FLUX PLOT PROGRAM - Input Data Layout

1. STRUCTURE OF SATELLITE CARD

Column		Description
1	S	
2	Blank	
3 - 14	(EBCDIC)	Satellite ID (left justified)
15	Blank	
16 - 19	(EBCDIC)	Source of data (left justified)
20	Blank	
21	L1	trend-check attribute of dataset
22	L1	Cal mode attribute of dataset
26 - 27	I2	Number of days in averaging interval
28	Not used	
29 - 30	I2	Number of hours in averaging interval
31		
32 - 33	I2	Number of minutes
34		
35 - 36	I2	Number of seconds
37 - 40	Not used	
41 - 44	I4	maximum error code allowed (defaults to 0)
45	Not used	
46 - 48	I3	maximum number of points/frame for 4060 plots (defaults to 125)
49 - 50	Not used	
51	L1	process PHA data (defaults to .TRUE.)
52	L1	process RATES data (defaults to .FALSE.)
53	L1	process data for histograms (defaults - False)
54 - 55	Not used	

Column		Description
56	L1	create semi-log time/history plots (default - T)
57	L1	create linear time/history plots (default - F)
58	L1	create time/history listings (default - T)
59 - 60	Not used	
61	L1	create log-log spectrum plots (default - T)
62	L1	create semi-log spectrum plots (default - F)
63	L1	create spectrum lists (default - F)

Note that flags in columns 56 - 58 and 61 - 63 are global specifications. If any of these flags are set to false, request for corresponding option on the following data cards will not be honored. If, on the other hand, a flag is set to .TRUE., the request for the option (explicit or implied) will be honored.

Include Card:

Column		
1	S	
2	I	
11 - 12	two-digit year	start-time of period to be included
13		
14 - 15	month	
16		
17 - 18	day	
19		
20 - 21	hour	
22		
23 - 24	minute	
25		
26 - 27	second	
28		
29 - 30	year	end-time of period to be included
31		
32 - 33	month	
34		
35 - 36	day	
37		
38 - 39	hour	
40		
41 - 42	minute	
43		
44 - 45	second	

Exclude Card: Identifies time periods from which data is to be excluded.

Character E in Column 2.

The time period to be excluded must lie entirely within the time span defined by the current include card. If this condition is not met, the program will signal an error condition.

Mode Card:

(Card 1)

Column			
1	M		
2	Blank		
3 - 6	Mode ID (left justified) EBCDIC		
7 - 8	Blank		
9 - 10	Two-character generation ID		
11 - 20	Blank		
21	Log-log spectrum plots desired flag	Y, N, blank	
22	Semi-log spectrum plots desired flag	Y, N, blank	
23	Spectrum list desired flag	Y, N, blank	
24 - 35	Not used		
36 - 44	Lower limit of ordinate (log-log plots)	(E9.0)	10^{-3}
45 - 53	Upper limit of ordinate (log-log plots)	(E9.0)	10^{6}
54 - 62	Lower limit of abcissa (log-log plots)	(E9.0)	1
63 - 71	Upper limit of abcissa (log-log plots)	(E9.0)	1000.
72	Blank, if semi-log spectrum plots are not required Non-blank character if semi-log spectrum plots are required		
73 - 80	Not used		

(Card 2) - must be present if Column 72 of the previous card contains a non-blank character

1 - 9	Lower limit of ordinate (semi-log)	(E9.0)	10^{-3}
10 - 18	Upper limit of ordinate (semi-log)	(E9.0)	10^{6}
19 - 27	Lower limit of abcissa (semi-log)	(E9.0)	0
28 - 36	Upper limit of abcissa (semi-log)	(E9.0)	24.0

List of Mode ID's

HS2	AB¬CI events
HS3	ABCI
HPFB	CIII CI+CII B A events
HPF	
HPB	
LS2	
LS3	

Note: Knowledge of precise ranges of energy in various modes is not essential. The approximate range for Pioneer-10 and -11 are as follows:

LS2	3.2 - 5.2	HPF	57 - 110
LS3	5.2 - 22.0	HPB	57 - 110
HS2	22.0 - 31.0	HPFB	> 110
HS3	31.0 - 57.0		

Bin Cards

One bin card is required for each bin for which data is to be obtained from PHA data.

One, or two cards are required for each bin for which flux is to be obtained from RATES data. Two cards are required only when flux has to be displayed and the catalog entry corresponding to the bin needs to be modified.

PHA Bin (one card only):

Column		
1	B	
2	Blank	
3 - 11	Threshold	(F9.0)
12 - 20	Ceiling	(F9.0)
21 - 25	Not used	
26	Linear time history plot flag Y - if a new frame for linear time history plot is to begin with this bin b - if this bin is to be displayed on the current frame - frame becomes current when character Y is encountered in this column N - if this bin is not to be displayed on linear time history plot	
27	Semi-log time/history plot flag (similar to linear time/history flag)	
28	Time/history listing (similar to linear time/history flag)	
29	1 - if ΔA histogram for this bin is required 2 - if ΔB histogram for this bin is required 3 - if both ΔA and ΔB histograms required	
30	ΔA histogram compression	(I1)
31	ΔB histogram compression	(I1)
32 - 35	Not used	

Histograms

Column		
36 - 44	Ordinate lower limit for semi-log time history plot	(E9.0)
45 - 53	Ordinate upper limit for semi-log time history plot	(E9.0)
54 - 62	Ordinate lower limit for linear time history plot	(E9.0)
63 - 71	Ordinate upper limit for linear time history plot	(E9.0)
72	Blank	
73 - 80	Not used (may be used for sequence number)	

RATE Bin:

(Card 1)

Column	
1	B
2	R
3 - 9	Rate mneumonic for first/only rate (A8)
10	Blank
11	Code for operation to be performed b - flux computation + - sum of rates, or rates modified by specified factors - - difference of rates, or rates modified by specified factors / - ratio of rates . - rate (possibly divided by a factor)
12 - 18	Rate mneumonic for second rate, if any (required if code is + or -)
19	
20	Blank
21 - 25	Not used
26	Linear time/history plot flag Y - if a new frame for linear time/history plot is to begin with this bin b - if this bin is to be displayed on the current frame (frame becomes current when Y is encountered in this column) N - if this bin is not to be displayed on linear time/history plot

Column		
27	Semi-log time/history plot flag (similar to linear time/history flag)	
28	Time/history listing (similar to linear time/history flag)	
29	1 - flux for this bin is to be displayed b - counts/sec for the first rate is to be displayed	
30 - 35	Not used	

(Card 2)

Column		
1 - 2	Blank	
3 - 11	Threshold of first, or only rate factor by which first or only rate is to be divided	flux +, -, .
12 - 20	Threshold of second rate; in case of single rate, ceiling energy factor by which second rate is to be divided	flux +, -
21 - 29	Geometry factor	flux
30 - 37	Particle identifier	

These values need only be specified in case the values are not currently available in the table maintained in the catalog.