DMSP

#613

Earth Sc

DMSP 5D-1/F1,F2,F3,F4

MFR TOTAL OZONE CALIBRATED RADIANCE DATA

76-091A-02A
77-044A-02A
78-042A-02A
79-050A-02A

613	76-091A-02A	ESAC-00040
613	76-091A-02B	ESAD-00097
613	77-044A-02A	ESAD-00197
613	77-044A-02B	ESAD-00097
613	78-042A-02A	ESAD-00104
613	78-042A-02B	ESAD-00097
613	79-050A-02A	ESAD-00050
613	79-050A-02B	ESAD-00097

#613

DMSP 5D-1/F1,F2,F3,F4

MFR TOTAL OZONE GRID POINT DATA
76-091A-02B
77-044A-02B
78-042A-02B
79-050A-02B

Table of Contents

1. Introduction

2. Errata/Change Log

3. LINKS TO RELEVANT INFORMATION IN THE ONLINE NSSDC INFORMATION SYSTEM

4. Catalog Materials

    a. Associated Documents

    b. Core Catalog Materials

---

1. INTRODUCTION:

The documentation for this data set was originally on paper, kept in NSSDC's Data Set Catalogs (DSCs). The paper documentation in the Data Set Catalogs have been made into digital images, and then collected into a single PDF file for each Data Set Catalog. The inventory information in these DSCs is current as of July 1, 2004. This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system. The information existing in the DSCs is now not needed for locating the data files, but we did not remove that inventory information.

The offline tape datasets have now been migrated from the original magnetic tape to Archival Information Packages (AIP's).

A prior restoration may have been done on data sets, if a requestor of this data set has questions; they should send an inquiry to the request office to see if additional information exists.

2. ERRATA/CHANGE LOG:

NOTE: Changes are made in a text box, and will show up that way when displayed on screen with a PDF reader.

When printing, special settings may be required to make the text box appear on the printed output.

Version	Date	Person	Page	Description of Change
01				
02				

3 LINKS TO RELEVANT INFORMATION IN THE ONLINE NSSDC INFORMATION SYSTEM:

http://nssdc.gsfc.nasa.gov/nmc/

[NOTE: This link will take you to the main page of the NSSDC Master Catalog. There you will be able to perform searches to find additional information]

4. CATALOG MATERIALS:

a. Associated Documents To find associated documents you will need to know the document ID number and then click here. http://nssdcftp.gsfc.nasa.gov/miscellaneous/documents/

b. Core Catalog Materials

README.DOC

This is a folder containing document information for a series of DMSP 5D-1 ozone and radiance data. Since the data products share the same format and descriptions, only one set of document is preserved. It applies to the following data set IDs:

Total Ozone and Calibrated Radiance
76-091A-02A
77-044A-02 A
78-042A-02A
79-050A-02A

MFR Total Ozone Grid Point Data
76-091A-02B
77-044A-02 B
78-042A-02B
79-050A-02B

****

The directory structures for the DMSP documents are as follows:

```
DMSP.DSC                (level-1 folder)

    README.TIF          (this document)
    DMSPCOV.TIF         (image of the catalog cover)

    DMSPDOC1            (level-2 folder)

        D001.TIF        (image of 8.5x11-in. hardcopy; Data Set Brief
        D002.TIF         Description, Materials for Distribution, etc.)
            .
            .
    DMSPDOC2            (level-2 folder)

        D001.TIF        (image of 8.5x11-in. hardcopy; a document or memo
        D002.TIF         listed in the Materials for Distribution)
            .
            .
    DMSPDUMP            (level-2 folder)

        L001.TIF        (image of computer listing)
        L002.TIF
            .
            .
```

****

B R I E F D E S C R I P T I O N
DMSP 5D-1/F1
76-091A

DMSP-5D-1/F1 was one of a series of meteorological satellites developed and operated by the Air Force under the Defense Meteorological Satellite Program (DMSP). This program, previously known as DAAP (Data Acquisition and Processing Program), was classified until March 1973. The objectives of this program were to provide global visual and infrared cloud cover data and specialized environmental data to support Department of Defense requirements. Operationally, the program consisted of two satellites in planned 83-km sun-synchronous polar orbits, with the ascending node of one satellite in early morning and the other at local noon. The 5.4-m-long spacecraft was separated into four sections: (1) a precision mounting platform (PMP) for sensors and equipment requiring precise alignment, (2) an equipment support module (ESM) containing the electronics, reaction wheels, and some meteorological sensors, (3) a reaction control equipment (RCE) support structure (that has the third-stage motor, hydrazine reaction control system) which supports (4) a 9.29 sq m solar cell panel. The Block 5D spacecraft stabilization was controlled by a conbination flywheel and magnetic control coil system so sensors could be maintained in the desired 'earth-looking' mode. One feature of Block 5D was the precision-pointing accuracy of the primary imager to 0.01 deg provided by a star sensor and an updated ephemeris navigation system. This allowed automatic geographical mapping of the digital imagery to the nearest picture element. The operational line scan system (OLS) built by Westinghouse, was the primary acquisition system that provided real-time or stored, multi-orbit, day-and-night visual and infrared imagery at 1/3 nautical mile resolution for all major land masses, 2-1/2 nautical mile resolution for complete global coverage, and provided with this data calibration, timing, and other auxiliary signals to the spacecraft for digital transmission to the ground. A supplementary sensor package, the special sensor H (SSH), a step-scanning radiometer, was the infrared temperature-humidity-ozone sounder. The data processing system, which included three high-density tape recorders, could store a total of 400 min of data, each allowing full global coverage twice daily. Either recorded or real-time data were transmitted to ground-receiving sites via two redundant s-band transmitters. Recorded data were read out to tracking sites located at Fairchild AFB, WA, and Loring AFB, ME, and relayed via SATCOM to Air Force Global Weather Central, Offutt AFB, NE. Real-time data were read out at mobile tactical sites located around the world. A more complete description of the Block 5D satellite can be found in the report, 'The Defense Meteorological Satellite Program,' D. A. Nichols, Optical Engineering, 14, 4, July - August 1975.

B R I E F D E S C R I P T I O N

DMSP-5D,Multchan Filt Radmtr(MFR)

76-091A-02

Special Sensor H (SSH) was a vertical temperature profile radiometer (VTPR). The objective of this experiment was to obtain vertical temperature, water vapor, and ozone profiles of the atmosphere to support Department of Defense resuirements in operational weather analysis and forecasting. The SSH was a 16-channel sensor with one channel (1022 cm-1) in the 10-micrometer ozone absorption band, one channel (835 cm-1) in the 12-micrometer atmospheric window, six channels (747, 725, 708, 695, 676, 668.5 cm-1) in the 15-micrometer CO2 absorption band, and eight channels (535, 408.5 441.5, 420, 374, 397.5, 355, 353.5 cm-1) in the 22- to 30-micrometer rotational water vapor absorption band. The experiment consisted of an optical system, detector and associated electronics, and a scanning mirror. The scanning mirror was stepped across the satellite subtrack, allowing the SSH to view 25 separate columns of the atmosphere every 32 s over a cross track ground swath of 2000 km. While the scanning mirror was stopped at a scene station, the channel filters were sequenced through the field of view. The surface resolution was approximately 39 km at nadir. Radiance data were transformed into temperature water vapor and ozone profiles by a mathematical inversion technique. A more complete description of the experiment can be found in the report, 'DMSP Block 5D Special Meteorological Sensor H, Optical Subsystem,' D. A. Nichols, Optical Engineering, 14, No. 4, 284-288, July-August 1975.

B R I E F D E S C R I P T I O N

Total Ozone + Calibrated Radiance

76-091A-02A Same information for 77-044A-02A 78-042A-02A 79-050A-02A

This data set is contained on binary magnetic tapes. The multichannel filter radiometer (MFR) was a scanning instrument carried on the DMSP satellite and was used to calibrate the total column ozone globally. The infrared MFR sensors made both daytime and nighttime observations, thus permitting a possible 67,500 observations every 24 h by satellite. The MFR instruments were unique in that they each had a channel for measurements of upwelling radiation in the 9.6 micrometer band of ozone. Uncalibrated radiance data were calibrated and mapped to earth coordinates at Lawrence Livermore National Laboratory (LLNL), thus deriving a total column ozone. Both the ozone and calibrated radiance data were placed in a computer data base called Satellite Ozone Analysis Center (SOAC). The data base was constructed on a VAX 11/780 computer with a VMS operating system using the FRAMIS code, a relational data base manager. The data base contains the MFR total ozone calibrated radiance data from all four DMSP block 5D-1 satellites. It can be implemented on any VAX system with a VMS operating system, provided that the system has sufficient disk space to hold one day of data. Similar data sets for DMSP are in 77-044A-02A, 78-042A-02A, and 79-050A-02A.

M A T E R I A L S F O R D I S T R I B U T I O N

76-091A-02A

Total Ozone + Calibrated Radiance

The following items were found in the data set catalog:

1) "Defense Meteorological Satellite Program Multichannel Filter Radiometer (DMSP/MFR)," p. 20-22, Souce and author unknown.

2) "The DMSP/MFR Total Ozone and Radiance Data Base," by J.S. Ellis et. al, Lawrence Livermore Laboratory, UCID-19690, January 1983.

(CYN, 9/97)

DMSP 5D-1/F1, F2

MFR TOTAL OZONE CALIBRATED RADIANCE DATA

76-091A-02A ESAC-00040

77-044A-02A ESAD-00197

THESE DATA SETS HAVE BEEN RESTORED. THEY ORIGINALLY CONTAINED 11 9-TRACK, 6250 BPI TAPES FOR DATA SET 76-091A-02A AND 39 9-TRACK, 6250 BPI TAPES FOR DATA SET 77-044A-02A AND 2 9-TRACK, 6250 BPI TAPES FOR BOTH DATA SETS, ALL WRITTEN IN BINARY. THERE ARE 11 RESTORED TAPES. THE ORIGINAL TAPES HAD ASCII HEADER AND TRAILER RECORDS, THESE WERE NOT COPIED ONTO THE RESTORED TAPES. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK, 6250 BPI. WHEN VERIFING THE TIME SPANS, THE YEAR COULD NOT BE VERIFIED. THE ORIGINAL TAPES WERE CREATED ON A VAX 11/780 COMPUTER AND WERE RESTORED ON THE MRS SYSTEM. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

76-091A-02A; 77-044A-02A

DR#	DS#	D#	FILES	TIME SPAN
DR005054	DS005054	D054508	1-5	03/25/77 - 03/30/77
		D054509	6-7	04/08/77 - 04/09/77
		D054510	8-16	04/10/77 - 04/19/77
		D054511	17-26	04/20/77 - 04/29/77
		D054512	27-36	04/30/77 - 05/09/77
		D054513	37-44	05/10/77 - 05/17/77
DR005055	DS005055	D054514	1-7	05/23/77 - 05/29/77
		D054515	8-15	05/30/77 - 06/08/77
		D054516	16-23	06/09/77 - 06/18/77
		D054517	24-32	06/19/77 - 06/28/77
		D054518	33-42	06/29/77 - 07/08/77
		D054519	43-47	07/09/77 - 07/18/77 *
		D054520	48-55	07/20/77 - 07/28/77 *

FILES 43-55 OF DR/DS 5055 CONTAIN BOTH DATA SETS.

DR#	DS#	D#	FILES	TIME SPAN
DR005195	DS005195	D054521	1-8	07/29/77 - 08/06/77
		D054522	9-17	08/08/77 - 08/16/77
		D054523	18-27	08/18/77 - 08/27/77
		D054524	28-32	08/28/77 - 09/06/77
		D054525	33-42	09/07/77 - 09/16/77
		D054526	43-50	09/17/77 - 09/26/77
		D054527	51-59	09/27/77 - 10/05/77
DR005196	DS005196	D054528	1-9	10/07/77 - 10/16/77
		D054529	10-19	10/17/77 - 10/26/77
		D054530	20-28	10/28/77 - 11/05/77
		D054531	29-38	11/06/77 - 11/15/77
		D054532	39-48	11/16/77 - 11/25/77
DR005197	DS005197	D054533	1-10	11/26/77 - 12/05/77
		D054534	11-20	12/06/77 - 12/15/77
		D054535	21-30	12/15/77 - 12/25/77
		D054536	31-36	12/26/77 - 12/31/77
		D054537	37-45	01/01/78 - 01/09/78
DR005198	DS005198	D054538	1-10	01/10/78 - 01/19/78
		D054539	11-20	01/20/78 - 01/29/78
		D054540	21-30	01/30/78 - 02/08/78
		D054541	31-40	02/09/78 - 02/18/78
DR005199	DS005199	D054542	1-10	02/19/78 - 02/28/78
		D054543	11-20	03/01/78 - 03/10/78
		D054544	21-30	03/11/78 - 03/20/78
DR005200	DS005200	D054545	1-10	03/21/78 - 03/30/78
		D054546	11-20	03/31/78 - 04/09/78
		D054547	21-30	04/10/78 - 04/19/78
DR005201	DS005201	D054548	1-10	04/20/78 - 04/29/78
		D054549	11-18	04/30/78 - 05/09/78
		D054550	19-28	05/10/78 - 05/19/78
		D054551	29-37	05/20/78 - 05/29/78
DR005202	DS005202	D054552	1-9	05/30/78 - 06/08/78
		D054553	10-19	06/09/78 - 06/18/78
		D054554	20-29	06/19/78 - 06/28/78
		D054555	30-38	06/29/78 - 07/08/78
DR005203	DS005203	D054556	1-10	07/09/78 - 07/18/78
		D054612	11-17	01/10/80 - 01/18/80
		D054613	18-25	01/22/80 - 02/29/80
		D054615	26-33	02/09/80 - 02/16/80

REQ. AGENT	RAND #	ACQ. AGENT
DAD	V0212	RWP YPS(See V0221)

DMSP 5D-1/F1, F2, F3, F4

MFR TOTAL OZONE CALIBRATED RADIANCE DATA

76-091A-02A ESAC-00040

77-044A-02A ESAD-00197

78-042A-02A ESAD-00104

79-050A-02A ESAD-00050

These data sets are contained on 108 magnetic tapes. The tapes are 6250 BPI, 9 track, multi-filed, and are written in binary. The tapes have ASCII header records and ASCII trailer records. They were created on a Vax 11/780 computer. All the tapes do not contain all four data sets The D#, # of Files, and Time span, and satellite ID's for each tape are as follows:

D#	# OF FILES	TIME SPANS	SATELLITE
D-54508	15	03/25/77 - 03/30/77	F1
D-54509	6	04/08/77 - 04/09/77	F1
D-54510	27	04/10/77 - 04/19/77	F1
D-54511	30	04/20/77 - 04/29/77	F1
D-54512	30	04/30/77 - 05/09/77	F1
D-54513	24	05/10/77 - 05/17/77	F1
D-54514	21	05/23/77 - 05/29/77	F1
D-54515	24	05/30/77 - 06/08/77	F1
D-54516	24	06/09/77 - 06/18/77	F1
D-54517	27	06/19/77 - 06/28/77	F1
D-54518	30	06/29/77 - 07/08/77	F1
D-54519	15	07/09/77 - 07/18/77	F1 & F2
D-54520	24	07/20/77 - 07/28/77	F1 & F2
D-54521	24	07/29/77 - 08/06/77	F2
D-54522	27	08/08/77 - 08/16/77	F2
D-54523	30	08/18/77 - 08/27/77	F2
D-54524	15	08/28/77 - 09/06/77	F2
D-54525	30	09/07/77 - 09/16/77	F2
D-54526	24	09/17/77 - 09/26/77	F2
D-54527	27	09/27/77 - 10/05/77	F2
D-54528	27	10/07/77 - 10/16/77	F2
D-54529	30	10/17/77 - 10/26/77	F2
D-54530	27	10/28/77 - 11/05/77	F2
D-54531	30	11/06/77 - 11/15/77	F2
D-54532	30	11/16/77 - 11/25/77	F2
D-54533	30	11/26/77 - 12/05/77	F2
D-54534	30	12/06/77 - 12/15/77	F2
D-54535	30	12/15/77 - 12/25/77	F2
D-54536	18	12/26/77 - 12/31/77	F2

D#	# OF FILES	TIME SPANS	SATELLITE
D-54537	27	01/01/78 - 01/09/78	F2
D-54538	30	01/10/78 - 01/19/78	F2
D-54539	30	01/20/78 - 01/29/78	F2
D-54540	30	01/30/78 - 02/08/78	F2
D-54541	30	02/09/78 - 02/18/78	F2
D-54542	30	02/19/78 - 02/28/78	F2
D-54543	30	03/01/78 - 03/10/78	F2
D-54544	30	03/11/78 - 03/20/78	F2
D-54545	30	03/21/78 - 03/30/78	F2
D-54546	30	03/31/78 - 04/09/78	F2
D-54547	30	04/10/78 - 04/19/78	F2
D-54548	30	04/20/78 - 04/29/78	F2
D-54549	24	04/30/78 - 05/09/78	F2
D-54550	30	05/10/78 - 05/19/78	F2
D-54551	27	05/20/78 - 05/29/78	F2
D-54552	27	05/30/78 - 06/08/78	F2
D-54553	30	06/09/78 - 06/18/78	F2
D-54554	30	06/19/78 - 06/28/78	F2
D-54555	27	06/29/78 - 07/08/78	F2
D-54556	30	07/09/78 - 07/18/78	F2
D-54557	30	07/19/78 - 07/28/78	F2 & F3
D-54558	30	07/29/78 - 08/07/78	F2 & F3
D-54559	30	08/08/78 - 08/17/78	F2 & F3
D-54560	30	08/18/78 - 08/27/78	F2 & F3
D-54561	30	08/28/78 - 09/06/78	F2 & F3
D-54562	30	09/07/78 - 09/16/78	F2 & F3
D-54563	30	09/17/78 - 09/26/78	F2 & F3
D-54564	30	09/27/78 - 10/06/78	F2 & F3
D-54565	30	10/07/78 - 10/16/78	F2 & F3
D-54566	30	10/17/78 - 10/26/78	F2 & F3
D-54567	30	10/27/78 - 11/05/78	F2 & F3
D-54568	30	11/06/78 - 11/15/78	F2 & F3
D-54569	30	11/16/78 - 11/25/78	F2 & F3
D-54570	30	11/26/78 - 12/05/78	F2 & F3
D-54571	30	12/06/78 - 12/15/78	F2 & F3
D-54572	30	12/16/78 - 12/25/78	F2 & F3
D-54573	15	12/26/78 - 12/31/78	F2 & F3
D-54574	27	01/01/79 - 01/09/79	F2 & F3
D-54575	30	01/09/79 - 01/19/79	F2 & F3
D-54576	30	01/20/79 - 01/29/79	F2 & F3
D-54577	30	01/30/79 - 02/08/79	F2 & F3
D-54578	30	02/09/79 - 02/18/79	F2 & F3
D-54579	30	02/19/79 - 02/28/79	F2 & F3
D-54580	30	03/01/79 - 03/10/79	F2 & F3
D-54581	30	03/11/79 - 03/20/79	F2 & F3
D-54582	30	03/21/79 - 03/30/79	F2 & F3
D-54583	30	03/31/79 - 04/09/79	F2 & F3
D-54584	30	04/10/79 - 04/19/79	F2 & F3
D-54585	30	04/20/79 - 04/29/79	F2 & F3
D-54586	30	04/30/79 - 05/09/79	F2 & F3
D-54587	30	05/10/79 - 05/19/79	F2 & F3
D-54588	30	05/20/79 - 05/29/79	F2 & F3
D-54589	30	05/30/79 - 06/08/79	F2 & F3
D-54590	30	06/09/79 - 06/18/79	F2,F3 & F4

D#	# OF FILES	TIME SPANS	SATELLITE
D-54591	30	06/19/79 - 06/28/79	F2,F3 & F4
D-54592	30	07/29/79 - 07/08/79	F2,F3 & F4
D-54593	30	07/09/79 - 07/18/79	F2,F3 & F4
D-54594	30	07/19/79 - 07/28/79	F2,F3 & F4
D-54595	30	07/29/79 - 08/07/79	F2,F3 & F4
D-54596	30	08/08/79 - 08/17/79	F2,F3 & F4
D-54597	30	08/18/79 - 08/27/79	F2,F3 & F4
D-54598	30	08/28/79 - 09/06/79	F2,F3 & F4
D-54599	30	09/07/79 - 09/16/79	F2,F3 & F4
D-54600	30	09/17/79 - 09/26/79	F2,F3 & F4
D-54601	30	09/27/79 - 10/06/79	F2,F3 & F4
D-54602	30	10/07/79 - 10/16/79	F2,F3 & F4
D-54603	30	10/17/79 - 10/26/79	F2,F3 & F4
D-54604	30	10/27/79 - 11/05/79	F2,F3 & F4
D-54605	30	11/06/79 - 11/15/79	F2,F3 & F4
D-54606	30	11/16/79 - 11/25/79	F2,F3 & F4
D-54607	30	11/26/79 - 12/05/79	F2,F3 & F4
D-54608	30	12/06/79 - 12/15/79	F2,F3 & F4
D-54609	30	12/16/79 - 12/25/79	F2,F3 & F4
D-54610	30	12/26/79 - 12/31/79	F2,F3 & F4
D-54611	27	01/01/80 - 01/09/80	F2 & F3
D-54612	21	01/10/80 - 01/18/80	F2
D-54613	24	01/22/80 - 01/29/80	F2
D-54614	27	01/30/80 - 02/08/80	F2 & F3
D-54615	24	02/09/80 - 02/16/80	F2

DEFENSE METEOROLOGICAL SATELLITE PROGRAM
Multichannel Filter Radiometer (DMSP/MFR)

I Measurement Description

Multichannel filter radiometer (MFR) infrared sensors were flown on the Defense Meteorological Satellite Program (DMSP) Block-5-series satellites operated by the U.S. Air Force. The first four DMSP satellites (F1-F4) with MFR sensors measured infrared radiances in 16 channels, including the 9.6 micron band of ozone, from which total column ozone amounts were derived. MFR sensor infrared measurements are taken day and night.

Each MFR sensor measures infrared radiation emitted from the Earth's surface and from the atmosphere at 16 spectral channels. The spectral channels coincide with the atmospheric absorption (emission) bands of water vapor, carbon dioxide and ozone. One channel in the atmospheric window is used to sense thermal radiation from the earth's surface. Total ozone amounts are determined from sets of radiance measurements using a linear regression analysis and simulated radiances from an ozone climatology.

II Data Description

The MFR scans side to side in discrete steps of 4 degrees in look angle. Radiance measurements are performed at 25 cross-track scanning locations every 32 seconds. A maximum of 67,500 sets of measurements (of 16 radiances each) were made per day, but typically 40,000-50,000 measurements are taken per day due to instrument sun screens (F2, F3), scan position blockage (F3), and data receipt and recovery problems.

All of the DMSP satellites are in polar, sun-synchronous orbits at altitudes of about 830 km, thereby providing nearly global coverage. Their orbital parameters are essentially identical with the exception of F4, which is in a nighttime ascending orbit (i.e., F4 ascends from southeast to northwest on the night side), whereas the others are in daytime ascending orbits. The local overpass times for each satellite are shown in Table 1. Although F2 and F4 are only about an hour apart in their overpass times, their flight tracks are different, thereby better enabling F4 to fill data-void areas of F2 and F3. Detailed information on the retrieval algorithm and measurement description appear in references 1 and 2.

TABLE 1. The data periods covered by the MFR sensors on the DMSP satellites.

DMSP satellite	Data period	Local overpass
F1	March 1977-July 1977	11-12 a.m. and p.m.
F2	July 1977-February 1980	9-10 a.m. and p.m.
F3	August 1978-January 1980	6-7 a.m. and p.m.
F4	June 1979-January 1980	10-12 a.m. and p.m.

III Data Validation

Validation studies include intercomparison of the MFR ozone data with Dobson data from 44 stations and with SBUV, TOMS and the TIROS Operational Vertical Sounder data. The intercomparison with Dobson data is done routinely for each month of data, whereas the satellite data intercomparison has been done for only limited periods. Validation of MFR data using Dobson stations and preliminary study of MFR SBUV/TOMS comparisons appear in references 1, 3 and 4. On the average, MFR values were found to be about 2% less than Dobson in the preliminary study.

IV Data Archival

The data (including the raw radiances, the retrieved ozone values and related data) are stored on high density magnetic tape (6250 bpi). The data were processed and archived using a DEC VAX 11/780 computer system at the Lawrence Livermore National Laboratory. The tapes are written in binary format and the FRAMIS (National Energy Software Center, Argonne, IL) relational data base management system must be used to extract the data. Data tapes and documentation necessary to read them will be available from the NSSDC after Octover 1982.

V References

1. Luther, F.M. "Annual Report of Lawrence Livermore National Laboratory to the FAA on the High Altitude Pollution Program, -- 1980," Lawrence Livermore National Laboratory Report UCRL-50042-80, 1980.

2. Luther, F.M., J.S. Ellis, J.E. Lovill, T.J. Sullivan and R.L. Weichel, "Global Distribution of Total Ozone During January and February 1979 as Determined from DMSP Multichannel Filter Radiometer Measurements," in Proceedings of the Quadrennial Ozone Symposium, Boulder, Colorado, August 4-9, 1980; Lawrence Livermore National Laboratory Report UCRL-84070m 1980,

3. Luther, F.M. and R.L. Weichel, "Determination of Total Ozone from DMSP Multichannel Filter Radiometer Measurements," in Proceedings of the Quadrennial Ozone Symposium, Boulder, Colorado, August 4-9, 1980; Lawrence Livermore National Laboratory Report UCRL-84069, 1980.

4. Lovill, J.E. et.at., "Defense Meteorological Satellite Measurements of Total Ozone", GRL, 9, pp. 105-108, 1982.

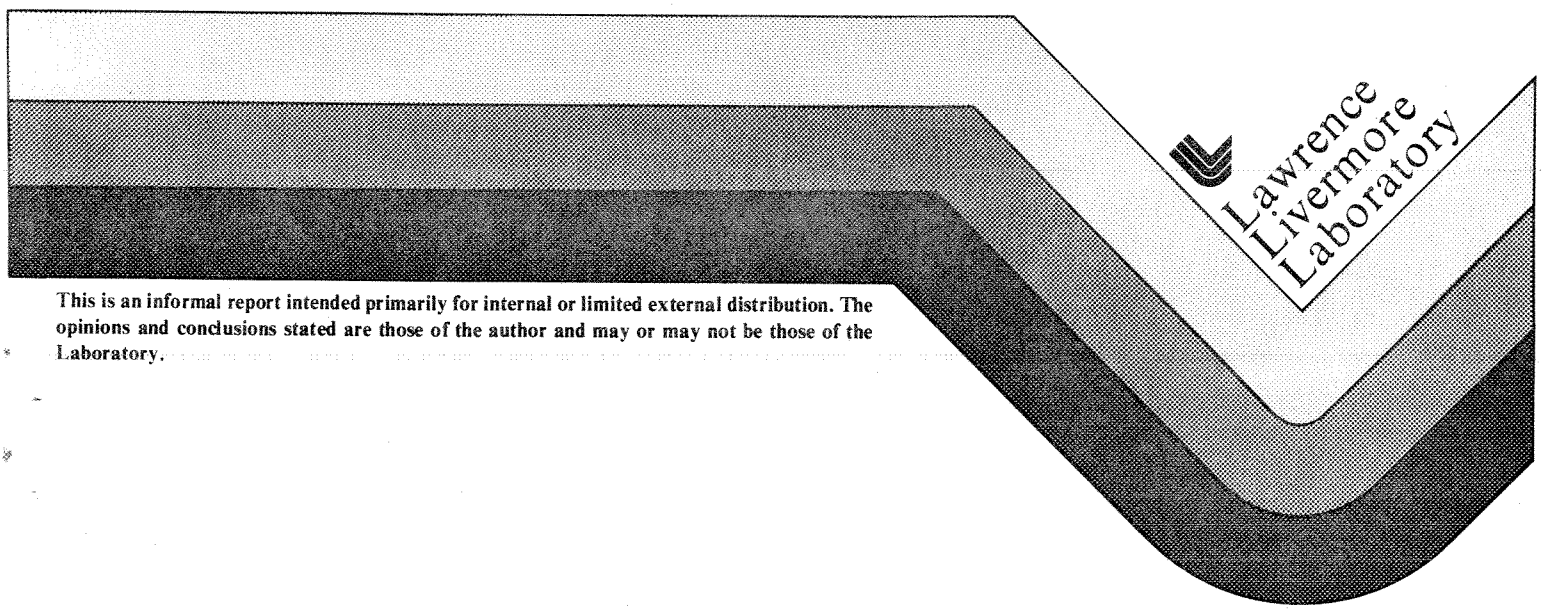
B-35054

UCID- 19690

THE DMSP/MFR TOTAL OZONE AND RADIANCE DATA BASE

J. S. Ellis, J. E. Lovill,
F. M. Luther, T. J. Sullivan,
S. S. Taylor and R. L. Weichel

January 1983



This is an informal report intended primarily for internal or limited external distribution. The opinions and conclusions stated are those of the author and may or may not be those of the Laboratory.

THE DMSP/MFR TOTAL OZONE AND RADIANCE DATA BASE

J. S. Ellis, J. E. Lovill, F. M. Luther, T. J. Sullivan
S. S. Taylor and R. L. Weichel

Lawrence Livermore National Laboratory, University of California
Livermore, California 94550

January 1983

1. INTRODUCTION

The radiance measurements by the multichannel filter radiometer (MFR), a scanning instrument carried on the Defense Meteorological Satellite Program (DMSP) Block 5D series of satellites (flight models F1, F2, F3 and F4), were used to calculate the total column ozone globally for the period March 1977 through February 1980. The infrared MFR sensors made both daytime and nighttime observations, thus permitting a possible 67,500 observations every 24 hours by each satellite. These MFR instruments were unique in that they each had a channel for measurement of upwelling radiation in the 9.6 μm band of ozone.

Uncalibrated radiance data on magnetic tape were sent to Lawrence Livermore National Laboratory (LLNL) throughout the data period from the Air Force Global Weather Center (AFGWC). These data were then calibrated and mapped to earth coordinates at LLNL. We derived total column ozone from these calibrated radiance data (Lovill et al., 1978, 1983; Luther, 1980) and placed both the ozone and calibrated radiance data into a computer data base called SOAC (Satellite Ozone Analysis Center). The uncalibrated radiance data tapes were initially sent on to the National Climate Center, Asheville, North Carolina and then to the Satellite

Data Services Branch /EDS/NOAA, Suitland, Maryland where they were archived. Copies of the data base containing the total ozone and the calibrated radiance data reside both at LLNL and at the National Space Science Data Center, NASA Goddard Space Flight Center, Greenbelt, Maryland.

The data base was constructed on a VAX 11/780 computer with a VMS operating system using the FRAMIS code, a relational data base manager. The data base can be implemented on any VAX system with a VMS operating system providing that the system has sufficient disc space to hold one day of data, i.e., approximately 25,000 blocks on a disk are required to contain the largest data day. The FRAMIS code and its documentation are available from the National Energy Software Center, Argonne, Illinois.

The purpose of this report is to describe the entries into the data base in sufficient detail so that the data base might be useful to others. The characteristics of the MFR sensor are briefly discussed and a complete index to the data base tapes is given.

2. THE MFR DATA

The DMSP Block 5D series satellites, flight models F1, F2, F3 and F4, which carried an MFR with a channel sensing in the 9.6 μm ozone band, were in an approximately 835 km altitude, near polar, sun-synchronous orbits. The local overpass time varied between satellites (Table 1). The operational lifetimes of these satellites also varied. The data period for F1 was shortest with 6 months of intermittent data receipts. The F2 data period was continuous for 2-1/2 years, including and extending beyond the F3 and F4 data periods. During the period from mid-June 1979 through December 1979, the three satellites, F2, F3 and F4, continuously provided data.

TABLE 1. The Data Periods Covered by the MFR Sensors on the Defense Meteorological Satellites.

Defense Meteorological Satellite	Data Period	Local Equatorial Overpass Time	Local AM Orbit
F1	March 1977 - July 1977	∿ 12 (AM;PM)	Ascending*
F2	July 1977 - February 1980	∿ 8-10 (AM;PM)	Ascending
F3	August 1978 - December 1979	∿ 7 (AM;PM)	Ascending
F4	June 1979 - December 1979	∿ 10 (AM;PM)	Descending

*Moving from south to north

The MFR scanned across the satellite ground track every 32 seconds in 25 steps at every 4 degrees of scan angle (±48 degrees from nadir). The ground projection of the sampled area at each of the 25 scan positions and the spacing of the cross-track scans are shown in Fig. 1. The cross-track scanning capability of the MFR and its daytime and nighttime sampling capability permitted up to 67,500 observations daily by each satellite. However, the actual number of daily observations retained in the data base was less because of various reasons, including operational cycle, noisy data when a sensor system began to fail, insufficient disc space at AFGWC to contain multiple satellite data (occurred in start up of F2),

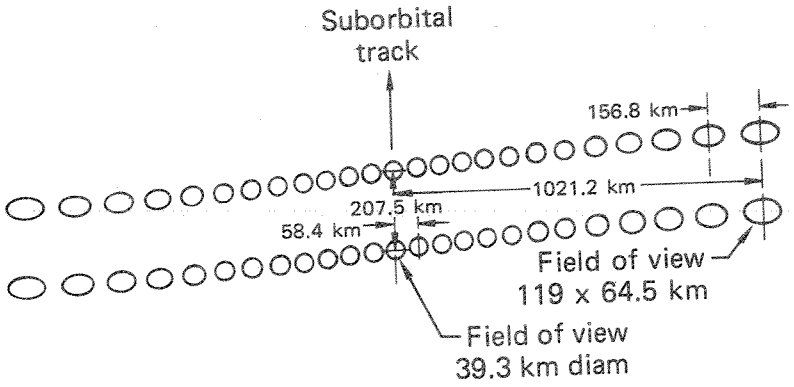


FIGURE 1. Earth-projected scan pattern for the MFR (after Nichols, 1975).

tapes being unreadable, failure of onboard satellite recorders, periodic satellite readout conflicts when multiple satellites were operational, and radiance values falling outside the range checks used during the total ozone calculation.

The satellite readout of the MFR data on all four satellites was on a continuous duty cycle. Out of a possible maximum of 1059 satellite-days of data, there are 991 days of data in the SOAC data base. There are but two extended temporal gaps in the 3-year data base; both occurred in the first half of 1977. These periods are March 31 to April 7, 1977 and May 16 to June 10, 1977, inclusive. These data losses occurred with the F1 satellite. There are 21 days of data intermittently missing from the data base in the second half of 1977. During the remaining period from January 1, 1978 to February 16, 1980, only 2 days of data are missing from the data base.

The F2 MFR daily data count was on the order of 50% or less of that possible for the first 3 months of its operation between July 13, 1977 and the last of October 1977. The computer disc space allocated by the AFGWC was not sufficient to hold both the data of the failing F1 MFR and the new F2 MFR data. Even with the reduced data counts, the F2 global coverage was quite good because either daytime or nightime data were usually recovered. After October 1977, F2 had a high data rate (40,630 average daily count) and there were no significant losses of data.

The F2 satellite MFR had a lower maximum possible data count throughout the sensor's lifetime because a sun shield on the spacecraft blocked the field of view in the last four scan positions to right of the spacecraft direction of travel. Nevertheless, the data coverage was quite good (Fig. 2b). After the F4 satellite became operational in June 1979, there were three satellite MFR instruments operating at one time until the end of December 1979 when only the F2 MFR continued to operate. During this period, the F2 MFR data became lower priority. Whenever a satellite readout conflict occurred, the F2 MFR data count decreased.

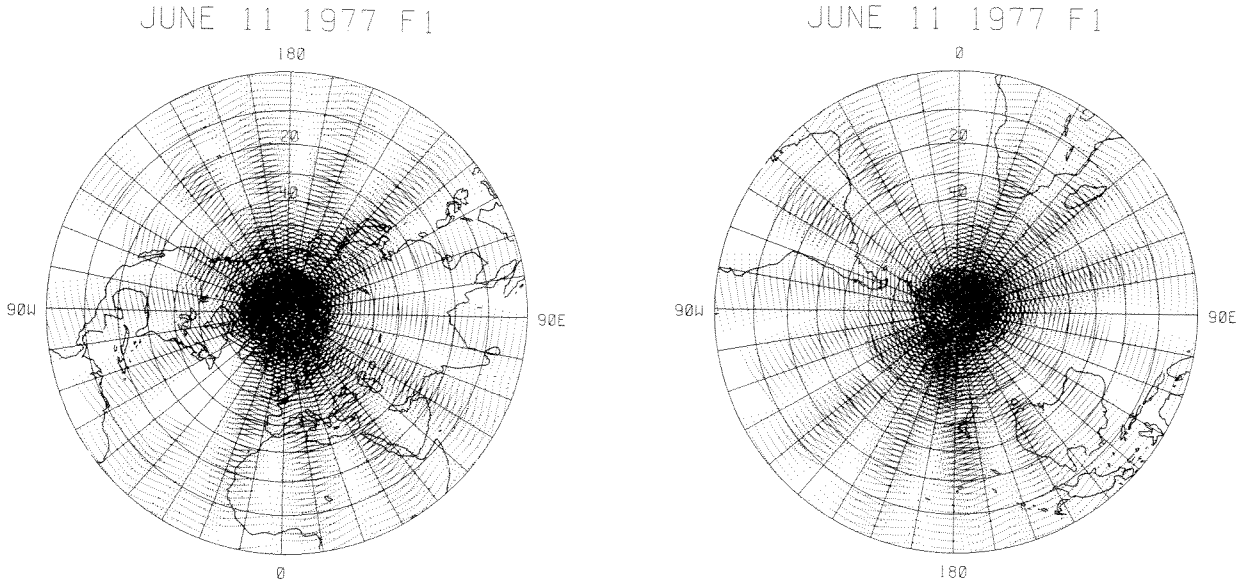


FIGURE 2a. Locations where total ozone retrievals were made during the 24-hour period of June 11, 1977, F1 satellite.

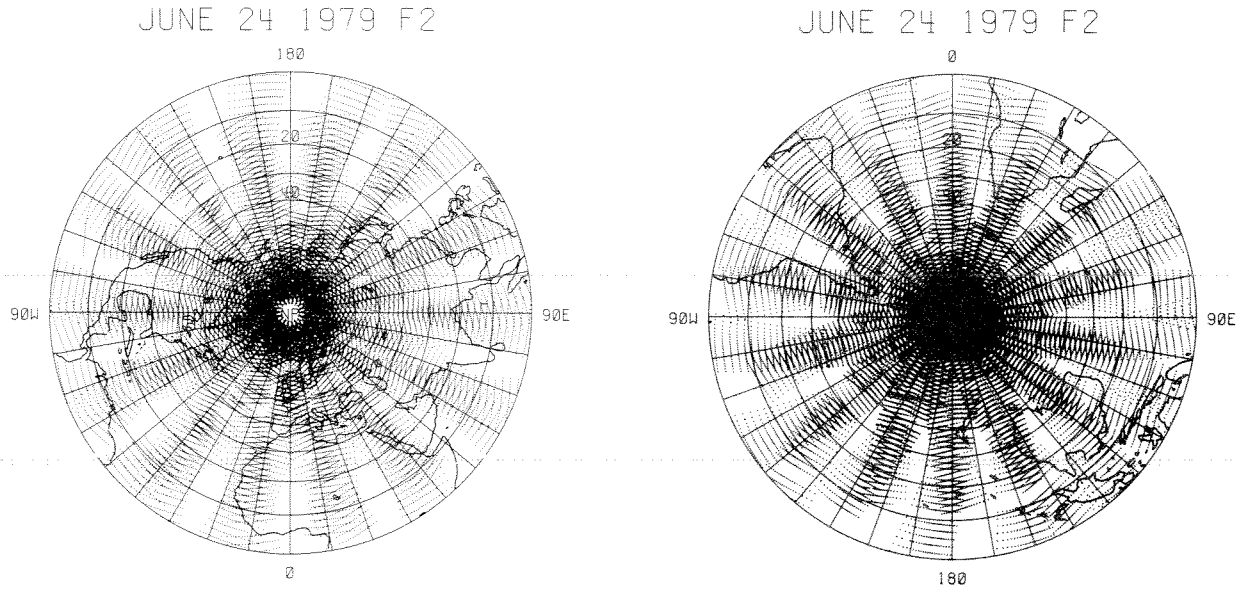


FIGURE 2b. Locations where total ozone retrievals were made during the 24-hour period of June 24, 1979, F2 satellite.

Thus, there were occasional days of F2 data with counts less than 50 percent of that possible.

The F3 MFR satellite generally provided 65 to 70 percent of the possible coverage during its lifetime because of a sun shield and an object(s) attached to the spacecraft which drifted through the field of view of the MFR during each orbit. The field of view in 8 to 9 scan positions was quite often obscured. However the F3 MFR coverage was still quite extensive (Figure 2c) with an average daily data count of 39,827. All 25 scan positions in the F4 MFR provided high quality data allowing high spatial sampling (Figure 2d). Data base data counts average 53,243 samples per day.

3. THE MFR CHARACTERISTICS

The MFR sensor measures upwelling radiances in 16 spectral bands. One channel is centered in the 9.6 μm O_3 bands, six channels are in the 15 μm CO_2 bands, one channel is in the so called atmospheric window near 12 μm, and eight channels are in the water vapor rotation band (18 to 30 μm). The nominal MFR channel characteristics are shown in Table 2; more specific channel characteristics for each satellite are presented in Appendix A.

The channels used to retrieve values of total ozone included the first three channels sensing in the 15μm CO_2 band (1, 2, and 3), the atmospheric window channel (7), and the channel sensing in the 9.6 μm O_3 band (16). The three CO_2 channels sense IR radiation emitted from the upper, middle and lower stratosphere and the upper troposphere. The derivation of the method to calculate total ozone from these infrared radiances and the application of the method was first discussed in Lovill et al. (1978). Modifications were later made to the method as described in Luther (1980).

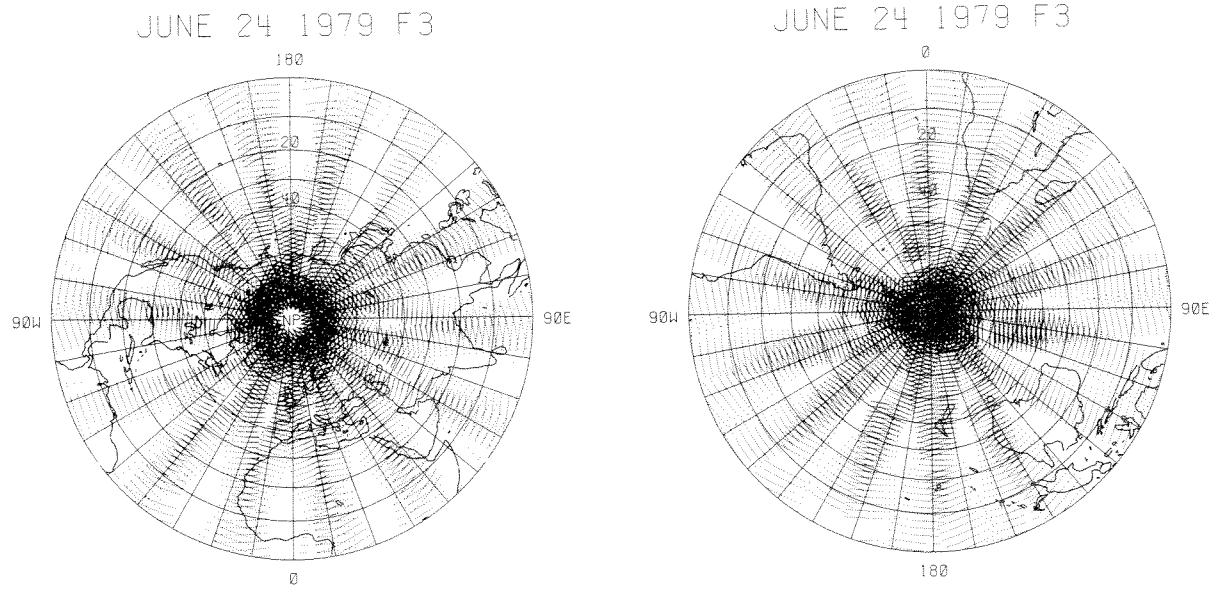


FIGURE2c. Locations where total ozone retrievals were made during the 24-hour period of June 24, 1979, F3 satellite.

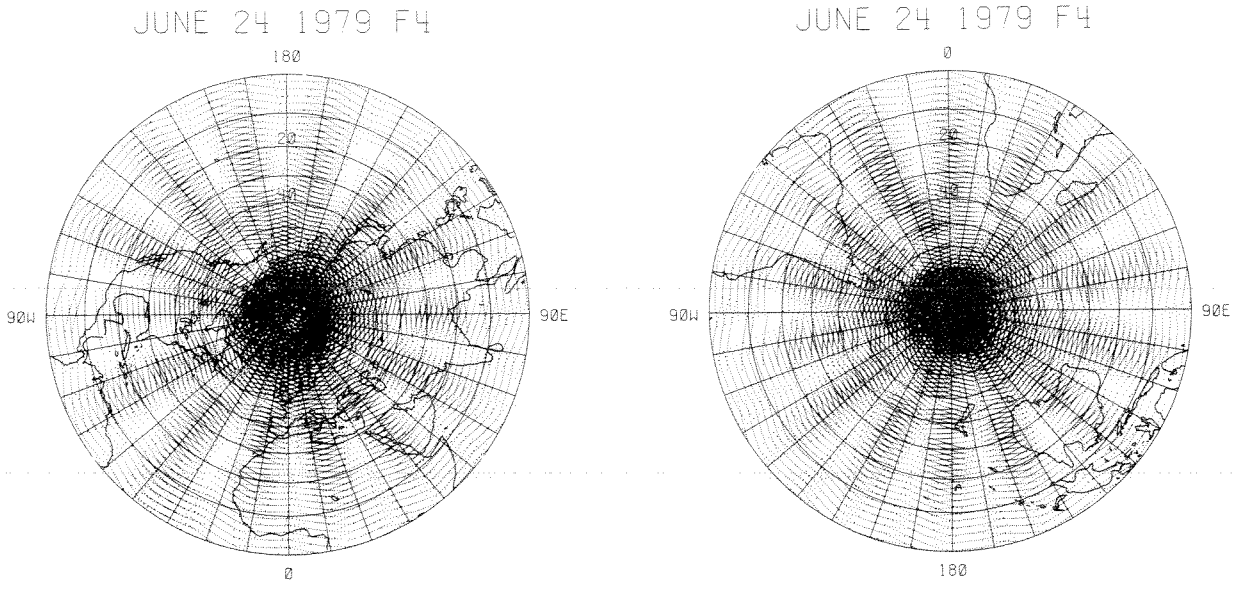


FIGURE 2d. Locations where total ozone retrievals were made during the 24-hour period of June 24, 1979, F4 satellite.

Table 2. Nominal MFR Channel Characteristics[a]

Channel Number	Center (μm)	Center (cm^{-1})	Half Width (cm^{-1})	Species	NESR[b]
1	15.0	668.5	3.5	CO_2	0.30
2	14.8	676.0	10.0	CO_2	0.09
3	14.4	695.0	10.0	CO_2	0.10
4	14.1	708.0	10.0	CO_2	0.11
5	13.8	725.0	10.0	CO_2	0.11
6	13.4	747.0	10.0	CO_2	0.12
7	12.0	835.0	8.0	Window	0.11
8[c]	18.7	535.0	16.0	H_2O	0.15
9	24.5	408.5	12.0	H_2O	0.14
10	22.7	441.5	18.0	H_2O	0.09
11	23.9	420.0	20.0	H_2O	0.12
12	26.7	374.0	12.0	H_2O	0.18
13	25.2	397.5	10.0	H_2O	0.16
14	28.2	355.4	15.0	H_2O	0.25
15	28.3	353.5	11.0	H_2O	0.33
16	9.8	1022.0	12.5	O_3	0.05

[a] After Nichols (1975)
[b] NESR = Noise Equivalent Spectral Radiance in $mW/(m^2\ sr\ cm^{-1})$.
[c] Not on Flight Model 1.

The filter in channel 1 on the F1 MFR was found to have a wide band-pass leak; it was partially transparent to radiation upwelling from the lower troposphere and the earth's surface. The calibration of the channel 2 radiances of the MFR's on the F2, F3 and F4 satellites is suspect since the calibration source possibly did not fill the field of view for this channel during the calibration checks. This alignment problem resulted from a hardware change in these MFR's. Therefore, radiance data from channel 1 on the F1 MFR and from channel 2 on the F2, F3 and F4 MFR were not used in our ozone retrieval algorithm.

If data from one or more of the 5 channels that were used in calculating total ozone fell outside range checks, then none of the data from that sample location were placed into the data base. Occasionally the daily data count in the data base was larger than the theoretical maximum or larger than it should have been. This

happened because, occassionally, the data from a satellite orbit were duplicated in the input data set received at LLNL from the AFGWC. In the most obvious cases, the data were sorted and the duplicate data were removed.

4. THE MFR DATA BASE

Derived total column ozone and the MFR calibrated radiance data were placed into a user oriented data base, called SOAC, using the FRAMIS database manager. FRAMIS is an interactive, relational, data base management tool developed by the Data Management Group of the Computation Department at the Lawrence Livermore National Laboratory (Jones et al, 1981).

A version of the FRAMIS code (Taylor, 1981), which is compatible with a VAX computer and the VMS operating system, and the documentation required to implement and operate the FRAMIS code can be obtained from the:

National Energy Software Center

9700 South Cass Avenue

Argonne, Illinois 60439

A sample database called Wildlife, which is used extensively in the FRAMIS tutorial (Dittli, 1981), is also available from NESC.

The database structure may be thought of as a series of files called tables. Each table is made up of columns (the different variables) and rows (the data). A table, representing MFR satellite data from one day, has 36 columns in the SOAC data base. Each of the columns is defined in Table 3. Each row in the data base represents all of the data, as defined by the column names, from one MFR scan spot.

The rows of the data base have been sorted into 2.5 by 2.5 degree latitude and longitude data cells. These cells are represented by the column name "BOX". The first cell (1) is centered at the Greenwich Meridian and the South pole; the last cell

Table 3. Names and definition of the columns in the FRAMIS data base.

BOX	a 2.5 degree latitude and longitude cell within the database
BIRD	Satellite number (F1, F2, F3 or F4)
JDAY	YYJJJ, YY is year and JJJ is the Julian day
TIME	HHMMSS, Greenwich time (hours, minutes, seconds)
NDPOS	Day-night and scan position indicator (+day, -night, ±1 to ±25 left to right)
LAT	Latitude x 100 (+North, -South)
LONG	Longitude x 100 (+East, -West)
OZONE	Total column ozone in Dobson units (m.atm.cm)
ORBIT	Satellite orbit number
CO2T1	Brightness temperature x 10 of CO2R1 (°K)
CO2T2	Brightness temperature x 10 of CO2R2 (°K)
CO2T3	Brightness temperature x 10 of CO2R3 (°K)
WINDT	Brightness temperature x 10 of WIND (°K)
DT12	(CO2T1-CO2T2) x 100
DT13	(CO2T1-CO2T3) x 100
BAND	Retrieval model band that data point is in (1 through 11)
BANDA	Band blend indicator
ALPH	Fractional weight assigned to the southern band model (BANDA) when band model blending is done x 100
SEC	Secant of the zenith angle x 10,000
CO2R1	Channel 1 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
CO2R2	Channel 2 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
CO2R3	Channel 3 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
CO2R4	Channel 4 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
CO2R5	Channel 5 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
CO2R6	Channel 6 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$

Table 3. Continued.

WIND1	Channel 7 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$ (Single look at scene)
WIND	Channel 7 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
H2OR1	Channel 8 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
H2OR2	Channel 9 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
H2OR3	Channel 10 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
H2OR4	Channel 11 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
H2O5	Channel 12 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
H2OR6	Channel 13 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
H2OR7	Channel 14 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
H2OR8	Channel 15 radiance x 100 $mW/(m^2\ sr\ cm^{-1})$
O3R	Channel 16 radiance x 100 (Avg. of 12 looks at a scene) $mW/(m^2\ sr\ cm^{-1})$

NOTE: Channel radiances are the average of two looks at the view scene except as noted above.

(72144) is centered at 2.5 degrees west longitude and the North pole. The cell numbers increase from east to west (1 to 144) and south to north (0 to 72000). The algorithm used to compute a cell number from any latitude-longitude pair is as follows:

a. Change the longitude from the standard (+) east and (-) west to (+) east longitude, (0 to 360 degrees east longitude).

```
IF (ALON.LT.0) ALON=ALON+360
```

b. Change the latitude from the standard (+) north and (-) south to colatitude, where the south pole is zero and the north pole is 180 degrees.

```
ALAT = ALAT + 90
```

c. Calculate the cell (box) number.

```
IX = IFIX (ALON * 0.4 + 1.5)

IF (IX.GE.145) IX = 1

IY = IFIX(ALAT * 0.4 + 1.5)

BOX = (IY-1) * 1000 + IX
```

The SOAC database was built on a VAX 11/780 computer with a VMS operating system using the VAX FRAMIS code. A VAX computer with a VMS operating system using the VAX FRAMIS code is required to access the data in the SOAC data base. The data base resides on 109 nine track magnetic tapes written at 6250 bpi density. This data base is available to various users and can be obtained from:

National Space Science Data Center

Code 601.4

Goddard Space Flight Center

Greenbelt, MD 20771

Each file on a database tape contains the data for all of the satellites for one data-day. A data-day is 24 hours long beginning with 0000 Greenwich Mean Time (GMT). The data time is the time in GMT when the observation was taken by the satellite. These are denoted by the JDAY and TIME columns in the data base.

There are up to 10 files (days of data) on each data base tape. The file naming convention is SOACZYJJJ, where "Y" is the last digit of the year and JJJ is the Julian day. The label for each tape (volume number-ZYJJ) was constructed using the last digit of the year followed by the first two digits of the Julian day for the files on the tape, e.g. Z800 contains data for Julian days 1 through 9, 1978; Z801 contains data for Julian days 10 through 19, 1978, etc. and the name of the file containing the data for Julian day 1 on tape Z800 is SOACZ8001.FRM. A complete list of the tape labels, the data-days, and the data count by satellite is given in Appendix C.

Before using FRAMIS on a VAX computer, we typically establish a shorthand method for executing FRAMIS by defining a global variable as

FRAMIS :== RUN device:[directory]FRAMIS

where the lower case names represent names to be inserted by the user.

A file is moved from a database tape to a disc by using the commands

MOUNT device: tapelabel

COPY device : filename.FRM *.*

An interactive session using FRAMIS is begun by executing FRAMIS followed by two necessary replies to the FRAMIS prompt (i.e. >) :

FRAMIS

> CREATE SOAC ;

> INCLUDE filename ;

where filename is the name of the file containing the data for one day (e.g. SOACZ8001).

An example of a FRAMIS session that we have used to extract data by cell number is illustrated in Appendix B.

ACKNOWLEDGMENTS

This work was performed under the auspices of the U.S. Department of Energy by the Lawrence Livermore National Laboratory under contract No. W-7405-Eng-48, and supported in part by the High Altitude Pollution Program of the Department of Transportation, Federal Aviation Administration and by the National Aeronautics and Space Administration.

REFERENCES

Dittli, A. L., "Introduction to FRAMIS - A Tutorial," Lawrence Livermore National Laboratory, LCSD-555,1981.

Jones, S. E., D. R. Ries, L. Lyles, A. L. Dittli, and K. W. Johnson, "FRAMIS Reference Manual," Lawrence Livermore National Laboratory, LCSD-554, 1981.

Lovill, J. E., T. J. Sullivan, R. L. Weichel, J. S. Ellis, J. G. Huebel, J. A. Korver, P. P. Weidhaas, and F. A. Phelps, "Total Ozone Retrieval From Satellite Multichannel Filter Radiometer Measurements," Lawrence Livermore National Laboratory, UCRL-52473, 1978.

Lovill, J. E., J. S. Ellis, F. M. Luther, T. J. Sullivan, and R. L. Weichel, "The DMSP/MFR Global Distribution of Total Ozone, March 1977-February 1980," Lawrence Livermore National Laboratory (in preparation), 1983.

Luther, F. M., "Annual Report of Lawrence Livermore National Laboratory to the FAA on the High Altitude Pollution Program - 1980", Lawrence Livermore National Laboratory, UCRL-50042-80, 1980.

Nichols, D. A., "DMSP Block 5D Special Meteorological Sensor H, Optical Subsystem", Opt. Engr., 14, 284-288, 1975.

Taylor, S. S., "VAX FRAMIS Notes," Lawrence Livermore National Laboratory, Report DMG 82-07, 1981.

APPENDIX A

Table A-1. Optical properties of selected MFR channels

DMSP Satellite	Channel number	Optical Center (cm^{-1})	Equivalent band width (cm^{-1})	Half-width of filter (cm^{-1})	Half power throughout (%)	Tenth-width of filter (cm^{-1})	Peak center (cm^{-1})	Peak Transmittance
F1	1	669.02	1.73	3.10	57.30	8.01	669.00	0.40
	2	678.30	6.92	11.62	85.65	16.86	679.90	0.59
	3	693.99	5.83	11.44	86.52	16.38	692.20	0.51
	4	708.10	5.44	9.99	87.15	14.11	711.00	0.53
	5	725.65	6.44	10.22	85.66	14.73	725.60	0.64
	6	746.82	5.18	9.57	79.86	15.52	747.10	0.54
	7	835.66	5.44	7.19	64.40	16.73	834.40	0.63
	16	1019.59	8.56	11.63	68.51	25.34	1020.00	0.63
F2	1	668.57	1.34	2.93	57.39	7.92	668.50	0.32
	2	678.01	6.71	11.51	84.72	17.08	679.90	0.56
	3	694.00	5.89	11.53	86.59	16.39	692.10	0.52
	4	707.26	5.66	9.97	86.71	14.24	705.60	0.56
	5	724.33	5.57	9.66	82.65	14.87	724.20	0.57
	6	746.11	5.15	9.71	80.34	15.75	746.30	0.53
	7	834.57	6.03	8.36	70.90	16.89	833.70	0.65
	16	1019.06	8.46	11.54	69.13	25.06	1019.50	0.63
F3	1	668.89	1.40	3.04	58.81	7.84	668.90	0.34
	2	677.87	5.06	11.67	85.27	17.17	679.30	0.44
	3	693.92	5.75	11.50	85.75	16.62	692.10	0.50
	4	707.93	5.62	9.87	85.79	14.29	706.40	0.55
	5	725.41	6.26	9.78	83.99	14.60	725.60	0.64
	6	747.62	5.29	9.71	81.38	15.34	747.80	0.55
	7	834.43	6.03	8.36	70.86	17.01	833.30	0.65
	16	1019.79	8.80	11.95	69.82	25.22	1020.00	0.64

Table A-1. Continued.

DMSP Satellite	Channel number	Optical Center (cm^{-1})	Equivalent band width (cm^{-1})	Half-width of filter (cm^{-1})	Half power throughout (%)	Tenth-width of filter (cm^{-1})	Peak center (cm^{-1})	Peak Transmittance
F4	1	668.45	1.55	3.13	60.82	8.14	668.40	0.38
	2	678.57	6.84	11.60	85.65	16.85	680.00	0.59
	3	693.93	5.78	11.43	86.48	16.28	692.00	0.51
	4	707.10	5.50	10.15	86.93	14.36	710.40	0.54
	5	724.16	5.55	9.72	83.69	14.58	724.20	0.58
	6	748.95	5.18	9.37	78.67	15.50	749.30	0.54
	7	835.02	5.52	8.37	70.52	17.33	833.90	0.59
	16	1021.09	11.10	14.01	75.85	25.88	1022.20	0.73

Table A-2. Optical centers of the water vapor channels.

DMSP Satellite	Channel number	Optical center (cm^{-1})
F1	9	356.27
	10	398.15
	11	418.29
	12	441.94
	13	410.08
	14	373.36
	15	353.84
F2	8	534.50
	9	356.20
	10	398.80
	11	418.90
	12	441.90
	13	407.30
	14	372.90
	15	355.20
F3	8	534.80
	9	356.30
	10	398.70
	11	418.70
	12	443.60
	13	409.70
	14	374.00
	15	352.80
F4	8	534.80
	9	355.00
	10	399.40
	11	418.80
	12	442.10
	13	409.10
	14	375.20
	15	353.00

A P P E N D I X B

EXAMPLE OF A FRAMIS SESSION

```
$       SAVE_DIR := 'F$DIRECTORY()'
$       SET DEFAULT DPROD:[TEST]
$ STARTUP:
$       ON CONTROL_Y THEN GOTO ALLDONE
$       ON WARNING THEN GOTO ALLDONE
$!*************************************************************
$! INCLUDE HERE APPROPRIATE BOX NUMBERS FOR EXTRACTION
$       OPEN/WRITE BOXFILE BOXFILE.DAT
$       WRITE BOXFILE " 60137"
$       WRITE BOXFILE " 56065"
$       WRITE BOXFILE " 52095"
$       CLOSE BOXFILE
$! EDIT FILE TO GET RID OF SEGMENTED RECORDS
$       EDIT BOXFILE.DAT
EXIT
$       SET DEFAULT [TEST]
$!*************************************************************
$! ESTABLISH FORMAT FILE FOR INPUTING FRAMIS TABLE
$       OPEN/WRITE FMT BOXFILE.FMT
$       WRITE FMT "FIXED 1 CD 1"
$       WRITE FMT "BOX 2 5"
$       CLOSE FMT
$! EDIT FILE TO GET RID OF SEGMENTED RECORDS
$       EDIT BOXFILE.FMT
EXIT
$       SET DEFAULT [TEST]
$!*************************************************************
$! ESTABLISH TABLE IN FRAMIS
$! WRITE FRAMIS EXECUTE FILE WITH TABLENAME
$       OPEN/WRITE COMMAND BOXEXTR.CMD
$       WRITE COMMAND "CREATE SOAC;"
$       WRITE COMMAND "DELETE TABLE BOXFILE;"
$       WRITE COMMAND "DEFINE TABLE BOXFILE BOX INT 3;"
$       WRITE COMMAND "INPUT BOXFILE FROM BOXFILE.DAT "
$       WRITE COMMAND "USING FILE BOXFILE.FMT;"
$       WRITE COMMAND "BOXFILE=BOXFILE SORT BOX;"
$       WRITE COMMAND "PRINT BOXFILE;"
$       WRITE COMMAND "END;"
$       CLOSE COMMAND
$! EDIT FILE TO GET RID OF SEGMENTED RECORDS
$       EDIT BOXEXTR.CMD
EXIT
$       SET DEFAULT [TEST]
$       FRAMIS
   EXECUTE [TEST]BOXEXTR.CMD;
$       SET DEFAULT [TEST]
$       DELETE BOXEXTR.CMD.*
$!*************************************************************
```

```
$! PROCESS FILES IN DIRECTORY
$       DIR/OUTPUT=[TEST]DTEMP.NAM/COLUMNS=1/NOHEAD/NOTRAIL -
                  [TEST]SOACZ*.FRM
$       OPEN DDIR [TEST]DTEMP.NAM
$ LOOP:
$       READ/END←OF←FILE=ALLDONE DDIR DIRNAME
$ FOUNDONE:
$       START = 'F$LOCATE("]",DIRNAME)' + 1
$       LEN = 'F$LOCATE(".FRM",DIRNAME)' - START
$       DIRNAME := "''F$EXTRACT(START,LEN,DIRNAME)'"
$       LEN = LEN - 5
$       DATE := "''F$EXTRACT(5,LEN,DIRNAME)'"
$       IF DATE.GTS."9999" THEN GOTO ALLDONE
$! WRITE FRAMIS EXECUTE FILE WITH APPROPRIATE TABLE NAMES
$       OPEN/WRITE COMMAND BOXEXTR.CMD
$       WRITE COMMAND  "OPEN SOAC;"
$       WRITE COMMAND  "INCLUDE SOACZ''DATE';"
$       WRITE COMMAND  "TEMP = Z''DATE' JOIN BOXFILE ON BOX;"
$       WRITE COMMAND  "TEMPOUT = TEMP "
$       WRITE COMMAND  "PROJ LAT LONG TIME JDAY BIRD SEC CO2R1 CO2R2 "
$       WRITE COMMAND  "CO2R3 O3R WINDT OZONE;"
$       WRITE COMMAND  "OUTPUT TEMPOUT WITH CONTROL TO Z''DATE'.DAT;"
$       WRITE COMMAND  "DELETE TABLE TEMP TEMPOUT;"
$       WRITE COMMAND  "DELETE TABLE  Z''DATE';"
$       WRITE COMMAND  "END;"
$! EDIT FILE TO GET RID OF SEGMENTED RECORDS
$       CLOSE COMMAND
$       EDIT BOXEXTR.CMD
EXIT
$       SET DEFAULT [TEST]
$       FRAMIS
   EXECUTE [TEST]BOXEXTR.CMD;
$       SET DEFAULT [TEST]
$       DELETE BOXEXTR.CMD.*
$       WRITE SYS$OUTPUT -
          " BOX EXTRACT COMPLETED NORMALLY FOR FILE ''DIRNAME'"
$       GOTO LOOP
$ ALLDONE:
$       SET DEFAULT [TEST]
$       CLOSE DDIR
$       DELETE DTEMP.NAM.*
$       DELETE SOAC*.FRM.1
$       DELETE BOXFILE.DAT.*
$       DELETE BOXFILE.FMT.*
$       SET DEFAULT 'SAVE≥DIR'
$       EXIT
```

B-3

FRAMIS OUTPUT FROM SOAC DATABASE

```
FIXED  12 CD  2
LAT              1    8   1
LONG            10    8   1
TIME            19    8   1
JDAY            28    8   1
BIRD            37    8   1
SEC             46    8   1
CO2R1           55    8   1
CO2R2           64    8   1
CO2R3           73    8   1
O3R              1    8   2
WINDT           10    8   2
OZONE           19   13   2 E   6
    4048   -12444    45908    78004        2    18677    5700    4880    4469
    3546     2740  3.545809E+02
    4048   -12448    45908    78004        2    18677    5700    4880    4469
    3546     2740  3.545793E+02
    3875   -12542    45940    78004        2    18677    5655    4867    4416
    2880     2553  3.252596E+02
    3955   -12536   144210    78004        2    12481    5471    4717    4345
    2135     2284  3.171061E+02
    3980   -12446   144211    78004        2    11793    5412    4697    4311
    1866     2227  3.276149E+02
    5054    15995   100121    78004        2    13437    5986    5517    5265
    2762     2500  4.571406E+02
    4880    15881   100153    78004        2    13438    5911    5450    5207
    2954     2560  4.503140E+02
    6036    -2009    62050    78004        2    16188    4773    3489    3266
    1332     2108  2.712137E+02
    5988    -2025    80057    78004        2    11263    4612    3535    3318
    1469     2160  2.756629E+02
    6008    -1893    80058    78004        2    11802    4642    3535    3302
    1507     2174  2.740614E+02
```

A P P E N D I X C

MFR DATA COUNT AND TAPE INDEX

TAPE	JULDAY	DATE	SAT	COUNT	SAT	COUNT	SAT	COUNT	SAT	COUNT
Z708	08477	3/25/77	F1 =	21508	F2 =	0	F3 =	0	F4 =	0
	08577	3/26/77	F1 =	16761	F2 =	0	F3 =	0	F4 =	0
	08677	3/27/77	F1 =	17297	F2 =	0	F3 =	0	F4 =	0
	08877	3/29/77	F1 =	24843	F2 =	0	F3 =	0	F4 =	0
	08977	3/30/77	F1 =	33370	F2 =	0	F3 =	0	F4 =	0
Z709	09877	4/ 8/77	F1 =	13313	F2 =	0	F3 =	0	F4 =	0
	09977	4/ 9/77	F1 =	70925	F2 =	0	F3 =	0	F4 =	0
Z710	10077	4/10/77	F1 =	44034	F2 =	0	F3 =	0	F4 =	0
	10177	4/11/77	F1 =	45165	F2 =	0	F3 =	0	F4 =	0
	10277	4/12/77	F1 =	25510	F2 =	0	F3 =	0	F4 =	0
	10377	4/13/77	F1 =	41684	F2 =	0	F3 =	0	F4 =	0
	10477	4/14/77	F1 =	33820	F2 =	0	F3 =	0	F4 =	0
	10577	4/15/77	F1 =	30709	F2 =	0	F3 =	0	F4 =	0
	10677	4/16/77	F1 =	30360	F2 =	0	F3 =	0	F4 =	0
	10877	4/18/77	F1 =	12090	F2 =	0	F3 =	0	F4 =	0
	10977	4/19/77	F1 =	47050	F2 =	0	F3 =	0	F4 =	0
Z711	11077	4/20/77	F1 =	54769	F2 =	0	F3 =	0	F4 =	0
	11177	4/21/77	F1 =	60594	F2 =	0	F3 =	0	F4 =	0
	11277	4/22/77	F1 =	47069	F2 =	0	F3 =	0	F4 =	0
	11377	4/23/77	F1 =	45080	F2 =	0	F3 =	0	F4 =	0
	11477	4/24/77	F1 =	29342	F2 =	0	F3 =	0	F4 =	0
	11577	4/25/77	F1 =	5204	F2 =	0	F3 =	0	F4 =	0
	11677	4/26/77	F1 =	31733	F2 =	0	F3 =	0	F4 =	0
	11777	4/27/77	F1 =	51407	F2 =	0	F3 =	0	F4 =	0
	11877	4/28/77	F1 =	47032	F2 =	0	F3 =	0	F4 =	0
	11977	4/29/77	F1 =	52142	F2 =	0	F3 =	0	F4 =	0
Z712	12077	4/30/77	F1 =	46376	F2 =	0	F3 =	0	F4 =	0
	12177	5/ 1/77	F1 =	53798	F2 =	0	F3 =	0	F4 =	0
	12277	5/ 2/77	F1 =	51285	F2 =	0	F3 =	0	F4 =	0
	12377	5/ 3/77	F1 =	42951	F2 =	0	F3 =	0	F4 =	0
	12477	5/ 4/77	F1 =	53730	F2 =	0	F3 =	0	F4 =	0
	12577	5/ 5/77	F1 =	35678	F2 =	0	F3 =	0	F4 =	0
	12677	5/ 6/77	F1 =	19474	F2 =	0	F3 =	0	F4 =	0
	12777	5/ 7/77	F1 =	41125	F2 =	0	F3 =	0	F4 =	0
	12877	5/ 8/77	F1 =	44344	F2 =	0	F3 =	0	F4 =	0
	12977	5/ 9/77	F1 =	58992	F2 =	0	F3 =	0	F4 =	0
Z713	13077	5/10/77	F1 =	42431	F2 =	0	F3 =	0	F4 =	0
	13177	5/11/77	F1 =	56767	F2 =	0	F3 =	0	F4 =	0
	13277	5/12/77	F1 =	43945	F2 =	0	F3 =	0	F4 =	0
	13377	5/13/77	F1 =	47968	F2 =	0	F3 =	0	F4 =	0

C-2

	13477	5/14/77	F1 =	50573	F2 =	0	F3 =	0	F4 =	0
	13577	5/15/77	F1 =	43814	F2 =	0	F3 =	0	F4 =	0
	13677	5/16/77	F1 =	406	F2 =	0	F3 =	0	F4 =	0
	13777	5/17/77	F1 =	223	F2 =	0	F3 =	0	F4 =	0
Z714	14377	5/23/77	F1 =	35	F2 =	0	F3 =	0	F4 =	0
	14477	5/24/77	F1 =	33	F2 =	0	F3 =	0	F4 =	0
	14577	5/25/77	F1 =	20	F2 =	0	F3 =	0	F4 =	0
	14677	5/26/77	F1 =	10	F2 =	0	F3 =	0	F4 =	0
	14777	5/27/77	F1 =	20	F2 =	0	F3 =	0	F4 =	0
	14877	5/28/77	F1 =	8	F2 =	0	F3 =	0	F4 =	0
	14977	5/29/77	F1 =	15	F2 =	0	F3 =	0	F4 =	0
z715	15077	5/30/77	f1 =	11	f2 =	0	f3 =	0	f4 =	0
	15277	6/ 1/77	f1 =	21	f2 =	0	f3 =	0	f4 =	0
	15377	6/ 2/77	f1 =	185	f2 =	0	f3 =	0	f4 =	0
	15477	6/ 3/77	f1 =	135	f2 =	0	f3 =	0	f4 =	0
	15577	6/ 4/77	F1 =	4	F2 =	0	F3 =	0	F4 =	0
	15777	6/ 6/77	F1 =	70	F2 =	0	F3 =	0	F4 =	0
	15877	6/ 7/77	F1 =	1710	F2 =	0	F3 =	0	F4 =	0
	15977	6/ 8/77	F1 =	5916	F2 =	0	F3 =	0	F4 =	0
Z716	16077	6/ 9/77	F1 =	1828	F2 =	0	F3 =	0	F4 =	0
	16177	6/10/77	F1 =	20430	F2 =	0	F3 =	0	F4 =	0
	16277	6/11/77	F1 =	51144	F2 =	0	F3 =	0	F4 =	0
	16377	6/12/77	F1 =	40848	F2 =	0	F3 =	0	F4 =	0
	16477	6/13/77	F1 =	5096	F2 =	0	F3 =	0	F4 =	0
	16677	6/15/77	F1 =	29165	F2 =	0	F3 =	0	F4 =	0
	16777	6/16/77	F1 =	31157	F2 =	0	F3 =	0	F4 =	0
	16977	6/18/77	F1 =	49470	F2 =	0	F3 =	0	F4 =	0
Z717	17077	6/19/77	F1 =	58739	F2 =	0	F3 =	0	F4 =	0
	17177	6/20/77	F1 =	58774	F2 =	0	F3 =	0	F4 =	0
	17277	6/21/77	F1 =	40046	F2 =	0	F3 =	0	F4 =	0
	17477	6/23/77	F1 =	26239	F2 =	0	F3 =	0	F4 =	0
	17577	6/24/77	F1 =	40074	F2 =	0	F3 =	0	F4 =	0
	17677	6/25/77	F1 =	37846	F2 =	0	F3 =	0	F4 =	0
	17777	6/26/77	F1 =	20316	F2 =	0	F3 =	0	F4 =	0
	17877	6/27/77	F1 =	17258	F2 =	0	F3 =	0	F4 =	0
	17977	6/28/77	F1 =	23220	F2 =	0	F3 =	0	F4 =	0
Z718	18077	6/29/77	F1 =	20480	F2 =	0	F3 =	0	F4 =	0
	18177	6/30/77	F1 =	27255	F2 =	0	F3 =	0	F4 =	0
	18277	7/ 1/77	F1 =	28725	F2 =	0	F3 =	0	F4 =	0
	18377	7/ 2/77	F1 =	32896	F2 =	0	F3 =	0	F4 =	0
	18477	7/ 3/77	F1 =	14652	F2 =	0	F3 =	0	F4 =	0
	18577	7/ 4/77	F1 =	65293	F2 =	0	F3 =	0	F4 =	0
	18677	7/ 5/77	F1 =	32028	F2 =	0	F3 =	0	F4 =	0
	18777	7/ 6/77	F1 =	19653	F2 =	0	F3 =	0	F4 =	0
	18877	7/ 7/77	F1 =	39920	F2 =	0	F3 =	0	F4 =	0
	18977	7/ 8/77	F1 =	5092	F2 =	0	F3 =	0	F4 =	0
Z719	19077	7/ 9/77	F1 =	17017	F2 =	0	F3 =	0	F4 =	0

C-3

	19177	7/10/77	F1 =	14314	F2 =	0	F3 =	0	F4 =	0
	19477	7/13/77	F1 =	0	F2 =	7590	F3 =	0	F4 =	0
	19677	7/15/77	F1 =	0	F2 =	3819	F3 =	0	F4 =	0
	19977	7/18/77	F1 =	2949	F2 =	16767	F3 =	0	F4 =	0
Z720	20177	7/20/77	F1 =	0	F2 =	21262	F3 =	0	F4 =	0
	20277	7/21/77	F1 =	76	F2 =	15324	F3 =	0	F4 =	0
	20377	7/22/77	F1 =	28	F2 =	19069	F3 =	0	F4 =	0
	20477	7/23/77	F1 =	92	F2 =	52242	F3 =	0	F4 =	0
	20677	7/25/77	F1 =	0	F2 =	27068	F3 =	0	F4 =	0
	20777	7/26/77	F1 =	0	F2 =	24874	F3 =	0	F4 =	0
	20877	7/27/77	F1 =	0	F2 =	24133	F3 =	0	F4 =	0
	20977	7/28/77	F1 =	0	F2 =	23751	F3 =	0	F4 =	0
Z721	21077	7/29/77	F1 =	0	F2 =	23805	F3 =	0	F4 =	0
	21177	7/30/77	F1 =	0	F2 =	27521	F3 =	0	F4 =	0
	21277	7/31/77	F1 =	0	F2 =	27570	F3 =	0	F4 =	0
	21377	8/ 1/77	F1 =	0	F2 =	26645	F3 =	0	F4 =	0
	21477	8/ 2/77	F1 =	0	F2 =	24205	F3 =	0	F4 =	0
	21577	8/ 3/77	F1 =	0	F2 =	23986	F3 =	0	F4 =	0
	21777	8/ 5/77	F1 =	0	F2 =	24650	F3 =	0	F4 =	0
	21877	8/ 6/77	F1 =	0	F2 =	21851	F3 =	0	F4 =	0
Z722	22077	8/ 8/77	F1 =	0	F2 =	25883	F3 =	0	F4 =	0
	22177	8/ 9/77	F1 =	0	F2 =	22091	F3 =	0	F4 =	0
	22277	8/10/77	F1 =	0	F2 =	24664	F3 =	0	F4 =	0
	22377	8/11/77	F1 =	0	F2 =	26562	F3 =	0	F4 =	0
	22477	8/12/77	F1 =	0	F2 =	23742	F3 =	0	F4 =	0
	22577	8/13/77	F1 =	0	F2 =	21246	F3 =	0	F4 =	0
	22677	8/14/77	F1 =	0	F2 =	22153	F3 =	0	F4 =	0
	22777	8/15/77	F1 =	0	F2 =	22859	F3 =	0	F4 =	0
	22877	8/16/77	F1 =	0	F2 =	7401	F3 =	0	F4 =	0
Z723	23077	8/18/77	F1 =	0	F2 =	32482	F3 =	0	F4 =	0
	23177	8/19/77	F1 =	0	F2 =	23896	F3 =	0	F4 =	0
	23277	8/20/77	F1 =	0	F2 =	19840	F3 =	0	F4 =	0
	23377	8/21/77	F1 =	0	F2 =	27499	F3 =	0	F4 =	0
	23477	8/22/77	F1 =	0	F2 =	27786	F3 =	0	F4 =	0
	23577	8/23/77	F1 =	0	F2 =	24739	F3 =	0	F4 =	0
	23677	8/24/77	F1 =	0	F2 =	21628	F3 =	0	F4 =	0
	23777	8/25/77	F1 =	0	F2 =	24350	F3 =	0	F4 =	0
	23877	8/26/77	F1 =	0	F2 =	23771	F3 =	0	F4 =	0
	23977	8/27/77	F1 =	0	F2 =	27548	F3 =	0	F4 =	0
Z724	24077	8/28/77	F1 =	0	F2 =	26909	F3 =	0	F4 =	0
	24177	8/29/77	F1 =	0	F2 =	24430	F3 =	0	F4 =	0
	24777	9/ 4/77	F1 =	0	F2 =	16726	F3 =	0	F4 =	0
	24877	9/ 5/77	F1 =	0	F2 =	33323	F3 =	0	F4 =	0
	24977	9/ 6/77	F1 =	0	F2 =	20974	F3 =	0	F4 =	0
Z725	25077	9/ 7/77	F1 =	0	F2 =	10890	F3 =	0	F4 =	0
	25177	9/ 8/77	F1 =	0	F2 =	10490	F3 =	0	F4 =	0
	25277	9/ 9/77	F1 =	0	F2 =	20935	F3 =	0	F4 =	0

C-4

	25377	9/10/77	F1 =	0	F2 =	23087	F3 =	0	F4 =	0
	25477	9/11/77	F1 =	0	F2 =	25326	F3 =	0	F4 =	0
	25577	9/12/77	F1 =	0	F2 =	19390	F3 =	0	F4 =	0
	25677	9/13/77	F1 =	0	F2 =	6984	F3 =	0	F4 =	0
	25777	9/14/77	F1 =	0	F2 =	26073	F3 =	0	F4 =	0
	25877	9/15/77	F1 =	0	F2 =	10467	F3 =	0	F4 =	0
	25977	9/16/77	F1 =	0	F2 =	28365	F3 =	0	F4 =	0
Z726	26077	9/17/77	F1 =	0	F2 =	24543	F3 =	0	F4 =	0
	26277	9/19/77	F1 =	0	F2 =	20943	F3 =	0	F4 =	0
	26377	9/20/77	F1 =	0	F2 =	29384	F3 =	0	F4 =	0
	26477	9/21/77	F1 =	0	F2 =	12003	F3 =	0	F4 =	0
	26577	9/22/77	F1 =	0	F2 =	24286	F3 =	0	F4 =	0
	26677	9/23/77	F1 =	0	F2 =	23501	F3 =	0	F4 =	0
	26877	9/25/77	F1 =	0	F2 =	24494	F3 =	0	F4 =	0
	26977	9/26/77	F1 =	0	F2 =	17918	F3 =	0	F4 =	0
Z727	27077	9/27/77	F1 =	0	F2 =	24545	F3 =	0	F4 =	0
	27177	9/28/77	F1 =	0	F2 =	24794	F3 =	0	F4 =	0
	27277	9/29/77	F1 =	0	F2 =	3401	F3 =	0	F4 =	0
	27377	9/30/77	F1 =	0	F2 =	25045	F3 =	0	F4 =	0
	27477	10/ 1/77	F1 =	0	F2 =	25656	F3 =	0	F4 =	0
	27577	10/ 2/77	F1 =	0	F2 =	27982	F3 =	0	F4 =	0
	27677	10/ 3/77	F1 =	0	F2 =	3507	F3 =	0	F4 =	0
	27777	10/ 4/77	F1 =	0	F2 =	21271	F3 =	0	F4 =	0
	27877	10/ 5/77	F1 =	0	F2 =	25093	F3 =	0	F4 =	0
Z728	28077	10/ 7/77	F1 =	0	F2 =	25247	F3 =	0	F4 =	0
	28177	10/ 8/77	F1 =	0	F2 =	28325	F3 =	0	F4 =	0
	28277	10/ 9/77	F1 =	0	F2 =	23827	F3 =	0	F4 =	0
	28377	10/10/77	F1 =	0	F2 =	21756	F3 =	0	F4 =	0
	28477	10/11/77	F1 =	0	F2 =	16435	F3 =	0	F4 =	0
	28577	10/12/77	F1 =	0	F2 =	7013	F3 =	0	F4 =	0
	28777	10/14/77	F1 =	0	F2 =	25485	F3 =	0	F4 =	0
	28877	10/15/77	F1 =	0	F2 =	25665	F3 =	0	F4 =	0
	28977	10/16/77	F1 =	0	F2 =	25441	F3 =	0	F4 =	0
Z729	29077	10/17/77	F1 =	0	F2 =	21698	F3 =	0	F4 =	0
	29177	10/18/77	F1 =	0	F2 =	25472	F3 =	0	F4 =	0
	29277	10/19/77	F1 =	0	F2 =	25151	F3 =	0	F4 =	0
	29377	10/20/77	F1 =	0	F2 =	10977	F3 =	0	F4 =	0
	29477	10/21/77	F1 =	0	F2 =	30478	F3 =	0	F4 =	0
	29577	10/22/77	F1 =	0	F2 =	47696	F3 =	0	F4 =	0
	29677	10/23/77	F1 =	0	F2 =	52377	F3 =	0	F4 =	0
	29777	10/24/77	F1 =	0	F2 =	29184	F3 =	0	F4 =	0
	29877	10/25/77	F1 =	0	F2 =	21866	F3 =	0	F4 =	0
	29977	10/26/77	F1 =	0	F2 =	31953	F3 =	0	F4 =	0
Z730	30177	10/28/77	F1 =	0	F2 =	34929	F3 =	0	F4 =	0
	30277	10/29/77	F1 =	0	F2 =	30061	F3 =	0	F4 =	0
	30377	10/30/77	F1 =	0	F2 =	31729	F3 =	0	F4 =	0
	30477	10/31/77	F1 =	0	F2 =	40664	F3 =	0	F4 =	0
	30577	11/ 1/77	F1 =	0	F2 =	42772	F3 =	0	F4 =	0

	30677	11/ 2/77	F1 =	0	F2 =	38267	F3 =	0	F4 =	0
	30777	11/ 3/77	F1 =	0	F2 =	51777	F3 =	0	F4 =	0
	30877	11/ 4/77	F1 =	0	F2 =	36781	F3 =	0	F4 =	0
	30977	11/ 5/77	F1 =	0	F2 =	50616	F3 =	0	F4 =	0
Z731	31077	11/ 6/77	F1 =	0	F2 =	34705	F3 =	0	F4 =	0
	31177	11/ 7/77	F1 =	0	F2 =	15673	F3 =	0	F4 =	0
	31277	11/ 8/77	F1 =	0	F2 =	46513	F3 =	0	F4 =	0
	31377	11/ 9/77	F1 =	0	F2 =	16715	F3 =	0	F4 =	0
	31477	11/10/77	F1 =	0	F2 =	40647	F3 =	0	F4 =	0
	31577	11/11/77	F1 =	0	F2 =	35481	F3 =	0	F4 =	0
	31677	11/12/77	F1 =	0	F2 =	18578	F3 =	0	F4 =	0
	31777	11/13/77	F1 =	0	F2 =	54311	F3 =	0	F4 =	0
	31877	11/14/77	F1 =	0	F2 =	30171	F3 =	0	F4 =	0
	31977	11/15/77	F1 =	0	F2 =	31565	F3 =	0	F4 =	0
Z732	32077	11/16/77	F1 =	0	F2 =	44229	F3 =	0	F4 =	0
	32177	11/17/77	F1 =	0	F2 =	19734	F3 =	0	F4 =	0
	32277	11/18/77	F1 =	0	F2 =	14934	F3 =	0	F4 =	0
	32377	11/19/77	F1 =	0	F2 =	45984	F3 =	0	F4 =	0
	32477	11/20/77	F1 =	0	F2 =	43845	F3 =	0	F4 =	0
	32577	11/21/77	F1 =	0	F2 =	40174	F3 =	0	F4 =	0
	32677	11/22/77	F1 =	0	F2 =	40445	F3 =	0	F4 =	0
	32777	11/23/77	F1 =	0	F2 =	30354	F3 =	0	F4 =	0
	32877	11/24/77	F1 =	0	F2 =	36643	F3 =	0	F4 =	0
	32977	11/25/77	F1 =	0	F2 =	35094	F3 =	0	F4 =	0
Z733	33077	11/26/77	F1 =	0	F2 =	28266	F3 =	0	F4 =	0
	33177	11/27/77	F1 =	0	F2 =	42612	F3 =	0	F4 =	0
	33277	11/28/77	F1 =	0	F2 =	36427	F3 =	0	F4 =	0
	33377	11/29/77	F1 =	0	F2 =	39719	F3 =	0	F4 =	0
	33477	11/30/77	F1 =	0	F2 =	6856	F3 =	0	F4 =	0
	33577	12/ 1/77	F1 =	0	F2 =	3523	F3 =	0	F4 =	0
	33677	12/ 2/77	F1 =	0	F2 =	19847	F3 =	0	F4 =	0
	33777	12/ 3/77	F1 =	0	F2 =	48407	F3 =	0	F4 =	0
	33877	12/ 4/77	F1 =	0	F2 =	31794	F3 =	0	F4 =	0
	33977	12/ 5/77	F1 =	0	F2 =	46768	F3 =	0	F4 =	0
Z734	34077	12/ 6/77	F1 =	0	F2 =	21182	F3 =	0	F4 =	0
	34177	12/ 7/77	F1 =	0	F2 =	19253	F3 =	0	F4 =	0
	34277	12/ 8/77	F1 =	0	F2 =	33567	F3 =	0	F4 =	0
	34377	12/ 9/77	F1 =	0	F2 =	10950	F3 =	0	F4 =	0
	34477	12/10/77	F1 =	0	F2 =	46402	F3 =	0	F4 =	0
	34577	12/11/77	F1 =	0	F2 =	35650	F3 =	0	F4 =	0
	34677	12/12/77	F1 =	0	F2 =	43105	F3 =	0	F4 =	0
	34777	12/13/77	F1 =	0	F2 =	35271	F3 =	0	F4 =	0
	34877	12/14/77	F1 =	0	F2 =	49378	F3 =	0	F4 =	0
	34977	12/15/77	F1 =	0	F2 =	32747	F3 =	0	F4 =	0
Z735	35077	12/16/77	F1 =	0	F2 =	23400	F3 =	0	F4 =	0
	35177	12/17/77	F1 =	0	F2 =	47540	F3 =	0	F4 =	0
	35277	12/18/77	F1 =	0	F2 =	47655	F3 =	0	F4 =	0
	35377	12/19/77	F1 =	0	F2 =	30718	F3 =	0	F4 =	0

	35477	12/20/77	F1 =	0	F2 = 47983	F3 =	0	F4 =	0
	35577	12/21/77	F1 =	0	F2 = 43702	F3 =	0	F4 =	0
	35677	12/22/77	F1 =	0	F2 = 52680	F3 =	0	F4 =	0
	35777	12/23/77	F1 =	0	F2 = 46179	F3 =	0	F4 =	0
	35877	12/24/77	F1 =	0	F2 = 43412	F3 =	0	F4 =	0
	35977	12/25/77	F1 =	0	F2 = 45114	F3 =	0	F4 =	0
Z736	36077	12/26/77	F1 =	0	F2 = 49015	F3 =	0	F4 =	0
	36177	12/27/77	F1 =	0	F2 = 29615	F3 =	0	F4 =	0
	36277	12/28/77	F1 =	0	F2 = 52794	F3 =	0	F4 =	0
	36377	12/29/77	F1 =	0	F2 = 35415	F3 =	0	F4 =	0
	36477	12/30/77	F1 =	0	F2 = 39900	F3 =	0	F4 =	0
	36577	12/31/77	F1 =	0	F2 = 42731	F3 =	0	F4 =	0
Z800	00178	1/ 1/78	F1 =	0	F2 = 30544	F3 =	0	F4 =	0
	00278	1/ 2/78	F1 =	0	F2 = 46497	F3 =	0	F4 =	0
	00378	1/ 3/78	F1 =	0	F2 = 44042	F3 =	0	F4 =	0
	00478	1/ 4/78	F1 =	0	F2 = 41598	F3 =	0	F4 =	0
	00578	1/ 5/78	F1 =	0	F2 = 40632	F3 =	0	F4 =	0
	00678	1/ 6/78	F1 =	0	F2 = 51209	F3 =	0	F4 =	0
	00778	1/ 7/78	F1 =	0	F2 = 49833	F3 =	0	F4 =	0
	00878	1/ 8/78	F1 =	0	F2 = 40874	F3 =	0	F4 =	0
	00978	1/ 9/78	F1 =	0	F2 = 45879	F3 =	0	F4 =	0
Z801	01078	1/10/78	F1 =	0	F2 = 46932	F3 =	0	F4 =	0
	01178	1/11/78	F1 =	0	F2 = 51863	F3 =	0	F4 =	0
	01278	1/12/78	F1 =	0	F2 = 34155	F3 =	0	F4 =	0
	01378	1/13/78	F1 =	0	F2 = 14698	F3 =	0	F4 =	0
	01478	1/14/78	F1 =	0	F2 = 7601	F3 =	0	F4 =	0
	01578	1/15/78	F1 =	0	F2 = 59286	F3 =	0	F4 =	0
	01678	1/16/78	F1 =	0	F2 = 38601	F3 =	0	F4 =	0
	01778	1/17/78	F1 =	0	F2 = 53449	F3 =	0	F4 =	0
	01878	1/18/78	F1 =	0	F2 = 40459	F3 =	0	F4 =	0
	01978	1/19/78	F1 =	0	F2 = 48001	F3 =	0	F4 =	0
Z802	02078	1/20/78	F1 =	0	F2 = 50099	F3 =	0	F4 =	0
	02178	1/21/78	F1 =	0	F2 = 47873	F3 =	0	F4 =	0
	02278	1/22/78	F1 =	0	F2 = 44967	F3 =	0	F4 =	0
	02378	1/23/78	F1 =	0	F2 = 34967	F3 =	0	F4 =	0
	02478	1/24/78	F1 =	0	F2 = 4514	F3 =	0	F4 =	0
	02578	1/25/78	F1 =	0	F2 = 26043	F3 =	0	F4 =	0
	02678	1/26/78	F1 =	0	F2 = 29253	F3 =	0	F4 =	0
	02778	1/27/78	F1 =	0	F2 = 29249	F3 =	0	F4 =	0
	02878	1/28/78	F1 =	0	F2 = 22143	F3 =	0	F4 =	0
	02978	1/29/78	F1 =	0	F2 = 48716	F3 =	0	F4 =	0
Z803	03078	1/30/78	F1 =	0	F2 = 42716	F3 =	0	F4 =	0
	03178	1/31/78	F1 =	0	F2 = 49784	F3 =	0	F4 =	0
	03278	2/ 1/78	F1 =	0	F2 = 37087	F3 =	0	F4 =	0
	03378	2/ 2/78	F1 =	0	F2 = 42781	F3 =	0	F4 =	0
	03478	2/ 3/78	F1 =	0	F2 = 41032	F3 =	0	F4 =	0
	03578	2/ 4/78	F1 =	0	F2 = 46786	F3 =	0	F4 =	0
	03678	2/ 5/78	F1 =	0	F2 = 46962	F3 =	0	F4 =	0

C-7

	03778	2/ 6/78	F1 =	0	F2 =	49354	F3 =	0	F4 =	0
	03878	2/ 7/78	F1 =	0	F2 =	49929	F3 =	0	F4 =	0
	03978	2/ 8/78	F1 =	0	F2 =	35155	F3 =	0	F4 =	0
Z804	04078	2/ 9/78	F1 =	0	F2 =	48925	F3 =	0	F4 =	0
	04178	2/10/78	F1 =	0	F2 =	46268	F3 =	0	F4 =	0
	04278	2/11/78	F1 =	0	F2 =	50180	F3 =	0	F4 =	0
	04378	2/12/78	F1 =	0	F2 =	46794	F3 =	0	F4 =	0
	04478	2/13/78	F1 =	0	F2 =	36425	F3 =	0	F4 =	0
	04578	2/14/78	F1 =	0	F2 =	30460	F3 =	0	F4 =	0
	04678	2/15/78	F1 =	0	F2 =	46295	F3 =	0	F4 =	0
	04778	2/16/78	F1 =	0	F2 =	57790	F3 =	0	F4 =	0
	04878	2/17/78	F1 =	0	F2 =	43261	F3 =	0	F4 =	0
	04978	2/18/78	F1 =	0	F2 =	33331	F3 =	0	F4 =	0
Z805	05078	2/19/78	F1 =	0	F2 =	11837	F3 =	0	F4 =	0
	05178	2/20/78	F1 =	0	F2 =	49253	F3 =	0	F4 =	0
	05278	2/21/78	F1 =	0	F2 =	50288	F3 =	0	F4 =	0
	05378	2/22/78	F1 =	0	F2 =	32476	F3 =	0	F4 =	0
	05478	2/23/78	F1 =	0	F2 =	53349	F3 =	0	F4 =	0
	05578	2/24/78	F1 =	0	F2 =	49737	F3 =	0	F4 =	0
	05678	2/25/78	F1 =	0	F2 =	47206	F3 =	0	F4 =	0
	05778	2/26/78	F1 =	0	F2 =	47187	F3 =	0	F4 =	0
	05878	2/27/78	F1 =	0	F2 =	48308	F3 =	0	F4 =	0
	05978	2/28/78	F1 =	0	F2 =	42618	F3 =	0	F4 =	0
Z806	06078	3/ 1/78	F1 =	0	F2 =	55465	F3 =	0	F4 =	0
	06178	3/ 2/78	F1 =	0	F2 =	50922	F3 =	0	F4 =	0
	06278	3/ 3/78	F1 =	0	F2 =	49874	F3 =	0	F4 =	0
	06378	3/ 4/78	F1 =	0	F2 =	43320	F3 =	0	F4 =	0
	06478	3/ 5/78	F1 =	0	F2 =	29932	F3 =	0	F4 =	0
	06578	3/ 6/78	F1 =	0	F2 =	15831	F3 =	0	F4 =	0
	06678	3/ 7/78	F1 =	0	F2 =	46237	F3 =	0	F4 =	0
	06778	3/ 8/78	F1 =	0	F2 =	51309	F3 =	0	F4 =	0
	06878	3/ 9/78	F1 =	0	F2 =	47464	F3 =	0	F4 =	0
	06978	3/10/78	F1 =	0	F2 =	39679	F3 =	0	F4 =	0
Z807	07078	3/11/78	F1 =	0	F2 =	44404	F3 =	0	F4 =	0
	07178	3/12/78	F1 =	0	F2 =	49963	F3 =	0	F4 =	0
	07278	3/13/78	F1 =	0	F2 =	36018	F3 =	0	F4 =	0
	07378	3/14/78	F1 =	0	F2 =	45080	F3 =	0	F4 =	0
	07478	3/15/78	F1 =	0	F2 =	50306	F3 =	0	F4 =	0
	07578	3/16/78	F1 =	0	F2 =	48116	F3 =	0	F4 =	0
	07678	3/17/78	F1 =	0	F2 =	49797	F3 =	0	F4 =	0
	07778	3/18/78	F1 =	0	F2 =	50537	F3 =	0	F4 =	0
	07878	3/19/78	F1 =	0	F2 =	44741	F3 =	0	F4 =	0
	07978	3/20/78	F1 =	0	F2 =	49576	F3 =	0	F4 =	0
Z808	08078	3/21/78	F1 =	0	F2 =	43312	F3 =	0	F4 =	0
	08178	3/22/78	F1 =	0	F2 =	45201	F3 =	0	F4 =	0
	08278	3/23/78	F1 =	0	F2 =	47093	F3 =	0	F4 =	0
	08378	3/24/78	F1 =	0	F2 =	49177	F3 =	0	F4 =	0
	08478	3/25/78	F1 =	0	F2 =	48813	F3 =	0	F4 =	0

	08578	3/26/78	F1 =	0	F2 =	48851	F3 =	0	F4 =	0
	08678	3/27/78	F1 =	0	F2 =	52029	F3 =	0	F4 =	0
	08778	3/28/78	F1 =	0	F2 =	50997	F3 =	0	F4 =	0
	08878	3/29/78	F1 =	0	F2 =	48792	F3 =	0	F4 =	0
	08978	3/30/78	F1 =	0	F2 =	46703	F3 =	0	F4 =	0
Z809	09078	3/31/78	F1 =	0	F2 =	47104	F3 =	0	F4 =	0
	09178	4/ 1/78	F1 =	0	F2 =	48834	F3 =	0	F4 =	0
	09278	4/ 2/78	F1 =	0	F2 =	35358	F3 =	0	F4 =	0
	09378	4/ 3/78	F1 =	0	F2 =	50729	F3 =	0	F4 =	0
	09478	4/ 4/78	F1 =	0	F2 =	50002	F3 =	0	F4 =	0
	09578	4/ 5/78	F1 =	0	F2 =	36819	F3 =	0	F4 =	0
	09678	4/ 6/78	F1 =	0	F2 =	49780	F3 =	0	F4 =	0
	09778	4/ 7/78	F1 =	0	F2 =	43595	F3 =	0	F4 =	0
	09878	4/ 8/78	F1 =	0	F2 =	45733	F3 =	0	F4 =	0
	09978	4/ 9/78	F1 =	0	F2 =	51150	F3 =	0	F4 =	0
Z810	10078	4/10/78	F1 =	0	F2 =	41290	F3 =	0	F4 =	0
	10178	4/11/78	F1 =	0	F2 =	55270	F3 =	0	F4 =	0
	10278	4/12/78	F1 =	0	F2 =	45217	F3 =	0	F4 =	0
	10378	4/13/78	F1 =	0	F2 =	49240	F3 =	0	F4 =	0
	10478	4/14/78	F1 =	0	F2 =	38537	F3 =	0	F4 =	0
	10578	4/15/78	F1 =	0	F2 =	46084	F3 =	0	F4 =	0
	10678	4/16/78	F1 =	0	F2 =	46387	F3 =	0	F4 =	0
	10778	4/17/78	F1 =	0	F2 =	48834	F3 =	0	F4 =	0
	10878	4/18/78	F1 =	0	F2 =	48175	F3 =	0	F4 =	0
	10978	4/19/78	F1 =	0	F2 =	49934	F3 =	0	F4 =	0
Z811	11078	4/20/78	F1 =	0	F2 =	51203	F3 =	0	F4 =	0
	11178	4/21/78	F1 =	0	F2 =	53361	F3 =	0	F4 =	0
	11278	4/22/78	F1 =	0	F2 =	51711	F3 =	0	F4 =	0
	11378	4/23/78	F1 =	0	F2 =	47430	F3 =	0	F4 =	0
	11478	4/24/78	F1 =	0	F2 =	39880	F3 =	0	F4 =	0
	11578	4/25/78	F1 =	0	F2 =	33652	F3 =	0	F4 =	0
	11678	4/26/78	F1 =	0	F2 =	36052	F3 =	0	F4 =	0
	11778	4/27/78	F1 =	0	F2 =	15332	F3 =	0	F4 =	0
	11878	4/28/78	F1 =	0	F2 =	50426	F3 =	0	F4 =	0
	11978	4/29/78	F1 =	0	F2 =	44458	F3 =	0	F4 =	0
Z812	12078	4/30/78	F1 =	0	F2 =	48010	F3 =	0	F4 =	0
	12178	5/ 1/78	F1 =	0	F2 =	44642	F3 =	0	F4 =	0
	12278	5/ 2/78	F1 =	0	F2 =	36321	F3 =	0	F4 =	0
	12478	5/ 4/78	F1 =	0	F2 =	19151	F3 =	0	F4 =	0
	12578	5/ 5/78	F1 =	0	F2 =	29359	F3 =	0	F4 =	0
	12778	5/ 7/78	F1 =	0	F2 =	28867	F3 =	0	F4 =	0
	12878	5/ 8/78	F1 =	0	F2 =	36690	F3 =	0	F4 =	0
	12978	5/ 9/78	F1 =	0	F2 =	15176	F3 =	0	F4 =	0
Z813	13078	5/10/78	F1 =	0	F2 =	55327	F3 =	0	F4 =	0
	13178	5/11/78	F1 =	0	F2 =	55341	F3 =	0	F4 =	0
	13278	5/12/78	F1 =	0	F2 =	43638	F3 =	0	F4 =	0
	13378	5/13/78	F1 =	0	F2 =	43721	F3 =	0	F4 =	0
	13478	5/14/78	F1 =	0	F2 =	47818	F3 =	0	F4 =	0

	13578	5/15/78	F1 =	0	F2 =	20901	F3 =	0	F4 =	0
	13678	5/16/78	F1 =	0	F2 =	17600	F3 =	0	F4 =	0
	13778	5/17/78	F1 =	0	F2 =	41744	F3 =	0	F4 =	0
	13878	5/18/78	F1 =	0	F2 =	39657	F3 =	0	F4 =	0
	13978	5/19/78	F1 =	0	F2 =	39365	F3 =	0	F4 =	0
Z814	14078	5/20/78	F1 =	0	F2 =	39150	F3 =	0	F4 =	0
	14178	5/21/78	F1 =	0	F2 =	39674	F3 =	0	F4 =	0
	14278	5/22/78	F1 =	0	F2 =	35408	F3 =	0	F4 =	0
	14478	5/24/78	F1 =	0	F2 =	33326	F3 =	0	F4 =	0
	14578	5/25/78	F1 =	0	F2 =	25823	F3 =	0	F4 =	0
	14678	5/26/78	F1 =	0	F2 =	27125	F3 =	0	F4 =	0
	14778	5/27/78	F1 =	0	F2 =	29790	F3 =	0	F4 =	0
	14878	5/28/78	F1 =	0	F2 =	7432	F3 =	0	F4 =	0
	14978	5/29/78	F1 =	0	F2 =	36096	F3 =	0	F4 =	0
Z815	15078	5/30/78	F1 =	0	F2 =	31895	F3 =	0	F4 =	0
	15278	6/ 1/78	F1 =	0	F2 =	36364	F3 =	0	F4 =	0
	15378	6/ 2/78	F1 =	0	F2 =	25246	F3 =	0	F4 =	0
	15478	6/ 3/78	F1 =	0	F2 =	23684	F3 =	0	F4 =	0
	15578	6/ 4/78	F1 =	0	F2 =	20330	F3 =	0	F4 =	0
	15678	6/ 5/78	F1 =	0	F2 =	38942	F3 =	0	F4 =	0
	15778	6/ 6/78	F1 =	0	F2 =	21783	F3 =	0	F4 =	0
	15878	6/ 7/78	F1 =	0	F2 =	4464	F3 =	0	F4 =	0
	15978	6/ 8/78	F1 =	0	F2 =	46754	F3 =	0	F4 =	0
Z816	16078	6/ 9/78	F1 =	0	F2 =	25929	F3 =	0	F4 =	0
	16178	6/10/78	F1 =	0	F2 =	34819	F3 =	0	F4 =	0
	16278	6/11/78	F1 =	0	F2 =	31333	F3 =	0	F4 =	0
	16378	6/12/78	F1 =	0	F2 =	3882	F3 =	0	F4 =	0
	16478	6/13/78	F1 =	0	F2 =	42759	F3 =	0	F4 =	0
	16578	6/14/78	F1 =	0	F2 =	31516	F3 =	0	F4 =	0
	16678	6/15/78	F1 =	0	F2 =	31617	F3 =	0	F4 =	0
	16778	6/16/78	F1 =	0	F2 =	33736	F3 =	0	F4 =	0
	16878	6/17/78	F1 =	0	F2 =	44357	F3 =	0	F4 =	0
	16978	6/18/78	F1 =	0	F2 =	44747	F3 =	0	F4 =	0
Z817	17078	6/19/78	F1 =	0	F2 =	16948	F3 =	0	F4 =	0
	17178	6/20/78	F1 =	0	F2 =	35093	F3 =	0	F4 =	0
	17278	6/21/78	F1 =	0	F2 =	35157	F3 =	0	F4 =	0
	17378	6/22/78	F1 =	0	F2 =	52913	F3 =	0	F4 =	0
	17478	6/23/78	F1 =	0	F2 =	30155	F3 =	0	F4 =	0
	17578	6/24/78	F1 =	0	F2 =	35148	F3 =	0	F4 =	0
	17678	6/25/78	F1 =	0	F2 =	46329	F3 =	0	F4 =	0
	17778	6/26/78	F1 =	0	F2 =	36875	F3 =	0	F4 =	0
	17878	6/27/78	F1 =	0	F2 =	41822	F3 =	0	F4 =	0
	17978	6/28/78	F1 =	0	F2 =	44083	F3 =	0	F4 =	0
Z818	18078	6/29/78	F1 =	0	F2 =	27283	F3 =	0	F4 =	0
	18178	6/30/78	F1 =	0	F2 =	35871	F3 =	0	F4 =	0
	18278	7/ 1/78	F1 =	0	F2 =	32682	F3 =	0	F4 =	0
	18378	7/ 2/78	F1 =	0	F2 =	37331	F3 =	0	F4 =	0
	18478	7/ 3/78	F1 =	0	F2 =	33060	F3 =	0	F4 =	0

C-10

	18578	7/ 4/78	F1 =	0	F2 =	33828	F3 =	0	F4 =	0
	18678	7/ 5/78	F1 =	0	F2 =	36753	F3 =	0	F4 =	0
	18778	7/ 6/78	F1 =	0	F2 =	24884	F3 =	0	F4 =	0
	18978	7/ 8/78	F1 =	0	F2 =	29791	F3 =	0	F4 =	0
Z819	19078	7/ 9/78	F1 =	0	F2 =	35041	F3 =	0	F4 =	0
	19178	7/10/78	F1 =	0	F2 =	34917	F3 =	0	F4 =	0
	19278	7/11/78	F1 =	0	F2 =	35920	F3 =	0	F4 =	0
	19378	7/12/78	F1 =	0	F2 =	45991	F3 =	0	F4 =	0
	19478	7/13/78	F1 =	0	F2 =	26445	F3 =	0	F4 =	0
	19578	7/14/78	F1 =	0	F2 =	45939	F3 =	0	F4 =	0
	19678	7/15/78	F1 =	0	F2 =	24766	F3 =	0	F4 =	0
	19778	7/16/78	F1 =	0	F2 =	31151	F3 =	0	F4 =	0
	19878	7/17/78	F1 =	0	F2 =	33183	F3 =	0	F4 =	0
	19978	7/18/78	F1 =	0	F2 =	33079	F3 =	0	F4 =	0
Z820	20078	7/19/78	F1 =	0	F2 =	33877	F3 =	0	F4 =	0
	20178	7/20/78	F1 =	0	F2 =	41244	F3 =	0	F4 =	0
	20278	7/21/78	F1 =	0	F2 =	20543	F3 =	0	F4 =	0
	20378	7/22/78	F1 =	0	F2 =	13796	F3 =	0	F4 =	0
	20478	7/23/78	F1 =	0	F2 =	32045	F3 =	783	F4 =	0
	20578	7/24/78	F1 =	0	F2 =	36248	F3 =	21645	F4 =	0
	20678	7/25/78	F1 =	0	F2 =	36739	F3 =	21595	F4 =	0
	20778	7/26/78	F1 =	0	F2 =	28546	F3 =	19543	F4 =	0
	20878	7/27/78	F1 =	0	F2 =	17441	F3 =	11198	F4 =	0
	20978	7/28/78	F1 =	0	F2 =	47147	F3 =	28638	F4 =	0
Z821	21078	7/29/78	F1 =	0	F2 =	49186	F3 =	30853	F4 =	0
	21178	7/30/78	F1 =	0	F2 =	45959	F3 =	34643	F4 =	0
	21278	7/31/78	F1 =	0	F2 =	45252	F3 =	31468	F4 =	0
	21378	8/ 1/78	F1 =	0	F2 =	43428	F3 =	19609	F4 =	0
	21478	8/ 2/78	F1 =	0	F2 =	34089	F3 =	26840	F4 =	0
	21578	8/ 3/78	F1 =	0	F2 =	45545	F3 =	26594	F4 =	0
	21678	8/ 4/78	F1 =	0	F2 =	45972	F3 =	27198	F4 =	0
	21778	8/ 5/78	F1 =	0	F2 =	47261	F3 =	26898	F4 =	0
	21878	8/ 6/78	F1 =	0	F2 =	27377	F3 =	17854	F4 =	0
	21978	8/ 7/78	F1 =	0	F2 =	16403	F3 =	17460	F4 =	0
Z822	22078	8/ 8/78	F1 =	0	F2 =	46008	F3 =	26670	F4 =	0
	22178	8/ 9/78	F1 =	0	F2 =	46417	F3 =	27628	F4 =	0
	22278	8/10/78	F1 =	0	F2 =	44915	F3 =	26819	F4 =	0
	22378	8/11/78	F1 =	0	F2 =	48215	F3 =	27534	F4 =	0
	22478	8/12/78	F1 =	0	F2 =	47168	F3 =	25148	F4 =	0
	22578	8/13/78	F1 =	0	F2 =	43042	F3 =	25569	F4 =	0
	22678	8/14/78	F1 =	0	F2 =	36319	F3 =	26926	F4 =	0
	22778	8/15/78	F1 =	0	F2 =	32408	F3 =	21284	F4 =	0
	22878	8/16/78	F1 =	0	F2 =	15262	F3 =	8479	F4 =	0
	22978	8/17/78	F1 =	0	F2 =	46598	F3 =	25746	F4 =	0
Z823	23078	8/18/78	F1 =	0	F2 =	48293	F3 =	25135	F4 =	0
	23178	8/19/78	F1 =	0	F2 =	48613	F3 =	25509	F4 =	0
	23278	8/20/78	F1 =	0	F2 =	45879	F3 =	25403	F4 =	0
	23378	8/21/78	F1 =	0	F2 =	48052	F3 =	25258	F4 =	0

	23478	8/22/78	F1 =	0	F2 = 46637	F3 = 25350	F4 =	0
	23578	8/23/78	F1 =	0	F2 = 47183	F3 = 25346	F4 =	0
	23678	8/24/78	F1 =	0	F2 = 52666	F3 = 25081	F4 =	0
	23778	8/25/78	F1 =	0	F2 = 46374	F3 = 32057	F4 =	0
	23878	8/26/78	F1 =	0	F2 = 45412	F3 = 24848	F4 =	0
	23978	8/27/78	F1 =	0	F2 = 47658	F3 = 24901	F4 =	0
Z824	24078	8/28/78	F1 =	0	F2 = 51266	F3 = 18279	F4 =	0
	24178	8/29/78	F1 =	0	F2 = 44674	F3 = 27206	F4 =	0
	24278	8/30/78	F1 =	0	F2 = 45142	F3 = 25110	F4 =	0
	24378	8/31/78	F1 =	0	F2 = 47506	F3 = 24950	F4 =	0
	24478	9/ 1/78	F1 =	0	F2 = 40774	F3 = 16578	F4 =	0
	24578	9/ 2/78	F1 =	0	F2 = 41683	F3 = 23027	F4 =	0
	24678	9/ 3/78	F1 =	0	F2 = 27066	F3 = 28481	F4 =	0
	24778	9/ 4/78	F1 =	0	F2 = 31776	F3 = 24931	F4 =	0
	24878	9/ 5/78	F1 =	0	F2 = 42192	F3 = 25252	F4 =	0
	24978	9/ 6/78	F1 =	0	F2 = 40991	F3 = 27914	F4 =	0
Z825	25078	9/ 7/78	F1 =	0	F2 = 35250	F3 = 24774	F4 =	0
	25178	9/ 8/78	F1 =	0	F2 = 45155	F3 = 24741	F4 =	0
	25278	9/ 9/78	F1 =	0	F2 = 45686	F3 = 26758	F4 =	0
	25378	9/10/78	F1 =	0	F2 = 51475	F3 = 27141	F4 =	0
	25478	9/11/78	F1 =	0	F2 = 40772	F3 = 27342	F4 =	0
	25578	9/12/78	F1 =	0	F2 = 46914	F3 = 26950	F4 =	0
	25678	9/13/78	F1 =	0	F2 = 46935	F3 = 27626	F4 =	0
	25778	9/14/78	F1 =	0	F2 = 47651	F3 = 27013	F4 =	0
	25878	9/15/78	F1 =	0	F2 = 41958	F3 = 26317	F4 =	0
	25978	9/16/78	F1 =	0	F2 = 45361	F3 = 26079	F4 =	0
Z826	26078	9/17/78	F1 =	0	F2 = 64626	F3 = 33360	F4 =	0
	26178	9/18/78	F1 =	0	F2 = 46619	F3 = 24076	F4 =	0
	26278	9/19/78	F1 =	0	F2 = 33278	F3 = 26064	F4 =	0
	26378	9/20/78	F1 =	0	F2 = 47801	F3 = 25770	F4 =	0
	26478	9/21/78	F1 =	0	F2 = 46010	F3 = 19469	F4 =	0
	26578	9/22/78	F1 =	0	F2 = 47689	F3 = 26032	F4 =	0
	26678	9/23/78	F1 =	0	F2 = 49106	F3 = 26086	F4 =	0
	26778	9/24/78	F1 =	0	F2 = 40415	F3 = 31410	F4 =	0
	26878	9/25/78	F1 =	0	F2 = 46386	F3 = 25334	F4 =	0
	26978	9/26/78	F1 =	0	F2 = 47700	F3 = 25899	F4 =	0
Z827	27078	9/27/78	F1 =	0	F2 = 56680	F3 = 29206	F4 =	0
	27178	9/28/78	F1 =	0	F2 = 47122	F3 = 26971	F4 =	0
	27278	9/29/78	F1 =	0	F2 = 46481	F3 = 25282	F4 =	0
	27378	9/30/78	F1 =	0	F2 = 45131	F3 = 27750	F4 =	0
	27478	10/ 1/78	F1 =	0	F2 = 44037	F3 = 27697	F4 =	0
	27578	10/ 2/78	F1 =	0	F2 = 46533	F3 = 29287	F4 =	0
	27678	10/ 3/78	F1 =	0	F2 = 42239	F3 = 27360	F4 =	0
	27778	10/ 4/78	F1 =	0	F2 = 44414	F3 = 27098	F4 =	0
	27878	10/ 5/78	F1 =	0	F2 = 46476	F3 = 34249	F4 =	0
	27978	10/ 6/78	F1 =	0	F2 = 42627	F3 = 25085	F4 =	0
Z828	28078	10/ 7/78	F1 =	0	F2 = 44954	F3 = 26172	F4 =	0
	28178	10/ 8/78	F1 =	0	F2 = 31840	F3 = 19009	F4 =	0

	28278	10/ 9/78	F1 =	0	F2 = 12273	F3 = 8815	F4 =	0
	28378	10/10/78	F1 =	0	F2 = 46519	F3 = 31148	F4 =	0
	28478	10/11/78	F1 =	0	F2 = 44819	F3 = 25903	F4 =	0
	28578	10/12/78	F1 =	0	F2 = 43887	F3 = 30450	F4 =	0
	28678	10/13/78	F1 =	0	F2 = 45037	F3 = 24991	F4 =	0
	28778	10/14/78	F1 =	0	F2 = 46724	F3 = 26202	F4 =	0
	28878	10/15/78	F1 =	0	F2 = 48297	F3 = 26561	F4 =	0
	28978	10/16/78	F1 =	0	F2 = 35524	F3 = 13993	F4 =	0
Z829	29078	10/17/78	F1 =	0	F2 = 46813	F3 = 0	F4 =	0
	29178	10/18/78	F1 =	0	F2 = 47448	F3 = 20077	F4 =	0
	29278	10/19/78	F1 =	0	F2 = 45088	F3 = 43162	F4 =	0
	29378	10/20/78	F1 =	0	F2 = 41538	F3 = 38446	F4 =	0
	29478	10/21/78	F1 =	0	F2 = 41821	F3 = 40041	F4 =	0
	29578	10/22/78	F1 =	0	F2 = 34739	F3 = 41219	F4 =	0
	29678	10/23/78	F1 =	0	F2 = 42883	F3 = 33824	F4 =	0
	29778	10/24/78	F1 =	0	F2 = 24911	F3 = 39569	F4 =	0
	29878	10/25/78	F1 =	0	F2 = 38525	F3 = 43465	F4 =	0
	29978	10/26/78	F1 =	0	F2 = 49156	F3 = 43545	F4 =	0
Z830	30078	10/27/78	F1 =	0	F2 = 50353	F3 = 43837	F4 =	0
	30178	10/28/78	F1 =	0	F2 = 50100	F3 = 43510	F4 =	0
	30278	10/29/78	F1 =	0	F2 = 51250	F3 = 43527	F4 =	0
	30378	10/30/78	F1 =	0	F2 = 49224	F3 = 44405	F4 =	0
	30478	10/31/78	F1 =	0	F2 = 51713	F3 = 45339	F4 =	0
	30573	11/ 1/78	F1 =	0	F2 = 48326	F3 = 45348	F4 =	0
	30678	11/ 2/78	F1 =	0	F2 = 51159	F3 = 44969	F4 =	0
	30778	11/ 3/78	F1 =	0	F2 = 51751	F3 = 45434	F4 =	0
	30878	11/ 4/78	F1 =	0	F2 = 52118	F3 = 45356	F4 =	0
	30978	11/ 5/78	F1 =	0	F2 = 51770	F3 = 45520	F4 =	0
Z831	31078	11/ 6/78	F1 =	0	F2 = 48289	F3 = 38753	F4 =	0
	31178	11/ 7/78	F1 =	0	F2 = 51600	F3 = 45652	F4 =	0
	31278	11/ 8/78	F1 =	0	F2 = 53184	F3 = 45622	F4 =	0
	31378	11/ 9/78	F1 =	0	F2 = 48315	F3 = 44732	F4 =	0
	31478	11/10/78	F1 =	0	F2 = 51730	F3 = 45220	F4 =	0
	31578	11/11/78	F1 =	0	F2 = 49236	F3 = 44883	F4 =	0
	31678	11/12/78	F1 =	0	F2 = 50129	F3 = 45237	F4 =	0
	31778	11/13/78	F1 =	0	F2 = 52049	F3 = 44903	F4 =	0
	31878	11/14/78	F1 =	0	F2 = 51793	F3 = 37161	F4 =	0
	31978	11/15/78	F1 =	0	F2 = 51811	F3 = 45400	F4 =	0
Z832	32078	11/16/78	F1 =	0	F2 = 51346	F3 = 44830	F4 =	0
	32078	11/16/78	F1 =	0	F2 = 51346	F3 = 44830	F4 =	0
	32178	11/17/78	F1 =	0	F2 = 50325	F3 = 44605	F4 =	0
	32178	11/17/78	F1 =	0	F2 = 50325	F3 = 44605	F4 =	0
	32278	11/18/78	F1 =	0	F2 = 51988	F3 = 45186	F4 =	0
	32278	11/18/78	F1 =	0	F2 = 51988	F3 = 45186	F4 =	0
	32378	11/19/78	F1 =	0	F2 = 47987	F3 = 45305	F4 =	0
	32378	11/19/78	F1 =	0	F2 = 47987	F3 = 45305	F4 =	0
	32478	11/20/78	F1 =	0	F2 = 50233	F3 = 44899	F4 =	0
	32578	11/21/78	F1 =	0	F2 = 51781	F3 = 44499	F4 =	0
	32678	11/22/78	F1 =	0	F2 = 43741	F3 = 45310	F4 =	0

C-13

	32778	11/23/78	F1 =	0	F2 = 51461	F3 = 44893	F4 =	0
	32878	11/24/78	F1 =	0	F2 = 47925	F3 = 45084	F4 =	0
	32978	11/25/78	F1 =	0	F2 = 51446	F3 = 45284	F4 =	0
Z833	33078	11/26/78	F1 =	0	F2 = 51378	F3 = 45632	F4 =	0
	33178	11/27/78	F1 =	0	F2 = 51387	F3 = 33473	F4 =	0
	33278	11/28/78	F1 =	0	F2 = 47484	F3 = 44355	F4 =	0
	33378	11/29/78	F1 =	0	F2 = 50148	F3 = 45266	F4 =	0
	33478	11/30/78	F1 =	0	F2 = 50830	F3 = 40816	F4 =	0
	33578	12/ 1/78	F1 =	0	F2 = 46041	F3 = 45150	F4 =	0
	33678	12/ 2/78	F1 =	0	F2 = 51502	F3 = 46035	F4 =	0
	33778	12/ 3/78	F1 =	0	F2 = 51330	F3 = 34009	F4 =	0
	33878	12/ 4/78	F1 =	0	F2 = 50850	F3 = 36488	F4 =	0
	33978	12/ 5/78	F1 =	0	F2 = 50572	F3 = 37464	F4 =	0
Z834	34078	12/ 6/78	F1 =	0	F2 = 48148	F3 = 45284	F4 =	0
	34178	12/ 7/78	F1 =	0	F2 = 42282	F3 = 42566	F4 =	0
	34278	12/ 8/78	F1 =	0	F2 = 36227	F3 = 44570	F4 =	0
	34378	12/ 9/78	F1 =	0	F2 = 36643	F3 = 53700	F4 =	0
	34478	12/10/78	F1 =	0	F2 = 38379	F3 = 43115	F4 =	0
	34578	12/11/78	F1 =	0	F2 = 38877	F3 = 43149	F4 =	0
	34678	12/12/78	F1 =	0	F2 = 47436	F3 = 44972	F4 =	0
	34778	12/13/78	F1 =	0	F2 = 50176	F3 = 45002	F4 =	0
	34878	12/14/78	F1 =	0	F2 = 50689	F3 = 44950	F4 =	0
	34978	12/15/78	F1 =	0	F2 = 51041	F3 = 44498	F4 =	0
Z835	35078	12/16/78	F1 =	0	F2 = 43610	F3 = 44853	F4 =	0
	35178	12/17/78	F1 =	0	F2 = 37070	F3 = 38325	F4 =	0
	35278	12/18/78	F1 =	0	F2 = 51656	F3 = 45116	F4 =	0
	35378	12/19/78	F1 =	0	F2 = 50166	F3 = 45245	F4 =	0
	35478	12/20/78	F1 =	0	F2 = 51257	F3 = 45532	F4 =	0
	35578	12/21/78	F1 =	0	F2 = 51250	F3 = 44911	F4 =	0
	35678	12/22/78	F1 =	0	F2 = 36258	F3 = 31813	F4 =	0
	35778	12/23/78	F1 =	0	F2 = 11730	F3 = 14353	F4 =	0
	35878	12/24/78	F1 =	0	F2 = 49404	F3 = 45181	F4 =	0
	35978	12/25/78	F1 =	0	F2 = 47641	F3 = 45103	F4 =	0
Z836	36078	12/26/78	F1 =	0	F2 = 38002	F3 = 28872	F4 =	0
	36278	12/28/78	F1 =	0	F2 = 35301	F3 = 33758	F4 =	0
	36278	12/28/78	F1 =	0	F2 = 35301	F3 = 33758	F4 =	0
	36378	12/29/78	F1 =	0	F2 = 48187	F3 = 44718	F4 =	0
	36378	12/29/78	F1 =	0	F2 = 48187	F3 = 44718	F4 =	0
	36478	12/30/78	F1 =	0	F2 = 42172	F3 = 44667	F4 =	0
	36478	12/30/78	F1 =	0	F2 = 42172	F3 = 44667	F4 =	0
	36578	12/31/78	F1 =	0	F2 = 51977	F3 = 42068	F4 =	0
	36578	12/31/78	F1 =	0	F2 = 51977	F3 = 42068	F4 =	0
Z900	00179	1/ 1/79	F1 =	0	F2 = 48050	F3 = 42228	F4 =	0
	00279	1/ 2/79	F1 =	0	F2 = 43656	F3 = 41958	F4 =	0
	00379	1/ 3/79	F1 =	0	F2 = 48538	F3 = 41909	F4 =	0
	00479	1/ 4/79	F1 =	0	F2 = 43617	F3 = 41413	F4 =	0
	00579	1/ 5/79	F1 =	0	F2 = 41361	F3 = 41576	F4 =	0
	00679	1/ 6/79	F1 =	0	F2 = 43443	F3 = 41915	F4 =	0

	00779	1/ 7/79	F1 =	0	F2 = 45574	F3 = 41346	F4 =	0
	00879	1/ 8/79	F1 =	0	F2 = 30863	F3 = 29260	F4 =	0
	00979	1/ 9/79	F1 =	0	F2 = 16778	F3 = 25138	F4 =	0
	00979	1/ 9/79	F1 =	0	F2 = 16778	F3 = 25138	F4 =	0
Z901	01179	1/11/79	F1 =	0	F2 = 39347	F3 = 41343	F4 =	0
	01279	1/12/79	F1 =	0	F2 = 43477	F3 = 41558	F4 =	0
	01379	1/13/79	F1 =	0	F2 = 43000	F3 = 41044	F4 =	0
	01479	1/14/79	F1 =	0	F2 = 45610	F3 = 41281	F4 =	0
	01579	1/15/79	F1 =	0	F2 = 41265	F3 = 42972	F4 =	0
	01679	1/16/79	F1 =	0	F2 = 43064	F3 = 42988	F4 =	0
	01779	1/17/79	F1 =	0	F2 = 44960	F3 = 42703	F4 =	0
	01879	1/18/79	F1 =	0	F2 = 43221	F3 = 42892	F4 =	0
	01979	1/19/79	F1 =	0	F2 = 42164	F3 = 41144	F4 =	0
Z902	02079	1/20/79	F1 =	0	F2 = 45827	F3 = 41246	F4 =	0
	02179	1/21/79	F1 =	0	F2 = 38112	F3 = 40787	F4 =	0
	02279	1/22/79	F1 =	0	F2 = 32776	F3 = 41398	F4 =	0
	02379	1/23/79	F1 =	0	F2 = 31327	F3 = 41492	F4 =	0
	02479	1/24/79	F1 =	0	F2 = 31880	F3 = 40471	F4 =	0
	02579	1/25/79	F1 =	0	F2 = 22814	F3 = 31590	F4 =	0
	02679	1/26/79	F1 =	0	F2 = 31443	F3 = 40754	F4 =	0
	02779	1/27/79	F1 =	0	F2 = 28340	F3 = 40130	F4 =	0
	02879	1/28/79	F1 =	0	F2 = 33726	F3 = 41245	F4 =	0
	02979	1/29/79	F1 =	0	F2 = 46175	F3 = 42391	F4 =	0
Z903	03079	1/30/79	F1 =	0	F2 = 42623	F3 = 46605	F4 =	0
	03179	1/31/79	F1 =	0	F2 = 46547	F3 = 41474	F4 =	0
	03279	2/ 1/79	F1 =	0	F2 = 44126	F3 = 38867	F4 =	0
	03379	2/ 2/79	F1 =	0	F2 = 46172	F3 = 38972	F4 =	0
	03479	2/ 3/79	F1 =	0	F2 = 46709	F3 = 40272	F4 =	0
	03579	2/ 4/79	F1 =	0	F2 = 42921	F3 = 40023	F4 =	0
	03679	2/ 5/79	F1 =	0	F2 = 49039	F3 = 39004	F4 =	0
	03779	2/ 6/79	F1 =	0	F2 = 45248	F3 = 40972	F4 =	0
	03879	2/ 7/79	F1 =	0	F2 = 43360	F3 = 41624	F4 =	0
	03979	2/ 8/79	F1 =	0	F2 = 44250	F3 = 41776	F4 =	0
Z904	04079	2/ 9/79	F1 =	0	F2 = 42491	F3 = 41379	F4 =	0
	04179	2/10/79	F1 =	0	F2 = 42178	F3 = 38002	F4 =	0
	04279	2/11/79	F1 =	0	F2 = 41722	F3 = 38999	F4 =	0
	04379	2/12/79	F1 =	0	F2 = 41988	F3 = 36627	F4 =	0
	04479	2/13/79	F1 =	0	F2 = 44435	F3 = 41547	F4 =	0
	04579	2/14/79	F1 =	0	F2 = 45403	F3 = 41197	F4 =	0
	04679	2/15/79	F1 =	0	F2 = 40425	F3 = 38690	F4 =	0
	04779	2/16/79	F1 =	0	F2 = 45811	F3 = 38600	F4 =	0
	04879	2/17/79	F1 =	0	F2 = 46079	F3 = 41895	F4 =	0
	04979	2/18/79	F1 =	0	F2 = 49415	F3 = 28174	F4 =	0
Z905	05079	2/19/79	F1 =	0	F2 = 46820	F3 = 42153	F4 =	0
	05179	2/20/79	F1 =	0	F2 = 45561	F3 = 42902	F4 =	0
	05279	2/21/79	F1 =	0	F2 = 46042	F3 = 38608	F4 =	0
	05379	2/22/79	F1 =	0	F2 = 45180	F3 = 48118	F4 =	0
	05479	2/23/79	F1 =	0	F2 = 47645	F3 = 43741	F4 =	0

	05579	2/24/79	F1 =	0	F2 = 49215	F3 = 43711	F4 =	0
	05679	2/25/79	F1 =	0	F2 = 46005	F3 = 44064	F4 =	0
	05779	2/26/79	F1 =	0	F2 = 42813	F3 = 44153	F4 =	0
	05879	2/27/79	F1 =	0	F2 = 43441	F3 = 44411	F4 =	0
	05979	2/28/79	F1 =	0	F2 = 36768	F3 = 30484	F4 =	0
Z906	06079	3/ 1/79	F1 =	0	F2 = 45899	F3 = 44884	F4 =	0
	06179	3/ 2/79	F1 =	0	F2 = 47105	F3 = 43815	F4 =	0
	06279	3/ 3/79	F1 =	0	F2 = 35062	F3 = 42257	F4 =	0
	06379	3/ 4/79	F1 =	0	F2 = 41615	F3 = 45714	F4 =	0
	06479	3/ 5/79	F1 =	0	F2 = 36466	F3 = 30365	F4 =	0
	06579	3/ 6/79	F1 =	0	F2 = 41049	F3 = 24014	F4 =	0
	06679	3/ 7/79	F1 =	0	F2 = 49171	F3 = 46595	F4 =	0
	06779	3/ 8/79	F1 =	0	F2 = 49807	F3 = 45369	F4 =	0
	06879	3/ 9/79	F1 =	0	F2 = 45779	F3 = 43744	F4 =	0
	06979	3/10/79	F1 =	0	F2 = 48034	F3 = 42405	F4 =	0
Z907	07079	3/11/79	F1 =	0	F2 = 38576	F3 = 46300	F4 =	0
	07179	3/12/79	F1 =	0	F2 = 35796	F3 = 46836	F4 =	0
	07279	3/13/79	F1 =	0	F2 = 45299	F3 = 47179	F4 =	0
	07379	3/14/79	F1 =	0	F2 = 45166	F3 = 47031	F4 =	0
	07479	3/15/79	F1 =	0	F2 = 48106	F3 = 42197	F4 =	0
	07579	3/16/79	F1 =	0	F2 = 41890	F3 = 47215	F4 =	0
	07679	3/17/79	F1 =	0	F2 = 22687	F3 = 46921	F4 =	0
	07779	3/18/79	F1 =	0	F2 = 36203	F3 = 37874	F4 =	0
	07879	3/19/79	F1 =	0	F2 = 50523	F3 = 46786	F4 =	0
	07979	3/20/79	F1 =	0	F2 = 50472	F3 = 47469	F4 =	0
Z908	08079	3/21/79	F1 =	0	F2 = 50053	F3 = 47015	F4 =	0
	08179	3/22/79	F1 =	0	F2 = 46490	F3 = 47090	F4 =	0
	08279	3/23/79	F1 =	0	F2 = 45860	F3 = 39834	F4 =	0
	08379	3/24/79	F1 =	0	F2 = 40581	F3 = 47027	F4 =	0
	08479	3/25/79	F1 =	0	F2 = 29748	F3 = 48850	F4 =	0
	08579	3/26/79	F1 =	0	F2 = 46058	F3 = 48331	F4 =	0
	08679	3/27/79	F1 =	0	F2 = 49918	F3 = 47488	F4 =	0
	08779	3/28/79	F1 =	0	F2 = 51081	F3 = 46790	F4 =	0
	08879	3/29/79	F1 =	0	F2 = 49900	F3 = 48273	F4 =	0
	08979	3/30/79	F1 =	0	F2 = 50258	F3 = 47888	F4 =	0
Z909	09079	3/31/79	F1 =	0	F2 = 49098	F3 = 48653	F4 =	0
	09179	4/ 1/79	F1 =	0	F2 = 49054	F3 = 48503	F4 =	0
	09279	4/ 2/79	F1 =	0	F2 = 47813	F3 = 48569	F4 =	0
	09379	4/ 3/79	F1 =	0	F2 = 49543	F3 = 48144	F4 =	0
	09479	4/ 4/79	F1 =	0	F2 = 49966	F3 = 48636	F4 =	0
	09579	4/ 5/79	F1 =	0	F2 = 47475	F3 = 48355	F4 =	0
	09679	4/ 6/79	F1 =	0	F2 = 45949	F3 = 47080	F4 =	0
	09779	4/ 7/79	F1 =	0	F2 = 50637	F3 = 48267	F4 =	0
	09879	4/ 8/79	F1 =	0	F2 = 47000	F3 = 48080	F4 =	0
	09979	4/ 9/79	F1 =	0	F2 = 37205	F3 = 48619	F4 =	0
Z910	10079	4/10/79	F1 =	0	F2 = 35342	F3 = 48825	F4 =	0
	10179	4/11/79	F1 =	0	F2 = 28325	F3 = 46949	F4 =	0
	10279	4/12/79	F1 =	0	F2 = 41824	F3 = 47239	F4 =	0

C-16

	10379	4/13/79	F1 =	0	F2 = 39848	F3 = 46806	F4 =	0
	10479	4/14/79	F1 =	0	F2 = 44117	F3 = 47575	F4 =	0
	10579	4/15/79	F1 =	0	F2 = 48097	F3 = 47076	F4 =	0
	10679	4/16/79	F1 =	0	F2 = 48455	F3 = 47334	F4 =	0
	10779	4/17/79	F1 =	0	F2 = 41356	F3 = 48335	F4 =	0
	10879	4/18/79	F1 =	0	F2 = 46585	F3 = 47802	F4 =	0
	10979	4/19/79	F1 =	0	F2 = 39298	F3 = 47807	F4 =	0
Z911	11079	4/20/79	F1 =	0	F2 = 48539	F3 = 48100	F4 =	0
	11179	4/21/79	F1 =	0	F2 = 48578	F3 = 47399	F4 =	0
	11279	4/22/79	F1 =	0	F2 = 47742	F3 = 44283	F4 =	0
	11379	4/23/79	F1 =	0	F2 = 50755	F3 = 48123	F4 =	0
	11479	4/24/79	F1 =	0	F2 = 44546	F3 = 39150	F4 =	0
	11579	4/25/79	F1 =	0	F2 = 36123	F3 = 48400	F4 =	0
	11679	4/26/79	F1 =	0	F2 = 31836	F3 = 25746	F4 =	0
	11779	4/27/79	F1 =	0	F2 = 50887	F3 = 43428	F4 =	0
	11879	4/28/79	F1 =	0	F2 = 42221	F3 = 48411	F4 =	0
	11979	4/29/79	F1 =	0	F2 = 48702	F3 = 47994	F4 =	0
Z912	12079	4/30/79	F1 =	0	F2 = 39475	F3 = 49040	F4 =	0
	12179	5/ 1/79	F1 =	0	F2 = 47099	F3 = 39610	F4 =	0
	12279	5/ 2/79	F1 =	0	F2 = 51181	F3 = 48289	F4 =	0
	12379	5/ 3/79	F1 =	0	F2 = 50807	F3 = 46242	F4 =	0
	12479	5/ 4/79	F1 =	0	F2 = 41073	F3 = 47699	F4 =	0
	12579	5/ 5/79	F1 =	0	F2 = 48017	F3 = 48188	F4 =	0
	12679	5/ 6/79	F1 =	0	F2 = 47801	F3 = 47852	F4 =	0
	12779	5/ 7/79	F1 =	0	F2 = 44334	F3 = 47069	F4 =	0
	12879	5/ 8/79	F1 =	0	F2 = 42920	F3 = 31433	F4 =	0
	12979	5/ 9/79	F1 =	0	F2 = 44854	F3 = 48651	F4 =	0
Z913	13079	5/10/79	F1 =	0	F2 = 46174	F3 = 47390	F4 =	0
	13179	5/11/79	F1 =	0	F2 = 49045	F3 = 47400	F4 =	0
	13279	5/12/79	F1 =	0	F2 = 30148	F3 = 48419	F4 =	0
	13379	5/13/79	F1 =	0	F2 = 43293	F3 = 48295	F4 =	0
	13479	5/14/79	F1 =	0	F2 = 53523	F3 = 45794	F4 =	0
	13579	5/15/79	F1 =	0	F2 = 37398	F3 = 46511	F4 =	0
	13679	5/16/79	F1 =	0	F2 = 43809	F3 = 48165	F4 =	0
	13779	5/17/79	F1 =	0	F2 = 48822	F3 = 47658	F4 =	0
	13879	5/18/79	F1 =	0	F2 = 33112	F3 = 28901	F4 =	0
	13979	5/19/79	F1 =	0	F2 = 11142	F3 = 13970	F4 =	0
Z914	14079	5/20/79	F1 =	0	F2 = 48557	F3 = 47436	F4 =	0
	14179	5/21/79	F1 =	0	F2 = 45998	F3 = 47265	F4 =	0
	14279	5/22/79	F1 =	0	F2 = 46262	F3 = 45661	F4 =	0
	14379	5/23/79	F1 =	0	F2 = 41785	F3 = 46642	F4 =	0
	14479	5/24/79	F1 =	0	F2 = 49894	F3 = 47465	F4 =	0
	14579	5/25/79	F1 =	0	F2 = 44417	F3 = 47710	F4 =	0
	14679	5/26/79	F1 =	0	F2 = 37535	F3 = 47633	F4 =	0
	14779	5/27/79	F1 =	0	F2 = 42638	F3 = 47841	F4 =	0
	14879	5/28/79	F1 =	0	F2 = 45740	F3 = 46460	F4 =	0
	14979	5/29/79	F1 =	0	F2 = 35643	F3 = 43936	F4 =	0
Z915	15079	5/30/79	F1 =	0	F2 = 46253	F3 = 44326	F4 =	0

C-17

	15179	5/31/79	F1 =	0	F2 =	41481	F3 =	47580	F4 =	0
	15279	6/ 1/79	F1 =	0	F2 =	45667	F3 =	47159	F4 =	0
	15379	6/ 2/79	F1 =	0	F2 =	35922	F3 =	47667	F4 =	0
	15479	6/ 3/79	F1 =	0	F2 =	48427	F3 =	47050	F4 =	0
	15579	6/ 4/79	F1 =	0	F2 =	40367	F3 =	46382	F4 =	0
	15679	6/ 5/79	F1 =	0	F2 =	52355	F3 =	46794	F4 =	0
	15779	6/ 6/79	F1 =	0	F2 =	44767	F3 =	46788	F4 =	0
	15879	6/ 7/79	F1 =	0	F2 =	44239	F3 =	46410	F4 =	0
	15979	6/ 8/79	F1 =	0	F2 =	47059	F3 =	37955	F4 =	0
Z916	16079	6/ 9/79	F1 =	0	F2 =	37417	F3 =	38385	F4 =	0
	16179	6/10/79	F1 =	0	F2 =	29247	F3 =	46597	F4 =	0
	16279	6/11/79	F1 =	0	F2 =	36289	F3 =	29971	F4 =	0
	16379	6/12/79	F1 =	0	F2 =	33212	F3 =	34526	F4 =	0
	16479	6/13/79	F1 =	0	F2 =	38833	F3 =	47290	F4 =	0
	16579	6/14/79	F1 =	0	F2 =	33471	F3 =	47088	F4 =	0
	16679	6/15/79	F1 =	0	F2 =	40175	F3 =	47294	F4 =	0
	16779	6/16/79	F1 =	0	F2 =	37717	F3 =	34278	F4 =	0
	16879	6/17/79	F1 =	0	F2 =	43355	F3 =	46883	F4 =	18636
	16979	6/18/79	F1 =	0	F2 =	40106	F3 =	46368	F4 =	59674
Z917	17079	6/19/79	F1 =	0	F2 =	49698	F3 =	47231	F4 =	58975
	17179	6/20/79	F1 =	0	F2 =	28261	F3 =	34888	F4 =	39974
	17279	6/21/79	F1 =	0	F2 =	41559	F3 =	41406	F4 =	40247
	17379	6/22/79	F1 =	0	F2 =	40835	F3 =	40107	F4 =	59445
	17479	6/23/79	F1 =	0	F2 =	46683	F3 =	47144	F4 =	58963
	17579	6/24/79	F1 =	0	F2 =	51720	F3 =	43425	F4 =	59231
	17679	6/25/79	F1 =	0	F2 =	32675	F3 =	47407	F4 =	56342
	17779	6/26/79	F1 =	0	F2 =	50310	F3 =	46853	F4 =	35745
	17879	6/27/79	F1 =	0	F2 =	25692	F3 =	47027	F4 =	48053
	17979	6/28/79	F1 =	0	F2 =	51046	F3 =	42692	F4 =	55184
Z918	18079	6/29/79	F1 =	0	F2 =	47138	F3 =	46108	F4 =	43057
	18179	6/30/79	F1 =	0	F2 =	45815	F3 =	43071	F4 =	33437
	18279	7/ 1/79	F1 =	0	F2 =	34189	F3 =	27847	F4 =	24666
	18379	7/ 2/79	F1 =	0	F2 =	17571	F3 =	16497	F4 =	17906
	18479	7/ 3/79	F1 =	0	F2 =	39305	F3 =	40994	F4 =	46234
	18579	7/ 4/79	F1 =	0	F2 =	38488	F3 =	42872	F4 =	59907
	18679	7/ 5/79	F1 =	0	F2 =	49540	F3 =	45758	F4 =	60152
	18779	7/ 6/79	F1 =	0	F2 =	48573	F3 =	47104	F4 =	55877
	18879	7/ 7/79	F1 =	0	F2 =	30450	F3 =	30333	F4 =	19562
	18979	7/ 8/79	F1 =	0	F2 =	16483	F3 =	16924	F4 =	6542
Z919	19079	7/ 9/79	F1 =	0	F2 =	46432	F3 =	31879	F4 =	54325
	19179	7/10/79	F1 =	0	F2 =	55105	F3 =	51597	F4 =	66998
	19279	7/11/79	F1 =	0	F2 =	46718	F3 =	41827	F4 =	47929
	19379	7/12/79	F1 =	0	F2 =	42952	F3 =	47217	F4 =	76274
	19479	7/13/79	F1 =	0	F2 =	38448	F3 =	35772	F4 =	47736
	19579	7/14/79	F1 =	0	F2 =	42280	F3 =	43029	F4 =	66230
	19679	7/15/79	F1 =	0	F2 =	47989	F3 =	47837	F4 =	59373
	19779	7/16/79	F1 =	0	F2 =	24771	F3 =	42633	F4 =	60834
	19879	7/17/79	F1 =	0	F2 =	31305	F3 =	48285	F4 =	55387
	19979	7/18/79	F1 =	0	F2 =	34228	F3 =	43293	F4 =	61052

Z920	20079	7/19/79	F1 = 0	F2 = 33548	F3 = 40378	F4 = 50798
	20179	7/20/79	F1 = 0	F2 = 35530	F3 = 48443	F4 = 57184
	20279	7/21/79	F1 = 0	F2 = 32461	F3 = 34059	F4 = 60251
	20379	7/22/79	F1 = 0	F2 = 41965	F3 = 40568	F4 = 56230
	20479	7/23/79	F1 = 0	F2 = 30600	F3 = 32517	F4 = 54453
	20579	7/24/79	F1 = 0	F2 = 25269	F3 = 45641	F4 = 37260
	20679	7/25/79	F1 = 0	F2 = 32461	F3 = 42548	F4 = 50808
	20779	7/26/79	F1 = 0	F2 = 22983	F3 = 36854	F4 = 50376
	20879	7/27/79	F1 = 0	F2 = 25758	F3 = 37980	F4 = 39332
	20979	7/28/79	F1 = 0	F2 = 28232	F3 = 45827	F4 = 60332
Z921	21079	7/29/79	F1 = 0	F2 = 23548	F3 = 49669	F4 = 60953
	21179	7/30/79	F1 = 0	F2 = 20756	F3 = 49447	F4 = 54460
	21279	7/31/79	F1 = 0	F2 = 20713	F3 = 44975	F4 = 61227
	21379	8/ 1/79	F1 = 0	F2 = 17165	F3 = 43811	F4 = 62307
	21479	8/ 2/79	F1 = 0	F2 = 23149	F3 = 46152	F4 = 52073
	21579	8/ 3/79	F1 = 0	F2 = 53179	F3 = 58366	F4 = 68846
	21679	8/ 4/79	F1 = 0	F2 = 41477	F3 = 49547	F4 = 59840
	21779	8/ 5/79	F1 = 0	F2 = 27597	F3 = 47714	F4 = 62282
	21879	8/ 6/79	F1 = 0	F2 = 48611	F3 = 48930	F4 = 57883
	21979	8/ 7/79	F1 = 0	F2 = 38060	F3 = 48712	F4 = 58671
Z922	22079	8/ 8/79	F1 = 0	F2 = 45272	F3 = 49236	F4 = 59407
	22179	8/ 9/79	F1 = 0	F2 = 38545	F3 = 48821	F4 = 56079
	22279	8/10/79	F1 = 0	F2 = 45128	F3 = 47938	F4 = 56021
	22379	8/11/79	F1 = 0	F2 = 48023	F3 = 49675	F4 = 61052
	22479	8/12/79	F1 = 0	F2 = 51659	F3 = 49791	F4 = 62052
	22579	8/13/79	F1 = 0	F2 = 36443	F3 = 36127	F4 = 42863
	22679	8/14/79	F1 = 0	F2 = 13068	F3 = 14228	F4 = 18834
	22779	8/15/79	F1 = 0	F2 = 46875	F3 = 49805	F4 = 61110
	22879	8/16/79	F1 = 0	F2 = 47252	F3 = 48583	F4 = 61433
	22979	8/17/79	F1 = 0	F2 = 48304	F3 = 48989	F4 = 62326
Z923	23079	8/18/79	F1 = 0	F2 = 47571	F3 = 48857	F4 = 60575
	23179	8/19/79	F1 = 0	F2 = 26283	F3 = 32096	F4 = 50680
	23279	8/20/79	F1 = 0	F2 = 50552	F3 = 54502	F4 = 61868
	23379	8/21/79	F1 = 0	F2 = 2626	F3 = 25616	F4 = 30543
	23479	8/22/79	F1 = 0	F2 = 38648	F3 = 41355	F4 = 61153
	23579	8/23/79	F1 = 0	F2 = 48966	F3 = 49573	F4 = 52270
	23679	8/24/79	F1 = 0	F2 = 39902	F3 = 49982	F4 = 60982
	23779	8/25/79	F1 = 0	F2 = 51669	F3 = 48784	F4 = 60406
	23879	8/26/79	F1 = 0	F2 = 35982	F3 = 37584	F4 = 46039
	23979	8/27/79	F1 = 0	F2 = 13120	F3 = 12618	F4 = 16652
Z924	24079	8/28/79	F1 = 0	F2 = 36104	F3 = 39072	F4 = 58005
	24179	8/29/79	F1 = 0	F2 = 36893	F3 = 35020	F4 = 38099
	24279	8/30/79	F1 = 0	F2 = 12534	F3 = 11366	F4 = 9922
	24379	8/31/79	F1 = 0	F2 = 47360	F3 = 46792	F4 = 61379
	24479	9/ 1/79	F1 = 0	F2 = 47147	F3 = 48543	F4 = 60783
	24579	9/ 2/79	F1 = 0	F2 = 50846	F3 = 46593	F4 = 61672
	24679	9/ 3/79	F1 = 0	F2 = 37496	F3 = 46022	F4 = 59966
	24779	9/ 4/79	F1 = 0	F2 = 36812	F3 = 45967	F4 = 61088
	24879	9/ 5/79	F1 = 0	F2 = 33777	F3 = 49002	F4 = 56865

	24979	9/ 6/79	F1 =	0	F2 = 33328	F3 = 46653	F4 = 61350
Z925	25079	9/ 7/79	F1 =	0	F2 = 32804	F3 = 35068	F4 = 44827
	25179	9/ 8/79	F1 =	0	F2 = 15744	F3 = 14278	F4 = 17500
	25279	9/ 9/79	F1 =	0	F2 = 38245	F3 = 43860	F4 = 60520
	25379	9/10/79	F1 =	0	F2 = 32731	F3 = 49478	F4 = 59508
	25479	9/11/79	F1 =	0	F2 = 33502	F3 = 46047	F4 = 54023
	25579	9/12/79	F1 =	0	F2 = 32638	F3 = 43476	F4 = 57887
	25679	9/13/79	F1 =	0	F2 = 35598	F3 = 47451	F4 = 62397
	25779	9/14/79	F1 =	0	F2 = 37285	F3 = 49392	F4 = 60026
	25879	9/15/79	F1 =	0	F2 = 52053	F3 = 48785	F4 = 59954
	25979	9/16/79	F1 =	0	F2 = 39277	F3 = 48454	F4 = 61928
Z926	26079	9/17/79	F1 =	0	F2 = 33336	F3 = 45458	F4 = 58757
	26179	9/18/79	F1 =	0	F2 = 47499	F3 = 49386	F4 = 62114
	26279	9/19/79	F1 =	0	F2 = 35805	F3 = 43861	F4 = 58414
	26379	9/20/79	F1 =	0	F2 = 48002	F3 = 39712	F4 = 52374
	26479	9/21/79	F1 =	0	F2 = 47240	F3 = 40003	F4 = 47616
	26579	9/22/79	F1 =	0	F2 = 47482	F3 = 42547	F4 = 60718
	26679	9/23/79	F1 =	0	F2 = 47582	F3 = 46631	F4 = 61183
	26779	9/24/79	F1 =	0	F2 = 35843	F3 = 44598	F4 = 56159
	26879	9/25/79	F1 =	0	F2 = 39096	F3 = 47168	F4 = 54733
	26979	9/26/79	F1 =	0	F2 = 47297	F3 = 47878	F4 = 50456
Z927	27079	9/27/79	F1 =	0	F2 = 48651	F3 = 47432	F4 = 51377
	27179	9/28/79	F1 =	0	F2 = 13599	F3 = 44815	F4 = 54447
	27279	9/29/79	F1 =	0	F2 = 0	F3 = 44600	F4 = 60001
	27379	9/30/79	F1 =	0	F2 = 14985	F3 = 45637	F4 = 60008
	27479	10/ 1/79	F1 =	0	F2 = 48582	F3 = 40009	F4 = 59869
	27579	10/ 2/79	F1 =	0	F2 = 36480	F3 = 45383	F4 = 58818
	27679	10/ 3/79	F1 =	0	F2 = 46837	F3 = 39972	F4 = 57443
	27779	10/ 4/79	F1 =	0	F2 = 51898	F3 = 45027	F4 = 61114
	27879	10/ 5/79	F1 =	0	F2 = 47402	F3 = 39373	F4 = 59215
	27979	10/ 6/79	F1 =	0	F2 = 47087	F3 = 42836	F4 = 59684
Z928	28079	10/ 7/79	F1 =	0	F2 = 47688	F3 = 45360	F4 = 55193
	28179	10/ 8/79	F1 =	0	F2 = 47867	F3 = 46564	F4 = 59355
	28279	10/ 9/79	F1 =	0	F2 = 47406	F3 = 46855	F4 = 61720
	28379	10/10/79	F1 =	0	F2 = 36323	F3 = 46077	F4 = 59357
	28479	10/11/79	F1 =	0	F2 = 37426	F3 = 46140	F4 = 60832
	28579	10/12/79	F1 =	0	F2 = 42335	F3 = 43809	F4 = 60556
	28679	10/13/79	F1 =	0	F2 = 53523	F3 = 44540	F4 = 55209
	28779	10/14/79	F1 =	0	F2 = 50210	F3 = 41385	F4 = 60479
	28879	10/15/79	F1 =	0	F2 = 49203	F3 = 41128	F4 = 52082
	28979	10/16/79	F1 =	0	F2 = 51971	F3 = 40479	F4 = 50753
Z929	29079	10/17/79	F1 =	0	F2 = 48510	F3 = 44420	F4 = 56388
	29179	10/18/79	F1 =	0	F2 = 37378	F3 = 43902	F4 = 60892
	29279	10/19/79	F1 =	0	F2 = 31268	F3 = 44360	F4 = 58754
	29379	10/20/79	F1 =	0	F2 = 47512	F3 = 41602	F4 = 47351
	29479	10/21/79	F1 =	0	F2 = 35481	F3 = 44124	F4 = 52514
	29579	10/22/79	F1 =	0	F2 = 42622	F3 = 51577	F4 = 57329
	29679	10/23/79	F1 =	0	F2 = 39581	F3 = 45247	F4 = 60577

	29779	10/24/79	F1 = 0	F2 = 21954	F3 = 44834	F4 = 62263
	29879	10/25/79	F1 = 0	F2 = 32408	F3 = 45379	F4 = 61866
	29979	10/26/79	F1 = 0	F2 = 35115	F3 = 45229	F4 = 50140
Z930	30079	10/27/79	F1 = 0	F2 = 35052	F3 = 46768	F4 = 63759
	30179	10/28/79	F1 = 0	F2 = 31024	F3 = 46316	F4 = 61123
	30279	10/29/79	F1 = 0	F2 = 24035	F3 = 45623	F4 = 57355
	30379	10/30/79	F1 = 0	F2 = 36033	F3 = 46051	F4 = 58495
	30479	10/31/79	F1 = 0	F2 = 45999	F3 = 45888	F4 = 58035
	30579	11/ 1/79	F1 = 0	F2 = 39925	F3 = 45593	F4 = 59802
	30679	11/ 2/79	F1 = 0	F2 = 49629	F3 = 41783	F4 = 59500
	30779	11/ 3/79	F1 = 0	F2 = 28996	F3 = 40666	F4 = 51910
	30879	11/ 4/79	F1 = 0	F2 = 49502	F3 = 46351	F4 = 53770
	30979	11/ 5/79	F1 = 0	F2 = 36059	F3 = 47119	F4 = 59108
Z931	31079	11/ 6/79	F1 = 0	F2 = 49770	F3 = 44785	F4 = 58529
	31179	11/ 7/79	F1 = 0	F2 = 45501	F3 = 46798	F4 = 56027
	31279	11/ 8/79	F1 = 0	F2 = 31253	F3 = 46712	F4 = 41664
	31379	11/ 9/79	F1 = 0	F2 = 0	F3 = 11313	F4 = 16245
	31479	11/10/79	F1 = 0	F2 = 64022	F3 = 65046	F4 = 88308
	31579	11/11/79	F1 = 0	F2 = 13656	F3 = 12817	F4 = 16769
	31679	11/12/79	F1 = 0	F2 = 39199	F3 = 47425	F4 = 60683
	31779	11/13/79	F1 = 0	F2 = 35962	F3 = 44216	F4 = 59556
	31879	11/14/79	F1 = 0	F2 = 27261	F3 = 46614	F4 = 61122
	31979	11/15/79	F1 = 0	F2 = 37810	F3 = 45790	F4 = 57297
Z932	32079	11/16/79	F1 = 0	F2 = 50118	F3 = 47388	F4 = 54901
	32179	11/17/79	F1 = 0	F2 = 39319	F3 = 30691	F4 = 41511
	32279	11/18/79	F1 = 0	F2 = 14819	F3 = 14373	F4 = 19518
	32379	11/19/79	F1 = 0	F2 = 49598	F3 = 43864	F4 = 56391
	32479	11/20/79	F1 = 0	F2 = 33259	F3 = 43910	F4 = 56396
	32579	11/21/79	F1 = 0	F2 = 44186	F3 = 45258	F4 = 57448
	32679	11/22/79	F1 = 0	F2 = 49520	F3 = 48106	F4 = 59443
	32779	11/23/79	F1 = 0	F2 = 49466	F3 = 45070	F4 = 59087
	32879	11/24/79	F1 = 0	F2 = 29301	F3 = 44339	F4 = 60173
	32979	11/25/79	F1 = 0	F2 = 32449	F3 = 47756	F4 = 60035
Z933	33079	11/26/79	F1 = 0	F2 = 41005	F3 = 47963	F4 = 60914
	33179	11/27/79	F1 = 0	F2 = 25571	F3 = 30754	F4 = 42635
	33279	11/28/79	F1 = 0	F2 = 14213	F3 = 14450	F4 = 18582
	33379	11/29/79	F1 = 0	F2 = 40276	F3 = 44548	F4 = 61547
	33479	11/30/79	F1 = 0	F2 = 46745	F3 = 48948	F4 = 48002
	33579	12/ 1/79	F1 = 0	F2 = 43006	F3 = 45690	F4 = 61934
	33679	12/ 2/79	F1 = 0	F2 = 44507	F3 = 47723	F4 = 60369
	33779	12/ 3/79	F1 = 0	F2 = 38930	F3 = 40026	F4 = 62287
	33879	12/ 4/79	F1 = 0	F2 = 51185	F3 = 43057	F4 = 56318
	33979	12/ 5/79	F1 = 0	F2 = 47821	F3 = 42089	F4 = 57093
Z934	34079	12/ 6/79	F1 = 0	F2 = 46131	F3 = 35704	F4 = 62262
	34179	12/ 7/79	F1 = 0	F2 = 37329	F3 = 35828	F4 = 59091
	34279	12/ 8/79	F1 = 0	F2 = 42180	F3 = 41702	F4 = 52291
	34379	12/ 9/79	F1 = 0	F2 = 38098	F3 = 41306	F4 = 62323
	34479	12/10/79	F1 = 0	F2 = 43162	F3 = 44285	F4 = 58510

	34579	12/11/79	F1 =	0	F2 = 45677	F3 = 42950	F4 = 61605
	34679	12/12/79	F1 =	0	F2 = 41850	F3 = 41724	F4 = 59452
	34779	12/13/79	F1 =	0	F2 = 36705	F3 = 27127	F4 = 41520
	34879	12/14/79	F1 =	0	F2 = 13679	F3 = 11891	F4 = 18642
	34979	12/15/79	F1 =	0	F2 = 46262	F3 = 44523	F4 = 61086
Z935	35079	12/16/79	F1 =	0	F2 = 49583	F3 = 47663	F4 = 76657
	35179	12/17/79	F1 =	0	F2 = 44661	F3 = 48060	F4 = 60800
	35279	12/18/79	F1 =	0	F2 = 21505	F3 = 32470	F4 = 42954
	35379	12/19/79	F1 =	0	F2 = 13183	F3 = 11950	F4 = 18598
	35479	12/20/79	F1 =	0	F2 = 38146	F3 = 47604	F4 = 58044
	35579	12/21/79	F1 =	0	F2 = 42660	F3 = 35749	F4 = 56832
	35679	12/22/79	F1 =	0	F2 = 44325	F3 = 47080	F4 = 61469
	35779	12/23/79	F1 =	0	F2 = 33603	F3 = 46302	F4 = 63263
	35879	12/24/79	F1 =	0	F2 = 47433	F3 = 47865	F4 = 55751
	35979	12/25/79	F1 =	0	F2 = 40868	F3 = 48346	F4 = 56703
Z936	36079	12/26/79	F1 =	0	F2 = 38486	F3 = 48037	F4 = 58114
	36179	12/27/79	F1 =	0	F2 = 21378	F3 = 27178	F4 = 52919
	36279	12/28/79	F1 =	0	F2 = 40933	F3 = 44161	F4 = 59395
	36379	12/29/79	F1 =	0	F2 = 43200	F3 = 48145	F4 = 11314
	36479	12/30/79	F1 =	0	F2 = 46011	F3 = 44548	F4 = 0
	36579	12/31/79	F1 =	0	F2 = 50295	F3 = 48096	F4 = 0
Z000	00180	1/ 1/80	F1 =	0	F2 = 52040	F3 = 43687	F4 = 0
	00280	1/ 2/80	F1 =	0	F2 = 55018	F3 = 36768	F4 = 0
	00380	1/ 3/80	F1 =	0	F2 = 74675	F3 = 47210	F4 = 0
	00480	1/ 4/80	F1 =	0	F2 = 12994	F3 = 0	F4 = 0
	00580	1/ 5/80	F1 =	0	F2 = 51658	F3 = 0	F4 = 0
	00680	1/ 6/80	F1 =	0	F2 = 49184	F3 = 0	F4 = 0
	00780	1/ 7/80	F1 =	0	F2 = 54952	F3 = 0	F4 = 0
	00880	1/ 8/80	F1 =	0	F2 = 51984	F3 = 0	F4 = 0
	00980	1/ 9/80	F1 =	0	F2 = 50395	F3 = 0	F4 = 0
Z001	01080	1/10/80	F1 =	0	F2 = 47010	F3 = 0	F4 = 0
	01180	1/11/80	F1 =	0	F2 = 49087	F3 = 0	F4 = 0
	01280	1/12/80	F1 =	0	F2 = 48946	F3 = 0	F4 = 0
	01380	1/13/80	F1 =	0	F2 = 50158	F3 = 0	F4 = 0
	01480	1/14/80	F1 =	0	F2 = 37769	F3 = 0	F4 = 0
	01780	1/17/80	F1 =	0	F2 = 10742	F3 = 0	F4 = 0
	01880	1/18/80	F1 =	0	F2 = 35568	F3 = 0	F4 = 0
Z002	02280	1/22/80	F1 =	0	F2 = 17879	F3 = 0	F4 = 0
	02380	1/23/80	F1 =	0	F2 = 50022	F3 = 0	F4 = 0
	02480	1/24/80	F1 =	0	F2 = 50561	F3 = 0	F4 = 0
	02580	1/25/80	F1 =	0	F2 = 48155	F3 = 0	F4 = 0
	02680	1/26/80	F1 =	0	F2 = 39792	F3 = 0	F4 = 0
	02780	1/27/80	F1 =	0	F2 = 36326	F3 = 0	F4 = 0
	02880	1/28/80	F1 =	0	F2 = 32443	F3 = 0	F4 = 0
	02980	1/29/80	F1 =	0	F2 = 71940	F3 = 0	F4 = 0
Z003	03080	1/30/80	F1 =	0	F2 = 42082	F3 = 0	F4 = 0
	03180	1/31/80	F1 =	0	F2 = 46699	F3 = 0	F4 = 0

	03280	2/ 1/80	F1 =	0	F2 =	43090	F3 =	0	F4 =	0
	03380	2/ 2/80	F1 =	0	F2 =	32232	F3 =	0	F4 =	0
	03580	2/ 4/80	F1 =	0	F2 =	0	F3 =	3197	F4 =	0
	03680	2/ 5/80	F1 =	0	F2 =	6718	F3 =	6917	F4 =	664
	03780	2/ 6/80	F1 =	0	F2 =	21318	F3 =	0	F4 =	3164
	03880	2/ 7/80	F1 =	0	F2 =	19511	F3 =	0	F4 =	0
	03980	2/ 8/80	F1 =	0	F2 =	2170	F3 =	0	F4 =	0
Z004	04080	2/ 9/80	F1 =	0	F2 =	44485	F3 =	0	F4 =	0
	04180	2/10/80	F1 =	0	F2 =	15262	F3 =	0	F4 =	0
	04280	2/11/80	F1 =	0	F2 =	52859	F3 =	0	F4 =	0
	04380	2/12/80	F1 =	0	F2 =	35944	F3 =	0	F4 =	0
	04480	2/13/80	F1 =	0	F2 =	5501	F3 =	0	F4 =	0
	04580	2/14/80	F1 =	0	F2 =	40891	F3 =	0	F4 =	0
	04680	2/15/80	F1 =	0	F2 =	5598	F3 =	0	F4 =	0
	04780	2/16/80	F1 =	0	F2 =	36587	F3 =	0	F4 =	0

DISCLAIMER

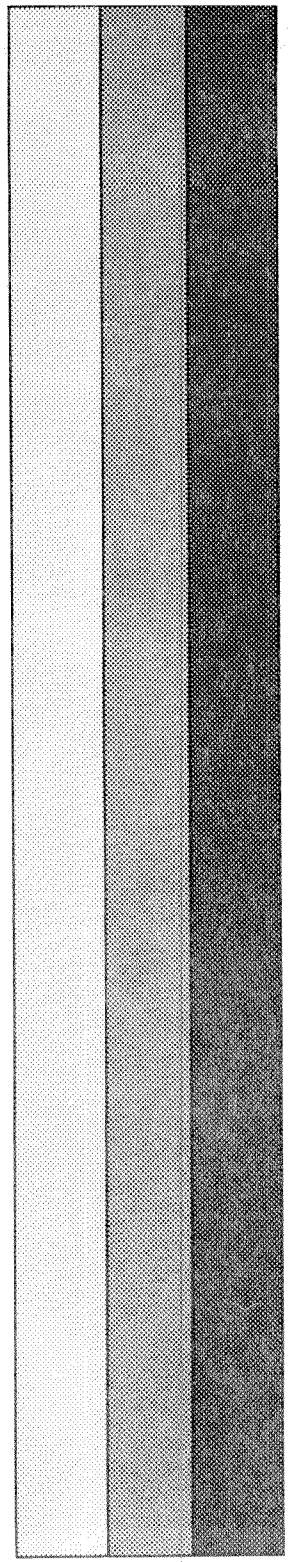
This document was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor the University of California nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or the University of California. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government thereof, and shall not be used for advertising or product endorsement purposes.

Printed in the United States of America
Available from
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
Price: Printed Copy $; Microfiche $4.50

Page Range	Domestic Price	Page Range	Domestic Price
001-025	$ 7.00	326-350	$ 26.50
026-050	8.50	351-375	28.00
051-075	10.00	376-400	29.50
076-100	11.50	401-426	31.00
101-125	13.00	427-450	32.50
126-150	14.50	451-475	34.00
151-175	16.00	476-500	35.50
176-200	17.50	501-525	37.00
201-225	19.00	526-550	38.50
226-250	20.50	551-575	40.00
251-275	22.00	576-600	41.50
276-300	23.50	601-up[1]	
301-325	25.00		

[1]Add 1.50 for each additional 25 page increment, or portion thereof from 601 pages up.

Technical Information Department · Lawrence Livermore Laboratory
University of California · Livermore, California 94550



Lawrence Livermore National Laboratory

76-091A-02A
77-044A-02A
78-042A-02A
79-050A-02A

November 24, 1982

Mr. Ralph Post
Code 601
Goddard Space Flight Center
Greenbelt, Maryland 20771

Dear Mr. Post:

I mailed to you today under separate cover 7 magnetic tapes (attached list), which are replacement tapes for like numbered tapes sent to you earlier this year.

The June 17, 1979 through August 13, 1979 F4 satellite data were processed incorrectly using the F2 satellite ozone retrieval model. These data were reprocessed using the F4 satellite ozone retrieval model and constitute part of this updated data base that I sent to you today.

Enclosed is a tape index showing the tape label and data count by satellite number. The tape label (volume number) is constructed using the last digit of the year followed by the first two digits of the Julian day. Each labeled tape contains data in sets of 10 days or less, e.g., V708 is 1977 and Julian days 080 through 089.

These replacement tapes and the tapes that you now have constitute our completed DMSP/MFR data base. A document we are now working on will give you more information regarding the structure of the data base and how to access it.

Sincerely yours,

James S. Ellis
Atmospheric and Geophysical
Sciences Division

415-422-1808

JSE/pmd
Distribution
J. Lovill
F. Luther
T. Sullivan
R. Weichel

LIST OF REPLACEMENT TAPES*

V916

V917

V918

V919

V920

V921

V922

*The replacement tape labels are marked with a red dot.

REQ. AGENT	RAND #	ACQ. AGENT
DAD	V0221	YPS

DMSP 5D-1/F1,F2,F3,F4

MFR TOTAL OZONE GRID POINT DATA

76-091A-02B
77-044A-02B
78-042A-02B
79-050A-02B

ESAD-00097

THIS DATA SET CONSISTS OF TWO TAPES. THE D TAPES ARE 6250 BPI, C TAPES ARE 1600 BPI, 9-TRACK, MULTI-FILED AND WRITTEN IN ASCII. THE TAPES WERE CREATED ON AN VAX 11/780 COMPUTER. THE DOCUMENT NO. IS B35194-000A. THE D AND C NUMBERS ALONG WITH THE TIME SPANS FOLLOW:

D#	C#	# OF FILES	TIME SPAN
D-59931	C-23574	486	03/25/77 - 09/20/78
	C-23575	101	09/21/78 - 12/31/78
D-59932	C-23576	255	01/01/79 - 09/13/79
	C-23577	150	09/14/79 - 02/16/80

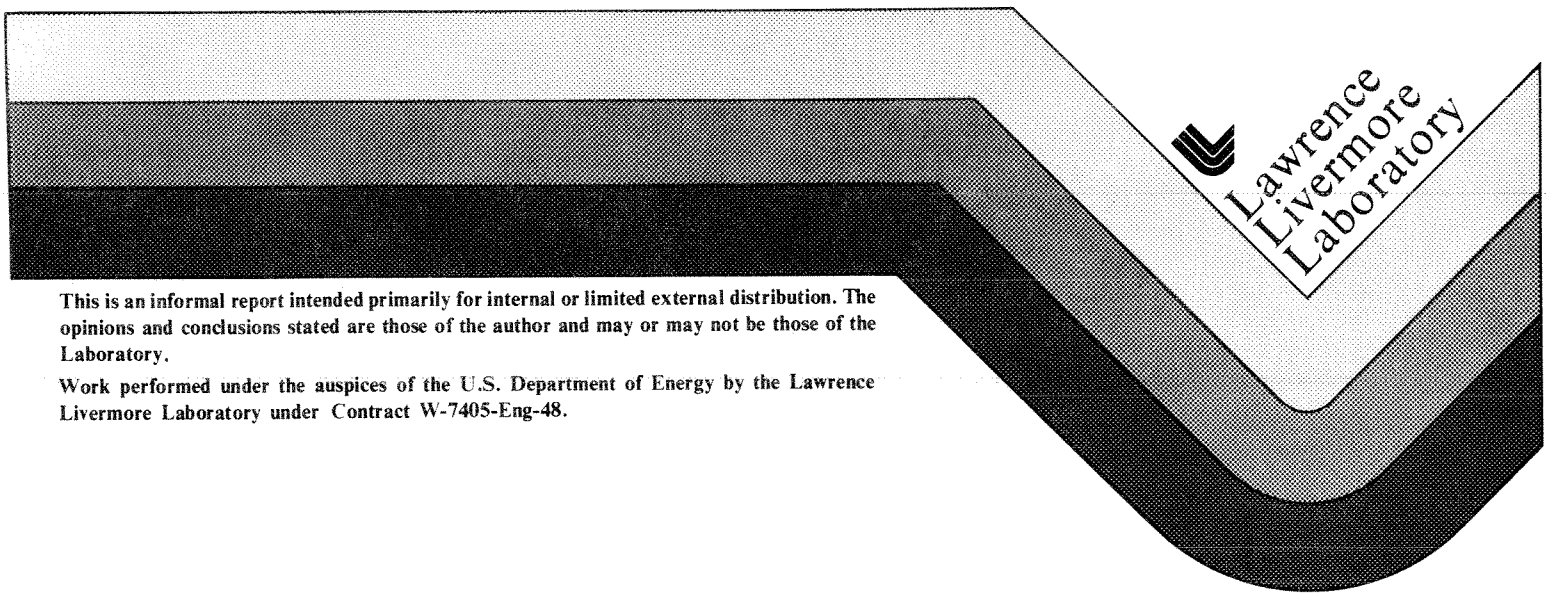
B35194-0004

UCID- 19866

THE MFR TOTAL OZONE GRID POINT DATA

James S. Ellis
James E. Lovill

August 1983



This is an informal report intended primarily for internal or limited external distribution. The opinions and conclusions stated are those of the author and may or may not be those of the Laboratory.

Work performed under the auspices of the U.S. Department of Energy by the Lawrence Livermore Laboratory under Contract W-7405-Eng-48.

THE MFR TOTAL OZONE GRID POINT DATA

James S. Ellis
James E. Lovill

Lawrence Livermore National Laboratory
Livermore, CA 94550

August 1983

Multichannel filter radiometers (MFR) on four satellites of the Defense Meteorological Satellite Program (DMSP) measured infrared radiances in 16 channels including the 9.6 μm ozone band. These radiance data were used for determining total column ozone (Luther et al., 1980). The quality of these data and their intercomparisons with other satellite ozone measurements have been discussed by Lovill et al. (1982) and Lovill and Ellis (1983).

A data base containing the calibrated radiance data and total ozone has been documented by Ellis et al. (1983). This data base is archived on 108 magnetic tapes of 6250 bpi density at the National Space Science Data Center (NSSDC), Goddard Space Flight Center, Greenbelt, Maryland. These tapes were written in a packed binary form and are compatible only with a VAX 11/780 series computer.

In order to make the total ozone data accessible to more users, we have archived the gridded ozone data on two 6250 bpi density tapes at NSSDC. These tapes were written as unlabeled tapes in blocks of 9380 ASCII characters with each block containing 20 records of 469 characters each (i.e., 469 8-bit bytes). An ozone grid point value is expressed to the nearest tenth of a m-atm-cm.

Each file on a tape represents the gridded data for one calendar day beginning at 0000Z Greenwich Mean Time (GMT). A file may contain as many as four grids, one for each of the satellites F1, F2, F3 and F4. The data available for gridding from each satellite have been discussed by Ellis et al. (1983).

The first tape, which can be identified by the name FGRID1, contains 228 files for the year 1977 followed by 359 files for the year 1978. The first and last files on the tape contain the gridded total ozone data for March 25, 1977 and December 31, 1978, respectively. The second tape, FGRID2, contains 364 files for 1979 followed by 41 files for 1980. The first and last files on the tape contain the gridded total ozone data for January 1, 1979 and February 16, 1980, respectively. A list of days for which there are no gridded total ozone data are shown in Table 1. Data were not gridded when there were less than 300 data points for that day and that satellite.

The grid in each hemisphere is a 67x67 rectangular matrix of points superposed on a polar stereographic map base. The grid spacing is the same as the NMC grid. The northern and southern hemisphere grids have been combined into one grid of 67 columns and 134 rows. The North Pole is located at grid point (34,34) and the South Pole at (34,101), where the first index represents a column and the second index a row in this convention. The orientation of the polar stereographic base maps of the northern and southern hemispheres relative to the grid is shown in Figure 1.

Figure 2 shows how to read and identify each grid. The first record of each file contains the date of the gridded data and the number of data points (the count) mapped into each grid for each of the satellites, F1, F2, F3 and F4. The date is expressed in Julian day and year in the form DDDYY, where DDD is 001 to 365 and YY is 78 to 80 inclusive (e.g., 10578 is April 15, 1978). There is one grid for each satellite, unless the count is zero, then there is no grid for that satellite in the file. This count is less than or equal to the count given for the ungridded data in Ellis et al. (1983) because ozone values exceeding a preselected range were not gridded.

A grid point value is the average value of all total ozone data points falling within that grid point area for one day beginning at 0000 GMT. Data points with total ozone values exceeding the range 200 to 650 m-atm-cm were not included in the grid point average. This range of values excluded an extremely small number of data points, which were considered to be erroneous values. Grid points that did not receive any data points for that day (empty grid points) were filled with an ozone value in order to fill out the grid. The filled grid point values are indicated by a minus sign preceding the grid point ozone value (e.g., -317.1).

Empty grid points were filled by averaging the grid point ozone values from the day before and the day after. If either one of these grid point values was empty, then the one that was not empty was used for filling. If both were empty, then the zonal mean value for that day at the latitude of the grid point was used for filling. In the event that none of the previous methods could satisfy the empty grid point, then a value was interpolated and placed into the empty grid point. This last condition occurred at the North Pole and mostly at one grid point in the F2 and F3 satellite grids because a sun shield on the spacecrafts blocked the MFR scan positions that normally would have seen the pole. Figures 2b and 2c in Ellis et al. (1983) show the extent of this problem in the north polar region.

Discontinuities near the boundaries between the actual and the filled grid point values were minimized by blending the actual gridded data into the region of the filled gridded data. Finally, the entire grid was smoothed by one pass of a 1-2-1 smoother in both the X and Y directions.

The grid point data can be transformed to latitude and longitude locations or to a latitude-longitude grid by using the algorithm shown in Figure 3 (after Jenne 1968).

ACKNOWLEDGMENTS

This work was supported in part by the High Altitude Pollution Program of the Department of Transportation, Federal Aviation Administration and by the National Aeronautics and Space Administration.

REFERENCES

Ellis, J. S., J. E. Lovill, F. M. Luther, T. J. Sullivan, S. S. Taylor, and R. L. Weichel, "The DMSP/MFR Total Ozone and Radiance Data Base", Lawrence Livermore National Laboratory, UCID-19690, 1983.

Jenne R., "Program NMCLAT", National Center for Atmospheric Research, Boulder, Colorado, 1968.

Lovill, J. E. J. S. Ellis, F. M. Luther, T. J. Sullivan, and R. L. Weichel, "Defense Meteorological Satellite Measurements of Total Ozone," Geophys. Res. Lett., 9, 105-108, 1982.

Lovill, J. E. and J. S. Ellis, "Correlative Studies of Satellite Ozone Sensor Measurements," Geophys. Res. Lett., 10, 447-450, 1983.

0014S

Table 1. Days Without Gridded Data

3/28/77	5/3/78
3/31/77-4/7/77	5/6/78
4/17/77	5/23/78
5/17/77-6/6/77	5/31/78
6/14/77	7/7/78
6/17/77	12/26/78
6/22/77	———
7/11/77-7/12/77	1/10/79
7/14/77	———
7/16/77-7/17/77	
7/19/77	1/15/80
7/24/77	1/16/80
8/4/77	1/19/80-1/21/80
8/7/77	2/3/80
8/17/77	
8/30/77-9/3/77	
9/18/77	
9/24/77	
10/6/77	
10/13/77	
10/27/77	

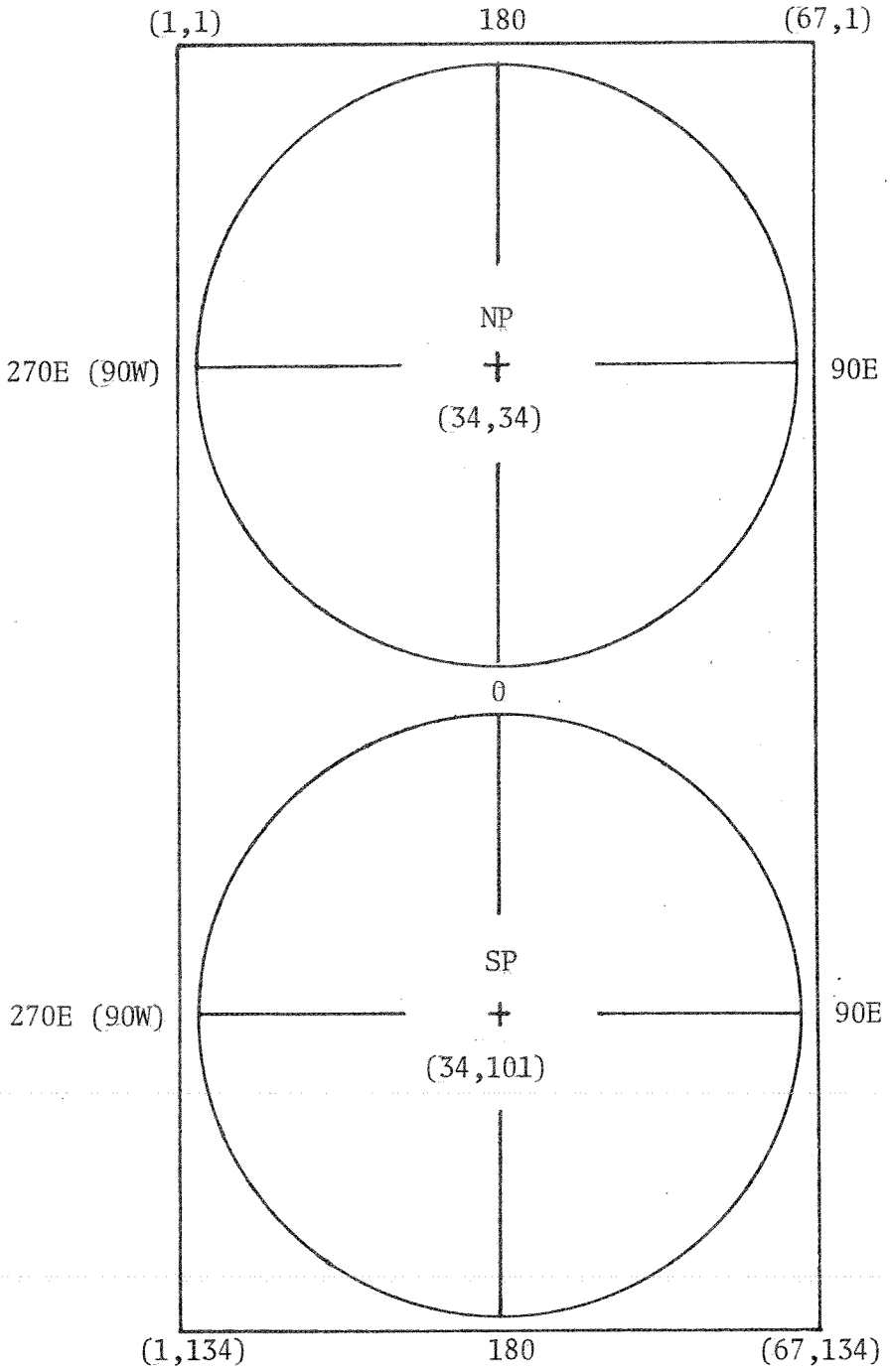


FIGURE 1. The MFR total ozone grid.

```
      INTEGER COUNT
      CHARACTER*5 DATE
      DIMENSION A(67,134,4), COUNT(4)
C
C       COUNT - THE NUMBER OF MAPPED OZONE VALUES FOR EACH SATELLITE
C       DATE  - THE JULIAN DAY AND YEAR OF THE SATELLITE DATA
C               (ie., 27878 IS JULIAN DAY 278 OF 1978, OR
C               OCTOBER 5, 1978)
C       K     - IDENTIFIES THE SATELLITE
C               K=1, IS SATELLITE F1
C               K=2, "      "      F2
C               K=3, "      "      F3
C               K=4, "      "      F4
C
      READ (ITAPE,1000) (COUNT(K),K=1,4),DATE
 1000 FORMAT(4I10,5X,A5)
C
      DO 200 K=1,4
      IF(COUNT(K) .EQ. 0) GO TO 200
      DO 100 J=1,134
  100 READ (ITAPE,2000) (A(I,J,K),I=1,67)
  200 CONTINUE
 2000 FORMAT(67F7.1)
```

FIGURE 2. Algorithm for reading a file from the MFR total ozone gridded data tapes.

```
      DIMENSION A(67,134)

      PI=3.141592654
      PI4=PI/4.
      DEGRAD=PI/180.
C
C       ITP SPECIFIES INTERPOLATING FUNCTION
      ITP=1
C
C       PHI IS LATITUDE IN DEGREES (+ NORTH, - SOUTH)
C       ELONG IS LONGITUDE EAST IN DEGREES (eg.,90W IS 270E)
C       AN EXAMPLE:
      PHI=45.
      ELONG=270.
C
      R=31.204359052*TAN(PI4-.5*DEGRAD*ABS(PHI))
      ELONG=ELONG*DEGRAD
C
C       XX AND YY ARE THE COORDINATES IN THE NMC POLAR GRID OF
C       THE LAT-LON VALUE.
C
      XX=R*SIN(ELONG)+34.
      YY=R*COS(ELONG)+34.
C       IS PHI IN THE SOUTHERN HEMISPHERE
      IF(PHI.LT.0.)YY=135.-YY
      M=XX
      N=YY
      DX=XX-M
      DY=YY-N
C
      IF(ITP.EQ.0) GO TO 10
C
C       DO 16 PT BESSEL INTERPOLATION SCHEME.
      DXX=.25*(DX-1.)
      DYY=.25*(DY-1.)
      AA=A(M,N-1)+DX*(A(M+1,N-1)-A(M,N-1)+DXX*(A(M+2,N-1)-
     1A(M+1,N-1)+A(M-1,N-1)-A(M,N-1)))
      AB=A(M,N)+DX*(A(M+1,N)-A(M,N)+DXX*(A(M+2,N)-A(M+1,N)+
     1A(M-1,N)-A(M,N)))
      AC=A(M,N+1)+DX*(A(M+1,N+1)-A(M,N+1)+DXX*(A(M+2,N+1)-
     1A(M+1,N+1)+A(M-1,N+1)-A(M,N+1)))
      AE=A(M,N+2)+DX*(A(M+1,N+2)-A(M,N+2)+DXX*(A(M+2,N+2)-
     1A(M+1,N+2)+A(M-1,N+2)-A(M,N+2)))
      AD=AB+DY*(AC-AB+DYY*(AE-AC+AA-AB))
      GO TO 100
C
C       DO 4 POINT DOUBLE LINEAR INTERPOLATION.
   10 CONTINUE
      AD=(1.-DY)*((1.-DX)*A(M,N)+DX*A(M+1,N))
     1         +DY*((1.-DX)*A(M,N+1)+DX*A(M+1,N+1))
C
  100 CONTINUE
C
C       "AD" IS THE TOTAL OZONE AT THE LATITUDE-LONGITUDE AS
C       SPECIFIED BY PHI AND ELONG.
```

FIGURE 3. Algorithm for interpolating the MFR total ozone gridded data to latitude and longitude locations (after Jenne 1968).

DISCLAIMER

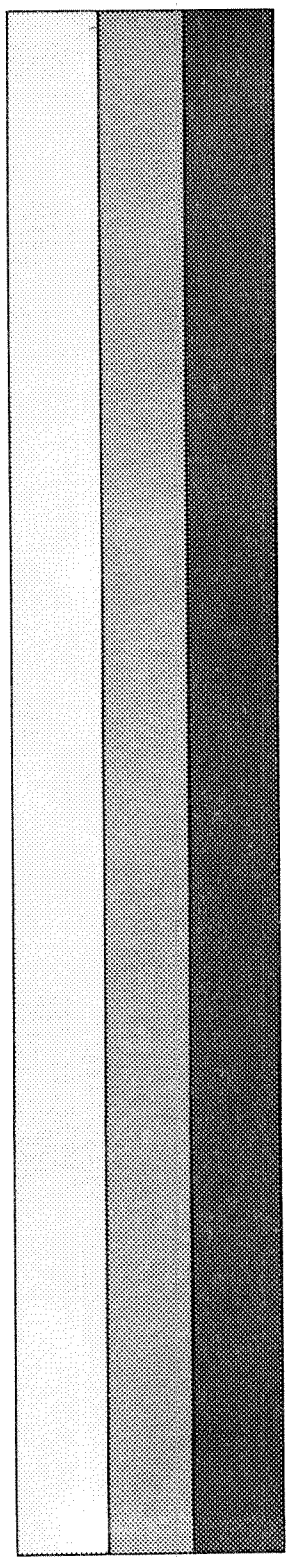
This document was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor the University of California nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or the University of California. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government thereof, and shall not be used for advertising or product endorsement purposes.

Printed in the United States of America
Available from
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
Price: Printed Copy $; Microfiche $4.50

Page Range	Domestic Price	Page Range	Domestic Price
001-025	$ 7.00	326-350	$ 26.50
026-050	8.50	351-375	28.00
051-075	10.00	376-400	29.50
076-100	11.50	401-426	31.00
101-125	13.00	427-450	32.50
126-150	14.50	451-475	34.00
151-175	16.00	476-500	35.50
176-200	17.50	501-525	37.00
201-225	19.00	526-550	38.50
226-250	20.50	551-575	40.00
251-275	22.00	576-600	41.50
276-300	23.50	601-up[1]	
301-325	25.00		

[1]Add 1.50 for each additional 25 page increment, or portion thereof from 601 pages up.

Technical Information Department · Lawrence Livermore Laboratory
University of California · Livermore, California 94550



N-54508
3/25/77 - 3/31/77

RECORD 1 OF FILE 2
LENGTH = 8192 BYTES

27084

00000000	00000000	00000000	5A373038	34202020	20202020	534F4143	5A373038	34045400	35002400	
01004800	3D033C03	00000002	02000300	00000800	03010100	02000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	424F5E20	
20202020	20202020	01000300	01010400	20202020	20202020	20202020	00000000	42495244	20202020	
20202020	04000100	01000000	20202020	20202020	20202020	00000000	4A444159	20202020	20202020	
05000300	01000000	20202020	20202020	20202020	00000000	54494D45	20202020	20202020	08000300	
01010000	20202020	20202020	20202020	00000000	4E44504F	53202020	20202020	08000100	01000000	
20202020	20202020	20202020	00000000	4C415420	20202020	20202020	00000200	01000000	20202020	
20202020	20202020	00000000	4C4F4E47	20202020	20202020	00000200	01000000	20202020	20202020	
20202020	00000000	4F5A4F4E	45202020	20202020	10000400	02000000	20202020	20202020	20202020	
00000000	4F524249	54202020	20202020	14000200	01000000	20202020	20202020	20202020	00000000	
434F3254	31202020	20202020	16000200	01000000	20202020	20202020	20202020	00000000	434F3254	
32202020	20202020	18000200	01000000	20202020	20202020	20202020	00000000	434F3254	32202020	
20202020	1A000200	01000000	20202020	20202020	20202020	00000000	57494E44	54202020	20202020	
1C000200	01000000	20202020	20202020	20202020	00000000	44543132	20202020	20202020	1E000200	
01000000	20202020	20202020	20202020	00000000	44543133	20202020	20202020	20000200	01000000	
20202020	20202020	20202020	00000000	42414E44	20202020	20202020	22000100	01000000	20202020	
20202020	20202020	00000000	42414F44	41202020	20202020	23000100	01000000	20202020	20202020	
20202020	00000000	414C5048	20202020	20202020	24000100	01000000	20202020	20202020	20202020	
00000000	53454320	20202020	20202020	25000200	01000000	20202020	20202020	20202020	00000000	
434F3252	31202020	20202020	27000200	01000000	20202020	20202020	20202020	00000000	434F3252	
32202020	20202020	29000200	01000000	20202020	20202020	20202020	00000000	434F3252	32202020	
20202020	2B000200	01000000	20202020	20202020	20202020	00000000	434F3252	34202020	20202020	
2D000200	01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	2F000200	
01000000	20202020	20202020	20202020	00000000	434F3252	36202020	20202020	31000200	01000000	
20202020	20202020	20202020	00000000	57494E44	31202020	20202020	33000200	01000000	20202020	
20202020	20202020	00000000	57494E44	20202020	20202020	35000200	01000000	20202020	20202020	
20202020	00000000	48324F52	31202020	20202020	37000200	01000000	20202020	20202020	20202020	
00000000	48324F52	32202020	20202020	39000200	01000000	20202020	20202020	20202020	00000000	
48324F52	33202020	20202020	3B000200	01000000	20202020	20202020	20202020	00000000	48324F52	
34202020	20202020	3D000200	01000000	20202020	20202020	20202020	00000000	48324F52	36202020	
20202020	3F000200	01000000	20202020	20202020	20202020	00000000	48324F52	37202020	20202020	
41000200	01000000	20202020	20202020	20202020	00000000	48324F52	38202020	20202020	43000200	
01000000	20202020	20202020	20202020	00000000	4F335220	20202020	20202020	45000200	01000000	
20202020	20202020	20202020	00000000	48324F35	20202020	20202020	47000200	01000000	20202020	
20202020	20202020	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
00000000	00000000	01000200	1A000000	00000002	00000D00	00000000	17000001	1C2D01F0	6D03FF49	
DD831592	441D11D7	0ABE08B0	C8E009FF	078700AD	FE01012C	AC482E13	4E127413	CD0E840E	07CBAD07	
8006EC15	69154E14	2513CB12	AF158C16	99050000	26000001	1C2D01B6	9C01FE1C	DD802490	44D46CCF	
0ADC08AE	08AC0804	08CA01E2	01C1012E	7A3F4B14	36128411	FD100F0F	D20CC907	8C072A16	AD15A514	
80132D13	DE154416	C9050CCC	2E000001	1C2D01AC	E301FE2E	0DA42E90	44187CCF	0ADA08AC	C8AFC8F1	
07C801AE	01010120	783F3B14	2912A411	F410F30E	7B0C5C07	5807ED15	5D152D14	1E13DF12	93157516	
AD050000	2F000C01	1C2D01C3	3603FF29	DDE52C90	4487BCD7	0AFC089E	08AE388A	088D030C	03C1012D	
AB489C15	9F11A611	8D115610	BCCD280B	640ACD16	9A16FA15	0615D014	0316E416	300E0CC0	4ACCCC01	
1C2D01F5	EF02FF32	DD56BA90	4483C1D3	0ADE08AB	08A90895	08FC0118	02010120	AA4E6414	1E126911	
1411A410	960F7708	5D089B17	C718E817	7E172C17	1E186917	AB060000	58000001	1C2D01AB	E301FF3A	
DD7BC890	443D74CF	0ADF08AE	C8AC08F5	07EE01FF	01010120	AD486E14	36123911	0A1151 0F	EACC7607	
69074216	D115AD14	A5131D13	0E160417	CE050000	71000001	1C2D01B5	9C01FF27	DDDBEC90	44DD74CF	
0AD708AF	08AC08F6	07890 1AE	01C1012E	AC481814	43128411	22116C0F	280D7B07	77C79016	0B162C15	
1F148313	1C16D316	DA050CCC	78C00001	1C2D01F6	EF02FE2D	DD22E790	44426DD3	0ACF08A7	0EA7C83E	
088A018A	01010120	793ECA13	E7115B11	23111E10	610E2309	1109AC17	EC17AF17	ED16A616	0618C617	
15060000	7F0C0001	1C2D01C4	3EC3FE1D	DD05FE90	44CB78D7	0ACA088E	08A90880	08550241	01C1C12E	
793F9A13	10117011	6A10F90F	1BCEE30A	A2092217	4C179716	C8156E15	5A172E17	06060000	85000001	
1C2D01F1	6D03FF3D	DDCDF390	445D22D7	0A1E09C0	08A503BF	04011126	7A3FEE16	E3125F11		
A110450E	310CF508	9508E916	AF16F415	E9146714	D616EC16	AE050000	EC030001	1C2D01AF	EF02FD8C	
CD010390	44831ED3	0AD008A5	C8A40813	08B501BB	01010126	1A39DA13	DF113E11	EA1076 0F	3BCD2008	
3608FD16	A516E716	1B15A614	B4164E17	A8050000	FD030001	1C2D01CC	E301FE6F	DD4C0490	44FA76CF	
0ADE08AA	08AC080F	080502EF	01C1012A	793F5E14	11128911	0111580F	1A0D3808	0108B616	58166A15	
60143314	3A16AB16	D4050CCC	EF030001	1C2D01A6	650101D5	DDCF0590	44CA22CD	0ADF08AE	C8AAC83A	
08E9010F	02010125	A9486914	36127611	1011AE0F	D50D0909	03099C16	8016F215	1515E514	8316A016	

Ascii Header

Binary Data

RECORD 1 OF FILE 14
LENGTH = 8192 BYTES

27089


```
00000000 00000000 00000000 5A373038 39202020 20202020 534F4143 5A373038 395A82C0 35CC2400
01004800 05050405 00000002 79007A00 00000600 03010100 02000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 424F5E20
20202020 20202020 01000300 01010400 20202020 20202020 20202020 00000000 42495244 20202020
20202020 04000100 01000000 20202020 20202020 20202020 00000000 4A444159 20202020 20202020
05000300 01000000 20202020 20202020 20202020 00000000 54494D45 20202020 20202020 08000300
01010000 20202020 20202020 20202020 00000000 4E44504F 53202020 20202020 08000100 01000000
20202020 20202020 20202020 00000000 4C415420 20202020 20202020 00000200 01000000 20202020
20202020 20202020 00000000 4C4F4E47 20202020 20202020 0E000200 01000000 20202020 20202020
20202020 00000000 4F5A4F4E 45202020 20202020 10000400 02000000 20202020 20202020 20202020
00000000 4F524249 54202020 20202020 14000200 01000000 20202020 20202020 20202020 00000000
434F3254 31202020 20202020 16000200 01000000 20202020 20202020 20202020 00000000 434F3254
32202020 20202020 18000200 01000000 20202020 20202020 20202020 00000000 434F3254 33202020
20202020 1A000200 01000000 20202020 20202020 20202020 00000000 57494E44 54202020 20202020
1C000200 01000000 20202020 20202020 20202020 00000000 44543132 20202020 20202020 1E000200
01000000 20202020 20202020 20202020 00000000 44543133 20202020 20202020 20000200 01000000
20202020 20202020 20202020 00000000 42414E44 20202020 20202020 22000100 01000000 20202020
20202020 20202020 00000000 42414E44 41202020 20202020 23000100 01000000 20202020 20202020
20202020 00000000 414C5048 20202020 20202020 24000100 01000000 20202020 20202020 20202020
00000000 53454320 20202020 20202020 25000200 01000000 20202020 20202020 20202020 00000000
434F3252 31202020 20202020 27000200 01000000 20202020 20202020 20202020 00000000 434F3252
32202020 20202020 29000200 01000000 20202020 20202020 20202020 00000000 434F3252 33202020
20202020 2B000200 01000000 20202020 20202020 20202020 00000000 434F3252 34202020 20202020
2D000200 01000000 20202020 20202020 20202020 00000000 434F3252 35202020 20202020 2F000200
01000000 20202020 20202020 20202020 00000000 434F3252 36202020 20202020 31000200 01000000
20202020 20202020 20202020 00000000 57494E44 31202020 20202020 33000200 01000000 20202020
20202020 20202020 00000000 57494E44 20202020 20202020 35000200 01000000 20202020 20202020
20202020 00000000 48324F52 31202020 20202020 37000200 01000000 20202020 20202020 20202020
00000000 48324F52 32202020 20202020 39000200 01000000 20202020 20202020 20202020 00000000
48324F52 33202020 20202020 3B000200 01000000 20202020 20202020 20202020 00000000 48324F52
34202020 20202020 3D000200 01000000 20202020 20202020 20202020 00000000 48324F52 36202020
20202020 3F000200 01000000 20202020 20202020 20202020 00000000 48324F52 37202020 20202020
41000200 01000000 20202020 20202020 20202020 00000000 48324F52 38202020 20202020 43000200
01000000 20202020 20202020 20202020 00000000 4F335220 20202020 20202020 45000200 01000000
20202020 20202020 20202020 00000000 48324F35 20202020 20202020 47000200 01000000 20202020
20202020 20202020 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 01000200 1A000000 00000002 00000D00 00000000 08000001 212D012F E9C1FE4D
DD27078F 44BE411C 0BAD087D C87D0863 08E001E0 0101012C 6D3F8E12 7E10E40F 62103010 FACE150A
0C0AF217 7D1E6218 F7178317 8B188E17 B9050000 09000001 212D01FD 2F02FE27 DD64078F 44E24617
0BB5087D 087C0887 0838024C 0201012E 6D3F0812 7610D90F 64106E10 8F0F110B 180B1618 9B18FE18
84185218 C218BF17 F9050000 0B000001 212D01B0 A500FF24 DD73098F 44843611 0BB1087E 087FC8C7
08FF01F6 0101012E 9848B012 8310F40F 1F108B10 4610F90C 0F0DCA17 AA18E918 F818A718 B7189A17
7D060000 0D000001 212D0144 2700FF39 DDAB0B8F 44B19410 0BB90882 088098CA 0823023C 0201012D
9A48F812 A910FB0F 10107610 2C100B0D 170D9017 5618B018 9A186018 36184917 95060000 23000001
212D018A 5E00FF3D DD46218F 440E9C10 0BB70881 087F08EF 08170232 0201012C 974EE712 A010F20F
2910E510 EF103C0E 460EF617 01193A19 6B191B19 9A188217 D7060000 28000001 212D01F4 2301FE41
DD81268F 44D15614 0BBC0880 C87E087C 085A0268 0201012C 6E3F1613 9210EE0F 0A101E10 17CFC50A
EB0A9017 43183818 DF178017 44182617 E2050000 2C000001 212D01EA 6A01FE22 DDE2298F 44E37C14
0BBA0881 0E7D08CE 083A025D 0201012E 6E3F0113 9A10E50F 5C10D010 8D102D0D 310DE317 E118C719
0619C718 8718A617 93060000 33000001 212D01E7 E801FE4F DD5E308F 44235D16 0BB50880 087DC89B
080A0230 0201012C 6F3FD212 9910E00F 4E105D10 B40FA40B 970EEE17 8718A618 60181A18 9418AF17
30060000 48000001 212D01BB 5E00FE3F DD20458F 4413B310 0BB40880 088208DA 080B02F8 0101012C
6E3FCD12 93100D10 6410F910 C4108F0D 880D0618 2B197319 65193A19 FC18C917 C2060000 4B000001
212D01B1 A500FE21 DD0FBC8F 441E8711 0BB40880 087E08CF 08040219 0201012E 6E3FCA12 9610ED0F
8710DB10 8210350D 320D1F18 FE183019 0A19DA18 D0186A17 9A060000 53000001 212D017F EC00FE2C
DD3FC38F 44529612 0BB2087F C87E08E5 0803020C 0201012D 6F3FBC12 8A10EC0F 82103C11 2B11EA0D
060E7718 7819BD19 C0196719 6419F717 DB060000 63000001 212D01FC 2F02FF28 DDA4D28F 44759C17
0BB80880 087D08F7 082E024C 0201012E 9648F212 9710E60F 1A10F410 0911820E 8A0EA017 BC180C19
46191519 9D181A17 08070000 73000001 212D0145 2700FE31 DDFAE28F 44E3C010 0BB90880 08800802
0939023C 0201012D 6F3FFB12 9610FB0F 68106711 9611DE0E C70E3918 9119131A 461A3A1A 2C19EF17
```

Hexdump of DS005054 (which is D54508 - D54513) 3/25/77 - 5/17/77

084 = Jul. Date = 3/25

HEX DUMP OF LR1003

FILE 2 RECORD 1 8192 BYTES

(0)	00000000	00000000	00000000	5A373038	34202020	20202020	534F4143	5A373038	34045400	35002400
(40)	01004800	3D033C03	00000002	02000300	00000800	03010100	02000000	00000000	00000000	00000000
(80)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	424F5820
(120)	20202020	20202020	01000300	01010400	20202020	20202020	20202020	00000000	42495244	20202020
(160)	20202020	04000100	01000000	20202020	20202020	20202020	00000000	4A444159	20202020	20202020
(200)	05000300	01000000	20202020	20202020	20202020	00000000	54494D45	20202020	20202020	08000300
(240)	01010000	20202020	20202020	20202020	00000000	4E44504F	53202020	20202020	0B000100	01000000
(280)	20202020	20202020	20202020	00000000	4C415420	20202020	20202020	0C000200	01000000	20202020
(320)	20202020	20202020	00000000	4C4F4E47	20202020	20202020	0E000200	01000000	20202020	20202020
(360)	20202020	00000000	4F5A4F4E	45202020	20202020	10000400	02000000	20202020	20202020	20202020
(400)	00000000	4F524249	54202020	20202020	14000200	01000000	20202020	20202020	20202020	00000000
(440)	434F3254	31202020	20202020	16000200	01000000	20202020	20202020	20202020	00000000	434F3254
(480)	32202020	20202020	18000200	01000000	20202020	20202020	20202020	00000000	434F3254	33202020
(520)	20202020	1A000200	01000000	20202020	20202020	20202020	00000000	57494E44	54202020	20202020
(560)	1C000200	01000000	20202020	20202020	20202020	00000000	44543132	20202020	20202020	1E000200
(600)	01000000	20202020	20202020	20202020	00000000	44543133	20202020	20202020	20000200	01000000
(640)	20202020	20202020	20202020	00000000	42414E44	20202020	20202020	22000100	01000000	20202020
(680)	20202020	20202020	00000000	42414E44	41202020	20202020	23000100	01000000	20202020	20202020
(720)	20202020	00000000	414C5048	20202020	20202020	24000100	01000000	20202020	20202020	20202020
(760)	00000000	53454320	20202020	20202020	25000200	01000000	20202020	20202020	20202020	00000000
(800)	434F3252	31202020	20202020	27000200	01000000	20202020	20202020	20202020	00000000	434F3252
(840)	32202020	20202020	29000200	01000000	20202020	20202020	20202020	00000000	434F3252	33202020
(880)	20202020	2B000200	01000000	20202020	20202020	20202020	00000000	434F3252	34202020	20202020
(920)	2D000200	01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	2F000200
(960)	01000000	20202020	20202020	20202020	00000000	434F3252	36202020	20202020	31000200	01000000
(1000)	20202020	20202020	20202020	00000000	57494E44	31202020	20202020	33000200	01000000	20202020
(1040)	20202020	20202020	00000000	57494E44	20202020	20202020	35000200	01000000	20202020	20202020
(1080)	20202020	00000000	48324F52	31202020	20202020	37000200	01000000	20202020	20202020	20202020
(1120)	00000000	48324F52	32202020	20202020	39000200	01000000	20202020	20202020	20202020	00000000
(1160)	48324F52	33202020	20202020	3B000200	01000000	20202020	20202020	20202020	00000000	48324F52
(1200)	34202020	20202020	3D000200	01000000	20202020	20202020	20202020	00000000	48324F52	36202020
(1240)	20202020	3F000200	01000000	20202020	20202020	20202020	00000000	48324F52	37202020	20202020
(1280)	41000200	01000000	20202020	20202020	20202020	00000000	48324F52	38202020	20202020	43000200
(1320)	01000000	20202020	20202020	20202020	00000000	4F335220	20202020	20202020	45000200	01000000
(1360)	20202020	20202020	20202020	00000000	48324F35	20202020	20202020	47000200	01000000	20202020
(1400)	20202020	20202020	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2040)	00000000	00000000	01000200	1A000000	00000002	00000D00	00000000	17000001	1C2D01F0	6D03FF49
(2080)	DDB31592	441D11D7	0ABE08B0	08E008FF	078700AD	FE01012C	AC482B13	4E127413	CD0E840E	070BAD07
(2120)	8006EC15	69154E14	2513CB12	AF158C16	99050000	26000001	1C2D01B6	9C01FE1C	DD802490	44D46CCF
(2160)	0ADC08AE	08AC0804	08CA01E2	0101012E	7A3F4B14	36128411	FD100F0F	D20CC907	BC072A16	AD15A514

ASCII HEADER

BINARY DATA

(6520)	F1050000	1E040001	4A2D01D6	AD01FC3B	DEB73392	44B9385B	0D4208EC	07F40786	0860030A	03010120
(6560)	5F34D90E	E80BA40B	E10C540D	490D090B	0D0BE015	32162216	E8156016	5D16DB15	84050000	23040001
(6600)	4A2D01D5	AD01FDF4	DD893891	44BE875B	0D4508EC	07F1073F	08760345	03010123	0439F30E	EE0B8F0B
(6640)	030CF60B	910B2C09	39095E14	1D14EC13	87131614	7F14EA13	BF040000	24040001	4A2D0129	E501FEF7
(6680)	DDBE3992	4432EF5B	0D4708ED	07F00772	08860366	03010123	573F030F	F10B850B	770CD10C	BE0C7D0A
(6720)	9F0AC615	FC15BC15	5115A915	32165D15	66050000	25040001	4A2D013F	5B00FEF7	DDD63A90	448AC855
(6760)	0D4C08F4	07FC075A	0871031D	03010123	5A3F2C0F	240CDD0B	110E600E	E20DDB09	DE095417	17174E16
(6800)	4B152215	16174D17	99040000	25040001	4A2D01F6	2B02FF33	DE693A92	444AED5C	0D5308F3	07F1077F
(6840)	08BF03D3	03010120	70486A0F	210C8F0B	590CFD0C	080DDC0A	EC0AC015	4D167D16	3A16A416	91165C15
(6880)	60050000	29040001	4A2D0116	2C02FF80	DDE83E92	4411725C	0D5408F1	07F00770	08DE03E7	03010129
(6920)	7248730F	120C890B	340C940C	750C710A	720A0815	4D153815	F6146415	9515EF14	26050000	2C040001
(6960)	4A2D01D4	AD01FEBA	DDA54192	441B205B	0D4808ED	07F00753	088C0376	03010126	583F0D0F	F50B820B
(7000)	2F0C470C	0A0CAE09	C4090615	BA146B14	F6137C14	0615D714	FA040000	2D040001	4A2D0168	5B00FD2F
(7040)	DE424291	44DB0F55	0D4C08F3	070308E0	087A03DD	02010120	05392C0F	1E0C0D0C	AC0E1C10	A610BF0D
(7080)	CB0D9418	3719F718	AC188D18	F4186818	DF050000	30040001	4A2D0128	E501FFFA	DD194592	444DFE5B
(7120)	0D4A08F3	07F10771	0866037C	03010123	70481D0F	1E0C8C0B	700CC30C	C70C750A	7C0AA415	D215BC15
(7160)	6315BE15	0E161615	49050000	36040001	4A2D01AE	3803FF93	DDF1BE92	44851F63	0D5908F2	07F407CB
(7200)	080104EC	03010128	7848980F	190CA50B	990DE70E	750F140D	150D0318	E4181019	EA18CB18	F8184017
(7240)	C5050000	38040001	4A2D0120	5B00FDB0	DDB2C091	446D5355	0D4708ED	07F60754	0884032A	03010127
(7280)	0539030F	F20BB10B	860C820C	350CB309	CB09F514	AD143614	AF134514	FF14F514	D0040000	3B040001
(7320)	4A2D0121	5B00FC0E	DE7AC392	44A5B955	0D5008F2	07FC079F	08AA034E	03010122	5F344F0F	190CD90B
(7360)	380DD80D	E50DC30B	C10B8916	2A174217	16178F17	27171116	CF050000	3B040001	4A2D01D3	AD01FFBC
(7400)	DD95C392	4444B95B	0D5108EF	07F00778	08D603D2	03010126	71485A0F	020C820B	BC0C460D	400DAA0A
(7440)	A50A9916	7617AF17	6A17D217	8F170A16	49050000	3B040001	4A2D01CE	3803FF47	DE70C392	442B7163
(7480)	0D6408F5	0700083E	095704EB	0301011F	7A48FC0F	2F0CFA0B	040E4110	CC11F810	DE104218	DA19971A
(7520)	321B641B	7A198417	E6060000	43040001	4A2D01B9	F102FFCE	DD35CB92	44DBF35F	0D5C08F6	07FA07C3
(7560)	08F703CF	03010125	7648B10F	350CCF0B	390D320E	A70ED90C	C60CB316	4A177517	4117B117	5C172216
(7600)	DE050000	44040001	4A2D01CF	3803FE4E	DE3ECC91	44A67B63	0D5B08F4	07060850	09060452	0301011F
(7640)	5D3FAF0F	290C2A0C	820EFD10	9B12A611	AE11D918	A11A3A1B	BF1BB71B	191A7118	07070000	47040001
(7680)	4A2D01A3	AA02FF58	DDBACE93	4434315E	0D5C08F3	07F4079E	0816040B	0401012B	7548B20F	200CA40B
(7720)	D80C890D	BD0DBA0B	B50B3916	EE16FD16	DB163517	F616D015	A9050000	48040001	4A2D01AF	3803FE9B
(7760)	DD64D091	44C39B63	0D6208F2	07FA07F4	085B040E	04010128	5C3FE50F	190CCD0B	000E880F	6610660E
(7800)	5D0E8E17	7C18AD18	D318CB18	3518E216	25060000	4A040001	4A2D01D9	5A00FC0A	DEC6D192	442D1255
(7840)	0D4A08EE	07F50732	0893034F	03010122	5F341B0F	FC0BAA0B	D70BAA0B	4E0BDC08	EE08B214	1515A714
(7880)	4114DB14	3215B714	D2040000	4D040001	4A2D01D8	5A00FDB0	DD49D592	4486F555	0D5908EE	07F80787
(7920)	082A04CB	03010127	04399B0F	FC0BBF0B	DA0C5F0D	5D0D0F0B	070B5716	C016D016	A116FB16	DF16D315
(7960)	9A050000	4E040001	4A2D01EB	AA02FF07	DE71D692	44BC2F5E	0D5C08F6	07FD0704	09FF03B9	03010122
(8000)	7748B40F	320CE10B	AA0D400F	4C10F40E	B70E0017	26187518	8A18AC18	F1179416	44060000	00000000
(8040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(8080)	00000000	00000000	C8011200	B6011200	A4011200	92011200	80011200	6E011200	5C011200	4A011200
(8120)	38011200	26011200	14011200	02011200	F0001200	DE001200	CC001200	BA001200	A8001200	96001200
(8160)	84001200	72001200	60001200	4E001200	3C001200	2A001200	18001200	06001200		

HEX DUMP OF LR1003

137 = JUL. DATE = 5/17/77

FILE 131 RECORD 1 8192 BYTES (2 7/1/3 7)

(0)	00000000	00000000	00000000	5AB7B133	37202020	20202020	534F4143	5A373133	37DF0000	35002400
(40)	01004800	0A000900	00000002	74007500	00000900	03010100	02000000	00000000	00000000	00000000

HEXDUMP OF DS 005195 (which is D54521 → D54527) 7/29/77 → 10/5/77

HEX DUMP OF LR1020

210 = Jul Day = 7/29

FILE 2 RECORD 1 8192 BYTES 7/29/77

(0)	00000000	00000000	00000000	5A373231	30202020	20202020	534F4143	5A373231	30FD5C00	35002400
(40)	01004800	95039403	00000002	6C006D00	00000700	03010100	02000000	00000000	00000000	00000000
(80)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	424F5820
(120)	20202020	20202020	01000300	01010400	20202020	20202020	20202020	00000000	42495244	20202020
(160)	20202020	04000100	01000000	20202020	20202020	20202020	00000000	4A444159	20202020	20202020
(200)	05000300	01000000	20202020	20202020	20202020	00000000	54494D45	20202020	20202020	08000300
(240)	01010000	20202020	20202020	20202020	00000000	4E44504F	53202020	20202020	0B000100	01000000
(280)	20202020	20202020	20202020	00000000	4C415420	20202020	20202020	0C000200	01000000	20202020
(320)	20202020	20202020	00000000	4C4F4E47	20202020	20202020	0E000200	01000000	20202020	20202020
(360)	20202020	00000000	4F5A4F4E	45202020	20202020	10000400	02000000	20202020	20202020	20202020
(400)	00000000	4F524249	54202020	20202020	14000200	01000000	20202020	20202020	20202020	00000000
(440)	434F3254	31202020	20202020	16000200	01000000	20202020	20202020	20202020	00000000	434F3254
(480)	32202020	20202020	18000200	01000000	20202020	20202020	20202020	00000000	434F3254	33202020
(520)	20202020	1A000200	01000000	20202020	20202020	20202020	00000000	57494E44	54202020	20202020
(560)	1C000200	01000000	20202020	20202020	20202020	00000000	44543132	20202020	20202020	1E000200
(600)	01000000	20202020	20202020	20202020	00000000	44543133	20202020	20202020	20000200	01000000
(640)	20202020	20202020	20202020	00000000	42414E44	20202020	20202020	22000100	01000000	20202020
(680)	20202020	20202020	00000000	42414E44	41202020	20202020	23000100	01000000	20202020	20202020
(720)	20202020	00000000	414C5048	20202020	20202020	24000100	01000000	20202020	20202020	20202020
(760)	00000000	53454320	20202020	20202020	25000200	01000000	20202020	20202020	20202020	00000000
(800)	434F3252	31202020	20202020	27000200	01000000	20202020	20202020	20202020	00000000	434F3252
(840)	32202020	20202020	29000200	01000000	20202020	20202020	20202020	00000000	434F3252	33202020
(880)	20202020	2B000200	01000000	20202020	20202020	20202020	00000000	434F3252	34202020	20202020
(920)	2D000200	01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	2F000200
(960)	01000000	20202020	20202020	20202020	00000000	434F3252	36202020	20202020	31000200	01000000
(1000)	20202020	20202020	20202020	00000000	57494E44	31202020	20202020	33000200	01000000	20202020
(1040)	20202020	20202020	00000000	57494E44	20202020	20202020	35000200	01000000	20202020	20202020
(1080)	20202020	00000000	48324F52	31202020	20202020	37000200	01000000	20202020	20202020	20202020
(1120)	00000000	48324F52	32202020	20202020	39000200	01000000	20202020	20202020	20202020	00000000
(1160)	48324F52	33202020	20202020	3B000200	01000000	20202020	20202020	20202020	00000000	48324F52
(1200)	34202020	20202020	3D000200	01000000	20202020	20202020	20202020	00000000	48324F52	36202020
(1240)	20202020	3F000200	01000000	20202020	20202020	20202020	00000000	48324F52	37202020	20202020
(1280)	41000200	01000000	20202020	20202020	20202020	00000000	48324F52	38202020	20202020	43000200
(1320)	01000000	20202020	20202020	20202020	00000000	4F335220	20202020	20202020	45000200	01000000
(1360)	20202020	20202020	20202020	00000000	48324F35	20202020	20202020	47000200	01000000	20202020
(1400)	20202020	20202020	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2040)	00000000	00000000	01000200	1A000000	00000002	00000D00	00000000	02000002	9A2D01D2	D401FE28
(2080)	DDB8008B	449AAB03	03030875	077C0707	08840541	0501012E	F63FE50C	D4088A08	130A400A	270AE007
(2120)	D5071415	C8145314	8C130D14	3E15EA14	F2031811	0A000002	9A2D0100	0C02FE3A	DDAD088B	44676B04
(2160)	03050876	077307E5	079A05AF	0501012D	F73FF80C	D6085808	56094209	07092407	2B071613	5C120512

ASCII HEADER

BINARY DATA

(7000)	DA0BE70C	760DC50A	D40AB916	7216F915	09151715	C116E616	31041D14	2E040002	9A2D01A6	4601FFBC
(7040)	DD31438E	44E93F01	03060876	078B0740	08A205D1	04010126	8749020D	D808E508	D60B620C	690C3809
(7080)	33095C16	4216D315	23151715	84166416	CD03E912	33040002	9A2D013B	C800FEE0	DD21BC8F	44A91A01
(7120)	03060879	07970768	08810555	04010124	FA3F010D	EC083109	3A0CDA0C	480D440A	310A9A16	A2164316
(7160)	AE15AE15	BA16A916	1B04F213	35040002	9A2D0190	FF00FF29	DE07BE8E	4425B101	030C087B	079307BE
(7200)	08AA05BF	04010121	89492E0D	F6081409	1E0CA00D	CB0EB60C	AF0C4A17	BE17A317	2B171017	FB17E216
(7240)	C6044616	3B040002	9A2D01B0	FF00FF7B	DD93C38E	44608701	030F087A	07920742	08CF05E0	04010129
(7280)	8649440D	F1081009	DA0B680C	6B0C4909	45093D16	F2159715	CE14D114	43162B16	CC03F012	3E040002
(7320)	9A2D015D	5302FFCF	DD90C68E	44D23805	030E087C	078B079C	08B4051E	05010125	7E493C0D	FB08E508
(7360)	2C0CC80D	9E0EB40B	B70B9317	1018E517	5A174717	FE177317	8704B415	41040002	9A2D013A	C800FFE5
(7400)	DD53C98E	44F96401	030E087D	07930787	08AB05C8	04010124	89493B0D	00091809	FD0B3C0D	CF0D180B
(7440)	140B0417	3E171917	7A167816	72173B17	5A040215	42040002	9A2D0147	0C02FF67	DDB5CA8E	44E63D04
(7480)	03140879	0787072E	080C0684	0501012A	81496B0D	EB08CB08	000CC60C	C50CCC08	CC088D16	28169415
(7520)	CD14D814	4B16C416	AA039F12	4A040002	9A2D0167	0C02FF13	DE0ED28E	443F8204	0318087F	0790077E
(7560)	08FA054F	05010122	7D498D0D	11090709	330CA50D	390EDD0A	DB0A7C17	EA17DD17	6D173B17	F9176617
(7600)	40045D15	4D040002	9A2D015E	5302FED6	DD97D48E	44CA8605	030A087D	078F077A	088405D0	04010125
(7640)	F43F1F0D	0209FD08	840CA50D	320EC30A	BF0AF516	5C171017	83167D16	62172A17	5504A514	51040002
(7680)	9A2D01F1	D401FFA6	DDDCD88E	44AE7703	0311087D	078C0773	08CE0539	05010127	8049560D	0009E908
(7720)	310C7C0D	000E900A	960A2617	49171B17	68165316	72171D17	26046B14	55040002	9A2D0168	0C02FE1A
(7760)	DE01DD8E	4421C404	030D087C	079207B3	08AB05D2	04010121	F33F360D	FC080F09	BF0CAE0E	A00F630C
(7800)	610C2C18	D918E018	8B184B18	F818D417	CE04F416	55040002	9A2D015F	5302FD19	DEE7DC8E	447F8105
(7840)	0306087C	0793079D	08690582	04010121	6539020D	FB081609	580C930D	5F0EBB0B	B70BAE16	2C171717
(7880)	B116E616	37179816	C2049F15	5C040002	9A2D0148	0C02FE6E	DD9EE38D	44C4D404	03050877	07840731
(7920)	088C0509	0501012A	F53FF70C	DD08BA08	BD0A270B	550BDA08	DA086C14	D1136013	AE124513	69145614
(7960)	D8037C11	5D040002	9A2D0124	8E01FFEF	DD02E58E	442A3B02	030F087E	07890798	08AF053E	05010124
(8000)	7F49480D	0809DA08	5C0C1D0E	F50E990B	9E0BFA17	6A185518	E717C617	7018D017	7D04F315	00000000
(8040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(8080)	00000000	00000000	C8011200	B6011200	A4011200	92011200	80011200	6E011200	5C011200	4A011200
(8120)	38011200	26011200	14011200	02011200	F0001200	DE001200	CC001200	BA001200	A8001200	96001200
(8160)	84001200	72001200	60001200	4E001200	3C001200	2A001200	18001200	06001200		

HEX DUMP OF LR1020

FILE 23 RECORD 1 8192 BYTES

2/8 = Jul Day = 8/6

(0)	00000000	00000000	00000000	5A373231	38202020	20202020	534F4143	5A373231	385B5500	35002400
(40)	01004800	4A034903	00000002	6A006B00	00000400	03010100	02000000	00000000	00000000	00000000
(80)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	424F5820
(120)	20202020	20202020	01000300	01010400	20202020	20202020	20202020	00000000	42495244	20202020
(160)	20202020	04000100	01000000	20202020	20202020	20202020	00000000	4A444159	20202020	20202020
(200)	05000300	01000000	20202020	20202020	20202020	00000000	54494D45	20202020	20202020	08000300
(240)	01010000	20202020	20202020	20202020	00000000	4E44504F	53202020	20202020	0B000100	01000000
(280)	20202020	20202020	20202020	00000000	4C415420	20202020	20202020	0C000200	01000000	20202020
(320)	20202020	20202020	00000000	4C4F4E47	20202020	20202020	0E000200	01000000	20202020	20202020
(360)	20202020	00000000	4F5A4F4E	45202020	20202020	10000400	02000000	20202020	20202020	20202020
(400)	00000000	4F524249	54202020	20202020	14000200	01000000	20202020	20202020	20202020	00000000
(440)	434F3254	31202020	20202020	16000200	01000000	20202020	20202020	20202020	00000000	434F3254
(480)	32202020	20202020	18000200	01000000	20202020	20202020	20202020	00000000	434F3254	33202020
(520)	20202020	1A000200	01000000	20202020	20202020	20202020	00000000	57494E44	54202020	20202020

FILE 176 RECORD 1 8192 BYTES

7/2/7/8

(0)	00000000	00000000	00000000	5A373237	38202020	20202020	534F4143	5A373237	38056200	35002400
(40)	01004800	C703C603	00000002	60006100	00000B00	03010100	02000000	00000000	00000000	00000000
(80)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	424F5820
(120)	20202020	20202020	01000300	01010400	20202020	20202020	20202020	00000000	42495244	20202020
(160)	20202020	04000100	01000000	20202020	20202020	20202020	00000000	4A444159	20202020	20202020
(200)	05000300	01000000	20202020	20202020	20202020	00000000	54494D45	20202020	20202020	08000300
(240)	01010000	20202020	20202020	20202020	00000000	4E44504F	53202020	20202020	0B000100	01000000
(280)	20202020	20202020	20202020	00000000	4C415420	20202020	20202020	0C000200	01000000	20202020
(320)	20202020	20202020	00000000	4C4F4E47	20202020	20202020	0E000200	01000000	20202020	20202020
(360)	20202020	00000000	4F5A4F4E	45202020	20202020	10000400	02000000	20202020	20202020	20202020
(400)	00000000	4F524249	54202020	20202020	14000200	01000000	20202020	20202020	20202020	00000000
(440)	434F3254	31202020	20202020	16000200	01000000	20202020	20202020	20202020	00000000	434F3254
(480)	32202020	20202020	18000200	01000000	20202020	20202020	20202020	00000000	434F3254	33202020
(520)	20202020	1A000200	01000000	20202020	20202020	20202020	00000000	57494E44	54202020	20202020
(560)	1C000200	01000000	20202020	20202020	20202020	00000000	44543132	20202020	20202020	1E000200
(600)	01000000	20202020	20202020	20202020	00000000	44543133	20202020	20202020	20000200	01000000
(640)	20202020	20202020	20202020	00000000	42414E44	20202020	20202020	22000100	01000000	20202020
(680)	20202020	20202020	00000000	42414E44	41202020	20202020	23000100	01000000	20202020	20202020
(720)	20202020	00000000	414C5048	20202020	20202020	24000100	01000000	20202020	20202020	20202020
(760)	00000000	53454320	20202020	20202020	25000200	01000000	20202020	20202020	20202020	00000000
(800)	434F3252	31202020	20202020	27000200	01000000	20202020	20202020	20202020	00000000	434F3252
(840)	32202020	20202020	29000200	01000000	20202020	20202020	20202020	00000000	434F3252	33202020
(880)	20202020	2B000200	01000000	20202020	20202020	20202020	00000000	434F3252	34202020	20202020
(920)	2D000200	01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	2F000200
(960)	01000000	20202020	20202020	20202020	00000000	434F3252	36202020	20202020	31000200	01000000
(1000)	20202020	20202020	20202020	00000000	57494E44	31202020	20202020	33000200	01000000	20202020
(1040)	20202020	20202020	00000000	57494E44	20202020	20202020	35000200	01000000	20202020	20202020
(1080)	20202020	00000000	48324F52	31202020	20202020	37000200	01000000	20202020	20202020	20202020
(1120)	00000000	48324F52	32202020	20202020	39000200	01000000	20202020	20202020	20202020	00000000
(1160)	48324F52	33202020	20202020	3B000200	01000000	20202020	20202020	20202020	00000000	48324F52
(1200)	34202020	20202020	3D000200	01000000	20202020	20202020	20202020	00000000	48324F52	36202020
(1240)	20202020	3F000200	01000000	20202020	20202020	20202020	00000000	48324F52	37202020	20202020
(1280)	41000200	01000000	20202020	20202020	20202020	00000000	48324F52	38202020	20202020	43000200
(1320)	01000000	20202020	20202020	20202020	00000000	4F335220	20202020	20202020	45000200	01000000
(1360)	20202020	20202020	20202020	00000000	48324F35	20202020	20202020	47000200	01000000	20202020
(1400)	20202020	20202020	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2040)	00000000	00000000	01000200	1A000000	00000002	00000D00	00000000	0F000002	DE2D01B1	A7000115
(2080)	DD5A0D8C	445D1EC2	06240961	08150881	08A20798	0A01012E	13483617	880F960C	2C0C480D	070DF00A
(2120)	F60AA015	DF15BA15	5C15A115	FB154315	1706BD14	26000002	DE2D010E	EB010149	DDE0238F	44AF22C7
(2160)	06310968	081E0893	08DC07BE	0A01012C	1148C017	C60FDD0C	A60CEA0D	D80D750B	750BF115	42162316
(2200)	D615FA15	3E169E15	11066815	31000002	DE2D01B9	B30101FD	DC4D2F8E	44101FC6	062F0964	081A0899
(2240)	08EB07D0	0A010130	1248A417	A30FBA0C	950CD30D	E00DA20B	A40BDC15	10160B16	CB15F015	29167C15
(2280)	1C067515	44000002	DE2D01D5	2501012A	DDE0418D	4417C4C4	062E0964	08180882	08E807DE	0A01012D
(2320)	1148A317	A40FAF0C	720C7D0D	520DF90A	040B7215	E5158C15	46157F15	E1156015	F305A614	51000002
(2360)	DE2D0124	320201DE	DC90C18E	4487A5C8	06350960	081A089B	08480806	0B010131	1448E417	860FBE0C
(2400)	850CD10D	E30DAD0B	A90B9C15	23162016	F3151216	22160115	0F069F15	55000002	DE2D017F	EE0001E4

ASCII HEADER

BINARY DATA

D-54564
9/27/78 - 10/6/78

RECORD 1 OF FILE 2
LENGTH = 8192 BYTES

2827

00000000	00000000	00000000	5A383237	30202020	20202020	534F4143	5A383237	307E4F01	35002400
01004800	F90CF80C	00000002	2D002F00	00000400	03010100	02000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	424F5820
20202020	20202020	01000300	01010400	20202020	20202020	20202020	00000000	42495244	20202020
20202020	04000100	01000000	20202020	20202020	20202020	00000000	4A444159	20202020	20202020
05000300	01000000	20202020	20202020	20202020	00000000	54494D45	20202020	20202020	08000300
01010000	20202020	20202020	20202020	00000000	4F44504F	53202020	20202020	0B000100	01000000
20202020	20202020	20202020	00000000	4C415420	20202020	20202020	0C000200	01000000	20202020
20202020	20202020	00000000	4C4F4F47	20202020	20202020	0E000200	01000000	20202020	20202020
20202020	00000000	4F5A4F4E	45202020	20202020	10000400	02000000	20202020	20202020	20202020
00000000	4F524249	54202020	20202020	14000200	01000000	20202020	20202020	20202020	00000000
434F3254	31202020	20202020	16000200	01000000	20202020	20202020	20202020	00000000	434F3254
32202020	20202020	18000200	01000000	20202020	20202020	20202020	00000000	434F3254	33202020
20202020	1A000200	01000000	20202020	20202020	20202020	00000000	57494E44	54202020	20202020
1C000200	01000000	20202020	20202020	20202020	00000000	44543132	20202020	20202020	1E000200
01000000	20202020	20202020	20202020	00000000	44543133	20202020	20202020	20000200	01000000
20202020	20202020	20202020	00000000	42414E44	20202020	20202020	22000100	01000000	20202020
20202020	20202020	00000000	42414E44	41202020	20202020	23000100	01000000	20202020	20202020
20202020	00000000	414C5048	20202020	20202020	24000100	01000000	20202020	20202020	20202020
00000000	53454320	20202020	20202020	25000200	01000000	20202020	20202020	20202020	00000000
434F3252	31202020	20202020	27000200	01000000	20202020	20202020	20202020	00000000	434F3252
32202020	20202020	29000200	01000000	20202020	20202020	20202020	00000000	434F3252	33202020
20202020	2B000200	01000000	20202020	20202020	20202020	00000000	434F3252	34202020	20202020
2D000200	01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	2F000200
01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	31000200	01000000
20202020	20202020	20202020	00000000	57494E44	31202020	20202020	33000200	01000000	20202020
20202020	20202020	00000000	57494E44	20202020	20202020	35000200	01000000	20202020	20202020
20202020	00000000	48324F52	31202020	20202020	37000200	01000000	20202020	20202020	20202020
00000000	48324F52	32202020	20202020	39000200	01000000	20202020	20202020	20202020	00000000
48324F52	33202020	20202020	3B000200	01000000	20202020	20202020	20202020	00000000	48324F52
34202020	20202020	3D000200	01000000	20202020	20202020	20202020	00000000	48324F52	36202020
20202020	3F000200	01000000	20202020	20202020	20202020	00000000	48324F52	37202020	20202020
41000200	01000000	20202020	20202020	20202020	00000000	48324F52	38202020	20202020	43000200
01000000	20202020	20202020	20202020	00000000	4F335220	20202020	20202020	45000200	01000000
20202020	20202020	20202020	00000000	48324F35	20202020	20202020	47000200	01000000	20202020
20202020	20202020	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	01000200	1A000000	00000002	00000D00	00000000	01000003	BE3101CC	6D010238
DD3C008E	44C16947	080A0931	08ED0798	087A0822	0B01012D	713F1D16	FC0D6E0B	A70CE20D	0D0F990B
980BD616	5A173C17	0D170817	86173F16	E505F815	08000003	BE3101FD	2601023C	DDBB098E	4449F246
080A092E	08ED0774	08970827	0B01012D	703F2316	EA0D6F0B	590C420D	320D990A	9A0A3516	7D165816
EB150216	9E16D715	8D05B114	0C000003	BE3101A3	3E03012C	DD600A8E	443A424E	0822093E	08F70729
08E508AF	0B01012D	9C481817	680EB60B	4C0CDE0C	1C0CAD08	A508A216	F8168316	B315AF15	F0167116
1805DD12	13000003	BE3101A7	EF000245	DDD7118E	44ED1246	0807092B	08EC0773	08930809	0B01012C
703FFE15	D00D6A0B	2E0CFA0C	F20C8C0A	970AF515	73162916	DC150016	7E16C615	9B059B14	1C000003
BE3101DA	A8000253	DDE9198D	44EC3544	0806092B	08EE074D	088F08F2	0A01012B	703FF415	CC0D740B
AC0B320C	D60B9109	94095915	9B153315	C0140615	C5155915	6D058C13	1D000002	BE3101ED	54020141
DDA01B8B	44C7558B	1A130938	08F1074C	08890858	0B01012C	0D488016	3A0E890B	E20BC70C	580C8709
80099E16	EB160B17	9A169916	35172216	8D058314	1D000002	BE3101ED	54020141	DDA01B8B	44C75588
1A130938	08F1074C	08890858	0B01012C	0D488016	3A0E890B	E20BC70C	580C8709	80099E16	EB160B17
9A169916	35172216	8D058314	26000003	BE31017F	C0020127	DD0D248D	4413554E	081A093A	08F10731
08BF0896	0B01012E	9C48C216	450E8D0B	4A0CF80C	3D0CE008	E5080F17	A9175A17	AA16B716	B717BC16
2A059413	28000002	BE3101F6	0D020107	DDDD258C	447B018A	1A180938	08F0075C	08BE0896	0B01012F
0C48B816	3A0E820B	E80BE30C	AB0CF309	F009F116	0E175417	CD16CA16	55172816	9605F014	28000002
BE3101F6	0D020107	DDDD258C	447B018A	1A180938	08F0075C	08BE0896	0B01012F	0C48B816	3A0E820B
E80BE30C	AB0CF309	F009F116	0E175417	CD16CA16	55172816	9505F014	30000002	BE310188	05000141
DDBD2D8C	44F4D382	1A0E0935	08F50775	087608FB	0A01012C	0C484B16	200EA70B	E60B000D	CF0C9A0A
A50AB915	F515DD15	7C15C015	45165F15	C205DE14	3C000002	BE3101B4	8F010136	DD62398A	44412A88
1A0F0937	08ED0762	08730850	0B01012D	0E485716	2B0E720B	B40BAF0C	820C1B0A	150A9C16	1A174F17
FF161C17	3C170416	C9054015	3E000003	BE310187	EF000254	DDC23B89	44B09E46	0805092D	08EB0791
08680802	0B01012B	703FE815	E20D610B	220C460D	780D650B	570BD316	BB17DA17	D617F417	AA17FD15

RECORD 1 OF FILE 29
LENGTH = 8192 BYTES

2827 9

00000000	00000000	00000000	5A383237	39202020	20202020	534F4143	5A383237	39800801	35002400
01004800	2E0A2D0A	00000002	2D002F00	00000100	03010100	02000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	424F5820
20202020	20202020	01000300	01010400	20202020	20202020	20202020	00000000	42495244	20202020
20202020	04000100	01000000	20202020	20202020	20202020	00000000	4A444159	20202020	20202020
05000300	01000000	20202020	20202020	20202020	00000000	54494D45	20202020	20202020	08000300
01010000	20202020	20202020	20202020	00000000	4E44504F	53202020	20202020	08000100	01000000
20202020	20202020	20202020	00000000	4C415420	20202020	20202020	0C000200	01000000	20202020
20202020	20202020	00000000	4C4F4F47	20202020	20202020	0E000200	01000000	20202020	20202020
20202020	00000000	4F5A4F4E	45202020	20202020	10000400	02000000	20202020	20202020	20202020
00000000	4F524249	54202020	20202020	14000200	01000000	20202020	20202020	20202020	00000000
434F3254	31202020	20202020	16000200	01000000	20202020	20202020	20202020	00000000	434F3254
32202020	20202020	18000200	01000000	20202020	20202020	20202020	00000000	434F3254	33202020
20202020	1A000200	01000000	20202020	20202020	20202020	00000000	57494E44	54202020	20202020
1C000200	01000000	20202020	20202020	20202020	00000000	44543132	20202020	20202020	1E000200
01000000	20202020	20202020	20202020	00000000	44543133	20202020	20202020	20000200	01000000
20202020	20202020	20202020	00000000	42414E44	20202020	20202020	22000100	01000000	20202020
20202020	20202020	00000000	42414E44	41202020	20202020	23000100	01000000	20202020	20202020
20202020	00000000	414C5048	20202020	20202020	24000100	01000000	20202020	20202020	20202020
00000000	53454320	20202020	20202020	25000200	01000000	20202020	20202020	20202020	00000000
434F3252	31202020	20202020	27000200	01000000	20202020	20202020	20202020	00000000	434F3252
32202020	20202020	29000200	01000000	20202020	20202020	20202020	00000000	434F3252	33202020
20202020	2B000200	01000000	20202020	20202020	20202020	00000000	434F3252	34202020	20202020
2D000200	01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	2F000200
01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	31000200	01000000
20202020	20202020	20202020	00000000	57494E44	31202020	20202020	33000200	01000000	20202020
20202020	20202020	00000000	57494E44	20202020	20202020	35000200	01000000	20202020	20202020
20202020	00000000	48324F52	31202020	20202020	37000200	01000000	20202020	20202020	20202020
00000000	48324F52	32202020	20202020	39000200	01000000	20202020	20202020	20202020	00000000
48324F52	33202020	20202020	3B000200	01000000	20202020	20202020	20202020	00000000	48324F52
34202020	20202020	3D000200	01000000	20202020	20202020	20202020	00000000	48324F52	36202020
20202020	3F000200	01000000	20202020	20202020	20202020	00000000	48324F52	37202020	20202020
41000200	01000000	20202020	20202020	20202020	00000000	48324F52	38202020	20202020	43000200
01000000	20202020	20202020	20202020	00000000	4F335220	20202020	20202020	45000200	01000000
20202020	20202020	20202020	00000000	48324F35	20202020	20202020	47000200	01000000	20202020
20202020	20202020	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	01000200	1A000000	00000002	00000D00	00000000	02000003	C7310160	0602021D
DD5D0192	4455D4C9	08510982	0833086C	088A08CD	0B01012E	783FCD19	AA10810D	D20DA90E	E50D5C0A
5D0ACC16	51170A17	99168916	2B17B216	0F06D714	03000002	C731011B	F502012A	DDA80193	44CD0C0F
1B590984	08360851	08510861	0B01012D	E9477919	BF10970D	840D580E	890DA709	AB098716	9F166416
CF15BF15	CC161B16	DC05D413	09000003	C731016A	BF010213	DDAC0792	4462FFC8	08600984	0835086A
089F08B3	0B01012E	783FC419	BA108E0D	E30D9F0F	E70D500A	470AAB16	2A17FF16	96166516	1B179A16
1606D514	0A000003	C7310186	3500013D	DD120991	448168C2	086B098C	0835087F	08B60815	0C01012C
A948361A	0011910D	3D0D260E	C50DE10A	CD0A2E16	63162416	BC15D315	7016D515	6106C614	0D000003
C731013D	8801021B	DD690B93	4437A1C7	08650986	0836086E	08B008CE	0B01012E	793FF219	D0109A0D
DE0D940E	E30D6A0A	7A0A9916	2717FD16	6F165316	0F179615	1D06EB14	15000003	C7310146	4101021D
DD041493	4499C4C6	08620988	08380855	088808A7	0B01012E	783FD619	DD10A40D	CE0D550E	6D0DC709
D9099C16	F2169316	04160316	C7167516	ED051F14	1A000003	C731018A	90030150	DDD11895	4433B3CF
08680991	0842083E	08580880	0B01012C	AA481B1A	3111F60D	95DD060E	F60C3109	27090916	5016CC15
00151815	52166B16	C1053213	1C000003	C7310178	FA000220	DD311A93	440478C6	08650988	0834084F
08A208EA	0B01012E	783FF919	E210890D	D60D3B0E	340D9F09	97096C16	B5164C16	CB15B615	BC165516
CF05FA13	21000002	C73101E1	2F020126	DD5E1F93	449AF10A	135B098B	083C0862	08210838	0B01012E
EA478D19	FB10C60D	7F0D6F0E	B20D1B0A	1E0A5116	86168216	F515CF15	C9161016	0C064314	23000003
C7310182	B3000225	DDA82193	44DA8FC4	0861098A	0836085A	086308AB	0B01012E	783FC819	E410980D
D70D5F0E	6E0DE409	E2096116	A4166216	EA15B215	CF161816	EF054A14	25000002	C7310113	E90101E7
DCDA2294	44823B09	1B65098C	083C0859	087E0899	0B010131	E947FD19	0111C80D	8A0D7F0E	A90DE009
DA098716	C016B316	23160816	0E172416	F4056D14	2A000003	C7310154	7C00022B	DD522892	4417CCC3
08620986	08330866	089A08D2	0B01012D	783FD619	CD10830D	BE0D670E	AC0D390A	3C0A6016	AD165216
C915C715	B5161816	0B068F14	2D000002	C731014A	2700011A	DD532B92	44006B02	1B69098A	0838088A
08BC08EF	0B01012E	EA472C1A	EE10A50D	480D6B0E	F80D3403	32030B16	4816FE15	8A15A315	7D16CE15

D-54579

2/19/79 - 2/27/79

RECORD 1 OF FILE 2
LENGTH = 8192 BYTES

Z905 0

```
00000000 00000000 C0CC0000 5A393035 30202020 20202020 534F4143 5A393035 308D5B01 35002400
01004800 600D5F0D 00000002 09000A00 00000300 03010100 02000000 00000000 00000000 00000000
00000000 00000000 00C00000 00C00000 00000000 00000000 00000000 00000000 00000000 424F5820
20202020 20202020 01C003C0 01010400 20202020 20202020 20202020 00000000 42495244 20202020
20202020 04000100 01000000 20202020 20202020 20202020 00000000 4A444159 20202020 20202020
05000300 01000000 20202020 20202020 20202020 00000000 54494D45 20202020 20202020 08000300
01010000 20202020 20202020 20202020 00000000 4E44504F 53202020 20202020 0B000100 01000000
20202020 20202020 20202020 00000000 4C415420 20202020 20202020 0C000200 01000000 20202020
20202020 20202020 00000000 4C4F4E47 20202020 20202020 0E000200 01000000 20202020 20202020
20202020 00000000 4F5A4F4E 45202020 20202020 10000400 02000000 20202020 20202020 20202020
00000000 4F524249 54202020 20202020 14000200 01000000 20202020 20202020 20202020 00000000
434F3254 31202020 20202020 16000200 01000000 20202020 20202020 20202020 00000000 434F3254
33202020 20202020 18000200 01000000 20202020 20202020 20202020 00000000 434F3254 33202020
20202020 1A000200 01000000 20202020 20202020 20202020 00000000 57494E44 54202020 20202020
1C000200 01000000 20202020 20202020 20202020 00000000 44543132 20202020 20202020 1E000200
01000000 20202020 20202020 20202020 00000000 44543133 20202020 20202020 20000200 01000000
20202020 20202020 20202020 00000000 42414E44 20202020 20202020 22000100 01000000 20202020
20202020 20202020 00000000 42414E44 41202020 20202020 23000100 01000000 20202020 20202020
20202020 00000000 414C5048 20202020 20202020 24000100 01000000 20202020 20202020 20202020
00000000 53454320 20202020 20202020 25000200 01000000 20202020 20202020 20202020 00000000
434F3252 31202020 20202020 27000200 01000000 20202020 20202020 20202020 00000000 434F3252
32202020 20202020 29000200 01000000 20202020 20202020 00000000 434F3252 33202020 20202020
20202020 28000200 01000000 20202020 20202020 20202020 00000000 434F3252 34202020 20202020
2D000200 01000000 20202020 20202020 20202020 00000000 434F3252 35202020 20202020 2F000200
01000000 20202020 20202020 20202020 00000000 434F3252 36202020 20202020 31000200 01000000
20202020 20202020 20202020 00000000 57494E44 31202020 20202020 33000200 01000000 20202020
20202020 20202020 00000000 57494E44 20202020 20202020 35000200 01000000 20202020 20202020
20202020 00000000 48324F52 31202020 20202020 37000200 01000000 20202020 20202020 20202020
00000000 48324F52 32202020 20202020 39000200 01000000 20202020 20202020 20202020 00000000
48324F52 33202020 20202020 3B000200 01000000 20202020 20202020 20202020 00000000 48324F52
34202020 20202020 3D000200 01000000 20202020 20202020 20202020 00000000 48324F52 36202020
20202020 3F000200 01000000 20202020 20202020 20202020 00000000 48324F52 37202020 20202020
41000200 01000000 20202020 20202020 20202020 00000000 48324F52 38202020 20202020 43000200
01000000 20202020 20202020 20202020 00000000 4F335220 20202020 20202020 45000200 01000000
20202020 20202020 20202020 00000000 48324F35 20202020 20202020 47000200 01000000 20202020
20202020 20202020 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 01000200 1A000000 00000002 00000D00 00000000 02000003 CA3401E6 3D03014F
DD89008A 44666658 1095093C 092409C5 08780360 0401012C AD48211C 02172316 53146E13 A711F20C
070DEA18 B319DD19 94194C19 7419A018 D908FA17 05000003 CA340128 32020230 DD4E048C 4466E654
109A093A 092309C6 C8BF03A5 0401012D 7B3F541C B7171616 4B145D13 8B11F60C FA0CBF18 D619C819
A4195019 73198018 BA0E2318 0F000003 CA340132 EB01022D DDEE0D8B 4433F353 10980939 092109C4
08B203A8 0401012D 7A3F421C B6170416 42144813 7E11E80C F00CD018 AE19C019 8D193619 5419BE18
C0081618 15000002 CA34014F CC000121 DDBC138A 4466668C 22A0093D 092109C0 08DB03F5 0401012E
ED47A61C E0170716 3D147113 AF11C80C BD0CD318 8819D919 87193B19 79199718 BF081318 17000003
CA3401EA BF020149 DD91158A 44000058 1097093B 09230986 089C0386 0401012C AD483A1C C6171F16
3A142C13 45117906 780CD418 9F19AF19 7F192C19 8E194818 BFC8A617 18000003 CA340104 B401022A
DD5F168C 44CD4C52 1095093A 092209BF 08940383 0401012D 7E3F221C B9170E16 38143613 6511C30C
CA0CD918 AE19AB19 70192C19 9319BE18 B408EF17 1E000002 CA34017A 56020137 DD5E1C8A 44008092
2296093D 09230987 0877037C 0401012D EC47281C D9171716 56146713 8011820C 860CBC18 7019AE19
63192019 7D197C18 B308B617 21000003 CA3401 0E 6D010228 DD3B1F8B 4466E651 1094093A 092109BE
08800380 0401012E 7A3F141C C1170416 3D142B13 5311890C C40CE518 C619D519 92194B19 7019BA18
B308E917 27000002 CA3401E4 0F0201FD DCB1248B 44666691 2297093C 09250984 088A0372 04010130
ED47391C D4173016 54146013 94116E0C 6E0CD918 8319AA19 60190D19 80198E18 AB08AC17 2A000003
CA340140 26010225 DD2628BB 449AD950 10950936 0920098A 08790380 0401012E 7B3F1A1C CE17FD15
37142513 4D119E0C 9F0CC718 C719D119 A0194B19 7419D218 A7C8D417 2E000003 CA340127 3202013F
DDAD2B8A 44666654 1097093E 092409A5 08800383 0401012C AD483A1C E4172316 3D140D13 EA10F80B
F80B7218 77196119 0D19DD18 06194818 95082417 33000003 CA340112 EF000223 DDA7308C 44004050
1095093C 09200988 087DC390 0401012E 7B3F211C D017FF15 3F142913 47118F0C 8E0CC318 AC19A019
6B192D19 69193718 9B08AC17 34000002 CA340115 07000114 DDE4318A 4400C089 2296093D 092409AF
087A0375 0401012F EC472D1C DA172216 47145213 6611450C 4F0CD118 8319AF19 67190C19 68196418
```

RECORD 1 OF FILE 29
LENGTH = 8192 BYTES

29059

00000000	00000000	00000000	5A393035	39202020	20202020	534F4143	5A393035	39B40601	35002400
01004800	1C0A1B0A	00000002	0B000C00	00000200	03010100	02000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	424F5820
20202020	20202020	01000300	01010400	20202020	20202020	20202020	00000000	42495244	20202020
20202020	04000100	01000000	20202020	20202020	20202020	00000000	4A444159	20202020	20202020
05000300	01000000	20202020	20202020	20202020	00000000	54494D45	20202020	20202020	08000300
01010000	20202020	20202020	20202020	00000000	4E44504F	53202020	20202020	0B000100	01000000
20202020	20202020	20202020	00000000	4C415420	20202020	20202020	0C000200	01000000	20202020
20202020	20202020	00000000	4C4F4E47	20202020	20202020	0E000200	01000000	20202020	20202020
20202020	00000000	4F5A4F4E	45202020	20202020	10000400	02000000	20202020	20202020	20202020
00000000	4F524249	54202020	20202020	14000200	01000000	20202020	20202020	20202020	00000000
434F3254	31202020	20202020	16000200	01000000	20202020	20202020	20202020	00000000	434F3254
32202020	20202020	18000200	01000000	20202020	20202020	20202020	00000000	434F3254	33202020
20202020	1A000200	01000000	20202020	20202020	20202020	00000000	57494E44	54202020	20202020
1C000200	01000000	20202020	20202020	20202020	00000000	44543132	20202020	20202020	1E000200
01000000	20202020	20202020	20202020	00000000	44543133	20202020	20202020	20000200	01000000
20202020	20202020	20202020	00000000	42414E44	20202020	20202020	22000100	01000000	20202020
20202020	20202020	00000000	42414E44	41202020	20202020	23000100	01000000	20202020	20202020
20202020	00000000	414C5048	20202020	20202020	24000100	01000000	20202020	20202020	20202020
00000000	53454320	20202020	20202020	25000200	01000000	20202020	20202020	20202020	00000000
434F3252	31202020	20202020	27000200	01000000	20202020	20202020	20202020	00000000	434F3252
32202020	20202020	29000200	01000000	20202020	20202020	20202020	00000000	434F3252	33202020
20202020	2B000200	01000000	20202020	20202020	20202020	00000000	434F3252	34202020	20202020
2D000200	01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	2F000200
01000000	20202020	20202020	20202020	00000000	434F3252	36202020	20202020	31000200	01000000
20202020	20202020	20202020	00000000	57494E44	31202020	20202020	33000200	01000000	20202020
20202020	20202020	00000000	57494E44	20202020	20202020	35000200	01000000	20202020	20202020
20202020	00000000	48324F52	31202020	20202020	37000200	01000000	20202020	20202020	20202020
00000000	48324F52	32202020	20202020	39000200	01000000	20202020	20202020	20202020	00000000
48324F52	33202020	20202020	3B000200	01000000	20202020	20202020	20202020	00000000	48324F52
34202020	20202020	3D000200	01000000	20202020	20202020	20202020	00000000	48324F52	36202020
20202020	3F000200	01000000	20202020	20202020	20202020	00000000	48324F52	37202020	20202020
41000200	01000000	20202020	20202020	20202020	00000000	48324F52	38202020	20202020	43000200
01000000	20202020	20202020	20202020	00000000	4F335220	20202020	20202020	45000200	01000000
20202020	20202020	20202020	00000000	48324F35	20202020	20202020	47000200	01000000	20202020
20202020	20202020	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	01000200	1A000000	00000002	00000D00	00000000	06000003	D3340155	4B02023C
DDC8048C	44CD8CD4	10630912	090409A2	082003B1	0301012D	7A3FDB19	1A16DB14	ED13CC12	E910E40B
E90B1519	AF196919	0819C318	6F191F19	08082017	0F000003	D3340187	04020239	DDF30D8C	4466E6D3
10690916	090609A4	083A03DF	0301012D	7A3F201A	3E16EB14	EA13C612	DF10F10B	F20BF518	95195C19
F418AF18	59190919	09080A17	19000003	D33401B9	BD010237	DD76178D	443333D2	106A0918	090709A5
082E03D8	0301012D	7A3F2A1A	5516FB14	E513C512	CB10F70B	F60BE518	AB198019	1019D618	5519C918
0D081E17	1D000002	D334016B	77020104	DD971B8B	44666612	23E50916	09030994	081E03DB	0301012F
1948FF19	3916CD14	DD13F212	0C11790B	890B2219	A619AD19	3419B318	C4193A19	ED07DE16	22000002
D334015C	5F000107	DDFD1F8B	4466A60A	23640916	0904099F	081103C2	0301012F	1748F219	3A16DB14
A113DD12	1E11CF0B	D30BF418	CA19EC19	85191F19	D0198118	08085017	23000003	D33401C3	76010235
DDD6208C	449AD9D1	1067091A	09060999	080303D2	0301012D	7A3F121A	6B16EB14	E0139F12	A610A10B
A40BDE18	B8198119	1819C418	7019F918	F507BD16	29000003	D3340154	4B02014A	DD96268B	449A59D4
10690915	09060972	084803E1	0301012C	AB48231A	3716EF14	C4136912	0310880A	860AE618	4919D118
1F18E517	3E199019	C6079815	2B000003	D3340196	3F01022E	DD0F298C	44CDCCD0	10670919	09050990
080803CC	0301012D	7A3F091A	5E16E914	C7139212	78105F0B	600B0819	D7197B19	0F19C418	88199818
E207A016	2D000002	D3340106	28000140	DDD02A8B	449AD909	23ED0917	0905097E	0854030F	0401012C
1848521A	4C16E314	A5138312	7F10DA0A	D30ACA18	51196F19	DC185618	8819B018	C2075816	30000002
D3340187	E901014D	DDD92D8C	44333310	236C0919	0907098B	083C03EF	0301012C	1648491A	5E16FC14
DF13C512	BA10370B	330B2619	84196B19	C1184E18	AE194719	E1077716	33000003	D3340186	04020148
DDBD308B	4433F3D3	10660916	09060994	082403C1	0301012C	AC48061A	3E16F214	E313BA12	B110780B
860B4319	C5198C19	F4189018	89194119	F1079E15	34000003	D33401A0	F800022C	DDF4318D	446626D0
106A0918	090409A0	082E03F9	0301012D	7A3F291A	5416D914	CD13B712	DC10D80B	D10B1319	171A101A
A2194219	DE19E218	EA072B17	3E000003	D33401D2	B100022A	DD743B8C	440080CE	10650915	09000997
081E03E9	0301012D	7A3FF219	3216B714	B913AE12	B510900B	890B5819	3A1A311A	E0195C19	2F1A3719

U-34615

2/9/80 - 2/16/80

RECORD 1 OF FILE 2
LENGTH = 8192 BYTES

7004 D

00000000	00000000	00000000	5A303034	30202020	20202020	534F4143	5A303034	30C5AD00	35002400
01004800	B006AF06	00000002	08000900	00000A00	03010100	02000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	424F5820
20202020	20202020	01000300	01010400	20202020	20202020	20202020	00000000	42495244	20202020
20202020	04000100	01000000	20202020	20202020	20202020	00000000	4A444159	20202020	20202020
05000300	01000000	20202020	20202020	20202020	00000000	54494D45	20202020	20202020	08000300
01010000	20202020	20202020	20202020	00000000	4E44504F	53202020	20202020	0B000100	01000000
20202020	20202020	20202020	00000000	4C415420	20202020	20202020	0C000200	01000000	20202020
20202020	20202020	00000000	4C4F4E47	20202020	20202020	0E000200	01000000	20202020	20202020
20202020	00000000	4F5A4F4E	45202020	20202020	10000400	02000000	20202020	20202020	20202020
00000000	4F524249	54202020	20202020	14000200	01000000	20202020	20202020	20202020	00000000
434F3254	31202020	20202020	16000200	01000000	20202020	20202020	20202020	00000000	434F3254
32202020	20202020	18000200	01000000	20202020	20202020	20202020	00000000	434F3254	33202020
20202020	1A000200	01000000	20202020	20202020	20202020	00000000	57494E44	54202020	20202020
1C000200	01000000	20202020	20202020	20202020	00000000	44543132	20202020	20202020	1E000200
01000000	20202020	20202020	20202020	00000000	44543133	20202020	20202020	20000200	01000000
20202020	20202020	20202020	00000000	42414E44	20202020	20202020	22000100	01000000	20202020
20202020	20202020	00000000	42414E44	41202020	20202020	23000100	01000000	20202020	20202020
20202020	00000000	414C5048	20202020	20202020	24000100	01000000	20202020	20202020	20202020
00000000	53454320	20202020	20202020	25000200	01000000	20202020	20202020	20202020	00000000
434F3252	31202020	20202020	27000200	01000000	20202020	20202020	20202020	00000000	434F3252
32202020	20202020	29000200	01000000	20202020	20202020	20202020	00000000	434F3252	33202020
20202020	2B000200	01000000	20202020	20202020	20202020	00000000	434F3252	34202020	20202020
2D000200	01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	2F000200
01000000	20202020	20202020	20202020	00000000	434F3252	36202020	20202020	31000200	01000000
20202020	20202020	20202020	00000000	57494E44	31202020	20202020	33000200	01000000	20202020
20202020	20202020	00000000	57494E44	20202020	20202020	35000200	01000000	20202020	20202020
20202020	00000000	48324F52	31202020	20202020	37000200	01000000	20202020	20202020	20202020
00000000	48324F52	32202020	20202020	39000200	01000000	20202020	20202020	20202020	00000000
48324F52	33202020	20202020	3B000200	01000000	20202020	20202020	20202020	00000000	48324F52
34202020	20202020	3D000200	01000000	20202020	20202020	20202020	00000000	48324F52	36202020
20202020	3F000200	01000000	20202020	20202020	20202020	00000000	48324F52	37202020	20202020
41000200	01000000	20202020	20202020	20202020	00000000	48324F52	38202020	20202020	43000200
01000000	20202020	20202020	20202020	00000000	4F335220	20202020	20202020	45000200	01000000
20202020	20202020	20202020	00000000	48324F35	20202020	20202020	47000200	01000000	20202020
20202020	20202020	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	01000200	1A000000	00000002	00000D00	00000000	03000002	A83801 0B	4E01014E
DDE20190	44623F37	36C00961	09430913	098A03E3	0401012C	2848241E	62196C17	7A153515	EC13830F
840F8119	041BCD1B	271CB11B	A71AEA18	010A3F1B	1D000002	A83801C0	A0020121	DDEF1A90	44F39C3C
36C0095D	09430920	09DC03DE	0401012E	2B481F1E	38196D17	7D152B15	08146A10	6B106A19	E61A881B
C11B581B	681A1419	3B0A8E1B	1E000002	A83801D1	88000102	DD9C1C8F	441D6134	36BB095F	094209F9
089A03BB	0401012F	2C48E71D	4D196217	5F15D014	32139D0E	A60E4819	701A061B	1918BF1A	0F1A2419
CB0914 1A	29000002	A83801CA	590201FD	DC5C278F	4477843B	36BF095D	09430903	09D103D9	04010130
2B48161E	3C196A17	6815B114	5013F20E	F50E0C19	471A9C1A	C21A631A	E1197018	E70958 1A	28000002
A838017B	51000126	DDC22890	44227433	36B8095F	09440918	097A0384	0401012E	2C48C41D	52197E17
6E151E15	C913800F	B50FED18	751AE71A	0518931A	161AA518	160A761A	36000002	A83801AD	0A00014A
DD7B3391	44A9C032	36C4095F	0946092D	09F003E2	0401012C	2B484F1E	4D199417	7F152B15	11146910
77101A19	731AC21A	FA1AA81A	FD19FB18	3C0A0C1B	44000002	A8380188	94010149	DDDA4190	44C58C38
368F0960	0945095E	09B503C6	0401012C	2F481B1E	60198417	A415B015	1C153A12	3F12A519	1118B11B
121C9E1B	AF1A3119	D30AE01C	48000002	A8380103	1F0301FD	DCA5458F	44CD1D3E	368A0956	093E090E
09DF03D5	04010130	2748D61D	F2183617	88151F15	DC13500F	520F141A	921B461C	871CDF1B	101B9819
E5092618	50000002	A83801C3	4D01011F	DD21C090	44C45637	36C1095F	09420945	09CF03EF	0401012E
2E482E1E	54196817	94158C15	B2144611	32119F19	3718F41B	581CEC1B	B51A3C19	7F0A881C	55000002
A83801FC	120201E1	DC85C590	44E01C3A	368C095E	09430916	09AA03B2	04010131	2A48EE1D	42197117
6915DC14	7F1398 0F	A20F1A19	581AA61A	E31A8E1A	D819B418	0E0A981A	5D000002	A8380195	160101FB
DCF6CC8F	44E7AB36	36BC095E	09430917	09AC03BC	04010130	2D48F71D	48196E17	7C15E414	9713A50F
A50F1019	3C1A8B1A	E41A9C1A	CD199118	190A8D1A	60000002	A83801E0	A002014C	DDA1D090	44DD7F3C
36BB0957	093C097C	09E403F7	0401012C	2548E71D	FC182117	8C150C16	BC156713	6D13F419	101CEE1C
AC1D2F1D	19186019	EA0AF41D	82000002	A838018D	0A000123	DD7FF18F	4417A332	36C4095E	0942090A
09030412	0501012E	3148581E	40196717	75150A15	9D13330F	4A0F7E19	D11A621B	A41B281B	741A3019

RECORD 1 OF FILE 23
LENGTH = 8192 BYTES

2004 7

00000000	00000000	00000000	5A303034	37202020	20202020	534F4143	5A303034	37E88E00	35002400
01004800	81058005	00000002	05000600	00000200	03010100	02000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	424F5820
20202020	20202020	01000300	01010400	20202020	20202020	20202020	00000000	42495244	20202020
20202020	04000100	01000000	20202020	20202020	20202020	00000000	4A444159	20202020	20202020
05000300	01000000	20202020	20202020	20202020	00000000	54494D45	20202020	20202020	08000300
01010000	20202020	20202020	20202020	00000000	4E44504F	53202020	20202020	0B0001 00	01000000
20202020	20202020	20202020	00000000	4C415420	20202020	20202020	0C000200	01000000	20202020
20202020	20202020	00000000	4C4F4E47	20202020	20202020	0E000200	01000000	20202020	20202020
20202020	00000000	4F5A4F4E	45202020	20202020	10000400	02000000	20202020	20202020	20202020
00000000	4F524249	54202020	20202020	14000200	01000000	20202020	20202020	20202020	00000000
434F3254	31202020	20202020	16000200	01000000	20202020	20202020	20202020	00000000	434F3254
32202020	20202020	18000200	01000000	20202020	20202020	20202020	00000000	434F3254	33202020
20202020	1A000200	01000000	20202020	20202020	20202020	00000000	57494E44	54202020	20202020
1C000200	01000000	20202020	20202020	20202020	00000000	44543132	20202020	20202020	1E000200
01000000	20202020	20202020	20202020	00000000	44543133	20202020	20202020	20000200	01000000
20202020	20202020	20202020	00000000	42414E44	20202020	20202020	22000100	01000000	20202020
20202020	20202020	00000000	42414E44	41202020	20202020	23000100	01000000	20202020	20202020
20202020	00000000	414C5048	20202020	20202020	24000100	01000000	20202020	20202020	20202020
00000000	53454320	20202020	20202020	25000200	01000000	20202020	20202020	20202020	00000000
434F3252	31202020	20202020	27000200	01000000	20202020	20202020	20202020	00000000	434F3252
32202020	20202020	29000200	01000000	20202020	20202020	20202020	00000000	434F3252	33202020
20202020	2B000200	01000000	20202020	20202020	20202020	00000000	434F3252	34202020	20202020
2D000200	01000000	20202020	20202020	20202020	00000000	434F3252	35202020	20202020	2F000200
01000000	20202020	20202020	20202020	00000000	434F3252	36202020	20202020	31000200	01000000
20202020	20202020	20202020	00000000	57494E44	31202020	20202020	33000200	01000000	20202020
20202020	20202020	00000000	57494E44	20202020	20202020	35000200	01000000	20202020	20202020
20202020	00000000	48324F52	31202020	20202020	37000200	01000000	20202020	20202020	20202020
00000000	48324F52	32202020	20202020	39000200	01000000	20202020	20202020	20202020	00000000
48324F52	33202020	20202020	3B000200	01000000	20202020	20202020	20202020	00000000	48324F52
34202020	20202020	3D000200	01000000	20202020	20202020	20202020	00000000	48324F52	36202020
20202020	3F000200	01000000	20202020	20202020	20202020	00000000	48324F52	37202020	20202020
41000200	01000000	20202020	20202020	20202020	00000000	48324F52	38202020	20202020	43000200
01000000	20202020	20202020	20202020	00000000	4F335220	20202020	20202020	45000200	01000000
20202020	20202020	20202020	00000000	48324F35	20202020	20202020	47000200	01000000	20202020
20202020	20202020	20202020	00000000	48324F35	20202020	20202020	47000200	01000000	20202020
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	01000200	1A000000	00000002	00000D00	00000000	09000002	AF380112	430101EA
DC4A088C	447CA99A	369D0946	092D0930	C965035E	04010131	FA477E1C	3B188316	C314EC14	4314FE1C
09116D19	2B1EAD1B	1E1CD31B	A21AC618	190A271C	12000002	AF38011C	FC00010E	DD77108C	449E5F99
36A00947	092C0936	09770382	0401012F	FA47A31C	49187D16	C714F714	3F14BD10	BA108319	401BDF1B
501CF91B	7D1A1B19	080A2D1C	1C000002	AF3801EE	C4000132	DD981A8C	443A3598	36A30948	092C090A
099103A2	04010120	F947C71C	4F187C16	E614C614	7F13300F	320F7019	ED1AA61B	EC1B681B	631A1219
9709E61A	31000002	AF380103	08020139	DDB12E8C	44D0EC9D	369C0947	092E0905	0954034E	04010120
FB47741C	45188B16	F214A514	7313070F	080F6919	191BBA1B	031C901B	9A1A7B18	8609DA1A	3B000002
AF38010D	C1010115	DD30388C	4473DC9C	36A00947	092C0933	09760384	0401012E	FB47A31C	4B187B16
E8140215	33149F10	A4108719	451B051C	901C221C	AF1A9218	F2090F1C	3C000002	AF3801DC	FFFF01E3
DCEA398B	445DD295	369E0945	092C09F1	087E0378	04010131	FC478E1C	2F187516	CB148814	6B135C0E
630E7819	F81A811B	E81B8E1B	AD1A8418	5F09701A	44000002	AF3801DF	890101F1	DC98418D	4426BC9B
36A00947	092C0947	09770385	04010130	FB47A01C	48187716	E4142015	8B146111	7211B619	3A1B151C
A31C361C	B81A3319	140AA11C	64000002	AF3801A6	C400013A	DD8BD38C	44956598	369B0944	092A0947
0965036D	04010120	FD476C1C	2A186316	D4143515	A2145911	6911C519	9A1B841C	161DA31C	161BE318
220AF01C	67000002	AF380147	860201EB	DC0FD78C	44BF849F	36A00945	092A0934	09920390	04010131
F847A31C	2C186216	C114EA14	2514AD10	B7106F19	161BE01B	5D1CF71B	701A9B18	EC09D11B	6E000002
AF3801D8	7D000116	DD94DD8B	441CBD97	36A40944	092A094E	09BC03C4	0401012E	FD47CF1C	27185F16
B2140915	82149E11	96118E19	DE1A501B	AE1B6F1B	451AE618	440A591C	70000002	AF380119	4F02010F
DD6CDF8D	44FFE59E	36A00946	092B0967	09810390	0401012F	F8479E1C	3A186A16	D0146A15	11159A12
A3129C19	87185F1C	0D1D7A1C	C91A3419	640A051D	77000002	AF3801E2	360001F2	DCF3E68B	44FE2F96
36A10945	092A0908	099A03A8	04010130	FD47B31C	33186416	BD148314	8C13220F	190F3819	C61A3E1B
891B381B	391AC618	9A09CA1A	7A000002	AF380123	08020133	DD33E98C	44DBE89D	36A20945	092B0925
099F03A3	04010120	F7478C1C	35187116	EE140515	19142410	1910F119	AE1B6E1C	EF1C6D1C	F41A0319

N-54951

3/25/77 -
9/20/78

```
$JOB    8:02:33
$ASS  IN  TUG
$EXE  TPLIST  BS

INPUT PARAMETERS ARE:  AS  SR=1=1

 TAPE NO.   1        .        FILE NO.   1
 RECORD   1                   LENGTH   [illegible]
      21503        0        0        0     08177

                                                                       -261.5 -260.6  251.3  242
.0  240.1 -261.0  252.9 -252.9 -263.1 -261.4 -260.0  252.4  253.0  245.9  244.6  243.4  236.6  234.
6  230.6  242.5 -250.7  239.4  237.7  237.1  243.1  242.2  238.6  248.1  245.5  236.2  259.7  265.0
 261.0  245.4  247.4  251.5  254.1  245.5  255.8  259.6  234.0  238.1  239.2  238.4  237.5  240.0
-245.7 -248.2 -240.4 -245.6 -248.4 -252.7 -252.3 -261.2 -259.8 -262.4 -257.5 -268.3 -273.3 -242.3 -
260.1 -258.4 -260.7 -252.2 -250.5 -244.5 -261.5  262.3  256.5 -252.4  245.8 -241.7  246.1 -253.7 -2
58.6 -259.6 -256.8  253.2  255.3  249.6  246.2  245.9  243.6  239.3  236.5  235.8  238.6  242.1 -24
2.1  240.8  240.0  240.0  240.0  243.1  246.8  247.5  248.8  252.7  255.2  253.0  247.1  244.6  244
.3  241.3  241.4  247.2  251.6  247.8  244.1  243.8  243.1  242.5  242.7 -243.3 -243.8 -244.2 -246.
3 -249.5 -252.3 -254.5 -256.5 -257.8 -257.6 -258.0 -259.4 -258.3 -255.4 -255.7 -256.1 -254.8 -254.4
 -254.1 -254.2 -252.5 -259.3 -258.1  253.3 -249.4  243.4 -247.2 -254.4 -257.5 -256.3  253.6  252.7
 252.0  246.8  246.3  246.0  245.1  242.2  239.2  236.7  237.2  239.7  242.2  243.3  242.0  240.5
240.4  242.9  245.1  246.2  246.8  249.8  252.3  251.5  248.4  245.7  243.0  240.7  239.6  241.4  2
44.4  246.1  250.2  253.1  250.3 -247.7 -245.9 -244.0 -243.7 -244.8 -247.1 -249.9 -252.4 -254.1 -25
4.9 -255.1 -255.0 -254.8 -254.7 -254.6 -254.9 -255.7 -256.2 -256.0 -255.7 -255.4 -253.8 -259.3 -258
.0 -259.7 -259.1 -255.8  252.5 -254.0 -256.7 -256.8 -254.0  250.9  250.7  250.9  249.0  246.9  245.
5  243.8  241.7  240.4  238.1  236.5  236.3  242.2  245.4  245.2  243.0  241.5  242.9  245.8  246.2
 245.9  248.7  252.5  252.4  250.5  249.5  247.2  245.4  244.8  243.1  241.3  245.3  255.1  260.4
 258.1  253.7 -249.4 -246.1 -245.1 -245.5 -247.1 -249.3 -251.5 -253.0 -253.5 -253.3 -252.7 -252.4 -
252.4 -252.9 -251.9 -255.1 -255.9 -256.2 -256.3 -255.9 -252.8 -251.8 -259.7 -260.3 -260.3 -259.5 -2
58.6 -258.1 -258.0 -255.9  254.1  251.3  250.4  249.8  248.9  247.5  246.0  242.3  240.4  241.1  23
9.8  238.3  239.4  242.2  244.8  240.3  242.8  241.6  243.5  245.9  247.1  247.9  249.7  251.8  250
.8  249.5  251.3  250.4  247.7  248.5  247.5  244.3  246.0  254.0  259.7  259.0 -254.7 -250.4 -247.
7 -246.4 -246.0 -246.4 -247.6 -249.4 -251.1 -252.0 -251.8 -251.1 -250.7 -251.2 -252.2 -253.4 -254.4
 -255.4 -256.4 -257.0 -257.4 -258.1 -259.7 -261.0 -260.5 -259.9 -259.4 -258.8 -258.1 -257.7  256.5
-253.6  250.6  248.2  247.5  247.9  247.8  244.9  240.1  238.9  240.2  240.7  241.5  241.7  241.4
242.1  242.2  241.4  243.4  245.7  247.3  248.5  249.7  251.0  251.1  248.9  248.1  250.4  249.2  2
45.4  246.6  249.4  248.5  247.9  251.3  255.0 -254.4 -251.5 -249.3 -247.8 -246.7 -245.9 -245.4 -24
5.6 -246.7 -248.7 -250.4 -250.8 -250.0 -249.5 -250.3 -251.8 -252.9 -253.7 -254.7 -256.1 -257.8 -259
.1 -260.0 -261.0 -261.7 -259.7 -256.3 -256.4 -257.0 -256.7 -256.0 -254.4  251.7  249.4  248.3  248.
1  247.0  249.1  243.7  241.0  238.4  238.1  239.0  240.8  241.8  241.1  241.7  243.3  244.4  247.4
 250.2  250.4  249.5  249.2  251.2  252.4  250.1  248.6  248.8  247.1  244.8  246.8  250.9  252.9
 253.1  251.8  250.7 -249.9 -248.5 -247.8 -247.4 -246.7 -245.8 -244.9 -244.4 -244.9 -246.8 -249.0 -
250.0 -249.3 -249.0 -249.8 -251.4 -252.7 -253.3 -253.9 -255.4 -257.6 -259.8 -261.3 -262.7 -262.9 -2
55.0  251.1 -252.2 -254.3 -254.7 -254.1 -252.6 -250.8 -249.4  248.8 -249.1  247.2  243.2  243.2  24
4.4  241.7  238.5  236.9  238.3  241.5  242.9  244.2  247.0  248.6  250.0  251.9  252.6  250.4  247
.5  249.9  253.4  252.7  251.8  251.0  251.2  251.4  252.8  254.5  255.3  254.4  251.3 -248.8 -247.
9 -247.4 -247.7 -248.0 -247.6 -246.8 -245.6 -244.8 -244.9 -246.4 -248.7 -250.0 -249.9 -249.6 -250.2
 -251.7 -253.1 -253.6 -254.1 -255.0 -256.9 -259.3 -261.4 -262.9 -263.1  253.2 -249.7  250.4  252.1
-253.0 -252.8 -251.9 -250.6 -249.5 -249.0 -249.0  247.6  245.1  240.0  242.3  245.0  242.9  238.8
238.9  242.2  244.0  245.8  248.4  250.0  251.8  254.1  254.4  253.1  249.3  250.3  253.2  255.1  2
57.7  260.1  262.0  262.5  261.7  262.3  261.2  256.1  252.5 -251.0 -249.6 -249.2 -249.7 -250.2 -24
9.9 -248.8 -247.4 -246.4 -246.4 -247.7 -249.7 -251.3 -251.9 -251.8 -252.0 -252.7 -253.9 -254.8 -255
.1 -255.4 -256.6 -255.6 -260.8 -263.1 -261.4  254.2  251.9 -251.3  251.3  251.8  252.1 -251.4 -250.
4 -249.7 -249.5 -249.0 -247.2  243.0  239.2  241.9  248.1  248.9  244.1  241.0  242.0  244.7  249.1
 253.2  255.2  256.9 -258.3 -255.9  252.7  252.7  253.3  254.7  259.6  265.3  269.2  271.5  272.0
 271.4  272.7  272.5  266.2 -255.6 -256.1 -254.1 -253.5 -253.5 -253.4 -252.8 -251.6 -249.9 -248.6 -
248.5 -249.7 -251.8 -253.8 -255.2 -255.4 -254.7 -254.1 -254.5 -255.4 -255.9 -255.8 -256.3 -257.7 -2
59.6 -261.4  254.3  254.2  253.0  251.9 -250.9  251.0  251.7 -251.2 -250.2 -249.8 -249.8 -249.4 -24
7.8 -244.6  242.3  244.1  249.7  252.5  247.4  241.4  242.9  250.1  257.6  262.2  264.5  265.1  264
.6 -260.8  256.0  255.4  257.1  261.4  268.8  273.9  276.0  276.7  276.6  276.7  277.6  278.0  273.
```

INPUT PARAMETERS ARE: AD FILE#1

TAPE NO. 1 FILE NO. 1
RECORD 1 LENGTH 9340
2 47764 23766 26378

282.7 -263.7 265.3 274
.8 271.4 275.9 282.0 256.6 252.4 348.4 247.3 245.0 246.6 244.7 244.1 244.8 247.1 243.
2 240.8 240.6 241.6 246.1 240.6 246.9 247.7 245.8 247.6 -247.1 249.0 247.6 247.3 247.8
247.5 248.3 348.1 231.2 246.1 247.7 244.7 245.8 245.0 242.4 242.3 244.6 249.5 246.3
243.9 238.2 250.2 240.5 241.1 244.5 245.9 247.9 247.6 -250.8 251.7 252.1 252.9 254.9
253.8 252.4 253.9 254.1 255.1 255.1 -268.2 -279.2 271.8 -279.4 271.0 259.5 265.7 261.0 2
56.1 251.9 248.6 247.5 246.2 247.8 246.3 245.5 -245.8 245.4 244.6 244.4 248.1 248.4 24
7.5 247.2 247.4 248.2 248.5 248.4 248.5 248.8 248.0 247.3 -247.1 247.2 247.8 248.0 248
.2 247.7 247.1 241.4 247.3 246.4 244.5 244.4 245.1 245.5 245.7 243.7 241.1 239.9 240.
4 241.3 241.2 -244.7 246.3 -247.2 246.6 249.7 246.8 249.3 249.6 249.9 250.0 251.4 253.2
254.2 -261.9 265.3 261.6 271.0 -271.4 267.3 -263.9 250.2 237.1 254.1 251.0 249.1 248.0
246.7 248.0 248.6 -248.6 247.2 248.7 246.8 247.1 247.5 248.1 248.9 249.1 248.6 248.8
245.2 249.1 248.8 248.6 -248.1 -247.3 246.5 246.2 246.1 245.9 246.2 247.0 247.6 248.3 2
48.6 247.7 -248.0 -248.2 -247.5 -244.7 -244.5 -242.0 240.1 248.2 240.8 239.8 239.4 241.4 24
3.9 245.9 246.6 247.3 247.4 247.5 247.2 247.6 248.4 250.2 -251.2 252.5 263.1 -312.4 -267
.8 -267.3 266.7 -271.9 272.5 255.1 253.5 251.6 249.7 248.4 247.7 247.1 246.0 246.1 247.
4 248.2 248.4 247.6 248.8 248.2 249.5 250.2 249.9 249.4 249.2 249.3 249.0 -248.7 248.4
248.1 247.3 245.9 244.7 244.2 247.1 244.6 245.1 245.2 245.4 246.1 246.0 -246.0 -245.3
-246.4 -246.3 -244.1 240.3 237.1 240.4 242.6 239.9 238.7 241.3 244.2 249.6 244.7 243.6
244.2 245.3 248.1 248.6 248.0 -247.6 249.8 250.2 -257.7 263.3 -260.0 -262.1 -259.9 253.9 2
52.1 250.9 250.7 249.3 -248.6 247.8 247.9 248.2 247.5 249.1 248.9 245.2 249.3 249.6 24
9.8 249.9 250.1 249.3 249.8 244.4 249.5 243.3 246.9 248.5 248.1 247.5 246.5 245.1 243
.5 242.6 242.8 242.2 242.9 242.2 241.8 241.9 241.7 241.7 243.8 248.3 247.1 244.9 241.
1 239.3 241.4 240.2 240.2 239.4 241.5 244.6 245.1 242.8 240.6 241.7 244.3 245.5 246.3
-248.3 249.1 248.3 248.3 -248.3 261.0 -260.7 -260.0 -257.7 255.0 250.5 247.8 248.5 248.2 249.2
248.9 248.7 248.1 249.7 249.5 249.6 248.8 248.8 250.0 250.2 250.0 249.8 249.5
249.1 249.2 249.3 248.7 248.4 -248.1 247.6 246.6 245.3 244.5 243.3 242.4 242.1 241.8 2
41.7 241.8 242.2 241.7 240.9 241.4 242.7 244.1 245.6 244.3 241.0 240.3 242.8 243.8 24
1.4 239.4 245.6 245.5 247.3 241.4 240.9 242.1 244.1 245.3 246.5 247.5 248.0 247.6 247
.6 248.3 -251.6 -257.5 -254.4 -251.9 243.6 248.0 247.3 240.7 240.3 245.3 249.9 250.3 250.
1 250.0 249.9 250.0 250.1 250.5 250.3 250.1 249.5 248.7 248.5 248.6 248.8 248.4 247.9
247.8 -247.5 245.4 246.7 244.3 243.6 243.0 242.3 241.0 240.3 241.3 242.7 244.1 -243.6
242.5 243.6 244.1 247.4 243.2 242.3 241.2 241.1 242.9 244.4 244.0 242.4 241.2 242.6
244.7 244.4 -245.7 -246.2 -245.0 -245.3 246.1 246.4 246.1 245.6 -245.0 247.7 -252.6 -255.5 -2
51.1 -249.2 -246.1 247.2 247.3 248.2 248.6 249.2 243.8 250.3 250.2 250.0 250.0 250.2 25
0.5 250.4 247.6 -246.2 246.1 247.2 247.3 247.7 247.8 247.6 247.2 247.0 -246.6 245.9 244
.7 243.2 242.3 240.1 241.6 239.7 239.3 242.3 243.6 245.2 -243.5 241.9 243.8 244.9 243.
5 241.4 243.2 243.4 239.4 240.3 243.3 245.3 245.6 243.9 243.6 245.7 -246.6 -246.2 -245.7
-248.2 -248.6 -248.6 -248.3 244.4 -244.4 245.3 -247.0 -247.3 246.6 -248.6 247.7 247.4 247.9
-248.6 246.2 249.8 249.7 250.7 250.5 250.3 250.3 250.7 250.6 250.6 250.0 249.1 247.9
-247.6 246.3 246.6 247.1 247.1 246.4 245.9 245.8 -245.3 -245.1 244.2 243.1 242.7 242.6 2
42.4 241.4 240.3 241.1 243.2 244.7 -240.6 241.6 244.6 244.5 241.8 239.2 238.1 238.4 23
9.3 240.8 241.6 244.1 241.2 245.4 246.3 -247.1 -247.6 -248.5 -248.7 -244.8 -244.5 -244.5 -244
.0 -248.6 244.2 -247.4 246.3 243.4 246.4 247.4 -247.5 -247.5 248.5 248.9 249.2 250.0 251.
0 251.3 252.3 250.1 250.5 250.2 250.6 250.1 249.4 248.7 247.7 247.6 247.6 247.1 247.2
248.8 248.7 248.3 -244.4 -248.3 -241.1 244.5 244.3 243.9 243.6 244.1 244.6 242.8 240.9
241.3 -243.8 -248.3 248.7 243.5 342.7 240.4 238.0 238.4 239.6 243.3 248.6 248.8 248.3
248.0 248.6 -247.1 -247.4 -247.4 -244.4 -243.1 -242.8 -248.0 -248.0 243.2 244.5 -248.9 2
45.7 248.1 -244.0 248.7 -247.0 -249.3 248.9 -249.4 250.4 251.6 251.4 250.5 250.2 250.3 25
0.3 250.7 250.4 -249.7 247.2 247.3 248.2 248.5 248.7 248.4 248.0 247.2 246.1 245.6 248
.9 -248.6 -248.6 -248.7 248.2 248.5 244.7 248.6 248.2 248.1 243.7 243.7 -248.2 -248.5 244.
4 248.1 241.8 251.0 241.4 246.2 248.2 248.0 247.9 247.3 248.2 -248.7 248.4 -247.7 -247.5
-248.6 -248.6 -248.2 -241.5 -241.1 -241.7 242.6 -242.5 244.2 245.4 -245.3 245.3 246.9 246.9
-247.5 -248.2 -248.7 248.6 -248.7 251.3 250.7 250.5 250.2 250.1 249.9 250.3 250.8 249.9
248.3 248.6 248.8 248.4 250.2 250.3 250.9 250.3 249.4 248.1 248.3 250.3 -251.2 -251.6 2
51.2 248.2 247.0 248.1 248.4 248.2 248.4 -249.0 -249.0 -248.4 248.9 248.7 248.7 248.7 24

R- 59931
9/21/78 - 12/31/78

```
$NOP
$NOP
$NOP *********** ASCII LIST OF COUNTS **************
$EXC TPLIST 85

INPUT PARAMETERS ARE: AS SERIAL 1

 TAPE NO.  1              FILE NO.  1
 RECORD   1               LENGTH   9380
        0    48974    19465        5       26478

                                                                         288.3  263.7  267.3  263
.3  256.3  251.3  257.9  245.8 -248.7  243.9 -246.4  245.2 -246.6  245.3  244.5  242.8 -246.8  243.
4  242.1  243.3  244.8  244.5  244.3  243.0  245.5  246.7  247.1  246.8  247.1  248.4  248.6  248.5
  248.9  249.8 -249.7  235.6  232.4  234.5  238.2  241.8  253.5  253.7  253.4  252.2  249.4  237.0
 245.4  244.8  240.1  237.0  247.0  251.2  251.3  245.8  247.6  250.8  251.5 -252.1  247.0  247.3
252.6 -253.4  265.0  272.3 -258.1  291.9 -265.6  279.2  269.5  268.0  262.9  254.9  250.0  247.4  2
46.0  245.1  244.5  244.8 -245.3  244.3  245.4  245.1  244.9  245.3  246.0  246.2  246.1  246.1  24
6.7  247.0  246.6  247.3  248.1  248.3  249.3  248.4 -248.8  249.2  249.2  249.3  248.9  246.9  244
.3  243.0  242.5  242.6  243.5  244.7  245.3  246.8  246.1  244.7  243.6  243.9  244.4  242.5  242.
0  245.1  247.1  246.2  245.1  244.4  245.4  246.9  247.3  247.1  248.7  250.5  252.2 -256.2 -262.7
  269.9 -274.7 -274.6  268.4  265.2  264.3  260.1  252.4 -248.2  247.3  246.7  245.5  244.7 -244.7
 245.1  245.4  245.7  245.9  246.2  247.0  248.0  248.7  248.5  248.1  248.5  248.8  248.6  248.5
248.7  248.9  248.7  248.8  249.0  249.0  249.0  249.1  248.2  246.3  245.5  244.8  242.9  242.9  2
43.7  243.6  243.8  244.2  243.6  243.2  244.1  245.0  244.8  243.0  241.8  243.5  244.7  243.0  24
1.9  240.8  240.1  242.1  244.1  245.8  248.0  249.8 -250.6  251.6  256.2 -263.2 -267.2 -263.3  267
.8  262.8  260.3  250.9  250.9  249.1  249.2  248.7  247.1  245.4  244.9  245.5  246.2  246.7  247.
0  247.8  248.9  249.4  249.5  249.7  249.4  249.4  249.6  249.4  248.9  248.3  248.1  247.9  248.0
  248.1  247.6  247.9  247.6  247.3  245.9  245.2  243.9  242.1  242.7  243.3  242.1 -241.9 -242.4
 242.4  243.1  245.0  246.4  245.4  243.9  241.9  241.0  241.3  240.7  239.7  237.6  236.6  238.5 -
241.3  244.1  246.6 -248.8  250.1 -253.7 -252.8 -256.9 -261.6 -273.1  260.0 -258.7 -256.7  254.0  2
52.0  251.2  250.2  249.5  248.4  245.4  245.6  246.4  247.3  247.7  248.1  248.7  249.5  250.2  25
0.4  250.5  250.1  249.8  249.5  249.0  248.4  247.1  246.0  246.2  247.0  246.9  245.7  245.0  245
.0  244.6  243.6  242.4  240.7  240.0  241.6  241.9  240.0  239.7  240.5  241.7  244.1  245.9  245.
7  244.6  243.7  241.6  238.6  238.3  240.0  240.8  239.7  238.4  237.9  239.0  241.8 -244.8  247.2
  248.6  249.9 -251.0 -253.4  256.5 -257.8 -253.0 -253.1 -251.9  251.8  252.2  251.9  250.6  249.4
 248.4  247.2  246.9  247.5  246.0  248.1  248.5  249.2  249.9  250.5  250.7  250.7  250.4  249.6
248.4  247.6  247.1  245.8  244.0  244.5  246.3  245.5  244.1  243.4  243.5  242.8  241.3  239.0  2
36.0  236.9  240.8  243.3  242.1  240.2  240.5  242.1  243.8  244.5  243.1  241.3  241.3  240.4  23
8.1  238.7  241.7  243.4  243.5  241.8  238.8  236.6  241.1  244.0  245.7  246.7 -248.1 -249.6  250
.6 -253.2  255.0 -253.4 -249.6  247.5  248.9  250.7  251.1  250.4  249.1  248.0  247.8  247.9  248.
3  248.3  248.6  249.1  249.7  250.2  250.5  250.5  250.5  250.1  249.0  247.1  246.1  246.2 -245.8
  244.7  245.1  246.0  245.4  243.0  240.7  243.0  241.5  239.7  238.3  236.6 -237.7  242.1  244.9
 240.7  241.4  241.3  242.6  243.6  241.7  235.9  238.0  239.3  240.8  240.9  242.4  244.6 -245.3 -
245.1  243.2  243.5  240.8  243.4  243.0 -245.0  245.9 -246.9  248.0 -249.4  251.5  257.2 -260.1  2
47.9  245.8  247.2  249.2  249.9  249.5 -249.0  248.3  248.4  248.7  249.0  249.2  249.3  249.7  25
0.0  249.8  249.8  250.1  250.0  249.2  248.0  246.4  245.6  246.0 -246.3  246.6  246.8  246.6  245
.1  243.2  242.6  241.7  239.0  237.4  238.1  238.7 -238.8  239.7  240.0  240.0  240.9  241.7  242.
8  243.1  241.1  237.9  236.9  238.8  241.4  242.7  244.2 -245.1 -244.9 -244.5 -243.5 -242.2  242.7
  244.5  245.5  245.4 -245.4 -245.9  246.9  242.3  249.6  249.2 -246.6  247.5  246.2  247.1  248.2
-248.5 -245.6 -248.6  248.5  248.7  249.2  249.6  249.6  249.7  249.9  249.6  248.9 -248.6  248.9
248.8  247.9  247.2  245.7  246.4  246.0 -245.9 -246.3  246.4  245.2  244.8  245.0  243.4  240.7  2
38.1  237.3  238.7 -240.2 -240.0  238.6  237.4  237.7  239.7  241.0  242.2  242.7  239.8  236.2  23
6.6  239.6  241.1 -241.7 -242.6 -243.4 -243.8 -243.8 -243.2 -242.3 -241.2  241.4  243.3 -244.3 -244
.5 -245.1 -246.1  247.3  247.6  247.0  249.6 -248.1  248.1  248.5 -248.1 -247.4  247.5  248.2  248.
7  249.3  249.8  250.0  249.7  249.7  249.7  249.3  247.4  246.1  246.6  247.6  247.5  247.3  247.7
  247.6  246.7  245.8 -245.5  245.1  244.0  244.3  245.2  243.8  242.0  241.1  240.1  239.3 -241.2
-244.3  244.8  242.4  239.7  239.1  239.0  240.4  239.9  237.1  235.2  237.6  240.5  240.9  240.9
241.1 -241.8 -243.0 -243.0 -242.6 -241.4 -239.1  237.8  240.6  243.1  243.5 -244.2 -245.3 -246.2  2
46.1 -242.1 -250.2  248.7  249.0 -249.3 -247.8  246.9  247.7  248.9  249.4  249.8  250.5  250.2  24
9.4  249.2  249.1  249.0  248.4  244.3  245.1  247.2  248.0  248.3  249.0  248.9  248.3  247.9 -247
.0 -244.8  241.9  240.8  241.5  242.6  243.5  244.2  243.2  241.2 -243.2 -247.5  248.5  245.2  241.
3  239.7  239.1  238.9  238.6  237.6  236.6  237.8 -240.4  241.9  242.1  241.2  241.4  242.9 -243.4
```

```
$ASS IN IVE
$AVE IN 186
$EXE IPLIST AS

INPUT PARAMETERS ARE: AS FOLLOWS

  TAPE NO.    1              FILE NO.    1
  RECORD  1                  LENGTH    9600
          0     51900        4800.3          6        36.72

                                                                                -236.2  -252.7  -240.3  -244
  .7  -255.8  -249.3   241.0  -254.3   247.2   248.3   240.6   252.6   241.8   231.2   242.8   240.7   242.9   244.
 9   241.3  -245.7  -243.5  -241.6   230.8   241.1   237.7   240.1   232.6   234.3   230.4   231.2   236.2   229.6
    230.0   237.5   241.1  -244.7   236.1   240.1   241.1   244.4   245.1  -244.0  -239.7  -239.9  -238.4  -243.5
  -245.2   234.7  -247.7  -231.8   245.6   172.4   225.6   234.8   236.0  -246.4  -244.4  -248.8  -259.9  -247.9
   249.9   215.9   227.7   235.6   167.0   171.0  -254.5  -262.7   229.7  -254.9  -250.9  -248.6   242.4   239.2   2
  42.4  -243.0   240.5   242.4   250.9   242.8   242.6   242.9   242.8   244.8   245.5  -245.0  -245.0  -244.8  -24
  3.8   243.1   242.8   242.3   240.3   237.4   238.3   236.1   237.1   239.3   240.5   242.4   243.6   241.0   235
  .3   230.7   236.6   232.6   247.1   244.8   244.9   246.7   242.4  -242.8  -243.5  -242.8  -240.2  -238.3  -238.
 2  -215.3  -238.3  -235.2  -236.6   134.3   255.2   240.8  -245.7  -248.0  -246.8  -242.6   236.1   232.7   240.9
   257.7   269.7   277.2   272.6  -264.8   253.7  -254.1  -247.0   239.1  -236.4   238.3   239.5   240.4   240.7
   241.4   242.3   247.6   246.2   246.1   247.3  -247.3  -246.8  -246.8   246.6   246.0   245.3   244.8   244.5
  243.6   230.5   237.0   230.1   233.9   272.6   242.5   245.0   244.9   241.9   237.9   237.6   239.6   241.1   2
  43.0   245.3   243.0   244.5   244.1   246.5   244.1  -243.3  -240.1  -239.5  -239.0  -239.4  -239.5  -239.6   23
  9.2  -237.5   239.7   235.4   240.9  -241.7  -244.0  -245.8   239.5   233.6   239.8   255.4   267.5   281.0   267
  .4   263.7  -240.3   234.9  -247.6  -242.8   238.3  -239.4   241.0   241.4   241.5   243.6   248.1   250.2   249.
 4   249.6   245.6  -242.6  -246.2   248.6   247.7   247.1   246.3   245.6   244.6   242.2   237.5   233.6   232.8
   233.8   235.8   239.4   240.1   241.7   243.9   243.3   242.4   242.6   243.1   243.6   243.6   242.4   242.5
  246.0   240.6  -241.4   241.1   237.7   236.8   238.9   239.3  -239.5   240.1  -241.2   240.8   236.7   235.0
  239.0   242.3  -244.3  -241.4  -240.9   237.1   241.1  -249.7   239.3   249.3  -235.4   250.1   258.4   254.3   2
  52.4  -248.8   244.6   243.6   244.3   244.1   243.9   245.1   248.1   250.4   250.7   250.4   249.5   249.2   24
  8.7   248.1   247.4   244.7   245.4   244.0   242.6   237.7   235.6   232.3   232.7   233.2   234.3   235.1   235
  .3   238.9   243.7   240.5   244.2   243.0   242.6   241.8   239.2   236.5   237.8   237.7   236.2   237.5   237.
 7   235.3   232.0   234.6   238.9   239.1   240.1   241.4  -241.7   238.2   235.0   237.6   241.5   244.6   243.9
   240.9   245.8  -242.7   246.0   251.6   251.5   253.3  -259.7   237.5   254.5   253.7   252.5   250.2   247.5
  245.6   247.3   247.4   248.0   249.4   250.5   250.9   250.8   250.5   249.8   248.8   247.7   246.5   245.0
 242.7   240.3   237.7   233.1   234.6   232.3   236.5   236.5   236.5  -235.7   234.8   237.3   241.5   242.8   2
  42.8   243.4   242.9   240.6   238.9   240.3   254.2   256.5   234.5   235.5   237.4   236.4   234.8   235.4   23
  8.0   240.1   241.1   242.3   242.9   238.6   230.6  -233.0   238.1   241.2   241.6   240.4  -239.9   240.8   243
  .1   246.7   247.5   255.4   232.2  -236.7   254.8  -253.6   252.8   251.5  -250.1   249.4   250.0   250.2   250.
 4   250.8   251.0   251.2   256.9   250.1   248.7   248.7   247.4   245.4   242.4   238.8   236.1   235.0   236.0
   238.5   239.8   240.4   241.5   241.8  -234.9   234.6   239.3   238.0   236.7   237.1   239.0   238.9   235.5
  231.4   230.6   238.4   236.8   238.4   234.8   239.1   241.1   238.3   256.4   238.4   241.3   243.0   244.2
 244.6   241.0   234.3   232.0   230.9   256.2   238.5   238.4   238.1   239.4   241.0   243.4   254.6  -232.1   2
  52.4   253.6  -215.4   252.6   251.6   251.4   250.9   250.6   250.5   250.3   250.5   250.8   250.8   250.6   25
  0.1   249.4  -249.5   247.7   247.3   241.1   239.5   235.5   235.1   237.5   240.1   241.9   242.7   243.2   245
  .3   246.5  -245.6   244.5   242.7   238.6   234.6   233.1   233.8   232.8   230.6   230.1   232.2   233.6  -233.
 5   232.1   238.0   238.3   242.9   241.4   238.5   239.3   241.5   242.7   243.1   244.1   244.8   241.8   237.0
   239.8   234.3   237.9   237.0   237.4   241.1   242.2   242.8   242.9   257.6  -253.3   253.8   252.7  -251.5
  250.5   250.7   253.2   247.7   247.6   245.3   249.7   249.9   249.9   249.4  -248.5  -247.4  -248.8  -246.4
 244.3   240.6   236.8   237.3   232.4   234.1   236.1   247.1   247.4   247.5   248.3   248.4  -248.6   250.0   2
  49.0   248.5   242.2   239.2   235.7   234.5   233.5   234.2   234.7  -233.4  -230.7   229.5   232.5   238.5   23
  9.4   239.7   238.5   238.9   240.2   241.2   241.9   243.0   244.4   246.1   240.5   237.9   239.4   241.6   240
  .5   238.9   242.6   243.0   244.5   253.4   256.6   253.5   253.2   253.3   250.6  -249.9   249.8   249.4   248.
 8   248.5   248.7   248.9   248.2  -248.3  -248.1  -247.1  -246.6   245.2   245.3  -244.3   241.2   240.4   242.8
   245.0   243.2   241.8   253.2   255.7   251.9   252.7   250.2  -250.2  -252.3   253.0   252.6   251.3   248.4
 244.2   241.2   242.3   240.1   237.6  -232.5   228.5   228.8   233.0   233.6   235.3   236.6   235.3   237.2
 239.4   240.9   241.5   240.0   242.5   241.6   236.9   236.5   235.9   241.8   241.2   238.3   241.3   245.7   2
 46.3   248.1   234.3   252.2   252.3   251.7   250.1   249.3   249.3   249.0   248.4   248.1   248.2   248.4   24
 8.6   248.3  -247.4   243.9   244.3   243.0   244.2   245.5  -244.1   244.7   248.5   251.5   253.7   256.3   257
```

3L1478X11
MOORE BUSINESS FORMS, INC. HO

U-5773Q
11/1/79 —
9/13/7T

TAPE NO. 1 FILE NO. 1
RECORD 1 LENGTH 9140
C 4805C 4128P 0 00179

-262.4 -260.7 240.3 244
.7 -227.3 244.3 -230.3 -203.9 -247.2 -247.3 -249.1 -252.6 249.7 248.7 -242.5 -240.7 -242.9 -245.
5 -241.9 241.3 251.1 240.2 240.3 244.6 244.4 244.0 244.5 244.1 243.5 -231.2 -236.2 -229.6
-257.4 -242.5 246.3 246.1 247.4 249.2 248.1 248.3 249.5 249.4 246.2 244.0 242.2 242.6
240.1 241.2 241.3 -244.1 -234.6 -236.2 -238.7 -241.1 251.6 253.6 238.7 251.9 259.9 247.9
253.3 -237.7 -234.3 -238.3 -243.7 -264.3 -252.6 248.9 -244.4 245.3 242.6 -242.4 -243.0 -2
44.3 -249.3 -244.5 244.9 242.4 -247.3 247.3 -245.2 -243.2 -244.0 -243.9 -243.6 -242.1 -241.9 24
2.2 242.7 243.7 244.4 244.9 241.7 245.6 243.2 -241.2 -238.8 -239.1 -241.3 -244.1 245.9 246
.6 247.2 248.2 248.7 248.7 248.8 246.5 247.7 246.6 245.2 244.5 244.2 243.3 242.4 242.
5 243.3 244.5 244.8 244.3 245.1 244.6 244.8 249.6 250.0 245.5 242.4 -241.3 240.7 243.2
251.3 257.4 261.5 -262.7 -251.0 244.8 243.2 -243.4 -242.6 -241.6 -241.4 -242.7 242.7 242.5
243.3 245.3 245.3 -244.8 -246.0 -245.1 -244.5 -245.7 -243.0 242.7 242.8 243.2 243.9 244.5
245.4 246.2 248.1 247.4 -244.4 -242.4 -243.1 -244.4 -245.5 246.2 245.5 247.1 248.4 249.0 2
48.7 248.3 246.3 248.0 248.0 247.2 246.2 246.3 244.3 243.2 243.4 242.5 243.2 243.3 24
3.1 -244.2 244.1 243.1 244.8 244.9 242.9 243.2 243.5 241.3 240.9 246.0 255.7 -281.0 -267
.4 -254.9 -248.8 -245.7 -244.6 -243.6 -242.5 242.3 243.0 -243.3 243.0 -243.5 244.0 244.0 244.
5 -245.8 -245.3 -245.5 -244.8 -243.7 -243.3 242.5 243.2 243.9 244.5 245.3 246.5 247.4 246.9
-244.9 -244.1 245.2 245.8 246.0 245.2 246.4 246.9 247.3 248.4 248.0 247.7 247.6 247.9
240.4 248.4 247.7 246.2 244.6 243.6 242.8 242.5 242.8 243.0 -242.7 243.5 244.4 242.3
240.6 241.0 243.7 242.2 243.8 242.5 240.3 241.4 248.0 254.1 -253.5 -254.7 -251.7 -248.9 -2
46.6 -245.0 244.3 244.2 244.5 244.7 244.3 244.0 243.7 244.0 -244.9 -246.4 -247.2 -245.6 -24
5.5 -244.3 246.1 242.8 243.3 243.3 244.4 244.7 245.1 245.2 244.9 244.2 244.6 245.7 24
6.0 245.5 245.4 246.2 247.1 247.5 247.5 247.2 247.5 248.0 248.2 248.0 246.
8 245.5 244.6 241.0 243.7 244.1 244.9 244.7 244.1 244.3 243.7 241.8 240.5 240.5 242.0
243.7 243.1 242.5 242.6 243.5 243.6 243.2 243.3 -243.0 -241.1 -245.8 -246.5 245.2 244.8 244.8
245.0 244.8 244.6 244.4 244.3 244.2 244.8 -246.1 -247.1 -247.0 -245.9 -244.5 243.4 243.0
243.2 245.4 245.6 246.0 245.3 245.2 245.8 246.1 246.7 245.7 246.9 246.9 246.6 246.2 245.4 24
4.6 244.5 245.1 246.0 246.7 246.7 246.3 243.3 241.7 241.5 242.5 243.2 243.3 241.3 239
.0 -241.9 242.0 239.5 241.0 243.1 247.4 243.5 -244.5 244.2 -244.2 244.3 244.3 244.4 244.
8 244.9 245.8 244.5 245.0 244.2 -246.0 245.6 244.9 244.6 243.8 243.2 243.6 245.0 245.7 246.0
245.0 -245.8 246.6 244.8 244.8 245.7 245.5 246.6 246.7 245.2 245.4 245.1 245.5 246.1
246.3 245.1 243.7 243.0 240.8 242.9 243.1 242.8 243.0 241.6 239.0 240.5 -254.0 -250.6 2
49.2 247.7 -240.0 245.2 244.1 243.8 243.5 243.5 243.8 244.3 244.7 244.7 244.3 244.0 24
4.3 -240.2 -245.1 244.8 244.1 241.9 243.0 242.6 242.7 243.2 243.8 244.0 243.4 243.0 -243
.7 244.0 245.2 247.2 241.7 241.1 242.9 240.6 241.8 243.1 243.5 -245.5 -244.1 244.9 243.
8 243.0 244.6 245.3 246.2 246.1 246.0 245.9 245.6 245.3 246.6 246.5 246.3 244.6 243.3
242.5 242.6 243.5 242.5 242.4 -242.6 240.3 -240.8 239.1 243.3 -248.4 247.3 246.3 -245.0
243.9 243.7 243.1 244.2 243.5 243.9 244.2 244.3 244.3 244.1 244.0 -244.3 244.5 244.2
243.5 243.3 243.5 243.3 243.5 244.3 245.1 245.4 245.1 245.0 -245.7 245.8 244.6 242.5 2
40.6 239.4 237.9 237.4 238.6 241.0 240.5 -241.4 -242.8 244.0 243.5 242.9 243.5 244.9 24
4.8 244.4 245.2 245.4 245.7 245.7 246.8 246.5 245.7 245.8 244.4 243.4 242.5 242.1 242
.1 -242.4 242.7 -242.5 241.8 240.9 244.3 248.2 -246.8 245.7 244.6 -243.8 243.3 242.9 242.
9 243.2 243.4 243.8 244.1 244.3 244.2 244.0 243.7 243.3 243.5 243.5 244.0 244.4 244.5
243.1 246.0 246.6 247.0 247.5 247.8 -248.6 -249.0 248.4 246.7 244.7 242.7 239.9 237.3
-235.6 -236.8 -240.3 -241.4 242.8 243.1 242.3 241.3 242.2 242.6 243.6 244.7 244.8
248.2 245.6 245.9 245.4 246.5 246.1 246.0 245.4 243.6 242.1 -242.2 242.8 -243.1 243.4 2
44.2 -247.0 -245.6 247.7 245.3 245.0 244.4 243.9 243.5 242.9 242.8 242.8 243.1 243.5 24
4.0 244.5 244.4 243.8 243.3 243.1 243.3 244.2 245.9 245.9 246.1 247.0 247.9 248.7 249
.7 250.4 250.6 -251.5 -252.6 253.0 252.6 251.8 249.8 246.1 239.4 236.0 235.0 -237.1 -239.
3 240.6 241.9 242.2 241.1 240.1 240.0 240.6 242.3 244.3 244.7 244.4 245.1 246.1 246.9
247.1 247.1 247.6 247.7 246.2 245.2 242.6 242.7 242.7 242.9 244.1 247.2 247.2 246.4
245.3 244.9 244.4 244.0 243.8 243.3 242.8 242.6 243.7 243.2 243.8 244.4 244.4 243.7
243.3 243.2 -244.1 244.4 246.3 247.4 248.1 249.1 250.1 251.4 252.7 253.2 253.1 -254.0 -2
55.3 256.3 257.2 257.2 258.3 256.9 247.2 242.0 238.2 -238.2 -238.8 238.1 238.3 238.9 23
6.7 238.0 238.2 239.2 240.9 242.9 243.6 241.3 244.3 245.0 245.9 247.0 247.1 247.5 247.

D-59932

```
$JOB 16:32:18
$ASC IN TU0
$AVF IN 254
$NOP
$NOP
$NOP *********** 00142 **************
$EXE TPLIST 80

INPUT PARAMETERS ARE:  AS FL=1=1 1

 TAPE NO.   1            FILE NO.   1
 RECORD   1              LENGTH=  9360
        0    35513      47402      62345     25679

                                                                          -268.5 -272.8 -264.0 -283
.3 -255.7  250.0  249.7  246.8  249.2  247.5 -245.4  247.5  248.5  244.8  245.1  244.0  242.8  238.
4 -243.1  238.7 -239.5 -240.6 -244.0 -246.2 -246.9 -246.9 -248.0 -246.9 -246.4 -245.2 -234.7 -243.9
 -244.7  243.6  244.4  244.0 -237.3 -240.0 -247.2 -241.4 -241.9 -235.1 -237.7 -238.8 -241.5  239.9
 238.8  245.0  244.3  247.3 -244.8 -245.0 -241.9 -242.8 -249.2 -254.3 -254.9 -254.1 -255.8 -256.2 -
262.8  267.0 -271.6  287.4  294.0  290.7 -285.8 -263.0 -267.2 -267.8 -266.3 -260.2 -253.3  249.0  2
47.4  247.2  246.6  246.1 -246.0  247.4  246.7  246.0  245.1  244.1  242.8  242.8  243.6 -244.2 -24
5.0 -245.7 -246.3 -246.6 -246.9 -247.3 -247.3 -246.7 -245.0  243.5  243.4  243.3  243.1  243.4  242
.6 -241.6 -242.5 -241.7 -243.3 -241.7  240.5  240.0  239.4  240.5  242.9  243.0  242.1  243.0 -244.
3 -244.5 -244.2 -244.5 -246.0 -248.4 -250.8 -251.7 -252.0 -253.1 -254.8 -258.9  265.4  271.8  278.0
 -285.6  285.9  280.1 -271.7 -267.1 -263.6 -263.3 -259.5 -254.9 -250.9 -248.4  246.8  245.9  245.3
 244.5  244.7  245.9  246.9  246.2  245.2 -244.6  245.3  246.5  247.0 -246.9 -246.7 -246.5 -246.3 -
246.3 -246.7  247.1  246.7  245.7  244.8  243.5  241.4  240.7  242.0  242.3 -242.4 -243.5 -244.0 -2
43.7 -242.6  241.6  240.7  239.6  239.8  241.5  242.6  242.4  242.7  243.9 -244.0 -244.0 -245.1 -24
6.8 -248.3 -249.1 -249.4 -249.7 -250.2 -250.9  253.8  260.6 -267.8  272.7  277.6  281.4 -274.4 -272
.1 -265.0 -263.3 -261.8 -258.7 -255.3 -252.2 -249.6 -247.6  246.0  244.5  243.8  244.3  244.9  246.
1  247.1  246.5  246.2  247.3  246.2  246.5 -248.1 -247.2 -246.2 -245.5 -245.3 -245.5 -245.7  245.1
  244.1  243.5  242.2  240.0  240.4  243.0  243.2 -243.0 -244.0 -244.2 -243.9 -243.2  242.5  242.0
 241.6  240.8  240.5  241.3  241.9 -242.5  243.3 -243.2 -243.4 -244.9 -246.7 -247.8 -248.0 -247.7 -
247.5 -247.5  247.6  250.0 -255.8  262.8  267.3  272.2  277.6  284.5 -255.2 -259.6 -260.0 -259.2 -2
57.2 -254.5 -251.9 -249.7 -248.1 -246.4  244.7  244.5  245.0  245.2  246.3  247.8  247.8  247.7  24
8.4  248.9 -249.0  248.5 -247.1 -245.4 -244.4 -244.2 -244.2 -244.1  243.3  242.2  242.2  242.7  241
.5  242.0  244.5  244.4 -243.7 -244.2 -244.0 -243.8 -243.1  242.8  243.3  243.8  243.2  242.4  241.
6  241.0  241.2  241.4 -241.8 -242.9 -244.6 -246.3 -247.2 -247.1 -246.3 -245.5 -245.2  245.8 -247.2
  251.0  257.0 -262.3  267.0  271.8 -271.1 -262.4 -254.1 -256.0 -256.3 -255.1 -253.0 -250.9 -245.2
-246.0 -246.9 -246.1 -245.0  246.4  246.8  247.5  248.3  248.6  248.8  248.9  248.9  248.6  247.9
245.7 -243.0 -242.7 -243.5 -243.7 -243.5 -243.1  241.8  242.3  245.2  245.8  244.5  244.0  243.4 -2
43.5 -244.6 -244.2 -243.6 -242.6  242.5  243.3  244.3  244.2  243.5  242.4  241.4  241.1 -241.1 -24
1.6 -242.7 -244.1 -245.6 -246.4 -246.2 -245.3 -244.0  243.5 -244.3  245.0  247.2 -252.3  257.8  262
.6 -266.7  271.4  241.1 -249.5 -251.8 -252.8 -252.6 -251.3 -249.9 -248.7 -248.0 -247.6 -247.4 -247.
4 -247.6  248.0  248.3  248.6  249.0  249.2  248.9  248.4  247.6  246.0  243.3  241.4 -242.4 -243.8
 -244.1 -244.2 -244.7  244.2  244.4  247.1  247.7  245.4  243.4  242.9  244.0 -244.7 -244.3 -243.2
-242.3  243.1  243.6  243.5  245.6  243.3  242.8  242.2  242.1 -242.2 -242.3 -242.7 -243.6 -244.7 -
245.5 -245.3 -244.8 -243.1  243.1  244.3  245.0  246.4  249.7  253.7  258.4  263.0 -264.3  244.8 -2
46.7  248.0 -249.7 -250.3 -249.7 -249.1 -248.5 -248.2 -248.0 -248.0 -248.1 -248.2  248.4  248.6  24
8.8  249.1  249.1  248.7  248.1  247.0  244.8  243.0  243.6 -244.9 -245.2 -245.3 -245.5 -246.7  247
.2  246.5  246.4  245.0  244.0  245.1  246.1  246.5 -246.1 -244.7 -242.9 -240.7  239.1  239.5  241.
2  242.0  242.4  242.8  242.9  242.8 -243.7 -242.8 -243.0 -243.4 -244.0 -244.7 -245.3 -244.6  243.1
  243.3  245.0 -245.6  245.2  247.7  250.5  254.1 -258.4  246.4 -247.4  245.8 -245.6 -248.0 -248.3
-248.2 -248.3 -248.4 -248.4 -248.4 -248.5 -248.5 -248.5 -248.5 -248.5  248.7  248.9  249.0  249.2
248.8  248.0  247.1  246.5  246.8  247.1 -247.6 -247.6 -247.3 -247.9 -248.0  246.4  243.9  242.3  2
44.6  248.1  249.2  249.0 -247.9 -245.7 -243.3 -240.2  237.2  236.9  239.0  239.9  240.2  241.7  24
2.6 -242.8 -242.9 -243.1 -243.3 -243.8 -243.8 -244.3 -245.2  245.4  244.6  244.8  245.5  245.8  246
.0  246.4  248.2 -252.7  253.9  255.5  246.0  245.8 -246.4 -247.4 -247.4  247.0 -247.6 -248.4 -248.
7 -248.9 -249.0 -249.0 -248.9 -248.4 -248.2 -248.5  249.0  249.5  250.1  249.9  249.7  250.3  250.4
  249.4  249.0  250.3 -250.5 -249.9 -249.9 -249.6  248.6  246.6  246.1  249.7  252.3  251.9  251.4
-250.2 -247.7 -245.1 -242.5  240.1  239.1  239.5  238.9  238.4  240.0  241.7 -242.3 -242.7 -243.1 -
```

D-59932
Sept. 14/79 –
Feb. 16, 1980

$EXEC [illegible]

INPUT PARAMETERS ARE: [illegible]

TAPE NO. 1 FILE NO. 1
RECORD 1 LENGTH [illegible]
0 [illegible] [illegible] [illegible] 25/79

268.5 272.8 264.0 283
.3 [illegible] 276.2 [illegible] [illegible] 258.1 [illegible] 246.3 244.5 243.7 244.6 248.0 241.5 240.2 -243.
9 243.0 244.8 [illegible] [illegible] [illegible] [illegible] 246.9 246.9 246.0 246.9 246.4 245.3 -235.6 242.8
243.1 -240.7 [illegible] -243.0 -242.0 -241.2 -241.5 241.4 241.9 235.1 237.7 238.5 243.4 251.8
238.8 241.6 -243.2 -242.6 -247.1 -246.8 -250.6 -251.8 -250.6 254.3 254.9 254.1 255.8 256.2
262.7 268.6 271.6 [illegible] [illegible] [illegible] 262.9 260.0 269.4 267.2 264.7 262.6 260.5 258.3 2
55.1 [illegible] [illegible] 247.1 [illegible] [illegible] -245.6 246.2 -244.7 243.5 243.9 -244.2 244.4 244.9 24
6.1 247.0 [illegible] [illegible] 247.1 [illegible] 246.6 243.5 241.1 240.5 240.4 241.9 -241.8 -241.7 -242
.3 -242.6 -242.7 [illegible] [illegible] [illegible] 241.6 240.7 240.6 241.4 241.9 241.3 -241.9 -243.9 -245.
7 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 256.6 259.1 263.1 268.9 275.1
278.8 278.8 [illegible] [illegible] 270.5 267.4 263.5 259.8 257.7 255.8 253.4 252.3 250.8 247.5
245.5 245.2 [illegible] -248.8 [illegible] [illegible] 244.5 244.9 245.6 245.5 247.3 247.5 246.7 246.2
246.9 247.2 [illegible] [illegible] [illegible] [illegible] 239.2 240.1 -241.3 -242.4 -243.0 -243.3 -243.6 -244.2 2
44.4 [illegible] [illegible] [illegible] [illegible] [illegible] 241.6 241.6 -241.1 -243.2 -244.3 -245.5 -246.7 -247.8 -24
8.6 [illegible] [illegible] [illegible] [illegible] [illegible] 253.1 255.6 259.0 263.7 270.0 276.7 278.3 -269.5 272
.1 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 248.7 246.5 246.1 246.3 -246.6 247.
0 246.5 [illegible] [illegible] [illegible] -246.4 247.6 245.1 247.6 245.4 243.7 244.8 245.5 242.9 239.6
238.6 239.4 [illegible] [illegible] 242.0 -247.7 -243.9 -243.9 -243.9 -244.1 243.8 243.4 244.2 244.7
244.4 [illegible] [illegible] -242.5 -242.1 -242.3 -242.8 -243.9 -245.4 -247.0 248.1 248.7 248.3 247.3
245.9 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 271.9 -278.0 [illegible] 236.6 261.8 263.7 263.9 2
59.7 [illegible] [illegible] [illegible] [illegible] [illegible] 248.7 247.0 247.0 247.2 247.3 247.4 247.5 247.5 24
7.8 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 242.9 240.4 240.4 242.9 243.9 244
.2 245.8 -245.4 [illegible] -244.1 -243.1 -243.2 241.0 243.5 244.7 245.4 245.3 245.5 244.7 243.
2 -242.1 [illegible] [illegible] [illegible] [illegible] [illegible] 248.0 249.0 247.5 245.7 245.2 245.7 246.6 247.0
248.6 [illegible] [illegible] [illegible] 274.9 277.7 -261.1 258.7 261.9 261.6 257.6 254.9 251.1 247.8
246.8 [illegible] [illegible] [illegible] [illegible] [illegible] 247.1 247.4 247.9 249.5 249.0 249.1 248.1 246.2 244.4
243.2 241.2 [illegible] [illegible] [illegible] [illegible] 243.0 245.1 247.0 246.5 246.7 246.5 -245.5 -244.9 -2
44.1 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 243.9 -242.5 -241.6 -241.2 -24
1.7 -243.2 245.1 247.1 248.1 [illegible] 244.6 244.4 245.0 244.8 243.8 244.9 250.1 257.0 264
.3 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 248.3 248.7 248.4 247.
4 247.0 [illegible] [illegible] [illegible] [illegible] [illegible] 249.5 249.1 247.4 244.5 241.6 240.7 240.9 242.3 244.5
244.2 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] -243.4 -244.5 -244.4 -243.5 -242.6 242.5
243.0 243.7 244.0 244.1 244.6 243.0 244.3 -243.1 -242.0 -241.5 -241.5 -241.9 242.7 244.3
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] -261.8 266.8 270.5 273.9 2
59.8 259.7 [illegible] [illegible] 249.4 [illegible] 251.5 250.2 248.6 248.2 247.8 247.6 247.7 247.7 24
8.0 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 244.4 245.8 -246.0 244.7 244.7 245
.0 247.0 [illegible] [illegible] [illegible] 241.1 -244.5 -245.4 -244.6 -243.2 242.0 241.4 242.0 242.8 243.
3 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] -241.9 242.0 242.3 243.1 244.6 245.5 244.9 244.4
244.1 243.7 [illegible] [illegible] 247.6 [illegible] [illegible] 261.6 -263.0 246.6 257.0 256.6 253.5 250.9
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
247.0 [illegible] [illegible] [illegible] 241.0 [illegible] [illegible] -247.1 -246.5 245.3 244.8 246.7 247.3 243.2 2
39.2 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] -242.9 -24
2.7 -242.6 [illegible] [illegible] [illegible] [illegible] 243.3 243.4 243.9 244.1 244.4 243.8 242.9 243.4 245
.0 247.2 [illegible] [illegible] [illegible] [illegible] [illegible] 252.4 -251.8 250.3 253.2 256.0 253.5 249.9 248.
6 249.0 [illegible] [illegible] [illegible] [illegible] [illegible] 247.6 247.3 247.6 248.4 248.6 248.6 247.5 244.9 242.0
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
-249.0 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 240.6 240.9 -241.5 -242.3 -242.5 -242.6 -242.9
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 245.1 247.2 246.9 -250.6 -2
51.6 -255.3 [illegible] [illegible] [illegible] [illegible] [illegible] 254.7 250.3 248.9 248.9 249.4 249.8 249.8 24
9.4 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
.9 -251.9 [illegible] [illegible] [illegible] [illegible] [illegible] 254.7 257.1 -257.3 -255.0 -251.4 -247.3 244.3 243.
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
243.6 243.0 [illegible] [illegible] [illegible] [illegible] [illegible] 246.3 -247.3 -248.4 -250.1 -251.9 244.5 -244.8
246.2 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

```
2.0 -241.1 -242.8 -242.6 -241.0 -242.5 242.3 242.4 242.7 243.1 243.8 243.6 242.6 241.9 242
.5 244.1 -244.8 244.8 -245.0 -246.0 -246.9 -248.2 -249.2 244.1 244.8 245.6 247.2 247.9 248.
1 248.5 249.5 249.9 250.0 250.4 250.2 249.9 249.4 249.4 -249.9 249.9 -250.1 -251.4 253.1
 254.3 256.0 257.3 259.1 260.7 260.8 -260.5 -260.6 -261.1 262.0 262.7 262.7 262.7 262.4
 260.9 259.0 -258.0 -255.3 -250.4 249.2 250.2 252.9 250.7 247.0 245.7 -245.4 -244.4 -244.0 -
243.4 242.5 242.0 242.1 242.2 242.3 242.8 242.7 242.5 243.0 243.9 244.9 245.2 244.4 -2
44.4 -245.1 -245.9 -247.1 -248.8 244.6 245.3 245.6 -246.3 247.4 248.1 248.8 249.0 250.1 25
0.4 250.4 250.4 250.6 250.4 251.7 250.6 -249.7 -250.2 252.5 254.7 257.2 260.2 263.0 265
.5 263.4 265.4 264.6 -265.5 -266.1 -266.2 265.5 263.8 261.4 259.4 259.1 259.7 -260.0 -258.
4 -252.0 245.1 250.2 256.3 254.4 250.9 248.2 -247.5 -247.1 -247.0 -246.7 244.8 242.6 242.3
 242.6 242.7 242.1 242.0 242.7 244.4 244.6 243.5 243.7 -244.1 -244.4 -244.8 -245.3 -246.2
-247.7 -245.7 245.9 246.4 247.0 247.4 248.2 248.9 249.6 250.1 250.4 250.3 250.5 251.1
251.2 251.0 251.1 -250.2 -251.1 -254.4 256.3 262.9 267.0 269.4 270.0 269.0 267.8 269.1 -2
71.8 -272.3 -271.1 270.0 266.0 264.2 262.7 266.4 269.1 -266.6 -261.9 255.4 251.3 253.8 25
6.1 253.4 257.2 251.6 -252.2 -251.9 -250.8 249.6 246.5 242.9 242.5 243.0 242.9 242.7 242
.3 242.4 244.1 244.5 243.2 -243.4 -244.4 -244.8 -244.8 -245.0 -245.5 -245.2 245.5 -246.6 247.
2 247.5 247.9 248.3 249.0 249.4 250.2 250.2 250.1 250.4 251.0 250.9 251.2 251.9 252.0
 -253.9 -252.2 264.0 270.0 273.7 274.4 272.6 270.6 271.4 275.2 278.7 -278.7 -276.7 275.8
 275.0 272.0 271.5 273.1 274.7 -272.1 -266.1 262.2 263.0 263.5 260.4 258.1 258.6 260.4 -
266.4 -257.9 -257.7 248.9 244.4 242.1 243.3 243.2 242.1 242.5 243.1 243.3 243.7 244.1 -2
44.1 -244.4 -245.0 -245.2 -245.1 -246.1 -246.5 -246.9 247.7 247.0 247.4 247.8 247.9 248.3 24
9.0 249.7 250.1 250.0 249.5 249.3 250.1 249.3 249.0 251.3 254.6 258.2 -263.3 -270.0 276
.4 280.0 279.6 271.5 274.7 276.7 279.0 262.3 262.5 -280.3 -279.7 279.2 278.7 277.9 277.
9 277.1 274.9 -274.9 276.1 283.2 283.0 277.3 272.6 271.5 -270.9 -267.9 -262.4 255.9 249.9
 245.5 244.2 244.4 242.4 240.3 241.0 242.9 243.5 243.4 -243.9 -244.5 -245.0 -245.4 -245.5
-245.4 -245.4 -245.4 -246.2 246.6 247.3 247.5 248.0 248.2 248.5 249.0 249.4 249.5 249.7
250.0 249.8 249.1 247.1 246.6 250.6 257.3 262.4 -268.0 -274.9 -282.4 287.4 286.1 281.9 2
80.0 280.1 281.7 283.0 283.4 -281.5 -281.9 282.0 282.7 281.5 279.9 279.5 280.6 -285.7 29
2.6 294.1 292.5 290.1 288.3 284.8 -278.4 -272.1 -265.1 256.5 254.4 249.7 245.8 243.6 241
.1 238.3 238.3 241.4 242.0 -242.7 -243.2 -244.3 -244.9 -245.3 -245.6 -245.8 -246.0 -245.6 243.
0 247.5 248.1 247.5 248.1 248.7 249.1 249.1 249.0 248.9 249.3 250.4 250.1 248.2 246.2
 247.1 253.4 260.1 265.8 272.0 -279.0 -287.1 293.5 292.7 287.2 283.9 283.2 283.6 284.0
-283.8 283.4 -284.0 286.5 289.4 289.7 289.4 290.2 290.6 -291.3 291.4 288.4 284.9 283.5
284.7 284.6 -279.0 -272.9 267.5 261.0 259.4 252.3 246.4 243.6 241.0 238.3 236.9 238.5 2
40.9 -240.2 -242.1 -243.9 -244.7 -245.2 -246.5 -246.1 246.4 245.9 246.8

***** JOB CODE.
SAVE IN 149
$EXEC TPLIST 02

INPUT PARAMETERS ARE: 42 TL=1 1

 TAPE NO.   1              FILE NO.   1
 RECORD   1                LENGTH   9300
          0      [illegible]          0          0          [illegible]

                                                                  -251.5 -241.5  246.0 -247
.5 254.1 236.7 -244.4 244.9 -243.5 -245.2 -245.1 -244.8 -242.7 -241.8 243.0 245.3 245.3 243.
4 240.1 241.0 238.9 235.5 233.0 233.7 -242.7 -242.9 -243.1 -243.3 -243.5 237.6 237.0 238.1
 233.0 230.6 231.1 231.9 231.6 239.6 239.5 -243.3 -243.1 -242.9 -242.7 -242.5 -242.3 239.5
 242.7 244.6 242.3 241.3 232.9 236.7 239.4 237.0 225.1 247.7 240.6 246.8 231.3 223.6 -
248.4 265.1 245.3 -251.1 -251.9 253.9 262.9 -251.7 248.0 -248.3 250.0 -249.0 248.2 249.5 -2
48.2 -245.9 -245.3 -244.9 -244.6 -244.4 -244.6 245.1 -245.4 244.7 243.7 243.4 243.3 241.7 23
9.4 239.9 240.1 -242.4 -243.6 -243.5 -243.7 -242.3 240.0 239.8 239.0 238.1 234.9 231.4 229
.2 228.2 230.6 -236.5 -241.5 -243.4 -243.8 -243.8 -243.4 -242.2 241.9 243.3 243.1 239.8 -237.
9 237.0 233.1 228.6 223.6 230.1 241.1 246.1 243.1 238.3 238.6 242.0 247.2 -251.7 252.8
 254.0 -252.4 260.0 255.2 -249.5 245.8 -248.1 247.5 250.7 253.1 250.0 -246.9 -245.8 -245.1
-245.1 -245.4 -246.1 -246.9 246.7 243.8 245.5 245.5 245.4 245.0 243.6 242.9 243.6 -244.4 -
244.6 -244.3 -244.2 -243.4 241.9 240.2 239.8 240.0 239.4 237.1 233.5 226.3 227.0 -234.1 -2
41.3 -243.6 -244.2 -244.6 244.6 243.8 242.2 243.9 243.1 239.4 236.8 234.4 228.9 222.2 22
0.6 229.9 242.0 245.3 -242.2 236.7 234.1 235.2 -239.1 244.2 248.0 -252.2 254.3 -251.9 -252
.5 249.5 -248.7 247.7 249.1 254.1 255.8 252.4 249.0 -247.1 -246.0 -246.0 -246.7 -247.7 -248.
5 248.1 [illegible]
```