

DATA SET CATALOG # 168

EXPLORER 33

HR AVG 66-058A-06A

3 MIN AVG 66-058A-06B

HR AVG WITHOUT ZEROS 66-058A-06D

EXPLORER 35

HR AVG 67-070A-06A

3 MIN AVG 67-070A-06B

HR AVG WITHOUT ZEROS 67-070A-06D

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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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

SPHE 00742

IMP-D

HOURLY AVERAGE INT PLASMA PARAMETERS-BLOCK BCD

66-058A-06A

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY IT CONTAINED ONE 7-TRACK, 556 BPI TAPE WRITTEN IN BCD. THERE IS ONE RESTORED TAPE WRITTEN IN ASCII. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPE WAS CREATED ON AN IBM 360 COMPUTER AND WAS RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBER ALONG WITH THE CORRESPONDING D NUMBER AND TIME SPAN IS AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR005209	DS005209	D007037	1	07/01/66 - 09/30/69

SPHE 00741

IMP-D

3-MIN INT PLASMA PARAM-BLOCK BCD

66-058A-06B

This data set has been restored. There were originally two 9-track, 1600 BPI tapes written in EBCDIC. There is one restored tape. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The original tapes were created on an IBM 360 computer and the restored tapes were created on an IBM 9021 computer. The DR and DS numbers along with the corresponding D numbers are as follows:

DR#	DS#	D#	FILES	TIME SPAN
-----	-----	-----	-----	-----
DR004314	DS004314	D007038	1	07/06/66 - 09/23/69
		D023901	2	02/23/70 - 10/14/71

SPHE 00025

IMP-E

HR AVG INT PLASMA PARAM-BLOCK

67-070A-06A

This data set has been restored. There was originally one 7-track, 556 BPI tape written in BCD. There is one restored tape written in ASCII. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The original tape was created on a 7094 computer and the restored tape was created on an IBM 9021 computer. The DR and DS numbers along with the corresponding D number are as follows:

DR#	DS#	D#	FILES	TIME SPAN
-----	-----	-----	-----	-----
DR004636	DS004636	D006932	1	07/14/67 - 07/25/68

SPHE 00727

IMP-E

3-MIN INT PLASMA-PARAM-BLOCK BCD

67-070A-06B

This data set has been restored. There was originally one 9-track, 1600 BPI tape written in EBCDIC. There is one restored tape. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The original tape was created on an IBM 360 computer and the restored tape was created on an IBM 9021 computer. The DR and DS numbers along with the corresponding D number are as follows:

DR#	DS#	D#	FILES	TIME SPAN
-----	-----	-----	-----	-----
DR004315	DS004315	D006933	1	07/25/67 - 07/03/68

EXPLORER 33, 35
3 MINUTE INTERPLANETARY PLASMA PARAMETERS

These tapes were created on an IBM 360. They are 9-track with 1 file each.
The data is stored at 1600 BPI in EBCDIC.

66-058A-06B (EXPLORER 33)

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-07038	C-05461	07/06/66 - 09/23/69
D-23901	C-17940	02/23/70 - 10/14/71

67-070A-06B (EXPLORER 35)

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-06933	C-05464	07/25/67 - 07/03/68

66-058A-06B
67-070A-06B

DETAILED DATA AND TAPE DESCRIPTION

There are three tapes available for 3 minute averages. The tapes have been converted to 9 track, ~~1600~~ BPI, in EBCDIC, fixed block format. The block size is 1000 bytes, and the logical record length is 100 bytes. Each logical record contains one solar wind measurement in the format shown below. The DD parameters necessary to read the tapes are as follows:

UNIT=9TRACK, LABEL=(,NL),DCB=(DEN=3,RECFM=FB,
LRECL=100,BLKSIZE=1000)

DETAILED DATA RECORD FORMAT

<u>Character</u>	<u>Format</u>	<u>Description</u>
1-2	12	Year (66-69)
3-11	F9.5	Decimal day of year, including fractional part (0.0 - 365.0, January 1, 1200 UT is decimal day 0.5)
12-15	A4	Month (JAN-DEC)
16-17	I2	Calendar day of month
18-21	I4	Universal time of day (000-2400)
22-27	I6	Sequence number, a satellite counter
28-32	F5.1	Density (no./cm ³)
33-35	I3	Aberrated bulk velocity (km/sec)
36-41	F6.1	Aberrated longitude of flow (see note)
42-47	F6.1	Aberrated latitude of flow (see note)
48-50	I3	Thermal speed (km/sec)
51-56	F6.1	Spacecraft coordinate flow angles, not normally used

Note: This is the solar ecliptic longitude/latitude of the direction from which the flow was coming.

<u>Character</u>	<u>Format</u>	<u>Description</u>
63-68	F6.1	True longitude of flow (see note)
69-74	F6.1	True latitude of flow (see note)
75-80	I6	True velocity of flow (see note)
81-86	F6.1	Solar ecliptic longitude of spin axis
87-92	F6.1	Solar ecliptic latitude of spin axis
93-100	8X	

Note: 30 km/sec aberration removed.

REQ. AGENT
CMP

RAND #
VO

ACQ. AGENT

EXPLORER 33, 35
HOURLY AVERAGE INTERPLANETARY PLASMA PARAMETERS

66-058A-06D and 66-070A-06D were created on an IBM 7094; the rest on an IBM 360. They are 7-track tapes with 1 file each. The data is stored at 556 BPI in BCD.

66-058A-06A (EXPLORER 33)

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-07037	C-05460	07/01/66 - 09/30/69

66-058A-06D (EXPLORER 33) With zero data removed

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-08077	C-05891	07/06/66 - 09/23/69

67-070A-06A (EXPLORER 35)

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-06932	C-05463	07/14/67 - 07/25/68

67-070A-06D (EXPLORER 35)

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-08078	C-05778	07/25/67 - 07/03/68

EBCDIC LIST OF cn1110

06-0587-06B

DR004314

FILE 1 RECORD 1 1000 BYTES

66186.33388JUL 6 801 48642 5.5369 -2.0 -4.1 32 5.3 -36.4 2.7 -4.1 369 125.0 -4.0 66186.33577JUL 6 804 48644 6.4
374 -4.7 -3.7 37 5.3 -39.1 -0.1 -3.7 372 125.0 -4.0 66186.34145JUL 6 812 48650 5.6385 -3.9 -3.8 27 5.3 -38.3
0.6 -3.8 384 125.0 -4.0 66186.35471JUL 6 831 48664 5.6383 -5.0 -3.7 32 5.3 -39.4 -0.5 -3.7 381 125.0 -4.0
66186.35660JUL 6 834 48666 5.2394 -4.4 -3.8 23 5.3 -38.8 -0.0 -3.8 392 125.0 -4.0 66186.36226JUL 6 842 48672
5.8368 -2.4 -6.5 32 8.3 -36.4 2.3 -6.5 367 125.0 -4.0 66186.36417JUL 6 844 48674 5.5391 -3.7 -3.9 24 5.3 -38
.1 0.7 -3.9 390 125.0 -4.0 66186.36606JUL 6 847 48676 6.7384 -4.7 -1.1 33 2.0 -39.4 -0.2 -1.2 382 124.9 -4.0
66186.36986JUL 6 853 48680 5.4377 -1.9 -4.1 32 5.3 -36.3 2.6 -4.1 377 124.9 -4.0 66186.37175JUL 6 855 48
682 5.1389 -4.3 -3.8 21 5.3 -38.7 0.1 -3.8 387 124.9 -4.0

EBCDIC LIST OF cn1110

FILE 1 RECORD 8126 800 BYTES

69265.98389SEP 232337290263 5.9410 -13.1 -12.4 22 9.9 12.1 -8.9 -12.6 404 62.1 9.8 69265.98584SEP 232340290265 5.6
413 -12.1 -9.3 24 7.0 13.8 -7.9 -9.4 407 62.1 9.8 69265.98755SEP 232342290267 5.0409 -13.9 -6.5 24 3.8 12.6
-9.7 -6.6 402 62.1 9.8 69265.98975SEP 232345290269 5.3407 -15.5 -6.8 24 3.8 11.0 -11.3 -6.9 400 62.1 9.8
69265.99341SEP 232351290273 5.0407 -14.4 -3.8 26 1.0 12.6 -10.3 -3.8 400 62.1 9.8 69265.99512SEP 232353290275
5.2410 -12.3 -6.1 25 3.8 14.2 -8.2 -6.2 404 62.1 9.8 69265.99683SEP 232356290277 5.2410 -11.0 -11.9 25 9.9 14
.2 -6.8 -12.0 405 62.1 9.8 69265.99927SEP 232359290279 4.8408 -12.7 -6.2 24 3.8 13.8 -8.5 -6.3 402 62.1 9.8

EBCDIC LIST OF cn1110

FILE 2 RECORD 1 1000 BYTES

70 53.01653FEB 23 24450826 5.9310 -3.8 11.3 32 10.9 12.9 1.8 11.3 309 277.9 7.9 70 53.01842FEB 23 27450828 5.5
310 -5.1 13.4 30 13.0 14.3 0.7 13.5 308 277.9 7.9 70 53.02219FEB 23 32450832 5.2307 -5.5 9.5 31 8.9 14.4
0.2 9.5 305 277.9 7.9 70 53.02408FEB 23 35450834 5.6300 -4.1 13.3 34 13.0 13.4 1.8 13.4 299 277.8 7.9
70 53.02599FEB 23 37450836 5.1309 -5.1 11.4 28 10.9 14.2 0.5 11.4 307 277.8 7.9 70 53.03354FEB 23 48450844
5.2303 -4.2 11.3 33 10.9 13.3 1.6 11.3 302 277.8 7.9 70 53.03734FEB 23 54450848 4.8311 -3.8 11.3 25 10.9 12
.9 1.8 11.3 310 277.8 7.9 70 53.03925FEB 23 57450850 5.5302 -6.9 9.6 32 8.9 15.7 -1.1 9.7 299 277.8 7.9
70 53.04114FEB 23 59450852 5.0313 -6.1 13.5 25 13.0 15.3 -0.4 13.6 311 277.8 7.9 70 53.04303FEB 23 102450
854 5.4304 -6.6 13.5 33 13.0 15.8 -0.8 13.6 302 277.8 7.9

EBCDIC LIST OF cn1110

FILE 2 RECORD 4409 600 BYTES

71286.096440CT 14 219648183 3.1438 -2.4 -7.9 21 7.2 25.3 1.5 -7.9 437 57.8 17.7 71286.098390CT 14 222648185 3.1
438 -2.4 -7.9 21 7.2 25.3 1.5 -7.9 437 57.8 17.7 71286.100100CT 14 224648187 3.1436 -4.5 -2.9 23 1.2 25.3
-0.6 -2.9 434 57.8 17.7 71286.124760CT 14 260648213 3.2431 -5.0 -5.9 20 4.1 23.7 -1.0 -5.9 429 57.8 17.7
71286.126710CT 14 302648215 3.1437 -3.6 -5.3 20 4.1 25.3 0.4 -5.3 436 57.8 17.7 71286.128420CT 14 305648217
3.2434 -3.9 -8.5 19 7.2 23.7 0.1 -8.5 433 57.8 17.7

EBCDIC LIST OF cnl1111

01-0104-0015
DR004315

FILE 1 RECORD 1 1000 BYTES

67205.57639JUL 251350 20561 14.0417 4.9 18.8 76 -5.9 -18.8 9.2 18.6 420 96.0 -87.0 67205.58208JUL 251358 20567 4.4
456 -6.1 35.5 34 4.0 -36.1 -1.5 35.7 454 96.0 -87.0 67205.58397JUL 251401 20569 3.3449 -2.7 33.0 35 0.8 -33.4
1.8 33.0 448 96.0 -87.0 67205.58588JUL 251404 20571 3.4417 -5.6 28.4 32 4.0 -29.0 -0.9 28.6 415 96.0 -87.0
67205.58777JUL 251406 20573 4.2441 -6.1 35.3 41 4.0 -35.9 -1.3 35.5 439 96.0 -87.0 67205.58965JUL 251409 20575
4.0450 -6.1 34.7 32 4.0 -35.3 -1.4 34.9 448 96.0 -87.0 67205.60669JUL 251434 20593 5.2420 -9.2 30.7 44 7.5 -31
.4 -4.5 30.9 416 96.0 -87.0 67205.60860JUL 251436 20595 5.2466 -9.8 38.7 40 7.5 -39.5 -5.1 39.0 462 96.0 -87.0
67205.61240JUL 251442 20599 4.3457 -3.1 38.2 38 0.8 -38.6 1.6 38.2 456 96.0 -87.0 67205.61617JUL 251447 20
603 5.5431 -2.7 33.0 45 0.8 -33.4 2.0 33.0 430 96.0 -87.0

EBCDIC LIST OF cnl1111

FILE 1 RECORD 7839 400 BYTES

68184.99323JUL 32350384315 2.7469 2.5 -1.5 30 -2.6 -2.9 6.1 -1.5 471 229.4 -83.6 68184.99512JUL 32353384317 2.2
481 -3.4 -0.6 29 3.3 -3.3 0.2 -0.6 480 229.4 -83.6 68184.99701JUL 32356384319 2.2474 -0.3 -0.7 29 0.2 -3.4
3.4 -0.7 474 229.4 -83.6 68184.99889JUL 32358384321 2.2483 -3.3 -0.5 31 3.3 -3.4 0.2 -0.5 482 229.4 -83.6

EXPLORER 33, HR. AVG. INT. PLASMA PARAM

66-058A-06A

556 BPI, BCD, 7 track, 1 file, IBM 360

D-07037 C-05460 7/01/66 - 9/30/69

EXPLORER 33, 3 MIN. INT. PLASMA PARAM

66-058A-06B^d

556 BPI, BCD, 7 track, 1 file, IBM 360

D-07038 C-05461^d 7/06/66 - 9/23/69

EXPLORER 33, HR. AVG WITH ZERO DATA REMOVED

66-058A-06D

556 BPI, BCD, 7 track, 1 file, IBM 7094

D-08077 C-05891 7/06/66 - 9/23/69

EXPLORER 35 HR. AVG. INTERPLAN. PLASMA PARAM.

67-070A-06A

556 BPI, BCD, 7 track, 1 file, IBM 360

D-06932 C-05463 7/14/67 - 7/25/68

EXPLORER 35, 3 MIN. INTERPLAN. PLASMA PARAM.

67-070A-06B^d

556 BPI, BCD, 7 track, 1 file, IBM 360

D-06933 C-05464^d 7/25/67 - 7/03/68

EXPLORER 35, HR AVG WITH ZERO DATA REMOVED

67-070A-06D

556 BPI, BCD, 7 track, 1 file, IBM 7094

D-08078

C-05778

7/25/67 - 7/03/68

TAPE FORMAT

The new hourly-average tapes are written in seven track, 556 BPI, BCD unlabeled, even parity. The physical record size is 84 characters and the logical record length is 84 characters. Each logical record contains one set of averaged plasma parameters in the format described below.

HOURLY AVERAGE DATA RECORD FORMAT WITH ZERO DATA REMOVED

<u>BCD CHARACTER</u>	<u>FORMAT</u>	<u>DESCRIPTION</u>
1- 2	I2	Spacecraft identification (33 or 35)
3- 5	I3	Number of solar wind measurements in the hourly average.
6-10	F5,0	Decimal day of the year (0,0 - 365,0, January 1 is day 0,0).
11-13	I3	Hour of the day (universal time) (1-24).
14-16	I3	Day of the month (1-31).
17-19	A3	Month name (Jan-Dec.).
20-21	I2	Year (66-60).
22-26	F5,0	Average thermal speed (km/sec).
27-31	F5,1	Average number density (no./c.c.).
32-36	F5,0	Average flow speed with aberration removed (km/sec)
37-46	2F5,1	Average solar ecliptic longitude and latitude respectively, of the direction <u>from which</u> the unaberrated flow was coming. (degrees)
47-71	F5,0	Standard deviations of the above fine parameters, in the save order, units, and
	F5,1	format.
	F5,0	
	2F5,1	
72-74	I3	Same as item 2
75-80	F6,0	Solar rotation number
81-84	I4	Blanks

B10937

Explorer 33 and 35 MIT Solar Wind Plasma Data:

July 1966 to September 1969*

Written by

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E. Clapp

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* Copy prepared at National Space Science Data Center

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1. GENERAL INTRODUCTION

The MIT Plasma Experiments on Explorer 33 and Explorer 35 have yielded large amounts of solar wind data. These data are now available from the National Space Science Data Center in the form of plots and on magnetic tape, both covering the same time period. This report gives a brief review of the method used to obtain the data, provides a description of the plasma parameters, and describes in detail the format of the plots and tapes available from the Data Center.

Hourly average plots of the data are included at the end of the report. From these plots, the availability and interest of the solar wind data for any period of time may be determined and the necessity of requesting more detailed data from the Data Center may be ascertained.

2. TIMES OF SOLAR WIND COVERAGE

Solar wind plasma data are available from the MIT Plasma Experiments on Explorer 33 and Explorer 35 for selected times between July 1966 and September 1969. Explorer 33 was launched on July 1, 1966, into earth orbit. Owing to the spin axis orientation of the spacecraft, data are available from this spacecraft during two periods of approximately 4 months each year. The spacecraft orbit is such that one of these two periods is spent in the tailward sheath. Thus most solar wind observations are from January to April of 1967 to 1969, although some data are available from the other period, which extends from July to October of 1966 to 1969. The spacecraft was tracked only 2 weeks in late February during this 4-month period in 1970.

Explorer 35 was launched on July 19, 1967, into lunar orbit and operated continuously for one year until the MIT instrument failed on about July 14, 1968. During each month of operation, solar wind coverage was interrupted for about one week by the passage of the moon through the magnetosheath and magnetotail. Also, no data are available during two daily one-hour periods when the spacecraft was in lunar optical shadow and during two daily one-hour periods when the spacecraft was in lunar radio shadow. All data influenced by the presence of the moon have been deleted from the set of solar wind measurements.

Using the unreduced data from both spacecraft, the times of all magnetopause and bow shock crossings have been determined. These crossing times, in turn, were used to eliminate all magnetosheath data from the current data set. Therefore, both the hourly averages and the detailed data represent measurements made ahead of the bow shock.

It should be noted that, owing to inherent limitations in the instruments and in the analysis program, plasma parameters cannot be derived when the solar wind velocity or thermal speed exceed certain limits. Parameters cannot be derived when the velocity is less than ~280 km/sec or greater than ~700 km/sec or when the thermal speed is less than ~15 km/sec.

3. PLASMA PARAMETER DERIVATION AND DESCRIPTION

A. Parameter Derivation

The MIT instruments on Explorer 33 and Explorer 35 measure the total flux, differential energy spectrum, and information concerning the direction of the solar wind once every 2.7 minutes. Plasma parameters (velocity, flow direction, density, and thermal speed) are derived from the measured spectra by first assuming that the velocity distribution function in the rest frame of the plasma is well represented by the function

$$f(w) = \frac{n}{(\pi w_0^2 \kappa)^{3/2}} \frac{\Gamma(\kappa+1)}{\Gamma(\kappa-1/2)} \left[\frac{1}{1 + \kappa^{-1}(w/w_0)^2} \right]^{\kappa+1}$$

where $w = |\vec{v} - \vec{v}_B|$, $\vec{v}$ is the particle velocity, $\vec{v}_B$ is the plasma bulk flow velocity, n is the number density, w_0 is the thermal speed, and $\kappa = 4$. This function is similar to the Maxwellian distribution function but includes a high-energy inverse power law tail.

This distribution function is next combined theoretically with the instrument response function to predict the response of the instrument to a wide variety of assumed incident flow conditions. By fitting the predicted currents to the three largest differential spectral measurements, the flow velocity, flow direction angles, and thermal speed are derived. The density is derived by scaling the calculated total flux to match the measured total flux. The general operation of the MIT type of plasma detector is given by Vasyliunas (1971), and the Explorer instruments are discussed in greater detail by Lyon et al. (1968) and Howe (1971).

B. Parameter Description

The flow direction is specified by two angles, ϕ and λ . The angles (ϕ, λ) are the solar elliptic longitude and latitude of the direction from which the wind flows. Therefore, ϕ is positive (negative) for flow from the east (west) of the sun, and λ is positive (negative) for flow from above (below) the solar elliptic plane. For example, flow from the typical aberration direction and in the ecliptic plane would have $\phi = -4^\circ$, $\lambda = 0^\circ$.

As described below, two sets of velocity vectors (speed and two angles) are supplied for the fine scale data. One velocity vector represents the actual measured velocity. The other is the true velocity vector with the aberration due to the earth's 30 km/sec orbital motion removed. For the hourly averages, the second (true) velocity magnitude and angles are used, and thus aberration has been removed from the hourly averaged parameters before averaging.

The thermal speed (W_0) is the most probable speed of the distribution function in the plasma rest frame and is related to the temperature of the plasma through the relation

$$1/2 M_p w_0^2 = kT$$

where M_p is the proton mass and k is the Boltzman constant. If W_0 is specified in km/sec and T in $^{\circ}K$, then

$$T (^{\circ}K) = 60.5 w_0^2 \text{ (km/sec)}$$

Two important points should be noticed. First, since the energy spectrum of the solar wind is measured only once every 2.7 minutes, then the finest time scale data available from the Explorer 33 and 35 instruments is one point every 2.7 minutes. In particular, these data do not represent an average of finer time scale data. Second, large changes in the solar wind flow such as the passage of an interplanetary shock wave during the measurement of an individual energy spectrum usually lead to the derivation of grossly incorrect plasma parameters from the spectrum. Therefore, care should be taken when using the one or two measurements made adjacent to or during the passage of a shock or discontinuity past the spacecraft.

4. HOURLY AVERAGES

A. Data Description

The hourly averages are formed for the solar wind velocity, flow direction angles (with aberration removed), number density, and thermal speed. For each hour, the standard deviation of each of these five parameters is also formed, in order to represent the parameter value spread within each hour. The averages and deviations are available on magnetic tape and as plots. The tape and plot formats are given in the following two sections.

B. Tape Format

The hourly average tapes are written in 7-track, 556-bpi, BCD, unlabeled, even parity, fixed block format. The block size is 1600 bytes, and the logical record length is 80 bytes. Each logical record contains one set of averaged plasma parameters in the format described below. The DD parameters necessary to read the tapes are as follows:

UNIT=TAPE7, LABEL=(,NL),

DCB=(DEN=1, TRTCH=ET, RECFM=FB, LRECL=80, BLKSIZE=1600)

HOURLY AVERAGE DATA RECORD FORMAT

<u>BCD Character</u>	<u>Format</u>	<u>Description</u>
1-2	I2	Spacecraft identification (33 or 35)
3-5	I3	Number of solar wind measurements in the hourly average
6-10	F5.0	Decimal day of the year (0.0 - 365.0, January 1 is day 0.0)
11-13	I3	Hour of the day (universal time) (1-24)
14-16	I3	Day of the month (1-31)
17-19	A3	Month name (JAN-DEC)
20-21	I2	Year (66-69)

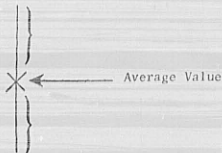
HOURLY AVERAGE DATA RECORD FORMAT (continued)

<u>BCD Character</u>	<u>Format</u>	<u>Description</u>
22-26	F5.0	Average thermal speed (km/sec)
27-31	F5.1	Average number density (no./cm ³)
32-36	F5.0	Average flow speed with aberration removed (km/sec)
37-46	2F5.1	Average solar ecliptic longitude and latitude, respectively, of the direction from which the unaberrated flow was coming (degrees)
47-71	F5.0 F5.1 F5.0 2F5.1	Standard deviation of the above five parameters, in the same order, units, and format
72-74	I3	Same as item 2
75-80	F6.0	Solar rotation number

C. Plot Format

The labels across the top of the plot indicate, in order, the spacecraft from which the data came, the solar rotation number (one solar rotation is plotted on each plot), the averaging interval (one hour), the date the plot was generated, and the region from which the data came (solar wind - all magnetosheath data were removed before averaging). The scale across the top of the plot indicates the day of the solar rotation.

For each plot, the hourly average is plotted as a symbol (+ for bulk velocity, $\bar{X}$ for density, and x for thermal speed), and the standard deviation (σ) of the plotted parameter for the hour is indicated by the vertical line through the symbol.



The three plotted parameters, from the top plot to the bottom, are most probable thermal speed (km/sec), proton number density (no./cm³), and bulk flow speed (km/sec). As mentioned above, if w_0 is given in km/sec and T in °K, then

$$T (^{\circ}\text{K}) = 60.5 w_0^2 \text{ (km/sec)}$$

A temperature scale is plotted at the extreme right end of the thermal speed plot. Note that the density scale is logarithmic and that the velocity scale does not start at zero.

The scale at the bottom of the plot gives the calendar day. The month and year of the first and last days of the plot are given at the left and right ends of the bottom of the plot.

5. DETAILED DATA TAPE DESCRIPTION

The detailed data are available on a time scale of approximately once every 2.7 minutes. The data tapes are written in 7-track, 556-bpi, BCD, unlabeled, even parity, fixed block format. The block size is 1000 bytes, and the logical record length is 100 bytes. Each logical record contains one solar wind measurement in the format shown below. There are two tapes available, one each for Explorer 33 and Explorer 35. The DD parameters necessary to read the tapes are as follows:

UNIT=TAPE7, LABEL=(,NL),DCB=(DEN=1, TRTCH=ET,RECFM=FB,
LRECL=100, BLKSIZE=1000)

DETAILED DATA RECORD FORMAT

<u>BCD Character</u>	<u>Format</u>	<u>Description</u>
1-2	I2	Year (66-69)
3-11	F9.5	Decimal day of year, including fractional part (0.0 - 365.0, January 1, 1200 UT is decimal day 0.5)
12-15	A4	Name of month (JAN-DEC)
16-17	I2	Calendar day of month (1-31)
18-21	I4	Universal time of day (0000-2400)
22-27	I6	Sequence number, a satellite counter
28-32	F5.1	Density (no./cm ³)
33-35	I3	Aberrated bulk velocity (km/sec)
36-41	F6.1	Aberrated longitude of flow (see Note)
42-47	F6.1	Aberrated latitude of flow (see Note)

Note: This is the solar ecliptic longitude (latitude) of the direction from which the flow was coming.

DETAILED DATA RECORD FORMAT (continued)

<u>BCD Character</u>	<u>Format</u>	<u>Description</u>
48-50	I3	Thermal speed (km/sec)
51-56	F6.1	Spacecraft coordinate flow angles, not normally used
65-68	F6.1	True longitude of flow
69-74	F6.1	True latitude of flow
75-80	I6	True velocity of flow
81-86	F6.1	Solar ecliptic longitude of spin axis
87-92	F6.1	Solar ecliptic latitude of spin axis
93-100	8X	

6. REFERENCES

Howe, H., "Explorer 33 and Explorer 35 plasma observations of the interaction region between the solar wind and magnetic field of the earth," Ph.D Thesis, MIT, June 1971.

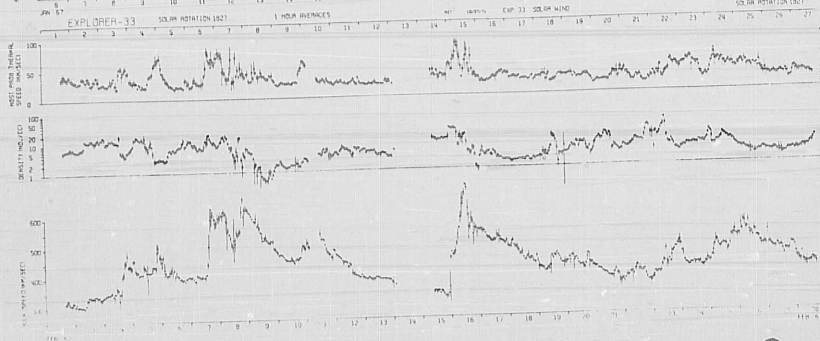
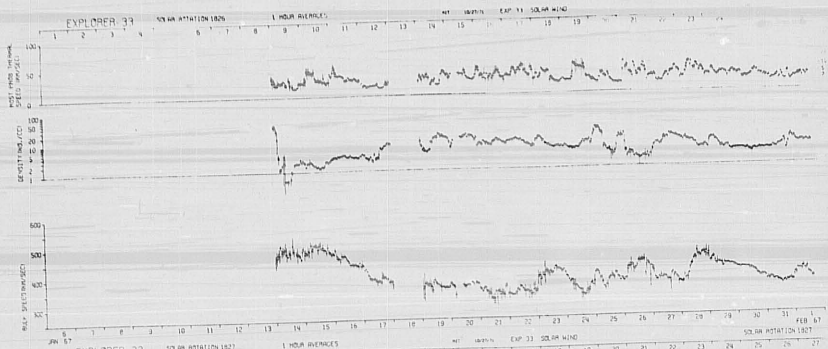
Lyon, E., A. Egidi, G. Pizzella, H. Bridge, J. Binsack, R. Baker, and R. Butler, "Plasma measurements on Explorer 33 (I) interplanetary region," Space Res. VII, 99, 1968.

Vasyliunas, V. M., "Deep space plasma measurements," in Methods of Experimental Physics, Volume 9B (Plasma Physics), R. H. Lovberg, ed., Academic Press, New York, 1971.

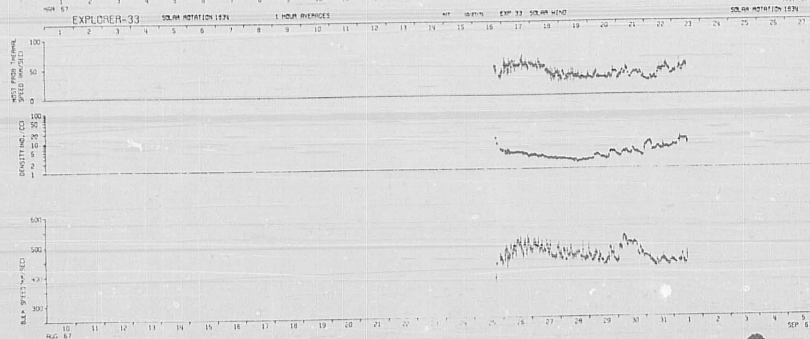
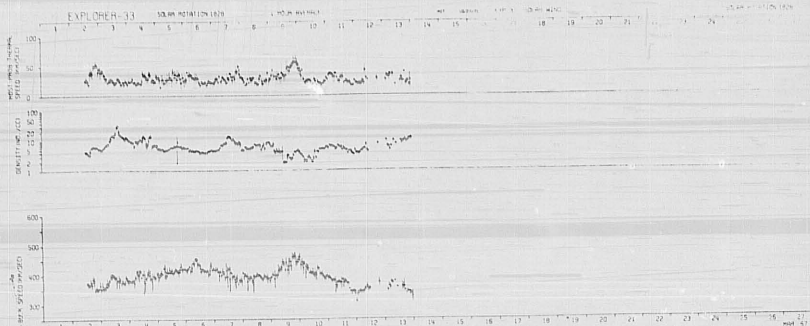
7. HOURLY AVERAGE DATA PLOTS

The hourly average data plots for Explorer 35 and Explorer 33 are included in this section. The plot format is described in Section 4C. The solar rotations during which data are available and the satellites from which the measurements were made are as follows.

<u>Solar Rotation #</u>	<u>First Day</u>	<u>Last Day</u>	<u>Satellite</u>
1819	July 1, 1966	July 27, 1966	33
1820	July 28, 1966	August 23, 1966	33
1826	January 6, 1967	February 1, 1967	33
1827	February 2, 1967	February 28, 1967	33
1828	March 1, 1967	March 27, 1967	33
1833	July 14, 1967	August 9, 1967	35
1834	August 10, 1967	September 5, 1967	33,35
1835	September 6, 1967	October 2, 1967	33,35
1836	October 3, 1967	October 29, 1967	35
1837	October 30, 1967	November 25, 1967	35
1838	November 26, 1967	December 22, 1967	35
1839	December 23, 1967	January 18, 1968	33,35
1840	January 19, 1968	February 14, 1968	33,35
1841	February 15, 1968	March 12, 1968	33,35
1842	March 13, 1968	April 8, 1968	33,35
1843	April 9, 1968	May 5, 1968	35
1844	May 6, 1968	June 1, 1968	35
1845	June 2, 1968	June 28, 1968	35
1846	June 29, 1968	July 25, 1968	35
1847	July 26, 1968	August 21, 1968	33
1848	August 22, 1968	September 17, 1968	33
1849	September 18, 1968	October 14, 1968	33
1853	January 4, 1969	January 30, 1969	33
1854	January 31, 1969	February 26, 1969	33
1855	February 27, 1969	March 25, 1969	33
1856	March 26, 1969	April 21, 1969	33
1860	July 12, 1969	August 7, 1969	33
1861	August 8, 1969	September 3, 1969	33
1862	September 4, 1969	September 30, 1969	33

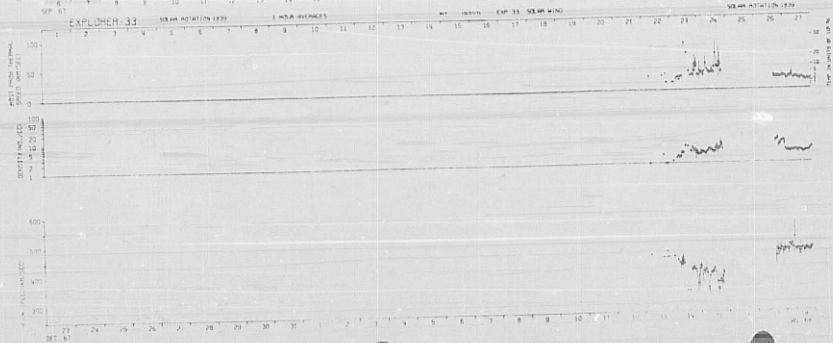
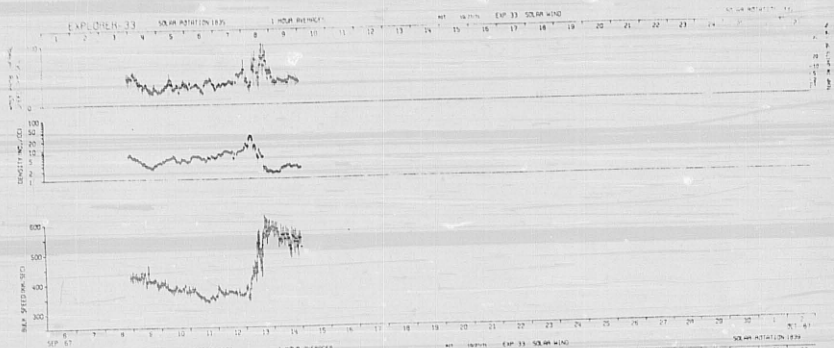


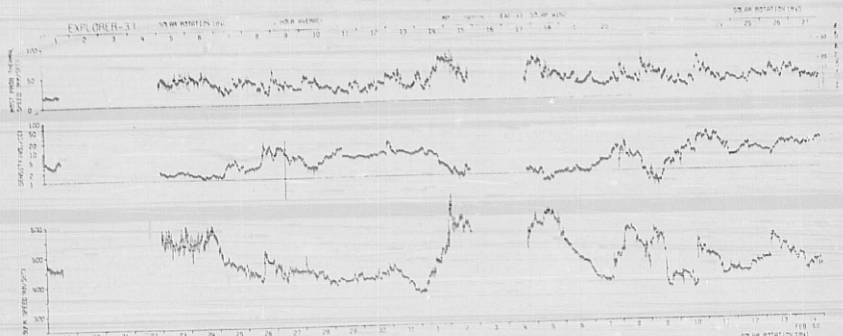
TIME IN UNITS OF 10

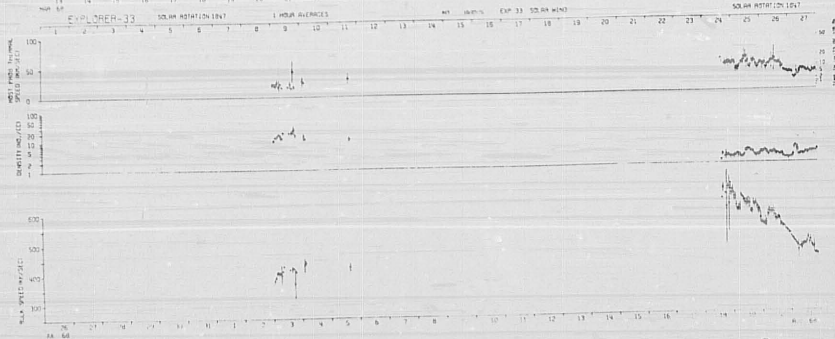
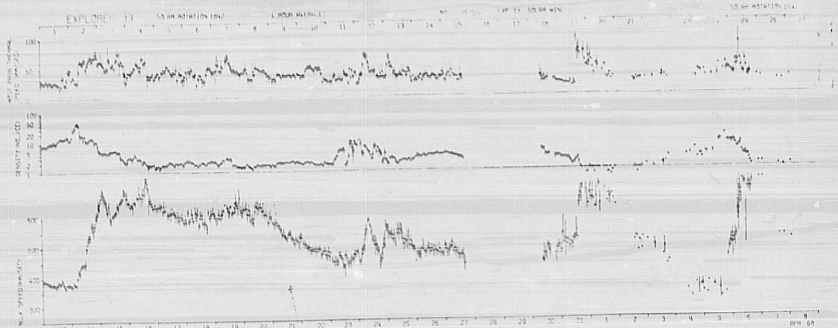


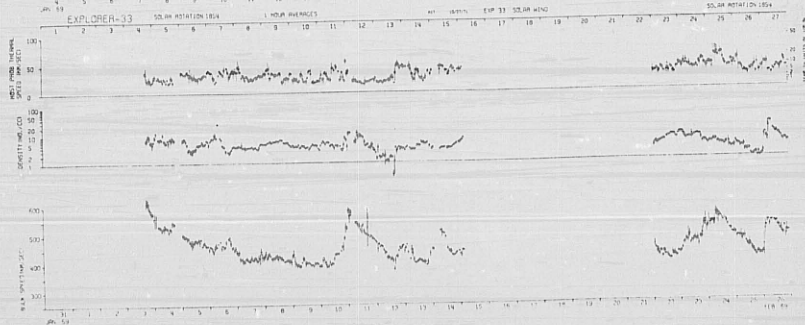
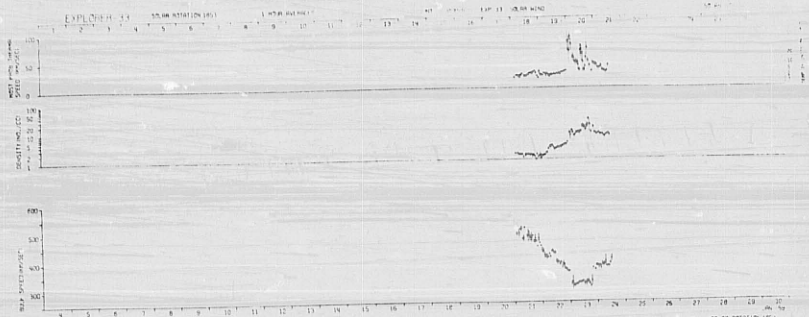
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2
10
5
1

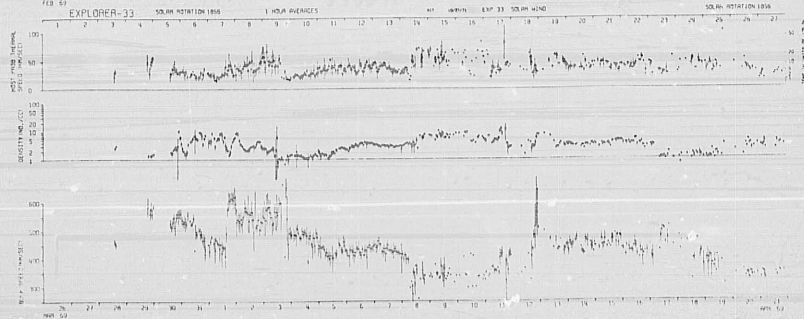
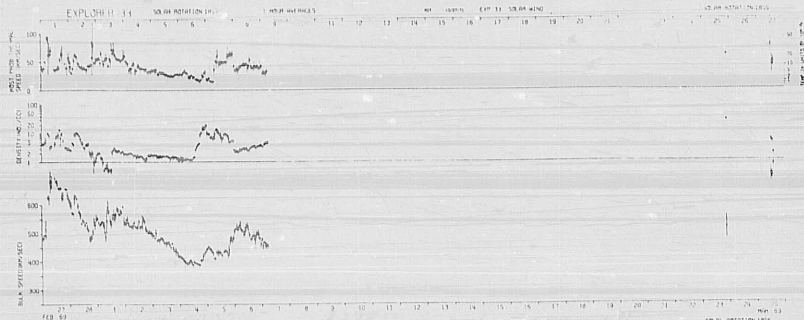
SEP 07

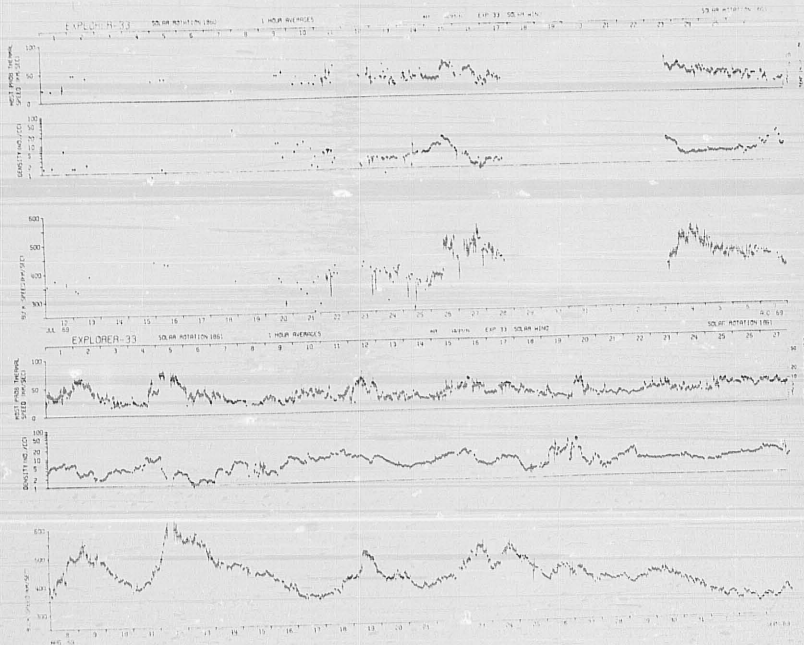


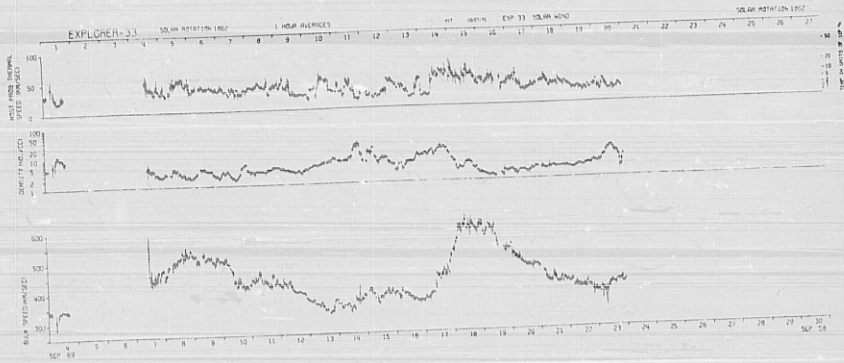


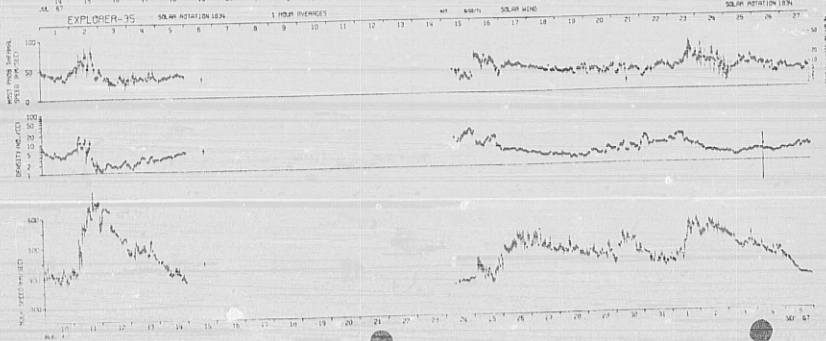


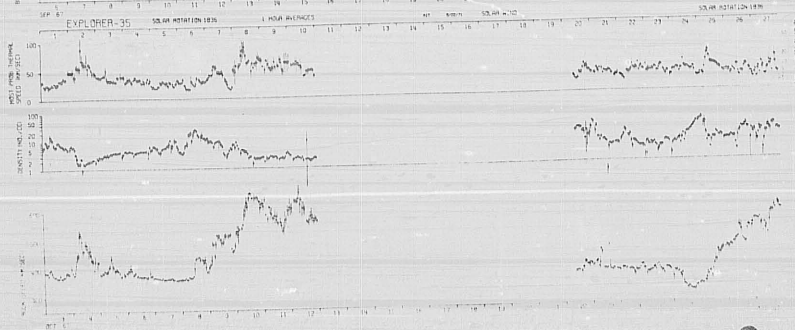
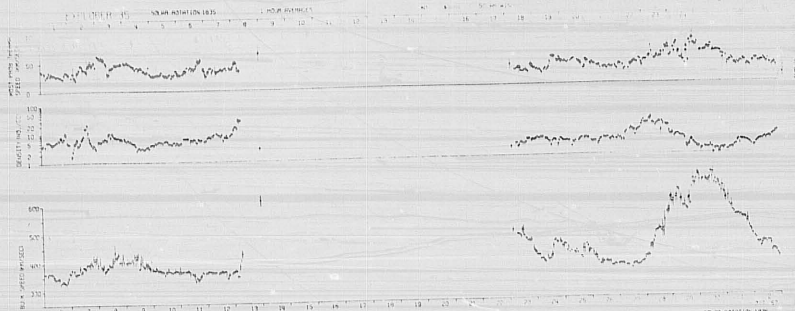


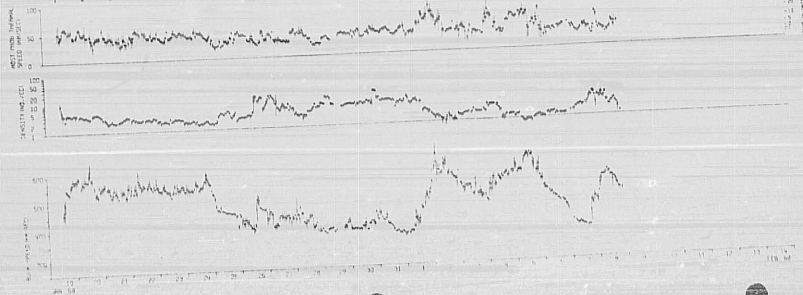
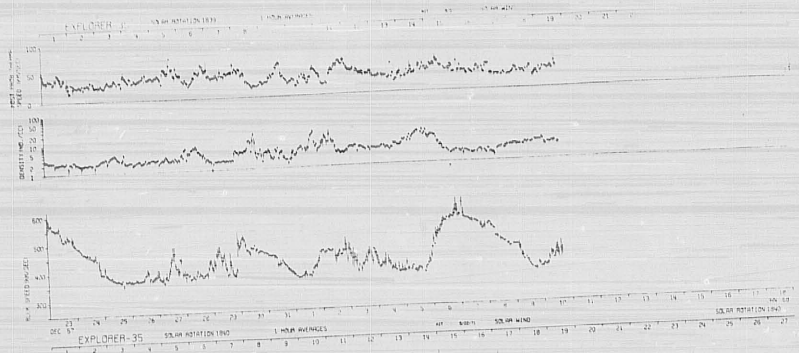


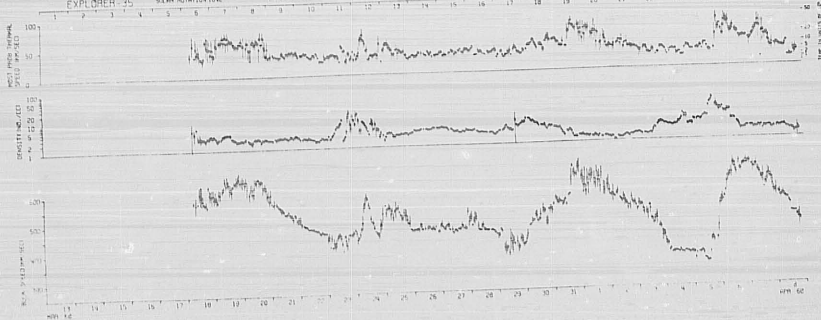
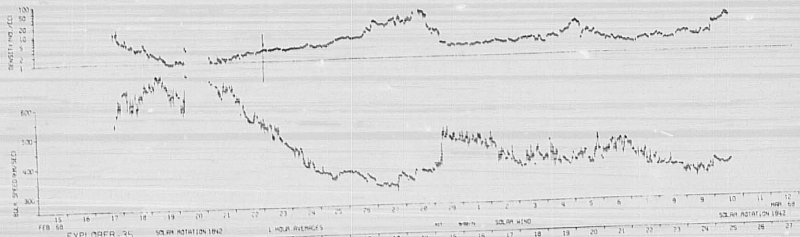


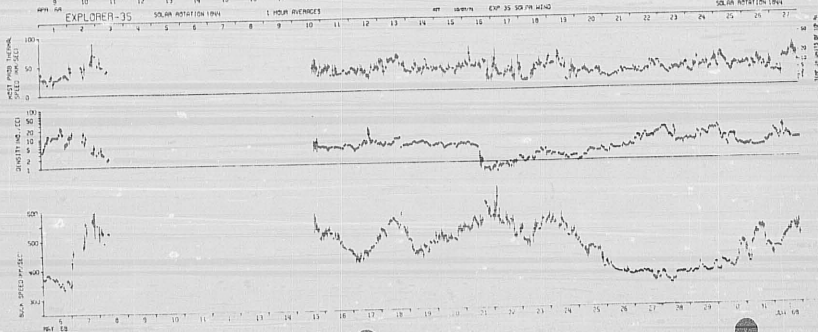
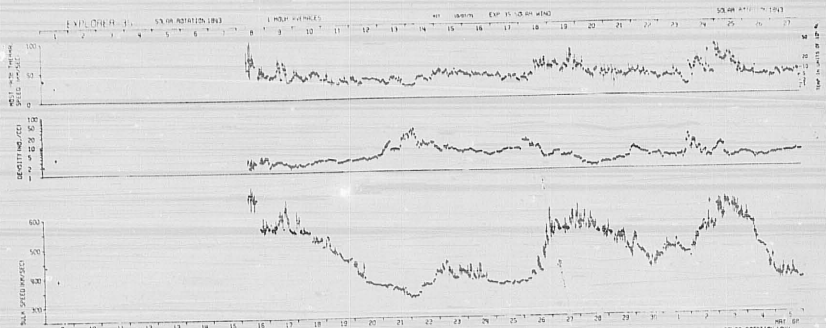


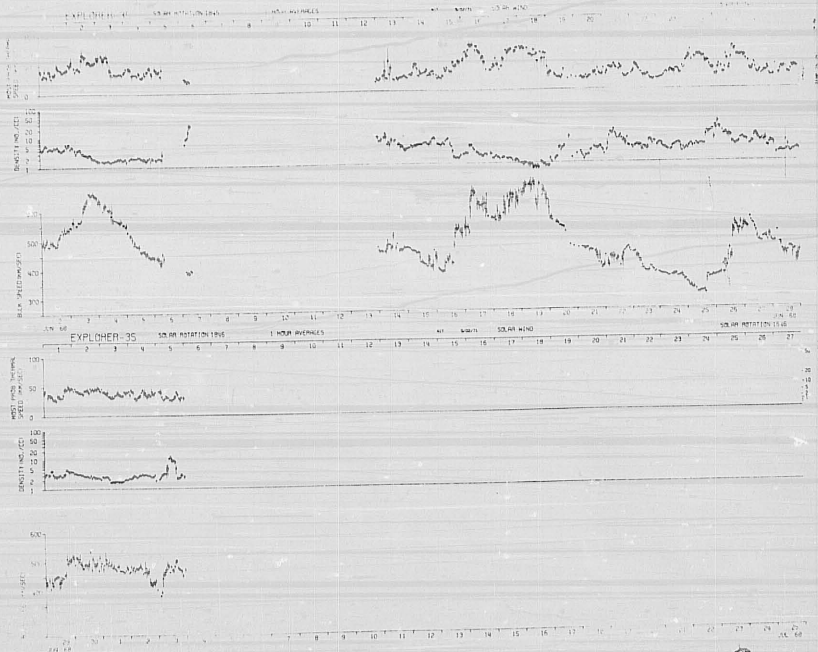












66186.33388JUL	6 801	48642	5.5369	-2.0	-4.1	32	5.3	-30.4	2.7	-4.1	359	125.0	-4.0
66186.33877JUL	6 802	48644	5.4174	-4.7	-3.7	37	5.3	-39.1	-0.1	-3.7	372	125.0	-4.0
66186.34145JUL	6 812	48550	5.4385	-3.9	-3.8	27	5.3	-38.3	0.6	-3.8	394	125.0	-4.0
66186.35671JUL	6 931	48664	5.4483	-5.0	-3.7	32	5.3	-39.4	-0.5	-3.7	381	125.0	-4.0
66186.35665JUL	6 834	48666	5.2394	-4.4	-3.8	23	5.3	-38.8	-0.0	-3.8	392	125.0	-4.0
66186.36226JUL	6 842	48672	5.4365	-2.4	-6.5	32	8.3	-30.4	2.3	-6.5	367	125.0	-4.0
66186.36417JUL	6 844	48674	5.5301	-3.7	-3.0	24	5.3	-38.1	2.7	-3.0	390	125.0	-4.0
66186.36505JUL	6 847	48676	5.7184	-4.7	-1.1	33	2.0	-39.4	-1.2	-1.1	382	124.9	-4.0
66186.36986JUL	6 853	48680	5.4377	-1.0	-4.1	32	5.3	-36.3	2.6	-4.1	377	124.9	-4.0
66186.37175JUL	6 855	48682	5.1389	-4.3	-3.8	21	5.3	-38.7	0.1	-3.8	387	124.9	-4.0

REC 1. LENGTH 1000

EXPL 33, 3 min 20.5

D-7038

66186.37552JUL	6 901	48686	5.5390	-3.0	-1.3	33	2.0	-38.0	1.1	-1.3	389	124.9	-4.0
66186.37743JUL	6 903	48688	5.6384	-5.8	-3.7	32	5.3	-39.4	-1.5	-3.7	382	124.9	-4.0
66186.38309JUL	6 912	48694	5.5175	-0.5	-1.6	35	2.0	-35.2	4.0	-1.6	375	124.9	-4.0
66186.38501JUL	6 914	48696	5.6383	-5.0	-3.7	32	5.3	-39.4	-0.6	-3.7	381	124.9	-4.0
66186.39258JUL	6 925	48704	5.4387	-6.8	-3.7	30	5.3	-39.2	-1.0	-3.7	385	124.9	-4.0
66186.39635JUL	6 931	48708	5.6385	1.1	-1.8	30	2.0	-33.6	5.0	-1.8	345	124.9	-4.0
66186.39824JUL	6 933	48710	4.4374	1.4	-4.6	19	5.3	-32.9	5.0	-4.6	375	124.9	-4.0
66186.40015JUL	6 936	48712	7.0186	-6.0	-3.7	32	5.3	-39.4	-0.6	-3.7	384	124.9	-4.0
66186.40770JUL	6 947	48720	5.6391	-5.4	-3.7	36	5.3	-38.9	-3.1	-3.8	389	124.9	-4.0
66186.40961JUL	5 950	48722	5.4395	-3.6	-3.9	31	5.3	-37.9	3.0	-3.9	399	124.9	-4.0

REC 2. LENGTH 1000

66058A-06B

66186.41155JUL	6 959	48724	5.4177	-4.4	-3.8	33	5.3	-38.7	0.2	-3.8	375	124.9	-4.0
66186.41361JUL	6 955	48726	5.7455	-1.0	0.6	32	5.3	-33.4	5.9	0.6	356	124.9	-4.0
66186.42667JUL	61014	48740	6.4358	-0.1	-4.4	14	5.3	-34.4	4.7	-4.4	359	124.9	-4.0
66186.42856JUL	61017	48742	5.8379	-3.6	-1.3	26	2.0	-33.2	1.0	-1.3	374	124.9	-4.0
66186.43044JUL	61020	48744	6.8358	-0.2	-6.9	29	8.3	-34.1	4.6	-6.9	369	124.9	-4.0
66186.43802JUL	61031	48750	5.0363	-1.9	-4.1	29	5.3	-36.2	2.3	-4.1	361	124.9	-4.0
66186.43993JUL	61033	48754	4.8384	-1.4	-4.2	20	5.3	-35.7	3.0	-4.2	364	124.9	-4.0
66186.44788JUL	61044	48762	5.5385	-1.5	-1.5	28	2.0	-35.1	3.0	-1.5	385	124.9	-4.0
66186.45074JUL	61103	48775	5.6391	-4.9	-3.7	39	5.3	-39.2	-2.5	-3.7	389	124.9	-4.0
66186.447020JUL	61117	48786	6.0365	-4.5	-3.8	35	5.3	-38.8	-0.1	-3.8	393	124.8	-4.0

REC 3. LENGTH 1000

66186.51375JUL	61220	48832	4.2370	-2.4	-1.6	19	2.0	-37.0	2.2	-1.6	369	124.8	-4.0
66186.52135JUL	61231	48840	4.0379	-5.9	-3.7	41	5.3	-39.4	-0.5	-3.7	377	124.8	-4.0
66186.52324JUL	61233	48842	3.6375	0.3	-4.4	17	5.3	-33.9	5.0	-4.4	371	124.8	-4.0
66186.52611JUL	61236	48842	4.6382	-5.4	-2.6	34	5.3	-39.5	-0.9	-2.6	380	124.8	-4.0
66186.52777JUL	61248	48922	3.7367	-2.2	-1.8	35	2.0	-36.7	2.5	-1.8	357	124.7	-4.0
66186.53027JUL	61428	48926	3.7367	-0.9	-7.1	36	8.3	-32.8	5.0	-7.1	338	124.7	-4.0
66186.56198JUL	61453	48948	4.0337	-0.9	-7.1	36	8.3	-32.8	5.0	-7.1	338	124.7	-4.0
66186.56277JUL	61455	48948	3.8369	-3.1	-0.0	32	5.3	-37.2	1.6	-0.0	368	124.7	-4.0
66186.56277JUL	61455	48948	4.0337	-0.9	-7.1	36	8.3	-32.8	5.0	-7.1	338	124.7	-4.0
66186.62549JUL	61891	48950	4.1373	-5.5	-3.6	33	5.3	-39.5	-0.8	-3.6	371	124.7	-4.0
66186.62549JUL	61893	48932	4.0339	-0.4	-1.6	34	2.0	-34.8	4.6	-1.6	340	124.6	-4.0
66186.70316JUL	61655	49034	3.8387	-3.2	-4.0	32	5.3	-37.3	1.6	-4.0	356	124.6	-4.0

REC 4. LENGTH 1000

66186.70508JUL	61655	49034	3.8387	-3.2	-4.0	32	5.3	-37.3	1.6	-4.0	356	124.6	-4.0
66186.71451JUL	61709	49044	3.7358	-4.2	-1.2	30	2.0	-38.5	0.6	-1.2	357	124.6	-4.0
66186.72397JUL	61723	49054	3.4767	-4.7	-3.7	32	5.3	-38.7	0.0	-3.8	365	124.6	-4.0
66186.73534JUL	61735	49066	3.5761	-5.6	-1.1	30	2.0	-39.6	-0.3	-1.1	350	124.6	-4.0
66186.74569JUL	61755	49078	3.3359	-4.3	-1.2	31	2.0	-38.5	0.4	-1.2	367	124.6	-4.0
66186.75606JUL	61812	49090	3.6390	-4.6	-1.2	26	2.0	-38.9	-0.1	-1.2	383	124.6	-4.0
66186.75695JUL	61814	49092	2.7309	7.4	-2.4	33	2.0	-26.7	13.0	-2.4	314	124.6	-4.0
66186.76186JUL	61817	49094	2.5330	1.9	-1.9	31	2.0	-32.4	7.0	-1.9	332	124.6	-4.0
66186.76375JUL	61820	49096	4.7355	-5.5	-1.1	34	2.0	-39.8	-0.5	-1.1	353	124.6	-4.0
66186.76561JUL	61823	49098	4.1372	-6.5	-3.6	32	5.3	-39.5	-2.9	-3.6	370	124.6	-4.0
66186.78567JUL	61853	49120	3.5460	-6.5	-4.1	30	5.3	-35.5	2.5	-4.1	340	124.5	-4.0

REC 5. LENGTH 1000

66186.80539JUL	61920	49140	3.7359	-5.1	-1.1	31	8.3	-38.7	-0.3	-1.1	357	124.5	-4.0
66186.80730JUL	61922	49142	3.6353	-4.6	-0.2	26	2.0	-38.3	0.8	-0.2	357	124.5	-4.0
66186.81110JUL	61928	49146	3.6387	-4.4	-1.1	25	2.0	-39.1	-0.7	-1.1	355	124.5	-4.0
66186.81487JUL	61933	49150	1.8287	22.4	-3.9	34	2.0	-11.5	28.0	-3.7	209	124.5	-4.0
66186.82633JUL	61947	49160	3.7358	-5.2	-1.3	31	7.3	-39.5	-1.4	-1.3	356	124.5	-4.0
66186.82625JUL	61949	49162	3.4359	-8.4	-0.4	27	-0.8	-36.9	-0.5	0.3	367	124.5	-4.0
66186.82625JUL	61950	49162	4.7359	-6.4	-1.3	31	2.3	-39.5	-0.7	-1.3	357	124.4	-4.0
66186.85873JUL	62001	49300	3.7360	-4.5	1.0	32	-0.8	-28.3	0.3	1.0	358	124.4	-4.0
66186.89851JUL	62030	49340	4.4649	-5.3	-1.3	29	2.3	-39.4	-0.7	-1.3	347	124.4	-4.0
66186.89857JUL	62030	49340	3.7327	-2.5	-1.6	29	2.3	-35.3	0.4	-1.6	327	124.4	-4.0
66187.00129JUL	7 31	49358											

REC 6. LENGTH 1000

66187.05916JUL	7 125 49408	3.8346	-5.6	-3.6 27	5.3	-39.3	-0.5	-3.7	338 124.3	-4.0
66187.06862JUL	7 139 49418	3.8338	-2.7	-4.0 29	5.3	-36.4	2.4	-4.0	337 124.3	-4.0
66187.10840JUL	7 236 49460	3.8339	-5.6	-3.6 28	5.3	-39.3	-0.5	-3.7	337 124.2	-4.0
66187.13492JUL	7 314 49488	3.8322	0.3	-0.0 29	2.3	-33.6	5.6	-1.9	323 124.2	-4.0
66187.13869JUL	7 320 49492	3.0343	-3.2	-1.6 29	2.3	-37.1	1.9	-1.6	342 124.2	-4.0
66187.18036JUL	7 420 49530	3.8347	-5.6	-1.3 30	2.3	-39.5	-0.6	-1.3	345 124.2	-4.0
66187.26369JUL	7 620 49624	3.8353	-5.5	-3.7 26	4.3	-39.7	-0.6	-3.7	351 124.1	-4.0
66187.28072JUL	7 644 49642	4.4348	-5.4	-1.3 27	2.3	-39.2	-0.4	-1.3	346 124.1	-4.0
66187.28641JUL	7 652 49648	3.7326	-2.6	-1.6 28	2.3	-36.4	2.7	-1.6	325 124.1	-4.0
66187.32050JUL	7 742 49684	3.6327	-5.8	-3.6 33	5.3	-39.3	-0.5	-3.5	325 124.0	-4.0

REC 7, LENGTH 1000

66187.32239JUL	7 744 49686	3.6335	-5.1	-3.7 28	5.3	-38.6	0.0	-3.7	333 124.0	-4.0
66187.32430JUL	7 747 49688	3.6337	-5.7	-1.3 29	2.3	-39.5	-0.6	-1.3	335 124.0	-4.0
66187.32619JUL	7 750 49690	3.6338	-5.5	1.1 29	-0.8	-39.5	-0.4	1.1	326 124.0	-4.0
66187.33754JUL	7 806 49702	3.3342	-5.4	-1.3 26	2.3	-39.2	-0.4	-1.3	340 124.0	-4.0
66187.37163JUL	7 885 49738	3.7326	-2.6	0.9 29	-0.8	-36.5	2.8	0.9	324 124.0	-4.0
66187.39246JUL	7 925 49760	3.2328	-3.7	-1.6 32	2.3	-37.1	1.5	-1.5	327 124.0	-4.0
66187.39435JUL	7 928 49752	3.3338	-5.9	-1.3 30	2.3	-39.6	-0.2	-1.3	336 124.0	-4.0
66187.47602JUL	71028 49806	3.6331	-5.3	-1.3 32	2.3	-39.0	-0.1	-1.3	329 123.9	-4.0
66187.45685JUL	71058 49828	4.0329	-3.1	-4.0 28	5.3	-36.4	2.2	-4.0	328 123.9	-4.0
66187.46631JUL	71112 49838	4.0344	-4.8	-1.4 26	2.3	-38.4	0.2	-1.4	342 123.9	-4.0

REC 8, LENGTH 1000

66187.47768JUL	71128 49850	3.7351	-5.5	-1.3 26	2.3	-39.1	-0.5	-1.3	349 123.9	-4.0
66187.49094JUL	71147 49864	4.1331	-5.1	-1.4 29	2.3	-38.7	0.1	-1.4	329 123.9	-4.0
66187.49284JUL	71150 49866	4.1334	-5.0	-1.4 27	2.3	-38.5	0.2	-1.4	332 123.9	-4.0
66187.52692JUL	71239 49902	4.1330	-5.0	1.1 30	-0.8	-38.8	0.2	1.1	328 123.8	-4.0
66187.54584JUL	71306 49922	4.2357	-5.3	-1.3 22	2.3	-38.9	-0.5	-1.3	355 123.8	-4.0

REC 9, LENGTH 1000

69265.87964SEP	232107290153	2.6404	-13.0	-3.6	3.0	1.0	14.0	-8.7	-3.5	398	62.2	9.8
69265.881721SEP	232118290161	2.7407	-11.3	-3.2	2.9	1.0	15.7	-7.1	-3.2	402	62.2	9.8
69265.89307SEP	232126290167	2.7403	-14.2	-3.7	2.7	1.0	13.7	-10.0	-3.8	395	62.2	9.8
69265.896573SEP	232132290171	2.6401	-14.4	-2.6	2.9	-0.2	13.8	-10.1	-2.6	394	62.2	9.8
69265.89893SEP	232134290173	2.3406	-11.7	-3.2	3.1	1.0	15.3	-7.5	-3.3	401	62.2	9.8
69265.90259SEP	232140290177	2.2406	-13.2	-6.3	3.0	3.8	13.2	-9.0	-6.4	400	62.2	9.8
69265.90430SEP	232143290179	1.6403	-12.2	-3.3	2.8	1.0	14.8	-8.0	-3.4	397	62.2	9.8
69265.90625SEP	232145290181	2.2403	-14.4	-6.6	3.0	3.8	12.0	-10.2	-6.7	396	62.2	9.8
69265.90796SEP	232148290183	2.2406	-11.4	-3.2	2.8	1.0	15.6	-7.2	-3.2	401	62.2	9.8
69265.91016SEP	232151290185	2.6403	-15.1	-3.9	2.8	1.0	11.9	-10.4	-4.0	395	62.2	9.8
69265.91211SEP	232153290187	2.3401	-15.6	-0.8	2.6	-2.2	11.9	-11.4	-0.8	393	62.2	9.8
69265.91382SEP	232156290189	2.3404	-15.1	-3.9	2.7	1.0	11.9	-10.9	-4.0	397	62.2	9.8
69265.91774SEP	232212290193	2.6401	-13.7	-6.4	2.8	3.8	12.7	-9.5	-6.5	394	62.1	9.8
69265.91968SEP	232204290195	2.4405	-11.0	-3.1	2.4	1.0	16.0	-6.8	-3.1	400	62.1	9.8
69265.92139SEP	232207290197	2.6404	-12.1	-6.1	3.0	3.8	14.4	-7.8	-6.2	398	62.1	9.8
69265.92334SEP	232210290199	2.6408	-11.4	-3.2	2.6	1.0	15.5	-7.2	-3.2	403	62.1	9.8
69265.92505SEP	232212290201	2.6009	-13.3	-0.4	2.7	-2.2	14.3	-9.1	-0.4	394	62.1	9.8
69265.92728SEP	232215290203	2.2401	-14.5	-0.6	2.9	-2.2	13.1	-10.2	-0.6	394	62.1	9.8
69265.92920SEP	232218290205	2.3398	-14.4	-0.6	2.9	3.8	12.0	-10.2	-0.7	391	62.1	9.8
69265.93262SEP	232223290209	2.4402	-13.1	-3.6	2.8	1.0	13.9	-8.9	-3.6	396	62.1	9.8
69265.93433SEP	232226290211	2.6401	-16.7	-4.2	3.0	1.0	10.3	-12.5	-4.3	391	62.1	9.8
69265.93677SEP	232229290213	3.0405	-17.5	-7.2	3.9	3.8	8.9	-13.1	-7.3	397	62.1	9.8
69265.94043SEP	232234290217	3.7413	-12.7	-3.4	2.7	1.0	14.3	-8.6	-3.5	407	62.1	9.8
69265.94214SEP	232237290219	4.1412	-15.0	-6.7	2.5	3.8	11.6	-10.9	-6.8	405	62.1	9.8
69265.94474SEP	232240290221	5.0407	-18.6	-7.4	2.3	3.8	7.8	-14.5	-7.5	398	62.1	9.8
69265.94800SEP	232245290225	4.6417	-18.0	-6.5	2.5	3.8	12.5	-9.9	-6.6	410	62.1	9.8
69265.94971SEP	232248290227	5.0414	-13.2	-9.5	2.6	7.0	13.6	-9.1	-9.6	408	62.1	9.8
69265.95396SEP	232251290231	5.6413	-13.2	-9.5	2.5	7.0	12.6	-9.1	-9.6	408	62.1	9.8
69265.95587SEP	232256290233	5.6413	-13.2	-9.5	2.5	7.0	12.6	-9.1	-9.6	407	62.1	9.8
69265.95923SEP	232302290237	5.6412	-13.9	-6.4	2.7	3.8	12.6	-9.7	-9.5	405	62.1	9.8
69265.96266SEP	232307290241	5.6408	-14.7	-9.8	2.7	7.2	11.1	-10.5	-10.0	411	62.1	9.8
69265.96509SEP	232310290243	5.6414	-12.0	-9.2	2.4	7.2	13.3	-7.9	-9.4	408	62.1	9.8
69265.96680SEP	232312290245	5.6415	-18.1	18.8	2.3	31.7	11.7	-12.9	19.5	418	62.1	9.8
69265.96875SEP	232315290247	5.6412	-12.8	-6.2	2.3	3.8	13.7	-8.7	-6.3	406	62.1	9.8
69265.97046SEP	232318290249	5.6415	-12.1	-9.3	2.3	7.0	13.7	-8.0	-9.4	410	62.1	9.8
69265.97266SEP	232321290251	5.7417	-10.5	-8.9	2.2	7.0	15.4	-6.3	-9.0	412	62.1	9.8
69265.97461SEP	232323290253	5.7416	-11.0	-6.9	2.4	3.8	15.5	-6.9	-9.0	411	62.1	9.8
69265.97803SEP	232326290257	5.6411	-13.3	-9.5	2.2	7.2	12.6	-9.9	-9.7	405	62.1	9.8
69265.97974SEP	232329290259	5.6409	-14.8	-9.8	2.3	7.0	11.9	-10.6	-10.1	412	62.1	9.8
69265.98218SEP	232332290261	5.6410	-13.9	-6.5	2.3	3.8	12.6	-9.7	-9.5	404	62.1	9.8
69265.98349SEP	232337290263	5.6415	-13.1	-12.4	2.2	9.9	12.1	-9.9	-12.6	404	62.1	9.8
69265.98584SEP	232340290265	5.6417	-12.1	-9.3	2.4	7.2	14.8	-7.9	-9.4	407	62.1	9.8
69265.98756SEP	232342290267	5.6409	-13.9	-6.6	2.4	3.8	13.6	-9.7	-9.6	402	62.1	9.8
69265.98975SEP	232345290269	5.3407	-15.5	-6.8	2.4	3.8	11.0	-11.3	-6.9	400	62.1	9.8
69265.99341SEP	232351290273	5.6407	-16.4	-3.8	2.6	1.0	12.6	-11.3	-3.8	403	62.1	9.8
69265.99612SEP	232353290275	5.6410	-12.3	-6.1	2.5	3.8	14.2	-8.2	-9.2	404	62.1	9.8
69265.99643SEP	232356290277	5.6410	-11.0	-11.9	2.5	9.9	14.2	-6.8	-12.0	405	62.1	9.8
69265.99947SEP	232359290279	4.6408	-12.7	-6.2	2.4	3.8	13.8	-8.3	-6.1	402	62.1	9.8

REC	1. LENGTH	1000
REC	2. LENGTH	1000
REC	3. LENGTH	1000
REC	4. LENGTH	1000
REC	5. LENGTH	1000

4. LENGTH 1600

REC 5, LENGTH 1600

REC 6, LENGTH 1600

REC 7, LENGTH 1600

REC 8. LENGTH 1600

[illegible]

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REC 20, LENGTH 1600

REC 21, LENGTH 960

DEBLK	16431
CKPT	17136
DELETE	17317

UNIT A2 WAS FINAL REEL OF INPUT

INTERNAL SORT PHASE COMPLETED. 6002 RECORDS SORTED.

PROGRAM	LOAD ADDRESS
HYSTAR	05677
IOPEN	06215
LABEL	10610
BTD	11456
RELEASE	11554
MRGIO	11707
XTRACT	13450
DEBLK	14135
FIMRG	14642
POSTP	20015
CKPT	20551
DELETE	20732

UNIT C4 CLOSING OUTPUT REEL NO. 0001 *0001

	PHASE 1	PHASE 2	PHASE 3
COUNT OF INPUT RECORDS TO SORT	15552	N/A	N/A
AND/OR MERGE	6002		6002
COUNT OF RECORDS SORTED OR MERGED	0		0
COUNT OF WORDS DUMPED	9550	N/A	0
COUNT OF RECORDS DELETED		N/A	0
COUNT OF HIGH PADDING RECORDS IN OUTPUT	N/A	N/A	0
COUNT OF LOW PADDING RECORDS IN OUTPUT	N/A	N/A	0

END OF SORT

*IBSYS

*STOP

PERIPHERAL UNIT POSITIONS AT END OF JOBS

SYSPP1	IS	C1	REC. 00000, FILE 00000
SYSOU1	IS	C3	REC. 00087, FILE 00000
SYSINI	IS	C2	REC. 00001, FILE 00001

END OF JOBS

33	0	186.	9	6JUL66	29.	5.6	381.	0.6	-3.7	5.	0.5	8.	1.0	1.3	9	1819.0000	REC	1.	LENGTH	84
33	0	186.	10	6JUL66	28.	5.7	378.	1.8	-2.8	5.	0.7	13.	2.7	1.4	12	1819.0000	REC	2.	LENGTH	84
33	0	186.	11	6JUL66	28.	5.6	371.	3.1	-3.6	4.	0.7	11.	1.2	1.9	6	1819.0000	REC	3.	LENGTH	84
33	0	186.	12	6JUL66	37.	5.6	391.	-0.3	-3.6	2.	0.4	2.	0.3	0.1	2	1819.0000	REC	4.	LENGTH	84
33	0	186.	13	6JUL66	39.	3.9	372.	2.2	-3.1	2.	0.3	3.	2.2	1.3	3	1819.0000	REC	5.	LENGTH	84
33	0	186.	14	6JUL66	34.	4.8	380.	-0.8	-3.5	0.	0.0	0.	0.0	0.0	1	1819.0000	REC	6.	LENGTH	84
33	0	186.	15	6JUL66	34.	3.8	358.	3.3	-4.1	2.	0.2	14.	1.9	2.3	3	1819.0000	REC	7.	LENGTH	84
33	0	186.	16	6JUL66	33.	4.0	371.	-0.7	-3.5	0.	0.0	0.	0.0	0.0	1	1819.0000	REC	8.	LENGTH	84
33	0	186.	17	6JUL66	34.	3.8	348.	3.0	-2.8	2.	0.2	3.	1.5	1.3	2	1819.0000	REC	9.	LENGTH	84
33	0	186.	18	6JUL66	31.	3.4	362.	0.1	-1.7	1.	0.2	4.	0.3	1.1	4	1819.0000	REC	10.	LENGTH	84
33	0	186.	19	6JUL66	31.	3.4	350.	3.5	-2.3	3.	0.7	24.	5.0	1.1	6	1819.0000	REC	11.	LENGTH	84
33	0	186.	20	6JUL66	29.	3.2	345.	5.1	-2.0	3.	0.7	21.	10.3	2.2	6	1819.0000	REC	12.	LENGTH	84
33	0	186.	24	6JUL66	31.	4.0	354.	-0.2	-0.5	1.	0.3	5.	0.3	1.0	3	1819.0000	REC	13.	LENGTH	84
33	0	187.	1	7JUL66	29.	3.6	327.	2.7	-1.5	0.	0.0	0.	0.0	0.0	1	1819.0000	REC	14.	LENGTH	84
33	0	187.	2	7JUL66	28.	3.4	338.	0.9	-3.8	1.	0.3	1.	1.4	0.2	2	1819.0000	REC	15.	LENGTH	84
33	0	187.	3	7JUL66	28.	3.7	337.	-0.5	-3.6	0.	0.0	0.	0.0	0.0	1	1819.0000	REC	16.	LENGTH	84
33	0	187.	4	7JUL66	29.	3.1	333.	3.6	-1.6	1.	0.1	10.	1.8	0.1	2	1819.0000	REC	17.	LENGTH	84
33	0	187.	5	7JUL66	30.	3.7	345.	-0.5	-1.2	0.	0.0	0.	0.0	0.0	1	1819.0000	REC	18.	LENGTH	84
33	0	187.	7	7JUL66	26.	3.9	341.	0.6	-2.1	2.	0.3	11.	1.4	1.1	3	1819.0000	REC	19.	LENGTH	84
33	0	187.	8	7JUL66	30.	3.6	332.	-0.3	-1.8	2.	0.1	4.	0.2	1.9	4	1819.0000	REC	20.	LENGTH	84
33	0	187.	9	7JUL66	28.	3.4	332.	1.2	-0.2	2.	0.2	8.	1.5	1.0	2	1819.0000	REC	21.	LENGTH	84
33	0	187.	10	7JUL66	31.	3.1	332.	0.4	-1.3	1.	0.1	5.	1.1	0.2	2	1819.0000	REC	22.	LENGTH	84
33	0	187.	11	7JUL66	30.	3.8	329.	1.0	-2.6	2.	0.3	1.	1.0	1.4	2	1819.0000	REC	23.	LENGTH	84
33	0	187.	12	7JUL66	27.	3.9	338.	-0.1	-1.3	1.	0.2	8.	0.2	0.0	4	1819.0000	REC	24.	LENGTH	84
33	0	187.	13	7JUL66	30.	4.0	328.	0.1	1.0	0.	0.0	0.	0.0	0.0	1	1819.0000	REC	25.	LENGTH	84
33	0	187.	14	7JUL66	25.	4.1	336.	0.8	-2.1	2.	0.6	11.	1.7	1.0	12	1819.0000	REC	26.	LENGTH	84
33	0	187.	15	7JUL66	24.	6.1	328.	4.5	-0.7	2.	1.4	11.	3.7	1.7	7	1819.0000	REC	27.	LENGTH	84
33	0	187.	16	7JUL66	24.	5.7	326.	4.6	-0.6	2.	0.7	9.	2.7	1.3	10	1819.0000	REC	28.	LENGTH	84
33	0	187.	17	7JUL66	22.	6.8	336.	2.1	-0.6	2.	0.4	10.	1.8	1.2	13	1819.0000	REC	29.	LENGTH	84
33	0	187.	18	7JUL66	25.	6.6	327.	1.8	0.5	2.	0.4	9.	1.7	0.9	17	1819.0000	REC	30.	LENGTH	84
33	0	187.	19	7JUL66	28.	7.3	320.	2.6	0.4	2.	0.9	16.	6.5	1.6	13	1819.0000	REC	31.	LENGTH	84
33	0	187.	20	7JUL66	25.	8.0	328.	1.6	1.9	1.	0.7	9.	2.1	1.4	18	1819.0000	REC	32.	LENGTH	84

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33	0	187.	21	7JUL66	25.	10.2	329.	1.5	1.7	2.	0.8	7.	1.4	1.2	13	1819.0000
33	0	187.	22	7JUL66	24.	11.2	333.	1.7	2.0	2.	0.8	8.	1.7	1.8	17	1819.0000
33	0	187.	23	7JUL66	22.	11.6	345.	0.6	6.1	2.	1.5	11.	4.0	12.9	10	1819.0000

REC	33. LENGTH	84
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REC	34. LENGTH	84
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REC	35. LENGTH	84
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33	0	265.	20	23SEP69	24.	5.4	406.	-5.2	-4.0	2.	0.6	8.	2.8	2.2	11	1862.0000
33	0	265.	21	23SEP69	26.	3.6	408.	-5.3	-5.6	5.	1.8	15.	6.1	2.5	14	1862.0000
33	0	265.	22	23SEP69	29.	2.3	397.	-9.0	-3.8	1.	0.2	3.	1.4	1.6	14	1862.0000
33	0	265.	23	23SEP69	27.	3.4	400.	-9.7	-5.5	2.	1.2	6.	2.0	2.8	17	1862.0000
33	0	265.	24	23SEP69	24.	5.4	405.	-9.0	-5.6	1.	0.3	3.	1.5	10.9	12	1862.0000

REC	1, LENGTH	84
REC	2, LENGTH	84
REC	3, LENGTH	84
REC	4, LENGTH	84
REC	5, LENGTH	84

67205.57639JUL	251350	20561	14.2417	4.9	18.8	76	-5.9	-18.8	9.2	18.6	420	96.0	-87.0
67205.58208JUL	251356	20567	4.4456	-6.1	35.5	34	4.0	-36.1	-1.5	35.7	454	96.0	-87.0
67205.58397JUL	251401	20569	3.3449	-2.7	33.0	35	0.8	-33.4	1.8	33.0	448	96.0	-87.0
67205.58588JUL	251404	20571	3.4417	-5.6	28.4	32	4.0	-29.0	-0.9	28.6	415	96.0	-87.0
67205.58777JUL	251406	20573	4.2441	-6.1	35.3	41	4.0	-35.9	-1.3	35.5	439	96.0	-87.0
67205.58965JUL	251409	20575	4.4450	-6.1	34.7	32	4.0	-35.3	-1.4	34.9	448	96.0	-87.0
67205.60669JUL	251434	20593	5.2420	-9.2	30.7	44	7.5	-31.4	-4.5	30.9	416	96.0	-87.0
67205.60860JUL	251436	20595	5.2466	-9.8	39.7	40	7.5	-39.5	-5.1	39.0	462	96.0	-87.0
67205.61240JUL	251442	20599	4.3457	-3.1	38.2	38	0.8	-38.6	1.6	38.2	456	96.0	-87.0
67205.61617JUL	251447	20603	5.5431	-2.7	33.0	45	0.8	-33.4	2.0	33.0	430	96.0	-87.0

REC 1. LENGTH 1000

Expt 35

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67205.61806JUL	251450	20605	4.4428	-5.7	30.5	40	4.0	-31.1	1.1	30.7	425	96.0	-87.0
67205.61995JUL	251453	20607	4.4457	-9.6	35.5	38	7.5	-36.3	-5.0	35.8	453	96.0	-87.0
67205.62186JUL	251455	20609	4.6426	-5.8	30.7	43	4.0	-31.3	-1.1	30.9	424	96.0	-87.0
67205.62375JUL	251458	20611	4.6435	-6.0	33.4	44	4.0	-34.0	-1.2	33.6	433	96.0	-87.0
67205.62752JUL	251504	20615	4.6443	-5.9	32.7	34	4.0	-33.3	-1.3	32.9	441	96.0	-87.0
67205.62943JUL	251506	20617	5.5475	-6.3	37.5	30	4.0	-38.1	-1.7	37.7	473	96.0	-87.0
67205.63132JUL	251509	20619	5.5475	-3.1	37.8	32	0.8	-38.2	1.5	37.8	474	96.0	-87.0
67205.63321JUL	251512	20621	4.6423	-2.6	31.1	46	0.8	-31.5	2.2	31.1	422	96.0	-87.0
67205.63512JUL	251515	20623	3.6463	-3.1	38.2	39	0.8	-38.6	1.6	38.2	462	95.9	-87.0
67205.63701JUL	251517	20625	4.6454	-0.6	35.5	40	-2.7	-35.7	5.2	35.4	455	95.9	-87.0

REC 2. LENGTH 1000

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67205.67867JUL	251617	20569	4.3416	-2.4	28.6	45	0.8	-29.0	2.3	28.6	415	95.9	-87.0
67205.68436JUL	251625	20575	9.5333	4.3	28.3	39	-5.9	-28.3	9.3	28.0	386	95.9	-87.0
67205.68813JUL	251631	20579	10.5370	-8.0	9.1	53	7.5	-9.8	-3.3	9.2	367	95.9	-87.0
67205.68941JUL	252106	20881	6.4458	-6.4	34.7	33	4.3	-35.3	-1.8	34.9	456	95.7	-87.0
67205.68129JUL	252109	20883	6.4458	-2.9	34.9	34	0.8	-35.3	1.7	34.9	457	95.7	-87.0
67205.68509JUL	252115	20887	6.4472	-2.9	35.0	37	0.8	-35.4	1.6	35.0	471	95.7	-87.0
67205.68698JUL	252117	20889	6.4458	-6.4	34.7	33	4.3	-35.3	-1.8	34.9	456	95.7	-87.0
67205.68884JUL	252120	20891	6.2456	-2.7	32.4	37	0.8	-32.8	1.8	32.4	455	95.7	-87.0
67205.69075JUL	252123	20893	6.4470	-6.1	34.8	36	4.0	-35.4	-1.6	35.0	468	95.7	-87.0
67205.69264JUL	252125	20895	7.0456	-6.3	37.7	37	4.0	-38.3	-1.9	37.9	494	95.7	-87.0

REC 3. LENGTH 1000

67205.69455JUL	252126	20897	6.2478	-5.5	27.4	36	4.0	-27.9	-1.1	27.5	435	95.7	-87.0
67205.69644JUL	252131	20899	6.1452	-5.7	29.8	37	4.0	-30.3	-1.3	29.9	450	95.7	-87.0
67205.69824JUL	252136	20903	6.2479	-6.1	35.0	39	4.0	-35.6	-1.7	35.2	477	95.7	-87.0
67205.69910JUL	252139	20905	6.4477	-6.1	34.8	37	4.0	-35.4	-1.7	35.0	475	95.7	-87.0
67205.69401JUL	252142	20907	6.4477	-2.6	35.2	40	0.5	-35.0	1.3	35.2	476	95.7	-87.0
67205.69590JUL	252145	20909	6.7457	-8.9	29.6	38	7.2	-30.3	-4.6	29.8	453	95.7	-87.0
67205.69781JUL	252147	20911	6.7462	-2.2	30.1	44	0.5	-30.5	2.1	30.1	461	95.7	-87.0
67205.69970JUL	252150	20913	7.2473	-5.6	32.1	36	3.7	-32.6	-1.3	32.2	471	95.7	-87.0
67205.69158JUL	252153	20915	6.5488	-5.6	32.2	38	3.7	-32.7	-1.4	32.3	486	95.7	-87.0
67205.69153JUL	252156	20919	8.0508	-2.3	33.3	51	0.3	-33.7	1.8	33.3	507	95.7	-87.0

REC 4. LENGTH 1000

67205.69172JUL	252201	20921	7.1460	-5.3	28.0	35	3.7	-28.5	-1.0	28.1	453	95.7	-87.0
67205.69165JUL	252204	20923	7.3482	-2.4	35.0	36	0.3	-35.4	2.0	35.0	481	95.7	-87.0
67205.69207JUL	252206	20925	6.5445	-5.6	32.1	32	3.7	-32.6	-1.0	32.2	443	95.7	-87.0
67205.69296JUL	252209	20927	6.5477	-5.6	32.2	38	3.7	-32.7	-1.3	32.3	475	95.7	-87.0
67205.69248JUL	252212	20929	7.0426	-1.9	28.1	35	0.3	-28.5	2.7	28.1	426	95.7	-87.0
67205.69267JUL	252215	20931	6.7460	-5.6	32.3	37	3.7	-32.8	-1.2	32.4	458	95.7	-87.0
67205.69353JUL	252220	20935	6.5447	-5.3	32.2	34	3.4	-32.7	-0.7	32.3	445	95.7	-87.0
67205.69342JUL	252223	20937	8.2442	-5.3	32.3	36	3.4	-32.8	-0.7	32.4	440	95.7	-87.0
67205.69343JUL	252225	20939	8.2442	-5.3	32.3	36	3.4	-32.8	-0.7	32.4	440	95.7	-87.0
67205.69362JUL	252228	20941	7.4441	-1.8	31.7	32	0.0	-32.0	2.7	31.6	441	95.7	-87.0

REC 5. LENGTH 1000

67205.693810JUL	252231	20943	7.4435	-4.9	29.7	34	3.2	-30.2	-0.3	29.8	433	95.7	-87.0
67205.69399JUL	252234	20945	7.5419	-4.7	27.4	32	3.2	-27.9	-0.1	27.5	417	95.7	-87.0
67205.694188JUL	252236	20947	7.4450	-5.2	34.1	33	3.2	-34.6	-0.7	34.2	457	95.7	-87.0
67205.694568JUL	252242	20951	6.5449	-8.1	31.9	32	6.3	-32.6	-3.6	32.1	446	95.7	-87.0
67205.694759JUL	252245	20953	6.2439	-5.1	32.2	34	3.2	-32.7	-0.6	32.3	437	95.6	-87.0
67205.694948JUL	252247	20955	8.1442	-1.6	32.2	30	-0.3	-32.5	3.0	32.1	442	95.6	-87.0
67205.695134JUL	252250	20957	6.7429	-4.9	29.6	30	3.2	-30.1	-0.3	29.7	427	95.6	-87.0
67205.695325JUL	252253	20959	6.5435	-8.1	31.5	37	6.3	-32.2	-3.5	31.7	432	95.6	-87.0

REC 6. LENGTH 1000

67205.95514JUL	252255	20961	6.7436	-4.6	29.7	33	2.9	-30.2	-0.1	29.8	434	95.6	-87.0	
67205.95705JUL	252256	20963	6.7443	-4.7	31.5	31	2.9	-32.0	-0.2	31.6	441	95.6	-87.0	
REC 7, LENGTH 1000														
67205.96082JUL	252304	20967	5.7434	-4.6	29.6	32	2.9	-30.1	-0.0	29.7	432	95.6	-87.0	
67205.96271JUL	252306	20969	6.5416	-0.9	25.0	22	-0.5	-25.3	3.7	25.0	416	95.6	-87.0	
67205.96460JUL	252309	20971	6.6436	-1.1	27.6	33	-0.5	-27.9	3.4	27.6	436	95.6	-87.0	
67205.96651JUL	252312	20973	7.5439	-1.2	30.2	40	-0.5	-30.5	3.3	30.2	439	95.6	-87.0	
67205.96840JUL	252315	20975	7.4432	-1.2	29.9	33	-0.5	-30.2	3.4	29.8	432	95.6	-87.0	
67205.97031JUL	252317	20977	6.6415	-0.4	25.0	30	2.6	-25.5	0.6	25.1	414	95.6	-87.0	
67205.97220JUL	252320	20979	6.7442	-2.2	30.1	35	-3.9	-30.2	0.6	29.9	444	95.6	-87.0	
67205.97786JUL	252326	20985	6.6434	-1.0	31.7	32	-0.8	-32.0	3.6	31.7	434	95.6	-87.0	
67205.97977JUL	252331	20987	6.7431	-4.1	29.7	32	2.4	-30.2	0.5	29.8	430	95.6	-87.0	
67205.98166JUL	252334	20989	7.3427	-3.9	27.3	30	2.4	-27.8	0.6	27.4	425	95.6	-87.0	
REC 8, LENGTH 1000														
67205.98357JUL	252336	20991	7.3454	-4.3	32.2	35	2.4	-32.7	0.2	32.3	453	95.6	-87.0	
67205.98546JUL	252339	20993	6.4449	-4.1	29.5	26	2.4	-30.0	0.3	29.6	448	95.6	-87.0	
67205.98734JUL	252342	20995	6.5458	-4.2	31.5	35	2.4	-32.0	0.2	31.6	457	95.6	-87.0	
67205.99112JUL	252347	20999	6.5456	-4.2	31.4	32	2.4	-31.9	0.2	31.5	455	95.6	-87.0	
67205.99303JUL	252350	21001	7.5440	-0.9	32.6	38	-1.0	-32.9	3.7	32.6	440	95.6	-87.0	
67205.99492JUL	252353	21003	7.4495	-4.4	37.1	38	2.1	-37.6	0.0	37.2	494	95.6	-87.0	
67205.99680JUL	252355	21005	6.5414	-3.4	23.5	29	2.1	-23.9	1.1	23.5	413	95.6	-87.0	
67205.99869JUL	252356	21007	6.5412	-3.2	19.9	31	2.1	-20.3	1.4	19.9	401	95.6	-87.0	
67206.00060JUL	26	1	21009	6.5419	-0.4	25.8	30	-1.0	-26.1	4.1	25.8	419	95.6	-87.0
67206.00249JUL	26	4	21011	6.2440	-3.8	30.3	29	2.1	-30.7	0.7	30.3	439	95.6	-87.0
REC 9, LENGTH 1000														
67206.00629JUL	26	9	21015	6.4431	-3.4	27.7	40	1.8	-28.1	1.1	27.7	430	95.6	-87.0
67206.00818JUL	26	12	21017	6.6417	-6.9	29.7	35	5.2	-30.3	-2.1	29.9	414	95.6	-87.0
67206.01006JUL	26	15	21019	6.5427	-6.9	29.5	30	5.2	-30.1	-2.2	29.7	424	95.6	-87.0
67206.01195JUL	26	17	21021	6.5409	-3.1	23.5	32	1.8	-23.9	1.5	23.5	408	95.6	-87.0
67206.01384JUL	26	20	21023	6.2420	0.0	27.6	28	-1.6	-27.8	4.6	27.5	421	95.6	-87.0
67206.01575JUL	26	23	21025	6.2454	-3.9	35.5	29	1.8	-35.9	0.7	35.5	453	95.6	-87.0
67206.01764JUL	26	25	21027	6.4429	-3.3	30.3	29	1.6	-30.7	1.3	30.3	428	95.6	-87.0
67206.02144JUL	26	31	21031	6.4415	-3.2	28.1	33	1.6	-28.5	1.6	28.1	414	95.6	-87.0
67206.02521JUL	26	36	21035	6.3418	-3.2	28.0	30	1.6	-28.4	1.6	28.0	417	95.6	-87.0
67206.02710JUL	26	39	21037	6.4431	-3.5	32.2	32	1.6	-32.6	1.2	32.2	430	95.6	-87.0
REC 10, LENGTH 1000														
67206.02901JUL	26	42	21039	6.1435	-3.1	30.4	35	1.3	-30.8	1.6	30.4	434	95.6	-87.0
67206.03090JUL	26	44	21041	6.4412	-2.9	28.1	32	1.3	-28.5	1.8	28.1	411	95.6	-87.0
67206.03278JUL	26	47	21043	6.5417	0.4	30.1	34	-2.1	-30.3	5.1	30.0	418	95.6	-87.0
67206.03658JUL	26	53	21047	6.5411	-6.0	28.0	34	4.4	-28.6	-1.2	28.2	409	95.6	-87.0
67206.03847JUL	26	55	21049	6.5421	-3.1	30.4	33	1.3	-30.8	1.7	30.4	420	95.6	-87.0
67206.04036JUL	26	58	21051	6.5446	-2.9	32.0	26	1.0	-32.4	1.7	32.0	445	95.6	-87.0
67206.04227JUL	26	101	21053	6.5437	-6.3	32.1	33	4.4	-32.7	-1.6	32.3	435	95.6	-87.0
67206.04416JUL	26	104	21055	6.5434	-2.9	32.2	31	1.0	-32.6	1.8	32.2	433	95.6	-87.0
67206.04604JUL	26	106	21057	6.4453	-3.1	34.9	31	1.0	-35.3	1.6	34.9	452	95.6	-87.0
67206.04793JUL	26	109	21059	6.7431	-2.5	30.2	28	0.8	-30.6	2.1	30.2	430	95.6	-87.0
REC 11, LENGTH 1000														
67206.05173JUL	26	114	21063	6.5438	-2.7	32.4	36	0.8	-32.8	2.0	32.4	437	95.6	-87.0
67206.05362JUL	26	117	21065	6.5436	-2.5	30.0	38	0.8	-30.4	2.0	30.0	435	95.6	-87.0
67206.05553JUL	26	120	21067	6.4423	-5.6	29.7	34	3.9	-30.2	-0.9	29.8	421	95.6	-87.0
67206.05742JUL	26	123	21069	6.5425	-2.6	30.4	33	0.8	-30.8	2.1	30.4	424	95.6	-87.0
67206.05930JUL	26	125	21071	6.5435	-2.4	32.1	29	0.5	-32.5	2.3	32.1	434	95.6	-87.0
67206.06119JUL	26	128	21073	6.5419	-2.1	28.3	38	0.5	-28.7	2.5	28.2	419	95.6	-87.0
67206.06310JUL	26	131	21075	6.4456	-2.6	35.2	39	0.5	-35.6	2.0	35.2	455	95.6	-87.0
67206.06500JUL	26	136	21079	6.5434	0.9	32.4	32	-2.8	-32.6	5.6	32.3	435	95.6	-87.0
67206.06689JUL	26	139	21081	6.4431	-5.3	30.2	30	3.6	-30.7	-0.7	30.3	429	95.6	-87.0
67206.06876JUL	26	142	21083	4.5429	-1.9	28.1	31	0.3	-28.4	2.6	28.0	429	95.6	-87.0
REC 12, LENGTH 1000														
67206.07063JUL	26	145	21085	6.5437	-5.3	30.0	25	3.6	-30.5	-0.8	30.1	435	95.6	-87.0
67206.07256JUL	26	147	21087	6.3472	-5.6	37.7	31	3.3	-38.2	-1.0	37.8	477	95.6	-87.0
67206.07445JUL	26	150	21089	4.6416	-4.9	28.0	33	3.3	-28.5	-0.2	28.1	414	95.6	-87.0
67206.07634JUL	26	153	21091	4.6413	-4.8	26.2	32	3.3	-26.7	-0.1	26.3	411	95.6	-87.0
67206.07825JUL	26	156	21095	4.1419	-4.9	27.9	32	3.3	-28.4	-0.2	28.0	417	95.6	-87.0

68184.72243JUL	31720384029	2.6479	-5.9	3.8	42	6.2	-7.4	-2.3	3.8	476	229.4	-83.6
68184.72432JUL	31723384031	2.1478	-5.9	3.1	44	6.2	-6.7	-2.3	3.1	475	229.4	-83.6
68184.72620JUL	31726384033	2.3477	-6.0	2.0	43	6.2	-5.5	-2.4	2.0	474	229.4	-83.6
68184.72812JUL	31728384035	2.1481	-6.0	2.4	43	6.2	-6.0	-2.4	2.4	473	229.4	-83.6
68184.73000JUL	31731384037	2.5476	-3.1	2.6	41	3.3	-6.5	3.5	2.6	475	229.4	-83.6
68184.73189JUL	31734384039	2.3475	-3.0	3.8	42	3.3	-7.4	0.6	3.5	474	229.4	-83.6
68184.73369JUL	31739384043	2.2476	-2.9	4.0	40	3.3	-7.9	3.7	4.0	475	229.4	-83.6
68184.73558JUL	31742384045	1.5475	-3.1	2.1	41	3.3	-6.0	0.5	2.7	474	229.4	-83.6
68184.73946JUL	31745384047	2.1474	-6.1	1.6	36	6.2	-5.2	-2.4	1.6	471	229.4	-83.6
68184.74135JUL	31746384049	2.0473	-3.4	-0.8	34	3.3	-3.1	2.3	-0.8	472	229.4	-83.6
68184.74326JUL	31750384051	1.5471	-3.3	-0.7	34	0.2	-3.4	3.4	-0.7	471	229.4	-83.6
68184.74515JUL	31752384053	2.1478	-6.2	1.6	41	3.3	-5.5	0.4	1.6	477	229.4	-83.6
68184.74706JUL	31756384055	1.5472	-3.1	1.8	35	3.3	-5.7	0.5	1.8	471	229.4	-83.6
68184.75084JUL	31801384059	2.0481	-3.3	0.4	35	3.3	-4.3	0.3	0.4	480	229.4	-83.6
68184.75272JUL	31804384061	2.1478	-6.0	3.2	37	3.3	-7.1	0.6	3.2	477	229.4	-83.6
68184.75461JUL	31807384063	2.3475	-5.9	3.0	38	0.2	-6.5	-2.3	3.0	472	229.4	-83.6
68184.75652JUL	31809384065	2.2473	-2.5	8.7	40	3.3	-12.6	1.2	8.7	472	229.4	-83.6
68184.75841JUL	31812384067	2.4478	-5.3	10.0	40	0.2	-13.7	-1.6	10.1	476	229.4	-83.6
68184.76030JUL	31815384069	2.3471	-3.2	1.1	39	3.3	-5.0	0.4	1.1	473	229.4	-83.6
68184.76218JUL	31818384071	2.2471	-6.1	1.3	35	6.2	-4.9	-2.4	1.3	468	229.4	-83.6
68184.77356JUL	31834384083	2.1464	-0.2	-0.2	33	0.2	-3.9	3.5	-0.2	464	229.4	-83.6
68184.77544JUL	31837384085	2.3467	-6.2	-0.2	38	0.2	-3.9	3.5	-0.2	467	229.4	-83.6
68184.77733JUL	31839384087	2.2473	-6.2	-0.0	34	6.2	-3.5	-2.5	-0.0	470	229.4	-83.6
68184.78113JUL	31845384091	2.2478	-3.4	-1.0	31	3.3	-2.9	0.2	-1.0	477	229.4	-83.6
68184.78304JUL	31848384093	2.2479	-3.4	-1.0	31	3.3	-2.9	0.2	-1.0	478	229.4	-83.6
68184.78493JUL	31850384095	2.2469	-3.3	-0.4	37	3.3	-3.5	0.4	-0.4	468	229.4	-83.6
68184.78682JUL	31853384097	2.5467	-3.3	0.0	36	3.3	-3.9	0.4	0.0	466	229.4	-83.6
68184.78870JUL	31856384099	2.2469	-3.4	0.5	37	3.3	-4.4	0.4	0.5	468	229.4	-83.6
68184.79059JUL	31859384101	2.1474	-6.2	-0.0	36	0.2	-3.6	-2.6	-0.0	471	229.4	-83.6
68184.79250JUL	31901384103	2.4470	-3.4	-0.3	30	3.3	-3.6	0.3	-0.3	469	229.4	-83.6
68184.79428JUL	31903384107	2.4470	-3.3	-0.5	31	3.3	-3.4	0.4	-0.5	469	229.4	-83.6
68184.79616JUL	31905384109	2.4463	-0.3	-1.2	30	0.2	-2.9	3.4	-1.2	463	229.4	-83.6
68184.80008JUL	31912384111	2.4467	-0.3	-1.2	29	0.2	-2.9	3.4	-1.2	467	229.4	-83.6
68184.80196JUL	31915384113	2.6470	-0.3	-0.7	32	0.2	-3.4	3.4	-0.7	470	229.4	-83.6
68184.80385JUL	31918384115	2.6471	-3.4	-0.6	30	3.3	-3.3	0.3	-0.6	470	229.4	-83.6
68184.80576JUL	31920384117	2.6466	-0.3	-1.2	30	0.2	-2.9	3.4	-1.2	466	229.4	-83.6
68184.80765JUL	31923384119	2.4470	-3.4	-0.6	33	3.3	-3.3	0.3	-0.6	469	229.4	-83.6
68184.81142JUL	31926384123	2.4465	-3.4	-1.1	33	3.3	-2.8	0.3	-1.1	464	229.4	-83.6
68184.81331JUL	31931384125	2.4470	-3.5	-1.9	31	3.3	-2.0	0.2	-1.9	469	229.4	-83.6
68184.81522JUL	31934384127	2.4471	-3.6	-1.9	31	3.3	-2.0	0.2	-1.9	470	229.4	-83.6
68184.81711JUL	31937384129	2.4470	-6.3	-1.3	33	6.2	-2.3	-2.7	-1.3	467	229.4	-83.6
68184.81902JUL	31939384131	2.2466	-0.3	-1.7	32	0.2	-2.4	3.3	-1.7	466	229.4	-83.6
68184.82291JUL	31942384133	2.2471	-6.3	-1.2	30	6.2	-2.4	-2.7	-1.2	469	229.4	-83.6
68184.82480JUL	31945384135	2.2467	-0.4	-1.8	28	0.2	-2.3	3.3	-1.8	467	229.4	-83.6
68184.82667JUL	31950384139	2.1473	-3.5	-2.2	28	3.3	-1.7	0.1	-2.2	472	229.4	-83.6
68184.82848JUL	31953384141	2.1472	-3.5	-2.3	27	3.3	-1.6	0.1	-2.3	471	229.4	-83.6
68184.83037JUL	31956384143	2.1476	-3.5	-2.2	29	3.3	-1.7	0.1	-2.2	475	229.4	-83.6
68184.83223JUL	31958384145	2.3473	-0.4	-2.5	29	0.2	-1.6	3.2	-2.5	471	229.4	-83.6
68184.83414JUL	32001384147	2.6476	-3.5	-2.0	30	3.3	-1.9	0.1	-2.0	475	229.4	-83.6
68184.83603JUL	32004384149	2.2468	-6.4	-2.3	30	6.2	-1.3	-2.7	-2.3	465	229.4	-83.6
68184.83794JUL	32007384151	2.0469	-6.4	-2.2	28	6.2	-1.4	-2.7	-2.2	466	229.4	-83.6
68184.84174JUL	32010384153	2.5460	-0.3	-0.9	36	0.2	-3.2	3.5	-0.9	460	229.4	-83.6
68184.84363JUL	32015384157	4.0486	-3.4	-1.0	35	3.3	-2.9	0.1	-1.0	485	229.4	-83.6
68184.84549JUL	32018384159	3.6481	-3.4	-0.9	31	3.3	-3.0	0.2	-0.9	480	229.4	-83.6
68184.84740JUL	32020384161	2.7461	0.0	2.5	24	0.2	-5.6	3.7	2.4	461	229.4	-83.6
68184.84929JUL	32023384163	2.7465	0.0	2.4	23	0.2	-5.5	3.7	2.3	465	229.4	-83.6
68184.85120JUL	32026384165	2.7465	0.1	2.9	22	0.2	-7.1	3.7	2.9	465	229.4	-83.6

REC 7, LENGTH 1000

REC 8, LENGTH 1000

REC 9, LENGTH 1000

REC 10, LENGTH 1000

REC 11, LENGTH 1000

REC 12, LENGTH 1000

68184.85309JUL	32026384167	2.7463	0.1	3.0	24	0.2	-7.2	3.8	3.0	464	229.4	-83.6
68184.85689JUL	32034384171	2.7463	0.1	3.1	25	0.2	-7.3	3.8	3.1	464	229.4	-83.6
68184.85878JUL	32037384173	2.5464	-0.1	1.6	25	0.2	-5.7	3.6	1.6	464	229.4	-83.6
68184.86066JUL	32035384175	2.7459	0.0	2.5	25	0.2	-6.6	3.8	2.4	459	229.4	-83.6
68184.86255JUL	32042384177	2.8463	0.2	4.1	25	0.2	-8.3	3.9	4.1	464	229.4	-83.6
68184.86446JUL	32045384179	3.0459	-3.0	3.4	24	3.3	-7.3	0.8	3.4	453	229.4	-83.6
68184.87201JUL	32056384187	2.8456	0.1	3.2	27	0.2	-7.4	3.9	3.2	454	229.4	-83.6
68184.87392JUL	32058384189	3.1451	2.9	3.9	30	-2.6	-8.3	6.7	3.9	453	229.4	-83.6
68184.87581JUL	32101384191	3.4453	2.8	2.9	29	-2.6	-7.3	6.6	2.9	455	229.4	-83.6
68184.87772JUL	32104384193	2.5450	0.2	4.4	31	0.2	-8.6	4.0	4.4	451	229.4	-83.6
68184.87961JUL	32107384195	2.8456	0.2	4.2	28	0.2	-8.4	3.9	4.2	457	229.4	-83.6
68184.88147JUL	32105384197	2.6441	2.6	0.3	34	-2.6	-4.7	6.5	0.3	443	229.4	-83.6
68184.88338JUL	32112384199	2.6444	-0.1	1.1	33	0.2	-5.2	3.8	1.1	444	229.4	-83.6
68184.88529JUL	32307384283	2.7458	2.9	3.8	40	-2.6	-8.2	6.7	3.8	460	229.4	-83.6
68184.88713JUL	32309384285	3.0454	2.8	2.0	36	-2.6	-6.4	6.5	2.0	456	229.4	-83.6
68184.88904JUL	32312384287	2.5451	-0.0	2.1	34	0.2	-6.2	3.7	2.0	461	229.4	-83.6
68184.89095JUL	32315384289	2.3468	2.6	-0.6	26	-2.6	-3.8	6.2	-0.6	470	229.4	-83.6
68184.89286JUL	32318384291	2.3467	-0.2	-0.0	30	0.2	-4.1	3.5	-0.0	467	229.4	-83.6
68184.89477JUL	32320384293	2.4471	-0.4	-2.0	27	0.2	-2.1	3.3	-2.0	471	229.4	-83.6
68184.89668JUL	32323384295	2.5467	-0.4	-1.9	30	0.2	-2.2	3.3	-1.9	467	229.4	-83.6
68184.89859JUL	32331384301	2.0473	-0.3	-0.6	26	0.2	-3.5	3.4	-0.6	473	229.4	-83.6
68184.898375JUL	32337384305	2.2476	-3.4	-0.7	26	3.3	-3.2	0.2	-0.7	475	229.4	-83.6
68184.90028JUL	32339384307	2.0473	-0.2	-0.5	26	0.2	-3.6	3.4	-0.5	473	229.4	-83.6
68184.90219JUL	32342384309	2.7468	-3.4	-1.6	27	3.3	-2.3	0.2	-1.6	467	229.4	-83.6
68184.90410JUL	32344384311	2.5463	5.5	-2.1	27	-5.7	-2.5	9.2	-2.1	466	229.4	-83.6
68184.90601JUL	32350384315	2.7469	2.5	-1.5	30	-2.6	-2.9	5.1	-1.5	471	229.4	-83.6
68184.90792JUL	32353384317	2.2481	-3.4	-0.6	29	3.3	-3.3	0.2	-0.6	460	229.4	-83.6
68184.90983JUL	32356384319	2.2474	-0.3	-0.7	29	0.2	-3.4	3.4	-0.7	474	229.4	-83.6
68184.91174JUL	32358384321	2.2483	-3.3	-0.6	31	3.3	-3.4	0.2	-0.6	482	229.4	-83.6

REC 13, LENGTH 1000

REC 14, LENGTH 1000

REC 15, LENGTH 400

1. LENGTH 1600
1200
D-6930
EXPL 35, HALY AUG
67-070A-06A

REC 2, LENGTH 1600

REC 3, LENGTH 1600

REC 4. LENGTH 1600

REC 5, LENGTH 1600

REC 5, LENGTH 1600

5	REC	6	LENGTH	1500
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6. REC	7. LENGTH	1600
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6 REC 8. LENGTH 160

35	0	205.	22	24JUL68	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	205.	23	24JUL68	0.	0.0	0.	0.
8	0.	0.0	0.	0.0	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	205.	24	24JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	1	25JUL68	0.	0.0	0.	0.0	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	2	25JUL68	0.	0.0	0.	0.0	
35	0	206.	3	25JUL68	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	4	25JUL68	0.	0.0	0.	0.	
8	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	5	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	6	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	7	25JUL68	0.	0.0	0.	0.	
35	0	206.	8	25JUL68	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	8	25JUL68	0.	0.0	0.	0.	
8	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	9	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	10	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	11	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	12	25JUL68	0.	0.0	0.	0.	
35	0	206.	13	25JUL68	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	13	25JUL68	0.	0.0	0.	0.	
8	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	14	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	15	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	16	25JUL68	0.	0.0	0.	0.	
35	0	206.	17	25JUL68	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	17	25JUL68	0.	0.0	0.	0.	
8	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	18	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	19	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	20	25JUL68	0.	0.0	0.	0.	
35	0	206.	21	25JUL68	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	21	25JUL68	0.	0.0	0.	0.	
8	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	22	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	23	25JUL68	0.	0.0	0.	0.	
0	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.0	0	1846.35	0	206.	24	25JUL68	0.	0.0	0.	0.	
35	0	206.	25	25JUL68	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	25	25JUL68	0.	0.0	0.	0.	
8	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0.	0.0	0	1846.35	0	206.	26	25JUL68	0.	0.0	0.	0.	

REC 24, LENGTH 960

WRITE	15504
WTFIX	16355
DEBLK	16411
CKPT	17136
DELETE	17317

UNIT A2 WAS FINAL REEL OF INPUT

INTERNAL SORT PHASE COMPLETED. 5546 RECORDS SORTED.

PROGRAM	LOAD ADDRESS
HYSTAR	05677
TOPEN	06215
LABEL	10610
STD	11456
RELEASE	11554
MRGIO	11707
XTRACT	13450
DEBLK	14135
FIMRG	14642
POSTP	20015
CKPT	20551
DELETE	20732

UNIT C4 CLOSING OUTPUT REEL NO. 0001 #0001

	PHASE 1	PHASE 2	PHASE 3
COUNT OF INPUT RECORDS TO SORT	9572	N/A	N/A
AND/OR MERGE	5546	0	5546
COUNT OF RECORDS SORTED OR MERGED	0	0	0
COUNT OF WORDS DUMPED	3526	N/A	0
COUNT OF RECORDS DELETED	N/A	N/A	0
COUNT OF HIGH PADDING RECORDS IN OUTPUT	N/A	N/A	0
COUNT OF LOW PADDING RECORDS IN OUTPUT	N/A	N/A	0

END OF SORT

#IBSYS

35	2	205.	14	25JUL67	55.	9.1	4.37.	3.8	27.0	0.	4.8	17.	5.3	9.5	2	1833.0000	REC	1. LENGTH	84
35	12	205.	15	25JUL67	39.	4.4	438.	-1.3	33.6	4.	0.7	15.	2.3	3.0	12	1833.0000	REC	2. LENGTH	84
35	6	205.	16	25JUL67	37.	4.8	455.	1.2	35.4	5.	0.8	18.	2.2	2.7	6	1833.0000	REC	3. LENGTH	84
35	3	205.	17	25JUL67	40.	8.3	389.	2.7	21.9	6.	2.9	20.	5.1	9.0	3	1833.0000	REC	4. LENGTH	84
35	17	205.	22	25JUL67	38.	6.6	468.	-0.5	33.2	0.	0.5	17.	1.8	2.6	17	1833.0000	REC	5. LENGTH	84
35	20	205.	23	25JUL67	34.	7.1	444.	-0.2	31.3	2.	0.5	15.	1.7	1.9	20	1833.0000	REC	6. LENGTH	84
35	18	205.	24	25JUL67	32.	6.7	437.	1.7	29.0	4.	0.5	20.	1.8	3.8	18	1833.0000	REC	7. LENGTH	84
35	18	206.	1	26JUL67	32.	5.5	424.	1.3	29.2	3.	0.4	12.	1.8	2.6	18	1833.0000	REC	8. LENGTH	84
35	19	206.	2	26JUL67	32.	5.3	432.	1.1	30.9	3.	0.5	14.	1.7	2.8	19	1833.0000	REC	9. LENGTH	84
35	20	206.	3	26JUL67	33.	4.5	434.	0.2	29.4	4.	0.4	10.	1.9	3.2	20	1833.0000	REC	10. LENGTH	84
35	19	206.	4	26JUL67	36.	4.1	440.	-2.1	31.8	7.	0.5	19.	2.5	4.4	19	1833.0000	REC	11. LENGTH	84
35	19	206.	5	26JUL67	30.	3.3	431.	-1.2	29.0	3.	0.4	13.	2.3	2.8	19	1833.0000	REC	12. LENGTH	84
35	18	206.	6	26JUL67	38.	4.1	429.	-3.1	36.2	5.	0.4	13.	3.0	2.9	18	1833.0000	REC	13. LENGTH	84
35	13	206.	7	26JUL67	32.	3.7	424.	-2.0	29.5	2.	0.2	10.	2.7	3.0	13	1833.0000	REC	14. LENGTH	84
35	7	206.	9	26JUL67	32.	3.6	426.	-1.8	28.3	3.	0.2	7.	1.5	2.1	7	1833.0000	REC	15. LENGTH	84
35	16	206.	10	26JUL67	34.	4.0	434.	-1.1	30.0	3.	0.4	10.	2.2	3.0	16	1833.0000	REC	16. LENGTH	84
35	20	206.	11	26JUL67	35.	4.3	430.	-2.9	34.9	3.	0.3	9.	3.3	2.4	20	1833.0000	REC	17. LENGTH	84
35	16	206.	12	26JUL67	31.	4.1	423.	-4.0	27.9	3.	0.3	8.	2.8	1.9	16	1833.0000	REC	18. LENGTH	84
35	18	206.	13	26JUL67	33.	3.8	430.	-1.1	35.3	4.	0.3	20.	2.5	3.3	18	1833.0000	REC	19. LENGTH	84
35	13	206.	14	26JUL67	34.	3.8	433.	-1.6	31.6	4.	0.2	15.	2.3	2.3	13	1833.0000	REC	20. LENGTH	84
35	18	206.	15	26JUL67	33.	4.0	432.	-1.8	30.7	5.	0.3	12.	2.3	2.2	18	1833.0000	REC	21. LENGTH	84
35	18	206.	16	26JUL67	40.	4.1	427.	-1.2	31.8	5.	0.3	16.	2.4	3.0	18	1833.0000	REC	22. LENGTH	84
35	17	206.	17	26JUL67	33.	4.0	407.	-1.2	17.9	5.	0.2	9.	2.1	6.5	17	1833.0000	REC	23. LENGTH	84
35	12	206.	18	26JUL67	40.	4.0	390.	-3.7	1.5	3.	0.2	4.	2.5	1.7	12	1833.0000	REC	24. LENGTH	84
35	15	206.	21	26JUL67	40.	3.5	387.	-2.2	1.7	2.	0.2	7.	2.0	1.0	15	1833.0000	REC	25. LENGTH	84
35	12	206.	22	26JUL67	38.	3.1	377.	-3.7	6.4	2.	0.1	1.	2.0	1.3	12	1833.0000	REC	26. LENGTH	84
35	23	206.	23	26JUL67	35.	3.1	380.	-1.5	-0.9	2.	0.1	1.	1.9	0.6	23	1833.0000	REC	27. LENGTH	84
35	19	206.	24	26JUL67	35.	3.1	375.	-2.7	6.0	1.	0.0	2.	1.7	1.1	19	1833.0000	REC	28. LENGTH	84
35	18	207.	1	27JUL67	34.	3.1	370.	-1.5	6.3	2.	0.0	2.	1.9	0.8	18	1833.0000	REC	29. LENGTH	84
35	15	207.	2	27JUL67	29.	3.5	374.	-1.8	-1.2	2.	0.2	3.	1.9	0.2	15	1833.0000	REC	30. LENGTH	84
35	16	207.	3	27JUL67	31.	3.5	370.	6.1	-0.8	4.	0.2	5.	1.7	0.5	16	1833.0000	REC	31. LENGTH	84
35	19	207.	4	27JUL67	38.	3.7	360.	-1.0	0.3	3.	0.3	3.	1.3	1.3	19	1833.0000	REC	32. LENGTH	84

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EXPL 35

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35 16 207.	5 27JUL67	36.	3.8 360.	-1.0 -0.5	3.	0.4	2.	1.5	0.7 16 1833.0000	REC	33, LENGTH	84
35 7 207.	6 27JUL67	34.	3.6 360.	-0.9 -0.5	3.	0.3	3.	1.4	0.7 7 1833.0000	REC	34, LENGTH	84
35 1 207.	7 27JUL67	33.	4.3 362.	-0.1 1.6	0.	0.0	0.	0.0	0.0 1 1833.0000	REC	35, LENGTH	84
35 8 207.	8 27JUL67	21.	4.3 374.	-1.6 2.5	1.	0.2	2.	2.1	0.4 8 1833.0000	REC	36, LENGTH	84
35 15 207.	9 27JUL67	22.	4.2 374.	-0.4 1.5	2.	0.2	2.	2.2	0.4 15 1833.0000	REC	37, LENGTH	84
35 18 207.	10 27JUL67	23.	3.6 371.	-0.5 0.4	4.	0.4	5.	1.7	1.2 18 1833.0000	REC	38, LENGTH	84
35 15 207.	11 27JUL67	27.	3.2 363.	-0.4 -1.1	4.	0.1	4.	1.9	0.4 15 1833.0000	REC	39, LENGTH	84
35 19 207.	12 27JUL67	24.	3.1 363.	1.4 -0.9	2.	0.1	2.	1.8	0.3 19 1833.0000	REC	40, LENGTH	84
35 14 207.	13 27JUL67	23.	3.2 365.	0.1 -0.5	3.	0.2	4.	1.7	1.2 14 1833.0000	REC	41, LENGTH	84
35 18 207.	14 27JUL67	29.	3.3 362.	2.8 -0.6	3.	0.2	6.	10.7	0.9 18 1833.0000	REC	42, LENGTH	84
35 13 207.	15 27JUL67	27.	3.4 365.	-0.9 0.9	3.	0.2	5.	1.9	1.9 13 1833.0000	REC	43, LENGTH	84
35 19 207.	16 27JUL67	32.	3.6 362.	0.5 0.8	3.	0.3	4.	1.8	1.5 19 1833.0000	REC	44, LENGTH	84
35 11 207.	17 27JUL67	27.	3.5 362.	0.3 -1.0	1.	0.2	2.	0.8	0.3 11 1833.0000	REC	45, LENGTH	84
35 3 207.	18 27JUL67	26.	3.5 366.	3.9 0.8	1.	0.0	1.	1.5	0.2 3 1833.0000	REC	46, LENGTH	84
35 17 207.	20 27JUL67	28.	4.1 371.	1.2 0.7	4.	0.5	8.	2.7	1.8 17 1833.0000	REC	47, LENGTH	84
35 19 207.	21 27JUL67	32.	4.4 375.	0.8 1.2	3.	0.4	5.	2.1	2.2 19 1833.0000	REC	48, LENGTH	84
35 19 207.	22 27JUL67	31.	4.5 372.	0.7 0.2	3.	0.5	2.	1.7	1.3 19 1833.0000	REC	49, LENGTH	84
35 20 207.	23 27JUL67	29.	4.8 370.	1.3 0.3	4.	0.3	3.	2.2	1.4 20 1833.0000	REC	50, LENGTH	84
35 16 207.	24 27JUL67	29.	5.0 372.	0.3 2.8	2.	0.3	4.	1.9	1.7 15 1833.0000	REC	51, LENGTH	84
35 18 208.	1 28JUL67	31.	5.2 372.	-0.7 2.9	2.	0.3	2.	2.7	0.8 18 1833.0000	REC	52, LENGTH	84
35 18 208.	2 28JUL67	34.	5.3 369.	-0.2 1.9	2.	0.2	2.	1.4	0.6 19 1833.0000	REC	53, LENGTH	84
35 18 208.	3 28JUL67	35.	5.2 365.	-0.4 -0.2	4.	0.2	2.	2.3	1.0 18 1833.0000	REC	54, LENGTH	84
35 16 208.	4 28JUL67	31.	5.4 366.	2.3 0.9	3.	0.3	2.	2.5	1.5 16 1833.0000	REC	55, LENGTH	84
35 9 208.	6 28JUL67	31.	5.1 365.	4.9 1.3	3.	0.3	4.	2.1	1.3 9 1833.0000	REC	56, LENGTH	84
35 8 208.	7 28JUL67	24.	6.1 370.	3.9 1.4	3.	0.6	2.	2.2	1.3 8 1833.0000	REC	57, LENGTH	84
35 14 208.	8 28JUL67	22.	6.6 370.	4.5 1.4	2.	0.5	3.	2.2	1.9 14 1833.0000	REC	58, LENGTH	84
35 19 208.	9 28JUL67	21.	8.6 375.	4.9 2.2	2.	1.5	3.	2.3	1.4 19 1833.0000	REC	59, LENGTH	84
35 18 208.	10 28JUL67	24.	9.6 378.	3.7 1.4	2.	1.7	4.	1.9	1.2 18 1833.0000	REC	60, LENGTH	84
35 20 208.	11 28JUL67	26.	6.6 374.	3.2 -1.4	2.	0.6	4.	2.2	0.4 20 1833.0000	REC	61, LENGTH	84
35 14 208.	12 28JUL67	26.	9.8 374.	4.2 -1.5	2.	3.1	1.	2.2	0.6 14 1833.0000	REC	62, LENGTH	84
35 19 208.	13 28JUL67	26.	12.7 377.	4.4 -1.8	4.	1.9	5.	2.4	0.7 19 1833.0000	REC	63, LENGTH	84
35 14 208.	14 28JUL67	24.	14.9 391.	1.5 -2.0	2.	1.3	2.	1.4	0.3 14 1833.0000	REC	64, LENGTH	84

35 14 183.	2	2JUL68	36.	2.1	482.	-0.0	3.8	4.	0.1	7.	1.1	2.2	14	1846.0000
35 19 183.	3	2JUL68	46.	2.2	471.	0.0	1.8	3.	0.2	8.	2.6	0.8	19	1846.0000
35 15 183.	4	2JUL68	41.	2.4	475.	-0.2	3.0	2.	0.3	5.	2.2	1.6	15	1846.0000
35 17 183.	5	2JUL68	40.	2.7	467.	-1.0	1.7	4.	0.3	8.	2.2	1.0	7	1846.0000
35 17 183.	6	2JUL68	36.	2.6	475.	-5.2	1.3	2.	0.1	7.	1.8	1.2	17	1846.0000
35 19 183.	7	2JUL68	29.	2.4	475.	-4.9	0.4	4.	0.1	5.	2.1	0.9	19	1846.0000
35 14 183.	8	2JUL68	28.	2.3	474.	-6.0	0.6	2.	0.1	7.	1.5	0.8	14	1846.0000
35 18 183.	9	2JUL68	32.	2.6	480.	-3.5	1.7	2.	0.2	4.	2.7	0.5	18	1846.0000
35 19 183.	10	2JUL68	33.	2.8	485.	-2.8	1.6	3.	0.2	10.	1.9	1.1	19	1846.0000
35 13 183.	11	2JUL68	35.	2.7	475.	-2.4	0.6	3.	0.2	7.	3.8	1.1	13	1846.0000
35 2 183.	12	2JUL68	40.	3.0	457.	3.4	0.3	1.	0.0	2.	2.9	0.3	2	1846.0000
35 9 183.	13	2JUL68	44.	2.8	463.	1.3	2.6	2.	0.2	2.	2.3	0.7	9	1846.0000
35 13 183.	14	2JUL68	37.	2.9	477.	0.2	3.0	6.	0.2	23.	2.7	3.0	13	1846.0000
35 20 183.	15	2JUL68	40.	2.9	463.	0.5	2.3	7.	0.2	18.	3.3	1.2	20	1846.0000
35 19 183.	16	2JUL68	35.	2.8	461.	-0.7	4.0	5.	0.2	8.	3.7	2.7	19	1846.0000
35 19 183.	17	2JUL68	33.	2.7	465.	-1.5	5.1	5.	0.2	13.	3.0	1.5	19	1846.0000
35 19 183.	18	2JUL68	35.	2.7	428.	2.2	3.1	6.	0.2	14.	1.8	2.2	19	1846.0000
35 20 183.	19	2JUL68	35.	2.6	422.	0.4	-0.4	4.	0.2	9.	2.4	0.4	20	1846.0000
35 16 183.	20	2JUL68	34.	2.4	419.	-0.7	2.0	3.	0.1	9.	1.6	2.3	16	1846.0000
35 18 183.	21	2JUL68	41.	2.4	429.	-1.0	1.0	6.	0.2	8.	1.3	0.9	18	1846.0000
35 19 183.	22	2JUL68	37.	2.5	422.	-1.4	2.8	4.	0.2	8.	1.9	1.8	19	1846.0000
35 3 183.	23	2JUL68	37.	2.8	433.	-2.7	5.0	3.	0.2	7.	1.5	0.4	3	1846.0000
35 1 183.	24	2JUL68	40.	1.8	402.	3.7	0.6	0.	0.0	0.	0.0	0.0	1	1846.0000
35 5 184.	3	3JUL68	41.	2.0	381.	1.3	1.5	1.	0.0	2.	1.8	0.2	5	1846.0000
35 18 184.	4	3JUL68	41.	2.3	393.	0.5	2.3	4.	0.2	6.	3.9	1.5	18	1846.0000
35 19 184.	5	3JUL68	39.	2.8	441.	-1.4	7.3	8.	0.3	28.	2.3	1.6	19	1846.0000
35 19 184.	6	3JUL68	31.	2.9	455.	-2.5	6.7	4.	0.3	12.	2.1	3.7	19	1846.0000
35 17 184.	7	3JUL68	27.	3.1	463.	-2.2	7.9	1.	0.2	11.	3.2	3.2	17	1846.0000
35 18 184.	8	3JUL68	30.	3.1	472.	0.7	11.6	3.	0.2	10.	3.6	1.8	18	1846.0000
35 19 184.	9	3JUL68	33.	4.3	485.	0.8	4.0	4.	2.1	14.	2.5	5.9	19	1846.0000
35 13 184.	10	3JUL68	30.	4.7	482.	0.7	0.2	4.	2.0	9.	2.6	2.1	13	1846.0000
35 1 184.	11	3JUL68	31.	10.3	462.	-2.6	1.1	0.	0.0	0.	0.0	0.0	1	1846.0000

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35	9	184.	12	3JUL68	27.	11.7	481.	-2.2	0.9	1.	0.8	4.	0.8	0.4	9	1846.0000
35	14	184.	13	3JUL68	27.	9.3	470.	-1.6	1.5	1.	1.5	6.	2.0	1.4	14	1846.0000
35	19	184.	14	3JUL68	26.	8.4	467.	-2.2	1.3	2.	0.6	8.	1.1	0.6	19	1846.0000
35	16	184.	15	3JUL68	28.	9.8	482.	-2.1	0.5	1.	0.4	4.	1.8	0.4	16	1846.0000
35	19	184.	16	3JUL68	31.	7.7	467.	-2.0	0.5	4.	0.9	8.	1.1	1.2	19	1846.0000
35	19	184.	17	3JUL68	33.	4.7	500.	-1.5	2.2	4.	1.7	6.	1.9	2.0	19	1846.0000
35	19	184.	18	3JUL68	40.	2.2	477.	-0.6	2.2	3.	0.3	5.	1.6	1.3	19	1846.0000
35	16	184.	19	3JUL68	36.	2.2	472.	-0.1	1.6	3.	0.2	5.	1.8	3.1	16	1846.0000
35	19	184.	20	3JUL68	30.	2.2	469.	1.0	-1.3	2.	0.2	3.	1.9	2.7	19	1846.0000
35	17	184.	21	3JUL68	27.	2.7	465.	2.3	1.3	4.	0.5	8.	2.5	2.2	17	1846.0000
35	5	184.	22	3JUL68	31.	2.8	450.	4.9	2.5	2.	0.3	6.	1.3	1.6	5	1846.0000
35	16	184.	24	3JUL68	30.	2.4	470.	3.6	-0.3	4.	0.3	7.	2.6	1.5	16	1846.0000

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