

Acquisition of digital seismograms during
the Mammoth Lakes, California, earthquake
sequence of May-June 1980

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This report is preliminary and has not
been reviewed for conformity with U. S. Geological Survey
editorial standards and stratigraphic nomenclature .

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This report is the first of two open-file reports describing the collection and preliminary analysis of digital seismograms recorded by the U.S. Geological Survey during the Mammoth Lakes, California, earthquake sequence of May-June, 1980. This first report describes the details of data collection and processing, and contains a summary of data gathered. The second report, by Mueller et al (1980), contains preliminary locations, moments, fault plane solutions, and pictures of locatable events.

On May 25, 1980, the region near Mammoth Lakes, California, was shaken by three earthquakes of $M_L \geq 6.0$ which occurred at 1633, 1649, and 1944 UTC. Shortly thereafter the U.S. Geological Survey deployed 12 digital, three-component seismometers in the Mammoth Lakes area at the locations shown in figure 1 and listed in table 1. The primary objective of the instrumental deployment was to record large aftershocks at the closest epicentral ranges possible in order to augment existing knowledge of possible ground motions at near-source ranges. Accordingly, several high-gain velocity sensors were deployed around the periphery of the apparently active area in order to locate the earthquake activity, and force-balance accelerometers (FBA) were installed along the traces of known or suspected active faults. The instruments were the model DR-100 manufactured by the Sprengnether Corporation, and have been described by Fletcher (1981). The instruments employed either velocity transducers with a 2 Hz natural period, or force-balance accelerometers. Periods of operation, instrument polarity, and sensor type for each site are also listed in table 1. Additional technical information for each station appears in table 2.

The Mammoth Lakes earthquake sequence lasted several weeks and has been described by McJunkin and Bedrossian (1980) and Uhrhammer and Ferguson (1980). During the first week, and especially during the first few days of the activity, the sequence was very rich in earthquakes above magnitude 4. Event coverage during the first two days of the sequence was consequently rather spotty due to the tendency of the instruments to use all their recording tape long before they could be serviced, and due to the time required to install all the instruments. By May 28 the instruments had been adjusted so that excessive recording tape usage was avoided.

During the three weeks the USGS instruments were deployed, a regular site maintenance schedule was followed. Each site was visited approximately once each day except PSl. Typically, during the visit a portable WWVB radio receiver was used to place a WWVB time signal on the tail of the cassette tape in the DR-100 recorder. If the tape had recorded any events, it was removed and a fresh cassette tape was installed in the recorder, and WWVB time was recorded at the head of the fresh tape. Instrumental gains and, less frequently, trigger ratios were varied if necessary during the visit in order to compensate for daily variations in the level of earthquake activity. Other maintenance, such as battery replacement, tape head cleaning, and sensor replacement was performed when necessary. A log of all cassette tapes describing gains and field notes appears in Appendix A, a concise summary of station gain settings appear in Appendix B, and other instrumental constants appear in table 3.

Once data tapes were removed from the recorders, they were returned to the field headquarters where their contents were examined by playback into a strip chart recorder, which allowed the personnel in the field to measure clock

corrections for the instruments, pick P and S wave arrival times, and monitor earthquake locations and equipment performance.

On days 156 and 157 an attempt was made to record a quarry blast set off near station MIN, causing a disruption of the regular maintenance schedule. Despite the high gain settings used during this period, no blast records were obtained. The instrument at MIN successfully recorded the blast, but no WWVB time was obtained, rendering the record useless.

The DR-100 recorder has an internal clock with a fairly constant, non-zero drift rate. Because of the drift, the clock correction is an approximately linear function of time, and measured clock corrections are given in Appendix C. The clock correction is defined by:

$$\text{INSTRUMENTAL TIME} + \text{CLOCK CORRECTION} = \text{TRUE TIME}$$

No clock correction was obtained for PS1 and its internal clock was probably in error by ± 0.5 s.

Approximately 1500 earthquakes were recorded by the station array. Appendix D lists all recorded event times, and the stations recording each event. In Appendix E can be found a list of all events recorded on three or more stations, sorted by number of stations recording the events. These lists are only about 97% accurate because they are sorted by integer minute. Hence, if an earthquake triggers one instrument at 1450:59 and another instrument at 1451:01, it appears as two separate events in the list. In addition, if a station is triggered more than once in the same minute, only one entry appears in the list.

Four stations were deployed which recorded essentially no usable data. These stations, BEN, MIN, PS2, and UCK, have not been included in any of the summaries appearing in this report, and their locations are given in table 4.

BEN and PS2 recorded no data because of instrument malfunction. UCK recorded one event, but without a time code.

Acknowledgments

We wish to thank the people of Mammoth Lakes, and especially the staff and management of the White Stag Inn and the International Inn, for their hospitality and cooperation with us during our field work. We also would like to thank Roger Sherburne and the California Division of Mines and Geology for their coordinating activities during the initial post-seismic confusion, and Barbara Mavko and Marylynne Vivrette for their logistical assistance.

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Table 1: Station locations, polarities, sensor types, and periods of operation.

Station	Sensor type	Operating period		Direction of positive motion			Latitude	Longitude	Altitude (m)
		installed	recovered	Chan. 1	Chan. 2	Chan. 3			
CBR	FBA	5/27	6/13	U	N	E	37° 40.75	-118° 49.51	2110
CON	FBA	5/27	6/13	D	W	S	37° 35.38	-118° 51.17	2320
DMP	VEL	5/29	6/3	U	N	E	37° 44.26	-118° 49.54	2110
FIS	FBA	5/26	6/13	U	N	E	37° 36.84	-118° 49.82	2160
HCF	FBA	5/27	6/13	U	N	E	37° 38.51	-118° 50.98	2160
HOT	VEL	5/26	5/30	U	N	E	37° 39.25	-118° 48.29	2110
LAK	VEL	5/26	6/13	U	N	E	37° 38.49	-118° 43.70	2070
LAR	VEL	5/26	5/30	U	N	E	37° 37.37	-118° 53.38	2220
LKM	VEL	5/30	6/13	U	S	W	37° 41.80	-118° 56.13	2340
MCC	VEL	5/26	5/27	U	N	E	37° 33.25	-118° 47.88	2390
MGE	FBA	5/27	6/13	U	N	E	37° 33.67	-118° 47.22	2340
PS1	FBA	5/26	6/1	D	W	S	37° 32.45	-118° 35.35	2110
ROC	VEL	5/26	6/13	U	N	E	37° 29.78	-118° 43.16	2730
TOM	VEL	5/26	6/13	U	N	E	37° 33.05	-118° 40.32	2190
TWL	VEL	5/30	6/13	U	N	E	37° 36.93	-119° 00.37	2630

Table 2: Additional technical information about stations.

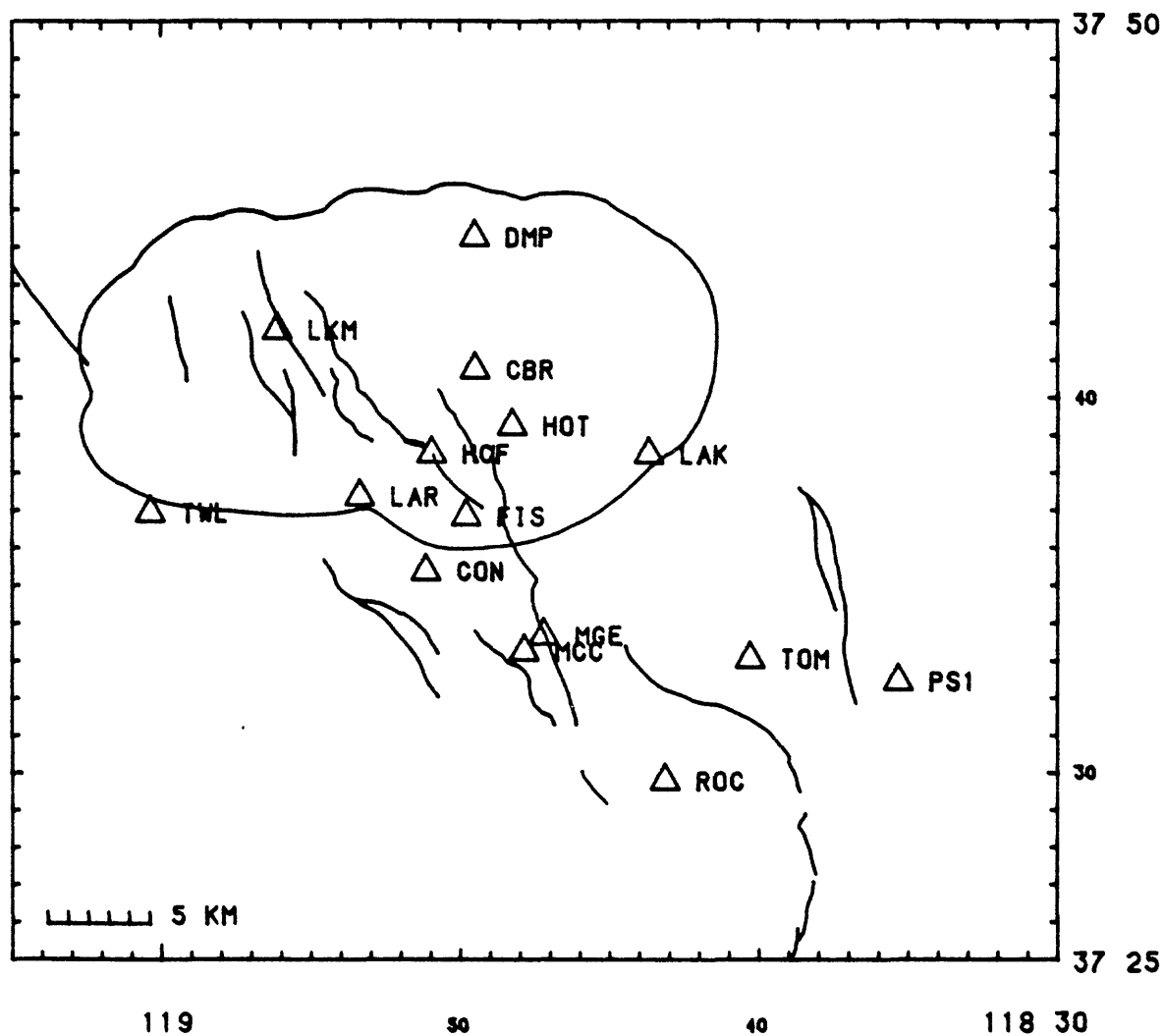
Station	System serial numbers		DR-100 internal switch settings				Sample rate per component (Hz)	Power	Remarks
	recorder	amplifier	sensor	A/V switch	C duration (s)	D ratio (dB)	E LTA (s)	F STA (s)	
CBR	203	127	105	A	5	6	20	0.2	gel cell
CON	204	105	7411		5	9	20	0.2	12 v wet cell USGS Eng. Geology
DMP	211	109	6724	A	5	9	20	0.2	gel cell sensor moved to TWL
FIS	217	122	106	A	5	6	20	0.2	gel cell
HCF	212	124	104	A	5	6	20	0.2	AC
HOT	222	125	6727	V	5	6	20	0.2	gel cell moved to TWL
LAK	219	121	6725	V	5	6	20	0.2	gel cell
LAR	223	126	6723	V	5	6	20	0.2	gel cell moved to LKM
LKM	223	126	6723	V	5	6	20	0.2	gel cell
MCC	212	124	6724	V	5	6	20	0.2	gel cell moved to DMP and HCF
MGE	216	114	101	A	5	6	20	0.2	gel cell
PS1	213	108	203	V	5	6	20	0.2	12 v wet cell USGS Eng. Geology
ROC	214	109/123	6753	V	5	6	20	0.2	gel cell
TOM	218	120	6726	V	5	6	20	0.2	gel cell
TWL	222	125	6727/6724	V	5	6	20	0.2	gel cell

Table 3: Instrument constants

	velocity instruments	force balance accelerometers
Coil constant	0.5 v/cm/s	.0068 v/cm/s ²
Natural frequency (Hz)	2	--
Corner frequency (Hz) anti-alias filter	50	50
Number of poles anti-alias filter	5	5
Rolloff (dB/octave) - anti-alias filter	30	30
Damping	0.6	0.6

Table 4: Station coordinates -
Malfunctioning stations

Station	Latitude-N	Longitude-W
BEN	37° 33.78'	118° 43.99'
MIN	37° 23.70'	118° 43.08'
PS2	37° 31.51'	118° 34.42'
UCK	37° 38.97'	118° 58.52'



MAMMOTH LAKES STATION LOCATIONS

Figure 1. Locations of digital seismometers which recorded earthquakes during the Mammoth Lakes earthquake sequence.

Appendix A: Cassette tape log

This appendix contains a list of all cassette data tapes recovered from the field for stations which produced good data. For each tape an installation and recovery time are given, as well as comments abstracted from the field notes. Abbreviations used in the appendix are:

TC: WWV time recorded on tape

S0: No WWV time code recorded, but indicated tape time on or time off is accurate to the minute.

T0: No WWV time code recorded, and indicated tape time on or time off is of unknown accuracy.

STATION NAME CBR(FBA)
 LAT. 37°40.75' LONG. 118°49.51' ELEV. 2110 m.
 MAP QUADRANGLE M7. MERRISEN
 DATE INSTALLED MAY 27, 1980 DATE REMOVED JUNE 13, 1980
 INSTALLED BY R. WARRICK, R. NAVARRO
 STATION SITING ALLUVIUM AND TUFF DEPOSITS OF THE
CALDERA
 RECORDER NO. 203 LID NO. 127 SEISMOMETER NO. 105
 SEISMOMETER ORIENTATION NORTH
 COMMENTS _____

* * * * *
 TAPE #1 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME 23:51
 TAPE OFF- TC(X), SO(), TO() DAY 149 TIME 16:43:55
 GAIN 12db NO. OF TRIG. 15 CC-WWV YES
 COMMENTS STA/LTA = 9db, TRIG. MODE = PER FBA

TAPE #2 TAPE ON - TC(X), SO(), TO() DAY 149 TIME 16:50:55
 TAPE OFF- TC(X), SO(), TO() DAY 150 TIME 15:22:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV YES
 COMMENTS _____

TAPE #3 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 15:31:55
 TAPE OFF- TC(), SO(), TO() DAY 151 TIME 15:42:55
 GAIN 12db NO. OF TRIG. 7 CC-WWV YES
 COMMENTS NEW BATTERY, HEADS CLEANED

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 151 TIME 15:49:55
 TAPE OFF- TC(), SO(X), TO() DAY 152 TIME 21:00
 GAIN 6db NO. OF TRIG. 13 CC-WWV YES
 COMMENTS STA/LTA = 6db, ON
HEADS CLEANED, TEST RUN AFTER TC BECAUSE
THE TAPE WAS ACCIDENTLY REMOVED

TAPE #5 TAPE ON - TC(), SO(X), TO() DAY 152 TIME 21:05:30
 TAPE OFF- TC(X), SO(), TO() DAY 153 TIME 21:37:55
 GAIN 6db NO. OF TRIG. 4 CC-WWV YES
 COMMENTS NEW BATTERY, CLEANED HEADS, 230' TAPE LEFT

TAPE #6 TAPE ON - TC(X), SO(), TO() DAY 153 TIME 21:37:55
 TAPE OFF- TC(X), SO(), TO() DAY 154 TIME 19:09:55
 GAIN 6db NO. OF TRIG. 5 CC-WWV YES
 COMMENTS HEADS CLEANED, 200' TAPE LEFT, LEFT INTERNAL
BATTERY ON.

CBR (FBA)

CBR (FBA)

TAPE #7 TAPE ON - TC(X),SO(),TO() DAY 154 TIME 19:43:55
 TAPE OFF- TC(X),SO(),TO() DAY 155 TIME 23:12:55
 GAIN 6db NO. OF TRIG. 4 CC-WWV YES
 COMMENTS HEADS CLEANED, NEW BATTERY, START SEQUENCES USES 25'

TAPE #8 TAPE ON - TC(X),SO(),TO() DAY 155 TIME 23:15:55
 TAPE OFF- TC(),SO(X),TO() DAY 157 TIME 01:51
 *GAIN 6db NO. OF TRIG. 26 CC-WWV _____
 COMMENTS HEADS CLEANED, AT 156+21:15 THERE WERE 2+1 TRIG
AND EVA NOT RESET, GAIN WAS SET TO 36db FOR BLAST, 250' TAPE LEFT
TAPE RAN OUT

TAPE #9 TAPE ON - TC(X),SO(),TO() DAY 157 TIME 01:55:55
 TAPE OFF- TC(),SO(),TO(X) DAY 157 TIME 20:53:46
 GAIN 6db NO. OF TRIG. 4 CC-WWV _____
 COMMENTS _____

TAPE #10 TAPE ON - TC(),SO(),TO(X) DAY 157 TIME 20:58
 TAPE OFF- TC(),SO(),TO(X) DAY 158 TIME 02:09
 *GAIN 54db NO. OF TRIG. 75 CC-WWV _____
 COMMENTS BLAST TAPE, TAPE RAN OUT

TAPE #11 TAPE ON - TC(),SO(),TO(X) DAY 158 TIME 02:10
 TAPE OFF- TC(X),SO(),TO() DAY 159 TIME 20:25:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV _____
 COMMENTS 250' TAPE LEFT

TAPE #12 TAPE ON - TC(X),SO(),TO() DAY 159 TIME 20:28:55
 TAPE OFF- TC(X),SO(),TO() DAY 160 TIME 19:51:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV _____
 COMMENTS HEADS CLEANED, 200' TAPE LEFT

TAPE #13 TAPE ON - TC(X),SO(),TO() DAY 160 TIME 19:55:55
 TAPE OFF- TC(),SO(),TO(X) DAY 161 TIME 19:21:30
 GAIN 6db NO. OF TRIG. 1 CC-WWV YES
 COMMENTS HEADS CLEANED, NEW BATTERY, 220' TAPE LEFT

TAPE #14 TAPE ON - TC(),SO(),TO(X) DAY 161 TIME 19:23
 TAPE OFF- TC(),SO(),TO(X) DAY 162 TIME 21:12
 GAIN 6db NO. OF TRIG. 2 CC-WWV YES
 COMMENTS 250' TAPE LEFT, HEADS CLEANED

TAPE #15 TAPE ON - TC(),SO(),TO(X) DAY 162 TIME 21:14
 TAPE OFF- TC(X),SO(),TO() DAY 163 TIME 21:04:30
 GAIN 6db NO. OF TRIG. 4 CC-WWV YES
 COMMENTS NEW BATTERY, HEADS CLEANED, 220' TAPE LEFT

TAPE #16 TAPE ON - TC(X),SO(),TO() DAY 163 TIME 21:10:55
 TAPE OFF- TC(X),SO(),TO() DAY 164 TIME 20:46:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV YES
 COMMENTS CLEANED HEADS, 220' TAPE LEFT

TAPE #17 TAPE ON - TC(X),SO(),TO() DAY 164 TIME 20:50:55
 LAST TAPE TAPE OFF- TC(X),SO(),TO() DAY 165 TIME 19:48:55
 GAIN 6db NO. OF TRIG. 1? CC-WWV YES
 COMMENTS NEW BATTERY, 230' TAPE LEFT, BELT FELL OFF

TAPE #18 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #19 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #20 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #21 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #22 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

CON (FBA)

STATION NAME CON (FBA)
 LAT. 37° 35.38 LONG. 118° 51.17 ELEV. 2320m
 MAP QUADRANGLE MT MERRISON
 DATE INSTALLED MAY 27, 1980 DATE REMOVED JUNE 13, 1980
 INSTALLED BY ED. HARP
 STATION SITING CONVIET LAKE WITH ONLY AT MOST 70 M. TO BEDROCK
 RECORDER NO. 204 LID NO. 8/05 SEISMOMETER NO. 7411
 SEISMOMETER ORIENTATION 354° ± 5°
 COMMENTS THIS STATION RAN OFF EXTERNAL CAR BATTERIES. THIS SEISMOMETER WIRE SUCH THE DOWN IS POSITIVE WEST IS POSITIVE SOUTH IS POSITIVE
~~THESE TIMES~~

* * * * *

TAPE #1 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME 17:30
 TAPE OFF - TC(), SO(), TO(X) DAY 149 TIME 18:39
 GAIN 1246 NO. OF TRIG. 31 CC-WWV
 COMMENTS TAPE RAN OUT APPARENTLY, 27 TRIG. AT LAST RECORD. TIME ON STATION WAS SET TO LOCAL TIME ACCORDING TO WRIST WATCH 31 TRIG. ON LABEL

TAPE #2 TAPE ON - TC(), SO(), TO(X) DAY 149 TIME 20:40
 TAPE OFF - TC(), SO(), TO(X) DAY 149 TIME 17:40
 GAIN 046 NO. OF TRIG. 30* CC-WWV
 COMMENTS WHAT ELSE CAN I SAY! TIME SET TO LOCAL BY WRISTWATCH ONLY 29TR

TAPE #3 TAPE ON - TC(), SO(), TO(X) DAY 149 TIME 17:43
 TAPE OFF - TC(X), SO(), TO() DAY 50 TIME 17:35:53
 GAIN 046 NO. OF TRIG. 13+1 CC-WWV SEE BELOW
 COMMENTS INTERNAL CLOCK ~ 3 sec SLOW WWV. CLOCK RESET TO GMT AT 17:45 GMT

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 17:49?
 TAPE OFF - TC(X), SO(), TO() DAY 151 TIME 21:30:55
 GAIN 046 NO. OF TRIG. 19+1 CC-WWV YES (OFF TIME)
 COMMENTS NO COMMENT

TAPE #5 TAPE ON - TC(X), SO(), TO() DAY 151 TIME 21:35:55
 TAPE OFF - TC(X), SO(), TO() DAY 152 TIME 19:32:55
 GAIN 046 NO. OF TRIG. 17+1 CC-WWV YES
 COMMENTS HEADS CLEANED

TAPE #6 TAPE ON - TC(X), SO(), TO() DAY 152 TIME 19:35:55
 TAPE OFF - TC(X), SO(), TO() DAY 153 TIME 17:13:55
 GAIN 046 NO. OF TRIG. 5 CC-WWV YES
 COMMENTS SEISMOMETER ORIENTATION MEASURED AT 354° ± 5°

* THESE TIMES FROM WRISTWATCH LOCAL - PDT

TAPE #7 TAPE ON - TC(X),SO(),TO() DAY 153 TIME 17:17:55
 TAPE OFF- TC(X),SO(),TO() DAY 154 TIME 14:44:55
 GAIN 0db NO. OF TRIG. 7 CC-WWV YES
 COMMENTS 190' TAPE LEFT

TAPE #8 TAPE ON - TC(X),SO(),TO() DAY 154 TIME 14:47:45
 TAPE OFF- TC(X),SO(),TO() DAY 155 TIME 14:23:55
 GAIN 0db NO. OF TRIG. 4 CC-WWV YES
 COMMENTS

TAPE #9 TAPE ON - TC(X),SO(),TO() DAY 155 TIME 19:27:55
 TAPE OFF- TC(),SO(),TO(X) DAY 156 TIME 18:40
 GAIN 6db NO. OF TRIG. 9+14! CC-WWV YES
 COMMENTS HEADS CLEANED, LARGE NO. OF FALSE TRIG. (14)
BECAUSE GAINS WERE EXPERIMENTED WITH IN PREPARATION FOR BLAST

TAPE #10 TAPE ON - TC(X),SO(),TO() DAY 156 TIME 18:45:55
 TAPE OFF- TC(),SO(),TO(X) DAY 157 TIME 00:13
 GAIN 24db NO. OF TRIG. 32 CC-WWV YES
 COMMENTS 3 FALSE TRIG. BECAUSE OF GAIN PLAYING AT START. TAPE
LABEL SAYS 31 TRIG., 2 TRIG WHILE REMOVING TAPE. TAPE RAN OUT.

TAPE #11 TAPE ON - TC(),SO(),TO(X) DAY 157 TIME 00:17
 TAPE OFF- TC(),SO(),TO(X) DAY 157 TIME 18:24
 GAIN 12db NO. OF TRIG. 19 CC-WWV YES
 COMMENTS

TAPE #12 TAPE ON - TC(),SO(),TO(X) DAY 157 TIME 18:28
 TAPE OFF- TC(),SO(),TO(X) DAY 158 TIME 00:32
 GAIN 42db NO. OF TRIG. 86 CC-WWV YES
 COMMENTS HIGH GAIN FOR BLAST

TAPE #13 TAPE ON - TC(),SO(),TO(X) DAY 158 TIME 00:33
 TAPE OFF- TC(X),SO(),TO() DAY 158 TIME 18:52:55
 GAIN 12db NO. OF TRIG. 20 CC-WWV YES
 COMMENTS TAPE LABEL SAYS 21 TRIG.

TAPE #14 TAPE ON - TC(X),SO(),TO() DAY 158 TIME 19:03:55
 TAPE OFF- TC(),SO(),TO(X) DAY 159 TIME 17:12
 GAIN 12db NO. OF TRIG. 30 CC-WWV YES
 COMMENTS HEADS CLEANED. NEW CAR BATTERY FROM HARPS GROUP
TAPE RUN OUT. SYSTEM TRIGGERED JUST AFTER REMOVING
OLD CASSETTE. MAYBE CLOCK RESET

← INSTALLED
 IN
 BETWEEN
 C.E.
 BETWEEN
 RICHARD
 CHANGING

TAPE #15 TAPE ON - TC(X),SO(),TO() DAY 159 TIME 17:18:55
 TAPE OFF- TC(X),SO(),TO() DAY 160 TIME 16:27:55
 GAIN 6db NO. OF TRIG. 6 CC-WWV YES
 COMMENTS HEADS CLEANED. 200' TAPE LEFT

TAPE #16 TAPE ON - TC(X),SO(),TO() DAY 160 TIME 16:29:55
 TAPE OFF- TC(),SO(),TO(X) DAY 161 TIME 16:04
 GAIN 6db NO. OF TRIG. 8 CC-WWV YES
 COMMENTS HEADS CLEANED, 180' TAPE LEFT

TAPE #17 TAPE ON - TC(),SO(),TO(X) DAY 161 TIME 16:06
 TAPE OFF- TC(),SO(),TO(X) DAY 162 TIME 17:43
 GAIN 6db NO. OF TRIG. 10 CC-WWV YES
 COMMENTS HEADS CLEANED, 180' TAPE LEFT

TAPE #18 TAPE ON - TC(),SO(),TO(X) DAY 162 TIME 17:44
 TAPE OFF- TC(X),SO(),TO() DAY 163 TIME 17:09
 GAIN 6db NO. OF TRIG. 17 CC-WWV YES
 COMMENTS HEADS CLEANED, 100' TAPE LEFT

TAPE #19 TAPE ON - TC(X),SO(),TO() DAY 163 TIME 17:20:55
 TAPE OFF- TC(X),SO(),TO() DAY 164 TIME 17:06:55
 GAIN 6db NO. OF TRIG. 6 CC-WWV YES
 COMMENTS HEADS CLEANED, LARGE QUAKE FELT AT 17:10
BUT WAS NOT RECORDED ON TAPE (OLD OR NEW) 175' TAPE LEFT
TWO OFF-TL'S 17:05:55 AND 17:06:55

TAPE #20 TAPE ON - TC(X),SO(),TO() DAY 164 TIME 17:10:55
 TAPE OFF- TC(X),SO(),TO() DAY 165 TIME 15:56:55
 GAIN 6db NO. OF TRIG. 7 CC-WWV YES
 COMMENTS 200' TAPE LEFT

TAPE #21 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #22 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

DMP(VEL)

STATION NAME DMP(VEL)
 LAT. 37° 44.26' LONG. 118° 49.54' ELEV. 2160 m.
 MAP QUADRANGLE MT. MORRISON
 DATE INSTALLED MAY 29, 1980 DATE REMOVED JUNE 2, 1980
 INSTALLED BY R. NAVARRO, E. CRANSWICK
 STATION SITING ON TOP OF ALLUVIUM AND TUFF DEPOSITS
OF THE CALDERA
 RECORDER NO. 211 LID NO. 109 SEISMOMETER NO. 6724
 SEISMOMETER ORIENTATION 0° ± 5°
 COMMENTS AT INSTALLATION, SYSTEM CALIBRATED USING INTERNAL
CAL. COILS - 3 COMP. AGREE ± 50%. STOMP TEST SUCCESSFULLY
TRIGGERED SYSTEM, LOW NEAR SURFACE P-WAVE VELOCITY (~100 m/sec)
NOTED FROM STOMP TEST

* * * * *
 TAPE #1 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 16:36:55
 TAPE OFF - TC(X), SO(), TO() DAY 151 TIME 16:11:55
 GAIN 12db NO. OF TRIG. 3 CC-WWV YES
 COMMENTS HEADS CLEANED

TAPE #2 TAPE ON - TC(X), SO(), TO() DAY 151 TIME 16:15:55
 TAPE OFF - TC(X), SO(), TO() DAY 152 TIME 20:37:55
 GAIN 24db NO. OF TRIG. 28 CC-WWV YES
 COMMENTS HEADS CLEANED, TAPE APPARENTLY REWOUND

TAPE #3 TAPE ON - TC(X), SO(), TO() DAY 152 TIME 20:40:55
 TAPE OFF - TC(X), SO(), TO() DAY 153 TIME 21:09:55
 GAIN 24db NO. OF TRIG. 15 CC-WWV YES
 COMMENTS STA/LTA ~ 9db, 20' TAPE LEFT

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 153 TIME 21:12:55
 TAPE OFF - TC(), SO(), TO(X) DAY 154 TIME 18:27
 GAIN 24db NO. OF TRIG. 8 CC-WWV YES
 COMMENTS HEADS CLEANED, STA/LTA = 9db, NOTE SUGGESTION
TO CHECK TRIG. MODE DURATION ETC BECAUSE OF LONG EVENTS.
SETTINGS CHECKED AT TAPE OFF AND FOUND CORRECT. 150' TAPE LEFT

TAPE #5 TAPE ON - TC(X), SO(), TO() DAY 154 TIME 18:36:55
 TAPE OFF - TC(), SO(), TO() DAY 154 TIME 18:36:55
 GAIN 24db NO. OF TRIG. 8 CC-WWV YES
 COMMENTS HEADS CLEANED, NEW BATTERY, STA/LTA = 9db
FOR OFF-TC OF #4 AND ON-TC AT 154+ 18:34:55 OF #5, SEIS
ACCIDENTLY PLUGGED IN INSTEAD OF RADIO

TAPE #6 TAPE ON - TC(), SO(), TO() DAY 154 TIME 18:36:55
 TAPE OFF - TC(), SO(), TO() DAY 154 TIME 18:36:55
 GAIN 24db NO. OF TRIG. 8 CC-WWV YES
 COMMENTS HEADS CLEANED, NEW BATTERY, STA/LTA = 9db

STATION NAME FIS (FBA)
 LAT. 37°36.34' LONG. 118°49.82' ELEV. 2160 m.
 MAP QUADRANGLE MT. MORRISON
 DATE INSTALLED MAY 27, 1980 DATE REMOVED JUNE 13, 1980
 INSTALLED BY R. TRIG. P. SPURICH
 STATION SITING NEAR EDGE OF CALDEIRA ON ALLUVIUM
NEAR BUILDING AT SIERRA NEVADA AQUATIC RESEARCH LAB.
 RECORDER NO. 217 LID NO. 122 SEISMOMETER NO. 106
 SEISMOMETER ORIENTATION NORTH
 COMMENTS _____

* * * * *

TAPE #1 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME 00:35
 TAPE OFF- TC(), SO(), TO(X) DAY 148 TIME 18:39
 GAIN 12db NO. OF TRIG. 27 CC-WWV YES
 COMMENTS _____

TAPE #2 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME 18:40
 TAPE OFF- TC(), SO(X), TO() DAY 149 TIME 18:49
 GAIN 12db NO. OF TRIG. 29 CC-WWV _____
 COMMENTS TAPE RAN OUT

TAPE #3 TAPE ON - TC(), SO(), TO(X) DAY 149 TIME 19:11
 TAPE OFF- TC(X), SO(), TO() DAY 150 TIME 18:24:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV YES
 COMMENTS NEW BATTERY, CHANGED TRIG. MODE FROM VEL. TO
FBA AT 149+23:49, NOTED 1 TRIG. THEN.

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 18:30:55
 TAPE OFF- TC(X), SO(), TO() DAY 151 TIME 21:56:55
 GAIN 12db NO. OF TRIG. 12 CC-WWV YES
 COMMENTS HEADS CLEANED

TAPE #5 TAPE ON - TC(X), SO(), TO() DAY 151 TIME 22:03:55
 TAPE OFF- TC(), SO(X), TO() DAY 152 TIME 19:08
 GAIN 6db NO. OF TRIG. 14 CC-WWV YES
 COMMENTS HEADS CLEANED, STA/LTA = 6db

TAPE #6 TAPE ON - TC(), SO(X), TO() DAY 152 TIME 19:14:30
 TAPE OFF- TC(X), SO(), TO() DAY 153 TIME 14:36:55
 GAIN 6db NO. OF TRIG. 4 CC-WWV YES
 COMMENTS HEADS CLEANED, NEW BATTERY

TAPE #7 TAPE ON - TC(X),SO(),TO() DAY 153 TIME 17:41:55
 TAPE OFF- TC(X),SO(),TO() DAY 154 TIME 15:06:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV YES
 COMMENTS HEADS CLEANED, 230' TAPE LEFT

TAPE #8 TAPE ON - TC(X),SO(),TO() DAY 154 TIME 15:08:55
 TAPE OFF- TC(X),SO(),TO() DAY 155 TIME 19:43:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV YES
 COMMENTS NO MENTION OF NEW BATTERY

TAPE #9 TAPE ON - TC(X),SO(),TO() DAY 155 TIME 19:46:55
 TAPE OFF- TC(X),SO(),TO() DAY 157 TIME 00:47:55
 24db * GAIN 6db NO. OF TRIG. 5 CC-WWV YES
 COMMENTS HEADS CLEANED. AT 156+19:05 THERE WERE 0 TRIG.
AND THE GAIN WAS SET TO 24db FOR BLAST. ONE FALSE TRIG.
AT 19:05 BUT WAS RESET.

TAPE #10 TAPE ON - TC(X),SO(),TO() DAY 157 TIME 00:51:55
 TAPE OFF- TC(),SO(),TO(X) DAY 158 TIME 03:19
 54? 48db * GAIN 6db NO. OF TRIG. 65 CC-WWV YES
 COMMENTS NEW BATTERY. AT 157+18:44, THERE WERE 0 TRIG.
AND THE GAIN WAS SET TO 48db FOR BLAST

ASK
 CHUCK
 ABOUT GAIN

TAPE #11 TAPE ON - TC(),SO(),TO(X) DAY 158 TIME 03:22
 TAPE OFF- TC(X),SO(),TO() DAY 159 TIME 17:45:57
 GAIN 6db NO. OF TRIG. 1 CC-WWV YES
 COMMENTS SECOND ~~IS~~ ~~AT~~ OFF-TC AT 159+17:46:55
230' TAPE LEFT

TAPE #12 TAPE ON - TC(X),SO(),TO() DAY 159 TIME 17:50:55
 TAPE OFF- TC(X),SO(),TO() DAY 160 TIME 16:45:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV YES
 COMMENTS HEADS CLEANED. DID NOT HIT LTA LOAD AND
ACCIDENTLY TRIGGERED SYSTEM AT 159+17:51:30. RESET 17:53:30
230' TAPE LEFT.

TAPE #13 TAPE ON - TC(X),SO(),TO() DAY 160 TIME 16:49:55
 TAPE OFF- TC(),SO(),TO(X) DAY 162 TIME 18:00
 GAIN 6db NO. OF TRIG. 1 CC-WWV YES
 COMMENTS HEADS CLEANED NEW BATTERY. NOTES SAY THERE WAS
AN ON-TC. LABEL SAYS NO ON-TC. AT 161+16:10 THERE WERE 0
TRIG. AND NO TC. TAPE LEFT IN 260' TAPE LEFT. 260' TAPE LEFT WHEN TAPE OF

TAPE #14 TAPE ON - TC(),SO(),TO(X) DAY 162 TIME 18:02
 TAPE OFF- TC(X),SO(),TO() DAY 163 TIME 17:47:55
 GAIN 6db NO. OF TRIG. 3 CC-WWV YES
 COMMENTS HEADS CLEANED. NEW BATTERY. 240' TAPE LEFT.

TAPE #15 TAPE ON - TC(X),SO(),TO() DAY 163 TIME 17:52:55
 TAPE OFF- TC(X),SO(),TO() DAY 164 TIME 17:29:55
 GAIN 6.56 NO. OF TRIG. 5 CC-WWV YES
 COMMENTS SECOND ON-TC AT 17:53:55. 200' TAPE LEFT

TAPE #16 TAPE ON - TC(X),SO(),TO() DAY 164 TIME 17:33:55
 TAPE OFF- TC(X),SO(),TO() DAY 165 TIME 16:18:55
 LAST TAPE GAIN 6.56 NO. OF TRIG. 1 CC-WWV YES
 COMMENTS NEW BATTERY

TAPE #17 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #18 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #19 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #20 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #21 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #22 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

STATION NAME HCF(FBA)
 LAT. 37°38.51' LONG. 118°50.98' ELEV. 2160 m.
 MAP QUADRANGLE MT. MORRISON
 DATE INSTALLED MAY 28, 1980 DATE REMOVED _____
 INSTALLED BY ~~R. WARRICK~~, R. NAVARRO, R. WARRICK
 STATION SITING IN ALLUVIUM OF CALDERA. IMMEDIATELY
ADJACENT TO FISH HATCHERY BUILDING
 RECORDER NO. 212 LID NO. 124 SEISMOMETER NO. 104
 SEISMOMETER ORIENTATION NORTH
 COMMENTS SYSTEM RAN OK FOR DURATION OF INSTALLATION.
PROBLEMS OF SYSTEM: LOSE BELTS, TRIGGERS ON SOMETHING
AT CHANGING, SYSTEM LACK OF SENSITIVITY (SEE TAPE #10 AND
APPENDED FIELD NOTES)

* * * * *

TAPE #1 TAPE ON - TC(), SO(), TO(X) DAY 149 TIME 01:24
 TAPE OFF - TC(), SO(), TO(X) DAY 149 TIME 15:19
 GAIN 12db NO. OF TRIG. 13 CC-WWV YES?

COMMENTS _____

TAPE #2 TAPE ON - TC(X), SO(), TO() DAY 149 TIME 15:18:55 ← MAYBE OFF.
 TAPE OFF - TC(X), SO(), TO() DAY 150 TIME 14:45:55 ← FOR TAPE #1,
 GAIN 6db NO. OF TRIG. 1 CC-WWV YES

COMMENTS BELT FELL OFF DURING FIRST TEST ADVANCE. SECOND
ON - TC AT 15:33? BELT WAS OFF WHEN TAPE WAS TAKEN OFF.
NEW BELT PUT ON. SYSTEM TRIGGERED JUST PRIOR TO CASSETTE CHANGE.

TAPE #3 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 14:50:55
 TAPE OFF - TC(X), SO(), TO() DAY 151 TIME 15:08:55
 GAIN 12db NO. OF TRIG. 8 CC-WWV YES

COMMENTS TRIG. MODE CHANGED TO FBA. RESET BEFORE TIMECODE
EVENT AT 15:06 WHILE CHANGING TAPE OFF

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 151 TIME 15:17:55
 TAPE OFF - TC(X), SO(), TO() DAY 152 TIME 21:37
 GAIN 6db NO. OF TRIG. 6 CC-WWV YES

COMMENTS HEADS CLEANED. STA/LTA = 6db. BELT OFF AT
TAPE OFF

TAPE #5 TAPE ON - TC(X), SO(), TO() DAY 152 TIME 21:43:55
 TAPE OFF - TC(X), SO(), TO() DAY 153 TIME 22:09:55
 GAIN 6db NO. OF TRIG. 7 CC-WWV YES

COMMENTS HEADS CLEANED. BELT OFF AT TAPE OFF. REPLACED
WITH NEW TAPE.

TAPE #6 TAPE ON - TC(X), SO(), TO() DAY 153 TIME 22:14:55
 TAPE OFF - TC(X), SO(), TO() DAY 154 TIME 19:38:53 *
 GAIN 6db NO. OF TRIG. 5 CC-WWV YES

COMMENTS 200' TAPE LEFT
* ACCIDENTLY HIT CONT. INSTEAD OF TEST. SYSTEM TRIGGERED
JUST BEFORE TAPE OFF

TAPE #7 TAPE ON - TC(X),SO(),TO() DAY 154 TIME 19:42:55
 TAPE OFF- TC(X),SO(),TO() DAY 155 TIME 23:36:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV YES

COMMENTS

TAPE #8 TAPE ON - TC(X),SO(),TO() DAY 155 TIME 23:39:55
 TAPE OFF- TC(X),SO(),TO() DAY 157 TIME 02:23:55
 36db * GAIN 6db NO. OF TRIG. 9 CC-WWV

COMMENTS HEADS CLEANED AT 15:6 + 21:30, THERE WAS 1 TRIG
AND THE GAIN WAS SET TO 36db

TAPE #9 TAPE ON - TC(),SO(X),TO() DAY 157 TIME 02:39:30
 TAPE OFF- TC(),SO(),TO(X) DAY 157 TIME 21:24
 GAIN 6db NO. OF TRIG. 1 CC-WWV

COMMENTS

TAPE #10 TAPE ON - TC(),SO(),TO(X) DAY 157 TIME 21:28
 TAPE OFF- TC(),SO(),TO() DAY 158 TIME 02:30
 GAIN 54db NO. OF TRIG. 2 CC-WWV
 COMMENTS SEE APPENDED FIELD NOTES. APPARENTLY PROBLEM
WITH LACK OF SYSTEM SENSITIVITY

TAPE #11 TAPE ON - TC(),SO(),TO(X) DAY 158 TIME 03:02
 TAPE OFF- TC(X),SO(),TO() DAY 159 TIME 20:48:55
 GAIN 6db NO. OF TRIG. 3 CC-WWV

COMMENTS

TAPE #12 TAPE ON - TC(X),SO(),TO() DAY 159 TIME 20:51:55
 TAPE OFF- TC(X),SO(),TO() DAY 160 TIME 20:15:55
 GAIN 6db NO. OF TRIG. 5 CC-WWV YES
 COMMENTS HEADS CLEANED, SECOND OFF-TC AT 20:16:55. SYSTEM
TRIGGERED JUST PRIOR TO CHANGING BUT FELT NO EQ.

TAPE #13 TAPE ON - TC(X),SO(),TO() DAY 160 TIME 20:19:55
 TAPE OFF- TC(X),SO(),TO() DAY 163 TIME 21:33:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV YES

COMMENTS CC-WWV 161+19:41, 0 TRIG, 280' TAPE LEFT, TAPE NOT CHANGED
CC-WWV 162+21:33:00, 0 TRIG, 280' TAPE LEFT, TAPE NOT CHANGED
215' TAPE LEFT

TAPE #14 TAPE ON - TC(X),SO(),TO() DAY 163 TIME 21:33:55
 TAPE OFF- TC(),SO(),TO() DAY 164 TIME 21:14:55
 GAIN 6db NO. OF TRIG. 2 CC-WWV YES

COMMENTS

HCF(FBA)

TAPE #15 TAPE ON - TC(),SO(),TO() DAY 164 TIME 21:18:55
LAST TAPE TAPE OFF- TC(),SO(),TO() DAY 165 TIME 19:15:55
GAIN 6.5 NO. OF TRIG. 3 CC-WWV _____
COMMENTS _____

TAPE #16 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #17 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #18 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #19 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #20 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #21 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #22 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

HOT(VEL)

STATION NAME HOT(VEL)
 LAT. 37° 39.25' LONG. 118° 48.29' ELEV. 2110 m.
 MAP QUADRANGLE MT. MERRISON
 DATE INSTALLED MAY 26, 1980 DATE REMOVED MAY 30, 1980
 INSTALLED BY R. WARRICK P. SPUDICH
 STATION SITING ALLUVIUM OF THE CALDERA

RECORDER NO. 222 LID NO. 125 SEISMOMETER NO. 6727
 SEISMOMETER ORIENTATION NORTH
 COMMENTS STATION WAS ORIGINALLY MISLOCATED BY
2160 m.

* * * * *

TAPE #1 TAPE ON - TC(), SO(), TO(X) DAY 147 TIME 20:07
 TAPE OFF- TC(), SO(), TO(X) DAY 148 TIME 17:22
 GAIN 1206 NO. OF TRIG. 48 CC-WWV YES?
 COMMENTS EVENT #46 IS FALSE TRIG, EVENT #48 IS OFF-TC

TAPE #2 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME 17:25
 TAPE OFF- TC(), SO(X), TO() DAY 149 TIME 18:16
 GAIN 1226 NO. OF TRIG. 72 CC-WWV ---
 COMMENTS EVENT COUNTER NOT RESET AT TAPE ON.
BELT WAS OFF AT TAPE OFF AND REPLACED WITH NEW RECT

TAPE #3 TAPE ON - TC(X), SO(), TO() DAY 149 TIME 18:30:55
 TAPE OFF- TC(X), SO(), TO() DAY 150 TIME 17:56:55
 GAIN 606 NO. OF TRIG. 4 CC-WWV YES
 COMMENTS ---

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 18:00:55
 TAPE OFF- TC(), SO(), TO() DAY 151 TIME 23:09
 GAIN 1206 NO. OF TRIG. --- CC-WWV YES
 COMMENTS LAST TAPE NEW BATTERY, HEADS CLEANED, NO NOTES ON TAPE OFF

TAPE #5 TAPE ON - TC(), SO(), TO() DAY --- TIME ---
 TAPE OFF- TC(), SO(), TO() DAY --- TIME ---
 GAIN --- NO. OF TRIG. --- CC-WWV ---
 COMMENTS ---

TAPE #6 TAPE ON - TC(), SO(), TO() DAY --- TIME ---
 TAPE OFF- TC(), SO(), TO() DAY --- TIME ---
 GAIN --- NO. OF TRIG. --- CC-WWV ---
 COMMENTS ---

LAK(VEL)

STATION NAME LAK(VEL)
 LAT. 37-38.47 LONG. 118-43.70 ELEV. 2070 m.
 MAP QUADRANGLE CASA DIABLO MTA
 DATE INSTALLED MAY 26, 1980 DATE REMOVED JUNE 13, 1980
 INSTALLED BY R. WARRICK P. SPUDICH
 STATION SITING ON ALLUVIUM NEAR EDGE OF CALDERA
.5 KM FROM LAKE CROWLEY
 RECORDER NO. 219 LID NO. 121 SEISMOMETER NO. 6725
 SEISMOMETER ORIENTATION NORTH
 COMMENTS _____

* * * * *

TAPE #1 TAPE ON - TC(), SO(), TO(X) DAY 147 TIME 21:45
 TAPE OFF- TC(), SO(), TO(X) DAY 148 TIME 17:57
 GAIN 12db NO. OF TRIG. 15 CC-WWV YES?
 COMMENTS NO GOOD NOTES

TAPE #2 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME 18:00
 TAPE OFF- TC(), SO(X), TO() DAY 149 TIME 17:29:55
 GAIN 18db NO. OF TRIG. 20 CC-WWV _____

COMMENTS NO GOOD NOISE TAPE ON. ~~TAPE~~ TAPE RAN OUT. TIME ~~CODE~~ CODE
CASSETTE MADE WITH TC AT 149+17:35:55 = TAPE 2B SEE MISCELLANEOUS

TAPE #3 TAPE ON - TC(X), SO(), TO() DAY 149 TIME 17:44:55
 TAPE OFF- TC(X), SO(), TO() DAY 150 TIME 17:17:55
 GAIN 12db NO. OF TRIG. 2 CC-WWV YES

COMMENTS NEW BATTERY

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 17:23:55
 TAPE OFF- TC(X), SO(), TO() DAY 151 TIME 16:48:55
 GAIN 18db NO. OF TRIG. 10 CC-WWV YES

COMMENTS HEADS CLEANED

TAPE #5 TAPE ON - TC(X), SO(), TO() DAY 151 TIME 16:53:55
 TAPE OFF- TC(X), SO(), TO() DAY 152 TIME 20:03:55
 GAIN 24db NO. OF TRIG. 22 CC-WWV YES

COMMENTS _____

TAPE #6 TAPE ON - TC(X), SO(), TO() DAY 152 TIME 20:06:55
 TAPE OFF- TC(X), SO(), TO() DAY 153 TIME 20:33:55
 GAIN 24db NO. OF TRIG. 16 CC-WWV _____

COMMENTS HEADS CLEANED. STA/LTA NOTED TO BE 9db. 85" TAPE LEFT

LAK (VEL)

TAPE #7 TAPE ON - TC(X),SO(),TO() DAY 153 TIME 20:35:55
 TAPE OFF- TC(X),SO(),TO() DAY 154 TIME 17:47:55
 GAIN 24db NO. OF TRIG. 9 CC-WWV YES
 COMMENTS RAN CENT. INSTEAD OF TEST. ACCIDENTLY TRIGGERED
AT TAPE OFF, THUS 9+1 TRIG. 150' TAPE LEFT.

TAPE #8 TAPE ON - TC(X),SO(),TO() DAY 154 TIME 17:49:55
 TAPE OFF- TC(X),SO(),TO() DAY 155 TIME 21:59:55
 GAIN 24db NO. OF TRIG. 13 CC-WWV YES
 COMMENTS STA/LTA = 6db

TAPE #9 TAPE ON - TC(X),SO(),TO() DAY 155 TIME 22:02:55
 TAPE OFF- TC(),SO(X),TO() DAY 156 TIME 20:27
 GAIN 24db NO. OF TRIG. 9 CC-WWV YES
 COMMENTS HEADS CLEANED. 9+9 TRIG. WHEN TAPE REMOVED
BECAUSE OF GAIN-PLAYING.

TAPE #10 TAPE ON - TC(X),SO(),TO() DAY 156 TIME 2033:55
 TAPE OFF- TC(),SO(X),TO() DAY 157 TIME 01:18
 GAIN 42db NO. OF TRIG. 30 CC-WWV YES
 COMMENTS TAPE RAN OUT

TAPE #11 TAPE ON - TC(X),SO(),TO() DAY 157 TIME 01:21:55
 TAPE OFF- TC(),SO(),TO(X) DAY 157 TIME 20:07
 GAIN 30db NO. OF TRIG. 13 CC-WWV YES
 COMMENTS RESET 157+01:23 = 1 TRIG AT 01:24

TAPE #12 TAPE ON - TC(),SO(),TO(X) DAY 157 TIME 20:29
 TAPE OFF- TC(),SO(),TO(X) DAY 158 TIME 01:41
 GAIN 48db NO. OF TRIG. 51 CC-WWV YES
 COMMENTS NEW BELT ON. TAPE RAN OUT

TAPE #13 TAPE ON - TC(),SO(),TO(X) DAY 158 TIME 01:42
 TAPE OFF- TC(X),SO(),TO() DAY 158 TIME 21:48:55
 GAIN 30db NO. OF TRIG. 16 CC-WWV YES
 COMMENTS

TAPE #14 TAPE ON - TC(X),SO(),TO() DAY 158 TIME 21:51:55
 TAPE OFF- TC(),SO(),TO(X) DAY 159 TIME 21:01:30
 GAIN 30db NO. OF TRIG. 28 CC-WWV YES
 COMMENTS HEADS CLEANED. TAPE RAN OUT.

LAK(VEL)

TAPE #15 TAPE ON - TC(X),SO(),TO() DAY 159 TIME 20:03:55
 TAPE OFF- TC(X),SO(),TO() DAY 160 TIME 19:12:55
 GAIN 24db NO. OF TRIG. 8 CC-WWV .25 sec. FAST AT TAPE OF
 COMMENTS 160' TAPE LEFT

TAPE #16 TAPE ON - TC(X),SO(),TO() DAY 160 TIME 19:15:15
 TAPE OFF- TC(),SO(),TO(X) DAY 161 TIME 18:58
 GAIN 30db NO. OF TRIG. 21 CC-WWV .25 sec. FAST
 COMMENTS HEADS CLEANED. 20' TAPE LEFT

TAPE #17 TAPE ON - TC(),SO(),TO(X) DAY 161 TIME 18:59
 TAPE OFF- TC(),SO(),TO(X) DAY 162 TIME 20:30
 GAIN 30db NO. OF TRIG. 30 CC-WWV YES
 COMMENTS NEW BATTERY. HEADS CLEANED. 5' TAPE LEFT

TAPE #18 TAPE ON - TC(),SO(),TO(X) DAY 162 TIME 20:45
 TAPE OFF- TC(X),SO(),TO() DAY 163 TIME 20:31:55
 GAIN 24db NO. OF TRIG. 13 CC-WWV YES
 COMMENTS HEADS CLEANED. NEW BATTERY INSTALLED. 100' TAPE LEFT

TAPE #19 TAPE ON - TC(X),SO(),TO() DAY 163 TIME 20:36:55
 TAPE OFF- TC(),SO(),TO() DAY 164 TIME 20:06:55
 GAIN 24db NO. OF TRIG. 10 CC-WWV YES
 COMMENTS HEADS CLEANED

TAPE #20 TAPE ON - TC(X),SO(),TO() DAY 164 TIME 20:13:55 } co-in-
 LAST TAPE TAPE OFF- TC(),SO(),TO() DAY 165 TIME 20:13:55 } cidence
 GAIN 30db NO. OF TRIG. 15 CC-WWV _____
 COMMENTS 85' TAPE LEFT

TAPE #21 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #22 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

LAR(UEL)

STATION NAME LAR(UEL)
 LAT. 37° 37' 37" LONG. 118° 53' 38" ELEV. 2220 m.
 MAP QUADRANGLE MT. MORRISON
 DATE INSTALLED MAY 26, 1980 DATE REMOVED _____
 INSTALLED BY REDACTED, PA SPUDICH, R. WARRICK
 STATION SITING ON ALLUVIUM - NEAR MOUNTAIN PEDIMENT
 RECORDER NO. 223 LID NO. 126 SEISMOMETER NO. 6723
 SEISMOMETER ORIENTATION NORTH
 COMMENTS RECORDER SEEN TO REWIND AT END OF TAPE

* * * * *
 TAPE #1 TAPE ON - TC([?]X), SO(), TO() DAY 147 TIME 18:56:51
 TAPE OFF - TC(), SO(), TO(X) DAY 148 TIME 16:35
 GAIN 12db NO. OF TRIG. 93 CC-WWV YES?
 COMMENTS NO GOOD NOTES. TAPE RAN OUT

TAPE #2 TAPE ON - TC([?]X), SO(), TO() DAY 148 TIME 16:43:55
 TAPE OFF - TC(X), SO(), TO() DAY 150 TIME 00:23:55
 GAIN 6db NO. OF TRIG. 36 CC-WWV _____
 COMMENTS NO GOOD NOTES FOR TAPE ON. NO SCOPE FOR RADIO CODE FOR TAPE OFF. TAPE REWOUND WHEN PUT ON CONTINUOUS WITH 2-10 SECS. TAPE REMAINING

TAPE #3 TAPE ON - TC(), SO(X), TO() DAY 150 TIME 00:33
 TAPE OFF - TC(X), SO(), TO() DAY 150 TIME 19:00:55
 GAIN 6db NO. OF TRIG. 11 CC-WWV YES
 COMMENTS NO SCOPE FOR RADIO CODE SCOPE WENT DEAD FOR TAPE OFF.

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 19:05:59
 LAST TAPE TAPE OFF - TC(), SO(), TO() DAY 152 TIME 01:11:30
 GAIN 6db NO. OF TRIG. _____ CC-WWV YES
 COMMENTS NEW BATTERY. NO NOTES FOR TAPE OFF

TAPE #5 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF - TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #6 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF - TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

STATION NAME LKM (VEL)
 LAT. 37° 41.80' LONG. 118° 56.13' ELEV. 2340 m.
 MAP QUADRANGLE MT. MORRISON
 DATE INSTALLED MAY 31, 1980 DATE REMOVED JUNE 13, 1980
 INSTALLED BY J. FLETCHER, R. NAVARRO
 STATION SITING ON ALLUVIUM OF CALDERA COMPLEX

RECORDER NO. 223 LID NO. 126 SEISMOMETER NO. 6723
 SEISMOMETER ORIENTATION SOUTH
 COMMENTS SYSTEM WAS THE ONE FORMERLY AT LAR (VEL). MANY
LONG DURATION EVENTS RECORDED

* * * * *
 ?
 TAPE #1 TAPE ON - TC(X), SO(), TO() DAY 152 TIME 01:52
 TAPE OFF - TC(X), SO(), TO() DAY 152 TIME 23:15:57
 GAIN 12db NO. OF TRIG. 11 CC-WWV YES?
 COMMENTS

TAPE #2 TAPE ON - TC(X), SO(), TO() DAY 152 TIME 23:19:50
 *TAPE OFF - TC(X), SO(), TO() DAY 153 TIME 22:36:55
 GAIN 12db NO. OF TRIG. 7 CC-WWV YES
 COMMENTS HEADS CLEANED, STA/LTA NOTED TO BE 9db, 160' TAPE LEFT

TAPE #3 *TAPE ON - TC(X), SO(), TO() DAY 153 TIME 22:38:55
 *TAPE OFF - TC(X), SO(), TO() DAY 154 TIME 20:07:55
 GAIN 18db NO. OF TRIG. 7 CC-WWV YES
 COMMENTS * ACCIDENTALLY SUBSTITUTED SEISMOMETER FOR RADIO OUTPUT
SECOND ON-TC AT 153+22:40:55. 170' TAPE LEFT.

TAPE #4 *TAPE ON - TC(X), SO(), TO() DAY 154 TIME 20:13:55
 TAPE OFF - TC(X), SO(), TO() DAY 156 TIME 00:05:55
 GAIN 18db NO. OF TRIG. 8 CC-WWV YES
 COMMENTS * RADIO OUTPUT NOT PLUGGED IN. SECOND ON-TC AT 154+20:15:55.
NEW BATTERY, HEADS CLEANED. STA/LTA CHANGED TO 6db.
8+1 TRIG.

TAPE #5 TAPE ON - TC(X), SO(), TO() DAY 156 TIME 00:03:55
 TAPE OFF - TC(X), SO(), TO() DAY 157 TIME 00:07:55
 GAIN 18db NO. OF TRIG. 14 CC-WWV YES
 COMMENTS HEADS CLEANED. AT 156+21:45, THERE WERE 11 TRIG
AND GAIN WAS SET TO 36db FOR BLAST WITH 150' TAPE LEFT

TAPE #6 TAPE ON - TC(X), SO(), TO() DAY 157 TIME 00:11:55
 TAPE OFF - TC(), SO(), TO(X) DAY 157 TIME 21:48
 GAIN 24db NO. OF TRIG. 11 CC-WWV YES
 COMMENTS NEW BATTERY

21:55

TAPE #7 TAPE ON - TC(),SO(),TO(X) DAY 157 TIME 21:55
 TAPE OFF- TC(),SO(),TO(X) DAY 158 TIME 00:01
 GAIN 54db NO. OF TRIG. 61 CC-WWV

COMMENTS

TAPE #8 TAPE ON - TC(),SO(),TO(X) DAY 158 TIME 00:05
 TAPE OFF- TC(X),SO(),TO() DAY 158 TIME 18:27:52
 GAIN 24db NO. OF TRIG. 14 CC-WWV

COMMENTS

TAPE #9 TAPE ON - TC(X),SO(),TO() DAY 158 TIME 18:30:52
 TAPE OFF- TC(),SO(),TO(X) DAY 159 TIME 21:10
 GAIN 27db NO. OF TRIG. 47 CC-WWV

COMMENTS

TAPE #10 TAPE ON - TC(X),SO(),TO() DAY 159 TIME 21:12:55
 TAPE OFF- TC(),SO(),TO(X) DAY 160 TIME 20:40
 GAIN 18db NO. OF TRIG. 12 CC-WWV YES

COMMENTS

TAPE #11 TAPE ON - TC(),SO(),TO(X) DAY 160 TIME 20:43
 TAPE OFF- TC(X),SO(),TO() DAY 161 TIME 15:36:55
 GAIN 18db NO. OF TRIG. 1 CC-WWV YES

COMMENTS

TAPE #12 TAPE ON - TC(X),SO(),TO() DAY 161 TIME 15:40:55
 TAPE OFF- TC(),SO(),TO(X) DAY 162 TIME 17:04
 GAIN 30db NO. OF TRIG. 36 CC-WWV YES

COMMENTS

TAPE #13 TAPE ON - TC(),SO(),TO(X) DAY 162 TIME 17:20
 TAPE OFF- TC(),SO(),TO(X) DAY 163 TIME 16:36
 GAIN 30db NO. OF TRIG. 46 CC-WWV YES

COMMENTS

TAPE #14 TAPE ON - TC(X),SO(),TO() DAY 163 TIME 16:39:55
 TAPE OFF- TC(X),SO(),TO() DAY 164 TIME 16:32:55
 GAIN 24db NO. OF TRIG. 10 CC-WWV YES

COMMENTS

LKM (VEL)

TAPE #15 TAPE ON - TC(X),SO(),TO() DAY 164 TIME 16:35:55
 LAST TAPE TAPE OFF- TC(),SO(),TO(X) DAY 165 TIME 15:21
 GAIN 304 NO. OF TRIG. 29 CC-WWV _____
 COMMENTS NEW BATTERY. TAPE RAN OUT. TIME CODE TAPE
MADE WITH TC AT 165 + 15:25:55 - SEPERATE TAPE.
SEISMOMETER FOUND TO BE ORIENTED SOUTH

TAPE #16 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

TAPE #17 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

TAPE #18 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

TAPE #19 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

TAPE #20 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

TAPE #21 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

TAPE #22 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

STATION NAME MCC (VEL)
 LAT. 37° 33.25' LONG. 113° 47.88' ELEV. 2370
 MAP QUADRANGLE MT. MERRISON
 DATE INSTALLED MAY 26, 1980 DATE REMOVED MAY 27, 1980
 INSTALLED BY R. NAVARRO, E. CRANSWICK
 STATION SITING BURIED IN THIN ALLUVIUM ADJACENT TO
CUTCRACK OF PALEOZOIC METAMORPHICS
 RECORDER NO. 212 LID NO. 124 SEISMOMETER NO. 76724
 SEISMOMETER ORIENTATION N 0° E 50°
 COMMENTS SYSTEM REMOVED AFTER ONE DAY OF OPERATION
BECAUSE OF ROCKSIDE HAZARD AT SITE. OFF TC MADE
ON A SEPERATE TAPE

* * * * *

TAPE #1 TAPE ON - TC(~~X~~), SO(), TO() DAY 147 TIME 19:50
 TAPE OFF- TC(), SO(), TO(~~X~~) DAY 148 TIME 16:46
 GAIN 18.16 NO. OF TRIG. 63 CC-WWV ? YES
 COMMENTS TAPE RAN OUT

TAPE #2 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

TAPE #3 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

TAPE #4 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

TAPE #5 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

TAPE #6 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____

COMMENTS _____

STATION NAME MGE (FBA)
 LAT. 37° 33.67 LONG. 118° 47.22 ELEV. 2340 m.
 MAP QUADRANGLE MT. MORRISON
 DATE INSTALLED MAY 27, 1980 DATE REMOVED JUNE 13, 1980
 INSTALLED BY R. WARRICK, R. NAVARRO
 STATION SITING ON A MURRAINE ON FAULT TRACE ADJACENT
TO FAULT BREAK AT MCGEE CREEK, # HILTON CREEK
 RECORDER NO. 216 LID NO. 114 SEISMOMETER NO. 101
 SEISMOMETER ORIENTATION NORTH
 COMMENTS CLOCK RESET SEVERAL TIMES

* * * * *
 TAPE #1 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME 22:42
 TAPE OFF- TC(), SO(X), TO() DAY 149 TIME 22:49
 GAIN 12db NO. OF TRIG. 36 CC-WWV YES?
 COMMENTS TAPE RUNOUT.

TAPE #2 TAPE ON - TC(), SO(), TO(X) DAY 149 TIME 23:05
^{NO SCOPE} TAPE OFF- TC(X), SO(), TO() DAY 150 TIME 23:30
 GAIN 6db NO. OF TRIG. 13 CC-WWV .25 SEC. SLOW
 COMMENTS TRIG. MODE CHANGED TO FBA FROM VELOCITY AT 149+23:29

TAPE #3 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 23:43
 TAPE OFF- TC(), SO(X), TO() DAY 151 TIME 17:47
 GAIN 6db NO. OF TRIG. 9 CC-WWV YES
 COMMENTS NEW BATTERY. STA/LTA CHANGED TO 6db

TAPE #4 TAPE ON - TC(), SO(X), TO() DAY 151 TIME 17:54
 TAPE OFF- TC(), SO(X), TO() DAY 152 TIME 18:19
 GAIN 6db NO. OF TRIG. 22? CC-WWV YES
 COMMENTS TIME CODE 152+01:00 AFTER ONE TRIG. INTERNAL
BATTERY LEFT ON AFTER 152+01:00 TO 152+18:19. BATTERY WENT DEAD
SYSTEM TRIGGERED 152+18:18:30

TAPE #5 TAPE ON - TC(X), SO(), TO() DAY 152 TIME 18:45:55
 TAPE OFF- TC(), SO(X), TO() DAY 153 TIME YES 18:06:30
 GAIN 6db NO. OF TRIG. 9 CC-WWV YES
 COMMENTS HEADS CLEANED. CLOCK RESET 152+18:40 (DEAD BATTERY)
1/2 TAPE LEFT. ACCIDENTLY 9+1 TRIG. ~~REMOVED~~

TAPE #6 TAPE ON - TC(X), SO(), TO() DAY 153 TIME 18:31:55
 TAPE OFF- TC(X), SO(), TO() DAY 154 TIME 15:31:55
 GAIN 6db NO. OF TRIG. 4 CC-WWV YES
 COMMENTS HEADS CLEANED. INTERNAL BATTERY REPLACED. CLOCK
RESET 153+19:25. 1 TRIG. AFTER TEST BEFORE TC. 200' TAPE LEFT.

MGE(FBA)

15:35:55

TAPE #7 TAPE ON - TC(X),SO(),TO() DAY 154 TIME 15:35:55
 TAPE OFF- TC(X),SO(),TO() DAY 155 TIME 20:04:55
 GAIN 6db NO. OF TRIG. 7 CC-WWV YES
 COMMENTS HEADS CLEANED

TAPE #8 TAPE ON - TC(X),SO(),TO() DAY 155 TIME 20:18:55
 TAPE OFF- TC(),SO(),TO(X) DAY 157 TIME 00:37
 GAIN 6db NO. OF TRIG. 25 CC-WWV YES
 COMMENTS HEADS CLEANED, NEW BATTERY- LOST CLOCK. RESET CLOCK
155+20:16. FALSE TRIG AFTER CLOCK? AT 156+19:25, THERE WERE
2 TRIG. AND GAIN WAS RESET TO 36db FOR REAST. 250' TAPE LEFT.
TRIG=4 WHEN LEAVING. TAPE RAN OUT

TAPE #9 TAPE ON - TC(),SO(),TO(X) DAY 157 TIME 00:39
 TAPE OFF- TC(),SO(),TO(X) DAY 158 TIME 04:33
 GAIN 6db NO. OF TRIG. 25 CC-WWV ---
 COMMENTS GAIN ~~6db~~ SET TO 42db AT 157+19:30. TAPE RAN OUT

TAPE #10 TAPE ON - TC(X),SO(),TO() DAY 158 TIME 04:43:55
 TAPE OFF- TC(),SO(),TO(X) DAY 158 TIME 19:40
 GAIN 24db NO. OF TRIG. 42 CC-WWV ---
 COMMENTS 4 TRIG. BETWEEN ~~04:33~~ 158+ ~~04:33~~ 04:33 - 04:39
(TAPE ON 04:33) BEFORE GAIN WAS REDUCED FROM 42db. 250'
TAPE LEFT. TAPE RAN OUT

TAPE #11 TAPE ON - TC(X),SO(),TO() DAY 158 TIME 19:44:55
 TAPE OFF- TC(X),SO(),TO() DAY 159 TIME 18:11:55
 GAIN 6db NO. OF TRIG. 1 CC-WWV ---
 COMMENTS HEADS CLEANED, NEW BATTERY, 260' TAPE LEFT

TAPE #12 TAPE ON - TC(X),SO(),TO() DAY 159 TIME 18:15:55
 TAPE OFF- TC(X),SO(),TO() DAY 160 TIME 17:29:55
 GAIN 6db NO. OF TRIG. 7 CC-WWV ---
 COMMENTS HEADS CLEANED, 200' TAPE LEFT

TAPE #13 TAPE ON - TC(X),SO(),TO() DAY 160 TIME 17:37:55
 TAPE OFF- TC(),SO(),TO(X) DAY 161 TIME 16:44
 GAIN 6db NO. OF TRIG. 1 CC-WWV YES
 COMMENTS HEADS CLEANED, NEW BATTERY, 230' TAPE LEFT

TAPE #14 TAPE ON - TC(),SO(),TO(X) DAY 161 TIME 16:46
 TAPE OFF- TC(),SO(),TO(X) DAY 162 TIME 18:20
 GAIN 6db NO. OF TRIG. 4 CC-WWV YES
 COMMENTS HEADS CLEANED. 250' TAPE LEFT

TAPE #15 TAPE ON - TC(), SO(), TO(X) DAY 162 TIME 18:30
 TAPE OFF- TC(X), SO(), TO() DAY 163 TIME 18:16:55
 GAIN 6db NO. OF TRIG. 6 CC-WWV YES
 COMMENTS HEADS CLEANED, NEW BATTERY, 205' TAPE LEFT

TAPE #16 TAPE ON - TC(X), SO(), TO() DAY 163 TIME 18:23:55
 TAPE OFF- TC(X), SO(), TO() DAY 164 TIME 18:57:55
 GAIN 6db NO. OF TRIG. 3 CC-WWV YES
 COMMENTS HEADS CLEANED, NEW BATTERY, 240' TAPE LEFT

TAPE #17 TAPE ON - TC(X), SO(), TO() DAY 164 TIME 18:01:55
 TAPE OFF- TC(X), SO(), TO() DAY 165 TIME 16:43:55
 GAIN 6db NO. OF TRIG. 1 CC-WWV _____
 COMMENTS NEW BATTERY

TAPE #18 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #19 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #20 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #21 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #22 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

PS1 (FBA)

STATION NAME PS1 (FBA)
 LAT. 37° 32.45' LONG. 113° 35.35' ELEV. 2110
 MAP QUADRANGLE CASA DIABLO MTN
 DATE INSTALLED MAY 22, 1980 DATE REMOVED JUNE 1, 1980
 INSTALLED BY E. HARP
 STATION SITING EDGE OF GORGE ON TUFF DEPOSITS
 RECORDER NO. 213 LID NO. 8183 SEISMOMETER NO. 7411
 SEISMOMETER ORIENTATION NORTH
 COMMENTS MUST HAVE HAD ~30 SECOND DURATION FOR
EVENT OF 148+14:50

* * * * *

TAPE #1 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME 14:49
 TAPE OFF- TC(), SO(), TO(X) DAY 153 TIME 14:14
 GAIN ? NO. OF TRIG. 15 CC-WWV
 COMMENTS THE CLOCK SET TO PDT WITH DAY ADVANCED
BY 1. NO CLOCK CORRECTION AT ALL. GAINS
18 db CH. 1, 12db CH. 2 & CH. 3.

TAPE #2 TAPE ON - TC(), SO(), TO() DAY TIME
 TAPE OFF- TC(), SO(), TO() DAY TIME
 GAIN NO. OF TRIG. CC-WWV
 COMMENTS

TAPE #3 TAPE ON - TC(), SO(), TO() DAY TIME
 TAPE OFF- TC(), SO(), TO() DAY TIME
 GAIN NO. OF TRIG. CC-WWV
 COMMENTS

TAPE #4 TAPE ON - TC(), SO(), TO() DAY TIME
 TAPE OFF- TC(), SO(), TO() DAY TIME
 GAIN NO. OF TRIG. CC-WWV
 COMMENTS

TAPE #5 TAPE ON - TC(), SO(), TO() DAY TIME
 TAPE OFF- TC(), SO(), TO() DAY TIME
 GAIN NO. OF TRIG. CC-WWV
 COMMENTS

TAPE #6 TAPE ON - TC(), SO(), TO() DAY TIME
 TAPE OFF- TC(), SO(), TO() DAY TIME
 GAIN NO. OF TRIG. CC-WWV
 COMMENTS

STATION NAME ROC (VEL)
 LAT. 37° 29.78' LONG. 118° 43.16' ELEV. 2730 m.
 MAP QUADRANGLE MT. TCM
 DATE INSTALLED MAY 27, 1980 DATE REMOVED JUNE 13, 1980
 INSTALLED BY R. NAVARRE, E. CRANSWICK
 STATION SITING SHALLOW AROUND ALLUVIUM OF A TALUS
SLOPE AT PEDIMENT OF A MOUNTAIN
 RECORDER NO. 214 LID NO. 109/123 SEISMOMETER NO. 6753
 SEISMOMETER ORIENTATION 0° ± 5°
 COMMENTS CHANNEL #2 DEAD FOR DURATION OF INSTALLATION
BECAUSE OF BAD SEISMOMETER. * LID CHANGED AT 149+21:15

* * * * *

TAPE #1 TAPE ON - TC(X), SO(), TO() DAY 148 TIME 01:02:57
 TAPE OFF - TC(), SO(), TO(X) DAY 148 TIME 18:46
 GAIN 18db NO. OF TRIG. 69 CC-WWV YES

COMMENTS

TAPE #2 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME 19:02
 TAPE OFF - TC(X), SO(), TO() DAY 149 TIME 20:50:55
 LID CHANGE GAIN 6db NO. OF TRIG. 6 CC-WWV ---
 COMMENTS LID #109 REPLACED WITH LID #123
SEE FIELD NOTES COPY

TAPE #3 TAPE ON - TC(X), SO(), TO() DAY 149 TIME 21:25:55
 TAPE OFF - TC(X), SO(), TO() DAY 150 TIME 21:34:55
 GAIN 12db NO. OF TRIG. 12 CC-WWV 5 sec FAST
 COMMENTS SYSTEM TESTED (ON TAPE DEE) AND FOUND THAT
ALL COMPONENTS AGREED WITHIN 25% (CAL-COLL)

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 22:10:55
 TAPE OFF - TC(X), SO(), TO() DAY 151 TIME 23:17:55
 GAIN 18db NO. OF TRIG. 21 CC-WWV 5 sec FAST
 COMMENTS NEW BATTERY, SYSTEM TESTED AND FOUND ALL
COMPONENTS AGREED WITHIN 25% AT 1

TAPE #5 TAPE ON - TC(X), SO(), TO() DAY 151 TIME 23:23:55
 TAPE OFF - TC(X), SO(), TO() DAY 152 TIME 16:23:55
 GAIN 18db NO. OF TRIG. 17 CC-WWV ---
 COMMENTS

TAPE #6 TAPE ON - TC(X), SO(), TO() DAY 152 TIME 16:33:55
 TAPE OFF - TC(X), SO(), TO() DAY 153 TIME 19:09:55
 GAIN 18db NO. OF TRIG. 25 CC-WWV ---
 COMMENTS HEADS CLEANED, STALIA CHANGED TO 6db
1/4" TAPE LEFT, SECOND TC AT 153+19:10:55

ROC(VEL)

TAPE #7 TAPE ON - TC(X),SO(),TO() DAY 153 TIME 19:14:55
 TAPE OFF- TC(X),SO(),TO() DAY 154 TIME 16:11:55
 GAIN 18db NO. OF TRIG. 13 CC-WWV ~ 1.0 sec FAST
 COMMENTS HEADS CLEANED, 150' TAPE LEFT

TAPE #8 TAPE ON - TC(X),SO(),TO() DAY 154 TIME 16:19:55
 TAPE OFF- TC(X),SO(),TO() DAY 155 TIME 20:53:55
 GAIN 18db NO. OF TRIG. 13 CC-WWV ~ 1.0 sec FAST
 COMMENTS HEADS CLEANED, NEW BATTERY

TAPE #9 TAPE ON - TC(X),SO(),TO() DAY 155 TIME 20:56:55
 TAPE OFF- TC(),SO(),TO(X) DAY 157 TIME 01:47
 42db *GAIN 18db NO. OF TRIG. ~ 1 sec FAST
 COMMENTS HEADS CLEANED, AT 156+20:18 THERE WERE 10 TRK.
170' TAPE LEFT AND THE GAIN WAS SET TO 42db. TAPE RAN OUT.

TAPE #10 TAPE ON - TC(),SO(),TO(X) DAY 157 TIME 01:52
 TAPE OFF- TC(X),SO(),TO() DAY 157 TIME 18:51:55
 GAIN 24db NO. OF TRIG. 12+1 CC-WWV ~ 1.1 sec FAST
 COMMENTS NEW BATTERY, 160' TAPE LEFT

TAPE #11 TAPE ON - TC(X),SO(),TO() DAY 157 TIME 18:54:55
 TAPE OFF- TC(),SO(),TO(X) DAY 158 TIME 04:03
 GAIN 36db NO. OF TRIG. 35 CC-WWV YES?
 COMMENTS TAPE RAN OUT?

TAPE #12 TAPE ON - TC(),SO(),TO(X) DAY 158 TIME 04:09
 TAPE OFF- TC(X),SO(),TO() DAY 158 TIME 20:57:55
 GAIN 24db NO. OF TRIG. 19 CC-WWV ~ 1.1 sec FAST
 COMMENTS NEW BATTERY, 160' TAPE LEFT

TAPE #13 TAPE ON - TC(X),SO(),TO() DAY 158 TIME 20:54:55
 TAPE OFF- TC(X),SO(),TO() DAY 159 TIME 19:15:55
 GAIN 18db NO. OF TRIG. 9 CC-WWV 1.3 sec FAST
 COMMENTS HEADS CLEANED

TAPE #14 TAPE ON - TC(X),SO(),TO() DAY 159 TIME 19:19:55
 TAPE OFF- TC(X),SO(),TO() DAY 160 TIME 18:38:55
 GAIN 24db NO. OF TRIG. 22 CC-WWV 1.3 sec FAST
 COMMENTS 50' TAPE LEFT

ROC(VEL)

TAPE #15 TAPE ON - TC(X),SO(),TO() DAY 160 TIME 18:33:55
 TAPE OFF- TC(),SO(),TO(X) DAY 161 TIME 18:17
 GAIN 24db NO. OF TRIG. 15 CC-WWV 1.5 sec FAST
 COMMENTS HEADS CLEANED, NEW BATTERY, 120' TAPE LEFT

TAPE #16 TAPE ON - TC(),SO(),TO(X) DAY 161 TIME 18:19
 TAPE OFF- TC(),SO(),TO(X) DAY 162 TIME 19:50
 GAIN 24db NO. OF TRIG. 29 CC-WWV 1.75 sec FAST
 COMMENTS HEADS CLEANED, 40' TAPE LEFT

TAPE #17 TAPE ON - TC(),SO(),TO(X) DAY 162 TIME 19:53
 TAPE OFF- TC(),SO(),TO(X) DAY 163 TIME 19:35
 GAIN 24db NO. OF TRIG. 23 CC-WWV YES
 COMMENTS HEADS CLEANED, 50' TAPE LEFT

TAPE #18 TAPE ON - TC(X),SO(),TO() DAY 163 TIME 19:41:55
 TAPE OFF- TC(X),SO(),TO() DAY 164 TIME 19:17:55
 GAIN 24db NO. OF TRIG. 24 CC-WWV 2 sec FAST
 COMMENTS HEADS CLEANED, NEW BATTERY

TAPE #19 TAPE ON - TC(X),SO(),TO() DAY 164 TIME 19:21:55
 TAPE OFF- TC(X),SO(),TO() DAY 165 TIME 17:46:55
 GAIN 24db NO. OF TRIG. 19 CC-WWV _____
 COMMENTS 150' TAPE LEFT

TAPE #20 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #21 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #22 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
 TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TOM(VEL)

STATION NAME TOM(VEL)
 LAT. 37° 33.05' LONG. 118° 40.32' ELEV. 2190
 MAP QUADRANGLE CASA DIABLO MTN.
 DATE INSTALLED MAY 26, 1980 DATE REMOVED JUNE 13, 1980
 INSTALLED BY R. NAVARRA, E. CRANSHAW
 STATION SITING IN ALLUVIUM ON FLANK OF MOUNTAIN. NOT
IN CALDERA. IN 'HOLIDAY CAMP' GROUND
 RECORDER NO. 218 LID NO. 120 SEISMOMETER NO. 6726
 SEISMOMETER ORIENTATION ~~N 45° E~~ C ± 5°
 COMMENTS _____

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TAPE #1 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME ~ 00:00
 TAPE OFF - TC(), SO(), TO(X) DAY 148 TIME 18:07
 GAIN 18db NO. OF TRIG. 67 CC-WWV YES?
 COMMENTS BELT CAME OFF, NEW BELT PUT ON. NO EVENTS
RECORDED

TAPE #2 TAPE ON - TC(), SO(), TO(X) DAY 148 TIME 18:16
 TAPE OFF - TC(X), SO(), TO() DAY 149 TIME 21:58:55
 GAIN 6db NO. OF TRIG. 4 CC-WWV _____
 COMMENTS _____

TAPE #3 TAPE ON - TC(X), SO(), TO() DAY 149 TIME 22:04:55
 TAPE OFF - TC(X), SO(), TO() DAY 150 TIME 22:56
 GAIN 12db NO. OF TRIG. 5 CC-WWV ~ 2.5 sec SLOW
 COMMENTS NEW BATTERY SCOPE FAILED, RAN OFF-TC
FOR REMAINING TAPE

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 150 TIME 23:00:55
 TAPE OFF - TC(X), SO(), TO() DAY 151 TIME 21:43:55
 GAIN 14db NO. OF TRIG. 16 CC-WWV YES
 COMMENTS HEADS CLEANED

TAPE #5 TAPE ON - TC(X), SO(), TO() DAY 151 TIME 21:50:55
 TAPE OFF - TC(X), SO(), TO() DAY 152 TIME 16:56:55
 GAIN 24db NO. OF TRIG. 17 CC-WWV _____
 COMMENTS NO SCOPE FOR ON-TC, HEADS CLEANED

TAPE #6 TAPE ON - TC(X), SO(), TO() DAY 152 TIME 17:00:55
 TAPE OFF - TC(X), SO(), TO() DAY 153 TIME 19:35:55
 GAIN 24db NO. OF TRIG. 14 CC-WWV ~ 5 sec SLOW
 COMMENTS HEADS CLEANED, INSTRUMENT ACCIDENTLY TRIGGERED
ON RAPID REMOVAL OF ~~OFF~~ ON-TC. 100' TAPE LEFT

700M (VEL)

TAPE #7 TAPE ON - TC(X),SO(),TO() DAY 153 TIME 19:47:55
 TAPE OFF- TC(X),SO(),TO() DAY 154 TIME 17:00:55
 GAIN 24db NO. OF TRIG. 16 CC-WWV YES
 COMMENTS NEW BATTERY STA 1/2 TA CHANGED TO 9.26

TAPE #8 TAPE ON - TC(X),SO(),TO() DAY 154 TIME 17:06:55
 TAPE OFF- TC(X),SO(),TO() DAY 155 TIME 21:17:55
 GAIN 24db NO. OF TRIG. 12 CC-WWV YES
 COMMENTS HEADS CLEANED, STA 1/2 TA CHANGED TO 6.86?

TAPE #9 TAPE ON - TC(X),SO(),TO() DAY 155 TIME 21:20:55
 TAPE OFF- TC(),SO(),TO(X) DAY 157 TIME 01:13
 GAIN 42db NO. OF TRIG. 22 CC-WWV YES
 COMMENTS HEADS CLEANED. AT 156+19:58 THERE WERE 7 TRIG. AND 180° TAPE LEFT AND THE GAIN WAS SET TO 42db TAPE ALMOST GONE

TAPE #10 TAPE ON - TC(),SO(),TO(X) DAY 157 TIME 01:20
 TAPE OFF- TC(X),SO(),TO() DAY 157 TIME 18:17:55
 GAIN 30db NO. OF TRIG. 8 CC-WWV YES
 COMMENTS 220° TAPE LEFT

TAPE #11 TAPE ON - TC(X),SO(),TO() DAY 157 TIME 18:25:55
 TAPE OFF- TC(),SO(),TO(X) DAY 158 TIME 03:04
 GAIN 42db NO. OF TRIG. 20 CC-WWV YES
 COMMENTS NEW BATTERY

TAPE #12 TAPE ON - TC(),SO(),TO(X) DAY 158 TIME 03:51
 TAPE OFF- TC(X),SO(),TO() DAY 158 TIME 20:29:55
 GAIN 30db NO. OF TRIG. 18 CC-WWV YES
 COMMENTS 100° TESTS ONE ACCIDENTAL

TAPE #13 TAPE ON - TC(X),SO(),TO() DAY 158 TIME 20:29:55
 TAPE OFF- TC(X),SO(),TO() DAY 159 TIME 18:46:55
 GAIN 24db NO. OF TRIG. 5 CC-WWV YES
 COMMENTS HEADS CLEANED, 180° TAPE LEFT

TAPE #14 TAPE ON - TC(X),SO(),TO() DAY 159 TIME 18:50:55
 TAPE OFF- TC(X),SO(),TO() DAY 160 TIME 18:04:55
 GAIN 30db NO. OF TRIG. 16 CC-WWV YES
 COMMENTS HEADS CLEANED, 100° TAPE LEFT

TAPE #15 TAPE ON - TC(X), SO(), TO() DAY 160 TIME 18:06:53
 TAPE OFF- ~~TC(X)~~, SO(), TO(X) DAY 161 TIME 17:51
 GAIN 3026 NO. OF TRIG. 8 CC-WWV YES
 COMMENTS HEADS CLEANED, 190' TAPE LEFT

TAPE #16 TAPE ON - TC(), SO(), TO(X) DAY 161 TIME 17:54
 TAPE OFF- TC(), SO(), TO(X) DAY 162 TIME 19:06
 GAIN 3626 NO. OF TRIG. 33 CC-WWV YES
 COMMENTS HEADS CLEANED, TAPE RAN OUT

TAPE #17 TAPE ON - TC(), SO(), TO(X) DAY 162 TIME 19:10
 TAPE OFF- TC(X), SO(), TO() DAY 163 TIME 19:01:55
 GAIN 3026 NO. OF TRIG. 17+1 CC-WWV YES
 COMMENTS HEADS CLEANED, 70' TAPE LEFT

TAPE #18 TAPE ON - TC(X), SO(), TO() DAY 163 TIME 19:07:55
 TAPE OFF- TC(X), SO(), TO() DAY 164 TIME 18:44:55
 GAIN 3026 NO. OF TRIG. 16 CC-WWV YES
 COMMENTS HEADS CLEANED, 80' TAPE LEFT

TAPE #19 TAPE ON - TC(X), SO(), TO() DAY 164 TIME 18:49:55
~~LAST TAPE~~ TAPE OFF- TC(), SO(), TO() DAY 165 TIME 17:22:55
 GAIN 3026 NO. OF TRIG. 8 CC-WWV YES
 COMMENTS 175' TAPE LEFT

TAPE #20 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #21 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TAPE #22 TAPE ON - TC(), SO(), TO() DAY _____ TIME _____
 TAPE OFF- TC(), SO(), TO() DAY _____ TIME _____
 GAIN _____ NO. OF TRIG. _____ CC-WWV _____
 COMMENTS _____

TWL (VEL)

STATION NAME TWL (VEL)
 LAT. 37° 36.93' LONG. 119° 03.7' ELEV. 2638 m.
 MAP QUADRANGLE DEL. CS POST PILE
 DATE INSTALLED MAY 31, 1980 DATE REMOVED JUNE 13, 1980
 INSTALLED BY FLETCHER, R. NAVARRE
 STATION SITING ON ALLUVIUM OF INDETERMINATE THICKNESS
NEXT TO LAKE IN A PARK WITH MANY TOURISTS
 RECORDER NO. 222 LID NO. 125 SEISMOMETER NO. 6727/6724
 SEISMOMETER ORIENTATION
 COMMENTS SYSTEM WAS AT HOT (VEL) FORMERLY. JUNE WAS
REPLACED DAY 156

* * * * *

TAPE #1 TAPE ON - TC(), SO(), TO(X) DAY 152 TIME 00:34
 TAPE OFF - TC(), SO(), TO(X) DAY 152 TIME 22:28
 GAIN 30db NO. OF TRIG. 80 CC-WWV YES
 COMMENTS TAPE RAN OUT (OBVIOUSLY) - OFF-TC PUT ON
SEPERATE TAPE

TAPE #2 TAPE ON - TC(X), SO(), TO() DAY 152 TIME 22:37:55
 TAPE OFF - TC(), SO(), TO(X) DAY 153 TIME 23:00
 GAIN 12db NO. OF TRIG. 7 CC-WWV YES
 COMMENTS STA/LTA = 9db. STATION WAS TAMPERED WITH
AND BATTERY DISCONNECTED - NO TRIG. COUNT:
150' TAPE LEFT

TAPE #3 TAPE ON - TC(X), SO(), TO() DAY 153 TIME 23:22:55
 TAPE OFF - TC(X), SO(), TO() DAY 154 TIME 21:33:55
 GAIN 12db NO. OF TRIG. 7 CC-WWV YES
 COMMENTS CLOCK RESET - SYSTEM LOCKED. 190' TAPE LEFT
CHANNEL #3 FOUND TO BE DEFECTIVE

TAPE #4 TAPE ON - TC(X), SO(), TO() DAY 154 TIME 21:35:55
 TAPE OFF - TC(X), SO(), TO() DAY 155 TIME 17:50:55
 GAIN 18db NO. OF TRIG. 17 CC-WWV YES
 COMMENTS STA/LTA CHANGED TO 6db - FIELD TEST WITH
SCOPE SHOWED SPIKY CALIBRATION PULSE ON CHANNEL 3

TAPE #5 TAPE ON - TC(X), SO(), TO() DAY 155 TIME 17:58:55
 TAPE OFF - TC(X), SO(), TO() DAY 156 TIME 22:30:55
 GAIN 18db NO. OF TRIG. 20 CC-WWV
 COMMENTS

TAPE #6 TAPE ON - TC(X), SO(), TO() DAY 156 TIME 22:41:55
 TAPE OFF - TC(X), SO(), TO() DAY 157 TIME 03:14:55
 GAIN 36db NO. OF TRIG. 21 CC-WWV
 COMMENTS HEADS CLEANED. SEISMOMETER #6727 WAS REPLACED
W/ 374 # 6724, 50' TAPE LEFT.

TWL (VEL)

TAPE #7 TAPE ON - TC(X), SO(), TO() DAY 157 TIME 03:17:55
 TAPE OFF- TC(), SO(), TO(X) DAY 157 TIME 22:20
 GAIN 24db NO. OF TRIG. 15 CC-WWV

COMMENTS

TAPE #8 TAPE ON - TC(), SO(), TO(X) DAY 157 TIME 22:27
 TAPE OFF- TC(), SO(), TO(X) DAY 157 TIME 23:33
 GAIN 54db NO. OF TRIG. 46 CC-WWV

COMMENTS

TAPE #9 TAPE ON - TC(), SO(), TO(X) DAY 157 TIME 23:34
 TAPE OFF- TC(X), SO(), TO() DAY 158 TIME 17:21:55
 GAIN 24db NO. OF TRIG. 15 CC-WWV

COMMENTS

TAPE #10 TAPE ON - TC(X), SO(), TO() DAY 158 TIME 17:25:55
 TAPE OFF- TC(), SO(), TO(X) DAY 159 TIME 21:46
 GAIN 24db NO. OF TRIG. 64 CC-WWV

COMMENTS

TAPE #11 TAPE ON - TC(X), SO(), TO() DAY 159 TIME 21:49:55
 TAPE OFF- TC(X), SO(), TO() DAY 160 TIME 15:48:55
 GAIN 18db NO. OF TRIG. 12 CC-WWV YES

COMMENTS

TAPE #12 TAPE ON - TC(X), SO(), TO() DAY 160 TIME 15:52:55
 TAPE OFF- TC(X), SO(), TO() DAY 161 TIME 19:38:55
 GAIN 18db NO. OF TRIG. 7 CC-WWV

COMMENTS

TAPE #13 TAPE ON - TC(X), SO(), TO() DAY 161 TIME 14:41:55
 TAPE OFF- TC(), SO(), TO(X) DAY 162 TIME 16:33
 GAIN 24db NO. OF TRIG. 29 CC-WWV .5 sec FAST

COMMENTS

TAPE #14 TAPE ON - TC(), SO(), TO(X) DAY 162 TIME 16:35
 TAPE OFF- TC(), SO(X), TO() DAY 163 TIME 15:20
 GAIN 24db NO. OF TRIG. 26+3 CC-WWV YES

COMMENTS

CLEANED HEADS. AUTOS DO NOT TRIG SYSTEM AT 24db

TWL (VEL)

TAPE #15 TAPE ON - TC(X),SO(),TO() DAY 163 TIME 15:26:55
TAPE OFF- TC(X),SO(),TO() DAY 164 TIME 15:42:55
GAIN 1826 NO. OF TRIG. 10 CC-WWV YES
COMMENTS HEADS CLEANED - CAMPER'S WEAR SEIS - WAS
NOT DISTURBED. 78150' TAPE LEFT

TAPE #16 TAPE ON - TC(X),SO(),TO() DAY 164 TIME 15:52:55
LAST TAPE TAPE OFF- TC(X),SO(),TO() DAY 165 TIME 14:47:55
GAIN 2926 NO. OF TRIG. 17 CC-WWV _____
COMMENTS _____

TAPE #17 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #18 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #19 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #20 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #21 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

TAPE #22 TAPE ON - TC(),SO(),TO() DAY _____ TIME _____
TAPE OFF- TC(),SO(),TO() DAY _____ TIME _____
GAIN _____ NO. OF TRIG. _____ CC-WWV _____
COMMENTS _____

Appendix B: Instrument gains

While most instrument constants remained fixed during the deployment, amplifier gains (output/input ratio) were adjusted daily to compensate for varying levels of seismicity, and were boosted substantially around day 157 in order to record a quarry blast. This appendix lists for each station the times of gain changes and the gain values employed. For all stations except PS1, gains were identical on all three channels.

STN	TYP	DAY	HR:IN	G A I N S		
---	---	---	----	CH 1	CH 2	CH 3
---	---	---	----	----	----	----
CBR	FBA	147	0000	4.0	4.0	4.0
		149	1651	2.0	2.0	2.0
		150	1532	4.0	4.0	4.0
		151	1550	2.0	2.0	2.0
		156	2115	64.0	64.0	64.0
		157	0156	2.0	2.0	2.0
		157	2058	512.0	512.0	512.0
		158	0210	2.0	2.0	2.0
CON	FBA	147	0000	4.0	4.0	4.0
		149	0040	1.0	1.0	1.0
		155	1928	2.0	2.0	2.0
		156	1846	16.0	16.0	16.0
		157	0017	4.0	4.0	4.0
		157	1828	128.0	128.0	128.0
		158	0033	4.0	4.0	4.0
		159	1719	2.0	2.0	2.0
DMP	VEL	147	0000	4.	4.	4.
		151	1616	16.	16.	16.
FIS	FBA	147	0000	4.0	4.0	4.0
		149	1911	2.0	2.0	2.0
		150	1831	4.0	4.0	4.0
		151	2204	2.0	2.0	2.0
		156	1905	16.0	16.0	16.0
		157	0052	2.0	2.0	2.0
		157	1844	256.0	256.0	256.0
		158	0322	2.0	2.0	2.0
HCF	FBA	147	0000	4.0	4.0	4.0
		149	1519	2.0	2.0	2.0
		150	1451	4.0	4.0	4.0
		151	1518	2.0	2.0	2.0
		156	2130	64.0	64.0	64.0
		157	0240	2.0	2.0	2.0
		157	2128	512.0	512.0	512.0
		158	0302	2.0	2.0	2.0
HOT	FBA	147	0000	4.	4.	4.
		149	1831	2.	2.	2.
		150	1801	4.	4.	4.

STN	TYP	DAY	HR.IN	G A I N S		
				CH 1	CH 2	CH 3
---	---	---	----	----	----	----
LAK	VEL	147	0000	4.	4.	4.
		148	1800	8.	8.	8.
		149	1745	4.	4.	4.
		150	1724	8.	8.	8.
		151	1654	16.	16.	16.
		156	2034	128.	128.	128.
		157	0122	32.	32.	32.
		157	2029	256.	256.	256.
		158	0142	32.	32.	32.
		159	2004	16.	16.	16.
		160	1916	32.	32.	32.
		162	2045	16.	16.	16.
		164	2014	32.	32.	32.
		LAR	VEL	147	0000	4.
148	1644			2.	2.	2.
LKM	VEL	147	0000	4.	4.	4.
		153	2239	8.	8.	8.
		157	0012	16.	16.	16.
		157	2155	512.	512.	512.
		158	0005	16.	16.	16.
		159	2113	8.	8.	8.
		161	1541	32.	32.	32.
		163	1640	16.	16.	16.
		164	1636	32.	32.	32.
MCC	VEL	147	0000	8.0	8.0	8.0
MGE	FBA	147	0000	4.0	4.0	4.0
		149	2305	2.0	2.0	2.0
		156	1925	64.0	64.0	64.0
		157	0039	2.0	2.0	2.0
		157	1930	128.0	128.0	128.0
		158	0444	16.0	16.0	16.0
		158	1945	2.0	2.0	2.0
		PS1	FBA	147	0000	8.0
ROC	VEL	147	0000	8.	8.	8.
		148	1902	2.	2.	2.
		149	2126	4.	4.	4.
		150	2211	8.	8.	8.
		156	2015	128.	128.	128.
		157	0152	16.	16.	16.
		157	1855	64.	64.	64.
		158	0409	16.	16.	16.
		158	2055	8.	8.	8.
		159	1920	16.	16.	16.

STN	TYP	DAY	HR:MIN	G A I N S		
				CH 1	CH 2	CH 3
---	---	---	---	---	---	---
TOM	VEL	147	0000	8.	8.	8.
		148	1816	2.	2.	2.
		149	2205	4.	4.	4.
		150	2301	16.	16.	16.
		156	1955	128.	128.	128.
		157	0120	32.	32.	32.
		157	1826	128.	128.	128.
		158	0351	32.	32.	32.
		158	2030	16.	16.	16.
		159	1851	32.	32.	32.
		161	1754	64.	64.	64.
		162	1910	32.	32.	32.
		TNL	VEL	147	0000	32.
152	2238			4.	4.	4.
154	2136			8.	8.	8.
156	2242			64.	64.	64.
157	0318			16.	128.	128.
157	2224			512.	512.	512.
157	2334			16.	16.	16.
159	2150			8.	8.	8.
161	1442			16.	16.	16.
163	1527			8.	8.	8.
164	1553			16.	16.	16.

Appendix C: Clock corrections

When possible during the experiment, WWVB time code was recorded on the data tapes to enable measurement of the drift of each instrument's internal clock with respect to true (WWVB) time. To measure the clock correction (CC), the time of the leading edge of a recorded WWVB second pulse was measured according to the recorder's internal clock (INTERNAL TIME) and was compared with the true time of the pulse. The clock correction is defined by

$$CC + \text{INTERNAL TIME} = \text{TRUE TIME}.$$

While this appendix contains an adequate sampling of clock corrections for determination of clock drift, not all clock corrections have been measured. Clock corrections measured in the field from strip chart records are denoted "FIELD." Because of power failure, time was reset for MGE and TWL during their deployments. The clock corrections labelled "EXTRAP" are extrapolated points based on each instrument's observed drift rate, and they are not actual measurements. They have been inserted at the times of power loss in order to facilitate linear interpolation of clock corrections. All clock corrections listed are accurate to ± 0.005 s.

MEASURED CLOCK CORRECTIONS - MAMMOTH LAKES STATIONS

STN	YR	DAY	HRMN	INTERNAL TIME	TRUE TIME	CC	COMMENT
---	--	---	----	-----	-----	-----	-----
HCF	80	149	123	51.88	52.00	0.12	
HCF	80	150	1445	55.89	56.00	0.11	
HCF	80	151	15 8	54.90	55.00	0.10	
HCF	80	152	2143	56.91	57.00	0.09	
HCF	80	155	2339	54.94	55.00	0.06	
HCF	80	157	223	57.96	58.00	0.05	
HCF	80	160	2000			0.04	* FIELD
HCF	80	163	2138			0.03	
HCF	80	165	1915			0.02	
CBR	80	149	1643	57.04	57.00	-0.04	
CBR	80	150	1531	57.05	57.00	-0.05	
CBR	80	151	1542	58.06	58.00	-0.06	
CBR	80	151	1549	58.06	58.00	-0.06	
CBR	80	153	2134	57.08	57.00	-0.08	
CBR	80	154	1913	57.09	57.00	-0.09	
CBR	80	155	2312	57.11	57.00	-0.11	
CBR	80	160	2000			-0.18	* FIELD
LAK	80	147	2144	53.94	54.00	0.06	
LAK	80	148	13 4	58.97	59.00	0.03	
LAK	80	151	1653	59.07	59.00	-0.07	
LAK	80	153	2033	59.15	59.00	-0.15	
LAK	80	155	2159	57.20	57.00	-0.20	
LAK	80	156	2033	58.23	58.00	-0.23	
LAK	80	160	1900			-0.33	
LAK	80	163	2031			-0.40	
LAK	80	165	2013			-0.44	
MGE	80	148	2241	52.84	53.00	0.16	
MGE	80	149	2304			0.17	* EXTRAP
MGE	80	149	2305			0.16	* EXTRAP
MGE	80	152	048	58.79	59.00	0.21	
MGE	80	152	1844			0.22	* EXTRAP
MGE	80	152	1845	58.92	59.00	0.08	
MGE	80	153	1831	57.90	58.00	0.10	
MGE	80	154	1531	58.88	59.00	0.12	
MGE	80	155	20 4	57.85	58.00	0.15	
MGE	80	155	2018			0.00	
MGE	80	160	1737			0.12	
MGE	80	163	1816			0.20	
MGE	80	165	1643			0.25	
CON	80	150	1700			2.58	
CON	80	150	1747			2.58	
CON	80	150	1748	55.03	55.00	-0.03	
CON	80	151	2130	57.04	57.00	-0.04	
CON	80	152	1932	57.06	57.00	-0.06	
CON	80	154	1444	58.08	58.00	-0.08	
CON	80	155	1923	58.09	58.00	-0.09	
CON	80	156	1845	59.10	59.00	-0.10	
CON	80	160	1630			-0.14	
CON	80	163	1709			-0.16	
CON	80	165	1556			-0.18	

STN	YR	DAY	HRMN	INTERNAL TIME	TRUE TIME	CC	COMMENT
---	---	---	---	-----	-----	---	-----
FIS	80	148	1838	49.96	50.00	0.04	
FIS	80	150	1830	58.00	58.00	0.00	
FIS	80	153	1736	53.05	53.00	-0.05	
FIS	80	155	1943	58.10	58.00	-0.10	
FIS	80	157	047	59.12	59.00	-0.12	
FIS	80	160	1730			-0.19	
FIS	80	163	1752			-0.24	
FIS	80	165	1613			-0.23	
TOM	80	148	18 6	58.71	59.00	0.29	
TOM	80	150	2253	35.77	36.00	0.23	
TOM	80	151	2250	57.79	58.00	0.21	
TOM	80	152	17 0	56.82	57.00	0.18	
TOM	80	153	1943	58.86	59.00	0.14	
TOM	80	154	17 0	58.88	59.00	0.12	
TOM	80	155	2120	57.91	58.00	0.09	
TOM	80	160	1800			-0.06	* FIELD
TOM	80	163	1902			-0.12	
TOM	80	165	1722			-0.17	
ROC	80	148	1 2	58.33	58.00	-0.33	
ROC	80	149	2050	58.51	58.00	-0.51	
ROC	80	151	2317	59.73	59.00	-0.73	
ROC	80	152	1633	58.81	58.00	-0.81	
ROC	80	153	1910	56.93	56.00	-0.93	
ROC	80	154	1611	59.03	58.00	-1.03	
ROC	80	155	2056	59.15	58.00	-1.15	
ROC	80	160	1800			-1.66	* FIELD
ROC	80	163	1936			-1.96	
ROC	80	165	1746			-2.14	
TWL	80	152	2237	56.90	57.00	0.10	
TWL	80	153	2321			0.08	* EXTRAP
TWL	80	153	2322	58.00	58.00	0.00	
TWL	80	154	2133	58.01	58.00	-0.01	
TWL	80	155	1758	59.04	59.00	-0.04	
TWL	80	157	314	59.08	59.00	-0.08	
TWL	80	161	1430			-0.20	* FIELD
TWL	80	164	1542			-0.26	
TWL	80	165	1447			-0.28	
LKM	80	152	151	58.99	59.00	0.01	
LKM	80	152	2319	55.03	55.00	-0.03	
LKM	80	156	0 8	59.08	59.00	-0.08	
LKM	80	157	0 7	59.10	59.00	-0.10	
LKM	80	161	1800			-0.19	* FIELD
LKM	80	163	1639			-0.22	
LKM	80	165	1525			-0.25	
DMP	80	150	1636	55.92	56.00	0.08	
DMP	80	151	1611	55.93	56.00	0.07	
DMP	80	152	2040	57.95	58.00	0.05	
DMP	80	153	21 9	56.98	57.00	0.02	
HOT	80	147	20 9	54.95	55.00	0.05	
HOT	80	150	1756	59.01	59.00	-0.01	
LAR	80	148	1643	57.94	58.00	0.06	
LAR	80	150	023	56.98	57.00	0.02	

Appendix D: Log of all recorded events

This appendix contains a list of times of all recorded events including WWVB recordings, sorted by integer minute, and a list of stations recording each event. The leftmost column contains the Julian day of the event and the next column to the right is the hour and minute that the event was recorded. The symbols "P" and "S" are used to indicate records lacking a P or S arrival, respectively, due to the late triggering of the instrument. The symbol "G" is used to denote a record which is unrecoverable garbage, usually due to instrument malfunction. The lack of one of these symbols next to an asterisk does not imply that the record is known to be good. We have examined most of the records from events recorded by three or more stations, so that lack of one of these symbols probably signifies a good record for those events. For events with only one or two recordings, record quality is unknown. In addition, about 200 of the events appearing in this table are recordings of WWVB time code.

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
147 19:07										*					
147 19:10										*					
147 19:24										*					
147 19:44										*					
147 19:52										*					
147 20:01										*					
147 20:03										*					
147 20:07										*					
147 20:09		*		*											
147 20:10		*													
147 20:11		*													
147 20:12		*								*					
147 20:32		*													
147 20:41		*													
147 20:46		*													
147 20:55		*													
147 21:04		*													
147 21:10		*													
147 21:19		*		*											
147 21:31										*					
147 21:40		*		*											
147 21:42		*								*					
147 21:44						*									
147 21 45		*													
147 21:46		*								*					
147 21:48										*					
147 21:49		*													
147 21:55		*													
147 21:56		*													
147 21:57		*								*					
147 21:58		*		*		*				*					
147 21:59		*													
147 22:19		*													
147 22:29		*													
147 22:35		*								*					
147 22:36		*													
147 22:39		*													
147 22:45				*											
147 22:49										*					
147 23:19			*							*					
147 23:45			*							*					
148 00:02										*					
148 00:21										*					
148 00:24										*					
148 00:34			*												
148 00:43			*		*										
148 01:02														*	
148 01:05														*	
148 01:14					*									*	
148 01:19		*													
148 01:44		*		*										*	
148 02:01				*										*	
148 02:21		*												*	
148 02:22		* P			* P									*	

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
148 02:27					*										
148 03:10			*												
148 03:43			*		*										*
148 04:07			*		*	*									*
148 04:22			*												*
148 05:29			*		*										
148 05:50															*
148 05:56					*										*
148 06:04															*
148 06:36			*												*
148 06:46			*												
148 07:22			*												
148 08:04			*		*										*
148 08:18					*										
148 08:36															*
148 09:09					*	*									*
148 09:28															*
148 10:27					*	*									*
148 10:29															*
148 10:32															*
148 10:38					*										
148 10:46															*
148 11:23					*										
148 12:06					*										
148 12:24															*
148 13:10					*	*									* G
148 13:27						*									
148 14:51	*				*	*									
148 14:54	*					*									
148 14:58						*									
148 15:01						*									
148 15:13					*	*									
148 15:56					*										
148 16:01					*	*									
148 16:09					*										
148 16:10					*	*									
148 16:43										*					
148 17:10	*					*				*					
148 17:34								*							
148 17:36					*			*							
148 17:47								*		*					
148 17:50								*							
148 17:52								*							
148 17:55															
148 17:57											*				
148 18:00						*					*				
148 18:04						*									
148 18:06		*									*				
148 18:15											*				
148 18:18								*							
148 18:36					*	*		*							
148 18:38					*										
148 18:44					*										
148 18:56					*										
148 19:01	*				*	*		*		*	*				*
148 19:23								*		*					
148 19:40								*							
148 19:47					*	*		*							

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
148 19:54					*										
148 19:56					*			*							
148 19:59					*										
148 20:00					*	PS		*		PS					
148 20:01								*							
148 20:04								*							
148 20:06								*		*					
148 20:10								*							
148 20:26								*		*					
148 20:30								*							
148 20:55								*							
148 21:09								*		*					
148 21:34	*				*	*		*		*	*				*
148 21:37					*										
148 21:46					*	*		PS							
148 22:18					*										
148 22:41								*		*					
148 23:14								*							
148 23:34								*							
148 23:41					*	*		*	*	*	*				
148 23:57			*	*	*	*		*		*					
149 00:08								*							
149 00:29								*							
149 00:57					*										
149 01:23							*								
149 01:27								*							
149 01:55									*						
149 02:01									*						
149 02:12					*			*	PS						
149 02:55								*							
149 03:05							*								
149 03:13								*							
149 03:17					*										
149 03:26								*	*						PS
149 03:37			*												
149 04:02								*							
149 04:03		*	*	*	*	*		*	*	*	*				
149 04:09								*	*	*	*				
149 04:22					*			*	*	*	*				
149 04:27								*							
149 04:49								*							
149 05:05			*	*	*	*	*	*	*	*	*	*	*	*	*
149 05:16	*		*	*	*	*	*	*	*	*	*	*	*	*	*
149 05:17								*							
149 05:19								*							
149 05:22								*		*					
149 05:24								*							
149 05:37								*							
149 05:47			PS	PS	PS	PS	PS	*	*	*	*	*	*	*	*
149 05:48			PS	PS	PS	PS	PS	*	*	*	*	*	*	*	*
149 05:49					*			*							
149 06:07								*	PS	*	*	*	*	*	*
149 06:13		*	*	*	*	*		*	*	*	*	*	*	*	*
149 06:34								*		*	*	*	*	*	*
149 06:41								*		*	*	*	*	*	*
149 06:43								*		*	*	*	*	*	*
149 06:49		*	*	PS	PS	PS	PS	*	*	PS	PS	PS	PS	PS	PS
149 07:48								*		*	*	*	*	*	*

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
149 07:51				*	*	*			*						
149 08:32				*											
149 09:20					*				*						*P
149 09:46															
149 10:03				*	*			*							
149 10:06					*										
149 10:13									*						
149 11:07									*						
149 11:46															
149 11:47															
149 11:53															
149 11:54	*			*	*	*		*	*		*				*
149 11:55															
149 11:58															
149 12:03								*	*						
149 13:27				*P		*		*P	*						
149 13:33								*							
149 13:50				*											
149 13:54								*							
149 14:06								*	*						*P
149 14:18									*						
149 14:34															
149 14:53								*							
149 15:00				*				*							
149 15:23								*							
149 15:33							*								
149 16:43				*											
149 16:49				*											
149 16:50				*											
149 17:32								*							
149 17:34						*									
149 17:35						*									
149 17:43						*									
149 17:44						*									
149 18:29			*												
149 18:30			*												
149 18:37								*							
149 20:50															*
149 21:02															*
149 21:04															*
149 21:05															*
149 21:06															*
149 21:18															*
149 21:19															*
149 21:25															*
149 21:54								*							*
149 21:58											*				
149 22:03											*				
149 22:04											*				
149 22:57								*							
149 23:02								*							
149 23:07		*				*		*							
149 23:17								*							
149 23:50								*	*						*P
149 23:56								*							
150 00:23										*					
150 00:32										*					
150 04:17															*

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
150 04:18	*		*	*	*	*		*	*	*	*				*
150 04:59	*								*						*
150 05:14									*						
150 05:49								*							
150 05:55									*	*	*				*P
150 07:32									*		*				*P
150 08:46															
150 08:47															
150 09:32															
150 09:33															
150 09:47								*							*
150 10:39				*						*					
150 11:46								*							
150 13:36								*		*					
150 13:52										*					
150 14:00										*					
150 14:15										*					
150 14:42							*								
150 14:43							*								
150 14:45							*								
150 15:16			*					*P	*	*					
150 15:22				*											
150 15:30				*											
150 15:31				*											
150 15:46															
150 16:01							*								
150 16:10															
150 16:14				*			*	*		*					
150 16:35												*			
150 16:42															
150 16:45															
150 16:46															
150 16:47															
150 16:48															
150 16:50															
150 16:56								*P	*						
150 16:57										*	*				*P
150 17:17					*										
150 17:21	*		*	*				*	*	*	*	*			*
150 17:22					*										
150 17:23					*										
150 17:48								*							
150 17:56			*												
150 17:59			*												
150 18:00			*												
150 18:24			*	*	*		*								
150 18:25					*							*			
150 18:28					*										
150 18:30					*										
150 18:54					*				*						*P
150 18:55		*	*	*	*			*	*						
150 18:56		*		*	*				*						
150 18:58										*					
150 19:06										*					
150 21:34															*
150 22:09															*
150 22:10															*
150 22:25															*

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
150 22:52											*				
150 22:53											*				
150 22:59											*				
150 23:00											*				
150 23:43									*						
151 00:09															*
151 00:46															*
151 01:19					*			*		*					*
151 01:38								*							*
151 02:25								*							
151 02:26					*										
151 02:58											*				*
151 03:04								*							*
151 03:05											*				
151 04:11										*					
151 04:45											*				*
151 04:57											*				*
151 05:13								*	*	*					
151 05:19								*							*
151 05:29								*		*					
151 05:38				*				*							
151 06:29	*	*	*			*		*							
151 06:52								*							
151 07:08											*				*
151 07:12											*				
151 07:21								*							
151 07:52	*		*					*	*	*					
151 10:30		*	*			*		*		*					
151 11:14				*				*			*				*
151 11:53								*							*
151 12:01				*		*		*	*		*				*
151 12:02	*							*							
151 13:32					*			*							
151 13:40			*					*	*	*	*				*
151 13:41				*				*		*	*				
151 14:56								*		*					
151 15:05					*			*		*					
151 15:42	*	*	*	*	*	*	*	*	*	*	*				*
151 15:49		*	*	*	*	*	*	*	*	*	*				*
151 15:51		*						*							
151 16:03											*				
151 16:11												*			
151 16:15												*			
151 16:48				*							*				*
151 16:51				*											
151 16:53				*											
151 17:54								*							
151 18:41										*					*
151 19:18								*		*					
151 19:49	*	*	*	*	*	*	*	*	*	*	*	*			*
151 20:36											*				
151 20:40								*							
151 21:29								*							
151 21:30								*							
151 21:35								*							
151 21:56				*											
151 22:02				*											
151 22:03				*											

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
151 22:42								*				*			
151 22:43											*				
151 22:50											*				
151 23:02					*					*P	*P	*P S			*
151 23:14															*
151 23:17															*
151 23:23															*
151 23:30											*				*
151 23:35												*			
151 23:49												*			
152 00:13					*					*P		*			
152 00:18							*								
152 00:48									*						
152 00:53														*	
152 00:58	*			*	*	*	*	*	*	*	*	*		*	*
152 01:01														*	
152 01:09										*					
152 01:12														*	
152 01:24														*	*
152 01:31															*
152 01:43														*	
152 01:51													*		
152 01:52															*
152 01:53														*	
152 02:08														*	
152 02:21														*	
152 02:35														*	
152 02:51												*			
152 02:54														*	
152 03:09															*
152 03:38														*	
152 04:15														*	
152 04:27														*	
152 05:14					*									*	
152 05:16					*									*	
152 06:15														*	
152 06:52									*					*	
152 08:05	*		*	*	*				*		*	*	*	*	*
152 09:34														*	
152 10:11	*		*	*	*	*	*	*	*	*	*	*	*	*	*
152 10:12			*	*			*	*			*P			*	*
152 10:13							*P				*P			*P	
152 10:14			*	*				*			*P	*P		*	*
152 10:17														*	
152 10:27														*	
152 10:49			*	*					*					*	
152 11:38									*					*	
152 11:39				*			*P				*P			*P	
152 11:41														*	
152 12:13							*					*			
152 12:28								*							
152 12:30									*						
152 12:35		*													
152 13:13		*	*	*	*	*	*	*			*P S	*P S			
152 13:28			*P	*	*	*	*P	*			*P				
152 13:43			*	*	*	*	*	*			*				*
152 13:44												*P S			
152 14:08				*	*	*	*	*				*P S			*P S

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
152 14:20													*		
152 14:21												*			
152 14:40				*											
152 15:07											*				*
152 15:16	*			*	*	*	*	*	*	*	*		*		*
152 15:17				*					*				*P		
152 15:20				*	*	*		*	*	*	*		*P		*
152 15:30				*	*	*		*P	*	*	*				*
152 15:31													*P		
152 15:35				*	*	*		*	*	*	*		*P		*P
152 16:23															*
152 16:33															*
152 16:56											*				
152 17:00											*				
152 17:01											*				
152 17:18									*						*
152 18:18								*	*						
152 18:30											*				*
152 18:45									*						
152 19:06											*				*
152 19:14					*										
152 19:31								*							
152 19:32								*							
152 19:35								*							
152 19:49													*		
152 19:52															*
152 19:56													*		
152 20:03						*									
152 20:06						*									
152 20:14						*			*		*		*		*
152 20:40												*			
152 21:04				*											
152 21:37							*								
152 21:43							*								
152 21:47												*			
152 22:37														*	
152 23:14						*									
152 23:15	*			*	*	*		*	*	*	*	*	*	*	*
152 23:19													*		
152 23:21															*
152 23:35					*										*
152 23:38									*						*
152 23:50					*										*
153 00:10															*
153 00:57								*				*	*	*	*
153 01:23												*			
153 02:21												*			
153 03:17					*				*		*				*
153 03:18												*			
153 04:09					*										
153 04:52															*
153 05:28						*P					*				*
153 05:51															*
153 06:08					*			*							
153 06:47			*	*	*	*	*	*	*	*	*	*	*	*	*
153 07:00					*P				*		*				*P
153 07:15											*				
153 07:47					*						*P	*			

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
153 09:08									*						*
153 11:40											*				*
153 11:44															*
153 12:21			*		*		*	*			*	*	*		*
153 12:27															*
153 13:08					*						*	*			*
153 14:55												*			
153 14:59					*P							*	*		
153 16:09															*
153 17:12							*								
153 17:17							*								
153 17:18					*										
153 17:27		*	*	*	*			*		*	*	*	*	*	*
153 17:36			*	*	*										
153 17:40			*	*	*										
153 17:41			*	*	*										
153 17:50							*					*P	*P	*P	
153 18:05								*							
153 18:29								*							
153 18:30								*							
153 18:31								*							
153 19:09															*
153 19:10															*
153 19:14															*
153 19:29											*				
153 19:43										*	*				
153 19:45										*	*				
153 19:47										*	*				
153 19:52							*								
153 20:33					*										
153 20:35					*										
153 21:09											*				
153 21:12											*				
153 21:34		*													
153 21:38		*													
153 21:39		*													
153 21:57															*
153 22:10						*									
153 22:14					*	*									
153 22:30		*	*	*	*	*	*	*	*	*	*	*	*	*	*
153 22:36												*			
153 22:38												*			
153 22:40												*			
153 23:22													*		
153 23:34				*		*		*		*					*
153 23:42											*				
153 23:50															*
154 01:02														*	
154 01:16												*			
154 02:06		*		*										*	
154 02:20								*						*	
154 02:30							*							*	
154 04:44															*
154 06:39			*		*	*	*	*	*	*	*	*P	*	*	*
154 07:29					*										*
154 09:19					*										
154 09:33												*			
154 10:08										*					*

		PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
154	10:22			*	*	*	*	*	*			*	*	*	*	*
154	12:42															*
154	12:46							*					*	*		
154	13:54															*
154	14:12															*
154	14:19															*
154	14:44								*							
154	14:47								*							
154	15:06				*											
154	15:08				*											
154	15:31									*						
154	15:34					*				*						
154	15:35									*						
154	16:01													*		
154	16:11															*
154	16:19					*	*	*				*	*	*	*	*
154	16:43					*										
154	16:58											*				
154	17:00											*				
154	17:05											*				
154	17:06											*				
154	17:45					*										
154	17:47					*										
154	17:49					*										
154	17:57			*												
154	18:02			*												
154	18:26											*				
154	18:34											*				
154	18:36											*				
154	19:09			*												
154	19:13			*												
154	19:35						*									
154	19:38						*									
154	19:42						*									
154	20:07												*			*
154	20:12					*										
154	20:13												*			
154	20:15												*			
154	20:34			* PS	*	*	*	*	*	*		*	*	*	*	*
154	21:33													*		
154	21:36													*		
154	21:47														*	*
154	22:49					*								*	*PS	
154	23:20													*		
155	01:29													*		
155	02:35					*		*	*		*		*	*	*	*
155	02:46					*								*		
155	03:30											*		*		
155	04:27										*				*	
155	04:28													*		
155	05:21													*		
155	06:18			*		* PS						*	*PS	* PS	* PS	
155	06:19													*		
155	06:56										*					
155	07:05			*		* PS	*							* PS		
155	07:32					*										
155	07:45										*				*	
155	07:46			*												

	PSI	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
155 08:02				*											
155 08:12					*										
155 08:38													*		
155 10:10															*
155 11:15										*					*
155 11:32								*							
155 13:00										*					
155 13:12					*										
155 16:30															*
155 16:44										*					
155 17:10								*		*					*
155 17:34				*				*		*		*	*	*	*
155 17:58													*		
155 19:23								*							
155 19:26								*							
155 19:27								*							
155 19:43				*											
155 19:46				*											
155 20:04								*							
155 20:17								*							
155 20:18								*							
155 20:19								*							
155 20:23												*	*		
155 20:43													*		
155 20:56															*
155 20:59					*					*					
155 21:17										*					
155 21:19															*
155 21:20										*					
155 21:59					*										
155 22:02					*										
155 23:12	*														
155 23:15	*														
155 23:36						*									
155 23:39						*									
155 23:57												*	*		
156 00:02	*											*			
156 00:05												*			
156 00:07												*			
156 00:08												*			
156 00:23				*								*	*		
156 01:01					*							*	*		*
156 02:38				*								*	*		*
156 04:00				*				*				*	*		
156 04:02															*
156 05:24															
156 05:25															
156 05:45										*					*
156 05:58										*					*
156 06:29													*		
156 08:34				*			*	*		*		*			*
156 08:57				*						*		*			*
156 11:16													*		
156 11:55								*							
156 12:31													*		
156 13:03								*					*		
156 13:19								*					*		
156 13:41				*						*		*			

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
156 16:59						*							**	*	
156 17:09						*		*					**	*	
156 17:13								*					**	*	
156 17:16								*					**	*	
156 17:48								*							
156 18:19														*	
156 18:30								*							
156 18:31								*							
156 18:37											*				*
156 18:44								*							
156 18:45								*							
156 18:48								*							
156 18:50								*							
156 18:52								*							
156 18:53								*							
156 18:54								*							
156 18:56								*							
156 18:57								*							
156 19:00								*							
156 19:01								*							
156 19:02								*							
156 19:03								*							
156 19:05								*							
156 19:06								*							
156 19:07					*			*							
156 19:09				**	*	*		*	*	*	*	*	*	*	*
156 19:10								*							
156 19:13								*							
156 19:15								*							
156 19:27									*						
156 19:33									*						
156 19:35									*						
156 19:44									*						
156 19:48												*			
156 19:55									*						
156 20:00									*						
156 20:06									*						
156 20:10									*						
156 20:20						*									
156 20:22						*			*						
156 20:27															*
156 20:28									*						
156 20:29				*					*						
156 20:30						*									
156 20:32						*									
156 20:33						*									
156 20:41						*									
156 20:48						*			*						*
156 20:53									*						
156 20:54									*						
156 20:55									*						
156 21:00			*		*	*		*		*	*	*	*	*	*
156 21:02					*			*					*	*	*
156 21:03			*		*			*		*				*	*
156 21:09														*	*
156 21:11						*								*	*
156 21:12														*	*
156 21:14						*									

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
156 21:15				*		*									
156 21:17				*											
156 21:18				*											*
156 21:19				*											
156 21:20				*											
156 21:21				*											
156 21:22				*											
156 21:23				*											
156 21:24				*											
156 21:25				*											
156 21:26										*					*
156 21:27															*
156 21:32															*
156 21:38															*
156 21:47							*								*
156 21:48							*								*
156 21:49							*								*
156 21:52							*					*			*
156 21:55															*
156 21:56					*										*
156 22:04															*
156 22:07					*										*
156 22:10															*
156 22:13					*										*
156 22:16					*										*
156 22:17												*			*
156 22:18					*										*
156 22:19					*					*					*
156 22:20					*					*					*
156 22:30													*		*
156 22:41													*		*
156 22:49					*								*		*
156 22:50													*		*
156 22:54													*		*
156 23:11					*										*
156 23:12					*										*
156 23:16					*					*			*	*	*
156 23:25					*					*			*	*	*
156 23:29					*					*		*	*	*	*
156 23:32					*					*			*	*	*
156 23:34					*					*			*	*	*
157 00:07												*			*
157 00:11												*			*
157 00:16							*								*
157 00:18					*										*
157 00:25													*		*
157 00:35													*		*
157 00:47				*											*
157 00:51				*											*
157 00:57					*					*					*
157 00:59					*					*					*
157 01:00										*					*
157 01:01										*				*	*
157 01:03										*				*	*
157 01:09										*				*	*
157 01:10							*			*				*	*
157 01:13							*			*			*	*	*
157 01:18							*			*			*	*	*

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
157 01:19														*	
157 01:21					*										
157 01:24					*P	*		*					*P	*	
157 01:52															*
157 01:55			*												
157 01:59						*									
157 02:18						*									
157 02:19						*									
157 02:21														*	
157 02:23						*									
157 02:26						*									
157 02:43														*	
157 02:44														*	
157 03:07					*			*P			*P		*P	*P	*
157 03:14														*	
157 03:16														*	*
157 03:17														*	
157 03:28							*								
157 03:33															*
157 04:12							*								
157 04:13														*	
157 04:45										*					*
157 07:30							*								
157 07:56										*					*
157 08:04					*		*							*P	
157 08:59					*		*			*		*		*P	*P
157 09:29														*	
157 09:46															*
157 09:53										*					
157 10:33				*P	*			*P		*P		*	*	*	*P
157 10:46							*								
157 10:50							*								
157 11:26							*			*					*P
157 12:03							*								
157 12:04														*	
157 12:59							*							*	
157 13:34							*								
157 14:25							*					*		*P	
157 15:40							*					*		*	
157 17:01															*
157 17:04			*									*		*P	
157 17:16							*								
157 17:20			*												
157 18:17										*					
157 18:25														*	
157 18:32							*								
157 18:45							*								
157 18:46							*								
157 18:48															*
157 18:49							*								
157 18:51							*								*
157 18:52				*P			*			*					
157 18:53			*				*					*P			
157 18:54			*				*			*P					*
157 18:56			*												
157 18:57							*								
157 18:59							*								
157 19:00							*								

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
157 19:01					*										
157 19:03					*			*							
157 19:05					*										
157 19:06					*										
157 19:09								*							
157 19:11					*										
157 19:15					*										
157 19:16					*										
157 19:18					*										
157 19:21					*										
157 19:23								*							
157 19:24					*P			*P			*				*
157 19:28								*							
157 19:29					*										
157 19:32								*							
157 19:33								*							*
157 19:36					*			*							
157 19:38					*P			*	*		*P				*
157 19:39								*	*						
157 19:40					*										
157 19:41			*	*			*	*G	*		*		*	*	*
157 19:43				*					*				*	*	*
157 19:45				*					*						
157 19:51									*						*
157 19:52				*					*						
157 19:55				*											
157 19:57									*						
157 20:01									*						
157 20:04									*		*				*
157 20:10									*						
157 20:12									*						
157 20:21									*						
157 20:24									*						
157 20:25									*						
157 20:27									*						
157 20:28						*									
157 20:30								*							
157 20:32								*							
157 20:33					*			*			*		*P	*P	*P
157 20:39					*										
157 20:48					*						*		*	*P	*
157 20:58			*	*	*P										*
157 21:00			*												
157 21:04					*										
157 21:06			*		*										
157 21:08			*												
157 21:10			*												
157 21:18			*												
157 21:19			*												
157 21:23			*												
157 21:25			*												
157 21:27			*				*								
157 21:32			*												
157 21:33				*							*				*
157 21:34			*												
157 21:48			*												
157 21:53			*										*		
157 21:54													*		

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
157 21:55				*		*									
157 21:57						*									*
157 21:58				*										*	
157 21:59													*		*
157 22:00						*									
157 22:01						*									
157 22:02													*		
157 22:03													*		
157 22:04				*									*		
157 22:05				*											
157 22:07													*		
157 22:08				*											
157 22:09				*		*							*		
157 22:10				*											*
157 22:11						*									
157 22:14													*		
157 22:15						*									
157 22:18													*		
157 22:19						*							*		*
157 22:22				*											
157 22:24														*	
157 22:25														*	*
157 22:26				*										*	
157 22:27				*											
157 22:28													*		
157 22:29				*		*								*	
157 22:30				*										*	
157 22:31														*	
157 22:32														*	
157 22:33														*	*
157 22:34														*	
157 22:35														*	
157 22:36														*	
157 22:38				*											
157 22:39				*										*	
157 22:40				*										*	
157 22:41														*	
157 22:42														*	
157 22:43				*										*	
157 22:49						*									
157 22:52				*		*									
157 22:55				*											
157 22:56				*										*	
157 23:02						*									*
157 23:22															*
157 23:28															*
157 23:32														*	*
157 23:35														*	
157 23:41														*	*
157 23:44													*		
157 23:46															*
157 23:52															*
158 00:10													*		
158 00:13							*						*		
158 00:16													*	*	*
158 00:45															*
158 01:34									*		*				
158 01:43						*									

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
158 02:29							*								
158 02:31											*				
158 02:51								*							
158 02:57														*	
158 03:02						*									
158 03:38											*				
158 03:50								*							
158 03:51											*				
158 03:59												*	*		
158 04:07															*
158 04:31											*				*
158 04:32									*						
158 04:35									*						
158 04:37									*						
158 04:38									*						
158 04:43									*						
158 04:47									*						
158 04:51									*		*				*
158 06:32									*						
158 06:39								*	*						
158 06:58								*	*						
158 08:00								*	*						
158 08:28								*	*		*	*			*
158 09:19								*	*		*	*			*
158 09:25	*					*	*	*	*		*	*	*G	*	
158 09:34						*	*	*	*		*	*			
158 09:52	*					*	*	*	*		*	*G	*G	*	*
158 10:59														*	
158 11:20								*	*						*
158 12:14						*	*	*	*		*	*	*G		
158 12:38	*					*	*	*	*		*	*	*G		
158 12:49								*	*						
158 12:56										*					
158 12:57															*
158 13:03						*	*	*	*		*				
158 13:07								*	*						
158 13:08						*	*	*	*						
158 13:10								*	*		*				
158 13:11								*	*		*				*
158 13:33						*	*	*	*		*	*	*G	*	*
158 14:04						*	*	*	*		*	*			
158 14:18	*					*	*	*	*		*	*	*G	*	*
158 14:23								*	*		*	*			
158 15:08						*	*	*	*		*	*			
158 15:33	*					*	*	*	*		*	*	*G		
158 15:35	*					*	*	*	*		*	*	*G		
158 15:43	*					*	*	*	*		*	*	*G	*	*
158 16:26	*					*	*	*	*		*	*	*	*	*
158 16:28								*	*		*	*			*
158 16:29	*							*	*		*	*			
158 16:49								*	*		*	*			*
158 17:16	*					*	*	*	*		*	*	*G	*	*
158 17:19						*	*	*	*		*	*			
158 17:21								*	*		*	*		*	
158 17:25								*	*		*	*		*	
158 17:41	*					*	*	*	*		*	*		*	
158 18:24	*					*	*	*	*		*	*		*	
158 18:27								*	*		*	*		*	

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
158 18:29													*		
158 18:30													*		
153 18:41					*								*	*P	
158 18:46							*								
158 18:48				*						*				*P	*
158 18:55							*								
158 18:57							*								
158 19:03							*								
158 19:06										*					*
158 19:09												*			
158 19:21			*												
158 19:44									*						
158 20:16															*
158 20:24										*					
158 20:28										*					
158 20:29										*					
158 20:49												*			
158 20:51															*
158 20:54															*
158 21:02												*			
158 21:48					*										
158 21:51					*										
158 22:15			*												
158 22:26															*
158 22:38						*									
158 23:13							*								
159 01:21								*			*P		*P	*P	*
159 01:28															*
159 01:31					*		*				*G		*	*	*
159 01:32		*	*			*	*	*P	*				*	*	*
159 01:34							*	*					*	*	
159 02:03												*	*	*	
159 02:26												*	*	*	
159 02:31				*											
159 02:49				*P			*					*	*P	*P	
159 03:14				*			*					*	*P	*P	*P
159 03:16				*							*G	*P	*P	*P	*
159 03:34												*	*	*	
159 03:38							*					*	*P	*	
159 04:12															*
159 04:24												*	*	*	
159 04:43							*								
159 05:19			*									*	*P	*	
159 05:23												*	*	*	
159 05:26													*	*	
159 05:42							*								
159 05:45												*	*	*	
159 06:14				*								*	*P	*	
159 06:17													*	*	
159 06:43				*										*	
159 06:56													*	*	
159 07:06												*	*	*	
159 07:19													*	*	
159 07:32							*						*	*P	
159 07:37				*P		*P	*	*				*	*	*P	
159 07:38				*		*	*	*				*	*	*G	
159 07:39				*									*	*	
159 07:50												*	*	*	

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
159 08:42								*							
159 09:25								*							
159 09:34						*		*							
159 09:56								*							
159 10:19						*		*							
159 10:30						*		*			*				*
159 10:32								*							
159 11:37						*		*							
159 12:09								*							
159 13:02								*							
159 13:24								*							
159 13:38			*					*							
159 14:15								*							
159 14:54								*							
159 15:11								*							
159 17:11															*
159 17:45				*											
159 17:46				*											
159 17:50				*											
159 17:51				*											
159 18:11								*							
159 18:12								*							
159 18:15								*							
159 18:46											*				
159 18:49											*				
159 18:50											*				
159 19:15															*
159 19:19															*
159 20:03					*										
159 20:25			*												
159 20:28			*												
159 20:45											*				*
159 20:48							*								
159 20:50							*								
159 20:51							*								
159 21:12												*			
159 21:24												*			
159 21:49													*		
159 22:23												*	*		
159 22:25					*						*				*
159 22:33					*										
159 22:35															
159 23:04														*	
159 23:17		*	*	*	*	*	*	*	*	*	*	*	*	*	*
159 23:19						*									
159 23:50															*
159 24:53															
160 00:44													*		*
160 01:24										*					*
160 03:34															*
160 05:08												*	*		
160 05:10												*	*		
160 05:16					*										*
160 06:07										*					*
160 06:11					*	*	*	*	*	*	*	*	*	*	*
160 06:25	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
160 06:26															*
160 06:32											*	*			

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
160 07:56											*				*
160 08:16											*				*
160 08:29											*				*
160 08:31											*				*
160 09:21													*	*	
160 09:26											**		*	*	
160 10:43															*
160 12:59													*	*	
160 13:05															*
160 13:07														*	
160 13:32											*				
160 14:58															
160 15:02															
160 15:07															*
160 15:37											*				*
160 15:48														*	
160 15:52														*	
160 16:21															*
160 16:23															*
160 16:29								*							
160 16:40						**	**	**				*	**		
160 16:45			*												
160 16:48			*												
160 16:49			*												
160 17:29									*						
160 17:37									*						
160 17:54								*							*
160 17:55					*					*					
160 17:56					**					**		*	*		
160 18:04										*					
160 18:06										*					
160 18:29															*
160 18:32															*
160 18:33															*
160 19:12					*										
160 19:15					*										
160 19:17								*						*	
160 19:33					*										
160 19:51		*													
160 19:55		*													
160 19:57														*	
160 20:13						*									
160 20:15						*									
160 20:16						*									
160 20:18						*									
160 20:19						*									
160 20:43												*			
160 21:23															*
160 21:44					*										
160 22:12					*										
160 22:14					*										
160 22:26					*										
160 23:22		**			*		**	**		*		**	**	*	
161 00:08					*										
161 00:18					*										
161 02:18															*
161 02:46					*										
161 02:48					*										

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
161 03:26															*
161 04:23						*									
161 04:29						*									
161 04:50						*									
161 06:19													*		
161 06:45							*								
161 06:50															*
161 07:35										*					*
161 07:40															*
161 07:53										*					*
161 08:05					*					*					*
161 08:19										*					*
161 09:13					*					*					*
161 09:29										*					*
161 09:30															*
161 13:16					*		*							*	
161 14:16					*										
161 14:38													*		
161 14:41													*		
161 14:59										*					*
161 15:02															
161 15:19							*								
161 15:33				*			*			*			*		*
161 15:36												*			
161 15:39												*			
161 15:40												*			
161 16:09				*		*						*			*
161 16:36												*			
161 16:37												*			
161 17:38												*			
161 17:54										*					
161 18:00				*								*		*	
161 18:08												*			
161 18:18															*
161 18:19										*					
161 18:59				*											
161 19:22			*												
161 20:07												*			
161 20:18												*			
161 20:30				*						*		*	*		
161 21:07												*			
161 21:16															*
161 21:30				*											
161 21:34				*								*	*		
161 21:57				*											
161 22:06				*											
161 22:34				*					*						*
161 22:55												*	*		
162 00:03				*											
162 00:08										*					*
162 00:24															*
162 00:28												*	*		
162 00:35										*					*
162 00:36												*			
162 00:43				*						*					*
162 00:44										*					
162 00:45															*
162 01:36				*						*			*	*	*

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
162 01:47													*	*	*
162 01:49											*		*	*	
162 01:51												*			
162 02:47														*	
162 02:53											*				*
162 03:13															*
162 03:22															*
162 03:28						*					*		*	*	*
162 03:32												*			
162 04:04												*			
162 04:08						*									
162 04:24												*	*		
162 04:27											*				*
162 04:37												*	*		
162 04:46											*				
162 05:08											*				*
162 06:49						*					*		*	*	*
162 06:56						*					*		*		
162 07:33								*					*		
162 07:36											*				*
162 08:11											*				
162 08:24													*		
162 08:33								*					*		
162 09:28					*			*	*		*		*	*	*
162 10:12													*		
162 10:26											*				*
162 10:56											*		*	*	*
162 11:23					*			*			*		*	*	
162 12:63								*					*		
162 13:29								*							
162 14:25													*		
162 14:38											*				
162 14:41					*										
162 14:48													*		
162 14:49					*			*			*		*	*	*
162 15:05											*				*
162 15:13					*				*						*
162 15:16					*				*	*					*
162 15:21			*	*				*	*	*			*	*	*
162 15:35													*		
162 16:03													*		
162 16:13								*					*		
162 16:34													*		
162 17:13								*					*	*	*
162 17:19												*			
162 17:26												*			
162 17:49												*			
162 17:50			*												
162 17:53												*			
162 17:57													*		
162 18:02					*										
162 18:14												*			
162 18:22								*				*	*	*	*
162 18:27												*	*	*	*
162 18:35												*			
162 18:39												*			
162 19:09											*				
162 19:32												*			

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
162 19:42														*	
162 19:52															*
162 20:26													*		
162 20:32											*				*
162 21:02													*		
162 21:13			*												
162 21:33										*					*
162 21:52														*	
162 21:54										*					*
162 22:13												*			
162 22:15						**		**		*			*	*	*
162 22:17												*			
162 22:23												*			
162 22:55						**		*		*		**	*	*	**
162 23:53												*			
163 00:10															*
163 00:30									*						
163 01:12													*		
163 01:58						*									
163 02:25												*	*	*	
163 03:04			**		*			**		**		*	*	*	*
163 03:15															*
163 03:38												*	*		
163 04:02								**		*					*
163 04:38															*
163 04:41			*G	*	*	*	*	*	*PS	*			*	*	*
163 04:42				**	*	*	*	*	*	*			*	*	*
163 04:43								*							
163 04:47				*		*	*	**	*	*			*	*	*
163 04:56								*					*		
163 05:02							*	*		**			**	**	**
163 05:05							**	*		**			**	**	**
163 05:13							*								
163 06:46													*		
163 09:06													*		
163 09:10													*		
163 09:50									**	*				*	*
163 10:13							*	*		**			**	*	*
163 11:03							*								
163 11:10														*	*
163 11:41													*	*	*
163 12:10							*	*					*	*	*
163 12:20							*	*					*		
163 12:23					*										
163 12:37										*					*
163 12:59					*										
163 13:20							*	*							
163 13:44										*					*
163 15:17													*		
163 15:18													*		
163 15:26													*		
163 16:39												*			
163 17:09							*	*		*			*	*	*
163 17:10			*G	*	*	**S	*	*	*	*		*	*	*	*
163 17:17			*									*	**	*	*
163 17:19							*	*							
163 17:20							*	*							
163 17:25							*	*							

	PSI	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
163 17:47				*											
163 17:50				*											
163 17:52				*											
163 17:53				*											
163 18:16								*							
163 18:23								*							
163 19:00										*					
163 19:02										*					
163 19:06										*					
163 19:07										*					
163 19:36														*	
163 19:40														*	
163 19:41														*	
163 20:18														*	
163 20:31				*											
163 20:35				*											
163 20:36				*											
163 20:58														*	
163 21:06	*														
163 21:10	*														
163 21:28										*					*
163 21:33						*									
163 21:37						*									
163 21:38						*									
163 22:08													*		
163 22:12													*		
163 22:19														*	
163 22:29													*		
163 22:30													*		
163 22:35													*		
163 22:39				*		*	*	*	*	*	*	*	*	*	*
163 22:58														*	
163 23:32								*							
164 00:26				*				*		*				*	
164 00:56										*		*		*	
164 04:00							*							*	
164 04:51										*				*	
164 05:04										*				*	
164 05:29	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
164 05:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
164 06:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
164 06:17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
164 06:18	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
164 06:21						*	*	*	*	*	*	*	*	*	*
164 06:37	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
164 08:17														*	
164 09:34											*				
164 09:52											*				
164 10:22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
164 10:28	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
164 11:25										*				*	
164 11:56										*				*	
164 12:35	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
164 12:36	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
164 14:24													*		
164 15:42													*		
164 15:47													*		
164 15:52													*		

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
164 16:32													*		
164 16:35													*		
164 17:05							*								
164 17:06							*								
164 17:10							*								
164 17:15					*					**		*	*	*	
164 17:16					*					*		*	*	*	
164 17:27												*	*	*	
164 17:29				*											
164 17:30															*
164 17:32				*											
164 17:33				*											
164 17:46												*	*		
164 17:57								*							
164 18:01								*							
164 18:15		*													
164 18:22		*													
164 18:33												*	*		
164 18:44										*					
164 18:48										*					
164 18:49										*					
164 19:11												*	*		
164 19:17														*	
164 19:20														*	
164 19:21														*	
164 20:06					*										
164 20:08					*										
164 20:13					*										
164 20:28					*					*		*G		*	
164 20:46		*													
164 20:49		*													
164 20:50		*													
164 21:09												*			
164 21:14						*									
164 21:17						*									
164 21:18						*									
164 22:24												*			
164 22:25				*											
164 23:17				*		*	*	*	*	*	*	*	*	*	*
165 00:18				*		*	*	*	*	*	*	*	*	*	*
165 01:03						*						*			
165 01:48												*			
165 02:36				*	*	*	*	*	*	*	*	*	*	*	*
165 02:55												*		*	*
165 03:18				*		*	*	*	*	*	*	*	*	*	*
165 04:47												*			
165 05:02												*	*		
165 05:06												*	*		
165 05:08				*		*	*	*	*	*	*	*	*	*	*
165 05:28										*				*	*
165 08:17				*		*	*	*	*	*	*	*	*	*	*
165 08:31										*				*	*
165 09:03				*		*	*	*	*	*	*	*	*	*	*
165 09:56				*	*	*	*	*	*	*	*	*	*	*	*
165 10:34												*	*	*	*
165 11:12										*				*	*
165 11:13				*		*	*	*	*	*	*	*	*	*	*
165 11:34												*	*	*	*

	PS1	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC
165 12:13					*	*	*	*			*			*	*
165 12:48					*										
165 12:51															*
165 13:09															*
165 14:24						*									
165 14:47														*	
165 14:57					*	*	*	*	*		*				*
165 15:25												*			
165 15:55							*								
165 15:56							*								
165 16:18				*											
165 16:38															*
165 16:43								*							
165 16:46					*										
165 17:22											*				
165 17:46															*
165 19:15						*									
165 19:48			*												
165 20:12					*										
165 20:13					*										

Appendix E: Events recorded on 3 or more stations

This appendix contains only those events from Appendix D which were recorded on 3 or more stations. Because this appendix is a distillation of appendix D, it suffers the same sorting ambiguities.

THE FOLLOWING 103 EVENTS WERE RECORDED ON 3 STATIONS

	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC	PS1
148 1:44	*			*										*	
148 2:22	*			*										*	
148 3:43	*			*										*	
148 8: 4	*			*										*	
148 9: 9				*	*									*	
148 10:27				*	*									*	
148 13:10				*	*									*	
148 17:10				*	*				*					*	*
148 19:47				*	*		*							*	
148 21:46				*	*		*							*	
149 2:12				*			*	*						*	
149 3:26				*			*	*						*	
149 5: 5				*			*	*						*	
149 8: 7				*			*	*	*					*	
149 9:20				*			*	*						*	
149 10: 3		*		*			*	*						*	
149 14: 6							*	*						*	
149 23: 7	*			*			*	*						*	
149 23:50							*	*						*	
150 4:59							*	*						*	*
150 7:32							*	*		*				*	
150 16:57							*	*	*	*				*	
150 18:54				*			*	*						*	
151 5:13				*			*	*	*					*	
151 11:14				*			*	*	*	*				*	
151 15: 5				*	*		*	*	*					*	
151 16:48				*			*	*	*	*				*	
152 0:13				*			*	*	*	*	*			*	
152 10:13				*			*	*	*	*				*	
152 10:49			*	*	*		*	*	*	*			*	*	
152 15:17		*		*	*		*	*	*	*	*		*	*	
153 5:28				*	*		*	*	*	*	*		*	*	
153 7:47				*	*		*	*	*	*	*		*	*	
153 14:59				*	*		*	*	*	*	*	*	*	*	
154 2: 6		*		*	*		*	*	*	*	*	*	*	*	
154 12:46				*	*		*	*	*	*	*	*	*	*	
154 22:49				*	*		*	*	*	*	*	*	*	*	*
155 17:10				*	*		*	*	*	*	*	*	*	*	*
156 0:23				*	*		*	*	*	*	*	*	*	*	*
156 8:57				*	*		*	*	*	*	*	*	*	*	*
156 13:41				*	*		*	*	*	*	*	*	*	*	*
156 16:59				*	*		*	*	*	*	*	*	*	*	*
156 17:13				*	*		*	*	*	*	*	*	*	*	*
156 20:48				*	*		*	*	*	*	*	*	*	*	*
156 21: 2				*	*		*	*	*	*	*	*	*	*	*
156 22:19				*	*		*	*	*	*	*	*	*	*	*
156 22:20				*	*		*	*	*	*	*	*	*	*	*
156 23:16				*	*		*	*	*	*	*	*	*	*	*
157 1:13				*	*		*	*	*	*	*	*	*	*	*
157 8: 4				*	*		*	*	*	*	*	*	*	*	*
157 11:26				*	*		*	*	*	*	*	*	*	*	*
157 14:25				*	*		*	*	*	*	*	*	*	*	*
157 15:40				*	*		*	*	*	*	*	*	*	*	*
157 17: 4	*			*	*		*	*	*	*	*	*	*	*	*
157 18:52			*	*	*		*	*	*	*	*	*	*	*	*
157 18:53			*	*	*		*	*	*	*	*	*	*	*	*
157 20: 4				*	*		*	*	*	*	*	*	*	*	*
157 20:58	*			*	*		*	*	*	*	*	*	*	*	*
157 21:33				*	*		*	*	*	*	*	*	*	*	*
157 22: 9	*			*	*		*	*	*	*	*	*	*	*	*
157 22:19				*	*		*	*	*	*	*	*	*	*	*
157 22:29	*			*	*		*	*	*	*	*	*	*	*	*
157 23: 2				*	*		*	*	*	*	*	*	*	*	*
157 23:41				*	*		*	*	*	*	*	*	*	*	*
158 4:51				*	*		*	*	*	*	*	*	*	*	*
158 9:19				*	*		*	*	*	*	*	*	*	*	*

	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC	PSI
158 13: 3							*	*		*					
158 15:33					*		*						*		
158 15:35					*				*				*		
158 18:41					*							*	*		
159 3:38						*						*	*		
159 5:19					*							*	*		
159 6:14					*							*	*		
159 22:25					*				*						*
160 6:11					*				*						*
160 9:26					*				*		*	*			
161 8: 5					*				*						*
161 9:13					*				*						*
161 13:16					*		*					*	*		
161 18: 0					*						*	*	*		
161 21:34					*						*	*	*		
161 22:34					*				*						*
162 0:43					*				*						*
162 1: 47											*	*	*		*
162 1:49									*		*	*	*		
162 6:56					*				*			*	*		
162 10:56									*			*	*		*
162 15:13					*			*							*
162 15:16					*			*							*
162 17:13						*						*	*		*
162 18:22						*					*	*	*		*
162 18:27											*	*	*		*
163 4: 2						*			*						*
163 9:50							*		*						*
163 12:10						*						*	*		*
163 17:17		*									*	*	*		
164 0:56									*		*	*	*		*
164 5:30					*						*	*	*		*
164 6:21						*			*		*	*	*		
164 17:16					*				*		*	*	*		
164 17:27											*	*	*		*
165 2:36					*						*	*	*		
165 5: 8					*						*	*	*		

THE FOLLOWING 49 EVENTS WERE RECORDED ON 4 STATIONS

	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DMP	LKM	TWL	ROC	PSI
147 21:58	*	*			*				*						
148 4: 7		*		*	*									*	
148 20: 0				*	*			*	*						
149 4:22				*	*		*	*	*						
149 6:49			*	*	*			*	*						
149 7:51			*	*	*			*	*						
149 13:27			*		*		*	*	*						
150 5:55					*		*	*	*	*				*	
150 15:16	*					*	*	*	*						
150 16:14			*		*	*	*	*	*						
150 18:24	*	*	*	*	*										
150 18:56	*		*	*	*		*	*	*						
151 1:19				*	*		*	*	*	*				*	
152 11:39				*	*	*	*	*	*	*		*	*	*	
152 14: 8				*	*	*	*	*	*	*	*	*	*	*	
153 3:17				*	*	*	*	*	*	*	*	*	*	*	
153 7: 0				*	*	*	*	*	*	*	*	*	*	*	
153 13: 8				*	*	*	*	*	*	*	*	*	*	*	
153 17:50				*	*	*	*	*	*	*	*	*	*	*	
153 23:34				*	*	*	*	*	*	*	*	*	*	*	
155 7: 5		*		*	*	*	*	*	*	*	*	*	*	*	
156 2:38				*	*	*	*	*	*	*	*	*	*	*	
156 4: 0				*	*	*	*	*	*	*	*	*	*	*	
156 17: 9				*	*	*	*	*	*	*	*	*	*	*	
156 23:29				*	*	*	*	*	*	*	*	*	*	*	
157 18:54			*	*	*	*	*	*	*	*	*	*	*	*	
157 19:24			*	*	*	*	*	*	*	*	*	*	*	*	
157 21:57			*	*	*	*	*	*	*	*	*	*	*	*	
158 0:16				*	*	*	*	*	*	*	*	*	*	*	
158 12:14				*	*	*	*	*	*	*	*	*	*	*	
158 17:41				*	*	*	*	*	*	*	*	*	*	*	
158 18:48				*	*	*	*	*	*	*	*	*	*	*	
159 1:21				*	*	*	*	*	*	*	*	*	*	*	
159 2:49				*	*	*	*	*	*	*	*	*	*	*	

		MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TO1	DIP	LKM	TWL	ROC	PS1
159	10:30					*		*			*					*
160	17:56					*					*		*	*		
161	16: 9					*		*					*			*
161	20:30					*					*		*	*		
162	1:36					*					*			*		*
162	6:49					*					*			*		*
162	11:23					*		*			*			*		*
163	5: 2							*			*			*		*
163	5: 5							*			*			*		*
163	10:13							*			*			*		*
164	0:26					*			*		*					*
164	12:35					*					*		*			*
164	20:28					*					*		*			*
165	3:15					*		*					*			*
165	9:56					*		*			*					*

THE FOLLOWING 31 EVENTS WERE RECORDED ON 5 STATIONS

		MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TO1	DIP	LKM	TWL	ROC	PS1
148	23:41				*	*		*	*	*						
148	23:57			*	*	*			*	*						
149	6:13			*	*	*			*	*						
151	6:29	*	*	*		*	*	*	*	*						
151	7:52	*		*		*	*	*	*	*						
151	10:30		*	*		*	*	*	*	*						
151	12: 1				*	*	*	*	*	*	*				*	
151	23: 2				*	*		*	*	*	*	*			*	
152	13:23			*	*	*	*	*	*	*	*					
152	20:14			*	*	*	*	*	*	*	*		*		*	
153	0:57				*	*	*	*	*	*	*	*	*	*	*	*
155	6:15			*	*	*	*	*	*	*	*	*	*	*	*	*
156	21: 3			*	*	*	*	*	*	*	*	*	*	*	*	*
157	1:24			*	*	*	*	*	*	*	*	*	*	*	*	*
157	19:38		*	*	*	*	*	*	*	*	*	*	*	*	*	*
157	20:48			*	*	*	*	*	*	*	*	*	*	*	*	*
158	8:28			*	*	*	*	*	*	*	*	*	*	*	*	*
158	12:38			*	*	*	*	*	*	*	*	*	*	*	*	*
159	1: 31			*	*	*	*	*	*	*	*	*	*	*	*	*
159	3:14			*	*	*	*	*	*	*	*	*	*	*	*	*
159	3:16			*	*	*	*	*	*	*	*	*	*	*	*	*
159	7:37			*	*	*	*	*	*	*	*	*	*	*	*	*
159	7:38			*	*	*	*	*	*	*	*	*	*	*	*	*
160	16:40			*	*	*	*	*	*	*	*	*	*	*	*	*
161	15:33			*	*	*	*	*	*	*	*	*	*	*	*	*
162	3:28			*	*	*	*	*	*	*	*	*	*	*	*	*
162	14:49			*	*	*	*	*	*	*	*	*	*	*	*	*
162	22:15			*	*	*	*	*	*	*	*	*	*	*	*	*
164	17:15			*	*	*	*	*	*	*	*	*	*	*	*	*
164	23:17			*	*	*	*	*	*	*	*	*	*	*	*	*
165	0:18			*	*	*	*	*	*	*	*	*	*	*	*	*

THE FOLLOWING 18 EVENTS WERE RECORDED ON 6 STATIONS

		MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TO1	DIP	LKM	TWL	ROC	PS1
149	4: 3			*	*	*	*	*	*	*						
150	18:55	*	*	*	*	*	*	*	*	*	*					*
151	13:40			*	*	*	*	*	*	*	*					*
151	15:49		*	*	*	*	*	*	*	*	*					*
152	13:43			*	*	*	*	*	*	*	*					*
155	17:34			*	*	*	*	*	*	*	*	*	*	*	*	*
156	8:34			*	*	*	*	*	*	*	*	*	*	*	*	*
157	3: 7			*	*	*	*	*	*	*	*	*	*	*	*	*
157	8:59			*	*	*	*	*	*	*	*	*	*	*	*	*
157	20:33			*	*	*	*	*	*	*	*	*	*	*	*	*
158	15:43			*	*	*	*	*	*	*	*	*	*	*	*	*
158	16:26			*	*	*	*	*	*	*	*	*	*	*	*	*
158	17:16			*	*	*	*	*	*	*	*	*	*	*	*	*
162	9:28			*	*	*	*	*	*	*	*	*	*	*	*	*
162	15:21	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
162	22:55			*	*	*	*	*	*	*	*	*	*	*	*	*
163	4:47			*	*	*	*	*	*	*	*	*	*	*	*	*
165	14:57			*	*	*	*	*	*	*	*	*	*	*	*	*

THE FOLLOWING 21 EVENTS WERE RECORDED ON 7 STATIONS

	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DIP	LKM	TWL	ROC	PS1
148 19: 1				*	*		*		*	*				*	*
148 21:34				*	*		*		*	*				*	*
149 5:48			*	*	*	*	*	*	*						
152 10:12			*	*	*		*	*		*			*	*	
152 10:14				*	*		*	*		*	*		*	*	
152 13:13			*	*	*		*	*		*	*				
152 15:30			*	*	*		*	*		*				*	
154 15:19					*	*	*			*	*	*	*	*	
155 2:35					*	*	*	*		*		*	*	*	
157 10:33		*			*	*	*		*	*		*	*	*	
158 9:25				*	*		*	*		*		*	*	*	
158 9:52				*	*		*	*		*		*	*	*	
158 13:33				*	*		*	*		*		*	*	*	
158 14:18				*	*		*	*		*		*	*	*	
159 1:32		*	*		*	*	*	*		*		*	*	*	
163 3: 4		*		*	*		*	*		*		*	*	*	
163 4:42			*	*	*		*	*		*		*	*	*	
163 22:39				*	*		*	*		*		*	*	*	
164 5:29			*	*	*	*	*	*		*		*	*	*	
164 10:22				*	*	*	*	*		*		*	*	*	
165 12:13			*	*	*	*	*	*		*		*	*	*	

THE FOLLOWING 7 EVENTS WERE RECORDED ON 8 STATIONS

	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DIP	LKM	TWL	ROC	PS1
149 11:54			*	*	*		*	*		*				*	*
152 15:20			*	*	*		*	*		*		*		*	
152 15:35			*	*	*		*	*		*		*		*	
153 12:21			*	*	*		*	*		*	*	*		*	
154 6:39				*	*		*	*		*	*	*	*	*	
156 21: 0			*	*	*	*	*	*		*		*	*	*	
160 23:22		*		*	*		*	*		*		*	*	*	

THE FOLLOWING 9 EVENTS WERE RECORDED ON 9 STATIONS

	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DIP	LKM	TWL	ROC	PS1
150 17:21		*	*	*	*		*	*	*	*	*	*		*	*
151 15:42		*	*	*	*		*	*	*	*	*	*		*	
153 17:27		*	*	*	*		*	*	*	*	*	*	*	*	
156 19: 9		*	*	*	*		*	*	*	*	*	*	*	*	
157 19:41		*	*	*	*	*	*	*	*	*	*	*	*	*	
159 23:17		*	*	*	*	*	*	*	*	*	*	*	*	*	
160 6:25		*	*	*	*	*	*	*	*	*	*	*	*	*	
163 4:41		*	*	*	*	*	*	*	*	*	*	*	*	*	
163 17:10		*	*	*	*	*	*	*	*	*	*	*	*	*	

THE FOLLOWING 7 EVENTS WERE RECORDED ON 10 STATIONS

	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DIP	LKM	TWL	ROC	PS1
149 5:16		*	*	*	*	*	*	*	*	*	*	*	*	*	*
150 4:18		*	*	*	*	*	*	*	*	*	*	*	*	*	*
152 5: 5		*	*	*	*	*	*	*	*	*	*	*	*	*	*
152 15:16		*	*	*	*	*	*	*	*	*	*	*	*	*	*
152 23:15		*	*	*	*	*	*	*	*	*	*	*	*	*	*
153 6:47		*	*	*	*	*	*	*	*	*	*	*	*	*	*
154 20:34		*	*	*	*	*	*	*	*	*	*	*	*	*	*

THE FOLLOWING 3 EVENTS WERE RECORDED ON 11 STATIONS

	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DIP	LKM	TWL	ROC	PS1
151 19:49		*	*	*	*	*	*	*	*	*	*	*	*	*	*
153 22:30		*	*	*	*	*	*	*	*	*	*	*	*	*	*
154 10:22		*	*	*	*	*	*	*	*	*	*	*	*	*	*

THE FOLLOWING 2 EVENTS WERE RECORDED ON 12 STATIONS

	MCC	HOT	CBR	FIS	LAK	HCF	CON	MGE	LAR	TOM	DIP	LKM	TWL	ROC	PS1
152 0:58		*	*	*	*	*	*	*	*	*	*	*	*	*	*
152 10:11		*	*	*	*	*	*	*	*	*	*	*	*	*	*