Data Set Catalog #226

Apollo 14, Alsep, Count Rate Data
71-008C-08A   31 tapes

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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inventory information is now no longer maintained in the DSCs, but is now managed in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

APOLLO 14 LM/ALSEP

COUNT RATE DATA ON MAG TAPE

71-008C-08A

This data set has been restored. There were originally 53
7-track, 556 BPI tapes written in Binary. There are five restored tapes.
The DR tapes are 3480 cartridges and the DS tapes are 9-track, 6250 BPI.
The original tapes were created on a 930 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#	DD#	FILES	TIME SPAN	
DR004786	DS004786	D010822	1	02/05/71 - 02/09/71	
		D011638	2	02/09/71 - 02/13/71	(a)
		D011639	3	02/13/71 - 02/17/71	
		D011640	4	02/17/71 - 02/21/71	
		D011641	5	02/21/71 - 02/25/71	
		D011642	6	02/25/71 - 03/01/71	
		D011634	7	03/01/71 - 03/05/71	
		D011635	8	03/05/71 - 03/09/71	(b)
		D011636	9	03/09/71 - 03/12/71	
		D011637	10	03/13/71 - 03/17/71	(c)
		D011890	11	03/19/71 - 03/21/71	
DR004787	DS004787	D011891	1	03/21/71 - 03/25/71	
		D011892	2	03/25/71 - 03/29/71	(d)
		D011893	3	03/29/71 - 04/02/71	
		D011894	4	04/02/71 - 04/06/71	
		D011895	5	04/06/71 - 04/10/71	
		D011896	6	04/16/71 - 04/20/71	
		D011897	7	04/20/71 - 04/24/71	
		D011898	8	04/24/71 - 04/28/71	
		D011899	9	04/28/71 - 05/02/71	
		D012117	10	05/02/71 - 05/06/71	
		D012118	11	05/06/71 - 05/10/71	
DR004788	DS004788	D012119	1	05/10/71 - 05/14/71	
		D012120	2	05/14/71 - 05/18/71	
		D012121	3	05/18/71 - 05/22/71	
		D012122	4	05/22/71 - 05/26/71	(e)
		D012123	5	05/26/71 - 05/30/71	(f)
		D012124	6	05/30/71 - 06/03/71	
		D012125	7	06/03/71 - 06/07/71	
		D016608	8	07/31/72 - 08/04/72	(g)
		D012593	9	08/03/72 - 08/06/72	
		D016604	10	08/04/72 - 08/08/72	
		D012591	11	08/07/72 - 08/10/72	

DR#	DS#	DD#	FILES	TIME SPAN	
DR004789	DS004789	D016603	1	08/08/72 - 08/12/72	(h)
		D016601	2	12/06/72 - 12/10/72	(i)
		D016606	3	12/18/72 - 12/22/72	
		D016607	4	12/22/72 - 12/26/72	(j)
		D016605	5	12/26/72 - 12/30/72	
		D016610	6	12/30/72 - 01/01/73	
		D016609	7	01/01/73 - 01/05/73	
		D016611	8	01/05/73 - 01/09/73	
		D016612	9	01/09/73 - 01/13/73	
		D016598	10	01/13/73 - 01/17/73	(k)
DR004790	DS004790	D016622	1	01/17/73 - 01/21/73	
		D016621	2	01/21/73 - 01/25/73	
		D016620	3	01/25/73 - 01/29/73	(1)
		D016619	4	01/29/73 - 02/02/73	
		D016618	5	02/02/73 - 02/06/73	
		D016617	6	02/06/73 - 02/10/73	(m)
		D016616	7	02/10/73 - 02/14/73	
		D016615	8	02/14/73 - 02/18/73	
		D016613	9	02/20/73 - 02/22/73	(n)
		D016614	10	02/28/73 - 03/02/73	(o)

(a) D011638: Read error occurred in record 490 of file 1.
(b) D011635: Read error occurred in record 14 of file 1.
(c) D011637: Read error occurred in record 206 of file 1.
(d) D011892: Read error occuerd in record 93 of file 1.
(e) D012122: Read error occurred in record 5 of file 1.
(f) D012123: Read error occurred in record 4 of file 1.
(g) D016608: Read error occurred in record 1702 of file 1.
(h) D016603: Read errors occurred in records 1743 & 1769 of file 1.
(i) D016601: Read error occuerd in record 85 of file 1.
(j) D016607: Read errors occurred in records 1284 & 1285 of file 1.
(k) D016598: Read errors occurred in records 28, 41, 44, 48, 62 of file 1.
(1) D016620: Read error occurred in record 395 of file 1.
(m) D016617: Read error occurred in record 65 of file 1.
(n) D016613: Read error occuerd in record 182 of file 1.
(o) D016614: Read error occurred in record 47 of file 1.

APOLLO 14 ALSEP

COUNT RATE DATA AND SOLAR FLARE COUNT RATE DATA

71-008C-08A

This data set catalog consisting of 53 tapes contains Apollo 14 ALSEP

Charged Particle Lunar Environment Experiment data. The tapes are 556

BPI, 7-track, Binary, 1 file. The were created on an XDS 920 computer.

The physical and logical record size can be found in the data tape format.

The time spans for the tapes are:

D#	C#	TIME SPAN
D-10822	C-08176	2/05/71 - 2/09/71
D-11638	C-08938	2/09/71 - 2/13/71
D-11639	C-08939	2/13/71 - 2/17/71
D-11640	C-08940	2/17/71 - 2/21/71
D-11641	C-08941	2/21/71 - 2/25/71
D-11642	C-08942	2/25/71 - 3/01/71
D-11634	C-08934	3/01/71 - 3/05/71
D-11635	C-08935	3/05/71 - 3/09/71
D-11636	C-08936	3/09/71 - 3/12/71
D-11637	C-08937	3/13/71 - 3/17/71
D-11890	C-09194	3/19/71 - 3/21/71
D-11891	C-09195	3/21/71 - 3/25/71
D-11892	C-09196	3/25/71 - 3/29/71
D-11893	C-09197	3/29/71 - 4/02/71
D-11894	C-09198	4/02/71 - 4/06/71
D-11895	C-09199	4/06/71 - 4/10/71
D-11896	C-09200	4/16/71 - 4/20/71
D-11897	C-09201	4/20/71 - 4/24/71
D-11898	C-09202	4/24/71 - 4/28/71

D#	C#	TIME SPAN
D-11899	C-09203	4/28/71 - 5/02/71
D-12117	C-09401	5/02/71 - 5/06/71
D-12118	C-09402	5/06/71 - 5/10/71
D-12119	C-09403	5/10/71 - 5/14/71
D-12120	C-09404	5/14/71 - 5/18/71
D-12121	C-09405	5/18/71 - 5/22/71
D-12122	C-09406	5/22/71 - 5/26/71
D-12123	C-09407	5/26/71 - 5/30/71
D-12124	C-09408	5/30/71 - 6/03/71
D-12125	C-09409	6/03/71 - 6/07/71
Solar Flare * D-12591	C-09583	8/03/72 - 8/06/72
* D-12593	C-09584	8/07/72 - 8/10/72

* These two tapes are the Solar Flare tapes.

D#	C#	TIME SPAN
D-16598	C-12689	1/13/73 - 1/17/73
D-16601	C-12690	12/06/72 - 12/10/72
D-16603	C-12691	8/08/72 - 8/12/72
D-16604	C-12692	8/04/72 - 8/08/72
D-16605	C-12693	12/26/72 - 12/30/72
D-16606	C-12694	12/18/72 - 12/22/72
D-16607	C-12695	12/22/72 - 12/26/72
D-16608	C-12696	7/31/72 - 8/04/72
D-16609	C-12697	1/01/73 - 1/05/73
D-16610	C-12698	12/30/72 - 1/01/73
D-16611	C-12699	1/05/73 - 1/06/73
D-16612	C-12700	1/09/73 - 1/13/73
D-16613	C-12701	2/20/73 - 2/22/73
D-16614	C-12702	2/28/73 - 3/02/73
D-16615	C-12703	2/14/73 - 2/18/73
D-16616	C-12704	2/10/73 - 2/14/73
D-16617	C-12705	2/06/73 - 2/10/73
D-16618	C-12706	2/02/73 - 2/06/73
D-16619	C-12707	1/29/73 - 2/02/73
D-16620	C-12708	1/25/73 - 1/29/73
D-16621	C-12709	1/21/73 - 1/25/73
D-16622	C-12710	1/17/73 - 1/21/73

Three tapes - D-16599, D-16600, and D-16602 each had over 30 parity errors.

APOLLO 14 LM/ALSEP

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		D011642	6	02/25/71 - 03/01/71	
		D011634	7	03/01/71 - 03/05/71	
		D011635	8	03/05/71 - 03/09/71	(b)
		D011636	9	03/09/71 - 03/12/71	
		D011637	10	03/13/71 - 03/17/71	(c)
		D011890	11	03/19/71 - 03/21/71	
DR004787	DS004787	D011891	1	03/21/71 - 03/25/71	
		D011892	2	03/25/71 - 03/29/71	(d)
		D011893	3	03/29/71 - 04/02/71	
		D011894	4	04/02/71 - 04/06/71	
		D011895	5	04/06/71 - 04/10/71	
		D011896	6	04/16/71 - 04/20/71	
		D011897	7	04/20/71 - 04/24/71	
		D011898	8	04/24/71 - 04/28/71	
		D011899	9	04/28/71 - 05/02/71	
		D012117	10	05/02/71 - 05/06/71	
		D012118	11	05/06/71 - 05/10/71	
DR004788	DS004788	D012119	1	05/10/71 - 05/14/71	
		D012120	2	05/14/71 - 05/18/71	
		D012121	3	05/18/71 - 05/22/71	
		D012122	4	05/22/71 - 05/26/71	(e)
		D012123	5	05/26/71 - 05/30/71	(f)
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		D016604	10	08/04/72 - 08/08/72	
		D012591	11	08/07/72 - 08/10/72	

REO. ACENT
ROP

RASH NO.
RB2207

ACQ. AGENT
IHK

APOLLO 14 ALSEP

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D-11641	C-08941	2/21/71 - 2/25/71
D-11642	C-08942	2/25/71 - 3/01/71
D-11634	C-08934	3/01/71 - 3/05/71
D-11635	C-08935	3/05/71 - 3/09/71
D-11636	C-08936	3/09/71 - 3/12/71
D-11637	C-08937	3/13/71 - 3/17/71
D-11890	C-09194	3/19/71 - 3/21/71
D-11891	C-09195	3/21/71 - 3/25/71
D-11892	C-09196	3/25/71 - 3/29/71
D-11893	C-09197	3/29/71 - 4/02/71
D-11894	C-09198	4/02/71 - 4/06/71
D-11895	C-09199	4/06/71 - 4/10/71
D-11896	C-09200	4/16/71 - 4/20/71
D-11897	C-09201	4/20/71 - 4/24/71
D-11898	C-09202	4/24/71 - 4/28/71

D𝜃	C𝜃	TIME SPAN
D-11899	C-09203	4/28/71 - 5/02/71
D-12117	C-09401	5/02/71 - 5/06/71
D-12118	C-09402	5/06/71 - 5/10/71
D-12119	C-09403	5/10/71 - 5/14/71
D-12120	C-09404	5/14/71 - 5/18/71
D-12121	C-09405	5/18/71 - 5/22/71
D-12122	C-09406	5/22/71 - 5/26/71
D-12123	C-09407	5/26/71 - 5/30/71
D-12124	C-09408	5/30/71 - 6/03/71
D-12125	C-09409	6/03/71 - 6/07/71
SoLAR FLARE D-12591	C-09583	8/03/72 - 8/06/72
* D-12593	C-09584	8/07/72 - 8/10/72

* These two tapes are the Solar Flare tapes.

RICE UNIVERSITY

HOUSTON, TEXAS

77001

9 November 1972

DEPARTMENT OF SPACE SCIENCE

Dr. Joseph King
Code 601
National Space Science Data Center
Goddard Space Flight Center
Greenbelt, Md. 20771

Dear Mr. King,

I am enclosing a description and data tape format for the
Charged Particle Lunar Environment Experiment (CPLEE), a com-
ponent of the Apollo 14 ALSEP. I am also sending, under
separate cover, a test tape for the first four (4) days of
CPLEE operation along with an octal dump of the first few
records. I would appreciate it if you would verify the tape
and inform me as to its acceptability. Following that, I
will begin to send tapes on a regular basis.

As we have discussed previously by telephone, CPLEE operated
continuously from February 5, 1971 until June 6, 1971, at which
time a partial failure in one of the high voltage supplies forced
it to operate on an intermittent basis. Initially, therefore
I will send tapes of the February 5 - June 6 period (30 tapes),
and thereafter will select certain periods of interest (e.g.
solar flare events, lunar impact events, magnetic storm events)
for which instrument operation was stable and good quality data
were received.

I shall also supply a tape, most likely written in 9-track
IBM 370 FORTRAN format, of the various ephemeris positions in
the solar-ecliptic and solar-magnetospheric coordinate systems.
I expect to supply this tape in approximately 2 months.

Sincerely,

David L. Reasoner

David L. Reasoner

cc: W. F. Eichelman
    D. W. Strangway
    D. Beattie

CPLEE DATA TAPE FORMAT

The data tape records are organized around the CPLEE deflection voltage cycles. The tapes are 7-track, 556 B.P.I., binary, odd parity with 1110 word physical records. A logical record contains timing and housekeeping information, and 96 data words. The 96 data words represent either 1 CPLEE cycle in the automatic mode (19.2 seconds) or 8 CPLEE cycles (2.4 seconds/cycle) in the manual mode. Also included are words to identify the deflection voltage step and polarity.

Each data tape begins with a 4-word header record written in odd parity and SDS-92 internal code. The label is "CPLEE ALSEP APOLLO 14".

Each logical record is constructed as follows, with ten (10) logical records per physical record.

WORD NUMBER	FUNCTION
1	Days (Day 1 = Jan. 1.)
2	Hours
3	Minutes
4	Milliseconds
5-100	Data Array
101	Mode and Step Indicator
102	Last Valid Line (Manual)
103	N/A
104	N/A
105	Year
106	N/A
107	Analyzer B Channeltron Power Supply Voltage
108	Analyzer A Channeltron Power Supply Voltage
109	DC/DC Convertor Voltage
110	Physical Analyzer Temp. ($^\circ$C)
111	Electronics Temp. ($^\circ$C)

DATA ARRAY (Words 5-100)

A. AUTOMATIC MODE

WORD	FUNCTION
5-10	Analyzer A, + 3500, Ch. 1-6
11-16	Analyzer B, + 3500, Ch. 1-6
17-22	Analyzer A, + 350, Ch. 1-6
23-28	Analyzer B, + 350, Ch. 1-6
29-34	Analyzer A, + 35, Ch. 1-6
35-40	Analyzer B, + 35, Ch. 1-6
41-46	Analyzer A, + 0, Ch. 1-6
47-52	Analyzer B, + 0, Ch. 1-6
53-58	Analyzer A, - 3500, Ch. 1-6
59-64	Analyzer B, -3500, Ch. 1-6
65-7C	Analyzer A, -350, Ch. 1-6
71-76	Analyzer B, -350, Ch. 1-6
77-82	Analyzer A, -35, Ch. 1-6
83-88	Analyzer B, -35, Ch. 1-6
89-94	Analyzer A, -0, Ch. 1-6
95-100	Analyzer B, -0, Ch. 1-6.

B. MANUAL MODE.

WORD	FUNCTION.
5-10	Analyzer A, Ch. 1-6
11-16	Analyzer B, Ch. 1-6

This sequence is repeated 7 times to fill the data array.
In the event that the instrument returns to automatic mode or
changes deflection voltage before the 8 cycles are complete,
the remainder of the array will be filled with zeroes.

MODE AND ID BITS   (Word 101)

A. Automatic Mode - If the instrument is in automatic mode
    the 24th bit (2^{23}) will be set to "1" and all other bits
    zero.

B. Manual Mode - If the instrument is in manual mode the 24th
    bit will be "0" and the lowest-order four bits will
    indicate the deflection voltage step according to the
    following:

OCTAL	DECIMAL	BINARY	DEFLECTION VOLTAGE
16	14	1110	+ 3500
14	12	1100	+ 350
12	10	1010	+ 35
10	8	1000	+ 0
06	6	0110	- 3500
04	4	0100	- 350
02	2	0010	- 35
00	0	0000	- 0

LAST VALID LINE (Word 102)

The last valid line word (word 102) is an integer from 1 to 8 which is the number of the last valid line in the data array. Since all lines are valid in Automatic, this value is significant only in Manual mode. Normally 8 manual cycles are packed into a logical unit, but a data gap or a change in mode or deflection voltage will abort the packaging process. Therefore, some logical units will have fewer than 8 lines of good, time-consecutive data in them, and this parameter tells how many lines are good.

YEAR (Word 105)

The year word is a binary integer for the data year; i.e., 1971.

HOUSEKEEPING (Words 107-111)

The housekeeping data has all been multiplied by 100 to preserve two decimal places in the binary integer form.

TAPE TERMINATION - Tapes are terminated with two (2) IBM end-of-file marks.

   NOTE:

   a) All periods when the instrument was off are deleted from the tape.

   b) Each tape contains 4 days of data beginning at Day n, 17/44/00 and ending at Day n + 4, 17/43/59.

   c) When checking to see if instrument is in manual or auto (word 101), simply check if word 101 is greater than or less than 100.

CHARGED PARTICLE LUNAR ENVIRONMENT EXPERIMENT

(CPLEE)

Description of the instrument, calibration factors, operational
history, and data tape format prepared for the National Space
Science Data Center.

For further information contact:

Prof. David L. Reasoner
Department of Space Science
Rice University
Houston, Texas 77001
713-528-4141 X1135

DESCRIPTION OF THE INSTRUMENT

The CPLEE consists of a box supported by four legs. The box contains two similar physical charged-particle analyzers, two different programable high-voltage supplies, twelve 20-bit accumulators, and appropriate conditioning and shifting circuitry.

Each physical analyzer contains five C-shaped channel electron multipliers with a nominal aperture of 1 mm each and one helical channel electron multiplier with a nominal aperture of 8 mm. These are shown schematically in figure 1.

The channel electron multiplier is a hollow glass tube, the inside surface of which, when bombarded by charged particles, ultraviolet light, etc., is an emitter of secondary electrons. In the CPLEE, the aperture of each electron multiplier is operated nominally at ground potential (actually at 16 V), while a voltage of 2800 or 3200 V (selected by ground command) is placed on the other (i.e., anode) end. Thus, if an incident particle enters the aperture and secondary electrons are produced, these are accelerated and hit the walls to generate more secondary electrons, so that a multiplication to an order of 10^7 is achieved by the time the pulse arrives at the anode. After conditioning, pulses from each electron multiplier are accumulated in a register for later readout as described in the following paragraphs.

As shown in figure 1, incident particles enter an analyzer through a series of slits and then pass between two deflection plates across which a voltage can be applied. Thus, at a given deflection voltage, the five small-aperture electron multipliers make a five-point measurement of the energy spectrum of charged particles of a given polarity (e.g., electrons), while, sim-

ultaneously, the large-aperture electron multiplier makes a single wideband measurement of particles with the opposite polarity and of simultaneous multiple-spectral samples are considerable in studies of rapidly varying particle fluxes.

In the CPLEE, the deflection-plate voltage, in the normal mode, is stepped in the sequence shown in figure 2. As a consequence, the energy passbands shown in figures 4 and 5 are sampled. Although data acquired the six sensors are not transmitted simultaneously, the six sensors are connected to six accumulators for exactly the same time (viz, 1.2 sec) and the contents transferred to shift registers for later sequential transmission.

Two analyzers, A and B, point in the directions shown in figure 3. The same deflection voltage is applied to each analyzer simultaneously, with counts from 1.2-sec accumulation time of analyzer A being transmitted while counts from analyzer B are accumulating. Thus, each voltage is normally on for 2.4 sec with the result that the total cycle time is 19.2 sec (fig. 2), when allowance is made for two sample times when the deflection voltage is zero. On one of those two occasions, counts are accumulated as usual to measure background or contaminating radiation. On the other occasion, a pulse generator of about 375 kHz is connected to the accumulators to verify operation.

The command link with the ALSEP provides a variety of options for CPLEE operation. Aside from the usual power commands common to all ALSEP experiments, three commands are provided that allow the normal automatic stepping sequence to be modified. The sequence can be stopped and then the deflection plate supply can be manually stepped to any one of the eight possible levels.

This is done to study a particular phenomenon (e.g., low-energy electrons) with higher time resolution (2.4 sec). A second set of commands allows the electron-multiplier high-voltage supply to be set at either 2800 or 3200 V. The higher voltage is used in the event the electron-multiplier gains decrease during lunar operations. A third pair of commands allows the normal thermal-control mode to be bypassed in the event of failure of the thermo-stat, thus offering manual control of the heaters.

The CPLEE apertures are covered with a dust cover to avoid contamination during deployment and, particularly, during LM ascent   . The dust cover was made doubly useful because a ^{63}Ni radioactive source was placed on the underside over each aperture. Thus, the sensors were proof calibrated on the Moon, and the data compared with measurements made in the same way with the same system when the unit was last calibrated on Earth.

CPLEE was deployed on the lunar surface at lunar coordinates 3° 40' south latitude and 17° 27' west longitude on February 5, 1971. Leveling and east-west orientation to with ± 1° were accomplished by means of a bubble level and sun compass. Analyzer A, therefore, points toward the local lunar vertical and Analyzer B points 60° from vertical toward lunar west. For a first approximation, the detectors may be considered to be pointing in the plane of the ecliptic.

CPLEE PHYSICAL ANALYZER
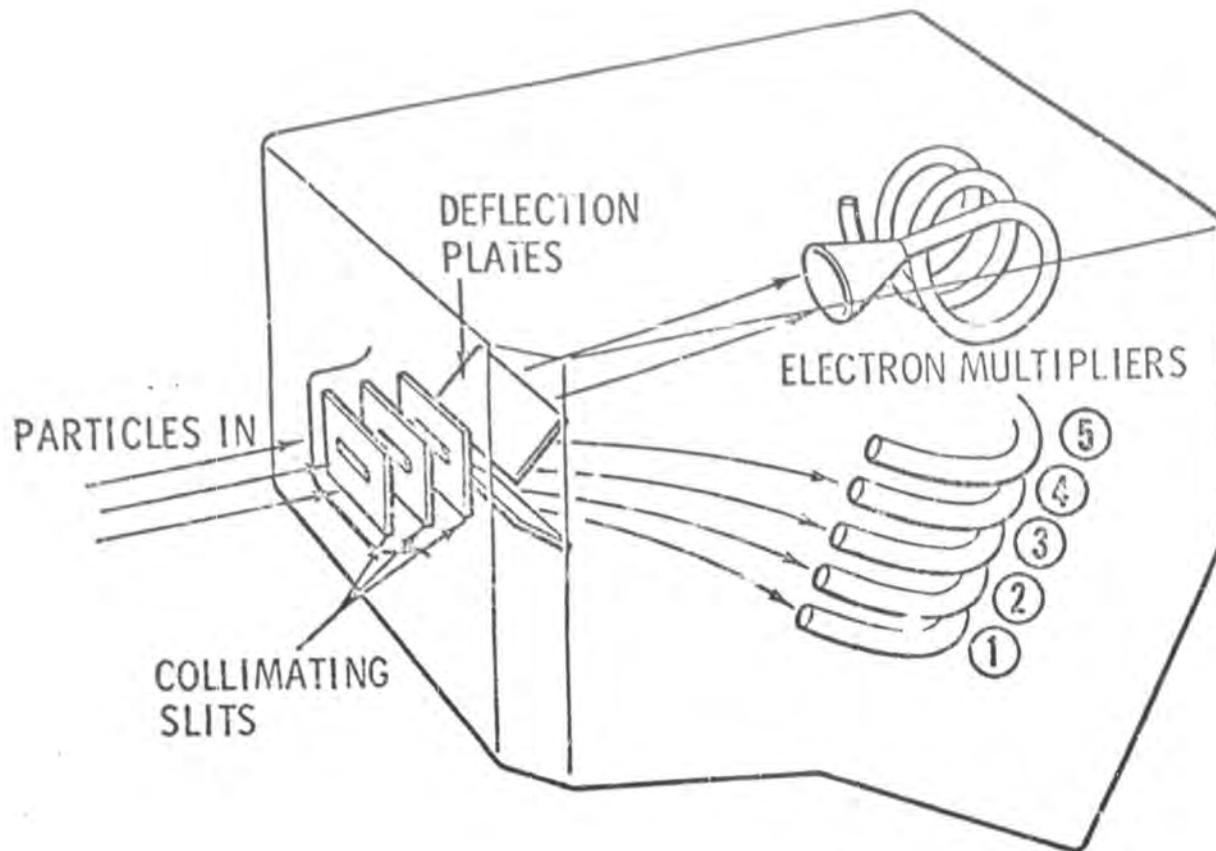
FIGURE 1

CPLEE TIMING SEQUENCE

ALSEP
FRAME NO

| 0 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 |

CPLEE
PHYS/AN

| A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B |

READOUT OF A DURING B MEAS , ETC.

DEFLECTION
VOLTAGE

+3500

+350

+35

BKG

CAL

EVEN FRAME
MARKS

−3500

−350

−35

— 19. 3 SEC (NORMAL) —
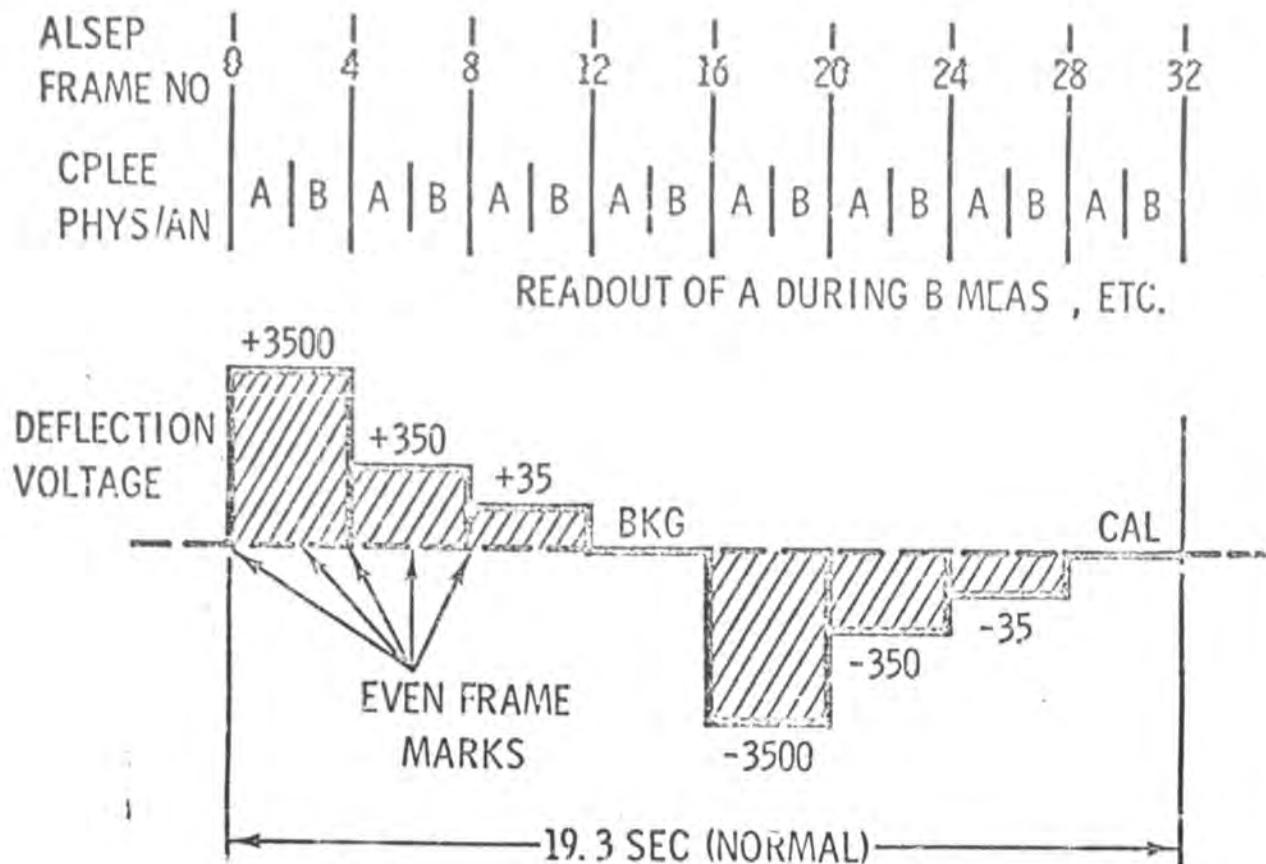
FIGURE 2

CHARGED-PARTIC LUNAR ENVIRONMENT EXPERIMENT SUBSYSTEM
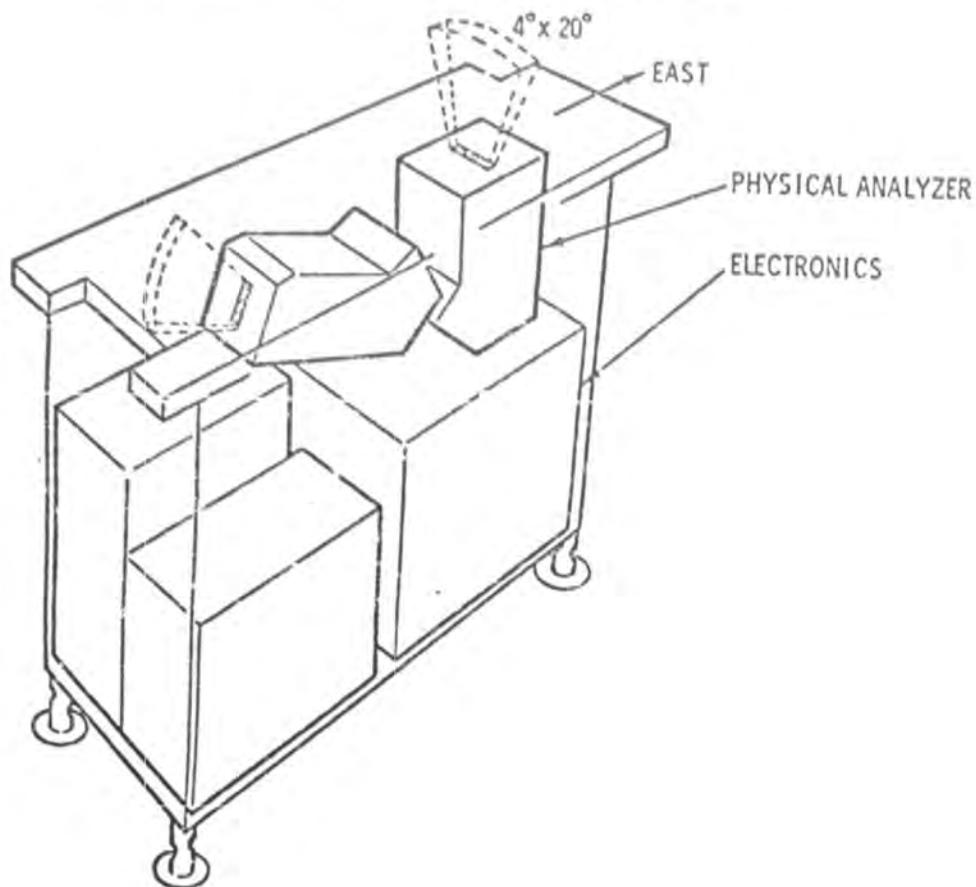
FIGURE 3

CPLEE CALIBRATION

In the following table (Table 1) the center energies of the various channels and the numbers to convert from counts/ cycle (1 cycle = 1.2 seconds) to flux in particles/cm^2 sec-ster-eV are given. Negative deflection voltages (-35, -350, -3500) for channels 1-5 are electron channels, while positive deflection voltages for channel 6 are electron channels. Conversely, positive deflection voltages for channels 1-5 and negative deflection voltages for channel 6 are ion channels. The calibrations for the lowest energy ion channels (+35 volts, channels 1-5) are estimated as there was no low-energy ion souce avaliable for calibration.

The deflection voltage step labled + 0 is a background measurement. At the -0 deflection voltage step, a test oscillator with frequency of about 375 kHz is connected to the amplifiers to verify operation of the entire data link.

Figures 4 and 5 show the actual CPLEE energy passbands for electrons. Here are plotted GF(E) vs. E. The area under a curve is $GF_o \times \Delta E$, or the effective geometric factor in units of cm^2-ster-eV-counts/particle. The conversion numbers in Table 1 were obtained by the formula $N = \dfrac{1}{GF_o \times \Delta E} \cdot \dfrac{1}{1.2}$. (The factor of 1.2 accounts for the 1.2 second accumulation time.)

Table 1

CPLEE Counts to Differential Flux

(Counts/1.2 sec to #/cm^2sec ster eV)

Step,Detector	Center Energy (eV)		Flux units/count	
	Analyzer A	Analyzer B	Analyzer A	Analyzer B
-35,1	40	45	5900	4350
-35,2	50	54	2780	2560
-35,3	65	70	1410	1430
-35,4	94	100	530	532
-35,5	200	200	100	74
-35,6				
-350,1	500	500	313	351
-350,2	600	600	210	266
-350,3	750	750	118	143
-350,4	1100	1100	65	81
-350,5	2000	2300	15	15
-350,6				
-3500,1	4800	5000	68	70
-3500,2	5800	6000	31	33
-3500,3	7200	7500	18	24
-3500,4	10000	10000	9.5	11.5
-3500,5	20000	23000	6.5	6.5
-3500,6				
+35,1	(60)	(55)	(2×10^5)	(1.2×10^5)
+35,2	(70)	(65)	(50000)	(50000)
+35,3	(84)	(85)	(19000)	(20000)
+35,4	170	(100)	2000	(4000)
+35,5	300	220	230	240
+35,6	75	85	4.8	4.5

Table 1 (continued)

+350,1	500	500	630	615
+350,2	600	600	380	475
+350,3	750	750	170	242
+350,4	1100	1100	70	105
+350,5	2000	2200	12	11
+350,6	750	800	0.74	0.83
+3500,1	4800	5000	35	35
+3500,2	5800	6000	13.4	14.3
+3500,3	7200	7500	6.9	8.0
+3500,4	10000	10000	2.7	3.3
+3500,5	20000	22000	1.5	1.5
+3500,6	9000	8000	0.31	0.60
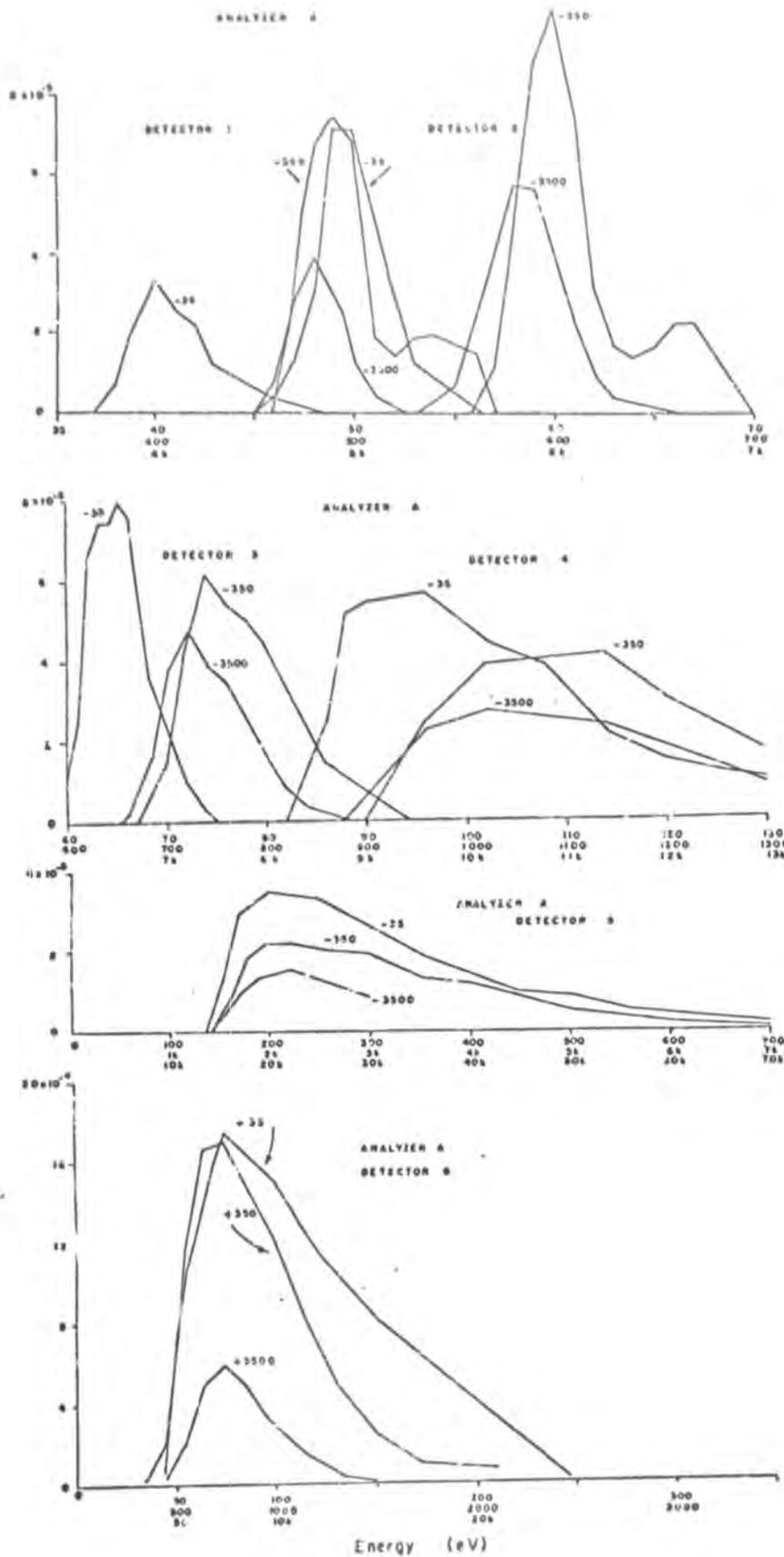
FIGURE 4
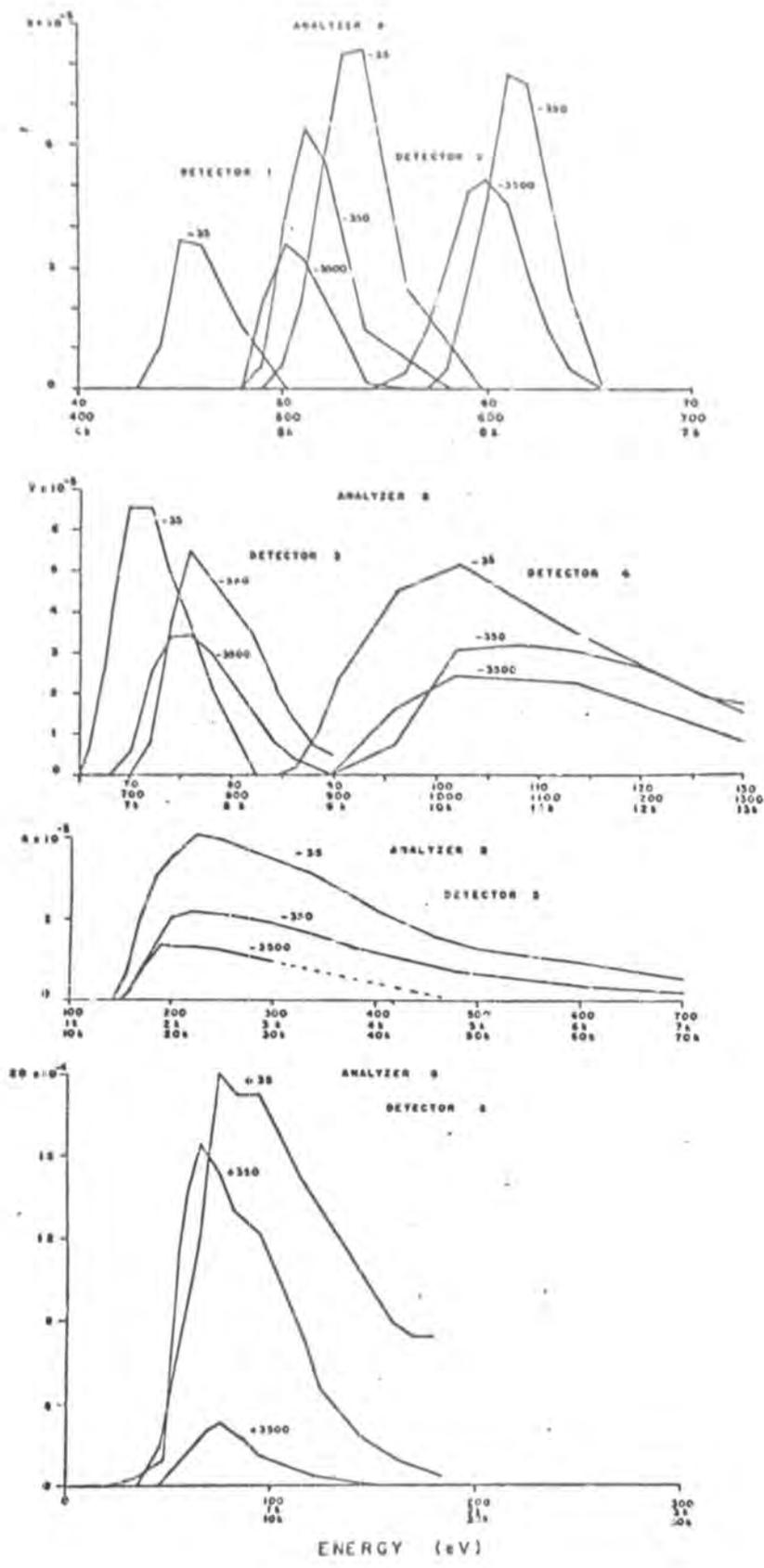
FIGURE 5

CPLEE OPERATIONAL HISTORY

TIME	EVENT
(Day/hours/Min./Sec.)	
036/10/00/00	CPLEE on-Functional Test
036/19/10/00	CPLEE off
036/21/58/40	CPLEE on
036/22/03/10	CPLEE off
037/04/00/00	CPLEE on -Full Functional Test w/all command Functions Tested-Counts are due to dust cover beta sources
037/06/09/40	CPLEE off
037/15/28/20	CPLEE on
037/15/39/50	CPLEE off
037/19/10/01	CPLEE on-Post LM Liftoff
037/19/30/13	Dust Cover Removed
044/02/22/00	Sequence of 10 minutes automatic operation alternating with 50 minutes manual + 350 operation begun.
044/21/00/00	Sequence Terminated.

045/02/00/00	Sequence of alternates 1-hour periods of automatic and manual + 350 operation begun.
048/21/00/00	Sequence Terminated - Instrument to automatic.
065/08/00/00	Sequence of alternate 1-hour periods of automatic and manual -35 operation begun.
069/21/45/0C	Sequence Terminated - Instrument to automatic mode/
072/00/00/00	CPLEE off due to Analyzer A solar U.V. contamination.
072/18/00/00	CPLEE on.
076/08/03/00	CPLEE off due to Analyzer B solar U.V. contamination.
078/04/00/00	CPLEE on.

098/21/ 5/35	CPLEE Channeltron power supply for Analyzer B failed, terminating data from this Analyzer.
099/14/30/00	CPLEE off.
106/14/29/00	CPLEE on - Analyzer A only.
130/20/50/00	CPLEE off due to Analyzer A solar U.V. contamination.
131/18/58/00	CPLEE on.
157/17/15/00	CPLEE channeltron power supply for Analyzer A partically failed (low voltage condition).
157/18/11/00	CPLEE off.

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FILE 0001 REC 0002 CH 6660
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Handwritten margin notes: 2/512, D-1002, C-08.76

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1441 000000000002  000000000001  000000000002  000000000240  000000000001  000000000000  000000000002  000000000001
1489 000000000000  000000000533  000000000000  000000000002  000000000001  000000000002  000000000001  000000000145
1537 000000000001  000000000004  000000000001  000000000001  000000000002  000000000575  000000000001  000000000003
1585 000000000001  000000000005  000000000002  000000000163  000000000002  000000000002  000000000000  000000000002
1633 000000000000  000000000567  000000000011  000000000031  000000000030  000000000132  000000000277  000000000052
1681 000000000007  000000000022  000000000026  000000000042  000000000135  000000000257  000000000004  000000000001
1729 000000000001  000000000005  000000000035  000000000073  000000000005  000000000003  000000000002  000000000002
1777 000000000014  000000000461  000000000001  000000000003  000000000003  000000000000  000000000002  000000000115
1825 000000000002  000000000002  000000000001  000000000001  000000000003  000000000520  000001403045  000001403045
1873 000001403046  000001403045  000001403046  000001403071  000001403070  000001403070  000001403070  000001403070
1921 000001403071  000001403173  000040000010  000000000000  000000000001  000000000001  000000003663  000000000000
1969 000001075201  000001037101  000000000456  000000002504  000000002754  000000000044  000000000023  000000000005
2017 000000130030  000000000001  000000000001  000000000003  000000000001  000000000003  000000002373  000000000001
2065 000000000002  000000000001  000000000000  000000000000  000000001331  000000000000  000000000000  000000000002
```

```
FILE 0001 REC 0005 CH 6660
          5857 000001437530    00000143753J    000001437530    030001437530    000001437532    C00C01437562    000001437601    000001437601
          590E 000001437603    000001437603    000001437603    030001417742    000040000000    00C000000000    000000000001    000000000001
          5953 000000003663    000000000007    000001013105    030001004771    000000000460    CCC0C0012574    00C000013250    000000000050
          6001 00000000CC20    000000000052    000000144262    000000000005    000000000001    C0C00C000001    000000000000    000000000001
          6049 00000000CC34    000000000003    000000000002    030000000000    000000000005    C00000000005    0C3000000540    000000000001
          6097 000000000002    000000000001    000000000005    000000000003    000000000150    C0C00C0000C21    000000000001    000000000035
          6145 000000000006    000000000005    000000001156    000000000001    000000000005    C0C000000002    000000000002    000000000071
          6193 000000014340    0C0000000001    000000000002    030000000002    000000000004    CCC0C0000004    000000006464    000000000001
          6241 000000300C01    00C000000000    000000000005    030000000004    000000000151    C0C0C0000002    000000000003    000000000003
          6285 0000C00000C06    000003000004    000000001377    000000000004    000000000006    C0C0CC0000004    000000000002    000000000005
          6337 000000000030    000000000004    000000000004    030000000004    000000000002    C00000000011    000000000457    000000000000
          6385 000000000000    000000000002    000000000001    000000000002    000000000063    C0C000000000    000000000002    000000000005
          6433 000000000002    C00000000001    000000001160    000000000041    000000000064    C0C0C0000024    000000000000    000000000012
          6481 000000000C76    000000000057    000000000027    000000000013    C0C000000016    000000001125    030001437532
          6529 000001437532    000001437532    000001437531    000001437533    000001437553    C0C001437574    000001437574    000001437574
          6577 000001437574    000001437572    000001437734    000040000000    000000000000    C00000000001    000000000001    00000000 3663
          6625 000000000000    000001013105    000001004771    000000000460    000000012574    00C000013332
FILE 0001 REC 0006 CH 6660
          0001 000000000050    000000000020    000303000053    030000024712    000000C00005    0C0CC0000002    000000000002    000000000006
          0049 000000000001    000000000037    000000000001    030000000004    000000000003    C0CC00000003    000000000003    000000000604
          0097 000000000CC1    000000000002    000000000003    000000000000    000000000003    C0CCC0000147    000000000001    000000000002
          0145 000000000C03    000000000005    000000000004    000000001115    000000000002    C0CCC0000004    000000000005    000000000004
          0193 000000000C03    000000014307    000000000002    030000000004    000000000004    C0C000000004    000000000005    000000006563
          0241 000000000C01    000000000004    000000000000    030000000002    000000000001    C0000C0000146    000000000001    000000000003
          0289 0CC0000000001   U00000000005    000000000003    000000001377    000000000002    C0C0CC000007    000000000006    000000000002
          0337 000000000003    000000000030    000000000001    030000000003    000000000006    C00000000006    000000000007    000000000462
          0385 000000000003    000000000002    000000000003    000000000000    000000000002    C0CC00000045    000000000002    000000000003
          0433 000000000003    000000000005    000000000004    000000001110    000000000047    C0C0C0000060    000000000030    000000000015
          0481 000000000C13    000000000053    000000000045    000000000047    000000000027    C0C0C0000015    000000000013    000000001127
          0529 000001437335    000001437535    000001437535    000001437535    000001437535    C00001437575    000001437577    000001437600
          0577 000001437577    000001437577    000001437575    000001437740    000040C0C000    000000000000    000000000001    000000000001
          0625 000000003663    000000000000    000001013105    030001004771    000000000456    C00000012574    000000013332    000000000050
          0673 0C0000000020    000000000053    000000072502    000000000002    000000000004    C0CCC0000002    000000000004    000000000005
          0721 000000000032    000000000004    000000000001    030000000001    000000000003    C00000000004    000000000566    000000000000
          0769 0C0000000C01    000000000001    000000000002    030000000000    000000000153    C0C0C000001    000000000004    000000000004
          0817 000000000C05    000000000004    000000001207    000000000001    000000C00005    000C00000002    000000000002    000000000003
          0865 00C00014C05    00000C0000003   000000000004    030000000006    000000000006    C0C0CC000003    000000006473    000000000000
          0913 000000000004    000000000002    000000000002    000000000001    000000000137    00C0C0000002    000000000003    000000000003
          0961 000000000002    000000000003    000000001416    000000000003    000000000002    C00CCC000005    000000000004    000000000001
          1009 000000000C27    000000000002    000000000005    000000000002    000000C00005    C00C00000001    000000C00455    000000000001
          1057 000000000002    000000000000    000000000002    030000000001    000000000053    00C0C0000000    00000C0000001   000000000002
          1105 000000000CC4    000000000002    000003001103    000000000046    000000000056    C0C0C0000026    0000C0000024    000000000013
          1153 000000000054    000000000053    000000000035    C00000000020    00C000000021    C0C0C0000007    000000001165    000001437536
          1201 000001437536    000001437536    000001437535    00000C1437536   000001437570    C0C0C1437603    000001437602    000001437603
          1249 000001437603    000001437603    000001437727    000040000000    000000000000    C00000000001    000000000001    000000003663
          1297 000000000C00    000001013105    000001004771    000000000456    000000012574    C0C000013332    000000000050    000000000020
          1345 00C000000C53    000000140271    000000000003    000000000005    000000000002    C0CCC0000002    000000000004    000000000044
          1393 000000000C01    000000000000    000003000003    030000000003    000000000006    C0C0C0000532    000000000000    000000000002
          1441 000000000C01    000000000000    000000000004    000000000150    000000000002    0C00C0000003    000000000003    000000000001
          1489 000000000006    000000001200    000000000003    030000000004    000000000006    C0CC00000005    600000000010    000000014124
          1537 000000000001    000000000003    000000000002    000000000010    000000000005    CC0000006533    000000000001    000000000003
          1585 000000000C00    000000000003    000000000004    000000000147    000000000001    C0C0C0000003    000000000002    000000000003
          1633 000000000C04    000000001431    000000000004    000000000004    000000000004    00C0C0000001    000000000004    000000000033
          1681 000000000C00    000000000003    000000000004    000000000005    000000C00003    CCC00C000464    000000000001    000000000004
          1729 000000000C00    000000000001    000000000002    000000000065    000000000001    C0C000000001    000000000004    000000000005
          1777 000000000002    000000001134    000000000052    000000000055    000000000032    C0C0C0000023    000000000012    000000000070
          1825 000000000C33    C00000000047    000000000022    000000000013    000000000013    00C00001133    000001437537    000001437537
          1873 000001437537    000001437536    000001437535    030001437562    000001437613    C0C0C1437613    000001437611    000001437611
          1921 000001437613    000001437762    000040000000    000000000000    000000000000    C0C0C0000001    000000003663    000000000000
          1969 000001013105    000001004771    000000000462    030000012574    000000013250    000000000050    000000000020    000000000054
          2017 00000002C721    000000000005    000000000003    000000000004    000000000566    C0C0C0000006    000000000034    000000000001
          2065 000000000000    000000000002    000000000003    000000000005    000000000566    C0C0C0000000    000000000000    000000000002
```

```
          5809 000000000002   000000000113   000300000000   000330000000   000000000000   000000000000   000000000000   000000000033
          5857 000000000014   000000000004   000030000004   000030000004   000000000004   000000000107   000000000300   000000000033
          5905 000000000000   000000000000   000000000000   000300000000   000000000004   000000000107   000000000300   000000000033
          5953 000000003664   000000000000   000000137616   000331011447   000000000454   777777775561   777777777410   000000000331
          6001 000000000000   000000000061   000030062635   000330003010   000000000006   000000000003   000000000004   000000050033
          6049 000000000076   000000000000   000300000000   000030000000   000000000000   000000000003   000000000004   000000050033
          6097 000000000012   000000000005   000000000003   000000000002   000000000071   000000000000   000000000000   000000000030
          6145 000000000000   000000000000   000000000000   000330000011   000000000006   000000000005   000000000005   000000000332
          6193 000000000105   000000000000   000300000000   000300000000   000000000000   000000000000   000000000000   000000000312
          6241 000000000006   000000000006   000000000005   000000000003   000000000105   000000000000   000000000000   000000000000
          6289 000000000000   000000000000   000000000000   000030000007   000000000012   000000000000   000000000002   000000000032
          6337 000000000105   000000000000   000000000000   000030000000   000000000000   000000000000   000000000000   000000000025
          6385 000000000011   000000000012   000000000002   000000000001   000000000070   000000000000   000000000000   000000000030
          6433 000000000000   000000000000   000000000000   000030000006   000000000012   000000000002   000000000006   000000000031
          6481 000000000105   000000000000   000000000000   000030000000   000000000000   000000000000   000000000006   000000000031
          6529 000000000015   000000000002   000000000003   000000000001   000000000073   000000000000   000000000000   000000000312
          6577 000000000000   000000000000   000000000000   000030000002   000000000019   000000000001   000000000001   000000000000
          6625 000000000000   000000137616   000301011447   000030000454   777777775561   777777777410
```

```
          0001 000000000330   000000000000   000000000061   000300130443   000000000010   000000000012   000000000006   000000000034
          0049 000000000002   000000000115   000000000030   000000000000   000000000000   000000000000   000000000000   000000000033
          0097 000000000010   000000000006   000000000005   000030000000   000000000000   000000000000   000000000000   000000000000
          0145 000000000000   000000000000   000000000000   000030000000   000000000000   000000000102   000000000000   000000000000
          0193 000000000002   000000000120   000000000000   000030000000   000000000015   000000000005   000000000005   000000000031
          0241 000000000014   000000000011   000000000007   000000000004   000000000000   000000000000   000000000000   000000000030
          0285 000000000000   000000000000   000000000000   000000000000   000000000012   000000000101   000000000000   000000000033
          0337 000000000001   000000000124   000000000000   000030000000   000000000000   000000000013   000000000001   000000000031
          0385 000000000014   000000000006   000000000007   000030000303   000000000004   000000000062   000000000006   000000000000
          0433 000000000000   000000000000   000000000000   000030000000   000000000016   000000000007   000000000004   000000000011
          0481 000000000005   000000000110   000000000000   000030000000   000000000000   000000000000   000000000000   000000000000
          0529 000000000006   000000000003   000000000005   000000000004   000000000002   000000000111   000000000000   000000000030
          0577 000000000000   000000000000   000000000000   000030000003   000000000002   000000000010   000000000001   000000000031
          0625 000000003664   000000000000   000000137616   000301011447   000000000454   777777775457   777777777410   000000000030
          0673 000000000000   000000000062   000000011072   000030000013   000000000014   000000000003   000000000003   000000000032
          0721 000000000105   000000000000   000000000000   000030000000   000000000000   000000000000   000000000000   000000000012
          0769 000000000011   000000000002   000000000002   000030000003   000000000113   000000000000   000000000000   000000000000
          0817 000000000000   000000000000   000000000000   000030000011   000000000000   000000000000   000000000000   000000000030
          0865 000000000124   000000000000   000000000000   000030000000   000000000000   000000000002   000000000001   000000000031
          0913 000000000012   000000000005   000000000002   000030000001   000000000114   000000000000   000000000000   000000000033
          0961 000000000000   000000000000   000000000000   000030000021   000000000013   000000000006   000000000006   000000000004
          1009 000000000133   000000000000   000000000000   000030000000   000000000000   000000000000   000000000000   000000000037
          1057 000000000011   000000000005   000000000003   000030000002   000000000120   000000000000   000000000000   000000000030
          1105 000000000000   000000000000   000000000000   000000000010   000000000010   000000000004   000000000004   000000000032
          1153 000000000111   000000000000   000000000000   000030000000   000000000000   000000000000   000000000000   000000000037
          1201 000000000005   000000000005   000000000303   000000000003   000000000102   000000000000   000000000000   000000000000
          1249 000000000000   000000000000   000000000002   000000000002   000000000010   000000000001   000000000001   000000003664
          1297 000000000000   000000137616   000001005770   000030000454   777777775457   777777777410   000000000330   000000000000
          1345 000000000062   000000056662   000000000005   000000000005   000000000002   000000000004   000000000001   000000000121
          1393 000000000000   000000000000   000000000000   000000000000   000000000002   000000000004   000000000010   000000000121
          1441 000000000002   000000000002   000000000003   000030000124   000000000000   000000000000   000000000010   000000000033
          1489 000000000000   000000000000   000000000011   000030003007   000000000000   000000000001   000000000003   000000000030
          1537 000000000000   000000000000   000000000000   000030200000   000000000000   000000000000   000000000016   000000000010
          1585 000000000005   000000000004   000000000001   000000000104   000000000000   000000000000   000000000000   000000000030
          1633 000000000000   000000000000   000000000012   000030000005   000000000013   000000000006   000000000001   000000000123
          1681 000000000000   000000000000   000000000000   000030000000   000000000000   000000000006   000000000001   000000000123
          1729 000000000002   000000000004   000000000000   000000000076   000000000000   000000000000   000000000012   000000000010
          1777 000000000000   000000000000   000000000021   000030000005   000000000000   000000000000   000000000000   000000000000
          1825 000000000000   000000000000   000000000000   000000000000   000000000006   000000000012   000000000006   000000000114
          1873 000000000000   000000000003   000000000004   000000000102   000000000000   000000000000   000000000026   000000000020
          1921 000000000000   000000000000   000000000002   000000000010   000000000001   000000000001   000000000000   000000000030
          1969 000000137616   000001005770   000000000454   777777775457   777777777410   000000000330   000000003664   000000000030
          2017 000000124451   000000000027   000000000020   000000000005   000000000006   000000000003   000000000103   000000000030
```

```
FILE 0001 REC 0005 CH 6660
          6529 000001360307   000001360307   000001360310   000001360310   000001360323   000001360344   000001360344   000001360344
          6577 000001360344   000001360344   000001360344   000040000000   000000000000   000000000001   000000000001   000000003664
          6625 000000000000   000000242655   000001012421   000000000450   777777772420   777777773714
FILE 0001 REC 0006 CH 6660
          0001 000000000333   000000000027   000000000070   000000107754   000000000011   000000000010   000000000003   000000000004
          0049 000000000011   000000000027   000000000000   000000000000   000000000000   000000000000   000000000000   000000000000
          0097 000000000006   000000000000   000000000007   000000000006   000000000004   000000000050   000000000000   000000000000
          0145 000000000000   000000000000   000000000000   000000000000   000000000002   000000000000   000000000006   000000000000
          0193 000000000003   000000000035   000000000000   000000000000   000000000000   000000000000   000000000000   000000000000
          0241 000000000004   000000000003   000000000003   000000000004   000000000006   000000000045   000000000000   000000000000
          0289 000000000000   000000000000   000000000000   000000000000   000000000012   000000000005   000000000005   000000000005
          0337 000000000004   000000000030   000000000000   000000000000   000000000000   000000000000   000000000000   000000000000
          0385 000000000006   000000000003   000000000003   000000000007   000000000004   000000000041   000000000000   000000000000
          0433 000000000000   000000000000   000000000000   000000000000   000000000010   000000000004   000000000007   000000000002
          0481 000000000007   000000000040   000000000000   000000000000   000000000000   000000000000   000000000000   000000000000
          0529 000001360345   000001360345   000001360345   000001360346   000001360346   000001360356   000001360366   000001360366
          0577 000001360366   000001360366   000001360366   000001360367   000040000000   000000000000   000000000001   000000000001
          0625 000000003664   000000000000   000000246233   000001012421   000000000450   777777772420   777777773714   000000000333
          0673 000000000027   000000000070   000000155544   000000000006   000000000002   000000000001   000000000004   000000000006
          0721 000000000037   000000000000   000000000000   000000000000   000000000000   000000000000   000000000000   000000000003
          0769 000000000004   000000000001   000000000010   000000000004   000000000055   000000000000   000000000000   000000000000
          0817 000000000000   000000000000   000000000000   000000000006   000000000003   000000000004   000000000003   000000000005
          0865 000000000052   000000000000   000000000000   000000000000   000000000000   000000000000   000000000000   000000000002
          0913 000000000002   000000000013   000000000002   000000000004   000000000044   000000000000   000000000000   000000000000
          0961 000000000000   000000000000   000000300000   000000000004   000000000005   000000000004   000000000003   000000000007
          1009 000000000040   000000000000   000000000000   000000000000   000000000000   000000000000   000000000000   000000000007
          1057 000000000004   000000000007   000000000007   000000000007   000000000031   000000000000   000000000000   000000000000
          1105 000000000000   000000000000   000000000000   000000000007   000000000005   000000000005   000000000002   000000000003
          1153 000000000044   000000000000   000000000000   000000000000   000000000000   000000000000   000000000000   000001360401
          1201 000001360400   000001360401   000001360402   000001360402   000001360412   000001360423   000001360423   000001360423
          1249 000001360423   000001360423   000001360423   000040000000   000000000000   000000000001   000000000001   000000003664
          1297 000000000000   000000246233   000001012421   000000000450   777777772533   777777773714   000000000333   000000000027
          1345 000000000071   000000036174   000000000006   000000000005   000000000011   000000000002   000000000003   000000000044
          1393 000000000000   000000000000   000000000000   000000000000   000000000000   000000000000   000000000005   000000000006
          1441 000000000003   000000000001   000000000006   000000000047   000000000000   000000000000   000000000000   000000000000
          1489 000000000000   000000000000   000000000007   000000000005   000000000004   000000000007   000000000004   000000000042
          1537 000000000000   000000000000   000000000000   000000000000   000000000000   000000000000   000000000010   000000000003
          1585 000000000007   000000000004   000000000007   000000000041   000000000000   000000000000   000000000000   000000000000
          1633 000000000000   000000000000   000000000011   000000000003   000000000003   000000000010   000000000005   000000000047
          1681 000000000000   000000000000   000000000000   000000000000   000000000000   000000000000   000000000006   000000000010
          1729 000000000004   000000000011   000000000010   000000000043   000000000000   000000000000   000000000000   000000000000
          1777 000000000000   000000000000   000000000005   000000000004   000000000006   000000000000   000000000005   000000000043
          1825 000000000000   000000000000   000000000000   000000000000   000000000000   000000000000   000001360406   000001360405
          1873 000001360407   000001360406   000001360404   000001360416   000001360427   000001360427   000001360427   000001360427
          1921 000001360427   000001360427   000040000000   000000000000   000000000001   000000000001   000000003664   000000000000
          1969 000000246233   000001012421   000000000450   777777772533   777777773714   000000000333   000000000027   000000000071
          2017 000000103763   000000000010   000000000004   000000000004   000000000006   000000000012   000000000041   000000000000
```

```
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2113 000000000003  000000000004  000000000042  000300000000  000000000000  006 10000000   000000000000  000000030333
2161 000000000000  000000000003  000000000005  000000000003  000000000007  000000000000  000000000046  000000030000
2209 000000000000  000000000000  000000000000  000030000000  000000000000  000000000006  000000000002  000000030010
2257 000000000010  000000000007  000000000034  000000000000  000000000000  000000000000  000000000000  000000030030
2305 000000030000  000000000006  000000000001  000030000006  000000000005  000000000002  000000000041  000000000033
2353 000000000000  000000000000  000000000000  000030000000  000000000000  000000000004  000000000004  000000000010
2401 000000000007  000000000002  000000000036  000030000000  000000000000  000030000000  000000000000  000000030333
2449 000000000000  000000000005  000000000003  000030000002  000000000002  000000000003  000000000033  000000030333
2497 000000000000  000000000000  000000000000  000000000000  000000000000  000001360420  000001360417  000001360422
2545 000001360417  000001360420  000001360435  000001360437  000001360437  000001360437  000001360437  000001360437
2593 000001360440  000040000000  000000000000  000000000001  000000000001  000000003664  000000000000  000000242655
2641 000001012421  000000000450  777777772533  777777773714  000000000333  000000000027  000000000071  000000151553
2689 000000000004  000000000001  000000000013  000000000007  000000000005  000000000045  000000000000  000000030000
2737 000000000000  000000000000  000000000000  000000000000  000000000012  000000000006  000000000003  000000030001
2785 000000000010  000000000043  000000000000  000000000000  000000000000  000000000000  000000000000  000000000030
2833 000000000005  000000000003  000000000010  000030000003  000000000007  000000000040  000000000000  000000030333
2881 000000000000  000000000000  000000000000  000000000000  000000000005  000000000006  000000000005  000000030005
2929 000000000005  030000000043  000000000000  000000000000  000000000000  000000000000  000000000000  000000030330
2977 000000000005  000000000006  000000000003  000000000004  000000000007  000000000036  000000000000  000000000030
3025 000000000000  000000000000  000000000000  000000000000  000000000006  000000000002  000000000004  000000000031
3073 000000000005  000000000045  000000000000  000000000000  000000000000  000000000000  000000000000  000000030330
3121 000000000005  000000000003  000000000003  000000000004  000000000010  000000000031  000000000000  000000000030
3169 000000000000  000000000000  000000000000  000000000000  000001360402  000001360404  000001360404  000001360403
3217 000001360402  000001360423  000001360430  000001360430  000001360430  000001360430  000001360430  000001360430
3265 000040000000  000000000000  000000000001  000000000001  000000003664  000000000000  000000242655  000001012421
3313 000000000450  777777772533  777777773714  000000000333  000000000027  000000000072  000000032203  000000030006
3361 000000000004  000000000002  000000000012  000000000005  000000000025  000000000000  000000000000  000000030330
3409 000000000000  000000000000  000000000000  000000000012  000000000001  000000000004  000000000007  000000030005
3457 000000000043  000000000000  000000000000  000000000000  000000000000  000000000000  000000000000  000000030012
3505 000000000004  000000000004  000000000004  000000000006  000000000040  000000000000  000000000000  000000030000
3553 000000000000  000000000000  000000000000  000000000003  000000000006  000000000004  000000000003  000000030005
3601 000000000037  000000000000  000000000000  000000000000  000000000000  000000000000  000000000000  000000030034
3649 000000000007  000000000001  000000000003  000000000004  000000000041  000000000000  000000000000  000000000000
3697 000000000000  000000000000  000000000000  000000000006  000000000006  000000000004  000000000006  000000030005
3745 000000000051  000000000000  000000000000  000000000000  000000000000  000000000000  000000000000  000000030002
3793 000000000006  000000000010  000000000005  000000000005  000000000033  000000000000  000000000000  000000030333
3841 000000000000  000000000000  000000000000  000001360372  000001360373  000001360374  000001360372  000001360373
3889 000001360403  000001360414  000001360414  000001360414  000001360414  000001360414  000001360414  000040000000
3937 000000000000  000000000001  000000000001  000000003664  000000000000  000000242655  000001015772  000000000450
3985 777777772533  777777773714  000000000333  000000000027  000000000072  000000077773  000000000005  000000030003
4033 000000000006  000000000003  000000000002  000000000650  000000000000  000000000000  000000000000  000000030000
4081 000000000000  000000000000  000000000006  000000000000  000000000003  000000000004  000000000003  000000030044
4129 000000000000  000000000000  000000000030  000000000000  000000000000  000000000000  000000000005  000000030003
4177 000000000005  000000000005  000000000004  000000000037  000000000000  000000000000  000000000000  000000030000
4225 000000000000  000000000000  000000000004  000000000002  000000000005  000000000006  000000000003  000000030034
4273 000000000000  000000000000  000000000000  000000000000  000000000000  000000000000  000000000007  000000030001
4321 000000000007  000000000006  000000000002  000000000033  000000000000  000000000000  000000000000  000000030000
4369 000000000000  000000000000  000000000006  000000000005  000000000003  000000000005  000000000004  000000030043
4417 000000000000  000000000000  000000000000  000000000000  000000000000  000000000000  000000000007  000000030036
4465 000000000007  000000000003  000000000010  000000000035  000000000000  000000000000  000000000000  000000030030
4513 000000000000  000000000000  000001360414  000001360410  000001360411  000001360411  000001360411  000001360425
4561 000001360437  000001360437  000001360437  000001360437  000001360437  000001360437  000040000000  777777772533
4609 000000000001  000000000001  000000003664  000000000000  000000242655  000001015772  000000000446  777777772533
4657 777777773611  000000000333  000000000027  000000000072  000000145562  000000000005  000000000004  000000030002
4705 000000000004  000000000003  000000000034  000000000000  000000000000  000000000000  000000000000  000000000033
4753 000000000000  030000000006  000000000006  000000000005  000000000011  000000000002  000000000073  000000030000
4801 000000000000  000000000000  000000000000  000000000000  000000000000  000000000005  000000000002  000000030005
4849 000000000002  000000000001  000000000037  000000000000  000000000000  000000000000  000000000000  000000030300
4897 000000000000  000000000003  000000000003  000000000004  000000000002  000000000001  000000000053  000000000333
4945 000000000000  000000000000  000000000000  000000000000  000000000000  000000000004  000000000006  000000030037
4993 000000000004  000000000005  000000000040  000000000000  000000000000  000000000000  000000000000  000000000330
5041 000000000000  000000000005  000000000005  000000000004  000000000004  000000000010  000000000034  000000030330
5089 000000000000  000000000000  000000000000  000000000000  000000000000  000000000007  000000000004  000000030004
```

```
5137 000000000004  000000000011  000000000046  000000000000  000000000000  000000000000  000000000000  000000000000
5185 000000000000  000001360403  000001360405  000001360403  000001360401  000001360401  000001360415  000001360426
5233 000001360426  000001360426  000001360426  000001360426  000001360426  000040000000  000000000000  000000000001
5281 000000000001  000000003664  000000000000  000000242655  000001015772  000000000446  777777772533  777777773611
5329 000000000333  000000000027  000000000073  000000026212  000000000013  000000000001  000000000007  000000000005
5377 000000000001  000000000045  000000000000  000000000000  000000000000  000000000000  000000000000  000000000000
5425 000000000005  000000000005  000000000007  000000000000  000000000001  000000000022  000000000000  000000000000
5473 000000000000  000000000000  000000000000  000000000000  000000000003  000000000005  000000000004  000000000003
5521 000000000004  000000000054  000000000000  000000000000  000000000000  000000000000  000000000000  000000000000
5569 000000000002  000000000005  000000000011  000000000005  000000000004  000000000042  000000000000  000000000000
5617 000000000000  000000000000  000000000000  000000000000  000000000007  000000000006  000000000004  000000000007
5665 000000000003  000000000054  000000000000  000000000000  000000000000  000000000000  000000000000  000000000000
5713 000000000010  000000000006  000000000004  000000000006  000000000005  000000000041  000000000000  000000000000
5761 000000000000  000000000000  000000000000  000000000000  000000000006  000000000006  000000000005  000000000007
5809 000000000003  000000000056  000000000000  000000000000  000000000000  000000000000  000000000000  000000000000
5857 000001360400  000001360400  000001360401  000001360400  000001360402  000001360417  000001360432  000001360432
5905 000001360432  000001360432  000001360432  000001360432  000040000000  000006000000  000000000001  000000000001
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6001 000000000027  000000000073  000000074002  000000000007  000000000002  000000000001  000000000003  000000000002
6049 000000000042  000000000000  030000000000  000000000000  000000000000  002000000000  000000000000  000000000003
6097 000000000005  000000000003  000000000005  000000000002  000000000054  000000000000  000000000000  000000000000
6145 000000000000  000000000000  000000000000  000000000007  000000000002  000000000006  000000000004  000000000010
6193 000000000046  000000000000  000000000000  000000000000  000000000000  000000000000  000000000000  000000000006
6241 000000000005  000000000011  000000000004  000000000006  000000000060  000000000000  000000000000  000000000000
6289 000000000000  000000000000  000000000000  000000000004  000000000007  000000000007  000000000003  000000000003
6337 000000000047  000000000000  000000000000  300000000000  000000000000  000000000000  000000000000  000000000011
6385 000000000006  000000000002  000000000006  000000000007  000000000041  000000000000  000000000000  000000000000
6433 000000000000  000000000000  000000040000  000000000005  000000000005  000000000005  000000000010  000000000003
6481 000000000052  000000000000  000000000000  000000000000  000000000000  000000000000  000000000000  000001360414
6529 000001360411  000001360413  000001360413  000001360411  000001360433  000001360433  000001360433  000001360433
6577 000001360433  000001360433  000001360433  000040000000  000000000000  000000000001  000000000001  000000003664
6625 000000000000  000000242655  000001015772  000000000452  777777772533  777777773714
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