#321

SKYLAB

SUPER RASTER DATA

73-027A-06E

SKYLAB

SUPER RASTER DATA ON TAPE

73-027A-06E

THIS DATA SET HAS BEEN RESTORED. THERE WERE ORIGINALLY FOUR 7-TRACK, 556 BPI TAPES, WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. THE ORIGINAL TAPES WERE NOT STACKED IN SEQUENTIAL ORDER. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE TAPES WERE CREATED ON AN IBM 360 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	DD#	FILES	TIME SPAN
DR03877	DS03877	D22179	1-89	01/28/74 - 01/29/74
		D22180	90-179	01/28/74 - 01/28/74
		D22181	180-275	01/28/74 - 01/28/74
		D22182	276-323	01/29/74 - 01/29/74

REQ. AGENT	RAND NO.	ACQ. AGENT
MLR	RC4609	JAF

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SUPER RASTER DATA

73-027A-06E

This data set consists of four 556 BPI, Binary, 7 track tapes. They are multifiled. The original tapes were created on the CDC 6400.

D#	C#	FILES	TIME SPAN
D-22179	C-17051	89	1/28/74 - 1/29/74
D-22180	C-17052	90	1/28/74 - 1/28/74
D-22181	C-17053	96	1/28/74 - 1/28/74
D-22182	C-17054	48	1/29/74 - 1/29/74

TAPES ARE WRITTEN IN "X" MODE @ 556 BPI

1/2" MAG TAPE

7 TRACK

Scientific user tape for S055

The tape consists of a series of files with each file consisting of an ID record, followed by Engineering Records, then Data Records, and finally an End-Of-File mark. The different records are described below:

ID record 18 words

1	ITAPE	
2	IFILE	
3	BLANK	{ MSFC - station no. of state receiving 1st data; JSC - SL## 100,000 + DN cycle #
4	IYEAR	
5	IDAY	
6	MSEC (GMT) of first data point	
7	detector 1	0 = off
8	detector 2	1 = On
9	detector 3	
10	detector 4	
11	detector 5	
12	detector 6	
13	detector 7	
14	K 252-55A	= 00_2 0 off; 01_2 1 3-Scan; 10_2 2 line; 11_2 3 raster — Storage ~~Mirror~~ Mode
15	INENG = Number of engineering records	
16	INDATA = number of data records	
17	Blank or Ignore	start point (1st data point considered to be in the present file, whose time is given in 4-6)
18		

ENG type 1 486 words in blocks of 4 (one block/sec of data)
(121 sec of data in rec)

				bits (27)			
1	time (MS)					Adcock 19 Mar (original units)	
2	4 x 15 bits	FSSUD(Pitch)	K 382-702	12	GAMY	arc-sec	±2600
		FSSLR(Yaw)	"	12	GAMX	arc-sec	
		FSSUDbias(Pitch)	"	12	GAMXB1	arc-sec	
		FSSLRbias(Yaw)	"	12	GAMYB2	arc-sec	
3	" "	~~FSSbias ID~~	"	12			
		GMT from date stmp				days	0-63
		XPOS	G 040-55A	10		steps×100	-5-[illegible]
		YPOS	G 040-55A	10		steps×100	
		ROLL	K 382-702	15	GAMRR	~~×180° = deg~~	
4	" "	Grat Pos	K 255-55A	13		$\times \frac{4}{3}$ = arcmin	
		Grat Mode	K 256-55A	3			
		Mirror Mode	K 252-55A	2			
		Mech/Opt Ref	K 254-55A	1			

ENG type 2 336 words (one word/1/24 sec of data)
(14 sec of data in rec)

			bits
each word:	30 bits	time GMT milliseconds	(27)
	3 x 10 bits	Grat Opt ref K245-55A	1
		S/EOL-EOR K246-55A	1
		Grat Mech ref K253-55A	1

full ⟺ [illegible]

DATA:

The data records have 4 measurements/word. Each 15 bits contains one flag bit (0 HV on 1 HV off (all bits on for fill data) ~~(0 real data, 1 dummy data)~~ and 14 bits of actual data. The gate time < 40 ms. One data point/detector is read each $\frac{1}{24}$ sec.

		ATM Measurement No.	Bits	Width of slit
Detector	1	K174-55A	14	1.6A
	2	K175-55A	13	8.3
	3	K247-53A	14	4.0
	4	K248-53A	14	4.0
	5	K249-53A	14	8.3
	6	K250-53A	14	4.0
	7	K251-53A	14	4.0

The data records depend on the type of data. The line scans are packed up to 60 per file.

	Data Points	Real Time Sec	Real Time Min.	CDC Words	# Rec.	Length	Max data rec/file
Raster	7920	330	5.5	1980	4	495	28
L-Scan	132	5.5		33	1/14	462	
Max L-Scan/rec	7920	330	5.5	1980			30
λ-scan	~5500	228	3.8	<1503	3	501	21

	#ENG1	#ENG2	total rec	total CDC words	tape length/file	length min.
RASTER	3	24	56	23400	486.863 in.	85.24
L-Scan						
max L-SCAN/rec	3	24	58	23400	470.363	85.52
λ-Scan	2	18	41	17223	346.516	91.18

TAPE length

$\sim \frac{90 \text{ in}}{\text{Min(of data)}} = 7.5 \frac{\text{ft}}{\text{min}} = 450 \text{ ft/hr} = 1800 \text{ ft/4 hrs of data} \sim 1800 \text{ ft/6 hrs real tim}$

$\sim$ 1 reel (2400 ft)/6 hrs. real time

(3 reels/day) x 140 manned days = 420 reels for manned mission

$\Rightarrow$ 2-3 reels/day

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* due to NASA blocking data into 4 blocks/day 29 III 73

$\geq$ 4 reels/day x140day 560 reels manned mission

~ 90day 360 " unmanned

910 "

SKYLAB
SUPER RASTER DATA
D-22179
HARVARD ID - 028-3
1/28/74 - 1/29/74

FILE 0001 REC 0001 CH 0180

0001	000000000000	000004330000	000000000000	000100000000	000001415200	000000000000	000036660000	000000000000
0049	003400000000	000504237355	000000000000	000000010000	000000000000	000100000000	000000000001	000000000000
0097	000000010000	000000000000	000000000000	000000000001	000000000000	000000010000	000000000000	000000000000
0145	000000000025	000000000000	000000220000	000000000000	000100000000	000000000000		

FILE 0001 REC 0002 CH 4860

0001	000000000005	042401472001	700132001370	002063275064	140176627721	000000000000	003000010000	000000050424
0049	211720017001	320013700020	652450641402	045277210000	000000000030	000100000000	000504244067	200170013200
0097	137000206721	506414020062	772100000000	000000300001	000000000005	042460372001	700132001370	002071165064
0145	530204527721	000000000000	003000010000	000000050425	000720017001	320013700020	004550641401	766277210000
0193	000000000030	000100000000	000504251757	200170013200	137000200242	506414020062	772100000000	000000300001
0241	000000000005	042537272001	700132001370	002004375064	140200627721	000000000000	003000010000	000000050425
0289	567720017001	320013700020	063450645302	006277210000	000000000030	000100000000	000504257647	200170013200
0337	137000201031	506453020062	772100000000	000000300001	000000000005	042616172001	700132001370	002012265064
0385	040200627721	000000000000	003000010000	000000050426	356720017001	320013700020	142350640402	006277210000
0433	000000000030	000100000000	000504265537	200170013200	137000201620	506443020062	772100000000	000000300001
0481	000000000005	042675072001	700132001370	002020155064	430200627721	000000000000	003000010000	000000050427
0529	145720017001	320013700020	221250640402	006277210000	000000000030	000100000000	000504273427	200170013200
0577	137000202407	506404020062	772100000000	000000300001	000000000005	042753772001	700132001370	002026045064
0625	430200627721	000000000000	003000010000	000000050427	734720017001	320013700020	300150644302	035277210000
0673	000000000030	000100000000	000504301317	200170013200	137000203176	506443017762	772100000000	000000300001
0721	000000000005	043032672001	700132001370	002033735064	430177627721	000000000000	003000010000	000000050430
0769	523720017001	320013700020	357050644301	776277210000	000000000030	000100000000	000504307207	200170013200
0817	137000203765	506404017762	772100000000	000000300001	000000000005	043111572001	700132001370	002041625064
0865	040203527721	000000000000	003000010000	000000050431	312720017001	320013700020	435750645301	766277210000
0913	000000000030	000100000000	000504315077	200170013200	137000204554	506414020262	772100000000	000000300001
0961	000000000005	043170472001	700132001370	002047515064	140202627721	000000000000	003000010000	000000050432
1009	101720017001	320013700020	514650641402	026277210000	000000000030	000100000000	000504322767	200170013200
1057	137000205343	506414020262	772100000000	000000300001	000000000005	043247372001	700132001370	002055405064
1105	140202627721	000000000000	003000010000	000000050432	670720017001	320013700020	573550645302	035277210000
1153	000000000030	000100000000	000504330657	200170013200	137000206132	506453017762	772100000000	000000300001
1201	000000000005	043326272001	700132001370	002063275064	140177627721	000000000000	003000010000	000000050433
1249	457720017001	320013700020	652450641402	006277210000	000000000030	000100000000	000504336547	200170013200
1297	137000206721	506453020062	772100000000	000000300001	000000000005	043405172001	700132001370	002071165064
1345	140204527721	000000000000	003000010000	000000050434	246720017001	320013700020	004550641402	006277210000
1393	000000000030	000100000000	000504344437	200170013200	137000200242	506453020062	772100000000	000000300001
1441	000000000005	043464072001	700132001370	002004375064	140200627721	000000000000	003000010000	000000050435
1489	035720017001	320013700020	063450641402	006277210000	000000000030	000100000000	000504352327	200170013200
1537	137000201031	506414020062	772100000000	000000300001	000000000005	043542772001	700132001370	002012265064
1585	530200627721	000000000000	003000010000	000000050435	624720017001	320013700020	142350640402	006277210000
1633	000000000030	000100000000	000504360217	200170013200	137000201620	506404020452	772100000000	000000300001
1681	000000000005	043621672001	700132001370	002020155064	430176627721	000000000000	003000010000	000000050436
1729	413720017001	320013700020	221250644302	026277210000	000000000030	000100000000	000504366107	200170013200
1777	137000202407	506443020262	772100000000	000000300001	000000000005	043700572001	700132001370	002026045064
1825	430202627721	000000000000	003000010000	000000050437	202720017001	320013700020	300150644301	766277210000
1873	000000000030	000100000000	000504373777	200170013200	137000203176	506443020262	772100000000	000000300001
1921	000000000005	043757472001	700132001370	002033735064	430202627721	000000000000	003000010000	000000050437
1969	771720017001	320013700020	357050644301	766277210000	000000000030	000100000000	000504401667	200170013200
2017	137000203765	506443020262	772100000000	000000300001	000000000005	044036372001	700132001370	002041625064
2065	430202627721	000000000000	003000010000	000000050440	560720017001	320013700020	435750644302	026277210000
2113	000000000030	000100000000	000504407557	200170013200	137000204554	506443020262	772100000000	000000300001
2161	000000000005	044115272001	700132001370	002047515064	430202627721	000000000000	003000010000	000000050441
2209	347720017001	320013700020	514650644302	026277210000	000000000030	000100000000	000504415447	200170013200
2257	137000205343	506443020262	772100000000	000000300001	000000000005	044174172001	700132001370	002055405064
2305	430202627721	000000000000	003000010000	000000050442	136720017001	320013700020	573550644302	026277210000
2353	000000000030	000100000000	000504423337	200170013200	137000206132	506443020262	772100000000	000000300001
2401	000000000005	044253072001	700132001370	002063275064	430202627721	000000000000	003000010000	000000050442
2449	725720017001	320013700020	652450644302	026277210000	000000000030	000100000000	000504431227	200170013200
2497	137000206721	506443020262	772100000000	000000300001	000000000005	044331772001	700132001370	002071165064
2545	430202627721	000000000000	003000010000	000000050443	514720017001	320013700020	004550644302	026277210000
2593	000000000030	000100000000	000504437117	200170013200	137000200242	506443017662	772100000000	000000300001
2641	000000000005	044410672001	700132001370	002004375064	430203527721	000000000000	003000010000	000000050444
2689	303720017001	320013700020	063450644302	035277210000	000000000030	000100000000	000504445007	200170013200

FILE 0001 REC 0002 CH 4860

2737	137000201031	506443020352	772100000000	000000300001	000000000005	044467572001	700132001370	002012265064
2785	430177627721	000000000000	003000010000	000000050445	072720017001	320013700020	142350644301	776277210000
2833	000000000030	000100000000	000504452677	200170013200	137000201620	506443017762	772100000000	000000300001
2881	000000000005	044546472001	700132001370	002020155064	430203527721	000000000000	003000010000	000000050445
2929	661720017001	320013700020	221250644302	035277210000	000000000030	000100000000	000504460567	200170013200
2977	137000202407	506443017762	772100000000	000000300001	000000000005	044625372001	700132001370	002026045064
3025	430177627721	000000000000	003000010000	000000050446	450720017001	320013700020	300150644301	776277210000
3073	000000000030	000100000000	000504466457	200170013200	137000203176	506404017762	772100000000	000000300001
3121	000000000005	044704272001	700132001370	002033735064	630200627721	000000000000	003000010000	000000050447
3169	237720017001	320013700020	357050643302	006277210000	000000000030	000100000000	000504474347	200170013200
3217	137000203765	506433020062	772100000000	000000300001	000000000005	044763172001	700132001370	002041625064
3265	140200627721	000000000000	003000010000	000000050450	026720017001	320013700020	435750642402	006277210000
3313	000000000030	000100000000	000504502237	200170013200	137000204554	506433020062	772100000000	000000300001
3361	000000000005	045042072001	700132001370	002047515064	330177627721	000000000000	003000010000	000000050450
3409	615720017001	320013700020	514650643301	776277210000	000000000030	000100000000	000504510127	200170013200
3457	137000205343	506443017762	772100000000	000000300001	000000000005	045120772001	700132001370	002055405064
3505	140177627721	000000000000	003000010000	000000050451	404720017001	320013700020	573550642402	006277210000
3553	000000000030	000100000000	000504516017	200170013200	137000206132	506433020062	772100000000	000000300001
3601	000000000005	045177672001	700132001370	002063275064	430200627721	000000000000	003000010000	000000050452
3649	173720017001	320013700020	652450643302	026277210000	000000000030	000100000000	000504523707	200170013200
3697	137000206721	506443020062	772100000000	000000300001	000000000005	045256572001	700132001370	002071165064
3745	430200627721	000000000000	003000010000	000000050452	762720017001	320013700020	004550641402	006277210000
3793	000000000030	000100000000	000504531577	200170013200	137000200242	506424020262	772100000000	000000300001
3841	000000000005	045335472001	700132001370	002004375064	330200627721	000000000000	003000010000	000000050453
3889	551720017001	320013700020	063450643302	006277210000	000000000030	000100000000	000504537467	200170013200
3937	137000201031	506433020262	772100000000	000000300001	000000000005	045414372001	700132001370	002012265064
3985	330202627721	000000000000	003000010000	000000050454	340720017001	320013700020	142350643302	006277210000
4033	000000000030	000100000000	000504545357	200170013200	137000201620	506443020162	772100000000	000000300001
4081	000000000005	045473272001	700132001370	002020155064	430200627721	000000000000	003000010000	000000050455
4129	127720017001	320013700020	221250643302	026277210000	000000000030	000100000000	000504553247	200170013200
4177	137000202407	506433020752	772100000000	000000300001	000000000005	045552172001	700132001370	002026045064
4225	330177627721	000000000000	003000010000	000000050455	716720017001	320013700020	300150643302	045277210000
4273	000000000030	000100000000	000504561137	200170013200	137000203176	506433017762	772100000000	000000300001
4321	000000000005	045631072001	700132001370	002033735064	330202627721	000000000000	003000010000	000000050456
4369	505720017001	320013700020	357050644302	045277210000	000000000030	000100000000	000504567027	200170013200
4417	137000203765	506443020262	772100000000	000000300001	000000000005	045707772001	700132001370	002041625064
4465	140176627721	000000000000	003000010000	000000050457	274720017001	320013700020	435750644302	006277210000
4513	000000000030	000100000000	000504574717	200170013200	137000204554	506433020262	772100000000	000000300001
4561	000000000005	045766672001	700132001370	002047515064	330200627721	000000000000	003000010000	000000050460
4609	063720017001	320013700020	514650641402	026277210000	000000000030	000100000000	000504602607	200170013200
4657	137000205343	506414020262	772100000000	000000300001	000000000005	046045572001	700132001370	002055405064
4705	330200627721	000000000000	003000010000	000000050460	652720017001	320013700020	573550643302	026277210000
4753	000000000030	000100000000	000504610477	200170013200	137000206132	506433017472	772100000000	000000300001
4801	000000000005	046124472001	700132001370	002063275064	330201627721	000000000000	003000010000	000000000000
4849	000000000000	000000000000						

FILE 0001 REC 0003 CH 4860

0001	000000000005	046144172001	700132001370	002065245064	330202627721	000000000000	003000010000	000000050461
0049	636720017001	320013700020	672150641402	045277210000	000000000030	000100000000	000504620337	200170013200
0097	137000207116	506424020062	772100000000	000000300001	000000000005	046223072001	700132001370	002000455064
0145	140200627721	000000000000	003000010000	000000050462	425720017001	320013700020	024250643302	035277210000
0193	000000000030	000100000000	000504626227	200170013200	137000200437	506433020352	772100000000	000000300001
0241	000000000005	046301772001	700132001370	002006345064	430177627721	000000000000	003000010000	000000050463
0289	214720017001	320013700020	103150644302	006277210000	000000000030	000100000000	000504634117	200170013200
0337	137000201226	506404020062	772100000000	000000300001	000000000005	046360672001	700132001370	002014235064
0385	140200627721	000000000000	003000010000	000000050464	003720017001	320013700020	162050641401	776277210000
0433	000000000030	000100000000	000504642007	200170013200	137000202015	506414020352	772100000000	000000300001
0481	000000000005	046437572001	700132001370	002022125064	530200627721	000000000000	003000010000	000000050464
0529	572720017001	320013700020	240750643302	006277210000	000000000030	000100000000	000504647677	200170013200
0577	137000202604	506433020262	772100000000	000000300001	000000000005	046516472001	700132001370	002030015064
0625	140202627721	000000000000	003000010000	000000050465	361720017001	320013700020	317650643302	045277210000
0673	000000000030	000100000000	000504655567	200170013200	137000203373	506433020352	772100000000	000000300001
0721	000000000005	046575372001	700132001370	002035705064	330177627721	000000000000	003000010000	000000050466