

#334

APOLLO 17

LACE MASS PEAK SUMMARY DATA

72-096C-08A

APOLLO 17 LM/ALSEP

MASS PEAK SUMMARY DATA ON TAPE

72-096C-08A

PSPA-00202

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

| DR#      | DS#      | D#      | FILES | TIME SPAN           |
|----------|----------|---------|-------|---------------------|
| -----    | -----    | -----   | ----- | -----               |
| DR005638 | DS005638 | D023425 | 1     | 05/22/73 - 09/01/73 |
|          |          | D023426 | 2     | 05/22/73 - 09/02/73 |

REQ. AGENT  
CMP

RAND NO.  
RC5527

ACQ. AGENT  
RNH

APOLLO 17

LACE MASS PEAK SUMMARY DATA

72-096C-08A

This data set contains 2 tapes. The tapes are 1600 BPI, binary, 9 track with one file of data. The time spans and 'C' numbers for each tape are listed below.

| <u>D#</u> | <u>C#</u> | <u>TIME SPAN</u>    |
|-----------|-----------|---------------------|
| D-23425   | C-17551   | 05/24/73 - 09/03/73 |
| D-23426   | C-17552   | 05/24/73 - 09/03/73 |

72-096C-08H

## LUNAR ATMOSPHERIC COMPOSITION EXPERIMENT

## DESCRIPTION OF EXPERIMENT AND INSTRUMENT CHARACTERISTICS

Apollo 17 carried a miniature mass spectrometer, called the Lunar Atmospheric Composition Experiment (LACE), to the moon as part of the Apollo Lunar Surface Experiments Package (ALSEP) to study the composition and variations in the lunar atmosphere. The instrument was successfully deployed in the Taurus-Littrow Valley with its entrance aperture oriented upward to intercept and measure the downward flux of gases at the lunar surface.

Identification of gas molecules in the lunar atmosphere by species and determination of concentrations is accomplished by a miniature magnetic-deflection mass spectrometer. Gas molecules entering the instrument aperture are ionized by an electron bombardment ion source, collimated into a beam and sent through a magnetic analyzer to the detector system.

The ion source contains two tungsten (with 1% rhenium) filaments, selectable by command, as electron emitters. In the normal mode of operation, called the fixed mode, the electron bombardment energy is fixed at 70 electron volts. This produces a sensitivity to nitrogen of  $5 \times 10^{-5}$  amp/torr, sufficient to measure concentrations of gas species in the  $10^{-15}$  torr range. An alternate mode, the cyclic mode, provides four different electron energies, 70, 27, 20, and 18 eV, which are cycled by successive sweeps of the mass spectrum. Identification of gases in a complex mass spectrum is greatly aided when the spectra are taken at several different electron ionization energies because cracking patterns of complex molecules are a strong function of the bombardment electron energy.

Voltage scan of the mass spectrum is employed utilizing a high voltage stepping power supply. The ion-accelerating voltage (sweep voltage) is varied in a stepwise manner through 1330 steps from 320 to 1420 volts with a dwell time of 0.6 sec per step. Each step is synchronized to a main frame of the telemetry format. Therefore, the telemetry word position serves as the identifier of atomic mass number. Ten steps of background counts (zero sweep voltage) and ten steps of an internal calibration frequency, are inserted between sweeps, making a total of 1350 steps per spectrum. Sweep time is 13.5 minutes. Because the instrument has three collector assemblies adjusted to collect ion beams, having passed through the magnetic analyzer, in the ratio 1:12:27.4, three mass ranges are scanned simultaneously, viz. 1 to 4, 12 to 48 and 27.4 to 110 amu.

In an alternate mode, the sweep voltage may be commanded to lock onto any of the 1350 steps enabling the instrument to continuously monitor any given mass number peak in the spectrum with a time resolution of 0.6 sec per sample. A one step advance command is also available. The lock mode permits high time resolution monitoring of mass peaks that may be suspected to be of volcanic origin.

Resolution of the analyzer is set at about 100 for the high mass channel at mass 82. This is defined as less than a 1% valley between peaks of equal amplitude at mass 82 and 83. Krypton is used to verify the resolution.

Standard ion counting techniques employing electron multipliers, pulse amplifiers, discriminators and counters are used, one system for each mass range. The number of counts accumulated per voltage step (0.6 sec) for each channel is stored in 21-bit accumulators until sampled by the telemetry system. Just prior to interrogation, the 21-bit word is converted to a

floating point number in base 2, reducing the data to a 10-bit word, consisting of a 6-bit number and a 4-bit multiplier. This scheme maintains 7-bit accuracy (1%) throughout the 21-bit ( $2 \times 10^6$ ) range of data counts.

Housekeeping circuits monitor 15 functions within the instrument (supply voltages, filament current, emission current, sweep voltage and several temperatures). One temperature sensor monitors the ion source temperature whose value is used in data reduction. Housekeeping words are sub-commutated, one each 90 main-frames requiring a full spectral scan time to read each monitor once.

Calibration of the instrument was performed at the NASA Langley Research Center (LRC) molecular beam facility. A molecular beam apparatus produces a beam of known flux in a liquid helium cryochamber. The instrument entrance aperture intercepts the beam at one end of the chamber. With known beam flux and ion source temperature, instrument calibration coefficients are determined. Variation of gas pressure in the molecular beam source chamber behind a porous silicate glass plug varies the beam flux and provides a test of the linearity of the instrument response. Good linearity was achieved up to  $5 \times 10^5$  counts/sec where the onset of counter saturation occurs.

Calibrations were done with a number of gases that may be candidates for ambient lunar gases, e.g. Ar, CO<sub>2</sub>, CO, Kr, Ne, N<sub>2</sub>, and H<sub>2</sub>. Helium calibrations are not possible with this system because no helium beam can be formed in the chamber since helium is not cryopumped at the wall temperature. Sensitivity to helium was determined in the UT-Dallas ultrahigh vacuum chamber by using the LRC absolute argon calibration of the instrument as a standard for calibrating an ionization pressure gage. The gage calibration for helium was subsequently inferred from the ratio of ionization cross sections for He and Ar. The resulting helium sensitivity is the ratio of the calibrated gage pressure to the helium counting rate.

## LUNAR ATMOSPHERIC COMPOSITION EXPERIMENT

### DATA HISTORY - OPERATIONAL HISTORY

The LACE instrument initial turn-on occurred on December 27, 1972 at 1807 GMT and continued throughout the first lunar night. Operation has been continuous during each lunar nighttime, from shortly after sunset to approximately sunrise. During the April and September 1973 sunrise periods operation continued 4 or 5 hours into the daytime to track the behavior of argon. Daytime operation has been severely curtailed because of the high outgassing rates encountered as the site warms which produces a large artifact background that covers most of the ambient gas levels except helium. This relatively high background gas concentration would likely degrade the instrument ion source sensitivity if operated for long periods (hours) in this environment. Likewise, extended daytime operation is not possible because of a tendency for the electronics package to exceed the maximum allowable operating temperature. Three brief daytime operation periods, one in January, one in February and one in May, have given information on the daytime gas concentrations at the site. Table 1 gives a listing of the times the instrument has been operated during its first nine months on the lunar surface.

In general, the instrument has operated well. All housekeeping data has remained within bounds. A fortuitous occurrence, the slow evaporation of the tungsten filament which produces doubly charged tungsten peaks in the mass 91-93 range of the spectrum, has provided a constant check on the instrument sensitivity, which has remained very stable with time.

A variable background counting rate that appears at times on all three data channels has interfered with a smooth data reduction operation. The origin of these counts, which seems to vary with time in a not too predictable manner, is uncertain. It appears not to be a simple electronic noise coupling into the data counting system, but rather somehow related to the characteristics of the ion source. At times these background counts mask some of the smaller peaks at the low mass end of each channel. The high mass channel is relatively free from this interference, it being the most prevalent on the low mass output.

Data from the Apollo 17 Lunar Atmospheric Composition Experiment (LACE) was collected from January 1, 1973, thru nine lunations. The data from these lunations was reduced and summarized on to two magnetic tapes and 9 reels of microfilm, one reel per lunation.

The magnetic tapes were written in IBM 360 standard label format. The record format is variable block size. A logical record is 324 bytes and the blocksize is 3224 bytes. i.e. DCB = (RECFM = VBS, LRECL = 324, BLKSIZE = 3224) Tape No. 1 contains the summarized data from lunation 1 thru lunation 5. Tape No. 2 contains lunation 6 thru 9.

Each record gives a summary of the data obtained from one mass spectrum, formatted in 80 binary words of 4 bytes each.

The word assignments for the 80 word record is listed in the attached Table 1 along with a description of each word.

The microfilm is a printed record of the data on the summary tapes. A typical printout of the microfilm is also attached. The numbers inside the bubbles indicate the word assignment at the 80 word record on the magnetic tapes.

| WORD | FORMAT | DATA                          | EXPLANATION                                                                                                                                                                                                    |
|------|--------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | I      | Day                           | Time of Start of Spectrum<br>(Day = 0 corresponds to<br>Jan 1, 1973)                                                                                                                                           |
| 2    | I      | Hour                          |                                                                                                                                                                                                                |
| 3    | I      | Minute                        |                                                                                                                                                                                                                |
| 4    | I      | Sec                           |                                                                                                                                                                                                                |
| 5    | I      | mSec                          |                                                                                                                                                                                                                |
| 6    | R*4    | Normal elevation              | Solar ephemeris data for the<br>Apollo 17 site                                                                                                                                                                 |
| 7    | R*4    | Solar Azimuth                 |                                                                                                                                                                                                                |
| 8    | R*4    | Solar Zenith                  |                                                                                                                                                                                                                |
| 9    | R*4    | Temperature coef.             | $\sqrt{T(\text{ion source})/T(\text{moon})}$                                                                                                                                                                   |
| 10   | I      | Spectrum quality flag         | cf. note a.                                                                                                                                                                                                    |
| 11   | I      | Spectrum sync flag            | cf. note b.                                                                                                                                                                                                    |
| 12   | I      | Housekeeping sync flag (AM01) | Housekeeping data in ALSEP<br>pcm format (0 - 255 counts)                                                                                                                                                      |
| 13   | I      | Instrument current (AM02)     |                                                                                                                                                                                                                |
| 14   | I      | Ion pump current (AM03)       |                                                                                                                                                                                                                |
| 15   | I      | Ion pump voltage (AM04)       |                                                                                                                                                                                                                |
| 16   | I      | Base plate temp (AM05)        |                                                                                                                                                                                                                |
| 17   | I      | Ion source temp. (AM06)       |                                                                                                                                                                                                                |
| 18   | I      | +12 VDC (AM07)                |                                                                                                                                                                                                                |
| 19   | I      | +5VDC (AM08)                  |                                                                                                                                                                                                                |
| 20   | I      | -12VDC (AM09)                 |                                                                                                                                                                                                                |
| 21   | I      | -15VDC (AM10)                 |                                                                                                                                                                                                                |
| 22   | I      | Emission current (AM11)       |                                                                                                                                                                                                                |
| 23   | I      | Fil. 1 current (AM12)         |                                                                                                                                                                                                                |
| 24   | I      | Fil. 2 current (AM13)         |                                                                                                                                                                                                                |
| 25   | I      | Multiplier voltage (AM14)     |                                                                                                                                                                                                                |
| 26   | I      | Electronics temp. (AM15)      |                                                                                                                                                                                                                |
| 27   | -      | --                            |                                                                                                                                                                                                                |
| 28   | I      | V1                            | Ion accelerator voltage<br>data (0-255 pcm counts)<br>from ALSEP telemetry word AM44.<br>There is one measurement per<br>each 90 frame telemetry format,<br>resulting in 15 measurements<br>per mass spectrum. |
| 29   | I      | V2                            |                                                                                                                                                                                                                |
| 30   | I      | V3                            |                                                                                                                                                                                                                |
| 31   | I      | V4                            |                                                                                                                                                                                                                |
| 32   | I      | V5                            |                                                                                                                                                                                                                |
| 33   | I      | V6                            |                                                                                                                                                                                                                |
| 34   | I      | V7                            |                                                                                                                                                                                                                |

| WORD | FORMAT  | DATA                          | EXPLANATION                                                                                                                                                                                                                    |
|------|---------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 35   | I       | V8                            |                                                                                                                                                                                                                                |
| 36   | I       | V9                            |                                                                                                                                                                                                                                |
| 37   | I       | V10                           |                                                                                                                                                                                                                                |
| 38   | I       | V11                           |                                                                                                                                                                                                                                |
| 39   | I       | V12                           |                                                                                                                                                                                                                                |
| 40   | I       | V13                           |                                                                                                                                                                                                                                |
| 41   | I       | V14                           |                                                                                                                                                                                                                                |
| 42   | I       | V15                           | (V16 = V1 of next spectrum)                                                                                                                                                                                                    |
| 43   | I       | V16                           |                                                                                                                                                                                                                                |
| 44   | R*4     | 4 AMU                         | Selected peak amplitudes determined by cross correlation of data with empirical peak shapes. Words 49 and 52 correspond to anomalous chlorine peaks which are shifted about -4 volts in energy from the normal chlorine peaks. |
| 45   | R*4     | Background at 28 AMU          |                                                                                                                                                                                                                                |
| 46   | R*4     | 28 AMU                        |                                                                                                                                                                                                                                |
| 47   | R*4     | 32 AMU                        |                                                                                                                                                                                                                                |
| 48   | R*4     | 35 AMU                        |                                                                                                                                                                                                                                |
| 49   | R*4     | 35s AMU                       |                                                                                                                                                                                                                                |
| 50   | R*4     | 36 AMU                        |                                                                                                                                                                                                                                |
| 51   | R*4     | 37 AMU                        |                                                                                                                                                                                                                                |
| 52   | R*4     | 37s AMU                       |                                                                                                                                                                                                                                |
| 53   | R*4     | 38 AMU                        |                                                                                                                                                                                                                                |
| 54   | R*4     | 40 AMU                        |                                                                                                                                                                                                                                |
| 55   | R*4     | 44 AMU                        |                                                                                                                                                                                                                                |
| 56   | --      | --                            |                                                                                                                                                                                                                                |
| 47   | --      | --                            |                                                                                                                                                                                                                                |
| 48   | R*4     | 92 AMU                        |                                                                                                                                                                                                                                |
| 59   | --      | --                            |                                                                                                                                                                                                                                |
| 60   | R*4     | Helium                        | Gas concentrations (Words 61 and 62 have not been corrected for HCL contamination)                                                                                                                                             |
| 61   | R*4     | <sup>36</sup> Ar (equivalent) |                                                                                                                                                                                                                                |
| 62   | R*4     | <sup>38</sup> Ar (equivalent) |                                                                                                                                                                                                                                |
| 63   | R*4     | <sup>40</sup> Ar              |                                                                                                                                                                                                                                |
| 64   | --      | --                            |                                                                                                                                                                                                                                |
| 65   | --      | --                            |                                                                                                                                                                                                                                |
| 66   | R*4     | Lunar surface temp (°k)       | Theroetical model                                                                                                                                                                                                              |
| 67   | R*4     | Ion source temp (°C)          | Engineering data                                                                                                                                                                                                               |
| 68   | R*4     | Base plate temp (°C)          |                                                                                                                                                                                                                                |
| 69   | R*4 Ele | Electronics temp (°C)         |                                                                                                                                                                                                                                |
| 70   | R*4     | Radiator plate temp (°C)      |                                                                                                                                                                                                                                |

TABLE 1 (C .)

| ORD | FORMAT | DATA                            | EXPLANATION                             |
|-----|--------|---------------------------------|-----------------------------------------|
| 71  | R*4    | $A_0$                           | Peak location = $A_0 + A_1/\text{mass}$ |
| 72  | R*4    | $A_1$                           |                                         |
| 73  | I      | STATUS (start of spectrum)      | cf. note c.                             |
| 74  | I      | STATUS (end of spectrum)        |                                         |
| 75  | I      | No. of commands during spectrum |                                         |
| 76  | I      | Tracking station ID             |                                         |
| 77  | I      | SYNC/STATUS FLAG                | cf. note d.                             |
| 78  | I      | Lunation number                 |                                         |
| 79  | R4     | Location of 28 AMU peak         |                                         |
| 80  | --     | --                              |                                         |

## NOTES

- a. Spectrum quality flag (word 10) gives the result of an attempt to locate the 28 AMU and 44 AMU peaks in the mid-mass channel spectrum.

0 = bad data

28 = only the 28 AMU peak was found

44 = only the 44 AMU peak was found

2844 = normal spectrum with both 28 AMU and 44 AMU peaks found

- b. Spectrum sync flag (word 11) gives the condition of the spectrum synchronization code at the start and end of the spectrum.

0 = normal

1 = sync at start only

2 = sync at end only

7 = no sync codes

- c. Status (words 73 and 74) is a combination of 8 binary encoded flags, each weighted by an appropriate power of 10, so that it prints as a binary format in base 10.

DIGIT (power of 10)

USE

|   |                                         |
|---|-----------------------------------------|
| 0 | Filament (0 = off, 1 = on)              |
| 1 | Accelerator voltage (0 = off, 1 = on)   |
| 2 | Backup heater (0 = off, 1 = on)         |
| 3 | Ion pump (0 = off, 1 = on)              |
| 4 | Lock/auto flag (0 = lock, 1 = auto)     |
| 5 | Discriminator level (0 = low, 1 = high) |

TABLE 1 (CONT.)

| DIGIT (power of 10) | USE                                    |
|---------------------|----------------------------------------|
| 6                   | Multiplier voltage (0 = low, 1 = high) |
| 7                   | Filament ID (1 = fil 1, 2 = fil 2)     |

Normal operating status = 11110011

d. Sync/status flag (word 77) gives the severity of nonstandard operating condition.

1 = normal

2 = spectrum quality flag (word 10)  $\neq$  2844

3 = status at start (word 73)  $\neq$  11110011, or spectrum sync flag (word 11)  $> 2$ ,  
or filament off at end of spectrum.

4 = status at start (word 73) = 21110011

5 = status at start (word 73) = 11010011

|      |    | 2  |    | 6      | 44   | 45   | 46    | 47    | PEAK AMPLITUDES |       | 49    | 50   | 51   | 52   | 53  | 54    | 7  | 55   |
|------|----|----|----|--------|------|------|-------|-------|-----------------|-------|-------|------|------|------|-----|-------|----|------|
|      |    | 3  |    | NATLEV |      | 28WK |       | 28    | 32              |       | 35    | 35S  | 36   | 37   | 37S | 38    | 40 | 2-15 |
| DATE |    |    |    |        |      |      |       |       |                 |       |       |      |      |      |     |       |    |      |
| 73   | 30 | 14 | 26 | 259.37 | 26.5 | 4.2  | 287.3 | 130.0 | 44.2            | 246.2 | 126.2 | 15.8 | 81.6 | 34.5 | 6.6 | 144.1 |    |      |
| 73   | 30 | 14 | 39 | 259.49 | 27.3 | 3.1  | 290.1 | 151.4 | 51.9            | 245.9 | 124.0 | 18.5 | 79.6 | 40.5 | 5.4 | 138.3 |    |      |
| 73   | 30 | 14 | 53 | 259.60 | 26.2 | 2.1  | 293.6 | 138.0 | 49.4            | 241.3 | 128.8 | 17.3 | 74.9 | 35.9 | 5.1 | 150.4 |    |      |
| 73   | 30 | 15 | 6  | 259.72 | 26.3 | 2.9  | 297.2 | 140.2 | 51.5            | 255.7 | 121.3 | 20.0 | 80.0 | 35.3 | 4.9 | 143.4 |    |      |
| 73   | 30 | 15 | 20 | 259.83 | 26.8 | 4.2  | 303.5 | 141.2 | 54.0            | 246.6 | 120.2 | 16.5 | 84.1 | 45.2 | 5.5 | 143.3 |    |      |
| 73   | 30 | 15 | 33 | 259.95 | 26.4 | 2.4  | 279.5 | 131.2 | 47.7            | 246.0 | 123.3 | 17.7 | 80.4 | 36.2 | 7.9 | 144.2 |    |      |
| 73   | 30 | 15 | 47 | 260.06 | 27.1 | 4.9  | 281.8 | 140.9 | 44.9            | 250.3 | 123.2 | 17.0 | 77.5 | 40.9 | 6.1 | 150.4 |    |      |
| 73   | 30 | 16 | 1  | 260.18 | 27.2 | 6.8  | 289.2 | 132.9 | 49.5            | 248.7 | 124.9 | 16.1 | 77.0 | 30.8 | 5.3 | 150.0 |    |      |
| 73   | 30 | 16 | 14 | 260.29 | 26.7 | 4.4  | 283.4 | 143.4 | 50.4            | 246.7 | 121.1 | 18.3 | 80.3 | 36.9 | 4.4 | 137.8 |    |      |
| 73   | 30 | 16 | 28 | 260.41 | 27.3 | 3.3  | 281.7 | 131.7 | 43.2            | 254.1 | 122.7 | 18.2 | 76.6 | 36.2 | 4.9 | 140.8 |    |      |
| 73   | 30 | 16 | 41 | 260.53 | 25.8 | 5.1  | 279.8 | 142.8 | 58.0            | 198.8 | 92.4  | 18.9 | 78.9 | 37.1 | 4.2 | 140.9 |    |      |
| 73   | 30 | 16 | 55 | 260.64 | 27.2 | 4.1  | 290.4 | 134.3 | 54.3            | 244.5 | 123.0 | 20.1 | 74.9 | 35.3 | 7.1 | 151.3 |    |      |
| 73   | 30 | 17 | 9  | 260.76 | 26.2 | 5.6  | 277.1 | 136.1 | 49.5            | 247.2 | 111.2 | 19.4 | 72.8 | 37.1 | 5.6 | 137.6 |    |      |
| 73   | 30 | 17 | 22 | 260.87 | 25.3 | 2.9  | 279.5 | 146.6 | 43.0            | 246.3 | 124.4 | 15.9 | 77.4 | 45.1 | 4.5 | 143.4 |    |      |
| 73   | 30 | 17 | 36 | 260.99 | 26.0 | 1.5  | 277.3 | 138.5 | 49.5            | 245.6 | 124.1 | 16.9 | 79.4 | 37.3 | 6.9 | 138.7 |    |      |
| 73   | 30 | 17 | 49 | 261.10 | 28.1 | 2.6  | 294.5 | 137.9 | 55.5            | 251.0 | 115.8 | 17.1 | 77.7 | 35.0 | 3.6 | 144.4 |    |      |
| 73   | 30 | 18 | 3  | 261.22 | 26.7 | 3.5  | 291.0 | 133.2 | 47.1            | 247.0 | 121.2 | 16.9 | 77.2 | 37.8 | 6.1 | 146.4 |    |      |
| 73   | 30 | 18 | 16 | 261.33 | 27.2 | 3.4  | 279.8 | 140.9 | 45.1            | 243.2 | 125.1 | 16.8 | 75.9 | 34.5 | 4.8 | 147.2 |    |      |
| 73   | 30 | 18 | 30 | 261.45 | 26.9 | 0.9  | 291.3 | 143.0 | 47.1            | 247.0 | 119.0 | 19.6 | 76.9 | 33.6 | 5.9 | 145.1 |    |      |
| 73   | 30 | 18 | 44 | 261.56 | 26.8 | 3.1  | 280.5 | 140.5 | 43.1            | 243.6 | 116.6 | 18.5 | 83.7 | 40.6 | 8.5 | 137.4 |    |      |
| 73   | 30 | 18 | 57 | 261.68 | 26.7 | 3.9  | 285.6 | 143.1 | 49.6            | 247.2 | 113.2 | 21.2 | 85.9 | 34.3 | 5.3 | 140.6 |    |      |
| 73   | 30 | 19 | 11 | 261.80 | 25.5 | 3.8  | 288.2 | 144.7 | 42.8            | 253.0 | 116.8 | 17.3 | 80.6 | 32.0 | 5.1 | 143.8 |    |      |
| 73   | 30 | 19 | 24 | 261.91 | 25.9 | 3.7  | 288.9 | 140.8 | 53.0            | 234.1 | 108.3 | 15.3 | 81.1 | 31.3 | 5.5 | 138.2 |    |      |
| 73   | 30 | 19 | 38 | 262.03 | 27.1 | 3.1  | 297.2 | 136.0 | 45.5            | 246.6 | 119.5 | 18.4 | 77.1 | 39.2 | 5.1 | 137.1 |    |      |
| 73   | 30 | 19 | 52 | 262.14 | 26.1 | 0.9  | 287.6 | 143.2 | 46.7            | 239.9 | 112.6 | 15.8 | 73.8 | 38.7 | 5.2 | 138.5 |    |      |
| 73   | 30 | 20 | 5  | 262.26 | 25.6 | 2.7  | 282.3 | 137.6 | 50.0            | 237.3 | 116.6 | 17.7 | 82.4 | 39.4 | 6.2 | 142.3 |    |      |
| 73   | 30 | 20 | 19 | 262.37 | 27.2 | 0.1  | 275.9 | 135.0 | 43.2            | 184.5 | 94.1  | 23.5 | 62.4 | 28.9 | 6.0 | 140.2 |    |      |
| 73   | 30 | 20 | 32 | 262.49 | 26.1 | 2.2  | 287.8 | 143.0 | 42.1            | 241.1 | 117.8 | 15.9 | 78.9 | 33.5 | 3.2 | 136.4 |    |      |
| 73   | 30 | 20 | 46 | 262.60 | 26.4 | 3.7  | 286.6 | 140.8 | 49.8            | 236.2 | 107.9 | 15.4 | 70.8 | 33.8 | 4.9 | 141.5 |    |      |
| 73   | 30 | 20 | 59 | 262.72 | 27.5 | 4.1  | 272.5 | 137.3 | 48.4            | 247.9 | 113.8 | 19.6 | 74.3 | 33.6 | 5.2 | 145.6 |    |      |
| 73   | 30 | 21 | 13 | 262.83 | 26.9 | 3.6  | 283.8 | 137.5 | 46.7            | 239.3 | 118.3 | 21.3 | 76.5 | 35.1 | 4.2 | 144.4 |    |      |
| 73   | 30 | 21 | 27 | 262.95 | 26.7 | 2.6  | 285.3 | 141.8 | 45.5            | 242.8 | 120.3 | 17.0 | 72.7 | 34.4 | 5.7 | 140.3 |    |      |
| 73   | 30 | 21 | 40 | 263.07 | 25.6 | 4.2  | 282.3 | 143.2 | 47.6            | 247.9 | 115.0 | 15.8 | 78.8 | 35.9 | 5.6 | 147.8 |    |      |
| 73   | 30 | 21 | 54 | 263.18 | 26.6 | 0.3  | 286.6 | 140.2 | 47.3            | 236.2 | 120.2 | 15.2 | 81.7 | 38.9 | 5.0 | 150.5 |    |      |
| 73   | 30 | 22 | 7  | 263.30 | 25.9 | 3.8  | 278.3 | 142.2 | 49.9            | 251.7 | 115.4 | 16.9 | 77.4 | 39.9 | 4.5 | 140.0 |    |      |
| 73   | 30 | 22 | 21 | 263.41 | 26.9 | 3.4  | 278.0 | 137.8 | 44.8            | 250.3 | 121.2 | 14.8 | 72.8 | 34.5 | 5.1 | 143.3 |    |      |
| 73   | 30 | 22 | 35 | 263.53 | 26.6 | 3.1  | 291.7 | 140.2 | 44.9            | 245.6 | 114.4 | 19.8 | 78.5 | 34.7 | 4.9 | 140.1 |    |      |
| 73   | 30 | 22 | 48 | 263.64 | 26.5 | 3.5  | 294.0 | 144.5 | 44.2            | 249.1 | 115.1 | 17.0 | 77.3 | 32.4 | 4.7 | 138.4 |    |      |
| 73   | 30 | 23 | 2  | 263.76 | 26.8 | 2.4  | 277.7 | 145.3 | 46.3            | 244.9 | 114.2 | 16.9 | 82.5 | 35.6 | 5.7 | 129.7 |    |      |
| 73   | 30 | 23 | 15 | 263.87 | 27.2 | 3.1  | 286.5 | 139.3 | 51.0            | 240.3 | 119.2 | 16.7 | 80.0 | 30.6 | 4.1 | 133.9 |    |      |
| 73   | 30 | 23 | 29 | 263.99 | 27.1 | 4.6  | 273.9 | 141.3 | 43.3            | 232.7 | 108.3 | 19.3 | 76.9 | 36.7 | 4.5 | 134.7 |    |      |
| 73   | 30 | 23 | 42 | 264.11 | 27.1 | 0.6  | 293.1 | 133.4 | 46.7            | 233.5 | 114.8 | 19.4 | 85.3 | 39.2 | 2.6 | 137.9 |    |      |
| 73   | 30 | 23 | 56 | 264.22 | 26.4 | 2.5  | 287.1 | 134.3 | 56.0            | 233.8 | 114.5 | 16.3 | 78.0 | 34.8 | 4.2 | 135.8 |    |      |
| 73   | 31 | 0  | 10 | 264.34 | 26.4 | 1.1  | 283.9 | 141.5 | 45.4            | 245.3 | 117.8 | 17.0 | 82.7 | 41.1 | 4.4 | 137.9 |    |      |
| 73   | 31 | 0  | 23 | 264.45 | 26.3 | 3.2  | 279.7 | 143.7 | 46.7            | 232.3 | 105.7 | 16.5 | 75.6 | 33.5 | 5.0 | 139.5 |    |      |
| 73   | 31 | 0  | 37 | 264.57 | 26.2 | 1.9  | 286.6 | 135.9 | 49.3            | 243.1 | 114.5 | 19.7 | 72.2 | 35.4 | 5.6 | 146.4 |    |      |
| 73   | 31 | 0  | 50 | 264.68 | 27.2 | 2.9  | 288.0 | 142.1 | 45.6            | 248.2 | 115.3 | 20.2 | 67.5 | 26.3 | 4.9 | 135.3 |    |      |
| 73   | 31 | 1  | 4  | 264.80 | 25.9 | 4.6  | 281.5 | 138.8 | 49.7            | 247.5 | 109.2 | 13.3 | 82.2 | 33.9 | 5.7 | 143.0 |    |      |
| 73   | 31 | 1  | 18 | 264.91 | 26.4 | 4.4  | 289.8 | 133.2 | 49.8            | 242.0 | 113.6 | 16.6 | 82.1 | 36.5 | 4.7 | 139.7 |    |      |
| 73   | 31 | 1  | 31 | 265.03 | 25.1 | 3.4  | 282.9 | 139.3 | 44.8            | 245.5 | 110.1 | 17.1 | 75.3 | 36.6 | 5.0 | 138.5 |    |      |
| 73   | 31 | 1  | 45 | 265.14 | 26.6 | 3.7  | 276.8 | 144.8 | 42.5            | 233.9 | 117.6 | 15.3 | 72.9 | 35.8 | 4.6 | 145.1 |    |      |
| 73   | 31 | 1  | 58 | 265.26 | 26.6 | 3.1  | 289.5 | 133.3 | 46.6            | 234.5 | 118.5 | 14.7 | 77.9 | 35.1 | 4.3 | 138.8 |    |      |
| 73   | 31 | 2  | 12 | 265.37 | 25.9 | 3.5  | 282.0 | 135.4 | 45.6            | 245.8 | 117.0 | 28.5 | 55.2 | 23.5 | 6.7 | 136.5 |    |      |
| 73   | 31 | 2  | 25 | 265.49 | 25.8 | 2.6  | 291.7 | 143.6 | 44.1            | 249.2 | 112.2 | 17.3 | 70.8 | 32.8 | 6.0 | 136.9 |    |      |
| 73   | 31 | 2  | 39 | 265.60 | 25.3 | 1.8  | 279.2 | 141.8 | 46.6            | 251.0 | 113.2 | 15.8 | 77.7 | 33.6 | 3.3 | 137.1 |    |      |

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61

CONCENTRATIONS

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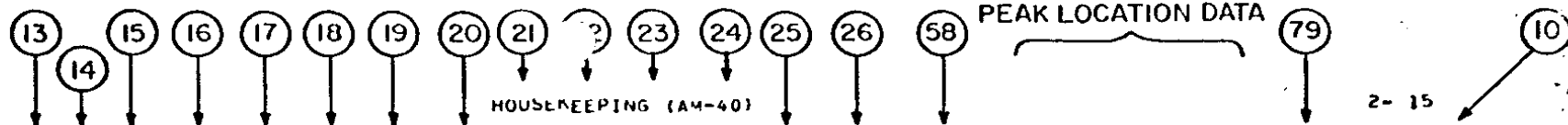
| DATE        | NATLEY | ICE   | 4       | 36      | 38     | 40     |
|-------------|--------|-------|---------|---------|--------|--------|
| 73 30 14 26 | 259.37 | 1.578 | 30554.4 | 21905.5 | 5991.9 | 1147.9 |
| 73 30 14 39 | 259.49 | 1.578 | 31498.9 | 21512.6 | 7020.8 | 941.3  |
| 73 30 14 53 | 259.60 | 1.578 | 30226.2 | 22347.0 | 6229.9 | 882.5  |
| 73 30 15 6  | 259.72 | 1.578 | 30416.2 | 21046.2 | 6121.0 | 844.4  |
| 73 30 15 20 | 259.83 | 1.578 | 30960.4 | 20855.7 | 7850.9 | 950.9  |
| 73 30 15 33 | 259.95 | 1.578 | 30530.6 | 21406.9 | 6277.6 | 1372.4 |
| 73 30 15 47 | 260.06 | 1.578 | 31355.9 | 21388.6 | 7091.1 | 1051.2 |
| 73 30 16 1  | 260.18 | 1.578 | 31442.0 | 21607.3 | 5348.8 | 919.3  |
| 73 30 16 14 | 260.29 | 1.578 | 30881.2 | 21026.7 | 6408.3 | 769.8  |
| 73 30 16 28 | 260.41 | 1.578 | 31525.7 | 21306.0 | 6278.8 | 847.8  |
| 73 30 16 41 | 260.53 | 1.578 | 29809.7 | 16044.2 | 5739.8 | 723.7  |
| 73 30 16 55 | 260.64 | 1.578 | 31451.6 | 21347.1 | 6127.1 | 1224.8 |
| 73 30 17 9  | 260.76 | 1.578 | 32502.1 | 19302.3 | 6437.6 | 967.2  |
| 73 30 17 22 | 260.87 | 1.578 | 29259.1 | 21663.9 | 7825.9 | 781.1  |
| 73 30 17 36 | 260.99 | 1.579 | 30011.5 | 21554.0 | 6484.9 | 1194.8 |
| 73 30 17 49 | 261.10 | 1.579 | 32416.3 | 20100.0 | 6072.0 | 628.4  |
| 73 30 18 3  | 261.22 | 1.579 | 30819.3 | 21045.2 | 6570.5 | 1056.5 |
| 73 30 18 16 | 261.33 | 1.579 | 31410.0 | 21733.3 | 5994.7 | 835.3  |
| 73 30 18 30 | 261.45 | 1.579 | 31080.1 | 20661.0 | 5836.2 | 1018.4 |
| 73 30 18 44 | 261.56 | 1.579 | 30973.7 | 20255.0 | 7043.8 | 1475.1 |
| 73 30 18 57 | 261.68 | 1.579 | 30840.3 | 19657.0 | 5953.9 | 915.0  |
| 73 30 19 11 | 261.80 | 1.579 | 29435.4 | 20291.6 | 5549.5 | 891.2  |
| 73 30 19 24 | 261.91 | 1.579 | 29968.4 | 18816.3 | 5435.2 | 951.7  |
| 73 30 19 38 | 262.03 | 1.579 | 31272.2 | 20703.7 | 6813.1 | 894.5  |
| 73 30 19 52 | 262.14 | 1.579 | 30221.6 | 19594.1 | 6722.5 | 897.7  |
| 73 30 20 5  | 262.26 | 1.579 | 29575.6 | 20254.5 | 6838.0 | 1080.8 |
| 73 30 20 19 | 262.37 | 1.579 | 31438.3 | 16353.1 | 5024.9 | 1041.0 |
| 73 30 20 32 | 262.49 | 1.579 | 30179.5 | 20407.7 | 5821.8 | 549.2  |
| 73 30 20 46 | 262.60 | 1.580 | 30550.8 | 18754.0 | 5881.0 | 843.7  |
| 73 30 20 59 | 262.72 | 1.580 | 31750.9 | 19706.5 | 5842.2 | 912.2  |
| 73 30 21 13 | 262.83 | 1.580 | 31120.2 | 20559.4 | 6104.9 | 726.0  |
| 73 30 21 27 | 262.95 | 1.580 | 30925.0 | 20902.8 | 5976.0 | 985.5  |
| 73 30 21 40 | 263.07 | 1.580 | 29569.6 | 19978.7 | 6237.1 | 971.2  |
| 73 30 21 54 | 263.18 | 1.580 | 30746.6 | 20873.6 | 6764.5 | 871.0  |
| 73 30 22 7  | 263.30 | 1.580 | 30000.2 | 20001.3 | 6935.9 | 777.1  |
| 73 30 22 21 | 263.41 | 1.580 | 31077.1 | 21069.2 | 5988.7 | 888.6  |
| 73 30 22 35 | 263.53 | 1.580 | 30720.0 | 19803.8 | 6024.1 | 844.0  |
| 73 30 22 48 | 263.64 | 1.580 | 30652.0 | 20000.5 | 5633.8 | 810.6  |
| 73 30 23 2  | 263.76 | 1.580 | 31004.3 | 19856.0 | 6196.2 | 992.2  |
| 73 30 23 15 | 263.87 | 1.580 | 31403.8 | 20716.6 | 5311.0 | 708.8  |
| 73 30 23 29 | 263.99 | 1.580 | 31323.3 | 18824.7 | 6379.7 | 786.8  |
| 73 30 23 42 | 264.11 | 1.580 | 31317.0 | 19958.3 | 6822.7 | 444.4  |
| 73 30 23 56 | 264.22 | 1.581 | 30500.8 | 19902.8 | 6054.9 | 726.4  |
| 73 31 0 10  | 264.34 | 1.581 | 30509.9 | 20489.0 | 7138.0 | 759.9  |
| 73 31 0 23  | 264.45 | 1.581 | 30461.1 | 18372.5 | 5829.9 | 863.4  |
| 73 31 0 37  | 264.57 | 1.581 | 30331.2 | 19910.6 | 6159.0 | 981.4  |
| 73 31 0 50  | 264.68 | 1.581 | 31505.2 | 20049.5 | 4570.6 | 850.8  |
| 73 31 1 4   | 264.80 | 1.581 | 29952.0 | 18991.4 | 5898.2 | 987.8  |
| 73 31 1 18  | 264.91 | 1.581 | 30562.1 | 19757.5 | 6351.6 | 809.4  |
| 73 31 1 31  | 265.03 | 1.581 | 29017.2 | 19150.4 | 6371.0 | 865.2  |
| 73 31 1 45  | 265.14 | 1.581 | 30750.7 | 20451.0 | 6221.8 | 801.5  |
| 73 31 1 58  | 265.26 | 1.581 | 30759.7 | 20612.9 | 6103.9 | 750.6  |
| 73 31 2 12  | 265.37 | 1.581 | 30004.9 | 20351.4 | 4092.4 | 1164.9 |
| 73 31 2 25  | 265.49 | 1.581 | 29898.1 | 19515.5 | 5699.1 | 1039.1 |
| 73 31 2 39  | 265.60 | 1.581 | 29258.9 | 19678.9 | 5845.1 | 576.9  |

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EPHEMERIS

|    | DATE | NALLEY | BZMH | ZNTH   | ICE    | TMOON  | LIONS | IMASE  | TRAPP | MELAG  | FMDAPHEF | FMDAPHEF | SYNG     | LCMPD    | TARG | STAIN |        |   |
|----|------|--------|------|--------|--------|--------|-------|--------|-------|--------|----------|----------|----------|----------|------|-------|--------|---|
| 73 | 30   | 14     | 26   | 259.37 | 206.34 | 156.19 | 1.57A | 108.72 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 9 |
| 73 | 30   | 14     | 39   | 259.49 | 206.09 | 156.25 | 1.57A | 108.71 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 9 |
| 73 | 30   | 14     | 53   | 259.60 | 205.84 | 156.30 | 1.57H | 108.70 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 15     | 6    | 259.72 | 205.59 | 156.35 | 1.57H | 108.69 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 15     | 20   | 259.83 | 205.34 | 156.41 | 1.57H | 108.68 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 15     | 33   | 259.95 | 205.09 | 156.46 | 1.57H | 108.67 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 15     | 47   | 260.06 | 204.84 | 156.51 | 1.57H | 108.66 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 16     | 1    | 260.18 | 204.59 | 156.57 | 1.57H | 108.65 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 16     | 14   | 260.29 | 204.34 | 156.62 | 1.57H | 108.64 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 16     | 26   | 260.41 | 204.09 | 156.67 | 1.57H | 108.63 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 16     | 41   | 260.53 | 203.84 | 156.73 | 1.57H | 108.62 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 16     | 55   | 260.64 | 203.59 | 156.78 | 1.57H | 108.61 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 17     | 9    | 260.76 | 203.34 | 156.83 | 1.57H | 108.60 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 17     | 22   | 260.87 | 203.09 | 156.89 | 1.57H | 108.59 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 17     | 36   | 260.99 | 202.84 | 156.94 | 1.57H | 108.58 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 17     | 49   | 261.10 | 202.59 | 156.99 | 1.57H | 108.57 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 18     | 3    | 261.22 | 202.34 | 157.05 | 1.57H | 108.56 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 18     | 16   | 261.33 | 202.09 | 157.10 | 1.57H | 108.55 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 18     | 30   | 261.45 | 201.84 | 157.15 | 1.57H | 108.54 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 18     | 44   | 261.56 | 201.59 | 157.21 | 1.57H | 108.53 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 18     | 57   | 261.68 | 201.34 | 157.26 | 1.57H | 108.52 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 19     | 11   | 261.80 | 201.09 | 157.32 | 1.57H | 108.51 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 19     | 24   | 261.91 | 200.84 | 157.37 | 1.57H | 108.50 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 19     | 36   | 262.03 | 200.59 | 157.42 | 1.57H | 108.49 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 19     | 52   | 262.14 | 200.34 | 157.48 | 1.57H | 108.48 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 20     | 5    | 262.26 | 200.09 | 157.53 | 1.57H | 108.47 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 20     | 19   | 262.37 | 199.84 | 157.58 | 1.57H | 108.46 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 20     | 32   | 262.49 | 199.59 | 157.64 | 1.57H | 108.46 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 20     | 46   | 262.60 | 199.34 | 157.69 | 1.580 | 108.45 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 20     | 59   | 262.72 | 199.09 | 157.74 | 1.580 | 108.44 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 21     | 13   | 262.83 | 198.84 | 157.80 | 1.580 | 108.43 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 21     | 27   | 262.95 | 198.59 | 157.85 | 1.580 | 108.42 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 21     | 40   | 263.07 | 198.34 | 157.90 | 1.580 | 108.41 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 21     | 54   | 263.18 | 198.09 | 157.96 | 1.580 | 108.40 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 22     | 7    | 263.30 | 197.83 | 158.01 | 1.580 | 108.39 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 22     | 21   | 263.41 | 197.58 | 158.06 | 1.580 | 108.38 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 22     | 35   | 263.53 | 197.33 | 158.12 | 1.580 | 108.37 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 4 |
| 73 | 30   | 22     | 48   | 263.64 | 197.08 | 158.17 | 1.580 | 108.36 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 30   | 23     | 2    | 263.76 | 196.83 | 158.22 | 1.580 | 108.35 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 30   | 23     | 15   | 263.87 | 196.58 | 158.28 | 1.580 | 108.34 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 30   | 23     | 29   | 263.99 | 196.33 | 158.33 | 1.580 | 108.33 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 30   | 23     | 42   | 264.11 | 196.08 | 158.38 | 1.580 | 108.32 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 30   | 23     | 56   | 264.22 | 195.83 | 158.44 | 1.581 | 108.31 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 0      | 10   | 264.34 | 195.54 | 158.45 | 1.581 | 108.30 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 0      | 23   | 264.45 | 195.22 | 158.45 | 1.581 | 108.29 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 0      | 37   | 264.57 | 194.90 | 158.44 | 1.581 | 108.28 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 0      | 50   | 264.68 | 194.59 | 158.44 | 1.581 | 108.27 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 1      | 4    | 264.80 | 194.27 | 158.44 | 1.581 | 108.26 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 1      | 18   | 264.91 | 193.96 | 158.44 | 1.581 | 108.25 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 1      | 31   | 265.03 | 193.64 | 158.44 | 1.581 | 108.24 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 1      | 45   | 265.14 | 193.33 | 158.43 | 1.581 | 108.23 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 1      | 58   | 265.26 | 193.01 | 158.43 | 1.581 | 108.22 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 2      | 12   | 265.37 | 192.70 | 158.43 | 1.581 | 108.21 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 2      | 25   | 265.49 | 192.38 | 158.43 | 1.581 | 108.20 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |
| 73 | 31   | 2      | 39   | 265.60 | 192.07 | 158.43 | 1.581 | 108.19 | -2.59 | -81.68 | -7.96    | 2844     | 11110011 | 11110011 | 0    | 0     | 603.00 | 3 |

|      |          | (28)                       | (29) | (30) | (31) | (32) | (33) | (34) | (35) | (36) | (37) | (38) | (39) | (40) | (41) | (42) |
|------|----------|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      |          | SWEEP HIGH VOLTAGE (AM-44) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| DATE | WALLEY   | 1                          | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   |
| 73   | 30 14 26 | 259.37                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 84   | 94   | 107  | 121  | 143  | 168  | 194  |
| 73   | 30 14 34 | 259.49                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 87   | 94   | 106  | 119  | 143  | 168  | 193  |
| 73   | 30 14 53 | 259.60                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 84   | 94   | 110  | 119  | 144  | 168  | 192  |
| 73   | 30 15 6  | 259.72                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 107  | 118  | 143  | 168  | 192  |
| 73   | 30 15 20 | 259.83                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 85   | 94   | 109  | 121  | 144  | 168  | 192  |
| 73   | 30 15 33 | 259.95                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 87   | 97   | 106  | 122  | 144  | 167  | 193  |
| 73   | 30 15 47 | 260.06                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 85   | 94   | 106  | 119  | 141  | 167  | 193  |
| 73   | 30 16 1  | 260.18                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 87   | 94   | 106  | 119  | 142  | 167  | 192  |
| 73   | 30 16 14 | 260.29                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 84   | 95   | 108  | 119  | 142  | 167  | 192  |
| 73   | 30 16 28 | 260.41                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 88   | 96   | 109  | 119  | 142  | 167  | 193  |
| 73   | 30 16 41 | 260.53                     | 43   | 49   | 55   | 61   | 66   | 73   | 78   | 84   | 94   | 109  | 119  | 142  | 168  | 193  |
| 73   | 30 16 55 | 260.64                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 108  | 120  | 142  | 168  | 193  |
| 73   | 30 17 9  | 260.76                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 109  | 121  | 143  | 168  | 194  |
| 73   | 30 17 22 | 260.87                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 84   | 94   | 106  | 121  | 143  | 168  | 193  |
| 73   | 30 17 36 | 260.99                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 85   | 94   | 107  | 121  | 143  | 168  | 193  |
| 73   | 30 17 49 | 261.10                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 107  | 118  | 143  | 167  | 193  |
| 73   | 30 18 3  | 261.22                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 107  | 121  | 142  | 167  | 193  |
| 73   | 30 18 16 | 261.33                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 95   | 106  | 120  | 143  | 168  | 193  |
| 73   | 30 18 30 | 261.45                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 106  | 120  | 144  | 168  | 192  |
| 73   | 30 18 44 | 261.56                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 96   | 110  | 118  | 142  | 167  | 192  |
| 73   | 30 18 57 | 261.68                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 84   | 94   | 108  | 118  | 143  | 169  | 193  |
| 73   | 30 19 11 | 261.80                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 85   | 95   | 106  | 120  | 142  | 168  | 192  |
| 73   | 30 19 24 | 261.91                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 106  | 120  | 142  | 168  | 193  |
| 73   | 30 19 38 | 262.03                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 106  | 119  | 141  | 167  | 194  |
| 73   | 30 19 52 | 262.14                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 95   | 108  | 120  | 144  | 167  | 193  |
| 73   | 30 20 5  | 262.26                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 84   | 97   | 106  | 119  | 143  | 168  | 192  |
| 73   | 30 20 19 | 262.37                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 85   | 94   | 106  | 119  | 142  | 167  | 193  |
| 73   | 30 20 32 | 262.49                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 85   | 97   | 107  | 118  | 141  | 167  | 193  |
| 73   | 30 20 46 | 262.60                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 97   | 108  | 119  | 143  | 165  | 193  |
| 73   | 30 20 59 | 262.72                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 95   | 109  | 118  | 143  | 168  | 192  |
| 73   | 30 21 13 | 262.83                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 84   | 96   | 108  | 119  | 141  | 167  | 193  |
| 73   | 30 21 27 | 262.95                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 109  | 118  | 142  | 168  | 192  |
| 73   | 30 21 40 | 263.07                     | 43   | 49   | 55   | 61   | 66   | 72   | 80   | 85   | 94   | 107  | 118  | 141  | 167  | 193  |
| 73   | 30 21 54 | 263.18                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 106  | 119  | 143  | 168  | 193  |
| 73   | 30 22 7  | 263.30                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 95   | 106  | 118  | 143  | 167  | 192  |
| 73   | 30 22 21 | 263.41                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 85   | 95   | 107  | 119  | 143  | 168  | 194  |
| 73   | 30 22 35 | 263.53                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 106  | 119  | 143  | 166  | 192  |
| 73   | 30 22 48 | 263.64                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 85   | 94   | 107  | 119  | 141  | 168  | 192  |
| 73   | 30 23 2  | 263.76                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 85   | 94   | 106  | 120  | 142  | 168  | 193  |
| 73   | 30 23 15 | 263.87                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 107  | 121  | 141  | 167  | 193  |
| 73   | 30 23 29 | 263.99                     | 43   | 49   | 55   | 61   | 66   | 73   | 78   | 85   | 95   | 107  | 119  | 142  | 167  | 193  |
| 73   | 30 23 42 | 264.11                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 106  | 121  | 143  | 168  | 194  |
| 73   | 30 23 56 | 264.22                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 108  | 121  | 142  | 168  | 193  |
| 73   | 31 0 10  | 264.34                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 96   | 106  | 118  | 142  | 165  | 193  |
| 73   | 31 0 23  | 264.45                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 87   | 95   | 106  | 119  | 143  | 168  | 193  |
| 73   | 31 0 37  | 264.57                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 84   | 94   | 107  | 118  | 141  | 167  | 194  |
| 73   | 31 0 50  | 264.68                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 97   | 106  | 119  | 143  | 168  | 193  |
| 73   | 31 1 4   | 264.80                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 107  | 120  | 143  | 168  | 193  |
| 73   | 31 1 18  | 264.91                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 85   | 94   | 106  | 120  | 140  | 166  | 194  |
| 73   | 31 1 31  | 265.03                     | 43   | 49   | 55   | 61   | 66   | 73   | 78   | 85   | 95   | 106  | 120  | 140  | 168  | 193  |
| 73   | 31 1 45  | 265.14                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 106  | 118  | 144  | 168  | 193  |
| 73   | 31 1 58  | 265.26                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 84   | 94   | 106  | 119  | 143  | 168  | 192  |
| 73   | 31 2 12  | 265.37                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 84   | 95   | 106  | 119  | 143  | 167  | 193  |
| 73   | 31 2 25  | 265.49                     | 43   | 49   | 55   | 61   | 67   | 73   | 78   | 84   | 94   | 109  | 121  | 143  | 167  | 193  |
| 73   | 31 2 39  | 265.60                     | 43   | 49   | 55   | 61   | 67   | 72   | 78   | 85   | 94   | 108  | 121  | 143  | 169  | 192  |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
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|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
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|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
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|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|      |          |                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
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| DATE | NALLEY | 1E | 1P | VP | 1H | 1I | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 |
|------|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|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|------|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|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|          |          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 074A2CB7 | 474A2CB7 | 427A000C | C23AF009 | C2684BFF | C21F8028 | 4325AFF7 | C32F2000 | 44944900 | 00A9867B |
| 00A9867B | 00000000 | 00000000 | 00000001 | 00000006 | 4325C800 | 00000000 | 01440000 | 0000008F | 00012009 |
| 00000038 | 00000038 | 0000000B | 42C1F2DA | 4310803C | 4267086E | 4116676F | 0000001C | 00000000 | 000000FF |
| 00000077 | 0000003C | 00000020 | 00000057 | 00000025 | 000000BF | 0000007F | 00000039 | 000000F4 | 0000007A |
| 00030067 | 00000002 | 000000AB | 00000000 | 00000000 | 0000002A | 00000036 | 00000036 | 0000003C | 00000042 |
| 00000048 | 0000004D | 00000058 | 00000064 | 00000074 | 00000083 | 0000009E | 000000BD | 000000DF | 0000000A |
| 0000002A | 4183F257 | 4120CCCC | 433468A0 | 41CC8585 | 4368BB7A | 43184880 | 43C014CB | 432087A0 | 42903E25 |
| 4338BBA7 | 421C6E3C | 42909155 | 474A2CB7 | 474A2CB7 | 42180000 | 474A2CB7 | 421044B4 | 457391D5 | 45222275 |
| 4411181A | 474A2CB7 | 474A2CB7 | 427A297C | C221A041 | C2684BFF | C21F8028 | 4325AFF7 | C32F0000 | 44944900 |
| 00A9867B | 00A9867B | 0000000C | 0000000B | 00000001 | 00000006 | 4325C800 | 00000000 | 01440000 | 0001008F |
| 0000000A | 0000000A | 0000001B | 00000063 | 42C2106D | 43107F8E | 426726FF | 4116D83F | 0000001C | 00000000 |
| 000000FF | 00000077 | 00000000 | 00000020 | 00000058 | 0000002C | 000000BF | 0000007F | 00000099 | 000000F4 |
| 0000007B | 00000067 | 00000002 | 000000AB | 0000000D | 00000000 | 0000002A | 00000036 | 00000036 | 0000003C |
| 00000042 | 00000048 | 0000004D | 00000059 | 00000065 | 00000075 | 00000084 | 000000A0 | 0000008F | 000000E0 |
| 000000FA | 0000002A | 41813A06 | 4130AAA9 | 43294EC9 | 4195CED0 | 435D33D7 | 431926F1 | 43A94ED1 | 41334555 |
| 428E4E31 | 43333A15 | 421433FF | 427417FF | 474A2CB7 | 474A2CB7 | 421A0000 | 474A2CB7 | 4420F94A | 4567DF0D |
| 451F6D8F | 43C65026 | 474A2CB7 | 474A2CB7 | 427A1AEE | C2183A00 | C266B08F | C21D5261 | 4325AFF7 | C32F19FF |
| 4494A2CC | 00A9867B | 00A9867B | 00000000 | 0000000B | 00000001 | 00000006 | 4325D800 | 00000000 | 01440000 |
| 0000008F | 0000000A | 00000017 | 0000003B | 000000BA | 42C22DF3 | 43107EE1 | 42674284 | 4116F929 | 0000001C |
| 0000000C | 000000FF | 00000076 | 00000000 | 00000020 | 00000058 | 0000002E | 000000BF | 0000007F | 00010099 |
| 000000E4 | 0000007B | 00000067 | 00000002 | 000000AC | 0000000D | 00000000 | 0000002A | 00000030 | 00000036 |
| 0000003C | 00000042 | 00000048 | 0000004D | 0000005B | 00000066 | 00000075 | 00000084 | 000000A0 | 000000C0 |
| 000000E2 | 000000FA | 0000002A | 41751EB7 | 4110030F | 43240148 | 417BA25B | 434E3BA8 | 4318617E | 43910D14 |
| 43179963 | 428C9792 | 432A6124 | 42186631 | 426962AF | 474A2CB7 | 474A2CB7 | 42110000 | 474A2CB7 | 441E0D85 |
| 4559FDE2 | 451A2577 | 43F0DA39 | 474A2CB7 | 474A2CB7 | 427A0C6A | C215889E | C266B08F | C21D5261 | 4325AFF7 |
| C32F35F  | 4494DB4A | 00A9867B | 00A9867B | 00000000 | 0000000B | 00000001 | 00000006 | 4325D800 | 00000000 |
| 01309103 | 0000008F | 0000000A | 00000025 | 00000022 | 00000112 | 42C24B79 | 43107E33 | 42675E09 | 411719F6 |
| 0000001C | 00000000 | 000000FF | 00000077 | 00000000 | 00000020 | 00000058 | 00000030 | 000000BF | 0000007F |
| 00000099 | 000000E4 | 0000007C | 00000067 | 00000002 | 000000AC | 0000000D | 00000000 | 0000002A | 00000030 |
| 00000036 | 0000003C | 00000042 | 00000048 | 0000004D | 0000005B | 00000065 | 00000076 | 00000085 | 000000A0 |
| 000000C1 | 000000E3 | 000000FA | 0000002A | 4186B851 | 40F11110 | 4320381B | 41687F80 | 43441464 | 43176AE4 |
| 437D0037 | 431394CE | 4288     |          |          |          |          |          |          |          |

|          |          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 42C93657 | C1297A60 | C24E6E11 | C17382BF | 4325AF77 | C32F11F8 | 44957D00 | 00A9867B | 00A9867B | 00000000 |
| 00000002 | 00000001 | 00000009 | 4326580C | 00000000 | 01440000 | 000000F5 | 00000012 | 00000034 | 00000017 |
| 00000011 | 414E8D00 | 425D4484 | 42556676 | 4112968B | 0000001C | 00000000 | 000000FF | 00000091 | 00000000 |
| 0000001E | 00000069 | 0000003E | 000000C0 | 0000007E | 00000099 | 000000F5 | 00000081 | 0000005F | 00000003 |
| 000000B7 | 00000024 | 00000000 | 00000028 | 00000031 | 00000037 | 0000003D | 00000043 | 00000049 | 0000004F |
| 00000054 | 00000064 | 00000071 | 0000007E | 00000098 | 000000B5 | 000000D3 | 000000F0 | 0000002B | 4173F257 |
| 409FFFA  | 42911FD5 | 4255DC46 | 4271B08C | 43197799 | 42B30238 | 4220792F | 4289A755 | 423AF0D5 | 4255AADA |
| 424C2997 | 474A2CB7 | 474A2CB7 | 42270000 | 474A2CB7 | 441812D2 | 44595CE6 | 441D6C7E | 442AC418 | 474A2CB7 |
| 474A2CB7 | 42CA7608 | 40206800 | C24B2C81 | C167AA12 | 4325AFF7 | C32F0F35 | 44957A32 | 00A9867B | 00A9867B |
| 00000000 | 00000002 | 00000001 | 00000009 | 4326580C | 00000000 | 00280100 | 000000F5 | 00000013 | 00000005 |
| 0000003A | 00000065 | 41506500 | 425D4E25 | 4255A4C6 | 41129FF8 |          |          |          |          |

RECORD 585 OF FILE 1  
LENGTH = 3208 BYTES

|          |          |          |          |          |           |          |          |          |          |
|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|
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| 000000C0 | 0000007E | 00000099 | 000000F4 | 00000081 | 0000005E  | 00000003 | 000000B8 | 00000025 | 00000000 |
| 0000002B | 00000031 | 00000037 | 0000003D | 00000043 | 00000049  | 0000004F | 00000054 | 00000063 | 00000071 |
| 0000007F | 00000098 | 000000B5 | 000000D5 | 000000F4 | 0000002B  | 417D9399 | 40511110 | 42B2762E | 4262DCA1 |
| 42AEDCA4 | 431E3CFF | 4313B9E5 | 42430A06 | 42A1AADI | 426FB2F8  | 425D8DC4 | 42893645 | 474A2CB7 | 474A2CB7 |
| 42270000 | 474A2CB7 | 441A20E4 | 449DDDAF | 4437DEA0 | 442C7079  | 474A2CB7 | 474A2CB7 | 42CBAF6A | 412D94B0 |
| C247E9A1 | C15BD16F | 4325AFF7 | C32F0E2F | 44958299 | 00A9867B  | 00A9867B | 00000000 | 00000002 | 00000001 |
| 00000009 | 43266800 | 00000000 | 01440000 | 000000F5 | 00000013  | 00000021 | 00000021 | 000000BC | 41523D00 |
| 425D57C7 | 42552F15 | 4112B50C | 0000001C | 00000000 | 000000FF  | 000000B8 | 00000000 | 0000001E | 0000006D |
| 00000043 | 00000000 | 0000007E | 00000099 | 000000F5 | 00000081  | 0000005F | 00000003 | 000000B8 | 00000026 |
| 00000000 | 0000002B | 00000031 | 00000037 | 0000003D | 00000043  | 00000049 | 0000004F | 00000054 | 00000064 |
| 00000073 | 0000007F | 00000099 | 000000B6 | 000000D5 | 000000F6  | 0000002B | 417C6D3A | 41155554 | 42B32342 |
| 4283C0AA | 42C97AA1 | 43209F92 | 4314F2E2 | 424E506F | 42A3FBE8  | 426DD473 | 425F49A8 | 427927A5 | 474A2CB7 |
| 474A2CB7 | 42330000 | 474A2CB7 | 4419FF92 | 44A86439 | 44372D73  | 442FDF27 | 474A2CB7 | 474A2CB7 | 42CCE340 |
| 416F02D0 | C24A4572 | C14FF8CC | 4325AFF7 | C32F1895 | 4495A595  | 00A9867B | 00A9867B | 00000000 | 00000002 |
| 00000001 | 00000009 | 43267800 | 00000000 | 01440000 | 000000F5  | 00000013 | 00000021 | 00000008 | 00000111 |
| 415A1500 | 425D6169 | 42551365 | 4112B50C | 0000007E | 00000099  | 000000F5 | 00000082 | 0000005F | 00000003 |
| 0000006F | 00000045 | 000000C0 | 0000002B | 00000031 | 00000037  | 0000003D | 00000043 | 00000049 | 00000055 |
| 00000027 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000  | 00000000 | 00000000 | 00000000 | 00000000 |
| 00000064 | 00000073 | 0000007F | 00000099 | 000000B7 | 000000D5  | 000000F4 | 0000002B | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 42CE11C3 | 419AB220 | C2415FFE | C14FF8CC | 4325AF77 | C32F1895  | 4495A595 | 00A9867B | 00A7FFDA | 00000002 |
| 00000002 | 00000003 | 00000009 | 474A2CB7 | 00000000 | 01440000  | 000000F5 | 00000013 | 0000002E | 0000002B |
| 00000167 | 4155EE00 | 425D680E | 4254F7A9 | 4111A15C | 04A2CB71  | 00000000 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 00000071 | 0000002E | 000000C0 | 0000007F | 00000099  | 000000F5 | 00000000 | 00000003 | 00000003 |
| 000000B9 | 00000028 | 00000000 | 0000002B | 00000031 | 00000037  | 0000003D | 00000043 | 00000049 | 0000004F |
| 00000055 | 00000061 | 0000006E | 0000007C | 00000093 | 000000AE  | 000000C9 | 000000E5 | 0000002B | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 42CF3BA4 | C215889E | C23E1937 | C1442029 | 4325AFF7  | C32F1895 | 4495A595 | 00A7FFDA | 00A7FFDA |
| 00000000 | 00000002 | 00000003 | 00000009 | 474A2CB7 | 00000000  | 01440000 | 000000F5 | 00000014 | 00000000 |
| 00000012 | 000001BD | 4157C600 | 425D74B0 | 4254D3F8 | 411D0D04  | 04A2CB71 | 00000000 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 00000073 | 000000C1 | 000000C0 | 0000007F  | 00000099 | 000000F4 | 00000000 | 00000003 |
| 00000003 | 000000B9 | 00000028 | 000000C0 | 0000002B | 00000031  | 00000037 | 0000003D | 00000043 | 00000049 |
| 0000004F | 00000055 | 0000005E | 0000006E | 00000078 | 00000092  | 000000AC | 000000C7 | 000000E2 | 0000002B |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 00A7FFDA | 00000000 | 00000002 | 00000003 | 00000009 | 474A2CB7  | 00000000 | 01440000 | 000000F5 | 00000014 |
| CC000000 | 00000035 | 00000021 | 41599E00 | 425D7E52 | 425A0048  | 41109342 | 04A2CB71 | 00000000 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 00000074 | 0000007A | 0000001A | 000000C0  | 0000007F | 00000099 | 000000F5 | 00000000 |
| 00000003 | 00000003 | 000000B9 | 00000029 | 00000000 | 0000002B  | 00000031 | 00000037 | 0000003D | 00000043 |
| 00000049 | 0000004F | 00000055 | 00000062 | 0000006D | 0000007C  | 00000092 | 000000AC | 000000C7 | 000000E2 |
| 0000002B | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 00A7FFDA | 00A7FFDA | 00000000 | 00000002 | 00000003 | 00000009  | 474A2CB7 | 00000000 | 01440000 | 000000F5 |
| 00000014 | 0000001B | 0000001C | 00000026 | 415B7600 | 425D87F4  | 4254A497 | 4110C65F | 04A2CB71 | 00000000 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 00000075 | 00000031F | 00000000 | 0000007E | 00000099 | 000000F4 |
| 00000082 | 0000005F | 00000003 | 000000B9 | 0000002A | 00000000  | 0000002B | 00000031 | 00000037 | 0000003D |
| 00000043 | 00000049 | 0000004F | 00000055 | 00000062 | 0000006F  | 0000007D | 00000094 | 000000AF | 000000CD |
| 000000EA | 0000002B | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 4495A595 | 00A7FFDA | 00A9867B | 00000002 | 00000002 | 00000003  | 00000009 | 474A2CB7 | 00000000 | 01440000 |
| CC0000F5 | 00000014 | 00000029 | 00000003 | 00000002 | 415D4F00  | 425D919A | 4254880B | 411244E2 | 0000001C |
| 00000001 | 000000FF | 0000008D | 00000000 | 0000001D | 00000077  | 00000040 | 000000C0 | 0000007E | 00000099 |
| 000000F5 | 00000083 | 0000005F | 00000003 | 000000BA | 0000002B  | 00000000 | 0000002B | 00000031 | 00000037 |
| 00000030 | 00000043 | 00000049 | 0000004F | 00000055 | 00000063  | 00000072 | 0000007F | 00000099 | 000000B6 |
| 000000D5 | 00000000 | 0000002B | 417D7E4A | 40755550 | 4314473E  | 4246E43C | 42D1312B | 43233C8A | 43164FD7 |
| 4245B03A | 428A858F | 425B4441 | 4261A21D | 42936C91 | 474A2CB7  | 474A2CB7 | 42300000 | 474A2CB7 | 44192B89 |

|          |          |          |          |          |           |          |          |          |          |
|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|
| 44AF25E5 | 442CC713 | 442FE6B9 | 474A2CB7 | 474A2CB7 | 42D3B23E  | 412D94B0 | C2343D24 | C114BD94 | 4325AFF7 |
| C32F2492 | 44963133 | 00A9867B | 00A9867B | 00000000 | 00000002  | 00000001 | 00000009 | 4326C800 | 00000000 |
| 01440000 | 00000005 | 00000014 | 00000036 | 00000026 | 00000035F | 415F2700 | 425D9B3B | 42546D2B | 4112AB22 |
| 00000B1C | 00000002 | 000000FF | 000000BD | 00000000 | 0000001D  | 00000078 | 0000004A | 000000C0 | 0000007D |
| 00000099 | 000000E5 | 00000083 | 0000005F | 00000003 | 0000008A  | 0000002C | 00000000 | 0000002B | 00000031 |
| 00000037 | 0000003D | 00000043 | 00000049 | 0000004F | 00000055  | 00000065 | 00000072 | 00000080 | 0000009B |
| 000000B9 | 000000E1 | 000000FE | 0000002B | 4173F257 | 40666665  | 4319E973 | 42DDDC08 | 432321C0 | 4323F54E |
| 433E4841 | 42CDD71B | 42D7402A | 4316408C | 42618AB0 | 43103E85  | 474A2CB7 | 474A2CB7 | 422D0000 | 474A2CB7 |
| 44182D41 | 451F39AA | 44B28102 | 4430E713 | 474A2CB7 | 474A2CB7  | 42D4C4C9 | 42108232 | C2329754 | C08E4E70 |
| 00000000 | C32F21CF | 44965CF7 | 00A9867B | 00A9867B | 00000000  | 00000002 | 00000001 | 00000009 | 4326D800 |
| 00000000 | 01440000 | 000000F5 | 00000015 | 00000008 | 00000000  | 00000072 | 4160FF00 | 425DA4DD | 4254517A |
| 4112D770 | 04A2CB71 | 00000000 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 0000007A | 0000004F | 000000C0 |
| 0000007D | 00000099 | 000000E5 | 00000084 | 0000005F | 00000003  | 0000008A | 0000002D | 00000000 | 0000002B |
| 00000031 | 00000037 | 0000003D | 00000043 | 00000049 | 0000004F  | 00000055 | 0000005F | 00000073 | 00000081 |
| 0000009B | 000000BA | 000000DA | 000000FD | 0000002C | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7  | 474A2CB7 | 42D5D33B | 42175E75 | C22F4AB9 |
| 402F3BC0 | 4325AFF7 | C32F21CF | 44965CF7 | 00A9867B | 00A7FFDB  | 00000002 | 00000002 | 00000003 | 00000009 |
| 474A2CB7 | 00000000 |          |          |          |           |          |          |          |          |

RECORD 536 OF FILE 1  
LENGTH = 328 BYTES

|          |          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 01480000 | 01440000 | 000000E5 | 00000015 | 00000015 | 00000030 | 0000003A | 4162D700 | 425DAE80 | 425435CA |
| 4112D6E1 | 04A2CB71 | 00000001 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 0000007C | 00000050 | 000000C0 |
| 00000000 | 00000099 | 000000F5 | 00000084 | 0000005F | 00000003 | 000000BB | 0000002E | 00000000 | 0000002C |
| 00000031 | 00000037 | 0000003D | 00000043 | 00000049 | 0000004F | 00000055 | 00000065 | 00000073 | 00000082 |
| 0000009D | 000000BB | 000000DC | 000000FE | 00000000 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 |
| 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 474A2CB7 | 42D6D08D | 42188E59 | C22FCD5  |
| 40ECC5F0 | 4325AFF7 | C32F21CF | 44965CF7 | 00A7FFDB | 00A7FFDA | 00000004 | 00000002 | 00000003 | 00000009 |
| 474A2CB7 | 00000000 |          |          |          |          |          |          |          |          |

585 RECORDS IN FILE 1 OF TAPE

```

IEF142I - STEP WAS EXECUTED - COND CODE 0000
IEF285I SYS76062.T060736.RV000.YZJRJMG1.L0JMOD PASSED
IEF285I VOL SER NOS= K3SCR3.
IEF285I SYS76062.T060736.RV000.YZJRJMG1.S0001034 SYSIN
IEF285I VOL SER NOS= K3SCR3.
IEF285I SYS76062.T060736.RV000.YZJRJMG1.S0001034 DELETED
IEF285I VOL SER NOS= K3SCR3.
IEF285I SYS76062.T060736.SV000.YZJRJMG1.R0001030 SYSOUT
IEF285I VOL SER NOS= K3SCR5.
IEF285I SYS76062.T060736.SV000.YZJRJMG1.R0001031 DELETED
IEF285I VOL SER NOS= K3SCR5.
IEF285I SYS76062.T060736.SV000.YZJRJMG1.R0001032 DELETED
IEF285I VOL SER NOS= K3SCR4.
IEF285I SYS76062.T060736.RV000.YZJRJMG1.R0001033 KEPT
IEF285I VOL SER NOS= JJ0080.
IEF280E K0D3,JJ0080,YZJRJMG1,G0
IEF373I STEP /GO / START 76062.2021
IEF374I STEP /GO / STOP 76062.2023 CPU 0MIN 04.17SEC MAIN 186K LCS 0K
STEP 03 - RETURN CODE = 0000
IO IN SECS. DISK= 2.00, DRUM= .34, TAPE= .29 MINS=(CPU= .06, IO= .23)
IEF285I SYS76062.T060736.RV000.YZJRJMG1.L0JMOD DELETED
IEF285I VOL SER NOS= K3SCR3.
IEF375I JOB /YZJRJMG1/ START 76062.2012
IEF376I JOB /YZJRJMG1/ STOP 76062.2023 CPU 0MIN 07.99SEC
SYSTEM=MVT-21 (11-21-73) K3
JOB 0147-
TOTAL TIME = TIME=20.23.32.83 DATE=03-02-76
IO IN SECS. DISK= 12.77, DRUM= 1.06, TAPE= 23.64, CEL= .00, OTHR= .62
THERE WERE 03 TAPES MOUNTED FOR THIS JOB. TAPE MOUNT CHARGE WAS 00.0 MINUTES.

```