#603

OAO-3

Reduced Data Tapes

72-065A-02A

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

OAO 3

REDUCED DATA

72-065A-02A ASXR-00037

THIS DATA SET WAS ORIGINALLY RECEIVED IN 1981 ON 28 9-TRACK, 800 BPI TAPES WRITTEN IN BINARY. THE ORIGINAL DATA SET HAD BEEN RESTORED TO 9-TRACK, 6250 BPI TAPES IN 1991. IN 1999, HEASARC RESTORED THE DATA SET IN FITS FORMAT. IN 2004, THE HEASARC RESTORED VERSION WAS COPIED AND PROCESSED TO ONE CD-WRITE ONCE CONTAINING 6716 FILES AND 6 FOLDERS. THE OBSLOG FOLDER CONTAINS THE OBSERVATION LOG CONVERTED FROM MICROFILM TO TIFF IMAGE FILES. EACH TIFF IMAGE FILE CORRESPONDS TO A FRAME IN THE ORIGINAL MICROFILM. THE ADD_COORDS, DB, TO_ARCHIVE, TO_ASCII AND TO_FITS FOLDERS CONTAIN ALL THE SCRIPT AND FORTRAN FILES USED TO TRANSLATE THE DATA FROM THE ORIGINAL FORMAT TO FITS. THERE ARE 6563 FITS FILES CONTAINING THE RAW REDUCED DATA.

KD#	KW#	VOLUME
KD021458	KW000172	OAO-3_X-RAY

Gail L. Schneider

From: "Beth Brown, Ph.D." <Beth.A.Brown@nasa.gov>
To: <banderso@mail630.gsfc.nasa.gov>
Cc: <Beth.A.Brown@nasa.gov>; "Gail" <gail.l.schneider.1@gsfc.nasa.gov>
Sent: Wednesday, March 24, 2004 11:24 AM
Subject: Copernicus Experiment 2 and dataset

Hello Betty,

This is for The Copernicus Experiment "Stellar X-Rays", 1972-065A-2
and the corresponding dataset "Reduced Data" 1972-065A-02A.

Please change the brief descriptions to the following.

Thanks,

Beth

Experiment BD
The University College London/Mullard Space Science Laboratory experiment used three grazing-incidence paraboloid mirror systems and one collimated proportional counter to observe celestial X-ray sources between 1 and 70 Angstroms. Between 1 and 3 Angstroms, the collimated proportional counter was used in conjunction with pulse-shape discrimination to reject background counts. The window was 0.51-mm beryllium, and the whole area of 17.8 sq cm collected radiation from a source on the axis of its collimating tube. From 3 to 9 Angstroms and 6 to 18 Angstroms, proportional counters located at the focus of two grazing-incidence reflecting telescopes, whose photon collect areas were 5.5 sq cm and 12.5 sq cm, respectively, were used with an anticoincidence scintillator also employed to reject background cosmic-ray counts. Their stellar windows were 3 mm in diameter and were of 76-micron beryllium and 5-micron aluminium, respectively. A channel photomultiplier, located at the focus of a grazing-incidence telescope with a photon collecting area of 23 sq cm, was used to observe between 20 and 70 Angstroms. The channel photomultiplier suffered from high UV background, and provided no useful data. A six-channel pulse-height analyzer could be switched to any of the three proportional counters to improve the energy resolution. An image scanning photomultiplier tube behind a three-element lens of 610-mm focal length was an auxiliary system for measuring misalignments of the Mullard experiment from the

pointing direction of the spacecraft and the Princeton spectrometer. The 3 to 9 Angstroms and 6 to 18 Angstroms systems became inoperable in June 1973 when the background shutter stuck in the closed position. Most of the observations after this were made with the 1 to 3 Angstroms system. For more details, see J. A. Bowles et al., J. Phy. E-Sci. Instru., v. 7, p. 183, 1974.

Dataset BD

This data set contains raw data from the instruments on the University College London Stellar X-Ray Experiment (UCLXE) on the Copernicus satellite, along with HK data and pointing constraints. The dataset has been restored in FITS format by the HEASARC at the Goddard Space Flight Center. The data covers the interval from August 1972 to December 1980. The FITS layout consists of one extension bintable containing both scientific and housekeeping data. The scientific data are stored in the columns CNT_1_3, CNT_3_9, CNT_6_18 and CNT_CPM and are from the 1-3 Angstrom, 3-9 Angstrom, 6-18 Angstrom and the channel photomultiplier detectors respectively. There are in total 6563 FITS files. The FITS files includes data also taken with a 6 channel Pulse Height Analyzer connected with one of the 3 proportional counters, however no response matrix is available to analyze the spectra. For more detailed information on this data set, contact the HEASARC.

* Description of the Copernicus X-Ray Data-Set conversion from ASCII to FITS *

Creating the Raw Fits Files

This was a relatively simple task because the data was already in a friendly ASCII format, organized chronologically, and separated into files for each observation. There were several fields added to the FITS files that were not in the ascii files. These new fields were added to assist the researcher in his/her understanding the data and are described in each FITS file. The FITS file are named with a "ucl" prescript, a "YYDDDHHMM" time stamp, the 1-6563 chronological numbering, and lastly a "fits" postscript. The "YYDDDHHMM" has, as one would suspect, the following meaning: YY = year, DDD = day of year, HH = hour, and MM = minute of the beginning time of the observation.

There were several key words created and one new parameter called PHA_TOT. PHA_TOT is simply the total of the 6 PHA channel counts. There were 11 key words created of particular interest in regards to the data statistics and are the following:

```
TOTCN13 =                    / Total 1 - 3 A detector counts
TOTCN39 =                    / Total 3 - 9 A detector counts
TOTCN618=                    / Total 6 - 18 A detector counts
TOTCNCPM=                    / Total CPM detector counts
AVECN13 =                    / Average 1 - 3 A detector counts
AVECN39 =                    / Average 3 - 9 A detector counts
AVECN618=                    / Average 6 - 18 A detector counts
AVECNCPM=                    / Average CPM detector counts
AVEGC13 =                    / Average 1 - 3 A guard counts
AVEGC39 =                    / Average 3 - 9 A guard counts
AVEGC618=                    / Average 6 - 18 A guard counts
```

There were only four file involved in making each FITS file. The data file of course (h/s####) and the following other files:

copx2fits.f - Master FORTRAN program which generates the FITS files using the ASCII data file with coordinates (h#### or s####) and the record file (cd_record.txt) for naming purposes. The record file was generated by the add_coords.pl script and is described in README_ADCOORDS.txt

cf_history.txt - Text file which describes the original data fields and is inserted into every FITS file.

** Description of the Copernicus X-Ray Data-Set Conversion to ASCII Format **

Converting to ASCII

The raw Copernicus X-Ray Data-Set files were originally on data tape. They were then written to a disk drive. On the disk drive there were 2727 binary files in non-swapped integer numeric data and non-swapped EBCDIC character data. These 2727 files were not divided in any particular order. There were observations of one source in more than file and null places at the beginning and end of some files. After a lot of investigating and accounting for errors a PERL script was written to read these 2727 file and write them to 6563 ASCII files. There is an ASCII file for every HEAD and SL record in the data-set. These ASCII files are numbered in chronological order as in the original 2727 binary files, however there are 6563 ASCII files not 2727. The files were named with a "cx" (Copernicus x-ray) prescript, then a "hd" or "sl" (HEAD or SL record), then the 1-6563 chronological numbering, and lastly a "raw" (raw files) postscript. There were also supplementary file produced and are described below:

ibm2acsii : Master program that generates the cx_record.txt, cx_summary.txt, cx_error.txt, and all of the ASCII header (cx_hd_####.raw) and ASCII slew (cx_sl_####.raw) files from the original OAO-3 Copernicus x-ray instrument byte swapped data files.

cx_record.txt : Record file which contains the following:

- IN# : The original OAO-3 Copernicus x-ray instrument file number (1-2727 file####).
- G : Flag which indicates no errors in the original file if it equals "*".
- HD : Number of cx_hd_####.raw files produced from the original file (file####).
- SL : Number of cx_sl_####.raw files produced from the original file (file####).
- DT : Number of Data records produced from the original file (file####).
- SF : Number of record shifts in the original file. Records that did not have 47 bytes and a shift was required to re-align the reading of the original data file.
- SP : Number of records that have blank space values for their all their bytes (EBCDIC value " " = 16448).
- JU : Number of records that have junk values for their all their bytes. Values of 16448, 65535, or 30583 for all of the values in the record.
- 65 : Number of records that have 65535 values for their first byte only.
- EH : Number of header range errors found in the original file. Values for entries in the head record that were not in the expected range (ie. year = 3684 which is not 1971 < year < 1983) for the head record.
- ES : Number of slew range errors found in the original file. Values for entries in the slew record that were not in the expected range (ie. year = 3684 which is not 1971 < year < 1983) for the slew record.
- ED : Number of data range errors found in the original file. Values for entries in the data record that were not in the expected range (ie. year = 3684 which is not 1971 < year < 1983) for the data record.

```
        TSTART s : Start time in seconds of the original file, starting
                   from 1/1/1972.
        TSTOP s  : Stop time in seconds of the original file, starting
                   from 1/1/1972.
        YEAR     : Year of the original files first data record.
        STFL     : Start file number for the new data file
                   (cx_hd/sl_####.raw).
        SPFL     : Stop file number for the new data file
                   (cx_hd/sl_####.raw).


cx_error.txt  : Error file which contains the following:
        IN#      : Number of the original input file (file name = "file"number)
                   in which error occurred (1-2727).
        OUT#     : Number of the output file (file name = "cx_hd/sl"number.raw)
                   in which error occurred (1-6563).
        BT       : Byte number of the record in which error occurred (1-47).
        REC#     : The error number (1 - total number of errors).
        MINVAL   : Minimum value that this field should have (the value
                   must be >= MINVAL).
        MAXVAL   : Maximum value that this field should have (the value
                   must be <= MAXVAL).
        TRUE VAL : Actual value the byte has.
        TYPE     : The error type:
                        HD RANGE = Head file range error
                        SL RANGE = Slew file range error
                        RANGE    = Data range error
                        EBB2ASCI = EBCDIC to ASCII conversion error.
        DAY      : Day of the original files error location.
        YEAR     : Year of the original files error location.

cx_cd.txt     : HD list file of non "SLEW" and non "DARK POINT" source
                names of the HD files and their possible matched
                coordinates from the cx_coord.txt file.
                        OLD FILE : Original Copernicus file name.
                        NEW FILE : New hd file name.
                        CD NAME  : cx_coord.txt source designation.
                        SOURCE NAME : Original Copernicus source designation.
                        RA       : Right accention B1950.
                        DEC      : Declination B1950.

cx_cddef.txt  : HD list file of non "SLEW" and non "DARK POINT" source names
                of the HD files for which matches were found from the
                coordinates from the cx_coord.txt file.
                        NEW FILE : New hd file name.
                        CD NAME  : cx_coord.txt source designation.
                        SOURCE NAME : Original Copernicus source designation.
                        RA       : Right accention B1950.
                        DEC      : Declination B1950.


cx_cdundef.txt : HD list file of non "SLEW" and non "DARK POINT" source
                names of the HD files that were not matched from the
                cx_coord.txt file..
                        FILE NAME   : New file name for header file
                                      (cx_hd_####.raw).
                        SOURCE NAME : Original Copernicus source designation.


cx_summary.txt: Summary file which contains the summary of the entire
```

```
        IBM to ASCII transformation from file 1 to file 2727.

Summary of files  :
        GOOD OLD FL : Number of non error original files.
        BAD OLD FL  : Number of original files with errors.
        NEW FL      : Number of new head and slew files total.
        #HEAD       : Number of new head files.  Files which have a
                      header and therefore a source of some type.
        #SLEW       : Number of new slew files.  Files which
                      have the slew type recored and therefore
                      no source.
        #SHIFT      : Number of records with the shift error.
                      Record which contains less than 47 bytes
                      and a shift in the record read is required
                      to read the data properly.

Summary of errors :
        SPACE       : Number of all blank space records (records
                      where all bytes are equal to 16448).
        JUNK        : Number of bininary all on errors (all bytes
                      of record are 65535, or first byte 65535 and
                      rest 30583 or 16448).
        65535       : Number of records that have 65535 values
                      for their first byte only.
        HD RANGE    : Number of range value errors for the header.
                      Values for entries in the head record that were
                      not in the expected range (ie. year = 3684 which
                      is not 1971 < year < 1983) for the data record.
        SL RANGE    : Number of range value errors for the slew header.
                      Values for entries in the slew record that were
                      not in the expected range (ie. year = 3684 which
                      is not 1971 < year < 1983) for the data record.
        DT RANGE    : Number of range value errors for the data records.
                      Values for entries in the data record that were
                      not in the expected range (ie. year = 3684 which
                      is not 1971 < year < 1983) for the data record.

Summary of new HD files summary :
        #HEAD       : Number of new head files.  Files which have a
                      header and therefore a source of some type.
        #DEF HD     : Number of new head files with coordinates.
        #UNDEF HD   : Number of new head files without coordinates.
        #SL HD      : Number of new head files with "SLEW" as source.
        #DRK HD     : Number of new head files with "DARK POINT"
                      as source.

Defined #### sources in Copernicus files :
This is a list of sources that were found in the cx_coord.txt file to
define coordinates in the header of a new file.

Defined #### names from cx_coord.txt file :
This is a list of names that were used in the cx_coord.txt file to
define coordinates in the header of a new file.

Undefined #### sources in Copernicus files :
This is a list of sources that WERE NOT found in the cx_coord.txt file
to define coordinates in the header of a new file.
```

```
                                   ucl781331023_h5499_h0
SIMPLE  =                    T / file does conform to FITS standard
BITPIX  =                  -32 / number of bits per data pixel
NAXIS   =                    0 / number of data axes
EXTEND  =                    T / FITS dataset may contain extensions
COMMENT   FITS (Flexible Image Transport System) format defined in Astronomy and
COMMENT   Astrophysics Supplement Series v44/p363, v44/p371, v73/p359, v73/p365.
COMMENT   Contact the NASA Science Office of Standards and Technology for the
COMMENT   FITS Definition document #100 and other FITS information.
ORIGIN  = 'HEASARC/GSFC/NASA'  / origin of FITS file
DATE    = '1999-05-11T14:59:02' / file creation date (YYYY-MM-DDThh:mm:ss UTC)
TELESCOP= 'COPERNICUS'         / Telescope (mission) name
INSTRUME= 'UCLXE   '           / Instrument name
DATE-OBS= '13/05/78'           / Start date of observation (dd/mm/yy)
TIME-OBS= '10:23:28'           / Start time of observation (hh:mm:ss)
DATE-END= '16/05/78'           / End date of observation (dd/mm/yy)
TIME-END= '00:40:40'           / End time of observation (hh:mm:ss)
OBJECT  = '4U1813-14'          / Original Copernicus source designation
CATID1  = '4U1813-14'          / Source designation match, NONE if null
IDHEADER= 'HEAD    '           / Data Type
COMMENT   Catalog name : 4UHURU
RA_OBJ  =       2.73290000E+02 / Right Ascension from match, -999.0 if null
DEC_OBJ =      -1.40600000E+01 / Declination from match, -999.0 if null
EQUINOX =               1950.0 / equinox of coordinate system
RADECSYS= 'FK4     '           / Coordinate system
CREATOR = 'copx2fits'          / s/w task which wrote this dataset
CHECKSUM= 'PaGIPZEGPaEGPYEG'   / HDU checksum updated 2000-03-14T23:24:53
DATASUM = '         0'         / data unit checksum updated 1999-05-11T15:01:48
END
```

```
XTENSION= 'BINTABLE'           / binary table extension
BITPIX  =                    8 / 8-bit bytes
NAXIS   =                    2 / 2-dimensional binary table
NAXIS1  =                  208 / width of table in bytes
NAXIS2  =                16855 / number of rows in table
PCOUNT  =                    0 / size of special data area
GCOUNT  =                    1 / one data group (required keyword)
TFIELDS =                   45 / number of fields in each row
TTYPE1  = 'TIME    '           / Seconds since MJDREF
TFORM1  = 'D       '           / data format of field: 8-byte DOUBLE
TUNIT1  = 's       '           / physical unit of field
TTYPE2  = 'TDIFF   '           / Time difference between rows
TFORM2  = 'D       '           / data format of field: 8-byte DOUBLE
TUNIT2  = 's       '           / physical unit of field
TTYPE3  = 'HOURS   '           / UT hours of the data frame
TFORM3  = 'J       '           / data format of field: 4-byte INTEGER
TUNIT3  = 'h       '           / physical unit of field
TTYPE4  = 'MINUTES '           / UT minutes of the data frame
TFORM4  = 'J       '           / data format of field: 4-byte INTEGER
TUNIT4  = 'min     '           / physical unit of field
TTYPE5  = 'SECONDS '           / UT seconds of the data frame
TFORM5  = 'J       '           / data format of field: 4-byte INTEGER
TUNIT5  = 's       '           / physical unit of field
TTYPE6  = 'DAY     '           / Day of the year of the data frame
TFORM6  = 'J       '           / data format of field: 4-byte INTEGER
TUNIT6  = 'd       '           / physical unit of field
TTYPE7  = 'YEAR    '           / Year of the data frame
TFORM7  = 'J       '           / data format of field: 4-byte INTEGER
TUNIT7  = 'yr      '           / physical unit of field
TTYPE8  = 'ORBITADS'           / Orbital address
TFORM8  = 'J       '           / data format of field: 4-byte INTEGER
TTYPE9  = 'OBS_CNSTR'          / Code the observational constraints
TFORM9  = 'J       '           / data format of field: 4-byte INTEGER
TTYPE10 = 'TIME_ACPT'          / Time counter for dead-time
TFORM10 = 'J       '           / data format of field: 4-byte INTEGER
TTYPE11 = 'CNT_1_3 '           / Counts in 1-3 A CPCounter detector
TFORM11 = 'J       '           / data format of field: 4-byte INTEGER
TUNIT11 = 'count   '           / physical unit of field
TTYPE12 = 'CNT_3_9 '           / Count in 3-9 A TPCounter detector
TFORM12 = 'J       '           / data format of field: 4-byte INTEGER
TUNIT12 = 'count   '           / physical unit of field
TTYPE13 = 'CNT_6_18'           / Count in 6-18 A TPCounter detector
TFORM13 = 'J       '           / data format of field: 4-byte INTEGER
TUNIT13 = 'count   '           / physical unit of field
TTYPE14 = 'CNT_CPM '           / Count in the channel photomultiplier
TFORM14 = 'J       '           / data format of field: 4-byte INTEGER
TUNIT14 = 'count   '           / physical unit of field
TTYPE15 = 'SHUTTER '           / Shutter flag : 0=bkg, 1=stellar
TFORM15 = 'J       '           / data format of field: 4-byte INTEGER
TTYPE16 = 'PHA_DET '           / PHA discriminator for which detector
TFORM16 = 'J       '           / data format of field: 4-byte INTEGER
TTYPE17 = 'PHA_CNT '           / Six channel spectrum
TFORM17 = '6J      '           / data format of field: 4-byte INTEGER
TUNIT17 = 'count   '           / physical unit of field
TTYPE18 = 'PHA_TOT '           / Total PHA count
TFORM18 = 'J       '           / data format of field: 4-byte INTEGER
TUNIT18 = 'count   '           / physical unit of field
TTYPE19 = 'GRD_1_3 '           / Guard Counts in the 1-3 A
TFORM19 = 'J       '           / data format of field: 4-byte INTEGER
TUNIT19 = 'count   '           / physical unit of field
TTYPE20 = 'GRD_3_9 '           / Guard Counts in the 3-9 A
TFORM20 = 'J       '           / data format of field: 4-byte INTEGER
TUNIT20 = 'count   '           / physical unit of field
```

```
TTYPE21 = 'GRD_6_18'          / Guard Counts in the 6-18 A
TFORM21 = 'J       '          / data format of field: 4-byte INTEGER
TUNIT21 = 'count   '          / physical unit of field
TTYPE22 = 'SEN_1_3 '          / Sensitivity flag in the 1-3 A
TFORM22 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE23 = 'SEN_3_9 '          / Sensitivity flag in the 3-9 A
TFORM23 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE24 = 'SEN_6_18'          / Sensitivity flag in the 6-18 A
TFORM24 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE25 = 'PSDS_1_3'          / Pulse shape discriminator speed
TFORM25 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE26 = 'PSDM_1_3'          / Pulse shape discriminator mode
TFORM26 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE27 = 'HTF_1_3 '          / High Tension flag 1-3 A
TFORM27 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE28 = 'HTF_3_9 '          / High tension flag 6-9 A
TFORM28 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE29 = 'HTF_6_18'          / High tension flag for 6-18 A
TFORM29 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE30 = 'HTF_CPM '          / High tension flag for CPM
TFORM30 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE31 = 'HEATFLAG'          / Experiment heater flag
TFORM31 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE32 = 'BKGDMODE'          / Background alternate flag
TFORM32 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE33 = 'LOWVLTFL'          / Low voltage (0=on 1=off)
TFORM33 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE34 = 'LOWVLTMD'          / Low voltage power supply (0=A, 1=B)
TFORM34 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE35 = 'IRIS    '          / Code size FOV (1=small 2=large 3=intermediate)
TFORM35 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE36 = 'FILTER  '          / Filter selected (value 1-4)
TFORM36 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE37 = 'ANTELGRP'          / Analog telemetry group (group B 1 = group A)
TFORM37 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE38 = 'OPMODE  '          / Operational mode 0=normal 1=calibration
TFORM38 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE39 = 'STYAXIS '          / Star tracker Y axis counter
TFORM39 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE40 = 'STZAXIS '          / Star tracker Z axis counter
TFORM40 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE41 = 'ANA_TEL1'          / Analog telemetry word 1
TFORM41 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE42 = 'ANA_TEL2'          / Analog telemetry word 2
TFORM42 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE43 = 'ANA_TEL3'          / Analog telemetry word 3
TFORM43 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE44 = 'ANA_TEL4'          / Analog telemetry word 4
TFORM44 = 'J       '          / data format of field: 4-byte INTEGER
TTYPE45 = 'ANA_TEL5'          / Analog telemetry word 5
TFORM45 = 'J       '          / data format of field: 4-byte INTEGER
EXTNAME = 'SPECTRA '          / name of this binary table extension
1CTYP17 = 'CHANNEL '          / Axis type
1CUNI17 = 'chan    '          / Physical Units of the Axis CTYP17
1CRVL17 =                   1 / Channel value for reference pixel
1CRPX17 =                   1 / Reference pixel
ORIGIN  = 'HEASARC/GSFC/NASA' / Origin of FITS file
TELESCOP= 'COPERNICUS'        / Telescope (mission) name
INSTRUME= 'UCLXE   '          / Instrument name
HDUCLASS= 'OGIP    '          / Format conforms to OGIP standard
HDUCLAS1= 'TEMPORALDATA'      / Contains non-science data vs. time
HDUCLAS2= 'COMBINED'          / Contains HK and data
DATE-OBS= '13/05/78'          / Start date of observation (dd/mm/yy)
```

```
TIME-OBS= '10:23:28'           / Start time of observation (hh:mm:ss)
DATE-END= '16/05/78'           / End date of observation (dd/mm/yy)
TIME-END= '00:40:40'           / End time of observation (hh:mm:ss)
MJDREF  = 4.131600000000000E+04 / Reference time in MJD
TIMESYS = '1972 1 0 00:00:00'  / Ref. time in YYYY MM DD hh:mm:ss
TIMEREF = 'LOCAL   '           / Reference frame for the times
TASSIGN = 'SATELLITE'          / Place of time assignment
CLOCKAPP=                    F / True if clock correction applied
TIMEUNIT= 's       '           / Unit for TSTART,TSTOP,and TIMEZER
TSTART  = 2.009174080000000E+08 / Start time counted from TIMESYS
TSTOP   = 2.011416400000000E+08 / Stop time counted from TIMESYS
TELAPSE = 2.242320000000000E+05 / Elapsed time of observation
TIMEPIXR=                  0.0 / Time stamps refer to start of each pixel
TIMEDEL =               62.509 / Integration time in TIMEUNIT
OBS_MODE= 'POINTING'           / Observation mode
OBJECT  = '4U1813-14'          / Original Copernicus source designation
CATID1  = '4U1813-14'          / Source designation match, NONE if null
IDHEADER= 'HEAD    '           / Data Type
COMMENT   Catalog name : 4UHURU
RA_OBJ  =       2.73290000E+02 / Right Ascension from match, -999.0 if null
DEC_OBJ =      -1.40600000E+01 / Declination from match, -999.0 if null
EQUINOX =               1950.0 / Equinox of coordinate system
RADECSYS= 'FK4     '           / Coordinate system
CREATOR = 'copx2fits'          / s/w task which wrote this dataset
TOTCN13 =               293296 / Total 1 - 3 A detector counts
TOTCN39 =                 4034 / Total 3 - 9 A detector counts
TOTCN618=                 3415 / Total 6 - 18 A detector counts
TOTCNCPM=                   48 / Total CPM detector counts
AVECN13 =              17.4011 / Average 1 - 3 A detector counts
AVECN39 =               0.2393 / Average 3 - 9 A detector counts
AVECN618=               0.2026 / Average 6 - 18 A detector counts
AVECNCPM=               0.0028 / Average CPM detector counts
AVEGC13 =             102.6380 / Average 1 - 3 A guard counts
AVEGC39 =             136.4495 / Average 3 - 9 A guard counts
AVEGC618=             225.6810 / Average 6 - 18 A guard counts
HISTORY   The UCL X-ray Experiment (UCLXE) package consisted of four telescopes
HISTORY   operating simultaneously. The main telescope used during the mission
HISTORY   was the 1-3 angstrom proportional counter which had a simple tube
HISTORY   for collimation. The field of view (FOV) was asymmetric with a full
HISTORY   width half maximum of 2.5 deg X 3.5 deg and an effective area of
HISTORY   17.8 cm**2. The other three telescopes were Wolter type 0 grazing
HISTORY   incidence telescopes with a dedicated detector.
HISTORY   Two were proportional counter (3-9 angstrom and 6-18 angstrom) and
HISTORY   the other a channel photomultiplier (CPM). The CPM suffers UV
HISTORY   contamination and provided no useful data.
HISTORY   The FOV (and the effective area) of the 3-9 and 6-18 angstrom
HISTORY   proportional counters could be set by using stops at the foci of
HISTORY   the telescopes. The 3-9 angstrom FOVs were 10 arcmin (large), 3.2
HISTORY   arcmin (intermediate) and 1.8 arcmin (small) corresponding to 3.7,
HISTORY   2.4 and 1 in cm**2 effective area respectively. The FOVs for the
HISTORY   6-18 angstrom detector were instead 10, 6 or 2 arcmin corresponding
HISTORY   to 12.3, 11.3 or 7.6 in cm**2 effective area. The 3-9 and 6-18
HISTORY   angstrom telescopes became inoperable in July 1973 following the
HISTORY   failure of the background shutter.
HISTORY   A six Pulse Height Analyzer (PHA) could be connected to any of the
HISTORY   three proportional counters and used to extract spectral information.
HISTORY   The basic time resolution was 62.509 seconds followed by 24 seconds
HISTORY   dead time. This resulted in a 86.509 sampling time. It was possible
HISTORY   to achieve higher time resolution, down to about 2 sec, with the
HISTORY   usage of the J20 mode. This mode was used only in few occasions and
HISTORY   was not scientifically useful.
HISTORY   ----------------------------------------------------------------------
HISTORY   This fits file contains data taken with all the telescopes.
```

```
HISTORY   All the fields found in the original data records were maintained in
HISTORY   the FITS file and three extra columns, TIME , PHA_SUM and TDIFF added.
HISTORY   The column description as given in the original documentation is
HISTORY   listed below. The TIMEDEL keyword value is always set to 62.509 sec
HISTORY   even when the J20 mode was operating. If J20 was in used the time
HISTORY   stamp is identical for many tens of rows. The usage of these are not
HISTORY   recommended.
HISTORY       TIME : seconds since the header keyword MJDREF
HISTORY       HOURS,MINUTES, SECONDS : store the UT time of the data frame
HISTORY                                start as was in the original file
HISTORY       DAY and YEAR : day of the year and year
HISTORY       ORBITADS: the orbital address (value 0-63)
HISTORY       OBS_CNSTR: orbital constrain (value 1-11)
HISTORY                  The values have the following meaning:
HISTORY                  1 = no constrain,
HISTORY                  2 = observation through earth atmosphere,
HISTORY                  3 = pointing sunlight earth,
HISTORY                  4 = pointing dark earth
HISTORY                  5 = South Atlantic Anomaly
HISTORY                6-8 = unknown
HISTORY                  9 = pointing near Sun
HISTORY                 10 = pointing near moon
HISTORY                 11 = observation during spacecraft night
HISTORY       TIME_ACPT: count acceptance period (value 0-127).  If not zero
HISTORY                  indicates the length in time (in spacecraft half
HISTORY                  seconds) the experiment was counting before one of
HISTORY                  the scalars filled (only for bright sources). It is
HISTORY                  a measurement of how quickly the counter saturate.
HISTORY       CNT_1_3, CNT_3_9, CNT_6_18, and CNT_CPM
HISTORY                record the counts in the four detectors (value 0-4095)
HISTORY       SHUTTER, background shutter flag 0 = background 1 = stellar
HISTORY       PHA_DET : indicates which proportional counters fed the PHA
HISTORY                   1 = 3-9  angstrom
HISTORY                   2 = 1-3  angstrom
HISTORY                   3 = 6-18 angstrom
HISTORY       PHA_CNT: six channel spectrum
HISTORY       PHA_SUM: total counts records in the PHA_CNT
HISTORY       GRD_1_3, GRD_3_9, GRD_6_18: records the guard counts
HISTORY                                   (value 0-4095) particle background
HISTORY       SEN_1_3: SEN_3_9, SEN_6_18 gain mode(0=low 1=high)
HISTORY       PSDS_1_3: pulse shape discriminator speed (rise time
HISTORY                 0=slow 1=fast)
HISTORY       PSDM_1_3: pulse shape discriminator mode (rise time
HISTORY                 0=on 1=off)
HISTORY       HTF_1_3, HTF_3_9, HTF_6_18 and HTF_CPM:  High tension flag
HISTORY                 for detector (0=off 1=on)
HISTORY       HEATFLAG: experiment  heater (0=on 1=off)
HISTORY       BKGMODE: background alternate mode (0=on 1=off)
HISTORY       LOWVLTFL: low voltage (0=on 1=off)
HISTORY       LOWVLTMD: low voltage power supply(0=supply A, 1=supply B)
HISTORY       IRIS: iris selected (value 1-4). This determinate the FOV
HISTORY             1= small 2= large 3 intermediate
HISTORY       FILTER: filter selected (value 1-4)
HISTORY       ANTELGRP: analog telemetry group (group B 1 = group A)
HISTORY       OPMODE: operation mode (0=normal 1=calibration)
HISTORY       STYAXIS: star-tracker Y axis count (value 0-31)
HISTORY       STZAXIS: star-tracker Z axis count (value 0-31)
HISTORY       ANA_TEL1, ANA_TEL2, ANA_TEL3, ANA_TEL4, and
HISTORY       ANA_TEL5: analog telemetry words
HISTORY       TDIFF: time difference in seconds between subsequent rows
HISTORY   ----------------------------------------------------------------------
HISTORY   The original file structure contained a header followed by data
HISTORY   records. Data and header records consisted of 47 words. Two types
```

```
HISTORY   of header record were present in the files storing different
HISTORY   parameters. A string set to HEAD or SL (kept in this fits file
HISTORY   in the keyword IDHEADER) identified the header type. The SL data
HISTORY   are raster scan around a source position set in the HEAD observation
HISTORY   immediately preceding (in time) the SL observation.
HISTORY   In the HEAD header only the first 12 words were used to store
HISTORY   word(1-2)=HEAD, word(3)= month, word(4)=day word(5)=year,
HISTORY   word(6)=day of year, word(7-12)=target name. The SL header the
HISTORY   words(6-14) and words(30-47) were unused, the others contain:
HISTORY   words(1-3) = hour min and sec; word(4)=SL; word(5)=constrain flag;
HISTORY   words(15-19), words(20-24) and words(25-29) contain the pitch yaw
HISTORY   and roll information respectively. Although the documentation
HISTORY   reports that no other words in either header type (HEAD and SL type)
HISTORY   were used, the content of the entire record are kept for
HISTORY   completeness in the HISTORY card listed below.
HISTORY   ***********************************************************************
HISTORY            HEAD|     5|    13|  1978|   133|
HISTORY    4U1813-14   |      |      |      |      |      |      |      |      |
HISTORY         |      |      |      |      |      |      |      |      |      |
HISTORY         |      |      |      |      |      |      |      |      |      |
HISTORY      154|   171|   173|   229|   150|      |      |
HISTORY   ***********************************************************************
HISTORY   The header of original HEAD data file did not contain coordinates,
HISTORY   but only the object name and the observation log was not available
HISTORY   in a suitable form when these FITS files were created. The coordinates
HISTORY   in the RA_OBJ and DEC_OBJ keywords, for the fits file with
HISTORY   IDHEADER=HEAD, were obtained by cross-correlating the object name
HISTORY   with various catalogs available from HEASARC and SIMBAD and with the
HISTORY   object name listed in the archive of the Copernicus "Princeton
HISTORY   Experiment Package" (COP_PEP). In a few cases coordinates were
HISTORY   assigned using the observation log.
HISTORY   The SL files instead did not contain either coordinates or object
HISTORY   name. The RA_OBJ, DEC_OBJ, OBJECT keywords, in fits file with
HISTORY   IDHEADER=SL, are retained from the HEAD observation immediately
HISTORY   preceding (in time) the current SL file.
CHECKSUM= 'TUYlVUWiTUWiTUWi'   / HDU checksum updated 1999-05-11T15:01:47
DATASUM = '2136865892'         / data unit checksum updated 1999-05-11T15:01:47
END
```

DAO 3

REDUCED DATA TAPES

72-065A-02A ASXR-00037

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY IT CONTAINED 28 9-TRACK, 800 BPI TAPES WRITTEN IN BINARY. THERE ARE FOUR RESTORED TAPES. THE DR AND DS TAPES ARE 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON AN IBM 360/65 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND THE TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR02478	DS02478	D43702	1-100	08/25/72 - 11/07/72
		D43703	101-175	11/07/72 - 01/27/73
		D43704	176-287	01/27/73 - 04/29/73
		D43705	288-339	04/29/73 - 07/06/73
		D43706	340-382	07/06/73 - 09/29/73
		D43707	383-417	10/01/73 - 01/15/74
		D43708	418-474	01/21/74 - 05/13/74
		D43709	475-557	05/13/74 - 08/17/74
		D43710	558-648	08/18/74 - 11/17/74
		D43711	649-723	11/17/74 - 02/11/75
DR02479	DS02479	D43712	1-80	02/11/75 - 05/16/75
		D43713	81-165	05/17/75 - 09/04/75
		D43714	166-269	09/15/75 - 01/07/76
		D43715	270-391	01/07/76 - 04/11/76
		D43716	392-521	04/11/76 - 07/27/76
		D43717	522-660	07/27/76 - 10/22/76
DR02480	DS02480	D43718	1-125	10/22/76 - 02/04/77
		D43719	126-230	02/04/77 - 05/30/77
		D43720	231-345	05/30/77 - 08/31/77
		D43721	346-462	09/01/77 - 02/07/78
		D43722	463-624	02/07/78 - 06/05/78
		D43723	625-746	06/06/78 - 11/04/78
DR02481	DS02481	D43724	1-92	11/04/78 - 12/31/78
		D43725	93-174	03/06/79 - 06/30/79
		D43726	175-260	06/30/79 - 11/13/79
		D43727	261-382	11/13/79 - 05/20/80
		D43728	383-548	05/13/80 - 10/14/80
		D43729	549-584	10/14/80 - 12/14/80

72-065A-02A	DD 43702	DC 23215	900	08/25/72 - 11/07/72		
72-065A-02A	DD 43703	DC 23216	750	11/07/72 - 01/27/73		
72-065A-02A	DD 43704	DC 23217	1120	01/27/73 - 04/29/73		
72-065A-02A	DD 43705	DC 23218	570	04/29/73 - 07/06/73		
72-065A-02A	DD 43706	DC 23219	430	07/06/73 - 09/29/73		
72-065A-02A	DD 43707	DC 23220	350	10/01/73 - 01/15/74		
72-065A-02A	DD 43708	DC 23221	570	01/21/74 - 05/13/74		
72-065A-02A	DD 43709	DC 23222	830	05/13/74 - 08/17/74		
72-065A-02A	DD 43710	DC 23223	910	08/18/74 - 11/17/74		
72-065A-02A	DD 43711	DC 23224	750	11/17/74 - 02/11/75	723	
72-065A-02A	DD 43712	DC 23225	800	02/11/75 - 05/16/75		
72-065A-02A	DD 43713	DC 23226	850	05/17/75 - 09/04/75		
72-065A-02A	DD 43714	DC 23227	1040	09/15/75 - 01/07/76		
72-065A-02A	DD 43715	DC 23228	1220	01/07/76 - 04/11/76		
72-065A-02A	DD 43716	DC 23229	1800	04/11/76 - 07/27/76		
72-065A-02A	DD 43717	DC 23230	1390	07/27/76 - 10/22/76	1660	
72-065A-02A	DD 43718	DC 23231	1250	10/22/76 - 02/04/77		
72-065A-02A	DD 43719	DC 23232	1050	02/04/77 - 05/30/77		
72-065A-02A	DD 43720	DC 23233	1150	05/30/77 - 08/31/77		
72-065A-02A	DD 43721	DC 23234	1170	09/01/77 - 02/07/78		
72-065A-02A	DD 43722	DC 23235	1620	02/07/78 - 06/05/78		
72-065A-02A	DD 43723	DC 23236	1220	06/06/78 - 11/04/78	746	
72-065A-02A	DD 43724	DC 23237	920	11/04/78 - 12/31/78		
72-065A-02A	DD 43725	DC 23238	820	03/06/79 - 06/30/79		
72-065A-02A	DD 43726	DC 23239	860	06/30/79 - 11/13/79		
72-065A-02A	DD 43727	DC 23240	1220	11/13/79 - 05/20/80		
72-065A-02A	DD 43728	DC 23241	1660	05/13/80 - 10/14/80		
72-065A-02A	DD 43729	DC 23242	380	10/14/80 - 12/14/80	586	564?

REQ. AGENT	RAND NO.	ACQ. AGENT
DAD	V0197	MCL

OAO-3

REDUCED DATA TAPES

72-065A-02A

This data set catalog consists of 28 OAO-3 data tapes. The tapes are 800 BPI, Binary, 9 track and have multi-files. The tapes were created on a IBM 360/65 computer. Data is all in a continuous time sequence from tape #1 forward covering the interval from 8/72 - 12/80. The time spans and the number of files are as follows:

D#	C#	FILES	TIME SPAN
D-43702	C-23215	100	08/25/72 - 11/07/72
D-43703	C-23216	75	11/07/72 - 01/27/73
D-43704	C-23217	112	01/27/73 - 04/29/73
D-43705	C-23218	52	04/29/73 - 07/06/73
D-43706	C-23219	43	07/06/73 - 09/29/73
D-43707	C-23220	35	10/01/73 - 01/05/74
D-43708	C-23221	57	01/21/74 - 05/13/74
D-43709	C-23222	83	05/13/74 - 08/17/74
D-43710	C-23223	91	08/18/74 - 11/17/74
D-43711	C-23224	75	11/17/74 - 02/11/75
D-43712	C-23225	80	02/11/75 - 05/16/75
D-43713	C-23226	85	05/17/75 - 09/04/75
D-43714	C-23227	104	09/15/75 - 01/07/76
D-43715	C-23228	122	01/07/76 - 04/11/76
D-43716	C-23229	130	04/11/76 - 07/27/76
D-43717	C-23230	139	07/27/76 - 10/22/76
D-43718	C-23231	125	10/22/76 - 02/04/77
D-43719	C-23232	105	02/04/77 - 05/30/77
D-43720	C-23233	115	05/30/77 - 08/31/77
D-43721	C-23234	117	09/01/77 - 02/07/78
D-43722	C-23235	162	02/07/78 - 06/05/78
D-43723	C-23236	122	06/06/78 - 11/04/78
D-43724	C-23237	92	11/04/78 - 12/31/78
D-43725	C-23238	82	03/06/78 - 06/30/79
D-43726	C-23239	86	06/30/78 - 11/13/79
D-43727	C-23240	122	11/13/79 - 05/12/80
D-43728	C-23241	166	05/13/80 - 10/14/80
D-43729	C-23242	38	10/14/80 - 12/14/80

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INFORMATION ON UCL/OAO-C REDUCED DATA TAPES

by

J. D. EWART

UCL Office,
Building 14,
Goddard Space Flight Center,
17 May 1974.

72-063A-02A

p.2

UCL/OAO-C REDUCED DATA TAPES

The following notes are intended to provide details of the format of magnetic tapes containing digitized data from the University College London Stellar X-Ray Experiment on the Copernicus Satellite.

The seven-track tapes contain from one through ~~twentyfive~~ 250 files of data, depending on the time-span covered. Sample JCL, as used on the IBM 360/65 computer which produces the tapes, is shown:

```
//GO.FT25F001 DD UNIT=(2400-2,,DEFER),DISP=(OLD,PASS),
//              DCB=(RECFM=F,TRTCH=C,LRECL=1128,BLKSIZE=1128,DEN=1),
//     DSNAME=DECK,LABEL=(1,BLP),VOL=(PRIVATE,RETAIN,,SER=RDT001)
//GO.FT25F002 DD UNIT=(2400-2,,DEFER),DISP=(OLD,PASS),
//     LABEL=(2,BLP),VOLUME=REF *.FT25F001,DCB=*.FT25F001,DSNAME=DECK
                                  .
                                  .
                                  .
                                  .
                                  .
//GO.FT25F025 DD UNIT=(2400-2,,DEFER),DISP=(OLD,PASS),
//     LABEL=(25,BLP),VOLUME=REF *.FT25F001,DCB=*.FT25F001,DSNAME=DECK
```

The tapes are read and written by FORTRAN routines using a 47-element I*2 array called MD. There are two types of record used; the first is known as a HEADER record, the second as a DATA record.

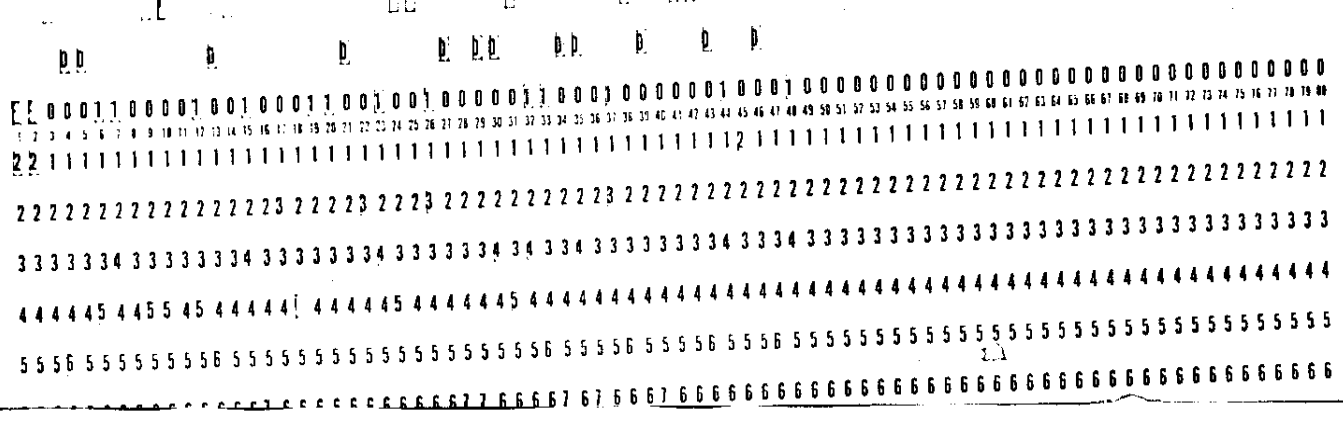
A typical tape might contain many hundreds of DATA records, and perhaps ten or twenty HEADER records. The HEADER record generally signifies the start of data from a new pointing.

The following pages show a breakdown of each type of record.

JCL FOR IBM 360/65 (RDTLIB TAPES) USED TO MERGE 10 7TK TAPES AS DESCRIBED ABOVE ON TO 1 9TK TAPE

```
// LABEL=(&OUTFILE,BLP,,OUT)
// VOL=(PRIVATE,RETAIN,SER=&OUTAPE),
//OUTPUT DD UNIT=2400-9,DISP=(NEW,KEEP),DCB=DEN=2,
// DCB=(TRTCH=C,DEN=1)
//INPUT DD UNIT=2400-2,DISP=OLD,VOL=SER=&INTAPE,
```

CARD ORDER →



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HEADER RECORD

MD (1) literals 'HE'
MD (2) literals 'AD' } recognition symbols for new targets

MD (3) not used

MD (4) day of month
MD (5) year
MD (6) day of year } date of data

MD (7) 'AL'
MD (8) 'FH'
MD (9) 'A '
MD(10) 'BO'
MD(11) 'OT'
MD(12) 'IS' } literals giving name of target (example shows ALPHA BOOTIS)

MD(13) through MD(47) not used

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p.4

DATA RECORD

MD (1) hours
MD (2) minutes
MD (3) seconds

UT of start of data frame (integration period)
one I/P is 64 spacecraft seconds (approx 62.9secs)

MD (4) 'orbital address' of I/P, an integer from 00 through 63

MD (5) constraint symbol, a literal character from the following:

blank = no constraint
E = observation through the atmosphere
/ = pointing at the sunlit earth
D = pointing at the dark earth
A = spacecraft in the South Atlantic Anomaly region
S = pointing near the Sun
M = pointing near the Moon
N = observation during spacecraft night

MD (6) 'count acceptance period', from 000 through 127 spacecraft half-seconds. If this is not zero, it indicates the length of time the experiment was counting before one of the scalers filled. (only on very streng X-Ray sources)

MD (7) 1-3Å detector counts (0 through 4095)
MD (8) 3-9Å " " "
MD (9) 6-18Å " " "
MD(10) CPM " " "

MD(11) background shutter position (0='background', 1='stellar')

MD(12) pulse height analyser fed from: 2= 1-3Å
1= 3-9Å
3=6-18Å

MD(13) PHA channel 1 counts (0 through 4095)
MD(14) " " 2 " "
MD(15) " " 3 " "
MD(16) " " 4 " "
MD(17) " " 5 " "
MD(18) " " 6 " "

MD(19) 1-3Å Guard counts (0 through 4095)
MD(20) 3-9Å " " "
MD(21) 6-18Å " " "

MD(22) 1-3Å sensitivity (0=low, 1=high)
MD(23) 3-9Å " "
MD(24) 6-18Å " "

MD(25) 1-3Å pulse shape discriminator speed (0=slow, 1=fast)
MD(26) 1-3Å pulse shape discriminator mode (0=on, 1=off)

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DATA RECORD (continued)

MD(27) 1-3Å detector high tension (0=off, 1=on)
MD(28) 3-9Å " " " "
MD(29) 6-18Å " " " "
MD(30) CPM high tension "

MD(31) experiment heater (0=off, 1=on)

MD(32) background alternate mode (0=off, 1=on)

MD(33) low voltage (0=off, 1=on)
MD(34) low voltage power supply selected (0=supply B, 1=supply A)

MD(35) iris selected (1, 2, 3 or 4)

MD(36) filter selected (1, 2, 3 or 4)

MD(37) analog telemetry group (0=group B, 1=group A)

MD(38) operating mode (0=normal, 1=calibrate)

MD(39) startracker Y axis count (00 through 31)
MD(40) " Z " " "

MD(41) analog telemetry word 1
MD(42) " " " 2
MD(43) " " " 3
MD(44) " " " 4
MD(45) " " " 5

MD(46) day of year
MD(47) year

D-43703
9/17/72 - 1/27/73

DUMP OF TAPE DOUT2

INPUT TAPE DOUT2 ON TU1
DATA INPUT H9 NF 75 SR 1 1 1 SR 75 LAST 1

FILE 1 RECORD 1 LENGTH 1128BYTES

(0)	C8C5C1C4	000B0007	07B40138	E2D3C5E6	40404040	40404040	06C6E6D9	D5D37B00	90EDF258	187F58A0
(40)	E00458F0	729895FF	F07C4780	70285820	F06C07F2	D23FF07C	72585820	F0C44130	000805D2	50E07258
(80)	050100FF	47F0716C	D2012000	730A0014	002B001F	001D0001	00000000	00000000	00000001	00010000
(120)	00000000	00000000	00000000	00000000	00010001	00010001	00010000	00000000	00000000	00000000
(160)	00010002	00040000	00000000	00000501	00FF47F0	716CD201	013807B4	0014002C	003A001E	00010000
(200)	00000000	00000000	00010001	00000000	00000000	00000000	00000000	00000001	00010001	00010001
(240)	00000000	00000000	00000000	00000001	00020004	00000000	00000000	050100FF	47F0716C	D2010138
(280)	07B40014	002E0018	001F0001	00000000	00000000	00010001	00010000	00000000	00000000	00000001
(320)	00010000	00010001	00010001	00010000	00000000	00000000	00000000	00010002	00040000	00000000
(360)	00000000	00000094	005E0093	013807B4	0014002F	00330020	00010000	00000000	00000000	00010001
(400)	00000000	00000000	00000000	00000000	00000001	00010001	00010001	00000000	00000000	00000000
(440)	00000001	00020004	00000000	00000000	00000000	0094005E	00930138	07B40014	00310011	00210001
(480)	00000000	00000000	00000001	00010000	00000000	00000000	00000000	00000000	00010001	00010001
(520)	00010000	00000000	00000000	00000000	00010002	00040000	00000000	00000000	00000094	005E0093
(560)	013807B4	00140032	002C0022	00010000	00000000	00000000	00010001	00000000	00000000	00000000
(600)	00000000	00000001	00010001	00010001	00000000	00000000	00000000	00000001	00020004	00000000
(640)	00000000	00000000	0094005E	00930138	07B40014	0034000A	00230001	00000000	00000000	00000001
(680)	00010000	00000000	00000000	00000000	00000000	00010001	00010001	00010000	00000000	00000000
(720)	00000000	00010002	00040000	00000000	00000000	00000094	005E0093	013807B4	00140035	00250024
(760)	00010000	00000000	00000000	00010001	00000000	00000000	00000000	00000000	00000001	00010001
(800)	00010001	00000000	00000000	00000000	00000001	00020004	00000000	00000000	00000000	0094005E
(840)	00930138	07B40014	00370003	00250001	00000000	00000000	00000001	00010000	00000000	00000000
(880)	00000000	00000000	00010001	00010001	00010000	00000000	00000000	00000000	00010002	00040000
(920)	00000000	00000000	00000094	005E0093	013807B4	00140038	001E0026	00010000	00000000	00000000
(960)	00010001	00000000	00000000	00000000	00000000	00000001	00010001	00010001	00000000	00000000
(1000)	00000000	00000001	00020004	00000000	00000000	00000000	0094005E	00930138	07B40014	00390038
(1040)	00270001	00000000	00000000	00000001	00010000	00000000	00000000	00000000	00000000	00010001
(1080)	00010001	00010000	00000000	00000000	00000000	00010002	00040000	00000000	00000000	0000C094
(1120)	005E0093	013807B4								

FILE	INPUT RECS.	DATA RECORDS INPUT	MAX. SIZE	READ ERROR SUMMARY PERM	ZERO B	SHORT	UNDEF.	INPUT RETRIES #RECS.	TOTAL#
1	50	50	1128	0	0	0	0	0	0

FILE 75 RECORD 11 LENGTH 1128BYTES

(0)	000D001E	00240033	00010000	00000000	00000000	00010001	00000000	00000000	00000000	00000000
(40)	00000001	00010001	00010001	00000000	00000000	00000000	00000001	00020004	00000000	00000000
(80)	00000000	0094005D	0092001B	07B5000D	00200002	00340001	00000000	00000000	00000001	00010000
(120)	00000000	00000000	00000000	00000000	00010001	00010001	00010000	00000000	00000000	00000000
(160)	00010002	00040000	00000000	00000000	00000094	005D0092	001B07B5	FFFF0010	000B0029	00010000
(200)	001C0004	00020000	00010001	00010002	00000001	00000000	049306CE	0BB50001	00000001	00000000
(240)	00010001	00010000	00000000	00000001	00020004	00010000	00020003	009D00AB	00AE00EF	0094001B
(280)	07B5000D	00110025	002A0001	0000002C	00020007	00000001	00010000	00020000	00000000	000004FC
(320)	06FE0BB1	00010000	00010000	00000001	00010001	00000000	00000000	00010002	00040001	00000003
(360)	0003009D	00AB00AE	00EF0094	001B07B5	000D0013	0004002B	00010000	002D0005	00040000	00010001
(400)	00010002	00010000	00010000	04F80740	0BF10001	00000001	00000000	00010001	00010000	00000000
(440)	00000001	00020004	00010000	00030003	009D00AC	00AE00EF	0094001B	07B5000D	0014001E	002C0001
(480)	0000002F	00010003	00000001	00010000	00010000	00000000	00000533	075A0BD9	00010000	00010000
(520)	00000001	00010001	00000000	00000000	00010002	00040001	00000003	0003009D	00AC00AE	00EF0094
(560)	001B07B5	000D0015	0039002D	00010000	002E0005	00030000	00010001	00010002	00010001	00000000
(600)	05E407C0	0C380001	00000001	00000000	00010001	00010000	00000000	00000001	00020004	00010000
(640)	00020004	009D00AC	00AE00EF	0094001B	07B5000D	00170017	002E0001	00000032	00040005	00000001
(680)	00010001	00010000	00010001	0000069C	08510C88	00010000	00010000	00000001	00010001	00000000
(720)	00000000	00010002	00040001	00000002	0003009D	00AC00AE	00EF0094	001B07B5	000D0018	0032002F
(760)	00010000	00370002	00050000	00010001	00010001	00000000	00000000	07F40909	0CE80001	00000001
(800)	00000000	00010001	00010000	00000000	00000001	00020004	00010000	00020004	009D00AC	00AE00EF
(840)	0094001B	07B5000D	001A0010	00300001	00000000	00000000	00000001	00010000	00000000	00000000
(880)	00000000	00000000	00010001	00010001	00010000	00000000	00000000	00000000	00010002	00040000

```
(   920)   00000004  0012009D  00AC00AE  00EF0094  001B07B5  000D001B  002B0031  00010000  00000000  00000000
(   960)   00010001  00000000  00000000  00000000  00010000  00000001  00010001  00010001  00000000  00000000
(  1000)   00000000  00000001  00020004  00000000  000A001E  00000000  0094005D  00920018  07B50000  001D0009
(  1040)   00320001  00000000  00000000  00000001  00010000  00000000  00000000  00000000  00000000  00010001
(  1080)   00010001  00010000  00000000  00000000  00000000  00010002  00040000  00000000  00000000  00000094
(  1120)   005D0092  001B07B5
```

1173

FILE	INPUT RECS.	DATA RECORDS INPUT	MAX. SIZE	READ ERROR SUMMARY PERM	ZERO B	SHORT	UNDEF.	INPUT RETRIES #RECS.	TOTAL#
75	11	12	1128	0	0	0	0	0	0

EOJ DUMP STOPPED AFTER FILE 75 # OF PERMANENT READ ERRORS 0

START TIME 05/27/83 12:25:51 STOP TIME 05/27/83 12:28:54

```
$$
$ASS IN TU0 OUT TU1
$EXE TPDUPC BS
```

DUMP OF TAPE DIN-7

D-43708
1/21/74 - 5/13/74

INPUT TAPE DIN-7 ON MT4
DATA INPUT H9 FL 1 3 3

21 1974

FILE 1 RECORD 1 LENGTH 1128BYTES

(0)	C8C5C1C4	00010015	07B60015	C7C1D4D4	C140E5C5	D3404040	70141200	4720D2F2	41000001	5000C05C
(40)	58007014	13005000	701458E0	68F04100	0000500E	001458AE	00044100	000F500E	00044110	D07058F0
(80)	D0AC05EF	58007008	12004760	D326000A	00380037	003E0005	00000000	00000000	00000001	00020000
(120)	00C000C0	00000000	00000000	00000000	00010001	00010000	00000000	00000000	00000000	00000000
(160)	00000002	00030000	00000000	0000D0AC	05EF5800	70081200	001507B6	000A003A	0015003F	00050000
(200)	00000000	00000000	00010002	00000000	00000000	00000000	00000000	00000001	00010001	00000000
(240)	00C000C0	00000000	00000000	00000000	00020003	00000000	00000000	00000032	0094005D	00910015
(280)	07B6000A	003B0030	00000005	00000000	00000000	00000001	00020000	00000000	00000000	00000000
(320)	00000000	00010001	00010000	00000000	00000000	00000000	00000000	00000002	00030000	00000000
(360)	00000000	00320094	005D0091	001507B6	000B0001	000E0001	00050000	00000000	00000000	00010002
(400)	00000000	00000000	00000000	00000000	00000001	00010001	00000000	00000000	00000000	00000000
(440)	00000000	00020003	00000000	00000000	00000032	0094005D	00910015	07B6000B	00020029	00020005
(480)	00000000	00000000	00000001	00020000	00000000	00000000	00000000	00000000	00010001	00010000
(520)	00000000	00000000	00000000	00000000	00000002	00030000	00000000	00000000	00320094	005D0091
(560)	001507B6	000B0004	00070003	00050000	00000000	00000000	00010002	00000000	00000000	00000000
(600)	00000000	00000001	00010001	00000000	00000000	00000000	00000000	00000000	00020003	00000000
(640)	00000000	00000032	0094005D	00910015	07B6000C	00060007	002E000B	00000000	00000000	00010001
(680)	00020000	00000000	00000000	00000002	00020000	00010001	00010000	00000000	00000000	00000000
(720)	00000000	00000002	00030000	00000000	00000000	00320094	005D0091	001507B6	000C0007	0022002F
(760)	000B0000	00000000	00000000	00010002	00000000	00000000	00000000	00000000	00000001	00010001
(800)	00000000	00000000	00000000	00000000	00000000	00020003	00000000	00000000	00000032	0094005D
(840)	00910015	07B6000C	00090000	0030000B	00000000	00000000	00000001	00020000	00000000	00000000
(880)	00000000	00000000	00010001	00010000	00000000	00000000	00000000	00000000	00000002	00030000
(920)	00000000	00000000	00320094	005D0091	001507B6	000C000A	001B0031	000B0000	00000000	00000000
(960)	00010002	00000000	00000000	00000000	00000000	00000001	00010001	00000000	00000000	00000000
(1000)	00000000	00000000	00020003	00000000	00000000	00000032	0094005D	00910015	07B6000C	0021001F
(1040)	00010005	00000000	00000000	00000001	00020000	00000000	00000000	00000000	00000000	00010001
(1080)	00010000	00000000	00000000	00000000	00000000	00000002	00030000	00000000	00000000	00320094
(1120)	005D0091	001507B6								

FILE 1 RECORD 2 LENGTH 1128BYTES

(0)	000C0022	003A0002	00050000	00000000	00000000	00010002	00000000	00000000	00000000	00000000
(40)	00000001	00010001	00C00000	00000000	00000000	00000000	00000000	00020003	00000000	00000000
(80)	00C00032	0094005D	00910015	07B6000C	00240018	00030005	00000000	00000000	00000001	00020000
(120)	00000000	00000000	00000000	00000000	00010001	00010000	00000000	00000000	00000000	00000000
(160)	00000002	00030000	00C00000	00000000	00320094	005D0091	001507B6	000C0025	00330004	00050000
(200)	00000000	00000000	00010002	00000000	00000000	00C00000	00000000	00000001	00010001	00000000
(240)	00000000	00000000	00000000	00000000	00020003	00000000	00000000	00000032	0094005D	00910015
(280)	07B6000C	00270011	00050005	00000000	00000000	00010001	00020000	00000000	00000000	00000000
(320)	00000000	00010001	00010000	00000000	00000000	00000000	00000000	00000002	00030000	00000000
(360)	00000000	00320094	005C0091	001507B6	000C0028	002C0006	00050000	00000000	00000000	00010002
(400)	00000000	00000000	00000000	00000000	00000001	00010001	00000000	00000000	00000000	00000000
(440)	00000000	00020003	00000000	00000000	00000032	0094005C	00910015	07B6000C	002A000A	00070005
(480)	00000C00	00000000	00000001	00020000	00000000	00000000	00000000	00000001	00010001	00010000
(520)	00000000	00000000	00000000	00000000	00000002	00030000	00000000	00000000	00320094	005C0091
(560)	001507B6	000C002B	00250008	00050000	00000000	00000000	00010002	00000000	00000000	00000000
(600)	00000000	00000001	00010001	00000000	00000000	00000000	00000000	00000000	00020003	00000000
(640)	00000000	00000032	0094005C	00910015	07B6000C	002D0003	00090005	00000000	00000000	00000001
(680)	00020000	00000000	00000000	00000000	00000000	00010001	00010000	00000000	00000000	00000000
(720)	00000000	00000002	00030000	00000000	00000000	00310093	005D0091	001507B6	000C002E	001E000A
(760)	00050000	00000000	00000000	00010002	00000000	00000000	00000000	00000000	00000001	00010001
(800)	00000000	00000000	00000000	00000000	00000000	00020003	00000000	00000000	00000031	0093005D
(840)	00910015	07B6000C	002F0038	000B0005	00000000	00000000	00000001	00020000	00000000	00000000
(880)	00000000	00000000	00010001	00010000	00000000	00000000	00000000	00000000	00000002	00030000
(920)	00000C00	00000000	00310093	005D0091	001507B6	000C0031	0017000C	00050000	00000000	00000000
(960)	00010002	00000000	00000000	00000000	00000000	00000001	00010001	00000000	00000000	00000000
(1000)	00000000	00000000	00020003	00000000	00000000	00000031	0093005D	00910015	07B6000C	00320031
(1040)	000D0005	00000000	00000000	00000001	00020000	00000000	00000000	00000000	00000000	00010001

5/13/74

DUMP OF TAPE DIN-7

INPUT TAPE DIN-7 ON TU1
DATA INPUT H9 NF 57 SR 57 1 3

FILE	INPUT RECS.	DATA RECORDS INPUT	MAX. SIZE	READ ERROR SUMMARY PERM	ZERO B	SHORT	UNDEF.	INPUT RETRIES #RECS.	TOTAL#
1	50	50	1128	0	0	0	0	0	0

FILE 57 RECORD 1 LENGTH 1128BYTES

(0)	00040032	001C0033	00010000	00000000	00000000	00010002	00000000	00000000	00000000	00000000
(40)	00000001	00010001	00000000	00000000	00000000	00000000	00000001	00020003	00000000	00000000
(80)	00000000	00950059	00800085	07B60004	00330036	00340001	00000000	00000000	00000001	00020000
(120)	00000000	00000000	00000000	00000000	00010001	00010000	00000000	00000000	00000000	00000000
(160)	00010002	00030000	00000000	00000000	00000095	00590080	008507B6	00040035	00150035	00010000
(200)	00000000	00000000	00010002	00000000	00000000	00000000	00000000	00000001	00010001	00000000
(240)	00000000	00000000	00000000	00000001	00020003	00000000	00000000	00000000	00950059	00800085
(280)	07B60004	0036002F	00360001	00000000	00000000	00000001	00020000	00000000	00000000	00000000
(320)	00000000	00010001	00010000	00000000	00000000	00000000	00000000	00010002	00030000	00000000
(360)	00000000	00000095	00590080	008507B6	00040038	000E0037	00010000	00000000	00000000	00010002
(400)	00000000	00000000	00000000	00000000	00000001	00010001	00000000	00000000	00000000	00000000
(440)	00000001	00020003	00000000	00000000	00000000	00950059	00800085	07B6C8C5	C1C40005	000D07B6
(480)	0085C8C4	40F7F2F1	F0F84040	40400000	00000000	00000000	00000000	00000000	00010001	00010000
(520)	00000000	00000000	00000000	00000000	00010002	00030000	00000000	00000000	00000095	00590080
(560)	008507E6	00040039	00280038	00010000	00000000	00000000	00010002	00000000	00000000	00000000
(600)	00000000	00000001	00010001	00000000	00000000	00000000	00000000	00000001	00020003	00000000
(640)	00000000	00000000	00950059	00800085	07B60004	003B0007	00390001	00000000	00000000	00000001
(680)	00020000	00000000	00000000	00000000	00000000	00010001	00010000	00000000	00000000	00000000
(720)	00000000	00010002	00030000	00000000	00000000	00000095	00590080	008507B6	00050000	0021003A
(760)	00010000	00000000	00000000	00010002	00000000	00000000	00000000	00000000	00000001	00010001
(800)	00000000	00000000	00000000	00000000	00000001	00020003	00000000	00000000	00000000	00950059
(840)	00800085	07B6FFFF	00300032	E2D30001	00000000	00000000	00000001	00020000	00000002	60400000
(880)	0001000C	00014040	40404040	00020001	40404040	40400002	00000000	00000000	00010002	00030000
(920)	00000013	0013009E	00AD00B0	00EE0083	008507B6	C8C5C1C4	0005000D	07B60085	E2D3C5E6	40404040
(960)	40404040	00000000	00026040	00000001	000C0001	40404040	40400002	00014040	40404040	00020000
(1000)	00000000	00000001	00020003	00000000	00130013	00000000	00950059	00800085	07B60004	00310001
(1040)	00320001	00000000	00000000	00000001	00020000	00000000	00000000	00000000	00000000	00010001
(1080)	00010000	00000000	00000000	00000000	00000000	00010002	00030000	00000000	00000000	00000095
(1120)	00590080	00850 7B6								

1974

FILE	INPUT RECS.	DATA RECORDS INPUT	MAX. SIZE	READ ERROR SUMMARY PERM	ZERO B	SHORT	UNDEF.	INPUT RETRIES #RECS.	TOTAL#
57	1	1	1128	0	0	0	0	0	0

****** EOF WHILE DUMPING RECORDS FOR REQUEST SR=57=1=3X

EOJ DUMP STOPPED AFTER FILE 57 # OF PERMANENT READ ERRORS 0

START TIME 06/13/83 10:10:43 STOP TIME 06/13/83 10:11:52

$$

D-43729
10/14/80 - 12/14/80

DUMP OF TAPE DIN-28

INPUT TAPE DIN-28 ON TU0
DATA INPUT H9 NF 38 SR 1 1 3 SR 38 LAST 3

FILE 1 RECORD 1 LENGTH 1128BYTES

(0)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(40)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(80)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(120)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(160)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(200)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(240)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(280)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(320)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(360)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(400)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(440)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(480)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(520)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(560)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(600)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(640)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(680)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(720)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(760)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(800)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(840)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(880)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(920)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(960)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(1000)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(1040)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(1080)	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040	40404040
(1120)	40404040	40404040								

FILE 1 RECORD 2 LENGTH 1128BYTES

(0)	C8C5C1C4	000A000E	07BC0120	F2F040E3	C1E44040	40404040	77777777	77777777	77777777	77777777
(40)	77777777	77777777	77777777	77777777	77777777	77777777	77777777	77777777	77777777	77777777
(80)	00000000	0094005E	00967777	77770008	00090013	0009000B	00000000	00000000	00000001	00020000
(120)	00000000	00000000	00000000	00000000	00010001	00010000	00000000	00000000	00000000	00000000
(160)	00010002	00040000	00000000	00000000	00000094	005E0096	012007BC	0008000A	002D0009	000B0000
(200)	00000000	00000000	00010002	00000000	00000000	00000000	00000000	00000001	00010001	00000000
(240)	00010001	00010000	00000000	00000001	00020004	00010000	00030014	00000000	0094005E	00960120
(280)	07BC0008	000A002D	0009000B	00140005	00000000	00000001	00020002	00010001	00010000	000000CC
(320)	011C0222	00010001	00010000	00000001	00010001	00000000	00000000	00010002	00040001	00000002
(360)	00030000	00000094	005E0096	012007BC	0008000A	002D0009	000B0020	00090000	00010000	00010002
(400)	00020003	00010001	00000000	013101A6	03540001	00010001	00000000	00010001	00010000	00000000
(440)	00000001	00020004	00010000	00020002	00000000	0094005E	00960120	07BC0008	000A002D	0009000B
(480)	00200006	00000000	00000001	00020002	00020000	00010000	00000144	01BD033C	00010001	00010000
(520)	00000001	00010001	00000000	00000000	00010002	00040001	00000002	00020000	00000094	005E0096
(560)	012007BC	0008000A	002D0009	000B0020	00080002	00000000	00010002	00030001	00010001	00010001
(600)	014D01A7	03450001	00010001	00000000	00010001	00010000	00000000	00000001	00020004	00010000
(640)	00020002	00000000	0094005E	00960120	07BC0008	000A002D	000A000B	000C0003	00000000	00000001
(680)	00020000	00010001	00010000	0000007D	00870120	00010001	00010000	00000001	00010001	00000000
(720)	00000000	00010002	00040001	00000016	000B0000	00000094	005E0096	012007BC	0008000C	000C000A
(760)	000B0000	00000000	00000000	00010002	00000000	00000000	00000000	00000000	00000001	00010001
(800)	00000000	00010001	00010000	00000000	00000001	00020004	00010000	00040001	00000000	0094005E
(840)	00960120	07BC0008	000C000C	000A000B	00040001	00000000	00000001	00020000	00000000	00010000
(880)	00000026	004D0080	00010001	00010000	00000001	00010001	00000000	00000000	00010002	00040001
(920)	00000016	000A0000	00000094	005E0096	012007BC	0008000C	000C000A	000B0020	00030002	00000000
(960)	00010002	00010001	00010000	00000000	015301A8	034E0001	00010001	00000000	00010001	00010000
(1000)	00000000	00000001	00020004	00010000	000A000A	009A00AB	00AC00EB	00950120	07BC0008	000C000C
(1040)	000A000B	00200008	00030002	00000001	00020001	00040001	00000001	00000147	01A00345	00010001

```
(  1080)   40404040  40404040  40404040  40404040  40404040  40404040  40404040  40404040  40404040  40404040
(  1120)   40404040  40404040

FILE      38  RECORD        2  LENGTH     1128BYTES
(     0)   00170021  00060005  00010000  00100000  00010000  00010002  00050004  00030000  00000001  0413065C
(    40)   0DA70001  00010001  00000000  00010001  00010000  00000000  00000001  00020004  00010000  00130012
(    80)   009B00AB  00AD00EC  0088015D  07BC0017  00220020  00060001  0000000D  00030006  00000001  00020003
(   120)   00070002  00000001  000003D8  06910D90  00010001  00010000  00000001  00010001  00000000  00000000
(   160)   00010002  00040001  000CC013  0012009B  00AC00AD  00EB0088  015D07BC  00170023  003B0007  00010000
(   200)   00130000  00030000  00010002  00070006  00020002  00000001  03E0069D  0DB60001  00010001  00000000
(   240)   00010001  00010000  00000000  00000001  00020004  00010000  00140013  009B00AC  00AD00E3  0088015D
(   280)   07BC0017  00250019  00080001  00000011  00010004  00000001  00020005  00030001  000203E4  00000014
(   320)   06AA0DA6  00010001  00010000  00000001  00010001  00000000  00000000  00010002  00040001  00010002
(   360)   0013009B  00AC00AD  00EB0088  015D07BC  00170026  00340009  00010000  00180007  00010000  00000000
(   400)   00050004  00060004  00030000  044D06E0  0D9C0001  00010001  00000000  00010001  00010000  00000000
(   440)   00000001  00020004  00010000  00140012  009B00AB  00AE00EB  0089015D  07BC0017  00280012  000A0001
(   480)   00000015  00020004  00000001  00020006  00060004  00010001  00010493  06E50DB0  00010001  00010000
(   520)   00000001  00010001  00000000  00000000  00010002  00040001  00000014  000F0093  00AB00AE  00EB0089
(   560)   015D07BC  00170029  002D000B  00010000  001F0001  00030000  00010002  000A0009  00070001  00010001
(   600)   04CD06F8  0DCB0001  00010001  00000000  00010001  00010000  00000000  00000001  00020004  00010000
(   640)   00130007  009B00AB  00AE00EB  0089015D  07BC0017  002B000B  000C0001  00000010  00040001  00000001
(   680)   00020004  00040004  00000001  00000557  07950DEC  00010001  00010000  00000001  00010001  00000000
(   720)   00000000  00010002  00040001  00000013  0003009B  00AB00AD  00EA0089  015D07BC  0017002C  0026000D
(   760)   00010000  002E0003  00010000  00010002  000F000A  00070006  00050001  05D807ED  0E250001  00010001
(   800)   00000000  00010001  00010000  00000000  00000001  00020004  00010000  00100002  009B00AB  00AD00EA
(   840)   0089015D  07BC0017  002E0004  000E0001  00000024  00010004  00000001  0002000E  00090003  00040002
(   880)   0001070B  08650E46  00010001  00010000  00000001  00010001  00000000  00000000  00010002  00040001
(   920)   0000000E  0003009B  00AB00AD  00EA0089  015D07BC  0017002F  001F000F  00070000  00240001  00040000
(   960)   00010002  000A0009  00050001  00030001  078008DE  0E730001  00010001  00000000  00010001  00010000
(  1000)   00000000  00000001  00020004  00010000  000D0003  009B00AB  00AD00EA  0089015D  07BC0017  00300039
(  1040)   00100005  00000000  00000000  00000001  00020000  00000000  00000000  00000000  00000000  00010001
(  1080)   00010000  00000000  00000000  00000000  00000000  00010002  00040000  0000000C  00020000  00000094
(  1120)   005C0086  015D07BC
```

12/14/80

```
FILE      38  RECORD        3  LENGTH     1128BYTES
(     0)   00170032  00180011  00050000  00000000  00000000  00010002  00000000  00000000  00000000  00000000
(    40)   00000001  00010001  00000000  00000000  00000000  00000000  00000001  00020004  00000000  00000000
(    80)   00000000  0094005C  0086015D  07BC0017  00330032  00120005  00000000  00000000  00000001  00020000
(   120)   00000000  00000000  00000000  00000000  00010001  00010000  00000000  00000000  00000000  00000000
(   160)   00010002  00040000  00000000  00000000  00000094  005C0086  015D07BC  00170035  00110013  00050000
(   200)   00000000  00000000  00010002  00000000  00000000  00000000  00000000  00000001  00010001  00000000
(   240)   00000000  00000000  00000000  00000001  00020004  00000000  00000000  00000000  0094005C  0086015D
(   280)   07BC0017  0036002B  00140005  00000000  00000000  00000001  00020000  00000000  00000000  00000000
(   320)   00000000  00010001  00010000  00000000  00000000  00000000  00000000  00010002  00040000  00000000
(   360)   00000000  00000094  005C0086  015D07BC  FFFF7777  77777777  77777777  77777777  77777777  77777777
(   400)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(   440)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  7777FFFF  77777777  77777777
(   480)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(   520)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(   560)   77777777  FFFF7777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(   600)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(   640)   77777777  77777777  77777777  77777777  7777FFFF  77777777  77777777  77777777  77777777  77777777
(   680)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(   720)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  FFFF7777  77777777
(   760)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(   800)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(   840)   77777777  7777FFFF  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(   880)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(   920)   77777777  77777777  77777777  77777777  77777777  FFFF7777  77777777  77777777  77777777  77777777
(   960)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(  1000)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  7777FFFF  77777777
(  1040)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(  1080)   77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777  77777777
(  1120)   77777777  77777777

      FILE    INPUT    DATA RECORDS    MAX.          READ ERROR SUMMARY          INPUT RETRIES
```