Open-File Report 96-70. Catalog of earthquake hypocenters for Augustine, Redoubt, Iliamna and Mount Spurr volcanoes, Alaska: January 1, 1991 - December 31, 1993 by Arthur D. Jolly, John A. Power, Scott D. Stihler, Lalitha N. Rao, Gail Davidson, John Paskievitch, Steve Estes, and John C. Lahr.

This report catalogs earthquakes located at the monitored Cook Inlet volcanoes and documents the status and development of the Alaska Volcano Observatory seismic net and data acquisition systems for the time interval January 1, 1991 to December 31, 1993. The report contains text (with figures), appendices and a 3.5 inch diskette. The text describes data acquisition systems, velocity models implemented and a description of earthquake locations. Appendices contain station locations, data acquisition parameters, station usage, and station frequency response information. The 3.5 inch diskette contains earthquake summary data including for each earthquake the origin time, locations, depth, magnitude, and statistical quality.

Requirements: The 1.4-MB diskette can be read by any IBM-compatible personal computer or Apple Macintosh with a high-density drive.

U.S. DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

CATALOG OF EARTHQUAKE HYPOCENTERS FOR AUGUSTINE, REDOUBT,

ILIAMNA, AND MOUNT SPURR VOLCANOES, ALASKA:

JANUARY 1, 1991 - DECEMBER 31, 1993

by

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INTRODUCTION

The Alaska Volcano Observatory (AVO), a cooperative program of the U.S. Geological Survey, the Geophysical Institute of the University of Alaska, Fairbanks, and the Alaska Division of Geological and Geophysical Surveys, has maintained a program of seismic monitoring at potentially active volcanoes in the Cook Inlet region since 1988. The principal objectives of this program include the seismic surveillance of the Cook Inlet volcanoes and the investigation of seismic processes associated with active volcanism. This catalog reflects the status and evolution of the seismic monitoring program, and presents the basic seismic data for the time interval January 1, 1991, to December 31, 1993. For an interpretation of these data the reader should refer to several recent articles on volcano related seismicity in the Cook Inlet region (e.g. Jolly and others, 1994; Power and others, 1995; and McNutt and others, 1995). A similar catalog covers the period from October 12, 1989 to December 31, 1991 (Power and others 1993).

The AVO seismic monitoring program has undergone significant changes during the catalog period. The changes included 1) new seismic stations placed at Mount Spurr and Redoubt Volcano, resulting in increased earthquake detection capability and improved earthquake locations, 2) the addition of several regional stations to the seismic data acquisition system which improved location quality near the volcano and enhanced our ability to scale eruptions and measure magnitudes of the largest volcanic earthquakes, 3) installation of a new event detection algorithm XDETECT (Rogers, 1993), which offered increased data collection capabilities , 4) modifications to the earthquake location program HYPOELLIPSE (Lahr, 1989) which now allows distinct velocity models and station corrections at each volcanic center, and 5) the addition of seismic stations at Augustine and Iliamna volcanoes to the data acquisition/location system.

The 1992 eruptions at Mount Spurr's Crater Peak vent provided the highlight of the catalog period. The crisis included three sub-plinian eruptions, which occurred on June 27, August 18, and September 16-17, 1992. The three eruptions punctuated a complex seismic sequence which included volcano-tectonic (VT) earthquakes, tremor, and both deep and shallow long period (LP) earthquakes. The seismic sequence began on August 18, 1991, with a small swarm of volcano-tectonic events beneath Crater Peak, and spread throughout the volcanic complex by November of the same year. Elevated levels of seismicity persisted at Mount Spurr beyond the catalog time period.

INSTRUMENTATION

The Alaska Volcano Observatory maintained and operated 57 seismometers at 46 sites during the catalog interval. The array included 48 vertical component instruments and 5 sites with vertical and horizontal components. Three sites operated both low and high gain vertical instruments. The station configuration consisted of a sparse regional array distributed throughout the Cook Inlet (Figure 1) with three dense subarrays located
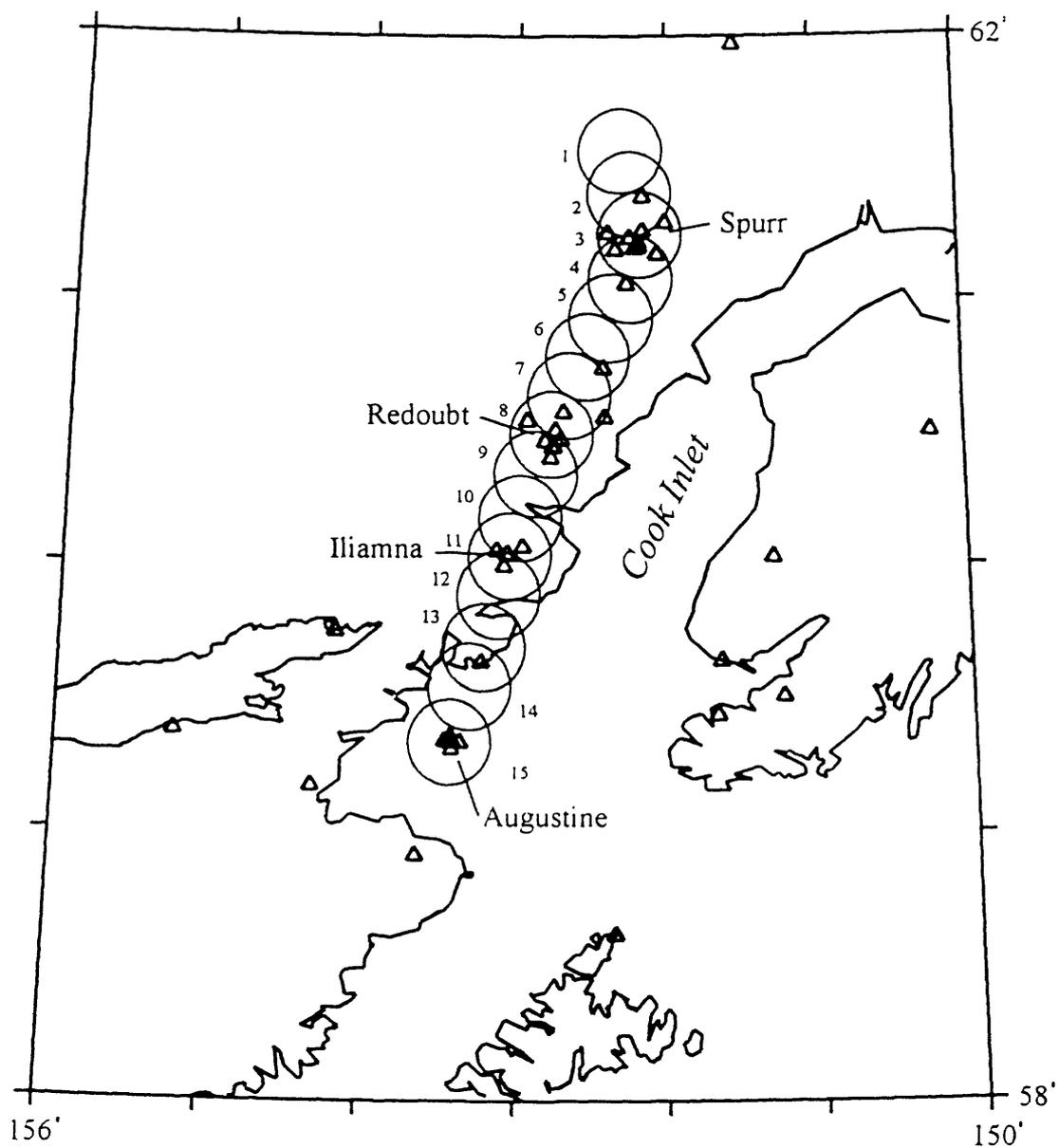
Figure 1. Location of seismic stations (triangles) operated by the Alaska Volcano Observatory between January 1, 1991 and December 31, 1993. Circles represent cylindrical models used by AVO in routine processing. Circles 1-5 represent the cylinders for the Spurr model. Circles 6-14 use the Redoubt model. The southernmost circle 15 uses the Augustine model.

at and near Mount Spurr (Figure 2), Redoubt (Figure 3), and Augustine (Figure 5) volcanoes. Iliamna volcano (Figure 4) and Douglas volcano were monitored by three and one seismic station respectively. Geographic coordinates, elevations, and the installation date of each of the stations are contained in Appendix A. The Spurr array consisted of six seismic stations (BGL, CRP, CGL ,CKL, NCG, and SPU) at the beginning of the catalog period. Station CKN began recording August 19, 1991, and station CPK, CPKL (a co-located, low gain seismometer) began recording October 1, 1991. Station CPK and CPKL were destroyed during the June 27, 1992, eruption (See Appendix C, page 63). The station was replaced on September 3rd, 1992 but was again destroyed during the September 16-17 eruption (Appendix C, Page 66). The CPK site was unoccupiable due to bench erosion following the September 16-17 eruption, thus a new site about 400 meters west of CPK was established (CP2) on October 23, 1992 (Appendix C, Page 67). The local array was further augmented by stations CKT on September 16, 1992 and CPA,CPAE, CPAN (three components) on October 29 1992.

The Redoubt array consisted of 14 seismometers at 11 sites at the beginning of the catalog period. This array was subsequently augmented with horizontal components and a low gain component at station REF beginning July 27, 1992. Station DRE, a vertical component station in the Drift River valley, was not critical to volcano monitoring efforts and was thus removed.

Two regional stations were added to the AVO monitoring program during the catalog period. These included stations BKG, located ~40 km south of Spurr and BGR located ~40 km north of Redoubt. These stations, which were added to the array in October 1992, provided improved magnitude determinations for larger volcano-related earthquakes.

AVO seismic stations in the northern portion of Cook Inlet were maintained by the U. S. Geological Survey, and in southern Cook Inlet by the Geophysical Institute-University of Alaska, Fairbanks. Each institution used slightly different field equipment. Stations at Mount Spurr and Redoubt Volcano use a combination of vertical and horizontal seismometers with a natural frequency of 1 Hz (Mark Products L-4C), a U.S.G.S. A1VCO amplifier/voltage controlled oscillator (Rogers and others, 1980), VHF radio transmitter, antenna, and batteries (which in most cases were float-charged by a solar panel). Station DRE, located in the Drift River Valley, was an exception as it utilized a Monitron VCO.

The Augustine and Iliamna nets utilize Teledyne-Geotech S-13 seismometers which have similar response characteristics to the L-4C (see Appendix D). Amplifier/voltage controlled oscillators on Augustine and Iliamna are manufactured by Monitron. Station AUE was the only exception as it utilized the AIVCO. Augustine and Iliamna stations generally transmitted on VHF radio frequencies. Exceptions include stations AUW, AUH, and AUP which have UHF transmitters. Signals from all stations are relayed to radio receivers and telemetered via frequency-multiplexed phone lines to the AVO offices in Fairbanks. The locations of seismograph stations operated by AVO between 1991 and 1993 are given in Figure 1 and Appendix A.
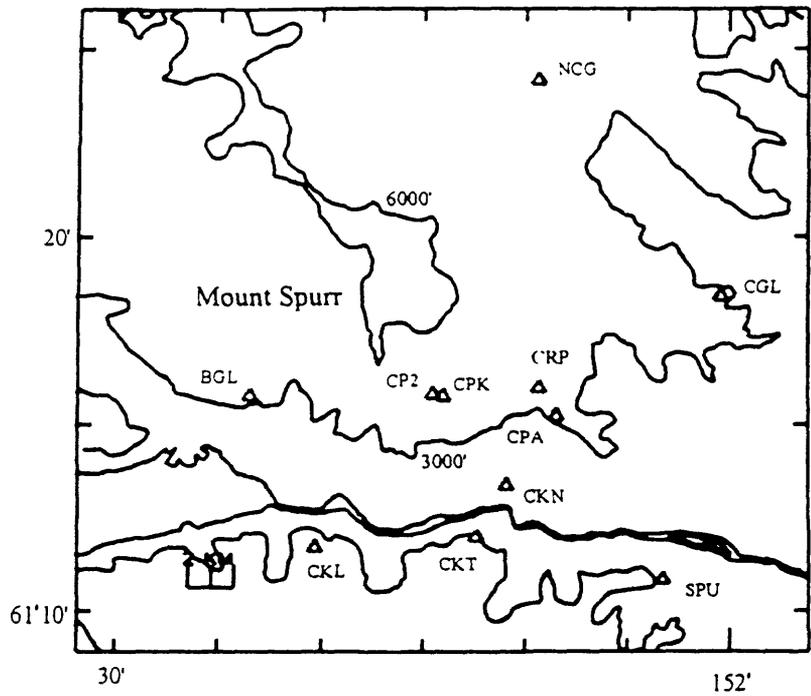
Figure 2. Spurr seismic stations.
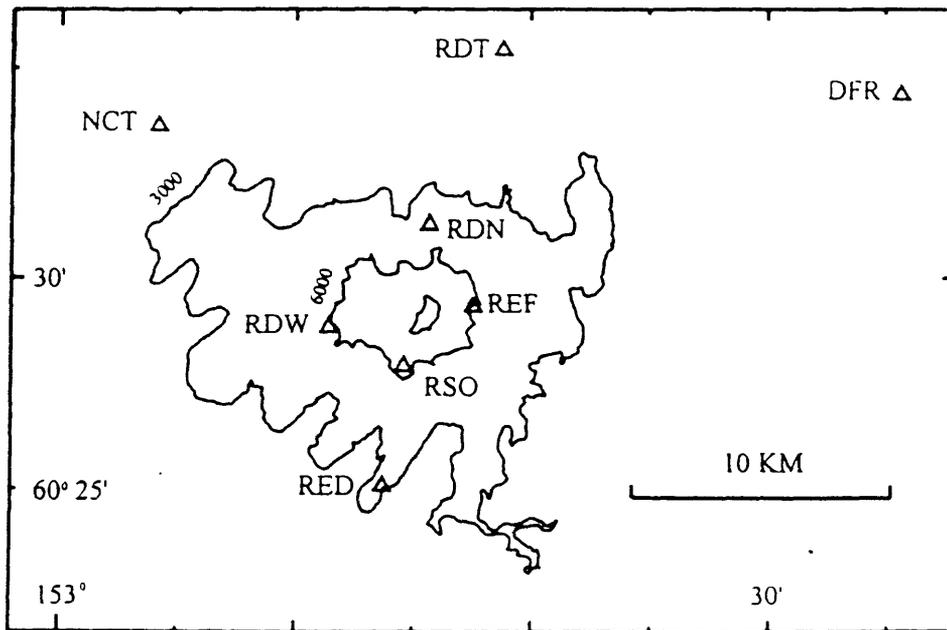
Figure 3. Redoubt seismic stations.

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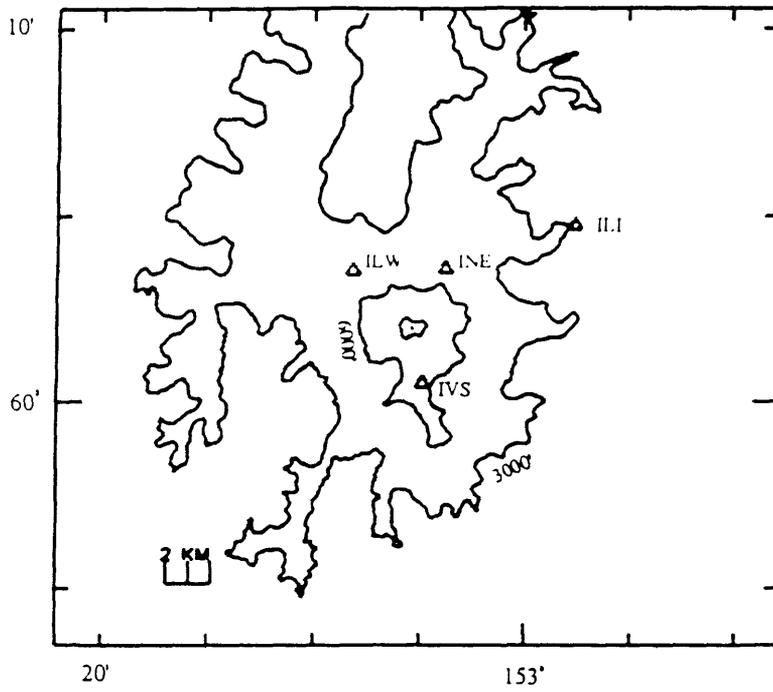
Figure 4. Iliamna seismic stations.
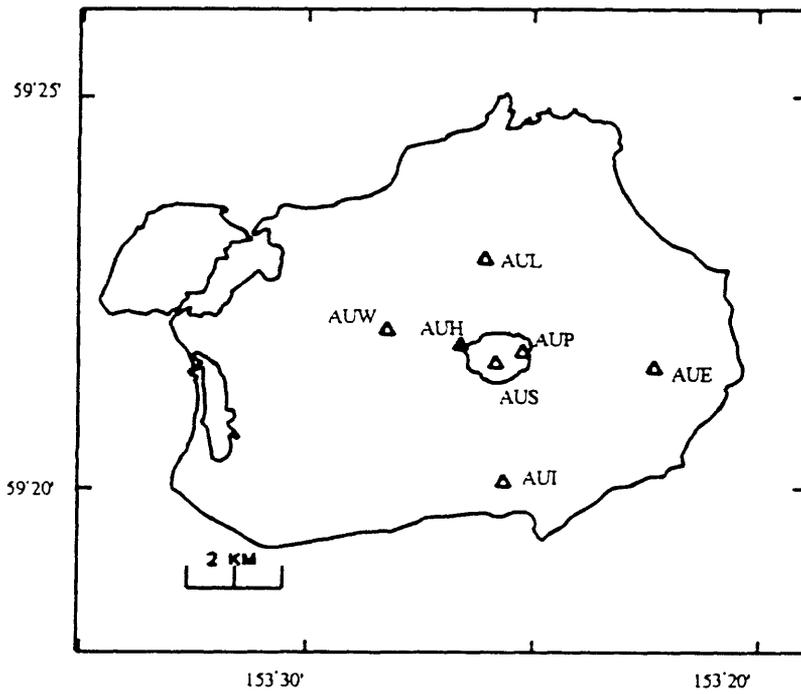
Figure 5. Augustine seismic stations.

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DATA ACQUISITION AND REDUCTION

The seismic data were recorded digitally in event-detection mode on a PC/AT computer system and in both continuous and in event-detection mode on a Masscomp computer system in Fairbanks (Alaska Volcano Observatory Staff, 1990). The two event-detection systems employed different triggering parameters, with the PC/AT system having greater sensitivity for events in close proximity to the volcanoes. The data were also recorded on additional PC/AT computers with the Real-time Seismic Amplitude Measurement (RSAM) system (Murray and Endo, 1989; Endo and Murray, 1991), and a Seismic Spectral Amplitude Measurement (SSAM) system (Stephens and others, 1994, Rogers and Stephens, 1995). Helicorder records provided an additional real-time monitoring tool. The data were analyzed with a combination of PC/AT computers and SUN Workstations. All of these systems are described in detail by March and Power (1990).

From January 1, 1991 to December 31, 1992 the PC/AT system used the program MDETECT (Lee and others, 1988) to digitize and record 16 channels of incoming data. The data acquisition program was subsequently changed to XDETECT (Rogers, 1993), an improved data acquisition software program, beginning January 1, 1993. The program XDETECT doubled to 32 the number of channels allowed for recording. The additional channels allowed AVO to add Augustine Volcano to the routine earthquake location process. This addition required utilization of XDETECT's subnet triggering capabilities.

Three subnets were established (Spurr, Redoubt, and Augustine), each with its own event detection algorithm. Subnet triggering improved event detection capabilities but also necessitated changes in our filenaming conventions. We adopted a filenaming system which utilized the numeric date from the PC clock along with a subnet extension (e.g. 9301120515s.). This convention replaced the old alphanumeric filenaming system which named events only to the nearest date and offered no information about the data's origin time (e.g. 9301121b.). The data acquisition system was further augmented beginning November 17, 1993 by an additional PC/AT system. This system increased AVO's event recording capability from 32 to 64 channels and allowed the addition of Iliamna Volcano to routine processing.

Event detection triggers were visually inspected on a computer screen and classified as (a) volcano-tectonic earthquake, (b) a long-period event, (c) an explosion event, (d) a regional tectonic earthquake, (e) a teleseismic event, (f) or a non-seismic event. If an event was classified as either a volcano-tectonic or long-period event and had four or more distinct phases at three or more stations, it was selected for location. The initial examination on the computer screen, event classification, the determination of P and S arrival times, direction of first motion, and the period and amplitude of the maximum recorded signal were determined using the program XPICK (Robinson, 1990). Earthquake hypocenters and magnitudes were calculated using the program HYPOELLIPSE (Lahr, 1989). Computed magnitudes approximate the Richter local magnitude as outlined by Eaton and others, (1970). Earthquake depths were computed with respect to sea level, with negative depths corresponding to locations above sea level.

HYPOELLIPSE (Lahr, 1989) reports a number of parameters to help evaluate the solution quality. These include: RMS (the root mean square residual); SEH (the 68 percent confidence limit in the least well-constrained horizontal direction); SEZ (the 68 percent confidence limit in depth); GAP (the largest azimuthal separation between stations measured from the epicenter); NP, the number of P arrivals used in the solution; and NS, the number of S arrivals used in the solution. More detailed information on these parameters is given by Lahr (1989) and complete discussion of the earthquake location process is given by Lee and Stewart (1981).

Earthquake hypocenter determinations contained both systematic and random errors. Systematic errors result from errors in the velocity model, misidentification of phases, or systematic timing errors. Systematic errors affect the accuracy of the hypocenter determination and can be evaluated through controlled experiments such as locating man-made explosions. Random errors result from timing errors and may be estimated for each earthquake through the use of standard statistical techniques. Random errors affect the precision with which hypocenters can be calculated. We estimate the precision of upper crustal volcano-tectonic events at Spurr and Redoubt to be ~1-2 km in epicenter and 2-3 km in depth (Jolly and others, 1994, Lahr and others, 1994). Augustine seismicity was probably located with similar precision. Systematic errors are thought to occupy error bounds at least as large as the randomly introduced errors.

The quality of each solution was checked using a computer algorithm which identifies those events without magnitude, fewer than three P phases, fewer than one S phase, or SEH or SEZ greater than 15.0 km. Corrections were made as necessary.

VELOCITY MODELS

Cylindrical velocity models were utilized for each of the monitored volcanoes (Figure 1). Each cylinder was 20 km in radius, began 3 km above sea level, and extended 50 km below sea level. For earthquakes originating at Mt. Spurr, the velocity model used to calculate hypocenters is:

LAYER	DEPTH (TO TOP OF LAYER)	P VELOCITY (km/s)	VP/VS (km/s)
1	-3.0	5.1	1.81
2	-2.0	5.5	1.81
3	5.25	6.3	1.74

Depths were referenced to sea level, with negative values reflecting height above sea level. Below 27.05 km, this model is underlain by a uniform halfspace with P-wave velocity of 7.2 km/s and VP/VS of 1.78 km/s. Station corrections used with this model are shown below:

STATION	P-DELAY (Seconds)	S-DELAY (Seconds)
BGL	-0.12	-0.21
BRLK	-0.62	-1.20
CGL	0.04	-0.11
CKL	0.07	0.00
CNP	-0.44	-0.78
CRP	0.11	0.20
CUT	0.41	0.73
DFR	-0.37	-0.77
GHO	0.36	0.00
ILM	-0.63	-1.40
KNK	-0.85	-0.54
NCT	-0.24	-0.66
NKA	2.18	3.88
NNL	1.21	2.15
PME	0.18	0.32
RDN	-0.42	-0.69
RDT	-0.49	-0.88
RED	-0.43	-1.00
SKL	-0.20	-0.80
SLV	-1.10	-2.00
SPU	0.04	-0.06
SVW	0.00	-0.65

The Spurr model was derived by minimizing the average root-mean-square (RMS) residual of observed versus computed travel times (Jolly and others, 1994).

At Augustine Volcano the velocity model used was:

LAYER	DEPTH (TO TOP OF LAYER)	P VELOCITY (km/s)	VP/VS(km/s)
1	-3.00	2.3	1.80
2	-0.70	2.6	1.80
3	0.00	3.4	1.80
4	1.00	5.1	1.80
5	9.00	6.3	1.78

This model is based on a three-dimensional velocity model first developed by Doug Lalla using observed travel times from man-made explosions (Power, 1988). The model was subsequently modified to accommodate the one-dimensional model required by HYPOELLIPSE (Lahr, 1989) in routine AVO processing (Jolly and others, 1994). For the model, depths are referenced to sea level; negative values reflect height above sea

level. Below a depth of 44 km this model is underlain by a uniform halfspace with P-wave velocity of 8.0 km/s and a VP/VS ratio of 1.78. No station corrections were determined.

At both Redoubt and Iliamna the velocity model used is:

LAYER	DEPTH (TO TOP OF LAYER)	P VELOCITY (km/s)	VP/VS(km/s)
1	-3.00	2.9	1.80
2	-1.70	5.1	1.80
3	1.50	6.4	1.72

For this model, depths are referenced to sea level; negative values reflect height above sea level. Below a depth of 17 km, this model is underlain by a uniform halfspace with P-wave velocity of 7.0 km/s and a VP/VS ratio of 1.78. Station corrections for this model are shown below:

	P-DELAY (Seconds)	S-DELAY (SECONDS)
DFR	0.00	-0.10
DRE	0.00	0.00
NCT	0.00	0.06
RDN	-0.01	-0.04
RDT	0.00	-0.02
RDTE	0.00	-0.02
RDTN	0.00	-0.02
RDW	0.02	-0.12
REF	0.01	0.01
RED	-0.02	-0.05
REDE	-0.02	-0.05
REDN	-0.02	-0.05
RSO	0.00	-0.05
RS1	0.00	-0.05
RS2	0.00	-0.05

The model and station corrections were developed by Lahr and others (1994) from earthquakes and man-made explosions near the volcano.

DISCUSSION

Origin times, focal coordinates, magnitudes, and related parameters for 3,938 earthquakes from January 1, 1991 through December 31, 1993 are contained in a file on the accompanying floppy disk. The data fields for this file are described by Lahr (1989) under the summary record heading. Spurr and Redoubt volcanoes were monitored

continuously during the catalog period. During this time 2,776 and 1,092 events occurred within 30 km of Mt. Spurr and Redoubt volcanoes respectively (Figures 7, 8). The Augustine subnet was added to the PC/AT location algorithm beginning January 1, 1993. During the recording period 15 events were located within 10 km of Augustine (Figure 9). The addition of the Iliamna subnet on November, 17, 1993 yielded a single event which was located within 10 km of the summit. Remaining events in the catalog were located within the volcanic axis but beyond the monitored volcanic centers. These events are not representative of the outlying seismicity.
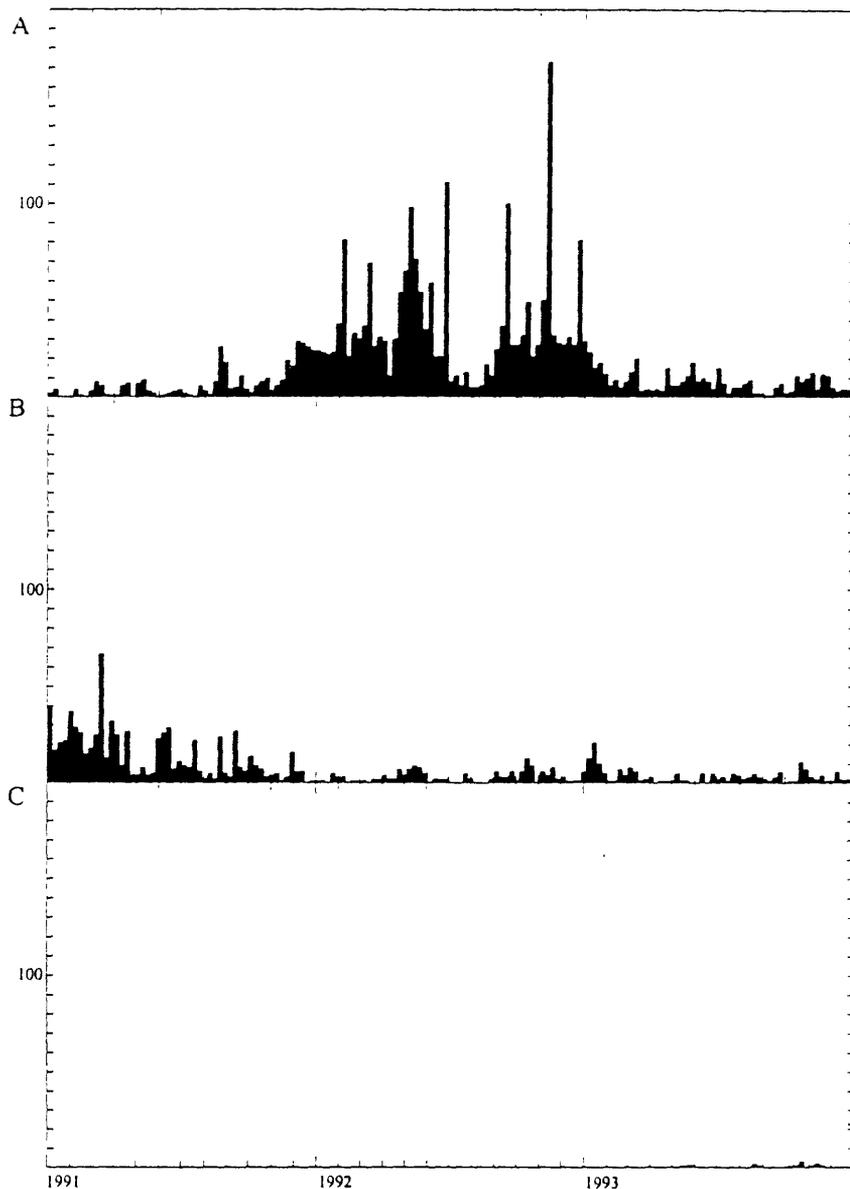
Figure 6. Time histogram for seismicity located at Mount Spurr, Redoubt, and Augustine volcanoes.
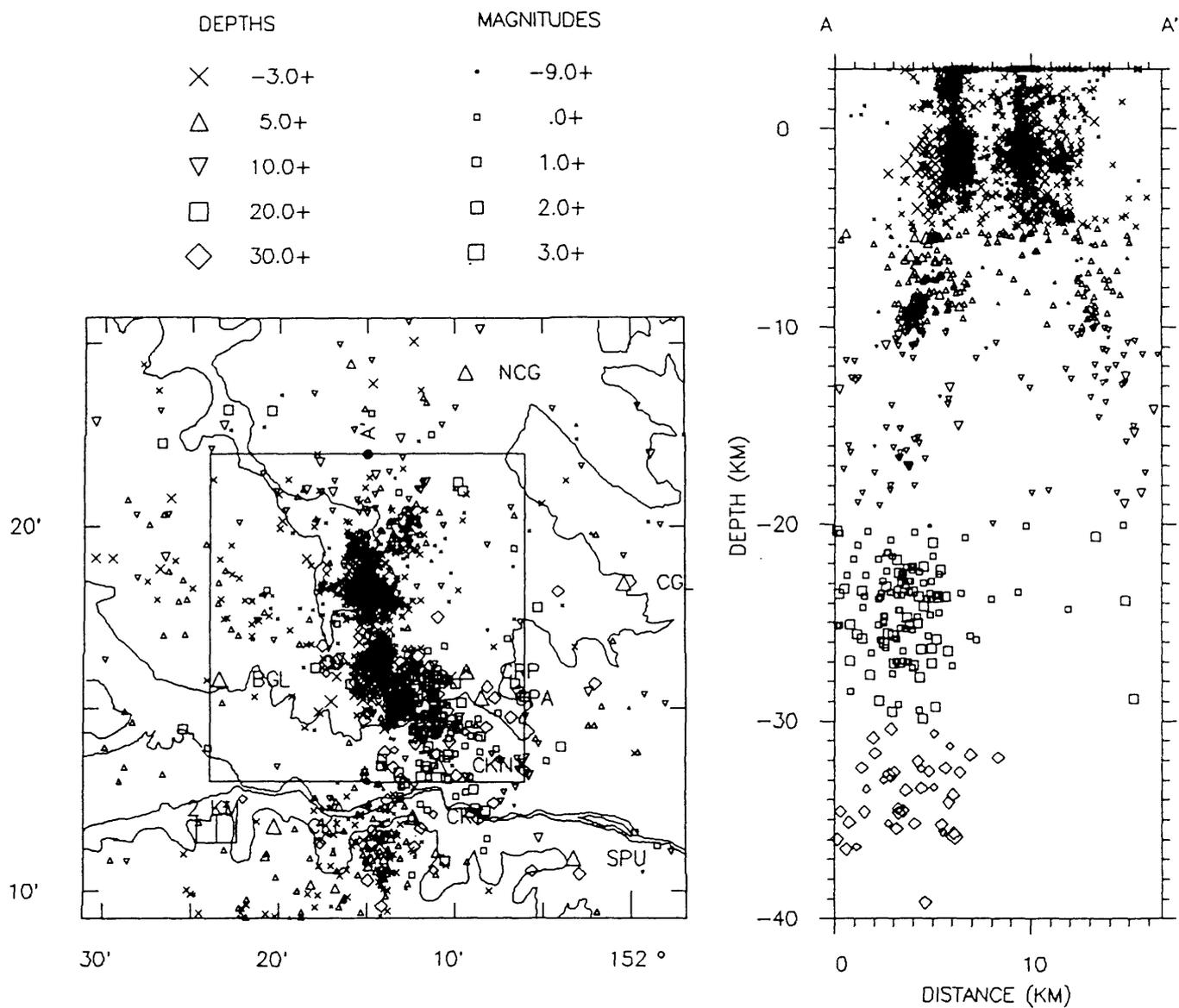
Figure 7. Earthquake epicenters and cross-section projections for Mount Spurr .
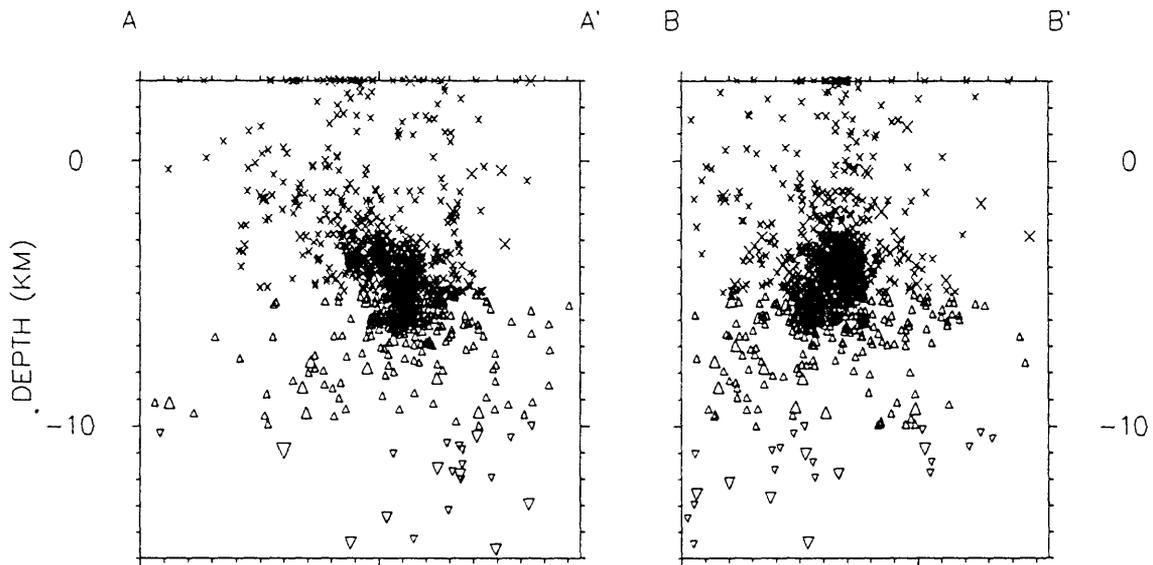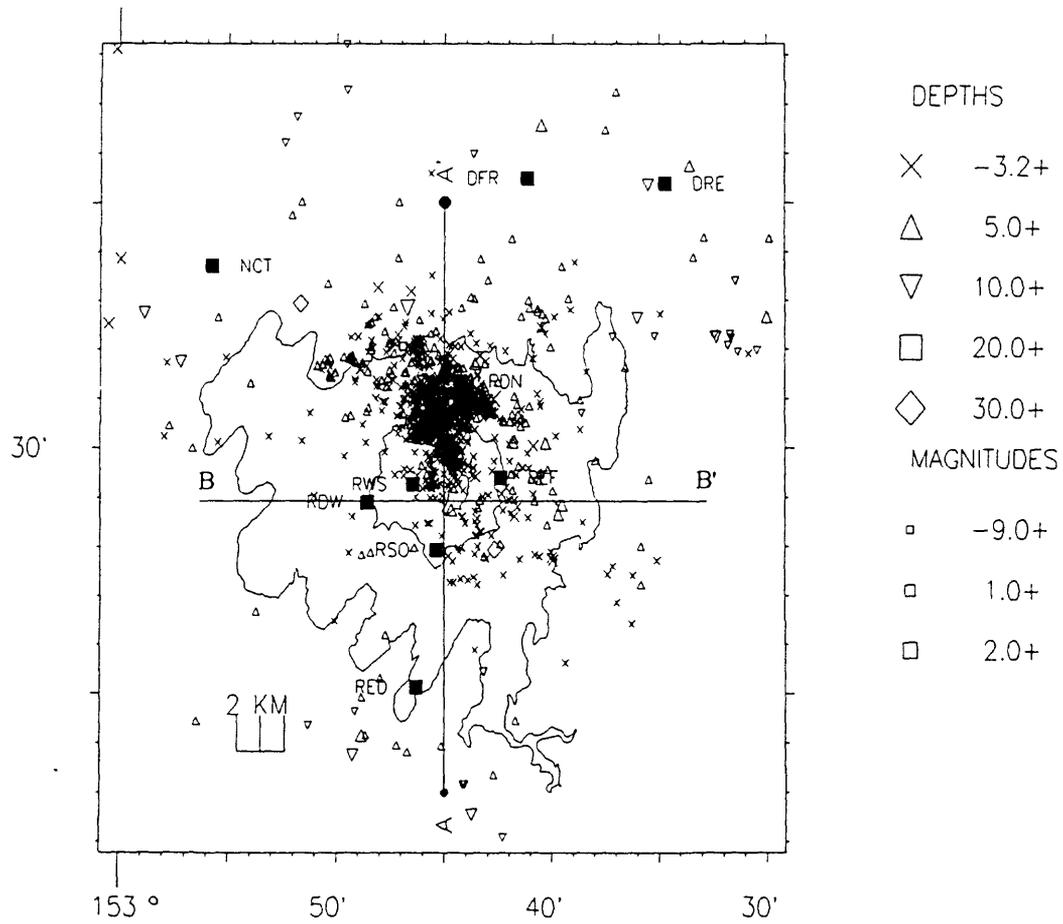
Figure 8. Earthquake epicenters and cross-section projections for Redoubt volcano .
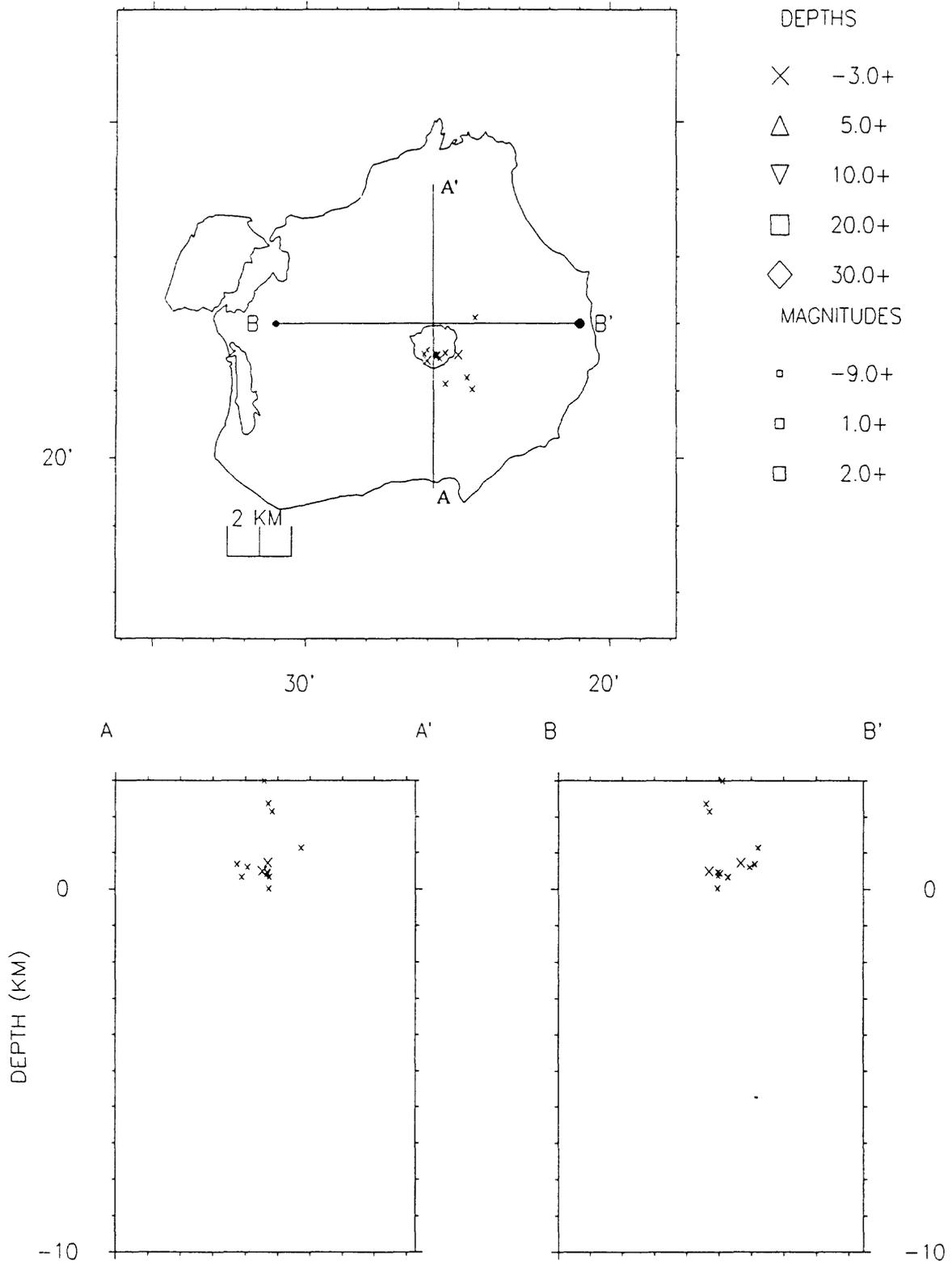
Figure 9. Earthquake epicenters and cross-sections for Augustine volcano.

<u>Spurr Seismicity</u>

Spurr area seismicity during the catalog period was dominated by the 1992 eruption at Crater Peak (Figure 6a). Before the eruption, seismicity occurred in distinct clusters including three clusters near the summit, four clusters located between 10 and 25 km south of the volcano, and two clusters located about 25 km northeast of the volcano (Jolly and others, 1994). Background rates of seismicity within and around the volcanic complex were generally less than 10 locatable events per week. Beginning late August 1991 a sudden rate increase was recorded at the volcano. Routine earthquake locations isolated the events at Crater Peak (Figure 7), a region which was previously devoid of seismicity (Jolly and others, 1994). This activity ceased after about two weeks and seismicity returned to near background levels. In late November, however, unusual seismic activity resumed when a burst of activity occurred at Spurr summit, Crater Peak and along the northern rim of Spurr's caldera. This seismicity continued at elevated levels until June 5, 1992, when 28 earthquakes were located in a single day (AVO Staff, 1993). After this date, rates of locatable seismicity dropped noticeably and tremor began. Tremor activity was sporadic with 1 to 24 bursts per day, each lasting between one and ten minutes (AVO Staff, 1993). Tremor of extended duration began on June 24 with events lasting as long as 154 minutes. The occurrence of continuous tremor and a vigorous swarm of volcano-tectonic earthquakes early on June 27th portended the onset of a sub-plinian eruption which began at 7:05 am (Alaska Daylight Time) and lasted for approximately four hours.

Seismicity declined to pre-August background levels following the June 27th eruption. The period was characterized by light seismicity at shallow depths and the occurrence of deeper earthquake activity. This deeper seismicity was first observed in early August 1991 as isolated volcano-tectonic earthquakes. The character of deep seismicity changed suddenly following the June 27th eruption when both LP and hybrid event types were observed along with volcano-tectonic events (Power and Jolly, 1994). The deep seismicity eventually illuminated a linear pipe-like feature beginning at Crater Peak and extending to the south-east with a plunge angle of about 85 degrees. Within this pipe, events cluster at mean depths of -2 km, 2 km, 9 km, 17 km, 25 km, and 33 km. The deepest events were located at ~45 km depth. A less well defined pipe-like structure with mirror image geometry begins on the north-rim of the caldera and extends about 30 km depth to the north (Figure 6). The occurrence of deep seismicity persisted beyond the catalog period.

The second of three Crater Peak eruptions occurred on August 18, 1992. This eruption was preceded by an eruptive event of short duration which began at 3:48 p.m. ADT and lasted about 16 minutes. The small eruption was followed at 4:42 p.m. ADT by the main eruptive event which lasted about 3 hours 30 minutes (AVO Staff, 1993). Seismicity of the volcanic complex increased following the eruption at all depth intervals.

The third and final eruption of the sequence occurred on September 16th and 17th, 1992. The eruption began with a minor event at 10:36 p.m. ADT which lasted about 11 minutes. This event was followed at 12:04 a.m. on the 17th with an eruption that lasted 3

hours 36 minutes(AVO Staff, 1993). The principal seismological difference between the third and previous eruptions was the observation of abundant volcano-tectonic earthquakes at the end of the eruptive sequence. The largest of these events had a local magnitude of 2.2 M_L. The waning phase of the eruption tremor masked P and S phases for these volcano-tectonic earthquakes at many local stations. In many cases these events were located with only distant stations and thus were poorly located. The observed depths for these events ranged between the surface and 13 km depth.

Two vigorous earthquake swarms were recorded beneath Crater Peak after the third eruption. The swarms occurred November 9-10th and December 21-27th respectively. The November 9-10th swarm began about 8:14 pm AST and lasted for about eight hours. The swarm was constrained in depth between the summit of Crater Peak and about six km below sea level. The largest event of the sequence was M_L 1.6 and included 126 events. The December swarm began on the 21st with the location of 11 events, reached its peak of 25 located events on December 25th, and receded to syn-eruptive seismicity rates by December 27th. The swarm was located between sea level and about 14 km depth. The largest event of the sequence had M_L 1.7. Seismicity declined slowly following the December swarm and leveled off at slightly above background rates by mid-March, 1993.

Redoubt Seismicity

Redoubt Volcano slipped into dormancy during the catalog time period as documented in Figure 6b. Background rates are difficult to assess in the region because the seismic network was established only two months prior to the 1989-90 Redoubt eruptions. During this brief pre-eruptive time period seismicity was located at a rate of about ten events per month (see Power and others, 1993, Figure 6). Following the 1989-90 eruptions, the rate of seismicity declined to about six locatable events per week(~25 events per month). The discrepancy between pre-eruption and post-eruption earthquake rates might result from an increase in the number of local stations during and after the 1989-90 eruption. Seismicity at Redoubt Volcano during the catalog interval were concentrated at the volcano and decreased in number with respect to radial distance from the volcano. Depths of earthquakes at the volcano range between the surface and 36 km depth. The largest event had M_L 2.2.

Iliamna Seismicity

Event detected recording of the Iliamna network began November 17, 1993. A single event with depth 1.5 km was located at Iliamna during this limited time period. Triggering parameters of the Iliamna subnet are not known for the catalog period.

Augustine Seismicity

The Augustine subnet was added to the PC/AT location algorithm beginning January 1, 1993. The triggering sensitivity was subsequently increased on June 28, 1993, and again

on July 21st, 1993. These changes in conjunction with the addition of station AUS to the trigger list (Appendix B) increased the system's ability to locate earthquakes (Figure 6c). Seismicity located during the catalog time period generally occurs in a tight cluster within the edifice of the volcano with scattered events locating to the southeast. Depths range from 3.0 km above sea level to sea level (Figure 9). Magnitudes range from -0.3 to 1.1.

ACKNOWLEDGMENTS

REFERENCES

Alaska Volcano Observatory Staff, 1990, The 1989-90 eruption of Redoubt Volcano: Eos, Transactions of the American Geophysical Union. v.71, p. 265-275.

Alaska Volcano Observatory Staff, 1993, Mt. Spurr's 1992 eruptions: Eos Transactions of the American Geophysical Union. v. 74, p. 217-222.

Eaton, J. P., O'Neil, M. E., and Murdock, J. N., 1970, Aftershocks of the 1966 Parkfield-Cholame, California earthquake: a detailed study: Bulletin of the Seismological Society of America, v.60, p. 1151-1197.

Endo, E. T., and Murray, T. L., 1991, Real-time Seismic Amplitude Measurement (RSAM): A volcano monitoring and prediction tool: Bulletin of Volcanology, v. 53:, p. 533-545.

Jolly, A. D., Page, R. A., and Power, J. A., 1994, Seismicity and stress in the vicinity of Mt. Spurr volcano, South Central Alaska: Journal of Geophysical Research, v. 99, p. 15305-15318.

Jolly, A. D., Lahr, J. C., Power, J. A., Stihler, S. D., Ward, P. L., and McNutt, S. R., 1994, Velocity models for locations of shallow seismicity along the northeastern portion of the Aleutian volcanic arc: Eos Transactions, American Geophysical Union: v. 75, n. 44, p. 423.

Lahr, J. C., 1989, HYPOELLIPSE/Version 2.0: A computer program for determining local earthquake hypocentral parameters, magnitude, and first motion pattern: U. S. Geological Survey, Open-File Report 89-116, 89 p.

Lahr, J. C., Chouet, B. C., Stephens, C. D., Power, J. A., and Page, R. A., 1994, Earthquake classification, location and error analysis in a volcanic environment: implications for the magmatic system of the 1989-1990 eruptions at Redoubt volcano, Alaska: Journal of Volcanology and Geothermal Research, v. 62, p. 137-152.

Lee, W. H. K., and Stewart, S. W., 1981, Principals and applications of microearthquake networks: Academic Press, New York, 293 p.

Lee, W. H. K., Tottingham, D. M., and Ellis, J. O., 1988, A PC-based seismic data acquisition and processing system: U.S. Geological Survey, Open-file Report 88-751, 31 p.

Lee, W. H. K., Ed., 1989, Toolbox for seismic data acquisition, processing and analysis: IASPEI Software Library, Vol. 1, Seismological Society of America, El Cerrito, 284 p.

March, G. D., and Power, J. A., 1990, A networked computer configuration for seismic monitoring of volcanic eruptions: U.S. Geological Survey, Open-file Report 90-422, 19 p.

McNutt, S.R., Tytgat, G. C., and Power, J. A., 1995, Preliminary analysis of volcanic tremor associated with 1992 eruptions of Crater Peak, Mount Spurr volcano *in* Keith, T. E. C, ed, The 1992 eruptions of Crater Peak vent, Mount Spurr volcano, Alaska, 1993: United States Geological Survey-Bulletin 2139, p. 161-177..

Murray, T. L., and Endo, E. T., 1989, A real-time seismic amplitude measurement system (RSAM): U. S. Geological Survey, Open-file Report 89-684, 26 pp.

Power, J. A., 1987, Seismicity associated with the 1986 eruption of Augustine Volcano, Alaska: Unpublished Masters Thesis, University of Alaska-Fairbanks.

Power, J. A., Lahr, J. C., Page, R. A., Chouet, B. A., Stephens, C.D., Harlow, D. H., Murray, T. L., and Davies, J. N., 1994, Seismic evolution of the 1989-1990 eruption sequence of Redoubt Volcano: Alaska: Journal of Volcanology and Geothermal Research, v. 62, p. 69-94.

Power, J. A., March, G. D., Lahr, J. C., Jolly, A. D., and Cruse, G. R., 1993, Catalog of earthquake hypocenters at Redoubt Volcano and Mt. Spurr, Alaska: October 12, 1989 - December 31, 1990: U. S. Geological Survey, Open-file Report, 93-685-A, 57 p.

Power, J. A., Jolly, A. D., 1994, Seismicity at 10 to 45 km depth associated with the 1992 eruptions of the Crater Peak vent, Mount Spurr, Alaska: v. 75, n. 44, p. 715.

Power, J. A., Jolly, A. D., Page, R. A. and McNutt, S.R., 1995, Seismicity and forcasting of the 1992 eruptions of Crater Peak vent, Mount Spurr volcano, Alaska, in Keith, T. E. C., ed, The 1992 eruptions of Crater Peak vent, Mount Spurr volcano, Alaska, 1993: United States Geological Survey-Bulletin 2139, p. 149-159.

Robinson, M., 1990, Xpick user's manual v 2.7: Seismology Lab, Geophysical Institute, University of Alaska, 93 p.

Rogers, J. A., Maslak, S., and Lahr, J. C., 1980, A seismic electronic system with automatic calibration and crystal reference: U. S. Geological Survey. Open-file Report 80-324. 130 p.

Rogers, J. A., 1993, XDETECT v 3.18 users reference: U. S. Geological Survey. Open-file Report :93-261. 26 pp.

Rogers, J. A., and Stephens, C. D., 1995, SSAM: Real-Time Seismic Spectral Amplitude Measurement on a PC and Its Application to Volcano Monitoring: Bulletin of the Seismological Society of America: n. 82-2, p. 632-639.

Stephens, C. D., Chouet, B. A., Page, R. A., Lahr, J. C., and Power, J. A., 1994, Seismological aspects of the 1989-1990 eruptions at Redoubt Volcano, Alaska: the SSAM perspective: Journal of Volcanology and Geothermal Research: v. 62, p. 153-182.

APPENDIX A

Stations operated by the Alaska Volcano Observatory in the Cook Inlet region between
January 1, 1991, and December, 31, 1993. The list includes geographic coordinates,
elevation, installation date, and organization responsible for maintenance for each station.
Negative longitudes imply values west of the prime meridian.

Station	Latitude	Longitude	Elevation (m)	Installation date	Maintainer
BGL	61 16.02	-152 23.30	1207	890813	USGS
CGL	61 18.46	-152 00.40	1082	810922	USGS
CKL	61 11.79	-152 20.27	1265	890805	USGS
CKN	61 13.44	-152 20.27	735	910819	USGS
CRP	61 16.02	-152 09.33	1622	810826	USGS
NCG	61 24.22	-152 09.40	1244	890806	USGS
SPU	61 10.90	-152 03.26	800	710810	USGS
REF	60 29.35	-152 42.10	1801	900314	USGS
RDN	60 31.37	-152 44.26	1400	880813	USGS
RDW	60 28.96	-152 48.57	1813	900907	USGS
RS1	60 27.61	-152 45.48	1864	900910	USGS
RS2	60 27.78	-152 45.44	1953	900910	USGS
RSO	60 27.73	-152 45.23	1921	900301	USGS
RED	60 25.19	-152 46.31	1064	740000	USGS
REDE	60 25.19	-152 46.31	1064	900830	USGS
REDN	60 25.19	-152 46.31	1064	900830	USGS
REDL	60 25.19	-152 46.31	1064	900830	USGS
RWS	60 29.28	-152 46.47	2713	900315	USGS
DFR	60 35.51	-152 41.16	1090	880815	USGS
DRE	60 34.99	-152 35.21	489	900201	USGS
NCT	60 33.79	-152 55.57	1079	880814	USGS
RDT	60 34.39	-152 24.32	930	710809	USGS
INE	60 03.65	-153 03.75	1585	900829	UAGI
INW	60 04.06	-153 07.95	1219	900829	UAGI
IVS	60 00.55	-153 04.85	2332	900829	UAGI
AUH	59 21.83	-153 26.59	890	781201	UAGI
AUI	59 21.83	-153 26.59	293	780406	UAGI
AUIE	59 21.83	-153 26.59	293	860600	UAGI
AUIN	59 21.83	-153 26.59	293	860600	UAGI
AUP	59 21.74	-153 25.23	1033	870922	UAGI
AUS	59 21.60	-153 25.84	1226	900901	UAGI
AUW	59 23.16	-153 33.02	276	860700	UAGI
AUE	59 21.53	-153 22.37	168	870830	UAGI
AUL	59 22.93	-153 26.07	360	801029	UAGI
CDD	58 55.79	-153 38.58	622	810817	UAGI
SKN	61 58.82	-151 31.78	564	720808	USGS
NNL	60 02.66	-151 17.36	381	720824	USGS
CNP	59 31.55	-151 14.16	564	830701	USGS

Station	Latitude	Longitude	Elevation (m)	Installation date	Maintainer
HOM	59 39.50	-151 38.60	198	760800	UAGI
PDB	59 47.27	-154 11.55	305	780909	UAGI
OPT	59 39.16	-153 13.78	450	740000	UAGI
MMN	59 11.11	-154 20.20	442	810822	UAGI
BGM	59 23.56	-155 13.76	625	780908	UAGI
SHU	58 37.68	-152 20.93	34	740000	UAGI
XLV	59 27.28	-151 40.30	320	870916	UAGI
BKG	61 04.21	-152 15.76	1009	910701	USGS
BGR	60 45.45	-152 25.06	985	910701	USGS
CP2	61 15.85	-152 14.51	1981	921023	USGS
CPA	61 15.29	-152 08.49	1192	921029	USGS
CPAE	61 15.29	-152 08.49	1192	921029	USGS
CPAN	61 15.29	-152 08.49	1192	921029	USGS
CPK	61 15.80	-152 14.00	2017	911001	USGS
CPKL	61 15.80	-152 14.00	2017	911001	USGS
CKT	61 12.05	-152 12.37	975	920916	USGS
REF-	60 29.35	-152 42.10	1801	920727	USGS
REFE	60 29.35	-152 42.10	1801	920727	USGS
REFN	60 29.35	-152 42.10	1801	920727	USGS

APPENDIX B

Appendix B shows stations being recorded and used for event triggering on the PC/AT acquisition system on a daily basis for the period January 1, 1991 through December 31, 1993. Subnet triggering, implemented beginning January 1, 1993, required additional documentation. For a given day, a one (1) indicates if the station was used to detect or trigger on an event, a zero (0) indicates that the station was recorded but not used for event determination purposes, a X indicates that the triggering parameters are unknown for the date indicated, and A blank ( ) indicates that the station was not on the data acquisition system for the date indicated. Thus for the date January 1, 1991, AUH, BGL, CGL, CRP, DFR, INE, NCG, NCT, RDN, RDT, RDW, RED, REF, RSO, and SPU were recorded on the PC/AT system. Of these stations, CGL, CRP, DFR, NCG, NCT, RDN, RDT, REF, RSO, and SPU were used to determine if an event occurred.

1991
Jan
willie   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUE																												0	0	0	0
AUII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0	0	0	0
AUI																												0	0	0	0
AUL																												0	0	0	0
AUP																							0	0	0	0	0				
BGL	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	
CRP	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0				
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
INE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0			
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
REDE																							0	0	0	0	0				
REDN																												0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Feb
willie   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
AUE	0	0	0																									
AUII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUI	0	0	0																									
AUL	0	0	0																									
AUP																												
BGL	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL				1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
CKL				1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REDE																												
REDN	0	0	0																									
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0

1991
Mar
willie   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1991

Apr

1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0
RDW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	1	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0
RSO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	1	0

May

1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	0	0	0	0	0	0
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1
RDW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1
RSO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	0	0	0	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	1	1	1	1	1	1

Jun

1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1991 Jul

1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

wllile	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUH	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGL	0	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CGL	0	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CKL	X	0	0	0	0	0	0	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRP	0	1	0	0	0	0	0	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DFR	0	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IRIG	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
NCG	0	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
NCT	0	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RDN	0	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RDT	0	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RDW	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RED	0	1	0	0	0	0	0	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
REF	0	1	0	0	0	0	0	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RSO	0	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SPU	0	1	0	0	0	0	0	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Aug

1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

wllile	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1991 Sep

1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

wllile	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
IRIG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
RDW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X

Oct   I = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

wllie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1991
Nov   I = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

wllie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Dec   I = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

wllie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1992

Jan

I = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X
BGL	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X
CGL	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X
CKL	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X
CRP	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X
DFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X
NCG	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X
RDN	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X
RDT	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X
RED	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X
REF	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X
RSO	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X
SPU	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	X	X	X	X	X	X	X	X	X	X

Feb

I = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
AUP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0
BGL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	I	I	I	I	I	I	I	I	I	I
CGL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	I	I	I	I	I	I	I	I	I	I
CKL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	I	I	I	I	I	I	I	I	I	I
CKN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0
CPKL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0
CRP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	I	I	I	I	I	I	I	I	I	I
DFR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0
IRIG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0
NCG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	I	I	I	I	I	I	I	I	I	I
RDT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0
RDW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0
RED	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	I	I	I	I	I	I	I	I	I	I
REF	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	I	I	I	I	I	I	I	I	I	I
RSO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	I	I	I	I	I	I	I	I	I	I
SPU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	I	I	I	I	I	I	I	I	I	I

1992

Mar

I = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
CGL	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
CKL	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
CKN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
DFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	I	I	I	I	I	I	I	I	I	I	I	I	I
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
REF	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
RSO	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
SPU	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I

Apr   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

wllie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1992
May   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

wllie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUP	0	0	0	0	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	0	0	0	0	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPKL	0	0	0	0	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	0	0	0	0	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	0	0	0	0	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Jun   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

wllie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BKG																0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPK																0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1992
Jul   1 - RECORD AND TRIGGER   0 - RECORD   X - UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
BKG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
CKN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
DFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0

Aug   1 - RECORD AND TRIGGER   0 - RECORD   X - UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BKG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
CPK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPKL	0	0	0	0	0	0	0	0	0	0	0	0																			
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1992
Sep   1 - RECORD AND TRIGGER   0 - RECORD   X - UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BKG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
CPK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Oct   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BKG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CP2																											1	1	1	1	1
CPK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1992
Nov   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BKG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Dec   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

willie	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BKG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993
Jan   Redoubt Subnet

I = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Feb   I = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1993
Mar   Redoubt Subnet

I = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Apr	I = RECORD AND TRIGGER										0 = RECORD				X = UNKNOWN															
red	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1993   Redoubt Subnet

May	I = RECORD AND TRIGGER										0 = RECORD				X = UNKNOWN																
red	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Jun	I = RECORD AND TRIGGER										0 = RECORD				X = UNKNOWN															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Redoubt Subnet

	1 = RECORD AND TRIGGER											0 = RECORD				X = UNKNOWN															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKG																													0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
REF-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
REFE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Aug

	1 = RECORD AND TRIGGER											0 = RECORD				X = UNKNOWN															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUS																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDW																	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REFE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Redoubt Subnet

	1 = RECORD AND TRIGGER											0 = RECORD				X = UNKNOWN														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REFE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Oct 1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

red	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPP					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFE	0	0	0	0																											
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1																															
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1993 Nov   Redoubt Subnet

1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUH																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CCL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKT																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NKA																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFE																														
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1																														
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SKN																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SLK																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSN																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SVW																	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Dec   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CKT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DFR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NKA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RDW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REF-REFE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REFN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1																															
RS2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SKN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SLK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SVW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1993 Jan — Spurr Subnet

1 = RECORD AND TRIGGER 0 = RECORD X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993 Feb — Spurr Subnet

1 = RECORD AND TRIGGER 0 = RECORD X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993 Mar — Spurr Subnet

1 = RECORD AND TRIGGER 0 = RECORD X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993   Spurr Subnet

Apr   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993   Spurr Subnet

May   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993   Spurr Subnet

Jun   1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U	U	0	0	U	U	U	U	0
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993 Jul — Spurr Subnet

1 = RECORD AND TRIGGER 0 = RECORD X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKG																													0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
CPAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
CPAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CRPE																													0	0	0
CRPN																													0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDW																													0	0	0
RSI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993 Aug — Spurr Subnet

1 = RECORD AND TRIGGER 0 = RECORD X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT																															
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA																															
CPAE																															
CPAN																															
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CRPE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0														
RSI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993 Sep — Spurr Subnet

1 = RECORD AND TRIGGER 0 = RECORD X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT																														
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA																														
CPAE																														
CPAN																														
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CRPE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDW																														
RSI																														
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993 Oct — Spurr Subnet
1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT																															
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA																															
CPAE																															
CPAN																															
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CRPE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPP																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDW																															
RS1																															
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1993 Nov — Spurr Subnet
1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUS																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT																														
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA																														
CPAE																														
CPAN																														
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CRPE																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NKA																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	0	0·	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDW																														
RS1																														
SKN																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SLK																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SSN																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SVW																	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1993
Dec   Spurr Subnet

1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BGR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BKG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CGL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CKT																															
CP2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CPA																															
CPAE																															
CPAN																															
CRP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CRPE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NKA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RDW																															
RS1																															
SKN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SLK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SSN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SVW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1993
Jan — Augustine Subnet
1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SPU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

1993
Feb — Augustine Subnet
1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
AUE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SPU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

1993
Mar — Augustine Subnet
1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SPU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

1993
Apr — Augustine Subnet
1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SPU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

1993
May — Augustine Subnet
1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AUW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SPU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

```
1993              Augustine Subnet
Jun        I = RECORD AND TRIGGER              0 = RECORD        X = UNKNOWN
      1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
AUE   X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  I  I  I
AUH   X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  I  I  I
AUI   X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  I  I  I
AUL   X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  I  I  I
AUP   X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  I  I  I
AUW   X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  0  0  0
BGR   X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  0  0  0
IRIG  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
REF   X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  0  0  0
SPU   X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  0  0  0


1993              Augustine Subnet
Jul        I = RECORD AND TRIGGER              0 = RECORD        X = UNKNOWN
      1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
AUE   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUH   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUI   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUL   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUP   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUW   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
BGR   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
IRIG  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
REF   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
SPU   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0


1993              Augustine Subnet
Aug        I = RECORD AND TRIGGER              0 = RECORD        X = UNKNOWN
      1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
AUE   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUH   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUI   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUL   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUP   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUW   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
BGR   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
IRIG  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
REF   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
SPU   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0


1993              Augustine Subnet
Sep        I = RECORD AND TRIGGER              0 = RECORD        X = UNKNOWN
      1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
AUE   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUH   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUI   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUL   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUP   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUW   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
BGR   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
IRIG  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
REF   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
SPU   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0


1993              Augustine Subnet
Oct        I = RECORD AND TRIGGER              0 = RECORD        X = UNKNOWN
      1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
AUE   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUH   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUI   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUL   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUP   I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUS                                 I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I  I
AUW   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
BGR   0  0  0  0  0  0  0  0  0  0
IRIG  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
REF   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
SPU   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
```

1993 Nov — Augustine Subnet
1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AUE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUIE																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUIN																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGM																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRLK																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CDD																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KDC																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MMN																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OPT																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PDB																	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1993 Dec — Augustine Subnet
1 = RECORD AND TRIGGER   0 = RECORD   X = UNKNOWN

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AUE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUIE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AUW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BGM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRLK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MMN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OPT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PDB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX C

Station usage as determined by earthquake phase files is documented within this appendix. Data are presented on a monthly basis with each diamond indicating the use of the given station to locate an earthquake. Thus, on January 1, 1991, an earthquake located at Redoubt volcano was detected and located using stations DFR, NCT, RDN, RDW,REF and RSO. This appendix adds information about the relative health and data acquisition patterns of the seismic net.

January 1991

date

February 1991

date

March 1991

date

April 1991

date

49

May 1991

aue
auh
aui
auie
auiw
aul
aup
aus
auw
bgl
bgm
bgr
bkg
brlk
cdd
cgl
ckl
ckn
ckt
cpa
cpae
cpan
cpk
cpkl
cp2
crp
crpe
crpn
crpp
dfr
ine
kdc
mmn
ncg
nct
nka
opt
pdb
rdn
rdt
rdw
red
rede
redn
ref
refe
refn
ref-
rso
rs1
rs2
skn
slk
spu
ssn
svw

0   7   14   21   28

date

June 1991

aue
auh
aui
auie
auiw
aul
aup
aus
auw
bgl
bgm
bgr
bkg
brlk
cdd
cgl
ckl
ckn
ckt
cpa
cpae
cpan
cpk
cpkl
cp2
crp
crpe
crpn
crpp
dfr
ine
kdc
mmn
ncg
nct
nka
opt
pdb
rdn
rdt
rdw
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rede
redn
ref
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ref-
rso
rs1
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skn
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spu
ssn
svw

0   7   14   21   28

date

July 1991

date

August 1991
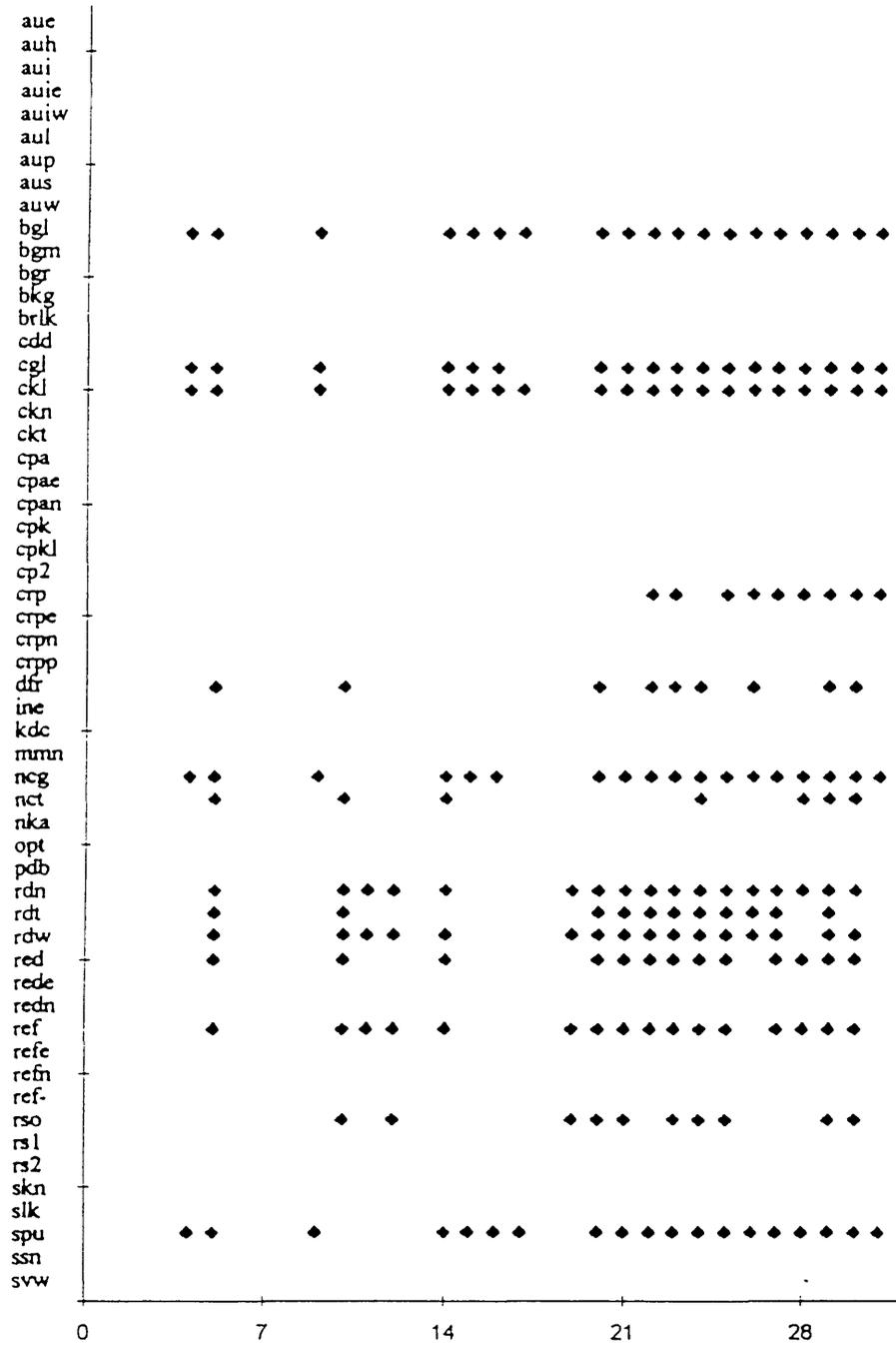
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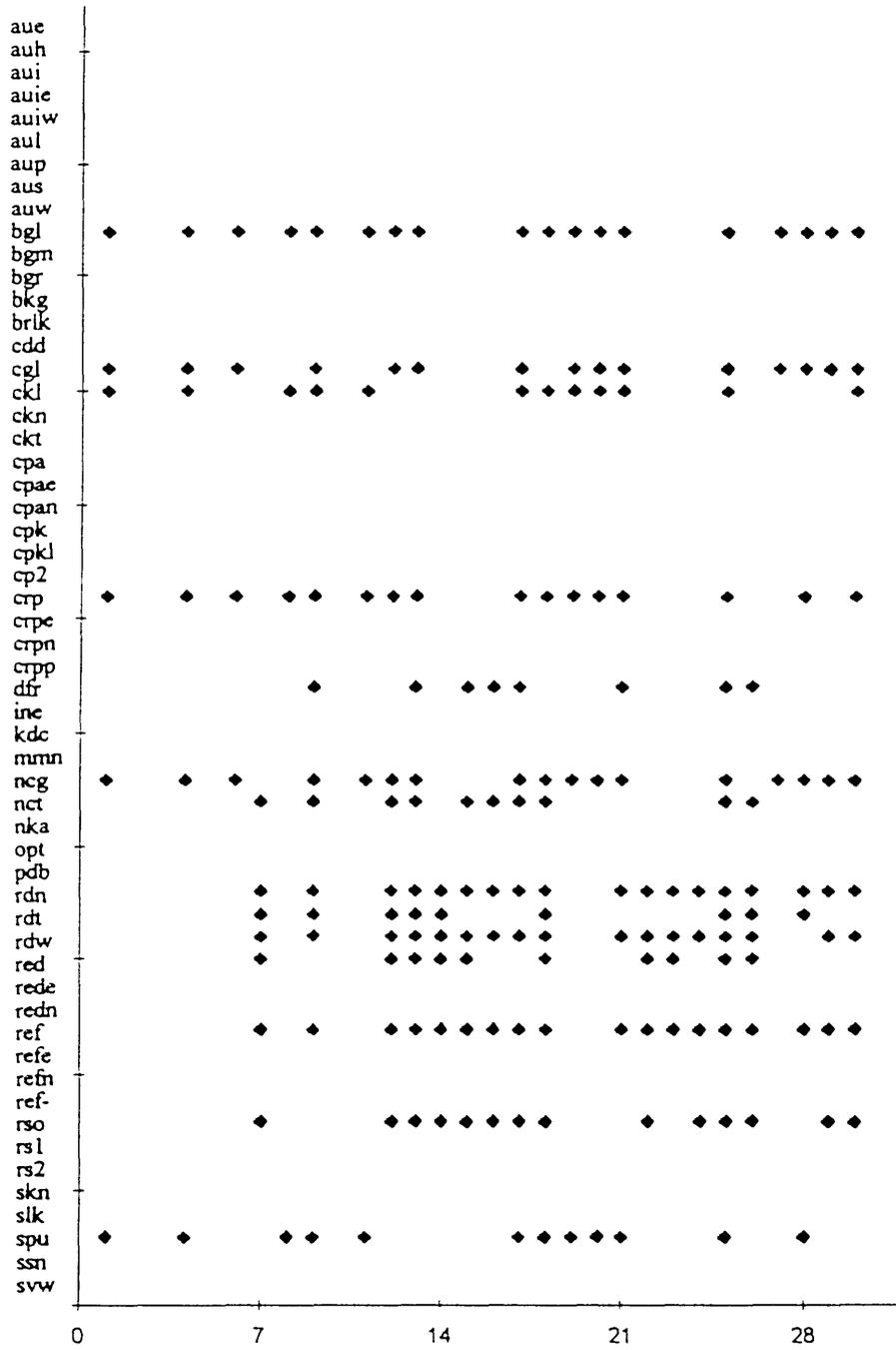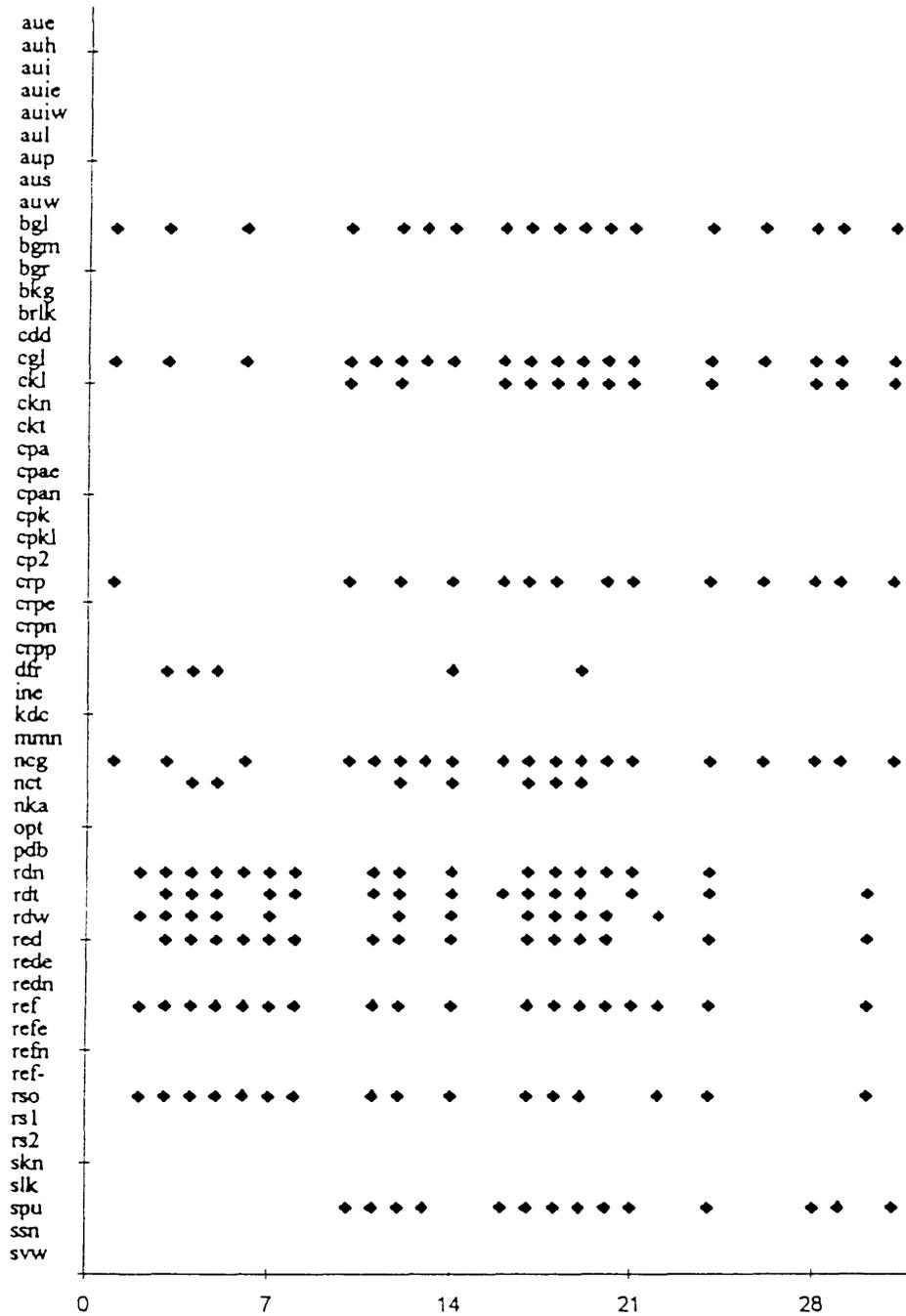
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October 1991

date

November 1991

date

56

date

January 1992

date

58
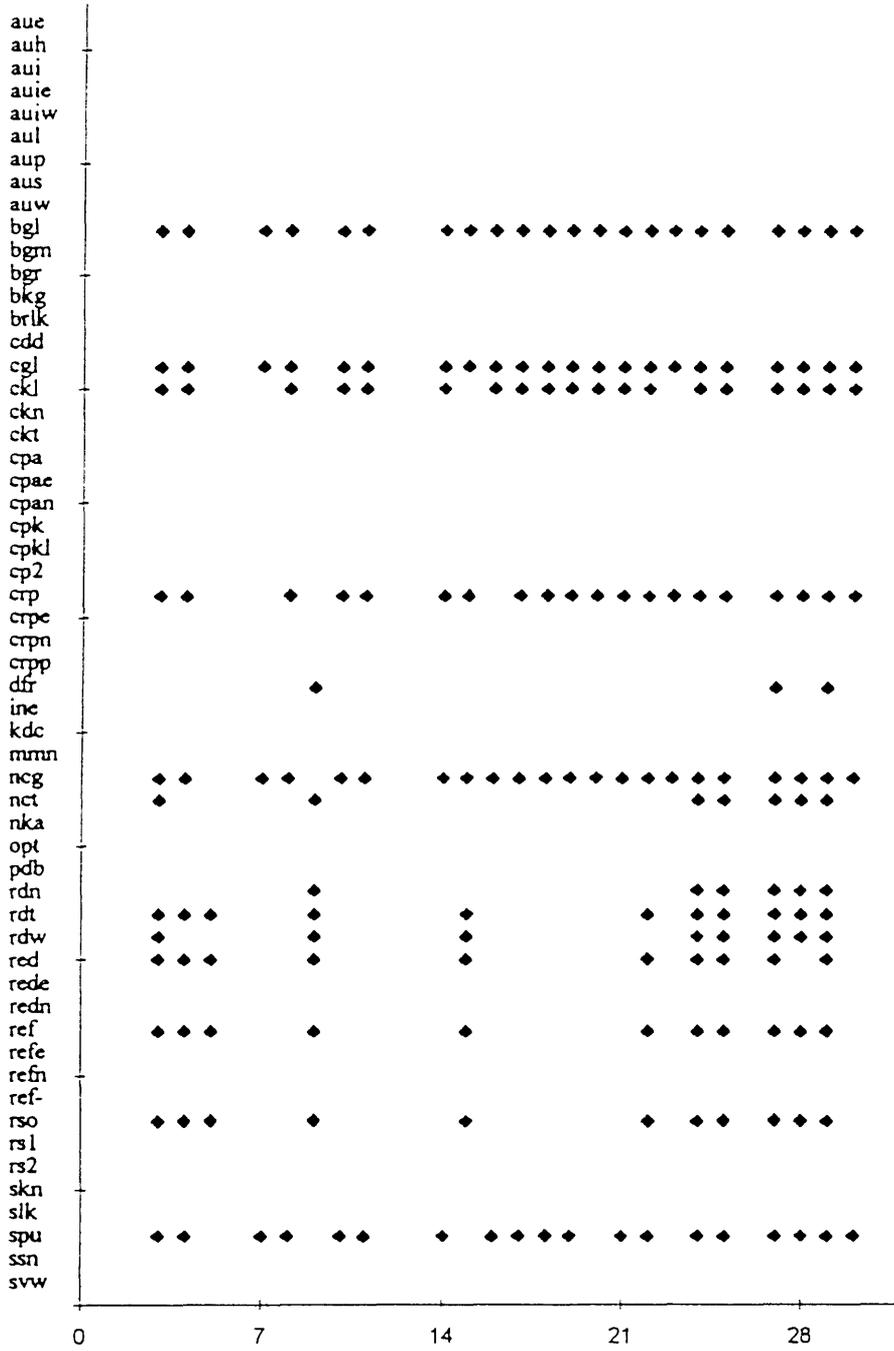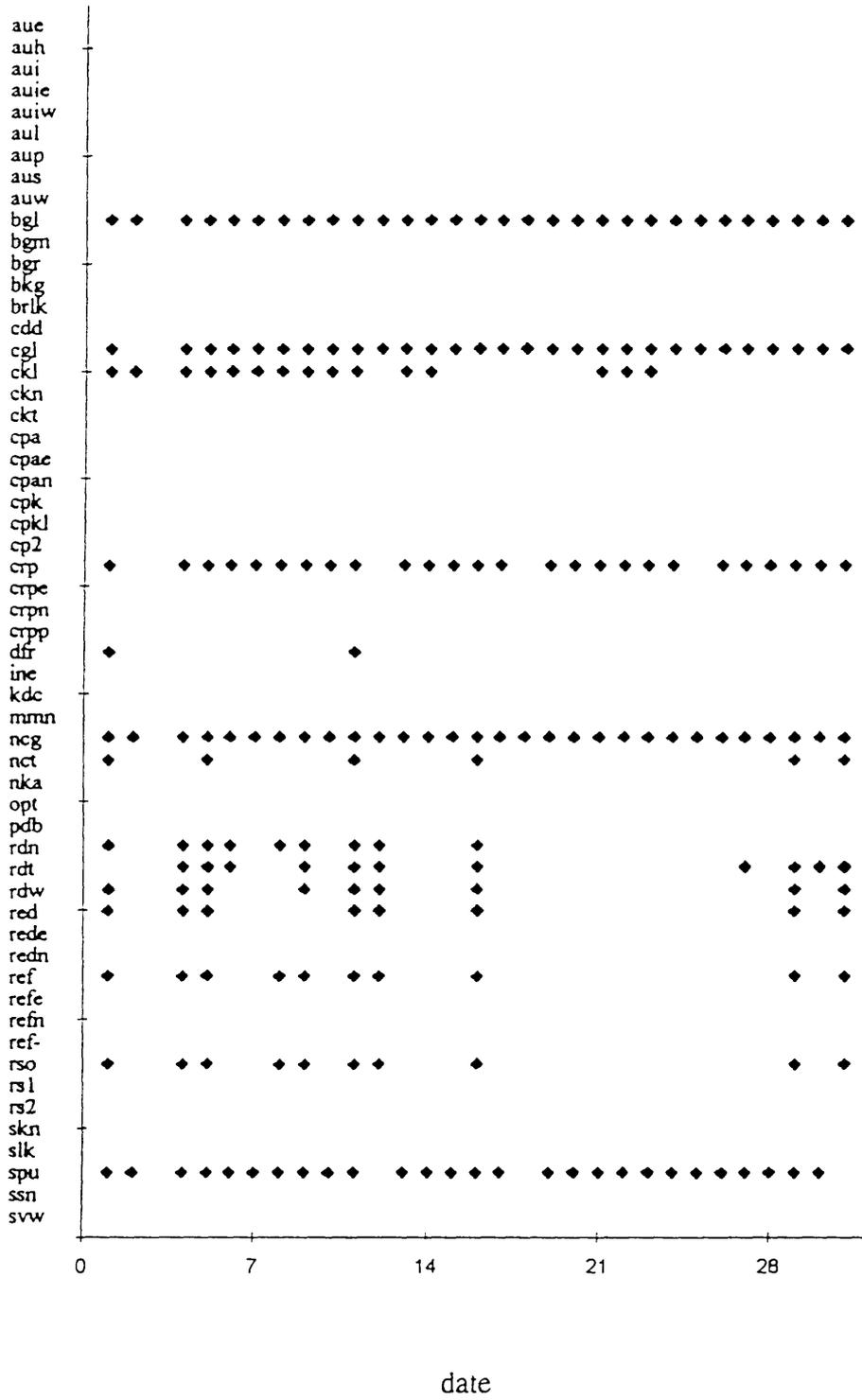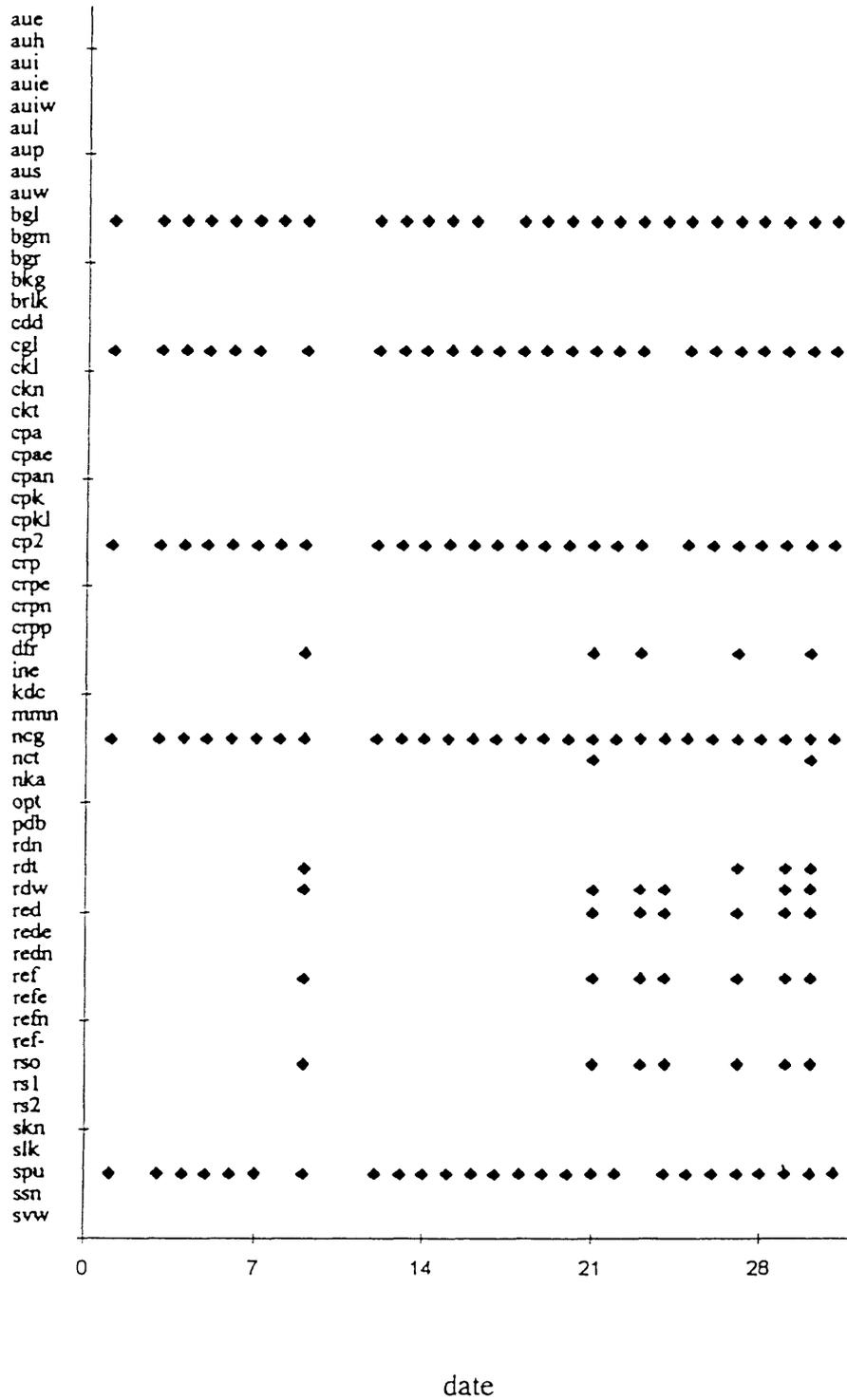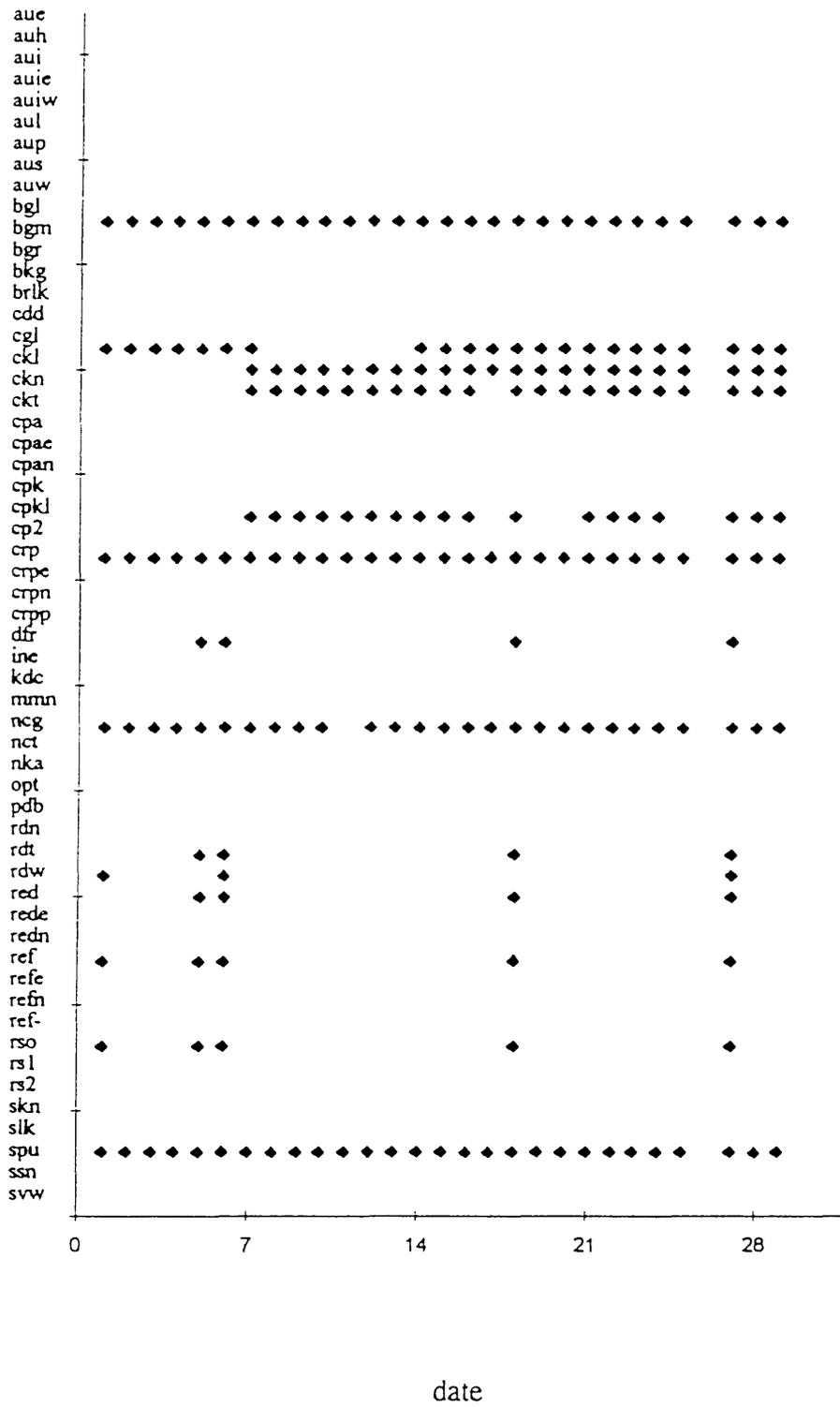
February 1992

March 1992
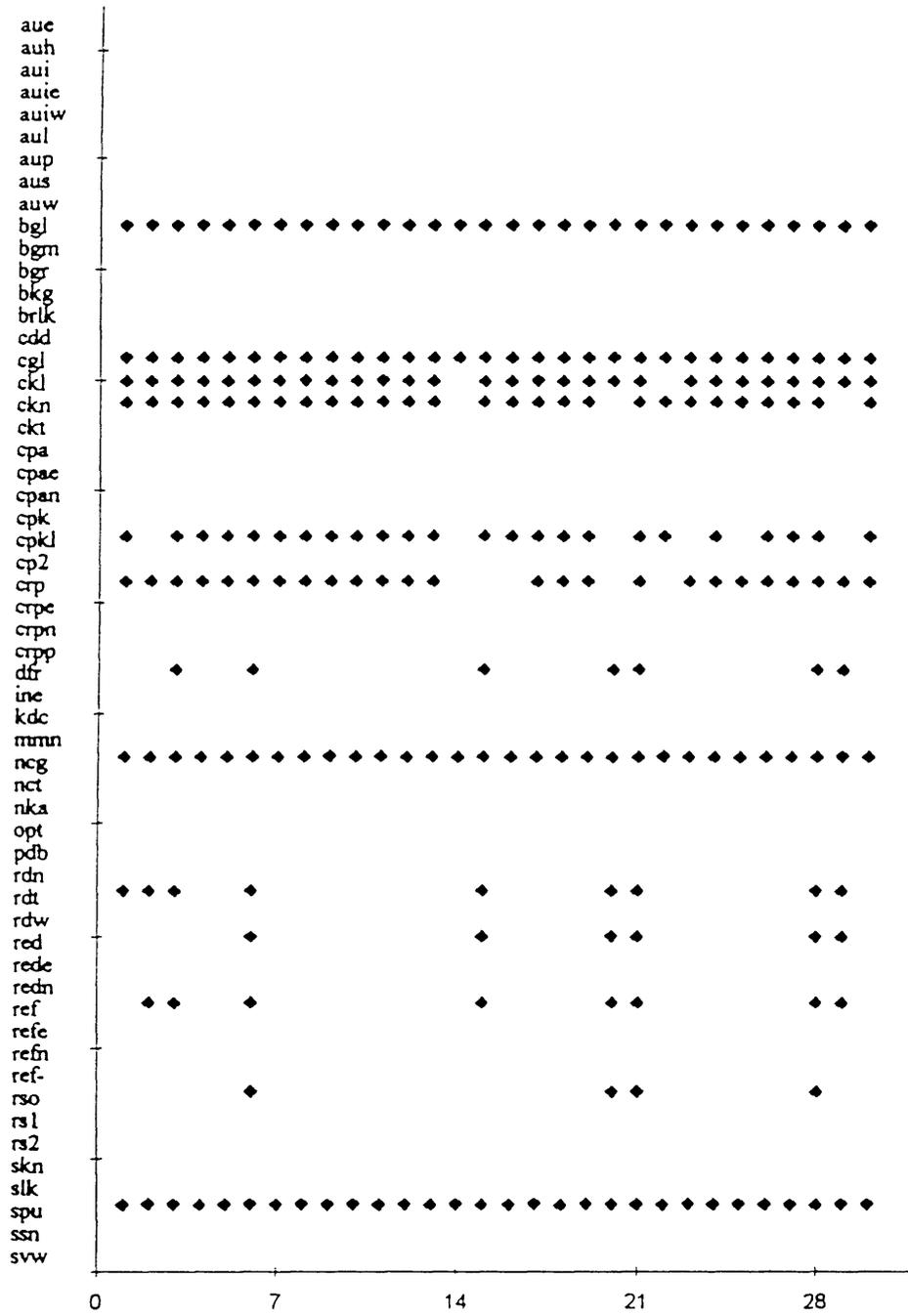
date

April 1992

date

May 1992

aue
auh
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aup
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bgl
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cdd
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cpa
cpae
cpan
cpk
cpkl
cp2
crp
crpe
crpn
crpp
dfr
ine
kdc
mmn
ncg
nct
nka
opt
pdb
rdn
rdt
rdw
red
rede
redn
ref
refe
refn
ref-
rso
rs1
rs2
skn
slk
spu
ssn
svw

0   7   14   21   28
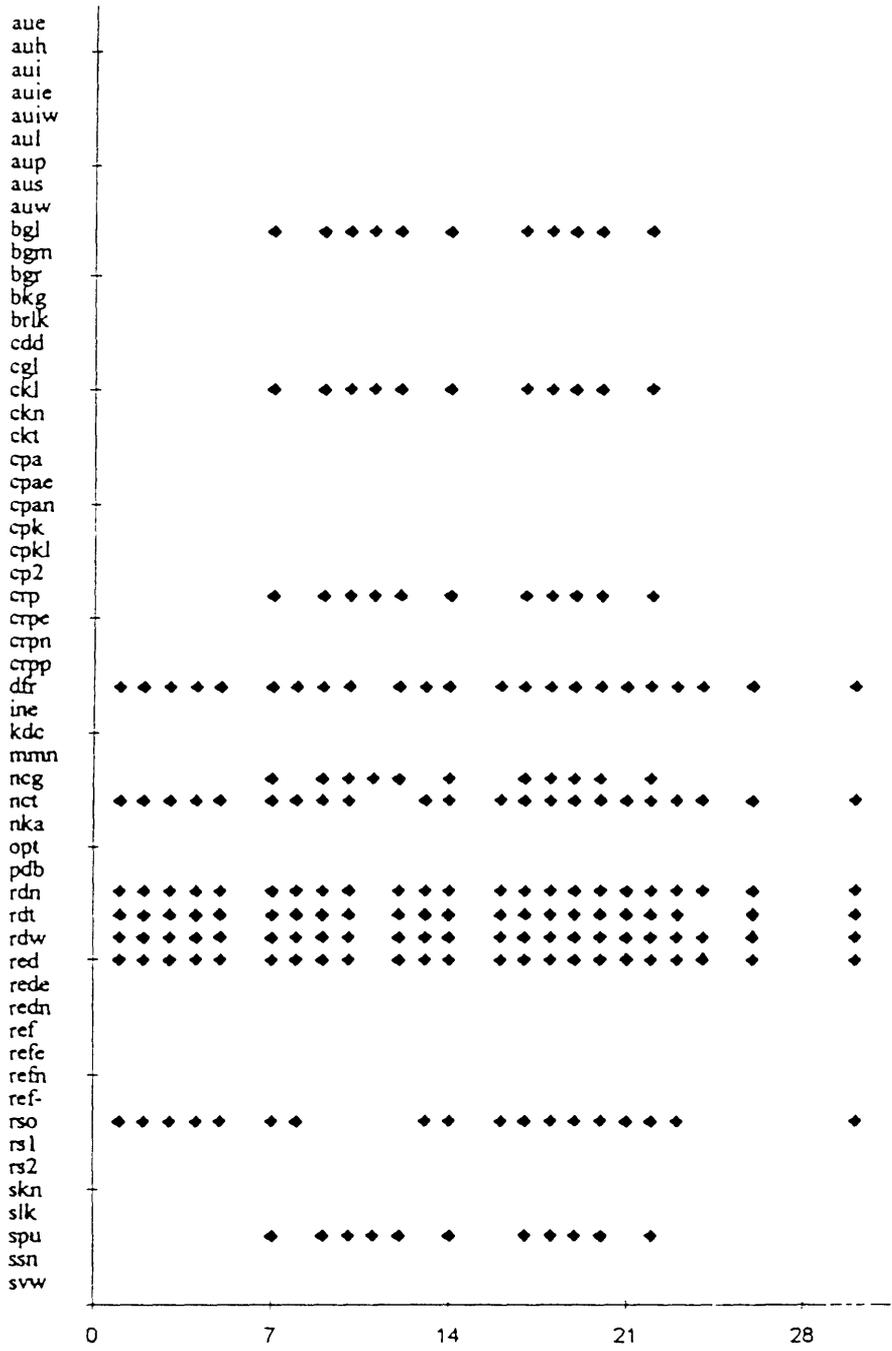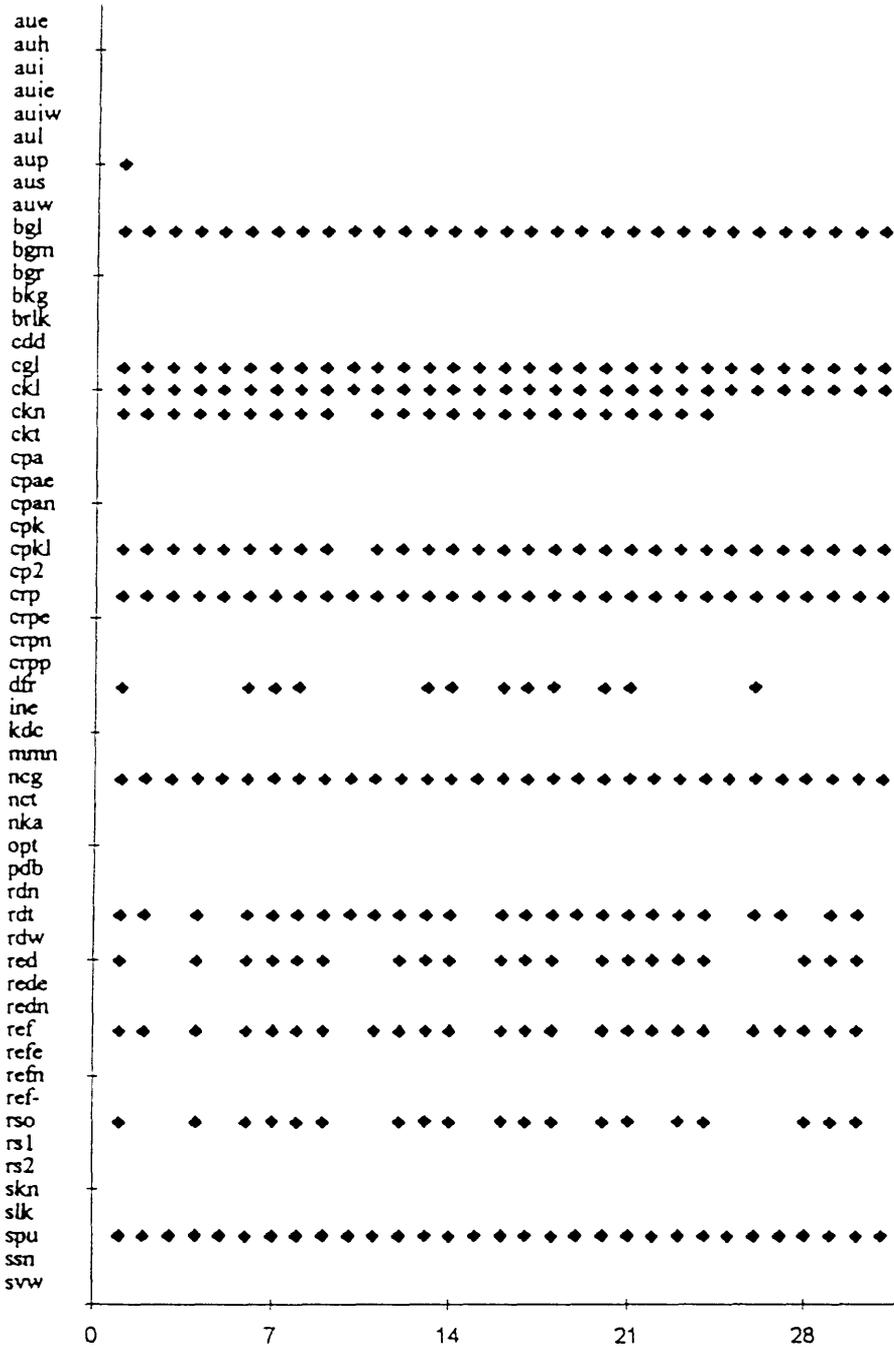
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June 1992
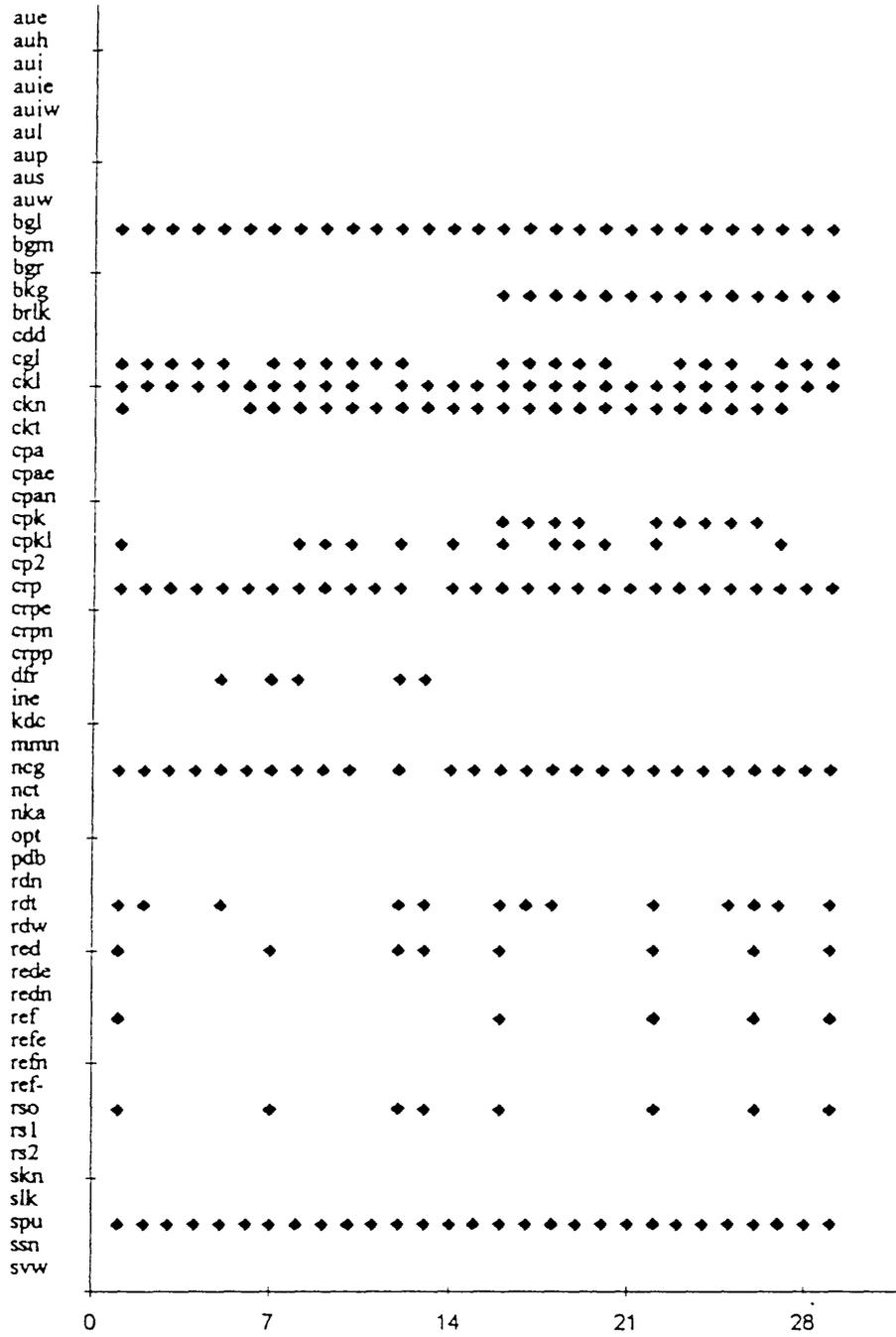
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July 1992
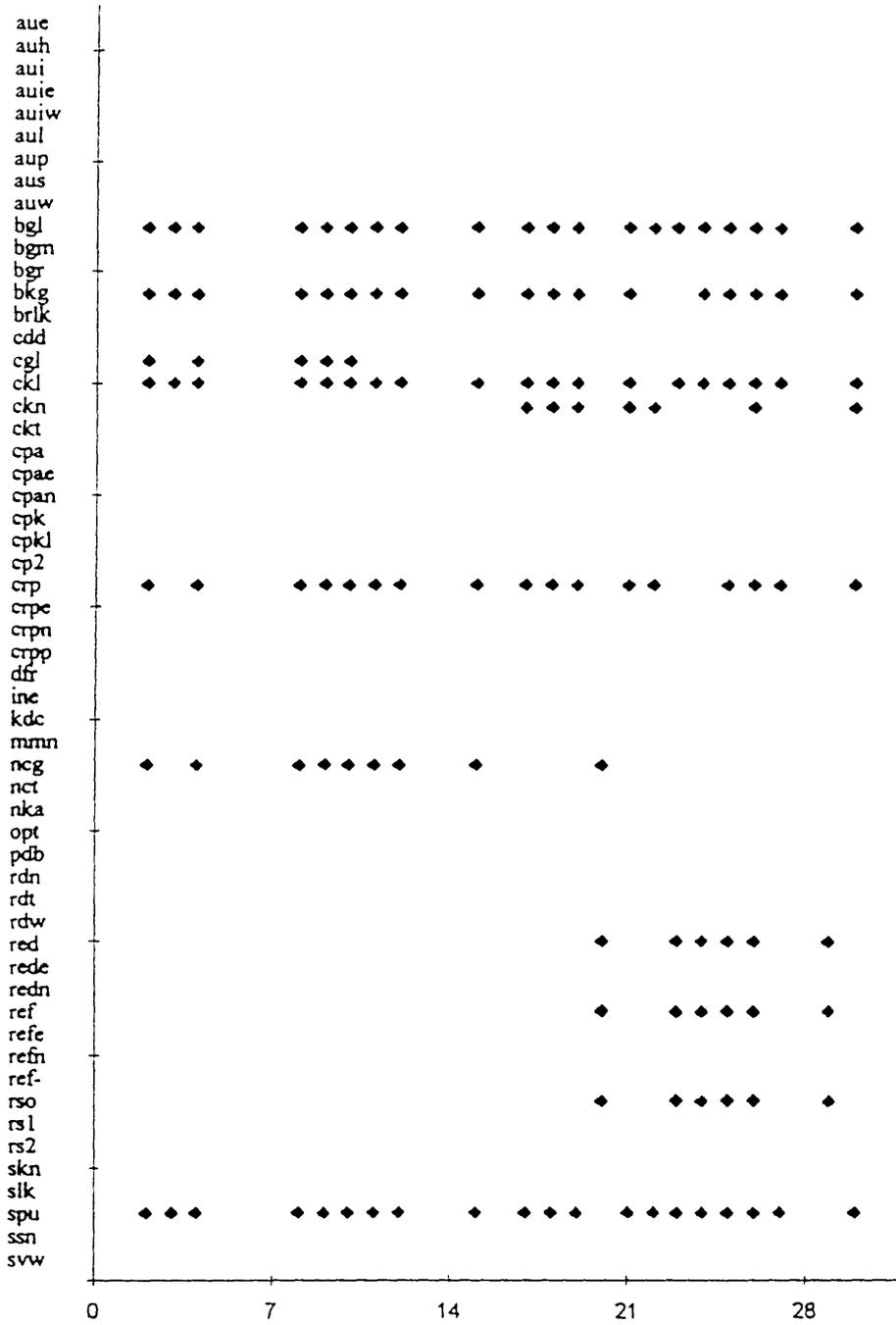
date

August 1992

date

September 1992

auc
auh
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cdd
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ckt
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cpae
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cpk
cpkl
cp2
crp
crpe
crpn
crpp
dfr
ine
kdc
mmn
ncg
nct
nka
opt
pdb
rdn
rdt
rdw
red
rede
redn
ref
refe
refn
ref-
rso
rs1
rs2
skn
slk
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ssn
svw

0   7   14   21   28

date

66

date

November 1992

date

68

December 1992

date

69
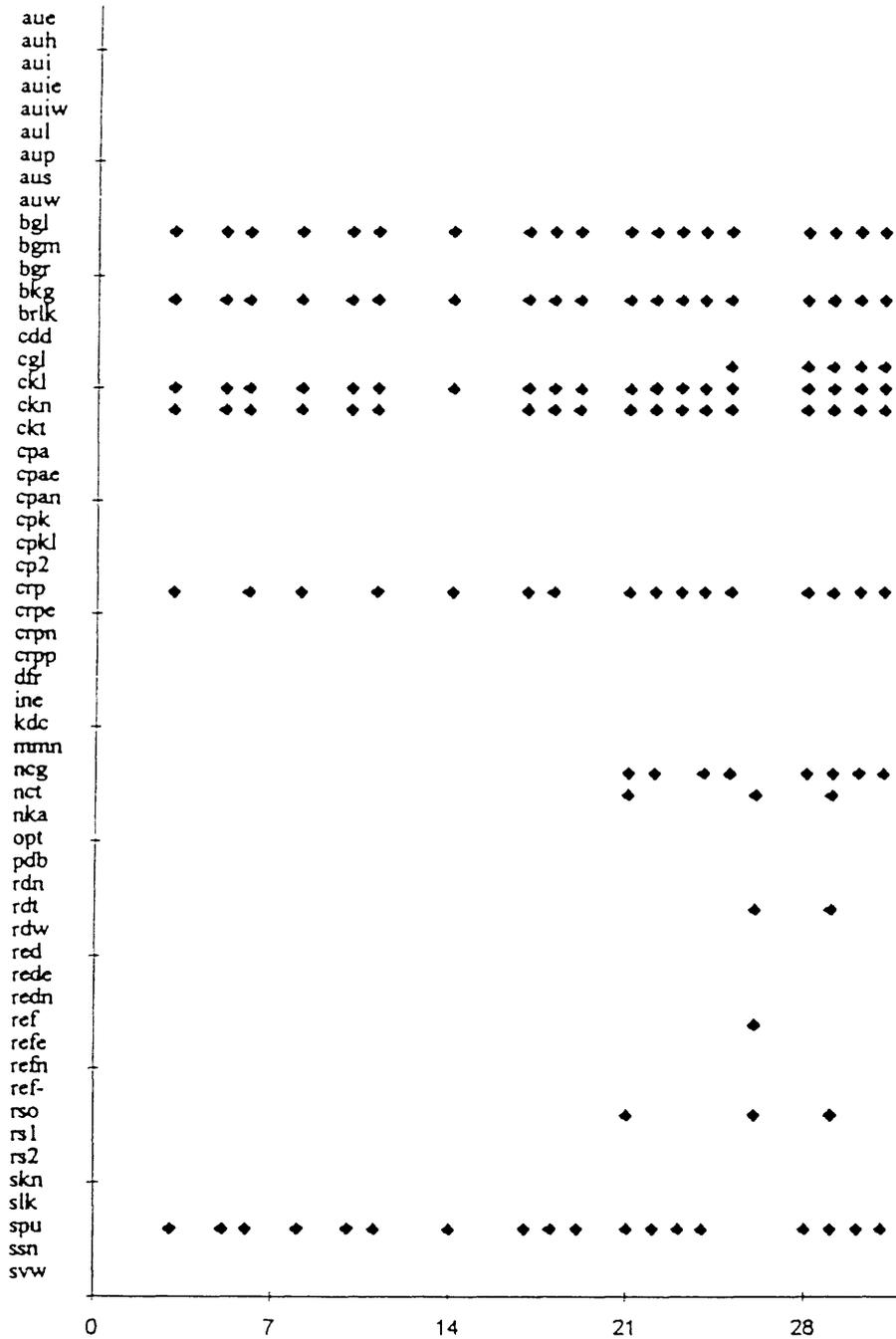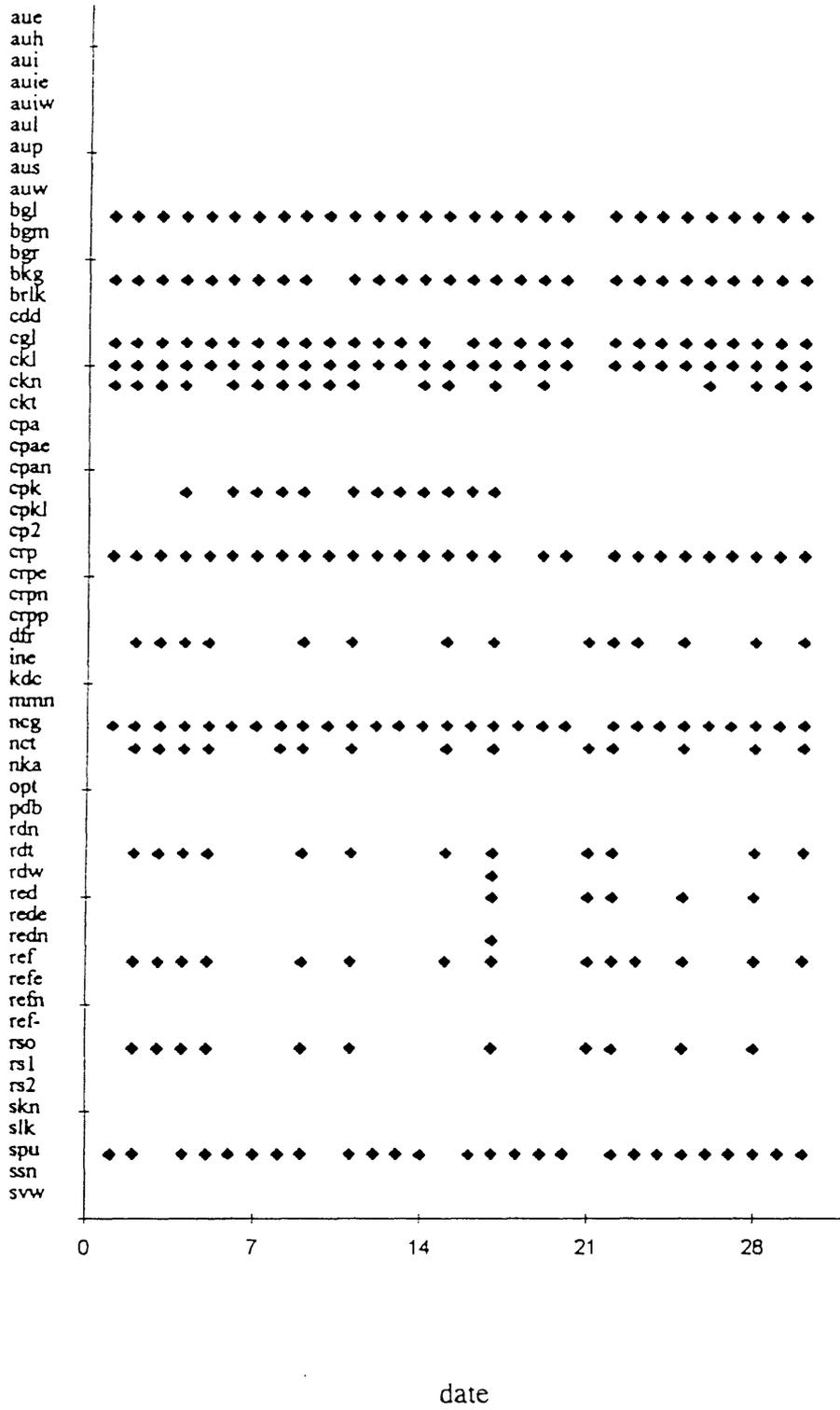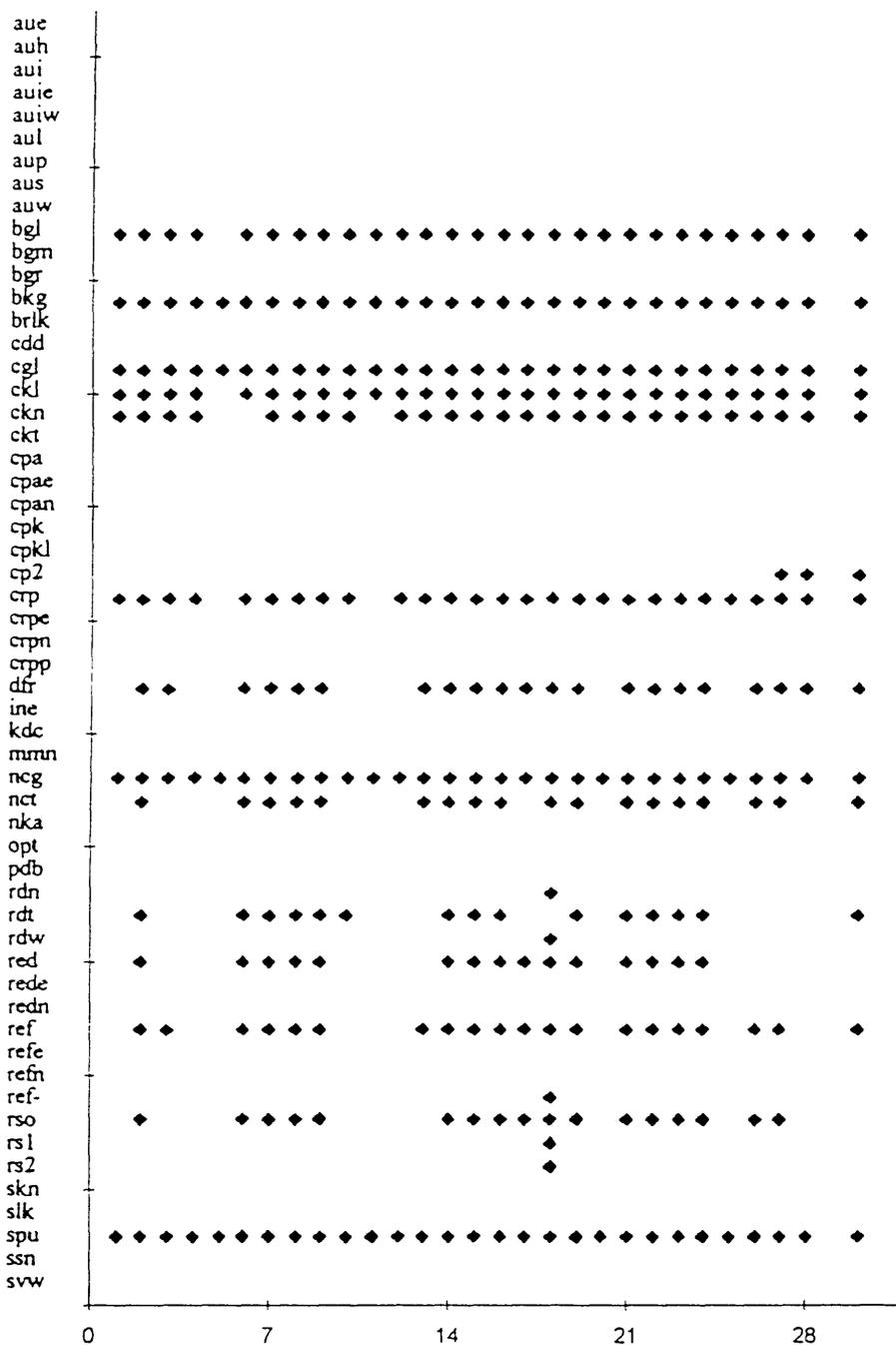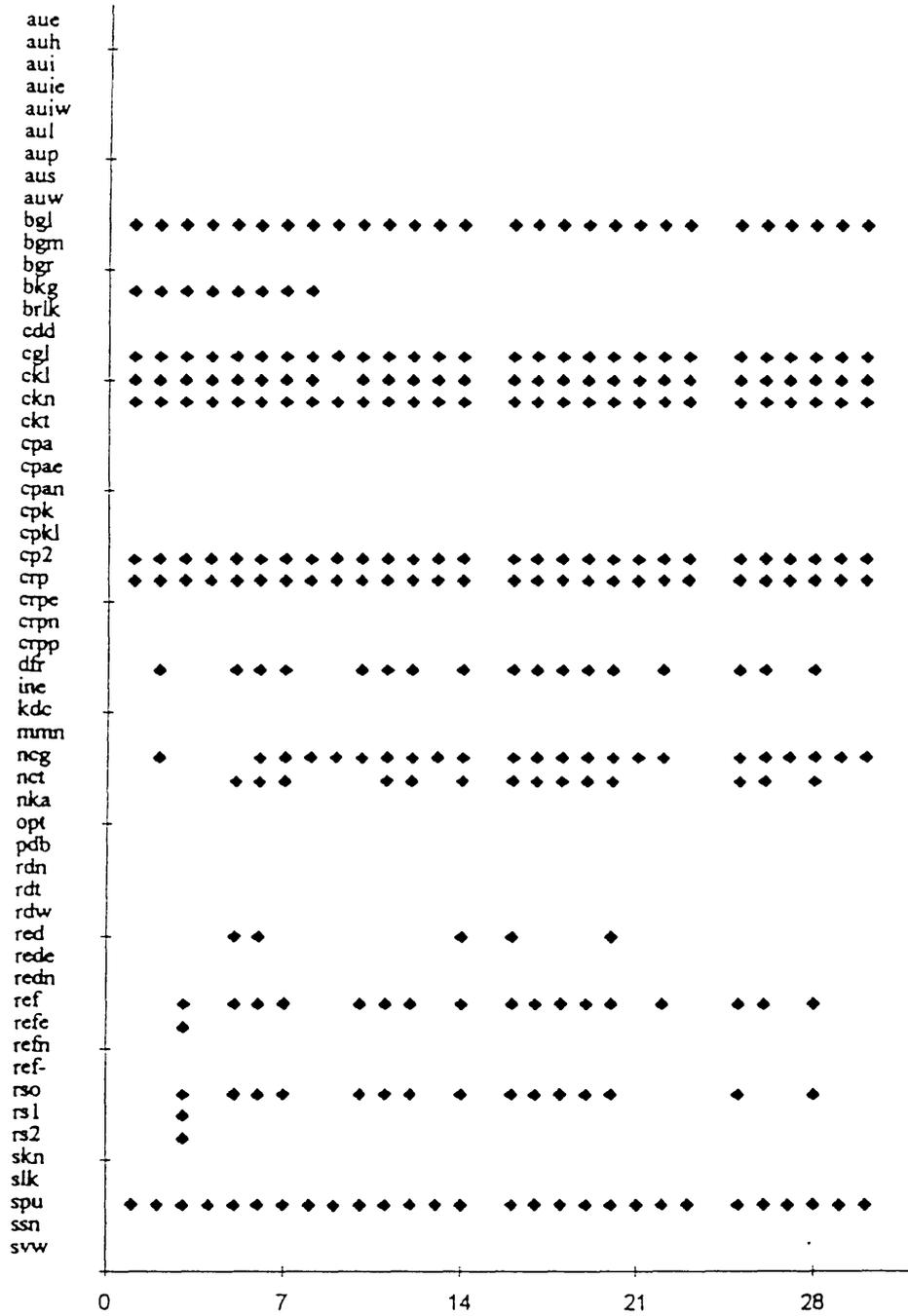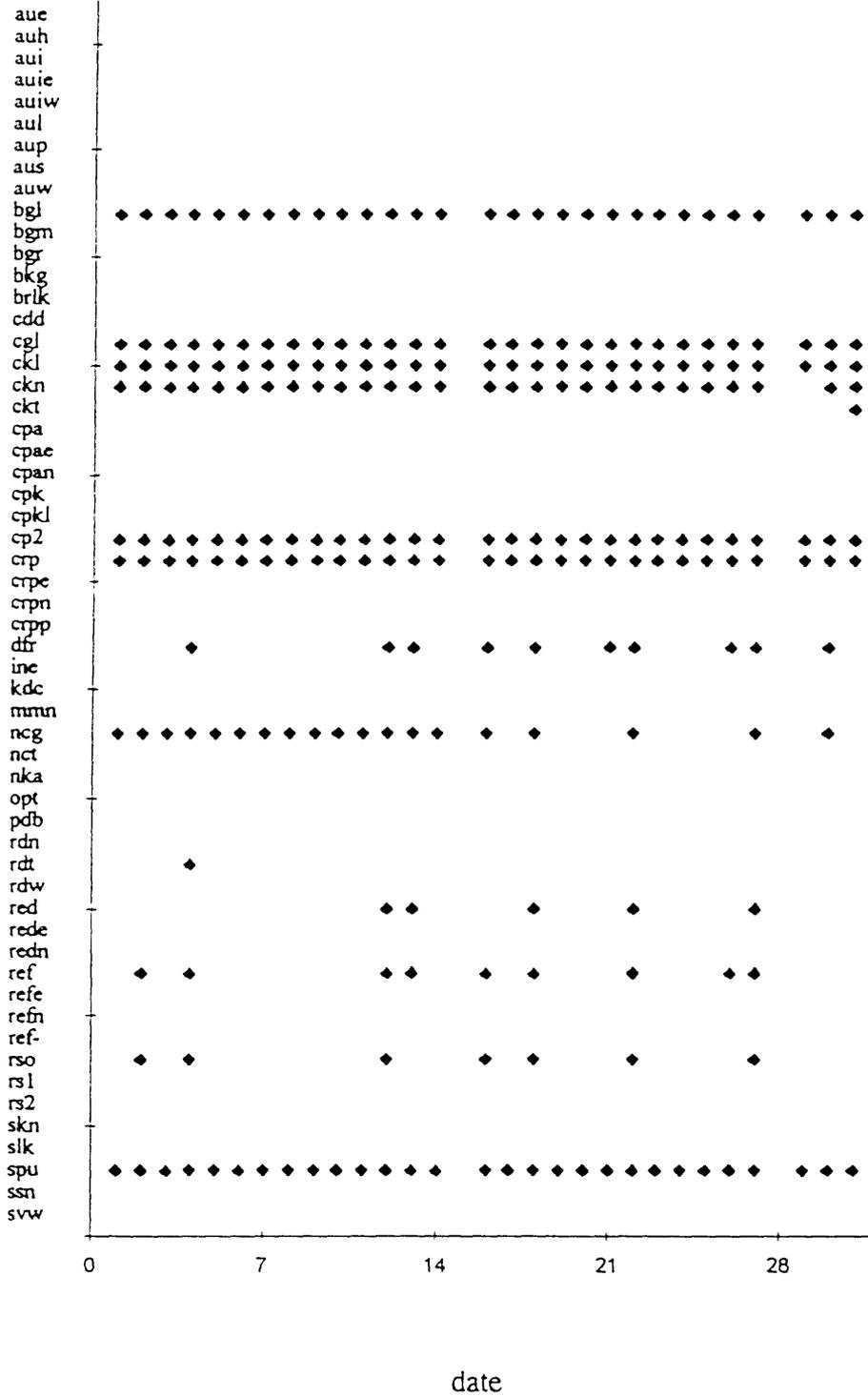
January 1993

date

February 1993

date

March 1993

date

April 1993

date

May 1993

date

June 1993

aue
auh
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bkg
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cdd
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ckl
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ckt
cpa
cpae
cpan
cpk
cpkl
cp2
crp
crpe
crpn
crpp
dfr
ine
kdc
mmn
ncg
nct
nka
opt
pdb
rdn
rdt
rdw
red
rede
redn
ref
refe
refn
ref-
rso
rs1
rs2
skn
slk
spu
ssn
svw

0   7   14   21   28

date

75

July 1993

date

August 1993

date

date

October 1993

date

79
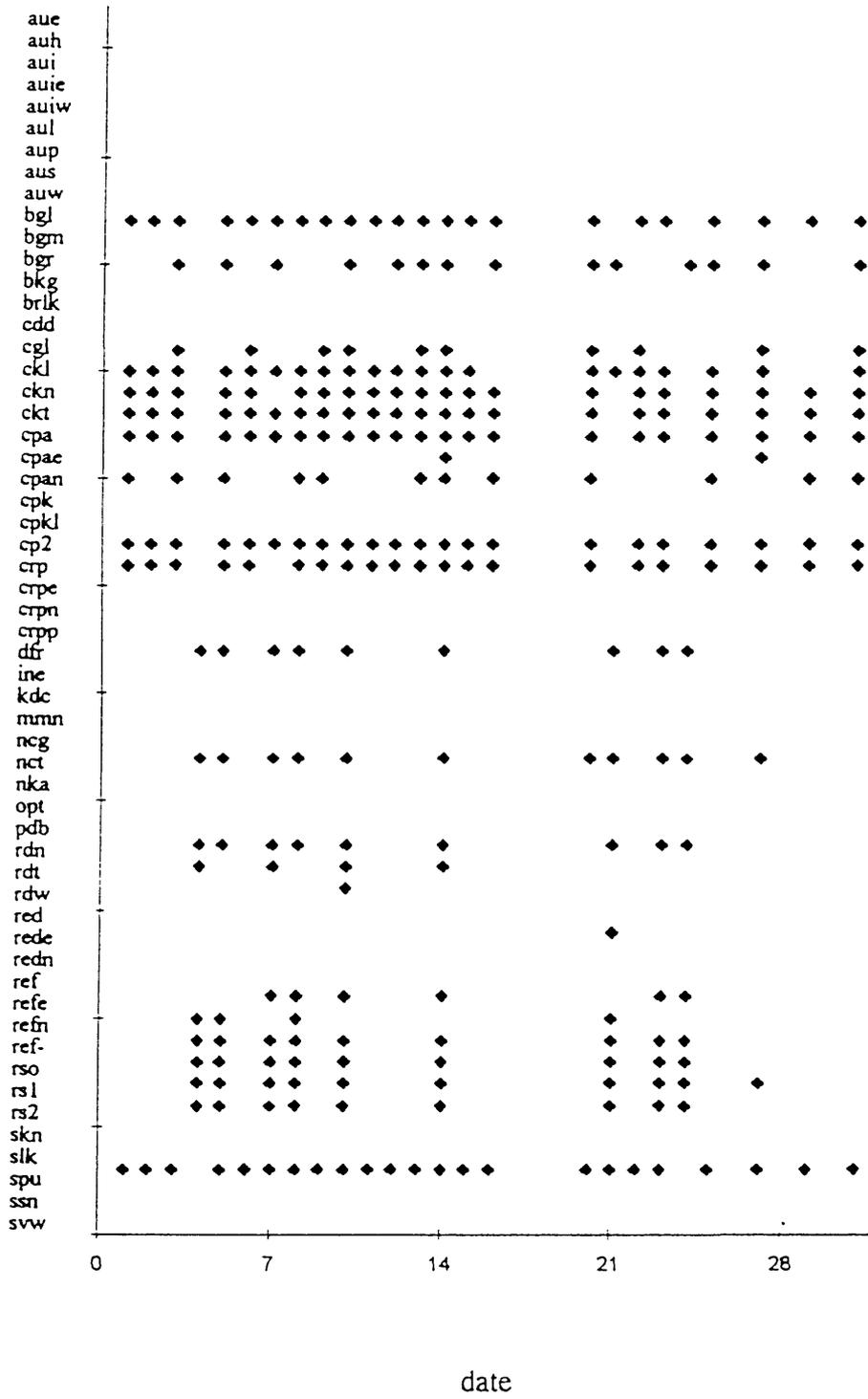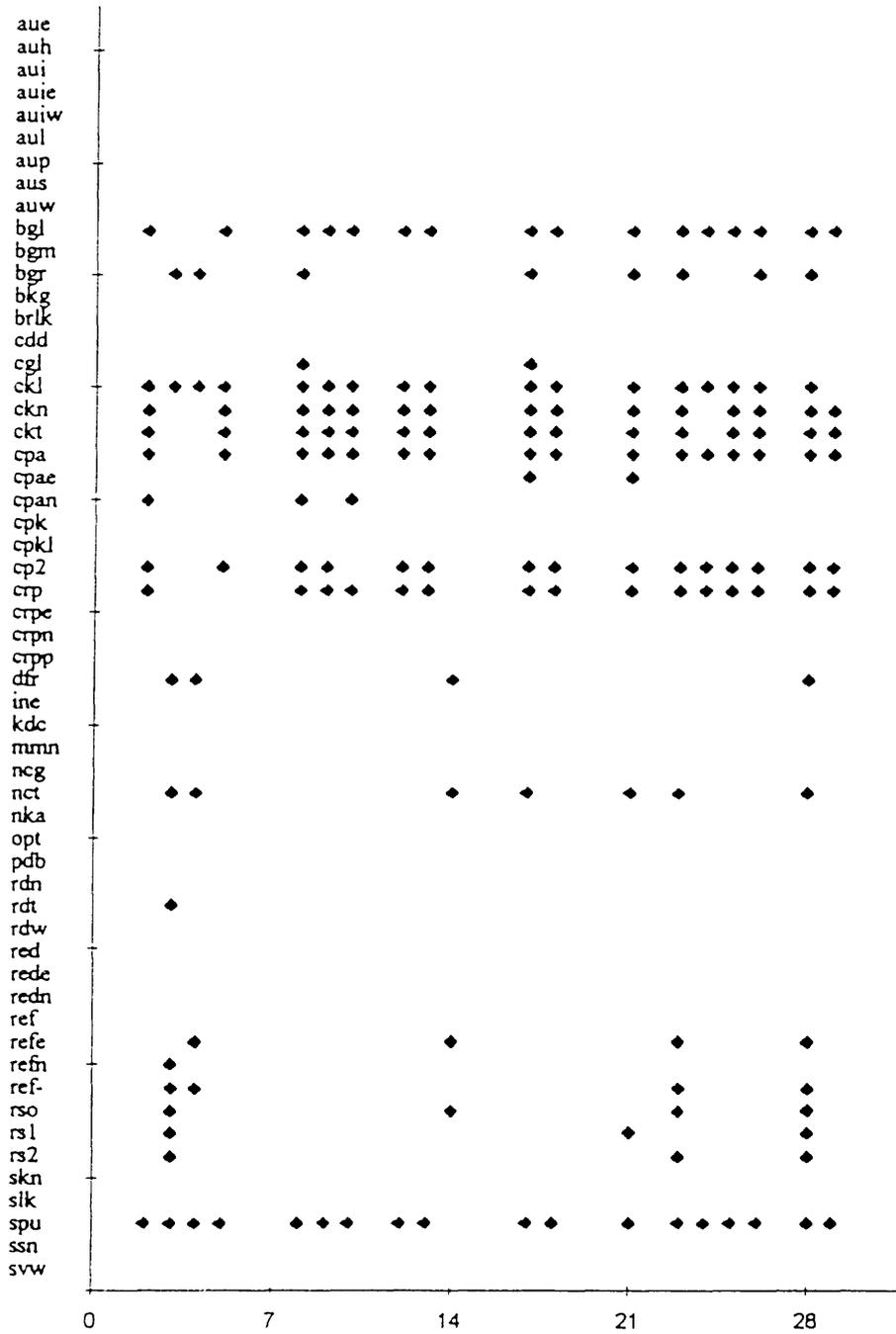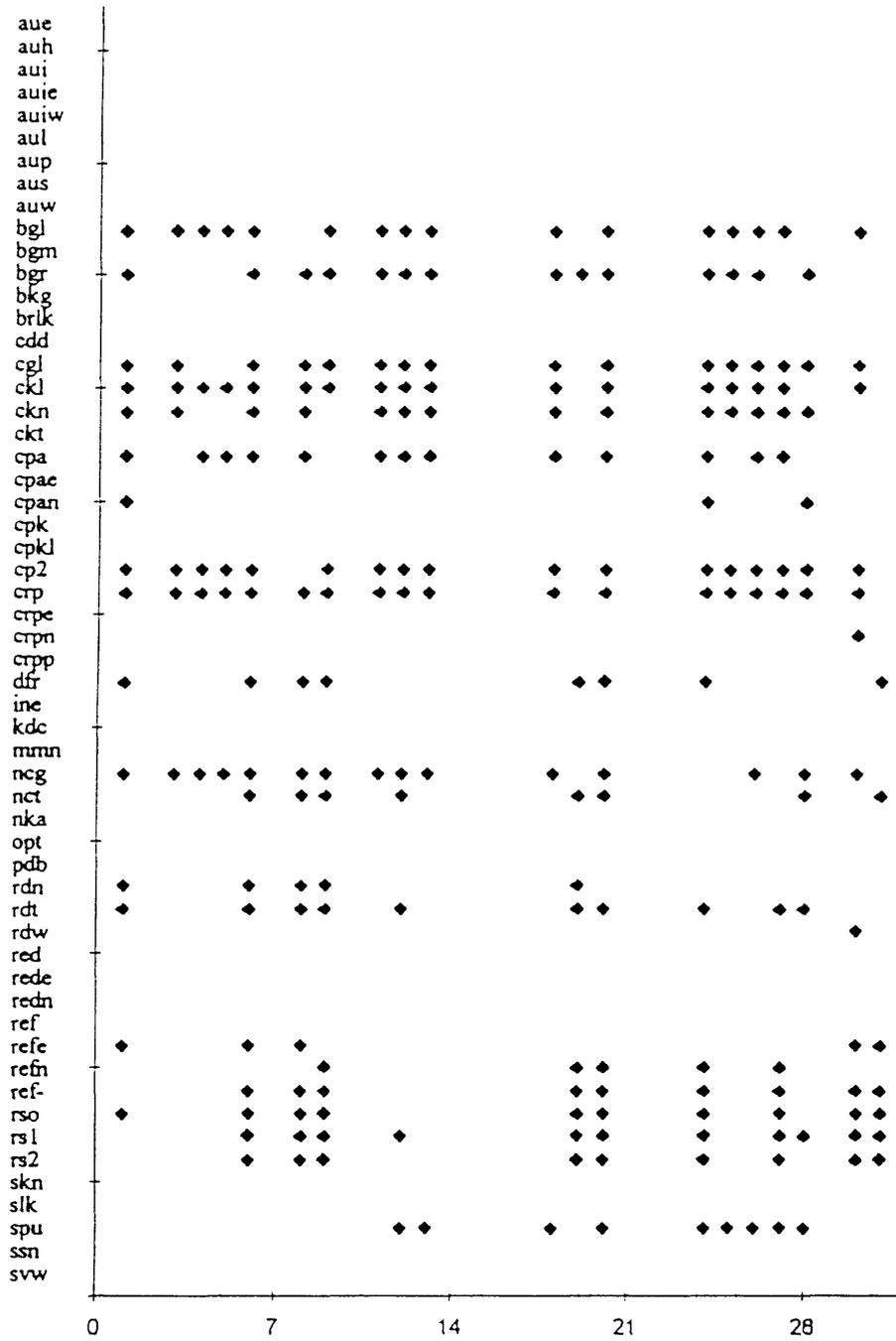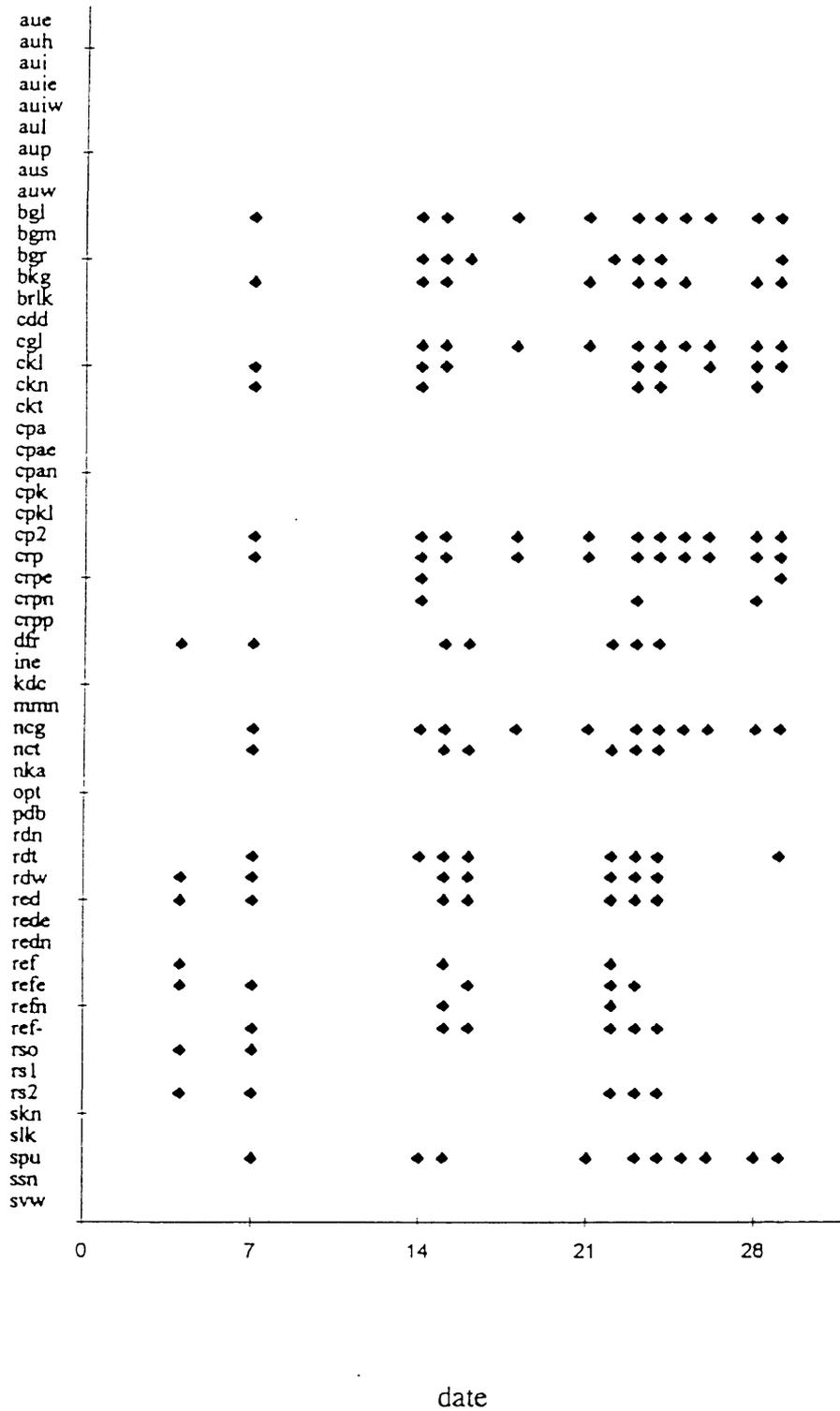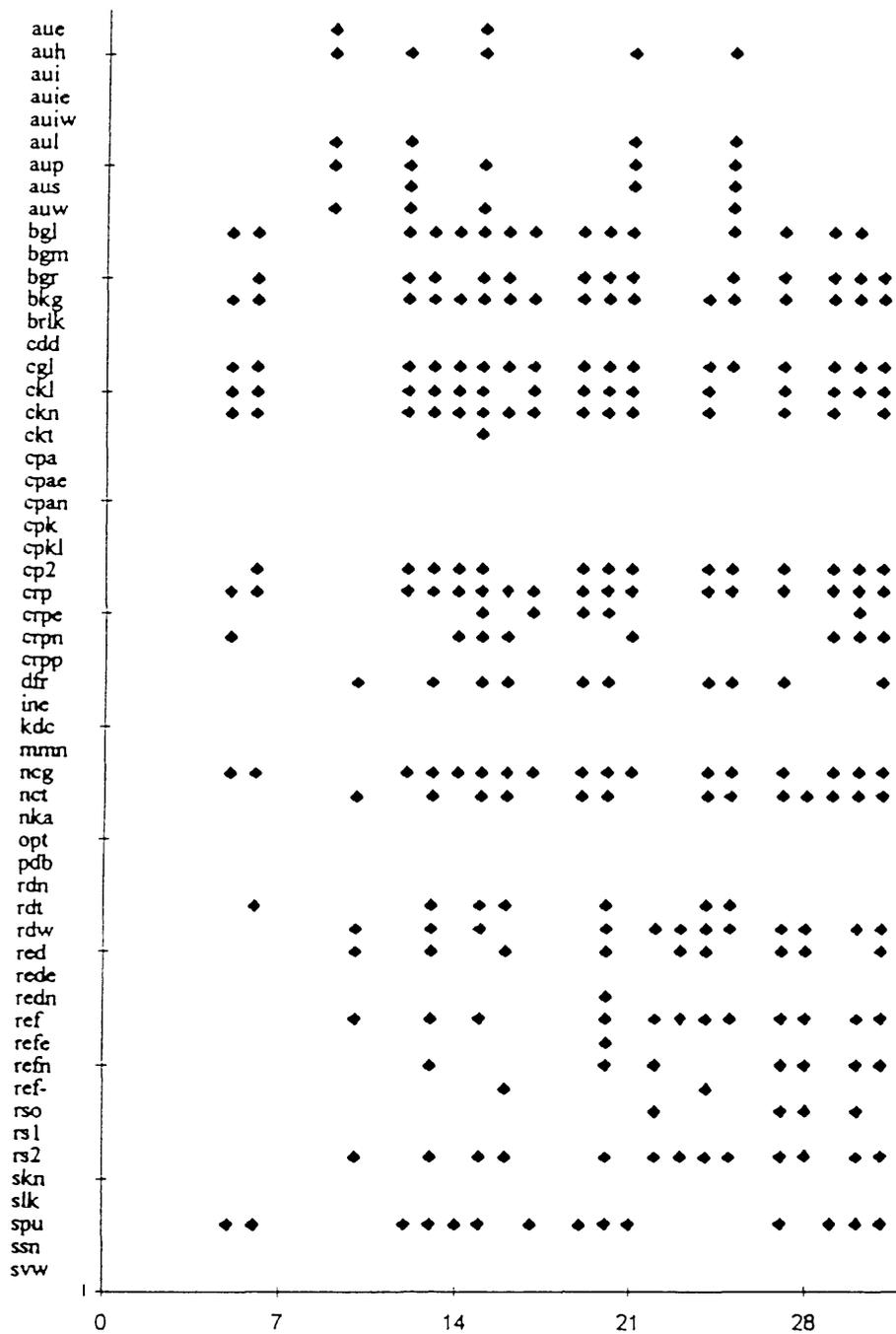
November 1993

date

80
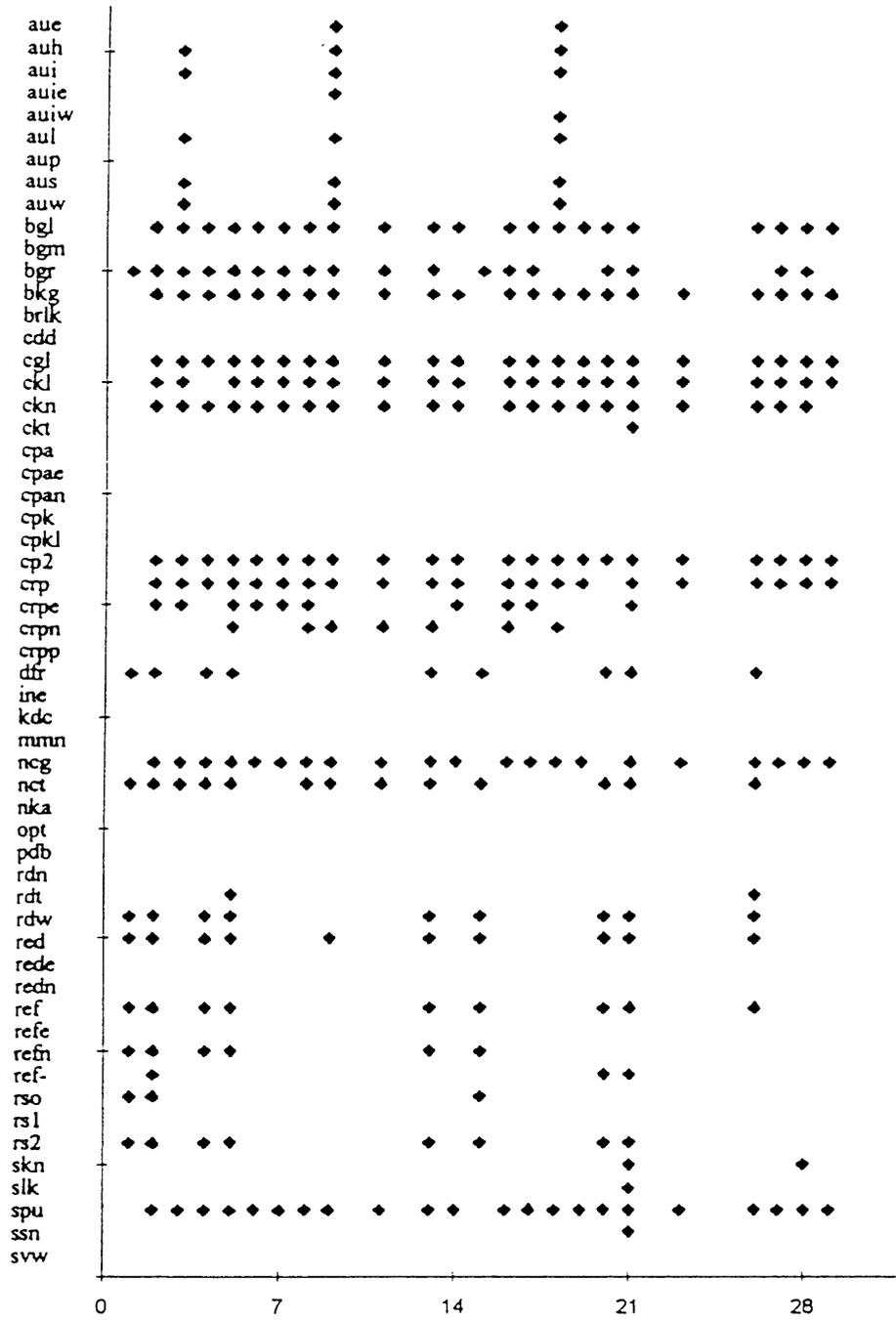
December 1993
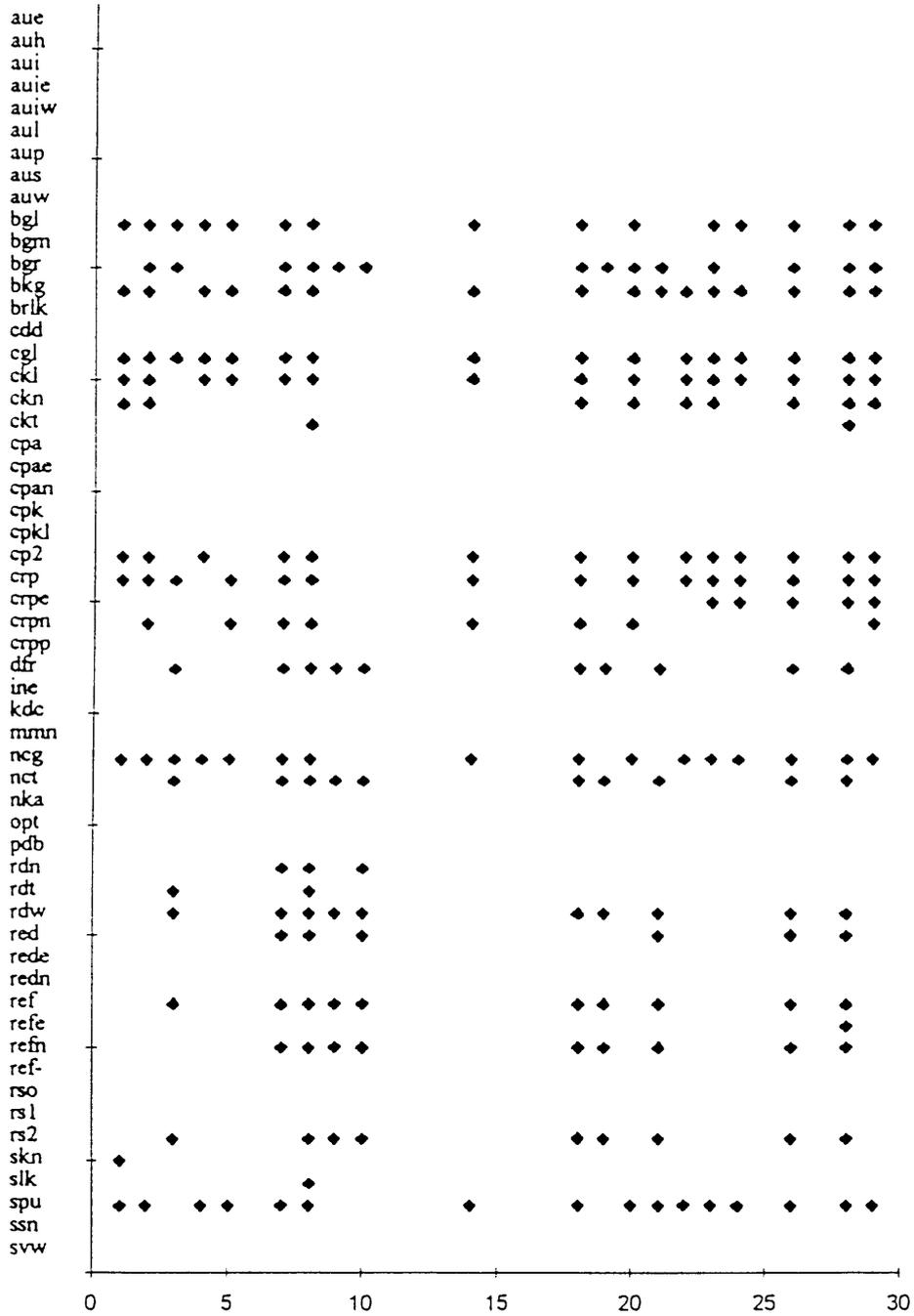
date

APPENDIX D

This appendix lists frequency response data for stations monitored by the PC/AT seismic acquisition system. These data show the magnification of ground displacement in digital counts per centimeter at a given frequency. Digital counts are limited to values less than 4096 (2^{12}) by a 12 bit analog to digital converter. This value corresponds to an analog signal of 5 volts peak to peak from the discriminator. Thus at station BGL, a peak to peak ground displacement of 5.0 x 10^{-5} cm. is magnified by 40442500 at 1 Hz. and produces an observed peak to peak displacement of 2022 counts (2.427 volts).

Frequency	AUE	AUE	AUH	AUH	AUH	AUH	AUI
0.1		470		470	2830	707	
0.2	4431	3774	4443	3772	29628	7407	2222
0.350018	23315	20240	23364	20217	174534	43633	11707
0.5	64148	57108	64233	56990	509220	127305	32190
0.750188	189893	176260	189954	175606	1595947	398986	95203
1	354577	334339	354578	332882	3015445	753861	177710
1.669449	806140	730681	806824	728665	6654193	1663548	404370
2	1005480	895085	1006751	893233	8185899	2046474	504578
2.5	1292480	113069	1294666	1129082	10381824	2595456	648865
3.333333	1751794	151009	1755383	1508748	13910987	3477746	879773
5	2241418	191100	2496256	2122258	18626809	4656702	1251086
10	2322302	196677	2930200	2474736	26654213	6663553	1850818
14.92537	1452600	122868	2611255	2202647	28413011	7103252	2114099
20	694763	587414	1741333	1468214	24905910	6226477	2094556
30.30303	150342	127069	440112	370966	21160210	5290052	1571228
40	32434	27408	100037	84315	9752671	2438167	955786
50	2673	2258	6702	5646	1632687	408171	151099
		gain adjustment 7/28/91		gain adjustment 7/27/91	gain adjustment 8/26/92	gain adjustment 9/3/92	

Frequency	AUI	AUL	AUL	AUP	AUP	AUS	AUS
0.1	236		473		501	244	244
0.2	1891	4443	3795	2222	4000	1946	1946
0.350018	10129	23364	20334	11780	21162	10307	10307
0.5	28527	64233	57302	32654	58571	28560	28560
0.750188	87758	189954	176478	97778	175014	85493	85493
1	166247	354578	334469	183350	327911	160289	160289
1.669449	364497	806824	732499	412415	739075	360667	360667
2	447132	1006751	898126	511780	918023	447640	447640
2.5	565564	1294666	1135493	654553	1175220	572608	572608
3.333333	756149	1755383	1517564	883300	1587191	772821	772821
5	1064047	2496253	2134916	1251599	2250333	1051353	1095160
10	1564080	3692859	3137673	1847461	3322918	1616652	1282778
14.92537	1784451	4218177	3579648	2109400	3794302	1845882	1142689
20	1767222	4179187	3545048	2089600	3758778	1879356	761901
30.30303	1325288	3135022	2658508	1446710	2602527	1477063	192545
40	806094	1907044	1617009	700195	1259544	875327	43766
50	127425	301477	255611	83728	150617	105509	2930
	gain adjustment 7/27/91		gain adjustment 7/23/91		gain adjustment 7/26/91	began recording 7/26/91	gain adjustment 8/4/93

Frequency	AUW	INE	INW	RED
0.1		1402	1441	
0.2	2222	11232	11525	53809
0.350018	11707	60129	61346	272571
0.5	32190	169241	171258	714722
0.750188	95203	520119	518993	1979797
1	177710	984923	977497	3618030
1.669449	404370	2161487	2174221	8712854
2	504578	2652604	2684210	11202161
2.5	648865	3356498	3415845	14873975
3.333333	879773	4489004	4590006	20775280
5	1201050	6318353	6223766	30264208
10	1850818	9288858	9551061	45470908
14.92537	2114099	10597887	10901274	52093164
20	2152735	10495656	11097517	51665492
30.30303	1692090	7871028	8721181	38785828
40	1002795	4787494	5168116	23599768
50	120874	756794	622943	3731214

Frequency	BGL	BGR	BKG	CGL	CKL	CKN	CKT
0.012589	5.266	9.678908	9.0343496	no	5.560896	1.3122872	no
0.015849	14.0095	25.749461	24.034698	calibration	14.794032	3.4911674	calibration
0.019953	33.265	61.14107	57.069434	available	35.12784	8.289638	available
0.025119	111.5475	205.02431	191.37089		117.79416	27.797637	
0.031623	389.5	715.901	668.2262		411.312	97.0634	
0.039811	861.57503	1583.5749	1478.1181		909.82323	214.7045	
0.050119	2078.1	3819.5478	3565.1884		2194.4736	517.86253	
0.063096	6021.2498	11067.057	10330.056		6358.4398	1500.4954	
0.079433	14786.25	27177.128	25367.291		15614.28	3684.7336	
0.1	35882.501	65952.037	61560.019		37891.921	8941.9193	
0.125893	82165.002	151019.27	140962.28		86766.243	20475.519	
0.158489	175392.5	322371.42	300903.38		185214.49	43707.812	
0.199526	372875	685344.25	639704.35		393756	92920.45	
0.251189	790225	1452433.6	1355710		834477.6	196924.07	
0.316228	1604250	2948611.5	2752251.3		1694088	399779.1	
0.398107	3286250	6040127.5	5637890.5		3470280	818933.5	
0.501187	6645750	12214889	11401449		7017912	1656120.9	
0.630957	13181000	24226678	22613324		13919136	3284705.2	
0.794328	24147000	44382186	41426593		25499232	6017432.4	
1	40442500	74333315	69383153		42707280	10078271	
1.258925	60655000	111483890	104059718		64051680	15115226	
1.584893	83122500	152779155	142604961		87777360	20714127	
1.995262	108322500	199096755	185838081		114388560	26993967	
2.511886	137995000	253634810	236744222		145722720	34388354	
3.162278	174282500	320331235	298999057		184042320	43431199	
3.981072	219450000	403349100	376488420		231739200	54686940	
5.011872	261825000	481234350	449186970		276487200	65246790	
6.309573	322375000	592525250	553066550		340428000	80335850	
7.943282	393425000	723115150	674959930		415456800	98041510	
10	468800000	861654400	804273280		495052800	116824960	
12.589254	537475000	987879050	922092110		567573600	133938770	
15.848932	620425000	1.14E+09	1.064E+09		655168800	154609910	
19.952623	605625000	1.113E+09	1.039E+09		639540000	150921750	
25.118864	624300000	1.147E+09	1.071E+09		659260800	155575560	
31.622777	478500000	879483000	820914600		505296000	119242200	
39.810717	437625000	804354750	750789450		462132000	109056150	
50.118723	345250000	634569500	592310900		364584000	86036300	
63.095734	261075000	479855850	447900270		275695200	65059890	
79.432823	110062500	202294875	188823225		116226000	27427575	
100	83730000	153895740	143647188		88418880	20865516	
		began recording 7/1/91	began recording 7/1/91			began recording 8/19/91	began recording

Frequency	CRP	CPA	CPAE	CPAN	CP2	CP2	DFR
0.012589	4.655144	no	no	no	3.0816632	2.243316	9.078584
0.015849	12.384398	calibration	calibration	calibration	8.1983594	5.968047	24.152378
0.019953	29.40626	available	available	available	19.466678	14.17089	57.34886
0.025119	98.60799				65.277597	47.519235	192.30789
0.031623	344.318				227.9354	165.927	671.498
0.039811	761.63232				504.1937	367.03096	1485.3553
0.050119	1837.0404				1216.1041	885.27061	3582.6444
0.063096	5322.7848				3523.6354	2565.0524	10380.635
0.079433	13071.045				8652.9137	6298.9426	25491.496
0.1	31720.131				20998.44	15285.946	61861.432
0.125893	72633.862				48082.959	35002.291	141652.46
0.158489	155046.97				102639.69	74717.207	302376.68
0.199526	329621.5				218206.45	158844.75	642836.5
0.251189	698558.9				462439.67	336635.85	1362347.9
0.316228	1418157				938807.1	683410.5	2765727
0.398107	2905045				1923113.5	1399942.5	5665495
0.501187	5874843				3889092.9	2831089.5	11457273
0.630957	11652004				7713521.2	5615106	22724044
0.794328	21345948				14130824	10286622	41629428
1	35751170				23666951	17228505	69722870
1.258925	53619020				35495306	25839030	104569220
1.584893	73480290				48643287	35410185	143303190
1.995262	95757090				63390327	46145385	186747990
2.511886	121987580				80754674	58785870	237903380
3.162278	154065730				101990119	74244345	300463030
3.981072	193993800				128422140	93485700	378331800
5.011872	231453300				153219990	111537450	451386300
6.309573	284979500				188653850	137331750	555774500
7.943282	347787700				230232310	167599050	678264700
10	414419200				274341760	199708800	808211200
12.589254	475127900				314530370	228964350	926606900
15.848932	548455700				363072710	264301050	1.07E+09
19.952623	535372500				354411750	257996250	1.044E+09
25.118864	551881200				365340360	265951800	1.076E+09
31.622777	422994000				280018200	203841000	824934000
39.810717	386860500				256098150	186428250	754465500
50.118723	305201000				202040300	147076500	595211000
63.095734	230790300				152781090	111217950	450093300
79.432823	97295250				64408575	46886625	189747750
100	74017320				48998796	35668980	144350520
		began	began	began	began	gain	
		recording	recording	recording	recording	adjustment	
					10/23/92	11/7/93	

Frequency	ILI	NCG	NCT	PDB	RDN	RDT	RDTN
0.012589	2.5992976	9.879016	4.865784	5.1943824	5.076424	8.84688	2.295976
0.015849	6.9150892	26.281822	12.944778	13.818971	13.505158	23.53596	6.108142
0.019953	16.419604	62.40514	30.73686	32.812596	32.06746	55.8852	14.50354
0.025119	55.059846	209.26311	103.06989	110.03045	107.53179	187.3998	48.63471
0.031623	192.2572	730.702	359.898	384.2028	375.478	654.36	169.822
0.039811	425.27343	1616.3147	796.09532	849.8576	830.55832	1447.446	375.64671
0.050119	1025.7502	3898.5156	1920.1644	2049.8379	2003.2884	3491.208	906.05161
0.063096	2972.0889	11295.865	5563.6348	5939.3608	5804.4848	10115.7	2625.2649
0.079433	7298.4931	27739.006	13662.495	14585.157	14253.945	24840.901	6446.8051
0.1	17711.603	67315.572	33155.431	35394.499	34590.731	60282.602	15644.771
0.125893	40556.645	154141.54	75920.462	81047.558	79207.062	138037.2	35823.941
0.158489	86573.74	329036.34	162062.67	173007.17	169078.37	294659.41	76471.132
0.199526	184051.1	699513.5	344536.5	367803.9	359451.5	626430	162573.5
0.251189	390055.06	1482462.1	730167.9	779477.94	761776.9	1327578	344538.1
0.316228	791857.8	3009573	1482327	1582432.2	1546497	2695140	699453
0.398107	1622093	6165005	3036495	3241557	3167945	5520900	1432805
0.501187	3280342.2	12467427	6140673	6555367.8	6406503	11164860	2897547
0.630957	6506141.6	24727556	12179244	13001738	12706484	22144080	5746916
0.794328	11918959	45299772	22311828	23818601	23277708	40566960	10528092
1	19962418	75870130	37368870	39892482	38986570	67943400	17632930
1.258925	29939308	113788780	56045220	59830092	58471420	101900400	26445580
1.584893	41029266	155937810	76805190	81992034	80130090	139645800	36241410
1.995262	53467986	203213010	100089990	106849314	104422890	181981800	47228610
2.511886	68114332	258878620	127507380	136118268	133027180	231831600	60165820
3.162278	86025842	326953970	161037030	171912258	168008330	292794600	75987170
3.981072	108320520	411688200	202771800	216465480	211549800	368676000	95680200
5.011872	129236820	491183700	241926300	258264180	252399300	439866000	114155700
6.309573	159124300	604775500	297874500	317990700	310769500	541590000	140555500
7.943282	194194580	738065300	363524700	388074420	379261700	660954000	171533300
10	231399680	879468800	433171200	462424320	451923200	787584000	204396800
12.589254	265297660	1.008E+09	496626900	530165340	518125900	902958000	234339100
15.848932	306241780	1.164E+09	573272700	611987220	598089700	1.042E+09	270505300
19.952623	298936500	1.136E+09	559597500	597388500	583822500	1.017E+09	264052500
25.118864	308154480	1.171E+09	576853200	615809520	601825200	1.049E+09	272194800
31.622777	236187600	897666000	442134000	471992400	461274000	803880000	208626000
39.810717	216011700	820984500	404365500	431673300	421870500	735210000	190804500
50.118723	170415400	647689000	319011000	340554600	332821000	580020000	150529000
63.095734	128866620	489776700	241233300	257524380	251676300	438606000	113828700
79.432823	54326850	206477250	101697750	108565650	106100250	184905000	47987250
100	41329128	157077480	77366520	82591272	80715720	140666400	36506280
	began recording 11/5/92			began recording 7/30/92			

Frequency	RDTE	RDW	REF	RSO	RS2	RWS	RED
0.012589	2.274912	4.697272	4.613016	5.16068	4.549824	0.9647312	no
0.015849	6.052104	12.496474	12.272322	13.72931	12.104208	2.5665404	calibration
0.019953	14.37048	29.67238	29.14014	32.5997	28.74096	6.094148	available
0.025119	48.18852	99.50037	97.71561	109.31655	96.37704	20.435502	
0.031623	168.264	347.434	341.202	381.71	336.528	71.3564	
0.039811	372.20041	768.52492	754.73972	844.34352	744.40082	157.84054	
0.050119	897.73921	1853.6652	1820.4156	2036.538	1795.4784	380.70792	
0.063096	2601.1799	5370.9548	5274.6148	5900.8248	5202.3598	1103.093	
0.079433	6387.6601	13189.335	12952.755	14490.525	12775.32	2708.8411	
0.1	15501.241	32007.191	31433.071	35164.851	31002.481	6573.6742	
0.125893	35495.281	73291.182	71976.542	80521.702	70990.562	15052.628	
0.158489	75769.562	156450.11	153643.83	171884.65	151539.12	32131.907	
0.199526	161082	332604.5	326638.5	365417.5	322164	68310.7	
0.251189	341377.2	704880.7	692237.1	774420.5	682754.4	144769.22	
0.316228	693036	1430991	1405323	1572165	1386072	293898.6	
0.398107	1419660	2931335	2878755	3220525	2839320	602041	
0.501187	2870964	5928009	5821677	6512835	5741928	1217501.4	
0.630957	5694192	11757452	11546556	12917380	11388384	2414759.2	
0.794328	10431504	21539124	21152772	23664060	20863008	4423730.4	
1	17471160	36074710	35427630	39633650	34942320	7409066	
1.258925	26202960	54104260	53133780	59441900	52405920	11111996	
1.584893	35908920	74145270	72815310	81460050	71817840	15228042	
1.995262	46795320	96623670	94890510	106156050	93590640	19844682	
2.511886	59613840	123091540	120883620	135235100	119227680	25280684	
3.162278	75290040	155459990	152671470	170796850	150580080	31928554	
3.981072	94802400	195749400	192238200	215061000	189604800	40203240	
5.011872	113108400	233547900	229358700	256588500	226216800	47966340	
6.309573	139266000	287558500	282400500	315927500	278532000	59059100	
7.943282	169959600	350935100	344640300	385556500	339919200	72075460	
10	202521600	418169600	410668800	459424000	405043200	85884160	
12.589254	232189200	479427700	470828100	526725500	464378400	98465420	
15.848932	268023600	553419100	543492300	608016500	536047200	113661860	
19.952623	261630000	540217500	530527500	593512500	523260000	110950500	
25.118864	269697600	556875600	546886800	611814000	539395200	114371760	
31.622777	206712000	426822000	419166000	468930000	413424000	87661200	
39.810717	189054000	390361500	383359500	428872500	378108000	80172900	
50.118723	149148000	307963000	302439000	338345000	298296000	63249800	
63.095734	112784400	232878900	228701700	255853500	225568800	47828940	
79.432823	47547000	98175750	96414750	107861250	95094000	20163450	
100	36171360	74687160	73347480	82055400	72342720	15339336	

Frequency	REDN	REDE	NNL	SPU	SKN	SLK	SLK
0.012589	no	no	no	20.453144	20.82387	11.34507	10.378233
0.015849	calibration	calibration	calibration	54.412898	55.399167	30.182067	27.609923
0.019953	available	available	available	129.20126	131.54312	71.666116	65.558662
0.025119				433.25049	441.10343	240.31793	219.83781
0.031623				1512.818	1540.2388	839.1388	767.6266
0.039811				3346.3574	3407.0123	1856.1772	1697.9921
0.050119				8071.3405	8217.6387	4477.0587	4095.5195
0.063096				23386.534	23810.43	12972.181	11866.679
0.079433				57429.796	58470.748	31855.498	29140.742
0.1				139367.63	141893.76	77305.261	70717.233
0.125893				319128.87	324913.29	177016.28	161930.79
0.158489				681224.49	693572.12	377865.61	345663.55
0.199526				1448246.5	1474496.9	803321.9	734862.05
0.251189				3069233.9	3124865.7	1702460.7	1557375.4
0.316228				6230907	6343846.2	3456196.2	3161655.9
0.398107				12763795	12995147	7079897	6476541.5
0.501187				25812093	26279954	14317604	13097444
0.630957				51195004	52122946	28397146	25977115
0.794328				93786948	95486897	52022297	47588908
1				157078670	159925822	87129322	79704079
1.258925				235584020	239854132	130675132	119538874
1.584893				322847790	328699614	179079114	163817823
1.995262				420724590	428350494	233369994	213481983
2.511886				535972580	545687428	297296428	271960546
3.162278				676913230	689182718	375474218	343475951
3.981072				852343800	867793080	472783080	432492060
5.011872				1.017E+09	1.035E+09	564075780	516004710
6.309573				1.252E+09	1.275E+09	694524700	635336650
7.943282				1.528E+09	1.556E+09	847594820	775361990
10				1.821E+09	1.854E+09	1.01E+09	923911040
12.589254				2.088E+09	2.125E+09	1.158E+09	1.059E+09
15.848932				2.41E+09	2.453E+09	1.337E+09	1.223E+09
19.952623				2.352E+09	2.395E+09	1.305E+09	1.194E+09
25.118864				2.425E+09	2.469E+09	1.345E+09	1.23E+09
31.622777				1.858E+09	1.892E+09	1.031E+09	943027800
39.810717				1.7E+09	1.731E+09	942819300	862471350
50.118723				1.341E+09	1.365E+09	743806600	680418700
63.095734				1.014E+09	1.032E+09	562459980	514526610
79.432823				427482750	435231150	237118650	216911175
100				325207320	331101912	180387912	165015084
						began recording 3/14/91	gain adjustment 9/15/92

Frequency	SSN
0.012589	5.1859568
0.015849	13.796556
0.019953	32.759372
0.025119	109.85198
0.031623	383.5796
0.039811	848.47908
0.050119	2046.5129
0.063096	5929.7268
0.079433	14561.499
0.1	35337.087
0.125893	80916.094
0.158489	172726.54
0.199526	367207.3
0.251189	778213.58
0.316228	1579865.4
0.398107	3236299
0.501187	6544734.6
0.630957	12980649
0.794328	23779966
1	39827774
1.258925	59733044
1.584893	81859038
1.995262	106675998
2.511886	135897476
3.162278	171633406
3.981072	216114360
5.011872	257845260
6.309573	317474900
7.943282	387444940
10	461674240
12.589254	529305380
15.848932	610994540
19.952623	596419500
25.118864	614810640
31.622777	471226800
39.810717	430973100
50.118723	340002200
63.095734	257106660
79.432823	108389550
100	82457304