

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Earthquake Data Archiving and Retrieval System: Archived Data  
Sets in the General Library -- GL000001 to GL000200

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

## INTRODUCTION

The USGS Earthquake Data Archiving and Retrieval System has been implemented using the computing facility of the Stanford Linear Accelerator Center (SLAC). The design and implementation of the system are described in Lee, Scharre and Crane (1983), and Crane, Lee, and Newberry (1984). Readers who are interested in using this system to query and retrieve earthquake data are referred to the Users' Manual (Crane, Lee and O'Neill, 1985).

The purpose of this report is to complement the above mentioned references in giving the readers a quick guide to what earthquake data sets are available in the system's General Library as of December 12, 1984. It is the first of a series of reports devoted to this purpose.

## EARTHQUAKE DATA ARCHIVING AND RETRIEVAL SYSTEM

The USGS Earthquake Data Archiving and Retrieval System is designed to archive any existing earthquake related data. Because numerous formats exist for these data, it is not practical to force everyone to adopt a uniform format. Therefore, we have set up three distinct libraries for storing, querying, and retrieving of earthquake data: (1) A General Library for data sets with arbitrary data structures and formats, (2) a Standardized Library for data sets using a standardized structure and recommended formats, and (3) two Waveform Libraries to handle the extremely large volume of seismic waveform data.

Figure 1 on page 3 briefly illustrates how the System works. The data sets are provided by contributors in the form of magnetic tapes or punched cards with description of contents and formats. These input data sets are first read onto a disk for editing with the "Edit System". An archivist then uses the "Archive System" to place the edited data sets onto a "Staging Disk" and then archival tapes. In the archiving process, data sets are copied, verified, and indexed in a "Database". Subsequently, the "Backup System" is used to backup the archived data sets independently via the SLAC Archive System. From the user's point of view, they may use the "Query System" to search the "Database" for the desired data sets. The result of a search is a list of pointers to the desired data sets on the archival tapes. The pointers are then used to display or retrieve specific datasets.

Because of the vast amounts of earthquake-related data, it is not economical or necessary to have all the data online. However, we do keep a sample of all the archived data sets online.

## DATA SAMPLES

This document is essentially a catalog in tabular form of the first 200 datasets archived as of December 12, 1984 from the General Library (GL). Each table is a separate dataset sample showing all of the dataset's explanatory material plus a short sampling of the data. To save space we have replaced large blocks of duplicate explanatory format material with a reference to a previous dataset sample.

Data sets were archived in the order of our processing. As a result, the data set names were assigned sequentially without regards to topics. To aid readers in quickly finding out what are archived in the first 200 data sets of the General Library, a major breakdown by topics is as follows:

1. Hypocenter data files from the International Seismological Centre (1904-1980): GL000001 to GL000029, and GL000031 to GL000037.
2. Hypocenter data files from the California Institute of Technology (1932-1975): GL000038 to GL000047. GL000060 to GL000112.
3. Phase data collected by the International Seismological Centre for California earthquakes (1971-1980): GL000049 to GL000058.
4. Hypocenter and phase data for southern California earthquakes compiled by the California Institute of Technology (1960-1980): GL000060 to GL000112.
5. Digital records of the Salmon and Sterling nuclear explosions: GL000113 to GL000136.
6. University of Southern California -- earthquake phase cards (1973-1980): GL000143 to GL000144.
7. Water levels in wells along San Andreas and San Jacinto fault zones (1976-1984): GL000145.
8. Investigations of radon and helium (1982-1984): GL000146 to GL000147, and GL000199 to GL000200.
9. Summary data for earthquakes located by the Adak Network (1983-1984): GL000148, and GL000198.
10. Dominion Observatory -- Computer re-evaluation of earthquake mechanism solutions (1922-1962): GL000149.
11. Summary of earthquake focal mechanisms for the western Pacific-Indonesian region (1929-1973): GL000150.
12. The Japan Meteorological Agency -- regional catalog of earthquakes in and near Japan (1926-1981): GL000151 to GL000152.
13. Earthquake summary data for the Utah region (1983-1984): GL000153.
14. USGS catalog of earthquakes along the San Andreas fault system in central California (1969-1980): GL000154 to GL000165.
15. Preliminary determination of epicenters (PDE) -- datafile of global earthquake hypocenters (1638-1983): GL000166 to GL000197.

Two indexes are provided at the end of this document, one by title and the other by persons who are involved in preparing the datasets.

Because of the large volume of data involved, some errors are unavoidable. We will appreciate readers informing us about any errors they discover. We will also welcome any suggestions for improvements.

#### REFERENCES

- Lee, W.H.K., Scharre, D.C., and Crane, G.R. (1983). A computer-based system for Organizing Earthquake-Related Data. U.S. Geological Survey Open-File Report 83-518, 28 pp.
- Crane, G.R., Lee, W.H.K., and Newberry, J.T. (1984). USGS Earthquake Data Archiving and Retrieval System: Reference Manual, U.S. Geological Survey Open-File Report 84-840, 159 pp.
- Crane, G.R., Lee, W.H.K., and O'Neill, M. (1985). USGS Earthquake Data Archiving and Retrieval System: User's Manual, U.S. Geological Survey Open-File Report 85-368, 24 pp.

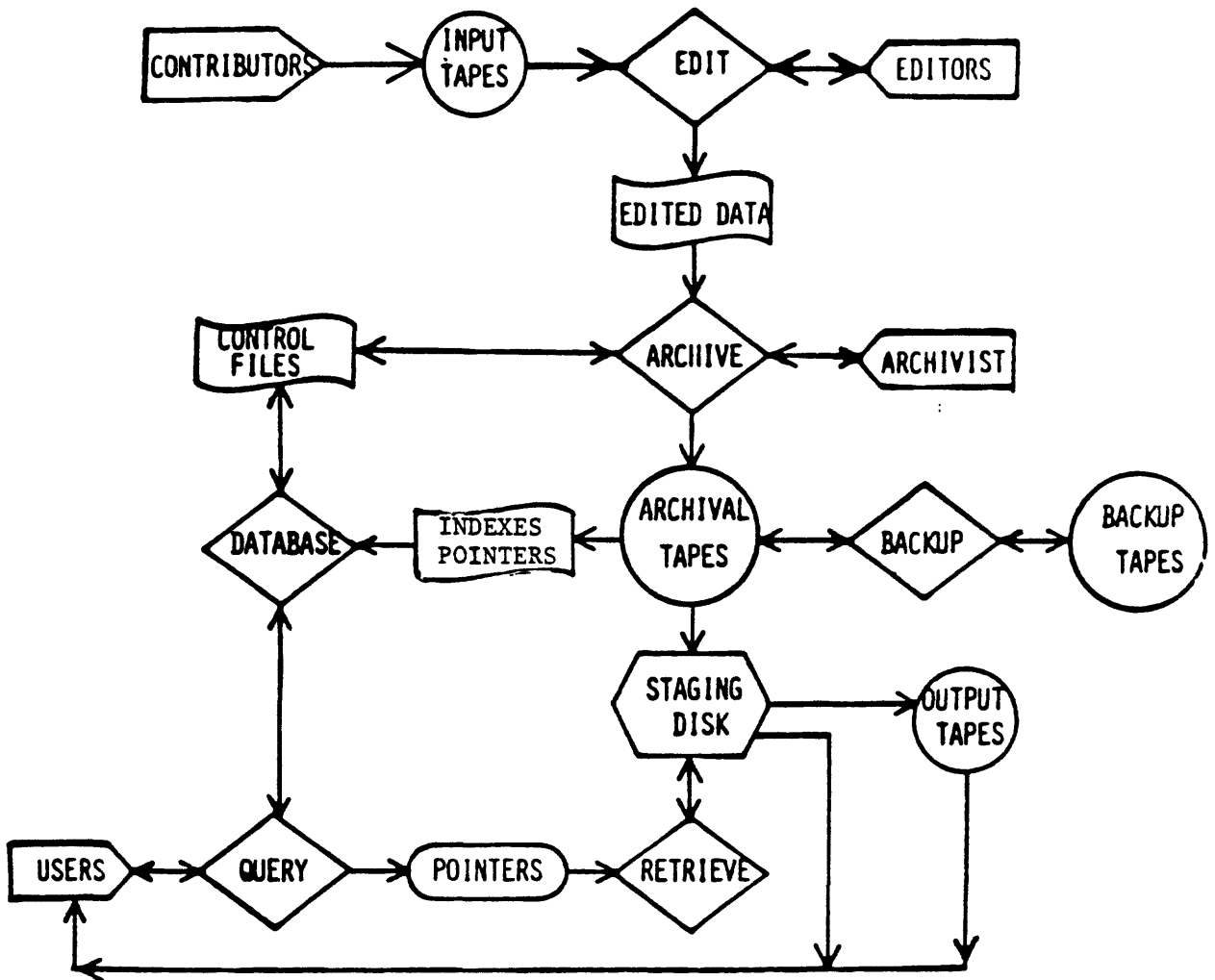


FIGURE 1: Overall scheme for organizing earthquake-related data.

## Table GL000001

C#DSN=GL000001;SIZE=000131;DATE=092484;ARCH=TM;TAPE=SM9310;FILE=083;STRT=000001;  
 C\*DATE : 19780101; 99; ISC0409;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19040101; 19091231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEARS FROM 1904 TO 1909;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED  
 C\* FROM THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:

## C\*FORMAT:

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01-06	A6	AUTHOR	ORGANIZATION THAT ISSUED THE DATA
C*	07-10	I4	YEAR	YEAR OF THE EVENT
C*	11-12	I2	MONTH	MONTH OF THE EVENT
C*	13-14	I2	DAY	DAY OF THE EVENT
C*	15-16	I2	HOUR	HOUR OF THE EVENT
C*	17-18	I2	MINUTE	MINUTE OF THE EVENT
C*	19-21	F3.1	SECOND	ORIGIN TIME (SECOND PORTION) OF THE EVENT
C*	22-26	F5.3	LAT	LATITUDE OF THE EPICENTER IN DEGREES
C*	27	A1	HYNS	N FOR NORTHERN OR S FOR SOUTHERN HEMISPHERE
C*	28-33	F6.3	LON	LONGITUDE OF THE EPICENTER IN DEGREES
C*	34	A1	HYEW	E FOR EASTERN OR W FOR WESTERN HEMISPHERE
C*	35-37	I3	HYDEP	FOCAL DEPTH IN KILOMETERS
C*	38-40	F3.2	MAG	MAGNITUDE OF THE EVENT
C*	41-42	A2	MSCALE	MAGNITUDE SCALE, E.G., MB, MS, ML
C*	43-45	A3	MAGAUT	MAGNITUDE AUTHORITY
C*	46-49	A4	INTMAX	MAXIMUM INTENSITY IN ROMAN NUMERAL OR "FELT"
C*	50-52	A3	ISCALE	INTENSITY SCALE, E.G., MM ETC.
C*	53-55	I3	REGION	FLINN-ENGDAHL REGION NUMBER
C*	56-61	A6	EFFECT	EFFECTS OF THE EVENT, I.E., FELT, TSUNAMI
C*	62-65	A4	ALPHA	OTHER REFERENCES IN ALPHA
C*	66-69	I4	NUMER	OTHER REFERENCES IN NUMERIC
C*	70-73	A4	SORQ	NUMBER OF STATIONS USED OR QUALITY CODE
C*	74	A1	CC	CONTROL COLUMN
C*	75-80	A6	SOURCE	DATA SOURCE

## C\*END-----

GUTE	19040120145206007000N079000W	775	PAS	83		GUTE
GUTE	19040404102600041750N023250E	750	PAS	363		GUTE
GUTE	19040607081754040000N134000E350750		PAS	660	-CCC	GUTE
GUTE	19040625144536052000N159000E	800	PAS	219		GUTE
GUTE	19040625210030052000N159000E	810	PAS	219		GUTE
GUTE	19040627000900052000N159000E	790	PAS	219		GUTE
GUTE	19040824205954030000N130000E	775	PAS	235		GUTE
GUTE	19040827215606064000N151000W	775	PAS	1		GUTE
GUTE	19041003030500012000N058000E	700	PAS	417		GUTE
GUTE	19041220054418008500N083000W	775	PAS	78		GUTE

\*\*\*\*\* 79 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000001

Table GL000002

C#DSN=GL000002;SIZE=000339;DATE=092484;ARCH=TM;TAPE=SM9310;FILE=083;STRT=000132;  
 C\*DATE : 19780101; 99; ISC1019;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19100101; 19191231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEARS FROM 1910 TO 1919;  
 C\*AUTHOR:  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED  
 C\* FROM THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

GUTE	19100101110200016500N084000W060710	PAS	94		GUTE
GUTE	19100108144930035000N122000E 675	PAS	665		GUTE
GUTE	19100122084830067500N017000W 710	PAS	637		GUTE
GUTE	19100123184942012000N060500W100720	PAS	95	-CCC	GUTE
GUTE	19100212181006032500N138000E350740	PAS	211	-BCB	GUTE
GUTE	19100218050918036000N024500E150700	PAS	368	-CCC	GUTE
GUTE	19100330165548021000S170000E080725	PAS	189	-CCC	GUTE
GUTE	19100412002213025500N122500E200775	PAS	243	-BCC	GUTE
GUTE	1910042022200020000S177000W330700	PAS	181	-CCC	GUTE
GUTE	19100501183036020000S169000E080710	PAS	186	-CCC	GUTE

\*\*\*\*\* 287 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000002

Table GL000003

C#DSN=GL000003;SIZE=000883;DATE=092484;ARCH=TM;TAPE=SM9310;FILE=083;STRT=000471;  
 C\*DATE : 19780101; 99; ISC2029;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19200101; 19291231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEARS FROM 1920 TO 1929;  
 C\*AUTHOR:  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED  
 C\* FROM THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

GUTE	19200112133958023500N144000E	600	PAS	213		GUTE
GUTE	19200130182645003000N077500W	600	PAS	102		GUTE
GUTE	19200202112218004000S152500E	770	PAS	192		GUTE
GUTE	19200208052430035000S111000E	625	PAS	598		GUTE
GUTE	19200210220715018000N067500W	650	PAS	89		GUTE
GUTE	19200222173550047500N146000E340700		PAS	220	-BCB	GUTE
GUTE	19200225175623035000N009500E	560	PAS	397		GUTE
GUTE	19200320183125035000S110000W	700	PAS	684		GUTE
GUTE	19200329050753051000N129000W	640	PAS	22		GUTE
GUTE	19200419210636019000N097000W110675		PAS	525	-BBB	GUTE

\*\*\*\*\* 831 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000003



Table GL000004

C#DSN=GL000004;SIZE=005034;DATE=092484;ARCH=TM;TAPE=SM9310;FILE=083;STRT=001354;  
 C\*DATE : 19780101; 99; ISC3039;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19300101; 19391231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEARS FROM 1930 TO 1939;  
 C\*AUTHOR:  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED  
 C\* FROM THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

GUTE	19300105011948049000N154000E140690	PAS	221	-BBB	GUTE
GUTE	19300106235000055000S131000W 600	PAS	691		GUTE
GUTE	19300111212100030000N139000E500500	PAS	211	-CCC	GUTE
GUTE	19300114220119016000S171000W030625	PAS	169		GUTE
GUTE	19300116002434034200N116900W 525	PAS	43		GUTE
GUTE	19300117111019033000S059000E 600	PAS	425		GUTE
GUTE	19300117165430008000N105000W 560	PAS	63		GUTE
GUTE	19300126122030018500N146500E190625	PAS	216	-BCB	GUTE
GUTE	19300214183820035750N024750E130675	PAS	370	-ABB	GUTE
GUTE	19300214204110021000S175000W050650	PAS	173		GUTE

\*\*\*\*\* 4982 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000004

Table GL000005

C#DSN=GL000005;SIZE=008133;DATE=081684;ARCH=TM;TAPE=SM9309;FILE=108;STRT=000001;  
 C\*DATE : 19780101; 99; ISC4049;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19400101; 19491231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEARS FROM 1940 TO 1949;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  
 ISS 19400101121509017800S178800W477 181 ISS  
 CGS 19400101121512017200S178700W550 181 USE  
 GUTE 19400101121513018000S178500W570625 PAS 181 -BBB GUTE  
 ISS 19400102000708030300N 22000E 401 ISS  
 GUTE 19400102110714028500S113000W 625 PAS 685 GUTE  
 CGS 19400102110718028600S113800W 685 USE  
 ISS 19400102110718028500S113500W 685 ISS  
 ISS 19400103140956036500N141600E 228 ISS  
 CGS 19400104011018034000S162000W 632 USE  
 CGS 19400104080712038300N116300W 37 USE  
 \*\*\*\*\* 8081 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000005

Table GL000006

C#DSN=GL000006;SIZE=011349;DATE=081684;ARCH=TM;TAPE=SM9309;FILE=109;STRT=000001;  
 C\*DATE : 19780101; 99; ISC5054;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19500101; 19541231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEARS FROM 1950 TO 1954;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

PDE	19500101025121026000N110000W	49		BCIS
ISS	19500101025216025100N109700W	49		ISS
CGS	19500101025221025000N110000W	49		USE
BCIS	19500101100330041200N014800E	VI MM390	APRX	BCIS
ISS	19500101160429017000N121500E	249		ISS
PDE	19500102004226019000N067500W	89		BCIS
SYKES	19500102004229819030N 67720W 37470 PAL	89	N 42	
CGS	19500102004230019000N067500W060	FELT 89		USE
ISS	19500102004234019100N067100W064	89		ISS
ISS	19500102011528007100N034600W	406		ISS

\*\*\*\*\* 11297 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000006

Table GL000007

C#DSN=GL000007;SIZE=015987;DATE=081634;ARCH=TM;TAP#=S19309;FILE=110;STRT=000001;  
 C\*DATE : 19780101; 99; ISC5559;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19550101; 19591231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEARS FROM 1955 TO 1959;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

CGS	19550101103441028500N044000W	403		USE
ISS	19550101103442028100N044400W	403		ISS
CGS	19550101104932028500N044000W	403		USE
ISS	19550101104933028100N044400W	403		ISS
BCIS	19550101104935028750N044250W	403		BCIS
BCIS	19550101165054026000S175000W	175	APRX	BCIS
API	19550101165106027000S177000W	177		BCIS
CGS	19550101180308051000N178500W	7		USE
CGS	19550101183741051500N178500W060	7		USE
BCIS	19550102020952003500S134250E	196		BCIS

\*\*\*\*\* 15235 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000007

Table GL000008

C#DSN=GL000008;SIZE=005552;DATE=081684;ARCH=TM;TAPE=SM9309;FILE=111;STRT=000001;  
 C#DATE : 19780101; 99; ISC1960;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: ;  
 C#ALPHA: 19600101; 19601231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C#KEYWD: ;  
 C#TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C# FOR THE YEAR 1960;  
 C#AUTHOR: ;  
 C#INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C# UNITED KINGDOM;  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C# THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C#REFERENCE:  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C#END-----  

TAC	19600101023448015950N100133W	510	TAC	65	BCIS
CGS	19600101041140049000N153500E			221	USE
CGS	19600101041732027500N142000E			212	USE
CGS	19600101055726018500N147000E			215	USE
BCIS	19600101105805007000N076500W			99	BCIS
PMG	19600101210411006500S147500E			207	BCIS
ISS	19600101231231056090N163020E000			218	ISS
CGS	19600101231233056000N162500E			218	USE
MOS	19600101231236056000N164000E	538	MAT	4	BCIS
CGS	19600102015218054000N157500E			217	USE

\*\*\*\*\* 5500 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000008

Table GL000009

C#DSN=GL000009;SIZE=003141;DATE=081684;ARCH=TM;TAPE=SM9309;FILE=111;STRT=005553;  
 C\*DATE : 19780101; 99; ISC1961;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19610101; 19611231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1961;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

TAC	19610101110229016400N098650W	58		BCIS
BCIS	19610101131445031500S178500E	177		BCIS
ISS	19610101163823018310S178130W551	181		ISS
SYKES	19610101163824118370S178040W563	181	N 18	
SYKES	19610101184545486440N 70060E	651	N 8	
BCIS	19610101193326055800S008000E	412		BCIS
SYKES	19610101221121529320S177040W147	178	N 9	
MOS	19610102101140012400S166400E 675 PAS	184		BCIS
ISS	19610102101155012500S166540E106	184		ISS
TAC	19610102124634016083N097550W	60		BCIS

\*\*\*\*\* 3089 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000009

Table GL000010

C#DSN=GL000010;SIZE=003323;DATE=081684;ARCH=TM;TAPE=SM9309;FILE=112;STRT=000001;  
 C#DATE : 19780101; 99; ISC1962;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: ;  
 C#ALPHA: 19620101; 19621231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C#KEYWD: ;  
 C#TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C# FOR THE YEAR 1962;  
 C#AUTHOR: ;  
 C#INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C# UNITED KINGDOM;  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C# THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C#REFERENCE:  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C#END-----  
 ISS 19620101024103052050N177830E000 6 ISS  
 PEK 19620101024104052000N178500E 600 PEK 6 BCIS  
 OBM 19620101024106052000N178500E 600 PEK 6 BCIS  
 MOS 19620101024110052000N177000E 475 MOS 6 BCIS  
 JMA 19620101051737238233N141900E 228 BCIS  
 SYKES 19620101121547027240S175180W 0 177 N 18  
 CAR 19620101132430006900N073000W176 99 BCIS  
 SYKES 19620101132442706710N 73370W170 99 N 11  
 NOU 19620101153113022500S171000E 189 BCIS  
 UPP 19620101180545061000N005500E 535 BCIS  
 \*\*\*\*\* 3271 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000010

Table GL000011

C#DSN=GL000011;SIZE=003619;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=113;STRT=000001;  
 C\*DATE : 19780101; 99; ISC1963;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19630101; 19631231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1963;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

BCIS	19630101154307043200N013300E		IV	MM	381		BCIS
MOS	19630101192732035400N058800E	450	MOSFELT		348		BCIS
SHL	19630101233905057000N160000W	575	PAL		11		BCIS
ISS	19630101233906056570N157560W051				12		ISS
PEK	19630101233908054500N155500W	675	PEK		17		BCIS
MOS	19630101233910055000N155000W	650	PAS		17		BCIS
SYKES	19630102005344517660N 82190W 17400		PAL		94	N 18	
MOS	19630102114636040500N080000E	400	MOS		321		BCIS
OBM	19630102145554004000S136000E	530	QUE		196		BCIS
PEK	19630102145558004000S136000E	550	PEK		196		BCIS

\*\*\*\*\* 3567 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000011



Table GL000012

C#DSN=GL000012;SIZE=010120;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=114;STRT=000001;  
 C\*DATE : 19780101; 99; ISC1964;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19640101; 19641231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1964;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

ISC	19640101030055432970N130840E 0	235	N 6	ISC
ISC	19640101042213943700N126300W 33370	30	N 6	ISC
ISC	19640101050259025100N122200E 33	243	N 6	ISC
ISC	19640101051425537310N142980E 27440	229	N 48	ISC
ISC	19640101080212038300N111800W	478	N 3	ISC
ISC	19640101085442646400N154100E 33460	222	N 6	ISC
ISC	19640101091401819100S169550E249	186	N 10	ISC
ISC	19640101094359118100N105870W 33430	54	N 19	ISC
USCGS	19640101094528723900S 67400W200410	127	N 6	ISC
ISC	19640101095837841420S176700E 33	160	N 8	ISC

\*\*\*\*\* 10068 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000012

Table GL000013

C\*DSN=GL000013;SIZE=010134;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=115;STRT=000001;  
 C\*DATE : 19780101; 99; ISC1965;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19650101; 19651231; 90.05; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1965;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

WAR	19650101005244050230N 18960E	200	548	N 3	ISC
ISC	19650101012435038600S175800E	12	159	N 8	ISC
ISC	19650101025644118700N107900W	33360	54	N 7	ISC
ISC	196501010344174 5450S154250E	142	193	N 15	ISC
ISC	19650101041440135360N136880E	0	232	N 14	ISC
ISC	19650101045301038900S175900E	12	159	N 8	ISC
ISC	19650101045419638600S175900E	12	159	N 9	ISC
PAS	19650101063953934140N117480W	9180	43	N 0	ISC
ISC	19650101074130733970N117520W	8440	43	N 20	ISC
ISC	19650101080415733950N117610W	6450	43	N 33	ISC

\*\*\*\*\* 10082 data cards not shown here \*\*\*\*\*  
 C\*FINIS DSN=GL000013

Table GL000014

C#DSN=GL000014;SIZE=011154;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=116;STRT=000001;  
 C\*DATE : 19780101; 99; ISC1966;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19660101; 19661231; 90.05; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1966;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

USCGS	19660101015953016300S 73400W 33	115	N 6	ISC
ISC	19660101061507035800S180000W 33	688	N 10	ISC
ISC	19660101061915010620S166260E 61	184	N 7	ISC
ISC	19660101063627916670N 97690W 95390	60	N 16	ISC
ISC	19660101084154657510N153700W 42420	13	N 8	ISC
ISC	19660101090000916890S 72350W 23	115	N 7	ISC
ISC	19660101095829031000N131400E 53	235	N 8	ISC
ISC	1966010111327014770N119500E 35	249	N 11	ISC
ROC	19660101112920142850N 78280W 5300	472	N 0	ISC
TAC	19660101120817015700N 98750W	65	N 3	ISC

\*\*\*\*\* 11102 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000014

Table GL000015

C#DSN=GL000015;SIZE=012395;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=117;STRT=000001;  
 C\*DATE : 19780101; 99; ISC1967;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSON: ;  
 C\*ALPHA: 19670101; 19671231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1967;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  
 ISC 19670101000417013200S165800E119 186 N 9 ISC  
 ISC 19670101001311011420S165710E 0 184 N 8 ISC  
 ISC 19670101002108012020S166080E 34510 184 N133 ISC  
 ISC 19670101004516012200S166000E 22 184 N 9 ISC  
 ISC 196701010105450 0020S125970E 18480 269 N 36 ISC  
 ISC 19670101021948818900S173400W 33430 173 N 13 ISC  
 ISC 19670101025939610950N 93170E108460 703 N 59 ISC  
 LAO 19670101031318027000S 66000W 410 130 N 7 ISC  
 ISC 19670101031319711990S166130E 43480 184 N 40 ISC  
 ISC 196701010335444 7500N 94500E 34440 704 N 19 ISC  
 \*\*\*\*\* 12343 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000015

Table GL000016

C#DSN=GL000016;SIZE=014252;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=118;STRT=000001;  
 C#DATE : 19780101; 99; ISC1968;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: ;  
 C#ALPHA: 19680101; 19681231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C#KEYWD: ;  
 C#TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C# FOR THE YEAR 1968;  
 C#AUTHOR: ;  
 C#INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C# UNITED KINGDOM;  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C# THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C#REFERENCE:  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C#END-----  

ISC	196801010102580	9100S	80400W	33410	108	N 10	ISC
LAO	196801010121260	7000N	74000W	470	99	N 1	ISC
NOU	196801010212130	22500S	171250E	370	189	N 4	ISC
LAO	196801010239100	29000S	63000W	460	132	N 1	ISC
ISC	196801010241250	2360N	79690W	35440	83	N 39	ISC
ISC	196801010403450	2920N	101020W	157430	693	N 38	ISC
ISC	196801010412484	62430N	149570W	33	1	N 7	ISC
ISC	196801010610532	62210N	149600W	44	1	N 8	ISC
ISC	196801010611025	46400N	150500E	189380	221	N 11	ISC
ISC	196801010656250	22400S	173900W	33450	174	N 11	ISC

\*\*\*\*\* 14200 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000016

Table GL000017

C#DSN=GL000017;SIZE=013233;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=119;STRT=000001;  
 C\*DATE : 19780101; 99; ISC1969;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19690101; 19691231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1969;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

ATH	19690101010242036700N 29300E	366	N 4	ISC
ISC	19690101022509065640N149980W 10	676	N 6	ISC
ISC	19690101045338052070N170090W 38470	9	N 66	ISC
ISC	19690101055536421310S 67170W203380	124	N 8	ISC
NOU	19690101063401019800S168600E 340	186	N 3	ISC
ISC	19690101065330060330S150400E 38	701	N 42	ISC
ISC	19690101071323020300N 99000W 30	523	N 7	ISC
ISC	19690101072829736590N138130E 0	227	N 23	ISC
JMA	19690101073424336450N138130E 0400	227	N 16	ISC
ISC	196901010804341 6090S 77200W100430	111	N 14	ISC

\*\*\*\*\* 13181 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000017

Table GL000018

C#DSN=GL000018;SIZE=011820;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=120;STRT=000001;  
 C\*DATE : 19780101; 99; ISC1970;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19700101; 19701231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1970;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

TRN	19700101011711317600N 61400W 89	92	N 3	ISC
ISC	19700101011930015900N 60800W 88	92	N 14	ISC
NOU	19700101013617019250S169000E 350	186	N 5	ISC
ISC	197001010143480 8540N 83350W 33530	78	N141	ISC
ISC	19700101014956828530N129390E 49510	238	N107	ISC
ISC	197001010329300 4900S102830E170490	274	N 31	ISC
ISC	19700101033130316200S177020E 33490	182	N 26	ISC
ISC	19700101044442029400S 90600W 33	683	N 7	ISC
ISC	19700101052651216170N 59690W 29	92	N 8	ISC
LAD	19700101053302043100N145700E 45380	224	N 2	ISC

\*\*\*\*\* 11768 data cards not shown here \*\*\*\*\*  
 C\*FINIS DSN=GL000018

Table GL000019

C#DSN=GL000019;SIZE=011422;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=121;STRT=000001;  
 C#DATE : 19780101; 99; ISC1971;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: ;  
 C#ALPHA: 19710101; 19711231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C#KEYWD: ;  
 C#TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C# FOR THE YEAR 1971;  
 C#AUTHOR: ;  
 C#INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C# UNITED KINGDOM;  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C# THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C#REFERENCE:  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C#END-----  

QUE	19710101010610030800N075600E	33490	308	N 0	ISC
ISC	19710101013722444707S166871E	12	161	N 9	ISC
WAR	19710101014110050330N018870E	0260	548	N 0	ISC
ISC	19710101021010059065S026149W	33480	153	N 13	ISC
ISC	19710101031249438043N020451E	0	364	N 12	ISC
ISC	19710101044529659624N144649W	0510	15	N109	ISC
ISC	19710101045349716617S168004E	33	186	N 6	ISC
ISC	19710101055605736084N139958E	57	227	N 34	ISC
ISC	19710101065052947778N128610W	33	26	N 11	ISC
TAC	19710101071455019690N101600W	33460	57	N 0	ISC

\*\*\*\*\* 11370 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000019



Table GL000020

C#DSN=GL000020;SIZE=011949;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=122;STRT=000001;  
 C\*DATE : 19780101; 99; ISC1972;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19720101; 19721231; 90.05; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1972;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  

ISC	19720101004645638442S175919E 3	159	N 8	ISC
ISC	19720101014413205484S153098E 58	190	N 27	ISC
ISC	19720101025413118160S167718E 38	186	N 35	ISC
ISC	19720101074130626322S027370E 0	584	N 5	ISC
ISC	19720101101548504628S155237E510520	193	N146	ISC
ISC	19720101112736566585N144871W 33370	676	N 27	ISC
ISC	19720101130119264040N022166W 33430	638	N 35	ISC
ISC	19720101140442905070S153253E 40	190	N 35	ISC
ISC	19720101144153164160N022276W 33430	638	N 21	ISC
ISC	19720101152040810605S113506E 49	282	N 28	ISC

\*\*\*\*\* 11897 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000020

Table GL000021

C#DSN=GL000021;SIZE=012313;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=123;STRT=000001;  
 C\*DATE : 19780101; 99; ISC1973;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19730101; 19731231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1973;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  
 ISC 19730101034609209294S150729E 41 207 N 57 ISC  
 ISC 19730101052229715081S173916W 33490 173 N 57 ISC  
 TIF 19730101064709743000N047300E 0 337 N 0 ISC  
 ISC 19730101075736736998N121749W 8 39 N 7 ISC  
 ISC 19730101081635916536S028108E 0 576 N 5 ISC  
 TIF 19730101085540543400N045100E 0 337 N 0 ISC  
 ISC 19730101092901822389S066128W249450 128 N 39 ISC  
 ISC 19730101114236135560S015594W 0530 411 N130 ISC  
 ISC 19730101122050738448N021538E 0 364 N 8 ISC  
 ISC 19730101132053616495S028330E 0 576 N 6 ISC  
 \*\*\*\*\* 12261 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000021

Table GL000022

C#DSN=GL000022;SIZE=013484;DATE=081784;ARCH=TM;TAPE=SM9309;FILE=124;STRT=000001;  
 C\*DATE : 19780101; 99; ISC74;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: ;  
 C\*ALPHA: 19740101; 19741231; 90.0S; 90.0N; 180.0W; 180.0E; ; A002;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1974;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A DATA TAPE OBTAINED FROM  
 C\* THE INTERNATIONAL SEISMOLOGICAL CENTRE IN 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000001 for details  
 \*\*\*\*\*

C\*END-----  
 ISC 19740101030309806723S148165E 0 192 N 4 ISC  
 PAS 19740101032253435930N118120W 4240 39 N 0 ISC  
 ISC 19740101054726320110S173811W 33440 173 N 36 ISC  
 ISC 19740101055443118699S168863E118 186 N 6 ISC  
 ISC 19740101065204319951S170414E 33 186 N 23 ISC  
 ISC 19740101070021620082S170162E 33 186 N 9 ISC  
 ISC 19740101074226919989S170106E 33 186 N 9 ISC  
 ISC 19740101075704621551N142895E333490 215 N127 ISC  
 ISC 19740101092844922053S176839W212460 171 N 55 ISC  
 ISC 19740101093656114599S166394E 46470 186 N 17 ISC  
 \*\*\*\*\* 13432 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000022

Table GL000023

C#DSN=GL000023;SIZE=027225;DATE=082084;ARCH=TM;TAPE=SM9309;FILE=125;STRT=000001;  
 C\*DATE: 19830624; 99; ISC1974;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19740101; 19741231; 90.05; 90.0N; 180.0W; 180.0E; ; A001;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA. FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1974 AS REFORMATED BY NEIS;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS TAKEN FROM A TAPE SENT BY RAY BULAND, U.S.  
 C\* GEOLOGICAL SURVEY, BOX 25046, M.S. 967, DENVER FEDERAL CENTER,  
 C\* DENVER, COLORADO, ON JUNE 24, 1983. THERE ARE 13442 EVENTS FOR 1974.  
 C\*REFERENCE:

C\*FORMAT:

C\*

C\* CARD 1

C\*

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
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C\*

C*	01	X		BLANK
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C*	02-06	A5	AGENCY	CONTRIBUTING ORGANIZATION, SOURCE, AUTHORITY.
----	-------	----	--------	--

C\*

C\* ADK: ADAK, AK, USA

C\*

C\* AEC: U.S. ATOMIC ENERGY COMMISSION

C\*

C\* ALG: ALGIERS, ALGERIA

C\*

C\* ALI: ALICANTE, SPAIN

C\*

C\* ALM: ALMERIA, SPAIN

C\*

C\* ALQ: ALBUQUERQUE, NM, USA

C\*

C\* APA: APATITY, RSFSR, USSR

C\*

C\* API: APIA, SAMOA IS.

C\*

C\* ATH: ATHENS OBSERVATORY, GREECE

C\*

C\* BCI: BUREAU CENTRAL INTERNATIONAL

C\*

C\* DE SEISMOLOGIE, STRASBOURG, FRANCE

C\*

C\* BLA: BLACKSBURG, VA, USA

C\*

C\* BNS: BENSBERG, FEDERAL REPUBLIC OF GERMANY

C\*

C\* BOG: BOGOTA, COLUMBIA

C\*

C\* BRA: BRATISLAVA, CZECHOSLOVAKIA

C\*

C\* BRK: BERKELEY (HAVILAND), CA, USA

C\*

C\* BUC: BUCHAREST, ROMANIA

C\*

C\* BUL: BULAWAYO, RHODESIA

C\*

C\* CAN: CANBERRA, AUSTRALIAN CAPITAL TERRITORY,

C\*

C\* AUSTRALIA

C\*

C\* CAR: CARACAS, VENEZUELA

C\*

C\* CFR: CHARLES F. RICHTER

C\*

C\* CGS: COAST AND GEODETIC SURVEY

C\*

C\* CHC: CHAPEL HILL, NC, USA

C\*

C\* CLL: COLLMBERG, GERMAN DEMOCRATIC REPUBLIC

C\*

C\* DJA: DJAKARTA, JAVA, INDONESIA

C\*

C\* EQH: EARTHQUAKE HISTORY OF THE UNITED STATES

C\*

C\* ERL: ENVIRONMENTAL RESEARCH LABORATORIES

C\*

C\* G-R: GUTENBERG-RICHTER

C\* GOL: GOLDEN (BERGEN PARK), CO, USA  
 C\* GS : U.S. GEOLOGICAL SURVEY, DENVER, CO, USA  
 C\* HEL: HELSINKI, FINLAND  
 C\* HRB: HURBANOVO, CZECHOSLOVAKIA  
 C\* HVO: HAWAIIAN VOLCANO OBSERVATORY,  
 C\* HAWAII NATIONAL PARK, HI, USA  
 C\* ISK: ISTANBUL - KANDILLI, TURKEY  
 C\* ISS: INTERNATIONAL SEISMOLOGICAL SUMMARY,  
 C\* KEW, ENGLAND, UK  
 C\* IST: ISTANBUL, TURKEY  
 C\* JER: JERUSALEM, ISRAEL  
 C\* JMA: JAPAN METEOROLOGICAL AGENCY, TOKYO, JAPAN  
 C\* JOH: JOHANNESBURG, SOUTH AFRICA  
 C\* KAR: KARACHI, PAKISTAN  
 C\* KEW: KEW, ENGLAND, UK  
 C\* KIR: KIRUNA, SWEDEN  
 C\* LEM: LEMBANG, JAVA, INDONESIA  
 C\* LIS: LISBON, PORTUGAL  
 C\* LJU: LJUBLJANA, YUGOSLAVIA  
 C\* LWI: LWIRO, ZAIRE  
 C\* MAL: MALAGA, SPAIN  
 C\* MAN: MANILA, PHILIPPINES  
 C\* MAT: MATSUSHIRO, HONSHU, JAPAN  
 C\* MER: MERIDA, MEXICO  
 C\* MOS: MOSCOW, RSFSR, USSR  
 C\* MOX: MOXA, GERMAN DEMOCRATIC REPUBLIC  
 C\* NES: NORTHEASTERN SEISMOLOGICAL ASSOCIATION,  
 C\* WESTON, MA, USA  
 C\* NOS: NATIONAL OCEAN SURVEY  
 C\* NOU: NOUMEA, NEW CALEDONIA  
 C\* NRR: NORTH RENO, NV, USA  
 C\* OAX: OAXACA, MEXICO  
 C\* OBM: ULAN BATOR, MONGOLIA  
 C\* OTT: OTTAWA, ONTARIO, CANADA  
 C\* OXF: OXFORD, MS, USA  
 C\* PAL: PALISADES, NY, USA  
 C\* PAS: PASADENA, CA, USA  
 C\* PEK: PEKING, CHINA  
 C\* PET: PETROPAVLOVSK, RSFSR, USSR  
 C\* PMG: PORT MORESBY, PAPUA  
 C\* PMR: PALMER, AK, USA  
 C\* PRA: PRAHA (PRAGUE), CZECHOSLOVAKIA  
 C\* PRU: PRHHONICE, CZECHOSLOVAKIA  
 C\* QUE: QUETTA, PAKISTAN  
 C\* RAC: RACIBORZ, POLAND  
 C\* REY: REYKJAVIK, ICELAND  
 C\* RIV: RIVERVIEW, NEW SOUTH WALES, AUSTRALIA  
 C\* RMP: ROME (MONTE PORZIO CATONE), ITALY  
 C\* ROM: ROME, ITALY  
 C\* SAN: SANTIAGO, CHILE  
 C\* SEA: SEATTLE, WA, USA  
 C\* SHI: SHIRAZ, IRAN  
 C\* SHL: SHILLONG, INDIA  
 C\* SLM: ST. LOUIS, MO, USA  
 C\* SNM: SOCORRO, NM, USA  
 C\* SSS: SAN SALVADOR, EL SALVADOR

C\* STR: STRASBOURG, FRANCE  
 C\* STU: STUTTGART, FEDERAL REPUBLIC OF GERMANY  
 C\* SYK: SYKES  
 C\* TAC: TACUBAYA, MEXICO  
 C\* TEH: TEHERAN, IRAN  
 C\* TOC: TOCKLAI, INDIA  
 C\* TRI: TRIESTE, ITALY  
 C\* TRN: TRINIDAD, TRINIDAD, W.I.  
 C\* TUL: TULSA, OK, USA  
 C\* UCC: UCCLE, BELGIUM  
 C\* UGL: UGLEGORSK, RSFSR, USSR  
 C\* UPP: UPPSALA, SWEDEN  
 C\* USE: UNITED STATES EARTHQUAKES  
 C\* VIC: VICTORIA, BRITISH COLUMBIA, CANADA  
 C\* WAR: WARSAW, POLAND  
 C\* WEL: WELLINGTON, NEW ZEALAND  
 C\* YSS: YUZHNO-SAKHALINSK, RSFSR, USSR  
 C\* ZUR: ZURICH, SWITZERLAND  
 C\* 07-12 A6 YEAR YEAR ENCLOSED BY PARENTHESES DENOTES  
 C\* B.C. DATE.  
 C\* 13-14 I2 MONTH  
 C\* 15-16 I2 DAY  
 C\* 17-25 F9.2 ORTIME ORIGIN TIME: UNIVERSAL TIME (GREENWICH TIME, UTC)  
 C\* 26-27 A2 AUTHOR AUTHORITY RESPONSIBLE FOR ORIGIN TIME AND  
 C\* COORDINATE PARAMETERS  
 C\* A : PARAMETERS OF EXPLOSION SUPPLIED BY U.S.  
 C\* ATOMIC ENERGY COMMISSION (AEC)  
 C\* B : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* UNIVERSITY OF CALIFORNIA AT BERKELEY  
 C\* CN: PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* PACIFIC GEOSCIENCE CENTRE, SIDNEY, BRITISH  
 C\* COLOMBIA, CANADA  
 C\* E : SOME OR ALL PARAMETERS OF EXPLOSION  
 C\* SUPPLIED BY ANY GROUP OR INDIVIDUAL OTHER  
 C\* THAN AEC  
 C\* G : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* U.S. GEOLOGICAL SURVEY (USGS) FOR ANY AREA  
 C\* OTHER THAN ISLAND OF HAWAII  
 C\* H : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* USGS HAWAIIAN VOLCANO OBSERVATORY  
 C\* J : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* ST. LOUIS UNIVERSITY  
 C\* L : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* LAMONT-DOHERTY GEOLOGICAL OBSERVATORY  
 C\* M : HYPOCENTER BASED ON MACROSEISMIC  
 C\* INFORMATION  
 C\* P : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY  
 C\* PA: PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* STATE COLLEGE OF PENNSYLVANIA  
 C\* R : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* UNIVERSITY OF NEVADA  
 C\* S : AN NEIS SOLUTION BASED ON USE OF DENSE  
 C\* LOCAL NETWORKS, A LOCAL CRUSTAL MODEL,  
 C\* OR OTHER METHODS NOT ROUTINELY APPLIED BY  
 C\* NEIS

C\* TC: PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* TENNESSEE EARTHQUAKE INFORMATION CENTER  
 C\* (TEIS)  
 C\* TL: PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* OKLAHOMA GEOPHYSICAL OBSERVATORY, TULSA,  
 C\* OKLAHOMA  
 C\* U : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* UNIVERSITY OF UTAH  
 C\* V : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* VIRGINIA POLYTECHNIC INSTITUTE AND STATE  
 C\* UNIVERSITY  
 C\* W : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* UNIVERSITY OF WASHINGTON  
 C\* X : TIME NOT REPORTED  
 C\* Z : NONINSTRUMENTAL TIME AND LOCATION  
 C\* \* : SECOND-ORDER HYPOCENTER DETERMINATION BY  
 C\* CGS/NOS/ERL/GS USING INCOMPLETE OF LESS  
 C\* RELIABLE DATA  
 C\* ? : POOR SOLUTION. ACCURACY IS CONSIDERED TO  
 C\* BE BELOW NORMAL NEIS PUBLICATION CRITERIA.  
 C\* X : A NON-FURNISHED HYPOCENTER HAS BEEN  
 C\* COMPUTED USING DATA REPORTED BY A SINGLE  
 C\* NETWORK OF STATIONS FOR WHICH THE DATA  
 C\* AND/OR ORIGIN TIME CANNOT BE CONFIRMED FROM  
 C\* SEISMOGRAMS AVAILABLE TO NEIS ANALYSTS.  
 C\* ALL OTHER PARAMETERS ARE CONSIDERED TO BE  
 C\* CONSISTENT WITH NORMAL NEIS PUBLICATION  
 C\* CRITERIA.  
 C\* RL: ISC SOLUTION RESTRAINED TO GIVEN LOCATION  
 C\* 28-34 F7.3 LAT LATITUDE: - = SOUTH  
 C\* 35-42 F8.3 LONG LONGITUDE: - = WEST  
 C\* 43-47 F5.1 DEPTH DEPTH (KM)  
 C\* 48 A1 DC DEPTH CONTROL  
 C\* A = ASSIGNED  
 C\* D = RESTRAINED BY REPORTED DEPTH PHASES  
 C\* N = RESTRAINED TO NORMAL DEPTH (33 KM)  
 C\* G = RESTRAINED BY GEOPHYSICIST  
 C\* S = DEPTH CONTROL AIDED BY USE OF S-PHASE DATA  
 C\* 49-50 I2 ND" NUMBER OF DEPTH PHASES USED IN COMPUTATION  
 C\* 51-54 F4.2 STD STANDARD DEVIATION OF THE COMPUTED SOLUTION  
 C\* 55-57 F3.1 MB AVERAGE BODY-WAVE MAGNITUDE  
 C\* 58-59 I2 NMB NUMBER OF MB AMPLITUDES USED IN THE MB MAGNITUDE  
 C\* 60-62 F3.1 MS AVERAGE SURFACE-WAVE MAGNITUDE  
 C\* 63 A1 ZH COMPONENT USED FOR SURFACE WAVE MAGNITUDE  
 C\* Z = VERTICAL  
 C\* H = HORIZONTAL  
 C\* 64-65 I2 NMS NUMBER OF MS AMPLITUDES USED IN THE MS MAGNITUDE  
 C\* 66-69 F4.2 MAG1 FIRST OF TWO POSSIBLE CONTRIBUTED MAGNITUDE VALUES  
 C\* 70-71 A2 MAG1SC MAGNITUDE SCALE OF MAG1: MW, MS, MB, ML, LG, DR,  
 C\* CL, RG. UNDERSCORE CHARACTER IS CODED IF SCALE  
 C\* IS UNKNOWN.  
 C\* 72-76 A5 MAG1DO DONOR OF MAG1; BLANKS REPRESENT UNKNOWN DONOR.  
 C\* GENERALLY, IF DONOR IS UNKNOWN, THE SUPPLYING  
 C\* AGENCY IS THE MAGNITUDE SOURCE.  
 C\* 77-80 F4.2 MAG2 SECOND OF TWO POSSIBLE CONTRIBUTED MAGNITUDE VALUES  
 C\* -----

C\*  
 C\* CARD 2  
 C\*  
 C\* 01-02 A2 MAG25C MAGNITUDE SCALE OF CONTRIBUTED MAG2  
 C\* 03-07 A5 MAG2D0 DONOR OF MAG2  
 C\* 08 A1 MM MODIFIED MERCALLI INTENSITY VALUE:  
 C\* 1-9; X = 10; E = 11; T = 12  
 C\* 09 A1 CE CULTURAL EFFECTS  
 C\* THE MOST SEVERE EFFECT IS LISTED.  
 C\* H = HEARD  
 C\* F = FELT  
 C\* C = CASUALTIES  
 C\* D = DAMAGE  
 C\* 10 A1 M ISOSEISMAL MAP CODE  
 C\* LETTER INDICATES PUBLICATION SOURCE.  
 C\* U = UNITED STATES EARTHQUAKES  
 C\* E = EARTHQUAKE NOTES  
 C\* P = PDE (MONTHLY LISTING)  
 C\* W = WELLINGTON, NEW ZEALAND  
 C\* N = NATURE MAGAZINE  
 C\* S = BULLETIN OF THE SEISMOLOGICAL SOCIETY OF  
 C\* AMERICA  
 C\* 11 A1 FS FAULT PLANE SOLUTION CODE  
 C\* F = FAULT PLANE SOLUTION IS AVAILABLE  
 C\* 12 A1 D DIASTROPHISM CODE  
 C\* F = FAULTING  
 C\* U = UPLIFT  
 C\* S = SUBSIDENCE  
 C\* 3 = UPLIFT AND SUBSIDENCE  
 C\* 4 = FAULTING AND UPLIFT  
 C\* 5 = FAULTING AND SUBSIDENCE  
 C\* 6 = FAULTING WITH UPLIFT AND SUBSIDENCE  
 C\* 7 = UPLIFT OR SUBSIDENCE  
 C\* 8 = FAULTING WITH UPLIFT OR SUBSIDENCE  
 C\* 13 A1 T TSUNAMI CODE  
 C\* T = TSUNAMI  
 C\* Q = QUESTIONABLE TSUNAMI  
 C\* 14 A1 S SEICHE CODE  
 C\* S = SEICHE  
 C\* Q = QUESTIONABLE SEICHE  
 C\* 15 A1 V VOLCANISM CODE  
 C\* V = EARTHQUAKE ASSOCIATED WITH VOLCANISM  
 C\* 16 A1 N NON-TECTONIC CODE  
 C\* E = EXPLOSION  
 C\* I = COLLAPSE  
 C\* C = COAL BUMP OR ROCK BURST IN COAL MINE  
 C\* R = ROCKBURST  
 C\* M = METEORTIC  
 C\* 17 A1 W GUIDED WAVES IN ATMOSPHERE AND/OR OCEAN CODE  
 C\* T = T-WAVE  
 C\* A = ACOUSTIC WAVE  
 C\* G = GRAVITY WAVE  
 C\* B = BOTH A AND G  
 C\* M = T AND A OR G  
 C\* 18 A1 G GROUND/SOIL/WATER TABLE RESPONSE AND ATMOSPHERIC  
 C\* PHENOMENA CODE



C*				L = LIQUIFACTION
C*				G = GEYSER
C*				S = LANDSLIDES AND/OR AVALANCHES
C*				B = SAND BLOWS
C*				C = GROUND CRACKS NOT KNOWN TO BE AN EXPRESSION
C*				OF FAULTING
C*				V = LIGHTS OF OTHER VISUAL PHENOMENA
C*				O = OLFACTORY
C*				M = MORE THAN ONE RESPONSE
C*	19	A1	IDE	IDE CODE
C*				X = EVENT DESIGNATED INTERNATIONAL DATA
C*				EXCHANGE
C*	20-22	I3	FE	FLINN-ENGDAHL GEOGRAPHIC REGION NUMBER
C*	23-25	A3	SORQ	NUMBER OF STATIONS/EVENT QUALITY
C*				THIS ENTRY GIVES EITHER THE NUMBER OF STATIONS
C*				USED IN THE COMPUTATION OR, FOR EVENTS FROM
C*				THE FOLLOWING SOURCES, A QUALITY INDICATOR
C*				FOR THE EVENT.
C*				G-R: THREE-LETTER COMBINATION
C*				(EPICENTER, ORIGIN TIME, DEPTH)
C*				A = VERY ACCURATE
C*				B = GOOD
C*				C = FAIR
C*				D = POOR
C*				MOS: TWO-LETTER OR LETTER-SYMBOL COMBINATION
C*				(EPICENTER, DEPTH)
C*				A = BEST ACCURACY
C*				B = VERY GOOD
C*				N = GOOD
C*				V = FAIR
C*				* = POOR
C*				PAS: SINGLE LETTER DESIGNATOR
C*				A = SPECIALLY INVESTIGATED
C*				B = EPICENTER PROBABLY WITHIN 5 KM;
C*				ORIGIN TIME TO NEAREST SECOND
C*				C = EPICENTER PROBABLY WITHIN 15 KM;
C*				ORIGIN TIME TO A FEW SECONDS
C*				D = EPICENTER NOT KNOWN WITHIN 15 KM;
C*				ROUGH LOCATION
C*				BRK: SINGLE LETTER DESIGNATOR
C*				A = ACCURATE EPICENTER
C*				B = GOOD
C*				C = FAIR
C*				D = POOR
C*				WEL: SINGLE LETTER DESIGNATOR
C*				A = ACCURATE EPICENTER
C*				B = GOOD
C*				C = FAIR
C*				D = POOR
C*	26	A1	FLAG	A ONE-LETTER CODE SIGNIFYING THAT A CERTAIN
C*				TYPE OF INFORMATION IS AVAILABLE FROM THE
C*				CATALOGUE SOURCE. THE ACTUAL VALUE IS NOT
C*				CODED.
C*				M = MOMENT TENSOR
C*				S = EARTHQUAKE STATISTICS
C*				B = BOTH MOMENT TENSOR AND EARTHQUAKE

C\* STATISTICS  
 C\* D = DEPTH COMPUTED FROM LITTLE-P-BIG-P PHASES  
 C\* (ISC BULLETIN TAPES AFTER 1970)  
 C\* 27 A1 PH PREFERRED HYPOCENTER CODE  
 C\* P = HYPOCENTER IS LOCATED WITHIN A SEISMIC  
 C\* NETWORK, SUCH AS PASADENA OR BERKELEY

C\*END-----  
 ISC 1974 0101030309.80RL -6.723 148.164 .0A  
 ..... 192 4..  
 ISC 1974 0101032253.40 35.930-118.119 4.0 2.40ML  
 ..... 039 ..  
 ISC 1974 0101054726.25 -20.110-173.810 33.0A 4.4 3  
 ..... 173 36..  
 ISC 1974 0101055443.13 -18.699 168.863118.0  
 ..... 186 6..  
 ISC 1974 0101065204.31 -19.950 170.414 33.0A  
 ..... 186 23..

\*\*\*\*\* 26874 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000023

Table GL000024

C#DSN=GL000024;SIZE=028111;DATE=082184;ARCH=TM;TAPE=SM9310;FILE=001;STRT=000001;  
 C#DATE: 19830624; 99; ISC1975;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: R. BULAND;  
 C#ALPHA: 19750101; 19751231; 90.0S; 90.0N; 180.0W; 180.0E; ; A001;  
 C#KEYWD: ;  
 C#TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C# FOR THE YEAR 1975 AS REFORMATED BY NEIS;  
 C#AUTHOR: ;  
 C#INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C# UNITED KINGDOM;  
 C#ABSTRACT: THIS DATA SET WAS TAKEN FROM A TAPE SENT BY RAY BULAND, U.S.  
 C# GEOLOGICAL SURVEY, BOX 25046, M.S. 967, DENVER FEDERAL CENTER,  
 C# DENVER, COLORADO, ON JUNE 24, 1983. THERE ARE 13885 EVENTS FOR 1975.  
 C#REFERENCE:  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000023 for details  
 \*\*\*\*\*

C#END-----  
 ISC 1975 0101003001.26 36.666 36.485 35.4 4.830  
 ..... 374145D.  
 ISC 1975 0101004616.06 62.366-151.223107.4  
 ..... 001 13..  
 ISC 1975 0101012858.94 19.270-155.346 40.0A  
 ..... 613 15..  
 ISC 1975 0101020505.88 -5.618 154.475107.4  
 ..... 193 12..  
 ISC 1975 0101021246.06 13.444 -91.744 35.0 4.3 7  
 ..... 071 9..  
 \*\*\*\*\* 27760 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000024

Table GL000025

C#DSN=GL000025;SIZE=031647;DATE=082184;ARCH=TM;TAPE=5M9310;FILE=002;STRT=000001;  
 C\*DATE: 19830624; 99; ISC1976;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19760101; 19761231; 90.0S; 90.0N; 180.0W; 180.0E; ; A001;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1976 AS REFORMATTED BY NEIS;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS TAKEN FROM A TAPE SENT BY RAY BULAND, U.S.  
 C\* GEOLOGICAL SURVEY, BOX 25046, M.S. 967, DENVER FEDERAL CENTER,  
 C\* DENVER, COLORADO, ON JUNE 24, 1983. THERE ARE 15653 EVENTS FOR 1976.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000023 for details  
 \*\*\*\*\*

C\*END-----  
 ISC 1976 0101000405.65 38.424 21.719 18.0 4.613  
 ..... 364122..  
 ISC 1976 0101001517.03 38.387 21.816 .0A  
 ..... 364 10..  
 ISC 1976 0101003240.78 66.124 -16.784 10.0A 4.821  
 ..... 637 58..  
 ISC 1976 0101012121.58 38.441 21.781 .0A  
 ..... 364 7..  
 ISC 1976 0101012935.23 -28.780-177.393 23.3 6.222  
 ..... 177431D.  
 \*\*\*\*\* 31296 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000025

Table GL000026

C#DSN=GL000026;SIZE=031505;DATE=082184;ARCH=TM;TAPE=5M9310;FILE=003;STRT=000001;  
 C\*DATE: 19830624; 99; ISC1977;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19770101; 19771231; 90.05; 90.0N; 180.0W; 180.0E; ; A001;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1977 AS REFORMATTED BY NEIS;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS TAKEN FROM A TAPE SENT BY RAY BULAND, U.S.  
 C\* GEOLOGICAL SURVEY, BOX 25046, M.S. 967, DENVER FEDERAL CENTER,  
 C\* DENVER, COLORADO, ON JUNE 24, 1983. THERE ARE 15582 EVENTS FOR 1977.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000023 for details  
 \*\*\*\*\*

C\*END-----  
 ISC 1977 0101001622.18 5.145 -77.956 60.8 4.7 3  
 ..... 102 16..  
 ISC 1977 0101004941.70 -34.099 -70.379 5.0A  
 ..... 127 8..  
 ISC 1977 0101021817.02 -8.185 107.701 53.2  
 ..... 277 15..  
 ISC 1977 0101030141.40RL 14.560 -96.780 33.0A  
 ..... 067 ..  
 ISC 1977 0101031055.84 43.800 147.533150.3  
 ..... 221 6..  
 \*\*\*\*\* 31154 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000026

Table GL000027

C#DSN=GL000027;SIZE=033557;DATE=082184;ARCH=TM;TAPE=SM9310;FILE=004;STRT=000001;  
 C\*DATE: 19830624; 99; ISC1978;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19780101; 19781231; 90.0S; 90.0N; 180.0W; 180.0E; ; A001;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1978 AS REFORMATTED BY NEIS;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS TAKEN FROM A TAPE SENT BY RAY BULAND, U.S.  
 C\* GEOLOGICAL SURVEY, BOX 25046, M.S. 967, DENVER FEDERAL CENTER,  
 C\* DENVER, COLORADO, ON JUNE 24, 1983. THERE ARE 16608 EVENTS FOR 1978.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000023 for details  
 \*\*\*\*\*

C\*END-----  
 ISC 1978 0101003026.26 -21.581 169.294 74.6 4.2 1  
 ..... 189 29..  
 ISC 1978 0101004633.54 -44.993 167.200 33.0A  
 ..... 162 7..  
 ISC 1978 0101022330.88 -41.764 175.254 25.0  
 ..... 159 15..  
 ISC 1978 0101025035.13 -31.406 -67.686140.0A  
 ..... 137 8..  
 ISC 1978 0101025808.96 -31.346 -67.915107.0A  
 ..... 137 13..  
 \*\*\*\*\* 33206 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000027

Table GL000028

C#DSN=GL000028;SIZE=036485;DATE=082184;ARCH=TM;TAPE=SM9310;FILE=005;STRT=000001;  
 C\*DATE: 19830624; 99; ISC1979;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19790101; 19791231; 90.0S; 90.0N; 180.0W; 180.0E; ; A001;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1979 AS REFORMATTED BY NEIS;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS TAKEN FROM A TAPE SENT BY RAY BULAND, U.S.  
 C\* GEOLOGICAL SURVEY, BOX 25046, M.S. 967, DENVER FEDERAL CENTER,  
 C\* DENVER, COLORADO, ON JUNE 24, 1983. THERE ARE 18072 EVENTS FOR 1979.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000023 for details  
 \*\*\*\*\*

C\*END-----  
 ISC 1979 0101000526.07 35.537 140.208 60.0A  
 ..... 228 5..  
 ISC 1979 0101002115.57 32.403 141.783 12.4 5.2364.7 7  
 ..... 211131..  
 ISC 1979 0101010224.00RL-32.310 138.149 20.0A 1.40ML  
 ..... 600 ..  
 ISC 1979 0101020832.99 -10.195 161.604 84.0 5.122  
 ..... 193 70D.  
 ISC 1979 0101021942.10 40.487-126.504 5.0A 4.2 1  
 ..... 034 17..  
 \*\*\*\*\* 36134 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000028

Table GL000029

C#DSN=GL000029;SIZE=040233;DATE=082184;ARCH=TM;TAPE=SM9310;FILE=006;STRT=000001;  
 C\*DATE: 19830624; 99; ISC1980;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19800101; 19801231; 90.05; 90.0N; 180.0W; 180.0E; ; A001;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1980 AS REFORMATTED BY NEIS;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE, .  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS TAKEN FROM A TAPE SENT BY RAY BULAND, U.S.  
 C\* GEOLOGICAL SURVEY, BOX 25046, M.S. 967, DENVER FEDERAL CENTER,  
 C\* DENVER, COLORADO, ON JUNE 24, 1983. THERE ARE 19946 EVENTS FOR 1980.  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000023 for details  
 \*\*\*\*\*

C\*END-----  
 ISC 1980 0101002522.61 73.819 -10.411 33.0A  
 ..... 640 7..  
 ISC 1980 0101012437.05 12.357 95.180 18.9 5.0424.9 2  
 ..... 703173D.  
 ISC 1980 0101020925.11 36.203-120.833 14.0  
 ..... 039 10..  
 ISC 1980 0101024555.24 27.335 60.387 40.0 5.356  
 ..... 353235D.  
 ISC 1980 0101030815.70RL 42.810 13.030 28.0A  
 ..... 381 ..  
 \*\*\*\*\* 39882 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000029



Table GL000030

```

C#DSN=GL000030;SIZE=000212;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=120;STRT=000001;
C#DATE: 19830823; 0; ISCONV1;
C#CLASS: MISCELLANEOUS; COMPUTER PROGRAM;
C#PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;
C#ALPHA: ; ; ; ; ; ; ; A004;
C#KEYWD: ISCONV1; ISC HYPOCENTER DATA;
C#TITLE: PROGRAM ISCONV1-- TO CONVERT ISC SUMMARY DATA FROM NEIS FORMAT TO
C#      ISC FORMAT;
C#AUTHOR: D.M. TOTTINGHAM AND W.H.K. LEE
C#INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025;
C#ABSTRACT: THIS PROGRAM CONVERTS ISC SUMMARY DATA FROM NEIS FORMAT
C#      TO ISC FORMAT.  IN SHORT, THE NEIS FORMAT IS REFERRED TO
C#      AS THE NEW FORMAT AND THE ISC FORMAT IS REFERRED TO AS
C#      THE OLD FORMAT.  THE FOLLOWING IS A CHART SHOWING WHAT
C#      CONVERSIONS ACTUALLY TAKE PLACE:
C#      INPUT                                OUTPUT
C# VARIABLE ODR CRD COLUMN FRMT    VARIABLE ODR COLUMN FRMT  NOTES
C# AUTHOR   8   1   26-27   A2      BLANK    1   1-6     6X    *
C# YEAR     2   1   7-12   1X,A4,1X YEAR     2   7-10    A4
C# MONTH    3   1   13-14   A2      MONTH    3   11-12   A2
C# DAY      4   1   15-16   A2      DAY      4   13-14   A2
C# HOUR     5   1   17-18   A2      HOUR     5   15-16   A2
C# MINUTE   6   1   19-20   A2      MINUTE   6   17-18   A2
C# SECOND   7   1   21-25   F5.2    ISEC     7   19-21   I3      A
C# LAT      9   1   28-34   F7.3    ILAT     8   22-26   I5      B
C#          10  1   35-42   F8.3    HYNS     9   27      A1      C
C# LON      10  1   35-42   F8.3    ILON    10  28-33   I6      D
C#          11  1   43-47   F5.1    HYEW    11  34      A1      E
C# HYDEP    11  1   43-47   F5.1    DEPTH   12  35-37   I3      F
C#          13  1   43-47   F5.1    IMAG    13  38-40   I3      G
C#          14  1   43-47   F5.1    MSCALE  14  41-42   A2      H
C#          15  1   43-47   F5.1    MAGAUT  15  43-45   A3      I
C# INTMAX   3   2    8      A1      INTMAX  16  46-49   A4      J
C#          17  1   50-52   1X,A2    ISCALE  17  50-52   1X,A2   K
C# REGION   5   2   20-22   I3      REGION  18  53-55   I3
C# EFFECT   4   2    9-14   A6      EFFECT  19  56-61   A6
C#          20  1   62-65   4X      ALPHA  20  62-65   4X
C#          21  1   66-69   4X      NUMER  21  66-69   4X
C#          22  1   71-73   I3      SORQ    22  71-73   I3
C#          23  1   74      1X      CC      23  74      1X
C#          24  1   75-80   3X,A3    SOURCE  24  75-80   3X,A3
C# SOURCE   1   1    2-6    A5
C# MB       12  1   55-57   F3.1
C# MS       13  1   60-62   F3.1
C# MAG1     14  1   66-69   F4.2
C# MAG1SC   15  1   70-71   A2
C# MAG1DO   16  1   72-76   A5
C# MAG2     17  1   77-80   F4.2
C# MAG2SC   1   2    1-2    A2
C# MAG2DO   2   2    3-7    A5
C#
C#
C# NOTES OF CONVERSION:

```

```

C* *: AUTHOR CAN NOT BE CONVERTED PROPERLY; THEREFORE, WE LEFT THE
C* FIELD BLANK.
C* A: ISEC= IFIX(SECOND*10) :CONVERT REAL NUMBER (SECOND) TO
C* INTEGER (ISEC)
C* B: LAT=ABS(LAT)*1000 :TAKE ABS VALUE OF LAT AND MULTIPLY BY 1000
C* ILAT=IFIX(LAT) :CONVERT REAL NUMBER (LAT) TO INTEGER (ILAT)
C* C: [THIS CONVERSION TAKES PLACE BEFORE LAT IS CHANGED TO ABS ]
C* IF(LAT.EQ.ABS(LAT)) HYNS='N' :IF LAT IS POSITIVE HYNS='N'
C* OTHERWISE, HYNS='S'
C* D: LON=ABS(LON)*1000 :TAKE ABS VALUE OF LON AND MULTIPLY BY 1000
C* ILON=IFIX(LON) :CONVERT REAL NUMBER (LON) TO INTEGER (ILON)
C* E: [THIS CONVERSION TAKES PLACE BEFORE LON IS CHANGED TO ABS ]
C* IF (LON.EQ.ABS(LON)) HYEW='E' :IF LON IS POSITIVE HYEW='E'
C* OTHERWISE, HYEW='W'
C* F: DEPTH=IFIX(HYDEP*10.) :DEPTH BECOMES THE INTEGER OF HYDEP
C* G: LOOK FOR FIRST VARIABLE [MS,MB,MAG1,OR MAG2] WITH A NUMBER
C* AND PLACE ITS CONTENTS IN MAG.
C* H: LOOK FOR FIRST VARIABLE [MS,MB,MAG1,OR MAG2] WITH A NUMBER
C* AND WRITE ['MS','MB',THE CONTENTS OF MAG1SC, OR THE CONTENTS
C* OF MAG2SC RESPECTIVELY] IN MSCALE. IF ALL VARIABLES CONTAIN
C* NOTHING, WRITE A BLANK IN MSCALE.
C* I: LOOK FOR THE FIRST VARIABLE [MS,MB,MAG1,MAG2] WITH A NUMBER
C* AND WRITE [BLANK,BLANK,THE CONTENTS OF MAG1D0, OR THE
C* CONTENTS OF MAG2D0 RESPECTIVELY] IN MAGAUT. IF ALL
C* VARIABLES CONTAIN NOTHING, WRITE A BLANK IN MAGAUT.
C* J: INTMAX IS EITHER A NUMBER (1-9),X,E, OR T. SETTING X=10,
C* E=11, T=12, INTMAX IS CONVERTED TO ROMAN NUMERAL FOR OUTPUT.
C* K: ALWAYS 'MM'
C* L: ALWAYS 'N'
C*
C*
C* NOTES OF PREPROCESSING:
C* BECAUSE OF ERRORS IN THE DATA USING NEIS FORMAT, WE HAVE CORRECTED
C* '_' TO ' ', AND '.-' TO '-.' IN THE INPUT DATA FOR THIS PROGRAM.
C*
C*
C* NOTES TO USERS:
C* A FEW DATA WERE ROUNDED OFF OR CONVERTED IMPROPERLY. IT IS NOT
C* POSSIBLE TO RECREATE THE ISC DATA FROM THE NEIS FORMAT BACK TO ITS
C* ORIGNIAL FORMAT.
C*
C*
C*FORMAT: STANDARD FORTRAN FORMAT (A72).
C*END-----
C--PROGRAM TO CONVERT ISC SUMMARY DATA FROM NEIS FORMAT TO ISC FORMAT
C--LAST REVISION 8/24/83
C*
C* INTEGER AUTHOR,YEAR,MONTH,DAY,HOUR,MINUTE
C* INTEGER DEPTH,HYNS,HYEW,MSCALE
C* INTEGER MAG1SC,MAG2SC,BLANK4
C* INTEGER INTMAX,ISCALE,REGION,SORQ
C* INTEGER ROMAN(14),INDEX(14)
C* REAL MAG,MB,MAG1,MAG2,MS
C* REAL HYDEP,LAT,LON,SECOND
C* DOUBLE PRECISION MAGAUT,MAG1D0,MAG2D0,BLANK8
C*
C* ***** 104 data cards not shown here *****
C#FINIS DSN=GL000030

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Table GL000031

C#DSN=GL000031;SIZE=013475;DATE=082184;ARCH=TM;TAPE=SM9310;FILE=008;STRT=000001;  
 C\*DATE: 19830823; 99; ISC74NEW;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;  
 C\*ALPHA: 19740101; 19741231; 90.0 S; 90.0 N; 180.0 W; 180.0 E; ; A003;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1974 CONVERTED FROM THE NEIS FORMAT TO THE ISC FORMAT;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS DERIVED FROM DSN=GL000023 USING THE PROGRAM  
 C\* ISCONV1. BECAUSE THE DATA FILE IN THE NEIS FORMAT WAS INCOMPLETE  
 C\* AND ROUNDED OFF, IT IS NOT POSSIBLE TO RECOVER THE ORIGINAL DATA IN  
 C\* ISC FORMAT COMPLETELY. SEE PROGRAM ISCONV1 (DSN=GL000030).

C\*REFERENCE:

C\*FORMAT:

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01-06	A6	AUTHOR	ORGANIZATION THAT ISSUED THE DATA (NOT USED HERE)
C*	07-10	I4	YEAR	YEAR OF THE EVENT
C*	11-12	I2	MONTH	MONTH OF THE EVENT
C*	13-14	I2	DAY	DAY OF THE EVENT
C*	15-16	I2	HOUR	HOUR OF THE EVENT
C*	17-18	I2	MINUTE	MINUTE OF THE EVENT
C*	19-21	F3.1	SECOND	ORIGIN TIME (SECOND PORTION) OF THE EVENT
C*	22-26	F5.3	LAT	LATITUDE OF THE EPICENTER IN DEGREES
C*	27	A1	HYNS	N FOR NORTHERN OR S FOR SOUTHERN HEMISPHERE
C*	28-33	F6.3	LON	LONGITUDE OF THE EPICENTER IN DEGREES
C*	34	A1	HYEW	E FOR EASTERN OR W FOR WESTERN HEMISPHERE
C*	35-37	I3	HYDEP	FOCAL DEPTH IN KILOMETERS
C*	38-40	F3.2	MAG	MAGNITUDE OF THE EVENT
C*	41-42	A2	MSCALE	MAGNITUDE SCALE, E.G., MB, MS, ML
C*	43-45	A3	MAGAUT	MAGNITUDE AUTHORITY
C*	46-49	A4	INTMAX	MAXIMUM INTENSITY IN ROMAN NUMERAL OR "FELT"
C*	50-52	A3	ISCALE	INTENSITY SCALE, E.G., MM ETC.
C*	53-55	I3	REGION	FLINN-ENGDAHL REGION NUMBER
C*	56-61	A6	EFFECT	EFFECTS OF THE EVENT, I.E., FELT, TSUNAMI
C*	62-65	A4	ALPHA	OTHER REFERENCES IN ALPHA
C*	66-69	I4	NUMER	OTHER REFERENCES IN NUMERIC
C*	70-73	A4	SORQ	NUMBER OF STATIONS USED OR QUALITY CODE
C*	74	A1	CC	CONTROL COLUMN
C*	75-80	A6	SOURCE	DATA SOURCE

C\*END

197401010303	98	67235148164E	0	MM192	N 4	ISC
19740101032253435930N118119W		4240ML		MM 39	N 0	ISC
197401010547263201105173810W		33440MB		MM173	N 36	ISC
19740101055443118699S168863E118				MM186	N 6	ISC
197401010652	4319950S170414E	33		MM186	N 23	ISC
19740101070021620081S170162E	33			MM186	N 9	ISC
19740101074226919988S170106E	33			MM186	N 9	ISC
197401010757	4621551N142894E333490MB			MM215	N127	ISC
19740101092844922053S176838W212460MB				MM171	N 55	ISC
19740101093656114599S166393E	46470MB			MM186	N 17	ISC

\*\*\*\*\* 13420 data cards not shown here \*\*\*\*\*

197412311826599115225177252W 0440MB

MM180

N 4

ISC

Table GL000032

C#DSN=GL000032;SIZE=013929;DATE=082184;ARCH=TM;TAPE=SM9310;FILE=009;STRT=000001;  
 C\*DATE: 19830823; 99; ISC75NEW;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;  
 C\*ALPHA: 19750101; 19751231; 90.0 S; 90.0 N; 180.0 W; 180.0 E; ; A003;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1975 CONVERTED FROM THE NEIS FORMAT TO THE ISC FORMAT;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS DERIVED FROM DSN=GL000024 USING THE PROGRAM  
 C\* ISCONV1. BECAUSE THE DATA FILE IN THE NEIS FORMAT WAS INCOMPLETE  
 C\* AND ROUNDED OFF, IT IS NOT POSSIBLE TO RECOVER THE ORIGINAL DATA IN  
 C\* ISC FORMAT COMPLETELY. SEE PROGRAM ISCONV1 (DSN=GL000030).  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000031 for details  
 \*\*\*\*\*

C\*END-----

197501010030 1336666N 36485E 35480MB	MM374	N145	ISC
19750101004616162366N151223W107	MM 1	N 13	ISC
19750101012858919270N155346W 40	MM613	N 15	ISC
197501010205 59 5618S154475E107	MM193	N 12	ISC
19750101021246113444N 91744W 35430MB	MM 71	N 9	ISC
19750101022354320924S176060W196460MB	MM181	N 18	ISC
197501010331361 8255S130629E248	MM281	N 12	ISC
19750101035511861917N149724W 58590MB	MM 2	N350	ISC
19750101045855732804S 72361W 33	MM134	N 8	ISC
19750101054634341872N142018E 33	MM224	N 4	ISC

\*\*\*\*\* 13875 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000032

# Table GL000033

C#DSN=GL000033;SIZE=015697;DATE=082884;ARCH=TM;TAPE=SM9310;FILE=010;STRT=000001;  
 C\*DATE: 19830823; 99; ISC76NEW;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;  
 C\*ALPHA: 19760101; 19761231; 90.0 S; 90.0 N; 180.0 W; 180.0 E; ; A003;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1976 CONVERTED FROM THE NEIS FORMAT TO THE ISC FORMAT;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS DERIVED FROM DSN=GL000025 USING THE PROGRAM  
 C\* ISCONV1. BECAUSE THE DATA FILE IN THE NEIS FORMAT WAS INCOMPLETE  
 C\* AND ROUNDED OFF, IT IS NOT POSSIBLE TO RECOVER THE ORIGINAL DATA IN  
 C\* ISC FORMAT COMPLETELY. SEE PROGRAM ISCONV1 (DSN=GL000030).  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000031 for details  
 \*\*\*\*\*

C\*END-----

197601010004 5638424N 21719E 18460MB	MM364	N122	ISC
19760101001517038387N 21816E 0	MM364	N 10	ISC
19760101003240866124N 16784W 10480MB	MM637	N 58	ISC
19760101012121638441N 21781E 0	MM364	N 7	ISC
19760101012935228780S177393W 23620MB	MM177	N431	ISC
19760101014054438608N 21707E 0	MM364	N 7	ISC
19760101014535329601S177618W191	MM178	N 44	ISC
19760101014753033471N116583W 11	MM 43	N 7	ISC
19760101014934828 54S177398W150	MM117	N 22	ISC
19760101015910629472S176927W 33	MM177	N 37	ISC

\*\*\*\*\* 15643 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000033

Table GL000034

C#DSN=GL000034;SIZE=015626;DATE=082884;ARCH=TM;TAPE=SM9310;FILE=011;STRT=000001;  
 C#DATE: 19830823; 99; ISC77NEW;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;  
 C#ALPHA: 19770101; 19771231; 90.0 S; 90.0 N; 180.0 W; 180.0 E; ; A003;  
 C#KEYWD: ;  
 C#TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C# FOR THE YEAR 1977 CONVERTED FROM THE NEIS FORMAT TO THE ISC FORMAT;  
 C#AUTHOR: ;  
 C#INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C# UNITED KINGDOM;  
 C#ABSTRACT: THIS DATA SET WAS DERIVED FROM DSN=GL000026 USING THE PROGRAM  
 C# ISCCONV1. BECAUSE THE DATA FILE IN THE NEIS FORMAT WAS INCOMPLETE  
 C# AND ROUNDED OFF, IT IS NOT POSSIBLE TO RECOVER THE ORIGINAL DATA IN  
 C# ISC FORMAT COMPLETELY. SEE PROGRAM ISCCONV1 (DSN=GL000030).  
 C#REFERENCE:  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000031 for details  
 \*\*\*\*\*

C#END-----  

197701010016222 5145N 77956W 61470MB	MM102	N 16	ISC
19770101004941734099S 70379W 5	MM127	N 8	ISC
197701010218170 8185S107701E 53	MM277	N 15	ISC
19770101030141414560N 96780W 33	MM 67	N 0	ISC
19770101031055843800N147533E150	MM221	N 6	ISC
19770101062345628133N130847E 33510MB	MM238	N 60	ISC
19770101070331043600N146699E 70	MM221	N 0	ISC
19770101071639344824N 10334E 33	MM545	N 9	ISC
19770101072051040400N127199W 2380ML	MM 34	N 0	ISC
197701010810393 7386N 78091W 63440MB	MM 81	N 38	ISC

\*\*\*\*\* 15572 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000034

Table GL000035

C#DSN=GL000035;SIZE=016652;DATE=082884;ARCH=TM;TAPE=SM9310;FILE=012;STRT=000001;  
 C\*DATE: 19830823; 99; ISC78NEW;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;  
 C\*ALPHA: 19780101; 19781231; 90.0 S; 90.0 N; 180.0 W; 180.0 E; ; A003;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1978 CONVERTED FROM THE NEIS FORMAT TO THE ISC FORMAT;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS DERIVED FROM DSN=GL000027 USING THE PROGRAM  
 C\* ISCONV1. BECAUSE THE DATA FILE IN THE NEIS FORMAT WAS INCOMPLETE  
 C\* AND ROUNDED OFF, IT IS NOT POSSIBLE TO RECOVER THE ORIGINAL DATA IN  
 C\* ISC FORMAT COMPLETELY. SEE PROGRAM ISCONV1 (DSN=GL000030).  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000031 for details  
 \*\*\*\*\*

C\*END-----  

19780101003026321581S169294E 75420MB	MM189	N 29	ISC
19780101004633544993S167200E 33	MM162	N 7	ISC
19780101022330941764S175254E 25	MM159	N 15	ISC
19780101025035131406S 67686W140	MM137	N 8	ISC
197801010258 9031346S 67915W107	MM137	N 13	ISC
197801010308426 8668S157187E 48470MB	MM193	N 11	ISC
19780101030935453021N159985E 33450MB	MM218	N 31	ISC
19780101033841366168N136395W 0	MM677	N 15	ISC
197801010352 8041750N 19510E 17	MM391	N 0	ISC
19780101035959211032S119710E 33	MM292	N 5	ISC

\*\*\*\*\* 16598 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000035



Table GL000036

C#DSN=GL000036;SIZE=018116;DATE=082884;ARCH=TM;TAPE=SM9310;FILE=013;STRT=000001;  
 C\*DATE: 19830823; 99; ISC79NEW;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;  
 C\*ALPHA: 19790101; 19791231; 90.0 S; 90.0 N; 180.0 W; 180.0 E; ; A003;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1979 CONVERTED FROM THE NEIS FORMAT TO THE ISC FORMAT;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS DERIVED FROM DSN=GL000028 USING THE PROGRAM  
 C\* ISCONV1. BECAUSE THE DATA FILE IN THE NEIS FORMAT WAS INCOMPLETE  
 C\* AND ROUNDED OFF, IT IS NOT POSSIBLE TO RECOVER THE ORIGINAL DATA IN  
 C\* ISC FORMAT COMPLETELY. SEE PROGRAM ISCONV1 (DSN=GL000030).  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000031 for details  
 \*\*\*\*\*

C\*END-----

19790101000526135537N140208E 60	MM228	N 5	ISC
19790101002115632403N141783E 12470MS	MM211	N131	ISC
19790101010224032310S138149E 20140ML	MM600	N 0	ISC
19790101020833010195S161604E 84510MB	MM193	N 70	ISC
19790101021942140487N126504W 5420MB	MM 34	N 17	ISC
19790101024310135317S178491E235440MB	MM160	N 17	ISC
19790101030110923691N121341E 33	MM244	N 8	ISC
197901010308305 5553S152838E 51490MB	MM192	N 21	ISC
197901010337 4847400N 1500W 25290ML	MM538	N 0	ISC
19790101042539437638N 50176E 33400MB	MM338	N 6	ISC

\*\*\*\*\* 18062 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000036

Table GL000037

C#DSN=GL000037;SIZE=019990;DATE=082884;ARCH=TM;TAPE=SM9310;FILE=014;STRT=000001;  
 C\*DATE: 19830823; 99; ISC80NEW;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;  
 C\*ALPHA: 19800101; 19801231; 90.0 S; 90.0 N; 180.0 W; 180.0 E; ; A003;  
 C\*KEYWD: ;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR THE YEAR 1980 CONVERTED FROM THE NEIS FORMAT TO THE ISC FORMAT;  
 C\*AUTHOR: ;  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS DERIVED FROM DSN=GL000029 USING THE PROGRAM  
 C\* ISCONV1. BECAUSE THE DATA FILE IN THE NEIS FORMAT WAS INCOMPLETE  
 C\* AND ROUNDED OFF, IT IS NOT POSSIBLE TO RECOVER THE ORIGINAL DATA IN  
 C\* ISC FORMAT COMPLETELY. SEE PROGRAM ISCONV1 (DSN=GL000030).  
 C\*REFERENCE:  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000031 for details  
 \*\*\*\*\*

C\*END-----  

19800101002522673819N 10411W 33	MM640	N 7	ISC
19800101012437112357N 95180E 19490MS	MM703	N173	ISC
19800101020925136203N120833W 14	MM 39	N 10	ISC
19800101024555227335N 60387E 40530MB	MM353	N235	ISC
19800101030815742810N 13030E 28	MM381	N 0	ISC
198001010353423 7103S129758E123	MM280	N 12	ISC
19800101042840632934N115522W 5	MM 45	N 4	ISC
19800101043045939202S 74626W 33	MM134	N 12	ISC
198001010456 3938596N 69445E 33410MB	MM715	N 9	ISC
19800101050544254927N 2741W 3	MM533	N 41	ISC

\*\*\*\*\* 19936 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000037

Table GL000038

C#DSN=GL000038;SIZE=003929;DATE=041185;ARCH=TM;TAPE=SM9310;FILE=117;STRT=000001;  
 C\*DATE: 19770322; 0; CITS3239;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: C. R. ALLEN; M. E. FRIEDMAN; J. A. HILEMAN; J. M. NORDQUIST;  
 C\* J. H. WHITCOMB  
 C\*ALPHA: 19320101; 19391231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A005;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY (CIT)  
 C\* FOR THE YEARS FROM 1932 TO 1939;  
 C\*AUTHOR: C. R. ALLEN, M. E. FRIEDMAN, J. A. HILEMAN, J. M. NORDQUIST,  
 C\* AND J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY M. E. FRIEDMAN  
 C\* IN 1977.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\*FORMAT: IF COLUMN 1 IS "1", THEN THE FOLLOWING FORMAT APPLIES.  
 C\* IF COLUMN 1 IS A BLANK, THEN COLUMNS 2-18 ARE REPEATED FROM THE  
 C\* PREVIOUS CARD, AND COLUMNS 19-80 ARE COMMENTS, USUALLY REFERRING  
 C\* TO FELT INFORMATION.  
 C\*  

C* COLUMNS	FORMAT	ITEM	EXPLANATION
C* 01-04	I4	YEAR	YEAR OF THE EVENT
C* 05	1X	BLANK	
C* 06-07	I2	MONTH	MONTH OF THE EVENT
C* 08	1X	BLANK	
C* 09-10	I2	DAY	DAY OF THE EVENT
C* 11-12	2X	BLANK	
C* 13-14	I2	HOUR	ORIGIN TIME OF THE EVENT: HOUR (GREENWICH TIME)
C* 15	1X	BLANK	
C* 16-17	I2	MINUTE	ORIGIN TIME OF THE EVENT: MINUTE
C* 18	1X	BLANK	
C* 19-23	F5.2	SECOND	ORIGIN TIME OF THE EVENT: SECOND
C* 24-25	1X	BLANK	
C* 26-27	I2	LAT	LATITUDE OF THE EPICENTER: DEGREES (NORTH)
C* 28	1X	BLANK	
C* 29-33	F5.2	LATMIN	LATITUDE OF THE EPICENTER: MINUTES
C* 34	1X	BLANK	
C* 35-37	I3	LON	LONGITUDE OF THE EPICENTER: DEGREES (WEST)
C* 38	1X	BLANK	
C* 39-43	F5.2	LONMIN	LONGITUDE OF THE EPICENTER: MINUTES
C* 44	1X	BLANK	
C* 45	A1	QUAL	EVENT QUALITY CODE
C*			A = SPECIALLY INVESTIGATED (USUALLY WITH
C*			PORTABLE SEISMOGRAPHS)
C*			B = EPICENTER PROBABLY WITHIN 5 KM,
C*			ORIGIN TIME TO NEAREST SECOND

C\* C = EPICENTER PROBABLY WITHIN 15 KM,  
 C\* ORIGIN TIME TO A FEW SECONDS  
 C\* D = NOT KNOWN WITHIN 15 KM,  
 C\* ROUGH LOCATION  
 C\* 46 1X BLANK  
 C\* 47-49 F3.1 ML LOCAL MAGNITUDE  
 C\* 50-53 A4 MAPI MAP INDEX (?)  
 C\* 54-59 F6.2 DEPTH FOCAL DEPTH (KM)  
 C\* 60-63 A4 SCODE UNEXPLAINED ITEM  
 C\* 64-67 F4.2 TSIG STANDARD ERROR OF THE ORIGIN TIME (SEC)  
 C\* 68-71 F4.2 XSIG STANDARD ERROR OF THE LONGITUDE (KM)  
 C\* 72-75 F4.2 YSIG STANDARD ERROR OF THE LATITUDE (KM)  
 C\* 76-80 F5.2 ZSIG STANDARD ERROR OF THE DEPTH (KM)

C\*END-----

1932	1 02	16 42	42.00	33	53.00	117	38.00	B 2.5	.	8A
1932	1 03	17 57	58.00	32	02.00	115	50.00	C 3.0	.	8A
1932	1 03	23 23	52.00	37	27.00	119	00.00	D 2.0	.	8A
1932	1 04	02 02	53.00	37	27.00	119	00.00	D 2.0	.	8A
1932	1 04	21 30	02.00	33	54.00	117	39.00	B 2.0	.	8A
1932	1 05	02 37	34.00	33	52.00	118	17.00	C 1.5	.	8A
1932	1 06	08 08	39.00	33	53.00	117	38.00	C 2.0	.	8A
1932	1 07	02 29	20.40	33	54.00	118	12.00	B 1.0	.	8A
1932	1 07	05 39	20.00	34	11.00	117	17.00	B 1.0	.	8A
1932	1 07	14 55	30.00	32	02.00	115	50.00	C 3.0	.	8A

\*\*\*\*\* 3851 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000038

Table GL000039

C#DSN=GL000039;SIZE=004321;DATE=041185;ARCH=TM;TAPE=SM9310;FILE=117;STRT=003930;  
 C\*DATE: 19770322; 0; CITS4049;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: C. R. ALLEN; M. E. FRIEDMAN; J. A. HILEMAN; J. M. NORDQUIST;  
 C\* J. H. WHITCOMB;  
 C\*ALPHA: 19400101; 19491231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A005;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY (CIT)  
 C\* FOR THE YEARS FROM 1940 TO 1949;  
 C\*AUTHOR: C. R. ALLEN, M. E. FRIEDMAN, J. A. HILEMAN, J. M. NORDQUIST,  
 C\* AND J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY M. E. FRIEDMAN  
 C\* IN 1977.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\*FORMAT: IF COLUMN 1 IS "1", THEN THE FOLLOWING FORMAT APPLIES.

\*\*\*\*\*  
 See previous format from dataset GL000038 for details  
 \*\*\*\*\*

C#END-----  
 1940 1 1 12 49 29.00 32 32.00 116 11.00 C 3.5 N 2 9  
 1940 1 1 18 42 29.00 33 25.00 115 48.00 C 3.5 P 3 9  
 1940 1 4 07 15 32.00 34 01.00 117 16.00 C 2.5 L 5 9  
 1940 1 4 8 7 11.00 33 18.00 116 18.00 C 4.0 N 3 9  
 1940 1 5 6 20 52.00 33 9.00 119 27.00 C 4.0 G 3 9  
 1940 1 5 8 42 55.00 33 10.00 116 25.00 C 3.0 N 3 9  
 1940 1 7 5 3 6.00 33 23.00 115 36.00 C 3.5 P 3 9  
 1940 1 7 07 12 41.00 33 23.00 115 36.00 C 3.5 P 3 9  
 1940 1 11 3 40 21.00 33 47.00 118 8.00 B 3.5 J 4 9  
 940 01 11 03 40 FELT LONG BEACH AREA  
 \*\*\*\*\* 4243 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000039

Table GL000040

C#DSN=GL000040;SIZE=005028;DATE=041185;ARCH=TM;TAPE=SM9310;FILE=118;STRT=000001;  
 C\*DATE: 19770322; 0; CITS5059;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: C. R. ALLEN; M. E. FRIEDMAN; J. A. HILEMAN; J. M. NORDQUIST;  
 C\* J. H. WHITCOMB;  
 C\*ALPHA: 19500101; 19591231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A005;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY (CIT)  
 C\* FOR THE YEARS FROM 1950 TO 1959;  
 C\*AUTHOR: C. R. ALLEN, M. E. FRIEDMAN, J. A. HILEMAN, J. M. NORDQUIST,  
 C\* AND J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY M. E. FRIEDMAN  
 C\* IN 1977.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\*FORMAT: IF COLUMN 1 IS "1", THEN THE FOLLOWING FORMAT APPLIES.

\*\*\*\*\*  
 See previous format from dataset GL000038 for details  
 \*\*\*\*\*

C\*END-----  
 1950 1 3 11 27 28.00 33 52.00 115 50.00 C 1.0 P 4 9  
 1950 1 3 17 26 38.00 34 3.00 117 18.00 B 2.8 L 5 9  
 1950 1 4 16 38 46.36 34 8.34 117 44.30 B 2.4 K 5 3.6 1C 0.15 1.4 3.9 4.3  
 950 01 04 16 38 REPORTED FELT AT BIG DALTON AND OTHER DAMS.  
 1950 1 5 07 24 09.00 33 50.00 115 48.00 B 2.9 F 4 9  
 1950 1 5 12 51 30.00 34 16.00 117 0.00 B 2.4 L 5 9  
 1950 1 5 13 46 49.00 33 41.00 119 11.00 C 3.2 G 4 9  
 1950 1 7 9 37 35.00 32 6.00 116 36.00 D 4.0 M 1 9  
 950 01 07 09 37 FELT NEAR CAMPO  
 1950 1 9 13 24 57.03 34 6.85 116 53.37 A 3.9 M 5 3.0 1C 0.32 1.7 1.5 4.7  
 \*\*\*\*\* 4950 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000040

Table GL000041

C#DSN=GL000041;SIZE=004378;DATE=041185;ARCH=TM;TAPE=SM9310;FILE=118;STRT=005029;  
 C\*DATE: 19770322; 0; CITS6069;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: C. R. ALLEN; M. E. FRIEDMAN; J. A. HILEMAN; J. M. NORDQUIST;  
 C\* J. H. WHITCOMB;  
 C\*ALPHA: 19600101; 19691231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A005;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY (CIT)  
 C\* FOR THE YEARS FROM 1960 TO 1969;  
 C\*AUTHOR: C. R. ALLEN, M. E. FRIEDMAN, J. A. HILEMAN, J. M. NORDQUIST,  
 C\* AND J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY M. E. FRIEDMAN  
 C\* IN 1977.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\*FORMAT: IF COLUMN 1 IS "1", THEN THE FOLLOWING FORMAT APPLIES.

\*\*\*\*\*  
 See previous format from dataset GL000038 for details  
 \*\*\*\*\*

C\*END-----  
 1960 01 02 07 11 19.00 33 46.00 118 35.00 C 2.4 H04 8  
 1960 01 02 22 51 48.00 35 24.00 121 12.00 D 4.0 C07 8  
 1960 01 03 20 51 12.00 32 06.00 115 36.00 D 4.0 P01 8  
 1960 01 03 21 08 12.00 31 30.00 115 30.00 D 4.0 P00 8  
 1960 1 4 12 18 20.00 36 12.00 120 42.00 D 3.2 D 9 6  
 1960 01 05 18 07 43.00 34 02.00 117 44.00 B 3.0 K05 8  
 960 01 05 18 07 FELT IN POMONA AREA  
 1960 01 06 20 52 15.00 35 01.00 118 30.00 C 2.8 H07 8  
 1960 01 07 17 51 30.00 32 18.00 115 36.00 D 4.1 P01 8  
 1960 01 08 06 51 22.00 33 28.00 116 27.00 B 3.1 N03 8  
 \*\*\*\*\* 4300 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000041

Table GL000042

C#DSN=GL000042;SIZE=000582;DATE=041185;ARCH=TM;TAPE=SM9310;FILE=118;STRT=009407;  
 C\*DATE: 19770322; 0; CITS1970;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: C. R. ALLEN; M. E. FRIEDMAN; J. A. HILEMAN; J. M. NORDQUIST;  
 C\* J. H. WHITCOMB;  
 C\*ALPHA: 19700101; 19701231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A005;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY (CIT)  
 C\* FOR THE YEAR 1970;  
 C\*AUTHOR: C. R. ALLEN, M. E. FRIEDMAN, J. A. HILEMAN, J. M. NORDQUIST,  
 C\* AND J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY M. E. FRIEDMAN  
 C\* IN 1977.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\*FORMAT: IF COLUMN 1 IS "1", THEN THE FOLLOWING FORMAT APPLIES.

\*\*\*\*\*  
 See previous format from dataset GL000038 for details  
 \*\*\*\*\*

C\*END-----  
 1970 1 01 15 13 21.80 32 48.06 115 26.66 C 2.6 10.0 1R  
 1970 1 01 19 49 26.28 37 20.55 118 45.79 C 3.8 8.0 1R 0.62 1.4 4.1 .  
 1970 1 01 20 57 45.57 36 35.20 121 35.66 B 3.3 8.0 1R 0.35 2.6 2.4 .  
 1970 1 02 10 45 20.66 34 10.07 119 40.21 B 3.1 10.0 1R  
 1970 1 02 21 47 56.04 35 44.62 117 50.92 C 2.6 10.0 1R  
 1970 1 03 02 51 58.32 37 15.03 122 09.24 C 3.9 08.0 1R 0.25 2.9 1.4  
 1970 1 03 19 48 40.80 33 57.74 116 50.63 B 3.2 10.0 1R  
 1970 1 04 02 27 15.76 34 18.32 116 50.70 B 2.7 8.0 1R 0.17 0.5 1.3 .  
 1970 1 05 12 04 36.65 33 10.72 116 03.59 C 3.1 10.0 1R  
 1970 1 06 02 29 07.45 36 34.30 121 04.87 A 4.0 8.0 1R 0.12 0.9 1.2 .  
 \*\*\*\*\* 504 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000042



Table GL000043

C#DSN=GL000043;SIZE=000967;DATE=041185;ARCH=TM;TAPE=SM9310;FILE=118;STRT=009989;  
 C\*DATE: 19770322; 0; CITS1971;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: C. R. ALLEN; M. E. FRIEDMAN; J. A. HILEMAN; J. M. NORDQUIST;  
 C\* J. H. WHITCOMB;  
 C\*ALPHA: 19710101; 19711231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A005;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY (CIT)  
 C\* FOR THE YEAR 1971;  
 C\*AUTHOR: C. R. ALLEN, M. E. FRIEDMAN, J. A. HILEMAN, J. M. NORDQUIST,  
 C\* AND J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY M. E. FRIEDMAN  
 C\* IN 1977.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\*FORMAT: IF COLUMN 1 IS "I", THEN THE FOLLOWING FORMAT APPLIES.

\*\*\*\*\*  
 See previous format from dataset GL000038 for details  
 \*\*\*\*\*

C\*END-----  
 1971 1 01 20 36 18.44 33 57.92 119 23.81 C 3.0 8.0 1R 0.46 1.7 3.6 .  
 1971 1 02 02 19 13.08 35 45.80 117 34.30 C 2.8 8.0 1R 0.21 2.3 2.5 .  
 1971 1 02 02 37 50.32 35 48.86 117 33.02 C 3.0 8.0 1R . . . .  
 1971 1 02 06 27 37.12 35 55.99 120 26.54 B 3.3 8.0 1R 0.12 1.2 1.2 .  
 1971 1 02 07 59 08.02 35 42.07 117 33.56 A 2.8 8.0 1R 0.10 1.2 0.9 .  
 1971 1 02 11 19 28.78 35 50.92 117 29.95 C 3.0 8.0 1R 0.37 5.0 3.6 .  
 1971 1 04 05 37 56.42 35 53.42 117 31.27 C 3.0 8.0 1R 0.62 2.1 4.5 .  
 1971 1 05 06 14 45.04 34 02.16 117 56.19 B 3.6 8.0 1R 0.15 1.4 1.6 .  
 971 1 05 06 14 FELT PASADENA LA CRESCENTA SOUTH PASADENA ALHAMBRA  
 971 1 05 06 14 ARCADIA MONROVIA ETC  
 \*\*\*\*\* 889 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000043

Table GL000044

C#DSN=GL000044;SIZE=000876;DATE=041185;ARCH=TM;TAPE=SM9310;FILE=118;STRT=010956;  
 C\*DATE: 19770322; 0; CITS1972;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: C. R. ALLEN; M. E. FRIEDMAN; J. A. HILEMAN; J. M. NORDQUIST;  
 C\* J. H. WHITCOMB;  
 C\*ALPHA: 19720101; 19721231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A005;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY (CIT)  
 C\* FOR THE YEAR 1972;  
 C\*AUTHOR: C. R. ALLEN, M. E. FRIEDMAN, J. A. HILEMAN, J. M. NORDQUIST,  
 C\* AND J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY M. E. FRIEDMAN  
 C\* IN 1977.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\*FORMAT: IF COLUMN 1 IS "1", THEN THE FOLLOWING FORMAT APPLIES.

\*\*\*\*\*  
 See previous format from dataset GL000038 for details  
 \*\*\*\*\*

C\*END-----  
 1972 01 01 14 37 30.03 34 18.09 118 20.69 C 1.7 9.73 1A 0.200.0 0.0 0.0  
 1972 1 02 04 47 10.90 34 09.62 116 43.08 B 2.8 08.0 1R 0.26 1.6 1.4 .  
 1972 1 6 2 59 33.59 34 19.51 118 17.97 C 2.5 0.07 1A 0.492.942.14 3.21  
 1972 1 6 8 4 1.07 34 20.39 118 25.14 C 1.7 4.79 1A 0.718.323.9610.31  
 1972 1 06 10 10 35.26 35 42.39 118 19.30 B 3.6 08.0 1R 0.22 1.4 2.1 .  
 972 1 06 10 10 FELT ISABELLA  
 1972 1 6 10 32 59.95 34 20.71 118 23.55 B 1.7 3.38 1A 0.211.560.65 2.29  
 1972 1 06 16 26 52.89 34 10.15 117 24.63 A 2.8 08.0 1R 0.10 0.8 0.7 .  
 1972 1 07 04 08 25.27 33 15.76 116 50.28 B 3.4 11.7 1A 0.40 2.4 2.6 01.0  
 1972 1 09 04 25 24.25 31 53.75 116 06.90 C 3.6 08.0 1R 0.47 1.3 3.6 .  
 \*\*\*\*\* 798 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000044

Table GL000045

C#DSN=GL000045;SIZE=001378;DATE=041185;ARCH=TM;TAPE=SM9310;FILE=119;STRT=000001;  
 C\*DATE: 19770322; 0; CITS1973;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: C. R. ALLEN; M. E. FRIEDMAN; J. A. HILEMAN; J. M. NORDQUIST;  
 C\* J. H. WHITCOMB;  
 C\*ALPHA: 19730101; 19731231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A005;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY (CIT)  
 C\* FOR THE YEAR 1973;  
 C\*AUTHOR: C. R. ALLEN, M. E. FRIEDMAN, J. A. HILEMAN, J. M. NORDQUIST,  
 C\* AND J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY M. E. FRIEDMAN  
 C\* IN 1977.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\*FORMAT: IF COLUMN 1 IS "1", THEN THE FOLLOWING FORMAT APPLIES.

\*\*\*\*\*  
 See previous format from dataset GL000038 for details  
 \*\*\*\*\*

C#END-----  

1973	1	1	0	55	55.17	34	10.35	117	32.74	C	1.7	5.00	1A	0.200	610.97	2.5
1973	1	02	02	45	48.57	33	37.41	117	19.12	A	3.1	08.0	1R	0.12	1.0	0.8
1973	1	03	00	59	38.19	34	49.05	116	19.33	B	2.6	08.0	1R	0.20	1.5	1.2
1973	1	03	03	21	53.90	31	34.47	115	42.97	C	3.7	08.0	1R	0.68	2.3	4.6
1973	1	03	06	30	44.27	32	36.45	115	16.16	A	2.3	08.0	1R	0.09	0.7	0.6
1973	1	3	22	47	23.36	34	22.68	118	24.29	B	1.7	8.74	1A	0.050	580.30	0.53
1973	1	3	22	52	49.73	34	25.72	118	24.10	D	1.7	13.12	1A	0.312	872.18	4.05
1973	1	4	3	37	47.98	33	59.94	117	12.87	C	1.7	7.33	1A	0.120	0.0	0.0
1973	1	04	20	31	08.81	34	09.54	119	35.42	B	2.6	08.0	1R	0.24	1.3	2.1
1973	1	4	20	55	18.81	34	13.08	118	13.16	C	1.7	4.37	1A	0.230	140.07	0.15

 \*\*\*\*\* 1300 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000045

Table GL000046

C#DSN=GL000046;SIZE=001362;DATE=041185;ARCH=TM;TAPE=SM9310;FILE=119;STRT=001379;  
 C\*DATE: 19770322; 0; CITS1974;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: C. R. ALLEN; M. E. FRIEDMAN; J. A. HILEMAN; J. M. NORDQUIST;  
 C\* J. H. WHITCOMB;  
 C\*ALPHA: 19740101; 19741231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A005;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY (CIT)  
 C\* FOR THE YEAR 1974;  
 C\*AUTHOR: C. R. ALLEN, M. E. FRIEDMAN, J. A. HILEMAN, J. M. NORDQUIST,  
 C\* AND J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY M. E. FRIEDMAN  
 C\* IN 1977.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974. SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\*FORMAT: IF COLUMN 1 IS "1", THEN THE FOLLOWING FORMAT APPLIES.

\*\*\*\*\*  
 See previous format from dataset GL000038 for details  
 \*\*\*\*\*

C\*END-----  
 1974 1 01 03 22 53.36 35 56.10 118 07.32 B 2.4 3.58  
 1974 1 2 8 50 30.03 34 19.73 118 23.68 C 1.1 1.18 1A 0.080.0 0.0 0.0  
 1974 1 2 10 27 53.89 34 25.89 118 24.77 C 1.7 12.92 1A 0.120.760.68 1.24  
 1974 1 2 11 32 13.26 34 16.70 118 25.93 C 1.8 5.00 1A 0.140.731.09 4.19  
 1974 1 2 13 4 13.96 34 18.98 117 38.43 D 1.6 5.59 1A 0.383.891.2799.00  
 1974 1 02 13 49 55.95 35 33.09 117 15.82 B 4.2 6.50  
 1974 1 3 0 20 30.45 34 19.60 118 16.70 C 1.2 7.98 1A 0.260.870.59 5.86  
 1974 1 03 05 49 21.99 33 05.99 115 37.71 B 2.7 14.8  
 1974 1 04 02 00 31.19 31 42.71 115 59.96 C 2.7 5.13  
 1974 1 04 02 39 44.77 34 21.02 118 25.20 B 2.0 5.41  
 \*\*\*\*\* 1284 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000046

Table GL000047

C#DSN=GL000047;SIZE=003008;DATE=041185;ARCH=TM;TAPE=SM9310;FILE=119;STRT=002741;  
 C\*DATE: 19770322; 0; CITS1975;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: C. R. ALLEN; M. E. FRIEDMAN; J. A. HILEMAN; J. M. NORDQUIST;  
 C\* J. H. WHITCOMB;  
 C\*ALPHA: 19750101; 19751231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A005;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY (CIT)  
 C\* FOR THE YEAR 1975;  
 C\*AUTHOR: C. R. ALLEN, M. E. FRIEDMAN, J. A. HILEMAN, J. M. NORDQUIST,  
 C\* AND J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY M. E. FRIEDMAN  
 C\* IN 1977.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\*FORMAT: IF COLUMN 1 IS "1", THEN THE FOLLOWING FORMAT APPLIES.

\*\*\*\*\*  
 See previous format from dataset GL000038 for details  
 \*\*\*\*\*

C\*END-----  
 1975 1 01 03 16 29.41 35 15.52 118 31.80 B 2.1 172 6.14 9 45 0.44 2.3 7.0  
 1975 1 01 07 51 38.76 34 13.13 117 26.55 B 2.9 57 8.00 24 11 0.43 1.4 2.5  
 1975 1 01 13 15 30.04 34 22.94 118 26.02 B 2.1 57 8.00 16 3 0.35 1.2 2.1  
 1975 1 01 19 57 28.52 35 06.93 116 34.31 B 2.4 203 8.00 15 30 0.37 2.1 3.6  
 1975 1 01 20 28 29.67 35 21.78 118 29.45 B 2.4 168 5.44 14 33 0.41 1.8 4.0  
 1975 1 02 09 38 59.45 30 47.15 116 18.47 D 3.1 313 8.00 7207 0.80 98.6 .  
 1975 1 02 19 34 22.28 30 47.89 116 03.62 D 3.8 320 8.00 6205 0.19 24.8 33.2  
 1975 1 2 20 31 33.78 33 53.76 115 32.30 A 2.6\* 79 0.18 14 8 0.18 0.9 14.6  
 1975 1 03 05 55 31.71 33 32.22 117 39.14 A 3.8 89 3.95 22 20 0.29 1.1 2.3  
 975 01 03 05 55 FELT CAPISTRANO AND LAGUNA BEACH  
 \*\*\*\*\* 2930 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000047

Table GL000048

```

C#DSN=GL000048;SIZE=004983;DATE=082984;ARCH=TM;TAPE=SM9310;FILE=017;STRT=005749;
C*DATE: 19830906; 0; NEISSTAT;
C*CLASS: EARTHQUAKE; STATION;
C*PERSN: RAY BULAND;
C*ALPHA: ; ; 90.0 S; 90.0 N; 180.0 W; 180.0 E; ; A001;
C*KEYWD: ;
C*TITLE: NEIS STATION MASTER FILE;
C*AUTHOR: ;
C*INSTITUTION: NATIONAL EARTHQUAKE INFORMATION SERVICE
C*          U. S. GEOLOGICAL SURVEY
C*          BOX 25046, M.S. 967
C*          DENVER FEDERAL CENTER
C*          DENVER, CO 80225
C*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY BULAND,
C*          U. S. GEOLOGICAL SURVEY, DENVER, IN 1983.
C*          IT CONTAINS NEARLY 5000 STATION CODES, INCLUDING STATIONS LONG
C*          CLOSED AND STATIONS NOT YET OPEN.
C*REFERENCE:
C*FORMAT:
C*  COLUMNS  FORMAT  ITEM    EXPLANATION
C*  01-05     A5      CODE     STATION CODE
C*  06        A1      FLAG     STATION FLAG
C*                                     BLANK = ACTIVE
C*                                     C      = CLOSED
C*                                     R      = RESERVED
C*                                     F      = FORBIDDEN
C*                                     (USUALLY DUE TO POTENTIAL AMBIGUITIES IN
C*                                     THE INTERNATIONAL SEISMIC TELEGRAPHIC
C*                                     FORMAT)
C*  07-08     I2      LATD     LATITUDE: DEGREES
C*  09-10     I2      LATM     LATITUDE: MINUTES
C*  11-14     F4.1    SLAT     LATITUDE: SECONDS
C*  15        A1      NS       N FOR NORTHERN OR S FOR SOUTHERN HEMISPHERE
C*  16-18     I3      LOND     LONGITUDE: DEGREES
C*  19-20     I2      LONM     LONGITUDE: MINUTES
C*  21-24     F4.1    SLOH     LONGITUDE: SECONDS
C*  25        A1      EW       E FOR EASTERN OR W FOR WESTERN HEMISPHERE
C*  26-32     F7.1    ELEV     ELEVATION (METERS) RELATIVE TO THE MEAN GEOID
C*                                     (POSITIVE UP)
C*  33-80     A48     NAME     REAL STATION NAME (TRUNCATED IF MORE THAN 48
C*                                     CHARACTERS)
C*END-----
-AOMAC464119.0N1061320.0W 897.0Subarray A0 LASA
A10  102740.0N 844256.0W 830.0Crater
AA-ISC521242.0N1741213.0W 6.0Atka
AAA  431618.0N 765648.0E 800.0Alma-Ata
AAB  431600.0N 772300.0E 850.0(Alternate Abbreviation for TLG)
AAC  C504700.0N 60500.0E 179.0Aachen
AAE  90145.0N 384556.0E 2442.0Addis Ababa
AAI  34000.0S1281000.0E 80.0Ambon
AAM  421759.0N 833922.0W 249.0Ann Arbor
AAR  460800.0N 255342.0E 1101.0Sfinta Ana
***** 4930 data cards not shown here *****

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C#FINIS DSN=GL000048

Table GL000049

C#DSN=GL000049;SIZE=008673;DATE=082984;ARCH=TM;TAPE=SM9310;FILE=018;STRT=000001;  
C\*DATE: 19831017;99; ICALPH71;  
C\*CLASS: EARTHQUAKE; PHASE;  
C\*PERSN: R. BULAND;  
C\*ALPHA: 19710101;19711231;30.0N;43.0N;135.0W;114.0W; ;A001;  
C\*KEYWD: CALIFORNIA;  
C\*TITLE: PHASE DATA COLLECTED BY THE INTERNATIONAL SEISMOLOGICAL  
C\* CENTRE (ISC) FOR CALIFORNIA EVENTS IN THE YEAR 1971;  
C\*AUTHOR:  
C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY,  
C\* RG13 1LX, BERKSHIRE, UNITED KINGDOM  
C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY  
C\* BULAND, U. S. GEOLOGICAL SURVEY, DENVER, IN 1983.  
C\*REFERENCE:  
C\*FORMAT: FOUR TYPES OF RECORDS MAY BE FOUND IN THIS FILE  
C\* 1. EVENT RECORD--THE HYPOCENTER PARAMETERS AND 4 MAGNITUDES  
C\* 2. STATION RECORD--STATION ID, FIRST-ARRIVAL DATA,  
C\* SPZ AMPLITUDE, AND FIRST ADDITIONAL-PHASE DATA  
C\* 3. ADDITIONAL PHASE RECORD--ALWAYS ASSOCIATED WITH A STATION  
C\* RECORD. CONTAINS DATA FOR 4 ADDITIONAL PHASES  
C\* 4. SURFACE WAVE RECORD--PERIOD AND AMPLITUDE OF 3 COMPONENTS  
C\*  
C\* EVENT RECORD  
C\*  

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01-02	A2	ID	RECORD IDENTIFICATION: '00'
C*	03	1X		BLANK
C*	04-11	I8	DATE	(YYYYMMDD)
C*	12	1X		BLANK
C*	13-20	F8.2	OR	ORIGIN TIME (HHMMSSSS)
C*	21	1X		BLANK
C*	22-26	F5.3	LAT	LATITUDE OF EPICENTER IN DEGREES
C*	27	A1	NS	N=NORTH, S=SOUTH
C*	28	1X		BLANK
C*	29-34	F6.3	LON	LONGITUDE OF EPICENTER IN DEGREES
C*	35	A1	EW	E=EAST, W=WEST
C*	36	1X		BLANK
C*	37-40	F4.1	DEPTH	FOCAL DEPTH IN KILOMETERS
C*	41	1X		BLANK
C*	42-43	F2.1	MB	MAGNITUDE
C*	44	1X		BLANK
C*	45-46	F2.1	MS	MS MAGNITUDE
C*	47	1X		BLANK
C*	48-49	F2.1	TMP	TELESEISMIC MAGNITUDE PREFERENCE
C*	50	1X		BLANK
C*	51-52	F2.1	LMP	LOCAL MAGNITUDE PREFERENCE
C*	53	1X		BLANK
C*	54-56	I3	NAS	NUMBER OF ASSOCIATED STATIONS
C*	57-58	2X		BLANK
C*	59-60	A2	RTC	RECORD TYPE CODE OF FOLLOWING RECORD

C\*  
C\* STATION RECORD  
C\*



C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01-02	A2	ID	RECORD IDENTIFICATION: '10'
C*	03	1X		BLANK
C*	04-11	I8	DATE1	DATE OF FIRST-ARRIVAL TIME (YYYYMMDD)
C*	12	1X		BLANK
C*	13-17	A5	SID	STATION IDENTIFICATION
C*	18	A1	OC1	ONSET CODE AS FOLLOWS:
C*				I SIGNIFIES I
C*				E SIGNIFIES E
C*				BLANK SIGNIFIES NULL
C*				3 SIGNIFIES (...)
C*				4 SIGNIFIES I(...)
C*				5 SIGNIFIES E(...)
C*				6 SIGNIFIES EI
C*	19-24	A6	PC1	PHASE CODE OF 1ST ARRIVAL
C*	25	A1	SPZ	SPZ 1ST-MOTION CODE (C/D)
C*	26	A1	LPZ	LPZ 1ST-MOTION CODE (+/-)
C*	27-34	F8.2	T1	TIME OF 1ST ARRIVAL (HHMMSSSS)
C*	35	1X		BLANK
C*	36-37	F2.1	PER1	PERIOD ASSOCIATED WITH 1ST ARRIVAL IN SECONDS
C*	38-43	E6.3	AMP1	AMPLITUDE IN NANOMETERS
C*				38-41 MANTISSA (F4.3)
C*				42 '+'/'-'
C*				43 EXPONENT
C*	44	1X		BLANK
C*	45	A1	OCS1	ONSET CODE OF 1ST SECONDARY PHASE
C*	46-51	A6	PCS1	PHASE CODE OF 1ST SECONDARY PHASE
C*	52-57	F6.2	OT	OFFSET TIME (SSSSSS)
C*	58	1X		BLANK
C*	59-60	A2	RTC	RECORD TYPE CODE OF FOLLOWING RECORD

# C\* ADDITIONAL PHASES RECORD

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01-02	A2	ID	RECORD IDENTIFICATION: '30'
C*	03	1X		BLANK
C*	04	A1	OC	ONSET CODE
C*	05-10	A6	PC	PHASE CODE
C*	11-16	F6.2	OT	OFFSET TIME (SSSSSS)
C*	17	1X		BLANK
C*	18	A1	OC	ONSET CODE
C*	19-24	A6	PC	PHASE CODE
C*	25-30	F6.2	OT	OFFSET TIME
C*	31	1X		BLANK
C*	32	A1	OC	ONSET CODE
C*	33-38	A6	PC	PHASE CODE
C*	39-44	F6.2	OT	OFFSET TIME
C*	45	1X		BLANK
C*	46	A1	OC	ONSET CODE
C*	47-52	A6	PC	PHASE CODE
C*	53-58	F6.2	OT	OFFSET TIME
C*	59-60	A2	RTC	RECORD TYPE CODE OF FOLLOWING RECORD

# C\* SURFACE WAVE RECORD

C\*

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01-02	A2	ID	RECORD IDENTIFICATION: '40'
C*	03	1X		BLANK
C*	04	A1	Z	'Z'
C*	05-06	I2	PER	PERIOD IN SECONDS
C*	07-12	E6.3	AMP	AMPLITUDE IN MICROMETERS
C*				07-10 MANTISSA (DECIMAL IN 7)
C*				11 '+'/'-'
C*				12 EXPONENT
C*	13	1X		BLANK
C*	14	A1	N	'N'
C*	15-16	I2	PER	PERIOD IN SECONDS
C*	17-22	E6.3	AMP	AMPLITUDE
C*	23	1X		BLANK
C*	24	A1	E	'E'
C*	25-26	I2	PER	PERIOD
C*	27-32	E6.3	AMP	AMPLITUDE
C*	33-58	26X		BLANK
C*	59-60	A2	RTC	RECORD TYPE CODE OF FOLLOWING RECORD

C\*END-----

00	19710101	20361840	33970N	119400W	80		1	10
10	19710101	BCN	IP	20373650		LR	6250	00
00	19710102	02191310	35770N	117570W	80		2	10
10	19710102	BCN	IPn	02195410		LR	2990	10
10	19710102	EUR	IPn	02202600	06.103+1			00
00	19710102	02375030	35820N	117550W	80		2	10
10	19710102	BCN	IPn	02383050		LR	3050	10
10	19710102	EUR	IPn	02390260	06.295+1			00
00	19710102	06273748	35967N	120832W	80		7	10
10	19710102	PRI	IP	c 06274240				10

\*\*\*\*\* 8533 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000049

Table GL000050

C#DSN=GL000050;SIZE=006422;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=019;STRT=000001;  
 C#DATE: 19831017;99; ICALPH72;  
 C#CLASS: EARTHQUAKE; PHASE;  
 C#PERSN: R. BULAND;  
 C#ALPHA: 19720101;19721231;30.0N;43.0N;135.0W;114.0W; ;A001;  
 C#KEYWD: CALIFORNIA;  
 C#TITLE: PHASE DATA COLLECTED BY THE INTERNATIONAL SEISMOLOGICAL  
 C# CENTRE (ISC) FOR CALIFORNIA EVENTS IN THE YEAR 1972;  
 C#AUTHOR:  
 C#INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEILBURY,  
 C# RG13 1LX, BERKSHIRE, UNITED KINGDOM  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY  
 C# BULAND, U. S. GEOLOGICAL SURVEY, DENVER, IN 1983.  
 C#REFERENCE:  
 C#FORMAT: FOUR TYPES OF RECORDS MAY BE FOUND IN THIS FILE

\*\*\*\*\*  
 See previous format from dataset GL000049 for details  
 \*\*\*\*\*

C#END-----  
 00 19720102 15254670 40465N 124742W 80 4 10  
 10 19720102 FHC IP c 15260220 I 1080 10  
 10 19720102 MIN IP d 15262630 I 870 30  
 30 I 2870 10  
 10 19720102 BKS IP c 15263830 10  
 10 19720102 JAS P 15265300 00  
 00 19720103 04151180 41461N 126021W 80 10 10  
 10 19720103 FHC IP c 04154080 S 2020 10  
 10 19720103 MIN IP c 04160700 I 1100 30  
 30 S 4100 I 4800 10  
 \*\*\*\*\* 6282 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000050

Table GL000051

C#DSN=GL000051;SIZE=006987;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=020;STRT=000001;  
 C#DATE: 19831017;99; ICALPH73;  
 C#CLASS: EARTHQUAKE; PHASE;  
 C#PERSN: R. BULAND;  
 C#ALPHA: 19730101;19731231;30.0N;43.0N;135.0W;114.0W; ;A001;  
 C#KEYWD: CALIFORNIA;  
 C#TITLE: PHASE DATA COLLECTED BY THE INTERNATIONAL SEISMOLOGICAL  
 C# CENTRE (ISC) FOR CALIFORNIA EVENTS IN THE YEAR 1973;  
 C#AUTHOR:  
 C#INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY,  
 C# RG13 1LX, BERKSHIRE, UNITED KINGDOM  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY  
 C# BULAND, U. S. GEOLOGICAL SURVEY, DENVER, IN 1983.  
 C#REFERENCE:  
 C#FORMAT: FOUR TYPES OF RECORDS MAY BE FOUND IN THIS FILE

\*\*\*\*\*  
 See previous format from dataset GL000049 for details  
 \*\*\*\*\*

C#END-----  
 00 19730101 07573669 36998N 121749W 80 7 10  
 10 19730101 SAO IPn d 07574640 10  
 10 19730101 MHC IPn d 07574510 S 490 10  
 10 19730101 BKS IPn c 07575730 S 1370 10  
 10 19730101 PRI IPn c 07580070 S 2030 10  
 10 19730101 JAS IPn c 07580060 I 340 30  
 30 S 1540 I 1740 10  
 10 19730101 FRI IPn c 07580430 S 1770 10  
 10 19730101 EUR EPn 07590320 02.060+1 00  
 00 19730102 02454860 33620N 117320W 80 31 4 10  
 \*\*\*\*\* 6847 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000051

Table GL000052

C#DSN=GL000052;SIZE=005873;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=021;STRT=000001;  
 C\*DATE: 19831017;99; ICALPH74;  
 C\*CLASS: EARTHQUAKE; PHASE;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19740101;19741231;30.0N;43.0N;135.0W;114.0W; ;A001;  
 C\*KEYWD: CALIFORNIA;  
 C\*TITLE: PHASE DATA COLLECTED BY THE INTERNATIONAL SEISMOLOGICAL  
 C\* CENTRE (ISC) FOR CALIFORNIA EVENTS IN THE YEAR 1974;  
 C\*AUTHOR:  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY,  
 C\* RG13 1LX, BERKSHIRE, UNITED KINGDOM  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY  
 C\* BULAND, U. S. GEOLOGICAL SURVEY, DENVER, IN 1983.  
 C\*REFERENCE:  
 C\*FORMAT: FOUR TYPES OF RECORDS MAY BE FOUND IN THIS FILE

\*\*\*\*\*  
 See previous format from dataset GL000049 for details  
 \*\*\*\*\*

C\*END-----  
 00 19740101 18282037 42001N 126680W 330 44 23 10  
 10 19740101 FHC EPn c 18285600 10  
 10 19740101 WDC IPn c 18291230 10  
 10 19740101 COR IPn d 18291580 10  
 10 19740101 LON IPn d 18294820 10  
 10 19740101 BMO IPn 18300750 10  
 10 19740101 EUR IP 18302400 05.559+1 10  
 10 19740101 NEW EP 18303300 10  
 10 19740101 NTI EP 18303600 10  
 10 19740101 DUG EP 18304980 13.125+2 10  
 \*\*\*\*\* 5733 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000052

Table GL000053

C#DSN=GL000053;SIZE=010318;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=022;STRT=000001;  
 C\*DATE: 19831017;99; ICALPH75;  
 C\*CLASS: EARTHQUAKE; PHASE;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19750101;19751231;30.0N;43.0N;135.0W;114.0W; ;A001;  
 C\*KEYWD: CALIFORNIA;  
 C\*TITLE: PHASE DATA COLLECTED BY THE INTERNATIONAL SEISMOLOGICAL  
 C\* CENTRE (ISC) FOR CALIFORNIA EVENTS IN THE YEAR 1975;  
 C\*AUTHOR:  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY,  
 C\* RG13 1LX, BERKSHIRE, UNITED KINGDOM  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY  
 C\* BULAND, U. S. GEOLOGICAL SURVEY, DENVER, IN 1983.  
 C\*REFERENCE:  
 C\*FORMAT: FOUR TYPES OF RECORDS MAY BE FOUND IN THIS FILE

\*\*\*\*\*  
 See previous format from dataset GL000049 for details  
 \*\*\*\*\*

C#END-----  
 00 19750101 07152578 40517N 125358W 30 35 6 10  
 10 19750101 FHC IPn c 07154740 S 1260 10  
 10 19750101 WDC IPn c 07160320 I 2780 10  
 10 19750101 MIN IPn d 07161320 I 3680 10  
 10 19750101 JAS IPn 07163810 10  
 10 19750101 FRI IPn 07165240 10  
 10 19750101 BMD EPn 07171660 06.170+1 00  
 00 19750103 05552948 33507N 117717W 50 43 9 10  
 10 19750103 RVR IPn 05554150 IS 660 10  
 10 19750103 CIS IPn 05554350 10  
 \*\*\*\*\* 10178 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000053

Table GL000054

C#DSN=GL000054;SIZE=009470;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=023;STRT=000001;  
 C#DATE: 19831017;99; ICALPH76;  
 C#CLASS: EARTHQUAKE; PHASE;  
 C#PERSN: R. BULAND;  
 C#ALPHA: 19760101;19761231;30.0N;43.0N;135.0W;114.0W; ;A001;  
 C#KEYWD: CALIFORNIA;  
 C#TITLE: PHASE DATA COLLECTED BY THE INTERNATIONAL SEISMOLOGICAL  
 C# CENTRE (ISC) FOR CALIFORNIA EVENTS IN THE YEAR 1976;  
 C#AUTHOR:  
 C#INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY,  
 C# RG13 1LX, BERKSHIRE, UNITED KINGDOM  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY  
 C# BULAND, U. S. GEOLOGICAL SURVEY, DENVER, IN 1983.  
 C#REFERENCE:  
 C#FORMAT: FOUR TYPES OF RECORDS MAY BE FOUND IN THIS FILE

\*\*\*\*\*  
 See previous format from dataset GL000049 for details  
 \*\*\*\*\*

C#END-----  
 00 19760101 01475299 33472N 116583W 110 7 10  
 10 19760101 PLM IPn 01480050 10  
 10 19760101 TPC IPn 01480850 IS 750 10  
 10 19760101 SND IPn 01481040 ES 1060 10  
 10 19760101 RVR IPn 01480960 IS 940 10  
 10 19760101 MWC IPn 01482000 IS 1900 10  
 10 19760101 PAS IPn 01482100 IS 1950 10  
 10 19760101 GLA IPn 01482100 IS 1860 00  
 00 19760101 17201073 33872N 117987W 80 41 27 10  
 10 19760101 PAS IPn 17201850 IS 400 10  
 \*\*\*\*\* 9330 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000054

Table GL000055

C#DSN=GL000055;SIZE=007571;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=024;STRT=000001;  
 C\*DATE: 19831017;99; ICALPH77;  
 C\*CLASS: EARTHQUAKE; PHASE;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19770101;19771231;30.0N;43.0N;135.0W;114.0W; ;A001;  
 C\*KEYWD: CALIFORNIA;  
 C\*TITLE: PHASE DATA COLLECTED BY THE INTERNATIONAL SEISMOLOGICAL  
 C\* CENTRE (ISC) FOR CALIFORNIA EVENTS IN THE YEAR 1977;  
 C\*AUTHOR:  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY,  
 C\* RG13 1LX, BERKSHIRE, UNITED KINGDOM  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY  
 C\* BULAND, U. S. GEOLOGICAL SURVEY, DENVER, IN 1983.  
 C\*REFERENCE:  
 C\*FORMAT: FOUR TYPES OF RECORDS MAY BE FOUND IN THIS FILE

\*\*\*\*\*  
 See previous format from dataset GL000049 for details  
 \*\*\*\*\*

C\*END-----  
 00 19770101 07205100 40400N 127200W 20 38 10 10  
 10 19770101 WKC EPn 07212950 ES 2800 10  
 10 19770101 FHC IPn 07213250 S 2950 10  
 10 19770101 MIN Pn 07215800 10  
 10 19770101 ORV EPn 07220100 10  
 10 19770101 KPK IPn 07220440 10  
 10 19770101 BKS IPn 07220230 P\* 770 30  
 30 S 5370 10  
 10 19770101 MHC IPn 07221200 10  
 10 19770101 ARN IPn 07221350 10  
 \*\*\*\*\* 7431 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000055



Table GL000056

C#DSN=GL000056;SIZE=010228;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=025;STRT=000001;  
 C\*DATE: 19831017;99; ICALPH78;  
 C\*CLASS: EARTHQUAKE; PHASE;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19780101;19781231;30.0N;43.0N;135.0W;114.0W; ;A001;  
 C\*KEYWD: CALIFORNIA;  
 C\*TITLE: PHASE DATA COLLECTED BY THE INTERNATIONAL SEISMOLOGICAL  
 C\* CENTRE (ISC) FOR CALIFORNIA EVENTS IN THE YEAR 1978;  
 C\*AUTHOR:  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY,  
 C\* RG13 1LX, BERKSHIRE, UNITED KINGDOM  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY  
 C\* BULAND, U. S. GEOLOGICAL SURVEY, DENVER, IN 1983.  
 C\*REFERENCE:  
 C\*FORMAT: FOUR TYPES OF RECORDS MAY BE FOUND IN THIS FILE

\*\*\*\*\*  
 See previous format from dataset GL000049 for details  
 \*\*\*\*\*

C\*END-----  
 00 19780102 06391808 40854N 125326W 320 40 21 10  
 10 19780102 WKC IPn c 06393480 10  
 10 19780102 FHC IPn c 06393610 S 1290 10  
 10 19780102 WDC IPn c 06395200 S 2300 10  
 10 19780102 MIN IPn c 06400240 10  
 10 19780102 ORV IPn c 06400670 10  
 10 19780102 BKS IPn 06401600 E 4000 30  
 30 E 4100 10  
 10 19780102 MHC IPn 06402630 10  
 10 19780102 WCN EPn 06402650 10  
 \*\*\*\*\* 10088 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000056

Table GL000057

C#DSN=GL000057;SIZE=012383;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=026;STRT=000001;  
 C\*DATE: 19831017;99; ICALPH79;  
 C\*CLASS: EARTHQUAKE; PHASE;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19790101;19791231;30.0N;43.0N;135.0W;114.0W; ;A001;  
 C\*KEYWD: CALIFORNIA;  
 C\*TITLE: PHASE DATA COLLECTED BY THE INTERNATIONAL SEISMOLOGICAL  
 C\* CENTRE (ISC) FOR CALIFORNIA EVENTS IN THE YEAR 1979;  
 C\*AUTHOR:  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY,  
 C\* RG13 1LX, BERKSHIRE, UNITED KINGDOM  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY  
 C\* BULAND, U. S. GEOLOGICAL SURVEY, DENVER, IN 1983.  
 C\*REFERENCE:  
 C\*FORMAT: FOUR TYPES OF RECORDS MAY BE FOUND IN THIS FILE

\*\*\*\*\*  
 See previous format from dataset GL000049 for details  
 \*\*\*\*\*

C\*END-----  
 00 19790101 02194210 40488N 126505W 50 42 42 17 10  
 10 19790101 FHC IPn c 02201520 S 2380 10  
 10 19790101 WDC IPn c 02203060 10  
 10 19790101 MIN IPn c 02204080 10  
 10 19790101 KPK IPn 02204680 10  
 10 19790101 BKS IPn c 02204830 E 870 30  
 30 S 4870 E 5170 10  
 10 19790101 MHC IPn d 02205780 10  
 10 19790101 ARN EPn 02205890 10  
 10 19790101 JAS IPn 02210570 10  
 \*\*\*\*\* 12243 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000057

Table GL000058

C#DSN=GL000058;SIZE=022722;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=027;STRT=000001;  
 C\*DATE: 19831017;99; ICALPH80;  
 C\*CLASS: EARTHQUAKE; PHASE;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19800101;19801231;30.0N;43.0N;135.0W;114.0W; ;A001;  
 C\*KEYWD: CALIFORNIA;  
 C\*TITLE: PHASE DATA COLLECTED BY THE INTERNATIONAL SEISMOLOGICAL  
 C\* CENTRE (ISC) FOR CALIFORNIA EVENTS IN THE YEAR 1980;  
 C\*AUTHOR:  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY,  
 C\* RG13 1LX, BERKSHIRE, UNITED KINGDOM  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY  
 C\* BULAND, U. S. GEOLOGICAL SURVEY, DENVER. IN 1983.  
 C\*REFERENCE:  
 C\*FORMAT: FOUR TYPES OF RECORDS MAY BE FOUND IN THIS FILE

\*\*\*\*\*  
 See previous format from dataset GL000049 for details  
 \*\*\*\*\*

C\*END-----  
 00 19800101 02092511 36203N 120834W 140 32 10 10  
 10 19800101 PRI IPg d 02092900 10  
 10 19800101 LLA IP\* d 02093400 10  
 10 19800101 PRS IP\* c 02093450 10  
 10 19800101 SAO IP\* 02093900 10  
 10 19800101 FRI IP\* 02094710 S 1590 10  
 10 19800101 GCC IPn d 02094800 10  
 10 19800101 MHC IPn 02094920 S 1680 10  
 10 19800101 JAS IPn d 02095540 S 2260 10  
 10 19800101 PCC IPn 02095550 10  
 \*\*\*\*\* 22582 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000058

Table GL000059

C#DSN=GL000059;SIZE=018530;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=028;STRT=000001;  
 C\*DATE: 19831019; 99; ICAL7180;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: R. BULAND;  
 C\*ALPHA: 19710101; 19801231; 30.0N; 43.0N; 135.0W; 114.0W; ; A001;  
 C\*KEYWD: CALIFORNIA;  
 C\*TITLE: HYPOCENTER DATA FILE OF THE INTERNATIONAL SEISMOLOGICAL CENTRE (ISC)  
 C\* FOR CALIFORNIA EVENTS IN THE YEARS 1971 THROUGH 1980  
 C\* AS REFORMATED BY NEIS;  
 C\*AUTHOR:  
 C\*INSTITUTION: INTERNATIONAL SEISMOLOGICAL CENTRE, NEWBURY RG13 1LX, BERKSHIRE,  
 C\* UNITED KINGDOM;  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY RAY BULAND, U.S.  
 C\* GEOLOGICAL SURVEY, BOX 25046, M.S. 967, DENVER FEDERAL CENTER,  
 C\* DENVER, COLORADO, ON JUNE 24, 1983. THERE ARE 9094 EVENTS.  
 C\*REFERENCE:  
 C\*FORMAT:  
 C\*  
 C\* CARD 1  
 C\*  

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01	X		BLANK
C*	02-06	A5	AGENCY	CONTRIBUTING ORGANIZATION, SOURCE, AUTHORITY.
C*				ADK: ADAK, AK, USA
C*				AEC: U.S. ATOMIC ENERGY COMMISSION
C*				ALG: ALGIERS, ALGERIA
C*				ALI: ALICANTE, SPAIN
C*				ALM: ALMERIA, SPAIN
C*				ALQ: ALBUQUERQUE, NM, USA
C*				APA: APATITY, RSFSR, USSR
C*				API: APIA, SAMOA IS.
C*				ATH: ATHENS OBSERVATORY, GREECE
C*				BCI: BUREAU CENTRAL INTERNATIONAL DE SEISMOLOGIE, STRASBOURG, FRANCE
C*				BLA: BLACKSBURG, VA, USA
C*				BNS: BENSBERG, FEDERAL REPUBLIC OF GERMANY
C*				BOG: BOGOTA, COLUMBIA
C*				BRA: BRATISLAVA, CZECHOSLOVAKIA
C*				BRK: BERKELEY (HAVILAND), CA, USA
C*				BUC: BUCHAREST, ROMANIA
C*				BUL: BULAWAYO, RHODESIA
C*				CAN: CANBERRA, AUSTRALIAN CAPITAL TERRITORY, AUSTRALIA
C*				CAR: CARACAS, VENEZUELA
C*				CFR: CHARLES F. RICHTER
C*				CGS: COAST AND GEODETIC SURVEY
C*				CHC: CHAPEL HILL, NC, USA
C*				CLL: COLLMBERG, GERMAN DEMOCRATIC REPUBLIC
C*				DJA: DJAKARTA, JAVA, INDONESIA
C*				EQH: EARTHQUAKE HISTORY OF THE UNITED STATES
C*				ERL: ENVIRONMENTAL RESEARCH LABORATORIES

C\* G-R: GUTENBERG-RICHTER  
 C\* GOL: GOLDEN (BERGEN PARK), CO, USA  
 C\* GS : U.S. GEOLOGICAL SURVEY, DENVER, CO, USA  
 C\* HEL: HELSINKI, FINLAND  
 C\* HRB: HURBANOVO, CZECHOSLOVAKIA  
 C\* HVO: HAWAIIAN VOLCANO OBSERVATORY,  
 C\* HAWAII NATIONAL PARK, HI, USA  
 C\* ISK: ISTANBUL - KANDILLI, TURKEY  
 C\* ISS: INTERNATIONAL SEISMOLOGICAL SUMMARY,  
 C\* KEW, ENGLAND, UK  
 C\* IST: ISTANBUL, TURKEY  
 C\* JER: JERUSALEM, ISRAEL  
 C\* JMA: JAPAN METEOROLOGICAL AGENCY, TOKYO, JAPAN  
 C\* JOH: JOHANNESBURG, SOUTH AFRICA  
 C\* KAR: KARACHI, PAKISTAN  
 C\* KEW: KEW, ENGLAND, UK  
 C\* KIR: KIRUNA, SWEDEN  
 C\* LEM: LEMBANG, JAVA, INDONESIA  
 C\* LIS: LISBON, PORTUGAL  
 C\* LJU: LJUBLJANA, YUGOSLAVIA  
 C\* LWI: LWIRO, ZAIRE  
 C\* MAL: MALAGA, SPAIN  
 C\* MAN: MANILA, PHILIPPINES  
 C\* MAT: MATSUSHIRO, HONSHU, JAPAN  
 C\* MER: MERIDA, MEXICO  
 C\* MOS: MOSCOW, RSFSR, USSR  
 C\* MOX: MOXA, GERMAN DEMOCRATIC REPUBLIC  
 C\* NES: NORTHEASTERN SEISMOLOGICAL ASSOCIATION,  
 C\* WESTON, MA, USA  
 C\* NOS: NATIONAL OCEAN SURVEY  
 C\* NOU: NOUMEA, NEW CALEDONIA  
 C\* NRR: NORTH RENO, NV, USA  
 C\* OAX: OAXACA, MEXICO  
 C\* OBM: ULAN BATOR, MONGOLIA  
 C\* OTT: OTTAWA, ONTARIO, CANADA  
 C\* OXF: OXFORD, MS, USA  
 C\* PAL: PALISADES, NY, USA  
 C\* PAS: PASADENA, CA, USA  
 C\* PEK: PEKING, CHINA  
 C\* PET: PETROPAVLOVSK, RSFSR, USSR  
 C\* PMG: PORT MORESBY, PAPUA  
 C\* PMR: PALMER, AK, USA  
 C\* PRA: PRAHA (PRAGUE), CZECHOSLOVAKIA  
 C\* PRU: PRHHONICE, CZECHOSLOVAKIA  
 C\* QUE: QUETTA, PAKISTAN  
 C\* RAC: RACIBORZ, POLAND  
 C\* REY: REYKJAVIK, ICELAND  
 C\* RIV: RIVERVIEW, NEW SOUTH WALES, AUSTRALIA  
 C\* RMP: ROME (MONTE PORZIO CATONE), ITALY  
 C\* ROM: ROME, ITALY  
 C\* SAN: SANTIAGO, CHILE  
 C\* SEA: SEATTLE, WA, USA  
 C\* SHI: SHIRAZ, IRAN  
 C\* SHL: SHILLONG, INDIA  
 C\* SLM: ST. LOUIS, MO, USA  
 C\* SNM: SOCORRO, NM, USA

C\* SSS: SAN SALVADOR, EL SALVADOR  
 C\* STR: STRASBOURG, FRANCE  
 C\* STU: STUTTGART, FEDERAL REPUBLIC OF GERMANY  
 C\* SYK: SYKES  
 C\* TAC: TACUBAYA, MEXICO  
 C\* TEH: TEHERAN, IRAN  
 C\* TOC: TOCKLAI, INDIA  
 C\* TRI: TRIESTE, ITALY  
 C\* TRN: TRINIDAD, TRINIDAD, W.I.  
 C\* TUL: TULSA, OK, USA  
 C\* UCC: UCCLE, BELGIUM  
 C\* UGL: UGLEGORSK, RSFSR, USSR  
 C\* UPP: UPPSALA, SWEDEN  
 C\* USE: UNITED STATES EARTHQUAKES  
 C\* VIC: VICTORIA, BRITISH COLUMBIA, CANADA  
 C\* WAR: WARSAW, POLAND  
 C\* WEL: WELLINGTON, NEW ZEALAND  
 C\* YSS: YUZHNO-SAKHALINSK, RSFSR, USSR  
 C\* ZUR: ZURICH, SWITZERLAND  
 C\* 07-12 A6 YEAR YEAR ENCLOSED BY PARENTHESES DENOTES  
 C\* B.C. DATE.  
 C\* 13-14 I2 MONTH  
 C\* 15-16 I2 DAY  
 C\* 17-25 F9.2 ORTIME ORIGIN TIME: UNIVERSAL TIME (GREENWICH TIME, UTC)  
 C\* 26-27 A2 AUTHOR AUTHORITY RESPONSIBLE FOR ORIGIN TIME AND  
 C\* COORDINATE PARAMETERS  
 C\* A : PARAMETERS OF EXPLOSION SUPPLIED BY U.S.  
 C\* ATOMIC ENERGY COMMISSION (AEC)  
 C\* B : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* UNIVERSITY OF CALIFORNIA AT BERKELEY  
 C\* CN: PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* PACIFIC GEOSCIENCE CENTRE, SIDNEY, BRITISH  
 C\* COLOMBIA, CANADA  
 C\* E : SOME OR ALL PARAMETERS OF EXPLOSION  
 C\* SUPPLIED BY ANY GROUP OR INDIVIDUAL OTHER  
 C\* THAN AEC  
 C\* G : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* U.S. GEOLOGICAL SURVEY (USGS) FOR ANY AREA  
 C\* OTHER THAN ISLAND OF HAWAII  
 C\* H : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* USGS HAWAIIAN VOLCANO OBSERVATORY  
 C\* J : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* ST. LOUIS UNIVERSITY  
 C\* L : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* LAMONT-DOHERTY GEOLOGICAL OBSERVATORY  
 C\* M : HYPOCENTER BASED ON MACROSEISMIC  
 C\* INFORMATION  
 C\* P : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY  
 C\* PA: PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* STATE COLLEGE OF PENNSYLVANIA  
 C\* R : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* UNIVERSITY OF NEVADA  
 C\* S : AN NEIS SOLUTION BASED ON USE OF DENSE  
 C\* LOCAL NETWORKS, A LOCAL CRUSTAL MODEL,  
 C\* OR OTHER METHODS NOT ROUTINELY APPLIED BY

C\* NEIS  
 C\* TC: PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* TENNESSEE EARTHQUAKE INFORMATION CENTER  
 C\* (TEIS)  
 C\* TL: PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* OKLAHOMA GEOPHYSICAL OBSERVATORY, TULSA,  
 C\* OKLAHOMA  
 C\* U : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* UNIVERSITY OF UTAH  
 C\* V : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* VIRGINIA POLYTECHNIC INSTITUTE AND STATE  
 C\* UNIVERSITY  
 C\* W : PARAMETERS OF HYPOCENTER SUPPLIED BY  
 C\* UNIVERSITY OF WASHINGTON  
 C\* X : TIME NOT REPORTED  
 C\* Z : NONINSTRUMENTAL TIME AND LOCATION  
 C\* \* : SECOND-ORDER HYPOCENTER DETERMINATION BY  
 C\* CGS/NOS/ERL/GS USING INCOMPLETE OF LESS  
 C\* RELIABLE DATA  
 C\* ? : POOR SOLUTION. ACCURACY IS CONSIDERED TO  
 C\* BE BELOW NORMAL NEIS PUBLICATION CRITERIA.  
 C\* X : A NON-FURNISHED HYPOCENTER HAS BEEN  
 C\* COMPUTED USING DATA REPORTED BY A SINGLE  
 C\* NETWORK OF STATIONS FOR WHICH THE DATA  
 C\* AND/OR ORIGIN TIME CANNOT BE CONFIRMED FROM  
 C\* SEISMOGRAMS AVAILABLE TO NEIS ANALYSTS.  
 C\* ALL OTHER PARAMETERS ARE CONSIDERED TO BE  
 C\* CONSISTENT WITH NORMAL NEIS PUBLICATION  
 C\* CRITERIA.  
 C\* RL: ISC SOLUTION RESTRAINED TO GIVEN LOCATION  
 C\* 28-34 F7.3 LAT LATITUDE: - = SOUTH  
 C\* 35-42 F8.3 LONG LONGITUDE: - = WEST  
 C\* 43-47 F5.1 DEPTH DEPTH (KM)  
 C\* 48 A1 DC DEPTH CONTROL  
 C\* A = ASSIGNED  
 C\* D = RESTRAINED BY REPORTED DEPTH PHASES  
 C\* N = RESTRAINED TO NORMAL DEPTH (33 KM)  
 C\* G = RESTRAINED BY GEOPHYSICIST  
 C\* S = DEPTH CONTROL AIDED BY USE OF S-PHASE DATA  
 C\* 49-50 I2 NDP NUMBER OF DEPTH PHASES USED IN COMPUTATION  
 C\* 51-54 F4.2 STD STANDARD DEVIATION OF THE COMPUTED SOLUTION  
 C\* 55-57 F3.1 MB AVERAGE BODY-WAVE MAGNITUDE  
 C\* 58-59 I2 NMB NUMBER OF MB AMPLITUDES USED IN THE MB MAGNITUDE  
 C\* 60-62 F3.1 MS AVERAGE SURFACE-WAVE MAGNITUDE  
 C\* 63 A1 ZH COMPONENT USED FOR SURFACE WAVE MAGNITUDE  
 C\* Z = VERTICAL  
 C\* H = HORIZONTAL  
 C\* 64-65 I2 NMS NUMBER OF MS AMPLITUDES USED IN THE MS MAGNITUDE  
 C\* 66-69 F4.2 MAG1 FIRST OF TWO POSSIBLE CONTRIBUTED MAGNITUDE VALUES  
 C\* 70-71 A2 MAG1SC MAGNITUDE SCALE OF MAG1: MW, MS, MB, ML, LG, DR,  
 C\* CL, RG. UNDERSCORE CHARACTER IS CODED IF SCALE  
 C\* IS UNKNOWN.  
 C\* 72-76 A5 MAG1DO DONOR OF MAG1; BLANKS REPRESENT UNKNOWN DONOR.  
 C\* GENERALLY, IF DONOR IS UNKNOWN, THE SUPPLYING  
 C\* AGENCY IS THE MAGNITUDE SOURCE.  
 C\* 77-80 F4.2 MAG2 SECOND OF TWO POSSIBLE CONTRIBUTED MAGNITUDE VALUES

```

C*-----
C*
C* CARD 2
C*
C* 01-02    A2    MAG2SC  MAGNITUDE SCALE OF CONTRIBUTED MAG2
C* 03-07    A5    MAG2DO  DONOR OF MAG2
C* 08        A1    MM      MODIFIED MERCALLI INTENSITY VALUE:
C*                                1-9; X = 10; E = 11; T = 12
C* 09        A1    CE      CULTURAL EFFECTS
C*                                THE MOST SEVERE EFFECT IS LISTED.
C*                                H = HEARD
C*                                F = FELT
C*                                C = CASUALTIES
C*                                D = DAMAGE
C* 10        A1    M      ISOSEISMAL MAP CODE
C*                                LETTER INDICATES PUBLICATION SOURCE.
C*                                U = UNITED STATES EARTHQUAKES
C*                                E = EARTHQUAKE NOTES
C*                                P = PDE (MONTHLY LISTING)
C*                                W = WELLINGTON, NEW ZEALAND
C*                                N = NATURE MAGAZINE
C*                                S = BULLETIN OF THE SEISMOLOGICAL SOCIETY OF
C*                                AMERICA
C* 11        A1    FS      FAULT PLANE SOLUTION CODE
C*                                F = FAULT PLANE SOLUTION IS AVAILABLE
C* 12        A1    D      DIASTROPHISM CODE
C*                                F = FAULTING
C*                                U = UPLIFT
C*                                S = SUBSIDENCE
C*                                3 = UPLIFT AND SUBSIDENCE
C*                                4 = FAULTING AND UPLIFT
C*                                5 = FAULTING AND SUBSIDENCE
C*                                6 = FAULTING WITH UPLIFT AND SUBSIDENCE
C*                                7 = UPLIFT OR SUBSIDENCE
C*                                8 = FAULTING WITH UPLIFT OR SUBSIDENCE
C* 13        A1    T      TSUNAMI CODE
C*                                T = TSUNAMI
C*                                Q = QUESTIONABLE TSUNAMI
C* 14        A1    S      SEICHE CODE
C*                                S = SEICHE
C*                                Q = QUESTIONABLE SEICHE
C* 15        A1    V      VOLCANISM CODE
C*                                V = EARTHQUAKE ASSOCIATED WITH VOLCANISM
C* 16        A1    N      NON-TECTONIC CODE
C*                                E = EXPLOSION
C*                                I = COLLAPSE
C*                                C = COAL BUMP OR ROCK BURST IN COAL MINE
C*                                R = ROCKBURST
C*                                M = METEORTIC
C* 17        A1    W      GUIDED WAVES IN ATMOSPHERE AND/OR OCEAN CODE
C*                                T = T-WAVE
C*                                A = ACOUSTIC WAVE
C*                                G = GRAVITY WAVE
C*                                B = BOTH A AND G
C*                                M = T AND A OR G
C* 18        A1    G      GROUND/SOIL/WATER TABLE RESPONSE AND ATMOSPHERIC

```



C*				PHENOMENA CODE
C*				L = LIQUIFACTION
C*				G = GEYSER
C*				S = LANDSLIDES AND/OR AVALANCHES
C*				B = SAND BLOWS
C*				C = GROUND CRACKS NOT KNOWN TO BE AN EXPRESSION
C*				OF FAULTING
C*				V = LIGHTS OF OTHER VISUAL PHENOMENA
C*				D = OLFACTORY
C*				M = MORE THAN ONE RESPONSE
C*	19	A1	IDE	IDE CODE
C*				X = EVENT DESIGNATED INTERNATIONAL DATA
C*				EXCHANGE
C*	20-22	I3	FE	FLINN-ENGDAHL GEOGRAPHIC REGION NUMBER
C*	23-25	A3	SORQ	NUMBER OF STATIONS/EVENT QUALITY
C*				THIS ENTRY GIVES EITHER THE NUMBER OF STATIONS
C*				USED IN THE COMPUTATION OR, FOR EVENTS FROM
C*				THE FOLLOWING SOURCES, A QUALITY INDICATOR
C*				FOR THE EVENT.
C*				G-R: THREE-LETTER COMBINATION
C*				(EPICENTER, ORIGIN TIME, DEPTH)
C*				A = VERY ACCURATE
C*				B = GOOD
C*				C = FAIR
C*				D = POOR
C*				MOS: TWO-LETTER OR LETTER-SYMBOL COMBINATION
C*				(EPICENTER, DEPTH)
C*				A = BEST ACCURACY
C*				B = VERY GOOD
C*				N = GOOD
C*				V = FAIR
C*				* = POOR
C*				PAS: SINGLE LETTER DESIGNATOR
C*				A = SPECIALLY INVESTIGATED
C*				B = EPICENTER PROBABLY WITHIN 5 KM;
C*				ORIGIN TIME TO NEAREST SECOND
C*				C = EPICENTER PROBABLY WITHIN 15 KM;
C*				ORIGIN TIME TO A FEW SECONDS
C*				D = EPICENTER NOT KNOWN WITHIN 15 KM;
C*				ROUGH LOCATION
C*				BRK: SINGLE LETTER DESIGNATOR
C*				A = ACCURATE EPICENTER
C*				B = GOOD
C*				C = FAIR
C*				D = POOR
C*				WEL: SINGLE LETTER DESIGNATOR
C*				A = ACCURATE EPICENTER
C*				B = GOOD
C*				C = FAIR
C*				D = POOR
C*	26	A1	FLAG	A ONE-LETTER CODE SIGNIFYING THAT A CERTAIN
C*				TYPE OF INFORMATION IS AVAILABLE FROM THE
C*				CATALOGUE SOURCE. THE ACTUAL VALUE IS NOT
C*				CODED.
C*				M = MOMENT TENSOR
C*				S = EARTHQUAKE STATISTICS

C\* B = BOTH MOMENT TENSOR AND EARTHQUAKE  
 C\* STATISTICS  
 C\* D = DEPTH COMPUTED FROM LITTLE-P-BIG-P PHASES  
 C\* (ISC BULLETIN TAPES AFTER 1970)  
 C\* 27 A1 PH PREFERRED HYPOCENTER CODE  
 C\* P = HYPOCENTER IS LOCATED WITHIN A SEISMIC  
 C\* NETWORK, SUCH AS PASADENA OR BERKELEY  
 C\*END-----  
 ISC 1971 0101203618.50RL 33.970-119.399 8.0A 3.00\_\_  
 ..... 043 ..  
 ISC 1971 0102021913.10RL 35.770-117.569 8.0A 2.80\_\_  
 ..... 039 ..  
 ISC 1971 0102023750.30RL 35.820-117.549 8.0A 3.00\_\_  
 ..... 039 ..  
 ISC 1971 0102062737.48 35.967-120.831 8.0A  
 ..... 039 7..  
 ISC 1971 0102075908.00RL 35.700-117.559 8.0A 2.80\_\_  
 ..... 039 ..  
 \*\*\*\*\* 18178 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000059

Table GL000060

C\*DSN=GL000060;SIZE=003859;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=029;STRT=000001;  
C\*DATE: 19790508; 99; CITJIM66;  
C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
C\*PERSN: J. H. WHITCOMB;  
C\*ALPHA: 19660101; 19661231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A006;  
C\*KEYWD: SOUTHERN CALIFORNIA;  
C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
C\* FOR THE YEAR 1966 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
C\*AUTHOR: J. H. WHITCOMB  
C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY J. H. WHITCOMB  
C\* IN 1979.  
C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
C\* BULL. SEISM. SOC. AM., 68,523-525.  
C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.  
C\* 1. HYPOCENTER CARD. THIS CARD IS BLANK IF NO HYPOCENTER WAS COMPUTED.  
C\* 2. HYPOCENTER CONTINUATION CARD.  
C\* 3. PHASE DATA CARD.  
C\* 4. MONTH SEPARATOR CARD.  
C\*  
C\*  
C\* HYPOCENTER CARD  
C\*  

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01-04	I4	YEAR	YEAR OF THE EVENT
C*	05	1X	BLANK	
C*	06-07	I2	MONTH	MONTH OF THE EVENT
C*	08	1X	BLANK	
C*	09-10	I2	DAY	DAY OF THE EVENT
C*	11-12	2X	BLANK	
C*	13-14	I2	HOUR	ORIGIN TIME OF THE EVENT: HOUR (GREENWICH TIME)
C*	15	1X	BLANK	
C*	16-17	I2	MINUTE	ORIGIN TIME OF THE EVENT: MINUTE
C*	18	1X	BLANK	
C*	19-23	F5.2	SECOND	ORIGIN TIME OF THE EVENT: SECOND
C*	24-25	1X	BLANK	
C*	26-27	I2	LAT	LATITUDE OF THE EPICENTER: DEGREES (NORTH)
C*	28	1X	BLANK	
C*	29-33	F5.2	LATMIN	LATITUDE OF THE EPICENTER: MINUTES
C*	34	1X	BLANK	
C*	35-37	I3	LON	LONGITUDE OF THE EPICENTER: DEGREES (WEST)
C*	38	1X	BLANK	
C*	39-43	F5.2	LONMIN	LONGITUDE OF THE EPICENTER: MINUTES

C*	44	1X	BLANK	
C*	45	A1	QUAL	EVENT QUALITY CODE
C*				A = SPECIALLY INVESTIGATED (USUALLY WITH
C*				PORTABLE SEISMOGRAPHS)
C*				B = EPICENTER PROBABLY WITHIN 5 KM,
C*				ORIGIN TIME TO NEAREST SECOND
C*				C = EPICENTER PROBABLY WITHIN 15 KM,
C*				ORIGIN TIME TO A FEW SECONDS
C*				D = NOT KNOWN WITHIN 15 KM,
C*				ROUGH LOCATION
C*	46	1X	BLANK	
C*	47-49	F3.1	ML	LOCAL MAGNITUDE
C*	50-53	A4	MAPI	MAP INDEX (?)
C*	54-59	F6.2	DEPTH	FOCAL DEPTH (KM)
C*	60-63	A4	SCODE	UNEXPLAINED ITEM
C*	64-67	F4.2	TSIG	STANDARD ERROR OF THE ORIGIN TIME (SEC)
C*	68-71	F4.2	XSIG	STANDARD ERROR OF THE LONGITUDE (KM)
C*	72-75	F4.2	YSIG	STANDARD ERROR OF THE LATITUDE (KM)
C*	76-80	F5.2	ZSIG	STANDARD ERROR OF THE DEPTH (KM)
C*				
C*				
C*				HYPOCENTER CONTINUATION CARD
C*				
C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01	1X	BLANK	
C*	02-18	-----		NUMBERS INDICATING DATE AND TIME REPEATED FROM THE SAME
C*				COLUMNS ON THE PREVIOUS CARD
C*	19-80	A62		COMMENTS, USUALLY REFERRING TO FELT INFORMATION
C*				
C*				
C*				PHASE DATA CARD
C*				
C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*				
C*	01-04	A4	XSTA	STATION DESIGNATOR
C*	05	A1	P1	'I' OR 'E' FOR P PHASE
C*	06	A1	P2	'P'
C*	07	A1	P3	'C' OR 'U' (COMPRESSION OR UP)
C*				'D' (DILATATION OR DOWN)
C*	08-09	3X	BLANK	
C*	10-15	I6	IDATE	(YR,MO,DAY)
C*	16-17	I2	IPHR	
C*	18-19	I2	IPM	
C*	20-24	F5.2	PSEC	
C*	25-31	7X	BLANK	
C*	32-36	F5.2	SSEC	
C*	37	A1	S1	'I' OR 'E' FOR S-ARRIVAL
C*	38	A1	S2	'S'
C*	39-80	-----	----	UNEXPLAINED ITEMS
C*				
C*				
C*				MONTH SEPARATOR CARD
C*				
C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*				
C*	01-04	I4	SEP	'8888'

C\*

C\*END-----

1966 01 0 11 59 58.33 33 55.77 117 56.54 B 2.3 10.6 1A

PASIPD 660107120003.70 08.20IS

BARIP 660107120026.50 47.20IS

GSCEP 660107120027.20 48.90IS

RVRIP 660107120007.20 13.70IS

WDYIP 660107120033.10 54.00IS

1966 01 07 19 10 23.04 33 16.73 116 14.92 B 4.0 -1.7 1A

PASIP 660107191055.20 79.70IS

BARIPD 660107191035.60 43.20IS

CLCEP 660107191107.40 50.80IS

\*\*\*\*\* 3737 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000060

Table GL000061

C#DSN=GL000061;SIZE=004761;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=029;STRT=003860;  
 C\*DATE: 19790508; 99; CITJIM67;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: J. H. WHITCOMB;  
 C\*ALPHA: 19670101; 19671231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A006;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1967 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR: J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY J. H. WHITCOMB  
 C\* IN 1979.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000060 for details  
 \*\*\*\*\*

C\*END-----

PASEP	670102091211.60	84.30IS
BARIP	670102091217.30	.
CLCIP	670102091150.30	97.80IS
CWCEP	670102091142.00	105.4IS
GLAIP	670102091205.80	75.30IS
GSCIP	670102091147.50	97.30IS
HAYIP	670102091159.40	122.4IS
ISAIP	670102091211.90	65.10IS
MWCIP	670102091210.00	80.20IS

\*\*\*\*\* 4639 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000061

Table GL000062

C#DSN=GL000062;SIZE=007063;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=030;STRT=000001;  
 C\*DATE: 19790508; 99; CITJIM68;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: J. H. WHITCOMB;  
 C\*ALPHA: 19680101; 19681231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A006;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1968 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR: J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY J. H. WHITCOMB  
 C\* IN 1979.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000060 for details  
 \*\*\*\*\*

C\*END-----  
 1968 1 01 07 50 50.71 32 56.41 115 50.62 B 3.1 9.6 1R  
 PASEP 680101075128.50 59.10IS  
 BARIP 680101075104.50 14.10IS  
 CLCIP 680101075149.20 91.50IS  
 GLAIP 680101075106.70 18.00IS  
 GSCEP 680101075132.60 70.30IS  
 HAYIPD 680101075105.10 15.30IS  
 ISAEP 680101075153.50 97.50IS  
 MWCIP 680101075130.80 57.30IS  
 PLMIP 680101075107.30 19.40IS

\*\*\*\*\* 6941 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000062

Table GL000063

C#DSN=GL000063;SIZE=008074;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=031;STRT=000001;  
 C\*DATE: 19790508; 99; CITJIM69;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: J. H. WHITCOMB;  
 C\*ALPHA: 19690101; 19691231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A006;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1969 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR: J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY J. H. WHITCOMB  
 C\* IN 1979.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000060 for details  
 \*\*\*\*\*

C\*END-----  
 1969 1 01 08 25 15.24 35 28.24 120 04.34 C 2.2 3.4 1A  
 FTCIP 690101082535.60 51.40IS  
 ISAIP 690101082539.20 57.40IS  
 SBCIP 690101082535.30 49.40IS  
 SYPEP 690101082532.50 45.00IS  
 SWMIP 690101082541.00 63.10IS  
 WDYIPD 690101082533.60 48.00IS  
  
 PASIP 690106063509.20 62.70IS  
 BARIP 690106063526.00 36.60IS  
 \*\*\*\*\* 7952 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000063



Table GL000064

C#DSN=GL000064;SIZE=006708;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=032;STRT=000001;  
 C\*DATE: 19790508; 99; CITJIM70;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: J. H. WHITCOMB;  
 C\*ALPHA: 19700101; 19701231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A006;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1970 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR: J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY J. H. WHITCOMB  
 C\* IN 1979.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000060 for details  
 \*\*\*\*\*

C\*END-----  
 1970 1 01 15 13 21.80 32 48.06 115 26.66 C 2.6 10.0 1R  
 BARIP 700101151340.30 53.90IS  
 GLAIPU 700101151333.00 40.00IS  
 HAYEP 700101151338.80  
 PLMIP 700101151345.00 64.30IS  
 1970 1 01 19 49 26.28 37 20.55 118 45.79 C 3.8 8.0 1R 0.62 1.4 4.1 .  
 PASEP 700101195021.50 69.50IS  
 CLCIP 700101194956.40  
 GSCEP 700101195007.40 54.00IS  
 ISAIPD 700101194956.60 77.00IS  
 \*\*\*\*\* 6586 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000064

Table GL000065

C#DSN=GL000065;SIZE=009850;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=033;STRT=000001;  
 C#DATE: 19790508; 99; CITJIM71;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: J. H. WHITCOMB;  
 C#ALPHA: 19710101; 19711231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A006;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR THE YEAR 1971 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR: J. H. WHITCOMB  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY J. H. WHITCOMB  
 C# IN 1979.  
 C#REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C# (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C# 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C# CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C# SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C# TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C# EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C# BULL. SEISM. SOC. AM., 68,523-525.  
 C#FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000060 for details  
 \*\*\*\*\*

C#END-----  
 1971 1 01 20 36 18.44 33 57.92 119 23.81 C 3.0 8.0 1R 0.46 1.7 3.6 .  
 PASIP 710101203637.50 51.00IS  
 CLCEP 710101203656.70  
 CWCEP 710101203701.60 35.40IS  
 GSCEP 710101203700.50 37.00IS  
 ISAIP 710101203648.00 56.50IS  
 MWCIP 710101203639.50  
 PLMEP 710101203705.80 31.50IS  
 SBCIPU 710101203628.00 37.00IS  
 SYPIPU 710101203632.00 42.00IS  
 \*\*\*\*\* 9728 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000065

Table GL000066

C#DSN=GL000066;SIZE=008955;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=034;STRT=000001;  
 C#DATE: 19790508; 99; CITJIM72;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: J. H. WHITCOMB;  
 C#ALPHA: 19720101; 19721231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A006;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR THE YEAR 1972 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR: J. H. WHITCOMB  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY J. H. WHITCOMB  
 C# IN 1979.  
 C#REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C# (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C# 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C# CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C# SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C# TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C# EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C# BULL. SEISM. SOC. AM., 68,523-525.  
 C#FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000060 for details  
 \*\*\*\*\*

C#END-----  
 1972 01 01 14 37 30.03 34 18.09 118 20.69 C A 9.73 1A 0.200.0 0.0 0.0  
 SCRIPU 720101143735.50 39.00ISU  
 IRCIPU 720101143733.26 S 60.20  
 MWC P 720101143735.87 S  
 1972 1 02 04 47 10.90 34 09.62 116 43.08 B 2.8 08.0 1R 0.26 1.6 1.4 .  
 PASEP 720102044732.90 49.40ES  
 BAREP 720102044736.50 56.80IS  
 CSPIP 720102044720.60 29.20IS  
 CLCEP 720102044742.00 64.30IS  
 GLAEP 720102044744.50 71.40ES  
 \*\*\*\*\* 8833 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000066

Table GL000067

C\*DSN=GL000067;SIZE=013601;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=035;STRT=000001;  
 C\*DATE: 19790508; 99; CITJIM73;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: J. H. WHITCOMB;  
 C\*ALPHA: 19730101; 19731231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A006;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1973 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR: J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY J. H. WHITCOMB  
 C\* IN 1979.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000060 for details  
 \*\*\*\*\*

C\*END-----  
 1973 1 1 0 55 55.17 34 10.35 117 32.74C A 5.00 1A 0.200.610.97 2.52  
 TCNIPD2 730101005603.84 S  
 VPDIPD2 730101005603.89 S  
 CSPIPD2 730101005600.29 03.90ISU1  
 PECEP 3 730101005604.50 11.21ISU2  
 1973 1 02 02 45 48.57 33 37.41 117 19.12 A 3.1 08.0 1R 0.12 1.0 0.8  
 PASIP 730102024604.10 15.00IS  
 BARIP 730102024608.00 22.20IS  
 CPEIP 730102024602.50 12.80IS  
 CLCEP 730102024624.30 56.20ES  
 \*\*\*\*\* 13479 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000067

Table GL000068

C#DSN=GL000068;SIZE=014844;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=036;STRT=000001;  
 C\*DATE: 19790508; 99; CITJIM74;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: J. H. WHITCOMB;  
 C\*ALPHA: 19740101; 19741231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A006;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1974 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR: J. H. WHITCOMB  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY J. H. WHITCOMB  
 C\* IN 1979.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000060 for details  
 \*\*\*\*\*

C\*END-----

GSCEP	740101032316.00	33.70ES	1.30	46
ISAIP	740101032301.00	S		
MWCEP	740101032328.90	S	1.10	43
TPCEP	740101032340.10	S	0.40	57
CLCIPU	740101032261.30	68.00ISD	5.10	71
CWCZIPJ	740101032303.30	10.00IS	8.00	59
CWCNEP	740101032303.5"	10.00IS	0.70	
CWCEEP	740101032303.50	10.00 S	0.90	
1974	1 2 8 50 30.03	34 19.73 118 23.68C	A 1.18 1A 0.080.0 0.0 0.0	

\*\*\*\*\* 14722 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000068

Table GL000069

C#DSN=GL000069;SIZE=022395;DATE=083184;ARCH=TM;TAPE=SM9310;FILE=037;STRT=000001;  
 C#DATE: 19790508; 99; CITJIM75;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: J. H. WHITCOMB;  
 C#ALPHA: 19750101; 19750603; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A006;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR THE YEAR 1975 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR: J. H. WHITCOMB  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY J. H. WHITCOMB  
 C# IN 1979. THE 1975 DATA IS INCOMPLETE.  
 C#REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C# (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C# 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C# CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C# SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C# TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C# EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C# BULL. SEISM. SOC. AM., 68,523-525.  
 C#FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000060 for details  
 \*\*\*\*\*

C#END-----  
 1975 1 01 03 16 29.41 35 15.52 118 31.80 B 2.1 172 6.14 9 45 0.44 2.3 7.0  
 PASZEP 750101031651.00 67.00ES 0.6 27  
 GSCEP 750101031656.00 78.30ES 0.9 39  
 ISAIPD 750101031637.00 42.90IS 15.0 41  
 SYPIP 7501010316 . 74.00IS 4.1  
 SBBIPU 750101031644.50 55.00IS 17.7 33  
 ISAIPD 750101031637.04 42.40ISU  
 PYRIPD 750101031642.31  
 SBBIPU 750101031644.42  
 1975 1 1 7 51 38.64 34 13.51 117 27.07 C 2.9 162 6.82 15 11 0.35 1.8 1.7  
 \*\*\*\*\* 22273 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000069

Table GL000070

C#DSN=GL000070;SIZE=002542;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=038;STRT=000001;  
 C\*DATE: 19820518; 99; CITKEN60;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19600101; 19601231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1960 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.  
 C\* 1. HYPOCENTER CARD. THIS CARD IS BLANK IF NO HYPOCENTER WAS COMPUTED.  
 C\* 2. HYPOCENTER CONTINUATION CARD.  
 C\* 3. PHASE DATA CARD.

C\*  
 C\*

C\* HYPOCENTER CARD

C\*

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
----	---------	--------	------	-------------

C\*

C*	01-04	I4	YEAR	YEAR OF THE EVENT
----	-------	----	------	-------------------

C\*

C*	05	1X	BLANK	
C*	06-07	I2	MONTH	MONTH OF THE EVENT

C\*

C*	08	1X	BLANK	
C*	09-10	I2	DAY	DAY OF THE EVENT

C\*

C*	11-12	2X	BLANK	
C*	13-14	I2	HOUR	ORIGIN TIME OF THE EVENT: HOUR (GREENWICH TIME)

C\*

C*	15	1X	BLANK	
C*	16-17	I2	MINUTE	ORIGIN TIME OF THE EVENT: MINUTE

C\*

C*	18	1X	BLANK	
C*	19-23	F5.2	SECOND	ORIGIN TIME OF THE EVENT: SECOND

C\*

C*	24-25	1X	BLANK	
C*	26-27	I2	LAT	LATITUDE OF THE EPICENTER: DEGREES (NORTH)

C\*

C*	28	1X	BLANK	
C*	29-33	F5.2	LATMIN	LATITUDE OF THE EPICENTER: MINUTES

C\*

C*	34	1X	BLANK	
C*	35-37	I3	LON	LONGITUDE OF THE EPICENTER: DEGREES (WEST)

C\*

C*	38	1X	BLANK	
C*	39-43	F5.2	LONMIN	LONGITUDE OF THE EPICENTER: MINUTES

C\*

C*	44	1X	BLANK	
----	----	----	-------	--

C\* 45            A1            QUAL        EVENT QUALITY CODE  
 C\*                            A = SPECIALLY INVESTIGATED (USUALLY WITH  
 C\*                            PORTABLE SEISMOGRAPHS)  
 C\*                            B = EPICENTER PROBABLY WITHIN 5 KM,  
 C\*                            ORIGIN TIME TO NEAREST SECOND  
 C\*                            C = EPICENTER PROBABLY WITHIN 15 KM,  
 C\*                            ORIGIN TIME TO A FEW SECONDS  
 C\*                            D = NOT KNOWN WITHIN 15 KM,  
 C\*                            ROUGH LOCATION  
 C\* 46            1X            BLANK  
 C\* 47-49        F3.1        ML            LOCAL MAGNITUDE  
 C\* 50-53        A4            MAPI        MAP INDEX (?)  
 C\* 54-59        F6.2        DEPTH       FOCAL DEPTH (KM)  
 C\* 60-63        A4            SCODE       UNEXPLAINED ITEM  
 C\* 64-67        F4.2        TSIG        STANDARD ERROR OF THE ORIGIN TIME (SEC)  
 C\* 68-71        F4.2        XSIG        STANDARD ERROR OF THE LONGITUDE (KM)  
 C\* 72-75        F4.2        YSIG        STANDARD ERROR OF THE LATITUDE (KM)  
 C\* 76-80        F5.2        ZSIG        STANDARD ERROR OF THE DEPTH (KM)  
 C\*  
 C\*  
 C\* HYPOCENTER CONTINUATION CARD  
 C\*  
 C\* COLUMNS    FORMAT    ITEM        EXPLANATION  
 C\* 01           1X           BLANK  
 C\* 02-18       -----    NUMBERS INDICATING DATE AND TIME REPEATED FROM THE SAME  
 C\*                            COLUMNS ON THE PREVIOUS CARD  
 C\* 19-80       A62           COMMENTS, USUALLY REFERRING TO FELT INFORMATION  
 C\*  
 C\*  
 C\* PHASE DATA CARD  
 C\*  
 C\* COLUMNS    FORMAT    ITEM        EXPLANATION  
 C\*  
 C\* 01-04        A4            XSTA        STATION DESIGNATOR  
 C\* 05           A1            P1           'I' OR 'E' FOR P PHASE  
 C\* 06           A1            P2           'P'  
 C\* 07           A1            P3           'C' OR 'U' (COMPRESSION OR UP)  
 C\*                            'D' (DILATATION OR DOWN)  
 C\* 08-09       3X            BLANK  
 C\* 10-15       I6            IDATE       (YR,MO,DAY)  
 C\* 16-17       I2            IPHR  
 C\* 18-19       I2            IPM  
 C\* 20-24       F5.2        PSEC  
 C\* 25-31       7X            BLANK  
 C\* 32-36       F5.2        SSEC  
 C\* 37           A1            S1           'I' OR 'E' FOR S-ARRIVAL  
 C\* 38           A1            S2           'S'  
 C\* 39-80       -----    ----        UNEXPLAINED ITEMS  
 C\*  
 C\*END-----

```

1960 01 02 07 11 19.00 33 46.00 118 35.00 C 2.4 H04      8
FTCIP  600131055522.10      51.10IS
PASIP  600102071127.30      35.00IS
FTCEP  600102071138.90      56.50ES
ISAIP  600102071153.20      75.60IS
PLMEP  600102071146.70      64.50ES
  
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RVRIP 600102071137.30 49.00IS

PASIP 600102140551.00 87.50IS

BARIP 600102140516.10 30.60IS

\*\*\*\*\* 2428 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000070

Table GL000071

C\*DSN=GL000071;SIZE=003951;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=038;STRT=002543;  
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 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19610101; 19611231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1961 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1961 01 01 14 27 26.00 35 43.00 118 00.00 B 3.1 J08 8  
 PASIP 610101142757.20 77.20IS  
 BAREP 610101142820.40 65.20ES  
 CLCIPU 610101142733.90 .  
 FTCIP 610101142747.80 61.50IS  
 HAIIP 610101142733.90 39.70IS  
 ISAIP 610101142733.10 .  
 KRCIP 610101142752.80 72.40IS  
 MWCIPU 610101142754.50 73.90IS  
 RVREP 610101142757.50 83.60IS  
 \*\*\*\*\* 3837 data cards not shown here \*\*\*\*\*  
 C\*FINIS DSN=GL000071

Table GL000072

C#DSN=GL000072;SIZE=003876;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=038;STRT=006494;  
 C\*DATE: 19820518; 99; CITKEN62;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19620101; 19621231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1962 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1962 01 01 15 21 38.82 35 22.26 118 35.87 B 2.9 H07 12.4 1A .17 2.0 1.8 03.6  
 PASIPU 620101152201.70 17.70IS  
 BARIP 620101152226.10 .  
 CLCIP 620101152155.80 .  
 FTC P 6201011521 . 56.20ES  
 ISAIP 620101152144.80 .  
 KRCIP 620101152157.70 .  
 MWCIP 620101152200.50 18.10IS  
 PLMIP 620101152218.00 55.50ES  
 RVRIP 620101152206.70 30.70IS

\*\*\*\*\* 3762 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000072

Table GL000073

C#DSN=GL000073;SIZE=004188;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=039;STRT=000001;  
 C\*DATE: 19820518; 99; CITKEN63;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19630101; 19631231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1963 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1963 01 01 18 37 49.52 36 4.39 117 57.77 B 2.9 K 9 5.1 1B 0.14 1.2 0.9 1.9  
 PASIP 630101183822.00 48.50IS  
 BAR P 6301011839 . 36.70IS  
 CLCIP 630101183757.20 60.40IS  
 FTCIP 630101183814.60 .  
 HAIIP 630101183750.30 51.90IS  
 HAYIP 630101183846.30 84.30IS  
 ISAIP 630101183800.20 06.30IS  
 MWCIP 630101183823.20 48.00IS  
 PLMIP 6301011839 19.30IS  
 \*\*\*\*\* 4074 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000073

Table GL000074

C#DSN=GL000074;SIZE=003143;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=039;STRT=004189;  
 C#DATE: 19820518; 99; CITKEN64;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: KEN PIPER;  
 C#ALPHA: 19640101; 19641231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR THE YEAR 1964 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR:  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C#REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C# (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C# 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C# CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C# SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C# TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C# EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C# BULL. SEISM. SOC. AM., 68,523-525.  
 C#FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C#END-----  
 1964 1 02 12 31 29.18 32 53.07 115 35.08 C 2.9 -2.0 1A  
 PASIP 640102123115.60 49.40IS  
 BARIP 640102123146.90 59.00IS  
 ECC P 6401021231 . 32.90IS  
 GSCEP 640102123218.00 60.00IS  
 HAYIP 640102123144.20 .  
 MWCIP 640102123214.60 49.20IS  
 PLMIP 640102123149.40 66.70IS  
 RVRIP 640102123302.90 28.30IS

\*\*\*\*\* 3029 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000074

Table GL000075

C#DSN=GL000075;SIZE=003598;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=039;STRT=007332;  
 C\*DATE: 19820518; 99; CITKEN65;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19650101; 19651231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1965 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1965 1 01 06 39 53.90 34 08.26 117 28.97 B 1.8 8.5 1A  
 PASIP 650101064004.70 12.00IS  
 BAREP 650101064021.80 42.30IS  
 GSCIP 650101064017.20 34.10IS  
 RVRIP 650101063957.30 59.80IS  
  
 PASIP 650101074123.60 31.50IS  
 GSCEP 650101074136.70 53.60IS  
 RVRIP 650101074116.40 19.20IS  
 1965 1 01 07 41 32.88 34 07.37 117 31.36 B 3.9 7.5 1A  
 \*\*\*\*\* 3484 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000075

Table GL000076

C#DSN=GL000076;SIZE=003839;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=040;STRT=000001;  
 C\*DATE: 19820518; 99; CITKEN66;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19660101; 19661231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1966 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C#END-----  
 1966 01 07 11 59 58.33 33 55.77 117 56.54 B 2.3 10.6 1A  
 PASIPD 660107120003.70 08.20IS  
 BARIP 660107120026.50 47.20IS  
 GSCEP 660107120027.20 48.90IS  
 RVRIP 660107120007.20 13.70IS  
 WDYIP 660107120033.10 54.00IS  
 1966 01 07 19 10 23.04 33 16.73 116 14.92 B 4.0 -1.7 1A  
 PASIP 660107191055.20 79.70IS  
 BARIPD 660107191035.60 43.20IS  
 CLCEP 660107191107.40 50.80IS  
 \*\*\*\*\* 3725 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000076

Table GL000077

C#DSN=GL000077;SIZE=004740;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=040;STRT=003840;  
 C\*DATE: 19820518; 99; CITKEN67;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19670101; 19671231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1967 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

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 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  

PASEP	670102091211.60	84.30IS
BARIP	670102091217.30	.
CLCIP	670102091150.30	97.80IS
CWCEP	670102091142.00	105.4IS
GLAIP	670102091205.80	75.30IS
GSCIP	670102091147.50	97.30IS
HAYIP	670102091159.40	122.4IS
ISAIP	670102091211.90	65.10IS
MWCIP	670102091210.00	80.20IS
PLMIP	670102091209.90	83.30IS

\*\*\*\*\* 4626 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000077



Table GL000078

C#DSN=GL000078;SIZE=007041;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=041;STRT=000001;  
 C\*DATE: 19820518; 99; CITKEN68;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSON: KEN PIPER;  
 C\*ALPHA: 19680101; 19681231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1968 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1968 1 01 07 50 50.71 32 56.41 115 50.62 B 3.1 9.6 1R  
 PASEP 680101075128.50 59.10IS  
 BARIP 680101075104.50 14.10IS  
 CLCIP 680101075149.20 91.50IS  
 GLAIP 680101075106.70 18.00IS  
 GSCEP 680101075132.60 70.30IS  
 HAYIPD 680101075105.10 15.30IS  
 ISAEP 680101075153.50 97.50IS  
 MWCIP 680101075130.80 57.30IS  
 PLMIP 680101075107.30 19.40IS

\*\*\*\*\* 6927 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000078

Table GL000079

C#DSN=GL000079;SIZE=008053;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=042;STRT=000001;  
 C#DATE: 19820518; 99; CITKEN69;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: KEN PIPER;  
 C#ALPHA: 19690101; 19691231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR THE YEAR 1969 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR:  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C#REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C# (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C# 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C# CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C# SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C# TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C# EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C# BULL. SEISM. SOC. AM., 68,523-525.  
 C#FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C#END-----  
 1969 1 01 08 25 15.24 35 28.24 120 04.34 C 2.2 3.4 1A  
 FTCIP 690101082535.60 51.40IS  
 ISAIP 690101082539.20 57.40IS  
 SBCIP 690101082535.30 49.40IS  
 SYPEP 690101082532.50 45.00IS  
 SWMIP 690101082541.00 63.10IS  
 WDYIPD 690101082533.60 48.00IS  
  
 PASIP 690106063509.20 62.70IS  
 BARIP 690106063526.00 36.60IS  
 \*\*\*\*\* 7939 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000079

Table GL000080

C#DSN=GL000080;SIZE=006676;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=043;STRT=000001;  
 C\*DATE: 19820518; 99; CITKEN70;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19700101; 19701231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1970 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1970 1 01 15 13 21.80 32 48.06 115 26.66 C 2.6 10.0 1R  
 BARIP 700101151340.30 53.90IS  
 GLAIPU 700101151333.00 40.00IS  
 HAYEP 700101151338.80  
 PLMIP 700101151345.00 64.30IS  
 1970 1 01 19 49 26.28 37 20.55 118 45.79 C 3.8 8.0 1R 0.62 1.4 4.1 .  
 PASEP 700101195021.50 69.50IS  
 CLCIP 700101194956.40  
 GSCEP 700101195007.40 54.00IS  
 ISAIPD 700101194956.60 77.00IS  
 \*\*\*\*\* 6562 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000080

Table GL000081

C#DSN=GL000081;SIZE=009813;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=044;STRT=000001;  
 C#DATE: 19820518; 99; CITKEN71;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: KEN PIPER;  
 C#ALPHA: 19710101; 19711231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR THE YEAR 1971 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR:  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C#REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C# (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C# 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C# CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C# SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C# TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C# EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C# BULL. SEISM. SOC. AM., 68,523-525.  
 C#FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C#END-----  
 1971 1 01 20 36 18.44 33 57.92 119 23.81 C 3.0 8.0 1R 0.46 1.7 3.6 .  
 PASIP 710101203637.50 51.00IS  
 CLCEP 710101203656.70  
 CWCEP 710101203701.60 35.40IS  
 GSCEP 710101203700.50 37.00IS  
 ISAIP 710101203648.00 56.50IS  
 MWCIP 710101203639.50  
 PLMEP 710101203705.80 31.50IS  
 SBCIPU 710101203628.00 37.00IS  
 SYPIPU 710101203632.00 42.00IS  
 \*\*\*\*\* 9699 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000081

Table GL000082

C#DSN=GL000082;SIZE=008923;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=045;STRT=000001;  
 C\*DATE: 19820518; 99; CITKEN72;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19720101; 19721231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1972 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1972 01 01 14 37 30.03 34 18.09 118 20.69 C 1.7 9.73 1A 0.200.0 0.0 0.0  
 SCRIPU 720101143735.50 39.00ISU  
 IRCIPU 720101143733.26 S 60.20  
 MWC P 720101143735.87 S  
 1972 1 02 04 47 10.90 34 09.62 116 43.08 B 2.8 08.0 1R 0.26 1.6 1.4 .  
 PASEP 720102044732.90 49.40ES  
 BAREP 720102044736.50 56.80IS  
 CSPIP 720102044720.60 29.20IS  
 CLCEP 720102044742.00 64.30IS  
 GLAEP 720102044744.50 71.40ES  
 \*\*\*\*\* 8809 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000082

Table GL000083

C#DSN=GL000083;SIZE=015488;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=046;STRT=000001;  
 C#DATE: 19820518; 99; CITKEN73;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: KEN PIPER;  
 C#ALPHA: 19730101; 19731231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR THE YEAR 1973 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR:  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C#REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C# (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C# 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C# CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C# SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C# TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C# EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C# BULL. SEISM. SOC. AM., 68,523-525.  
 C#FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C#END-----  
 1973 1 1 0 55 55.17 34 10.35 117 32.74 C 1.7 5.00 1A 0.200.610.97 2.5  
 TCNIPD2 730101005603.84 S  
 VPDIPD2 730101005603.89 S  
 CSPIPD2 730101005600.29 03.90ISU1  
 PECEP 3 730101005604.50 11.21ISU2  
 1973 1 02 02 45 48.57 33 37.41 117 19.12 A 3.1 08.0 1R 0.12 1.0 0.8  
 PASIP 730102024604.10 15.00IS  
 BARIP 730102024608.00 22.20IS  
 CPEIP 730102024602.50 12.80IS  
 CLCEP 730102024624.30 56.20ES  
 \*\*\*\*\* 15374 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000083

Table GL000084

C#DSN=GL000084;SIZE=018782;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=047;STRT=000001;  
 C#DATE: 19820518; 99; CITKEN74;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: KEN PIPER;  
 C#ALPHA: 19740101; 19741231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR THE YEAR 1974 COMPILED BY THE CALIFORNIA INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR:  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C#REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C# (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C# 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C# CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C# SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C# TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C# WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C# EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C# BULL. SEISM. SOC. AM., 68,523-525.  
 C#FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C#END-----  

ESCEP	740101032316.00	33.70ES	1.30	46
ISAIP	740101032301.00	S		
MWCEP	740101032328.90	S	1.10	43
TPCEP	740101032340.10	S	0.40	57
CLCIPU	740101032261.30	68.00ISD	5.10	71
CWCZIPU	740101032303.30	10.00IS	8.00	59
CWCNEP	740101032303.50	10.00IS	0.70	
CWCEEP	740101032303.50	10.00 S	0.90	
TWLIPD2	740102085035.10	39.40ES 3	6.13	18

\*\*\*\*\* 18668 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000084

Table GL000085

C#DSN=GL000085;SIZE=029773;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=048;STRT=000001;  
 C\*DATE: 19820518; 99; CITK75A;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19750101; 19750630; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1975 (JANUARY-JUNE) COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1975 1 01 03 16 29.41 35 15.52 118 31.80 B 2.1 172 6.14 9 45 0.44 2.3 7.0  
 PASZEP 750101031651.00 67.00ES 0.6 27  
 GSCEP 750101031656.00 78.30ES 0.9 39  
 ISAIPD 750101031637.00 42.90IS 15.0 41  
 SYPIP 7501010316 . 74.00IS 4.1  
 SBBIPU 750101031644.50 55.00IS 17.7 33  
 ISAIPD 750101031637.04 42.40ISU  
 PYRIPD 750101031642.31  
 SBBIPU 750101031644.42  
 1975 1 1 7 51 38.64 34 13.51 117 27.07 C 2.9 162 6.82 15 11 0.35 1.8 1.7  
 \*\*\*\*\* 29658 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000085



Table GL000086

C#DSN=GL000086;SIZE=021061;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=049;STRT=000001;  
 C\*DATE: 19820518; 99; CITK75B;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19750701; 19751231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1975 (JULY-DECEMBER) COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1975 7 1 1 7 10.31 34 14.12 116 40.32 A 1.7 99 7.37 15 9 0.13 0.6 1.3  
 RMRIP 0 750701010712.40 24  
 HIDIPU0 750701010717.10 16  
 CPMIP-1 750701010718.10 13  
 INSEP 3 750701010720.10  
 LEDEP+2 750701010722.30  
 GRPEP 3 750701010729.30  
 BLUEP 3 750701010726.98  
 SDWIP-1 750701010719.70 26.59ES 2 13  
 MLLIP 1 750701010715.39  
 \*\*\*\*\* 20946 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000086

Table GL000087

C#DSN=GL000087;SIZE=028219;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=050;STRT=000001;  
 C\*DATE: 19820518; 99; CITK76A;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19760101; 19760630; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1976 (JANUARY-JUNE) COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974. SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1976 1 1 1 32 51.95 32 54.92 115 38.42 B 1.4 271 13.98 4 10 0.12 0.0 0.0  
 SUPIP 0 760101013255.60 13  
 CRRIPU0 760101013257.80  
 COKIPU0 760101013255.05 15  
 SGLIPD0 760101013257.55 12  
 1976 1 01 01 47 54.86 33 31.01 116 35.28 A 3.3 59 8.00 48 15 0.32 0.7 1.9  
 PASZIP 760101014821.0 40.5 IS 13.6 110  
 CPEZIPD 760101014808.6 19.1 IS 31.5 87  
 GLAZIPD 760101014821.0 39.6 IS 29.6 145  
 GSCZIP 760101014825.7 49.5 IS 29.7 90  
 \*\*\*\*\* 28104 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000087

Table GL000088

C#DSN=GL000088;SIZE=028733;DATE=090384;ARCH=TM;TAPE=SM9310;FILE=051;STRT=000001;  
 C\*DATE: 19820518; 99; CITK76B;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19760701; 19761231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1976 (JULY-DECEMBER) COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----

GSCZIP	760701004820.20	42.10IS	1.4	37
ISAZIP	760701004755.00	.	37.8	74
ISANIP	760701004755.00	55.80IS	3.1	4
ISAE P	7607010047 .	55.70IS	2.4	
CWCZEP	760701004811.40	20.00ES	1.2	34
ISAIPD0	760701004755.00			
1976 7 1	2 45 9.96	32 45.47 115 32.98	B 2.0 129 11.26 20 15 0.46	2.0 2.5
GLAZIPU	760701024522.20	31.50IS	8.8	61
PLMZEP	760701024531.50	47.80IS	2.0	37
***** 28618 data cards not shown here *****				
C#FINIS DSN=GL000088				

Table GL000089

C#DSN=GL000089;SIZE=024105;DATE=100584;ARCH=TM;TAPE=SM9310;FILE=092;STRT=000001;  
 C\*DATE: 19820518; 99; CITK77A;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19770101; 19770430; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1977 (JANUARY-APRIL) COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1977 1 1 1 0 31.83 34 27.49 117 57.69 B 0.0 67 5.48 0.17 0.5 0.9  
 SCYIPU0 77 1 1 10041.85 43.55IS 4 1  
 IRCIPU0 77 1 1 10038.71 1  
 PASIPU0 77 1 1 10038.60 43.61IS 1 1  
 TCCIP-1 77 1 1 10042.71 1  
 VPDIPD0 77 1 1 10044.44 1  
 RVRIPD0 77 1 1 10043.95 53.06IS 1 1  
 PECIPU0 77 1 1 10047.52 59.42ES 4 1  
 CSPIPU0 77 1 1 10041.45 49.33IS 1 1  
 SNSIP+1 77 1 1 10052.11 67.17ES 3 1  
 \*\*\*\*\* 23990 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000089

Table GL000090

C#DSN=GL000090;SIZE=018950;DATE=091284;ARCH=TM;TAPE=SM9310;FILE=053;STRT=000001;  
 C\*DATE: 19820518; 99; CITK77B;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19770501; 19770829; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR THE YEAR 1977 (MAY-AUGUST) COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE: FRIEDMAN, M. E., WHITCOMB, J. H., ALLEN, C. R., AND HILEMAN, J. A.  
 C\* (1976). SEISMICITY OF THE SOUTHERN CALIFORNIA REGION:  
 C\* 1 JANUARY 1972 TO 31 DECEMBER 1974, SEISMOLOGICAL LABORATORY,  
 C\* CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* HILEMAN, J. A., ALLEN, C. R., AND NORDQUIST, J. M. (1973).  
 C\* SEISMICITY OF THE SOUTHERN CALIFORNIA REGION: 1 JANUARY 1932  
 C\* TO 31 DECEMBER 1972, SEISMOLOGICAL LABORATORY, CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY, PASADENA, CALIFORNIA.  
 C\* WHITCOMB, J. H. (1978). P- AND S-PHASE DATA FROM LOCAL  
 C\* EARTHQUAKES IN SOUTHERN CALIFORNIA FOR 1966 TO 1975,  
 C\* BULL. SEISM. SOC. AM., 68,523-525.  
 C\*FORMAT: THREE TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000070 for details  
 \*\*\*\*\*

C\*END-----  
 1977 5 1 1 19 45.68 33 46.02 118 14.68 B 0.0 85 11.04 21 7 0.41 1.5 2.3  
 TWLEP 4 77 5 1 11956.88 1  
 IRCEP 3 77 5 1 11957.24 1  
 SBBEP 3 77 5 1 11963.89 1  
 MWCEP 2 77 5 1 11954.61 1  
 PASEP 4 77 5 1 11952.80 1  
 TCCIPD0 77 5 1 11952.03 1  
 VPDEP 3 77 5 1 11953.33 1  
 PECEP 3 77 5 1 11962.29 75.34ISU4 1  
 CSPEP+2 77 5 1 11962.01 73.37ES 3 1  
 \*\*\*\*\* 18835 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000090

Table GL000091

```

C#DSN=GL000091;SIZE=020413;DATE=091284;ARCH=TM;TAPE=SM9310;FILE=054;STRT=000001;
C*DATE: 19820518; 99; CITK77X;
C*CLASS: EARTHQUAKE; SUMMARY; PHASE;
C*PERSN: KEN PIPER;
C*ALPHA: 19770628; 19770930; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;
C*KEYWD: SOUTHERN CALIFORNIA;
C*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES
C*      FOR JUNE 28 - SEPTEMBER 30, 1977, COMPILED BY THE CALIFORNIA
C*      INSTITUTE OF TECHNOLOGY;
C*AUTHOR:
C*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;
C*      U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025
C*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,
C*      UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.
C*REFERENCE:
C*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.
C*      1. EVENT NUMBER CARD.
C*      2. ORIGIN TIME CARD.
C*      3. HYPOCENTER LOCATION CARD.
C*      4. COMMENT CARD.
C*      5. MAGNITUDE CARD.
C*      6. PHASE DATA CARD.
C*
C*      BLANK CARDS SEPARATE EVENTS.
C*
C*      EVENT NUMBER CARD
C*
C*      COLUMNS  FORMAT  ITEM      EXPLANATION
C*      01        1X      BLANK
C*      02-08     A7      ALPH1     'EVENT #'
C*      09-13     I5      NUM1      UNEXPLAINED ITEM
C*      14        A1      ALPH2     '/'
C*      15        I1      NUM2      UNEXPLAINED ITEM
C*      16        1X      BLANK
C*      17-21     A5      ALPH3     'SLOT:'
C*      22-25     I4      NUM3      UNEXPLAINED ITEM
C*
C*      ORIGIN TIME CARD
C*
C*      COLUMNS  FORMAT  ITEM      EXPLANATION
C*      01        1X      BLANK
C*      02-06     A5      ALPH1     'TIME:'
C*      07        1X      BLANK
C*      08-11     I4      YEAR      YEAR OF THE EVENT
C*      12        A1      ALPH2     ( / )
C*      13-14     I2      MONTH     MONTH OF THE EVENT
C*      15        A1      ALPH3     '/'
C*      16-17     I2      DAY       DAY OF THE EVENT
C*      18        1X      BLANK
C*      19-20     I2      HOUR      HOUR OF THE EVENT
C*      21-22     I2      MINUTE    MINUTE OF THE EVENT

```

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C* 23      1X      BLANK
C* 24-28   F5.2    SECOND  SECOND OF THE EVENT
C* 29      1X      BLANK
C* 30-32   A3      ALPH4   'GMT'
C*
C*
C* HYPOCENTER LOCATION CARD
C*
C* COLUMNS  FORMAT  ITEM    EXPLANATION
C* 01        1X      BLANK
C* 02-05     A4      ALPH1   'LOC:'
C* 06-08     3X      BLANK
C* 09-14     F6.3    LAT     LATITUDE OF THE EPICENTER (DEGREES NORTH)
C* 15-16     2X      BLANK
C* 17-23     F7.3    LON     LONGITUDE OF THE EPICENTER (DEGREES WEST)
C* 24-25     2X      BLANK
C* 26-30     F5.2    DEPTH    FOCAL DEPTH (KM)
C*
C*
C* COMMENT CARD (OPTIONAL)
C*
C* COLUMNS  FORMAT  ITEM    EXPLANATION
C* 01-80     A80     ALPH1   COMMENTS
C*
C*
C* MAGNITUDE CARD (OPTIONAL)
C*
C* COLUMNS  FORMAT  ITEM    EXPLANATION
C* 01        1X      BLANK
C* 02-04     A3      MAGTYPE 'ML', 'MH', OR 'MCA': TYPE OF MAGNITUDE SCALE
C*           (CODES UNEXPLAINED)
C* 05        A1      ALPH1   '='
C* 06-07     2X      BLANK
C* 08-11     F4.2    MAG     MAGNITUDE
C*
C*
C* PHASE DATA CARD
C*
C* COLUMNS  FORMAT  ITEM    EXPLANATION
C* 01        1X      BLANK
C* 02-05     A4      XSTA    STATION DESIGNATOR
C* 06-07     2X      BLANK
C* 08-12     F5.2    PSEC    P-ARRIVAL TIME (SEC)
C* 13        1X      BLANK
C* 14        A1      P1      'I' OR 'E' FOR P-PHASE
C* 15        A1      P2      'P'
C* 16        A1      P3      'U' OR '+' : UP
C*           'D' OR '-' : DOWN
C* 17        I1      P4      UNEXPLAINED ITEM, PROBABLY QUALITY CODE
C* 18-19     2X      BLANK
C* 20-24     F5.2    SSEC    S-ARRIVAL TIME
C* 25        1X      BLANK
C* 26        A1      S1      'I' OR 'E' FOR S-PHASE
C* 27        A1      S2      'S'
C* 28        1X      S3      '+' : UP
C*           '-' : DOWN

```

C\* 29 I1 S4 UNEXPLAINED ITEM, PROBABLY QUALITY CODE

C\*END-----

EVENT # 2014/1 SLOT: 10

TIME: 1977/ 6/28 1900 15.17 GMT

LOC: 35.036 117.688 4.42

SBB 21.88 IPU0 27.65 ISD1

CSP 29.56 IPU1

CLC 29.54 EP+2

SWM 30.11 IPD0

ISA 31.57 EP+2

GSC 29.36 EP+2 40.84 ISD1

BMT 28.79 EP+2

\*\*\*\*\* 20291 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000091



Table GL000092

C#DSN=GL000092;SIZE=031197;DATE=091284;ARCH=TM;TAPE=SM9310;FILE=055;STRT=000001;  
 C\*DATE: 19820518; 99; CITK77Y;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19771001; 19771130; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR OCTOBER 1-NOVEMBER 30, 1977, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----  
 EVENT # 976/1 SLOT: 89  
 TIME: 1977/10/ 1 23 44.13 GMT  
 LOC: 34.422 118.409 5.04  
 TWL 48.93 IPD4  
 SCY 50.01 IPD0  
 SBB 54.21 IPU0  
 MWC 50.92 IPD0  
 PAS 50.53 IPD0 55.48 IS 0  
 TCC 54.25 IPU1  
 VPD 59.02 EP 2  
 \*\*\*\*\* 31075 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000092

Table GL000093

C#DSN=GL000093;SIZE=009012;DATE=091284;ARCH=TM;TAPE=SM9310;FILE=056;STRT=000001;  
C\*DATE: 19820518; 99; CITK77Z;  
C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
C\*PERSN: KEN PIPER;  
C\*ALPHA: 19771201; 19771231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
C\*KEYWD: SOUTHERN CALIFORNIA;  
C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
C\* FOR DECEMBER 1-DECEMBER 31, 1977, COMPILED BY THE CALIFORNIA  
C\* INSTITUTE OF TECHNOLOGY;  
C\*AUTHOR:  
C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
C\*REFERENCE:  
C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
See previous format from dataset GL000091 for details  
\*\*\*\*\*

C\*END-----  
EVENT # 1637/1 SLOT: 16  
TIME: 1977/12/ 1 232 27.27 GMT  
LOC: 32.798 115.557 5.41  
ELR 35.99 EP 3  
WLK 32.97 IPD1  
CRR 34.00 IPU0  
COK 30.88 IPU1  
SUP 32.50 IPU0 36.72 ES 2  
COT 37.00 IPD0 44.61 ES 3  
AMS 35.14 IPU0 40.24 ES 3  
\*\*\*\*\* 8890 data cards not shown here \*\*\*\*\*  
C#FINIS DSN=GL000093

Table GL000094

C#DSN=GL000094;SIZE=020292;DATE=091284;ARCH=TM;TAPE=SM9310;FILE=057;STRT=000001;  
 C\*DATE: 19820518; 99; CITK78A;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19780101; 19780228; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR JANUARY 1-FEBRUARY 28, 1978, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----  
 EVENT # 991/1 SLOT: 70  
 TIME: 1978/ 1/ 1 102 39.72 GMT  
 LOC: 34.005 117.106 14.40  
 MCA= 1.76  
 CPM 54.04 IPD1  
 RVR 44.48 IPU1 48.09 ES 2  
 PEC 43.08 IPD1 45.6 ES 2  
 DB2 44.94 IPD1 49.08 ES 2  
 INS 53.65 IPD0  
 PNM 59.55 EP+3  
 \*\*\*\*\* 20170 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000094

Table GL000095

C#DSN=GL000095;SIZE=027799;DATE=091284;ARCH=TM;TAPE=SM9310;FILE=058;STRT=000001;  
 C\*DATE: 19820518; 99; CITK78B;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19780301; 19780430; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR MARCH 1-APRIL 30, 1978, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----  
 EVENT # 4432/1 SLOT: 23  
 TIME: 1978/ 3/ 1 22 21.27 GMT  
 LOC: 35.263 118.582 4.04  
 MH = 2.20  
 MCA= 2.20  
 SWM 31.47 IPD0  
 PYR 34.46 IPD0 43.91 IS 1  
 ISA 29.39 EP+3 35.02 IS 1  
 LHU 32.62 IPD0  
 LJBN 39.55 IPU0 51.38 ES 4  
 \*\*\*\*\* 27677 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000095

Table GL000096

C#DSN=GL000096;SIZE=022164;DATE=091284;ARCH=TM;TAPE=SM9310;FILE=059;STRT=000001;  
 C#DATE: 19820518; 99; CITK78C;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: KEN PIPER;  
 C#ALPHA: 19780501; 19780630; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR MAY 1-JUNE 30, 1978, COMPILED BY THE CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR:  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C# U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C#REFERENCE:  
 C#FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C#END-----  
 EVENT # 7871/1 SLOT: 16  
 TIME: 1978/ 5/ 1 54 19.23 GMT  
 LOC: 33.007 116.075 6.00  
 C - MIGHT BE OCOTILLO WELLS|  
 MCA= 1.70  
 CRR 22.37 IPU0  
 SGL 28.15 EP 2  
 CTW 31.94 EP 3  
 JUL 27.72 EP 2 34.39 ES 3

\*\*\*\*\* 22042 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000096

Table GL000097

C#DSN=GL000097;SIZE=029303;DATE=091284;ARCH=TM;TAPE=SM9310;FILE=060;STRT=000001;  
 C\*DATE: 19820518; 99; CITK78D;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19780701; 19780831; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR JULY 1-AUGUST 31, 1978, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----  
 EVENT # 570/1 SLOT: 124  
 TIME: 1978/ 7/ 1 102 10.64 GMT  
 LOC: 33.152 117.208 5.81  
 Q - VISTA|  
 BAR 22.55 EP 3 31.16 ES 3  
 PLM 17.65 EP 2 23.02 ES+2  
 PEC 23.90 EP 2  
 JUL 20.08 EP+2 27.19 ES 2  
 HOT 21.24 EP 3  
 SNS 18.44 EP 2  
 \*\*\*\*\* 29181 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000097

Table GL000098

C#DSN=GL000098;SIZE=027785;DATE=091284;ARCH=TM;TAPE=SM9310;FILE=061;STRT=000001;  
 C\*DATE: 19820518; 99; CITK78E;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19780901; 19781031; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR SEPTEMBER 1-OCTOBER 31, 1978, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----  
 EVENT # 4314/1 SLOT: 113  
 TIME: 1978/ 9/ 1 1 34.81 GMT  
 LOC: 34.340 116.873 0.86  
 Q - CUSHENBURY|  
 MCA= 2.31  
 LRR 53.04 EP+3  
 BAR 64.88 EP-4  
 RVR 45.25 EP+4  
 SBB 50.95 EP+2  
 GSC 53.13 EP+3  
 \*\*\*\*\* 27663 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000098

Table GL000099

C#DSN=GL000099;SIZE=019016;DATE=091284;ARCH=TM;TAPE=SM9310;FILE=062;STRT=000001;  
 C\*DATE: 19820518; 99; C\*TK78F;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19781101; 19781231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR NOVEMBER 1-DECEMBER 31, 1978, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----  
 EVENT # 791/1 SLOT: 104  
 TIME: 1978/11/ 1 26 9.33 GMT  
 LOC: 33.519 119.239 8.76  
 ML = 2.55  
 MH = 2.64  
 MCA= 2.58  
 FMA 24.11 EP 4  
 SCY 25.44 EP 4  
 SCI 24.03 EP 3 35.58 ES 3  
 SYP 30.17 EP+2 47.03 ES 3  
 \*\*\*\*\* 18894 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000099



Table GL000100

C#DSN=GL000100;SIZE=021870;DATE=091484;ARCH=TM;TAPE=SM9310;FILE=063;STRT=000001;  
C\*DATE: 19820518; 99; CITK79A;  
C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
C\*PERSN: KEN PIPER;  
C\*ALPHA: 19790101; 19790228; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
C\*KEYWD: SOUTHERN CALIFORNIA;  
C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
C\* FOR JANUARY 1-FEBRUARY 28, 1979, COMPILED BY THE CALIFORNIA  
C\* INSTITUTE OF TECHNOLOGY;  
C\*AUTHOR:  
C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
C\*REFERENCE:  
C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
See previous format from dataset GL000091 for details  
\*\*\*\*\*

C\*END-----  
EVENT # 3393/1 SLOT: 4  
TIME: 1979/ 1/ 1 241 11.71 GMT  
LOC: 34.145 116.058 10.42  
C02 23.90 EP 2  
TPC 13.63 IPD0 15.40 ES 3  
PNM 17.08 IPU0 21.30 ES-2  
INS 16.49 IPD0 20.23 ES 2  
CPM 14.54 IPD0  
MOV 18.76 EP 2  
RMR 19.87 EP+2  
\*\*\*\*\* 21748 data cards not shown here \*\*\*\*\*  
C#FINIS DSN=GL000100

Table GL000101

C#DSN=GL000101;SIZE=026783;DATE=091484;ARCH=TM;TAPE=SM9310;FILE=064;STRT=000001;  
 C\*DATE: 19820518; 99; CITK79B1;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19790301; 19790319; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR MARCH 1-MARCH 19, 1979, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----  
 EVENT # 994/1 SLOT: 35  
 TIME: 1979/ 3/ 1 21 48.42 GMT  
 LOC: 34.415 116.795 5.00  
 INS 61.32 EP+2  
 CPM 59.06 EP 2  
 HDG 56.07 IPU0  
 ROD 53.70 IPU0 57.01 ES 2  
 MOV 55.20 IPD0  
 RMR 53.67 IPD0 57.54 ES+2  
 SIL 50.69 EP 2  
 \*\*\*\*\* 26661 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000101

Table GL000102

C#DSN=GL000102;SIZE=013246;DATE=091484;ARCH=TM;TAPE=SM9310;FILE=065;STRT=000001;  
 C\*DATE: 19820518; 99; CITK79B2;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19790320; 19790331; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR MARCH 20-MARCH 31, 1979, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----  
 EVENT # 2245/1 SLOT: 132  
 TIME: 1979/ 3/20 15 34.23 GMT  
 LOC: 33.703 116.849 5.99  
 HOT 42.80 IP-1  
 PLM 41.21 EP+2  
 VST 53.95 IPU1  
 JUL 46.87 IPD1 55.79 ES 2  
 COY 44.53 EP+2 52.30 ES 2  
 PNM 50.67 EP 2 62.8' ES 3  
 INS 44.86 IPU0 52.4' ES 3  
 \*\*\*\*\* 13124 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000102

Table GL000103

C#DSN=GL000103;SIZE=029362;DATE=091484;ARCH=TM;TAPE=SM9310;FILE=066;STRT=000001;  
 C#DATE: 19820518; 99; CITK79C;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: KEN PIPER;  
 C#ALPHA: 19790401; 19790531; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR APRIL 1-MAY 31, 1979, COMPILED BY THE CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR:  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C# U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C#REFERENCE:  
 C#FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C#END-----  
 EVENT # 3337/1 SLOT: 66  
 TIME: 1979/ 4/ 1 107 18.11 GMT  
 LOC: 34.307 116.434 2.40  
 INS 26.25 IP+1 32.17 ES+2  
 CPM 23.13 IPU0  
 HDG 21.48 IPD0  
 ROD 25.00 IPU0  
 MOV 21.37 IPD0 23.55 ES 2  
 RMR 21.14 IPD0  
 RAY 26.26 IPD0  
 \*\*\*\*\* 29240 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000103

Table GL000104

C#DSN=GL000104;SIZE=032055;DATE=091484;ARCH=TM;TAPE=SM9310;FILE=067;STRT=000001;  
C\*DATE: 19820518; 99; CITK79D;  
C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
C\*PERSN: KEN PIPER;  
C\*ALPHA: 19790601; 19790731; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
C\*KEYWD: SOUTHERN CALIFORNIA;  
C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
C\* FOR JUNE 1-JULY 31, 1979, COMPILED BY THE CALIFORNIA  
C\* INSTITUTE OF TECHNOLOGY;  
C\*AUTHOR:  
C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
C\*REFERENCE:  
C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
See previous format from dataset GL000091 for details  
\*\*\*\*\*

C\*END-----  
EVENT # 1629/1 SLOT: 87  
TIME: 1979/ 6/ 1 33 16.02 GMT  
LOC: 33.256 117.153 2.28  
BAR 28.89 EP 3 38.27 ES 3  
PLM 21.39 EP 2  
VST 18.44 IPU0  
JUL 25.35 EP 2  
COY 29.66 EP 2  
HOT 25.38 EP+2  
SNS 23.61 EP 2  
\*\*\*\*\* 31933 data cards not shown here \*\*\*\*\*  
C#FINIS DSN=GL000104

Table GL000105

C#DSN=GL000105;SIZE=024081;DATE=091484;ARCH=TM;TAPE=SM9310;FILE=068;STRT=000001;  
 C\*DATE: 19820518; 99; CITK79E;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19790801; 19790930; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR AUGUST 1-SEPTEMBER 30, 1979, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----

EVENT # 1366/1 SLOT: 118  
 TIME: 1979/ 8/ 1 234 14.28 GMT  
 LOC: 34.950 118.976 3.29  
 SBB 33.08 EP 3 46.18 ES 3  
 LJBV 33.08 EP 3  
 LJB 33.10 IPD1  
 LJBE 33.08 EP-2  
 TPO 26.01 IPU1  
 LHU 24.49 IPU0 31.77 ES 3  
 SWM 21.99 EP 3 27.82 ES 3

\*\*\*\*\* 23959 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000105

Table GL000106

C#DSN=GL000106;SIZE=028516;DATE=091484;ARCH=TM;TAPE=SM9310;FILE=069;STRT=000001;  
 C\*DATE: 19820518; 99; CITK79F1;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19791001; 19791016; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR OCTOBER 1-OCTOBER 16, 1979, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----  
 EVENT # 3382/1 SLOT: 30  
 TIME: 1979/10/ 1 227 46.60 GMT  
 LOC: 34.009 118.829 5.00  
 CIS 55.71 EP 3  
 SIP 50.40 IPD0 54.85 ES 2  
 KYP 49.10 IPD0  
 PTD 47.62 IPD0  
 SBLG 50.83 IPU0 55.25 ES 3  
 ECF 56.99 EP 3  
 SBAI 56.28 EP 3  
 \*\*\*\*\* 28394 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000106

Table GL000107

C#DSN=GL000107;SIZE=027841;DATE=091484;ARCH=TM;TAPE=SM9310;FILE=070;STRT=000001;  
C#DATE: 19820518; 99; CITK79F2;  
C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
C#PERSON: KEN PIPER;  
C#ALPHA: 19791017; 1979.031; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
C#KEYWD: SOUTHERN CALIFORNIA;  
C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
C# FOR OCTOBER 17-OCTOBER 31, 1979, COMPILED BY THE CALIFORNIA  
C# INSTITUTE OF TECHNOLOGY;  
C#AUTHOR:  
C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
C# U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
C#REFERENCE:  
C#FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
See previous format from dataset GL000091 for details  
\*\*\*\*\*

C#END-----  
EVENT # 4301/1 SLOT: 7  
TIME: 1979/10/17 0 60.86 GMT  
LOC: 33.030 115.488 5.04  
GLA 71.29 IPD0  
IKP 72.68 IPD0 81.71 ES 3  
BAR 78.94 EP-2 93.82 ES 2  
PLM 81.21 EP-2  
YMD 76.79 EP 3  
PLT 73.30 IPD0  
BON 68.68 EP-2

\*\*\*\*\* 27719 data cards not shown here \*\*\*\*\*  
C#FINIS DSN=GL000107



Table GL000108

C#DSN=GL000108;SIZE=032137;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=071;STRT=000001;  
C#DATE: 19820518; 99; CITK79G;  
C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
C#PERSN: KEN PIPER;  
C#ALPHA: 19791101; 19791231; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
C#KEYWD: SOUTHERN CALIFORNIA;  
C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
C# FOR NOVEMBER 1-DECEMBER 31, 1979, COMPILED BY THE CALIFORNIA  
C# INSTITUTE OF TECHNOLOGY;  
C#AUTHOR:  
C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
C# U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
C#REFERENCE:  
C#FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
See previous format from dataset GL000091 for details  
\*\*\*\*\*

C#END-----  
EVENT # 5670/1 SLOT: 23  
TIME: 1979/11/ 1 27 39.58 GMT  
LOC: 32.701 115.402 18.41  
BAR 59.17 EP 4  
YMD 52.84 EP+3  
PLT 50.13 IPU0  
BSC 46.05 IPU1  
BON 42.99 IPU0 46.14 ES 3  
SGL 45.44 IPU0  
COA 45.73 IPU0  
\*\*\*\*\* 32015 data cards not shown here \*\*\*\*\*  
C#FINIS DSN=GL000108

Table GL000109

C#DSN=GL000109;SIZE=013780;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=072;STRT=000001;  
 C#DATE: 19820518; 99; CITK80A;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: KEN PIPER;  
 C#ALPHA: 19800101; 19800131; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR JANUARY 1-JANUARY 31, 1980, COMPILED BY THE CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR:  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C# U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C# (DATA IS MISSING FOR THE EVENT ON JANUARY 3 AT 18:47.)  
 C#REFERENCE:  
 C#FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C#END-----  
 EVENT # 2611/1 SLOT: 1  
 TIME: 1980/ 1/ 1 209 43.94 GMT  
 LOC: 35.328 119.980 4.90  
 ISA 59.48 EP-2 84.55 ES 3  
 SYP 57.18 EP 3  
 TPO 67.34 EP 3  
 LHU 67.64 EP 3  
 SWM 65.38 EP 3  
 BMT 61.00 EP 3  
 SIP 68.25 EP-2  
 \*\*\*\*\* 13657 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000109

Table GL000110

C#DSN=GL000110;SIZE=017427;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=073;STRT=000001;  
 C\*DATE: 19820518; 99; CITK80B;  
 C\*CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19800201; 19800229; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C\*KEYWD: SOUTHERN CALIFORNIA;  
 C\*TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C\* FOR FEBRUARY 1-FEBRUARY 29, 1980, COMPILED BY THE CALIFORNIA  
 C\* INSTITUTE OF TECHNOLOGY;  
 C\*AUTHOR:  
 C\*INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C\* U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C\* UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C\*REFERENCE:  
 C\*FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C\*END-----  
 EVENT # 1418/1 SLOT: 63  
 TIME: 1980/ 2/ 1 357 61.36 GMT  
 LOC: 34.002 116.014 5.75  
 TPC 63.82 IPD0  
 CH2 72.36 IPU1  
 JUL 84.42 EP+3  
 COY 74.43 EP+2  
 HOT 78.49 EP+2  
 LTM 73.76 EP 4  
 IRN 72.07 EP 3  
 \*\*\*\*\* 17305 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000110

Table GL000111

C#DSN=GL000111;SIZE=019438;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=074;STRT=000001;  
 C#DATE: 19820518; 99; CITK80C;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: KEN PIPER;  
 C#ALPHA: 19800301; 19800331; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR MARCH 1-MARCH 31, 1980, COMPILED BY THE CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR:  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C# U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C# (THE EVENT ON MARCH 2 AT 20:06 WAS MISPLACED ON THE ORIGINAL TAPE  
 C# AMONG THE FEBRUARY EVENTS; IT WAS MOVED TO THIS DATA SET.)  
 C#REFERENCE:  
 C#FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C#END-----  
 EVENT # 3681/1 SLOT: 1  
 TIME: 1980/ 3/ 1 1 50.87 GMT  
 LOC: 33.504 116.521 13.44  
 PEC 72.39 ES 3  
 SGL 57.00 EP 3  
 JUL 59.85 EP 3 65.87 ES 2  
 COY 55.63 IPU1 58.96 ES 2  
 HOT 55.31 EP+2 58.61 ES 1  
 SMO 53.41 IPU0 55.16 ES 3  
 KEE 54.80 EP-2 57.51 ES 3  
 \*\*\*\*\* 19314 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000111

Table GL000112

C#DSN=GL000112;SIZE=014690;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=075;STRT=000001;  
 C#DATE: 19820518; 99; CITK80D;  
 C#CLASS: EARTHQUAKE; SUMMARY; PHASE;  
 C#PERSN: KEN PIPER;  
 C#ALPHA: 19800401; 19800502; 31.0 N; 38.0 N; 121.0 W; 114.0 W; ; A007;  
 C#KEYWD: SOUTHERN CALIFORNIA;  
 C#TITLE: HYPOCENTERS AND PHASE DATA FOR SOUTHERN CALIFORNIA EARTHQUAKES  
 C# FOR APRIL 1-MAY 2, 1980, COMPILED BY THE CALIFORNIA  
 C# INSTITUTE OF TECHNOLOGY;  
 C#AUTHOR:  
 C#INSTITUTION: CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA 91125;  
 C# U.S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C#ABSTRACT: THIS DATA SET WAS EXTRACTED FROM A TAPE SENT BY KEN PIPER,  
 C# UNIVERSITY OF SOUTHERN CALIFORNIA, IN 1982.  
 C# MAY 2 IS INCOMPLETE.  
 C#REFERENCE:  
 C#FORMAT: SIX TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000091 for details  
 \*\*\*\*\*

C#END-----  
 EVENT # 3427/1 SLOT: 26  
 TIME: 1980/ 4/ 1 109 24.62 GMT  
 LOC: 33.265 117.142 5.00  
 SNS 31.94 IPU1  
 PLM 29.64 IPU0 33.52 ES 3  
 COY 38.00 EP 3  
 BAR 37.68 EP 3 46.98 ES 3  
 DB2 33.10 EP+2  
 SMO 36.76 EP+2  
 POB 33.10 IPU0  
 \*\*\*\*\* 14567 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000112

Table GL000113

C#DSN=GL000113;SIZE=004858;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=076;STRT=000001;  
 C\*DATE: 19840201; 0; SALMON01;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15.00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KEND E	13.5	31-13.86	89-40.00
KEND W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*  
C\*

#### FIELD PROCEDURES

C\*

C\* THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED  
C\* IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL  
C\* GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS  
C\* NEAR THE CENTER OF THE SPREAD.

C\* CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR  
C\* AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS  
C\* 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*  
C\*

#### SYSTEM RESPONSE

C\*

C\* SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT  
C\* ET AL. (1967).

C\*  
C\*

#### REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

C\* ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE  
C\* WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS  
C\* ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES  
C\* OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON  
C\* THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL  
C\* PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION,  
C\* SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED  
C\* LEVELS FOR THE SALMON DIGITIZED RECORDS.

C\* THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME  
C\* LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*  
C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY  
C\* FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL.  
C\* SEISM. SOC. AM. 61, 1073-1098.

C\* BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967).  
C\* SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME,  
C\* MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER:  
C\* CRUSTAL STUDIES-48.

C\*  
C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

- C\* 1. FILE TITLE CARD.
- C\* 2. SIGNAL LENGTH CARD.
- C\* 3. TRACE TITLE CARD.
- C\* 4. DATA CARD.

C\*  
C\*

C\* FILE TITLE CARD

```

C*
C*  COLUMNS  FORMAT  ITEM
C*
C*  01-80      A80      TITLE OF FILE
C*
C*
C*  SIGNAL LENGTH CARD
C*
C*  COLUMNS  FORMAT  ITEM
C*
C*  01-06      A6        'NPTS ='
C*  07-11      I5         NUMBER OF POINTS IN TRACE
C*  12-41      A30        ', SAMPLING INTERVAL = 0.01 SEC'
C*

```

```

C*  TRACE TITLE CARD
C*
C*  COLUMNS  FORMAT  ITEM
C*
C*  01-80      A80      TITLE OF TRACE
C*

```

```

C*  DATA CARD
C*
C*  COLUMNS  FORMAT  ITEM
C*
C*  01-75      15I5      DATA POINTS
C*

```

C\*END-----

```

SALMON: POPLARVILLE (26.6-28.7 KM)
NPTS = 5000, SAMPLING INTERVAL = 0.01 SEC
FILE 1, TRACE 1: VERTICAL GEOPHONE #1

```

-40	-43	-38	-45	-41	-43	-44	-38	-41	-38	-39	-43	-38	-44	-39
-40	-42	-36	-43	-47	-41	-42	-42	-38	-45	-41	-42	-44	-39	-45
-40	-41	-43	-38	-44	-39	-41	-44	-38	-44	-39	-39	-43	-41	-46
-40	-39	-42	-38	-45	-43	-43	-43	-39	-44	-39	-42	-45	-41	-46
-40	-42	-44	-40	-45	-40	-43	-46	-40	-44	-39	-41	-43	-38	-45
-41	-43	-44	-38	-41	-38	-39	-43	-38	-44	-39	-40	-42	-36	-43
-40	-43	-45	-38	-43	-39	-42	-44	-39	-46	-43	-44	-46	-39	-45

```

***** 4708 data cards not shown here *****
C#FINIS DSN=GL000113

```



Table GL000114

C#DSN=GL000114;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=076;STRT=004859;  
 C\*DATE: 19840201; 0; SALMON02;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

#### FIELD PROCEDURES

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

#### SYSTEM RESPONSE

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

#### REMARKS ON DIGITIZED CALIBRATION SIGNALS

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
 C\*BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000113 for details  
 \*\*\*\*\*

C\*END-----  
 SALMON: POPLARVILLE (26.6-28.7 KM): CALIBRATION --- 100000 MICROVOLTS

NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 2, TRACE 1: VERTICAL GEOPHONE #1

-49	16	60	59	34	-21	-77	-125	-147	-117	-67	2	55	63	46
-7	-64	-117	-149	-129	-85	-16	43	64	56	8	-46	-104	-147	-137
-97	-29	35	63	63	20	-32	-91	-140	-140	-110	-46	19	56	67
31	-18	-75	-131	-143	-120	-63	4	48	67	42	-2	-61	-122	-143
-132	-80	-11	40	69	50	8	-48	-111	-141	-141	-94	-28	26	66
56	21	-33	-97	-134	-145	-108	-46	14	62	61	33	-15	-80	-124
-147	-120	-62	0	54	65	46	0	-64	-115	-148	-131	-79	-16	46

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000114

Table GL000115

C#DSN=GL000115;SIZE=004858;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=076;STRT=005979;  
 C\*DATE: 19840201; 0; SALMON03;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.  
 C\*  
 C\*  
 C\* SOURCE INFORMATION  
 C\*  
 C\* DATE OF SALMON EVENT: OCTOBER 22, 1964  
 C\* TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 C\* SIZE OF SALMON EVENT: 5.3 KILOTONS  
 C\* DATE OF STERLING EVENT: DECEMBER 3, 1966  
 C\* TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 C\* SIZE OF STERLING EVENT: 0.38 KILOTON  
 C\* LOCATION OF SALMON AND STERLING  
 C\* GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 C\* 89 DEG 34 MIN 11.8 SEC WEST  
 C\* SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 C\* SHOT DEPTH FROM SURFACE: 2717 FEET  
 C\*  
 C\*  
 C\* STATION LOCATIONS  
 C\*  

C*	STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
C*	KENO E	13.5	31-13.86	89-40.00
C*	KENO W	15.3	31-14.04	89-41.39
C*	ROUSE W	16.2	31-0.56	89-38.94
C*	ROUSE E	17.7	30-59.49	89-37.86
C*	POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
C*	POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
C*	COLUMBIA E	27.7	30-08.23	89-51.60
C*	POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
C*	POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
C*	COLUMBIA W	30.1	31-07.98	89-53.15
C*	SUMRALL W	30.8	31-25.15	89-35.00
C*	SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

# FIELD PROCEDURES

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

# SYSTEM RESPONSE

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

# REMARKS ON DIGITIZED CALIBRATION SIGNALS

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
BORCHERDT, R.D., J.H. HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
See previous format from dataset GL000113 for details  
\*\*\*\*\*

END-----  
SALMON: PICAYUNE (67.4-69.8 KM)

NPTS = 5000, SAMPLING INTERVAL = 0.01 SEC

FILE 3, TRACE 1: VERTICAL GEOPHONE #1

-10	-16	-8	-12	-9	-8	-16	-9	-12	-9	-6	-11	-8	-12	-7
-7	-13	-7	-12	-9	-7	-13	-7	-12	-9	-10	-15	-7	-12	-9
-10	-15	-10	-15	-9	-7	-15	-10	-16	-13	-12	-17	-9	-12	-10
-11	-16	-9	-15	-11	-9	-13	-7	-13	-11	-9	-15	-10	-14	-10
-9	-13	-8	-12	-8	-8	-15	-7	-12	-10	-7	-15	-11	-14	-8
-7	-13	-9	-15	-11	-10	-15	-8	-13	-10	-11	-18	-11	-14	-10
-9	-15	-9	-13	-10	-8	-14	-7	-12	-9	-8	-14	-8	-13	-10

\*\*\*\*\* 4708 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000115

Table GL000116

C#DSN=GL000116;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=076;STRT=010837;  
 C#DATE: 19840201; 0; SALMON04;  
 C#CLASS: EXPLOSION; WAVEFORM;  
 C#PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C#ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C#KEYWD: NUCLEAR;  
 C#TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C#AUTHOR:  
 C#INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C#ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

C\* DATE OF SALMON EVENT: OCTOBER 22, 1964  
 C\* TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 C\* SIZE OF SALMON EVENT: 5.3 KILOTONS  
 C\* DATE OF STERLING EVENT: DECEMBER 3, 1966  
 C\* TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 C\* SIZE OF STERLING EVENT: 0.38 KILOTON  
 C\* LOCATION OF SALMON AND STERLING  
 C\* GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 C\* 89 DEG 34 MIN 11.8 SEC WEST  
 C\* SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 C\* SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

# FIELD PROCEDURES

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

# SYSTEM RESPONSE

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

# REMARKS ON DIGITIZED CALIBRATION SIGNALS

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
 C\*BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000113 for details  
 \*\*\*\*\*

C\*END-----  
 SALMON: PICAYUNE (67.4-69.8 KM): CALIBRATION --- 10000 MICROVOLTS



NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 4, TRACE 1: VERTICAL GEOPHONE #1

-20	-24	-15	-8	-8	0	0	7	11	8	14	10	13	12	4
7	0	0	-4	-11	-14	-24	-20	-24	-32	-29	-38	-34	-33	-38
-29	-31	-24	-22	-22	-12	-12	-4	0	-2	6	4	11	12	7
14	7	9	6	-2	1	-8	-8	-13	-23	-20	-25	-25	-28	-33
-28	-34	-30	-27	-28	-19	-22	-15	-10	-11	-1	-3	4	7	5
13	8	12	12	7	12	2	2	-1	-10	-8	-18	-19	-22	-28
-26	-33	-31	-31	-35	-28	-32	-24	-19	-24	-15	-16	-7	-2	-2

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000116

Table GL000117

C\*DSN=GL000117;SIZE=006720;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=077;STRT=000001;  
 C\*DATE: 19840201; 0; SALMON05;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
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ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*  
C\*

#### FIELD PROCEDURES

C\*

C\* THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED  
C\* IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL  
C\* GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS  
C\* NEAR THE CENTER OF THE SPREAD.

C\* CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR  
C\* AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS  
C\* 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*  
C\*

#### SYSTEM RESPONSE

C\*

C\* SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT  
C\* ET AL. (1967).

C\*  
C\*

#### REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

C\* ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE  
C\* WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS  
C\* ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES  
C\* OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON  
C\* THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL  
C\* PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION,  
C\* SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED  
C\* LEVELS FOR THE SALMON DIGITIZED RECORDS.

C\* THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME  
C\* LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*  
C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY  
C\* FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL.  
C\* SEISM. SOC. AM. 61, 1073-1098.  
C\* BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967).  
C\* SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME,  
C\* MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER:  
C\* CRUSTAL STUDIES-48.

C\*  
C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----  
SALMON: RALEIGH (109.4-111.9 KM)

NPTS = 7000, SAMPLING INTERVAL = 0.01 SEC

FILE 5, TRACE 1: VERTICAL GEOPHONE #1

7	7	13	7	12	9	8	13	7	12	7	9	15	10	15
10	9	16	11	14	8	8	13	8	12	7	8	14	8	12
7	7	12	7	13	8	8	14	10	14	6	6	13	10	15
8	8	13	6	12	9	9	14	8	13	9	9	13	7	12
7	9	16	9	13	7	7	15	10	15	10	9	12	7	14
10	10	15	7	13	7	7	12	7	14	8	8	12	5	12
9	10	15	9	15	9	8	12	6	13	8	8	14	7	12

\*\*\*\*\* 6570 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000117

Table GL000118

C#DSN=GL000118;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=077;STRT=006721;  
 C\*DATE: 19840201; 0; SALMON06;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15.00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*

C\*

# FIELD PROCEDURES

C\*

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*

C\*

# SYSTEM RESPONSE

C\*

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

C\*

C\*

# REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*

C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*

C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----

SALMON: RALEIGH (109.4-111.9 KM): CALIBRATION --- 1000 MICROVOLTS

NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 6, TRACE 1: VERTICAL GEOPHONE #1

26	20	25	28	21	24	18	19	18	12	16	13	15	14	10
15	9	13	15	11	16	14	18	18	15	22	16	21	24	22
28	22	24	25	22	28	23	23	21	15	19	14	16	17	11
15	9	10	10	7	15	11	13	15	12	20	15	18	22	20
26	22	27	27	22	28	24	28	28	21	24	19	20	20	14
18	11	14	16	8	11	5	10	14	10	15	12	15	15	12
19	16	22	24	19	26	21	24	25	22	27	22	25	26	20

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000118

Table GL000119

C#DSN=GL000119;SIZE=003920;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=077;STRT=007841;  
 C\*DATE: 19840201; 0; SALMON07;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86



C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*  
C\*

#### FIELD PROCEDURES

C\*

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*

C\*

#### SYSTEM RESPONSE

C\*

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

C\*

C\*

#### REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

C\*

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*

C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*

C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----  
STERLING: KENO (13.5-15.3 KM)

NPTS = 4000, SAMPLING INTERVAL = 0.01 SEC

FILE 7, TRACE 1: VERTICAL GEOPHONE #1

20	13	17	13	19	21	19	27	24	27	28	25	32	30	35
33	27	31	27	29	27	22	28	23	26	28	23	27	19	23
26	19	23	20	27	30	27	33	27	30	30	21	24	22	29
27	18	23	21	28	27	24	32	29	34	32	24	27	22	27
25	22	28	22	25	25	21	26	24	30	28	16	-42	-22	51
29	15	32	22	23	-7	-11	37	27	22	30	20	21	20	23
22	24	31	25	30	29	24	29	24	29	30	26	29	21	25

\*\*\*\*\* 3770 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000119

# Table GL000120

C#DSN=GL000120;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=078;STRT=000001;  
 C\*DATE: 19840201; 0; SALMON08;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.

C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

C\*

C\*

C\*

## SOURCE INFORMATION

C\*

C\*

DATE OF SALMON EVENT: OCTOBER 22, 1964

C\*

TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)

C\*

SIZE OF SALMON EVENT: 5.3 KILOTONS

C\*

DATE OF STERLING EVENT: DECEMBER 3, 1966

C\*

TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)

C\*

SIZE OF STERLING EVENT: 0.38 KILOTON

C\*

LOCATION OF SALMON AND STERLING

C\*

GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH

C\*

89 DEG 34 MIN 11.8 SEC WEST

C\*

SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET

C\*

SHOT DEPTH FROM SURFACE: 2717 FEET

C\*

C\*

C\*

## STATION LOCATIONS

C\*

C\*

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C\*

C\*

C\*

C\*

C\*

C\*

C\*

C\*

C\*

C\*

C\*

C\*

C\*

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

# FIELD PROCEDURES

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

# SYSTEM RESPONSE

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

# REMARKS ON DIGITIZED CALIBRATION SIGNALS

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
BORCHERDT, R.D., J.H. HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
See previous format from dataset GL000113 for details  
\*\*\*\*\*

END-----  
STERLING: KENO (13.5-15.3 KM): CALIBRATION --- 100 MICROVOLTS

NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 8, TRACE 1: VERTICAL GEOPHONE #1

-9	-41	-78	-118	-131	-144	-160	-157	-158	-144	-129	-115	-83	-56	-20
17	49	86	115	150	176	189	208	215	223	218	200	184	152	125
92	52	22	-20	-51	-83	-114	-128	-148	-155	-158	-159	-143	-132	-107
-79	-53	-14	17	54	87	118	152	172	196	212	216	224	211	203
188	152	122	86	52	18	-23	-52	-81	-110	-138	-152	-155	-162	-147
-136	-135	-104	-80	-47	-7	31	70	88	126	169	190	199	207	224
221	209	202	175	152	120	78	47	9	-22	-52	-85	-115	-142	-148

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000120

# Table GL000121

C#DSN=GL000121;SIZE=004382;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=078;STRT=001121;  
 C\*DATE: 19840201; 0; SALMON09;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC

C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.

C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

C\*

C\*

C\*

## SOURCE INFORMATION

C\*

C\*

DATE OF SALMON EVENT: OCTOBER 22, 1964

C\*

TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)

C\*

SIZE OF SALMON EVENT: 5.3 KILOTONS

C\*

DATE OF STERLING EVENT: DECEMBER 3, 1966

C\*

TIME OF STERLING EVENT: 12:15.00.05 GMT (06:15 AM CST)

C\*

SIZE OF STERLING EVENT: 0.38 KILOTON

C\*

LOCATION OF SALMON AND STERLING

C\*

GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH

C\*

89 DEG 34 MIN 11.8 SEC WEST

C\*

SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET

C\*

SHOT DEPTH FROM SURFACE: 2717 FEET

C\*

C\*

C\*

## STATION LOCATIONS

C\*

C\*

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
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C\*

KENO E	13.5	31-13.86	89-40.00
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C\*

KENO W	15.3	31-14.04	89-41.39
--------	------	----------	----------

C\*

ROUSE W	16.2	31-0.56	89-38.94
---------	------	---------	----------

C\*

ROUSE E	17.7	30-59.49	89-37.86
---------	------	----------	----------

C\*

POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
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C\*

POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
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C\*

COLUMBIA E	27.7	30-08.23	89-51.60
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C\*

POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
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C\*

POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
----------------------	------	----------	----------

C\*

COLUMBIA W	30.1	31-07.98	89-53.15
------------	------	----------	----------

C\*

SUMRALL W	30.8	31-25.15	89-35.00
-----------	------	----------	----------

C\*

SUMRALL E	32.8	31-26.26	89-34.86
-----------	------	----------	----------

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*

C\*

#### C\* FIELD PROCEDURES

C\*

C\* THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED  
C\* IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL  
C\* GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS  
C\* NEAR THE CENTER OF THE SPREAD.

C\* CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR  
C\* AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS  
C\* 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*

C\*

#### C\* SYSTEM RESPONSE

C\*

C\* SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT  
C\* ET AL. (1967).

C\*

C\*

#### C\* REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

C\* ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE  
C\* WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS  
C\* ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES  
C\* OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON  
C\* THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL  
C\* PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION,  
C\* SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED  
C\* LEVELS FOR THE SALMON DIGITIZED RECORDS.

C\* THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME  
C\* LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*

C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY  
C\* FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL.  
C\* SEISM. SOC. AM. 61, 1073-1098.

C\* BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967).  
C\* SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME,  
C\* MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER:  
C\* CRUSTAL STUDIES-48.

C\*

C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----  
STERLING: ROUSE (16.2-17.7 KM)

NPTS = 4500, SAMPLING INTERVAL = 0.01 SEC

FILE 9, TRACE 1: VERTICAL GEOPHONE #1

40	38	37	43	38	46	45	44	48	42	46	39	35	34	26
32	28	32	40	38	48	49	49	52	46	51	48	49	56	51
57	52	50	54	47	51	46	47	34	9	56	57	41	58	53
55	54	54	62	57	57	51	51	52	44	45	35	34	41	36
41	36	37	41	35	44	41	42	49	43	48	43	40	44	38
43	36	33	36	30	36	36	40	47	44	51	47	48	53	48
54	46	43	47	39	43	38	36	40	36	39	32	32	36	30

\*\*\*\*\* 4232 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000121



Table GL000122

C#DSN=GL000122;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=078;STRT=005503;  
 C\*DATE: 19840201; 0; SALMON10;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*

C\*

# FIELD PROCEDURES

C\*

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# FIELD PROCEDURES

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

# SYSTEM RESPONSE

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

# REMARKS ON DIGITIZED CALIBRATION SIGNALS

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
BORCHERDT, R.D., J.H. HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----

STERLING: ROUSE (16.2-17.7 KM): CALIBRATION --- 100 MICROVOLTS

NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 10, TRACE 1: VERTICAL GEOPHONE #1

-65	-113	-97	-18	74	168	216	191	117	12	-73	-112	-89	-7	85
175	215	178	99	-3	-81	-115	-85	0	93	183	217	173	90	-13
-88	-112	-77	13	108	193	217	167	81	-24	-94	-111	-67	26	119
199	214	158	71	-32	-100	-110	-61	35	128	202	208	143	54	-46
-106	-107	-50	48	139	207	207	138	46	-53	-109	-106	-44	59	148
209	201	125	33	-64	-113	-99	-31	68	155	212	195	116	23	-73
-115	-94	-23	80	167	218	192	108	13	-81	-116	-86	-10	93	174

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000122

Table GL000123

C#DSN=GL000123;SIZE=004382;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=078;STRT=006623;  
 C\*DATE: 19840201; 0; SALMON11;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC

C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.

C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

C\*

C\*

C\* SOURCE INFORMATION

C\*

C\* DATE OF SALMON EVENT: OCTOBER 22, 1964

C\* TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)

C\* SIZE OF SALMON EVENT: 5.3 KILOTONS

C\* DATE OF STERLING EVENT: DECEMBER 3, 1966

C\* TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)

C\* SIZE OF STERLING EVENT: 0.38 KILOTON

C\* LOCATION OF SALMON AND STERLING

C\* GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH

C\* 89 DEG 34 MIN 11.8 SEC WEST

C\* SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET

C\* SHOT DEPTH FROM SURFACE: 2717 FEET

C\*

C\*

C\* STATION LOCATIONS

C\*

C* STATION	C* DIST (KM)	C* LAT (DEG-MIN)	C* LONG(DEG-MIN)
C* KENO E	13.5	31-13.86	89-40.00
C* KENO W	15.3	31-14.04	89-41.39
C* ROUSE W	16.2	31-0.56	89-38.94
C* ROUSE E	17.7	30-59.49	89-37.86
C* POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
C* POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
C* COLUMBIA E	27.7	30-08.23	89-51.60
C* POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
C* POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
C* COLUMBIA W	30.1	31-07.98	89-53.15
C* SUMRALL W	30.8	31-25.15	89-35.00
C* SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

# FIELD PROCEDURES

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

# SYSTEM RESPONSE

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

# REMARKS ON DIGITIZED CALIBRATION SIGNALS

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.

C\* BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
See previous format from dataset GL000113 for details  
\*\*\*\*\*

C\*END-----  
STERLING: POPLARVILLE (HOTEL) (26.6-28.7 KM)

NPTS = 4500, SAMPLING INTERVAL = 0.01 SEC

FILE 11, TRACE 1: VERTICAL GEOPHONE #1

-330 -330 -321 -324 -329 -325 -335 -333 -331 -332 -325 -357 -360 -320 -323  
-330 -327 -327 -334 -335 -326 -328 -322 -324 -329 -324 -329 -325 -327 -331  
-327 -331 -329 -330 -330 -324 -328 -326 -329 -331 -326 -330 -326 -325 -331  
-328 -331 -327 -326 -327 -325 -331 -327 -323 -324 -323 -334 -329 -329 -334  
-327 -328 -326 -325 -326 -322 -333 -333 -334 -331 -320 -327 -328 -329 -333  
-329 -331 -327 -329 -333 -328 -332 -324 -322 -327 -323 -330 -330 -331 -331  
-323 -327 -324 -326 -332 -329 -329 -320 -324 -333 -329 -333 -328 -324 -325

\*\*\*\*\* 4232 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000123

Table GL000124

C#DSN=GL000124;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=079;STRT=000001;  
 C\*DATE: 19840201; 0; SALMON12;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

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#### FIELD PROCEDURES

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#### SYSTEM RESPONSE

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#### REMARKS ON DIGITIZED CALIBRATION SIGNALS

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ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
C\*BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----  
STERLING: POPLARVILLE (HOTEL) (26.6-28.7 KM): CALIBRATION --- 100 MICROVOLTS



NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 12, TRACE 1: VERTICAL GEOPHONE #1

-403 -381 -333 -283 -255 -243 -270 -310 -354 -397 -407 -389 -344 -292 -260  
-243 -264 -300 -344 -390 -404 -397 -356 -303 -266 -242 -259 -292 -334 -380  
-400 -404 -368 -316 -275 -247 -256 -279 -322 -371 -399 -411 -379 -328 -285  
-249 -255 -275 -312 -360 -393 -411 -387 -340 -295 -253 -249 -264 -301 -353  
-388 -408 -393 -351 -307 -261 -248 -259 -291 -340 -376 -407 -400 -364 -318  
-268 -248 -252 -280 -330 -369 -403 -405 -375 -332 -279 -251 -248 -273 -319  
-360 -399 -408 -383 -343 -288 -256 -248 -267 -311 -349 -390 -407 -391 -356

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000124

Table GL000125

C#DSN=GL000125;SIZE=004382;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=079;STRT=001121;  
 C\*DATE: 19840201; 0; SALMON13;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*  
C\*

# FIELD PROCEDURES

C\*

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*  
C\*

# SYSTEM RESPONSE

C\*

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

C\*  
C\*

# REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*  
C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*  
C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

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See previous format from dataset GL000113 for details

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C\*END-----

STERLING: POPLARVILLE (PAPA) (26.6-28.7 KM)

NPTS = 4500, SAMPLING INTERVAL = 0.01 SEC

FILE 13, TRACE 1: VERTICAL GEOPHONE #1

30	35	36	41	49	33	27	24	22	26	15	8	8	12	14
12	24	10	0	22	23	14	12	18	34	30	27	24	23	30
24	28	30	19	20	28	31	15	16	34	28	30	39	32	30
21	26	29	25	45	42	15	6	16	28	18	22	27	10	20
28	22	17	24	32	28	37	23	15	39	38	33	31	30	34
19	19	23	13	31	41	20	5	20	22	3	22	36	34	42
33	26	25	17	19	18	27	22	18	30	25	32	30	6	6

\*\*\*\*\* 4232 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000125

Table GL000126

C#DSN=GL000126;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=079;STRT=005503;  
 C\*DATE: 19840201; 0; SALMON14;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

#### SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15.00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

#### STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

#### FIELD PROCEDURES

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

#### SYSTEM RESPONSE

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

#### REMARKS ON DIGITIZED CALIBRATION SIGNALS

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
BORCHERDT, R.D., J.H. HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
See previous format from dataset GL000113 for details  
\*\*\*\*\*

C\*END-----  
STERLING: POPLARVILLE (PAPA) (26.6-28.7 KM): CALIBRATION --- 100 MICROVOLTS

NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 14, TRACE 1: VERTICAL GEOPHONE #1

-90	155	361	438	349	126	-118	-311	-368	-257	-57	186	380	434	324
96	-144	-327	-363	-236	-28	216	397	427	300	64	-174	-341	-355	-211
4	246	411	420	275	30	-204	-353	-345	-187	34	272	421	405	245
-1	-228	-361	-333	-161	64	296	430	394	220	-32	-253	-366	-318	-134
95	322	437	379	191	-64	-276	-368	-300	-104	128	345	440	360	160
-95	-296	-368	-280	-75	158	367	441	339	127	-128	-314	-365	-260	-45
188	383	434	314	95	-158	-330	-359	-239	-18	216	401	431	291	64

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000126

Table GL000127

C#DSN=GL000127;SIZE=004382;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=079;STRT=006623;  
 C\*DATE: 19840201; 0; SALMON15;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

C\* DATE OF SALMON EVENT: OCTOBER 22, 1964  
 C\* TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 C\* SIZE OF SALMON EVENT: 5.3 KILOTONS  
 C\* DATE OF STERLING EVENT: DECEMBER 3, 1966  
 C\* TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 C\* SIZE OF STERLING EVENT: 0.38 KILOTON  
 C\* LOCATION OF SALMON AND STERLING  
 C\* GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 C\* 89 DEG 34 MIN 11.8 SEC WEST  
 C\* SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 C\* SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

C* STATION	C* DIST (KM)	C* LAT (DEG-MIN)	C* LONG(DEG-MIN)
C* KENO E	C* 13.5	C* 31-13.86	C* 89-40.00
C* KENO W	C* 15.3	C* 31-14.04	C* 89-41.39
C* ROUSE W	C* 16.2	C* 31-0.56	C* 89-38.94
C* ROUSE E	C* 17.7	C* 30-59.49	C* 89-37.86
C* POPLARVILLE (HOTEL) E	C* 26.6	C* 30-54.14	C* 89-35.11
C* POPLARVILLE (PAPA) E	C* 26.6	C* 30-54.14	C* 89-35.11
C* COLUMBIA E	C* 27.7	C* 30-08.23	C* 89-51.60
C* POPLARVILLE (HOTEL) W	C* 28.7	C* 30-53.00	C* 89-35.18
C* POPLARVILLE (PAPA) W	C* 28.7	C* 30-53.00	C* 89-35.18
C* COLUMBIA W	C* 30.1	C* 31-07.98	C* 89-53.15
C* SUMRALL W	C* 30.8	C* 31-25.15	C* 89-35.00
C* SUMRALL E	C* 32.8	C* 31-26.26	C* 89-34.86



C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

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# FIELD PROCEDURES

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THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

## SYSTEM RESPONSE

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

## REMARKS ON DIGITIZED CALIBRATION SIGNALS

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
BORCHERDT, R.D., J.H. HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----

STERLING: COLUMBIA (27.7-30.1 KM)

NPTS = 4500, SAMPLING INTERVAL = 0.01 SEC

FILE 15, TRACE 1: VERTICAL GEOPHONE #1

-7	-1	-7	-3	-6	-11	-10	-17	-16	-19	-21	-16	-19	-11	-11
-9	-1	-6	-4	-10	-16	-9	-14	-11	-11	-11	-8	-15	-10	-13
-13	-7	-12	-9	-13	-16	-11	-16	-13	-14	-12	-7	-14	-9	-8
-9	0	-3	-2	-5	-6	-2	-6	-1	-6	-9	-3	-11	-5	-5
-6	0	-8	-5	-6	-8	-3	-10	-7	-7	-6	0	-5	-2	-7
-11	-6	-8	-3	-8	-15	-13	-21	-13	-12	-14	-9	-16	-12	-12
-9	-2	-10	-6	-6	-5	0	-8	-7	-15	-20	-11	-14	-9	-12

\*\*\*\*\* 4232 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000127

Table GL000128

C#DSN=GL000128;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=080;STRT=000001;  
 C\*DATE: 19840201; 0; SALMON16;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86



NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 16, TRACE 1: VERTICAL GEOPHONE #1

-104	-100	-95	-77	-67	-46	-29	-13	12	22	43	61	71	87	89
96	98	93	91	76	66	49	26	10	-14	-28	-49	-71	-80	-97
-100	-103	-107	-101	-100	-84	-72	-62	-40	-27	-3	14	28	49	60
79	90	93	101	96	96	88	74	65	44	29	7	-18	-34	-57
-69	-83	-100	-103	-111	-106	-103	-99	-84	-76	-56	-39	-24	0	14
35	50	63	82	85	96	99	94	95	82	75	57	34	19	-4
-21	-39	-61	-74	-94	-98	-104	-110	-103	-104	-92	-81	-70	-49	-37

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000128

Table GL000129

C#DSN=GL000129;SIZE=004382;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=080;STRT=001121;  
 C\*DATE: 19840201; 0; SALMON17;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSON: R. D. BORCHERT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15.00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*

C\*

# FIELD PROCEDURES

C\*

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# FIELD PROCEDURES

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

# SYSTEM RESPONSE

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

# REMARKS ON DIGITIZED CALIBRATION SIGNALS

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
BORCHERDT, R.D., J.H. HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
See previous format from dataset GL000113 for details  
\*\*\*\*\*

END-----  
STERLING: SUMRALL (30.8-32.8 KM)

NPTS = 4500, SAMPLING INTERVAL = 0.01 SEC

FILE 17, TRACE 1: VERTICAL GEOPHONE #1

35	23	28	23	26	40	68	51	28	118	108	14	21	28	9
13	20	17	12	27	23	12	18	15	34	41	17	30	29	23
33	32	32	36	44	45	56	55	25	41	49	30	31	19	7
1	1	19	36	35	21	12	7	1	19	25	32	127	89	-25
14	32	21	36	36	33	50	37	10	16	9	2	15	7	11
7	-11	-2	-1	7	6	4	28	51	60	-1	3	88	77	60
66	52	47	40	47	62	43	25	39	48	31	19	19	7	7

\*\*\*\*\* 4232 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000129



Table GL000130

C#DSN=GL000130;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=080;STRT=005503;  
 C\*DATE: 19840201; 0; SALMON18;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15.00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30-32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*  
C\*

#### FIELD PROCEDURES

C\*

C\*

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

C\*

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*

C\*

#### SYSTEM RESPONSE

C\*

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

C\*

C\*

#### REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

C\*

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

C\*

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*

C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
BORCHERDT, R.D., J.H. HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*

C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----

STERLING: SUMRALL (30.8-32.8 KM): CALIBRATION --- 10 MICROVOLTS

NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 18, TRACE 1: VERTICAL GEOPHONE #1

48	41	27	20	3	-6	-16	-33	-41	-56	-64	-70	-78	-74	-81
-75	-67	-68	-55	-49	-36	-22	-13	3	9	22	32	37	49	48
54	55	48	48	34	29	19	3	-4	-23	-33	-44	-59	-63	-77
-76	-75	-79	-72	-72	-63	-52	-46	-31	-25	-8	4	11	25	29
42	51	49	55	49	51	48	35	29	12	3	-8	-26	-32	-50
-58	-65	-76	-75	-80	-77	-73	-74	-63	-57	-43	-29	-20	-3	2
16	28	32	46	49	55	57	52	54	44	36	27	12	4	-12

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000130

Table GL000131

C#DSN=GL000131;SIZE=004858;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=080;STRT=006623;  
 C\*DATE: 19840201; 0; SALMON19;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*  
C\*

#### FIELD PROCEDURES

C\*

C\* THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARKANGED  
C\* IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL  
C\* GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS  
C\* NEAR THE CENTER OF THE SPREAD.

C\* CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR  
C\* AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS  
C\* 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*  
C\*

#### SYSTEM RESPONSE

C\*

C\* SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT  
C\* ET AL. (1967).

C\*  
C\*

#### REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

C\* ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE  
C\* WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS  
C\* ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES  
C\* OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON  
C\* THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL  
C\* PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION,  
C\* SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED  
C\* LEVELS FOR THE SALMON DIGITIZED RECORDS.

C\* THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME  
C\* LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*  
C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY  
C\* FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL.

C\*

SEISM. SOC. AM. 61, 1073-1098.

C\*

BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967).

C\*

SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME,

C\*

MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER:

C\*

CRUSTAL STUDIES-48.

C\*  
C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----

STERLING: CAMP SHELBY (38.9-40.8 KM)

NPTS = 5000, SAMPLING INTERVAL = 0.01 SEC

FILE 19, TRACE 1: VERTICAL GEOPHONE #1

-17	-9	-7	-1	-7	-4	-12	-18	-9	-10	-9	-14	-17	-19	-24
-17	-29	-39	-30	-27	-13	-12	-18	-21	-33	-29	-29	-34	-31	-32
-24	-27	-24	-12	-12	-4	-3	2	9	0	6	9	4	-2	-11
-4	-9	-16	-15	-24	-27	-32	-28	-20	-24	-17	-15	-12	-5	-12
-11	-9	0	4	-7	-4	-6	-8	-2	-7	-5	-15	-27	-22	-14
-3	-5	-3	5	1	7	5	2	7	2	2	-1	-3	-3	-14
-10	-13	-17	-17	-50	-34	-41	-39	-17	-13	-10	-16	-18	-11	-19

\*\*\*\*\* 4708 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000131

Table GL000132

C#DSN=GL000132;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=081;STRT=000001;  
 C\*DATE: 19840201; 0; SALMON20;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

#### FIELD PROCEDURES

THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS NEAR THE CENTER OF THE SPREAD.

CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

#### SYSTEM RESPONSE

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT ET AL. (1967).

#### REMARKS ON DIGITIZED CALIBRATION SIGNALS

ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION, SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED LEVELS FOR THE SALMON DIGITIZED RECORDS.

THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL. SEISM. SOC. AM. 61, 1073-1098.  
 C\*BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967). SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME, MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER: CRUSTAL STUDIES-48.

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*  
 See previous format from dataset GL000113 for details  
 \*\*\*\*\*

C\*END-----  
 STERLING: CAMP SHELBY (38.9-40.8 KM): CALIBRATION --- 100 MICROVOLTS



NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 20, TRACE 1: VERTICAL GEOPHONE #1

-86	232	477	501	305	-21	-355	-563	-565	-364	-57	271	513	520	303
-38	-374	-571	-558	-341	-24	306	538	524	292	-54	-386	-569	-534	-302
17	340	556	520	272	-79	-402	-563	-510	-270	53	371	567	508	246
-105	-420	-563	-491	-240	85	395	571	492	219	-132	-438	-563	-472	-213
115	422	580	476	189	-166	-460	-566	-459	-189	142	440	577	454	160
-194	-480	-566	-442	-163	168	459	579	433	127	-224	-496	-565	-423	-134
201	479	574	409	94	-256	-515	-561	-403	-107	227	492	565	383	63

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000132

Table GL000133

C#DSN=GL000133;SIZE=004858;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=081;STRT=001121;  
 C\*DATE: 19840201; 0; SALMON21;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*

C\*

## C\* FIELD PROCEDURES

C\*

C\* THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED  
C\* IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL  
C\* GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS  
C\* NEAR THE CENTER OF THE SPREAD.

C\* CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR  
C\* AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS  
C\* 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*

C\*

## C\* SYSTEM RESPONSE

C\*

C\* SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT  
C\* ET AL. (1967).

C\*

C\*

## C\* REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

C\* ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE  
C\* WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS  
C\* ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES  
C\* OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON  
C\* THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL  
C\* PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION,  
C\* SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED  
C\* LEVELS FOR THE SALMON DIGITIZED RECORDS.

C\* THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME  
C\* LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*

C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY  
C\* FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL.  
C\* SEISM. SOC. AM. 61, 1073-1098.  
C\* BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967).  
C\* SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME,  
C\* MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER:  
C\* CRUSTAL STUDIES-48.

C\*

C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----  
STERLING: PICAYUNE (67.4-69.8 KM)

NPTS = 5000, SAMPLING INTERVAL = 0.01 SEC

FILE 21, TRACE 1: VERTICAL GEOPHONE #1

34	25	16	25	28	36	42	44	46	31	28	29	31	42	37
38	29	13	7	0	9	25	36	45	34	38	40	34	40	48
61	63	57	57	45	41	38	34	41	36	36	34	28	29	27
39	40	37	41	29	31	36	35	41	35	38	33	22	31	35
46	52	46	40	28	31	35	34	42	40	39	27	15	16	12
26	34	33	44	35	29	34	40	39	32	42	45	38	40	33
35	37	32	35	31	36	34	31	41	38	42	50	45	42	37

\*\*\*\*\* 4708 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000133

Table GL000134

C\*DSN=GL000134;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=081;STRT=005979;  
 C\*DATE: 19840201; 0; SALMON22;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSON: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.

C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

C\*  
 C\*

SOURCE INFORMATION

C\*  
 C\*

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

C\*  
 C\*

STATION LOCATIONS

C\*  
 C\*

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
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POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
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C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
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C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*  
C\*  
C\*

#### FIELD PROCEDURES

C\* THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED  
C\* IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL  
C\* GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS  
C\* NEAR THE CENTER OF THE SPREAD.

C\* CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR  
C\* AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS  
C\* 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*  
C\*

#### SYSTEM RESPONSE

C\*  
C\*  
C\*

SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT  
ET AL. (1967).

C\*  
C\*

#### REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

C\* ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE  
C\* WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS  
C\* ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES  
C\* OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON  
C\* THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL  
C\* PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION,  
C\* SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED  
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C\*  
C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY  
C\* FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL.  
C\* SEISM. SOC. AM. 61, 1073-1098.  
C\* BORCHERDT, R.D., J.H. HEALY, W.H. JACKSON, AND D.H. WARREN (1967).  
C\* SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME,  
C\* MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER:  
C\* CRUSTAL STUDIES-48.

C\*  
C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----

STERLING: PICAYUNE (67.4-69.8 KM): CALIBRATION --- 100 MICROVOLTS

NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 22, TRACE 1: VERTICAL GEOPHONE #1

217	111	-10	-108	-155	-112	-26	82	190	243	215	105	-16	-113	-157
-109	-20	89	196	245	209	97	-22	-115	-154	-104	-14	97	203	243
202	91	-28	-119	-155	-103	-10	101	205	243	197	82	-37	-124	-152
-94	-3	105	206	241	194	78	-41	-128	-154	-93	2	113	214	243
188	71	-48	-131	-152	-87	10	119	216	240	183	64	-52	-133	-151
-82	15	125	222	241	177	57	-59	-135	-146	-76	21	128	221	238
172	49	-67	-140	-147	-72	27	135	225	236	166	44	-72	-142	-144

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000134

Table GL000135

C#DSN=GL000135;SIZE=005782;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=082;STRT=000001;  
 C\*DATE: 19840201; 0; SALMON23;  
 C\*CLASS: EXPLOSION; WAVEFORM;  
 C\*PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C\*ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C\*KEYWD: NUCLEAR;  
 C\*TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C\*AUTHOR:

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045  
 C\*ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C\* WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C\* DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C\* IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C\* WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C\* DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C\* THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C\* RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C\* SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C\* FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C\* CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

DATE OF SALMON EVENT: OCTOBER 22, 1964  
 TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 SIZE OF SALMON EVENT: 5.3 KILOTONS  
 DATE OF STERLING EVENT: DECEMBER 3, 1966  
 TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 SIZE OF STERLING EVENT: 0.38 KILOTON  
 LOCATION OF SALMON AND STERLING  
 GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 89 DEG 34 MIN 11.8 SEC WEST  
 SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KENO E	13.5	31-13.86	89-40.00
KENO W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86



C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*

C\*

# C\* FIELD PROCEDURES

C\*

C\* THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED  
C\* IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL  
C\* GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS  
C\* NEAR THE CENTER OF THE SPREAD.

C\* CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR  
C\* AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS  
C\* 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*

C\*

# C\* SYSTEM RESPONSE

C\*

C\* SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT  
C\* ET AL. (1967).

C\*

C\*

# C\* REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

C\* ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE  
C\* WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS  
C\* ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES  
C\* OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON  
C\* THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL  
C\* PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION,  
C\* SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED  
C\* LEVELS FOR THE SALMON DIGITIZED RECORDS.

C\* THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME  
C\* LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*

C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY  
C\* FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL.  
C\* SEISM. SOC. AM. 61, 1073-1098.  
C\* BORCHERDT, R.D., J.H. HEALY, W.H. JACKSON, AND D.H. WARREN (1967).  
C\* SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME,  
C\* MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER:  
C\* CRUSTAL STUDIES-48.

C\*

C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----  
STERLING: RALEIGH (109.4-111.9 KM)

NPTS = 6000, SAMPLING INTERVAL = 0.01 SEC

FILE 23, TRACE 1: VERTICAL GEOPHONE #1

-28	-28	-30	-16	-20	-22	-12	-18	-20	-30	-33	-34	-44	-41	-44
-40	-32	-33	-27	-29	-24	-21	-28	-23	-30	-31	-19	-17	-13	-21
-16	-3	-11	-11	-16	-23	-23	-24	-16	-22	-20	-15	-16	-5	-8
-10	-7	-8	-4	-10	-6	2	-3	1	-1	-1	1	-4	-6	-19
-21	-16	-24	-21	-24	-20	-8	-7	-2	-6	-5	-1	-6	-7	-17
-17	-11	-13	-6	-7	-3	1	-3	-1	-11	-11	-4	-9	-7	-12
-6	6	2	7	5	6	8	4	11	8	7	7	-6	-10	-18

\*\*\*\*\* 5632 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000135

Table GL000136

C#DSN=GL000136;SIZE=001120;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=082;STRT=005783;  
 C#DATE: 19840201; 0; SALMON24;  
 C#CLASS: EXPLOSION; WAVEFORM;  
 C#PERSN: R. D. BORCHERDT; M. E. O'NEILL; D. H. WARREN;  
 C#ALPHA: 19641022; 19661203; 30.5 N; 32.2 N; 89.9 W; 89.1 W; ; A008;  
 C#KEYWD: NUCLEAR;  
 C#TITLE: DIGITAL RECORDS OF THE SALMON AND STERLING NUCLEAR EXPLOSIONS;  
 C#AUTHOR:  
 C#INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 92045

C#ABSTRACT: IN OCTOBER 1964 THE U. S. GEOLOGICAL SURVEY RECORDED SEISMIC  
 C# WAVES FROM A 5.3-KT NUCLEAR EXPLOSION (SALMON) IN THE TATUM SALT  
 C# DOME, MISSISSIPPI, AT SITES BETWEEN 26 AND 112 KM FROM GROUND ZERO;  
 C# IN DECEMBER 1966 THE SAME RECORDING SITES, PLUS SEVERAL OTHERS,  
 C# WERE INSTRUMENTED TO RECORD A 0.38-KT NUCLEAR EXPLOSION (STERLING)  
 C# DETONATED IN THE CAVITY FORMED BY THE SALMON EXPLOSION.  
 C# THIS DATA SET CONTAINS RECORDS DIGITIZED FROM THE ORIGINAL ANALOG  
 C# RECORDS AT 100 SAMPLES/SECOND. IT IS ONE OF 24 FILES, 6 FOR THE  
 C# SALMON EXPLOSION AND 18 FOR THE STERLING EXPLOSION. ODD-NUMBERED  
 C# FILES CONTAIN EXPLOSION SIGNALS, AND EVEN-NUMBERED FILES CONTAIN  
 C# CALIBRATION SIGNALS. EACH FILE INCLUDES DATA FOR 14 TRACES.

SOURCE INFORMATION

C# DATE OF SALMON EVENT: OCTOBER 22, 1964  
 C# TIME OF SALMON EVENT: 16:00:00.00 GMT (10:00 AM CST)  
 C# SIZE OF SALMON EVENT: 5.3 KILOTONS  
 C# DATE OF STERLING EVENT: DECEMBER 3, 1966  
 C# TIME OF STERLING EVENT: 12:15:00.05 GMT (06:15 AM CST)  
 C# SIZE OF STERLING EVENT: 0.38 KILOTON  
 C# LOCATION OF SALMON AND STERLING  
 C# GEOGRAPHIC COORDINATES: 31 DEG 08 MIN 31.6 SEC NORTH  
 C# 89 DEG 34 MIN 11.8 SEC WEST  
 C# SURFACE ELEVATION ABOVE MEAN SEA LEVEL: 242 FEET  
 C# SHOT DEPTH FROM SURFACE: 2717 FEET

STATION LOCATIONS

STATION	DIST (KM)	LAT (DEG-MIN)	LONG(DEG-MIN)
KEND E	13.5	31-13.86	89-40.00
KEND W	15.3	31-14.04	89-41.39
ROUSE W	16.2	31-0.56	89-38.94
ROUSE E	17.7	30-59.49	89-37.86
POPLARVILLE (HOTEL) E	26.6	30-54.14	89-35.11
POPLARVILLE (PAPA) E	26.6	30-54.14	89-35.11
COLUMBIA E	27.7	30-08.23	89-51.60
POPLARVILLE (HOTEL) W	28.7	30-53.00	89-35.18
POPLARVILLE (PAPA) W	28.7	30-53.00	89-35.18
COLUMBIA W	30.1	31-07.98	89-53.15
SUMRALL W	30.8	31-25.15	89-35.00
SUMRALL E	32.8	31-26.26	89-34.86

C*	CAMP SHELBY W	38.9	31-08.84	89-09.75
C*	CAMP SHELBY E	40.8	31-08.88	89-08.50
C*	PICAYUNE E	67.4	30 32.10	89-32.37
C*	PICAYUNE W	69.8	30-30.77	89-32.47
C*	RALEIGH W	109.4	32-07.70	89-36.99
C*	RALEIGH E	111.9	32-09.02	89-36.80

C\*

C\*

## C\* FIELD PROCEDURES

C\*

C\* THE SIX VERTICAL GEOPHONES AT EACH RECORDING SITE WERE ARRANGED  
C\* IN A SPREAD OF LENGTH 2.5 KM WITH 0.5 KM SPACING. THE HORIZONTAL  
C\* GEOPHONES WERE LOCATED AT ONE OF THE VERTICAL GEOPHONE POSITIONS  
C\* NEAR THE CENTER OF THE SPREAD.

C\* CALIBRATION SIGNALS WERE PUT ON THE TAPES IMMEDIATELY BEFORE OR  
C\* AFTER A SHOT WAS RECORDED. THE RMS INPUT TO THE AMPLIFIERS WAS  
C\* 10\*\*N MICROVOLTS AT TWO LEVELS AND SEVERAL FREQUENCIES.

C\*

C\*

## C\* SYSTEM RESPONSE

C\*

C\* SYSTEM RESPONSE IS DESCRIBED IN THE REPORT BY BORCHERDT  
C\* ET AL. (1967).

C\*

C\*

## C\* REMARKS ON DIGITIZED CALIBRATION SIGNALS

C\*

C\* ONLY ONE OF THE TWO CALIBRATION LEVELS FOR EACH RECORDING SITE  
C\* WAS DIGITIZED. DEDUCING IN 1984 THE VALUES OF THE CALIBRATION LEVELS  
C\* ON THE DIGITIZED RECORDS INVOLVED COMPARISON OF RELATIVE AMPLITUDES  
C\* OF AN EXPLOSION SIGNAL AND ITS CORRESPONDING CALIBRATION SIGNAL ON  
C\* THE DIGITIZED RECORDS AND ON LABELLED COPIES OF THE ORIGINAL  
C\* PHOTOGRAPHIC MONITOR RECORDS (ORIGINALS NOW LOST). IN ADDITION,  
C\* SOME INCOMPLETE NOTES MADE IN ABOUT 1969 HAVE CONFIRMED THE DEDUCED  
C\* LEVELS FOR THE SALMON DIGITIZED RECORDS.

C\* THE CALIBRATION LEVELS THAT WERE DIGITIZED ARE NOT ALWAYS THE SAME  
C\* LEVELS SHOWN ON THE MONITOR RECORDS IN THE REPORT BY BORCHERDT ET AL.

C\*

C\*

C\*REFERENCE: SPRINGER, D.L., AND R.L. KINNAMAN (1971). SEISMIC SOURCE SUMMARY  
C\* FOR U. S. UNDERGROUND NUCLEAR EXPLOSIONS, 1961-1970, BULL.  
C\* SEISM. SOC. AM. 61, 1073-1098.

C\* BORCHERDT, R.D., J.H.HEALY, W.H. JACKSON, AND D.H. WARREN (1967).  
C\* SEISMIC MEASUREMENTS OF EXPLOSIONS IN THE TATUM SALT DOME,  
C\* MISSISSIPPI, U. S. GEOLOGICAL SURVEY TECHNICAL LETTER:  
C\* CRUSTAL STUDIES-48.

C\*

C\*

C\*FORMAT: FOUR TYPES OF RECORDS ARE INCLUDED IN THIS FILE.

\*\*\*\*\*

See previous format from dataset GL000113 for details

\*\*\*\*\*

C\*END-----

STERLING: RALEIGH (109.4-111.9 KM): CALIBRATION --- 10 MICROVOLTS

NPTS = 1000, SAMPLING INTERVAL = 0.01 SEC

FILE 24, TRACE 1: VERTICAL GEOPHONE #1

-42	2	45	60	53	9	-35	-70	-90	-67	-41	5	51	60	53
8	-41	-70	-88	-66	-34	9	49	59	47	1	-43	-75	-91	-65
-32	13	53	57	45	0	-46	-75	-87	-61	-26	18	56	59	40
-6	-51	-78	-88	-59	-21	22	59	58	35	-11	-56	-80	-86	-56
-17	25	59	56	31	-15	-62	-84	-84	-52	-12	30	61	55	29
-20	-64	-81	-83	-49	-8	31	62	52	23	-26	-66	-83	-79	-45
-4	36	63	49	20	-27	-68	-82	-77	-41	0	40	63	47	13

\*\*\*\*\* 970 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000136

Table GL000137

C#DSN=GL000137;SIZE=000171;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=082;STRT=006903;  
 C\*DATE: 840222; 0; CONSUM;  
 C\*CLASS: MISCELLANEOUS; COMPUTER PROGRAM;  
 C\*PERSN: J. T. NEWBERRY;  
 C\*ALPHA: ; ; ; ; ; USGS 9930-01173; ;  
 C\*KEYWD: ;  
 C\*TITLE: COMPUTER PROGRAM TO CONVERT CALTECH SUMMARY DATA TO THE STANDARDIZED  
 C\* SUMMARY FORMAT;  
 C\*AUTHOR: J. T. NEWBERRY  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS WATFIV COMPUTER PROGRAM CONVERTS GL0^0038 THRU GL000047 TO THE  
 C\* STANDARDIZED SUMMARY FORMAT  
 C\*REFERENCE:  
 C\*FORMAT: TWO TYPES OF INPUT CARDS ARE READ, AND ONE IS  
 C\* OUTPUT. THE FIRST TYPE OF INPUT CARD CONTAINS  
 C\* SUMMARY INFORMATION, THE SECOND IS ONLY COMMENT.  
 C\*  

INPUT				OUTPUT			
VARIABLES	CARD	COLUMNS	FORMAT	VARIABLE	COLUMNS	FORMAT	NOTE
				REFNUM	1-4	A4	A
EVYEAR	1	1-4	I4	EVYEAR	6-9	I4	
EVMON	1	6-7	I2	EVMON	11-12	I2	
EVDAY	1	13-14	I2	EVDAY	13-14	I2	
EVHOUR	1	11-12	I2	EVHOUR	16-17	I2	
EVMIN	1	16-17	I2	EVMIN	18-19	I2	
				EVINDX	20	A1	B
				DATKEY	22-24	A3	C
ORTIME	1	19-23	F5.2	ORTIME	26-30	F5.2	
LAT	1	26-27	I2				
LATMIN	1	29-33	F5.2	HYLAT	32-38	F7.4	
				HYNS	39	A1	D
LON	1	35-37	I3				
LONMIN	1	39-43	F5.2	HYLON	41-48	F8.4	
				HYEW	49	A1	
ML	1	47-49	F3.1	ML	58-60	F3.1	
				MLCODE	61	A1	E
HYDEP	1	54-59	A6	HYDEP	51-55	A5	F
COMMENT	2	TO BE DISCARDED					

C\*  
 C\*NOTES:  
 C\* A. REFNUM is a reference number to be assigned later  
 C\* B. EVINDX distinguishes events which occur within the  
 C\* minute as another. The first event receives a blank  
 C\* each successive event in the same minute gets a letter  
 C\* beginning with "A".  
 C\* C. DATKEY indicates what type of standardized data format  
 C\* is being used for output. This case is always "SUM"  
 C\* D. HYNS and HYEW are 'N' or 'S' for north and south, or  
 C\* 'E' or 'W' for east or west longitude.  
 C\* E. MLCODE designates the method used for determining magnitude  
 C\* due to the time period and the institution involved with  
 C\* this data compilation, Richter magnitude was assumed.

C\* F. Depth was read in with an 'A' format to preserve blanks  
C\* if no depth was reported.

C\*

C\* To run this program, define unit 7 to receive standardized  
C\* output, and set unit 8 to be the terminal. Unit 6  
C\* contains a listing of the program by default.

C\*

C\*END-----

C\*\*\* CONVERTS: PROGRAM TO CONVERT CIT SUMMARY DATA TO STANDARD  
C FORMAT FOR THE USGS ARCHIVE (12/14/83)

INTEGER EVMON,EVDAY,EVHOUR,EVMIN,DYTEMP,HRTEMP

REAL LATMIN,LONMIN,ML

CHARACTER\*1 HYDEPC,MLCODE,LETTER(11),HYDEP\*6,EVYEAR\*4

CHARACTER REFNUM\*4,DATKEY\*3,EVINDX\*1,YRTEMP\*4

CHARACTER\*1 HYN5,HYEW,CARD\*80,TYPE\*4,CARD2\*80,TYPE2\*4

DATA LETTER/' ','A','B','C','D','E','F','G','H','I','J'/'

C\*\*\*\*\*

C\* INITIALIZATIONS

\*\*\*\*\* 99 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000137

Table GL000138

```

C#DSN=GL000138;SIZE=000498;DATE=091784;ARCH=TM;TAPE=SM9310;FILE=082;STRT=007074;
C*DATE: 19840313; 0; CONCPL;
C*CLASS: MISCELLANEOUS; COMPUTER PROGRAM;
C*PERSN: J. T. NEWBERRY;
C*ALPHA: ; ; ; ; ; USGS 9930-01173; A009;
C*KEYWD: ;
C*TITLE: WATFIV COMPUTER PROGRAM TO CONVERT CIT SUMMARY AND PHASE DATA
C*      TO USGS STANDARDIZED CONDENSED PHASE LIST FORMAT;
C*AUTHOR: J. T. NEWBERRY
C*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025
C*ABSTRACT: THIS PROGRAM WAS USED TO CONVERT GL000060 THROUGH GL000090 TO
C*          THE STANDARD CPL FORMAT.
C*REFERENCE:
C*FORMAT: THIS PROGRAM READS 3 INPUT CARDS AND OUTPUTS TWO
C*          TWO TYPES OF CARDS IN CONDENSED PHASE LIST FORMAT.
C*
C*          INPUT                                OUTPUT
C* VARIABLES  CARD  COLUMNS  FORMAT  VARIABLE  COLUMNS  FORMAT NOTE
C*
C*          REFNUM      1-4      A4      A
C* EVYEAR      1      1-4      I4      EVYEAR      6-9      I4
C* EVMON       1      6-7      I2      EVMON       11-12     I2
C* EVDAY       1      13-14     I2      EVDAY       13-14     I2
C* EVHOUR      1      11-12     I2      EVHOUR      16-17     I2
C* EVMIN       1      16-17     I2      EVMIN       18-19     I2
C*          EVINDX      20      A1      B
C*          DATKEY      22-24     A3      C
C* ORTIME      1      19-23     F5.2    ORTIME      26-30     F5.2
C* LAT         1      26-27     I2
C* LATMIN      1      29-33     F5.2    HYLAT      32-38     F7.4
C*          HYN5        32      A1      D
C* LON         1      35-37     I3
C* LONMIN      1      39-43     F5.2    HYLON      41-48     F8.4
C*          HYEW        49      A1
C* ML          1      47-49     F3.1    ML         58-60     F3.1
C*          MLCODE      61      A1      E
C* HYDEP       1      54-59     A6      HYDEP      51-55     A5      F
C*          NUMCRD      62-64     I3      G
C* COMMENT     2      TO BE DISCARDED
C* PHNAME      3      1-4      A4
C* RMK1        3      5        A1
C* RMK2        3      6        A1
C* RMK3        3      7        A1
C* PSEC        3      20-24     F5.2
C* SSEC        3      32-36     F5.2
C* RMK1        3      37      A1
C* RMK2        3      38      A1
C*          NUMSEQ      1-2      I2      I
C*          PHNAME      3-6      A4
C*          PHRMKS      7-10     4A1     J
C*          PHTIME      11-15     I5      K
C*          16-80 5(A4,4A1,I5) L
C*

```



C\*NOTES:

C\* A. REFNUM IS A REFERENCE NUMBER TO BE ASSIGNED LATER  
C\* B. EVINDX DISTINGUISHES EVENTS WHICH OCCUR WITHIN THE  
C\* MINUTE AS ANOTHER. THE FIRST EVENT RECIEVES A BLANK  
C\* EACH SUCCESSIVE EVENT IN THE SAME MINUTE GETS A LETTER  
C\* BEGINNING WITH "A".  
C\* C. DATKEY INDICATES WHAT TYPE OF STANDARDIZED DATA FORMAT  
C\* IS BEING USED FOR OUTPUT. THIS CASE IS ALWAYS "CPL"  
C\* D. HYN5 AND HYEW ARE 'N' OR 'S' FOR NORTH AND SOUTH, OR  
C\* 'E' OR 'W' FOR EAST OR WEST LONGITUDE.  
C\* E. MLCODE DESIGNATES THE METHOD USED FOR DETERMINING MAGNITUDE  
C\* DUE TO THE TIME PERIOD AND THE INSTITUTION INVOLVED WITH  
C\* THIS DATA COMPILATION, RICHTER MAGNITUDE WAS ASSUMED.  
C\* F. DEPTH WAS READ IN WITH AN 'A' FORMAT TO PRESERVE BLANKS  
C\* IF NO DEPTH WAS REPORTED.  
C\* G. THIS VALUE REPRESENTS THE NUMBER OF PHASE CARDS IN THE  
C\* PHASE LIST TO FOLLOW.  
C\* H. RMK1 IS THE ONSET CODE, USUALLY 'I','E', OR ' '.  
C\* RMK2 IDENTIFIES THE PHASE REPORTED 'P' OR 'S'  
C\* RMK3 GIVES FIRST MOTION IF RMK2 IS 'P'  
C\* U OR C FOR COMPRESSION OR UP  
C\* D FOR DILITATION OR DOWN  
C\* I. NUMSEQ IS THE NUMBERING OF THE CARDS IN A PHASE LIST  
C\* J. PHRMKS OUTPUT OF RMKS AS IN NOTE H  
C\* K. PHTIME IS THE TIME IN SECONDS OF THE PHASE GIVEN BY RMK2,  
C\* MEASURED IN SECONDS AFTER THE MINUTE OF THE ORIGIN TIME,  
C\* OR AFTER THE MINUTE OF THE MINIMUM P-ARRIVAL, IF THE  
C\* SUMMARY CARD WAS BLANK.  
C\* L. THIS REPRESENTS FIVE MORE REPEATS OF THE FORMAT FOR  
C\* THE DATA FIELD. IN GENERAL, THE FIRST FIELD REPRESENTS  
C\* A P-ARRIVAL, FOLLOWED BY THE S-ARRIVAL FOR THE SAME  
C\* STATION (OR THE P-ARRIVAL FOR THE NEXT), FOLLOWED BY A  
C\* P-ARRIVAL FOR ANOTHER STATION, ETC.  
C\*  
C\* TO RUN THIS PROGRAM, DEFINE UNIT 7 TO RECEIVE THE STANDARDIZED  
C\* OUTPUT, UNIT 9 TO RECEIVE THE UNPROCESSABLE DATA, UNIT 8  
C\* AS THE TERMINAL.  
C\*

C\*END-----

C\* CONVERTK: PROGRAM TO CONVERT CIT SUMMARY AND PHASE  
C\* DATA TO STANDARD 'CPL' FORMAT FOR THE  
C\* USGS ARCHIVE (12/19/83)  
C\*

CHARACTER CARD\*80,LSTSUM\*80,JUNK\*80(200)  
INTEGER EVYEAR,EVMON,EVDAY,EVHOUR,EVMIN,YRTEMP,DYTEMP  
INTEGER HRTEMP,HRMIN,WRTFLG,EVHM,HMDIF,EVDEC,PHDEC  
REAL LATMIN,LONMIN,ML  
CHARACTER\*1 HYDEPC,MLCODE,LETTER(10),LSTTYP\*2,HYDEP\*6  
CHARACTER REFNUM\*4,DATKEY\*3,TYPE\*2,EVINDX\*1,PHNAME\*4(50,7)

\*\*\*\*\* 395 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000138

Table GL000139

C\*DSN=GL000139;SIZE=000324;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=120;STRT=000213;  
 C\*DATE: 19840626; 0; ISCCONV2;  
 C\*CLASS: MISCELLANEOUS; COMPUTER PROGRAM;  
 C\*PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;  
 C\*ALPHA: ; ; ; ; ; USGS 9930-01173; A016;  
 C\*KEYWD: ISCCONV2; ISC HYPOCENTER DATA;  
 C\*TITLE: PROGRAM ISCCONV2: CONVERT ISC SUMMARY DATA FROM ISC FORMAT TO  
 C\* STANDARDIZED FORMAT

C\*AUTHOR: D.M. TOTTINGHAM

C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025

C\*ABSTRACT: THIS PROGRAM CONVERTS ISC SUMMARY DATA FROM ISC FORMAT

C\* TO STANDARDIZED FORMAT. IN SHORT, THE ISC FORMAT IS

C\* REFERRED TO AS THE OLD FORMAT. THE FOLLOWING IS A

C\* CHART SHOWING WHAT CONVERSIONS ACTUALLY TAKE PLACE:

INPUT				OUTPUT				
C*	VARIABLES	ODR COLUMN	FRMT	VARIABLE	ODR COLUMN	FRMT	NOTES	
C*				REFNUM	1 1-4	A4	A	
C*	EVYEAR/EVYR2	1 7-10	I4	EVYEAR	2 6-9	I4		
C*	EVMON/EVMON2	2 11-12	I2	EVMON	3 11-12	I2		
C*	EVDAY/EVDAY2	3 13-14	I2	EVDAY	4 13-14	I2		
C*	EVHOUR/EVHR2	4 15-16	I2	EVHOUR	5 16-17	I2		
C*	EVMIN/EVMIN2	5 17-18	I2	EVMIN	6 18-19	I2		
C*				EVINDX	7 20	A1	B	
C*				DATCOD	8 21	A1	C	
C*				DATKEY	9 22-24	A3	D	
C*	ORTIME/OTIM2	6 19-21	F3.1	ORTIME	10 26-30	F5.2		
C*				TMUNIT	11 31	A1	E	
C*	HYLAT/HYLAT2	7 22-26	F5.3	HYLAT	12 32-38	F7.4		
C*	HYNS/HYNS2	8 27	A1	HYNS	13 39	A1		
C*	HYLON/HYLON2	9 28-33	F6.3	HYLON	14 41-48	F8.4		
C*	HYEW/HYEW2	10 34	A1	HYEW	15 49	A1		
C*	HYDEP/HYDEP2	11 35-37	I3	DEPTH	16 51-55	F5.1	F	
C*	HYDEPC/HYDC2	19 74	A1	HYDEPC	17 56	A1	G	
C*	MAG/MAG1	12 38-40	F3.2	ML	18 58-60	F3.1	K	
C*				MLCODE	19 61	A1	H	
C*	MAXINT/MXIN2	14 46-49	A4	MAXINT	20 63	A1	I	
C*	NMPA1/NMP12	16 71	A1	NMPA1	21 65	A1	J	
C*	NMPA2/NMP22	17 72	A1	NMPA2	22 66	A1	J	
C*	NMPA3/MNP32	18 73	A1	NMPA3	23 67	A1	J	
C*				MB	24 69-71	F3.1	K	
C*				MS	25 73-75	F3.1	K	
C*				M	26 77-79	F3.1	K	
C*				MCODE	27 80	A1	K	
C*	MSCALE/MSCL2	13 41-42	A2					
C*	NNN/NNN2	15 70	A1					

C\*

C\*

C\* NOTES OF CONVERSION:

C\* A: REFNUM IS ALWAYS 'A006'.

C\* B: EVINDX IS THE EVENT INDEX. IF THERE ARE MORE THAN ONE QUAKE

C\* WITHIN THE SAME MINUTE, A DIFFERENT LETTER OF THE ALPHABET

C\* IS ASSIGNED TO EACH QUAKE AND THESE LETTERS ARE PLACED IN

C\* THIS COLUMN. IN ORDER TO LOOK FOR IDENTICAL MINUTES AND

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C*      BECAUSE A CARD CAN ONLY BE READ ONCE, TWO CARDS ARE READ
C*      IN AT THE BEGINNING INTO TWO SETS OF VARIABLES (AS SHOWN
C*      ABOVE).  BEFORE EACH NEW CARD IS READ, THE SECOND CARD TAKES
C*      THE PLACE OF THE FIRST CARD; AND, THEREFORE, A COMPARISON
C*      CAN BE DONE.
C*      C: DATCOD IS ALWAYS A BLANK
C*      D: DATKEY, IN THIS CASE, IS ALWAYS 'SUM'
C*      E: TMUNIT IS ALWAYS A BLANK
C*      F: DEPTH= FLOAT(HYDEP) :INTEGER HYDEP IS CONVERTED TO REAL DEPTH
C*      G: HYDEPC IS A ONE-CHARACTER CODE FOR HOW FOCAL DEPTH IS
C*          DETERMINED.
C*      H: MLCODE IS ALWAYS ' '.
C*      I: MAXINT IS A FOUR CHARACTER ROMAN NUMERAL.  IT IS CONVERTED
C*          INTO A NUMBER (1-9),X,E, OR T FOR OUTPUT.
C*      J: NMPA1,NMPA2, AND NMPA3 ARE THREE LETTERS AND/OR NUMBERS THAT
C*          COULD REPRESENT THE NUMBER OF STATIONS.  EACH VARIABLE IS
C*          TESTED TO SEE IF IT CONTAINS ANYTHING OTHER THAN A BLANK OR A
C*          NUMBER (0-9).  IF SO, THE THREE VARIABLES DO NOT CONTAIN THE
C*          NUMBER OF STATIONS AND ARE CHANGED TO BLANKS.  OTHERWISE,
C*          THEY REPRESENT THE NUMBER OF STATIONS.
C*      K: MSCALE IS EITHER 'MS','MB', 'ML', OR ' '.
C*          IF MSCALE='MS' THEN MS=MAG
C*          IF MSCALE='MB' THEN MB=MAG
C*          IF MSCALE='ML' THEN ML=MAG
C*          IF MSCALE=' ' THEN M=MAG AND MCODE='U'
C*          IN OTHER WORDS, THE MAGNITUDE IS PLACED IN ITS RESPECTIVE
C*          COLUMN.
C*
C*
C*FORMAT: STANDARD FORTRAN FORMAT (A72).
C*END-----
C--ISC CONV2: PROGRAM TO CONVERT ISC SUMMARY DATA FROM ISC FORMAT
C--          TO USGS STANDARDIZED FORMAT
          CHARACTER*5 BLANK4
          INTEGER REFNUM,EVYEAR,EVYR2,EVMON,EVMON2,EVDAY,EVDAY2
          INTEGER EVHOUR,EVHR2,EVMIN,EVMIN2,EVINDX,DATCOD,DATKEY
          INTEGER TMUNIT,HYNS,HYNS2,HYEW,HYEW2,HYDEPC,HYDC2
          INTEGER MLCODE,MAXINT,MXIN2,NMPA1,NMP12,NMPA2
          INTEGER NMP22,NMPA3,NMP32,CEND,CTEST
          INTEGER MCODE,MSCALE,MSCL2,NNN,NNN2,NN,N,G
          INTEGER INDEX(13),NMRAL(13),LETTER(14),NUM1(11)
***** 229 data cards not shown here *****
C#FINIS DSN=GL000139

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Table GL000140

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C#DSN=GL000140;SIZE=000296;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=120;STRT=000537;
C#DATE: 19840626; 0; ISCCONV3;
C#CLASS: MISCELLANEOUS; COMPUTER PROGRAM;
C#PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;
C#ALPHA: ; ; ; ; ; USGS 9930-01173; A016;
C#KEYWD: ISCCONV3; NEIS HYPOCENTER DATA;
C#TITLE: ISCCONV3--PROGRAM TO CONVERT ISC SUMMARY DATA FROM NEIS
C#      FORMAT TO STANDARDIZED FORMAT
C#AUTHOR: D.M. TOTTINGHAM
C#INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025
C#ABSTRACT: THIS PROGRAM CONVERTS ISC SUMMARY DATA FROM NEIS FORMAT
C#      TO STANDARDIZED FORMAT.  IN SHORT, THE NEIS FORMAT IS
C#      REFERRED TO AS THE OLD FORMAT.  THE FOLLOWING IS A CHART
C#      SHOWING WHAT CONVERSIONS ACTUALLY TAKE PLACE:
C#      INPUT                                OUTPUT
C# VARIABLES      ODR C COLUMN FRMT    VARIABLE ODR COLUMN FRMT    NOTES
C#
C# EVYEAR/EVYR2 1   1 7-12 1X,I4,1X EVYEAR  2   6-9    I4
C# EVMON/EVMON2 2   1 13-14  I2  EVMON   3   11-12  I2
C# EVDAY/EVDAY2 3   1 15-16  I2  EVDAY   4   13-14  I2
C# EVHOUR/EVHR2 4   1 17-18  I2  EVHOUR  5   16-17  I2
C# EVMIN/EVMIN2 5   1 19-20  I2  EVMIN   6   18-19  I2
C#
C#      EVINDX  7   20      A1      B
C#      DATCOD  8   21      A1      C
C#      DATKEY  9   22-24    A3      D
C# ORTIME/OTIM2 6   1 21-25  F5.2 ORTIME  10  26-30  F5.2
C#
C#      TMUNIT  11  31      A1      E
C# HYLAT/HYLAT2 7   1 28-34  F7.3 HYLAT   12  32-38  F7.4  F
C#
C#      HYNS    13  39      A1      G
C# HYLON/HYLON2 8   1 35-42  F8.3 HYLON   14  41-48  F8.4  H
C#
C#      HYEW    15  49      A1      I
C# HYDEP/HYDEP2 9   1 43-47  F5.1 HYDEP   16  51-55  F5.1
C# HYDEPC/HYDC2 10  1 48      A1  HYDEPC  17  56      A1
C#
C#      ML      18  58-60  F3.1  J
C#      MLCODE  19  61      A1      K
C# MAXINT/MXIN2 2   2 8      A1  MAXINT  20  63      A1
C# NMPA1/NMP12  3   2 23      A1  NMPA1   21  65      A1  L
C# NMPA2/NMP22  4   2 24      A1  NMPA2   22  66      A1  L
C# NMPA3/NMP32  5   2 25      A1  NMPA3   23  67      A1  L
C# MB/MB1       11  1 55-57  F3.1 MB      24  69-71  F3.1  J
C# MS/MS1       12  1 60-62  F3.1 MS      25  73-75  F3.1  J
C#
C#      M       26  77-79  F3.1  J
C#      MCODE   27  80      A1      J
C#
C# MAG1/MAG12   13  1 66-69  F4.2
C# MAG1SC/MG125 14  1 70-71  A2
C# MAG2/MAG22   15  1 77-80  F4.2
C# MAG2SC/MG225 1  2 1-2     A2
C#
C#
C# NOTES OF CONVERSION:
C#   A: REFNUM IS ALWAYS 'A001'
C#   B: EVINDX IS THE EVENT INDEX.  IF THERE IS MORE THAN ONE QUAKE
C#       WITHIN THE SAME MINUTE, A DIFFERENT LETTER OF THE ALPHABET

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C*      IS ASSIGNED TO EACH QUAKE AND THESE LETTERS ARE PLACED IN
C*      THIS COLUMN.  IN ORDER TO LOOK FOR IDENTICAL MINUTES AND
C*      BECAUSE A CARD CAN ONLY BE READ ONCE, TWO CARDS ARE READ
C*      IN AT THE BEGINNING INTO TWO SETS OF VARIABLES (AS SHOWN
C*      ABOVE).  BEFORE EACH NEW CARD IS READ, THE SECOND CARD TAKES
C*      PLACE OF THE FIRST CARD; AND, THEREFORE, A COMPARISON CAN BE
C*      DONE.
C*      C: DATCOD IS ALWAYS BLANK
C*      D: DATKEY, IN THIS CASE, IS ALWAYS 'SUM'
C*      E: TMUNIT IS ALWAYS A BLANK
C*      F: HYLAT=ABS(HYLAT) :TAKE ABSOLUTE VALUE OF HYLAT
C*      G: [THIS CONVERSION TAKES PLACE BEFORE HYLAT IS CHANGED TO ABS]
C*          IF(HYLAT.EQ.ABS(HYLAT))HYNS='N':IF HYLAT IS POSITIVE HYNS='N'
C*                                   OTHERWISE, HYNS='S'
C*      H: HYLON=ABS(HYLON) :TAKE ABSOLUTE VALUE OF HYLON
C*      I: [THIS CONVERSION TAKES PLACE BEFORE HYLON IS CHANGED TO ABS]
C*          IF(HYLON.EQ.ABS(HYLON))HYEW='E':IF HYLON IS POSITIVE HYEW='E'
C*                                   OTHERWISE, HYEW='W'
C*      J: IF MS OR MB HAS A VALUE: ML=0,M=0,AND MCODE=BLANK
C*          IF MS AND MB DON'T HAVE VALUES,MAG1 HAS A VALUE, AND
C*          MAG1SC='ML': ML=MAG1
C*                                   OTHERWISE M=MAG1 AND MCODE='U'
C*          IF MS,MB, AND MAG1 DON'T HAVE VALUES,MAG2 HAS A VALUE, AND
C*          MAG2SC='ML': ML=MAG2
C*                                   OTHERWISE M=MAG2 AND MCODE='U'
C*      K: MLCODE IS ALWAYS 'R' STANDING FOR RICHTER SCALE.
C*      L: NMPA1,NMPA2, AND NMPA3 ARE THREE LETTERS AND/OR NUMBERS THAT
C*          COULD REPRESENT THE NUMBER OF STATIONS.  EACH VARIABLE IS
C*          CHECKED TO SEE IF IT CONTAINS ANYTHING OTHER THAN A BLANK
C*          OR A NUMBER (0-9).  IF SO, THE THREE VARIABLES DO NOT
C*          CONTAIN THE NUMBER OF STATIONS AND ARE CHANGED TO BLANKS.
C*          OTHERWISE, THEY REPRESENT THE NUMBER OF STATIONS.
C*
C*
C*FORMAT: STANDARDIZED FORTRAN FORMAT (A72).
C*END-----
C-- ISCONV3: PROGRAM TO CONVERT NEIS SUMMARY DATA FROM NEIS FORMAT
C--      TO STANDARDIZED FORMAT
      INTEGER RENUM,EVYEAR,EVYR2,EVMON,EVMON2,EVDAY,EVDAY2
      INTEGER EVHOUR,EVHR2,EVMIN,EVMIN2,EVINDX,DATCOD,DATKEY
      INTEGER TMUNIT,HYNS,HYEW,HYDEPC,HYDC2
      INTEGER MLCODE,MAXINT,MXIN2,NMPA1,NMP12,NMPA2
      INTEGER NMP22,NMPA3,NMP32,DOT,CEND,CTEST
      INTEGER MCODE,NN,N,G,LETTER(14),NUM1(11),MAG1SC,MAG2SC
      INTEGER MG12S,MG22S,BLANK,BLANK3,TRAP,IMS,IMB,UUU,TRAP2
      REAL ORTIME,OTIM2,HYLAT,HYLAT2,HYLON,HYLON2,HYDEP,HYDEP2
***** 196 data cards not shown here *****
C#FINIS DSN=GL000140

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Table GL000141

C#DSN=GL000141;SIZE=000675;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=120;STRT=000833;  
 C\*DATE: 19840626; 0; ISCCONV4;  
 C\*CLASS: MISCELLANEOUS; COMPUTER PROGRAM;  
 C\*PERSON: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;  
 C\*ALPHA: ; ; ; ; ; USGS 9930-01173; A016;  
 C\*KEYWD: ISCCONV4; ISC HYPOCENTER DATA;  
 C\*TITLE: ISCCONV4-- PROGRAM TO CONVERT ISC SUMMARY AND PHASE DATA TO  
 C\* STANDARDIZED SUMMARY AND PHASE DATA  
 C\*AUTHOR: D.M. TOTTINGHAM  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS PROGRAM CONVERTS ISC SUMMARY AND PHASE DATA FROM  
 C\* ISC FORMAT TO STANDARDIZED FORMAT. THE FOLLOWING IS A  
 C\* CHART SHOWING WHAT CONVERSIONS ACTUALLY TAKE PLACE:  
 C\*

## C\* CONVERSION FOR SUMMARY CARD:

INPUT				OUTPUT				
VARIABLE	ODR	C	COLUMN FRMT	VARIABLE	ODR	COLUMN	FRMT	NOTES
				REFNUM	1	1-4	A4	A1
EVYEAR	2	1	4-7 I4	EVYEAR	2	6-9	I4	
EVMON	3	1	8-9 I2	EVMON	3	11-12	I2	
EVDAY	4	1	10-11 I2	EVDAY	4	13-14	I2	
EVHOUR	5	1	13-14 I2	EVHOUR	5	16-17	I2	
EVMIN	6	1	15-16 I2	EVMIN	6	18-19	I2	
EVBLK1	1	1	4-16 A13	EVINDX	7	20	A1	B1
				DATCOD	8	21	A1	C1
				DATKY1	9	22-24	A3	D1
OR	7	1	17-20 I4	ORTIME	10	26-30	F5.2	E1
				TMUNIT	11	31	A1	F1
LAT	8	1	22-26 I5	HYLAT	12	32-38	F7.4	G1
HYNS	9	1	27 A1	HYNS	13	39	A1	
LON	10	1	29-34 I6	HYLON	14	41-48	F8.4	H1
HYEW	11	1	35 A1	HYEW	15	49	A1	
DEPTH	12	1	37-40 I4	HYDEP	16	51-55	F5.1	I1
				HYDEPC	17	56	A1	J1
LMP	16	1	51-52 I2	ML	18	58-60	F3.1	K1
				MLCODE	19	61	A1	L1
				MAXINT	20	63	A1	M1
NAS	17	1	54-56 I3	NAS	21	65-67	I3	
IMB	13	1	42-43 I2	MB	22	69-71	F3.1	N1
IMS	14	1	45-46 I2	MS	23	73-75	F3.1	O1
TMP	15	1	48-49 I2	RMS	24	77-79	F3.1	P1
				MCODE	25	80	A1	Q1

## C\* NOTES OF CONVERSION:

C\* A1: REFNUM: IS INPUTED BY THE USER ON REQUEST BY THE COMPUTER  
 C\* WHEN THE APPROPRIATE PROMPT IS DISPLAYED.  
 C\* B1: EVINDX: IS THE EVENT INDEX IF THERE ARE MORE THAN ONE  
 C\* QUAKE WITHIN THE SAME MINUTE. EVBLK1 CONTAINS THE FIRST  
 C\* THIRTEEN CHARACTERS OF CARD 1 WHICH INCLUDES THE EVENT  
 C\* DATE AND TIME. A ROUTINE CHECKS EACH RECORD FOR IDENTICAL  
 C\* EVENT TIMES AND A RESPECTIVE ALPHANUMERIC CHARACTER IS

C\* PLACED IN THE EVINDX SLOT IF REPLICA EVENT TIMES DO OCCUR.  
 C\* C1: DATCOD: IS ALWAYS BLANK  
 C\* D1: DATKY1: IN THIS CASE, IS ALWAYS 'SUM'  
 C\* E1: ORTIME: IS REAL FORM OF THE VARIABLE OR DIVIDED BY 100  
 C\* F1: TMUNIT: IS ALWAYS A BLANK  
 C\* G1: HYLAT: IS THE REAL FORM OF THE VARIABLE LAT MULTIPLIED BY  
 C\* 10 AND DIVIDED BY 10000.  
 C\* H1: HYLON: IS THE REAL FORM OF THE VARIABLE LON MULTIPLIED BY  
 C\* 10 AND DIVIDED BY 10000.  
 C\* I1: HYDEP: IS THE REAL FORM OF THE VARIABLE DEPTH DIVIDED BY  
 C\* 10.  
 C\* J1: HYDEPC: IS A ONE CHARACTER CODE FOR HOW FOCAL DEPTH IS  
 C\* DETERMINED. THIS IS LEFT BLANK.  
 C\* K1: ML: IS THE REAL FORM OF THE VARIABLE LMP DIVIDED BY 10.  
 C\* L1: MLCODE: IS ALWAYS A BLANK.  
 C\* M1: MAXINT: IS ALWAYS A BLANK.  
 C\* N1: MB: IS THE REAL FORM OF THE VARIABLE IMB DIVIDED BY 10.  
 C\* O1: MS: IS THE REAL FORM OF THE VARIABLE IMS DIVIDED BY 10.  
 C\* P1: RMS: IS THE REAL FORM OF THE VARIABLE TMP DIVIDED BY 10.  
 C\* Q1: MCODE: IF RMS IS NOT EQUAL TO ZERO THEN MCODE='T'  
 C\* NOTE- T STANDS FOR TELESEISMIC MAGNITUDE PREFERENCE  
 C\* IF RMS IS EQUAL TO ZERO THEN MCODE='U'  
 C\* NOTE- U STANDS FOR UNSPECIFIED.

C\*  
 C\*

# C\* CONVERSION FOR PHASE CARD:

C\*

INPUT				OUTPUT				
VARIABLE	ODR	C	COLUMN FRMT	VARIABLE	ODR	COLUMN	FRMT	NOTES
				REFNUM	1	1-4	A4	A
C* EVYEAR	2	1	4-7 I4	EVYEAR	2	6-9	I4	
C* EVMON	3	1	8-9 I2	EVMON	3	11-12	I2	
C* EVDAY	4	1	10-11 I2	EVDAY	4	13-14	I2	
C* EVHOUR	5	1	13-14 I2	EVHOUR	5	16-17	I2	
C* EVMIN	6	1	15-16 I2	EVMIN	6	18-19	I2	
C* EVBLK1	1	1	4-16 A13	EVINDX	7	20	A1	B
				DATCOD	8	21	A1	C
				DATKEY	9	22-24	A3	D
				PHAGCY	10	26-29	A4	E
C* PHNAME	1	2	13-16 A4	PHNAME	11	30-33	A4	
C* PHPRM1	2	2	18 A1	PHPRM1	12	35	A1	
C* PHPRM2	3	2	19 A1	PHPRM2	13	36	A1	
C* LPZ	5	2	26 A1	PHPRM3	14	37	A1	F
C* SPZ	4	2	25 A1					
				PHPRM4	15	38	A1	G
C* IPHPAR	6	2	31-34 I4	PHPARR	16	40-44	F5.2	H
C* OCS1	11	2	45 A1	PHSRM1	17	46	A1	I
C* OC	1	3	4 A1					
C* OC2	4	3	18 A1					
C* OC3	7	3	32 A1					
C* OC4	10	3	46 A1					
C* PCS1	12	2	46 A1	PHSRM2	18	47	A1	J
C* PC	2	3	5 A1					
C* PC2	5	3	19 A1					
C* PC3	8	3	33 A1					
C* PC4	11	3	47 A1					

C*					PHSRM3	19	48	A1	K
C*					PHSRM4	20	49	A1	L
C* IOT	13	2	52-57	I6	PHSARR	21	50-55	F6.2	M
C* IOT1	3	3	11-16	I6					
C* IOT2	6	3	25-30	I6					
C* IOT3	9	3	39-44	I6					
C* IOT4	12	3	53-58	I6					
C*					PHFMP	22	57-60	A4	N
C*					PHRMK	23	62-64	A3	O
C* AMP(1)	8	2	38-41	F4.3	AMPX	24	65-69	F5.1	P
C* E1	9	2	42	A1					
C* A1	10	2	43	I1					
C* AMP(2)	3	4	7-10	F4.3					
C* E2	4	4	11	A1					
C* A2	5	4	12	I1					
C* AMP(3)	8	4	17-20	F4.3					
C* E3	9	4	21	A1					
C* A3	10	4	22	I1					
C* AMP(4)	13	4	27-30	F4.3					
C* E4	14	4	31	A1					
C* A4	15	4	32	I1					
C*					LETR	25	70	A1	Q
C* IPER(1)	7	2	36-37	I2	PRX	26	71-74	F4.2	R
C* IPER(2)	2	4	5-6	I2					
C* IPER(3)	7	4	15-16	I2					
C* IPER(4)	12	4	25-26	I2					
C*									
C*									
C*	NOTES OF CONVERSION:								
C*	A: REFNUM: IS INPUTED BY THE USER ON REQUEST BY THE COMPUTER								
C*	WHEN THE APPROPRIATE PROMPT IS DISPLAYED.								
C*	B: EVINDX: IS THE EVENT INDEX IF THERE ARE MORE THAN ONE QUAKE								
C*	WITHIN THE SAME MINUTE. EVBLK1 CONTAINS THE FIRST THIRTEEN								
C*	CHARACTERS OF CARD 1 WHICH INCLUDES THE EVENT DATE AND TIME.								
C*	A ROUTINE CHECKS EACH RECORD FOR IDENTICAL EVENT TIMES AND								
C*	A RESPECTIVE ALPHANUMERIC CHARACTER IS PLACED IN THE EVINDX								
C*	SLOT IF REPLICA EVENT TIMES DO OCCUR.								
C*	C: DATCOD: IS ALWAYS ' '								
C*	D: DATKEY: IS ALWAYS 'PHI'								
C*	E: PHAGCY: IS ALWAYS 'ISC '								
C*	F: PHPRM3: IS ALWAYS LPZ. IF LPZ DOES NOT CONTAIN A VALUE,								
C*	SPZ'S VALUE IS USED. THIS IS LEFT BLANK IF BOTH LPZ AND SPZ								
C*	ARE BLANK.								
C*	G: PHPRM4: IS THE FOLLOWING:								
C*	IF PHPRM1='I' THEN RM4=' '								
C*	IF PHPRM1='E' THEN RM4='2'								
C*	IF PHPRM1=' ' THEN RM4=' '								
C*	H: PHPAR: IS THE REAL FORM OF IPHPAR								
C*	I: PHSRM1: IS THE OC DERIVATIVE THAT IS LOCATED CLOSEST TO THE								
C*	PC DERIVATIVE THAT CONTAINS 'S'.								
C*	J: PHSRM2: IS THE FIRST PC DERIVATIVE THAT CONTAINS 'S'. IF								
C*	ALL OF THE PC DERIVATIVES ARE BLANK, THEN BOTH PHSRM2 AND								
C*	PHSRM1 REMAIN BLANK.								
C*	K: PHSRM3: IS ALWAYS ' '								
C*	L: PHSRM4: IS THE FOLLOWING:								
C*	IF THE RESPECTIVE OC DERIVATIVES= 'E' THEN RM4='2'								



```

C*      OTHERWISE, RM4=' '
C*  M: PHSARR: IS THE REAL FORM OF THE 1ST DERIVATIVE THAT IS
C*      LOCATED CLOSEST TO THE FIRST PC DERIVATIVE THAT CONTAINS
C*      'S'.
C*  N: PHFMP: IS ALWAYS ' '
C*  O: PHRMK: IS THE FOLLOWING:
C*      IF AMP(1) IS THE MAXIMUM AMPLITUDE THEN PHRMK='SZP'
C*      NOTE: SZP= SHORT PERIOD VERTICAL P-WAVE COMPONENT
C*      IF AMP(2) IF THE MAXIMUM AMPLITUDE THEN PHRMK='LZS'
C*      NOTE: LZS= LONG PERIOD VERTICAL SURFACE WAVE COMPONENT
C*      IF AMP(3) IS THE MAXIMUM AMPLITUDE THEN PHRMK='LNS'
C*      NOTE: LNS= LONG PERIOD NORTH-SOUTH SURFACE WAVE COMPONENT
C*      IF AMP(4) IS THE MAXIMUM AMPLITUDE THEN PHRMK='LES'
C*      NOTE: LES= LONG PERIOD EAST-WEST SURFACE WAVE COMPONENT
C*  P: AMPX: IS THE EXPONENTIAL FORM OF THE GREATEST AMPLITUDE FROM
C*      CARDS 2 AND 4.
C*  Q: LETR: IS 'M' WHEN AMPLITUDE IS IN MICROMETERS AND BLANK
C*      WHEN AMPLITUDE IS IN NANOMETERS
C*  R: PRX: IS THE REAL FORM OF THE RESPECTIVE IPER LOCATED CLOSEST
C*      TO THE GREATEST AMPLITUDE ON CARDS 2 AND 4.
C*
C*
C*FORMAT: STANDARDIZED FORTRAN FORMAT (A72).

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*****
See previous format from dataset GL000140 for details
*****

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C*END-----
C-- ISCONV4: PROGRAM TO CONVERT ISC SUMMARY AND PHASE DATA FROM
C--      ISC FORMAT TO USGS STANDARDIZED FORMAT.
C
C  DECLARATION OF VARIABLES
C
CHARACTER CHECK*2, CARD*80, EVBLK1*13, EVBLK2*13, HRMK*3(4)
CHARACTER*1 PHPRM3, PHPRM4, LPZ, SPZ, OC1, PC3, OC3, PC4, E3, E4
CHARACTER*1 E1, PHSRM3, PCS1, PHSRM1, PHSRM2, PHSRM4, OCS1, PC, OC
CHARACTER*1 DATCOD, LETR, PC2, OC2, OC4, E2, PHPRM1, LETTER(14), EVINDX
CHARACTER*2 ZERO, TEN, THIRTY, FORTY, RTC, RTC1, RTC2
***** 475 data cards not shown here *****
C#FINIS DSN=GL000141

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Table GL000142

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C#DSN=GL000142;SIZE=000147;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=120;STRT=001508;
C*DATE: 19840626; 0; NEISCON1;
C*CLASS: MISCELLANEOUS; COMPUTER PROGRAM;
C*PERSN: D. M. TOTTINGHAM; W. H. K. LEE; R. BULAND;
C*ALPHA: ; ; ; ; ; USGS 9930-01173; A016;
C*KEYWD: NEISCON1; NEIS STATION DATA;
C*TITLE: NEISCON1-- PROGRAM TO CONVERT NEIS MASTER STATION DATA
C*      TO STANDARDIZED DATA
C*AUTHOR: D.M. TOTTINGHAM
C*INSTITUTION: U. S. GEOLOGICAL SURVEY, MENLO PARK, CA 94025
C*ABSTRACT: THIS PROGRAM CONVERTS NEIS MASTER STATION DATA FROM
C*          NEIS FORMAT TO STANDARDIZED FORMAT.  THE FOLLOWING
C*          IS A CHART SHOWING WHAT CONVERSIONS ACTUALLY TAKE
C*          PLACE:
C*          INPUT                                OUTPUT
C* VARIABLE ODR  COLUMN  FRMT    VARIABLE ODR  COLUMN  FRMT  NOTES
C* REFNUM      14                REFNUM      1    1-4    A4    A
C*              DATKEY      2    22-24  A3    B
C*              STWT       3     25    A1    C
C* STAGCY       1    1-5    A4,1X  STAGCY      4    26-29  A4
C*              STNAME      5    30-33  A4    D
C* LATD         3    7-8    I2
C* LATM         4    9-10   I2
C* SLAT         5   11-14  F4.1  STLAT       6   34-41  1X,F7.4 E
C* STNS         6     15    A1    STNS        7     42    A1
C* LOND         7   16-18   I3
C* LONM         8   19-20   I2
C* SLON         9   21-24  F4.1  STLON       8   43-51  1X,F8.4 F
C* STEW        10     25    A1    STEW        9     52    A1
C* ELEV        11   26-32  1X,F6.1 STELEV      10   53-57  I5    G
C*              FLAG       11   58-59  A2    H
C* STRNM1       12   33-37  A5    STRNM1      12   60-64  A5
C* STRNM2       13   38-42  A5    STRNM2      13   65-69  A5
C*              STDT       14   70-74  A5    I
C*              OFFDAT      15   75-80  A6    J
C* FLAG1        2     6    A1
C*
C*
C* NOTES OF CONVERSION:
C*  A: REFNUM IS DEFINED BY THE ARCHIVER UPON PROGRAM EXECUTION.
C*  B: DATKEY= 'STA' BECAUSE THIS PROGRAM PROCESSES STATION DATA.
C*  C: STATION WEIGHT IS NORMALLY BLANK; AND, THEREFORE, IT IS
C*     LEFT BLANK.
C*  D: STATION NAME DOES NOT EXIST IN NEIS FORMAT; AND, THEREFORE,
C*     IT REMAINS BLANK IN OUTPUT.
C*  E: STLAT= LATD+ LATM/60 + SLAT/3600: CONVERT MINUTES AND
C*     SECONDS INTO DEGREES AND ADD TO LATD. CONVERT LATD, LATM,
C*     AND SLAT INTO REALS FIRST.
C*  F: STLON= LOND+ LONM/60 + SLON/3600: CONVERT MINUTES AND
C*     SECONDS INTO DEGREES AND ADD TO LOND. CONVERT LOND, LONM,
C*     AND SLON INTO REALS FIRST.
C*  G: STELEV= IFIX(ELEV*10): CONVERT REAL ELEV TO INTEGER
C*     STELEV.

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C*  H:  FLAG= BLANK: WHEN A REAL STATION NAME EXISTS
C*  I:  STDT= BLANK: AS THERE IS NOT ANY CLOCK CORRECTION IN
C*      NEIS FORMAT.
C*  J:  OFFDAT= '830906' WHEN FLAG1='C' OTHERWISE OFFDAT=BLANK
C*
C*
C*FORMAT: STANDARDIZED FORTRAN FORMAT (A72).

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*****
See previous format from dataset GL000140 for details
*****

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C*END-----
C-- NEISCON1: PROGRAM TO CONVERT NEIS MASTER STATION LIST FROM
C--      NEIS FORMAT TO USGS STANDARDIZED FORMAT
C
C----DECLARATION OF VARIABLES
C
      INTEGER REFNUM,DATKEY
      INTEGER STWT,STAGCY,STNAME,STNS,STEW,STELEV
      INTEGER FLAG,FLAG1,LATD,LATM
      INTEGER LOND,LONM,CC
      CHARACTER*1 CARDI*80
***** 75 data cards not shown here *****
C#FINIS DSN=GL000142

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Table GL000143

C#DSN=GL000143;SIZE=007255;DATE=100184;ARCH=TM;TAPE=SM9310;FILE=084;STRT=001443;  
 C\*DATE: 19840406; 0; USC7380;  
 C\*CLASS: EARTHQUAKE; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19730101; 19801231; 33.0N; 35.0N; 119.5W; 117.0W; ; A011;  
 C\*KEYWD: ;  
 C\*TITLE: UNIVERSITY OF SOUTHERN CALIFORNIA PHASE CARDS FOR EARTHQUAKES IN THE  
 C\* LOS ANGELES BASIN: 1973-1980  
 C\*AUTHOR:  
 C\*INSTITUTION: UNIVERSITY OF SOUTHERN CALIFORNIA  
 C\* LOS ANGELES, CA 90089  
 C\*ABSTRACT: THIS DATASET CONTAINS PHASE CARDS FOR EARTHQUAKES IN THE LOS ANGELES  
 C\* BASIN COLLECTED BY THE UNIVERSITY OF SOUTHERN CALIFORNIA.  
 C\*REFERENCE: LEE, W.H.K., AND J.C. LAHR, HYP071 (REVISED): A COMPUTER  
 C\* PROGRAM FOR DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST  
 C\* MOTION PATTERN OF LOCAL EARTHQUAKES, OPEN-FILE REPORT  
 C\* 75-311, 114 P., 1975.  
 C\*FORMAT:  
 C\* THIS FORMAT IS THE STANDARD FORMAT FOR PHASE CARDS USED BY THE  
 C\* LOCATION PROGRAM HYP071 (REVISED). BLANK CARDS SEPARATE  
 C\* PHASE CARDS OF DIFFERENT EARTHQUAKES.  
 C\*  

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01-04	A4	MSTA	STATION NAME
C*	05-08		PRMK	REMARKS FOR P-ARRIVAL
C*	05	A1		DESCRIPTION OF ONSET OF P-ARRIVAL; I DENOTES IMPULSIVE OR SHARP E DENOTES EMERGENT OR GRADUAL
C*	06	A1		"P" TO DENOTE P-ARRIVAL; P OR BLANK
C*	07	A1		FIRST MOTION DIRECTION OF P-ARRIVAL; U = UP = C = COMPRESSION D = DOWN = DILATATION + = POOR U OR C - = POOR D N = NOISY BLANK = NOT READABLE
C*	08	A1		WEIGHT ASSIGNED TO P-ARRIVAL 0 OR BLANK = FULL WEIGHT 1 = 3/4 WEIGHT 2 = 1/2 WEIGHT 3 = 1/4 WEIGHT 4 = NO WEIGHT
C*	10-15	I6	KDATE	YEAR, MONTH, AND DAY OF P-ARRIVAL
C*	16-17	I2	KHR	HOUR OF P-ARRIVAL
C*	18-19	I2	KMIN	MINUTE OF P-ARRIVAL
C*	20-24	F5.2	SEC	SECOND OF P-ARRIVAL
C*	32-36	F5.2	S	SECOND OF S-ARRIVAL
C*	37-40		SRMK	REMARKS FOR S-ARRIVAL
C*	37	A1		DESCRIPTION OF ONSET OF S-ARRIVAL; I OR E OR BLANK
C*	38	A1		"S" TO DENOTE S-ARRIVAL;

C*				S OR BLANK
C*	39	A1		FIRST MOTION DIRECTION
C*				U OR D OR + OR - OR N OR BLANK
C*	40	F1.0		WEIGHT ASSIGNED TO S-ARRIVAL;
C*				0 OR BLANK = FULL WEIGHT
C*				1 = 3/4 WEIGHT
C*				2 = 1/2 WEIGHT
C*				3 = 1/4 WEIGHT
C*				4 = NO WEIGHT
C*	44-47	F4.0	AMI X	MAXIMUM PEAK-TO-PEAK AMPLITUDE IN MM
C*	48-50	F3.2	PRX	PERIOD OF THE MAXIMUM AMPLITUDE IN SEC.
C*				STANDARD PERIOD (PRR) FOR THIS STATION AS
C*				SPECIFIED IN THE STATION LIST WILL BE USED
C*				BY HYP071 IF THIS FIELD IS BLANK.
C*	51-54	F4.1	CALP	NORMALLY NOT USED EXCEPT AS NOTED IN NEXT ITEM.
C*	59-62	F4.1	CALX	PEAK-TO-PEAK AMPLITUDE OF 10 MICROVOLT
C*				CALIBRATION SIGNAL IN MM. IF THIS FIELD IS
C*				BLANK, THEN CALX = CALP. IF AGAIN CALX IS
C*				BLANK, THEN THE STANDARD CALIBRATION (CALR)
C*				FOR THIS STATION AS SPECIFIED IN THE STATION
C*				LIST WILL BE USED. IF ICAL = 1 (IN THE
C*				STATION LIST FOR THIS STATION), THEN CALX WILL
C*				ALWAYS BE REPLACED BY CALR.
C*	63-65	A3	RMK	REMARK FOR THIS PHASE CARD. ANY THREE
C*				CHARACTERS (EXCEPT CAL) MAY BE USED.
C*	66-70	F5.2	DT	TIME CORRECTION IN SEC. NORMALLY NOT USED FOR
C*				TELEMETERED STATIONS.
C*	71-75	F5.0	FMP	F-P TIME IN SEC. THIS IS THE DURATION TIME OF
C*				EARTHQUAKE. IN NCER PRACTICE, ONE MEASURES THE
C*				TIME BETWEEN THE FIRST P-ARRIVAL AND THAT
C*				WHERE THE PEAK-TO-PEAK AMPLITUDE OF THE
C*				SEISMIC TRACE DROPS BELOW 1 CM.

C\*END-----

BHREPC	730108200023.43	
SPHIPC	730108200021.44	
SCRIPD	730108200023.96	100.
SJRIPC	730108200015.58	
VPDIPC	730108200012.91	120.
TCNIPD	730108200017.63	100.

TCNIPD0	730204023058.73
LCMEP+0	730204023059.25
HCMIPC0	730204023057.56

\*\*\*\*\* 7158 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000143

Table GL000144

C\*DSN=GL000144;SIZE=003338;DATE=100184;ARCH=TM;TAPE=SM9310;FILE=085;STRT=000001;  
 C\*DATE: 19840406; 0; USCSB;  
 C\*CLASS: EARTHQUAKE; PHASE;  
 C\*PERSN: KEN PIPER;  
 C\*ALPHA: 19780801; 19801231; 34.2N; 34.5N; 120.0W; 119.5W; ; A011;  
 C\*KEYWD: ;  
 C\*TITLE: UNIVERSITY OF SOUTHERN CALIFORNIA PHASE CARDS FOR EARTHQUAKES IN THE  
 C\* SANTA BARBARA AREA: AUGUST 1978 - DECEMBER 1980  
 C\*AUTHOR:  
 C\*INSTITUTION: UNIVERSITY OF SOUTHERN CALIFORNIA  
 C\* LOS ANGELES, CA 90089  
 C\*ABSTRACT: THIS DATASET CONTAINS PHASE CARDS FOR EARTHQUAKES IN THE SANTA  
 C\* BARBARA AREA COLLECTED BY THE UNIVERSITY OF SOUTHERN CALIFORNIA.  
 C\*REFERENCE: LEE, W.H.K., AND J.C. LAHR, HYPO71 (REVISED): A COMPUTER  
 C\* PROGRAM FOR DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST  
 C\* MOTION PATTERN OF LOCAL EARTHQUAKES, OPEN-FILE REPORT  
 C\* 75-311, 114 P., 1975.  
 C\*FORMAT:  
 C\* THIS FORMAT IS THE STANDARD FORMAT FOR PHASE CARDS USED BY THE  
 C\* LOCATION PROGRAM HYPO71 (REVISED). BLANK CARDS SEPARATE  
 C\* PHASE CARDS OF DIFFERENT EARTHQUAKES.  
 C\*  

C*	COLUMNS	FORMAT	ITEM	EXPLANATION
C*	01-04	A4	MSTA	STATION NAME
C*	05-08		PRMK	REMARKS FOR P-ARRIVAL
C*	05	A1		DESCRIPTION OF ONSET OF P-ARRIVAL;
C*				I DENOTES IMPULSIVE OR SHARP
C*				E DENOTES EMERGENT OR GRADUAL
C*	06	A1		"P" TO DENOTE P-ARRIVAL;
C*				P OR BLANK
C*	07	A1		FIRST MOTION DIRECTION OF P-ARRIVAL;
C*				U = UP = C = COMPRESSION
C*				D = DOWN = DILATATION
C*				+ = POOR U OR C
C*				- = POOR D
C*				N = NOISY
C*				BLANK = NOT READABLE
C*	08	A1		WEIGHT ASSIGNED TO P-ARRIVAL
C*				0 OR BLANK = FULL WEIGHT
C*				1 = 3/4 WEIGHT
C*				2 = 1/2 WEIGHT
C*				3 = 1/4 WEIGHT
C*				4 = NO WEIGHT
C*	10-15	I6	KDATE	YEAR, MONTH, AND DAY OF P-ARRIVAL
C*	16-17	I2	KHR	HOUR OF P-ARRIVAL
C*	18-19	I2	KMIN	MINUTE OF P-ARRIVAL
C*	20-24	F5.2	SEC	SECOND OF P-ARRIVAL
C*	32-36	F5.2	S	SECOND OF S-ARRIVAL
C*	37-40		SRMK	REMARKS FOR S-ARRIVAL
C*	37	A1		DESCRIPTION OF ONSET OF S-ARRIVAL;
C*				I OR E OR BLANK
C*	38	A1		"S" TO DENOTE S-ARRIVAL;

C\* S OR BLANK  
 C\* 39 A1 FIRST MOTION DIRECTION  
 C\* U OR D OR + OR - OR N OR BLANK  
 C\* 40 F1.0 WEIGHT ASSIGNED TO S-ARRIVAL;  
 C\* 0 OR BLANK = FULL WEIGHT  
 C\* 1 = 3/4 WEIGHT  
 C\* 2 = 1/2 WEIGHT  
 C\* 3 = 1/4 WEIGHT  
 C\* 4 = NO WEIGHT  
 C\* 44-47 F4.0 AMPX MAXIMUM PEAK-TO-PEAK AMPLITUDE IN MM  
 C\* 48-50 F3.2 PRX PERIOD OF THE MAXIMUM AMPLITUDE IN SEC.  
 C\* STANDARD PERIOD (PRR) FOR THIS STATION AS  
 C\* SPECIFIED IN THE STATION LIST WILL BE USED  
 C\* BY HYP071 IF THIS FIELD IS BLANK.  
 C\* 51-54 F4.1 CALP NORMALLY NOT USED EXCEPT AS NOTED IN NEXT ITEM.  
 C\* 59-62 F4.1 CALX PEAK-TO-PEAK AMPLITUDE OF 10 MICROVOLT  
 C\* CALIBRATION SIGNAL IN MM. IF THIS FIELD IS  
 C\* BLANK, THEN CALX = CALP. IF AGAIN CALX IS  
 C\* BLANK, THEN THE STANDARD CALIBRATION (CALR)  
 C\* FOR THIS STATION AS SPECIFIED IN THE STATION  
 C\* LIST WILL BE USED. IF ICAL = 1 (IN THE  
 C\* STATION LIST FOR THIS STATION), THEN CALX WILL  
 C\* ALWAYS BE REPLACED BY CALR.  
 C\* 63-65 A3 RMK REMARK FOR THIS PHASE CARD. ANY THREE  
 C\* CHARACTERS (EXCEPT CAL) MAY BE USED.  
 C\* 66-70 F5.2 DT TIME CORRECTION IN SEC. NORMALLY NOT USED FOR  
 C\* TELEMETERED STATIONS.  
 C\* 71-75 F5.0 FMP F-P TIME IN SEC. THIS IS THE DURATION TIME OF  
 C\* EARTHQUAKE. IN NCER PRACTICE, ONE MEASURES THE  
 C\* TIME BETWEEN THE FIRST P-ARRIVAL AND THAT  
 C\* WHERE THE PEAK-TO-PEAK AMPLITUDE OF THE  
 C\* SEISMIC TRACE DROPS BELOW 1 CM

C\*END-----

VTR	780813225455.70	1000.
DCA	780813225457.28	
DCC	780813225456.48	
DCE	780813225456.12	

VTR	780813230104.12	60.
DCA	780813230106.66	
DCC	780813230105.63	
DCE	780813230105.25	

\*\*\*\*\* 3241 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000144

Table GL000145

C#DSN=GL000145;SIZE=013052;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=121;STRT=000001;  
 C\*DATE: 19840625; 0; WATER;  
 C\*CLASS: HYDROLOGIC; WATER LEVEL;  
 C\*PERSN: D. L. LAMAR; P. M. MERIFIELD; J. V. LAMAR;  
 C\*ALPHA: 19761015; 19840429; 33.1 N; 34.5 N; 118.2 W; 116.0 W; 14-08-0001-21859;  
 C\* A012;  
 C\*KEYWD: WATER LEVELS; SAN ANDREAS FAULT; SAN JACINTO FAULT;  
 C\*TITLE: WATER LEVELS IN WELLS ALONG SAN ANDREAS AND SAN JACINTO FAULT ZONES,  
 C\* SOUTHERN CALIFORNIA  
 C\*AUTHOR: D. L. LAMAR, P. M. MERIFIELD, AND J. V. LAMAR  
 C\*INSTITUTION: LAMAR-MERIFIELD GEOLOGISTS, INC.  
 C\* 1318 2ND ST. #25  
 C\* SANTA MONICA, CA 90401  
 C\*ABSTRACT: WATER LEVELS FOR MORE THAN 50 WELLS ALONG THE SAN ANDREAS AND SAN  
 C\* JACINTO FAULT ZONES HAVE BEEN MONITORED DURING THE PERIOD OCTOBER  
 C\* 1976 TO APRIL 1984.  
 C\*REFERENCE: LAMAR, D. L. (1984). "HYDROLOGICAL/GEOCHEMICAL MONITORING ALONG SAN  
 C\* ANDREAS AND SAN JACINTO FAULTS, SOUTHERN CALIFORNIA, DURING  
 C\* FIRST HALF OF FISCAL YEAR 1984", IN SUMMARIES OF TECHNICAL  
 C\* REPORTS, VOLUME XVIII, NATIONAL EARTHQUAKE HAZARDS REDUCTION  
 C\* PROGRAM, JUNE 1984, U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT 84-628.  
 C\* MERIFIELD, P. M., AND D. L. LAMAR (1983). "HYDROLOGICAL/GEOCHEMICAL  
 C\* MONITORING ALONG SAN ANDREAS AND SAN JACINTO FAULTS,  
 C\* SOUTHERN CALIFORNIA, DURING FISCAL YEAR 1983", IN SUMMARIES  
 C\* OF TECHNICAL REPORTS, VOLUME XVII, NATIONAL EARTHQUAKE  
 C\* HAZARDS REDUCTION PROGRAM, DECEMBER 1983, U. S. GEOLOGICAL  
 C\* SURVEY OPEN-FILE REPORT 83-918.  
 C\* LAMAR, D. L., AND P. M. MERIFIELD (1983). "HYDROLOGICAL/GEOCHEMICAL  
 C\* MONITORING ALONG SAN ANDREAS AND SAN JACINTO FAULTS, SOUTHERN  
 C\* CALIFORNIA, DURING FIRST HALF OF FISCAL YEAR 1983", IN  
 C\* SUMMARIES OF TECHNICAL REPORTS, VOLUME XVI, NATIONAL EARTHQUAKE  
 C\* HAZARDS REDUCTION PROGRAM, JUNE 1983, U. S. GEOLOGICAL SURVEY  
 C\* OPEN-FILE REPORT 83-525.  
 C\* MERIFIELD, P. M., AND D. L. LAMAR (1983). "HYDROLOGICAL/GEOCHEMICAL  
 C\* MONITORING ALONG SAN ANDREAS AND SAN JACINTO FAULTS, SOUTHERN  
 C\* CALIFORNIA, DURING FISCAL YEAR 1982", IN SUMMARIES OF TECHNICAL  
 C\* REPORTS, VOLUME XV, NATIONAL EARTHQUAKE HAZARDS REDUCTION  
 C\* PROGRAM, JANUARY 1983, U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT 83-90.  
 C\* LAMAR, D. L., AND P. M. MERIFIELD, (1982). "WATER-LEVEL MONITORING  
 C\* ALONG SAN ANDREAS AND SAN JACINTO FAULTS, SOUTHERN CALIFORNIA,  
 C\* DURING FIRST HALF OF FISCAL YEAR 1982," IN SUMMARIES OF  
 C\* TECHNICAL REPORTS, VOLUME XIV, NATIONAL EARTHQUAKE HAZARDS  
 C\* REDUCTION PROGRAM, JULY 1982, U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT 82-840.  
 C\* LAMAR, D. L., AND P. M. MERIFIELD (1982). "WATER-LEVEL MONITORING  
 C\* ALONG SAN ANDREAS AND SAN JACINTO FAULTS, SOUTHERN CALIFORNIA,  
 C\* DURING FISCAL YEAR 1981", IN SUMMARIES OF TECHNICAL REPORTS,  
 C\* VOLUME XIII, NATIONAL EARTHQUAKE HAZARDS REDUCTION PROGRAM,  
 C\* DECEMBER 1981, U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 82-65.  
 C\* LAMAR, D. L., AND P. M. MERIFIELD (1981). "WATER-LEVEL MONITORING  
 C\* ALONG SAN ANDREAS AND SAN JACINTO FAULTS, SOUTHERN CALIFORNIA,



C\* DURING FIRST HALF OF FISCAL YEAR 1981", IN SUMMARIES OF  
C\* TECHNICAL REPORTS, VOLUME XII, NATIONAL EARTHQUAKE HAZARDS  
C\* REDUCTION PROGRAM, JUNE 1981, U. S. GEOLOGICAL SURVEY OPEN-FILE  
C\* REPORT 81-833.

C\* MERIFIELD, P. M., AND D. L. LAMAR (1981). "WATER-LEVEL MONITORING  
C\* ALONG SAN ANDREAS AND SAN JACINTO FAULTS, SOUTHERN CALIFORNIA,  
C\* DURING SECOND HALF OF FISCAL YEAR 1980", IN SUMMARIES OF  
C\* TECHNICAL REPORTS, VOLUME XI, NATIONAL EARTHQUAKE HAZARDS  
C\* REDUCTION PROGRAM, JANUARY 1981, U. S. GEOLOGICAL SURVEY  
C\* OPEN-FILE REPORT 81-167.

C\* LAMAR, D. L., AND P. M. MERIFIELD (1980). "WATER-LEVEL MONITORING  
C\* ALONG SAN ANDREAS AND SAN JACINTO FAULTS, SOUTHERN CALIFORNIA,  
C\* DURING FIRST HALF OF FISCAL YEAR 1980", IN SUMMARIES OF  
C\* TECHNICAL REPORTS, VOLUME X, NATIONAL EARTHQUAKE HAZARDS  
C\* REDUCTION PROGRAM, JUNE 1980, U. S. GEOLOGICAL SURVEY OPEN-FILE  
C\* REPORT 80-842.

C\* MERIFIELD, P. M. AND D. L. LAMAR (1980). "WATER LEVEL MONITORING  
C\* ALONG SAN ANDREAS AND SAN JACINTO FAULTS, SOUTHERN CALIFORNIA,  
C\* DURING FISCAL YEAR 1979", IN SUMMARIES OF TECHNICAL REPORTS,  
C\* VOLUME IX, NATIONAL EARTHQUAKE REDUCTION PROGRAM, DECEMBER  
C\* 1979, U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 80-6.

C\* MERIFIELD, P. M., AND D. L. LAMAR (1979). "PROGRESS REPORT ON WATER  
C\* LEVEL MONITORING ALONG SAN ANDREAS AND SAN JACINTO FAULTS,  
C\* SOUTHERN CALIFORNIA", IN SUMMARIES OF TECHNICAL REPORTS, VOLUME  
C\* VIII, NATIONAL EARTHQUAKE HAZARDS REDUCTION PROGRAM, JUNE 1979,  
C\* U. S. GEOLOGICAL SURVEY.

C\* MERIFIELD, P. M., AND D. L. LAMAR (1978). "REPORT ON TWO YEARS OF  
C\* WATER LEVEL MONITORING ALONG SAN ANDREAS AND SAN JACINTO  
C\* FAULTS, SOUTHERN CALIFORNIA", IN SUMMARIES OF TECHNICAL  
C\* REPORTS, VOLUME VII, NATIONAL EARTHQUAKE HAZARDS REDUCTION  
C\* PROGRAM, DECEMBER 1978, U. S. GEOLOGICAL SURVEY.

C\* LAMAR, D. L., AND P. M. MERIFIELD (1978). "PROGRESS REPORT ON WATER  
C\* LEVEL MONITORING ALONG SAN ANDREAS AND SAN JACINTO FAULTS,  
C\* SOUTHERN CALIFORNIA," IN SUMMARIES OF TECHNICAL REPORTS,  
C\* VOLUME VI, NATIONAL EARTHQUAKE HAZARDS REDUCTION PROGRAM,  
C\* JUNE 1978, U. S. GEOLOGICAL SURVEY.

C\* LAMAR, D. L., AND P. M. MERIFIELD (1978). "REPORT OF FIRST YEAR OF  
C\* WATER LEVEL MONITORING IN AREA OF PALMDALE UPLIFT, SOUTHERN  
C\* CALIFORNIA", IN SUMMARIES OF TECHNICAL REPORTS, VOLUME V,  
C\* NATIONAL EARTHQUAKE HAZARDS REDUCTION PROGRAM, JANUARY 1978,  
C\* U. S. GEOLOGICAL SURVEY.

C\* LAMAR, D. L., AND P. M. MERIFIELD (1977). "PRELIMINARY REPORT OF  
C\* WATER LEVEL MONITORING IN AREA OF PALMDALE UPLIFT, SOUTHERN  
C\* CALIFORNIA", IN SUMMARIES OF TECHNICAL REPORTS, VOLUME IV,  
C\* NATIONAL EARTHQUAKE HAZARDS REDUCTION PROGRAM, JULY 1977,  
C\* U. S. GEOLOGICAL SURVEY.

C\* LAMAR, D. L. AND P. M. MERIFIELD (1984). "DATA REPORT: SUMMARY OF  
C\* WATER LEVEL DATA 01 OCT THROUGH 31 MAR 84". A COPY OF THIS  
C\* UNPUBLISHED REPORT IS AVAILABLE FROM WILLIE LEE, OFFICE OF  
C\* EARTHQUAKES, VOLCANOES, AND ENGINEERING, MAIL STOP 977,  
C\* U. S. GEOLOGICAL SURVEY, 345 MIDDLEFIELD ROAD, MENLO PARK,  
C\* CA 94025.

C\*FORMAT:

C\*END-----

WELL NUMBER: 04N/09W-18N01 VALYERM0 QUAD(VY18N01)  
HEIGHT REFERENCE POINT ABOVE LAND SURFACE: 0.600 FT

LAND SURFACE ELEVATION:            FT  
TOTAL DEPTH OF WELL: 200.00 FT  
YMAX= -            YMIN= -  
LATITUDE: 34-35.61 N        LONGITUDE: 117-60.92 W  
PRECIP STATIONS:

DATE	TIME	TEMP	O	PROBE	WATER	NOTES
	(PST)	(F)	B	DEPTH	DEPTH	
***** 12934 data cards not shown here *****						
C#FINIS DSN=GL000145						

Table GL000146

C#DSN=GL000146;SIZE=000130;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=122;STRT=000001;  
 C#DATE: 19840705; 0; CHUNG1;  
 C#CLASS: GEOCHEMICAL; RADON; HELIUM; CONDUCTIVITY; TEMPERATURE;  
 C#PERSN: Y. CHUNG;  
 C#ALPHA: 19820818; 19840412; 32.9N; 34.2N; 117.3W; 115.4W; 14-08-0001-21186;  
 C# A014;  
 C#KEYWD: RADON; HELIUM; CONDUCTIVITY;  
 C#TITLE: INVESTIGATION OF RADON AND HELIUM AS POSSIBLE FLUID-PHASE  
 C# PRECURSORS TO EARTHQUAKES  
 C#AUTHOR: Y. CHUNG  
 C#INSTITUTION: UNIVERSITY OF CALIFORNIA, SAN DIEGO, CA.  
 C# GEOLOGICAL RESEARCH DIVISION, A-020  
 C# SCRIPPS INSTITUTION OF OCEANOGRAPHY  
 C# LA JOLLA, CA 92093  
 C#ABSTRACT: RADON, HELIUM, CONDUCTIVITY, AND TEMPERATURE OF GROUNDWATERS  
 C# HAVE BEEN MONITORED ALONG THE SAN ANDREAS, SAN JACINTO, AND ELSINORE  
 C# FAULTS IN SOUTHERN CALIFORNIA. DISCRETE SAMPLES OF GROUNDWATER  
 C# WERE TAKEN AT MONTHLY INTERVALS FOR DISSOLVED GAS MONITORING.  
 C#REFERENCE: CHUNG, Y. (1984). "INVESTIGATION OF RADON AND HELIUM AS  
 C# POSSIBLE FLUID-PHASE PRECURSORS TO EARTHQUAKES" IN SUMMARIES  
 C# OF TECHNICAL REPORTS, VOLUME XVIII, NATIONAL EARTHQUAKE  
 C# HAZARDS REDUCTION PROGRAM, JUNE 1984, U. S. GEOLOGICAL  
 C# SURVEY OPEN-FILE REPORT 84-628.  
 C# CHUNG, Y. (1984). "DATA REPORT: DATA SUMMARY FOR RADON AND  
 C# HELIUM MONITORING IN SOUTHERN CALIFORNIA FROM AUGUST 83  
 C# TO APRIL 84." A COPY OF THIS UNPUBLISHED REPORT IS AVAILABLE  
 C# FROM WILLIE LEE, OFFICE OF EARTHQUAKES, VOLCANOES, AND  
 C# ENGINEERING, MAIL STOP 977, U. S. GEOLOGICAL SURVEY,  
 C# 345 MIDDLEFIELD ROAD, MENLO PARK, CA 94025.  
 C#  
 C#FORMAT: DATA FORMAT DEFINED AS FOLLOWS:  
 C# COLUMN FORMAT ITEM EXPLANATION  
 C# 1-2 (I2) CODE SITE CODE.  
 C# MURRIETA HOT SPRINGS (2), WARNER HOT  
 C# SPRINGS (4), AGUA CALIENTE (5),  
 C# INDIAN CANYON (8), ROBISON'S WELL  
 C# (9), ARROWHEAD HOT SPRINGS (10), HOT  
 C# MINERAL WELL (15), NILAND SLAB WELL  
 C# (21).  
 C# 4-9 (I6) DATE DATE OF SAMPLE COLLECTION: 2 DIGITS  
 C# FOR THE MONTH; 2 DIGITS FOR THE DAY;  
 C# 2 DIGITS FOR THE YEAR.  
 C# 11 (I1) SUBSITE 1=FIRST SAMPLING SUBSITE;  
 C# 2=SECOND SAMPLING SUBSITE.  
 C# 12 (A1) SITETYPE P=POOL, S=SPRING, W=WELL.  
 C# 14 (I1) DUP DUPLICATE SAMPLE TAKEN.  
 C# 16-19 (F4.1) TEMP TEMPERATURE OF WATER, CENTIGRADE.  
 C# 24-27 (I4) COND CONDUCTIVITY IN MICRO MHO.  
 C# 31-36 (F6.3) RN RADON IN DPM/G.  
 C# 37-38 (A2) RN NOTE A1 AND A2 ARE FOR DUPLICATE SAMPLES.  
 C# A AND B ARE FOR DIFFERENT TYPES OF  
 C# SAMPLING BOTTLES.  
 C# 40-45 (F6.3) HE HELIUM IN MICRO CC/G.

C# 46-47 (A2) HE NOTE F=CORNING 1720 FLASK. F1 AND F2 ARE  
 C# DUPLICATE SAMPLES.

C#END-----

2	81083	2P	55.5	1220	.450	3.84	F
2	92083	2P	53.2	1242	.413	4.32	F
2	110883	2P	51.0	1245	.485	A 4.34	F
2	110883	2P	51.0	1245	.478	B 4.25	F
2	113083	2P	49.0	1270	.520	5.04	F
2	121683	2P	49.0	1250	.407	2.33	F
2	11384	2P	51.0	1220	.528	2.81	F
2	21084	2P	53.0	1220	.432	3.90	F
2	31584	2P	52.0	1300	.487	4.87	F
2	41284	2P	53.2	1250	.608	5.89	F

\*\*\*\*\* 63 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000146

Table GL000147

C#DSN=GL000147;SIZE=000948;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=122;STRT=000131;  
 C\*DATE: 19840705; 0; CHUNG2;  
 C\*CLASS: GEOCHEMICAL; RADON; HELIUM; CONDUCTIVITY; TEMPERATURE;  
 C\*PERSN: Y. CHUNG;  
 C\*ALPHA: 19830101; 19840412; 32.9N; 34.2N; 117.3W; 115.4W; 14-08-0001-21186;  
 C\* A014;  
 C\*KEYWD: RADON; HELIUM; CONDUCTIVITY;  
 C\*TITLE: INVESTIGATION OF RADON AND HELIUM AS POSSIBLE FLUID-PHASE  
 C\* PRECURSORS TO EARTHQUAKES  
 C\*AUTHOR: Y. CHUNG  
 C\*INSTITUTION: UNIVERSITY OF CALIFORNIA, SAN DIEGO, CA.  
 C\* GEOLOGICAL RESEARCH DIVISION, A-020  
 C\* SCRIPPS INSTITUTION OF OCEANOGRAPHY  
 C\* LA JOLLA, CA 92093  
 C\*ABSTRACT: CONTINUOUS RADON MONITORS HAVE BEEN INSTALLED AT MURRIETA HOT  
 C\* SPRINGS, ARROWHEAD HOT SPRINGS, AND PINON FLAT. THEY MONITOR  
 C\* THE GAS-PHASE RADON AT ARROWHEAD AND MURRIETA HOT SPRINGS,  
 C\* AND THE DISSOLVED-PHASE RADON AT PINON FLAT.  
 C\*REFERENCE: CHUNG, Y. (1984). "INVESTIGATION OF RADON AND HELIUM AS  
 C\* POSSIBLE FLUID-PHASE PRECURSORS TO EARTHQUAKES" IN SUMMARIES  
 C\* OF TECHNICAL REPORTS, VOLUME XVIII, NATIONAL EARTHQUAKE  
 C\* HAZARDS REDUCTION PROGRAM, JUNE 1984, U. S. GEOLOGICAL  
 C\* SURVEY OPEN-FILE REPORT 84-628.  
 C\* CHUNG, Y. (1984). "DATA REPORT: DATA SUMMARY FOR RADON AND  
 C\* HELIUM MONITORING IN SOUTHERN CALIFORNIA FROM AUGUST 83  
 C\* TO APRIL 84." A COPY OF THIS UNPUBLISHED REPORT IS AVAILABLE  
 C\* FROM WILLIE LEE, OFFICE OF EARTHQUAKES, VOLCANOES, AND  
 C\* ENGINEERING, MAIL STOP 977, U. S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD, MENLO PARK, CA 94025.  
 C\*  
 C\*FORMAT: DATA FORMAT DEFINED AS FOLLOWS:  
 C\* COLUMN FORMAT ITEM EXPLANATION  
 C\* 1-2 (I2) CODE SITE CODE  
 C\* MURRIETA HOT SPRING (2), ARROWHEAD  
 C\* HOT SPRINGS (10), PINON FLAT (12).  
 C\* 4-7 (I4) YEAR YEAR THE DATA WAS COLLECTED.  
 C\* 13-15 (I3) JULIAN DATE THE DATA WAS COLLECTED.  
 C\* DATE  
 C\* 22-27 (I6) RN ACTIVITY OF RADON AND TWO ALPHA  
 C\* DAUGHTERS IN COUNTS PER 20 MIN.  
 C\* (10) OR 40 MIN. (2 AND 12).  
 C\* DAILY AVERAGE OF 24 RECORDS.

C\*END-----

2	1983	82	117869
2	1983	83	107862
2	1983	84	98828
2	1983	85	99143
2	1983	86	102149
2	1983	87	92037
2	1983	88	87352
2	1983	89	83694
2	1983	90	91553
2	1983	91	95079

\*\*\*\*\* 894 data cards not shown here \*\*\*\*\*  
C#FINIS DSN=GL000147

Table GL000148

C#DSN=GL000148;SIZE=000373;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=122;STRT=001079;  
 C\*DATE: 19840618; 0; ADAK1;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: CARL KISSLINGER; SELENA BILLINGTON;  
 C\*ALPHA: 19831001; 19840331; 50.5N; 52.5N; 179.0W; 175.0W;  
 C\* 14-08-0001-21896; A013;  
 C\*KEYWD: ALEUTIANS; 14-08-0001-21230;  
 C\*TITLE: SUMMARY DATA FOR EARTHQUAKES LOCATED BY THE ADAK SEISMIC NETWORK FOR  
 C\* OCTOBER 1, 1983 THROUGH MARCH 31, 1984  
 C\*AUTHOR: CARL KISSLINGER AND SELENA BILLINGTON  
 C\*INSTITUTION: UNIVERSITY OF COLORADO  
 C\* CIRES  
 C\* CAMPUS BOX 449  
 C\* BOULDER, CO 80309  
 C\*ABSTRACT:  
 C\*REFERENCE: KISSLINGER, CARL, AND SELENA BILLINGTON (1984). "CENTRAL ALEUTIAN  
 C\* ISLANDS SEISMIC NETWORK" IN SUMMARIES OF TECHNICAL REPORTS,  
 C\* VOLUME XVIII, NATIONAL EARTHQUAKE HAZARDS REDUCTION PROGRAM,  
 C\* JUNE 1984, U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 84-628.  
 C\* KISSLINGER, CARL (1984). "A FIELD STUDY OF EARTHQUAKE PREDICTION  
 C\* METHODS IN THE CENTRAL ALEUTIAN ISLANDS" IN SUMMARIES OF  
 C\* TECHNICAL REPORTS, VOLUME XVIII, NATIONAL EARTHQUAKE HAZARDS  
 C\* REDUCTION PROGRAM, JUNE 1984, U. S. GEOLOGICAL SURVEY  
 C\* OPEN-FILE REPORT 84-682.  
 C\* KISSLINGER, CARL, AND SELENA BILLINGTON (1984). "PREDICTION  
 C\* METHODOLOGY FOR SUBDUCTION ZONE EARTHQUAKES, CENTRAL ALEUTIAN  
 C\* ISLANDS" IN SUMMARIES OF TECHNICAL REPORTS, VOLUME XVIII,  
 C\* NATIONAL EARTHQUAKE HAZARDS REDUCTION PROGRAM, JUNE 1984,  
 C\* U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 84-628.  
 C\* KISSLINGER, CARL, AND SELENA BILLINGTON (1984). "DATA SUMMARY:  
 C\* CENTRAL ALEUTIAN ISLANDS SEISMIC NETWORK, OCTOBER 1, 1983 -  
 C\* MARCH 31, 1984". A COPY OF THIS UNPUBLISHED REPORT IS  
 C\* AVAILABLE FROM WILLIE LEE, OFFICE OF EARTHQUAKES, VOLCANOES,  
 C\* AND ENGINEERING, MAIL STOP 977, U.S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD, MENLO PARK, CA 94025.  
 C\*  
 C\*FORMAT: DATA FORMAT DEFINED AS FOLLOWS:  
 C\*  

C*	COLUMN	EXPLANATION
C*	1-3	DEQ = FREE DEPTH SOLUTION; LEQ = FIXED DEPTH SOLUTION
C*	6-26	DATE AND TIME (YR/MO/DAY HR/MIN/SEC)
C*	29-34	NORTH LATITUDE
C*	36-43	WEST LONGITUDE
C*	45-49	DEPTH
C*	50-52	DURATION MAGNITUDE
C*	53-69	P FIRST-MOTION POLARITY AT THE STATIONS (WILL SEND SEQUENCE OF STATIONS IF ANYONE CARES)
C*	70-72	IDENTIFIER OF THE SUB-REGION OF THE ADAK SEISMIC ZONE
C*	73-80	EVENT FLAGS AND NEIS TELESEISMIC MAGNITUDE
C*	73	MAGNITUDE OUT OF RANGE FOR DETERMINING DURATION MAGNITUDES:
C*		S = EVENT TOO SMALL FOR DURATION MAGNITUDE

C\* L = EVENT TOO LARGE FOR DURATION MAGNITUDE  
 C\* 74 SPECIAL STUDIES: USED FOR IDENTIFYING EVENTS  
 C\* USED IN INDIVIDUAL PROJECTS  
 C\* 75 INTERESTING EVENTS  
 C\* A = AFTERSHOCK (ONLY WHEN CLEARLY ASSOCIATED  
 C\* WITH MAINSHOCK)  
 C\* B = BLAST  
 C\* C = CONVERTED PHASE  
 C\* F = FELT ON ADAK  
 C\* H = HARMONIC TREMOR  
 C\* I = INTERNATIONAL DATA EXCHANGE EVENT  
 C\* L = LOCATED BY OBS'S  
 C\* M = FOCAL MECHANISM HAS BEEN DETERMINED  
 C\* O = OBSERVED BY OBS'S  
 C\* T = TSUNAMIGENIC  
 C\* U = UNIDENTIFIED NON-SEISMIC EVENT  
 C\* V = ASSOCIATED WITH SURFACE VOLCANISM  
 C\* 76 WARNING FLAGS ARE ASSIGNED AUTOMATICALLY BY  
 C\* THE HYPOCENTER LOCATION PROGRAM  
 C\* X = DID NOT CONVERGE AND SE GREATER THAN  
 C\* 0.30 SEC  
 C\* Z = DEPTH ABOVE SURFACE OR DEPTH GREATER  
 C\* THAN 300 KM  
 C\* 77 STANDARD ERROR CODE IS ASSIGNED AUTOMATICALLY  
 C\* 1 = SE LESS THAN OR EQUAL TO 0.30  
 C\* 2 = SE IS GREATER THAN 0.30 BUT LESS THAN OR  
 C\* EQUAL TO 0.50  
 C\* 3 = SE IS GREATER THAN 0.50 BUT LESS THAN OR  
 C\* EQUAL TO 0.75  
 C\* 4 = SE IS GREATER THAN 0.75 BUT LESS THAN OR  
 C\* EQUAL TO 1.0  
 C\* W = SE IS GREATER THAN 1.0  
 C\* 78-80 TELESEISMIC MAGNITUDES FROM THE PDE ARE GIVEN  
 C\* FOR ANY EVENTS WITH DURATION MAGNITUDES  
 C\* GREATER THAN 3.5

C\*END-----

deq	83	10	2	21	50	7.86	51.426	-176.615	37.71.6..cc.dddd....d...SW2	1
deq	83	10	3	7	57	59.39	51.873	-176.102	142.82.5..d....d.....c...D	1
deq	83	10	3	13	28	.67	51.417	-175.975	21.31.3d.dd...d.....d...SE2	1
deq	83	10	4	0	59	7.50	51.879	-176.747	121.12.2..d..ddd.....d...D	1
deq	83	10	5	1	26	59.91	51.745	-176.288	77.41.5..c.....D	1
deq	83	10	6	7	41	4.33	51.369	-177.463	38.51.1...d.d.....c...AC3	1
deq	83	10	6	12	25	48.28	51.676	-176.568	80.21.5.....c...D	1
leq	83	10	8	12	0	9.70	51.297	-176.085	10.31.5d.....SE	1
deq	83	10	9	4	13	19.72	51.109	-177.708	8.32.5n....d.end...d...W	1
deq	83	10	10	0	46	12.75	51.950	-176.621	6.2.5..d....cc....c...V	1

\*\*\*\*\* 273 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000148



Table GL000149

C#DSN=GL000149;SIZE=000664;DATE=100584;ARCH=TM;TAPE=SM9310;FILE=093;STRT=000001;  
 C#DATE: 19840327; 0; FOCMEC1;  
 C#CLASS: EARTHQUAKE; FOCAL MECHANISM;  
 C#PERSN: YAN KAGAN; A. J. WICKENS; J. H. HODGSON;  
 C#ALPHA: 19221111; 19621229; 90.05; 90.0N; 180.0W; 180.0E; ; A010;  
 C#KEYWD: ;  
 C#TITLE: DOMINION OBSERVATORY COMPUTER RE-EVALUATION OF EARTHQUAKE MECHANISM  
 C# SOLUTIONS: 1922-1962  
 C#AUTHOR: A. J. WICKENS AND J. H. HODGSON  
 C#INSTITUTION: DOMINION OBSERVATORY, OTTAWA, CANADA  
 C#ABSTRACT: THIS DATA SET WAS TAKEN FROM A TAPE SENT BY YAN KAGAN, U.C.L.A.  
 C#REFERENCE: WICKENS, A. J., AND HODGSON, J. H. (1967). COMPUTER  
 C# RE-EVALUATION OF EARTHQUAKE MECHANISM SOLUTIONS:  
 C# 1922-1962, PUBLICATIONS OF THE DOMINION OBSERVATORY,  
 C# OTTAWA, VOL. XXXIII, NO. 1.  
 C#FORMAT:  
 C#  
 C# COLUMNS FORMAT ITEM  
 C#  
 C# 02-04 A3 SEQUENCE NUMBER  
 C# 05-06 I2 YEAR (LAST 2 DIGITS)  
 C# 07-08 I2 MONTH  
 C# 09-10 I2 DAY  
 C# 11-12 I2 HOUR  
 C# 13-14 I2 MINUTE  
 C# 15-16 I2 SECOND  
 C# 17 BLANK  
 C# 18-21 F4.1 LATITUDE  
 C# 22 A1 N OR S  
 C# 23-27 F5.1 LONGITUDE  
 C# 28 A1 E OR W  
 C# 29-31 I3 DEPTH (KM)  
 C# 32 BLANK  
 C# 33-35 F3.1 MAGNITUDE  
 C# 36 BLANK  
 C# 37-41 F5.1 P-AXIS AZIMUTH (DEG)  
 C# 42 BLANK  
 C# 43-46 F4.1 P-AXIS PLUNGE (DEG)  
 C# 47 BLANK  
 C# 48-52 F5.1 T-AXIS AZIMUTH (DEG)  
 C# 53 BLANK  
 C# 54-57 F4.1 T-AXIS PLUNGE (DEG)  
 C# 58 BLANK  
 C# 59-61 I3 SEQUENCE NUMBER OF KERN COUNTY AFTERSHOCKS  
 C# FROM BATH AND RICHTER

C#END-----

	1	2	3	4	5	6
N	DATE	TIME	COORDINATES	DEP M	P-AXIS	T-AXIS
			LAT LONG		AZ PL	AZ PL
1	221111	43236	29.05 70.0W	33 8.3	148.3 27.8	338.2 61.9
2	25 628	12105	46.0N111.0W	33 6.7	76.6 31.5	344.3 3.6
3	27 3 7	92746	35.6N135.0E	12 7.7	110.3 4.0	14.0 58.0
4	271024	155955	57.6N137.0W	7.1	18.0 7.8	284.8 22.3

5 29 6 2213828 34.5N137.2E350 7.1 291.2 19.8 37.8 38.4  
6 30 220233700 35.0N139.1E 33 126.1 18.5 225.2 25.2  
7 30 3 9105400 35.0N139.1E 33 122.8 8.4 214.9 13.6  
\*\*\*\*\* 607 data cards not shown here \*\*\*\*\*  
C#FINIS DSN=GL000149

Table GL000150

C#DSN=GL000150;SIZE=003507;DATE=100184;ARCH=TM;TAPE=SM9310;FILE=088;STRT=001038;  
 C\*DATE: 19841001; 0; FOCMEC2;  
 C\*CLASS: EARTHQUAKE; FOCAL MECHANISM;  
 C\*PERSN: DAVID DENHAM; YAN KAGAN;  
 C\*ALPHA: 19290602; 19730626; 90.05; 90.0N; 180.0W; 180.0E; ; A010;  
 C\*KEYWD: ;  
 C\*TITLE: SUMMARY OF EARTHQUAKE FOCAL MECHANISMS FOR THE WESTERN PACIFIC-  
 C\* INDONESIAN REGION, 1929-1973  
 C\*AUTHOR: DAVID DENHAM  
 C\*INSTITUTION: BUREAU OF MINERAL RESOURCES, CANBERRA CITY, AUSTRALIA  
 C\*ABSTRACT: THIS CATALOG OF EARTHQUAKE FOCAL MECHANISMS WAS SUBMITTED  
 C\* BY YAN KAGAN, U. C. L. A.  
 C\*REFERENCE: DENHAM,D. (1977). "SUMMARY OF EARTHQUAKE FOCAL MECHANISMS FOR THE  
 C\* WESTERN PACIFIC-INDONESIAN REGION, 1929-1973," WORLD DATA  
 C\* CENTER A FOR SOLID EARTH GEOPHYSICS, BOULDER, COLORADO,  
 C\* REPORT SE-3 (GEODYNAMICS PROJECT-SCIENTIFIC REPORT NO. 28).  
 C\*FORMAT: EACH ORIGINAL HEADER AND LINE OF DATA HAS BEEN BROKEN INTO TWO  
 C\* 80-CHARACTER LINES IN THE FOLLOWING DATA SET.

C*	COLUMN	FORMAT	EXPLANATION
C*	1	1X	BLANK
C*	2-3	I2	YEAR OF EVENT
C*	4	1X	BLANK
C*	5-6	I2	MONTH
C*	7	1X	BLANK
C*	8-9	I2	DAY
C*	10	1X	BLANK
C*	11-12	I2	HOUR
C*	13	1X	BLANK
C*	14-15	I2	MINUTE
C*	16	1X	BLANK
C*	17-20	F4.1	SECOND
C*	21	1X	BLANK
C*	22-27	F6.3	LATITUDE IN DEGREES
C*	28	A1	N/S
C*	29	1X	BLANK
C*	30-36	F7.3	LONGITUDE IN DEGREES
C*	37	A1	E/W
C*	38	1X	BLANK
C*	39-41	I3	FOCAL DEPTH IN KILOMETERS
C*	42-44	3X	BLANK
C*	45-47	F3.1	MB MAGNITUDE
C*	48	1X	BLANK
C*	49-51	F3.1	ML MAGNITUDE
C*	52	1X	BLANK
C*	53-55	F3.1	MS MAGNITUDE
C*	56-58	3X	BLANK
C*	59-61	I3	POLE OF 1ST NODAL PLANE: TREND (DEGREES)
C*	62-65	4X	BLANK
C*	66-67	I2	POLE OF 1ST NODAL PLANE: PLUNGE (DEGREES)
C*	68-72	5X	BLANK
C*	73-75	I3	POLE OF 2ND NODAL PLANE: TREND (DEGREES)

C\* 76-79 4X BLANK  
 C\* 80-81 I2 POLE OF 2ND NODAL PLANE: PLUNGE (DEGREES)  
 C\* 82-86 5X BLANK  
 C\* 87-89 I3 AXIS OF COMPRESSION P: TREND (DEGREES)  
 C\* 90-93 4X BLANK  
 C\* 94-95 I2 AXIS OF COMPRESSION P: PLUNGE (DEGREES)  
 C\* 96-100 5X BLANK  
 C\* 101-103 I3 AXIS OF TENSION T: TREND (DEGREES)  
 C\* 104-107 4X BLANK  
 C\* 108-109 I2 AXIS OF TENSION T: PLUNGE (DEGREES)  
 C\* 110-114 5X BLANK  
 C\* 115-117 I3 NULL AXIS B: TREND (DEGREES)  
 C\* 118-121 4X BLANK  
 C\* 122-123 I2 NULL AXIS B: PLUNGE (DEGREES)  
 C\* 124-125 2X BLANK  
 C\* 126-129 I4 EARTHQUAKE SEQUENCE NUMBER

C\*END-----

1

# EARTHQUAKE FOCAL MECHANISM SOLUTIONS

F	AXIS OF		NULL	POLE OF			POLE 0		
	COMPRESSION	TENSION		1ST NODAL	2ND NODAL	PLANE	PLANE		
AL	DATE	TIME	AXIS	MAGNITUDES	TREND	PLUNGE	TREND	PLUNGE	PLU
	P	T	B						
	YR MO DA	HR MN SEC	LAT LONG	KM	MB ML MS				
	NGE	TREND PLUNGE	TREND PLUNGE	TREND PLUNGE	NO.				

\*\*\*\*\* 3426 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000150

Table GL000151

C#DSN=GL000151;SIZE=018833;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=123;STRT=000001;  
 C\*DATE: 19840730; 0; JAPAN1;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: YAN KAGAN; RITSUKO MATSU'URA;  
 C\*ALPHA: 19260104; 19591231; 25.0N; 50.0N; 125.0E; 150.0E ; ; A010;  
 C\*KEYWD: ;  
 C\*TITLE: THE JAPAN METEOROLOGICAL AGENCY REGIONAL CATALOGUE OF EARTHQUAKES  
 C\* IN AND NEAR JAPAN: 1926-1959  
 C\*AUTHOR:  
 C\*INSTITUTION: JAPAN METEOROLOGICAL AGENCY, TOKYO, JAPAN  
 C\*ABSTRACT: THIS CATALOG OF JAPANESE EARTHQUAKES WAS SUBMITTED BY YAN KAGAN,  
 C\* U. C. L. A.. WHO OBTAINED IT FROM RITSUKO MATSU'URA.

C\*REFERENCE:

C\*FORMAT:

C\*

C*	COLUMN	FORMAT	ITEM	EXPLANATION
C*				
C*	1-2	I2	DAY	DAY OF THE MONTH
C*	3-4	I2	HOUR	HOUR
C*	5-6	I2	MIN	MINUTE (ROUNDED OFF)
C*	7-32	26X		BLANK
C*	33-34	I2	MINT	MINUTE
C*	35-37	F2.1	SEC	SECONDS
C*	38	1X		BLANK
C*	39-40	I2	TE	TIME ERROR
C*	41	1X		BLANK
C*	42-44	I3	LON	LONGITUDE OF EPICENTER IN DEGREES
C*	45-46	I2	LONM	LONGITUDE MINUTES
C*	47-48	I2	LONE	LONGITUDE ERRORS
C*	49	1X		BLANK
C*	50-51	I2	LAT	LATITUDE OF EPICENTER IN DEGREES
C*	52-53	I2	LATM	LATITUDE MINUTES
C*	54-55	I2	LATE	LATITUDE ERRORS
C*	56-58	I3	DEPTH	FOCAL DEPTH IN KILOMETERS
C*	59-60	F2.1	MAG	MAGNITUDE
C*	61-62	I2	YEAR	YEAR OF EVENT
C*	63-64	I2	MONTH	MONTH OF EVENT
C*	65-78	14X		BLANK
C*	79	A1	UE	UNKNOWN ENTRY
C*	80	1X		BLANK

C\*END-

4 525	0 0 0 145 0 0 42 0 0 09926 1
1018 2	0 0 0 14125 4 3615 5 105526 1
101831	0 0 0 141 6 0 3618 0 209926 1
101835	0 0 0 141 8 6 3624 8 709926 1
12 257	0 0 0 13938 7 3512 5 103826 1
122139	0 0 0 1404418 37 0 8 809926 1
132219	0 0 0 14642 0 4254 0 209926 1
1413 7	0 0 0 13959 5 36 2 6 103426 1
141752	0 0 0 13341 3 3334 3 04726 1
15 834	0 0 0 14111 3 36 3 2 909926 1

\*\*\*\*\* 18781 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000151

Table GL000152

C#DSN=GL000152;SIZE=022384;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=124;STRT=000001;  
 C#DATE: 19840730; 0; JAPAN2;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: YAN KAGAN; RITSUKO MATSU'URA;  
 C#ALPHA: 19600102; 19811231; 25.0N; 50.0N; 125.0E; 150.0E ; ; A010;  
 C#KEYWD: ;  
 C#TITLE: THE JAPAN METEOROLOGICAL AGENCY REGIONAL CATALOGUE OF EARTHQUAKES  
 C# IN AND NEAR JAPAN: 1960-1981  
 C#AUTHOR:  
 C#INSTITUTION: JAPAN METEOROLOGICAL AGENCY, TOKYO, JAPAN  
 C#ABSTRACT: THIS CATALOG OF JAPANESE EARTHQUAKES WAS SUBMITTED BY YAN KAGAN,  
 C# U. C. L. A., WHO OBTAINED IT FROM RITSUKO MATSU'URA.  
 C#REFERENCE:  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000151 for details  
 \*\*\*\*\*

C#END-----  

2 222	22482 9 13849 5 35 9 3 209960 1
2 356	56488 5 13856 3 35 14 2 109960 1
2 946	45420 12 142 1 6 3736 2 109960 1
3 751	51137 2 13022 1 3255 1 09960 1
31013	13 49 6 14236 3 38 7 2 104860 1
313 0	0309 8 14024 5 3336 3 209960 1
32045	45131 6 14127 3 37 8 1 504460 1
4 620	20149 7 14821 4 4433 31205760 1
4 823	23256 14 14358 7 4021 5 409960 1
5 722	22 28 3 14027 1 3537 2 109960 1

\*\*\*\*\* 22332 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000152

Table GL000153

C#DSN=GL000153;SIZE=000378;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=125;STRT=000001;  
 C#DATE: 19840801; 0; UTAH1;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: W. D. RICHINS; WALTER J. ARABASZ; ROBERT B. SMITH;  
 C#ALPHA: 19831001; 19840331; 36.75 N; 42.50 N; 114.25 W; 108.75 W;  
 C# 14-08-0001-21857; A015;  
 C#KEYWD: WASATCH FAULT;  
 C#TITLE: EARTHQUAKE SUMMARY DATA FOR THE UTAH REGION, OCTOBER 1, 1983 -  
 C# MARCH 31, 1984  
 C#AUTHOR: W. D. RICHINS  
 C#INSTITUTION: UNIVERSITY OF UTAH, SEISMOGRAPH STATIONS  
 C# ROOM 704 W. C. BROWNING BLDG  
 C# SALT LAKE CITY, UT 84112-1183  
 C#ABSTRACT:  
 C#REFERENCE: ARABASZ, WALTER J., AND ROBERT B. SMITH (1984). "REGIONAL SEISMIC  
 C# MONITORING ALONG THE WASATCH FRONT URBAN CORRIDOR AND ADJACENT  
 C# INTERMOUNTAIN SEISMIC BELT" IN SUMMARIES OF TECHNICAL REPORTS,  
 C# VOLUME XVIII, NATIONAL EARTHQUAKE HAZARDS REDUCTION PROGRAM,  
 C# JUNE 1984, U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 84-628.  
 C# UNIVERSITY OF UTAH (1984). "UTAH PRELIMINARY EPICENTERS:  
 C# DECEMBER 1983." A COPY OF THIS UNPUBLISHED REPORT IS  
 C# AVAILABLE FROM WILLIE LEE, OFFICE OF EARTHQUAKES, VOLCANOES,  
 C# AND ENGINEERING, MAIL STOP 977, U. S. GEOLOGICAL SURVEY,  
 C# 345 MIDDLEFIELD ROAD, MENLO PARK, CA 94025.  
 C# UNIVERSITY OF UTAH (1984). "UTAH PRELIMINARY EPICENTERS:  
 C# JANUARY 1, 1984 TO MARCH 31, 1984." A COPY OF THIS UNPUBLISHED  
 C# REPORT IS AVAILABLE FROM WILLIE LEE, OFFICE OF EARTHQUAKES,  
 C# VOLCANOES, AND ENGINEERING, MAIL STOP 977, U. S. GEOLOGICAL  
 C# SURVEY, 345 MIDDLEFIELD ROAD, MENLO PARK, CA 94025.  
 C#FORMAT: SUMMARY FORMAT DEFINED AS FOLLOWS:  
 C#  

C#	COLUMN	FORMAT	EXPLANATION
C#	1-2	I2	YEAR
C#	3-6	I4	DATE
C#	7	1X	BLANK
C#	8-11	I4	ORIGIN TIME, HOUR AND MINUTE (UTC)
C#	12	1X	BLANK
C#	13-17	F5.2	ORIGIN TIME, SECONDS
C#	18	1X	BLANK
C#	19-20	I2	NORTH LATITUDE, DEGREES
C#	21	1X	BLANK
C#	22-26	F5.2	NORTH LATITUDE, MINUTES
C#	27	1X	BLANK
C#	28-30	I3	WEST LONGITUDE, DEGREES
C#	31	1X	BLANK
C#	32-36	F5.2	WEST LONGITUDE, MINUTES
C#	37-38	2X	BLANK
C#	39-43	F5.2	DEPTH, KM
C#	44	A1	'*' IMPLIES FIXED DEPTH
C#	45	A1	'W' IMPLIES WOOD-ANDERSON MAGNITUDE
C#	46-50	F5.2	LOCAL MAGNITUDE
C#	51	1X	BLANK

C\* 52-53 I2 NUMBER OF ARRIVAL TIMES USED FOR SOLUTION  
 C\* 54 1X BLANK  
 C\* 55-57 I3 MAXIMUM STATION GAP, DEGREES  
 C\* 58-62 F5.1 MINIMUM STATION DISTANCE, KM  
 C\* 63-67 F5.2 RMS RESIDUAL, SECONDS  
 C\* 68-72 F5.2 ESTIMATE OF HORIZONTAL ERROR, KM  
 C\* 73-77 F5.2 ESTIMATE OF VERTICAL ERROR, KM

C\*END-----

831001	123	23.40	41	47.14	112	23.26	1.37	1.05	18	103	16.7	.22	0.6	1.1
831001	127	56.95	41	47.87	112	23.42	7.65	.80	17	113	15.5	.22	0.6	3.7
831001	232	21.07	41	47.18	112	23.54	2.05	.70	12	110	16.8	.21	0.6	21.3
831001	625	38.16	39	32.04	111	22.62	3.61	1.56	10	123	45.2	.32	1.3	3.5
831001	725	9.27	41	46.91	112	23.04	1.39	.68	17	102	17.1	.29	0.7	1.2
831001	1152	7.46	41	5.16	110	39.83	.23	1.73	17	277	85.2	.27	3.2	2.0
831001	2156	28.28	40	1.46	111	31.62	4.17	1.97	18	117	26.7	.47	1.3	2.3
831002	1333	29.36	39	59.19	111	47.53	1.09	1.10	12	142	10.6	.30	1.2	3.3
831002	2317	10.68	41	53.16	111	44.26	7.75	1.10	19	87	9.3	.24	0.5	2.2
831003	531	8.95	39	19.71	111	6.90	.03	2.03	16	100	46.1	.25	1.0	2.8

\*\*\*\*\* 306 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000153



Table GL000154

C#DSN=GL000154;SIZE=001266;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=096;STRT=000001;  
 C#DATE: 19841003; 0; CALSUM69;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: BOB NOVACK; W. H. K. LEE; J. C. ROLLER; P. G. BAUER; J. D. JOHNSON;  
 C#ALPHA: 19690101; 19691231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C#KEYWD: ;  
 C#TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C# IN CENTRAL CALIFORNIA FOR THE YEAR 1969  
 C#AUTHOR: W. H. K. LEE, J. C. ROLLER, P. G. BAUER, J. D. JOHNSON  
 C#INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C# 345 MIDDLEFIELD ROAD,  
 C# MENLO PARK, CA 94025  
 C#ABSTRACT: THIS CATALOG SUMMARIZES THE RESULTS OF ROUTINE EARTHQUAKE LOCATIONS  
 C# FROM THE U. S. G. S. CENTRAL CALIFORNIA MICROEARTHQUAKE NETWORK FOR  
 C# THE YEAR 1969. 1190 EVENTS WHICH WERE IDENTIFIED AS EARTHQUAKES  
 C# WERE LOCATED USING ARRIVAL TIMES RECORDED AT 101 SEISMOGRAPH  
 C# STATIONS.  
 C# THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C#REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C# DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C# OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C# REPORT, 1975.  
 C# LEE, W. H. K., J. C. ROLLER, P. G. BAUER, AND J. D. JOHNSON,  
 C# "CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM IN  
 C# CENTRAL CALIFORNIA FOR THE YEAR 1969", U. S. GEOLOGICAL SURVEY  
 C# OPEN-FILE REPORT, 1972.  
 C#FORMAT:  
 C#  

C#	COLUMN	FORMAT	ITEM	EXPLANATION
C#	1-2	I2	EVYEAR	2 DIGITS FOR THE YEAR OF THE QUAKE.
C#	3-4	I2	EVMON	2 DIGITS FOR THE MONTH OF THE QUAKE.
C#	5-6	I2	EVDAY	2 DIGITS FOR THE DAY OF THE QUAKE.
C#	7	1X		BLANK
C#	8-9	I2	EVHOUR	2 DIGITS FOR THE HOUR OF THE QUAKE.
C#	10-11	I2	EVMIN	2 DIGITS FOR THE MINUTE OF THE QUAKE.
C#	12	1X		BLANK
C#	13-17	F5.2	ORTIME	ORIGIN TIME OF THE QUAKE IN SECONDS.
C#	18	1X		BLANK
C#	19-20	I2	LATDEG	NORTH LATITUDE OF EPICENTER IN DEGREES.
C#	21	A1		"-"
C#	22-26	F5.2	LATMIN	NORTH LATITUDE OF EPICENTER IN MINUTES.
C#	27	1X		BLANK
C#	28-30	I3	LONDEG	WEST LONGITUDE OF EPICENTER IN DEGREES.
C#	31	A1		"-"
C#	32-36	F5.2	LONMIN	WEST LONGITUDE OF EPICENTER IN MINUTES.
C#	37-38	2X		BLANK
C#	39-43	F5.2	HYDEP	EARTHQUAKE FOCAL DEPTH IN KILOMETERS.
C#	44	1X		BLANK
C#	45	A1	HYDEPC	* = FIXED FOCAL DEPTH SOLUTION.
C#	46	1X		BLANK
C#	47-50	F4.2	ML	LOCAL MAGNITUDE OF THE QUAKE.
C#	51	A1	MLCODE	1-CHARACTER CODE FOR THE TYPE OF LOCAL MAGNITUDE;

```

C*          R=RICHTER SCALE USING THE WOOD-ANDERSON SEISMOGRAM.
C* 52-53    I2          NUMPHA TOTAL NUMBER OF PHASE READINGS USED IN LOCATING THE
C*          EARTHQUAKE.
C* 54       1X          BLANK
C* 55-57    I3          GAP    MAXIMUM STATION GAP IN DEGREES.
C* 58-62    F5.1        DMIN    MINIMUM STATION DISTANCE IN KILOMETERS FOR A LOCAL
C*          EARTHQUAKE.
C* 63       1X          BLANK
C* 64-67    F4.1        RMS    RMS RESIDUAL IN SECONDS.
C* 68-72    F5.1        ERH    STANDARD ERROR OF THE EPICENTER IN KILOMETERS.
C* 73-77    F5.1        ERZ    STANDARD ERROR OF THE FOCAL DEPTH IN KILOMETERS.
C* 78       A1          QRMK    Q=QUARRY BLAST.
C* 79       A1          HYQUAL  HYP071 QUALITY CODE FOR A LOCAL EARTHQUAKE.
C*          Q    EPICENTER    FOCAL DEPTH
C*          A    EXCELLENT    GOOD
C*          B    GOOD         FAIR
C*          C    FAIR         POOR
C*          D    POOR         POOR
C* 80       I1          NUMMOD  MODEL NUMBER.
C*          1=MODEL FOR SOURCES EAST OF THE SAN ANDREAS FAULT.
C*          2=MODEL FOR SOURCES WEST OF THE SAN ANDREAS FAULT.
C*END-----
690101  0 3 18.16 37- 1.62 121-27.30   9.63   2.36 22  90  2.6 0.13  0.5  0.7 B1
690101 11 2 53.90 36-56.88 121-25.01   8.74   1.72 14 111 10.4 0.08  0.4  1.4 B1
690101 14 5 59.66 37-21.06 121-40.45   9.47   0.40  8 126 10.4 0.09  0.6  2.8 B1
690101 1413 11.64 37-21.06 121-40.89   9.69   1.02 11 123  3.7 0.10  0.6  1.2 B1
690101 1415 52.47 37-21.19 121-40.86   9.44   0.56  8 125 10.0 0.10  0.8  3.5 B1
690101 1518 17.36 36-54.75 121-25.18   5.00   0.84  9 156 13.8 0.21  1.6  1.8 C2
690101 16 0 53.44 37-20.60 121-41.32   5.49   0.68  9 114  4.2 0.15  0.9  1.8 B1
690101 16 6  6.32 37-20.98 121-40.71   9.66   0.65  8 123  3.4 0.09  0.7  1.7 B1
690101 17 7  5.86 36-58.33 121-20.98   5.00   0.75  5 174 10.3 0.08  2.3  2.4 C1
690102 049 28.61 37-29.74 121-48.05   5.00   1.30  7 298  4.9 0.11  7.6  0.8 D1
***** 1180 data cards not shown here *****
C#FINIS DSN=GL000154

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Table GL000155

C#DSN=GL000155;SIZE=002395;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=096;STRT=001267;  
 C\*DATE: 19841003; 0; CALSUM70;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BOB NOVACK; W. H. K. LEE; J. C. ROLLER; K. L. MEAGHER; R. E. BENNETT;  
 C\*ALPHA: 19700101; 19701231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C\*KEYWD: ;  
 C\*TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C\* IN CENTRAL CALIFORNIA FOR THE YEAR 1970  
 C\*AUTHOR: W. H. K. LEE, J. C. ROLLER, K. L. MEAGHER, R. E. BENNETT  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD,  
 C\* MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS CATALOG SUMMARIZES THE RESULTS OF ROUTINE EARTHQUAKE LOCATIONS  
 C\* FROM THE U. S. G. S. CENTRAL CALIFORNIA MICROEARTHQUAKE NETWORK FOR  
 C\* THE YEAR 1970. 2319 EVENTS WHICH WERE IDENTIFIED AS EARTHQUAKES  
 C\* WERE LOCATED USING ARRIVAL TIMES RECORDED AT 142 SEISMOGRAPH  
 C\* STATIONS.  
 C\* THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C\*REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C\* DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C\* OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT, 1975.  
 C\* LEE, W. H. K., J. C. ROLLER, K. L. MEAGHER, AND R. E. BENNETT,  
 C\* "CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM IN  
 C\* CENTRAL CALIFORNIA FOR THE YEAR 1970", U. S. GEOLOGICAL SURVEY  
 C\* OPEN-FILE REPORT, 1972.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000154 for details  
 \*\*\*\*\*

C\*END-----  
 700101 015 37.63 37-18.38 122- 6.20 1.28 1.05 5 107 3.0 0.05 0.4 0.4 C2  
 700101 515 41.66 37-14.92 121-42.21 5.87 0.61 5 105 2.9 0.02 0.0 0.0 C1  
 700101 825 2.99 36-23.98 120-57.84 7.79 1.53 4 163 5.6 0.00 C2  
 700101 1055 24.49 37-23.37 121-41.93 4.53 0.47 4 223 6.1 0.02 C1  
 700101 13 1 16.90 37-14.66 121-41.96 5.73 0.46 4 176 2.8 0.02 C1  
 700101 1512 35.97 36-45.40 121-20.70 12.31 1.26 8 124 5.3 0.06 0.4 0.7 B2  
 700101 2050 17.19 36-46.57 121-22.45 11.24 1.55 13 93 6.4 0.12 0.6 1.2 B2  
 700101 2057 47.59 36-47.15 121-23.00 10.38 \* 3.20 36 46 6.0 0.16 0.4 0.5 B2  
 700101 21 1 22.59 36-46.74 121-22.59 10.37 1.55 10 92 6.3 0.13 0.9 1.6 B2  
 700101 2114 9.99 36-46.78 121-22.66 10.74 0.80 8 143 6.2 0.09 0.8 1.2 B2  
 \*\*\*\*\* 2309 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000155

Table GL000156

C#DSN=GL000156;SIZE=002118;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=096;STRT=003662;  
 C#DATE: 19841003; 0; CALSUM71;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSON: BOB NOVACK; W. H. K. LEE; K. L. MEAGHER; R. E. BENNETT;  
 C# E. E. MATAMOROS;  
 C#ALPHA: 19710101; 19711231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C#KEYWD: ;  
 C#TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C# IN CENTRAL CALIFORNIA FOR THE YEAR 1971  
 C#AUTHOR: W. H. K. LEE, K. L. MEAGHER, R. E. BENNETT, E. E. MATAMOROS  
 C#INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C# 345 MIDDLEFIELD ROAD,  
 C# MENLO PARK, CA 94025  
 C#ABSTRACT: THIS CATALOG SUMMARIZES THE RESULTS OF ROUTINE EARTHQUAKE LOCATIONS  
 C# FROM THE U. S. G. S. CENTRAL CALIFORNIA MICROEARTHQUAKE NETWORK FOR  
 C# THE YEAR 1971. 2041 EVENTS WHICH WERE IDENTIFIED AS EARTHQUAKES  
 C# WERE LOCATED USING ARRIVAL TIMES RECORDED AT 121 SEISMOGRAPH  
 C# STATIONS.  
 C# THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C#REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C# DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C# OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C# REPORT, 1975.  
 C# LEE, W. H. K., K. L. MEAGHER, R. E. BENNETT, AND E. E. MATAMOROS,  
 C# "CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM IN  
 C# CENTRAL CALIFORNIA FOR THE YEAR 1971", U. S. GEOLOGICAL SURVEY  
 C# OPEN-FILE REPORT, 1972.  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000154 for details  
 \*\*\*\*\*

C#END-----  
 710101 929 0.49 37-17.95 121-39.43 5.44 1.53 21 67 4.8 0.11 0.4 0.4 A1  
 710101 1138 15.85 36-47.81 121-22.95 8.77 0.90 9 85 6.9 0.07 0.5 1.5 A1  
 710101 1456 58.45 37-37.00 121-39.61 6.99 1.77 10 170 3.2 0.14 1.1 0.8 C1  
 710101 15 2 5.46 37-36.88 121-39.98 6.97 2.00 12 159 3.4 0.11 0.7 0.7 B1  
 710101 15 6 21.52 37-36.59 121-40.02 7.54 0.93 9 151 3.1 0.14 1.1 1.6 C1  
 710102 627 36.86 35-56.35 120-30.48 11.92 \* 3.05 12 107 3.1 0.12 1.0 0.7 B1  
 710102 833 49.86 36-50.34 121-23.92 9.90 1.37 17 69 2.0 0.07 0.3 0.6 A1  
 710102 2324 23.45 37-19.61 121-40.95 2.95 0.94 10 102 4.0 0.20 1.0 0.6 B1  
 710104 516 2.27 35-46.82 121-14.79 9.26 1.98 10 251 34.4 0.12 3.2 1.4 D2  
 710104 937 29.40 36-47.64 120-51.48 3.93 2.16 23 220 21.1 0.12 1.0 0.4 C1  
 \*\*\*\*\* 2031 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000156

Table GL000157

C#DSN=GL000157;SIZE=005350;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=096;STRT=005780;  
 C\*DATE: 19841003; 0; CALSUM72;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BOB NOVACK; R. L. WESSON; R. E. BENNETT; K. L. MEAGHER; F. W. LESTER;  
 C\*ALPHA: 19720101; 19721231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C\*KEYWD: ;  
 C\*TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C\* IN CENTRAL CALIFORNIA FOR THE YEAR 1972  
 C\*AUTHOR: R. L. WESSON, R. E. BENNETT, K. L. MEAGHER, F. W. LESTER  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD,  
 C\* MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS CATALOG SUMMARIZES THE RESULTS OF ROUTINE EARTHQUAKE LOCATIONS  
 C\* FROM THE U. S. G. S. CENTRAL CALIFORNIA MICROEARTHQUAKE NETWORK FOR  
 C\* THE YEAR 1972. 4943 EVENTS WHICH WERE IDENTIFIED AS EARTHQUAKES  
 C\* WERE LOCATED USING ARRIVAL TIMES RECORDED AT 129 SEISMOGRAPH  
 C\* STATIONS.  
 C\* WARNING: TOTAL NUMBER OF EVENTS IN THIS CATALOG DOES NOT MATCH  
 C\* TOTAL NUMBER OF EVENTS IN THIS DATA SET.  
 C\* THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C\*REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C\* DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C\* OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT, 1975.  
 C\* WESSON, R. L., R. E. BENNETT, AND K. L. MEAGHER, "CATALOG OF  
 C\* EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM IN CENTRAL  
 C\* CALIFORNIA JANUARY-MARCH 1972", U. S. GEOLOGICAL SURVEY  
 C\* OPEN-FILE REPORT, 1972.  
 C\* WESSON, R. L., R. E. BENNETT, AND F. W. LESTER, "CATALOG OF  
 C\* EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM IN CENTRAL  
 C\* CALIFORNIA APRIL-JUNE 1972", U. S. GEOLOGICAL SURVEY  
 C\* OPEN-FILE REPORT, 1972.  
 C\* WESSON, R. L., K. L. MEAGHER, AND F. W. LESTER, "CATALOG OF  
 C\* EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM IN CENTRAL  
 C\* CALIFORNIA JULY-SEPTEMBER 1972", U. S. GEOLOGICAL SURVEY  
 C\* OPEN-FILE REPORT, 1973.  
 C\* WESSON, R. L., F. W. LESTER, AND K. L. MEAGHER, "CATALOG OF  
 C\* EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEMS IN CENTRAL  
 C\* CALIFORNIA OCTOBER-DECEMBER 1972", U. S. GEOLOGICAL SURVEY  
 C\* OPEN-FILE REPORT, 1974.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000154 for details  
 \*\*\*\*\*

C\*END-----  

720101	233	13.67	36-	2.71	120-36.93	2.02	1.52	7	157	11.8	0.14	1.8	0.9	C2
720101	244	11.49	36-41.33	121-20.80	6.46	1.44	10	89	2.3	0.08	0.4	0.8	A2	
720101	951	49.82	36-41.36	121-21.14	5.71	2.51	23	60	2.3	0.13	0.4	0.6	A2	
720101	1027	22.56	36-40.94	121-20.68	5.80	2.39	24	61	3.0	0.13	0.4	0.5	A2	
720101	1101	6.00	36-41.45	121-21.36	5.47	0.68	10	70	2.3	0.10	0.5	1.0	A2	
720101	1404	5.49	37-28.02	121-34.96	4.69	1.20	9	169	13.8	0.19	1.6	1.2	C1	

720101	1636	58.08	35-47.70	121-	3.36	11.79	1.68	7	255	33.6	0.05	0.8	0.6	C2
720101	2049	3.98	36-41.12	121-	21.08	4.71	1.04	11	81	2.7	0.09	0.5	1.0	A2
720101	2331	52.97	36-41.52	121-	21.36	4.75	1.30	9	70	2.2	0.07	0.4	0.8	A2
720101	2359	42.42	36-40.79	121-	20.25	4.96	1.29	11	89	3.3	0.08	0.4	0.9	A2

\*\*\*\*\* 5250 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000157

Table GL000158

C#DSN=GL000158;SIZE=004245;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=097;STRT=000001;  
 C#DATE: 19841003; 0; CALSUM73;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSON: BOB NOVACK; R. L. WESSON; F. W. LESTER; K. L. MEAGHER; C. G. BUFE;  
 C# S. L. KIRKMAN;  
 C#ALPHA: 19730101; 19731231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C#KEYWD: ;  
 C#TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C# IN CENTRAL CALIFORNIA FOR THE YEAR 1973  
 C#AUTHOR: R. L. WESSON, F. W. LESTER, K. L. MEAGHER, C. G. BUFE, S. L. KIRKMAN  
 C#INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C# 345 MIDDLEFIELD ROAD,  
 C# MENLO PARK, CA 94025  
 C#ABSTRACT: THIS CATALOG SUMMARIZES THE RESULTS OF ROUTINE EARTHQUAKE LOCATIONS  
 C# FROM THE U. S. G. S. CENTRAL CALIFORNIA MICROEARTHQUAKE NETWORK FOR  
 C# THE YEAR 1973. 4006 EVENTS WHICH WERE IDENTIFIED AS EARTHQUAKES  
 C# WERE LOCATED USING ARRIVAL TIMES RECORDED AT 142 SEISMOGRAPH  
 C# STATIONS.  
 C# WARNING: TOTAL NUMBER OF EVENTS IN THIS CATALOG DOES NOT MATCH  
 C# TOTAL NUMBER OF EVENTS IN THIS DATA SET.  
 C# THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C#REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C# DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C# OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C# REPORT, 1975.  
 C# WESSON, R. L., F. W. LESTER, AND K. L. MEAGHER, "CATALOG OF  
 C# EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM IN CENTRAL  
 C# CALIFORNIA JANUARY-MARCH 1973", U. S. GEOLOGICAL SURVEY  
 C# OPEN-FILE REPORT, 1974.  
 C# BUFE, C. G., F. W. LESTER, K. L. MEAGHER, AND R. L. WESSON,  
 C# CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM IN  
 C# CENTRAL CALIFORNIA APRIL-JUNE 1973", U. S. GEOLOGICAL SURVEY  
 C# OPEN-FILE REPORT 75-125, 1975.  
 C# LESTER, F. W., K. L. MEAGHER, AND R. L. WESSON, "CATALOG OF  
 C# EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM IN CENTRAL  
 C# CALIFORNIA JULY-SEPTEMBER 1973", U. S. GEOLOGICAL SURVEY  
 C# OPEN-FILE REPORT 76-169.  
 C# LESTER, F. W., S. L. KIRKMAN, AND K. L. MEAGHER, "CATALOG OF  
 C# EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEMS IN CENTRAL  
 C# CALIFORNIA OCTOBER-DECEMBER 1973", U. S. GEOLOGICAL SURVEY  
 C# OPEN-FILE REPORT 78-1010.  
 C#FORMAT:

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 See previous format from dataset GL000154 for details  
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C#END	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
730101	2	4	53.98	36-31.11	121-	7.80	10.08	1.38	11	88	5.0	0.07	0.4	0.8	A2
730101	527	32.93	37-47.71	121-57.42	16.15	1.24	10	63	1.0	0.07	0.5	0.9	A1		
730101	659	19.30	36-48.10	121-31.05	4.63	2.26	28	36	5.0	0.17	0.4	0.7	B2		
730101	724	43.91	37-38.15	121-51.27	5.05	0.73	7	94	9.0	0.11	1.0	3.0	B1		
730101	757	39.01	37- 6.14	121-29.82	10.13	3.20	47	106	4.5	0.15	0.4	0.4	B1		

730101	759	24.42	37-	5.12	121-29.71	9.88	0.31	7	128	4.4	0.03	0.3	0.6	B1
730101	1050	54.88	37-	26.22	121-46.72	4.80	0.65	8	133	2.4	0.14	1.2	0.7	B1
730101	1159	21.63	36-	37.62	121-16.46	4.46	1.31	13	54	3.8	0.06	0.3	0.7	A2
730101	1550	39.60	36-	37.86	121- 8.48	12.35	0.99	10	66	4.8	0.10	0.8	1.2	A1
730101	1817	56.30	36-	24.45	121- 1.63	7.80	0.67	9	88	2.0	0.07	0.6	0.9	A2

\*\*\*\*\* 4144 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000158



Table GL000159

C#DSN=GL000159;SIZE=003302;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=097;STRT=004246;  
 C\*DATE: 19841003; 0; CALSUM74;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BOB NOVACK; F. W. LESTER; K. L. MEAGHER;  
 C\*ALPHA: 19740101; 19741231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C\*KEYWD: ;  
 C\*TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C\* IN CENTRAL CALIFORNIA FOR THE YEAR 1974  
 C\*AUTHOR: F. W. LESTER, K. L. MEAGHER  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD,  
 C\* MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS CATALOG SUMMARIZES THE RESULTS OF ROUTINE EARTHQUAKE LOCATIONS  
 C\* FROM THE U. S. G. S. CENTRAL CALIFORNIA MICROEARTHQUAKE NETWORK FOR  
 C\* THE YEAR 1974. 3073 EVENTS WHICH WERE IDENTIFIED AS EARTHQUAKES  
 C\* WERE LOCATED USING ARRIVAL TIMES RECORDED AT 152 SEISMOGRAPH  
 C\* STATIONS.  
 C\* WARNING: TOTAL NUMBER OF EVENTS IN THIS CATALOG DOES NOT MATCH  
 C\* TOTAL NUMBER OF EVENTS IN THIS DATA SET.  
 C\* THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C\*REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C\* DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C\* OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT, 1975.  
 C\* LESTER, F. W., AND K. L. MEAGHER, "CATALOG OF EARTHQUAKES  
 C\* ALONG THE SAN ANDREAS FAULT SYSTEM IN CENTRAL CALIFORNIA FOR  
 C\* THE YEAR 1974", U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT  
 C\* 79-1138.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000154 for details  
 \*\*\*\*\*

C\*END-----  

740101	612	13.96	38-44.22	122-43.97	2.82	1.81	9	187	3.5	0.10	1.1	0.5	C1
740101	7	9	10.90	36-27.25	121- 4.28	5.18	0.65	7	128	5.8	0.12	1.2	3.6 B2
740101	758	53.60	37-38.35	122- 1.93	2.03	0.97	13	58	2.8	0.15	0.6	0.5	B1
740101	935	35.58	36-50.56	121-34.54	5.46	1.47	16	72	4.8	0.15	0.7	0.7	B2
740101	15	0	46.90	35-48.02	121- 9.58	8.06	1.85	9	223	31.5	0.14	2.2	12.6 D2
740101	1747	4.04	36-57.72	121-38.96	2.48	0.80	10	60	3.5	0.05	0.2	0.2	A2
740101	2339	54.88	36-31.45	121- 6.97	8.41	1.12	11	84	4.0	0.13	0.7	1.3	A2
740102	115	46.99	36-54.64	121-47.86	11.21	1.06	13	178	8.0	0.11	0.8	1.5	B2
740102	231	20.93	37-37.93	121-43.87	5.00	0.84	7	157	9.3	0.08	0.7	1.2	B1
740102	8	6	9.82	36-46.92	121-31.28	7.51	1.97	27	88	4.2	0.14	0.4	0.8 A2

\*\*\*\*\* 3214 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000159

Table GL000160

C#DSN=GL000160;SIZE=003090;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=097;STRT=007548;  
 C\*DATE: 19841003; 0; CALSUM75;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BOB NOVACK; C. A. MCHUGH; F. W. LESTER;  
 C\*ALPHA: 19750101; 19751231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C\*KEYWD: ;  
 C\*TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C\* IN CENTRAL CALIFORNIA FOR THE YEAR 1975  
 C\*AUTHOR: C. A. MCHUGH, F. W. LESTER  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD,  
 C\* MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS CATALOG SUMMARIZES THE RESULTS OF ROUTINE EARTHQUAKE LOCATIONS  
 C\* FROM THE U. S. G. S. CENTRAL CALIFORNIA MICROEARTHQUAKE NETWORK FOR  
 C\* THE YEAR 1975. 2858 EVENTS WHICH WERE IDENTIFIED AS EARTHQUAKES  
 C\* WERE LOCATED USING ARRIVAL TIMES RECORDED AT 230 SEISMOGRAPH  
 C\* STATIONS.  
 C\* WARNING: TOTAL NUMBER OF EVENTS IN PRINTED CATALOG DOES NOT MATCH  
 C\* TOTAL NUMBER OF EVENTS IN THIS DATA SET.  
 C\* THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C\*REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C\* DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C\* OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT, 1975.  
 C\* MCHUGH, C. A., AND F. W. LESTER, "CATALOG OF EARTHQUAKES ALONG THE  
 C\* SAN ANDREAS FAULT SYSTEM IN CENTRAL CALIFORNIA FOR THE YEAR  
 C\* 1975", U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 79-1138.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000154 for details  
 \*\*\*\*\*

C\*END-----  

750101	021	40.87	36-29.04	121-	6.12	5.83	2.02	24	61	3.7	0.12	0.4	1.0	A2	
750101	319	44.09	36-56.52	121-	25.98	4.73	1.43	23	74	5.4	0.10	0.3	0.8	B1	
750101	334	45.95	36-55.61	121-	28.07	7.13	1.34	23	60	3.7	0.09	0.3	0.7	A1	
750101	652	39.91	36-55.71	121-	28.00	5.33	1.85	33	56	3.9	0.10	0.2	0.6	A1	
750101	828	53.42	36-53.57	121-	24.42	7.88	1.26	24	65	4.0	0.10	0.3	0.9	A1	
750101	841	59.87	36-54.52	121-	28.89	6.22	1.30	22	53	8.9	0.06	0.2	1.2	B1	
750101	1013	36.80	35-55.48	120-	32.55	8.95	1.68	7	175	6.6	0.02	0.4	0.4	B1	
750101	1031	9.37	36-55.92	121-	27.96	4.69	1.45	23	61	4.1	0.08	0.2	0.6	A1	
750101	1229	48.62	36-44.25	121-	23.45	6.14	1.52	14	62	5.3	0.11	0.5	0.8	A2	
750101	14	8	17.92	36-55.77	121-	27.85	4.84	2.01	33	56	4.1	0.10	0.2	0.4	A1

 \*\*\*\*\* 3003 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000160

Table GL000161

C\*DSN=GL000161;SIZE=003295;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=098;STRT=000001;  
 C\*DATE: 19841003; 0; CALSUM76;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSON: BOB NOVACK; C. A. MCHUGH; F. W. LESTER;  
 C\*ALPHA: 19760101; 19761231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C\*KEYWD: ;  
 C\*TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C\* IN CENTRAL CALIFORNIA FOR THE YEAR 1976  
 C\*AUTHOR: C. A. MCHUGH, F. W. LESTER  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD,  
 C\* MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS CATALOG SUMMARIZES THE RESULTS OF ROUTINE EARTHQUAKE LOCATIONS  
 C\* FROM THE U. S. G. S. CENTRAL CALIFORNIA MICROEARTHQUAKE NETWORK FOR  
 C\* THE YEAR 1976. 3053 EVENTS WHICH WERE IDENTIFIED AS EARTHQUAKES  
 C\* WERE LOCATED USING ARRIVAL TIMES RECORDED AT 247 SEISMOGRAPH  
 C\* STATIONS.  
 C\* WARNING: TOTAL NUMBER OF EVENTS IN PRINTED CATALOG DOES NOT MATCH  
 C\* TOTAL NUMBER OF EVENTS IN THIS DATA SET.  
 C\* THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C\*REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C\* DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C\* OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT, 1975.  
 C\* MCHUGH, C. A., AND F. W. LESTER, "CATALOG OF EARTHQUAKES ALONG THE  
 C\* SAN ANDREAS FAULT SYSTEM IN CENTRAL CALIFORNIA FOR THE YEAR  
 C\* 1976", U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 78-1051.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000154 for details  
 \*\*\*\*\*

C\*END-----  
 760101 857 10.81 35-47.10 121-23.56 7.24 2.23 15 242 24.6 0.13 1.4 1.1 C2  
 760101 18 2 12.04 37-33.17 121-50.18 6.37 1.91 32 69 4.7 0.18 0.5 1.1 B1  
 760101 21 3 46.29 36-34.30 121- 4.34 9.34 0.91 10 95 4.7 0.11 0.8 1.6 B1  
 760102 258 50.44 36-28.57 121- 5.29 11.31 1.57 17 63 7.8 0.21 0.8 2.3 B1  
 760102 337 39.56 37-32.58 121-49.97 4.78 1.32 16 67 4.1 0.11 0.4 0.5 A1  
 760102 938 32.58 36-26.80 121- 3.75 6.51 1.91 21 65 4.6 0.15 0.5 1.3 A2  
 760102 1212 31.51 35-53.86 120-27.74 3.50 1.47 9 79 4.7 0.15 0.8 0.6 B1  
 760102 2047 49.35 36-28.95 121- 5.63 5.15 1.67 21 75 3.5 0.13 0.4 0.8 A2  
 760103 325 0.72 36- 2.08 120-37.05 3.50 1.95 17 74 4.4 0.17 0.7 0.7 B1  
 760103 619 31.09 36-35.23 121-14.02 7.90 1.55 28 37 4.2 0.14 0.4 0.7 A2  
 \*\*\*\*\* 3208 data cards not shown here \*\*\*\*\*  
 C\*FINIS DSN=GL000161

Table GL000162

C#DSN=GL000162;SIZE=003410;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=098;STRT=003296;  
 C\*DATE: 19841003; 0; CALSUM77;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSON: BOB NOVACK; S. M. MARKS; F. W. LESTER; L. FLUTY;  
 C\*ALPHA: 19770101; 19771231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C\*KEYWD: ;  
 C\*TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C\* IN CENTRAL CALIFORNIA FOR THE YEAR 1977  
 C\*AUTHOR: S. M. MARKS, F. W. LESTER, L. FLUTY  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD,  
 C\* MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS CATALOG SUMMARIZES THE RESULTS OF ROUTINE EARTHQUAKE LOCATIONS  
 C\* FROM THE U. S. G. S. CENTRAL CALIFORNIA MICROEARTHQUAKE NETWORK FOR  
 C\* THE YEAR 1977. 3243 EVENTS WHICH WERE IDENTIFIED AS EARTHQUAKES  
 C\* WERE LOCATED USING ARRIVAL TIMES RECORDED AT 227 SEISMOGRAPH  
 C\* STATIONS.  
 C\* WARNING: TOTAL NUMBER OF EVENTS IN PRINTED CATALOG DOES NOT MATCH  
 C\* TOTAL NUMBER OF EVENTS IN THIS DATA SET.  
 C\* THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C\*REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C\* DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C\* OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT, 1975.  
 C\* MARKS, S. M. AND F. W. LESTER, "CATALOG OF EARTHQUAKES ALONG THE  
 C\* SAN ANDREAS FAULT SYSTEM IN CENTRAL CALIFORNIA, JANUARY-MARCH  
 C\* 1977", U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 80-1233.  
 C\* MARKS, S. M. AND F. W. LESTER, "CATALOG OF EARTHQUAKES ALONG THE  
 C\* SAN ANDREAS FAULT SYSTEM IN CENTRAL CALIFORNIA, APRIL-JUNE  
 C\* 1977", U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 80-1264.  
 C\* MARKS, S. M. AND L. FLUTY, "CATALOG OF EARTHQUAKES ALONG THE SAN  
 C\* ANDREAS FAULT SYSTEM IN CENTRAL CALIFORNIA, JULY-SEPTEMBER  
 C\* 1977", U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 81-462.  
 C\* FLUTY, L., AND S. M. MARKS, "CATALOG OF EARTHQUAKES ALONG THE SAN  
 C\* ANDREAS FAULT SYSTEMS IN CENTRAL CALIFORNIA, OCTOBER-DECEMBER  
 C\* 1977", U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 81-1325.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000154 for details  
 \*\*\*\*\*

C*END-----														
770101	144	51.34	37-29.58	121-40.65	6.09	1.84	20	124	11.7	0.16	0.7	0.9	B1	
770101	215	31.82	38-48.49	122-48.12	0.60	1.71	21	58	4.0	0.10	0.3	0.3	A1	
770101	459	48.11	36-54.51	121-29.54	4.22	1.02	22	60	1.7	0.10	0.3	0.3	A1	
770101	6	9	7.22	39- 4.26	123- 5.96	2.81	1.60	14	226	7.8	0.15	1.7	0.7	C1
770101	721	39.61	38-53.89	123-35.06	15.43	1.73	13	304	4.1	0.21	9.4	6.5	D1	
770101	726	7.94	38-48.86	122-48.37	2.46	1.35	14	76	3.4	0.11	0.4	0.3	A1	
770101	1647	25.02	36-28.40	121- 5.56	8.35	1.35	22	62	4.4	0.21	0.8	1.5	B2	
770101	18	2	23.04	36-35.10	121-14.32	8.61	1.39	24	69	4.6	0.17	0.6	1.1	B2
770101	19	2	34.80	36-32.32	120-47.10	5.01	2.40	29	131	13.8	0.21	0.8	0.6	C1
770101	1914	3.53	36-32.29	120-47.20	5.33	1.84	23	131	13.9	0.23	0.9	0.7	C1	

\*\*\*\*\* 3314 data cards not shown here \*\*\*\*\*  
C#FINIS DSN=GL000162

Table GL000163

C#DSN=GL000163;SIZE=002701;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=098;STRT=006706;  
 C#DATE: 19841003; 0; CALSUM78;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: BOB NOVACK;  
 C#ALPHA: 19780101; 19781231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C#KEYWD: ;  
 C#TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C# IN CENTRAL CALIFORNIA FOR THE YEAR 1978  
 C#AUTHOR:  
 C#INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C# 345 MIDDLEFIELD ROAD,  
 C# MENLO PARK, CA 94025  
 C#ABSTRACT: THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C# CATALOG IS IN PREPARATION.  
 C#REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYP071: A COMPUTER PROGRAM FOR  
 C# DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C# OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C# REPORT, 1975.  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000154 for details  
 \*\*\*\*\*

C#END-----  
 780101 1651 54.92 38-43.00 122-49.76 3.82 1.37 12 68 5.5 0.14 0.7 0.7 B1  
 780101 1748 51.93 36-50.96 121- 4.57 5.56 2.04 57 95 12.3 0.17 0.5 0.9 C1  
 780101 1811 54.37 36-50.99 121- 4.45 5.18 1.89 50 133 12.5 0.18 0.5 0.6 C1  
 780101 1859 56.45 36-41.50 121-25.49 7.63 1.05 6 136 6.5 0.08 1.1 2.7 C2  
 780101 1912 42.49 36-33.51 121- 5.89 11.62 2.82 35 62 5.7 0.13 0.3 0.3 A2  
 780101 1915 49.81 36-33.53 121- 5.77 11.84 2.11 21 63 5.7 0.10 0.4 0.5 A2  
 780101 2158 47.21 38-51.43 122-44.82 3.43 1.08 7 150 3.4 0.08 0.7 0.4 B1  
 780102 2 2 12.99 36-35.10 121- 6.56 11.11 1.38 22 71 7.2 0.21 0.8 1.6 B2  
 780102 1944 56.95 36-41.10 121-25.74 6.01 1.68 28 88 1.4 0.16 0.5 0.9 B2  
 780102 2141 23.58 36-34.79 121-13.56 8.72 1.58 18 69 5.9 0.27 1.1 2.5 B1  
 \*\*\*\*\* 2623 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000163

Table GL000164

C#DSN=GL000164;SIZE=003336;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=099;STRT=000001;  
 C\*DATE: 19841003; 0; CALSUM79;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BOB NOVACK;  
 C\*ALPHA: 19790101; 19791231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C\*KEYWD: ;  
 C\*TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C\* IN CENTRAL CALIFORNIA FOR THE YEAR 1979  
 C\*AUTHOR:  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD,  
 C\* MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C\* CATALOG IS IN PREPARATION.  
 C\*REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C\* DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C\* OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT, 1975.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000154 for details  
 \*\*\*\*\*

C\*END-----  
 790101 1619 4.57 38-47.94 122-48.03 2.01 1.66 16 72 1.1 0.05 0.2 0.1 A1  
 790101 1805 30.31 36-20.13 120-57.13 6.46 1.26 14 68 3.1 0.11 0.5 0.9 A2  
 790102 140 8.89 36-19.49 119-35.86 0.09 2.45 8 326 67.4 0.19 46.1 61.0 D1  
 790102 243 13.61 37-23.89 121-44.15 5.93 1.34 15 85 4.7 0.11 0.5 1.4 A1  
 790102 1619 31.35 36-27.62 121- 3.60 3.12 1.29 14 77 5.4 0.07 0.3 0.4 B2  
 790102 2231 55.40 36-53.79 121-37.19 3.30 1.66 16 77 2.9 0.20 0.7 0.5QB2  
 790103 644 50.74 36-41.14 121-19.13 6.19 3.08 58 38 3.4 0.15 0.3 0.5 B2  
 790103 649 20.88 36-41.34 121-19.31 5.94 2.33 42 37 3.0 0.15 0.3 0.5 A2  
 790103 831 33.09 38-48.33 122-48.83 1.81 1.22 12 70 1.8 0.05 0.2 0.1 A1  
 790103 839 56.33 37-19.20 121-28.64 9.30 1.76 47 176 5.9 0.12 0.4 0.6 B1  
 \*\*\*\*\* 3258 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000164

Table GL000165

C#DSN=GL000165;SIZE=006024;DATE=113084;ARCH=TM;TAPE=SM9310;FILE=099;STRT=003337;  
 C\*DATE: 19841003; 0; CALSUM80;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BOB NOVACK;  
 C\*ALPHA: 19800101; 19801231; 35.0N; 42.0N; 126.0W; 118.0W; ; A017;  
 C\*KEYWD: ;  
 C\*TITLE: U. S. G. S. CATALOG OF EARTHQUAKES ALONG THE SAN ANDREAS FAULT SYSTEM  
 C\* IN CENTRAL CALIFORNIA FOR THE YEAR 1980  
 C\*AUTHOR:  
 C\*INSTITUTION: U. S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD,  
 C\* MENLO PARK, CA 94025  
 C\*ABSTRACT: THIS VERSION CAME FROM A TAPE PREPARED BY BOB NOVACK IN 1980.  
 C\* CATALOG IS IN PREPARATION.  
 C\*REFERENCE: LEE, W. H. K., AND J. C. LAHR, "HYPO71: A COMPUTER PROGRAM FOR  
 C\* DETERMINING HYPOCENTER, MAGNITUDE, AND FIRST MOTION PATTERN  
 C\* OF LOCAL EARTHQUAKES", U. S. GEOLOGICAL SURVEY OPEN-FILE  
 C\* REPORT, 1975.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000154 for details  
 \*\*\*\*\*

C\*END-----  
 800101 1 .77 38- 6.40 120-23.65 1.02 1.22 15 132 14.1 .21 .9245.9QC1  
 800101 209 24.29 36-13.77 120-49.87 0.86 3.33 94 77 3.6 2.72 4.2 9.7 C2  
 800101 248 50.98 37- 6.50 121-30.98 3.14 1.05 34 98 9.7 0.23 0.7 0.5 B1  
 800101 354 29.37 37- 9.84 121-32.25 7.01 1.24 56 96 7.7 0.16 0.4 1.3 B1  
 800101 420 40.34 37-51.65 122-14.36 6.40 1.84 42 54 11.8 0.18 0.5 0.5 B1  
 800101 449 18.40 36-27.07 121- 4.44 8.07 1.75 34 71 6.5 0.25 0.7 1.7 B2  
 800101 1003 39.55 36-46.75 121-31.35 5.40 1.19 19 235 4.0 0.29 2.6 2.6 D2  
 800101 1205 36.73 37- 2.13 121-28.53 5.67 1.51 60 90 1.3 0.16 0.3 0.4 B1  
 800101 1749 4.17 38-47.82 122-46.43 1.69 1.54 12 122 1.9 0.11 0.4 0.3 B1  
 800101 1926 20.01 37-26.92 121-32.11 5.89 2.08 29 82 11.0 0.24 0.7 0.7 B1  
 \*\*\*\*\* 5946 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000165



Table GL000166

C\*DSN=GL000166;SIZE=000345;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=100;STRT=000001;  
 C\*DATE: 19840711; 0; PDEB1900;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 16380611; 18991225; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FROM 1638 TO 1899  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:  
 C\*  

C* COLUMN	C* FORMAT	C* ITEM	C* EXPLANATION
C* 01-03	A3	SCODE	SOURCE CODE
C* 04	A1	SGYEAR	"MINUS SIGN" FOR B. C. DATES
C* 05-08	I4	EVYEAR	YEAR
C* 09-10	I2	EVMON	MONTH
C* 11-12	I2	EVDAY	DAY
C* 13-14	I2	EVHOUR	HOUR
C* 15-16	I2	EVMIN	MINUTE
C* 17-19	F3.1	ORTIME	ORIGIN TIME (SECOND PORTION; IMPLIED DECIMAL)
C* 20-24	F5.3	HYLAT	GEOGRAPHIC LATITUDE IN THOUSANDTHS OF A DEGREE (IMPLIED DECIMAL)
C* 25	A1	HYNS	DIRECTION OF LATITUDE (N OR S)
C* 26-31	F6.3	HYLON	GEOGRAPHIC LONGITUDE IN THOUSANDTHS OF A DEGREE (IMPLIED DECIMAL)
C* 32	A1	HYEW	DIRECTION OF LONGITUDE (E OR W)
C* 33-35	I3	HYDEP	DEPTH (KM)
C* 36-38	F3.2	MB	MB MAGNITUDE (IMPLIED DECIMAL)
C* 39-40	A2	MBSCAL	CONTAINS LETTERS MB, IF MAGNITUDE VALUE IS PRESENT

C\* 41-43 A3 IMCODE ISOSEISMAL MAP CODE  
 C\* 44 A1 MAXINT INTENSITY (1 THRU 9; X, E, T, = INT X, XI, XII)  
 C\* 45 A1 DP DIASTROPHIC PHENOMENON (F, U, D)  
 C\* 46 A1 TSU TSUNAMI (T OR Q)  
 C\* 47 A1 SEI SEICHE (S OR Q)  
 C\* 48 A1 VOL VOLCANISM (V)  
 C\* 49 A1 NTI NON-TECTONIC INDICATOR (N, R, C, M, E, I, L)  
 C\* 50 A1 IWAVE INFRASONIC WAVES (T, A, G, B, O)  
 C\* 51-53 I3 FENUM FLINN-ENGDAHL GEOGRAPHIC REGION NUMBER  
 C\* 54-55 F2.1 MS MS MAGNITUDE (IMPLIED DECIMAL)  
 C\* 56-57 A2 MSSCAL CONTAINS LETTERS MS, IF MAGNITUDE VALUE IS PRESENT  
 C\* 58 A1 MSCOMP Z OR H COMPONENT  
 C\* 59 A1 CEFF CULTURAL EFFECTS (C=CASUALTIES, D=DAMAGE, F=FELT)  
 C\* 60 A1 UID UNPUBLISHED INTENSITY DESIGNATOR (U)  
 C\* 61-63 F3.2 M MAGNITUDE FROM OTHER SOURCES (IMPLIED DECIMAL)  
 C\* 64-66 A3 MAUTH AUTHORITY THAT COMPUTED THE MAGNITUDE  
 C\* 67 A1 SED SPECIAL EVENT DESIGNATOR (X=IDE EARTHQUAKE)  
 C\* 68 A1 HYDEPC DEPTH CONTROL DESIGNATION (N, G, D, OR A)  
 C\* 69-71 I3 NUMSTA NUMBER OF STATIONS USED IN THE COMPUTATION OR  
 C\* QUALITY OF SOLUTION  
 C\* 72 A1 Q OTHER QUALITY INDICATORS OR AUTHORITY FOR TIME  
 C\* AND COORDINATES  
 C\* 73-75 F3.2 ML LOCAL MAGNITUDE (IMPLIED DECIMAL)  
 C\* 76-77 A2 MLSCAL SCALE, GENERALLY LETTERS ML  
 C\* 78-80 A3 MLAUTH AUTHORITY THAT COMPUTED THE MAGNITUDE  
 C\*

C\*NOTE: FOR MANY RECORDS, THE INFORMATION CORRESPONDING TO DATA  
 C\* FIELDS IN POSITIONS 33 TO 80 MAY BE ABSENT. IN THOSE CASES, BLANKS  
 C\* ARE USED IN THE DATA FIELD. ALSO, MARSDEN SQUARE NUMBERS WERE  
 C\* DELETED FROM COLUMNS 81-85 IN ORDER TO CONFORM TO THE EARTHQUAKE  
 C\* DATA FILE PUNCHED CARD FORMAT.

C\*END-----

EQH 1638061119000004250	N06900 W	8	477	D	Z
EQH 1643061118000004280	N07080 W	5	476	F	Z
EQH 16610210	4550 N07300 W	5	447	F	Z
EQH 1663020522300004760	N07010 W	X	447	D	Z
EQH 1727111003400004280	N07080 W	8	476	D	Z
EQH 1732091616000004550	N07360 W	9	447	C	Z
EQH 1737021721300004240	N07100 W	5	476	F	Z
EQH 1737121904000004080	N07400 W	7	494	D	Z
EQH 1741062415350004220	N07120 W	5	476	F	Z
EQH 1744061415150004220	N07120 W	7	476	D	Z

\*\*\*\*\* 249 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000166

Table GL000167

C#DSN=GL000167;SIZE=000183;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=100;STRT=000346;  
 C\*DATE: 19840711; 0; PDE0009;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19000801; 19091029; 90.05; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FROM 1900 TO 1909  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 EQH 1900080119450003980 N11220 W 7 478 D Z  
 EQH 1900100700000006100 N15100 W 5 002 F Z  
 EQH 1900100912280006000 N14200 W025 7 002 D 830PAS A  
 EQH 1900103116150003040 N08170 W 5 510 F Z  
 EQH 190103 6500 N15200 W 5 676 F Z  
 EQH 190103030745 36 N1205 W 8 039 D Z  
 EQH 1901051707000003930 N08250 W 5 471 F Z  
 EQH 1901072621400004080 N11570 W 7 037 D Z  
 EQH 1901111404300003870 N11210 W 8 478 D Z  
 EQH 1901111500000003880 N10620 W 7 479 D X

\*\*\*\*\* 87 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000167

Table GL000168

C#DSN=GL000168;SIZE=000200;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=100;STRT=000529;  
 C\*DATE: 19840711; 0; PDE1019;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19100123; 19191103; 90.05; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FROM 1910 TO 1919  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 EQH 1910012301150004380 N07040 W 5 475 F Z  
 EQH 1910022608000004140 N09730 W 5 463 F Z  
 EQH 1910031415090005950 N13525 W 5 019 F Z  
 EQH 1910050821100003770 N07840 W 5 492 F Z  
 EQH 191005151547 335 N1175 W 7 043 D 600EQH Z  
 EQH 1910052212280004080 N11190 W 7 478 D Z  
 EQH 1910072601300004150 N10930 W 5 460 F Z  
 EQH 1910080500000006000 N14000 W 4 019 F Z  
 EQH 1910090100000005400 N16600 W 5 009 F Z  
 EQH 1910092404050003600 N11110 W 6 495 F Z  
 \*\*\*\*\* 104 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000168

Table GL000169

C#DSN=GL000169;SIZE=000284;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=100;STRT=000729;  
 C\*DATE: 19840711; 0; PDE2029;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19200124; 19291228; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FROM 1920 TO 1929  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 EQH 1920012407090004900 N12270 W 7 023 D Z  
 EQH 1920041423450004290 N12210 W 5 032 F Z  
 EQH 1920050115150003850 N09050 W 5 485 F Z  
 EQH 1920062602410006500 N14800 W 5 676 F Z  
 EQH 1920091821050004150 N11200 W 6 478 F Z  
 EQH 1920091913500004150 N11200 W 6 478 F Z  
 EQH 1920112005400004150 N11200 W 6 478 F Z  
 EQH 1920112600000003710 N11350 W 5 478 F Z  
 EQH 1920122407300003600 N08500 W 5 506 F Z  
 EQH 1921012623400004000 N07500 W 5 473 F Z  
 \*\*\*\*\* 188 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000169

Table GL000170

C#DSN=GL000170;SIZE=000929;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=100;STRT=001013;  
 C\*DATE: 19840711; 0; PDE3039;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19300102; 19391231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FROM 1930 TO 1939  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 USE 1930010216300003580 N08960 W 506 F Z  
 USE 1930011211460006200 N14650 W 001 F Z  
 USE 1930012104480001820 N12000 E 6 249 F Z  
 USE 1930012300300005750 N15200 W 013 F Z  
 USE 1930012403450004640 N08430 W 468 F Z  
 USE 1930012501400000660 N12670 E 259 F Z  
 USE 1930012621000003610 N09120 W 484 F Z  
 USE 1930021406150004340 N07170 W 474 F Z  
 USE 1930021817000003550 N09040 W 502 F Z  
 USE 1930022512450003750 N08920 W 487 F Z  
 \*\*\*\*\* 833 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000170

Table GL000171

C#DSN=GL000171;SIZE=001326;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=100;STRT=001942;  
 C\*DATE: 19840711; 0; PDE4049;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19400102; 19491231; 90.05; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FROM 1940 TO 1949  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 USE 1940010201060004250 N07150 W 476 F Z  
 CGS 19400104011018034000S162000W 632  
 CGS 19400106081542044600N151700E 222  
 CGS 19400107032242034200N141700E 229  
 CGS 19400107213448006500S078000W100 111  
 CGS 19400110111730034500N098000E 325  
 CGS 19400119135306011000S173500W 169  
 CGS 19400121024536027500N126500E350 234  
 CGS 19400126064148014500S167500E100 186  
 CGS 19400127144942034000N139000E 230  
 \*\*\*\*\* 1230 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000171

Table GL000172

C#DSN=GL000172;SIZE=001147;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=100;STRT=003268;  
 C\*DATE: 19840711; 0; PDE5054;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSON: BILL RINEHART;  
 C\*ALPHA: 19500102; 19541231; 90.05; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FROM 1950 TO 1954  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 USE 1950010200422601900 N06750 W037 089 F 470PAL 042  
 USE 1950010219530404150 N11200 W 4 478 F  
 CGS 19500108204255021500S174000W100 4 173 F  
 CGS 19500109012510051000N176000W060 007 F  
 CGS 19500113001059005000S152000E 192  
 CGS 19500113050719037017N116483W 041 F 410MLPAS  
 CGS 19500117105812000000N025000W 406  
 CGS 19500118015551040500N110500W 5 478 D 525PAS  
 CGS 19500120231535028000S063500W600 132  
 CGS 1950012104304106300N148500W 001  
 \*\*\*\*\* 1051 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000172



Table GL000173

C#DSN=GL000173;SIZE=003855;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=100;STRT=004415;  
 C\*DATE: 19840711; 0; PDE5559;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19550101; 19591231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FROM 1955 TO 1959  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 CGS 19550101103441028500N044000W 403  
 CGS 19550101104932028500N044000W 403  
 CGS 19550101180308051000N178500W 007  
 CGS 19550101183741051500N178500W060 007  
 CGS 19550103010702039000N022000E 7 364 D  
 CGS 19550105005012050000S162500E 166 690PAS  
 CGS 19550105124444015000S076000W 114  
 CGS 19550105152820054500N161000E 218  
 CGS 19550105153508000000N078000W 106  
 CGS 19550105174835016000S167500E 6 186 F 675PAS  
 \*\*\*\*\* 3759 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000173

Table GL000174

C#DSN=GL000174;SIZE=001759;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=100;STRT=008270;  
 C\*DATE: 19840711; 0; PDE1960;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19600101; 19601231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1960  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

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 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 CGS 19600101041140049000N153500E 221  
 CGS 19600101041732027500N142000E 212  
 CGS 19600101055726018500N147000E 215  
 CGS 19600101231233056000N162500E 218 538MAT  
 CGS 19600102015218054000N157500E 217  
 CGS 19600102032152015500S068000W150 120 625PAS  
 CGS 19600102040935045000N111500W 456 F  
 CGS 19600102050654002500N096000E 706 575MAT  
 CGS 19600102065936056500N163500E 218 563MAT  
 CGS 19600102212251005000S152500E 4 192 F  
 \*\*\*\*\* 1663 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000174

Table GL000175

C#DSN=GL000175;SIZE=002843;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=101;STRT=000001;  
 C#OATE: 19840711; 0; PDF1961;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: BILL RINEHART;  
 C#ALPHA: 19610101; 19611231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C#KEYWD: ;  
 C#TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C# EARTHQUAKE HYPOCENTERS FOR 1961  
 C#AUTHOR:  
 C#INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C# 325 BROADWAY  
 C# BOULDER, CO 80303  
 C#ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C# EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C# PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C# 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C# 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C# FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C# 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C# THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C# AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C# MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C# (WWNSS).  
 C# THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C# NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C# GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C# 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C# 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C#REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C# FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C# (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C# RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C#FORMAT:

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 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C#END-----  
 CGS 19610101130908513100S167000E098 186  
 CGS 19610101135237619500N121000E077 4 248 F  
 CGS 19610101163823818200S178100W600 181  
 CGS 19610101193316654217S008097E033 412 N009\*  
 CGS 19610101202216049587S125532E033 437 N016\*  
 CGS 19610101221117029200S177000W100 178  
 CGS 19610102031642241500S087700W025 686 N  
 CGS 19610102101158112500S166300E140 184 675PAS  
 CGS 19610102124914605100N127600E070 248  
 CGS 19610102162130051200N157700E040 218  
 \*\*\*\*\* 2747 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000175

Table GL000176

C#DSN=GL000176;SIZE=002532;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=101;STRT=002844;  
 C\*DATE: 19840711; 0; PDE1962;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19620101; 19621231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1962  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

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 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

CGS 19620101024111652200N177700E048	006	029
CGS 19620101051737838700N141600E033	228	009
CGS 19620101064957652000N177600E033	006	015
CGS 19620101101702551800N177600E033	006	013
CGS 19620101121552027200S175200W033	177	014
CGS 19620101132441906900N073000W176	099	008
CGS 19620101153111822400S171500E098	189	013
CGS 19620101234023452200N177700E033	006	044
CGS 19620102021529704100S143900E104	202	012
CGS 19620102052341518100S070600W077	122	022

\*\*\*\*\* 2436 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000176

Table GL000177

C#DSN=GL000177;SIZE=004335;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=101;STRT=005376;  
 C\*DATE: 19840711; 0; PDE1963;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19630101; 19631231; 90.05; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1963  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

CGS 19630101040527306900N073100W150	099	037
CGS 19630101121735306800S156100E139	193	029
CGS 19630101125025606900N073000W155	099	009
CGS 19630101134806420700N144500E046	216	031
CGS 19630101144306103400N122800E591	262	005
CGS 19630101162737920000S175500W129	173	031
CGS 19630101174939406800S154600E170	193	008
CGS 19630101192736835400N058900E033	348	014
CGS 19630101193555140200S081300E033	429	006
CGS 19630101233909556600N157500W080	012	129

\*\*\*\*\* 4239 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000177

Table GL000178

C#DSN=GL000178;SIZE=004778;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=102;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1964;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSON: BILL RINEHART;  
 C\*ALPHA: 19640101; 19641231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1964  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, ERL, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

CGS 19640101042213443700N126300W033370MB	030	006
CGS 19640101051426537400N142700E033410MB	229	010
CGS 19640101091401819100S169500E247440MB	186	010
CGS 19640101094359518200N105900W033440MB	054	016
CGS 19640101094528723900S067400W200410MB	127	007
CGS 19640101122155406800S129800E096570MB	280	023
CGS 19640101141627641400S074400W033470MB	143	005
CGS 19640101141853904300S105900W033460MB	694	018
CGS 19640101154947955900S027100W033540MB	153	012
CGS 19640101164308037700N112500W015	478	006

\*\*\*\*\* 4682 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000178

Table GL000179

C#DSN=GL000179;SIZE=006300;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=102;STRT=004779;  
 C\*DATE: 19840711; 0; PDE1965;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19650101; 19651231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1965  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

CGS 19650101025647519100N107900W033370MB	054		006
CGS 19650101034416605400S154300E136	193		011
CGS 1965010110024981960LN068500W033450MB	422		020
CGS 19650101113930513600N092900W033450MB	068		015
CGS 19650101124643423500N121200E033520MB	244		014
CGS 19650101133440219900N121600E023	248		006
USE 19650101145745419808N155423W013	613	F	H390MLHVO
USE 1965010117322783580 N00450 E033440MB	396	F 538PAS	018
CGS 19650101193420211800S166300E024	184		007
CGS 19650101200238061700N148900W033430MB	002		008

\*\*\*\*\* 6204 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000179

Table GL000180

C#DSN=GL000180;SIZE=005611;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=103;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1966;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSON: BILL RINEHART;  
 C\*ALPHA: 19660101; 19661231; 90.05; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1966  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

CGS 196601010159531163005073400W033	115		005
CGS 19660101063625516900N097700W052420MB	060		011
CGS 19660101084154757500N153700W042430MB	013		006
CGS 19660101090000516900S072300W023	115		006
CGS 1966010111327114800N119500E037430MB	249		007
CGS 19660101122430309800S154700E033560MB	194		026
CGS 19660101132338042900N078200W010470MBUSE6	472	D	030
CGS 19660101161020509700S154800E007510MBUSE6	194	D	014
CGS 19660101192551100600N025400W033490MB	406		029
CGS 19660101195156107800S074700W165460MB	112		010

\*\*\*\*\* 5515 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000180



Table GL000181

C#DSN=GL000181;SIZE=005347;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=103;STRT=005612;  
 C\*DATE: 19840711; 0; PDE1967;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19670101; 19671231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1967  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

CGS 19670101000421113555S166193E149390MB	186		007*
CGS 19670101002104612038S166237E017500MB	184	663PAS	090
CGS 19670101004511811991S166320E022	184		006*
CGS 19670101010546500018S125967E033470MB	269		N027
CGS 19670101021947119068S173380W033430MB	T173		N008
CGS 19670101025935911001N093078E070490MB	703		G041
USE 19670101030451519392N155308W022	613	F	H390MLHVO
CGS 19670101031319311973S166120E043460MB	184		033
CGS 19670101033543207589N094413E034420MB	704		011
CGS 19670101040403311953S166023E009450MB	184		044

\*\*\*\*\* 5251 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000181

Table GL000182

C#DSN=GL000182;SIZE=005679;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=104;STRT=000001;  
 C#DATE: 19840711; 0; PDE1968;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: BILL RINEHART;  
 C#ALPHA: 19680101; 19681231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C#KEYWD: ;  
 C#TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C# EARTHQUAKE HYPOCENTERS FOR 1968  
 C#AUTHOR:  
 C#INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C# 325 BROADWAY  
 C# BOULDER, CO 80303  
 C#ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C# EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C# PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C# 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C# 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C# FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C# 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C# THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C# AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C# MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C# (WWNSS).  
 C# THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C# NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C# GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C# 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C# 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C#REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C# FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C# (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C# RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C#END-----  

CGS 19680101024125102300N079700W040440MB	083	029
CGS 19680101040331402800N101100W033450MB	693	024
CGS 19680101041248462400N149600W033	001	007
CGS 19680101061053462200N149500W033	001	006
CGS 19680101081615311200S076000W132440MB	116	018
CGS 19680101150325231100N114300W033410MB	049	010
CGS 19680101173347021800S067500W189430MB	124	010
CGS 19680101190722527100S062800W641390MB	132	010
CGS 19680101201847727500S071700W033470MB	122	023
CGS 19680101223228406500S128800E200440MB	280	010

\*\*\*\*\* 5583 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000182

Table GL000183

C\*DSN=GL000183;SIZE=005306;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=104;STRT=005680;  
 C\*DATE: 19840711; 0; PDE1969;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19690101; 19690231; 90.05; 90.0N; 130.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1969  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
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 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

CGS 19690101022511365644N149980W033	676	N006*
CGS 19690101045337752090N170017W033460MB	009	N027
CGS 19690101065329060517S150554E033	701	N008
CGS 19690101080434005952S077072W097430MB	111	008
CGS 19690101090704351240N179373W034540MB	007	061
CGS 19690101092500516221S178357E033530MB	182	N038
CGS 19690101110136160531N147895W033	002	N006*
CGS 19690101121927829346N130115E036450MB	238	011*
CGS 19690101122542465496N150087W033	676	N008*
CGS 19690101125336249040S008928W033400MB	410	N006*

\*\*\*\*\* 5210 data cards not shown here \*\*\*\*\*  
 C\*FINIS DSN=GL000183

Table GL000184

C#DSN=GL000184;SIZE=004412;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=105;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1970;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19700101; 19701231; 90.05; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1970  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
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 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

CGS 19700101014346708598N083525W048520MB	07857MSH	043
CGS 19700101014955628617N129312E039520MB	238 F	044
CGS 19700101032916804930S102733E058540MB	274	012*
CGS 19700101095359945778N154374E033530MB	222	N053
CGS 19700101100928521058S168878E035470MB	188	009*
CGS 19700101112102109357N069471W014410MB	101 F	011
CGS 19700101143523226166S028173E033490MB	584	N008
CGS 19700101150934043067S082676W033460MB	686	N013
CGS 19700101171100629363S177560W044540MB	178	060
CGS 19700101181205216069N059679W033470MB	092	N025

\*\*\*\*\* 4316 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000184

Table GL000185

C#DSN=GL000185;SIZE=004642;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=105;STRT=004413;  
 C\*DATE: 19840711; 0; PDE1971;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19710101; 19711231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1971  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 NOS 19710101021010059089S026347W033480MB 153 N006\*  
 PDE 19710101044529 596 N1446 W 1652 MB 015 G 49  
 NOS 19710101044529059633N144638W016520MB 015 049 530MLNOS  
 NOS 19710101055605536047N139937E058390MB 3 227 F 014  
 NOS 19710101065052547824N128580W033450MB 026 N009\*  
 PDE 19710101065053 478 N1286 W 45 MB 026 9  
 NOS 19710101075758803998S141157E017550MB 5 20258MSHF 600PAS 058  
 NOS 19710101083139119204S178193W638460MB 181 022  
 NOS 19710101115503552977N167036W061460MB 009 039  
 NOS 19710101135716936078N139860E058380MB 3 227 F 013  
 \*\*\*\*\* 4546 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000185

Table GL000186

C#DSN=GL000186;SIZE=004683;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=106;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1972;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19720101; 19721231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1972  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 ERL 197201010144137053555153097E065440MB 190 010  
 ERL 197201010254115182365167857E036490MB 3 186 F 011\*  
 ERL 197201011015480046185155235E506520MB 193 069  
 ERL 1972010111273666533N144772W033370MB 676 N017  
 PDE 19720101112737 665 N1448 W 37 MB 676 17  
 ERL 19720101130118963988N022352W033450MB 637 N021\*  
 ERL 197201011404413048155153385E052 190 002\*  
 ERL 19720101144153364164N022368W033430MB 638 N014\*  
 ERL 19720101184520762348N151244W096 001 010  
 ERL 19720101192031060333N153264W139 002 011  
 \*\*\*\*\* 4587 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000186

Table GL000187

C#DSN=GL000187;SIZE=005344;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=106;STRT=004684;  
 C\*DATE: 19840711; 0; PDE1973;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19730101; 19731231; 90.05; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1973  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 ERL 197301010346098092145150634E041530MB 207 025  
 ERL 197301010522298150125173958W033500MB 173 N023\*  
 ERL 197301010928572221615065792W205480MB 128 022  
 ERL 197301011142375355135016211W033540MB 41060MSH N039  
 ERL 19730101213558613897N044876W033440MB 403 N006\*  
 ERL 19730101214117113743N045266W033440MB 403 N006\*  
 ERL 197301012233016443035167154E061 162 006\*  
 ERL 197301020053203098545117427E066550MB 285 021  
 ERL 19730102015028538221N020165E033430MB 364 N016 400MLATH  
 ERL 19730102022709201035N126211E061540MB 266 024

\*\*\*\*\* 5248 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000187

Table GL000188

C#DSN=GL000188;SIZE=005143;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=107;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1974;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19740101; 19741231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1974  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

GS	197401010547276200675174248W033460MB	173	N 17
GS	19740101075704521631N142852E333500MB	215	65
GS	19740101092843121933S176931W194480MB	181	21
GS	19740101102624736165N077360E033460MB	324	N 8*
GS	19740101110340611155S166062E118470MB	184	15*
GS	19740101122145014928S166789E033	186	N 5*
GS	19740101124316123698S179924E501500MB	171	45
GS	19740101140740104630N095896E059540MB	706	44
GS	19740101141331504774N095726E033510MB	706	N 12
GS	19740101143604114883S166779E021430MB	186	11

\*\*\*\*\* 5047 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000188



Table GL000189

C#DSN=GL000189;SIZE=005455;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=107;STRT=005144;  
 C\*DATE: 19840711; 0; PDE1975;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19750101; 19751231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1975  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

GS	19750101002956836581N036463E015480MB	374	D	38
GS	19750101004616362363N151230W104	001		13
GS	19750101012859019100N155400W040400MB	613	F	15H420MLHVO
GS	19750101020506205703S154451E104	193		11*
GS	19750101021244713363N091653W033430MB	071		N 8*
GS	19750101035512061909N149738W066590MB	5 002	D	118
GS	19750101064354019300N155300W005450MB	613	F	17H410MLHVO
GS	19750101070351432464N021208E039420MB	401	D	7
GS	19750101074155019300N155400W005420MB	613	F	14H410MLHVO
GS	19750101104543138234N022642E033460MB	364		N 19 370MLATH

\*\*\*\*\* 5359 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000189

Table GL000190

C#DSN=GL000190;SIZE=006455;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=108;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1976;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19760101; 19761231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1976  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 GS 19760101000405438441N021633E01947 MB 364 F 23 440MLATH  
 GS 19760101003244066314N016346W03349 MB 637 N 21  
 GS 19760101012939628611S177638W05962 MB 177 690PAS 78  
 GS 19760101014754733517N116600W011 043 7P340MLPAS  
 GS 19760101021917638304N021575E03340 MB 364 N 13 350MLATH  
 GS 19760101022110628949S177537W05055 MB 177 D 20  
 GS 19760101030354550258N129723W03346 MB 025 N 29  
 PDE 19760101030355 5026 N12972 W 46 MB 025 29  
 GS 19760101041141850273N129823W01949 MB 025 47  
 PDE 19760101041142 5027 N12982 W 1949 MB 025 47

\*\*\*\*\* 6359 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000190

Table GL000191

C\*DSN=GL000191;SIZE=005889;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=109;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1977;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19770101; 19771231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPLCENTERS FOR 1977  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 GS 19770101001619105195N078184W03348 MB 083 N 10\*  
 GS 19770101021820107833S107866E09047 MB 277 7\*  
 GS 19770101062345128135N130649E03351 MB 238 N 37  
 GS 19770101071639344823N010332E033 545 N 8\*  
 GS 19770101072051040400N127300W002 034 11B370MLBRK  
 GS 19770101081036107380N078292W03342 MB 081 N 24  
 GS 19770101083742230391N138103E43444 MB 211 10\*  
 GS 19770101105234108414N126409E05350 MB 259 25  
 GS 19770101113341630663N137060E47652 MB 211 105  
 GS 19770101121922210278N126232E08950 MB 248 18  
 \*\*\*\*\* 5793 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000191

Table GL000192

C#DSN=GL000192;SIZE=006563;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=110;STRT=000001;  
 C#DATE: 19840711; 0; PDE1978;  
 C#CLASS: EARTHQUAKE; SUMMARY;  
 C#PERSN: BILL RINEHART;  
 C#ALPHA: 19780101; 19781231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C#KEYWD: ;  
 C#TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C# EARTHQUAKE HYPOCENTERS FOR 1978  
 C#AUTHOR:  
 C#INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C# 325 BROADWAY  
 C# BOULDER, CO 80303  
 C#ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C# EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C# PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C# 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C# 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C# FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C# 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C# THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C# AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C# MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C# (WWNSS).  
 C# THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C# NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C# GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C# 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C# 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C#REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C# FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C# (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C# RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C#FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C#END-----  

GS	19780101025035231397S067693W140	137		7*
GS	19780101025807231175S067825W107	137		7*
GS	19780101030934352895N160360E03345 MB	219		N 24*
GS	19780101042346243205N017356E03343 MB	383	D	N 29 360MLSKO
GS	19780101052106831627N140317E10444 MB	211		9*
GS	19780101070122817829S178042W55749 MB	181		19*
GS	19780101074014645715N026457E13647 MB	358		112
GS	19780101092555742909N015769E033	382		N 19 440MLTRI
GS	19780101105058331115S067718W03551 MB	137		49
GS	19780101110840031388S067815W033	137		N 8

\*\*\*\*\* 6467 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000192

# Table GL000193

C#DSN=GL000193;SIZE=007441;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=111;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1979;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19790101; 19791231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1979  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 GS 19790101 2118632430N141651E 3252 MB 21149MSZ 88  
 GS 19790101 20832810206S161653E 8651 MB 193 47  
 GS 19790101 21942040640N126713W 1242 MB 34 9B440MLBRK  
 GS 19790101 308284 5613S152951E 3349 MB 190 N 11\*  
 GS 19790101 540041 6431S145795E13137 MB 202 7\*  
 GS 19790101110644610850S161987E 5447 MB 193 18  
 GS 19790101114025511109S162885E 5746 MB 193 18  
 GS 19790101122355314377S167451E19052 MB 186 20  
 GS 19790101125810424054N142706E 6345 MB 213 13\*  
 GS 19790101132906127125S175874W 5153 MB 177 D 35

\*\*\*\*\* 7345 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000193

Table GL000194

C#DSN=GL000194;SIZE=007497;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=112;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1980;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19800101; 19801231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1980  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

GS	19800101012437212353N095192E02051 MB	70349MSZ	97
GS	19800101020925736208N120848W005	39	9B320MLBRK
GS	19800101024554027261N060259E03353 MB	353	D123
GS	19800101042841432900N115500W005	45 F	4P300MLPAS
GS	19800101045603438602N069520E03342 MB	715	N 7
GS	19800101050543954982N002646W010	533 F	G 23
GS	19800101074748426045N098514E033	297	N 7
GS	19800101075329360201N152327W09342 MB	2	22
GS	19800101111820215958S026085E03341 MB	576	N 6*
GS	19800101124618817839S168085E06148 MB	186	6*

\*\*\*\*\* 7401 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000194

Table GL000195

C#DSN=GL000195;SIZE=006926;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=113;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1981;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19810101; 19811231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1981  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
 C\* THESE STATIONS ARE OPERATED BY USGS, NOAA, OTHER GOVERNMENT  
 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

GS 19810101010812739137N025315E010	365	G 17 330MLATH
GS 19810101032936017044N094258W12252 MB	61	D 84
GS 19810101081006636946N021090E01042 MB	368	G 13 360MLATH
GS 19810101090008817525S122744E033	590	N 9*
GS 19810101091244323717S179901E46149 MB	171	35
GS 19810101101651850230N007848E010	543 F	G 6*200MLBNS
GS 19810101110923339435N023861E010	365	G 5*320MLATH
GS 1981010112440730777N126310E02352 MB	25946MSZ	45
GS 19810101131302841295N068877E03346 MB	713	N 8
GS 19810101151933543732N016790E010	383	G 26 400MLTRI

\*\*\*\*\* 6830 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000195

Table GL000196

C#DSN=GL000196;SIZE=007833;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=114;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1982;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19820101; 19821231; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FOR 1982  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
 C\* 400 OR SO COOPERATING SEISMOGRAPH STATIONS OF THE GLOBAL NETWORK.  
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 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  
 GS 19820101 4214045731N 15530E 10 383 G 7  
 GS 19820101 4402538860N 25055E 10 365 G 5\*340MLATH  
 GS 19820101 23526064004N148997W 33 1 N 7 300MLPMR  
 GS 19820101 25352139309N 29016E 10 366 G 11  
 GS 19820101 41129075288N 72274W 1044 MB 68138MS G 31  
 GS 19820101 72213742961N 17360E 10 382 G 21 450MLTRI  
 GS 19820101 759383 0781N 27907W 1050 MB 40645MS G 5\*  
 GS 19820101 85353545062N 26476E 10 358 G 7\*  
 GS 19820101105307517954S178496W58755 MB 181 101  
 GS 19820101134009721478N143657E 3252 MB 21552MS 76

\*\*\*\*\* 7737 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000196



Table GL000197

C#DSN=GL000197;SIZE=008294;DATE=010885;ARCH=TM;TAPE=SM9310;FILE=115;STRT=000001;  
 C\*DATE: 19840711; 0; PDE1983;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: BILL RINEHART;  
 C\*ALPHA: 19830101; 19831026; 90.0S; 90.0N; 180.0W; 180.0E; ; A022;  
 C\*KEYWD: ;  
 C\*TITLE: PRELIMINARY DETERMINATION OF EPICENTERS (PDE) DATAFILE OF GLOBAL  
 C\* EARTHQUAKE HYPOCENTERS FROM JAN. 1, 1983 TO OCT. 26, 1983  
 C\*AUTHOR:  
 C\*INSTITUTION: NATIONAL GEOPHYSICAL DATA CENTER, NOAA,  
 C\* 325 BROADWAY  
 C\* BOULDER, CO 80303  
 C\*ABSTRACT: THE PRINCIPAL DATA SOURCE, WHICH INCLUDES SOME 80,000  
 C\* EARTHQUAKES, IS THE PRELIMINARY DETERMINATION OF EPICENTERS (PDE)  
 C\* PROGRAM. THIS IS A SYSTEMATIC, CONTINUING ACTIVITY INITIATED IN  
 C\* 1937 BY THE U. S. COAST AND GEODETIC SURVEY AND CONDUCTED SINCE  
 C\* 1973 BY THE U. S. GEOLOGICAL SURVEY. THE EPICENTERS ARE COMPUTED  
 C\* FROM ARRIVAL-TIME INFORMATION PROVIDED BY AT LEAST SEVERAL OF THE  
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 C\* AGENCIES, COLLEGES AND UNIVERSITIES, AND MANY FOREIGN INSTITUTIONS;  
 C\* MANY OF THEM ARE PART OF THE WORLD NETWORK OF STANDARD SEISMOGRAPHS  
 C\* (WWNSS).  
 C\* THE SOURCE IS NOT IDENTIFIED BY "PDE" IN THE FILE, BUT BY THE  
 C\* NAME OF THE ORGANIZATION OPERATING THE PDE PROGRAM: COAST AND  
 C\* GEODETIC SURVEY (CGS), PRIOR TO 1970; NATIONAL OCEAN SURVEY (NOS),  
 C\* 1970 TO 1971; ENVIRONMENTAL RESEARCH LABORATORIES (ERL), 1971 TO  
 C\* 1973; AND GEOLOGICAL SURVEY (GS), 1973 ONWARD.  
 C\*REFERENCE: NGDC, EARTHQUAKE DATA FILE PUNCHED CARD FORMAT (REVISED MAY 1979).  
 C\* FOR MORE DETAILS SEE MEYERS, HERBERT, AND CARL A. VON HAKE,  
 C\* (1976). "EARTHQUAKE DATA FILE SUMMARY," KEY TO GEOPHYSICAL  
 C\* RECORDS DOCUMENTATION NO. 5, NOAA, EDIS, NGSDC, BOULDER, CO.  
 C\*FORMAT:

\*\*\*\*\*  
 See previous format from dataset GL000166 for details  
 \*\*\*\*\*

C\*END-----  

GS	19830101003248639207S174511E21945 MB	159		8*
GS	19830101041221835817N117733W 6	39		G 10P300MLPAS
GS	198301010518563 3298S142652E 3349 MB	200		N 23
GS	19830101053156116943S 69114W17257 MBFPS3	118	F 620PAS	D250
GS	19830101060323953801N164231W 3349 MB	10		N 71 490MLPMR
GS	19830101064416442988N 2128W 10	377		G 14*330MLLDG
GS	19830101104513657161N153215W 6943 MB	13		14*
GS	19830101104613716996N147299E 4447 MB	215		29
GS	19830101110204516945N147739E 3344 MB	215		N 14*
GS	1983010111807761336N147174W 5553 MB 4	2	F	169

\*\*\*\*\* 8198 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000197

Table GL000198

C#DSN=3L000198;SIZE=000289;DATE=041685;ARCH=TM;TAP=-SM9310;FILE=125;STRT=000379;  
 C\*DATE: 19841203; 0; ADAK2;  
 C\*CLASS: EARTHQUAKE; SUMMARY;  
 C\*PERSN: CARL KISSLINGER; SELENA BILLINGTON;  
 C\*ALPHA: 19840401; 19840731; 50.5 N; 52.5 N; 179.0 W; 175.0 W;  
 C\* 14-08-0001-21896; A018;  
 C\*KEYWD: ALEUTIANS; 14-08-0001-21230;  
 C\*TITLE: SUMMARY DATA FOR EARTHQUAKES LOCATED BY THE ADAK SEISMIC NETWORK FOR  
 C\* APRIL 1, 1984 THROUGH JULY 31, 1984  
 C\*AUTHOR: CARL KISSLINGER AND SELENA BILLINGTON  
 C\*INSTITUTION: UNIVERSITY OF COLORADO  
 C\* CIRES  
 C\* CAMPUS BOX 449  
 C\* BOULDER, CO 80309  
 C\*ABSTRACT:  
 C\*REFERENCE: KISSLINGER, CARL, AND SELENA BILLINGTON (1984). "CENTRAL ALEUTIAN  
 C\* ISLANDS SEISMIC NETWORK AND PREDICTION METHODOLOGY FOR  
 C\* SUBDUCTION ZONE EARTHQUAKES, CENTRAL ALEUTIAN ISLANDS", IN  
 C\* SUMMARIES OF TECHNICAL REPORTS, VOLUME XIX, NATIONAL EARTHQUAKE  
 C\* HAZARDS REDUCTION PROGRAM, DECEMBER 1985, U. S. GEOLOGICAL  
 C\* SURVEY OPEN-FILE REPORT 85-22.  
 C\* KISSLINGER, CARL, AND SELENA BILLINGTON (1984). "DATA SUMMARY:  
 C\* CENTRAL ALEUTIAN ISLANDS SEISMIC NETWORK, APRIL 1, 1984-  
 C\* JULY 31, 1984." A COPY OF THIS UNPUBLISHED REPORT IS AVAILABLE  
 C\* FROM WILLIE LEE, OFFICE OF EARTHQUAKES, VOLCANOES, AND  
 C\* ENGINEERING, MAIL STOP 977, U. S. GEOLOGICAL SURVEY,  
 C\* 345 MIDDLEFIELD ROAD, MENLO PARK, CA 94025.  
 C\*  
 C\*FORMAT: DATA FORMAT DEFINED AS FOLLOWS:  
 C\*  

C*	COLUMN	EXPLANATION
C*	01-03	DEQ = FREE DEPTH SOLUTION; LEQ = FIXED DEPTH SOLUTION
C*	04-05	BLANK
C*	06-26	DATE AND TIME (YR/MO/DAY HR/MIN/SEC)
C*	27-28	BLANK
C*	29-34	NORTH LATITUDE
C*	35	BLANK
C*	36-43	WEST LONGITUDE
C*	44	BLANK
C*	45-49	DEPTH
C*	50-52	DURATION MAGNITUDE
C*	53-69	P FIRST-MOTION POLARITY AT THE STATIONS (WILL SEND SEQUENCE OF STATIONS IF ANYONE CARES)
C*	70-72	IDENTIFIER OF THE SUB-REGION OF THE ADAK SEISMIC ZONE
C*	73-80	EVENT FLAGS AND NEIS TELESEISMIC MAGNITUDE
C*	73	MAGNITUDE OUT OF RANGE FOR DETERMINING DURATION MAGNITUDES:
C*		S = EVENT TOO SMALL FOR DURATION MAGNITUDE
C*		L = EVENT TOO LARGE FOR DURATION MAGNITUDE
C*	74	SPECIAL STUDIES: USED FOR IDENTIFYING EVENTS
C*		USED IN INDIVIDUAL PROJECTS
C*	75	INTERESTING EVENTS

C\* A = AFTERSHOCK (ONLY WHEN CLEARLY ASSOCIATED  
 C\* WITH MAINSHOCK)  
 C\* B = BLAST  
 C\* C = CONVERTED PHASE  
 C\* F = FELT ON ADAK  
 C\* H = HARMONIC TREMOR  
 C\* I = INTERNATIONAL DATA EXCHANGE EVENT  
 C\* L = LOCATED BY OBS'S  
 C\* M = FOCAL MECHANISM HAS BEEN DETERMINED  
 C\* O = OBSERVED BY OBS'S  
 C\* T = TSUNAMIGENIC  
 C\* U = UNIDENTIFIED NON-SEISMIC EVENT  
 C\* V = ASSOCIATED WITH SURFACE VOLCANISM  
 C\* 76 WARNING FLAGS ARE ASSIGNED AUTOMATICALLY BY  
 C\* THE HYPOCENTER LOCATION PROGRAM  
 C\* X = DID NOT CONVERGE AND SE GREATER THAN  
 C\* 0.30 SEC  
 C\* Z = DEPTH ABOVE SURFACE OR DEPTH GREATER  
 C\* THAN 300 KM  
 C\* 77 STANDARD ERROR CODE IS ASSIGNED AUTOMATICALLY  
 C\* 1 = SE LESS THAN OR EQUAL TO 0.30  
 C\* 2 = SE IS GREATER THAN 0.30 BUT LESS THAN OR  
 C\* EQUAL TO 0.50  
 C\* 3 = SE IS GREATER THAN 0.50 BUT LESS THAN OR  
 C\* EQUAL TO 0.75  
 C\* 4 = SE IS GREATER THAN 0.75 BUT LESS THAN OR  
 C\* EQUAL TO 1.0  
 C\* W = SE IS GREATER THAN 1.0  
 C\* 78-80 TELESEISMIC MAGNITUDES FROM THE PDE ARE GIVEN  
 C\* FOR ANY EVENTS WITH DURATION MAGNITUDES  
 C\* GREATER THAN 3.5

C\*END-----  
 deq 84 4 1 14 49 38.75 52.075 -175.990 203.73.3.....D 1  
 leq 84 4 3 15 27 1.20 51.167 -175.083 2.52.5.....E 1  
 deq 84 4 4 12 2 33.74 51.390 -176.097 21.13.4c....dd.dd...d...SE1 f 14.6  
 deq 84 4 4 12 26 22.63 51.366 -176.094 21.71.7d.....d.....SE3 1  
 deq 84 4 6 21 24 30.78 51.395 -175.952 21.51.1d.dd...d.....d...SE2 1  
 deq 84 4 8 3 42 25.63 51.254 -176.094 17.3 .0.....d.....d...SE s 1  
 deq 84 4 8 11 34 41.73 51.515 -175.750 22.61.8d.d..d.dd.....SE5 1  
 leq 84 4 9 6 39 33.60 51.082 -178.052 4.01.7.....dn.....W c 1  
 leq 84 4 10 1 23 1.10 51.194 -178.203 4.01.8.....W c 1  
 deq 84 4 10 14 30 1.70 51.049 -176.275 15.01.5.....d.....SW 1  
 \*\*\*\*\* 193 data cards not shown here \*\*\*\*\*  
 C#FINIS DSN=GL000198

Table GL000199

C\*DSN=GL000199;SIZE=000139;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=125;STRT=000668;  
 C\*DATE: 19841203; 0; CHUNG3;  
 C\*CLASS: GEOCHEMICAL; RADON; HELIUM; CONDUCTIVITY; TEMPERATURE;  
 C\*PERSN: Y. CHUNG;  
 C\*ALPHA: 19840101; 19840930; 32.9 N; 34.2 N; 117.3 W; 115.4 W;  
 C\* 14-08-0001-21186; A020;  
 C\*KEYWD: RADON; HELIUM; CONDUCTIVITY;  
 C\*TITLE: INVESTIGATION OF RADON AND HELIUM AS POSSIBLE FLUID-PHASE  
 C\* PRECURSORS TO EARTHQUAKES  
 C\*AUTHOR: Y. CHUNG  
 C\*INSTITUTION: UNIVERSITY OF CALIFORNIA, SAN DIEGO, CA.  
 C\* GEOLOGICAL RESEARCH DIVISION, A-020  
 C\* SCRIPPS INSTITUTION OF OCEANOGRAPHY  
 C\* LA JOLLA, CA 92093  
 C\*ABSTRACT: THIS DATA SET CONTAINS DISCRETE RADON AND HELIUM DATA COLLECTED  
 C\* FROM NETWORK SITES AT MONTHLY INTERVALS IN 1984 UNTIL SEPTEMBER.  
 C\* THE DATA COLLECTED BEFORE APRIL, 1984 WAS SUBMITTED TO THE  
 C\* USGS IN MAY AND ARCHIVED AS CHUNG1.  
 C\*REFERENCE: CHUNG, Y. (1984). "INVESTIGATION OF RADON AND HELIUM AS  
 C\* POSSIBLE FLUID-PHASE PRECURSORS TO EARTHQUAKES" IN SUMMARIES  
 C\* OF TECHNICAL REPORTS, VOLUME XIX, NATIONAL EARTHQUAKE  
 C\* HAZARDS REDUCTION PROGRAM, DECEMBER 1985, U. S. GEOLOGICAL  
 C\* SURVEY OPEN-FILE REPORT 85-22.  
 C\* CHUNG, Y. (1984). "DATA REPORT: DATA SUMMARY FOR RADON AND  
 C\* HELIUM MONITORING IN S. CALIFORNIA FROM JAN TO SEP 84."  
 C\* A COPY OF THIS UNPUBLISHED REPORT IS AVAILABLE FROM WILLIE  
 C\* LEE, OFFICE OF EARTHQUAKES, VOLCANOES, AND ENGINEERING, MAIL  
 C\* STOP 977, U. S. GEOLOGICAL SURVEY, 345 MIDDLEFIELD ROAD, MENLO  
 C\* PARK, CA 94025.  
 C\*  
 C\*FORMAT: DATA FORMAT DEFINED AS FOLLOWS:  
 C\*  

C* COLUMN	C* FORMAT	C* ITEM	C* EXPLANATION
C* 01-02	C* I2	C* CODE	C* SITE CODE. C* MURRIETA HOT SPRINGS (2), WARNER HOT C* SPRINGS (4), AGUA CALIENTE (5), C* INDIAN CANYON (8), ROBISON'S WELL C* (9), ARROWHEAD HOT SPRINGS (10), HOT C* MINERAL WELL (15), NILAND SLAB WELL C* (21).
C* 03	C* IX		C* BLANK
C* 04-09	C* I6	C* DATE	C* DATE OF SAMPLE COLLECTION: 2 DIGITS C* FOR THE MONTH; 2 DIGITS FOR THE DAY; C* 2 DIGITS FOR THE YEAR.
C* 10	C* IX		C* BLANK
C* 11	C* I1	C* SUBSITE	C* 1=FIRST SAMPLING SUBSITE; C* 2=SECOND SAMPLING SUBSITE.
C* 12	C* A1	C* SITETYPE	C* P=POOL, S=SPRING, W=WELL.
C* 13	C* IX		C* BLANK
C* 14	C* I1	C* DUP	C* DUPLICATE SAMPLE TAKEN.
C* 15	C* IX		C* BLANK
C* 16-19	C* F4.1	C* TEMP	C* TEMPERATURE OF WATER, CENTIGRADE.

C\* 20-23 4X BLANK  
 C\* 24-27 I4 COND CONDUCTIVITY IN MICRO MHO.  
 C\* 28-30 3X BLANK  
 C\* 31-36 F6.3 RN RADON IN DPM/G.  
 C\* 37-38 A2 RN NOTE A1 AND A2 ARE FOR DUPLICATE SAMPLES.  
 C\* A AND B ARE FOR DIFFERENT TYPES OF  
 C\* SAMPLING BOTTLES.  
 C\* 39 1X BLANK  
 C\* 40-45 F6.3 HE HELIUM IN MICRO CC/G.  
 C\* 46-47 A2 HE NOTE F=CORNING 1720 FLASK. F1 AND F2 ARE  
 C\* DUPLICATE SAMPLES.  
 C\* 48-80 33X BLANK

C\*END-----

2	11384	2P	51.0	1220	.528	2.81	F
2	21084	2P	53.0	1220	.432	3.90	F
2	31584	2P	52.0	1300	.487	4.87	F
2	41284	2P	53.2	1250	.608	5.89	F
2	51084	2P	54.0	1280	.592	5.60	F
2	61584	2P	53.0	1250	.452	3.91	F
2	71384	2P	52.5	1270	.595	5.41	F
2	81084	2P	49.8	1270	.557	5.59	F
2	91484	2P	49.1	1280	.464	4.09	F
4	11284	1P	57.0	448	1.31	3.16	F

\*\*\*\*\* 62 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000199

Table GL000200

C#DSN=GL000200;SIZE=000525;DATE=041685;ARCH=TM;TAPE=SM9310;FILE=125;STRT=000807;  
 C\*DATE: 19841203; 0; CHUNG4;  
 C\*CLASS: GEOCHEMICAL; RADON; HELIUM; CONDUCTIVITY; TEMPERATURE;  
 C\*PERSN: Y. CHUNG;  
 C\*ALPHA: 19840101; 19840930; 32.9 N; 34.2 N; 117.3 W; 115.4 W;  
 C\* 14-08-0001-21186; A020;  
 C\*KEYWD: RADON; HELIUM; CONDUCTIVITY;  
 C\*TITLE: INVESTIGATION OF RADON AND HELIUM AS POSSIBLE FLUID-PHASE  
 C\* PRECURSORS TO EARTHQUAKES  
 C\*AUTHOR: Y. CHUNG

C\*INSTITUTION: UNIVERSITY OF CALIFORNIA, SAN DIEGO, CA.  
 C\* GEOLOGICAL RESEARCH DIVISION, A-020  
 C\* SCRIPPS INSTITUTION OF OCEANOGRAPHY  
 C\* LA JOLLA, CA 92093

C\*ABSTRACT: THIS DATA SET CONTAINS DAILY AVERAGED RADON DATA OBTAINED WITH  
 C\* CRMS AT THREE LOCATIONS DURING 1984. THE MURRIETA DATA AFTER  
 C\* AUGUST 25 WERE NOT VALID BECAUSE THE WATER LEVEL DECREASED  
 C\* SIGNIFICANTLY THEN AND THE GAS BUBBLE COLLECTOR WAS ABOVE THE  
 C\* WATER SURFACE. THE ARROWHEAD SITE HAS SUFFERED SIGNIFICANT DATA  
 C\* LOSS MAINLY DUE TO FREQUENT MALFUNCTIONING OF THE CRM UNDER HIGH  
 C\* HUMIDITY CONDITION OF THE UNDERGROUND CELL. AFTER THE REGULAR CRM  
 C\* UNIT (#115) HAD BROKEN DOWN, TWO SEPARATE UNITS (#113 AND #118)  
 C\* WERE USED THERE BUT THEY DID NOT WORK EITHER. THE DATA FROM JULY  
 C\* 13 TO 25 (DAY 195 TO 207) WERE COLLECTED WITH CRM #113. THE DATA  
 C\* FROM AUGUST 31 TO SEPTEMBER 14 (DAY 244 TO 258) AND FROM OCTOBER 10  
 C\* TO 15 (DAY 284 TO 289) WERE COLLECTED WITH CRM #118. DUE TO  
 C\* POSSIBLE EFFICIENCY DIFFERENCES THESE DATA MAY NOT REFLECT ANY REAL  
 C\* TEMPORAL VARIATIONS.

C*	C*	C*	C*	C*
	SITE CODE	SITE	DATA GAP	CAUSE
C*	2	MURRIETA	8	PAPER JAMMED
C*				PAPER JAMMED
C*			152-162	DATA LOW DUE TO MIXING
C*				WITH AIR
C*	10	ARROWHEAD	42-51	LEAKING; NO GAS FLOW
C*			127-130	PRINTER BATTERIES
C*				DISCHARGED
C*			139-194	PRINTER FAILED
C*			208-243	CRM BROKE DOWN
C*			259-283	PAPER JAMMED
C*	12	PINON FLAT	14-20	PRINTER FAILED
C*			83-84	PAPER JAMMED

C\*REFERENCE: CHUNG, Y. (1984). "INVESTIGATION OF RADON AND HELIUM AS  
 C\* POSSIBLE FLUID-PHASE PRECURSORS TO EARTHQUAKES" IN SUMMARIES  
 C\* OF TECHNICAL REPORTS, VOLUME XIX, NATIONAL EARTHQUAKE  
 C\* HAZARDS REDUCTION PROGRAM, DECEMBER 1985, U. S. GEOLOGICAL  
 C\* SURVEY OPEN-FILE REPORT 85-22.  
 C\* CHUNG, Y. (1984). "DATA REPORT: DATA SUMMARY FOR RADON AND  
 C\* HELIUM MONITORING IN S. CALIFORNIA FROM JAN TO SEP 84."  
 C\* A COPY OF THIS UNPUBLISHED REPORT IS AVAILABLE FROM WILLIE  
 C\* LEE, OFFICE OF EARTHQUAKES, VOLCANOES, AND ENGINEERING, MAIL  
 C\* STOP 977, U. S. GEOLOGICAL SURVEY, 345 MIDDLEFIELD ROAD, MENLO  
 C\* PARK, CA 94025.  
 C\*

C\*FORMAT: DATA FORMAT DEFINED AS FOLLOWS:

C\*

C*	COLUMN	FORMAT	ITEM	EXPLANATION
----	--------	--------	------	-------------

C\*

C*	01-02	I2	CODE	SITE CODE
C*				MURRIETA HOT SPRING (2), ARROWHEAD
C*				HOT SPRINGS (10), PINON FLAT (12).

C*	03	1X		BLANK
----	----	----	--	-------

C*	04-07	I4	YEAR	YEAR THE DATA WAS COLLECTED.
----	-------	----	------	------------------------------

C*	08-12	5X		BLANK
----	-------	----	--	-------

C*	13-15	I3	JULIAN	DATE THE DATA WAS COLLECTED.
----	-------	----	--------	------------------------------

C*			DATE	
----	--	--	------	--

C*	16-21	6X		BLANK
----	-------	----	--	-------

C*	22-27	I6	RN	ACTIVITY OF RADON AND TWO ALPHA
C*				DAUGHTERS IN COUNTS PER 20 MIN.

C*				(10) OR 40 MIN. (2 AND 12).
----	--	--	--	-----------------------------

C*				DAILY AVERAGE OF 24 RECORDS.
----	--	--	--	------------------------------

C*	28-80	53X		BLANK
----	-------	-----	--	-------

C\*END-----

2	1984	1	101223
---	------	---	--------

2	1984	2	98640
---	------	---	-------

2	1984	3	105975
---	------	---	--------

2	1984	4	107385
---	------	---	--------

2	1984	5	106859
---	------	---	--------

2	1984	6	107862
---	------	---	--------

2	1984	7	103466
---	------	---	--------

2	1984	9	105774
---	------	---	--------

2	1984	10	106743
---	------	----	--------

2	1984	11	107927
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\*\*\*\*\* 442 data cards not shown here \*\*\*\*\*

C#FINIS DSN=GL000200

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