#573

APOLLO 12,14,15,16&17

ALSEP 24 HOUR WORK TAPES

69-099C-00D
71-008C-00D
71-063C-00D
72-031C-00D
72-096C-00D

573	69-099C-00D	XXNO-00405	APOLLO 12
573	71-008C-00D	XXNO-00163	APOLLO 14
573	71-063C-00D	XXNO-00408	APOLLO 15
573	72-031C-00D	XXNO-00441	APOLLO 16
573	72-096C-00D	XXNO-00283	APOLLO 17

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

April 6, 1995

To: For The Record

FROM: Computer Services

SUBJECT: Release of D and C tapes

The following tapes should be released per Joe King. The data contained on these tapes are archived at IRIS DMC.

Apollo 12	Apollo 14	Apollo 15	Apollo 16	Apollo 17
69-099C-00D;	71-008C-00D;	71-063C-00D;	72-031C-00D;	72-096C-00D

D054736 - 054995	(260 TAPES)	
D055017 - 055536	(520 TAPES)	
D055538 - 056057	(520 TAPES)	
D056062 - 056246	(185 TAPES)	
D059938	(1 TAPE)	
	(1486 TAPES)	

From: NCF::KING 28-MAR-1995 11:16:45.58
To: POST
CC: DWILLIAMS,KING
Subj: Apollo Work Tapes

Ralph, this note authorizes you to release/recycle the ALSEP work tapes referenced below. This note, and the series of attached E-mails, should be retained as the rationale for the decision by NSSDC to release the tapes. - Joe King

From: NCF::DWILLIAMS "Dave Williams, NSSDC - (301) 441-4197" 27-MAR-1995 1
To: KING, POST
CC:
Subj: ALSEP work tapes

Joe and Ralph,
I just got the following message from Yosio Nakamura from a research vessel docked in Panama (what strange lengths this job leads us to!) Anyway, it looks like all of the ~1500 tapes are safely restored and archived elsewhere. I'd suggest we get a copy of the restored version on CD, but it looks like we can go ahead and recycle all those *&$%#@! Apollo ALSEP work tapes.
Dave

From: SMTP%"ewing12@ewing.ldgo.columbia.edu" 25-MAR-1995 08:32:54.88
To: DWILLIAMS
CC:
Subj:

Date: Sat, 25 Mar 95 02:28:24 GMT
From: ewing12@ewing.ldgo.columbia.edu (R/V Ewing Science Party E-Mail Box # 12)
Message-Id: <9503250228.AA00280@shark.ldgo.columbia.edu>
To: dwilliams@nssdca.gsfc.nasa.gov

Hi, Dave,

I received your message. I've checked the dates of those 19 tapes against a record I found in a hard disk I have with me here, and found that the dates of all 19 tapes are correct but the years are incorrect. The 10 tapes dated 1996 on your list should be 1997, and the 9 tapes dated 1997 on your list should be 1996. Apparently, they were mislabeled. Thus I am quite certain that all those tapes you have are duplicates of what we have archived at IRIS DMC.

Regards,

Yosio

on board R/V Maurice Ewing (on port call at Balboa, Panama)
03/24/95

P.S. My personal e-mail address for the next four weeks is:
ewing12@ewing.ldgo.columbia.edu

>>>

Yosio,
Thanks to your help, I think we may have almost figured out the

mystery of the Apollo ALSEP work tapes. It's been a few months, so I included your last message below to jog your memory if you've (understandibly) forgotten what this is all about. We've gone through our tapes, and tape 7001 starts at 1976, Day 61 as you've listed below, tape 8107 ends on day 273, 1977, tape 6001 starts day 228, 1976 and tape 6336 ends day 115, 1977. The total number of tapes, 1486 matches our 1484 tapes if you add in tapes 8108 and 8109, which we don't have. The reason our start and end dates (Day 1, 1976 and Day 331, 1977) don't match tapes 7001 and 8107 is that the numbers on the tapes are not strictly chronological. The first tape we have, datewise, is number 6183 (1/1/76) and the last is 6157 (12/14/77). In an earlier message, you said that the experiments were turned off 2 and a half months before 12/14/77, so I don't know what could be on these last tapes. We have 9 tapes dated from 11/13/77 to 12/14/77. Could NASA have turned on onbe or more of the ALSEPs for a month after turning them off in September? Or could this be some set of processed data? As for the earlier data, we have 10 tapes dated before tape 7001 at 3/1/76. I don't know what these tapes represent either. Judging by the fact that we have the same number of tapes, you probably have these same tapes preserved. I've included a list of the tapes and their dates below. Is there any way I can check to see if you have the same dates covered on these tapes as we've found? I'm just about convinced that these tapes are the same as the ones you've got preserved, and will get rid of them and replace them with a copy of the preservation tapes, but I don't want to do that until I'm sure these last 19 tapes are accounted for. Do you have any information that could help? Sorry to bother you with this again - I just want to make sure I don't discard any irreplaceable data.

Thanks,
Dave

Tape	Date
6183	01/01/76
6184	01/01/76
6185	01/02/76
6186	01/03/76
6187	01/03/76
6188	01/04/76
7641	02/17/76
7642	02/17/76
7643	02/18/76
7644	02/19/76
7476	11/13/77
6134	11/25/77
6136	11/27/77
6137	11/28/77
6138	11/28/77
6139	11/29/77
6140	11/30/77
7503A	11/30/77
6157	12/14/77

REQ. AGENT	RAND NO.	ACQ. AGENT
GLS	V0176	RWV

APOLLO 12,14,15,16&17

ALSEP 24 HOUR WORK TAPES

69-099C-00D	XXNO-00405
71-008C-00D	XXNO-00163
71-063C-00D	XXNO-00408
72-031C-00D	XXNO-00441
72-096C-00D	XXNO-00283

This data set catalog contains 1,485 magnetic tapes. These data tapes are 1600 BPI, Binary, 9 track and contain 1 file. They were created on the 360 IBM computer. The listing that follows contains the D number, day, time span, date, work tape number and the FRC box number for each tape.

2 July 1981

4. Compressed-scale playout of LSPE data.

This data set is also currently being generated, and I expect the set will be complete in about three months. The original playouts will be sent to you for microfilming when the entire set is completed.

Format descriptions of these four data sets are attached.

Sincerely yours,

Yosio Nakamura

YN:jj

Attachments

cc: Mr. James E. Harris

ALSEP Normal-Bit-Rate Work Tape Format

The ALSEP data from Apollo stations 12, 14, 15, 16 and 17 for the time period March 1, 1976 through September 30, 1977 were processed by the University of Texas Galveston Geophysics Laboratory. The processed digital data were stored on 1/2 in (12.7 mm) magnetic tapes on 2400 ft (732 m) reels. The data were recorded on 9 tracks at 1600 bpi PE (phase encoded), odd parity, and in binary format. Each tape contains a single file of the following description:

Blocks 1 and 2: Hearder records, 16 bytes each

Bytes 1-2: Tape ID code "3" in a 16-bit integer

Bytes 3-4: active station code 1, 2, 3, 4 and 5 for Apollo 12, 15, 16, 14 and 17 stations, respectively, placed in consecutive 3-bit positions starting at the second bit. The first bit is not used. Respective bits are cleared for inactive stations.

Bytes 5-6: number of active stations (n) in a 16-bit integer.

Bytes 7-8: tape ID number (7001 through 8109) in a 16-bit integer.

Bytes 9-10: year in a 16-bit integer.

Bytes 11-14 and first 4 bits of byte 15: time of the year of the first data in msec, 36-bit integer.

Remaining bits of byte 15 and byte 16: not used.

Blocks 3 and the following: Data records, 5760 bytes each

Each block contains 60/n frames; each frame contains n subframes, representing n active stations; and each subframe contains 96 bytes of data for a single 64-word frame of ALSEP data for a station. In each subframe:

First bit of byte 1: a flag bit indicating usage of computer-generated time code.

Remaining bits of byte 1, bytes 2-4, and first 4 bits of byte 5: time of the year in msec, 35-bit integer.

Last 4 bits of byte 5: ALSEP tracking station ID code.

First 3 bits of byte 6: ALSEP package ID code.

Last 5 bits of byte 6: bit synchronizer status bits

- bit 1: search
- bit 2: verify
- bit 3: confirm
- bit 4: lock
- bit 5: input level

Bytes 7-8: original 7-track record number, 16 bit integer (first subframe only)

The remaining bytes are divided into 22 4-byte groups, with each group (32 bits) containing 3 10-bit ALSEP data words with two single unused bits between data, except the last group, which contains only one ALSEP word.

Last block: End-of-file block, 5760 bytes

All bytes are hexadecimal 11.

EOF: Standard IBM end-of-file mark.

Compressed-Scale Playouts of PSE/LSG Data

This data set shows a complete time history of the ALSEP PSE and LSG data for the period March 1, 1976 through September 30, 1977.

The components plotted are: Apollo 12 LPX, LPY, LPZ; Apollo 14 LPX, LPY, LPZ, SPZ; Apollo 15 LPX, LPY, LPZ, SPZ; Apollo 16 LPX, LPY, LPZ, SPZ; and Apollo 17 LSG seismic. All components (16 traces) are plotted in parallel using a common time scale of 76 mm/hr (3 in/hr).

The data compression methods used are as follows:

PSE - LP data ----The absolute value of the difference between consecutive data values is summed over 40 points, yielding one value for each 6 seconds of data. This is plotted at a scale of 157 DU/cm (400 DU/in; DU=digital unit), using opposite polarity for consecutive plots to produce a trace with appearance of a seismogram.

PSE - SPZ data----Similar to the LP data except that the absolute values are summed over 320 data points and plotted at a scale of 1260 DU/cm (3200 DU/in).

LSG - seismic-----The absolute difference between the sum of amplitudes in the first 300 msec interval (14 data points) and that in the second 300 msec interval is calculated for each 600 msec interval, and the largest of them in each 6 second interval is plotted at a scale of 1260 DU/cm (3200 DU/in) using opposite polarity for consecutive plots.

ALSEP High-Bit-Rate Work Tape Format

The ALSEP high-bit-rate data from the Apollo station 17 for the time period August 15, 1976 through April 25, 1977 were processed by the University of Texas Galveston Geophysics Laboratory. The processed digital data were stored on 1/2 in (12.7 mm) magnetic tapes on 2400 ft (732 m) reels. The data were recorded on 9-tracks at 1600 bpi PE (phase encoded), odd parity, and in binary format. Each tape contains a single file of the following description:

Blocks 1 and 2: Hearder records, 16 bytes each

Bytes 1-2: Tape ID code "4" in a 16-bit integer.

Bytes 3-4: active station code "5" for the Apollo 17 station placed in the last 3-bit position of the 16-bit word.

Bytes 5-6: number of active stations (=1) in a 16-bit integer.

Bytes 7-8: tape ID number (6001 through) in a 16-bit integer.

Bytes 9-10: year in a 16-bit integer.

Bytes 11-14 and first 4 bits of byte 15: time of the year of the first data in msec, 36-bit integer.

Remaining bits of byte 15 and byte 16: not used.

Blocks 3 and the following: Data records, 5760 bytes each

Each block contains 20 frames; each frame contains 3 subframes, and each subframe contains 96 bytes of data for a single 20-word subframe of LSPE data. In each subframe:

First bit of byte 1: a flag bit indicating usage of computer-generated time code.

Remaining bits of byte 1, bytes 2-4, and first 4 bits of byte 5: time of the year in msec, 35-bit integer.

Last 4 bits of byte 5: ALSEP tracking station ID code.

First 3 bits of byte 6: ALSEP package ID code =5.

Last 5 bits of byte 6: bit synchronizer status bits

bit 1: search
bit 2: verify
bit 3: confirm
bit 4: lock
bit 5: input level

Bytes 7-8: original 7-track record number, 16-bit integer (first subframe only).

Bytes 9-88: divided into 20 4-byte groups, with each group (32 bits) containing a 30-bit LSPE data word followed by two unused bits.

Bytes 89-96: not used.

Last block: End-of-file block, 5760 bytes.

All bytes are hexadecimal 11.

EOF: Standard IBM end-of-file mark.

Compressed-Scale Playouts of LSPE Data

This data set shows a complete time history of the Apollo 17 LSPE data for the period August 15, 1976 through April 25, 1977.

The seismic data from the four geophones are compressed and plotted in parallel at a time scale of 90 mm/hr (3.5 in/hr).

The compression method used is as follows: The absolute value of the difference between every 5th log-decompressed amplitude values is summed over 48 samples, yielding one value for each 10.2 seconds of data. This is plotted at a scale of 630 LDU/cm (1600 LDU/in; LDU=log-decompressed amplitude unit). The log-decompression of amplitude uses a formula:

$$y = \mathrm{sgn}\,(x-63.5) \cdot \exp\left|0.1427(x-63.5)\right|$$

where x is the log-compressed amplitude in digital units.

THE UNIVERSITY OF TEXAS AT AUSTIN
~~MARINE SCIENCE INSTITUTE~~
GALVESTON, TEXAS 77550

2 July 1981

Geophysics Laboratory
700 The Strand
713 765-~~2173~~ 2911

Mr. Robert W. Vostreys
National Space Science Data Center
Goddard Space Flight Center
Code 601
Greenbelt, Maryland 20771

Dear Mr. Vostreys:

Listed below are the data sets, with their current status, which we are generating by processing the ALSEP range tapes and which we are sending to you for archiving at the Data Center.

1. Continuous ALSEP normal-bit-rate data on magnetic tape (NBR work tapes).

   A copy of the entire 1151-reel set, identified by work tape numbers C7001 through C8109, has been sent to you in several separate shipments in the last few months.

2. Compressed-scale playout of PSE/LSG data.

   This 3490-sheet set of playouts has been completed, and the original set will be sent to you for microfilming as soon as the other original playouts (the last batch of event compressed playouts) are returned from you.

3. Continuous ALSEP high-bit-rate data on magnetic tape (HBR work tapes).

   This data set is currently being generated, and I expect the set will be complete in about three months. The archive copy, which we are sending to you in several shipments, is identified by work tape numbers starting C6001. The total number of tapes will be about 360 reels.

D#	DAY	Timespan	DATE	TAPE ID#	FRC BOX #
D-56181	001	0012 - 1653	01/01/76	C6183	BOX #5625
D-56182	001	1653 - 0942	01/01/76	C6184	BOX #5625
D-56183	002	0942 - 0117	01/02/76	C6185	BOX #5625
D-56184	003	0114 - 1823	01/03/76	C6186	BOX #5625
D-56185	003	1816 - 1100	01/03/76	C6187	BOX #5625
D-56186	004	1054 - 0341	01/04/76	C6188	BOX #5625
D-55901	048	0902 - 2340	02/17/76	C7641	BOX #5604
D-55900	048	2340 - 1444	02/17/76	C7642	BOX #5604
D-55903	049	1445 - 0332	02/18/76	C7643	BOX #5604
D-55902	050	0329 - 1434	02/19/76	C7644	BOX #5604
D-54752	061	0001 - 1011	03/01/76	C7001	BOX #5517
D-54753	061	0859 - 1011	03/01/76	C7001A	BOX #5517
D-54754	061	1052 - 2240	03/01/76	C7002	BOX #5517
D-54755	061	2240 - 0956	03/01/76	C7003	BOX #5517
D-54756	062	1047 - 2358	03/02/76	C7004	BOX #5517
D-54757	062	2359 - 1415	03/02/76	C7005	BOX #5518
D-54758	063	1416 - 0211	03/03/76	C7006	BOX #5518
D-54759	064	0211 - 1455	03/04/76	C7007	BOX #5518
D-54760	064	1455 - 0006	03/04/76	C7008	BOX #5518
D-54761	065	0006 - 1429	03/05/76	C7009	BOX #5518
D-54948	065	1423 - 0202	03/05/76	C7010	BOX #5532
D-54949	066	0202 - 1258	03/06/76	C7011	BOX #5532
D-54950	066	1258 - 0002	03/06/76	C7012	BOX #5532
D-54951	067	0002 - 1451	03/07/76	C7013	BOX #5532
D-54952	067	1451 - 0236	03/07/76	C7014	BOX #5533
D-54953	068	0236 - 0646	03/08/76	C7015	BOX #5533
D-54954	068	0641 - 0736	03/08/76	C7016	BOX #5533
D-54955	068	0734 - 1912	03/08/76	C7017	BOX #5533
D-55176	068	1914 - 0255	03/08/76	C7560A	BOX #5548

D-54956	068	1920 - 0626	03/08/76	C7018	BOX #5533
D-54957	069	0735 - 2113	03/09/76	C7019	BOX #5533
D-54771	069	2113 - 0902	03/09/76	C7020	BOX #5519
D-54770	070	0902 - 1346	03/10/76	C7020A	BOX #5519
D-54769	070	1042 - 2006	03/10/76	C7021	BOX #5518
D-54768	070	2000 - 0739	03/10/76	C7022	BOX #5518
D-54767	071	0735 - 1948	03/11/76	C7023	BOX #5518
D-54766	071	1949 - 0732	03/11/76	C7024	BOX #5518
D-54765	072	0729 - 1513	03/12/76	C7025	BOX #5518
D-54764	072	1511 - 0100	03/12/76	C7026	BOX #5518
D-54763	073	0058 - 1040	03/13/76	C7027	BOX #5518
D-54762	073	1041 - 2122	03/13/76	C7028	BOX #5518
D-54782	073	2122 - 0854	03/13/76	C7029	BOX #5519
D-54781	074	0846 - 2121	03/14/76	C7030	BOX #5519
D-54780	074	2121 - 0858	03/14/76	C7031	BOX #5519
D-54779	075	0858 - 1947	03/15/76	C7032	BOX #5519
D-54778	075	1942 - 0738	03/15/76	C7033	BOX #5519
D-54777	076	0738 - 1833	03/16/76	C7034	BOX #5519
D-54776	076	1833 - 0145	03/16/76	C7035	BOX #5519
D-54775	077	0145 - 1636	03/17/76	C7036	BOX #5519
D-54774	077	1637 - 0805	03/17/76	C7037	BOX #5519
D-54773	078	0805 - 2154	03/18/76	C7038	BOX #5519
D-54892	078	2150 - 0853	03/18/76	C7039	BOX #5528
D-54893	079	0845 - 2325	03/19/76	C7040	BOX #5528
D-54894	079	2319 - 1330	03/19/76	C7041	BOX #5528
D-54895	080	1220 - 0042	03/20/76	C7042	BOX #5528
D-54896	081	0043 - 1054	03/21/76	C7043	BOX #5528
D-54897	081	1050 - 2103	03/21/76	C7044	BOX #5528
D-54898	081	2101 - 0911	03/21/76	C7045	BOX #5528

D-54899	082	0907 - 2108	03/22/76	C7046	BOX #5528
D-54900	082	2106 - 1051	03/22/76	C7047	BOX #5529
D-54901	083	1045 - 2335	03/23/76	C7048	BOX #5529
D-54938	083	2334 - 0954	03/23/76	C7049	BOX #5531
D-54939	084	0950 - 1723	03/24/76	C7050	BOX #5532
D-54940	084	1720 - 0759	03/24/76	C7051	BOX #5532
D-54941	085	0759 - 1755	03/25/76	C7052	BOX #5532
D-54942	085	1752 - 0853	03/25/76	C7053	BOX #5532
D-54943	086	0853 - 0817	03/26/76	C7054	BOX #5532
D-54944	087	0817 - 2301	03/27/76	C7055	BOX #5532
D-54945	087	2301 - 1555	03/27/76	C7056	BOX #5532
D-54946	088	1549 - 0607	03/28/76	C7057	BOX #5532
D-54947	089	0605 - 1951	03/29/76	C7058	BOX #5532
D-55554	089	1237 - 0437	03/29/76	C6015	BOX #5577
D-54882	089	1951 - 0655	03/29/76	C7059	BOX #5527
D-54883	090	0653 - 2059	03/30/76	C7060	BOX #5527
D-54884	090	2050 - 1125	03/30/76	C7061	BOX #5527
D-54885	091	1126 - 0234	03/31/76	C7062	BOX #5527
D-54886	092	0234 - 1950	04/01/76	C7063	BOX #5527
D-54887	092	1947 - 0554	04/01/76	C7064	BOX #5528
D-54888	093	0622 - 0725	04/02/76	C7064A	BOX #5528
D-54889	093	0711 - 2207	04/02/76	C7065	BOX #5528
D-54890	093	2207 - 1340	04/02/76	C7066	BOX #5528
D-54891	094	1341 - 0323	04/03/76	C7067	BOX #5528
D-54928	095	0322 - 1642	04/04/76	C7068	BOX #5531
D-54929	095	1643 - 0321	04/04/76	C7069	BOX #5531
D-54930	096	0322 - 1629	04/05/76	C7070	BOX #5531
D-54931	096	1630 - 0319	04/05/76	C7071	BOX #5531
D-54932	097	0318 - 0725	04/06/76	C7071A	BOX #5531

D-56040	332	0253 - 1934	11/28/77	C6137	BOX #5615
D-56044	332	1934 - 1217	11/28/77	C6138	BOX #5615
D-56045	333	1303 - 0533	11/29/77	C6139	BOX #5615
D-56042	334	0533 - 2238	11/30/77	C6140	BOX #5615
D-55895	334	0859 - 0913	11/30/77	C7503A	BOX #5603
D-56160	348	0502 - 0739	12/14/77	C6157	BOX #5623

$$
$ASS IN TUO

DUMP OF TAPE GAIL1

D-56186

INPUT TAPE GAIL1 ON TD2 TAPE ID
DATA INPUT H9 FL 1 2 2 6182 Number YEAR 71

FILE 1 RECORD 1 LENGTH 16BYTES
(0) 00030005 00011820 07B9016F 11A82000

FILE 1 RECORD 2 LENGTH 16BYTES
(0) 00030005 00011820 07B9016F 11A82000

FILE 1 RECORD 6000 LENGTH 5760BYTES

(0)	01A8A765	E1A3051B	0EE108B8	850223A4	85021BA0	810213A4	81020BC0	81020BE4	81020BC0	810203CC
(40)	7F0203D0	810203BC	810203AC	8101FBA4	7F01EB98	8101E388	8101E37C	8101EB7C	8101FB60	8101E374
(80)	8101E36C	8101EB6C	00000000	00000000	01A8A770	81A30000	0EE107B4	8101F374	8301EB80	8301E380
(120)	8101DB80	8501D398	8701CBB0	8901CBB4	8901CBC8	8901CBF8	8B01D3F4	8B01D3E0	8901D400	8701D400
(160)	8B01DC04	8D01DC08	8D01D40C	8F01D400	8EFDD400	8AF9CC04	00000000	00000000	01A8A77B	11A30000
(200)	0EE0F740	8701DC04	8501DC00	8101DC00	8101DC00	8101DC00	8301DC08	8101DC04	8101DC08	8101D404
(240)	8301E408	8701FC00	83020430	80F5FC40	80F5F424	80FA0424	80FA0444	80F6045C	80F20454	80F60418
(280)	00000000	00000000	01A8A785	B1A30000	0EDF0840	7D020414	7F020430	7D020444	7B020430	79020404
(320)	78FE0400	7CFE040C	80FA0400	7AF2040C	78EE040C	7EF20404	80EE0408	80EA0408	80EA040C	80EE040C
(360)	80EE0400	7EF20418	7EF60420	7EFA041C	00000000	00000000	01A8A790	51A30000	0EE0F840	81020404
(400)	81020400	7F020410	7F020400	81020408	81020400	81020414	80FE0418	80FE0408	80FA0404	80F20400
(440)	80FA0400	80FA0400	80F60404	80FA0408	81020400	81020400	81020400	810203F4	00000000	00000000
(480)	01A8A79A	F1A30000	0EE1083C	830203E4	87020400	89020400	8B020400	8B020400	8B020408	8B020404
(520)	88FA0408	88F60404	86FA0408	84FA0400	86FE0400	8701F400	8301F3F4	8101EBC4	8101E3D4	8101DC0C
(560)	8101DC04	8101DBF8	00000000	00000000	01A8A7A5	91A30000	0EE10740	8111D404	8111E400	8111DBF4
(600)	8111CC00	8115C404	8111CC00	8111E40C	810DEC00	8109FC0C	81060400	81060404	810A0408	81060408
(640)	810204C0	810A040C	7D0E0400	7D120424	7B12042C	7716041C	00000000	00000000	01A8A7B0	21A30000
(680)	0EDD1840	79120434	790E0450	79120460	79160470	771A0488	75120480	75120474	77160478	771A0478
(720)	791A0474	791E0460	791E0460	791E0470	791E0474	771E0468	771A046C	771A0470	77160470	77160474
(760)	00000000	00000000	01A8A7BA	C1A30000	0EDD1848	75020494	75020490	7301F490	7101ECA0	7109F4A0
(800)	7309EC38	7301EC74	7501E488	7701E494	7501D488	7701DC60	7B01EC60	7D01FC60	81020454	81020454
(840)	81020474	81020470	81020464	81020468	00000000	00000000	01A8A7C5	61A30000	0EE10844	81020474
(880)	81020470	81020484	81020480	81020484	81020460	81020450	81020460	80FE046C	81021470	80FA0C74
(920)	80FA0468	80FA0468	80FA046C	80F6046C	80EE0460	80EE0454	80EE042C	80EA041C	00000000	00000000
(960)	01A8A7D0	01A30000	0EE0E840	80EA0434	80EA0440	80EE0450	80F60460	80FE0468	81020460	81020454
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(1080)	80FE0450	81021460	81021C58	81021C24	81020C28	81020C44	81020C28	81020C00	81021400	81061C00
(1120)	81021C04	81022404	81022404	81020C0C	7D020404	7F020408	00000000	00000000	01A8A7E5	31A30000
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(1320)	85020400	85020400	83021C00	85021C04	00000000	00000000	01A8A7FA	71A30000	0EE10840	81021404
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(1400)	81023C10	81023C10	81023C24	81023434	81022C34	7F022C4C	79022C44	79021C38	00000000	00000000
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(1600)	70F603C4	72F603B8	72FA03AC	750203A0	750203A0	750203B4	00000000	00000000	01A8A81A	41A30000
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(3200)	81020380	81060380	81060380	81060380	810E038C	810E0374	810A0378	81020388	81020380	81020370	
(3240)	81020380	81020388	81020370	81020370	00000000	00000000	01A8A8CE	B1A30000	0EE107B4	8101F364	
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(3320)	8101E380	8101D390	8101CB94	8101CBA8	8101CBCC	8101CBF0	8101DC00	8101D404	00000000	00000000	
(3360)	01A8A8D9	51A30000	0EE10740	8101CC04	8101D400	8101DC00	8101DC00	8101DC00	8101E408	8101E404	
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(3440)	87020474	8B020478	00000000	00000000	01A8A8E3	F1A30000	0EE30848	8B020484	8B020480	8B020484	
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(3640)	00000000	00000000	01A8A8F9	31A30000	0EE108C0	81021C04	81020C00	81020400	81020400	81020400	
(3680)	81020408	81020404	80FA0408	80F60404	7CFA0408	7B020400	76FE0400	74F603F0	74FA03E4	770203E4	
(3720)	77020404	75020400	77020404	7B0203F8	00000000	00000000	01A8A903	C1A30000	0EDF083C	74FE0404	
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(3880)	6D0203F8	6D020408	6AFE0404	6B0203E0	6B0203E0	69020400	6B0203F4	6D0203E8	6D0213EC	6B021400	
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(4240)	81020410	7F020410	79020430	77020440	79020438	7B020434	77020458	7501FC54	73020418	73020400	
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(4320)	01A8A943	71A30000	0EDF17C0	7B15EC04	7919E400	7919EC04	7919FC00	7919EC04	7B15DC00	8115E40C	
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(4440)	8125D420	8125D428	8121CC30	8121DC34	811DE418	811DF408	811E0404	811E0400	811A0400	811A0400	
(4480)	811A0404	81160408	81160400	811A0400	81160400	810E0404	00000000	00000000	01A8A958	B1A30000	
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EOJ DUMP STOPPED AFTER FILE 1 # OF PERMANENT READ ERRORS 0

START TIME 02/01/83 12:11:08 STOP TIME 02/01/83 12:14:41

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