#241

ALOUETTE 1 & 2, ISIS 1 & 2

ORBITAL ELEMENTS

62-049A-00J
65-098A-00G
69-009A-00E
71-024A-00E

ALOUETTE 1

GSFC ORBITAL ELEMENTS, TAPE

62-049A-00J

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

DR#	DS#	D#	FILES	TIME SPAN
DR005832	DS005832	D012603	1	10/07/62 - 02/13/72

REQ. AGENT	RASH NO.	ACQ. AGENT
VJP	RB4622	LLD

ALOUETTE 1 & 2, ISIS 1 & 2

ORBITAL ELEMENTS

62-049A-00J
65-098A-00G ✓
69-009A-00E ✓
71-024A-00E ✓

These data sets consist of one tape each. They were created on the IBM 7094 computer and are 556 BPI, BCD, 7-track with one file per tape. These tapes are updated every 6 months. When updated data comes in, the information is punched on three cards and the cards are then put on tape. The formats for these 3 cards are:

CARD	COLUMN	DESCRIPTION
1	1- 6	Date of EPOCH (MO.,DAY,YEAR)
1	7-16	Time of EPOCH (HRS.,MIN.,SEC.)
2	1-13	Semi-major axis of orbit (Earth Radii)
2	14-26	Eccentricity
2	27-39	Inclination of orbit (Radians)
2	40-52	Mean anomaly (at time of EPOCH-Radians)
2	53-65	Argument of perigee (Radians)
2	66-78	Right ascension of ascending node (Radians)
3	1-13	Rate of change of argument of Perigee (Radians/Day)
3	14-26	Rate of change of R.A. of ascending node (Radians/DAY)
3	27-39	Period of orbit (minutes)

The time spans for the data sets are:

D#	C#	NAME	ID	TIME SPAN
D-12603	C-09575	Alouette 1	62-049A-00J	10/07/62 - 2/13/72
D-12601	C-09573	Alouette 2	65-098A-00G	12/05/65 - 10/08/72
D-12600	C-09572	ISIS 1	69-009A-00E	2/07/69 - 10/20/72
D-12602	C-09574	ISIS 2	71-024A-00E	4/08/71 - 11/02/72

MEMO

Purpose: Keypunching data

Data will be obtained in printout form. Not all data need be punched; the significant entries are listed below. The data from each sheet should be punched on three cards in the format shown on the attached coding sheets. Two values are given for some data items; this occurs when there are different units possible (such as radians and degrees). Only one number should be punched for each item.

ALOUETTE 1 & 2, ISIS 1 & 2

Orbital Elements

Update according to directions on MEMO sheet. Do 1 EPOCH sheet at a time (code for keypunch). After EPOCH sheets have been keypunched then put cards in order by EPOCH date. Make sure there are no duplicates on any of the EPOCH sheets, then check for duplicates on UPDATE (old cards) cards. After EPOCH sheets have been keypunched and checked for duplicates then dupe the deck (keypunched cards) 3 times. Interspace new cards with old UPDATE cards by EPOCH date, then run the program. Then check output for consistency (see sample output).

Then fill requests (DUBACH), charge time for computer and keypunch to Acq. Agent, send only the latest update cards to:

Jackson	Req. receive- keypunched UPDATE cards,
Warnock	listing of cards and output from the
Becker	program. (Jackson does not receive 3rd card of each set)

Program is run separate for each experiment.

Period of orbit is equal to:

S27 = Alout. 1 = 105.

S27A= Alout. 2 = 120.

ISIS A = 128.

ISIS b = 113.

```
   42662-049A ALOUETTE 1                                                                  REC     1, LENGTH    84
10 762                                                                                    REC     2, LENGTH    84
   1.15892920   0.00232553   1.40436170   1.84555510   5.37145299   2.75617999          REC     3, LENGTH    84
                                                                                          REC     4, LENGTH    84
102262                                                                                    REC     5, LENGTH    84
   1.15892909   0.00212881   1.40436760   0.66124098   4.58753109   2.49893820          REC     6, LENGTH    84
                                                                                          REC     7, LENGTH    84
11 362                                                                                    REC     8, LENGTH    84
   1.15892769   0.00244940   1.40430640   6.00276750   3.95615599   2.29308030          REC     9, LENGTH    84
                                                                                          REC    10, LENGTH    84
112162                                                                                    REC    11, LENGTH    84
   1.15892640   0.00263113   1.40434730   4.40557611   3.19615349   1.98439039          REC    12, LENGTH    84
                                                                                          REC    13, LENGTH    84
12 462                                                                                    REC    14, LENGTH    84
   1.15892620   0.00270136   1.40437180   1.11166450   2.68173370   1.76146521          REC    15, LENGTH    84
                                                                                          REC    16, LENGTH    84
121762                                                                                    REC    17, LENGTH    84
   1.15892620   0.00266336   1.40441079   4.12673259   2.15405241   1.53859620          REC    18, LENGTH    84
                                                                                          REC    19, LENGTH    84
122862                                                                                    REC    20, LENGTH    84
   1.15892570   0.00248512   1.40440300   5.32476002   1.61072560   1.34983560          REC    21, LENGTH    84
                                                                                          REC    22, LENGTH    84
 11163                                                                                    REC    23, LENGTH    84
   1.15892491   0.00256269   1.40436670   6.21237719   0.98674741   1.10982411          REC    24, LENGTH    84
                                                                                          REC    25, LENGTH    84
 12563                                                                                    REC    26, LENGTH    84
   1.15892500   0.00254391   1.40436080   0.76801856   0.41202284   0.86968088          REC    27, LENGTH    84
                                                                                          REC    28, LENGTH    84
 2 963                                                                                    REC    29, LENGTH    84
   1.15892410   0.00245443   1.40435870   5.71578491   6.07039511   0.61242993          REC    30, LENGTH    84
                                                                                          REC    31, LENGTH    84
 22363                                                                                    REC    32, LENGTH    84
```

```
-.044779731  -.017200166  105.392854
081571
1.158642     .00228250    1.4043509    4.18821090   5.1590922    3.83621520
 -.044822713  -.017125000  105.560575
082971
1.158641     .00229763    1.4043862    5.50165570   4.5152594    3.59593680
-.044731739  -.017169416  105.448674
092671
1.158640     .00236430    1.4044088    1.82174934   3.2541624    3.11559590
-.044932120  -.017259033  105.239828
101071
1.158639     .00238882    1.4043722    3.11415490   2.6348715    2.87544050
-.044713933  -.017165938  105.466449
102471
1.158638     .00239976    1.4043305    4.39937680   2.0243983    2.3522770
-.044626343  -.017129548  105.555825
110771
1.158637     .00238466    1.4043286    5.69132500   1.4087539    2.39494820
-.044805655  -.017212254  105.365670
112171
     1.158636     .00235361    1.4043494    .70723475    .7847771    2.15465960
 -.044972363  -.017285950  105.191408
120571
     1.158635     .00231480    1.4043691    2.02002740    .1549081    1.91438988
 -.044859645  -.017231321  105.312361
121971
     1.158633     .00229512    1.4043732    3.34216670    5.7975496    1.67416292
 -.044651735  -.017135110  105.532017
010272
     1.158632     .00229201    1.4043538    4.67066020    5.1526201    1.43390030
 -.044673339  -.017147763  105.507296
011672
```

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REC     65, LENGTH    84
REC     66, LENGTH    84
REC     67, LENGTH    84
REC     68, LENGTH    84
REC     69, LENGTH    84
REC     70, LENGTH    84
REC     71, LENGTH    84
REC     72, LENGTH    84
REC     73, LENGTH    84
REC     74, LENGTH    84
REC     75, LENGTH    84
REC     76, LENGTH    84
REC     77, LENGTH    84
REC     78, LENGTH    84
REC     79, LENGTH    84
REC     80, LENGTH    84
REC     81, LENGTH    84
REC     82, LENGTH    84
REC     83, LENGTH    84
REC     84, LENGTH    84
REC     85, LENGTH    84
REC     86, LENGTH    84
REC     87, LENGTH    84
REC     88, LENGTH    84
REC     89, LENGTH    84
REC     90, LENGTH    84
REC     91, LENGTH    84
REC     92, LENGTH    84
REC     93, LENGTH    84
REC     94, LENGTH    84
REC     95, LENGTH    84
REC     96, LENGTH    84
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    1.158631    .00232343    1.4043528   5.99438840    4.5139904   1.19359346                REC    97, LENGTH    84
  -.044896803  -.017250602   105.270930                                                       REC    98, LENGTH    84
013072                                                                                        REC    99, LENGTH    84
    1.159630    .00237094    1.4043476   1.02821010    3.8836320    .95322885                REC   100, LENGTH    84
  -.044960122  -.017280453   105.204351                                                       REC   101, LENGTH    84
021372                                                                                        REC   102, LENGTH    84
    1.158630    .00240040    1.4043855   2.33762760    3.2624593    .71284258                REC   103, LENGTH    84
  -.044763786  -.017184871   105.414923                                                       REC   104, LENGTH    84
```

ALOUETTE 2

GSFC ORBITAL ELEMENTS, TAPE

65-098A-00G

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

DR#	DS#	D#	FILES	TIME SPAN
DR005671	DS005671	D012601	1	12/05/65 - 03/21/73

See 62-049A-00J
for document

```
 180465-098A ALOUETTE 2                                                                  REC     1, LENGTH    84
12 565                                                                                   REC     2, LENGTH    84
   1.27311769   0.15274425   1.39321910   2.22506839   5.58883297   3.53377780          REC     3, LENGTH    84
                                                                                         REC     4, LENGTH    84
121965                                                                                   REC     5, LENGTH    84
   1.27311389   0.15265346   1.39323489   2.38160118   5.12642014   3.34056258          REC     6, LENGTH    84
                                                                                         REC     7, LENGTH    84
 1 266                                                                                   REC     8, LENGTH    84
   1.27311081   0.15263440   1.39322248   2.54205489   4.66370606   3.14735347          REC     9, LENGTH    84
                                                                                         REC    10, LENGTH    84
 11656                                                                                   REC    11, LENGTH    84
   1.27310599   0.15269860   1.39325659   2.70717779   4.20080531   2.95412338          REC    12, LENGTH    84
                                                                                         REC    13, LENGTH    84
 13066                                                                                   REC    14, LENGTH    84
   1.27309629   0.15282725   1.39331730   2.88078058   3.73851960   2.76096797          REC    15, LENGTH    84
                                                                                         REC    16, LENGTH    84
 21366                                                                                   REC    17, LENGTH    84
   1.27308708   0.15288142   1.39328049   3.06504330   3.27708447   2.56781670          REC    18, LENGTH    84
                                                                                         REC    19, LENGTH    84
 22766                                                                                   REC    20, LENGTH    84
   1.27307819   0.15287361   1.39323311   3.26106167   2.81553522   2.37462968          REC    21, LENGTH    84
                                                                                         REC    22, LENGTH    84
 31366                                                                                   REC    23, LENGTH    84
   1.27307299   0.15282275   1.39321809   3.46620831   2.35327780   2.18143150          REC    24, LENGTH    84
                                                                                         REC    25, LENGTH    84
 32766                                                                                   REC    26, LENGTH    84
   1.27306689   0.15281559   1.39316151   3.67799109   1.89133179   1.98622320          REC    27, LENGTH    84
                                                                                         REC    28, LENGTH    84
 41066                                                                                   REC    29, LENGTH    84
   1.27306129   0.15282668   1.39314950   3.89695948   1.42928191   1.79496969          REC    30, LENGTH    84
                                                                                         REC    31, LENGTH    84
 42466                                                                                   REC    32, LENGTH    84
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```
    1.269071     .14985247     1.3932762    4.94711690     5.7501279     .87965974
  -.033386488  -.013972479   120.728631
091072
    1.269064     .14980372     1.3933097    3.78400720     5.2834623     .68461224
  -.033284998  -.013916697   120.877713
100872
    1.269038     .14985531     1.3933934    1.49397060     4.3498209     .29454093
  -.033242994  -.013885900   120.959660
```

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REC    97, LENGTH    84
REC    98, LENGTH    84
REC    99, LENGTH    84
REC   100, LENGTH    84
REC   101, LENGTH    84
REC   102, LENGTH    84
REC   103, LENGTH    84
REC   104, LENGTH    84
```

ISIS 1

GSFC ORBITAL ELEMENTS, TAPE

69-009A-00E

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

DR#	DS#	D#	FILES	TIME SPAN
DR005734	DS005734	D012600	1	02/07/69 - 01/23/75

See 62-049A-00J

```
 366969-009A ISIS A                                                                  REC     1, LENGTH    84
 2 769                                                                               REC     2, LENGTH    84
   1.32111299   0.17498117   1.54322919   3.08456558   2.70704558   5.06966537      REC     3, LENGTH    84
                                                                                     REC     4, LENGTH    84
 21469                                                                               REC     5, LENGTH    84
   1.32111099   0.17496553   1.54317369   0.13474877   2.46448877   5.05622858      REC     6, LENGTH    84
                                                                                     REC     7, LENGTH    84
 22869                                                                               REC     8, LENGTH    84
   1.32110399   0.17492221   1.54312350   0.52328540   1.97872539   5.02928644      REC     9, LENGTH    84
                                                                                     REC    10, LENGTH    84
 31469                                                                               REC    11, LENGTH    84
   1.32109800   0.17489014   1.54308319   0.92069416   1.49282320   5.00228775      REC    12, LENGTH    84
                                                                                     REC    13, LENGTH    84
 32869                                                                               REC    14, LENGTH    84
   1.32108499   0.17485690   1.54307060   1.32797949   1.00674219   4.97524619      REC    15, LENGTH    84
                                                                                     REC    16, LENGTH    84
041169                                                                               REC    17, LENGTH    84
1.321078     .17486923    1.5430760    1.74628699   .5208347     4.94821940         REC    18, LENGTH    84
-.034774874  -.001935128  128.293510                                                 REC    19, LENGTH    84
 42569                                                                               REC    20, LENGTH    84
   1.32107300   0.17483934   1.54309249   2.17095280   0.03489610   4.92114919      REC    21, LENGTH    84
                                                                                     REC    22, LENGTH    84
 5 969                                                                               REC    23, LENGTH    84
   1.32107100   0.17478523   1.54313529   2.59960580   5.83212799   4.89408690      REC    24, LENGTH    84
                                                                                     REC    25, LENGTH    84
052369                                                                               REC    26, LENGTH    84
1.321067     .17470039    1.5431537    3.03225870   5.3459233    4.86708800         REC    27, LENGTH    84
-.034772459  -.001929529  128.291820                                                 REC    28, LENGTH    84
060669                                                                               REC    29, LENGTH    84
1.321064     .17462031    1.5432099    3.46986420   4.8591817    4.89011980         REC    30, LENGTH    84
-.034771289  -.001925513  128.291350                                                 REC    31, LENGTH    84
 62069                                                                               REC    32, LENGTH    84
```

```
  1.32105500   0.17463482   1.54321459   3.91358149   4.37236500   4.81318575
 7 469
  1.32104999   0.17475426   1.54319829   4.36472476   3.88561487   4.78626639
 71869
  1.32104300   0.17489464   1.54316899   4.82230687   3.39971387   4.75937200
080169
1.321040     .17498067    1.5431278    5.28556240   2.9140015    4.73242520
-.034781747  -.001931867  128.287850
 81569
  1.32103699   0.17496272   1.54308139   5.75429749   2.42858189   4.70548207
 82969
  1.32102899   0.17493493   1.54305489   6.22909987   1.94286840   4.67646239
091269
1.321023     .17489411    1.5430476    .42682529    1.4568945    4.65143000
-.034780300  -.001937428  128.285480
092669
1.321017     .17486792    1.5430618    .91357452    .9708136     4.62436320
-.034780334  -.001936431  128.284600
101069
  1.32100599   0.17486120   1.54309669   1.40992700   0.48489510   4.59739357
102469
  1.32099099   0.17464107   1.54314910   1.92008780   6.28192288   4.57035059
110769
1.320971     .17476070    1.54322190   2.45159980   5.7959832    4.54335560
-.034783418  -.001925340  128.277910
```

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REC    33. LENGTH    84
REC    34. LENGTH    84
REC    35. LENGTH    84
REC    36. LENGTH    84
REC    37. LENGTH    84
REC    38. LENGTH    84
REC    39. LENGTH    84
REC    40. LENGTH    84
REC    41. LENGTH    84
REC    42. LENGTH    84
REC    43. LENGTH    84
REC    44. LENGTH    84
REC    45. LENGTH    84
REC    46. LENGTH    84
REC    47. LENGTH    84
REC    48. LENGTH    84
REC    49. LENGTH    84
REC    50. LENGTH    84
REC    51. LENGTH    84
REC    52. LENGTH    84
REC    53. LENGTH    84
REC    54. LENGTH    84
REC    55. LENGTH    84
REC    56. LENGTH    84
REC    57. LENGTH    84
REC    58. LENGTH    84
REC    59. LENGTH    84
REC    60. LENGTH    84
REC    61. LENGTH    84
REC    62. LENGTH    84
REC    63. LENGTH    84
REC    64. LENGTH    84
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    1.320556    .17460729    1.5438070   4.44202810    1.2118720   2.58425800                REC    97, LENGTH    84
  -.034862914  -.001888968   128.190450                                                       REC    98, LENGTH    84
100672                                                                                        REC    99, LENGTH    84
    1.320547    .17459662    1.5436939    .07873807     .2392427   2.53159280                REC   100, LENGTH    84
  -.034705316  -.001887070   128.418030                                                       REC   101, LENGTH    84
102072                                                                                        REC   102, LENGTH    84
    1.320545    .17453129    1.5436408   1.04495241    6.0358347   2.50519160                REC   103, LENGTH    84
  -.034890825  -.001902191   128.071840                                                       REC   104, LENGTH    84
```

ISIS 2

GSFC ORBITAL ELEMENTS, TAPE

71-024A-00E

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

DR#	DS#	D#	FILES	TIME SPAN
DR004678	DS004678	D012602	1	04/08/71 - 01/23/75

See 62-049A-00J for format

FATS070 CONTROL CARD TABLE SIZE IS 4096 BYTES

FATAR CONTROL CARDS

DR/DS004678
71-024A-00E

```
1--   ANALYZE BLP
2--   PRINT LF=1,B=ALL,CHAR
```

FATS071 TAPE BUFFER SIZE IS 65535 BYTES

FATS040 TAPEIN IS NOT LABELED - LABELS=NO ASSUMED

CHARACTERISTICS OF THE TAPE TO BE ANALYZED

UNIT	SERIAL	DEN	TRTCH
5A9	NC2005	38000	

FATAR DETAIL REPORT

BLOCK NUMBER	LNGTH/ DISPL	MESSAGE/ BLOCK TYPE	1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...80 (COLUMN GRID IS VALID ONLY FOR CHARACTER FORMATTED DATA)					
* * * * * * *		START FILE 1						
		FATS038 DATA FILE IN ISCII/ASCII - TRANSLATED TO EBCDIC						
1	86	PRINT REQUESTED	510471-024A ISIS B					
2	86	PRINT REQUESTED	040871					
3	86	PRINT REQUESTED	1.217800	.00446419	1.5386096	.71950436	2.1770779	5.10213640
4	86	PRINT REQUESTED	-.043245821	-.002796522	113.716596			
5	86	PRINT REQUESTED	042271					
6	86	PRINT REQUESTED	1.217799	.00450487	1.5386050	3.50042220	1.5920402	5.06289460
7	86	PRINT REQUESTED	-.043513563	-.002816753	113.416801			
8	86	PRINT REQUESTED	050671					
9	86	PRINT REQUESTED	1.217799	.00447034	1.5386183	.00370260	1.0017257	5.02365840
10	86	PRINT REQUESTED	-.043465275	-.002811994	113.468805			
11	86	PRINT REQUESTED	052071					
12	86	PRINT REQUESTED	1.217799	.00440435	1.5386433	2.79437070	.4073667	4.98444680
13	86	PRINT REQUESTED	-.043230491	-.002792421	113.733387			
14	86	PRINT REQUESTED	060371					
15	86	PRINT REQUESTED	1.217799	.00432497	1.5386806	5.59726040	6.0841362	4.94527620
16	86	PRINT REQUESTED	-.043428633	-.002803779	113.510156			

FATAR DETAIL REPORT

BLOCK NUMBER	LNGTH/ DISPL	MESSAGE/ BLOCK TYPE	1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...80 (COLUMN GRID IS VALID ONLY FOR CHARACTER FORMATTED DATA)					
17	86	PRINT REQUESTED	061771					
18	86	PRINT REQUESTED	1.217799	.00425038	1.5386991	2.13112040	5.4639409	4.90614530
19	86	PRINT REQUESTED	-.043538020	-.002810223	113.388406			
20	86	PRINT REQUESTED	070171					
21	86	PRINT REQUESTED	1.217799	.00422810	1.5387062	4.95235250	4.8397863	4.86705000
22	86	PRINT REQUESTED	-.043268659	-.002789711	113.690487			
23	86	PRINT REQUESTED	071571					
24	86	PRINT REQUESTED	1.217798	.00425878	1.5386986	1.48900366	4.2173050	4.82795890
25	86	PRINT REQUESTED	-.043323902	-.002794460	113.628300			
26	86	PRINT REQUESTED	072971					
27	86	PRINT REQUESTED	1.217798	.00432676	1.5386724	4.30699440	3.5971668	4.78884940
28	86	PRINT REQUESTED	-.043558309	-.002814093	113.365591			
29	86	PRINT REQUESTED	081271					
30	86	PRINT REQUESTED	1.217797	.00441502	1.5386309	.82755513	2.9918476	4.74969250
31	86	PRINT REQUESTED	-.043359943	-.002803086	113.587005			
32	86	PRINT REQUESTED	082671					
33	86	PRINT REQUESTED	1.217797	.00448670	1.5385984	3.62197680	2.3962416	4.71049370
34	86	PRINT REQUESTED	-.043252094	-.002797962	113.708623			
35	86	PRINT REQUESTED	090971					
36	86	PRINT REQUESTED	1.217797	.00451033	1.5385727	.12559265	1.8085240	4.67125640
37	86	PRINT REQUESTED	-.043518725	-.002819990	113.408147			
38	86	PRINT REQUESTED	092371					
39	86	PRINT REQUESTED	1.217797	.00449192	1.5385650	2.91333340	1.2200488	4.63199460
40	86	PRINT REQUESTED	-.043459634	-.002816298	113.476144			
41	86	PRINT REQUESTED	100771					

FATAR DETAIL REPORT

```
BLOCK  LNGTH/  MESSAGE/                1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...80
NUMBER DISPL   BLOCK TYPE                        (COLUMN GRID IS VALID ONLY FOR CHARACTER FORMATTED DATA)

   267    86  PRINT REQUESTED              1.2178289    .00434087    1.5387446    3.3017746    .08338049    1.3344808
   268    86  PRINT REQUESTED            -.043250744 -.0027850046    113.71187
   269    86  PRINT REQUESTED           010775
   270    86  PRINT REQUESTED              1.2178292    .00424376    1.5387106    4.0920647    5.7046942    1.2926259
   271    86  PRINT REQUESTED            -.043272406 -.0027895841    113.68659
   272    86  PRINT REQUESTED           012375
   273    86  PRINT REQUESTED              1.2178295    .00420048    1.5386544    2.8457768    4.9921849    1.2479087
   274    86  PRINT REQUESTED            -.043558559 -.0028156918    113.36518
   275    86  PRINT REQUESTED           000000
* * * * * * *  END OF FILE      1  -- FILE CONTAINED     275 BLOCKS
* * * * * * *  START FILE       2
               FATS038 DATA FILE IN ISCII/ASCII - TRANSLATED TO EBCDIC
* * * * * * *  END OF FILE      2  -- FILE CONTAINED       0 BLOCKS
FATS020 ANALYSIS TERMINATED AT TAPEMARK SEQUENCE
```

FINAL TOTALS

FILES READ	BLOCKS READ	BYTES READ	FEET READ	TEMP ERRS	PERM ERRS	FILES WRITTEN	BLOCKS WRITTEN
1	275	23650	2	0	0	0	0

```
 510471-024A ISIS 3                                                                                  REC     1, LENGTH    84
040871                                                                                               REC     2, LENGTH    84
1.217800     .00446419    1.5386096    .71950436    2.1770779    5.10213640                         REC     3, LENGTH    84
-.043245821  -.002796522  113.716596                                                                 REC     4, LENGTH    84
042271                                                                                               REC     5, LENGTH    84
1.217799     .00450487    1.5386050    3.50042220   1.5920402    5.05289460                         REC     6, LENGTH    84
-.043513563  -.002816753  113.416801                                                                 REC     7, LENGTH    84
050671                                                                                               REC     8, LENGTH    84
1.217799     .00447034    1.5386183    .00370260    1.0017257    5.02365840                         REC     9, LENGTH    84
-.043465275  -.002811994  113.468805                                                                 REC    10, LENGTH    84
052071                                                                                               REC    11, LENGTH    84
1.217799     .00440435    1.5386433    2.79437070   .4073667     4.98444680                         REC    12, LENGTH    84
-.043230491  -.002792421  113.733387                                                                 REC    13, LENGTH    84
060371                                                                                               REC    14, LENGTH    84
1.217799     .00432497    1.5386805    5.59726040   6.0841362    4.94527620                         REC    15, LENGTH    84
-.043428633  -.002803779  113.510156                                                                 REC    16, LENGTH    84
061771                                                                                               REC    17, LENGTH    84
1.217799     .00425038    1.5386991    2.13112040   5.4639409    4.90614530                         REC    18, LENGTH    84
-.043538020  -.002810223  113.388406                                                                 REC    19, LENGTH    84
071571                                                                                               REC    20, LENGTH    84
1.217798     .00425878    1.5386986    1.46900366   4.2173050    4.82795890                         REC    21, LENGTH    84
-.043323902  -.002794460  113.628300                                                                 REC    22, LENGTH    84
072971                                                                                               REC    23, LENGTH    84
1.217798     .00432576    1.5386724    4.30699440   3.5971668    4.78884940                         REC    24, LENGTH    84
-.043558309  -.002814093  113.365591                                                                 REC    25, LENGTH    84
081271                                                                                               REC    26, LENGTH    84
1.217797     .00441502    1.5386309    .82755513    2.9918475    4.74969250                         REC    27, LENGTH    84
-.043359943  -.002803086  113.587005                                                                 REC    28, LENGTH    84
082671                                                                                               REC    29, LENGTH    84
1.217797     .00448670    1.5385984    3.62197680   2.3962415    4.71049370                         REC    30, LENGTH    84
-.043252094  -.002797962  113.708623                                                                 REC    31, LENGTH    84
090971                                                                                               REC    32, LENGTH    84
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1.217797	.00451033	1.5385727	.12559265	1.8085240	4.67125640	REC	33,	LENGTH 84
-.043513725	-.002819990	113.408147				REC	34,	LENGTH 84
092371						REC	35,	LENGTH 84
1.217797	.00449192	1.5385650	2.91333340	1.2200488	4.63199460	REC	36,	LENGTH 84
-.043459634	-.002816298	113.476144				REC	37,	LENGTH 84
100771						REC	38,	LENGTH 84
1.217797	.00443804	1.5385902	5.70586830	.6269581	4.59272500	REC	39,	LENGTH 84
-.043227512	-.002796870	113.736711				REC	40,	LENGTH 84
102171						REC	41,	LENGTH 84
1.217797	.00435923	1.5386155	2.22579460	.0234806	4.55349680	REC	42,	LENGTH 84
-.043425956	-.002809336	113.513501				REC	43,	LENGTH 84
110471						REC	44,	LENGTH 84
1.217797	.00428212	1.5386563	5.03717680	5.6950072	4.51431230	REC	45,	LENGTH 84
-.043536533	-.002813898	113.389370				REC	46,	LENGTH 84
111871						REC	47,	LENGTH 84
1.217797	.00423432	1.5386925	1.57704981	5.0718847	4.47517830	REC	48,	LENGTH 84
-.043272025	-.002791160	113.686205				REC	49,	LENGTH 84
120271						REC	50,	LENGTH 84
1.217795	.00424323	1.5387254	4.40599220	4.4430362	4.43609310	REC	51,	LENGTH 84
-.043328802	-.002792448	113.622722				REC	52,	LENGTH 84
121671						REC	53,	LENGTH 84
1.214795	.00427661	1.5387193	.94022065	3.8260345	4.39703420	REC	54,	LENGTH 84
-.043560690	-.002810095	113.362892				REC	55,	LENGTH 84
123071						REC	56,	LENGTH 84
1.217795	.00435224	1.5386930		3.2100257	4.35797940	REC	57,	LENGTH 84
-.043359535	-.002797586	113.589077				REC	58,	LENGTH 84
011372						REC	59,	LENGTH 84
1.217795	.00445134	1.5386629	.27735921	2.5086043	4.31889820	REC	60,	LENGTH 84
-.043248834	-.002792051	113.713741				REC	61,	LENGTH 84
012772						REC	62,	LENGTH 84
1.217795	.00449661	1.5386422	5.07140650	2.0167304	4.27978610	REC	63,	LENGTH 84
-.043514703	-.002813542	113.416171				REC	64,	LENGTH 84

021072 REC 65, LENGTH 84

1.217795 .00450792 1.5386207 5.85131850 1.4293413 4.24064300 REC 66, LENGTH 84

-.043465557 -.002811803 113.46887 REC 67, LENGTH 84

022472 REC 68, LENGTH 84

1.217794 .00445783 1.5386264 2.37122650 .8390432 4.20150360 REC 69, LENGTH 84

-.043231429 -.002793972 113.732457 REC 70, LENGTH 84

030972 REC 71, LENGTH 84

1.217793 .00438964 1.5386511 5.17380080 .2395962 4.16237710 REC 72, LENGTH 84

-.043424723 -.002806089 113.514619 REC 73, LENGTH 84

032372 REC 74, LENGTH 84

1.217794 .00431509 1.5387037 1.70360361 5.9131582 4.12327200 REC 75, LENGTH 84

-.043543155 -.002810194 113.382640 REC 76, LENGTH 84

040672 REC 77, LENGTH 84

1.217794 .00425553 1.5387703 4.53016560 5.2902324 4.08422370 REC 78, LENGTH 84

-.043276916 -.002784672 113.682298 REC 79, LENGTH 84

042072 REC 80, LENGTH 84

1.217794 .00424702 1.5388247 1.07483172 4.6662756 4.04524200 REC 81, LENGTH 84

-.043315974 -.002782767 113.639021 REC 82, LENGTH 84

050472 REC 83, LENGTH 84

1.217793 .00428252 1.5388372 3.90286740 4.0423684 4.00630210 REC 84, LENGTH 84

-.043558515 -.002799503 113.367999 REC 85, LENGTH 84

051872 REC 86, LENGTH 84

1.217793 .00435644 1.5388462 .43994471 3.4264990 3.96738870 REC 87, LENGTH 84

-.043377828 -.002785416 113.569856 REC 88, LENGTH 84

060172 REC 89, LENGTH 84

1.217793 .00444241 1.5388380 3.24699060 2.8241047 3.92849330 REC 90, LENGTH 84

-.043247298 -.002776550 113.717450 REC 91, LENGTH 84

061572 REC 92, LENGTH 84

1.217793 .00450105 1.5388265 6.04438680 2.2315097 3.88960470 REC 93, LENGTH 84

-.043509445 -.002796835 113.422357 REC 94, LENGTH 84

062972 REC 95, LENGTH 84

1.217793 .00452076 1.5388022 2.55646520 1.6414232 3.85067970 REC 96, LENGTH 84

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  -.043483357  -.002797069   113.453318                                                  REC    97, LENGTH    84
071372                                                                                    REC    98, LENGTH    84
     1.217793    .00447921    1.5387872   5.35075320    1.0533525   3.81174360          REC    99, LENGTH    84
  -.043234988  -.002780109   113.731624                                                  REC   100, LENGTH    84
072772                                                                                    REC   101, LENGTH    84
     1.217792    .00441939    1.5387873   1.86787683     .4585025   3.77277930          REC   102, LENGTH    84
  -.043403705  -.002792518   113.541430                                                  REC   103, LENGTH    84
081072                                                                                    REC   104, LENGTH    84
     1.217792    .00434252    1.5388107   4.67919890    6.1360170   3.73364170          REC   105, LENGTH    84
  -.043551243  -.002801304   113.376132                                                  REC   106, LENGTH    84
082472                                                                                    REC   107, LENGTH    84
     1.217792    .00426712    1.5388479   1.21818931    5.5196491   3.69493570          REC   108, LENGTH    84
  -.043296396  -.002779276   113.661374                                                  REC   109, LENGTH    84
090772                                                                                    REC   110, LENGTH    84
     1.217792    .00422854    1.5388991   4.04775020    4.8961494   3.65607890          REC   111, LENGTH    84
  -.043304121  -.002775336   113.653255                                                  REC   112, LENGTH    84
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1.217798	.00425878	1.5386986	1.48900366	4.2173050	4.62795890
-.043323902	-.002794430	113.628300			
072971					
1.217798	.00432576	1.5386724	4.30699440	3.5971668	4.78884940
-.043558309	-.002814093	113.365591			
081271					
1.217797	.00441502	1.5386309	.82755513	2.9918476	4.74969250
-.043359943	-.002803086	113.587005			
082671					
1.217797	.00448670	1.5385984	3.62197680	2.3962415	4.71049370
-.043252094	-.002797962	113.708623			
090971					
1.217797	.00451033	1.5385727	.12559265	1.8085240	4.67125640
-.043518725	-.002819990	113.408147			
092371					
1.217797	.00449192	1.5385650	2.91333340	1.2200488	4.63199460
-.043459634	-.002816298	113.476144			
100771					
1.217797	.00443804	1.5385902	5.70586630	.6269581	4.59272500
-.043227512	-.002796870	113.736711			
102171					
1.217797	.00435923	1.5386155	2.22579460	.0234806	4.55349680
-.043425956	-.002809336	113.513501			
110471					
1.217797	.00428212	1.5386563	5.03717680	5.6950072	4.51431230
-.043536533	-.002813898	113.389370			
111871					
1.217797	.00423432	1.5386925	1.57704981	5.0718847	4.47517830
-.043272025	-.002791160	113.686205			
120271					
1.217796	.00424323	1.5387254	4.40599220	4.4430362	4.43609310
-.043328802	-.002792448	113.622722			

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REC    30, LENGTH    84
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REC    32, LENGTH    84
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121671
1.214796      .00427661     1.5387193     .94022065     3.8260345     4.39703420
-.043560690  -.002810095  113.362892
123071
1.217795      .00435224     1.5386930                   3.2100257     4.35797940
-.043359535  -.002797586  113.589077
011372
1.217795      .00445134     1.5386629     .27735921     2.6086043     4.31889820
-.043248834  -.002792051  113.713741
012772
1.217795      .00449661     1.5386422     3.07140660    2.0167304     4.27978610
  -.043514703  -.002813542   113.416171
021072
     1.217795     .00450792     1.5386207    5.86131850     1.4293413     4.24064300
  -.043465557  -.002811803   113.46887
022472
     1.217794     .00445783     1.5386264    2.37122650      .8390432     4.20150360
  -.043231429  -.002793972   113.732457
030972
     1.217793     .00438964     1.5386511    5.17380080      .2395962     4.16237710
  -.043424723  -.002806089   113.514619
032372
     1.217794     .00431509     1.5387037    1.70360361     5.9131582     4.12327200
  -.043543155  -.002810194   113.382640
040672
     1.217794     .00425553     1.5387703    4.53016560     5.2902324     4.08422370
  -.043276916  -.002784672   113.682298
042072
     1.217794     .00424702     1.5388247    1.07483172     4.6662756     4.04524200
  -.043315974  -.002782767   113.639021
050472
     1.217793     .00428252     1.5388372    3.90286740     4.0423684     4.00630210
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REC     64, LENGTH     84
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-.043558515 -.002799503 113.367999

051872

1.217793 .00435644 1.5388462 .43994471 3.4264990 3.96738670

-.043377828 -.002785416 113.569856

060172

1.217793 .00444241 1.5388380 3.24699060 2.8241047 3.92849330

-.043247298 -.002776550 113.717450

061572

1.217793 .00450105 1.5388265 5.04438680 2.2316097 3.88960470

-.043509445 -.002796835 113.422357

062972

1.217793 .00452076 1.5388022 2.55646520 1.6414232 3.85067970

-.043483357 -.002797069 113.453318

071372

1.217793 .00447921 1.5387872 5.35075320 1.0533525 3.81174360

-.043234988 -.002780109 113.731624

072772

1.217792 .00441939 1.5387873 1.86787683 .4565025 3.77277930

-.043403705 -.002792518 113.541450

081072

1.217792 .00434252 1.5388107 4.67919890 6.1360170 3.73384170

-.043551243 -.002801304 113.376132

082472

1.217792 .00426712 1.5388479 1.21818931 5.5196491 3.69493570

-.043296396 -.002779278 113.651374

090772

1.217792 .00422854 1.5388991 4.04775020 4.8961494 3.65607890

-.043304121 -.002775336 113.653255

092172

1.217792 .00424483 1.5389467 .59678683 4.2703971 3.61728910

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100572

REC 65. LENGTH 84

REC 66. LENGTH 84

REC 67. LENGTH 84

REC 68. LENGTH 84

REC 69. LENGTH 84

REC 70. LENGTH 84

REC 71. LENGTH 84

REC 72. LENGTH 84

REC 73. LENGTH 84

REC 74. LENGTH 84

REC 75. LENGTH 84

REC 76. LENGTH 84

REC 77. LENGTH 84

REC 78. LENGTH 84

REC 79. LENGTH 84

REC 80. LENGTH 84

REC 81. LENGTH 84

REC 82. LENGTH 84

REC 83. LENGTH 84

REC 84. LENGTH 84

REC 85. LENGTH 84

REC 86. LENGTH 84

REC 87. LENGTH 84

REC 88. LENGTH 84

REC 89. LENGTH 84

REC 90. LENGTH 84

REC 91. LENGTH 84

REC 92. LENGTH 84

REC 93. LENGTH 84

REC 94. LENGTH 84

REC 95. LENGTH 84

REC 96. LENGTH 84

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     1.217791     .00429337    1.5389774   3.42279520    3.6512499   3.57852530
  -.043399267  -.002775419   113.548577
101972
     1.217791     .00437526    1.5390035   6.23920460    3.0422236   3.53980650
  -.043239564  -.002761435   113.729130
110272
     1.217791     .00445266    1.5390047   2.76316460    2.4428166   3.50110660
  -.043489761  -.002779631   113.449274
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REC     97. LENGTH     84
REC     98. LENGTH     84
REC     99. LENGTH     84
REC    100. LENGTH     84
REC    101. LENGTH     84
REC    102. LENGTH     84
REC    103. LENGTH     84
REC    104. LENGTH     84
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