	0.14
128	80	116		1555		4500	4	0	5	10	3.8	-71.210	17.854	-56.2	-161.0	992.1	6.9	11.1	0.0	0.02
129	80	116		1920		637	5	1	7	10	2.1	-70.738	19.300	-4.6	-1.0	2.7	0.5	0.7	0.6	0.18
130	80	116		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
131	80	117		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
132	80	117		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
133	80	117		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
134	80	117		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
135	80	117		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
136	80	117		1259		2686	5	1	3	10	2.3	-70.413	19.695	31.0	32.7	39.7	4.2	5.2	5.8	0.17
137	80	117		1307		5292	3	1	5	5	1.8	-70.541	19.819	17.0	56.3	18.7	98.4	248.3	306.1	1.07
138	80	117		1857		643	4	2	4	5	1.3	-70.072	18.871	68.4	-48.5	7.0	22.6	22.4	81.8	0.82
139	80	117		1942		3583	4	1	7	9	1.3	-70.755	19.305	-6.4	-0.5	3.2	0.6	1.2	0.7	0.15
140	80	117		2144		3040	3	1	5	10	1.1	-70.440	19.292	28.1	-1.9	68.7	1.3	4.4	0.6	0.01
141	80	118		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
142	80	118		326		3225	3	2	4	10	1.6	-70.536	19.771	17.5	51.1	32.2	6.2	9.8	28.7	0.32
143	80	118		519		5474	4	1	4	10	1.6	-70.633	19.591	6.9	31.1	36.3	1.0	1.5	1.4	0.93
144	80	118		752		1950	4	0	4	10	3.4	-70.679	19.126	1.9	-20.3	8.2	3.2	3.8	0.9	0.10
145	80	118		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
146	80	118		1230		5252	3	1	5	10	0.2	-70.499	19.679	21.6	40.9	56.8	0.4	0.6	0.5	0.00
147	80	118		1851		3488	4	1	7	10	1.1	-70.750	19.300	-5.9	-1.0	4.5	0.3	0.4	1.1	0.07
148	80	118		1926		491	5	0	6	10	0.3	-70.851	19.203	-17.0	-11.8	77.0	4.1	5.0	39.0	0.12
149	80	118		2014		949	3	1	5	10	1.8	-69.796	18.860	98.5	-49.8	5.0	8.9	10.7	0.0	0.22
150	80	118		2051		4474	4	1	7	10	0.9	-70.729	19.289	-3.6	-2.2	4.3	0.5	0.5	1.5	0.07

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
151	80	118		2102	371		3	2	4	10	0.3	-70.733	19.143	-4.0	-18.4	14.4	2.6	2.6	8.8	0.19
152	80	119		714	5720		4	0	6	10	3.3	-70.770	19.283	-9.9	-2.9	34.0	0.1	0.1	0.3	0.00
153	80	119		1458	4980		5	1	7	10	0.9	-70.736	19.291	-4.3	-2.1	2.4	1.1	1.4	1.3	0.37
154	80	120		45	5346		4	1	4	10	1.6	-70.722	19.109	-2.8	-22.2	5.0	2.0	2.8	0.0	0.37
155	80	120		747	5349		5	0	6	10	3.7	-70.836	19.096	-15.2	-23.6	30.9	0.1	0.1	0.7	0.00
156	80	120		843	356		5	0	3	10	1.5	-70.574	19.040	13.5	-29.8	59.7	14.6	7.9	31.7	0.14
157	80	120		1303	25		4	2	3	10	1.3	-70.430	19.453	23.7	15.8	47.4	21.1	14.2	23.8	0.53
158	80	121		1502	5020		2	1	5	1	1.6	0.000	0.000	-8.2	4.6	5.0	0.0	0.0	0.0	20.09
159	80	122		1520	5902		5	1	7	10	1.1	-70.735	19.299	-4.3	-1.2	2.8	0.3	0.4	0.3	0.10
160	80	123		515	504		5	1	3	10	0.9	-70.404	19.014	32.0	-32.7	113.4	5.5	6.3	5.0	0.14
161	80	123		843	4024		4	0	7	5	0.9	-70.687	18.864	1.0	-49.3	8.9	23.2	52.1	58.3	0.60
162	80	123		1349	5143		4	1	7	10	0.3	-70.724	19.292	-3.1	-1.9	6.7	0.1	0.1	0.2	0.01
163	80	123		1437	532		4	0	4	10	1.3	-70.611	19.050	9.4	-28.7	25.0	0.6	0.4	1.0	0.01
164	80	123		1537	3429		3	1	7	10	0.8	-70.717	19.276	-2.3	-3.7	7.1	0.0	0.0	0.0	0.00
165	80	123		1539	126		4	1	4	10	0.9	-70.534	19.053	17.7	-28.4	40.9	1.6	1.4	1.8	0.06
166	80	123		1856	5985		6	2	2	10	1.5	-70.335	19.066	39.5	-26.9	30.8	17.0	20.2	24.9	1.29
167	80	123		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
168	80	124		348	2342		5	0	4	5	2.1	0.000	0.000	133.3	-18.6	33.5	1310.0	104.6	836.6	3.25
169	80	124		558	2366		5	1	3	10	1.8	-69.386	18.534	143.5	-85.7	56.8	33.2	28.0	94.7	0.30
170	80	124		800	1671		3	1	5	5	0.3	0.000	0.000	55.0	-7.0	22.9	189.2	444.1	370.2	3.04
171	80	124		1021	1903		3	0	5	10	3.4	-70.698	19.155	-0.2	+17.1	5.0	0.0	0.0	0.0	0.00
172	80	124		1442	4463		3	1	5	10	2.4	0.000	0.000	-397.8	-452.3	5.0	1310.0	1310.0	0.0	73.93
173	80	124		1931	207		4	1	7	10	0.8	-70.726	19.286	-3.3	-2.6	5.5	0.3	0.3	0.5	0.03
174	80	125		251	2000		5	0	6	9	2.5	-97.100	18.824	1310.0	-53.7	1310.0	1310.0	207.0	1310.0	0.21
175	80	125		454	4056		4	0	6	10	2.5	-70.608	19.103	9.6	-22.9	108.4	0.6	6.5	14.2	0.02
176	90	125		515	2329		6	1	2	10	1.8	-70.268	19.197	46.9	-12.4	38.5	21.3	11.0	23.3	0.93
177	80	125		845	262		5	2	2	10	1.8	-70.616	19.737	8.8	47.3	25.6	1.6	2.9	5.4	0.15
178	80	125		930	222		5	2	2	10	2.1	-70.442	18.955	27.8	-39.2	82.7	4.2	6.7	5.6	0.24
179	80	125		1316	374		4	1	7	8	1.1	-70.757	19.316	-6.6	0.7	5.0	0.7	1.5	0.0	0.16
180	80	125		1317	4592		4	1	4	10	0.5	-70.821	19.198	-13.6	-12.4	26.2	0.0	0.1	0.3	0.00
181	80	126		1337	1421		5	2	2	10	1.7	-70.672	19.822	2.7	56.7	35.2	1.4	2.6	3.9	0.17
182	80	126		1637	4893		4	1	5	10	0.8	-70.632	19.662	7.0	38.9	27.2	0.7	2.0	3.2	0.11
183	80	126		1749	5160		6	3	6	10	0.6	-70.380	18.796	34.6	-56.8	79.3	5.3	7.1	5.9	0.31
184	80	126		1900	4978		5	1	3	10	0.6	-70.262	18.961	47.6	-38.6	19.4	1.7	2.1	1.0	0.08
185	80	126		1901	2568		3	0	7	10	0.6	-70.753	19.334	-6.2	2.7	5.0	0.0	0.1	0.0	0.00
186	80	126		0	0		0	0	4	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
187	80	126		1909	400		4	1	4	8	0.3	0.000	0.000	-30.5	16.1	9.7	59.6	31.3	160.8	3.49
188	80	126		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
189	80	126		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
190	80	127		44	5344		5	1	3	10	0.0	-70.140	19.590	60.9	31.1	20.9	7.5	4.3	2.0	0.24
191	80	127		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
192	80	127		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
193	80	127		424	2508		5	2	2	10	0.5	-71.142	19.123	-40.0	-20.6	79.5	3.4	4.3	3.9	0.17
194	80	127		442	2430		4	1	4	10	0.0	-70.359	19.492	36.9	19.1	31.2	3.6	1.0	5.2	0.15
195	80	127		449	5291		4	1	4	10	2.4	-70.290	20.052	44.5	82.1	23.7	0.5	0.9	2.8	0.02
196	80	127		526	3374		5	1	3	10	1.1	-71.003	20.170	-33.5	95.2	17.4	2.0	4.5	1.8	0.13
197	80	127		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
198	80	127		805	3382		5	1	3	10	0.8	-70.414	19.291	30.9	-12.0	28.5	11.3	10.9	23.4	1.06
199	80	127		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
200	80	127		1106	500		4	0	3	8	3.1	0.000	0.000	1310.0	1310.0	5.0	126.6	102.6	0.0	161.72

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
201	80	127		1327	4690		3	0	7	9	1.1	-70.720	19.275	-2.6	-3.8	5.0	1.7	2.7	0.0	0.04
202	80	127		1630	3751		4	2	3	10	1.0	-70.536	18.920	17.5	-43.1	12.7	2.6	2.2	3.7	0.13
203	80	127		1650	2638		3	0	6	10	3.8	-70.093	19.677	66.0	40.6	5.0	3.1	1.5	0.0	0.03
204	80	127		1955	5782		3	1	5	10	1.5	-70.394	20.066	33.1	83.6	37.6	1.7	3.4	0.7	0.08
205	80	127		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
206	80	128		321	3450		5	2	2	10	2.3	-69.650	18.715	113.5	-65.7	86.5	7.8	6.4	10.2	0.23
207	80	128		2159	1694		4	1	4	10	1.3	-70.225	18.936	51.6	-41.4	23.1	3.4	4.7	9.6	0.17
208	80	129		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
209	80	129		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
210	80	129		913	3835		3	1	5	10	0.9	-79.792	19.592	-10.5	31.3	15.1	0.0	0.1	0.1	0.00
211	80	129		1031	1338		2	1	6	1	2.5	0.000	0.000	-17.1	35.7	5.0	0.0	0.0	0.0	5.78
212	80	129		1220	4851		6	0	2	10	2.8	-68.263	18.316	266.5	-110.0	230.2	291.5	126.8	235.3	0.17
213	80	129		1502	4857		5	1	7	10	1.3	-70.756	19.301	-6.5	-0.9	2.6	1.3	1.3	1.2	0.35
214	80	129		1615	153		4	1	4	10	0.3	-70.607	19.629	9.7	35.4	17.8	1.7	3.8	12.8	0.31
215	80	130		42	1595		3	0	6	10	2.5	-70.896	19.426	-21.9	12.9	5.0	0.0	0.0	0.0	0.00
216	80	130		315	382		5	2	2	10	0.9	-70.308	19.637	42.5	36.2	18.6	5.5	3.4	6.7	0.28
217	80	130		1350	5161		5	1	7	10	0.6	-70.756	19.293	-6.5	-1.9	4.0	1.2	1.2	3.1	0.31
218	80	130		1509	491		6	1	2	10	0.9	-70.827	19.099	-14.3	-23.2	55.2	0.8	1.2	1.6	0.07
219	80	130		1725	3000		3	0	5	4	2.1	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	43.91
220	80	130		1831	2440		6	3	2	10	1.5	-69.811	19.166	97.0	-15.9	99.6	5.5	4.6	4.5	0.20
221	80	130		1854	3656		5	0	3	10	3.7	-71.542	19.450	-92.6	15.5	102.5	36.6	5.5	38.8	0.18
222	80	130		1941	4726		5	2	7	10	1.6	-70.738	19.299	-4.5	-1.1	2.4	0.5	0.6	0.5	0.17
223	80	130		2142	5232		4	2	3	10	1.6	-70.583	19.721	12.5	45.5	40.5	5.2	7.3	17.7	0.58
224	80	130		741	5243		4	2	3	10	1.5	-71.043	19.748	-38.0	49.5	17.8	4.7	7.1	7.5	0.30
225	80	131		825	515		3	0	6	10	2.1	-70.840	19.472	-15.7	17.9	5.0	0.3	0.1	0.0	0.01
226	80	131		927	2255		5	2	2	10	1.1	-70.683	19.820	1.4	56.5	31.9	1.0	1.9	2.9	0.13
227	80	131		1036	4535		3	1	5	10	1.1	-70.381	19.945	34.5	70.3	76.7	0.5	1.3	1.2	0.00
228	80	131		1421	5194		4	1	4	10	1.6	-70.241	19.998	49.8	76.2	38.5	6.8	8.8	3.3	0.38
229	80	131		1723	3331		6	1	2	10	2.2	-69.633	19.590	116.4	21.0	33.2	9.2	5.4	3.6	0.30
230	80	201		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
231	80	201		337	4041		6	1	2	5	2.1	-69.959	19.492	80.8	20.2	9.9	16.9	7.8	33.2	0.65
232	80	201		501	3102		2	1	5	10	0.3	-71.384	19.659	-75.3	38.6	5.0	1.7	1.2	0.0	0.05
233	80	201		725	5303		3	1	5	10	1.6	-70.758	19.653	-6.8	38.0	5.0	1.0	2.2	0.0	0.12
234	80	201		1053	2236		2	1	5	1	1.5	0.000	0.000	0.0	0.0	5.0	0.0	0.0	0.0	20.32
235	80	201		1335	2906		3	0	5	10	2.7	-70.726	19.425	-3.2	12.7	5.0	0.1	0.0	0.0	0.00
236	80	201		1351	5948		4	2	7	6	1.3	-70.743	19.316	-5.1	0.7	3.4	0.4	1.0	2.5	0.11
237	80	201		1616	3582		3	1	5	10	0.3	-70.430	19.790	29.2	53.2	28.5	0.1	0.2	0.2	0.00
238	80	201		1745	1000		6	0	6	10	2.5	-71.027	24.420	-36.2	565.2	1310.0	114.4	1310.0	1310.0	0.24
239	80	201		1939	2627		3	0	5	10	0.8	-70.228	19.755	51.3	49.3	5.0	0.7	0.5	0.0	0.00
240	80	202		41	4530		3	0	5	10	1.6	-71.084	18.565	-42.5	-82.4	5.0	0.4	0.8	0.0	0.00
241	80	202		545	2783		6	0	2	9	3.0	-71.046	20.146	-38.3	92.5	21.1	7.9	16.2	25.4	0.18
242	80	202		927	1504		2	1	5	10	0.3	-70.542	19.357	16.9	5.2	5.0	1.8	3.7	0.0	0.02
243	80	202		1026	3331		5	0	4	10	1.8	-70.560	20.209	14.9	99.3	5.0	2.9	22.2	0.0	0.18
244	80	202		1526	1933		4	2	3	10	1.8	-71.266	19.639	-62.4	36.5	32.4	4.5	3.1	7.7	0.21
245	80	202		1550	2000		4	0	4	3	1.1	0.000	0.000	682.9	-569.4	1310.0	1310.0	1310.0	1310.0	75.95
246	80	202		1919	4000		3	0	6	4	2.5	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	16.84
247	80	203		155	4542		5	2	3	10	1.5	-70.235	19.957	50.5	71.6	39.9	3.1	4.5	1.7	0.21
248	80	203		1254	3179		5	1	4	10	2.2	-70.318	19.132	41.5	-19.7	34.8	15.9	15.4	23.8	0.81
249	80	204		102	1011		3	0	6	10	4.2	-70.909	19.358	-23.2	5.4	5.0	0.0	0.1	0.0	0.00
250	80	204		405	1043		3	1	5	10	1.1	-71.520	19.794	-90.1	53.5	38.8	3.4	2.1	7.1	0.08

DR EQFILE NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
251	80	204		642	501		3	1	4	10	2.0	-70.346	19.104	38.4	-22.7	53.4	0.4	2.5	1.8	0.01
252	80	204		1312	5674		3	2	7	10	1.2	-70.747	19.291	-5.6	-2.1	5.4	1.2	2.6	1.4	0.03
253	80	204		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
254	80	204		1646	3993		4	1	4	10	1.7	-70.805	20.683	-11.9	151.9	5.0	26.2	19.7	0.0	0.63
255	80	204		2316	4292		2	1	5	1	0.9	0.000	0.000	0.0	0.0	5.0	0.0	0.0	0.0	11.23
256	80	205		412	2573		4	1	4	10	1.9	-70.959	19.791	-28.8	52.1	21.0	5.8	10.0	3.3	0.28
257	80	205		623	2342		5	1	4	10	2.1	-69.100	18.800	174.8	-56.4	152.9	12.9	16.0	14.0	0.23
258	80	205		1336	3781		4	1	7	10	1.0	-70.765	19.325	-7.5	1.7	1.6	0.0	0.1	0.0	0.00
259	80	205		0	0		0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
260	80	205		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
261	80	206		341	4486		4	1	4	10	0.6	-70.252	18.940	48.7	-40.9	117.9	9.3	12.2	6.9	0.21
262	80	206		905	3353		2	1	5	1	0.6	0.000	0.000	0.0	0.0	5.0	0.0	0.0	0.0	12.09
263	80	206		1026	3220		3	1	4	10	2.7	-70.434	18.639	28.7	-74.1	37.7	1.1	0.8	0.6	0.01
264	80	206		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
265	80	206		1140	5500		4	0	4	5	1.4	-23.417	27.689	1310.0	926.8	1310.0	1310.0	1310.0	1310.0	1.68
266	80	206		1312	4357		4	1	7	10	0.9	-70.754	19.309	-6.3	-0.0	2.7	0.2	0.3	0.2	0.04
267	80	206		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
268	80	206		1542	1500		2	2	5	3	0.1	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1310.00
269	80	206		1900	3198		2	1	5	10	0.3	-70.151	18.941	59.7	-40.8	5.0	0.3	0.2	0.0	0.00
270	80	206		2349	2124		6	1	2	10	3.7	-70.432	19.140	28.9	-18.8	42.6	6.0	5.6	10.5	0.40
271	80	207		156	1517		4	2	3	10	1.3	-71.033	19.778	-36.9	51.8	8.8	9.6	10.2	22.9	0.55
272	80	207		304	2608		5	1	3	10	1.3	-70.763	19.799	-7.3	54.1	25.5	1.4	3.4	2.5	0.13
273	80	207		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
274	80	207		1642	3839		5	1	3	10	1.6	-71.082	19.903	-42.2	65.6	5.0	14.2	25.0	0.0	0.89
275	80	207		2030	5730		3	2	3	10	0.8	0.000	0.000	-9.5	58.1	5.0	20.5	47.2	0.0	2.45
276	80	207		2103	471		4	1	4	10	1.6	-69.953	19.291	81.4	-2.1	90.2	0.3	0.4	0.4	0.01
277	80	207		2130	2044		3	1	7	10	0.6	-70.731	19.247	-3.8	-7.0	5.0	0.0	0.0	0.0	0.00
278	80	208		438	3814		3	2	4	6	1.3	0.000	0.000	94.7	46.5	38.8	459.7	366.6	108.3	5.27
279	80	208		442	1281		3	1	4	10	0.9	-70.467	19.933	25.1	69.0	5.0	12.0	27.9	0.0	1.06
280	80	208		550	1933		5	3	2	10	0.9	-70.655	19.187	4.6	-13.6	27.2	0.4	0.6	0.9	0.07
281	80	208		1214	2927		3	2	7	10	0.3	-70.733	19.260	-4.0	-5.5	5.0	2.2	3.8	0.0	0.21
282	80	208		1630	125		3	1	4	10	1.3	0.000	0.000	1310.0	-661.8	5.0	1310.0	1310.0	0.0	484.92
283	80	208		1739	1737		4	1	3	10	1.3	-71.036	19.715	-37.1	44.8	14.7	0.7	1.0	1.3	0.03
284	80	208		1802	2256		2	1	5	1	1.3	0.000	0.000	-31.0	-8.6	5.0	0.0	0.0	0.0	21.14
285	80	208		2041	1971		5	0	6	10	4.7	-71.901	19.580	-131.9	29.9	5.0	154.9	24.8	0.0	0.75
286	80	209		515	3446		4	1	4	5	1.8	-71.172	18.765	-52.0	-60.3	45.7	39.0	89.9	39.9	0.55
287	80	209		832	1436		3	1	5	2	1.3	0.000	0.000	-460.1	1310.0	1310.0	1310.0	1310.0	1310.0	791.41
288	80	209		957	4211		3	1	5	10	0.9	-70.689	19.845	0.8	59.2	37.8	7.1	12.8	0.0	0.35
289	80	209		1250	3926		3	1	5	10	1.8	-70.721	19.869	-2.7	61.9	24.6	0.5	0.2	0.5	0.00
290	80	209		1358	995		3	2	7	10	0.8	-70.783	19.331	-9.4	2.3	3.9	1.5	1.4	4.0	0.09
291	80	209		2009	2670		6	1	3	10	2.1	-69.692	18.993	109.9	-35.9	91.3	6.4	5.0	5.6	0.17
292	80	210		5	2335		6	2	2	10	2.2	-69.672	18.949	112.2	-39.9	90.6	7.2	5.7	7.4	9.23
293	80	210		125	5000		4	0	5	2	2.5	0.000	0.000	1017.0	613.1	1319.0	1319.0	1319.0	1319.0	259.60
294	80	210		135	1117		4	1	6	7	2.7	0.000	0.000	289.8	59.3	77.2	1310.0	1310.0	1310.0	9.12
295	80	210		244	3447		2	1	5	1	0.6	0.000	0.000	-31.0	-8.6	5.0	9.0	0.0	0.9	6.81
296	80	210		334	5673		6	1	2	10	3.5	-70.720	19.840	-2.5	58.6	25.0	0.8	1.9	2.0	0.09
297	80	210		349	5152		4	1	4	2	1.3	0.000	0.000	-23.7	-3.5	1310.0	1310.0	1310.0	1310.0	1310.00
298	80	210		410	1681		3	1	5	7	1.1	-70.618	19.894	8.6	64.6	6.4	42.9	59.1	113.7	1.83
299	80	210		421	337		6	1	2	10	1.6	-70.730	19.900	-3.7	65.3	30.4	1.2	3.1	3.4	0.13
300	80	210		444	2398		6	2	2	10	1.3	-70.667	19.821	3.2	56.5	27.8	0.8	1.7	2.4	0.10

DR EQF ILE NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
301	80	210		446	3268		3	1	5	10	1.3	-70.705	19.841	-0.9	58.8	21.5	0.1	0.1	0.1	0.00
302	80	210		458	1082		4	2	3	10	0.9	-70.677	19.814	2.1	55.8	31.2	3.7	3.7	3.5	0.17
303	80	210		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
304	80	210		637	3100		4	1	4	6	1.3	0.000	0.000	9.0	111.6	43.2	950.1	655.3	1073.7	15.35
305	80	210		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
306	80	210		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
307	80	210		940	1135		2	1	5	1	1.1	0.000	0.000	-17.1	35.7	5.0	0.0	0.0	0.0	7.14
308	80	210		941	3040		4	1	4	10	1.3	-70.755	19.869	-6.4	61.9	27.3	2.5	4.0	2.3	0.12
309	80	210		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
310	80	211		449	5630		3	3	4	10	1.9	-69.709	19.414	108.1	11.5	148.5	34.8	91.9	20.1	0.23
311	80	211		910	3382		5	2	4	10	1.0	-70.449	19.626	27.1	35.0	30.7	1.5	1.6	3.2	0.13
312	80	211		1544	4500		4	0	6	8	1.1	-77.036	35.559	-694.2	1310.0	1310.0	1310.0	1310.0	1310.0	0.65
313	80	211		1613	4259		4	1	4	10	1.1	-70.618	20.002	8.5	76.5	23.1	6.3	22.3	30.6	0.66
314	80	211		807	4889		6	2	2	10	1.9	-70.160	19.631	58.7	35.5	19.3	6.9	3.6	5.9	0.31
315	80	211		2000	5633		2	2	5	10	1.5	-70.245	19.009	49.3	-33.3	5.0	1.0	1.8	0.0	0.07
316	80	211		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
317	80	212		144	1361		6	1	2	10	1.2	-70.732	19.862	-3.9	61.1	23.5	3.9	9.4	9.6	0.42
318	80	212		235	5538		5	2	4	10	1.8	-70.122	19.580	62.9	29.9	14.3	9.4	5.8	11.9	0.41
319	80	212		256	292		2	1	5	1	0.0	0.000	0.000	-7.6	-4.2	5.0	0.0	0.0	0.0	3.95
320	80	212		344	2603		3	0	6	10	2.5	-70.874	20.060	-19.4	83.0	5.0	0.8	13.5	0.0	0.02
321	80	212		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
322	80	212		515	500		5	0	4	10	2.9	-58.947	15.803	1286.4	-387.9	1034.5	1310.0	1310.0	1310.0	0.42
323	80	212		519	5536		3	0	6	10	2.1	-70.900	19.433	-22.3	13.7	5.0	0.1	0.5	0.0	0.01
324	80	212		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
325	80	212		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
326	80	212		856	1791		2	1	6	10	1.2	-70.437	19.301	28.4	-0.9	5.0	0.0	0.1	0.0	0.00
327	80	212		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
328	80	212		1339	436		3	1	7	10	0.9	-70.732	19.248	-3.9	-6.8	5.4	0.0	0.0	0.0	0.00
329	80	212		1418	1426		4	1	4	10	0.3	-70.390	18.878	33.5	-47.7	86.1	4.6	6.3	5.5	0.16
330	80	212		1436	584		3	0	4	10	2.0	-70.496	19.436	21.9	13.9	5.0	0.0	0.0	0.0	0.00
331	80	212		1518	383		5	0	4	10	2.0	-70.735	19.828	-4.3	57.3	28.3	1.5	5.6	5.0	0.13
332	80	212		1644	2308		6	3	4	5	1.6	0.000	0.000	50.5	-38.4	18.7	15.4	19.1	166.5	3.46
333	80	212		1823	4273		3	0	6	10	2.7	-71.146	20.173	-49.2	95.5	5.0	4.5	7.9	0.0	0.05
334	80	212		1842	2089		5	3	3	10	1.5	-70.230	18.923	51.1	-42.8	17.2	1.5	1.9	5.9	0.11
335	80	213		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
336	80	213		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
337	80	213		248	1198		4	2	3	10	0.0	-70.618	19.186	8.6	-13.7	29.6	0.8	0.6	1.1	0.05
338	80	213		317	1529		4	1	4	10	0.4	-70.771	19.893	-8.2	64.5	24.4	0.2	0.5	0.3	0.01
339	80	213		414	5589		6	1	2	10	2.7	-70.698	19.787	-0.2	52.8	20.7	1.2	3.8	2.2	0.20
340	80	213		638	4429		4	1	4	10	1.6	-70.755	19.837	-6.4	58.3	20.0	2.7	7.6	5.8	0.27
341	80	213		944	5831		5	0	4	5	2.0	-70.774	19.883	-8.5	63.4	41.1	5.2	10.6	3.3	0.44
342	80	213		1118	4500		3	0	6	3	2.5	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	99.80
343	80	213		1448	3592		2	1	7	1	-0.4	-70.765	19.272	-7.6	-4.2	5.0	0.0	0.0	0.0	0.55
344	80	213		1730	3914		6	2	2	10	0.6	-70.718	19.625	-2.4	34.9	25.9	0.6	0.8	1.7	0.09
345	80	213		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
346	80	214		111	3387		6	0	3	10	4.7	-69.713	18.934	107.6	-41.5	90.5	50.9	23.7	37.7	0.19
347	80	214		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
348	80	214		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
349	80	214		544	4		3	1	5	10	-0.4	-70.718	19.588	-2.3	30.8	28.0	0.2	0.1	0.2	0.00
350	80	214		850	4791		3	2	4	10	1.3	0.000	0.000	787.3	449.4	30.9	1310.0	1310.0	0.0	133.40

DR EQFILE

NO	YR	M	D	H	M	S.	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
351	80	214		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
352	80	214	1	109	1719		6	2	2	10	0.3	-70.463	19.636	25.5	36.1	24.7	1.4	1.7	3.0	0.14
353	80	214	1	215	2917		2	2	5	10	0.9	0.000	0.000	118.7	33.1	213.6	1310.0	1310.9	0.0	38.26
354	80	214	1	310	139		2	1	7	1	0.7	-70.765	19.272	-7.6	-4.2	5.0	0.0	0.0	0.0	0.14
355	80	214		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
356	80	214	1	543	1326		3	1	5	7	2.1	-70.397	20.355	32.8	115.6	22.3	31.3	52.6	226.5	1.21
357	80	214		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
358	80	214		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
359	80	214	1	710	529		2	1	7	1	0.6	-70.765	19.272	-7.6	-4.2	5.0	0.0	0.0	0.0	0.68
360	80	214	1	714	2681		6	0	3	7	4.4	-70.117	19.412	63.4	11.3	40.1	6.8	2.7	1.7	0.23
361	80	215		18	3847		3	2	4	10	0.6	-70.697	19.661	-0.0	38.9	26.2	2.3	2.2	2.6	0.12
362	80	215		339	4778		3	2	4	10	-0.3	-70.440	19.122	28.1	-20.8	38.8	1.3	1.3	0.9	0.04
363	80	215		342	1119		6	0	3	10	1.8	-69.785	19.364	99.8	6.0	38.3	15.6	3.3	2.1	0.18
364	80	215		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
365	80	215		527	4805		6	1	3	10	2.7	-71.560	20.069	-94.5	84.0	45.2	5.8	6.6	34.7	0.19
366	80	215		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
367	80	215		739	4560		6	1	3	10	3.5	-69.547	18.839	125.8	-52.0	103.0	6.5	5.7	6.2	0.16
368	80	215	1	232	4347		3	2	2	7	0.0	-70.772	19.265	-8.3	-4.9	5.0	5.7	10.7	0.0	0.59
369	80	215	1	347	5456		4	1	7	10	1.1	-70.757	19.311	-6.7	0.1	2.8	0.2	0.4	0.3	0.04
370	80	215		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
371	80	215	1	511	4693		5	0	4	5	2.8	-69.892	19.156	88.1	-17.0	21.6	92.7	17.5	61.1	0.82
372	80	215	1	555	2821		2	1	5	1	0.0	-70.765	19.272	-7.6	-4.2	5.0	0.0	0.0	0.0	1.36
373	80	215	2	106	4470		5	1	4	10	1.8	-70.424	18.707	29.8	-66.7	43.1	5.9	12.6	2.3	0.36
374	80	215	2	200	2228		2	1	5	10	0.0	-70.996	19.735	-32.8	47.1	5.0	0.0	0.1	0.0	0.00
375	80	221	1	513	5500		3	0	6	10	0.7	-70.986	19.383	-31.7	8.1	5.0	0.3	0.3	0.0	0.00
376	80	221	1	851	1775		3	1	7	6	0.6	-70.715	19.244	-2.1	-7.3	3.8	1.8	3.2	4.8	0.05
377	80	221	2	024	2168		5	2	3	10	2.0	-69.566	18.897	123.7	-45.6	106.1	5.1	4.7	6.1	0.15
378	80	221	2	343	3812		5	0	3	10	2.2	-70.157	19.195	59.1	-12.6	59.8	10.3	3.8	10.2	0.09
379	80	222		121	2492		6	1	2	10	1.3	-70.511	19.119	20.3	-21.1	29.3	0.8	1.1	1.5	0.09
380	80	222		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
381	80	222		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
382	80	222	1	022	5768		5	3	2	10	1.8	-70.250	18.827	48.9	-53.4	87.1	5.0	7.0	6.2	0.25
383	80	222	1	431	3574		3	1	7	10	1.5	-70.746	19.307	-5.4	-0.3	8.1	0.0	0.1	0.1	0.00
384	80	222	2	213	4119		5	3	3	10	1.8	-70.343	18.656	38.6	-72.3	30.4	4.9	4.3	7.3	0.19
385	80	223	1	407	3572		5	1	7	10	1.3	-70.752	19.279	-6.0	-3.4	3.3	1.5	1.7	3.8	0.41
386	80	223		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
387	80	224		436	2793		2	1	5	10	1.8	-70.042	19.365	71.6	6.1	5.0	0.6	0.3	0.0	0.01
388	80	224		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
389	80	224		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
390	80	224		0	0		0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
391	80	224		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
392	80	224	1	702	461		3	0	5	10	0.3	-70.460	20.351	25.9	115.2	5.0	9.8	224.8	0.0	0.41
393	80	224	1	749	5286		4	1	4	10	0.6	-70.394	19.531	33.1	24.5	28.0	0.8	1.5	1.6	0.96
394	80	224	1	911	516		5	4	2	10	0.3	-70.518	19.053	19.6	-28.3	38.5	1.5	1.4	1.5	0.10
395	80	224	1	938	1625		5	1	3	10	1.6	-69.272	19.242	156.0	-7.5	5.0	8.3	7.3	0.0	0.27
396	80	225		115	1673		6	1	2	10	1.3	-70.722	19.954	-2.8	71.2	31.6	1.8	4.2	4.7	0.17
397	80	225		849	4160		2	1	5	10	0.0	-70.595	19.758	11.1	49.6	5.0	0.1	0.1	0.0	0.00
398	80	225	1	007	1053		4	1	4	5	1.6	-70.040	18.384	71.8	-102.4	10.7	39.3	37.0	173.4	0.87
399	80	225	1	036	3355		3	0	6	10	2.5	-70.777	19.303	-8.8	-0.8	5.0	0.1	0.0	0.0	0.00
400	80	225	1	047	3859		3	1	5	7	0.9	0.000	0.000	14.4	34.7	4.5	246.6	315.0	480.3	11.42

DR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
401	80	225	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
402	80	225	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
403	80	225	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
404	80	225	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
405	80	226	440	4246	6	1	2	10	1.0	-71.247	19.877	-60.2	62.7	27.8	3.7	4.0	6.8	0.16
406	80	227	1114	2917	5	0	3	10	1.3	-70.721	19.889	-2.6	64.0	27.0	0.1	0.5	0.4	0.01
407	80	227	1459	2918	3	1	7	10	1.0	-70.733	19.291	-4.0	-3.2	7.7	0.0	0.0	0.0	0.00
408	80	227	1509	3324	3	1	5	10	0.9	-70.762	19.873	-7.1	62.4	26.9	0.1	0.1	0.1	0.00
409	80	227	2030	2344	7	1	2	10	1.6	-70.719	19.945	-2.5	70.2	31.9	2.1	5.1	5.4	0.21
410	80	228	46	3175	5	1	4	6	2.8	0.000	0.000	-247.4	-8.4	27.8	188.6	158.9	437.6	3.05
411	80	228	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
412	80	228	212	2126	5	2	2	5	1.3	-70.965	20.179	-29.4	96.2	14.3	5.6	7.7	14.9	0.35
413	80	228	759	1413	6	1	2	10	0.0	-70.510	19.009	20.4	-33.2	73.1	3.9	6.6	7.7	0.25
414	80	228	1346	4490	3	1	7	10	1.2	-70.757	19.292	-6.7	-1.9	7.2	0.0	0.0	0.0	0.00
415	80	228	1531	2353	3	0	7	10	-0.5	-70.740	19.302	-4.8	-0.9	5.0	0.0	0.0	0.0	0.00
416	80	228	2002	5981	2	2	5	10	0.3	0.000	0.000	-13.5	13.8	-6.6	273.5	109.0	0.0	19.27
417	80	228	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
418	80	228	2228	3655	2	2	5	5	0.0	-70.607	19.169	9.8	-15.5	5.5	454.8	460.5	340.4	0.33
419	80	229	1322	5903	5	1	7	10	1.3	-70.756	19.301	-6.5	-1.0	3.2	0.2	0.2	1.9	0.05
420	80	229	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
421	80	229	1517	2139	2	1	5	1	0.8	-70.765	19.272	-7.6	-4.2	5.0	0.0	0.0	0.0	0.67
422	80	301	800	4475	5	1	5	10	0.9	-70.218	19.795	52.3	53.7	34.6	5.6	6.1	6.8	0.24
423	80	301	1330	4852	5	1	7	10	1.3	-70.756	19.303	-6.5	-0.7	3.0	0.2	0.2	0.2	0.05
424	80	301	1712	2064	5	2	4	10	0.9	-69.972	19.174	90.2	-15.0	88.6	6.9	7.5	6.2	0.24
425	80	301	2053	4834	4	2	3	5	0.9	-70.692	18.489	0.4	-90.8	16.4	52.7	14.2	18.4	0.62
426	80	302	503	2745	6	1	3	10	1.6	-69.356	18.556	146.8	-83.4	66.0	26.3	24.4	56.1	0.57
427	80	302	633	5453	3	0	5	5	2.2	-70.975	18.855	-30.5	-50.3	5.0	12.7	61.4	0.0	0.45
428	80	302	1353	1395	5	1	7	10	2.1	-70.741	19.302	-4.9	-0.8	2.9	0.4	0.5	0.4	0.14
429	80	302	1930	2321	5	2	2	10	0.0	-70.831	19.582	-14.7	30.1	27.4	2.7	2.6	4.6	0.21
430	80	302	2234	5149	5	1	4	10	0.9	-69.765	19.391	102.0	9.0	12.4	15.6	12.9	11.7	0.53
431	80	303	319	445	5	3	3	10	1.6	-69.817	18.870	96.2	-48.7	103.7	3.6	4.9	4.8	0.13
432	80	303	1033	436	6	2	2	10	0.0	-70.675	19.688	2.4	41.9	29.2	0.8	1.6	2.6	0.13
433	80	304	1309	5341	5	1	7	10	1.5	-70.758	19.303	-6.7	-0.7	3.0	0.3	0.3	0.3	0.07
434	80	304	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
435	80	304	2106	805	7	1	2	10	1.3	-69.855	19.242	92.1	-7.4	5.0	13.7	5.8	0.0	0.43
436	80	304	2138	3210	5	1	4	6	1.8	-71.786	18.395	-119.3	-101.1	45.5	19.4	20.6	36.7	0.38
437	80	305	1122	73	5	2	3	10	0.9	-70.458	18.817	26.1	-54.5	96.6	6.3	7.8	6.5	0.25
438	80	305	1253	1881	6	0	3	7	1.8	-68.995	19.515	186.3	22.7	6.5	355.1	15.3	51.0	0.32
439	80	305	1443	2561	4	1	4	10	1.1	-70.692	19.933	0.5	69.0	24.0	4.1	8.2	13.6	0.28
440	80	305	2204	2174	6	1	3	10	1.1	-71.465	19.970	-84.1	73.1	33.1	5.2	4.7	2.2	0.19
441	80	306	450	4291	3	3	4	10	0.6	-70.537	19.029	17.5	-31.0	39.6	3.4	2.2	1.5	0.08
442	80	307	1553	2917	4	1	7	10	0.5	-70.755	19.300	-6.4	-1.1	3.9	0.3	0.4	1.3	0.07
443	80	307	1602	5489	4	1	4	10	1.6	-68.887	18.722	190.1	-65.0	198.3	31.2	41.7	35.8	0.54
444	80	326	213	5863	3	0	6	10	3.1	-70.747	19.429	-5.6	13.2	5.0	0.0	0.0	0.0	0.00
445	80	326	706	1500	4	0	5	8	3.0	-40.799	15.208	1310.0	-453.7	1310.0	1310.0	1310.0	1310.0	0.61
446	80	326	1354	369	4	1	4	10	1.3	-70.680	19.855	1.8	60.4	36.7	1.0	2.4	3.0	0.11
447	80	326	1355	4660	3	1	7	10	1.6	-70.743	19.355	-5.1	5.0	10.6	0.0	0.1	0.1	0.00
448	80	326	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
449	80	326	2051	4544	5	1	3	10	5.6	-69.469	19.366	134.5	6.2	60.7	13.5	10.0	4.5	0.30
450	80	327	1340	2722	5	0	3	10	1.5	-70.764	19.632	-7.4	35.6	26.9	10.7	19.3	28.6	0.39

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
451	80	327		1418	1749		5	1	7	10	0.9	-70.753	19.298	-5.2	-1.3	3.8	0.6	0.7	2.3	0.17
452	80	327		1555	4046		3	1	5	10	1.8	-70.248	18.922	49.1	-42.8	31.7	0.1	0.1	0.4	0.00
453	80	327		1740	883		5	1	3	10	0.6	-79.442	18.909	27.8	-44.4	83.5	6.5	11.0	10.1	0.34
454	80	327		2051	5150		3	1	5	7	1.3	0.000	0.000	161.0	-40.6	-0.0	1310.0	1310.0	1310.0	87.03
455	80	328		22	972		4	0	5	10	1.1	-70.432	19.610	29.9	33.3	5.0	1.3	1.7	0.0	0.14
456	80	328		1343	135		5	0	7	10	1.6	-70.757	19.298	-6.6	-1.2	4.3	0.8	0.8	2.2	0.20
457	80	328		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
458	80	328		1744	1971		4	0	4	10	0.8	-70.601	18.874	10.5	-48.1	72.1	0.7	0.9	0.9	0.00
459	80	328		2338	5703		6	1	3	8	0.8	-70.410	19.462	31.3	16.9	2.7	6.9	7.2	15.3	0.99
460	80	329		1244	1615		5	2	4	10	0.9	-70.628	19.063	7.5	-27.3	31.5	0.8	1.3	1.7	0.11
461	80	329		1532	3092		5	0	3	10	0.8	-70.572	19.161	13.6	-16.4	31.8	0.8	1.3	2.4	0.19
462	80	329		1658	4206		4	1	5	10	2.8	-68.903	18.843	196.3	-51.6	152.0	11.9	15.7	16.2	0.23
463	80	329		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
464	80	329		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
465	80	330		358	3000		4	0	6	5	1.1	0.000	0.000	-206.2	1310.0	1310.0	1310.0	1310.0	1310.0	3.98
466	80	330		1420	108		3	1	7	10	1.1	-70.736	19.267	-4.3	-4.7	5.0	4.1	9.8	0.0	0.54
467	80	331		321	1563		4	1	3	10	0.8	-69.860	19.135	91.6	-19.4	99.1	14.3	9.1	13.9	0.25
468	80	331		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
469	80	331		1555	850		3	2	7	10	1.3	-70.746	19.331	-5.4	2.4	5.0	2.4	5.8	0.0	0.29
470	80	331		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
471	80	401		226	1969		2	1	5	10	1.3	-69.645	18.912	115.1	-44.0	5.0	0.3	0.2	0.0	0.00
472	80	401		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
473	80	401		654	839		5	3	3	10	0.9	-70.467	19.699	25.1	43.0	29.3	1.8	2.4	3.9	0.18
474	80	401		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
475	80	401		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
476	80	401		1247	4493		4	1	4	10	0.9	-71.353	19.717	-71.9	45.1	33.7	6.2	4.7	9.4	0.20
477	80	401		1932	4304		7	1	2	10	0.8	-70.679	19.846	1.9	59.3	31.9	1.6	4.3	5.5	0.19
478	80	401		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
479	80	401		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
480	80	401		2304	5628		7	2	1	10	0.3	-70.578	19.718	13.0	45.1	30.5	0.8	1.4	2.5	0.11
481	80	402		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
482	80	402		101	2766		2	1	5	1	-0.5	0.000	0.000	-7.6	-4.2	5.0	0.0	0.0	0.0	4.48
483	80	402		836	2407		2	1	5	10	0.3	-70.335	19.714	39.6	44.7	5.0	0.1	0.3	0.0	0.00
484	80	402		1138	5140		5	1	4	10	0.9	0.000	0.000	89.9	16.5	34.1	93.6	58.2	69.5	2.40
485	80	403		256	446		3	0	5	10	1.6	-70.490	19.294	23.7	-1.7	5.0	0.0	0.1	0.0	0.00
486	80	403		1543	4473		6	1	3	10	0.9	-70.740	19.654	-4.8	38.1	27.9	1.2	1.9	3.5	0.16
487	80	403		1609	4490		4	1	4	10	1.3	-70.291	19.103	44.4	-22.8	94.5	7.4	8.3	6.3	0.18
488	80	403		1703	4501		3	0	6	10	2.5	-70.864	19.439	-18.3	14.3	5.0	0.0	0.0	0.0	0.00
489	80	403		1810	1124		3	1	5	5	0.9	-70.175	18.897	57.1	-45.7	17.3	14.8	19.5	49.2	0.77
490	80	403		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
491	80	403		2111	2900		2	1	5	10	0.8	-71.012	20.099	-34.5	86.2	5.0	0.9	0.7	0.9	0.02
492	80	403		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
493	80	404		15	3071		7	2	2	10	3.3	-70.109	18.009	64.4	-143.9	242.4	26.3	27.3	25.5	0.60
494	80	404		101	2500		5	0	4	5	2.6	59.122	1.597	1318.0	1319.0	1310.0	1310.0	1310.0	1310.0	0.64
495	80	404		129	2573		2	1	5	10	0.9	-71.988	20.203	-42.9	98.8	5.0	0.8	0.9	0.0	0.02
496	80	404		352	4163		6	2	2	10	1.3	-70.723	19.657	-2.9	38.4	28.8	1.1	1.6	3.2	0.16
497	80	404		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
498	80	404		827	2909		5	1	4	7	1.3	-70.280	20.113	45.6	88.9	11.9	41.0	71.3	127.0	0.90
499	80	404		842	3058		7	2	1	10	0.9	-70.402	18.796	32.3	-56.8	99.0	3.8	5.1	4.3	0.19
500	80	404		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00

DR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
501	80	404	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
502	80	404	1339	860	5	1	4	5	1.3	-70.791	20.607	-10.3	143.5	52.1	27.4	39.0	52.3	1.05
503	80	405	140	3534	2	1	5	10	1.1	-70.019	19.775	74.2	51.5	5.0	0.1	0.1	0.0	0.00
504	80	405	1331	3160	4	1	4	10	0.6	-70.735	19.883	-4.2	63.4	30.5	7.5	3.1	6.6	0.11
505	80	405	1535	2455	4	1	4	10	0.6	-70.414	18.659	30.9	-72.0	109.4	7.9	4.5	2.1	0.05
506	80	405	1627	3434	6	1	2	10	1.0	-71.296	19.155	-65.7	-17.1	57.9	12.9	7.8	13.1	0.45
507	80	405	1901	3005	3	1	5	10	0.6	-70.696	19.799	0.0	53.2	24.7	0.1	0.1	0.1	0.00
508	80	405	2010	440	5	1	3	10	0.9	-70.924	19.005	-24.9	-33.7	5.0	1.3	1.9	9.0	0.14
509	80	405	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
510	80	406	412	3279	3	0	6	10	2.2	-70.678	19.139	2.0	-18.8	5.0	0.1	0.1	0.0	0.01
511	80	406	653	5297	5	1	3	10	1.6	-70.745	19.884	-5.4	63.5	31.2	6.2	9.6	9.4	0.33
512	80	406	942	5562	6	1	2	10	0.7	-70.687	19.845	1.1	59.2	26.9	2.9	4.1	4.3	0.16
513	80	406	1026	5618	6	1	2	10	1.0	-70.643	19.909	5.9	66.2	33.8	10.4	12.9	15.2	0.51
514	80	406	1514	1177	3	3	4	10	-0.3	-70.711	19.160	-1.6	-16.6	18.7	1.4	1.6	3.0	0.11
515	80	406	1607	2838	5	2	3	3	1.1	0.000	0.000	1210.6	277.4	1310.0	1310.0	1310.0	1310.0	541.13
516	80	406	1743	3472	5	2	3	10	1.2	-70.252	19.471	48.6	17.8	24.2	6.8	3.2	16.3	0.29
517	80	406	2124	4598	4	3	3	10	-0.5	-70.858	19.004	-17.7	-33.8	5.0	2.2	3.7	0.0	0.35
518	80	406	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
519	80	407	126	2878	6	1	3	10	3.1	-69.436	18.926	247.4	-42.4	182.7	36.9	24.7	46.4	0.38
520	80	407	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
521	80	407	439	5904	3	1	5	10	0.9	-69.227	19.213	160.9	-10.7	5.0	13.9	14.1	0.0	0.51
522	80	407	405	4089	5	1	4	10	2.8	-68.946	18.181	191.6	-124.9	85.7	18.8	19.2	43.9	0.22
523	80	407	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
524	80	407	716	4186	2	1	5	10	0.5	-70.646	19.368	5.5	6.4	5.0	1.3	0.2	0.0	0.02
525	80	407	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
526	80	408	49	5605	2	1	5	10	0.6	-70.182	19.668	56.3	39.7	5.0	0.2	0.1	0.0	0.00
527	80	408	1556	5811	4	1	7	10	0.0	-70.741	19.297	-4.9	-1.4	5.2	0.2	0.3	0.6	0.04
528	80	408	1600	613	5	1	7	10	0.3	-70.758	19.302	-6.7	-9.9	3.1	0.5	0.5	0.5	0.12
529	80	408	1607	1676	4	2	3	10	0.3	-70.655	19.763	4.5	50.1	31.7	2.2	2.1	2.1	0.10
530	80	408	1732	500	2	1	5	10	1.8	-69.705	18.012	108.5	-143.5	5.0	1.0	1.7	0.0	0.02
531	80	408	1800	1590	4	1	4	10	0.9	-70.245	18.933	49.5	-41.7	17.4	8.3	6.6	14.7	0.27
532	80	408	1810	3088	2	1	5	10	0.9	-71.015	19.904	-34.8	65.7	5.0	0.1	0.1	0.0	0.00
533	80	408	1917	5899	5	1	4	7	-0.1	-70.687	19.140	1.0	-18.7	8.2	2.1	1.3	9.2	0.17
534	80	409	1940	1917	6	1	2	10	0.3	-70.761	19.789	-7.1	53.0	26.5	4.9	7.9	6.1	0.30
535	80	408	2039	5476	6	1	2	10	0.2	-70.732	18.961	-3.9	-38.6	29.6	4.4	6.8	9.3	0.39
536	80	410	1322	4854	3	0	5	10	0.5	-70.798	18.878	-11.1	-47.7	5.0	0.0	0.2	0.0	0.00
537	80	410	1421	101	5	2	7	10	0.0	-70.750	19.303	-6.9	-0.7	2.4	0.5	0.5	0.6	0.17
538	80	410	1440	3115	3	0	5	10	0.9	-70.744	19.498	-5.2	10.9	5.0	0.0	0.0	0.0	0.00
539	80	410	1456	1428	4	1	4	10	0.7	-71.460	18.479	-83.6	-91.8	5.0	12.0	13.8	0.0	0.33
540	80	411	215	5044	4	2	4	10	1.1	-70.037	18.326	72.2	-108.8	5.0	3.7	2.6	0.0	0.10
541	80	411	414	4429	2	1	5	10	0.6	-70.579	19.719	12.8	45.3	5.0	0.1	0.1	0.0	0.00
542	80	411	1011	2994	2	1	5	10	0.9	-71.163	19.641	-51.0	36.6	5.0	0.1	0.1	0.0	0.00
543	80	411	2040	5036	3	0	7	10	-0.4	-70.735	19.292	-4.3	-2.0	5.0	0.0	0.0	0.0	0.00
544	80	411	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
545	80	412	23	500	7	0	3	6	2.8	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	2.49
546	80	412	0	0	3	1	5	10	0.9	-71.116	19.660	-46.0	38.8	22.9	0.1	0.1	0.2	0.00
547	80	412	34	4375	3	1	5	10	0.7	-71.069	19.597	-40.7	39.6	5.0	1.4	0.8	0.0	0.07
548	80	412	41	1673	4	2	3	10	1.0	-71.102	19.640	-44.4	36.5	24.4	2.2	2.1	3.8	0.13
549	80	412	123	3225	4	1	4	10	2.0	-71.071	19.623	-41.1	34.7	24.3	3.6	3.8	7.5	0.19
550	80	412	216	3979	4	1	4	10	1.8	-71.117	19.609	-46.0	33.1	5.0	17.2	11.8	0.0	0.92

DR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
551	80	412	320	369	2	1	5	5	0.6	0.000	0.000	-23.1	13.7	5.0	140.1	50.4	0.0	2.61
552	80	412	350	3231	4	2	4	10	0.4	-71.066	19.613	-40.5	33.5	29.2	1.7	1.5	2.9	0.11
553	80	412	539	5361	4	1	4	10	0.9	-71.083	19.627	-42.4	35.1	18.4	7.1	7.1	18.9	0.41
554	80	412	1104	2831	4	1	4	10	1.3	-71.052	19.457	-38.9	16.3	49.8	4.6	9.7	6.7	0.16
555	80	412	1111	3094	3	1	4	10	1.1	-71.014	19.451	-34.7	15.7	44.1	0.1	0.2	0.3	0.00
556	80	412	1502	2124	3	1	5	10	0.9	-71.056	19.580	-39.4	29.9	5.0	6.2	3.7	0.0	0.33
557	80	412	1836	5161	2	1	5	10	1.1	-70.901	19.588	-22.4	30.8	5.0	0.1	0.0	0.0	0.00
558	80	413	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
559	80	413	1433	2232	5	2	4	10	1.0	-71.004	19.587	-42.5	30.6	18.7	3.4	2.7	9.7	0.25
560	80	413	1445	948	3	1	4	5	1.8	0.000	0.000	30.7	-84.0	5.4	194.2	200.1	464.7	2.36
561	80	414	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
562	80	414	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
563	80	414	607	3284	3	1	5	10	1.1	-69.953	19.004	81.3	-33.8	5.0	24.0	17.1	0.0	0.69
564	80	414	655	5543	5	1	4	10	2.5	-68.319	19.429	260.3	13.2	117.8	59.5	39.7	150.0	0.58
565	80	414	1357	1915	4	0	7	10	1.3	-70.641	19.278	6.0	-3.5	7.4	0.1	0.0	0.0	0.00
566	80	415	557	2352	2	1	5	10	0.9	-71.164	19.652	-51.1	37.8	5.0	0.3	0.3	0.0	0.01
567	80	415	1047	4113	4	0	4	10	2.5	-70.560	19.148	15.0	-17.8	24.0	0.1	0.0	0.1	0.00
568	80	415	0	0	2	1	5	1	0.9	0.000	0.000	-31.0	-8.6	5.0	0.0	0.0	0.0	4.28
569	80	415	1404	1850	2	1	5	1	1.1	0.000	0.000	0.0	0.0	5.0	0.0	0.0	0.0	16.95
570	80	415	1710	119	3	1	5	10	-0.5	-70.657	19.373	4.3	7.0	19.1	0.1	0.3	0.1	0.00
571	80	415	1726	76	3	0	5	10	2.5	-70.796	19.588	-10.9	30.8	5.0	0.2	0.1	0.0	0.01
572	80	415	1800	2292	3	0	5	10	2.5	-70.723	19.623	-2.9	34.6	5.0	0.1	0.1	0.0	0.00
573	80	416	108	479	4	1	5	10	1.8	-69.651	19.383	114.4	8.1	72.4	11.3	6.3	17.7	0.21
574	80	416	427	4142	3	2	4	10	0.6	-70.571	19.536	13.7	25.0	23.2	3.4	1.3	3.6	0.13
575	80	416	540	3480	2	1	5	10	0.0	-71.255	19.686	-61.2	41.6	5.0	0.1	0.1	0.0	0.00
576	80	416	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
577	80	416	659	4678	2	1	5	10	-0.1	-71.160	19.650	-50.7	37.7	5.0	0.1	0.1	0.0	0.00
578	80	416	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
579	80	416	1237	5093	3	0	6	10	2.0	-70.889	19.432	-21.1	13.6	5.0	0.0	0.0	0.0	0.00
580	80	416	1239	0	5	0	6	10	3.0	-70.698	21.903	9.6	286.8	993.3	88.6	956.3	1310.0	0.23
581	80	416	1424	3992	5	1	7	10	0.3	-70.757	19.303	-6.6	-0.8	3.0	0.4	0.5	0.5	0.11
582	80	416	1913	262	2	1	5	10	0.5	-71.090	19.575	-43.0	29.4	5.0	0.1	0.1	0.0	0.00
583	80	417	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
584	80	417	511	1313	5	0	4	10	2.1	-70.815	19.602	-12.9	32.4	5.0	6.2	4.0	0.0	0.55
585	80	417	1100	3437	2	1	5	1	1.9	0.000	0.000	-7.6	-4.2	5.0	0.0	0.0	0.0	40.79
586	80	417	1425	4664	2	1	5	10	1.6	-71.507	19.615	-88.8	33.8	5.0	0.2	0.1	0.0	0.00
587	80	417	1446	2764	4	1	7	10	0.3	-70.752	19.298	-6.1	-1.2	3.4	0.2	0.2	1.0	0.04
588	80	417	2151	85	5	1	3	10	1.1	-70.553	18.957	15.7	-39.0	90.9	8.5	6.4	11.5	0.29
589	80	417	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
590	80	418	1243	1496	3	0	5	10	2.4	-70.769	19.498	-8.0	19.9	5.0	0.0	0.0	0.0	0.00
591	80	418	1553	3485	4	1	4	10	1.1	-70.421	18.846	30.1	-51.2	24.5	4.7	4.3	4.5	0.17
592	80	418	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
593	80	418	1852	839	3	1	5	10	1.4	0.000	0.000	-146.4	154.5	5.0	111.8	86.7	0.0	2.09
594	80	418	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
595	80	419	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
596	80	419	313	1400	4	1	4	10	1.8	-68.899	18.735	196.9	-63.6	169.9	37.4	25.4	46.6	0.38
597	80	419	517	499	4	1	3	10	0.3	-70.608	19.336	9.7	2.9	18.3	2.3	1.0	1.7	0.08
598	80	419	527	3312	4	1	4	10	0.3	-70.559	19.358	15.1	5.3	8.5	18.1	6.1	20.9	0.51
599	80	419	802	1825	3	1	5	10	0.0	-70.598	19.327	10.8	1.9	18.2	0.1	0.1	0.1	0.00
600	80	419	1438	3125	5	0	7	10	0.8	-70.738	19.354	-4.6	4.9	10.2	1.3	2.8	2.2	0.17

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
601	80	419		1550	1777		4	1	4	10	1.7	-70.313	19.712	41.9	44.5	5.0	7.9	4.2	0.0	0.27
602	80	419		1603	5355		4	0	7	10	0.6	-70.736	19.295	-4.3	-1.6	5.5	0.0	0.0	0.0	0.00
603	80	419		1631	1085		2	1	5	10	0.8	-70.142	18.958	60.7	-38.9	5.0	0.2	0.1	0.0	0.00
604	80	419		2123	5187		5	0	3	10	1.8	-69.755	18.999	103.0	-35.5	99.4	122.4	45.6	92.5	0.40
605	80	419		2150	3032		4	1	4	10	0.9	-70.463	18.729	25.6	-64.3	109.1	5.0	2.9	1.4	0.03
606	80	419		2205	799		3	1	5	10	1.4	-70.940	19.187	-26.6	-13.6	108.3	1.2	0.5	0.4	0.00
607	80	419		2258	3764		5	1	2	10	1.6	-69.404	18.798	132.7	-56.6	61.6	15.5	8.8	28.4	0.25
608	80	420		0	0		0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
609	80	420		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
610	80	420		2203	4618		2	1	5	1	1.7	0.000	0.000	-7.6	-4.2	5.0	0.0	0.0	0.0	55.20
611	80	422		1429	3304		4	1	7	10	0.0	-70.732	19.289	-3.9	-2.3	5.0	0.8	0.8	2.0	0.12
612	80	422		1628	3113		3	1	7	10	0.1	-70.760	19.294	-7.0	-1.8	6.2	0.0	0.0	0.0	0.00
613	80	422		1755	5523		3	1	4	10	1.5	0.000	0.000	202.2	-3.3	5.0	77.5	123.7	0.0	2.41
614	80	423		7	4416		4	2	2	10	0.8	-70.865	19.585	-18.5	30.5	29.3	2.0	4.6	4.1	0.17
615	80	423		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
616	80	423		1214	3500		4	0	6	10	2.0	0.000	0.000	1310.0	-1123.2	1265.3	1310.0	1310.0	0.0	11.49
617	80	423		1635	2368		3	0	6	10	2.0	-71.238	19.493	-59.3	20.3	5.0	0.6	0.1	0.0	0.00
618	80	423		0	0		0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
619	80	423		1740	5265		3	1	5	10	1.2	0.000	0.000	-198.4	1.6	5.0	139.2	137.2	0.0	4.36
620	80	423		1947	1050		4	1	5	10	0.6	-70.197	19.577	54.7	29.5	17.0	6.5	2.9	5.7	0.22
621	80	423		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
622	80	424		203	5092		3	0	6	10	2.0	-70.995	19.446	-32.7	15.0	5.0	0.0	0.0	0.0	0.00
623	80	424		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
624	80	424		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
625	80	424		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
626	80	424		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
627	80	424		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
628	80	424		1207	577		5	1	4	6	1.7	-71.719	18.327	-112.0	-108.7	22.6	32.0	30.5	13.7	0.98
629	80	424		1313	3360		5	1	4	10	1.7	-69.432	18.902	138.5	-45.1	142.2	8.3	10.7	9.9	0.21
630	80	424		1508	1327		3	1	5	8	1.3	0.000	0.000	-142.8	-98.2	32.8	360.8	582.2	213.6	9.73
631	80	424		1544	2285		5	2	7	10	0.8	-70.756	19.304	-6.5	-0.6	3.1	0.3	0.2	0.2	0.07
632	80	424		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
633	80	424		1555	5101		4	1	4	10	2.1	-70.460	19.499	25.9	21.0	27.1	3.0	1.5	7.2	0.15
634	80	424		1733	1066		6	1	2	10	0.7	-70.406	19.030	31.8	-30.9	79.8	3.4	4.4	6.1	0.20
635	80	425		1340	3826		4	0	6	10	1.4	-70.848	19.461	-16.6	16.8	5.0	0.4	0.2	0.0	0.06
636	80	425		1347	1091		6	0	4	10	2.7	-71.561	19.574	-94.7	29.2	38.4	42.7	12.0	5.8	0.55
637	80	425		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
638	80	425		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
639	80	425		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
640	80	425		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
641	80	425		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
642	80	425		1758	2083		3	0	5	10	0.8	-70.271	19.011	46.6	-33.0	5.0	0.2	0.2	0.0	0.00
643	80	425		1908	779		3	1	5	10	1.3	-70.544	20.302	15.7	199.3	5.0	36.9	33.3	0.0	1.14
644	80	425		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
645	80	425		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
646	80	425		2332	1595		2	1	5	1	0.6	0.000	0.000	35.6	17.2	5.0	0.0	0.0	0.0	13.74
647	80	425		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
648	80	426		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
649	80	426		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
650	80	426		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.03

DR EQFILE NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
651	80	426		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
652	80	426		1600		4562	3	0	7	7	0.4	-70.744	19.272	-5.2	-4.2	5.0	0.6	1.5	0.0	0.04
653	80	426		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
654	80	426		1707		1558	4	0	6	10	0.9	-71.801	20.077	-121.0	84.8	217.1	35.4	25.8	65.9	0.05
655	80	426		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
656	80	426		2339		2313	5	1	5	6	-0.3	-72.916	19.476	-243.0	18.4	62.8	26.6	28.2	57.3	0.56
657	80	427		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
658	80	427		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
659	80	427		144		1301	2	1	5	1	-0.5	0.000	0.000	35.6	17.2	5.0	0.0	0.0	0.0	5.05
660	80	427		311		143	4	1	4	10	0.8	-70.523	19.654	19.0	38.1	17.1	3.3	3.9	20.0	0.28
661	80	427		1431		369	4	0	7	10	1.7	-70.726	19.293	-3.2	-1.9	5.0	0.1	0.1	0.0	0.02
662	80	427		1935		1000	4	0	5	4	0.9	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	1310.00
663	80	427		2035		3335	5	1	3	10	0.8	-70.684	19.791	1.4	53.2	27.6	1.2	3.1	4.2	0.15
664	80	427		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
665	80	428		141		5000	5	0	3	5	1.8	5.000	2.414	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.75
666	80	428		146		5082	3	1	4	10	0.9	-70.857	19.610	-17.6	33.2	11.7	0.0	0.1	0.1	0.00
667	80	428		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
668	80	429		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
669	80	428		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
670	80	428		1004		1639	5	1	4	10	1.5	-73.277	18.406	-282.6	-99.9	5.0	16.1	27.2	0.0	0.49
671	80	428		1020		4696	6	1	4	10	1.4	-69.579	18.932	122.4	-41.7	116.6	6.0	5.3	6.6	0.17
672	80	428		1612		978	5	1	3	10	1.1	-70.575	19.534	13.3	24.8	51.4	4.9	6.5	15.9	0.49
673	80	428		1704		2694	5	1	6	10	0.9	-70.747	19.647	-5.5	37.3	26.0	0.7	1.4	2.5	0.09
674	80	428		1752		5349	5	2	5	10	2.5	-70.100	19.664	65.3	39.2	15.2	5.8	4.0	12.3	0.27
675	80	428		1922		4396	5	1	3	10	0.8	-70.672	19.732	2.6	52.2	28.2	1.9	6.2	8.3	0.25
676	80	429		540		3318	2	1	5	10	0.3	-70.608	19.625	9.7	34.9	5.0	0.1	0.0	0.0	0.00
677	80	429		825		4792	4	0	5	10	0.9	-70.892	20.074	-21.4	84.6	4.9	9.7	27.4	0.0	0.31
678	80	429		1019		5763	6	1	2	10	0.8	-70.447	18.941	27.3	-40.8	62.2	5.0	8.2	8.1	0.34
679	80	429		1048		1658	5	2	3	10	1.6	-70.624	19.053	8.0	-28.3	22.7	0.4	0.9	0.9	0.07
680	80	429		1311		3292	5	0	7	10	0.8	-70.728	19.301	-3.4	-0.9	1.8	1.8	2.1	2.0	0.56
681	80	429		0		0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
682	80	429		1621		5573	4	1	3	10	1.7	-70.344	18.872	38.6	-48.4	10.7	19.2	16.9	74.1	0.69
683	80	429		1649		3578	5	2	5	10	0.6	-70.367	19.433	36.1	13.7	27.0	2.0	1.2	2.7	0.12
684	80	429		1912		2005	3	0	5	10	2.2	-70.735	19.194	-4.3	-12.8	5.0	0.0	0.0	0.0	0.00
685	80	429		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
686	80	430		39		3000	3	0	5	10	0.6	-70.472	19.472	24.6	17.9	5.0	0.0	0.1	0.0	0.00
687	80	430		134		1500	5	0	3	7	2.4	-41.454	18.131	1310.0	-130.4	1090.9	1310.0	1310.0	1310.0	0.69
688	80	430		311		1169	5	0	3	10	0.6	-70.434	19.895	28.7	64.8	40.6	1.9	3.5	4.5	0.04
689	80	430		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
690	80	430		1722		735	6	2	2	10	1.3	-69.145	18.699	169.8	-68.5	150.2	9.9	10.0	13.9	0.27
691	80	430		1722		5209	6	3	2	10	1.3	-69.641	19.152	115.6	-16.3	83.4	10.3	9.7	14.6	0.45
692	80	430		1825		1492	3	0	5	10	0.3	-70.476	19.494	24.2	20.4	5.0	0.1	0.4	0.9	0.03
693	80	430		2057		4273	4	0	3	10	0.0	-71.129	19.597	-46.4	21.8	73.3	0.6	0.2	0.7	0.03
694	80	430		2140		1332	5	0	3	10	0.2	-70.959	19.210	63.6	-11.0	59.8	26.0	11.4	15.7	0.23
695	80	501		632		3304	3	0	4	10	0.3	-70.698	19.179	0.7	-14.5	5.0	0.3	0.2	0.0	0.02
696	80	501		653		109	4	0	4	10	0.0	-70.791	19.152	-0.5	-16.3	13.3	0.0	0.0	0.1	0.00
697	80	501		1134		5388	3	0	5	10	1.1	-70.343	19.342	38.7	3.6	5.0	0.2	0.2	0.0	0.00
698	80	501		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
699	80	501		1654		2016	5	0	3	10	1.4	-70.401	20.083	32.3	85.6	40.3	2.4	5.5	0.6	0.09
700	80	501		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00

DR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
701	80	501	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
702	80	501	2313	2845	5	3	2	10	2.2	-68.782	18.764	209.6	-60.4	157.6	16.5	23.0	25.2	0.36
703	80	502	26	429	2	1	5	10	-0.3	0.000	0.000	-22.4	12.6	5.0	197.9	72.5	0.0	4.82
704	80	502	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
705	80	502	1848	4503	5	0	5	10	2.1	-70.301	19.023	43.3	-31.7	6.1	11.0	13.9	5.1	0.29
706	80	502	1907	415	6	2	2	10	0.9	-70.067	19.516	69.0	22.9	18.8	2.7	1.4	1.2	0.12
707	80	502	1915	4950	6	3	6	10	3.4	-70.422	17.766	30.0	-170.7	404.5	17.4	19.5	10.2	0.26
708	80	502	1923	1034	5	1	3	10	0.9	-69.448	19.470	136.7	17.7	81.7	9.8	9.8	11.6	0.26
709	80	502	1950	3500	4	0	4	10	0.6	-37.091	66.647	1310.0	1310.0	1310.0	1310.0	1310.0	0.0	0.19
710	80	502	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
711	80	502	2311	3009	4	0	4	10	3.9	-89.296	-0.994	1310.0	1310.0	1310.0	245.0	308.8	0.0	0.06
712	80	503	53	901	6	1	3	10	1.2	-70.404	18.897	32.0	-55.6	70.4	7.5	11.5	13.4	0.44
713	80	503	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
714	80	503	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
715	80	503	258	2037	6	2	2	10	1.5	-70.649	19.173	5.1	-15.1	22.6	1.0	1.4	2.1	0.19
716	80	503	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
717	80	503	942	5441	3	0	6	10	2.6	-70.836	19.227	-15.3	-9.2	5.0	0.0	0.1	0.0	0.00
718	80	503	1059	3295	2	2	5	2	1.0	0.000	0.000	-31.0	-8.6	5.0	1310.0	1310.0	0.0	4.51
719	80	503	1355	2799	6	0	2	10	2.1	-68.967	19.438	189.3	14.2	105.7	118.1	8.2	51.7	0.17
720	80	503	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
721	80	503	1915	3424	5	2	2	10	1.5	-70.343	19.491	38.7	20.1	33.3	3.2	2.4	4.3	0.21
722	80	503	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
723	80	503	2109	1129	6	2	2	10	0.7	-70.396	19.146	32.9	-18.1	33.7	2.5	2.5	5.1	0.21
724	80	503	2214	3513	6	1	2	10	1.3	-70.426	18.939	29.6	-41.0	67.1	5.6	8.1	8.8	0.35
725	80	504	14	5532	4	1	3	10	0.8	-70.939	19.560	-26.6	27.7	13.9	4.3	5.8	15.3	0.33
726	80	504	204	217	3	0	6	10	2.1	-70.763	19.168	-7.2	-15.6	5.0	0.1	0.0	0.0	0.00
727	80	504	453	2373	2	1	5	10	1.0	-70.001	19.395	76.1	9.4	5.0	0.1	0.1	0.0	0.00
728	80	504	659	1545	3	1	4	10	0.9	-70.330	19.573	40.1	29.1	199.7	1.2	0.6	0.6	0.01
729	80	504	832	3555	2	1	5	10	0.9	-70.586	19.799	12.1	54.1	5.0	0.0	0.1	0.0	0.00
730	80	504	923	1207	3	1	5	10	1.1	-70.376	20.168	35.1	94.9	41.3	0.3	0.1	0.1	0.00
731	80	504	1014	4401	4	1	3	10	0.9	-70.121	18.570	63.0	-81.0	5.0	3.8	5.6	0.0	0.21
732	80	504	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
733	80	504	1459	153	3	1	7	10	0.9	-70.735	19.251	-4.2	-6.4	5.2	0.0	0.0	0.0	0.00
734	80	504	1605	444	3	1	7	10	0.5	-70.723	19.291	-2.9	-3.2	5.9	0.0	0.1	0.0	0.00
735	80	505	1218	512	6	1	3	10	1.0	-70.251	19.282	48.8	-3.1	71.8	12.6	8.8	16.7	0.60
736	80	505	1227	5772	3	1	4	5	1.5	0.000	0.000	-20.4	5.1	7.0	121.2	39.7	981.6	13.03
737	80	505	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
738	80	505	0	0	0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
739	80	505	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
740	80	505	2123	279	4	2	4	10	0.6	-70.153	19.661	59.5	38.8	20.3	2.3	1.4	1.1	0.09
741	80	505	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
742	80	505	2244	3885	5	1	3	10	1.1	-70.445	19.090	27.5	-24.3	61.2	5.4	3.7	5.0	0.20
743	80	506	916	1275	4	0	6	10	2.8	-70.930	19.481	-25.5	18.9	51.3	0.3	0.4	2.3	0.00
744	80	506	936	4593	4	1	4	10	0.6	-70.614	19.429	9.0	13.0	48.3	5.4	12.1	4.7	0.06
745	80	506	1336	4489	4	1	7	10	1.0	-70.716	19.267	-2.2	-4.7	5.5	0.1	0.2	0.1	0.00
746	80	506	1554	1625	4	1	4	10	1.7	-70.260	20.353	47.7	115.4	5.0	3.6	4.9	0.0	0.17
747	80	506	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
748	80	507	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
749	80	508	30	2406	4	1	4	10	1.6	-69.488	19.401	132.3	10.1	69.8	4.3	4.1	5.0	0.11
750	80	508	356	730	4	1	4	10	1.8	-68.979	18.672	188.0	-70.5	189.3	33.9	45.5	39.7	0.61

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
751	80	508		922	4411		4	2	3	10	0.6	-70.736	19.058	-4.4	-26.7	20.9	1.2	1.2	4.3	0.11
752	80	508		1209	2203		4	1	4	5	2.6	-72.982	19.917	-250.2	67.2	45.6	129.5	105.1	375.9	1.71
753	80	509		1230	2926		3	2	4	10	0.6	-70.729	19.080	-3.5	-25.4	22.8	1.4	1.7	3.5	0.10
754	80	508		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
755	80	509		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
756	80	508		1603	2000		5	0	4	3	1.4	0.000	0.000	1310.0	599.3	1310.0	1310.0	1310.0	1310.0	7.12
757	80	508		1752	3972		4	1	7	10	0.8	-70.746	19.319	-5.4	1.0	2.1	0.2	0.4	0.2	0.05
758	80	508		2046	4413		3	2	4	10	0.5	-70.457	19.209	26.2	-11.2	5.0	5.5	2.1	0.0	0.29
759	80	509		509	1143		3	1	5	10	1.5	-70.883	19.619	-20.4	34.2	5.0	7.3	4.5	0.0	0.57
760	80	509		533	3124		2	2	5	2	0.7	0.000	0.000	0.0	0.0	5.0	1310.0	1310.0	0.0	7.50
761	80	509		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
762	80	509		635	3620		6	2	3	10	0.8	-70.314	19.236	41.9	-8.2	23.3	3.1	1.6	4.1	0.17
763	80	509		1044	2497		3	1	5	8	0.5	0.000	0.000	104.7	-62.7	68.7	1310.0	1310.0	1310.0	13.93
764	80	509		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
765	80	509		1139	2102		6	1	3	10	1.5	-70.977	19.667	-30.7	39.6	16.5	8.7	9.6	11.1	0.63
766	80	509		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
767	80	509		1344	5575		2	2	5	10	0.6	-70.936	19.531	-26.2	24.5	5.0	9.8	4.3	0.0	0.16
768	80	509		1409	5089		5	1	3	10	1.5	-70.331	19.951	40.0	70.9	5.0	11.7	16.5	0.0	0.78
769	80	509		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
770	80	509		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
771	80	509		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
772	80	509		1610	4705		4	2	3	10	1.4	-70.686	19.798	1.1	54.1	28.4	5.4	4.8	5.6	0.25
773	80	509		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
774	80	509		1714	1254		5	1	4	10	0.3	-70.348	19.464	38.1	17.1	40.3	3.0	1.9	4.6	0.15
775	80	509		1731	5043		6	1	2	10	1.8	-70.149	19.452	59.9	15.7	19.1	12.2	3.8	6.3	0.35
776	80	509		1908	2825		5	1	3	10	0.6	-70.197	18.915	54.6	-43.6	13.7	5.4	6.0	27.5	0.29
777	80	509		1949	5370		2	1	5	10	0.8	-71.094	19.506	-43.6	21.7	5.0	0.4	0.1	0.0	0.00
778	80	509		2200	3178		3	1	5	10	1.1	-69.867	19.632	90.8	35.7	18.6	0.0	0.0	0.0	0.00
779	80	509		2259	2097		4	1	4	10	1.3	-70.291	19.471	44.4	17.8	31.7	11.8	6.4	12.4	0.48
780	80	509		2302	5768		5	0	4	10	1.7	-70.732	19.802	-3.9	54.4	24.2	0.4	1.5	1.3	0.04
781	80	510		14	2401		3	1	4	10	1.8	0.000	0.000	202.8	-172.8	5.0	164.4	194.3	0.0	3.40
782	80	510		109	1287		6	1	3	10	1.5	-69.885	19.310	88.9	0.0	19.0	2.9	1.0	0.8	0.08
783	80	510		219	1213		2	2	5	2	0.7	0.000	0.000	35.6	17.2	5.0	1310.0	1310.0	0.0	6.09
784	80	510		440	646		6	2	2	10	1.5	-69.527	18.792	128.0	-57.3	102.2	6.1	6.3	7.7	0.19
785	80	510		441	5893		5	2	3	6	1.5	-71.443	18.373	-81.8	-103.6	39.3	36.9	30.9	223.2	1.54
786	80	510		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
787	80	510		752	2633		4	2	4	10	0.6	-70.507	19.659	20.7	38.6	22.1	1.5	2.1	3.5	0.11
788	80	510		814	3141		6	1	2	10	1.1	-70.669	19.801	3.0	54.3	28.3	0.7	2.7	2.9	0.10
789	80	510		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
790	80	510		929	5991		3	0	6	10	0.9	-70.865	19.031	-18.4	-30.8	5.0	0.0	0.0	0.0	0.00
791	80	510		1010	5955		4	3	3	10	0.2	-70.738	19.073	-4.6	-26.2	20.8	0.6	0.8	1.7	0.07
792	80	510		1238	3641		4	1	4	6	2.0	-67.586	19.161	340.5	-16.4	45.9	29.0	25.7	117.7	0.30
793	80	510		1250	736		4	2	7	10	0.4	-70.751	19.307	-7.0	-9.2	2.8	0.8	1.7	1.9	0.21
794	80	510		1543	5142		4	1	7	10	0.6	-70.743	19.393	-5.1	-0.1	2.6	1.3	2.6	1.2	0.35
795	80	510		1936	3472		2	1	5	1	0.9	0.000	0.000	35.6	17.2	5.0	0.0	0.0	0.0	6.19
796	80	510		2243	2790		2	2	5	10	0.6	-71.121	19.590	-46.5	21.0	5.0	32.4	12.3	0.0	1.13
797	80	512		1204	2394		5	1	3	10	2.3	-70.956	19.556	-28.5	27.2	37.4	2.9	2.1	5.1	0.22
798	80	512		1551	2177		3	2	4	10	1.1	-71.289	19.638	-64.8	36.3	40.3	7.8	3.5	9.1	0.23
799	80	512		1738	3780		4	1	7	10	0.7	-70.740	19.305	-4.8	-0.6	2.9	0.2	0.4	0.2	0.05
800	80	513		339	3782		4	1	4	10	1.6	-69.990	19.567	77.4	28.4	32.8	7.7	4.6	6.8	0.24

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
801	80	513		908	5703		6	2	2	10	1.4	-70.242	18.977	49.8	-36.8	78.6	3.0	3.5	3.4	0.15
802	80	513		1315	2284		4	2	7	10	0.6	-70.757	19.311	-6.6	0.1	2.6	0.3	0.5	0.3	0.07
803	80	513		1333	5465		2	1	5	1	1.0	0.000	0.000	-17.1	35.7	5.0	0.0	0.0	0.0	13.83
804	80	513		1423	1592		4	1	4	10	1.1	-70.693	19.793	0.4	53.5	30.5	0.1	0.3	0.4	0.01
805	80	513		1431	1469		3	0	5	0	0.9	-69.369	19.958	145.4	71.7	5.0	43.8	13.8	0.0	0.30
806	80	513		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.30
807	80	513		1833	727		6	2	2	10	1.2	-71.054	19.054	-40.3	-28.2	82.1	5.3	4.5	6.5	0.28
808	80	513		2240	3909		5	1	3	10	1.7	-70.498	20.002	21.8	76.6	21.0	4.7	10.2	42.8	0.43
809	80	513		2336	547		2	1	5	1	1.5	0.000	0.000	0.0	0.0	5.0	0.0	0.0	0.0	12.64
810	80	514		240	1796		2	1	5	1	0.3	0.000	0.000	0.0	0.0	5.0	0.0	0.0	0.0	8.12
811	80	514		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
812	80	514		535	2021		6	2	3	10	1.5	0.000	0.000	10.4	42.7	62.6	25.2	47.5	59.7	2.45
813	80	514		538	427		4	1	4	10	0.9	-70.670	19.830	2.9	57.6	31.2	10.5	11.4	11.0	0.42
814	80	514		545	2838		2	1	5	1	0.2	0.000	0.000	-17.1	35.7	5.0	0.0	0.0	0.0	6.96
815	80	514		722	136		5	2	2	10	1.5	-70.673	19.791	2.6	53.2	26.1	0.8	2.0	2.6	0.11
816	80	514		1321	1154		4	1	7	10	0.6	-70.757	19.310	-6.7	0.0	2.7	0.1	0.3	0.1	0.04
817	80	514		1503	4933		5	1	3	10	0.8	-70.692	19.837	1.5	58.3	32.0	1.5	3.9	5.0	0.18
818	80	514		1512	1133		4	2	0	10	1.7	-70.675	19.847	2.4	59.5	32.0	2.9	4.3	3.9	0.16
819	80	515		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
820	80	515		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
821	80	515		1859	2051		4	3	3	10	0.7	-70.227	18.912	51.4	-43.9	28.1	0.7	1.0	2.0	0.05
822	80	515		2000	1200		5	2	7	10	0.5	-70.740	19.299	-4.7	-1.3	1.8	0.9	1.0	1.0	0.30
823	80	516		456	5897		6	0	6	10	0.3	-71.121	17.818	-46.4	-165.0	349.8	81.3	298.5	566.8	0.40
824	80	516		833	5784		5	2	2	10	0.3	0.000	0.000	-11.1	39.1	5.0	34.6	51.1	0.0	4.32
825	80	516		1346	1109		3	1	7	10	0.5	-70.731	19.247	-3.8	-6.9	3.0	0.0	0.1	0.0	0.00
826	80	516		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
827	80	516		1905	2779		3	0	5	10	0.9	-70.574	19.121	13.4	-20.9	5.0	0.4	0.1	0.0	0.01
828	80	516		2207	1619		2	2	5	9	1.1	0.000	0.000	-7.5	142.2	404.0	1310.0	1310.0	0.0	60.56
829	80	516		2247	2140		3	1	5	10	0.6	-70.448	18.873	27.2	-48.3	96.2	2.2	1.5	0.7	0.01
830	80	517		1215	4266		3	1	5	10	0.9	-70.153	18.857	59.5	-50.0	60.4	0.4	0.5	0.2	0.00
831	80	517		1729	2712		4	1	4	10	1.1	0.000	0.000	-191.6	-34.4	5.0	135.0	117.8	0.0	4.95
832	80	517		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
833	80	517		1829	3289		6	0	7	10	0.1	-70.738	19.302	-4.6	-0.8	2.8	0.4	0.4	0.4	0.11
834	80	517		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
835	80	518		1510	5716		5	0	7	10	0.3	-70.725	19.291	-3.2	-2.1	5.8	0.6	0.7	0.8	0.08
836	80	518		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
837	80	518		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
838	80	529		1420	5840		3	0	5	10	1.8	-70.650	19.473	5.1	18.1	5.0	0.2	0.1	0.0	0.00
839	80	520		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
840	80	520		1548	2792		4	2	3	10	0.7	-70.670	18.715	2.9	-65.8	95.1	28.0	12.6	9.8	0.25
841	80	521		1137	1902		3	1	5	10	1.1	-71.373	19.473	-74.1	18.1	38.2	1.4	1.5	2.7	0.01
842	80	521		1845	3854		6	0	7	10	1.8	-70.736	19.297	-4.4	-1.3	2.6	0.5	0.5	0.4	0.15
843	80	522		444	3074		3	1	4	10	1.9	-70.543	19.561	16.8	27.8	47.4	2.9	3.3	2.4	0.31
844	80	522		1419	4943		5	1	7	10	1.5	-70.756	19.301	-5.6	-0.9	3.0	0.4	0.5	0.4	0.11
845	80	522		2240	4500		4	0	4	3	1.3	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	1310.00
846	80	523		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
847	80	523		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
848	80	523		2248	2694		5	1	3	10	0.9	-70.829	19.474	-14.5	18.1	20.5	2.3	1.3	7.2	0.23
849	80	524		1219	1555		2	1	5	1	0.9	0.000	0.000	-17.1	35.7	5.0	0.0	0.0	0.0	5.71
850	80	524		1324	2970		5	0	7	10	1.6	-70.738	19.301	-4.6	-1.0	2.8	0.6	0.7	0.5	0.18

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
851	80	524		1613	3481		4	0	4	10	1.1	-70.572	19.130	13.7	-19.9	2.2	0.2	0.1	0.1	0.00
852	80	524		1700	4168		3	1	4	5	1.3	-69.570	18.120	123.3	-131.6	60.6	300.0	209.6	237.9	1.55
853	80	525		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
854	80	525		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
855	80	525		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
856	80	526		159	1092		2	1	5	10	1.8	-73.491	18.873	-296.1	-48.3	5.0	1.6	2.4	0.0	0.93
857	80	526		241	944		6	2	3	10	0.9	-70.874	19.251	-19.5	-6.5	26.6	1.0	1.0	1.9	0.14
858	80	526		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
859	80	526		446	5565		2	1	5	1	0.9	0.000	0.000	-17.1	35.7	5.0	0.0	0.0	0.0	7.49
860	80	526		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
861	80	526		729	915		6	2	2	10	1.6	-70.397	18.871	32.8	-48.6	67.2	8.5	6.9	5.5	0.29
862	80	526		939	521		5	2	2	10	0.6	-70.701	19.126	-0.5	-20.3	75.2	3.5	3.8	4.5	0.16
863	80	526		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
864	80	526		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
865	80	526		1641	5500		4	0	6	10	1.8	-97.876	25.789	1310.0	716.6	1310.0	1310.0	242.2	0.0	0.29
866	80	526		1844	3372		3	2	4	10	1.6	-70.365	19.078	36.3	-25.7	110.3	71.1	29.0	23.3	0.52
867	80	526		2007	2783		3	2	3	10	0.9	-70.495	18.503	31.9	-89.2	5.0	19.3	10.3	0.0	0.22
868	80	526		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
869	80	526		2340	5153		4	1	5	10	1.0	-70.698	19.998	-0.2	76.1	20.3	10.4	12.1	5.4	0.39
870	80	526		836	3000		6	1	2	10	1.1	-71.402	16.878	-77.2	-269.0	679.1	132.5	204.1	82.9	1.00
871	80	526		1403	4493		2	1	5	1	0.6	0.000	0.000	-17.1	35.7	5.0	0.0	0.0	0.0	4.85
872	80	526		1848	4000		5	0	6	10	2.9	-70.494	13.200	22.2	-675.8	1151.0	216.2	1310.0	1310.0	0.17
873	80	526		2338	3302		3	2	4	10	0.0	-70.782	19.123	-9.3	-20.6	21.3	1.3	5.0	5.1	0.08
874	80	526		2359	3166		6	4	1	10	1.5	-69.841	18.738	93.7	-63.2	141.7	21.9	15.5	13.8	0.42
875	80	527		211	3310		4	2	3	10	1.7	-71.192	19.887	-54.2	63.9	62.9	18.4	7.5	8.6	0.16
876	80	527		227	416		5	1	3	8	1.1	-70.105	19.356	64.7	5.1	43.7	20.4	9.7	4.2	0.53
877	80	527		352	2426		6	0	2	10	0.6	-70.550	19.089	16.0	-24.4	50.8	4.5	8.5	11.4	0.36
878	80	527		404	3500		5	0	3	7	1.3	-42.774	19.040	1310.0	-29.8	1310.0	1310.0	525.0	1310.9	1.92
879	80	527		559	999		5	1	2	7	1.7	-70.526	18.618	18.7	-76.5	7.9	4.2	5.3	26.8	0.18
880	80	527		1454	500		5	0	6	6	2.4	-81.243	33.833	-1154.7	1310.0	1310.0	1310.0	1310.0	1310.0	1.97
881	80	527		1751	5041		2	1	5	10	0.1	-71.033	19.915	-36.8	67.0	5.0	0.1	0.3	0.0	0.01
882	80	527		1833	2503		5	0	3	10	1.3	-38.088	121.147	1310.0	1310.0	39.1	1310.0	1310.0	0.0	0.52
883	80	528		1401	1632		3	0	7	10	-0.1	-70.759	19.298	-6.9	-1.2	5.0	0.1	0.1	0.0	0.01
884	80	528		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
885	80	528		2002	4900		5	0	6	6	2.0	-66.799	28.149	426.8	977.7	1310.0	1310.0	1310.0	1310.0	1.77
886	80	529		1411	509		4	0	4	10	2.5	-59.520	17.600	1223.7	-189.0	748.7	437.8	95.6	0.0	0.21
887	80	530		424	1511		5	3	2	6	1.3	-70.402	18.615	32.3	-76.9	3.5	12.5	10.6	56.4	0.54
888	80	530		1224	3499		6	0	2	10	1.3	-68.098	18.404	284.5	-100.1	40.1	119.7	67.1	0.0	0.58
889	80	530		1424	39		5	2	2	10	1.1	-70.846	19.370	-16.4	6.7	5.0	8.4	7.1	0.0	1.90
890	80	530		1336	500		4	0	4	3	0.2	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	1310.00
891	80	530		1459	4369		5	0	3	10	3.5	-70.276	19.169	46.0	-15.6	37.6	80.5	6.6	56.5	0.30
892	80	530		1622	5266		6	0	2	10	1.8	-70.725	19.327	-3.1	1.9	6.0	4.7	4.0	9.0	1.02
893	80	531		718	1500		6	0	2	10	2.2	-55.902	17.601	1310.0	-189.0	1095.3	658.0	134.2	0.0	0.35
894	80	531		1257	5000		6	0	2	7	2.1	39.861	2.916	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	0.07
895	80	531		1347	4399		6	0	7	10	1.3	-70.744	19.301	-5.2	-0.3	2.4	0.6	0.5	0.6	0.19
896	80	531		1429	5500		5	0	3	6	1.6	-26.665	12.428	1310.0	-761.1	1310.0	1310.0	1310.0	1310.0	1.16
897	80	531		1432	500		5	0	3	5	0.9	13.419	7.370	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.79
898	80	531		1950	1092		3	0	6	10	2.0	-70.632	19.555	7.0	27.1	5.0	0.0	0.0	0.0	0.00
899	80	601		35	3084		6	2	2	10	1.5	-70.837	19.074	-15.4	-26.1	12.4	5.2	7.6	28.5	0.91
900	80	601		41	4249		6	2	2	10	2.0	-71.961	18.288	-138.4	-113.0	5.0	7.0	5.3	0.0	0.25

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
901	80	6	1	2	50	4000	4	0	4	1	0.6	0.000	0.000	641.9	212.4	5.0	1310.0	1310.0	0.0	401.55
902	80	6	1	14	18	3858	5	4	2	10	2.9	-70.281	18.950	45.5	-39.8	79.1	5.9	3.9	3.8	0.19
903	80	6	1	16	24	4060	5	2	2	10	0.6	-70.820	19.384	-13.6	8.2	37.3	5.9	3.9	10.8	0.46
904	80	6	1	19	25	370	5	0	3	10	0.0	-70.016	19.189	-13.1	-13.4	21.4	0.3	0.5	1.8	0.04
905	80	6	1	20	42	3457	4	3	3	10	1.7	-69.841	19.237	93.7	-8.0	5.0	3.2	4.0	0.0	0.19
906	80	6	2	15	59	153	5	2	2	10	1.5	-70.996	18.671	-32.8	-70.6	5.0	16.5	20.5	0.0	1.07
907	80	6	2	17	45	1008	3	0	5	10	0.0	-70.978	19.472	-30.8	17.9	5.0	0.0	0.0	0.0	0.00
908	80	6	3	0	10	1096	5	0	3	10	1.3	-69.834	18.871	94.4	-48.5	118.0	137.3	70.8	136.8	0.44
909	80	6	3	17	21	4000	4	0	4	10	0.5	-55.998	15.688	1310.0	-400.6	970.6	576.3	157.4	0.0	0.21
910	80	6	3	17	36	2500	5	0	3	10	0.4	-63.975	17.037	735.9	-251.4	631.5	1310.0	1310.0	1310.0	0.31
911	80	6	3	20	1	4410	3	0	5	10	0.6	-70.567	19.123	14.2	-20.7	5.0	0.2	0.0	0.0	0.00
912	80	6	3	20	57	2623	6	0	7	10	1.9	-70.738	19.297	-4.6	-1.3	2.7	0.5	0.5	0.4	0.16
913	80	6	4	4	13	5846	5	0	3	10	2.0	-69.535	19.041	127.1	-29.7	105.1	146.7	40.1	97.3	0.35
914	80	6	4	6	39	1500	5	0	3	5	0.5	0.000	0.000	51.9	1310.0	1310.0	1310.0	1310.0	1310.0	2.59
915	80	6	4	7	0	2500	5	0	3	6	0.9	-22.568	15.930	1310.0	-373.8	1310.0	1310.0	1310.0	1310.0	1.66
916	80	6	4	7	29	959	5	0	3	10	0.8	-70.603	19.462	10.2	16.8	59.8	14.7	17.3	66.6	1.28
917	80	6	4	12	5	5162	5	0	4	10	0.1	-70.361	19.483	36.8	19.1	42.7	38.2	4.3	25.8	0.19
918	80	6	4	13	36	2000	6	0	2	10	2.1	-62.454	15.430	902.5	-429.1	752.5	1310.0	888.7	1310.0	0.15
919	80	6	4	13	34	4733	4	0	4	10	1.5	-70.753	19.300	-6.1	-1.1	4.0	0.0	0.0	0.1	0.00
920	80	6	5	4	43	2000	4	0	5	2	1.8	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	1310.00
921	80	6	5	8	20	5917	5	0	3	10	2.8	-70.542	19.318	16.9	0.9	30.3	14.1	12.6	41.1	1.81
922	80	6	5	8	30	3500	4	0	5	4	1.4	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	2.38
923	80	6	5	14	39	2500	5	0	4	7	2.1	-110.224	51.483	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.44
924	80	6	6	6	45	2533	6	0	4	10	1.3	-70.329	19.208	40.2	-11.2	60.8	9.8	8.2	13.0	0.25
925	80	6	6	6	46	2736	6	0	3	10	2.2	-70.562	19.420	14.7	12.2	31.3	3.5	4.1	11.3	0.44
926	80	6	6	7	12	1663	5	0	5	10	2.1	-70.851	19.200	-17.0	-12.1	24.0	0.9	1.1	4.1	0.09
927	80	6	6	8	3	1037	5	0	3	10	1.8	-70.612	18.800	9.3	-56.4	11.7	28.2	55.8	58.7	0.27
928	80	6	6	11	44	3503	6	0	2	10	0.3	-70.007	19.573	75.5	29.1	40.6	33.1	11.8	4.1	0.36
929	80	6	6	13	55	473	4	0	5	10	2.2	-70.587	19.180	12.0	-14.3	30.2	0.3	0.1	0.4	0.09
930	80	6	6	15	9	5725	5	0	4	10	1.3	-70.877	19.157	-19.8	-16.8	5.0	1.0	1.6	0.0	0.24
931	80	6	6	15	40	239	5	0	7	10	2.6	-70.737	19.298	-4.5	-1.3	2.8	0.8	1.0	0.9	0.25
932	80	6	6	20	39	3500	6	0	4	8	0.9	-86.935	3.013	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	0.93
933	80	6	6	22	37	1833	4	0	5	10	0.3	-69.246	17.466	158.8	-203.9	42.4	224.8	328.9	0.0	0.11
934	80	6	7	17	12	1953	6	0	3	10	1.6	-70.227	20.102	51.4	87.6	37.0	14.7	39.4	6.9	0.35
935	80	6	7	18	3	1658	4	0	5	10	0.5	-70.251	19.374	48.7	7.1	0.2	0.2	0.0	0.5	0.00
936	80	6	7	22	48	3538	5	0	5	7	0.9	-66.609	19.706	447.5	43.9	183.2	1310.0	1310.0	1310.0	0.77
937	80	6	8	13	38	778	3	0	5	10	0.3	-70.727	19.288	-3.4	-2.4	5.0	0.0	0.0	0.0	0.00
938	80	6	8	14	17	860	3	0	5	10	1.7	-70.735	19.290	-4.2	-2.1	5.0	0.0	0.0	0.0	0.00
939	80	6	8	14	50	1556	3	0	5	10	0.6	-70.738	19.295	-4.6	-1.6	5.0	0.0	0.0	0.0	0.00
940	80	6	9	22	59	4811	3	0	5	10	2.3	-70.759	19.294	-6.9	-1.7	5.0	0.0	0.0	0.0	0.00
941	80	6	9	15	53	3000	4	0	5	3	2.4	0.000	0.000	879.0	1310.0	1310.0	1310.0	1310.0	1310.0	14.57
942	80	6	9	19	53	2597	5	0	4	10	0.3	-70.679	19.580	1.9	29.9	33.1	1.5	3.7	3.7	0.09
943	80	6	9	21	03	3234	4	0	5	10	1.6	-69.961	18.583	99.5	-89.3	39.7	14.6	19.9	2.6	0.83
944	80	6	10	0	27	4201	4	0	5	10	0.9	-70.838	19.491	-12.2	29.1	27.6	0.1	0.5	0.5	0.00
945	80	6	10	5	53	5855	5	0	3	10	2.1	-70.764	19.610	-7.4	33.2	45.3	4.3	10.4	7.2	0.20
946	80	6	10	10	13	562	6	0	3	10	0.3	-70.463	19.697	25.6	42.9	63.6	19.5	42.6	52.5	0.84
947	80	6	10	20	27	4139	5	0	4	10	0.9	-70.737	19.300	-4.4	-1.1	2.7	0.5	0.7	0.6	0.17
948	80	6	11	2	42	4718	3	0	5	10	1.5	-70.699	19.277	-0.3	-3.6	5.0	0.0	0.1	0.0	0.90
949	80	6	11	8	52	3000	5	0	4	4	1.7	-12.891	23.039	1310.0	412.5	1310.0	1310.0	1310.0	1310.0	1.72
950	80	6	11	12	23	1661	3	0	5	10	0.9	-70.735	19.291	-4.2	-2.1	5.0	0.0	0.0	0.0	0.99

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
951	80	6	11	1430	500		4	0	5	1	1.5	0.000	0.000	-994.6	1310.0	5.0	1310.0	1310.0	0.0	1131.51
952	80	6	11	1547	3535		6	0	3	10	2.2	-70.367	18.821	36.1	-54.0	94.6	37.2	69.3	96.6	0.81
953	80	6	11	1917	3877		5	0	4	10	1.3	-70.215	18.926	52.7	-42.4	7.0	8.2	9.2	0.0	0.16
954	80	6	11	2051	2416		3	0	5	10	1.7	-70.735	19.288	-4.2	-2.4	5.0	0.0	0.1	0.0	0.00
955	80	6	12	1452	83		5	2	7	10	3.9	-70.739	19.299	-4.7	-1.2	2.8	0.3	0.4	0.3	0.10
956	80	6	12	1722	4500		7	0	2	10	1.7	-73.506	21.192	-307.6	208.2	505.9	357.3	235.3	565.1	0.19
957	80	6	13	549	906		4	2	3	10	3.3	-70.677	19.812	2.1	55.6	30.8	1.8	3.1	7.2	0.16
958	80	6	13	554	2439		6	2	2	10	4.0	-70.659	19.805	4.1	54.8	37.4	1.7	3.9	5.0	0.16
959	80	6	13	640	35		3	1	5	10	3.6	-70.705	19.874	-0.9	62.4	5.0	1.4	3.4	0.0	0.14
960	80	6	13	647	3418		4	1	4	10	2.7	-70.649	19.777	5.2	51.7	44.7	1.8	3.4	4.6	0.08
961	80	6	13	751	3543		5	0	3	10	2.8	-70.484	19.292	23.2	-1.9	56.6	6.4	6.0	18.4	0.41
962	80	6	13	1841	3870		4	0	4	10	4.2	-70.393	19.507	33.3	21.8	5.0	2.4	3.4	0.0	0.35
963	80	6	13	2220	2000		7	0	2	6	2.1	2.000	-33.643	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.23
964	80	6	14	1920	2741		4	0	4	10	0.6	-70.736	19.293	-4.3	-1.9	3.6	0.0	0.0	0.2	0.00
965	80	6	15	747	5506		4	0	4	5	1.3	0.000	0.000	32.1	-35.3	5.0	212.2	441.8	0.0	11.15
966	80	6	15	1608	2244		3	0	5	10	1.3	-70.679	19.280	1.9	-3.2	5.0	0.1	0.1	0.0	0.00
967	80	6	15	1853	1234		3	0	5	10	1.5	-70.412	19.837	31.1	58.3	5.0	0.1	0.2	0.0	0.00
968	80	6	16	355	2111		5	0	3	10	1.3	-71.590	19.779	-97.9	51.9	54.4	90.6	38.2	28.1	0.27
969	80	6	16	542	1500		6	0	3	10	3.1	-66.653	16.905	442.7	-265.9	882.1	1310.0	1310.0	1310.0	0.45
970	80	6	16	742	0		6	0	4	7	2.2	0.000	17.495	1310.0	-200.8	1310.0	1310.0	1219.8	1310.0	1.59
971	80	6	16	1137	4611		4	3	3	6	1.1	-71.062	20.289	-40.0	108.3	53.4	10.0	13.4	23.2	0.37
972	80	6	16	1527	3631		5	1	3	10	1.5	-70.754	19.287	-6.3	-2.6	3.8	3.5	3.5	8.6	0.91
973	80	6	16	1559	1331		3	0	5	10	2.9	-70.480	19.191	23.6	-13.1	5.0	0.0	0.0	0.0	0.00
974	80	6	16	2350	1141		4	1	4	10	0.2	-70.341	18.990	38.9	-35.4	85.7	4.8	6.7	5.9	0.19
975	80	6	17	314	4500		6	0	2	6	0.6	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	287.84
976	80	6	17	1256	4064		5	0	7	10	0.9	-70.757	19.303	-6.7	-0.7	3.1	0.4	0.4	0.4	0.09
977	80	6	17	1613	808		5	0	7	10	0.6	-70.743	19.301	-5.1	-1.0	2.5	1.0	1.2	1.1	0.32
978	80	6	18	124	1409		4	0	4	7	2.0	0.000	0.000	1310.0	328.1	1310.0	1310.0	1310.0	1310.0	2.80
979	80	6	18	1305	3130		3	0	5	10	1.5	-69.625	20.539	117.3	136.0	5.0	13.5	8.6	0.0	0.04
980	80	6	18	1611	1505		6	1	2	10	2.1	-71.875	19.869	-129.1	61.9	24.1	5.1	7.6	4.0	0.16
981	80	6	19	659	2679		5	0	6	10	2.2	-70.905	19.608	-22.8	33.1	204.3	54.2	67.8	340.9	0.73
982	80	6	19	1405	4374		5	0	7	10	1.8	-70.737	19.301	-4.5	-1.0	5.0	1.0	1.1	0.0	0.24
983	80	6	19	1912	3246		4	0	4	10	1.7	-69.092	18.444	175.7	-95.7	114.2	23.5	14.1	12.9	0.02
984	80	6	20	36	4222		5	0	3	10	1.8	-70.761	19.709	-7.1	44.1	23.0	2.9	6.9	8.4	0.25
985	80	6	20	212	5194		6	0	2	10	2.1	-70.390	19.553	43.4	26.9	37.4	11.2	9.8	14.8	0.22
986	80	6	21	1342	3042		4	0	7	10	0.3	-70.735	19.299	-4.2	-1.1	2.5	0.0	0.0	0.0	0.00
987	80	6	21	1527	4855		5	0	7	10	1.7	-70.756	19.303	-6.5	-0.7	3.0	0.4	0.5	0.5	0.11
988	80	6	22	2320	3818		2	1	5	10	1.1	-70.052	19.540	70.5	25.5	5.0	0.4	0.4	0.0	0.01
989	80	6	23	529	1205		6	1	4	6	1.6	0.000	0.000	42.6	217.8	18.0	971.8	1226.0	1107.6	21.50
990	80	6	23	1507	3910		3	1	5	10	0.9	-70.429	19.379	29.3	7.7	5.0	2.4	2.3	0.0	0.31
991	80	6	23	1817	1955		3	0	7	10	0.6	-70.741	19.298	-4.9	-1.3	5.0	0.0	0.0	0.0	0.00
992	80	6	24	1857	4326		3	0	5	10	1.3	-70.259	18.989	47.9	-35.5	5.0	0.4	0.5	0.0	0.00
993	80	6	25	1207	4500		4	0	6	3	4.0	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	78.05
994	80	6	25	1810	214		5	0	7	10	1.6	-70.611	19.241	9.3	-7.6	14.6	12.3	7.6	13.9	9.59
995	80	6	25	0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
996	80	6	26	0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
997	80	6	26	0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
998	80	6	26	1512	673		5	0	7	10	0.3	-70.757	19.303	-6.6	-0.7	2.5	0.5	0.5	0.5	0.15
999	80	6	27	0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1000	80	6	27	1559	4046		4	1	4	10	1.3	0.000	0.000	15.4	-19.2	79.9	39.5	41.1	92.8	2.28

JR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1001	80	628	1052	3847	2	1	5	9	0.9	-69.845	19.748	93.2	48.4	5.0	52.7	115.0	0.0	0.90
1002	80	628	1104	90	2	2	5	10	1.3	-70.077	18.820	67.8	-54.1	5.0	3.6	3.8	0.0	0.20
1003	80	628	1421	2903	5	0	7	10	0.0	-70.683	19.542	1.4	25.7	16.6	2.3	1.8	4.8	0.19
1004	80	628	1512	5152	3	0	5	10	1.7	-70.204	19.142	53.9	-18.5	5.0	0.1	0.0	0.0	0.09
1005	80	628	1630	4198	5	0	7	10	0.3	-70.627	19.556	7.6	27.2	11.9	7.7	5.7	25.1	0.57
1006	80	629	1701	2539	2	1	5	10	1.5	-72.526	19.860	-200.3	69.9	5.0	9.3	7.4	0.0	0.15
1007	80	629	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1008	80	629	804	293	2	1	5	10	1.5	-72.189	19.733	-163.4	46.9	5.0	0.4	0.3	0.0	0.01
1009	80	629	1204	933	4	1	4	10	1.7	-70.112	17.885	64.0	-157.4	111.0	35.5	19.6	16.3	0.15
1010	80	629	2042	2428	3	1	5	6	0.9	-69.915	19.176	85.5	-14.8	14.4	7.2	2.5	3.4	0.21
1011	80	629	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1012	80	630	402	2657	6	2	3	10	2.1	-70.331	19.476	40.0	18.4	24.4	3.7	2.1	4.2	0.23
1013	80	630	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1014	80	630	1628	3947	3	0	7	10	0.7	-70.741	19.299	-4.9	-1.2	5.0	0.0	0.0	0.0	0.09
1015	80	630	1737	4127	2	1	5	10	1.5	-69.462	21.760	135.2	271.0	5.0	4.9	2.7	0.0	0.07
1016	80	630	1801	702	2	1	5	1	1.1	0.000	0.000	35.6	17.2	5.0	0.0	0.0	0.0	25.76
1017	80	630	1824	2272	2	1	5	1	0.4	0.000	0.000	35.6	17.2	5.0	0.0	0.0	0.0	4.24
1018	80	630	1841	2543	5	1	7	10	0.9	-70.230	18.945	51.1	-40.3	17.7	4.8	5.8	9.3	0.21
1019	80	630	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1020	80	630	2310	3151	6	2	3	10	0.6	-70.611	18.485	9.3	-91.2	19.4	3.5	5.4	3.2	0.26
1021	80	701	1313	151	3	0	7	10	0.6	-70.735	19.290	-4.2	-2.1	5.0	0.0	0.0	0.0	0.00
1022	80	701	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1023	80	701	1904	5005	4	0	7	10	0.3	-70.745	19.312	-5.3	0.3	3.9	0.0	0.0	0.1	0.00
1024	80	701	2328	8	2	1	5	1	1.0	0.000	0.000	35.6	17.2	5.0	0.0	0.0	0.0	13.24
1025	80	702	25	2072	5	3	2	10	0.2	-70.242	19.510	49.7	22.2	13.8	4.2	2.1	3.1	0.24
1026	80	702	419	511	2	1	5	1	0.0	0.000	0.000	-7.6	-4.2	5.0	0.0	0.0	0.0	5.50
1027	80	702	924	3002	6	0	6	10	1.5	-70.972	19.599	-30.1	32.0	425.1	28.2	22.8	327.6	0.16
1028	80	702	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1029	80	702	1428	708	5	0	7	10	0.8	-70.735	19.299	-4.3	-1.2	2.6	0.4	0.5	0.5	0.13
1030	80	702	1835	2154	3	2	4	10	0.6	-70.744	19.260	-5.2	-5.5	13.0	3.1	4.6	5.3	0.25
1031	80	702	1925	3570	3	1	5	10	0.6	-70.740	19.294	-4.8	-1.7	6.4	0.0	0.0	0.0	0.00
1032	80	702	1959	4999	5	0	7	10	0.7	-70.758	19.302	-6.7	-0.8	3.0	0.6	0.7	0.7	0.16
1033	80	702	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1034	80	702	2027	714	3	1	5	10	0.9	-70.662	19.819	3.7	56.3	5.0	0.7	1.3	0.0	0.04
1035	80	702	2200	3443	5	1	4	10	1.6	-69.997	18.636	76.6	-74.5	26.1	5.1	5.8	32.8	0.22
1036	80	702	2213	5242	6	2	2	10	1.2	-70.800	19.757	-11.3	49.5	26.3	2.7	3.0	4.2	0.19
1037	80	702	2334	5401	4	0	5	10	1.7	-70.025	19.550	73.5	26.6	79.3	19.9	1.9	20.0	0.03
1038	80	703	42	4429	6	0	3	10	2.8	-69.522	18.950	128.5	-39.8	111.0	118.4	44.0	91.9	0.30
1039	80	703	709	4658	6	0	3	10	1.6	-70.061	19.265	69.6	-4.9	67.9	37.9	9.7	36.0	0.39
1040	80	704	108	2979	5	0	3	10	1.3	-70.673	19.593	2.6	31.3	45.8	1.9	2.5	12.5	0.12
1041	80	704	1903	5185	4	1	4	10	2.1	-70.394	19.099	33.1	-23.3	5.0	12.6	14.2	0.0	0.94
1042	80	705	402	4820	4	0	5	10	2.4	-70.359	19.091	36.9	-24.2	7.9	0.2	0.2	0.0	0.01
1043	80	705	1319	5992	6	0	7	10	1.8	-70.737	19.297	-4.5	-1.4	2.5	0.4	0.4	0.4	0.12
1044	80	706	238	33	3	0	5	10	2.0	-70.848	19.542	-15.6	25.7	5.0	0.4	0.1	0.9	0.00
1045	80	706	1837	2116	4	0	5	10	2.8	-71.140	19.068	-48.6	-26.7	35.4	1.2	0.4	0.8	0.00
1046	80	706	2004	3279	5	0	4	10	1.8	-71.071	19.235	-41.1	-8.2	32.9	13.5	5.9	9.6	0.20
1047	80	707	1652	1500	4	0	5	2	1.3	0.000	0.000	736.2	1310.0	5.0	1310.0	1310.0	0.0	1310.00
1048	80	707	1906	2590	4	0	5	6	1.8	-15.306	-119.456	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.24
1049	80	707	1929	372	5	0	7	10	1.4	-70.758	19.305	-6.8	-0.5	3.1	0.2	0.3	0.3	0.06
1050	80	708	1827	3687	5	0	7	10	1.7	-70.757	19.305	-6.7	-0.5	3.0	0.3	0.3	0.3	0.03

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1051	80	709		223	5500		6	0	6	7	2.1	-40.815	40.191	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.03
1052	80	709		247	5000		6	0	6	7	1.8	-40.371	42.725	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.04
1053	80	709		1035	2500		4	0	4	2	1.3	0.000	0.000	1310.0	-315.2	5.0	1310.0	1310.0	0.0	1319.00
1054	80	709		1320	4500		4	0	4	6	1.3	63.356	-37.069	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	0.96
1055	80	709		1350	633		5	0	7	10	0.6	-70.742	19.296	-5.0	-1.5	3.9	1.7	1.9	6.9	0.47
1056	80	709		1859	4954		4	2	4	10	0.8	-70.249	18.945	49.0	-40.3	25.7	3.0	4.1	7.1	0.19
1057	80	710		1502	258		6	1	7	10	0.8	-70.739	19.301	-4.6	-1.0	5.0	1.2	1.1	0.0	0.32
1058	80	710		1830	755		5	1	7	10	0.2	-70.757	19.305	-6.6	-0.5	3.1	0.3	0.2	0.2	0.07
1059	80	711		4	4084		3	1	5	10	1.1	-70.389	19.776	33.6	51.6	5.0	3.1	5.7	0.0	0.22
1060	80	711		231	4283		3	1	5	10	2.1	-68.656	18.640	223.4	-74.0	216.7	3.4	4.5	2.9	0.04
1061	80	711		445	2638		5	1	4	10	0.7	-70.793	19.844	-10.6	59.1	25.8	4.9	6.9	8.1	0.29
1062	80	711		657	1000		4	0	6	6	0.6	-67.598	3.435	339.3	1310.0	1310.0	1310.0	1310.0	1310.0	1.34
1063	80	711		1919	659		5	0	7	10	1.3	-70.749	19.301	-5.7	-0.9	2.1	0.4	0.4	0.5	0.13
1064	80	711		2147	3563		4	0	5	6	1.7	-70.020	18.533	74.0	-85.9	43.7	96.9	175.3	64.9	0.36
1065	80	711		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1066	80	712		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1067	80	712		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1068	80	712		310	2626		2	1	5	1	1.8	0.000	0.000	0.0	0.0	5.0	0.0	0.0	0.0	19.29
1069	80	712		530	1619		2	1	5	1	1.6	0.000	0.000	35.6	17.2	5.0	0.0	0.0	0.0	39.53
1070	80	712		622	2000		4	0	5	3	2.5	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	1310.00
1071	80	712		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1072	80	712		1346	5500		6	1	7	10	1.6	-70.738	19.297	-4.6	-1.3	2.5	0.5	0.5	0.5	0.17
1073	80	712		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1074	80	712		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1075	80	713		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1076	80	714		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1077	80	714		159	527		4	1	5	10	1.1	-70.338	19.543	39.2	25.8	43.5	5.0	2.2	6.4	0.08
1078	80	714		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1079	80	714		1027	1387		4	2	4	8	1.3	-69.853	17.765	92.3	-170.8	41.4	28.6	25.8	271.4	0.63
1080	80	714		1424	4368		5	1	4	10	2.1	-71.145	19.572	-49.1	29.0	5.0	11.4	4.4	0.0	0.39
1081	80	714		1528	1292		6	0	7	10	1.7	-70.738	19.296	-4.6	-1.5	2.7	0.5	0.5	0.5	0.18
1082	80	714		1600	5596		3	0	5	5	2.8	-72.131	18.136	-157.0	-129.8	5.0	178.1	130.7	0.0	0.30
1083	80	714		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1084	80	714		1839	4936		5	0	7	10	1.7	-70.757	19.300	-6.7	-1.1	4.3	0.4	0.4	1.2	0.10
1085	80	715		422	5168		5	1	3	10	1.6	-70.440	18.885	28.1	-46.9	82.1	5.8	8.7	9.1	0.26
1086	80	715		434	2155		2	1	5	1	0.9	0.000	0.000	35.6	17.2	5.0	0.0	0.0	0.0	4.86
1087	80	715		759	3000		4	0	6	8	0.6	-76.052	21.633	-586.4	257.0	1310.0	1310.0	1310.0	1310.0	1.19
1088	80	715		932	1576		5	0	4	10	1.5	-70.358	19.469	37.1	17.5	18.4	5.0	2.0	5.6	0.19
1089	80	715		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1090	80	715		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1091	80	715		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1092	80	715		1857	5743		4	1	5	10	0.9	-79.220	18.976	52.1	-36.9	18.6	4.4	3.4	1.9	0.14
1093	80	715		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1094	80	716		0	0		0	0	6	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1095	80	716		1405	3161		5	1	4	10	3.4	-70.339	19.953	39.1	71.1	39.8	1.7	2.5	0.9	0.11
1096	80	716		1842	5231		5	1	7	8	1.7	-70.737	19.297	-4.5	-1.4	5.0	1.2	0.9	0.0	0.25
1097	80	716		2015	4300		6	0	6	8	5.7	-75.436	18.243	-518.9	-118.0	1310.0	1310.0	431.1	1310.0	0.55
1098	80	716		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1099	80	717		122	2008		3	1	5	6	1.7	0.000	0.000	-213.9	92.5	35.4	585.4	407.4	1268.7	7.09
1100	80	807		2007	4216		5	1	7	10	1.6	-70.736	19.303	-4.3	-0.8	2.4	0.4	0.4	0.4	0.12

DR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1101	80	808	1420	5882	3	1	7	10	1.7	-70.719	19.274	-2.4	-4.0	9.5	0.0	0.0	0.0	0.00
1102	80	810	526	500	5	0	4	5	2.2	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	3.24
1103	80	810	549	59	6	0	4	10	3.5	-70.717	19.521	-2.2	23.4	40.5	18.6	16.3	40.7	1.36
1104	80	810	1414	1742	5	3	4	10	1.3	-70.737	19.297	-4.5	-1.4	2.6	0.5	0.6	0.5	0.17
1105	80	810	1905	4590	5	0	3	10	1.1	-70.619	18.963	8.4	-38.3	10.8	35.8	53.0	32.0	0.62
1106	80	810	2155	82	5	1	4	10	2.1	0.000	0.000	51.8	-215.0	5.0	1310.0	720.6	0.0	6.33
1107	80	811	1636	1096	5	2	5	10	2.4	-70.736	19.299	-4.4	-1.2	2.6	0.6	0.7	0.7	0.20
1108	80	811	1751	1064	6	4	6	9	4.0	-71.796	18.039	-120.4	-140.6	7.7	6.6	7.3	7.2	0.28
1109	80	811	2056	4029	5	1	4	10	2.2	-70.743	19.303	-5.1	-0.7	2.3	0.9	1.0	1.0	0.29
1110	80	812	704	3902	6	1	3	10	3.3	-70.498	19.008	21.7	-33.3	55.2	15.9	12.6	19.2	0.58
1111	80	812	713	311	5	3	4	10	3.7	-69.809	18.798	97.1	-56.6	54.4	23.9	20.0	64.3	0.31
1112	80	812	719	3254	5	2	4	6	2.5	-69.817	18.833	96.3	-52.7	56.6	41.4	26.6	41.4	0.51
1113	80	812	1417	2468	4	0	2	10	1.5	-70.753	19.299	-6.2	-1.2	4.2	0.0	0.0	0.0	0.00
1114	80	813	125	2150	6	6	4	10	2.5	-69.504	18.843	130.6	-51.6	110.3	7.0	5.4	8.8	0.16
1115	80	813	1625	3620	6	0	3	7	3.5	-70.132	18.081	61.8	-135.8	20.4	52.1	93.0	25.2	0.31
1116	80	813	1737	5899	5	3	4	9	2.0	-70.330	18.395	40.1	-101.1	19.4	30.6	11.6	5.2	0.31
1117	80	814	1446	4043	3	0	7	10	0.9	-70.731	19.289	-3.8	-2.3	5.0	0.0	0.0	0.0	0.00
1118	80	815	456	5567	6	4	4	10	4.0	-70.393	18.480	33.2	-91.7	27.8	8.0	6.1	18.6	0.31
1119	80	815	1522	1500	3	0	3	4	2.8	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	15.58
1120	80	815	1554	639	5	1	7	10	1.8	-70.742	19.303	-5.0	-0.8	2.3	0.9	1.1	1.1	0.31
1121	80	815	1855	4446	4	1	7	10	1.3	-70.797	19.090	-11.0	-24.3	38.1	9.6	6.8	9.4	0.24
1122	80	815	2044	1509	6	0	3	5	3.2	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	2.17
1123	80	815	2209	500	6	0	3	7	2.2	-31.769	58.031	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	0.65
1124	80	816	359	4500	4	0	2	2	0.6	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	4.64
1125	80	816	805	3772	5	1	7	10	2.1	-70.737	19.301	-4.5	-0.9	2.7	0.7	0.8	0.8	0.22
1126	80	816	2141	4523	6	2	3	10	1.7	-70.802	19.158	-11.6	-16.8	66.9	14.9	16.2	25.1	0.95
1127	80	817	446	5079	6	5	5	10	0.9	-69.878	19.042	89.6	-29.6	108.5	11.2	8.3	10.5	0.31
1128	80	817	451	3738	4	1	3	10	1.1	-70.072	19.254	68.4	-6.2	68.7	11.3	8.3	14.6	0.31
1129	80	817	455	3018	6	4	4	10	1.3	-70.496	19.280	21.9	-3.3	56.3	18.9	13.2	23.8	1.14
1130	80	817	846	0	5	0	3	4	1.5	-99.879	-1.162	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.89
1131	80	817	1316	2180	6	1	3	7	2.4	-69.523	19.712	128.5	44.4	49.8	36.2	18.7	50.6	0.70
1132	80	817	1401	3000	4	0	2	4	0.0	-34.259	9.208	1310.0	-1117.3	1310.0	1310.0	1310.0	1310.0	1.26
1133	80	817	1710	3000	5	0	2	4	2.4	0.000	0.000	612.1	1310.0	1310.0	1310.0	1310.0	1310.0	2.31
1134	80	818	1421	1440	5	2	3	10	2.5	-68.794	18.888	208.3	-46.6	160.3	63.3	89.3	92.5	0.94
1135	80	818	1512	5000	6	0	2	7	4.0	-44.008	-118.390	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.18
1136	80	818	1625	1458	7	0	7	10	3.1	-70.496	18.995	22.0	-34.8	70.3	4.1	8.1	11.5	0.20
1137	80	818	2125	5602	3	0	7	10	2.1	-70.727	19.289	-3.4	-2.4	5.0	0.0	0.0	0.0	0.00
1138	80	819	1215	2490	6	1	2	10	2.1	-69.708	19.088	108.2	-24.6	14.7	17.3	8.3	6.5	0.56
1139	80	819	1733	146	5	2	3	10	0.6	-70.523	19.872	19.0	62.2	38.7	10.4	22.6	27.2	1.17
1140	80	819	2152	4908	5	2	4	10	2.1	-71.121	19.345	-46.5	3.9	22.9	26.1	16.8	19.8	1.18
1141	80	819	2312	4304	7	0	3	10	2.5	0.000	0.000	-7.8	4.5	49.8	22.7	21.4	59.8	2.53
1142	80	820	-41	4597	7	3	3	10	1.7	-70.832	19.319	-20.3	1.1	230.6	40.2	42.9	25.2	1.16
1143	80	820	140	3142	5	3	4	10	1.1	-71.409	19.272	-86.8	-4.1	48.1	2.1	1.5	3.1	0.88
1144	80	820	343	3552	7	1	5	10	1.2	-69.748	19.376	103.8	7.4	40.6	10.3	5.1	1.9	0.24
1145	80	820	1020	1608	4	4	3	10	-0.3	-70.637	19.148	6.5	-17.8	17.3	5.0	3.2	4.8	0.25
1146	80	820	1913	3874	6	2	7	10	1.5	-70.669	19.442	3.8	14.6	13.3	3.2	5.2	10.1	0.65
1147	80	821	1611	5364	6	2	7	10	2.0	-70.738	19.299	-4.6	-1.2	2.5	0.5	0.5	0.4	0.16
1148	80	821	1741	5731	7	5	5	9	2.4	-71.142	19.678	-48.7	40.7	3.0	12.7	9.5	11.8	0.43
1149	80	821	1807	4747	5	5	5	10	1.3	-71.124	19.764	-46.9	50.3	20.9	4.4	3.3	9.5	0.28
1150	80	824	55	3546	8	3	4	10	2.2	-71.152	17.795	-49.9	-167.5	17.1	14.5	21.2	17.5	1.24

DR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1151	80	824	754	2553	7	1	2	10	0.6	0.000	0.000	6.7	-2.8	5.0	7.9	8.3	0.0	2.43
1152	80	824	1744	4310	5	2	3	10	1.0	-70.644	19.715	5.7	44.8	23.4	0.7	1.8	3.0	0.11
1153	80	824	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1154	80	825	53	1235	6	2	2	10	0.9	-70.740	19.609	-4.8	33.1	22.0	1.6	2.6	4.9	0.27
1155	80	825	156	2700	4	0	4	4	2.0	38.974	-9.598	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.40
1156	80	825	1906	3427	5	1	4	10	1.6	-69.830	19.681	94.8	-69.5	120.1	6.3	8.7	9.8	0.19
1157	80	906	1359	1710	4	1	4	10	1.3	0.000	0.000	-27.0	-68.5	5.0	71.4	132.0	0.0	5.30
1158	80	906	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1159	80	907	245	174	6	2	2	10	1.8	-69.874	19.176	90.0	-14.8	24.5	3.7	2.3	10.3	0.16
1160	80	909	41	1671	8	1	1	10	2.5	-69.801	20.074	98.1	84.5	31.5	2.5	5.0	2.0	0.24
1161	80	909	654	3449	5	2	2	10	0.9	-70.754	19.702	-6.3	43.4	26.3	1.9	1.6	2.4	0.13
1162	80	909	1543	3038	3	1	4	10	1.1	-71.111	19.601	-45.4	32.2	5.0	7.0	4.7	0.0	0.36
1163	80	909	2348	2040	9	2	1	10	1.8	-69.786	20.126	99.7	90.3	14.0	3.3	6.8	5.3	0.42
1164	80	909	2351	156	7	1	1	10	2.5	-69.950	19.797	81.7	53.9	29.0	7.2	16.6	37.4	0.98
1165	80	910	147	3122	6	1	2	6	2.4	0.000	0.000	858.4	22.6	255.5	1310.0	1310.0	1310.0	122.31
1166	80	910	437	401	6	1	2	10	1.3	-70.427	18.895	29.5	-45.9	78.1	2.5	3.8	4.2	0.15
1167	80	910	1904	2478	3	1	7	10	1.8	-70.537	19.067	17.5	-26.9	92.4	1.4	0.9	0.5	0.01
1168	80	911	116	3913	5	0	7	10	1.8	-70.743	19.297	-5.1	-1.4	3.4	1.4	1.6	9.4	0.39
1169	80	911	1030	4728	3	2	4	10	0.2	-71.020	19.155	-35.4	-17.1	31.9	2.3	8.4	2.2	0.05
1170	80	911	2027	1097	6	1	7	10	2.1	-70.737	19.296	-4.5	-1.5	2.7	0.3	0.3	0.3	0.11
1171	80	912	847	5164	3	0	6	10	3.5	-70.778	19.313	-9.0	0.4	5.0	0.0	0.0	0.0	0.00
1172	80	912	1537	343	5	0	7	10	1.6	-70.747	19.438	-5.6	14.2	20.9	23.6	10.2	19.9	1.04
1173	80	913	1342	2723	4	0	7	10	1.3	-70.725	19.282	-3.2	-3.1	5.0	1.1	1.3	0.0	0.18
1174	80	914	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1175	80	915	440	2500	8	0	6	6	3.5	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	3.85
1176	80	915	639	2540	7	2	1	10	1.6	-70.730	18.876	-3.7	-47.9	85.4	5.3	7.5	8.6	0.36
1177	80	915	0	0	0	0	1	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1178	80	915	834	3377	7	1	2	10	3.1	-66.174	18.875	495.1	-48.1	186.3	21.7	23.4	44.8	0.27
1179	80	915	1000	2997	8	2	3	5	2.2	-69.222	18.770	161.4	-59.6	43.4	41.7	12.1	9.0	1.44
1180	80	915	1511	4471	12	1	1	10	2.5	-69.514	19.079	129.4	-25.4	20.7	3.0	1.7	2.5	0.32
1181	80	915	1622	2167	6	0	7	10	1.8	-70.737	19.298	-4.5	-1.3	2.8	0.5	0.5	0.4	0.14
1182	80	915	1639	4650	10	1	1	10	1.8	-70.455	19.429	26.4	-97.4	19.4	2.6	3.6	3.0	0.33
1183	80	915	1832	1215	3	0	5	10	1.1	-70.083	18.709	67.2	-66.5	5.0	0.1	0.1	0.0	0.01
1184	80	915	2307	1839	9	2	1	10	2.8	-69.034	18.600	182.0	-78.4	117.1	7.6	7.2	7.6	0.39
1185	80	915	2353	3075	2	2	5	2	0.7	0.000	0.000	48.7	-92.9	5.0	1310.0	1310.0	0.0	5.50
1186	80	916	509	1730	8	1	2	10	3.1	-69.830	20.038	94.9	80.5	5.0	13.8	17.8	0.0	0.87
1187	80	916	718	752	8	1	5	8	3.3	-69.770	20.062	101.4	83.3	19.1	3.7	4.6	3.6	0.21
1188	80	920	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1189	80	921	736	80	3	2	4	10	0.7	-70.991	19.513	-32.2	22.5	42.8	14.8	11.4	8.3	0.31
1190	80	921	1613	701	4	0	7	10	0.6	-70.719	19.270	-2.3	-4.3	5.6	0.0	0.0	0.0	0.00
1191	80	921	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1192	80	921	2117	1984	3	1	5	10	1.7	-69.520	19.277	128.8	-3.6	163.4	2.9	1.6	3.3	0.03
1193	80	922	57	4035	7	2	2	10	1.0	-70.433	18.887	29.8	-45.7	87.8	4.9	4.0	11.8	0.45
1194	80	922	135	995	7	0	2	10	1.5	-70.952	19.439	70.5	19.8	19.3	1.9	1.7	0.3	0.12
1195	80	922	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1196	80	922	1452	1073	4	1	4	6	2.0	-63.533	19.030	236.9	-30.9	42.5	25.8	14.4	13.3	0.70
1197	80	922	1603	3022	5	0	7	10	0.8	-70.728	19.283	-3.5	-2.9	3.1	0.5	0.6	0.4	0.15
1198	80	922	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1199	80	1112	439	4452	5	1	3	10	0.8	-70.386	19.337	34.0	3.0	19.3	2.3	1.1	4.6	0.18
1200	80	1112	449	2089	3	0	5	10	1.1	-70.629	19.497	7.4	20.7	5.0	0.0	0.0	0.0	0.00

DR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1201	80	1112	550	2032	5	0	4	7	2.1	-69.780	19.395	100.3	9.5	9.6	37.2	4.6	28.6	0.27
1202	80	1112	559	1866	3	0	5	7	1.5	-69.391	19.445	142.9	15.0	5.0	42.8	10.9	0.0	0.29
1203	80	1112	1914	208	4	0	7	10	0.9	-70.734	19.299	-4.1	-1.1	2.3	0.0	0.0	0.0	0.00
1204	80	1113	312	3533	7	0	3	10	1.6	-70.300	20.177	43.4	96.0	29.9	1.0	4.3	1.6	0.15
1205	80	1113	1933	2073	5	0	7	10	0.3	-70.731	19.293	-3.8	-1.9	3.6	1.4	1.2	3.8	0.32
1206	80	1113	2107	134	4	0	5	10	1.6	-70.446	19.340	27.4	3.4	4.3	0.0	0.0	9.1	0.00
1207	80	1113	2224	4527	6	0	2	10	1.7	-71.377	18.745	-74.5	-62.5	14.2	4.6	2.9	1.8	0.09
1208	80	1114	2007	289	4	0	7	10	1.3	-70.730	19.295	-3.7	-1.6	2.3	0.0	0.0	0.0	0.00
1209	80	1114	2035	3094	6	1	3	10	1.6	-70.203	19.766	54.0	50.5	5.0	2.1	4.8	0.0	0.45
1210	80	1114	2224	3864	4	0	4	10	1.2	-70.397	19.335	32.8	2.8	15.1	0.1	0.0	0.3	0.00
1211	80	1117	316	3262	5	0	5	7	1.7	-69.318	19.181	150.9	-14.2	7.2	434.7	53.9	1310.0	1.58
1212	80	1117	1202	3638	5	1	4	5	1.5	-70.038	19.622	72.1	34.5	8.2	17.6	9.3	35.4	0.71
1213	80	1117	1730	4611	2	1	5	1	1.2	0.000	0.000	35.6	17.2	5.0	0.0	0.0	0.0	6.30
1214	80	1117	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1215	80	1117	2308	4400	4	2	4	10	1.3	-70.732	19.061	-3.9	-27.4	22.3	4.4	3.1	2.9	0.17
1216	80	1118	929	5565	5	2	4	10	0.7	-70.960	19.185	-28.9	-13.7	75.3	1.8	1.5	2.0	0.08
1217	80	1118	1326	706	4	0	7	10	1.4	-70.734	19.295	-4.1	-1.7	2.3	0.0	0.0	0.0	0.00
1218	80	1119	710	4303	5	1	3	10	1.5	-69.566	18.907	123.7	-44.5	115.0	5.7	4.8	6.6	0.15
1219	80	1119	853	4874	4	1	4	10	1.0	-70.379	19.528	34.8	24.2	31.8	0.2	0.1	0.4	0.01
1220	80	1119	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1221	80	1119	1523	5288	4	1	7	10	1.3	-70.733	19.300	-4.0	-1.0	2.5	0.5	0.5	0.5	0.15
1222	80	1119	1701	3193	5	0	4	5	1.4	-70.930	19.577	-25.6	29.5	8.3	67.2	15.1	21.3	1.23
1223	80	1119	2200	1881	5	1	4	10	1.5	-69.610	19.342	118.9	3.6	63.1	5.8	3.5	5.9	0.16
1224	80	1120	453	2347	5	0	4	10	1.1	-70.249	19.289	48.9	-2.3	30.6	6.6	1.7	7.1	0.15
1225	80	1120	1351	2479	4	0	7	10	1.1	-70.729	19.294	-3.6	-1.8	2.2	0.0	0.0	0.0	0.00
1226	80	1120	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1227	80	1120	1649	2775	4	0	7	10	0.8	-70.732	19.298	-3.9	-1.3	2.4	0.0	0.0	0.0	0.00
1228	80	1120	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1229	80	1120	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1230	80	1121	511	1520	5	0	4	10	1.4	-70.365	19.334	36.3	2.7	22.0	2.6	0.9	3.5	0.13
1231	80	1121	819	3200	4	0	5	9	1.1	-70.704	19.478	-0.9	-92.0	1310.0	326.1	1310.0	1310.0	0.42
1232	80	1121	1508	302	6	0	2	10	1.7	-70.834	20.309	-15.1	110.5	283.3	43.6	60.9	178.8	0.24
1233	80	1121	1925	4700	5	0	7	10	1.1	-70.731	19.295	-3.8	-1.6	4.7	2.2	1.8	3.3	0.45
1234	80	1123	200	1427	3	0	5	10	1.5	-71.625	20.413	-101.7	122.0	5.0	8.2	38.6	0.0	0.09
1235	80	1123	0	0	0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1236	80	1124	1409	2839	4	0	7	6	1.1	-70.717	19.272	-2.3	-4.2	0.1	0.3	0.3	0.4	0.07
1237	80	1126	557	3353	4	0	5	10	2.1	-69.826	18.895	95.3	-55.8	154.1	5.7	4.5	9.3	0.01
1238	80	1127	1403	446	5	0	7	10	0.7	-70.733	19.296	-4.0	-1.5	3.7	1.1	1.0	2.8	0.26
1239	80	1120	1307	2456	4	0	7	10	1.5	-70.734	19.299	-4.1	-1.2	2.1	0.0	0.0	0.0	0.00
1240	80	1130	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1241	80	1130	1449	3483	7	3	1	10	2.1	-69.365	19.358	145.8	5.4	65.1	2.6	2.3	2.4	0.14
1242	80	1201	1047	4193	4	0	5	6	1.7	-70.236	18.950	58.4	-39.8	43.3	62.3	60.1	72.9	0.76
1243	80	1201	1517	3946	3	0	7	10	1.5	-70.725	19.284	-3.2	-2.8	5.0	0.0	0.0	0.0	0.00
1244	80	1201	0	0	0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1245	80	1201	0	0	0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1246	80	1203	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1247	80	1203	1521	2000	5	0	7	3	1.0	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	1310.00
1248	80	1204	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1249	80	1204	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1250	80	1205	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00

DR EQFILE

NO	YR	M D	H M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1251	80	1205	0	0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1252	80	1205	943	5000	4	0	5	2	1.0	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	562.71
1253	80	1205	1438	3531	6	0	7	10	0.5	-70.732	19.295	-3.9	-1.6	2.9	0.5	0.5	0.4	0.14
1254	80	1206	117	4746	7	0	2	10	2.7	0.000	0.000	23.1	30.4	5.0	11.6	19.2	0.0	2.42
1255	80	1207	1048	0	6	0	2	2	2.2	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	18.59
1256	80	1207	1818	1594	8	0	1	10	3.2	-70.619	19.775	8.5	51.5	20.9	1.6	3.3	2.2	0.29
1257	80	1207	2304	5231	6	0	2	10	2.0	-70.372	19.497	35.5	19.6	19.1	3.4	3.0	3.1	0.33
1258	80	1208	1515	489	6	4	1	10	2.1	-69.625	18.984	117.4	-36.0	89.5	8.2	4.5	10.3	0.30
1259	80	1208	1957	5412	3	0	7	10	1.1	-70.732	19.293	-3.9	-1.9	5.0	0.0	0.0	0.0	0.00
1260	80	1209	316	4456	6	0	2	10	3.1	-70.918	18.962	-24.3	-38.4	5.0	3.9	1.7	0.0	0.25
1261	80	1209	1547	4401	3	0	7	10	1.3	-70.729	19.289	-3.5	-2.3	5.0	0.0	0.0	0.0	0.00
1262	80	1210	138	5328	3	0	5	10	2.1	-70.312	19.355	42.1	5.0	5.0	0.5	0.3	0.0	0.00
1263	80	1210	1628	5400	4	0	4	4	2.4	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	4.08
1264	80	1210	1658	126	4	0	4	9	1.5	-70.720	19.293	-3.4	-1.9	5.0	9.6	7.0	0.0	1.25
1265	80	1211	1601	1915	5	0	3	10	1.7	-70.718	19.307	-2.4	-0.3	5.5	1.8	1.3	1.3	0.17
1266	80	1211	1808	711	8	0	1	10	2.5	-70.336	19.469	39.5	17.6	19.3	2.3	3.2	3.5	0.54
1267	80	1211	1822	3009	8	0	6	10	2.7	-69.117	13.402	172.9	-653.4	1154.6	83.4	447.0	775.8	0.21
1268	80	1212	1405	4576	9	7	1	10	2.3	-70.363	19.533	36.5	24.7	20.2	1.0	1.6	1.6	0.26
1269	80	1212	1503	4115	5	0	7	10	1.8	-70.734	19.298	-4.1	-1.2	2.4	0.0	0.0	0.0	0.01
1270	80	1212	1557	2136	3	0	7	10	0.3	-70.740	19.296	-4.8	-1.5	5.0	0.0	0.0	0.0	0.00
1271	80	1212	1755	3061	3	0	5	10	0.6	-70.191	18.950	55.3	-39.7	5.0	0.0	0.0	0.0	0.00
1272	80	1213	1511	1686	6	0	7	10	1.1	-70.732	19.294	-3.9	-1.7	3.9	0.9	0.8	2.0	0.22
1273	80	1214	554	1908	7	0	2	10	1.8	-69.039	19.507	181.5	21.8	58.7	105.7	20.6	9.7	0.39
1274	80	1218	2116	204	3	0	5	10	1.6	-70.667	19.745	3.2	48.2	5.0	0.4	0.8	0.0	0.00
1275	80	1219	1558	4010	6	0	7	10	1.1	-70.732	19.295	-3.9	-1.6	3.7	1.1	0.9	2.9	0.27
1276	80	1220	1316	312	5	0	7	10	0.6	-70.734	19.298	-4.1	-1.3	2.1	0.1	0.1	0.1	0.04
1277	80	1220	2021	5464	3	0	7	10	0.6	-70.729	19.291	-3.5	-2.1	5.0	0.0	0.0	0.0	0.00
1278	80	1222	206	2723	6	0	2	10	2.2	-70.489	18.675	22.7	-70.2	24.1	3.9	11.1	9.7	0.23
1279	80	1222	338	2934	6	0	2	10	2.9	-69.812	19.259	96.8	-5.6	5.0	22.7	3.7	0.0	0.32
1280	80	1224	2157	414	5	0	3	10	1.5	-70.735	19.642	-4.2	36.7	28.7	10.7	17.1	17.6	0.24
1281	80	1225	412	3810	6	0	2	10	2.7	-69.901	19.367	87.1	6.4	5.0	38.4	10.1	0.0	0.53
1282	80	1228	1459	46	3	0	7	10	0.6	-70.727	19.288	-3.3	-2.4	5.0	0.0	0.0	0.0	0.00
1283	80	1229	545	1671	5	0	3	10	2.5	-69.791	19.437	99.1	14.1	65.3	112.9	26.0	67.1	0.16
1284	80	1231	810	1314	6	1	2	10	2.4	-69.040	18.779	181.3	-58.7	131.1	13.3	7.9	18.1	0.24
1285	81	102	741	1110	6	0	6	10	3.1	-71.091	18.654	-33.4	-72.6	72.2	5.4	6.0	7.0	0.07
1286	81	102	808	1401	6	0	6	10	3.5	-70.363	19.416	36.5	11.8	5.0	2.4	1.3	0.0	0.27
1287	81	102	810	4709	5	0	3	10	2.1	-70.337	19.418	39.3	11.9	5.0	7.1	2.6	0.0	0.55
1288	81	102	906	3209	6	0	2	10	2.2	-70.367	19.421	36.0	12.4	5.0	2.7	1.6	0.0	0.32
1289	81	102	1011	4322	6	0	2	10	2.4	-70.366	19.422	36.1	12.5	5.0	2.3	1.3	0.0	0.27
1290	81	103	1134	5500	4	0	4	5	0.6	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	1310.00
1291	81	103	1321	4842	3	0	7	10	1.8	-70.727	19.290	-3.3	-2.1	5.0	0.0	0.0	0.0	0.00
1292	81	103	1441	2347	3	0	7	10	1.8	-70.729	19.291	-3.6	-2.1	5.0	0.0	0.0	0.0	0.00
1293	81	103	2245	5485	5	0	3	5	0.9	-70.942	19.059	-26.9	-27.7	8.8	17.8	6.1	78.2	0.93
1294	81	103	2253	5255	5	0	3	10	1.6	-70.958	19.014	-31.9	-32.7	7.0	4.3	1.2	0.0	0.18
1295	81	104	1433	439	3	0	7	10	0.9	-70.726	19.299	-3.3	-2.2	5.0	0.0	0.0	0.0	0.00
1296	81	105	1309	3297	3	0	7	10	0.6	-70.729	19.291	-3.5	-2.0	5.0	0.0	0.0	0.0	0.00
1297	81	106	1535	3592	3	0	7	10	0.3	-70.734	19.293	-4.2	-1.8	5.0	0.0	0.0	0.0	0.00
1298	81	209	1531	1948	5	3	7	5	0.6	-70.734	19.283	-4.1	-2.9	5.0	5.7	4.8	0.0	1.31
1299	81	210	1347	373	7	6	2	10	2.0	-68.704	19.391	218.1	9.0	5.0	18.1	20.4	0.0	1.11
1300	81	210	1414	4182	5	3	7	5	0.6	0.000	0.000	58.1	70.5	10.5	103.3	444.7	489.5	15.57

DR EQF ILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1301	81	211		1339	4051		4	3	7	10	0.0	-70.730	19.293	-3.7	-1.8	1.2	0.7	0.9	1.4	0.23
1302	81	211		1542	429		9	4	1	10	1.5	-70.872	19.723	-19.2	45.8	18.8	3.9	4.4	2.6	0.44
1303	81	212		152	2755		7	4	2	10	0.5	-70.690	19.610	0.7	33.2	17.9	1.5	1.8	2.6	0.29
1304	81	212		419	460		7	1	3	10	2.0	-71.469	18.303	-84.6	-111.3	5.0	11.2	11.2	0.0	0.52
1305	81	212		707	1723		5	1	3	10	1.4	-70.625	18.813	7.9	-54.9	18.3	6.6	4.1	3.1	0.28
1306	81	212		1445	497		5	0	7	10	1.2	-70.726	19.333	-3.2	2.6	8.0	6.0	4.1	3.8	0.78
1307	81	213		610	4650		3	2	4	6	1.1	-70.387	19.643	33.8	36.9	8.2	3.1	2.4	13.9	0.17
1308	81	213		1128	5510		7	0	6	10	1.8	-70.588	19.784	11.8	52.4	149.8	9.3	20.8	51.6	0.32
1309	81	213		1343	3766		4	1	7	10	0.6	-70.735	19.300	-4.3	-1.0	2.6	0.1	0.2	0.2	0.04
1310	81	214		848	1642		7	2	1	10	1.1	-70.527	19.035	18.5	-30.4	27.1	1.7	1.1	2.2	0.19
1311	81	214		1329	4954		3	1	7	10	0.5	-70.725	19.280	-3.1	-3.3	5.8	0.0	0.0	0.0	0.00
1312	81	214		1554	5495		4	1	7	10	0.6	0.000	0.000	-2.8	-3.8	5.0	21.8	60.7	0.0	2.11
1313	81	215		603	801		6	1	2	10	1.1	-70.257	18.503	48.1	-89.2	18.2	16.3	11.3	7.5	0.49
1314	81	215		1437	4861		9	0	1	10	2.1	-69.756	18.932	102.9	-41.8	40.7	4.3	5.3	4.1	0.72
1315	81	216		1604	1761		3	0	7	10	1.0	-70.733	19.295	-4.0	-1.7	5.0	0.0	0.0	0.0	0.00
1316	81	217		723	3567		6	0	3	10	1.1	-69.866	18.094	90.9	-134.4	5.0	36.0	47.0	0.0	0.53
1317	81	217		2312	5292		7	2	2	5	1.8	-69.006	18.294	185.1	-112.4	40.9	24.5	39.7	29.3	1.01
1318	81	218		513	2763		6	3	3	10	1.1	-70.607	18.686	9.8	-69.0	21.4	3.2	2.2	1.9	0.12
1319	81	219		1046	999		7	2	2	10	1.7	-70.990	19.026	-32.2	-31.4	16.9	5.1	2.5	15.7	0.45
1320	81	219		1559	299		5	0	7	10	1.5	-70.733	19.295	-4.0	-1.7	2.2	0.3	0.3	0.3	0.08
1321	81	220		441	119		4	3	3	10	0.6	-70.696	19.585	1.2	30.4	30.0	2.3	2.9	6.1	0.21
1322	81	220		1426	4509		4	1	7	9	0.2	-70.722	19.281	-2.8	-3.2	5.0	1.2	1.3	0.0	0.19
1323	81	221		1848	4929		5	0	7	10	0.7	-70.735	19.309	-4.3	-0.2	2.9	1.4	1.3	1.2	0.41
1324	81	222		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1325	81	222		1816	2805		7	5	2	10	1.6	-69.490	18.776	132.1	-59.0	96.7	14.1	9.0	16.8	0.51
1326	81	222		1906	5708		7	7	1	10	0.9	0.000	0.000	29.3	29.3	5.0	11.3	14.7	0.0	2.16
1327	81	223		1359	211		3	0	7	10	0.6	-70.726	19.288	-3.3	-2.3	5.0	0.0	0.0	0.0	0.00
1328	81	223		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1329	81	224		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1330	81	224		1353	3296		3	0	7	10	0.6	-70.724	19.284	-3.0	-2.8	5.0	0.0	0.0	0.0	0.00
1331	81	224		1655	64		3	0	7	10	0.0	-70.731	19.294	-3.8	-1.7	5.0	0.0	0.0	0.0	0.00
1332	81	225		1409	3522		3	0	7	10	0.6	-70.725	19.291	-3.2	-2.1	5.0	0.0	0.0	0.0	0.00
1333	81	226		506	5954		3	0	5	10	1.5	-70.626	19.677	7.7	40.6	5.0	0.0	0.0	0.0	0.00
1334	81	226		2019	3500		4	0	5	10	1.6	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	0.0	59.33
1335	81	227		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1336	81	301		2212	674		4	0	5	5	1.5	-71.476	20.127	-85.3	90.4	18.1	389.5	330.1	9.1	0.59
1337	81	302		756	5900		5	0	4	2	1.6	0.000	0.000	-115.2	1310.0	1310.0	1310.0	1310.0	1310.0	16.88
1338	81	302		1208	1242		5	2	2	10	1.7	-69.412	19.185	140.6	-13.8	29.0	2.8	1.4	0.9	0.09
1339	81	302		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1340	81	302		1523	872		3	1	5	10	0.7	-70.635	19.543	6.7	25.8	5.0	34.3	14.7	0.0	1.29
1341	81	303		758	1630		5	0	3	7	1.1	-67.520	19.709	347.8	44.1	70.5	220.5	40.0	78.3	0.42
1342	81	303		953	4563		3	2	4	10	0.7	-70.404	19.097	32.0	-23.5	11.2	12.5	7.2	51.4	0.22
1343	81	304		2132	1465		5	4	2	10	0.6	-70.455	19.550	26.4	25.5	26.5	1.8	1.7	4.7	0.29
1344	81	305		1330	4387		3	0	7	10	0.3	-70.727	19.287	-3.3	-2.6	5.0	0.0	0.0	0.0	0.00
1345	81	305		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1346	81	305		1851	2099		4	0	4	10	0.6	-70.251	18.940	48.8	-49.8	5.0	23.5	10.1	0.0	1.28
1347	81	306		734	4580		3	0	5	10	-0.1	-70.472	19.402	24.5	10.2	5.0	0.1	0.1	0.0	0.00
1348	81	306		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1349	81	306		1948	4500		4	0	6	4	1.8	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	8.46
1350	81	307		54	3069		4	0	5	10	1.5	-69.323	19.704	150.4	43.6	6.5	31.6	12.8	0.0	0.41

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1351	81	307		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1352	81	308		357		3431	5	3	2	10	1.6	-69.931	19.736	83.8	47.1	5.0	5.5	5.1	0.0	0.37
1353	81	308		844		249	3	3	4	10	0.3	-70.617	19.584	8.7	30.3	24.2	0.3	0.5	1.7	0.05
1354	81	308		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1355	81	309		735		1630	5	0	3	10	1.7	-70.638	19.615	6.4	33.8	3.6	0.1	0.2	0.5	0.03
1356	81	309		805		4598	3	0	5	10	0.9	-70.578	19.739	12.9	47.5	5.0	0.0	0.1	0.0	0.00
1357	81	310		441		354	3	0	5	10	1.1	-70.497	19.464	22.9	17.0	5.0	0.0	0.0	0.0	0.00
1358	81	310		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1359	81	310		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1360	81	312		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1361	81	313		1045		5900	4	0	5	3	1.7	0.000	0.000	1310.0	-828.9	1310.0	1310.0	1310.0	1310.0	6.31
1362	81	313		1729		3418	2	1	5	10	2.1	-68.910	18.956	195.5	-39.1	5.0	3.2	3.5	0.0	0.06
1363	81	313		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1364	81	317		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1365	81	318		748		4307	5	2	3	7	1.6	0.000	0.000	245.7	31.5	18.7	870.0	1310.0	1310.0	16.30
1366	81	318		0		0	0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1367	81	318		1519		1152	5	3	2	10	0.7	-70.741	19.556	-4.9	27.2	26.1	0.5	0.7	1.8	0.09
1368	81	318		1301		5903	3	0	7	10	0.1	-70.726	19.292	-3.3	-2.0	5.0	0.0	0.0	0.0	0.00
1369	81	320		1113		1568	5	1	3	10	1.0	-70.277	20.089	45.9	86.2	5.0	3.6	5.1	0.0	0.21
1370	81	320		1254		3630	3	1	5	6	0.9	-70.333	19.996	39.7	76.0	8.6	12.4	19.9	100.9	0.81
1371	81	320		1333		1681	3	1	5	10	0.6	-70.312	19.907	42.1	74.9	2.4	4.5	7.7	7.3	0.08
1372	81	320		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1373	81	321		929		1068	2	1	5	1	1.1	0.000	0.000	-17.1	35.7	5.0	0.0	0.0	0.0	7.08
1374	81	321		932		1324	6	2	2	8	1.6	-68.058	19.571	288.8	28.9	35.8	21.3	34.5	26.1	0.74
1375	81	321		0		0	0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1376	81	321		1959		103	4	2	3	10	0.0	-70.642	19.643	5.9	36.9	25.7	0.3	0.9	1.5	0.06
1377	81	321		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1378	81	322		244		2054	6	3	2	10	0.6	-70.629	18.969	7.3	-38.6	81.8	2.6	3.9	3.8	0.19
1379	81	322		923		638	4	1	4	10	0.3	-70.638	19.645	6.4	37.1	26.6	0.9	2.6	4.3	0.15
1380	81	322		0		0	0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1381	81	324		2005		5751	4	2	4	10	1.0	-69.671	19.444	112.3	14.9	5.0	5.9	6.3	0.0	0.28
1382	81	324		2056		1324	3	1	5	10	0.9	-71.199	19.612	-54.9	33.4	22.4	0.5	0.3	0.9	0.01
1383	81	325		848		3891	6	1	2	10	1.3	-70.138	19.562	61.2	27.9	19.5	9.5	4.8	3.0	0.36
1384	81	325		1812		3800	7	0	6	10	1.8	-67.269	11.892	375.3	-820.4	1310.0	1310.0	1310.0	1310.0	0.43
1385	81	325		2120		3852	6	2	2	5	1.6	-71.718	19.885	-111.9	63.6	18.7	10.5	9.3	25.7	0.42
1386	81	329		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1387	81	330		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1388	81	331		1307		3239	3	1	7	10	-0.3	-70.726	19.287	-3.2	-2.5	5.7	0.0	0.0	0.0	0.00
1389	81	401		1206		3488	3	0	7	10	0.3	-70.754	19.295	-6.4	-1.6	5.0	0.0	0.0	0.0	0.00
1390	81	402		1239		2709	4	0	7	10	0.3	-70.749	19.290	-5.8	-2.2	5.5	0.0	0.1	0.1	0.00
1391	81	402		1458		5018	4	0	7	10	0.3	-70.718	19.274	-2.3	-3.9	6.1	7.9	9.7	5.9	0.33
1392	81	402		1538		4375	3	1	5	10	1.1	-70.324	18.549	49.8	-84.1	32.2	0.1	0.2	0.4	0.00
1393	81	403		609		603	6	0	2	10	1.5	-70.091	19.060	66.3	-27.6	131.4	12.6	4.5	25.1	0.10
1394	81	403		839		3652	8	0	2	10	0.9	-69.361	19.545	145.2	26.9	62.0	33.0	8.6	11.5	0.19
1395	81	403		0		0	0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1396	81	403		0		0	0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1397	81	403		1631		2046	6	0	2	10	1.5	-70.123	19.177	62.7	-14.6	5.0	15.0	12.6	0.0	1.81
1398	81	403		1645		1185	5	5	2	10	1.6	-72.550	18.624	-203.0	-75.9	5.0	11.9	16.2	0.0	0.69
1399	81	404		958		4467	3	1	5	10	1.0	-72.163	20.031	-160.5	79.8	58.0	8.8	5.6	105.7	0.14
1400	81	404		1240		546	3	0	7	10	0.5	-70.724	19.288	-3.0	-2.4	5.0	0.0	0.0	0.0	0.00

JR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1401	81	406		809	4625		8	8	1	10	1.6	-69.615	19.465	118.4	17.2	197.0	19.0	26.5	16.8	0.90
1402	81	407		0	0		0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1403	81	407		1318	3539		4	0	7	10	0.3	-70.736	19.253	-4.4	-6.3	5.2	0.0	0.0	0.0	0.00
1404	81	409		1539	1741		3	0	7	10	1.0	-70.727	19.291	-3.4	-2.1	5.0	0.0	0.0	0.0	0.00
1405	81	410		839	2447		7	7	1	10	0.6	-70.611	19.203	9.3	-11.8	24.9	1.5	1.3	3.1	0.31
1406	81	410		1311	2943		3	2	7	10	0.6	-70.726	19.285	-3.3	-2.6	6.3	0.2	0.2	0.5	0.02
1407	81	410		1525	5364		4	1	7	10	0.4	-70.758	19.301	-6.7	-0.9	4.7	0.4	0.5	1.3	0.09
1408	81	411		550	0		5	0	6	7	2.1	-9.052	102.599	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	1.63
1409	81	411		1728	3989		6	1	2	10	1.3	-69.101	19.272	174.7	-4.2	95.2	10.9	9.6	17.7	0.29
1410	81	412		335	1437		2	1	5	1	1.0	0.000	0.000	-17.1	35.7	5.0	0.0	0.0	0.0	5.61
1411	81	412		1050	663		6	5	1	10	0.5	-70.481	19.258	23.6	-5.7	5.0	2.9	2.5	0.0	0.69
1412	81	413		1416	2411		4	0	7	5	0.5	0.000	0.000	-34.6	105.7	5.0	1310.0	1310.0	0.0	68.89
1413	81	413		2029	581		2	1	5	1	0.3	0.000	0.000	35.6	17.2	5.0	0.0	0.0	0.0	3.66
1414	81	414		520	2521		3	0	5	10	1.3	-70.848	19.514	-16.6	22.6	5.0	0.0	0.0	0.0	0.00
1415	81	414		1525	5532		8	7	1	10	0.9	-70.520	19.601	19.3	32.2	5.0	5.1	8.5	0.0	1.42
1416	81	416		619	466		4	2	3	10	0.6	-70.885	19.602	-20.7	32.3	22.3	1.0	1.0	1.4	0.09
1417	81	416		619	1404		7	6	1	10	1.1	-69.611	18.926	118.9	-42.4	95.2	7.5	5.4	11.3	0.35
1418	81	418		852	5890		7	4	1	10	1.7	-70.140	18.980	60.9	-36.5	99.3	23.3	16.3	23.8	1.26
1419	81	418		1116	1572		6	4	1	10	0.0	-70.867	19.572	-18.7	29.0	26.1	2.0	2.0	3.9	0.26
1420	81	419		2223	4043		5	2	2	10	0.5	0.000	0.000	-28.7	1.6	38.9	25.5	19.0	35.4	2.12
1421	81	420		552	5362		5	0	6	10	1.5	-71.702	18.030	-110.1	-141.5	5.0	17.8	23.5	0.0	0.24
1422	81	421		1603	1182		2	1	5	1	0.5	-70.696	19.310	0.0	0.0	5.0	0.0	0.0	0.0	1.05
1423	81	423		807	4310		2	1	5	10	0.9	-70.967	20.025	-29.6	79.1	5.0	0.3	0.5	0.0	0.01
1424	81	423		1147	5017		4	1	4	10	0.8	-70.767	19.664	-7.8	39.1	21.8	1.1	2.0	4.7	0.12
1425	81	423		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1426	81	423		1903	4131		5	0	3	10	0.0	-70.355	19.470	37.4	17.8	22.0	8.0	6.9	10.0	0.22
1427	81	424		142	2512		4	0	4	10	1.1	-70.328	19.385	40.3	8.3	46.0	2.2	1.2	1.0	0.00
1428	81	424		310	255		5	1	3	10	-0.5	-70.795	19.176	-10.8	-14.8	19.8	0.4	0.6	1.3	0.08
1429	81	424		340	2415		4	1	4	10	0.3	-70.090	19.184	66.4	-13.9	7.0	28.9	17.5	243.0	1.17
1430	81	424		1619	0		4	0	4	10	0.5	-61.308	19.603	1027.9	32.4	1310.0	183.2	89.7	0.0	0.18
1431	81	504		210	357		7	1	2	10	0.2	-70.026	19.523	73.3	23.6	19.1	17.1	8.3	5.1	0.58
1432	81	504		917	2848		4	2	3	10	0.3	-70.360	18.831	36.8	-53.0	95.3	5.2	3.6	3.6	0.15
1433	81	504		2140	4715		5	0	6	10	2.2	-71.959	18.294	-138.2	-112.4	119.1	132.2	114.0	89.0	0.30
1434	81	505		257	5376		5	0	3	10	1.5	-68.283	18.834	264.2	-52.6	218.8	283.4	63.4	211.2	0.16
1435	81	505		1427	1932		5	0	3	6	0.0	-70.761	19.383	-7.1	8.1	3.4	3.6	2.8	1310.0	0.71
1436	81	505		2105	1537		5	1	3	10	1.1	-70.721	20.323	-2.7	112.0	41.7	29.1	32.4	9.1	0.88
1437	81	506		8	3514		3	4	4	10	0.2	-70.472	18.911	24.6	-44.1	91.4	9.0	6.1	5.2	0.25
1438	81	506		2257	3826		4	1	4	10	0.6	-69.760	19.218	102.5	-10.1	34.5	40.1	6.5	14.9	0.19
1439	81	507		838	223		4	1	4	10	1.1	-70.975	19.994	-30.5	75.7	37.3	11.8	17.1	15.1	0.56
1440	81	507		1408	4537		5	0	4	10	0.8	-70.745	19.306	-5.3	-0.4	8.6	4.1	3.8	6.3	0.81
1441	81	507		0	0		0	0	5	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1442	81	509		1605	1503		3	2	4	10	0.8	-70.416	19.114	30.7	-21.7	5.0	11.2	19.2	0.0	0.76
1443	81	509		1743	3351		5	1	3	10	1.6	-70.230	19.291	51.1	-2.0	52.3	24.8	9.2	21.1	0.77
1444	81	509		2140	2469		5	1	2	10	1.0	-69.970	18.476	189.0	-92.2	128.7	30.8	18.4	31.2	0.67
1445	81	512		103	2952		4	1	4	10	1.6	-69.639	18.870	119.2	-48.6	115.2	3.4	4.1	5.7	0.10
1446	81	512		159	2500		4	0	6	3	2.8	0.000	0.000	1310.0	1310.0	1310.0	1310.0	1310.0	1310.0	6.29
1447	81	512		430	4570		5	4	2	10	0.8	-70.677	19.768	2.1	50.7	29.9	1.7	3.0	4.3	0.24
1448	81	512		1931	144		6	2	2	10	1.5	-70.209	19.276	53.3	-3.8	64.7	17.7	19.0	34.3	1.72
1449	81	521		34	3543		10	7	1	10	0.9	-69.814	19.212	96.6	-10.8	17.1	1.4	1.7	3.1	0.39
1450	81	521		139	4321		8	6	1	10	1.0	-70.099	19.587	65.4	30.7	12.1	2.0	3.5	24.1	0.51

ER EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1451	81	5	21	706	4338		6	2	2	10	0.3	-70.563	19.706	14.6	43.8	80.5	15.6	35.5	33.9	1.59
1452	81	5	21	755	5636		5	5	2	10	1.5	-71.129	20.120	-46.4	89.6	17.9	4.5	4.8	4.0	0.35
1453	81	5	21	819	2294		5	0	3	10	2.1	-70.755	19.550	-6.4	-84.0	20.4	0.9	1.2	0.0	0.04
1454	81	5	21	1118	339		9	9	1	10	1.0	-70.047	19.008	71.1	-33.4	45.4	5.5	7.1	5.1	1.22
1455	81	5	21	1146	3841		5	4	2	10	0.6	-71.120	19.858	-46.4	60.7	10.0	5.9	6.2	64.5	0.48
1456	81	5	21	1704	4043		9	8	1	10	0.9	-70.494	18.825	22.2	-53.6	86.8	1.6	2.6	3.1	0.24
1457	81	5	21	2229	2121		6	1	2	10	0.3	-70.358	19.384	37.0	8.3	43.3	13.5	6.2	21.0	0.73
1458	81	5	22	1408	402		6	6	1	10	1.1	0.000	0.000	36.7	32.1	78.8	18.1	28.8	31.2	2.03
1459	81	5	22	1431	5411		5	2	7	10	0.0	-70.749	19.284	-5.7	-2.8	5.0	2.2	3.4	0.0	0.57
1460	81	5	22	1934	1948		10	6	1	10	0.6	-70.165	19.446	58.2	15.0	19.5	1.2	2.0	2.7	0.39
1461	81	5	22	2321	5847		12	8	1	10	0.8	-69.624	18.756	117.5	-61.3	98.7	2.6	2.9	4.4	0.32
1462	81	5	22	2325	5217		10	6	1	10	1.1	-69.548	18.799	125.7	-56.5	90.7	4.2	3.4	5.1	0.37
1463	81	5	23	416	4925		11	8	1	10	1.6	-70.496	20.137	22.0	91.5	18.0	5.2	9.5	7.5	0.97
1464	81	5	23	1305	4409		11	1	1	10	1.9	-70.034	19.294	72.5	-1.7	5.0	7.0	6.8	0.0	1.46
1465	81	5	23	1926	3255		9	2	1	10	2.1	0.000	0.000	-87.2	-38.4	15.4	62.5	29.7	35.4	3.18
1466	81	5	24	1457	2000		10	0	6	8	1.3	-74.092	23.675	-371.8	482.8	1310.0	938.4	1130.8	1310.0	1.09
1467	81	5	24	1905	4546		6	0	3	10	1.1	-70.523	19.071	19.0	-26.4	56.9	3.1	6.4	6.9	0.18
1468	81	6	2	2029	1841		4	2	3	10	0.9	-69.876	19.453	89.9	15.8	5.0	11.3	9.8	0.0	0.54
1469	81	6	4	632	4064		8	5	1	10	1.5	-70.420	19.674	30.2	40.3	7.1	2.0	3.8	4.6	0.47
1470	81	6	4	1256	1143		3	2	4	10	1.3	-71.121	19.664	-46.4	39.2	5.0	1.7	1.1	0.0	0.08
1471	81	6	4	1330	4613		5	3	2	10	0.3	-70.499	18.969	22.7	-37.7	31.7	2.1	3.6	5.3	0.22
1472	81	6	4	1427	1114		3	2	7	10	0.0	-70.713	19.266	-1.8	-4.8	5.5	0.5	0.8	0.4	0.03
1473	81	6	4	1954	2532		5	2	2	5	2.1	-70.530	20.119	18.2	89.5	8.8	5.5	9.9	31.0	0.47
1474	81	6	5	653	5117		6	2	2	10	1.3	-70.419	20.206	30.4	99.2	19.4	5.3	12.2	6.0	0.56
1475	81	6	6	141	3570		4	2	3	10	0.9	-70.449	20.024	27.0	79.0	26.6	10.6	20.8	51.1	0.97
1476	81	6	7	1113	2428		5	3	3	10	1.5	-70.497	19.638	21.8	36.3	27.0	1.1	1.4	3.1	0.13
1477	81	6	16	1341	419		2	2	7	2	0.3	-70.765	19.272	-7.6	-4.2	5.0	1310.0	1310.0	0.0	0.77
1478	81	6	16	1712	2763		4	1	4	10	0.3	-70.653	19.468	4.8	17.5	23.7	6.2	1.7	9.8	0.24
1479	81	6	17	343	3685		4	2	3	10	0.6	-70.354	18.291	37.5	-112.7	38.6	0.4	0.5	0.2	0.01
1480	81	6	17	1411	2675		3	2	7	10	0.0	-70.725	19.286	-3.1	-2.6	5.7	1.8	3.3	0.9	0.05
1481	81	6	17	1554	5451		7	4	2	10	1.4	-70.090	19.415	66.4	11.7	1.2	1.3	2.1	3.7	0.32
1482	81	6	17	1718	4564		3	0	5	10	1.1	-70.693	19.436	0.4	13.9	5.0	0.1	0.0	0.0	0.00
1483	81	6	17	2057	3610		7	4	2	6	0.6	-70.786	18.684	-9.8	-69.2	10.6	15.3	13.5	50.9	1.46
1484	81	6	17	2157	1180		4	3	3	10	0.0	-70.278	19.511	45.8	22.3	28.8	3.7	1.9	6.5	0.15
1485	81	6	18	143	3378		8	3	1	10	1.6	0.000	0.000	25.9	-33.9	48.1	12.6	12.1	29.7	2.33
1486	81	6	18	227	1959		5	0	6	10	2.5	-73.418	19.627	-298.0	35.1	152.3	1310.0	333.5	644.1	0.21
1487	81	6	19	2108	1000		6	0	6	4	1.1	0.000	0.000	1085.3	1310.0	1310.0	1310.0	1310.0	1310.0	10.39
1488	81	6	23	1347	192		4	3	7	10	0.2	-70.702	19.253	-0.6	-6.2	5.0	1.9	1.9	1.3	0.16
1489	81	6	23	0	0		0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1490	81	6	23	1824	4959		4	2	3	10	0.9	-70.186	18.927	55.9	-42.3	11.1	8.7	6.9	29.7	0.32
1491	81	6	23	2118	780		4	3	4	9	0.6	-71.676	19.723	-107.2	45.7	22.5	17.6	15.9	104.0	0.71
1492	81	6	25	712	1044		4	2	3	10	1.1	-70.316	19.378	41.7	7.6	26.2	9.7	19.7	8.4	0.20
1493	81	6	25	1415	1000		4	3	7	10	0.0	-70.719	19.276	-2.5	-3.7	5.7	1.4	1.5	1.9	0.14
1494	81	6	27	1517	4351		5	3	2	10	0.0	-70.597	19.659	10.8	38.6	33.8	0.6	0.9	1.7	0.08
1495	81	6	27	1523	1786		5	3	2	10	0.9	-70.592	19.657	11.5	38.5	33.0	0.9	1.3	3.1	0.13
1496	81	6	27	1539	2468		5	3	2	10	1.4	-70.593	19.667	11.3	39.5	33.4	0.5	0.8	1.4	0.07
1497	81	6	27	1635	5442		4	3	3	10	0.9	-70.595	19.653	11.1	38.0	32.9	1.3	0.8	1.3	0.06
1498	81	6	28	812	863		4	3	3	10	1.3	-71.632	18.769	-102.4	-59.8	5.0	27.8	40.2	0.0	0.72
1499	81	6	28	859	250		3	1	5	5	0.9	0.000	0.000	104.6	-122.2	21.1	383.0	333.7	180.0	2.60
1500	81	6	28	1345	170		3	3	4	10	0.0	-70.714	19.269	-1.9	-4.5	5.0	1.0	1.8	1.1	0.04

DR EQFILE

NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1501	81	6	28	21	21	50.27	4	0	4	10	1.1	-70.792	19.377	-10.5	7.4	8.5	0.0	0.0	0.2	0.00
1502	81	6	28	21	44	49.77	5	1	3	10	1.5	-69.599	18.380	120.1	-102.8	56.6	13.6	14.3	10.1	0.42
1503	81	6	30	14	00	59.27	2	2	7	2	0.0	-70.765	19.272	-7.6	-4.2	5.0	1310.0	1310.0	0.0	0.80
1504	81	6	30	16	22	11.45	4	1	4	10	1.2	-69.833	19.469	94.5	17.6	28.0	3.8	2.1	18.2	0.09
1505	81	6	30	16	33	17.19	4	4	2	10	0.6	-70.005	19.480	75.7	18.8	40.1	9.8	9.0	3.7	0.52
1506	81	6	30	18	18	0.96	3	2	4	7	0.6	-70.170	19.594	57.6	21.5	10.3	4.8	2.9	36.3	0.18
1507	81	7	1	18	01	33.67	3	0	5	10	0.6	-70.829	19.431	-14.5	13.4	5.0	0.1	0.0	0.0	0.00
1508	81	7	4	5	57	19.89	3	1	5	10	0.6	-70.881	19.827	-20.2	57.2	5.0	8.7	14.8	0.0	0.51
1509	81	7	5	5	29	28.92	3	2	5	10	0.3	-70.018	19.243	74.3	-7.4	5.0	6.1	21.1	0.0	0.27
1510	81	7	5	12	35	21.19	3	0	5	10	1.3	-70.962	19.321	-29.1	1.3	5.0	0.3	0.4	0.0	0.00
1511	81	7	6	0	30	35.21	2	1	5	1	0.3	0.000	0.000	0.0	0.0	5.0	0.0	0.0	0.0	24.80
1512	81	7	6	2	50	19.48	3	1	5	6	0.6	-71.106	18.686	-53.6	-69.0	49.6	7.6	13.3	16.3	0.04
1513	81	7	6	4	27	45.65	3	2	4	10	0.3	-70.680	20.047	1.8	81.5	5.0	12.8	11.8	0.0	0.55
1514	81	7	7	0	0	0.00	0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1515	81	7	8	21	29	33.39	3	3	4	10	-0.4	-70.771	19.136	-8.1	-19.2	22.0	0.3	1.2	1.0	0.01
1516	81	7	9	9	46	13.93	3	2	4	10	1.1	-70.606	17.851	9.8	-161.4	5.0	7.1	3.4	0.0	0.16
1517	81	7	11	0	0	0.00	0	0	7	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1518	81	7	11	22	23	32.64	3	2	4	10	0.0	-71.247	18.816	-60.3	-54.6	5.0	2.9	2.6	0.0	0.11
1519	81	7	12	1	09	49.56	5	2	2	5	1.5	-68.521	19.377	238.2	7.4	44.9	47.8	40.4	32.4	1.68
1520	81	7	12	1	28	51.67	4	2	4	8	1.4	-68.339	19.229	258.1	-8.9	60.4	49.8	54.4	101.2	1.49
1521	81	7	12	3	21	46.73	3	2	5	10	0.9	-71.760	18.713	-116.4	166.0	5.0	22.1	39.8	0.0	0.44
1522	81	7	12	3	28	48.66	3	2	4	10	0.9	-70.650	19.241	5.1	-7.5	42.3	2.0	6.7	1.4	0.04
1523	81	7	12	3	32	58.89	3	2	4	10	0.0	-70.673	19.311	2.6	0.1	43.1	4.5	14.6	2.0	0.09
1524	81	7	12	5	16	30.28	5	2	2	10	0.8	-69.730	18.798	105.8	-56.6	74.9	2.0	2.2	3.1	0.12
1525	81	7	12	5	53	11.66	3	2	4	10	0.0	-70.663	19.245	3.7	-7.1	42.1	0.8	2.6	0.5	0.01
1526	81	7	12	6	29	36.38	8	3	1	10	1.4	-69.516	18.383	129.2	-102.5	139.5	22.5	30.5	37.3	1.92
1527	81	7	13	3	29	9.69	4	2	3	10	0.6	-69.748	17.844	103.9	-162.1	68.3	1.3	3.4	5.9	0.03
1528	81	7	14	8	40	55.45	3	1	5	10	1.1	-69.901	18.453	87.0	-94.8	5.0	4.0	3.1	0.0	0.09
1529	81	7	15	17	05	22.00	5	1	3	10	1.5	-68.925	18.690	194.0	-68.6	139.2	23.4	20.6	24.0	0.40
1530	81	7	16	12	56	41.26	2	2	7	2	0.3	-70.696	19.310	0.0	0.0	5.0	1310.0	1310.0	0.0	0.79
1531	81	7	16	22	11	10.47	9	3	1	10	1.8	-71.558	18.601	-94.4	-78.3	20.2	15.3	9.7	16.8	0.99
1532	81	7	18	2	15	45.00	4	0	4	4	1.6	0.000	0.000	1310.0	1310.0	5.0	1310.0	1310.0	0.0	1310.00
1533	81	7	18	15	55	46.30	3	1	7	10	-0.5	-70.738	19.299	-4.5	-1.2	6.0	0.0	0.0	0.0	0.00
1534	81	7	18	17	24	48.66	7	3	1	10	0.6	-70.550	20.077	16.0	84.9	38.6	17.4	15.7	8.9	0.85
1535	81	7	19	0	0	0.00	0	0	1	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1536	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1537	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1538	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1539	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1540	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1541	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1542	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1543	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1544	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1545	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1546	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1547	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1548	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1549	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1550	0	0	0	0	0	0.00	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00

DR EQFILE NO	YR	M	D	H	M	S	NP	NS	IQ	ITR	MAG	LONG (DEG)	LAT (DEG)	X (KM)	Y (KM)	DEPTH (KM)	DX (KM)	DY (KM)	DZ (KM)	S
1551	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1552	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1553	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1554	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1555	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1556	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1557	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1558	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1559	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1560	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1561	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1562	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1563	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1564	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1565	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1566	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1567	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1568	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1569	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1570	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1571	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1572	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1573	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1574	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1575	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1576	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1577	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1578	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1579	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1580	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1581	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1582	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1583	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1584	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1585	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1586	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1587	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1588	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1589	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1590	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1591	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1592	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1593	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1594	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1595	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1596	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1597	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1598	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1599	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00
1600	0	0	0	0	0	0	0	0	0	0	0.0	0.000	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.00