#308

APOLLO 16

FAR UV CAMERA/SPECT

72-031C-10B

APOLLO 16

DIGITIZED IMAGES ON MAG TAPE

72-031C-10B

This data set has been restored. There were originally 26 7-track, 800 BPI tapes written in Binary. There are six restored tapes. The DR tapes are 3480 cartridges and the DS tapes are 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	
DR004410	DS004410	D023995	1 - 35	04/21/72 - 04/23/72	(a)
		D023996	36 - 112	04/21/72 - 04/23/72	(b)
		D023997	113 - 121	04/21/72 - 04/23/72	
		D023998	122 - 130	04/21/72 - 04/23/72	
		D023999	131 - 138	04/21/72 - 04/23/72	
DR004411	DS004411	D024000	1 - 9	04/21/72 - 04/23/72	(c)
		D024001	10 - 18	04/21/72 - 04/23/72	
		D024002	19 - 27	04/21/72 - 04/23/72	
		D024003	28 - 36	04/21/72 - 04/23/72	
		D024004	37 - 45	04/21/72 - 04/23/72	
DR004412	DS004412	D024005	1 - 9	04/21/72 - 04/23/72	
		D024006	10 - 18	04/21/72 - 04/23/72	(d)
		D024007	19 - 27	04/21/72 - 04/23/72	
		D024008	28 - 36	04/21/72 - 04/23/72	
		D024009	37 - 47	04/21/72 - 04/23/72	
DR004413	DS004413	D024010	1 - 9	04/21/72 - 04/23/72	
		D029054	10 - 16	04/21/72 - 04/23/72	
		D029055	17 - 24	04/21/72 - 04/23/72	(e)
		D029056	25 - 33	04/21/72 - 04/23/72	
		D029057	34 - 48	04/21/72 - 04/23/72	
DR004414	DS004414	D029058	1 - 19	04/21/72 - 04/23/72	(f)
		D029059	20 - 24	04/21/72 - 04/23/72	
		D029060	25 - 36	04/21/72 - 04/23/72	
		D029061	37 - 55	04/21/72 - 04/23/72	
		D029062	56 - 70	04/21/72 - 04/23/72	(g)
DR004415	DS004415	D029063	1 - 12	04/21/72 - 04/23/72	

(a) D023995: Read errors occurred on records 656, 657, 658, 659, 660, 661, 662, 663, 664, 775 of file 29.
(b) D023996: Read error occured on record 143 of file 12 and record 217 of file 16.
(c) D024000: Read errors occurred on records 501, 673, 694, 705, 726, 757, 831 of file 1 and record 384 of file 2.
(d) D024006: Read errors occurred on records 684, 939, 980, 1023 of file 9.
(e) D029055: Read error occurred on record 516 of file 1.
(f) D029058: Read error occurred on record 2 of file 1.
(g) D029062: Read errors occurred on records 18, 628, 629, 630, 631, 632, of file 1.

REQ. AGENT	RAND NO.	ACQ. AGENT
WKD	RB5596	TNK

APOLLO 16

FAR UV CAMERA/SPECT

72-031C-10B

This data set consists of ~~30~~ 26, 800 BPI, Binary, Multi-filed, 7 track magnetic tapes. These tapes contain the digitized results of microdensitometering the 209 mission frames from the Apollo 16 experiment, "Far UV Camera."

The time spans for the tapes are:

TAPE #	D#	C#	FILES	TIME SPAN
UV72M	D-13961	C-14539	15	4/21/72 - 4/23/72
UV72N	D-13962	C-14540	15	4/21/72 - 4/23/72
UV72O	D-13963	C-14541	15	4/21/72 - 4/23/72
UV72Q	D-13965	C-14542	15	4/21/72 - 4/23/72
UV72R	D-13966	C-14543	15	4/21/72 - 4/23/72
UV72S	D-13967	C-14544	15	4/21/72 - 4/23/72
UV72T	D-13968	C-14545	17	4/21/72 - 4/23/72
UV72U	D-13969	C-14546	15	4/21/72 - 4/23/72
UV72B	D-13970	C-14547	15	4/21/72 - 4/23/72
UV72C	D-13971	C-14548	15	4/21/72 - 4/23/72
UV72D	D-13972	C-14549	15	4/21/72 - 4/23/72
UV72E	D-13973	C-14550	15	4/21/72 - 4/23/72
UV72F	D-13974	C-14551	15	4/21/72 - 4/23/72
UV72G	D-13975	C-14552	15	4/21/72 - 4/23/72
UV72H	D-13976	C-14553	17	4/21/72 - 4/23/72
UV72I	D-13977	C-14554	15	4/21/72 - 4/23/72
UV72J	D-13978	C-14555	15	4/21/72 - 4/23/72

These tapes were released 3/7/77
Replacements
D23995-24010
29054-29063

This catalog is composed of 476 pages submitted by Dr. T. Page to accompany the magnetic tapes that contain the results of microdensitometering, using the Dicomed Model 57 Microdensitometer, the 209 mission frames gathered on the lunar surface (17:51:53 GMT 4/21/72 to 17:40:14 GMT 4/23/72) by the Apollo 16 "Far UV Camera/Spectrometer" experiment. The 209 mission frames included 190 "pictures" and 19 calibration frames. A number of these mission frames were microdensitometered more than once. In addition, during the process of doing the microdensitometer scans many scans were made of a gray-scale step-wedge as a qualitative control variable on the scanning procedure. In all, 476 scans were made, and the information on each scan is contained on a single page.

The nature of the information given on each scan make this catalog useful for three purposes:

(1) As the source of general information on each of the mission frames, as the pages give data on camera pointing, time of exposure, filter(s) used, exposure time, objects visible, etc.

(2) As a useful adjunct to the viewing of the mission frames.

(3) As an essential guide in determining the location of the microdensitometer scan(s) of the mission frames on the digitized scan data tapes; and, the source of information on how the scans were performed, and the size of the scans.

Copies (B/W negatives, 70mm) of the 209 mission frames are stored at the NSSDC under the Data Set number 72-031C-10A. The thirty magnetic tapes containing the microdensitometer scan data are at the NSSDC under Data Set number 72-031C-10B. A person may order either data set, or a sub-set of either set, from the NSSDC.

There follows an index giving the page location(s) for each of the 190 "picture" mission frames in this catalog.

Thomas Kelsall
Acquisition Scientist
NSSDC
27 May 1974

INDEX FOR THE 190 MISSION-FRAMES OF UV "PICTURES"

Lunar Surface Exposure Number	Catalog Page(s)
1	23
2	24
3	26,358,373
4	27,408,425
5	28,307
6	29
7	32
8	34,374
9	35
10	37
11	38
12	39,327
13	41,426,458
14	42,427
15	43
16	44,326
17	47
18	48,375
19	49,325
20	50
21	52,407,428,429
22	53,306
23	54,303
24	56
25	57
26	58,376,431,459
27	59,324,432
28	62
29	63,433,461
30	64
31	65,378,462
32	67
33	68
34	69
35	71,321,379,463
36	72
37	73,320
38	74
39	77,464
40	78,380
41	79,302
42	80
43	82
44	83,381
45	84
46	86
47	87
48	88
49	89,383,466
50	92,319,434
51	93,301
52	94
53	95
54	97
55	98
56	99
57	101
58	102
59	103
60	104
61	107
62	108
63	109
64	110
65	112
66	113
67	114
68	116
69	117,384
70	120,318
71	121,300
72	124
73	125
74	126
75	127
76	129
77	130
78	131
79	133
80	134
81	135
82	136
83	139
84	140
85	141
86	142
87	144
88	145
89	146
90	148
91	149
92	150
93	151
94	154,298
95	155,315
96	156
97	157
98	158,385,467
99	160,314,435
100	161,297
101	163
102	164
103	165
104	166
105	169,357,388
106	170,296,405,436
107	171,311
108	172
109	174,356
110	175,389
111	176,313,390,438
112	178
113	179
114	180
115	181
116	184
117	185
118	186
119	187,404,468
120	189
121	190
122	191
123	193
124	194
125	195,392,469
126	196,294,439
127	199,309
128	200
129	201
130	202,355
131	204
132	205,393,470
133	206,293,440
134	208,308
135	209
136	210
137	211
138	214
139	215
140	216
141	217

INDEX FOR THE 190 MISSION-FRAMES OF UV "PICTURES"

Lunar Surface Exposure Number	Catalog Page(s)
142	219
143	220
144	221
145	223
146	224
147	225
148	226
149	229
150	230
151	231
152	232,394
153	234,292,443
154	235
155	236
156	238
157	239
158	240,395
159	241
160	244
161	245
162	246
163	247
164	249
165	250
166	251
167	253
168	254,340
169	255
170	256,341
171	259,342
172	260,343,397
173	261,398,444
174	262,291
175	264,345
176	265,346
177	266
178	268,347
179	269,399
180	270,288,445
181	271
182	274
183	275
184	276,349,400
185	277,403,446
186	279
187	280
188	281,350
189	283,351
190	352

TAPE UV72A

FILE 1 OF TAPE NUMBER UV72A

MISSION FRAME 901

FRAME TYPE:

FILTER TYPE: N/A .

TARGET NUMBER 0

TARGET DESIGNATION: GRAY-SCALE

DATE OF EXPOSURE: 00/00/00

TIME OF EXPOSURE (GMT): 00:00:00

DURATION OF EXPOSURE .00 MIN.

AZIMUTH SETTING (NOMINAL): .000 DEG.

ELEVATION SETTING (NOMINAL): .000 DE

RIGHT ASCENSION (C-O-F): .000 DEG.

DECLINATION (C-O-F): .000 DEG.

ANGLE FROM LOCAL ZENITH TO
NORTH CELESTIAL POLE: .000 DEG.

SCAN INFORMATION

SCAN SEQUENCE NUMBER 1

SCANNER LIGHT LEVEL SETTING: 5

DATE OF SCAN: 05/23/72

TIME OF SCAN: 18:52:00

NUMBER OF ELEMENTS PER SCAN LINE: 1024

NUMBER OF LINES PER FRAME: 50

ADDITIONAL FRAME INFORMATION

FIRST SCAN OF THE FABRICATED (NON-MISSION) FRAME CONTAINING THE GREY-SCALE STEP WEDGE. THIS FRAME TO BE RE-SCANNED AT REGULAR INTERVALS OF TIME (AFTER EVERY FOURTH MISSION FRAME SCANNED) TO TRACK SCANNER DRIFT ON DENSITY LEVELS.

Poor Original

FILE 2 OF TAPE NUMBER UV72A

MISSION FRAME 3

FRAME TYPE: CALIBRATION/ I-S

FILTER TYPE: NONE

TARGET NUMBER 0

TARGET DESIGNATION: I(2)-A LAMP

DATE OF EXPOSURE: 04/01/72

TIME OF EXPOSURE (GMT): 00:00:00

DURATION OF EXPOSURE 1.50 MIN.

AZIMUTH SETTING (NOMINAL): .000 DEG.

ELEVATION SETTING (NOMINAL): .000 DE

RIGHT ASCENSION (C-O-F): .000 DEG.

DECLINATION (C-O-F): .000 DEG.

ANGLE FROM LOCAL ZENITH TO
NORTH CELESTIAL POLE: .000 DEG.

SCAN INFORMATION

SCAN SEQUENCE NUMBER 2

SCANNER LIGHT LEVEL SETTING: 5

DATE OF SCAN: 05/23/72

TIME OF SCAN: 17:00:00

NUMBER OF ELEMENTS PER SCAN LINE: 1024

NUMBER OF LINES PER FRAME: 1024

ADDITIONAL FRAME INFORMATION

THE FIRST DIGITIZED CALIBRATION FRAME.CALIBRATION FRAMES
EXPOSED AT NRL (HYDROGEN-ARGON LAMP SOURCE) PRIOR TO APOLLO
16 MISSION.TO BE USED FOR CONVERTING FILM DENSITY VALUES TO
FLUX VALUES.THIS FRAME HAS ABOUT 10 VISIBLE SCRATCHES.
% 'SPECKS' - IMAGE OF LAMP SOURCE-IMAGE FAINT.APPROX. C-O-F.

Poor Original

TAPE #	D#	C#	FILES	TIME SPAN
UV72K	D-13979	C-14556	15	4/21/72 - 4/23/72
UV72V	D-13980	C-14557	18	4/21/72 - 4/23/72
UV72W	D-13981	C-14558	16	4/21/72 - 4/23/72
UV73A	D-13982	C-14559	15	4/21/72 - 4/23/72
UV73B	D-13983	C-14560	6	4/21/72 - 4/23/72
UV73C	D-13984	C-14561	27	4/21/72 - 4/23/72
UV73D	D-13985	C-14562	15	4/21/72 - 4/23/72
UV73E	D-13986	C-14563	12	4/21/72 - 4/23/72
UV73F	D-13987	C-14564	28	4/21/72 - 4/23/72
UV73G	D-13988	C-14565	6	4/21/72 - 4/23/72
UV73H	D-13989	C-14566	29	4/21/72 - 4/23/72
UV72A	D-13990	C-14567	15	4/21/72 - 4/23/72
UV72L	D-13960	C-14705	15	4/21/72 - 4/23/72

See 1st Page

DR/DS004413
D29054

RECORD 1 OF FILE 12
LENGTH = 1536 BYTES

1(1)	030031030031	033032031031	031030027027	032033032031	030030031032	031030027030	027027030027	027031032032
9(49)	031030027030	032031032031	031032033032	032031030027	030033032031	032032031030	031031030032	031030031030
17(97)	032033032031	031031027031	032031030030	031032031031	030032031030	032034032032	033034034033	033032031030
25(145)	032034033032	032032031034	033031030031	030027030030	031030031030	033034033030	031032031030	032032032032
33(193)	031030030030	031031030030	031030030033	032031032032	031031030031	031032033033	032031032031	031030031031
41(241)	031031031031	031032033034	035034033032	031030027030	032033032032	031032031030	033034033032	032033032035
49(289)	034033032032	032031030031	033033032032	031031030027	030031030030	033032031030	030027032031	027027031030
57(337)	027031030027	030032033031	030030030032	031032032031	030031030032	031030031030	030030032034	032031030030
65(385)	031031030031	032032032032	031031030030	030031033034	033032031030	032031030027	027030030031	031030030027
73(433)	031032032031	030032031030	030030030030	031030027030	031031031030	031032032031	031030030032	031031031030
81(481)	030031031032	032031032032	033032031030	032033033033	032032031032	031030030031	030030027031	032030030031
89(529)	030031031030	030031032031	030031032032	031031033032	033032032032	032031032031	031032033032	031030030030
97(577)	032032033033	033033032032	033032031031	030027030032	031030030031	031032032032	032032032031	031031031030
105(625)	031031031033	034034033032	032034033032	032032031032	032034035034	033032032034	033033034034	033032031031
113(673)	033032032033	032031032034	034033032032	032032033032	031031031032	033033033033	032031032032	033033035034
121(721)	034034034033	033033032031	032032031031	032031031033	033034033033	035035035035	035034033034	034033033032
129(769)	033034034033	032033033033	035036035035	036035035035	034033035035	034034035034	034034034033	033033034033
137(817)	034033031032	033033033034	035035034033	034033033032	034034034034	034034034036	035034034035	034034034034
145(865)	036035032032	033033034034	034033033033	032032034033	033034034033	033032033035	037036034035	034033032032
153(913)	034033032033	035035034034	034035034034	035035034035	033034034035	034035035034	034033033032	033034033032
161(961)	034034033033	032033032033	033032031033	032032032031	030032033032	032032033033	032032033032	032032033032
169(1009)	031031033033	033033032033	034035034033	032032031030	032033032034	034033033033	033032031032	031030030031
177(1057)	033034035034	033033031032	034034033032	031032034033	032032033032	032032033033	033032031030	031033034033
185(1105)	032032032032	033031030032	031032033032	034035033032	032033034034	033031031032	033034033032	031032032032
193(1153)	032031030031	032031031033	032032032033	032031031031	031032033032	031033033033	032031032032	031031033034
201(1201)	033032032033	033032032034	033031031032	031031031030	031033032032	033032032032	032032032033	032031032031
209(1249)	031032032031	030030031032	033031031032	031032032032	033031030030	030030031032	032032033032	031032031032
217(1297)	033032031031	033033032032	033033031030	031033033032	031030031033	032032032032	033032032032	031030031033
225(1345)	031031031031	032032031030	031032032032	033032033032	032032032031	031031031031	032032033033	032031030032
233(1393)	031031033033	031031030030	027031032031	031032031030	027030030032	032031030031	031031031030	031031031030
241(1441)	031030030032	032032031030	030027026027	030031031030	027030030030	031030030031	030030030030	030030030027
249(1489)	027030027030	030030030030	027027030030	027026027031	031032031027	026031031030	032031030030	031031030030

RECORD 2 OF FILE 1
LENGTH = 1536 BYTES

1(1)	031030030032	031030031030	031033033033	032031030031	035034033030	030031030027	031030032033	032031031030
9(49)	030030032032	032031031032	031031031030	032032032032	032032032031	030031032032	031031030030	033033032032
17(97)	031030032032	031031031030	030031032032	032032031031	030031031034	033034033033	033031031032	032031032033
25(145)	031031031030	031033033032	031031032032	031030031031	031030031034	033031031032	032031032031	032035034032
33(193)	031031031030	030030030032	031030032034	033030030031	030030032032	033032031031	032031030032	034033032031
41(241)	030030031032	034034034033	032031030031	031030032032	033031031031	032032032032	033033032033	031032033033
49(289)	033032031031	032032033032	031032032032	031033032031	031031033034	033030030031	031031031032	031031031034
57(337)	033027027031	031030031030	027030032032	032031031032	032031030027	030032032032	032032031031	030032032032
65(385)	033032032033	032031032033	032031031031	032034033031	031031030030	032032032031	031032032030	027027030031
73(433)	031032032033	033031032031	031031031030	027027030030	031030031032	032031030030	030031030032	031030030031
81(481)	031033031030	032032032033	033031032033	032031031032	032032032031	031030027030	031030032031	031031031032
89(529)	030027027031	031032033032	031030031033	034033032032	031032031030	032033032031	032031032032	031030032033
97(577)	032031032031	031032032031	031032031030	031031031030	032032032034	033032032033	033033031032	033033032032
105(625)	033034035035	035034033033	032032033033	033033033034	035034034033	034035034033	033033033032	031031032032
113(673)	033033034033	032033032033	033033034033	034034033032	033033033033	033032032031	031033032032	033032032032
121(721)	033034034033	031031033032	031031031031	032034034033	033034035034	034034033033	034035034033	034033032033
129(769)	033032034033	032031033032	034035035034	033036034032	033035034033	032034036035	034034033033	036036035034
137(817)	033032033033	032034035034	032032032033	032033034034	033034035035	034036036036	035034033034	034033036037
145(865)	035033033034	034033035034	033034035034	033032032033	034033033032	033035035034	033034034034	033034034033
153(913)	033034036035	035034034035	035034035034	034035034034	035036035036	035033033035	035033032033	033034033032
161(961)	032033033033	033032032033	034034033032	031031031030	033032031030	033032032033	034033031032	033033034034
169(1009)	033031032032	032032034034	034033032033	031030031032	032033033032	034033034033	032032031031	031030032034
177(1057)	034033032032	031031034033	032034033031	033032033033	032032033033	033032031031	032031030032	035034033033
185(1105)	033032033032	031032032031	031031033034	033032033034	035034033032	032033034034	035034033031	031031032031
193(1153)	031032033033	032032033034	033034034033	031032033032	033032031033	034034034033	034033033032	033033032032
201(1201)	034034033033	033034033031	032032031030	031030031031	032033033033	032033032033	033033033032	031032032031
209(1249)	030031031031	032033034034	033033032031	031031033032	031032032031	031034034033	032033032033	031031031030
217(1297)	031032033032	032031031032	033032031033	032031031032	032034033032	032033032032	033033033032	032031031032
225(1345)	032031032033	032032033033	032031032032	032033033032	031031031032	033032032032	032032032032	032031030031
233(1393)	031031031031	031031030031	031031030033	031030031031	030031032032	031031031032	033032031031	030030031031
241(1441)	032033031030	027030030027	027030032032	031030031031	030030031030	030030030030	027027030030	030030027027
249(1489)	027027027027	031030027027	030031030030	027030030030	030027027031	031032032031	030031032032	031031031030

RECORD 1024 OF FILE 1
LENGTH = 1536 BYTES

1(1)	033033034034	034035037036	034033035036	035034035034	035035035034	033033034034	034034034035	036036035034
9(49)	034034033033	034034034033	033033033033	034034035034	033033033031	034036035034	035035034033	033032033034
17(97)	033033032031	032032032032	031031032032	034036035034	034034033032	032032034034	034033032032	031031030031
25(145)	033033032032	032031030030	032031031030	031031032033	031030031031	031031031030	030030030031	031032033032
33(193)	032033032032	033032032031	030031031030	030030030031	031030027030	031031032032	031030030032	031032032031
41(241)	030031031031	030031032031	030031032033	031030030027	027027026026	031031031032	031030030027	027027031031
49(289)	030030027030	031030032031	030030027027	030032032032	034033031032	032031030031	030030030031	032031030030
57(337)	032031030027	027027026030	031030030027	027027027030	031030027027	027027031031	030031031030	027027027026
65(385)	026030030027	027027027031	030030031030	031030027026	030031030030	030027030030	027030030030	031030030030
73(433)	027027031031	030030031030	030027027027	030032032031	030030031031	031030027027	027027030030	032032031031
81(481)	032033030030	030027030033	032031030031	031032031030	032033034034	033033034033	032034033030	034033032031
89(529)	033032032032	031031031032	034033033032	035034033035	034035034034	034034034035	035034036036	035034034035
97(577)	035034034036	036037036037	040041040040	037037036035	034036035036	041037036035	036041040037	037036036036
105(625)	036037037036	036040041040	037036036037	041040037036	040040037036	037037036037	040040037036	035035035040
113(673)	040036035035	037037037037	041040037040	040037036036	040040037040	040037036037	037036037037	037037037037
121(721)	036040037036	037037036040	040037037042	041041041041	041040037040	037036037040	037037040037	040037037040
129(769)	040037037040	040037036036	037037036036	036035036037	040042040037	037040041040	037036040042	041037040041
137(817)	040040037037	040040040040	037037042041	037036037037	037037041040	041040037037	041041042043	042041037040
145(865)	042041037037	041041040037	040040037040	040040040037	037040042042	042041040041	041040040041	040037040041
153(913)	041037036037	037041041040	042042040037	040040040040	042042042041	042041036037	042041040040	037036037040
161(961)	037036037040	040040041040	037037036037	040037037037	037040037036	035034035035	036036036036	037036035034
169(1009)	036036036035	034033032035	034035036036	036035034035	034034035034	036037036035	034034033033	036035036036
177(1057)	035034035034	034033033033	032031031035	035034036035	034033032033	035034034034	033032034036	035035034033
185(1105)	033035034033	033033034034	033032032034	034033033035	034034033033	032033032034	034033033033	034035034034
193(1153)	034034035035	034036035034	035034033033	034035035034	033033033032	034033032033	034035035036	035036035034
201(1201)	033032034034	034033033034	034034033033	033034035034	036037036036	035034033034	036035033033	034034035035
209(1249)	034033034033	033034035035	035034034034	035035034035	035035035035	035036036036	036035035036	036036037036
217(1297)	035034035035	035036041037	035034036035	033033035035	034036036035	034036035036	036034033033	035034033035
225(1345)	034034034035	036035034034	034034034036	035034034035	036037036035	034035034034	035035037037	036035034034
233(1393)	034035035035	035035034035	035037036036	036035036035	034036035034	034036035034	035035035035	035035036037
241(1441)	036035035034	036036035034	033036037036	035034036036	034033033035	034034034035	036036035036	035034034034
249(1489)	034036036035	035035035035	035035034035	035037040037	036035034035	036035034036	035035034034	034035035034

1024 RECORDS IN FILE 1 OF TAPE

RECORD 1023 OF FILE 1
LENGTH = 1536 BYTES

1(1)	032032033033	033034036035	033033033035	035034034033	033034035034	033033033033	034035034034	033034034033
9(49)	033032032034	033033033032	033032032033	033032033032	031031032032	033036035033	034034033032	034033033035
17(97)	033032032032	032031030030	030032032032	034034033032	032034033031	032032032033	032031030027	030031032033
25(145)	032033033033	032032031031	031031031031	032031031032	031030031032	031032032031	031033032031	030031033032
33(193)	031031032031	030032032032	031030031031	031030031031	030031030027	030031030031	031031031031	031031030027
41(241)	027031032031	030030031031	031030032031	030027030030	027027027026	030030030030	030030030027	026026027030
49(289)	027026026026	031031030030	027026027027	027030030031	031031031030	027031030027	027026027030	030030030031
57(337)	031031030027	027027026027	030030031030	030030030032	031030027027	027030030031	030031031030	027031030027
65(385)	026031031030	030027027027	030030030030	031030027026	030031030030	030031032031	030030030030	030030032031
73(433)	030030030030	030031030030	031030030030	030030030027	030031032032	031032031030	033032031030	031030030032
81(481)	032032031031	030030030032	032031030032	032031031031	030032034033	032033033032	032032032031	032031031031
89(529)	032032032031	031032033033	032033034033	034035034034	035034034034	035035034034	034033034037	036036036036
97(577)	036035034034	036036037037	036036036037	040037036035	034035034035	036036035036	037041040037	036037037036
105(625)	035036037037	040041042041	040040037037	037036036040	041040037036	036035035036	037037036036	036037037036
113(673)	037036035035	036040037036	041040037040	040037036037	037036035037	041040037040	037036040040	037040041041
121(721)	040040037037	037036036040	040037040041	040041040040	040040037040	037037037036	036041042040	037037040040
129(769)	037036036037	037037036035	040041040037	037036037040	040041037036	037040053061	042035035036	040037037036
137(817)	037037037040	037036040042	037037042040	036037040037	037040040037	040040037036	040037041042	042040037040
145(865)	042041036036	036037036036	037040040040	037040040040	037037040041	041040040037	037040042042	041037036036
153(913)	036036036037	036037040043	042041040037	037040040040	040040040041	041040037040	037040040040	037037036036
161(961)	036037041040	037037040040	040037040041	041040037037	037037040040	037036036036	037041041037	036037036035
169(1009)	036036036035	035035034034	034034037037	037035034034	035035034033	034036036035	034034034035	034033035036
177(1057)	035035035035	034033032032	032032033036	036036036035	034033033036	036035036035	035034034034	034035035034
185(1105)	035035034033	032034034034	034033034036	035034036035	034033032034	033033032033	034034034033	033034034034
193(1153)	035034033034	035034034034	034034033033	035034033034	034033032033	033034033032	033034035036	035035034033
201(1201)	034034033035	034033031031	033033033032	031032033033	035036035035	034035034034	034035034034	035034034033
209(1249)	033033034033	035035035034	036035034034	034034034036	036035035036	035035035036	035034036035	034036036035
217(1297)	035034033034	035034035036	035035035035	034033034034	034037040037	036037036036	036035035034	035035035036
225(1345)	035035036040	037036037036	035034034036	036036035035	036037036036	037036035035	034035036035	034036035034
233(1393)	034035036035	034034033035	036036035035	034033034035	034035035034	033034034035	034036036035	035035035035
241(1441)	036036035034	036035034034	033035036037	036035035035	034033033035	035035035035	034035036035	034034036035
249(1489)	034035035034	034033034035	034034033034	036036035036	037036035035	034034035034	034033033036	035035037036

DUMP OF TAPE X-448

D-29054

112-114

71374143660

29054

INPUT TAPE X-448 ON MS6
DATA INPUT 07 NF 7 FL 1 1 1 SR 7 1 1 SR 7 LAST 1 70449

CAAF 122373 154757 LG?

LA/

FILE	1 RECORD	1 LENGTH	600BYTES		1 IMAGE	FRAME	
(0)	14432	25	66162066035	121505050505	000000000001	162206141205	132706221205	050505050505
(48)	1 0513505	616262636763	616564676567	211454000000	000000000000	000000000000	210474777777	572117777777
(96)	204534121726	000000000145	000000000006	056761636764	616463666060	000000002000	000000002000	000000001000
(144)	[illegible]	0000000	000000000000	000000000000	000000000001	000000000000	000000000000	000000000000
(192)	[illegible]	[illegible]	[illegible]	[illegible]144	[illegible]	[illegible]036	[illegible]036	[illegible]
(240)	0$3062606105	627461606156	666462665611	121062635361	655364675365	675310066360	605664605663	605660660505
(288)	050505050505	000032336365	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505
(336)	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505	052212111632	220535561000
(384)	311524111205	113230310530	251210203005	050505050505	050505050505	050505050505	050505050505	050505050505
(432)	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505
(480)	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505
(528)	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505	050505050505
(576)	050505050505	050505050505	050505050505	050505050505				

MEDIUMAX,CA

5201 2/101 64264

FILE	1 RECORD	1025 LENGTH	1536BYTES					
(0)	033033034034	034035037036	034033035036	035034035034	035035035034	033033034034	034034034035	036036035034
(48)	034034033033	034034034033	033033033033	034034035034	033033033031	034036035034	035035034033	033032033034
(96)	033033032031	032032032032	031031032032	034036035034	034034033032	032032034034	034033032032	031031030031
(144)	033033032032	032031030030	032031031030	031031032033	031030031031	031031031030	030030030031	031032033032
(192)	032033032032	033032032031	030031031030	030030030031	031030027030	031031032032	031030030032	031032032031
(240)	030031031031	030031032031	030031032033	031030030027	027027026026	031031031032	031030030027	027027031031
(288)	032032027031	031032032031	030031027027	030032032032	034033031032	032031030031	030030030031	032031030030
(336)	032031030027	027027026030	031030030027	027027027030	031030027027	027027031031	030031031030	027027027026
(384)	026030030027	027027027031	030030031030	031030027026	030031030030	030027030030	027030030030	031030030030
(432)	027027031031	030030031030	030027027027	030032032031	030030031031	031030027027	027027030030	032032031031
(480)	032033033031	030027030033	032031030031	031032031030	032033034034	033033034033	032034033030	034033032031
(528)	033032032032	031031031032	034033033032	035034033035	034035034034	034034034035	035034036036	035034034035
(576)	035034034036	036037036037	040041040040	037037036035	034036035036	041037036035	036041040037	037036036036
(624)	036037037036	036041041040	037036036037	041040037036	040040037036	037037036037	040040037036	035035035040
(672)	040036035035	037037037037	041040037040	040037036036	040040037040	040037036037	037036037037	037037037037
(720)	036040037036	037037036040	040037037042	041041041041	041040037040	037036037040	037037040037	040037037040
(768)	040037037040	040037036036	037037036036	036035036037	040042040037	037040041040	037036040042	041037040041
(816)	040040037037	040040040040	037037042041	037036037037	037037041040	041041037037	041041042043	042041037040
(864)	042041037037	041041040037	040040037040	040040040037	037040042042	042041040041	041040040041	040037040041
(912)	041037036037	037041041040	042042040037	040040040040	042042042041	042041036037	042041040040	037036037040
(960)	037036037040	040040041040	037037036037	040037037037	037040037036	035034035035	036036036036	037036035034
(1008)	036036036035	034033032035	034035036036	036035034035	034034035034	036037036035	034034033033	036035036036
(1056)	035034035034	034033033033	032031031035	035034036035	034033032033	035034034034	033032034036	035035034033
(1104)	033035034033	033033034034	033032032034	034033033035	034034033033	032033032034	034033033033	034035034034
(1152)	034034035035	034036035034	035034033033	034035035034	033033033032	034033032033	034035035036	035036035034
(1200)	033032034034	034033033034	034034033033	033034035034	036037036036	035034033034	036035033033	034034035035
(1248)	034033034033	033034035035	035034034034	035035034035	035035035035	035036036036	036035035036	036036037036
(1296)	035034035035	035036041037	035034036035	033033035035	034036036035	034036035036	036034033033	035034033035
(1344)	034034034035	036035034034	034034034036	035034034035	036037036035	034035034034	035035037037	036035034034
(1392)	034035035035	035035034035	035037036036	036035036035	034036035034	034036035034	035035035035	035035036037
(1440)	036035035034	036036035034	033036037036	035034036036	034033033035	034034 34035	036036035036	035034034034
(1488)	034036036035	035035035035	035035034035	035037040037	036035034035	036035034036	035035034034	034035035034

FILE	INPUT RECS.	DATA RECORDS INPUT	MAX. SIZE	READ ERROR SUMMARY PERM	ZERO B	SHORT	UNDEF.	INPUT RETRIES #RECS.	TOTAL#
1	1025	1026	1536	0	0	0	0	2	5

12674 ABELL 12208

FILE	2 RECORD	1 LENGTH	6 BYTES					
(0)	000000014744	000000000046	060712212105	616262700505	000000000001	162206141205	132706221205	050505050505
(48)	1 0513505	056162666764	050563626070	207654000000	000000000000	000000000000	210554777777	206460000000
(96)	2 41727243	000000000073	000000000006	056462616764	617162710505	000000002000	000000002000	000000001000
(144)	000000001000	000000000000	000000000000	000000000000	000000000001	000000000000	000000000000	000000000000
(192)	[illegible]	[illegible]	[illegible]	[illegible]144	[illegible]	[illegible]036	[illegible]036	[illegible]

6426

6628

K

HR	MIN	SEC	SEC.	LAT.	LONG.	THETA	PSI	PHI	ALTITUDE	SPECTRA
253	21	30	912090.38	0.0	0.0	-57.36	-76.57	94.90	0.0	1
253	21	40	912100.38	0.0	0.0	-57.07	-76.54	91.89	0.0	1
253	21	50	912110.38	0.0	0.0	-56.77	-76.52	88.88	0.0	2
253	22	0	912120.38	0.0	0.0	-56.46	-76.51	85.88	0.0	1
253	22	10	912130.38	0.0	0.0	-56.16	-76.50	82.88	0.0	1
253	22	20	912140.38	0.0	0.0	-55.81	-76.49	79.91	0.0	1
253	22	30	912150.38	0.0	0.0	-55.50	-76.49	76.91	0.0	2
253	22	40	912160.38	0.0	0.0	-55.19	-76.50	73.92	0.0	1
253	22	50	912170.38	0.0	0.0	-54.82	-76.51	70.97	0.0	1
253	23	0	912180.38	0.0	0.0	-54.49	-76.54	68.01	0.0	1
253	23	10	912190.38	0.0	0.0	-54.16	-76.56	65.02	0.0	2
253	23	20	912200.38	0.0	0.0	-53.82	-76.59	62.05	0.0	1
253	23	30	912210.38	0.0	0.0	-53.48	-76.63	59.10	0.0	1
253	23	40	912220.38	0.0	0.0	-53.14	-76.66	56.13	0.0	2
253	23	50	912230.38	0.0	0.0	-52.82	-76.71	53.14	0.0	1
253	24	0	912240.38	0.0	0.0	-52.45	-76.76	50.21	0.0	1
253	24	10	912250.38	0.0	0.0	-52.13	-76.82	47.22	0.0	1
253	24	20	912260.38	0.0	0.0	-51.83	-76.88	44.20	0.0	2
253	24	30	912270.38	0.0	0.0	-51.48	-76.95	41.26	0.0	1
253	24	40	912280.38	0.0	0.0	-51.18	-77.02	38.24	0.0	1
253	24	50	912290.38	0.0	0.0	-50.90	-77.10	35.22	0.0	1
253	25	0	912300.38	0.0	0.0	-50.58	-77.18	32.25	0.0	1
253	25	10	912310.38	0.0	0.0	-50.34	-77.26	29.18	0.0	1
253	25	20	912320.38	0.0	0.0	-50.09	-77.35	26.12	0.0	1
253	25	30	912330.38	0.0	0.0	-49.83	-77.45	23.08	0.0	0
253	25	40	912340.38	0.0	0.0	-49.60	-77.55	20.00	0.0	0
253	25	50	912350.38	0.0	0.0	-49.36	-77.66	16.94	0.0	0
253	26	0	912360.38	0.0	0.0	0.0	0.0	0.0	0.0	0
253	26	10	912370.38	0.0	0.0	0.0	0.0	0.0	0.0	0
253	26	20	912380.38	0.0	0.0	0.0	0.0	0.0	0.0	2
253	26	30	912390.38	0.0	0.0	-48.77	-78.11	4.33	0.0	0
253	26	40	912400.38	0.0	0.0	-48.71	-78.23	1.09	0.0	1
253	26	50	912410.38	0.0	0.0	-48.64	-78.35	-2.13	0.0	1
253	27	0	912420.38	0.0	0.0	-48.63	-78.48	-5.42	0.0	2
253	27	10	912430.38	0.0	0.0	-48.60	-78.61	-8.67	0.0	1
253	27	20	912440.38	0.0	0.0	-48.63	-78.74	-11.98	0.0	1
253	27	30	912450.38	0.0	0.0	-48.70	-78.88	-15.36	0.0	1
253	27	40	912460.38	0.0	0.0	-48.84	-79.01	-18.80	0.0	2
253	27	50	912470.38	0.0	0.0	-48.99	-79.15	-22.23	0.0	1
253	28	0	912480.38	0.0	0.0	-49.19	-79.28	-25.73	0.0	1
253	28	10	912490.38	0.0	0.0	-49.41	-79.41	-29.24	0.0	1
253	28	20	912500.38	0.0	0.0	-49.68	-79.54	-32.80	0.0	2
253	28	30	912510.38	0.0	0.0	-50.03	-79.67	-36.44	0.0	1
253	28	40	912520.38	0.0	0.0	-50.39	-79.80	-40.09	0.0	1
253	28	50	912530.38	0.0	0.0	-50.83	-79.92	-43.81	0.0	1
253	29	0	912540.38	0.0	0.0	-51.28	-80.04	-47.56	0.0	2
253	29	10	912550.38	0.0	0.0	-51.81	-80.16	-51.37	0.0	1
253	29	20	912560.38	0.0	0.0	-52.42	-80.28	-55.26	0.0	1
253	29	30	912570.38	0.0	0.0	-53.05	-80.39	-59.17	0.0	1
253	29	40	912580.38	0.0	0.0	-53.75	-80.50	-63.16	0.0	2

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(   576)   050505050505  050505050505  050505050505  050505050505

FILE        7  RECORD     1 25  LENGTH     1536BYTES
(     0)   053050056053  053056053050  051051053051  053054047054  054055056053  050054052054  051054054056  050052050050
(    48)   050055052055  056057054047  051051054052  046050050052  052052047052  051057054052  053052052054  056051054046
(    96)   046053057054  052055046050  054052047050  051050053060  050046052054  054053050051  051055056052  050045055062
(   144)   057055051050  052057050052  053052055052  046055050045  054055051052  054051052050  046053047047  050051050051
(   192)   053047054054  052047042051  054051051054  055054055051  052052053055  052047044053  054050054050  051045044050
(   240)   047050056053  050050051046  050051050051  053055052061  054052046053  047051053056  054052052055  052047053051
(   288)   053050052055  055047051056  054052052052  060047053051  045052060055  052050055052  056054056051  050052045052
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(  1104)   042044047042  036042040042  041037040036  037043037037  040037040037  042042037041  042042040040  037043040042
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(  1200)   043043045043  051052054050  054057055051  057054053054  045050060055  052053047045  047051046050  046054051055
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     FILE   INPUT    DATA RECORDS    MAX.        READ ERROR SUMMARY          INPUT RETRIES
            RECS.       INPUT        SIZE      PERM  ZERO B   SHORT  UNDEF.  #RECS.  TOTAL#
        7    1 25     1 26           1536        0       0       0       0       6       7

EOJ        DUMP STOPPED AFTER FILE   7          # OF PERMANENT READ ERRORS  0

START TIME 03/30/79  09:28:21        STOP TIME 03/30/79  09:32:14
```

$
$AVR CI 8
END DO

HR	MIN	SEC	SEC.	LAT.	LONG.	THETA	PSI	PHI	ALTITUDE	SPECTRA
253	13	10	911590.38	0.0	0.0	-47.55	-77.37	-90.57	0.0	2
253	13	20	911600.38	0.0	0.0	-47.85	-77.47	-94.16	0.0	1
253	13	30	911610.38	0.0	0.0	-48.26	-77.57	-97.86	0.0	1
253	13	40	911620.38	0.0	0.0	-48.64	-77.66	-101.52	0.0	1
253	13	50	911630.38	0.0	0.0	-49.03	-77.74	-105.19	0.0	2
253	14	0	911640.38	0.0	0.0	-49.42	-77.82	-108.88	0.0	1
253	14	10	911650.38	0.0	0.0	-49.89	-77.89	-112.63	0.0	1
253	14	20	911660.38	0.0	0.0	-50.37	-77.95	-116.40	0.0	1
253	14	30	911670.38	0.0	0.0	-50.81	-78.01	-120.14	0.0	2
253	14	40	911680.38	0.0	0.0	-51.31	-78.05	-123.93	0.0	1
253	14	50	911690.38	0.0	0.0	-51.82	-78.10	-127.72	0.0	1
253	15	0	911700.38	0.0	0.0	-52.29	-78.13	-131.48	0.0	1
253	15	10	911710.38	0.0	0.0	-52.78	-78.15	-135.27	0.0	2
253	15	20	911720.38	0.0	0.0	-53.27	-78.17	-139.04	0.0	1
253	15	30	911730.38	0.0	0.0	-53.71	-78.19	-142.77	0.0	1
253	15	40	911740.38	0.0	0.0	-54.22	-78.20	-146.56	0.0	1
253	15	50	911750.38	0.0	0.0	-54.68	-78.19	-150.32	0.0	2
253	16	0	911760.38	0.0	0.0	-55.14	-78.19	-154.07	0.0	1
253	16	10	911770.38	0.0	0.0	-55.55	-78.18	-157.77	0.0	1
253	16	20	911780.38	0.0	0.0	-55.97	-78.16	-161.47	0.0	1
253	16	30	911790.38	0.0	0.0	-56.39	-78.12	-165.18	0.0	2
253	16	40	911800.38	0.0	0.0	-56.80	-78.10	-168.89	0.0	1
253	16	50	911810.38	0.0	0.0	-57.18	-78.06	-172.57	0.0	1
253	17	0	911820.38	0.0	0.0	-57.50	-78.02	-176.16	0.0	1
253	17	10	911830.38	0.0	0.0	-57.82	-77.97	-179.79	0.0	2
253	17	20	911840.38	0.0	0.0	-58.14	-77.92	176.61	0.0	1
253	17	30	911850.38	0.0	0.0	-58.41	-77.87	173.05	0.0	1
253	17	40	911860.38	0.0	0.0	-58.63	-77.81	169.53	0.0	1
253	17	50	911870.38	0.0	0.0	-58.85	-77.75	166.03	0.0	2
253	18	0	911880.38	0.0	0.0	-59.01	-77.69	162.56	0.0	1
253	18	10	911890.38	0.0	0.0	-59.18	-77.64	159.11	0.0	0
253	18	20	911900.38	0.0	0.0	-59.30	-77.57	155.70	0.0	0
253	18	30	911910.38	0.0	0.0	-59.41	-77.51	152.29	0.0	0
253	18	40	911920.38	0.0	0.0	-59.48	-77.44	148.92	0.0	1
253	18	50	911930.38	0.0	0.0	-59.55	-77.38	145.56	0.0	1
253	19	0	911940.38	0.0	0.0	-59.57	-77.31	142.24	0.0	1
253	19	10	911950.38	0.0	0.0	-59.59	-77.25	138.92	0.0	2
253	19	20	911960.38	0.0	0.0	-59.61	-77.18	135.60	0.0	1
253	19	30	911970.38	0.0	0.0	-59.54	-77.11	132.37	0.0	1
253	19	40	911980.38	0.0	0.0	-59.46	-77.06	129.14	0.0	1
253	19	50	911990.38	0.0	0.0	-59.35	-77.00	125.97	0.0	2
253	20	0	912000.38	0.0	0.0	-59.27	-76.94	122.73	0.0	1
253	20	10	912010.38	0.0	0.0	-59.11	-76.89	119.59	0.0	1
253	20	20	912020.38	0.0	0.0	-58.95	-76.84	116.45	0.0	1
253	20	30	912030.38	0.0	0.0	-58.78	-76.79	113.30	0.0	2
253	20	40	912040.38	0.0	0.0	-58.58	-76.74	110.20	0.0	1
253	20	50	912050.38	0.0	0.0	-58.37	-76.69	107.12	0.0	1
253	21	0	912060.38	0.0	0.0	-58.12	-76.65	104.05	0.0	2
253	21	10	912070.38	0.0	0.0	-57.87	-76.63	101.01	0.0	1
253	21	20	912080.38	0.0	0.0	-57.62	-76.60	97.96	0.0	1