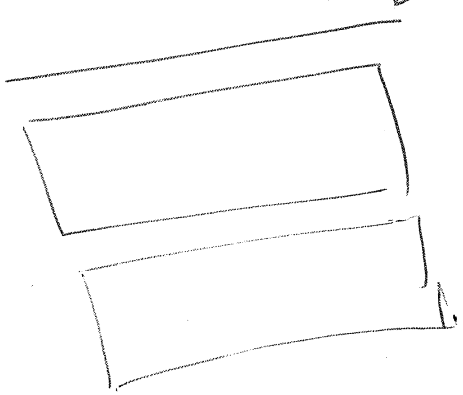
~~GGR 1983~~

FMCD
Feb/Mar 94

specify focus = G1
zero x axis
axis props
left or bottom -, 4
(no alt. map)

tic labels + marks as desired

special tics -
use tick labels
specify actual x axis value + label for that value



2 - Landscaped
with traj axis (non linear)

UNIVERSITY OF MARYLAND AT COLLEGE PARK

INSTITUTE FOR PHYSICAL SCIENCE AND TECHNOLOGY

FAX COMMUNICATION

No. of pages including this page: 2 Date: February 2, 1994

TO: Pam Schuster	From: Frank B. McDonald
Organization: **NASA/Goddard Space Flight Center**	FAX No: (301)314-9363
Location: **Greenbelt, Maryland 20771**	Voice No.: (301)405-4861
FAX No.: **286**-1771	
Voice No.: 286-9875	

Pam,

Here are the revised V-1 LeT defector info.

Thanks,

Frank McDonald

COLLEGE PARK, MARYLAND 20742-2431 • (301) 405-4874 • FAX: (301) 314-9363 • FAX: (301) 314-9404

VOYAGER 1

Let C (EVENT TYPE 22)

'old' = 3-54 record 141-2 2.73-8.12 at 22

	RADIUS	THICKNESS
L_1	.948 cm	36.17 MICRONS
L_2	.948	32.26
L_3	1.15	397.1
L_4	1.15	451.4

$L_1 L_2$ SEPARATION = 4.079 cm

FULL SCALE MeV = 2072

L_1	L_2	L_3
14-23	15-27	55
14-23	15-27	56
14-23	15-27	57

40790.00
32.26
40822.26

42850.86
-40822.26
2027.74

42850.0
397.1
43247.1

46000.0
-43247.1
2752.9

LET D (EVENT TYPE 24)

	RADIUS	THICKNESS
L_1	.946 cm	34.58
L_2	.946	33.82
L_3	1.15	400.7
L_4	1.15	464.3

40750.00
33.82
40783.82

42850.86
40783.82
2066.18

$L_1 L_2$ SEPARATION = 4.075 cm

FULL SCALE MeV = 2026

42850.0
400.7
43250.7

46000.0
43250.7
2749.3

NO ADDITIONAL ENTRIES REQUIRE FOR EVENT TYPE 24 RESPONSE TABLE

'old' = 3-58 records 145-6 2.73-8.14 at 24

3-D H overlays old

V1	LC3	3-14	rec51	3.08 - 8.07	et 22
	LD3	3-14	53	3.10 - 8.09	et 24
V2	LA3	3-15	262	3.25 - 8.53	et 18
	LC3	4-17	266	3.32 - 8.65	et 22
	LD3	4-15	268	3.31 - 8.04	et 24

new

V1	LC3	3 - 13	3.276 - 8.097	
	LD3	3 - 14	3.256 - 8.132	
✓ V2	LA3	3 - 15	3.242 - 8.590	ok
	LC3	4-17	3.472 - 8.613	
	LD3	4-15	3.496 - 8.073	

last ~ >8 pw are * for H V2 LA3 LC3

V2 87 jobs w V2LOSPC2 ~~[illegible]~~ subbed

couldn't find exclude loc for 93 —

V2 93 jobs w V2LOSPC2 done anyway

Made V1LOSPC2 from LD3 set

subbed V1 87 + 93 jobs

as I was leaving got vacuum messages about V2932A

///

3/29/94

RESPONSE MATRIX TABLES

Today's date: JAN 11,1985

STOPPING MODES

VOYAGER-1

FLUX CATALOG:
SB#VG.CATALOG.DATA

PROTON LD:

THRESHOLD	1.83
CEILING	3.10
EVENT TYPE	24
CHANNELS	4- 23
RECORDS	52- 52

LOW	HIGH	LOW	HIGH	CHANNEL	ENERGY	GEOMETRY
17 ~~15~~	22	0	0	4	1.829	0.4312
16 ~~14~~	22	0	0	5	1.858	0.4312
16 14	21	0	0	6	1.890	0.4312
15 14	21	0	0	7	1.926	0.4312
14 13	20	0	0	8	1.964	0.4312
14 13	20	0	0	9	2.005	0.4312
14 7	~~19~~ 18	0	0	10	2.045	0.4312
13 7	~~19~~ 18	0	0	11	2.088	0.4312
13 ~~8~~ 7	~~18~~ 17	0	0	12	2.133	0.4312
12 7	~~18~~ 17	0	0	13	2.181	0.4312
12 ~~7~~	~~18~~ 17	0	0	14	2.226	0.4312
11 7	~~17~~ 16	0	0	15	2.274	0.4312
11 7	~~17~~ 16	0	0	16	2.323	0.4312
11 7	16	0	0	17	2.376	0.4312
11 7	15	0	0	18	2.428	0.4312
11 8	15	0	0	19	2.480	0.4312
11 ~~8~~	15	0	0	20	2.535	0.4312
11 ~~8~~	14	0	0	21	2.590	0.4312
10 ~~9~~	14	0	0	22	2.647	0.4312
~~9~~	~~14~~	0	0	~~23~~	~~2.704~~	0.4312

FULL SCALE MEV= 310.25

(THIS IS ONLY V-1
LET WORKING IN
L_1 L_2 MODE)

LET DV1.DATA & memg MCDTRKV

V-2 LA2 2.60
4-24

9688 RV2
9689 RV1

150-161 $$ FITLS
162-163 $$FITLS A
138-148 $dropdriv

HOK

V2 LC2 He
needs N+1 work
make ch89 upper = lower

also same LD2

V1 LD2 He

same

also reinstall L2D H

after momentum operator
need pressure output

```
    SUMMARY OF FIT PARAMETERS     MAR 29, 1994 FMCD REQUEST
****
-   V1  ALPHA    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(AV1RDCA1)
  VOYAGER-1   FLUX FOR TIME 91/08/11- 91/08/16
 /*FIT PARMS: 1.2622E-02 ( 6.7958E-03)    1.4022E+01 ( 1.1400E+00)   /*
****
-   V1  ALPHA    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(AV1RDCB1)
  VOYAGER-1   FLUX FOR TIME 91/09/18- 91/09/22
 /*FIT PARMS: 4.8872E-02 ( 1.8960E-02)    1.9172E+01 ( 1.5403E+00)   /*
****
-   V1  ALPHA    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(AV1RDCC1)
  VOYAGER-1   FLUX FOR TIME 91/10/10- 91/10/22
 /*FIT PARMS: 1.0239E-02 ( 1.2796E-03)    1.8203E+01 ( 4.4671E-01)   /*


****
-   V1  PROTON    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(PV1RDCA1)
  VOYAGER-1   FLUX FOR TIME 91/08/11- 91/08/16
 /*FIT PARMS: 2.3954E-02 ( 7.4339E-03)    2.4062E+01 ( 1.8764E+00)   /*
****
-   V1  PROTON    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(PV1RDCB1)
  VOYAGER-1   FLUX FOR TIME 91/09/18- 91/09/22
 /*FIT PARMS: 2.1312E+00 ( 5.4480E-01)    1.8600E+01 ( 9.2188E-01)   /*
****
-   V1  PROTON    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(PV1RDCC1)
  VOYAGER-1   FLUX FOR TIME 91/10/10- 91/10/22
 /*FIT PARMS: 2.3442E-01 ( 7.9219E-02)    2.0094E+01 ( 1.4231E+00)   /*


    SUMMARY OF FIT PARAMETERS     MAR 30, 1994 FMCD REQUEST
****
-   V2  PROTON    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(PV2RDCA2)
  VOYAGER-2   FLUX FOR TIME 91/05/31- 91/06/07
 /*FIT PARMS: 2.5848E-01 ( 2.7712E-02)    2.4949E+01 ( 6.9279E-01)   /*
****
-   V2  PROTON    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(PV2RDCB2)
  VOYAGER-2   FLUX FOR TIME 91/09/05- 91/09/16
 /*FIT PARMS: 4.8318E-01 ( 5.4688E-02)    2.3940E+01 ( 6.7347E-01)   /*
****
-   V2  PROTON    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(PV2RDCC2)
  VOYAGER-2   FLUX FOR TIME 91/09/25- 91/10/08
 /*FIT PARMS: 9.2871E-02 ( 6.2462E-03)    2.4992E+01 ( 4.3664E-01)   /*


    SUMMARY OF FIT PARAMETERS     MAR 30, 1994 FMCD REQUEST
****
-   V2  ALPHA    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(AV2RDCA2)
  VOYAGER-2   FLUX FOR TIME 91/05/31- 91/06/07
 /*FIT PARMS: 3.6327E-02 ( 3.1872E-03)    1.6746E+01 ( 2.6552E-01)   /*
****
-   V2  ALPHA    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(AV2RDCB2)
  VOYAGER-2   FLUX FOR TIME 91/09/05- 91/09/16
 /*FIT PARMS: 1.9597E-02 ( 4.1064E-03)    2.3257E+01 ( 1.2193E+00)   /*
****
-   V2  ALPHA    MOMENTUM PARMS       FROM   MCDN2FIT.FITS(AV2RDCC2)
  VOYAGER-2   FLUX FOR TIME 91/09/25- 91/10/08
 /*FIT PARMS: 8.2924E-03 ( 1.0211E-03)    1.8891E+01 ( 4.7234E-01)   /*
```

"3 time series" momentum plots –
het only bins (5 points) used to fit the times
for V1 & V2 after het 2-D revisions

3/29/94 jmx

TABLE 1. Values of P_o for Spectral fits of the form exponential in momentum/nucleon

		Time Interval		$(P_o)_H$	$(P_o)_{He}$
a peak	V-2 (100, D, E)	5/31-6/7/91	34.7 AU	21.9 ± 1	17 ± 5.4
	V-1	8/11-8/16/91	45.8	26.2 ± 2.0	16.2 ± 1.1
	P-10	8/19-8/30/91	52.4	26.4 ± 0.7	18.6 ± 3
b peak	V-2 100	9/5-9/16/91	35.4	21.9 ± 1.1	23.9 ± 1.4
	V-1	9/18-9/22/91	46.2	20.1 ± 1.5	20.2 ± 2
	P-10	10/4-10/7/91	52.7	29.0 ± 3.0	25.1 ± 5
c peak	V-2 (100)	9/25-10/08/91	35.6	22.6 ± 1.1	18.9 ± 1.1
	V-1	10/10-10/22/91	46.4	21 ± 1.5	20.9 ± 1.5
	P-10	10/25-11/08/91	52.9	26.8 ± 1.6	26 ± 4

INCOPLTOG EXCLUDE(D)

		H	V2	He	V2
V1	t_1	24.1 ± 1.9	24.9 ± .7	14.0 ± 1.1	16.7 ± .3
let only	t_2	18.6 ± 1	23.9 ± .7	19.2 ± 1.5	23.3 ± 1.2
	t_3	20.1 ± 1.4	25.0 ± .4	18.2 ± .5	18.9 ± .5

These V2 times need to be fit also the P10

redo V2 as let only

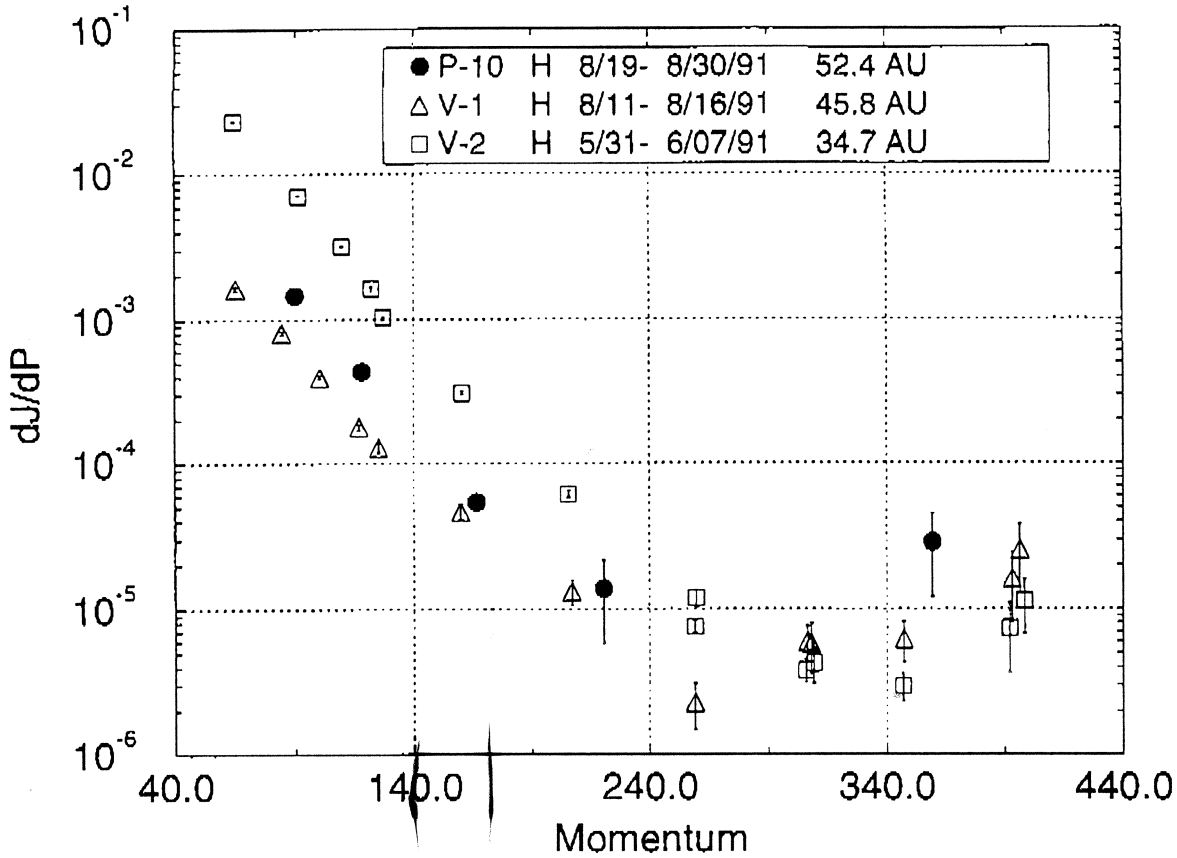
leave P10 as is

PAM This TABLE Needs to Be updated for Revised V-1, V-2 DATA After new L1 vs L2 Look-up TABLE V-1 is created

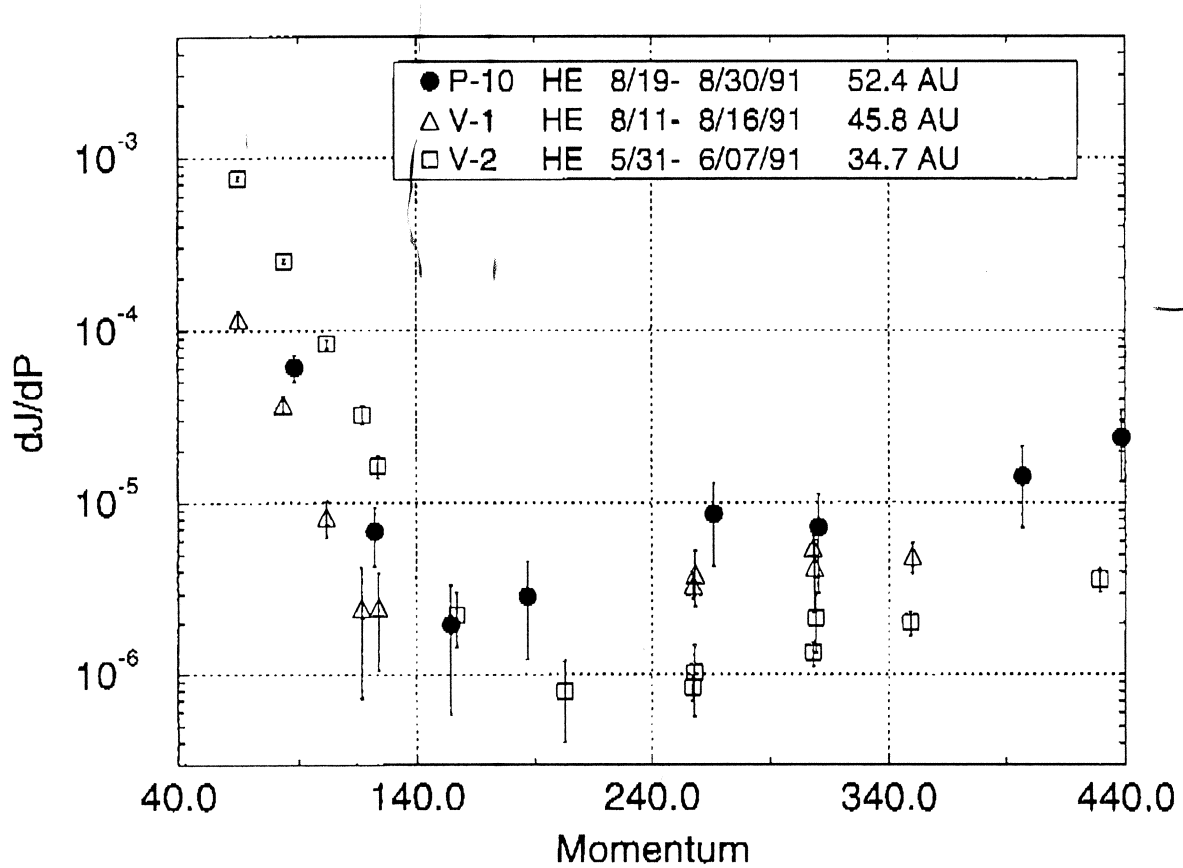
FITRI

The 3 Figures that follow need the revised L1L2 DATA Point for V1 AND V2

3/29/94



ALL CAPS
↓
APFC2T1
PV1D21A
PV2D21A



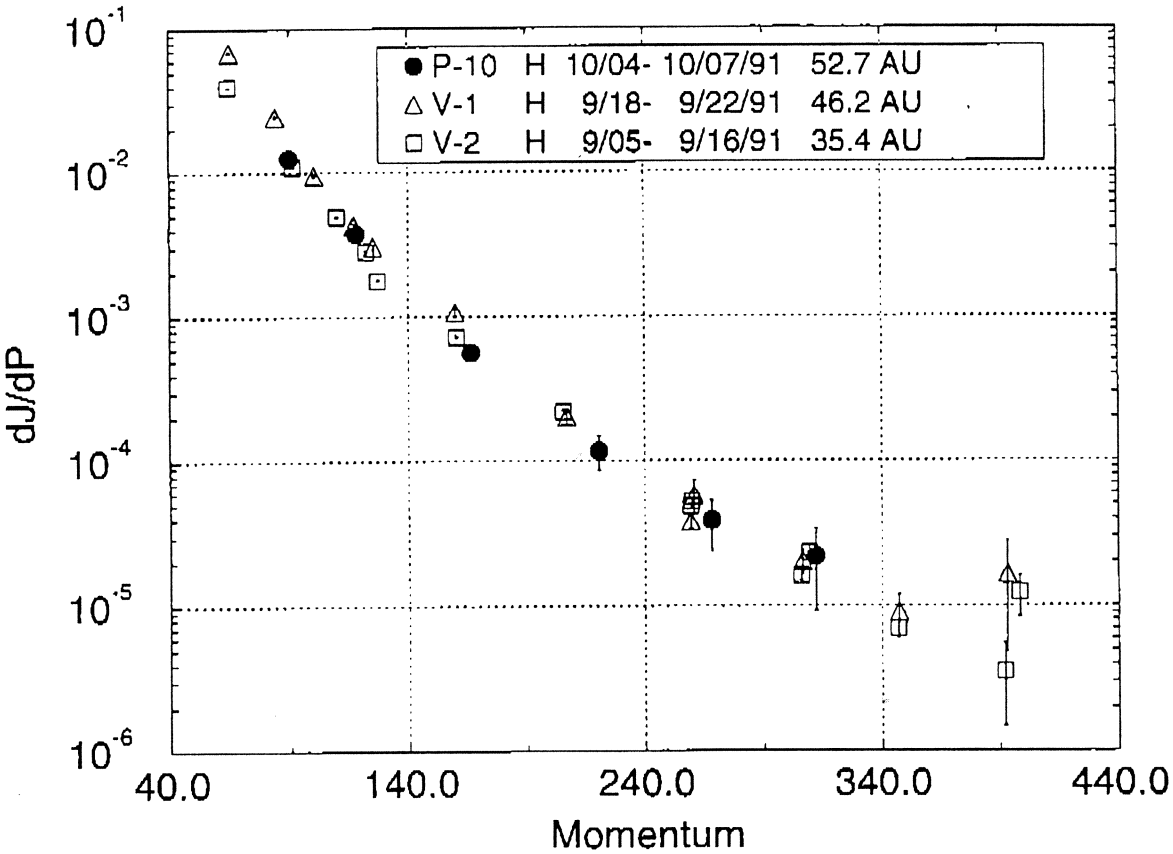
All CAPS
↓
APFC2T1
AV1D21A
AV2D21A

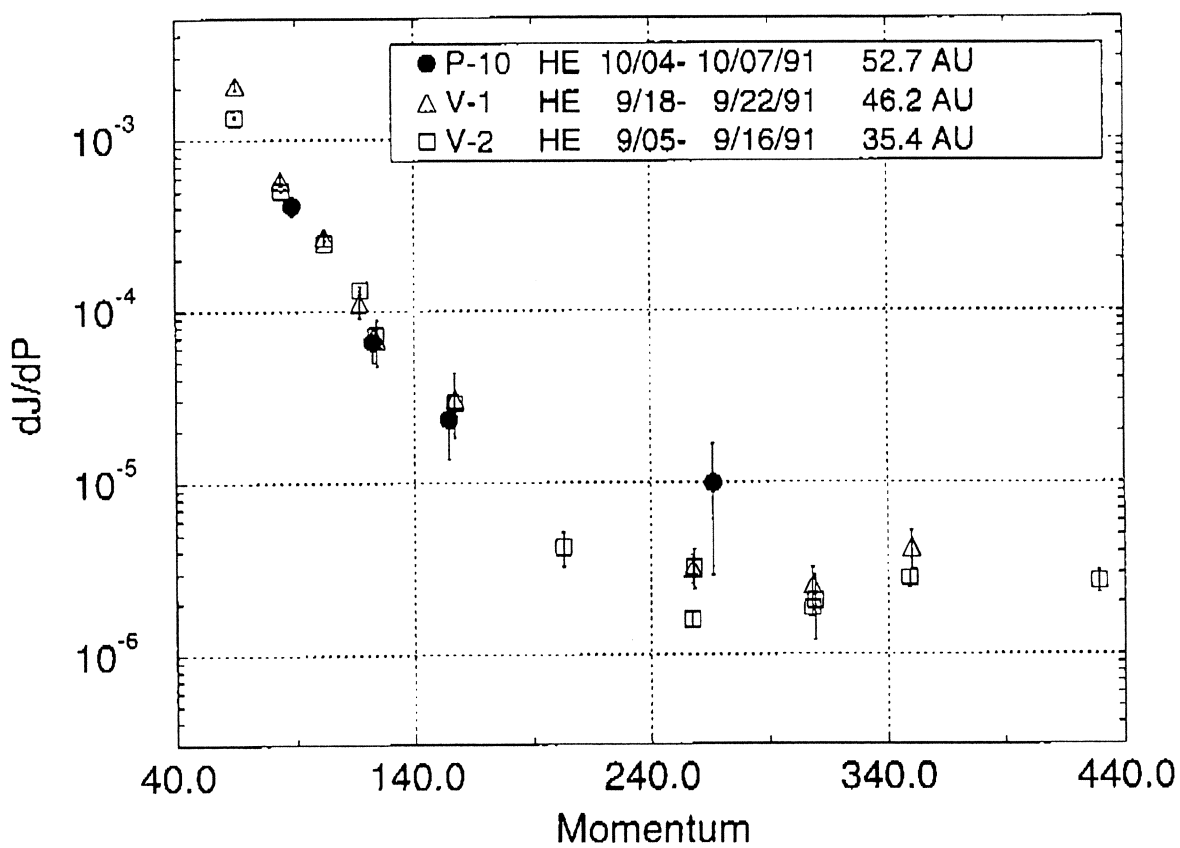
other CAP files
(C2T2 for P10
C2T3
(D22A
D23A for others)

set 2, set 3 for others

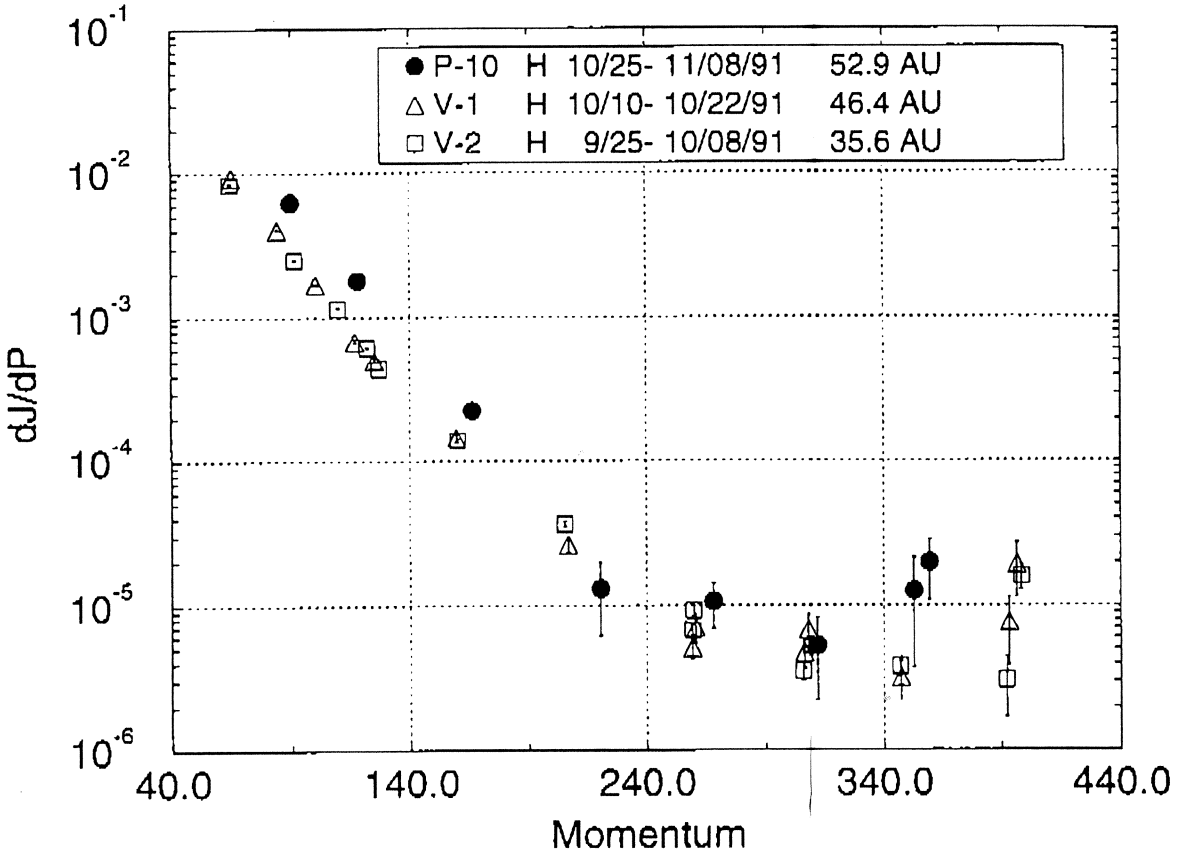
mainframe: MCDCALG2.DATA
plotdata/FORSCE/momentum440, withlegend, wide, set1. parab

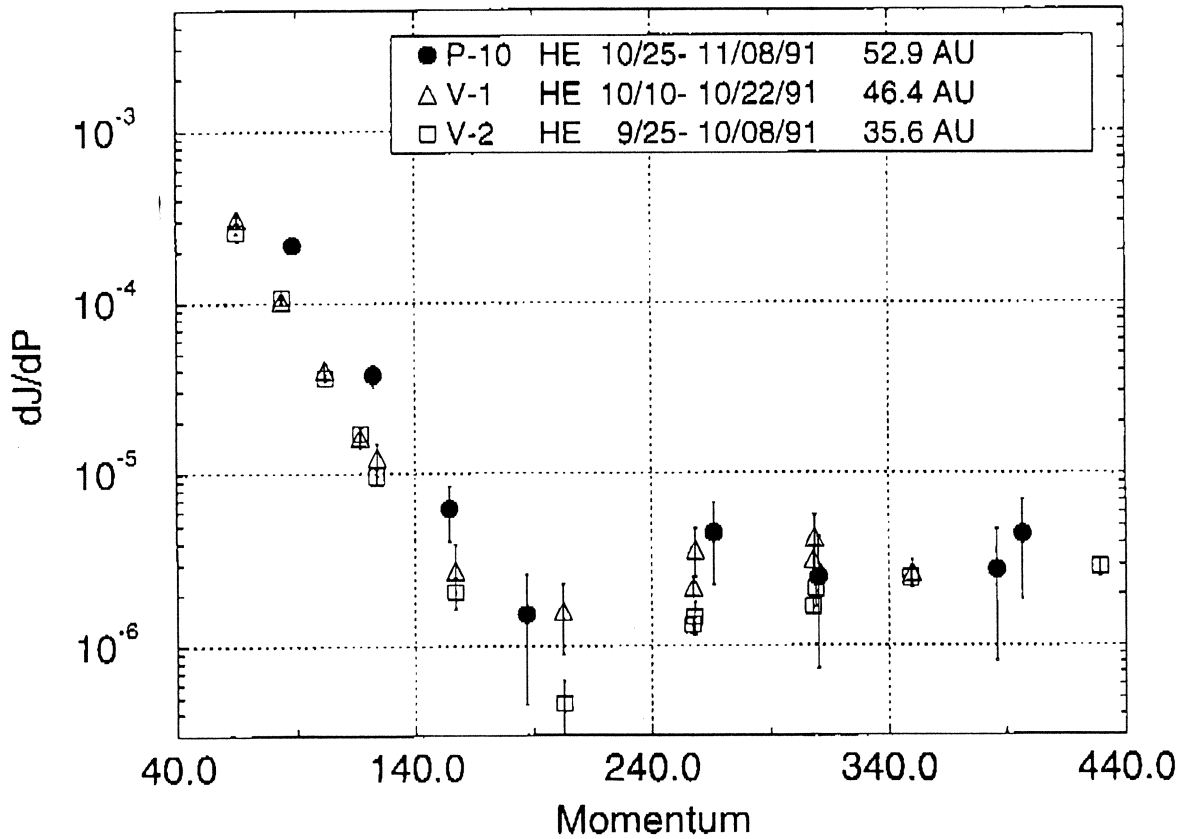
3/29/94


P-10 H 10/04- 10/07/91 52.7 AU
V-1 H 9/18- 9/22/91 46.2 AU
V-2 H 9/05- 9/16/91 35.4 AU
dJ/dP
Momentum
40.0
140.0
240.0
340.0
440.0


P-10 HE 10/04- 10/07/91 52.7 AU
V-1 HE 9/18- 9/22/91 46.2 AU
V-2 HE 9/05- 9/16/91 35.4 AU
dJ/dP
Momentum
40.0
140.0
240.0
340.0
440.0

3/29/94


P-10 H 10/25- 11/08/91 52.9 AU
V-1 H 10/10- 10/22/91 46.4 AU
V-2 H 9/25- 10/08/91 35.6 AU
dJ/dP
Momentum
40.0
140.0
240.0
340.0
440.0


P-10 HE 10/25- 11/08/91 52.9 AU
V-1 HE 10/10- 10/22/91 46.4 AU
V-2 HE 9/25- 10/08/91 35.6 AU
dJ/dP
Momentum
40.0
140.0
240.0
340.0
440.0

9/23/93

VOYAGER 2

9/24/93 In test cat.

1. CHANGE LET GEOMETRIC FACTOR TO 0.435.

9/24/93 In test cat

2. FOR HET-1 2 PARAMETER STOPPING PARTICLES ENTER REVISED LOOK-UP TABLE FOR LOWER BOUND OF A-1
UPPER BOUND AND END POINT ARE UNCHANGED

3. SELECT EQUIVALENT ENERGY INTERVALS FOR LET AND HET
~ 4.2 - 5.85 } 2 PARAMETER HET
6.2 - 8.8 } 3 PARAMETER HET

4. RUN H FLUXES FOR STANDARD?
Log figure ~ TO DAY PERIODS? IN 1991/1992 (LISTING)

5. SET UP LONGER RUN FOR He
(TRY 4/15 - 5/15 / 28
Matrix
(IS THERE LOW GAIN 2 PARAMETER He.
FOR DATA ~~TYP~~ TYPE 4
4 X 4 COMPRESSION

6. (Determine which HET on V-1 IS PROVIDING 2 PARAMETER ~~DA~~ H DATA AND RUN MATRICES

9/23/93

END POINT AT 83.5

A1 vs A2 VOYAGER 2 HET I

A2	LOWER BOUND A-1	DATA type 4 A.2	A.1	A-2 - A1
1	80	27	61	53
2	80	28	61	49
3	79	29	61	54
4	78	30	60	48
5	77	31	60	55
6	76	32	59	48
7	76	33	58	56
8	75	34	57	47
9	74	35	57	58
10	72	36	56	46
11	70	37	55	59
12	70	38	55	45
13	69	39	54	60
14	68	40	53	45
15	68	41	53	61
16	67	42	53	45
17	66	43	52	62
18	65	44	52	44
19	65	45	51	63
20	64	46	51	44
21	63	47	51	64
22	63	48	50	43
23	62	49	50	65
24	61	50	50	43
25	61	51	50 ~~49~~	66
26	61	52	~~48~~ 49	43
				67
				43
				68
				43
				69
				42
				70
				42
				71
				41
				72
				41
				73
				40
				74
				40
				75
				39
				76
				39
				77
				39
				78
				39
				79
				39

(even)

P-10 LET I RECALIBRATION FOR H 9/23/93
2 PARAMETER STOPPING

D II	E
25	5.1
24	5.2
23	5.3
22	5.4
21	5.5
20	5.6
19	5.75
18	5.9
17	6.05
16	6.3
15	6.6
14	6.9
13	7.25
12	7.65
11	8.15
10	9
9	10.4
8	11.75
7	13.55
6	16.1
5	20.3

UNIVERSITY OF MARYLAND AT COLLEGE PARK

INSTITUTE FOR PHYSICAL SCIENCE AND TECHNOLOGY

FAX COMMUNICATION

No. of pages including this page: 2 Date: August 23, 1993

TO: Pam Schuster	From: Frank B. McDonald
Organization: **NASA/Goddard Space Flight Center**	FAX No: (301)314-9363
Location: **Greenbelt, Maryland 20771**	Voice No.: (301)405-4861
FAX No.: **286-4952**	
Voice No.: 286-9875	

Pam,

Please see the attached instructions from Dr. McDonald.

Thanks,

Diane

COLLEGE PARK, MARYLAND 2 [illegible] (301) [illegible] • FAX: (301) 314-9[illegible] • FAX: (301) 314-9404

Revised Interim R-10 LET Look-up TABLES - Protons

DII	DI	Energy	old	
4	4-6	21.7		Pioneer 10
5	4-6	19.9		
6	4-7	18.1		
7	5-8	15.06		
8	5-9	13.3	14.7	LP2
9	5-10	11.86	12.59	
10	6-11	10.03	12.00	
11	7-12	9.73	11.5	
12	8-12	9.33	11.00	
13	9-12	8.93	10.5	
14	9-13	8.43	10	
15	9-13	~~7.62~~ 8.03	9.5	
16	10-14	~~7.~~ 7.62		
17	11-14	7.18		
18	11-15	6.74		
19	12-15	6.29		
20	12-15			
21	13-16			
22	13-16			

do I need to redo PROTONS?

Channels 4 - 18 define the TRACK
Channel 19 contain the TRESHOLD energy "(n+1) channel"

Energy is Defined at the Lower Level of the DII Channel

ie. Closest to Channel 3

First set of 3 T/F flags - flag 3 = T

PHA Col 28
BIN y 3 1 1
1
2

pplots → $$DRV TST
in mcDPLT06.DATA

per log Aug 23
entry for other
dsnames

OFPLP2 1 2 ← PFLP2T1
3 2 PFLP2T1C
4 2

PFLP2T3
PFLP2T3C

1. RERUN V-1 ; V-2 H, He
FLUX PROGRAMS FOR
1977/78
1987
[USE 0.44 GEOM FACTOR FOR LETS]

USING 24 hr AVERAGES (subtracting to whole)

(AS OF 1991)

2. PRINT-OUT WORKING LET MATRICES
FOR H AND He (PROBABLY ON SAME
V1, V2 1977/78 AND 1987 MATRIX)
ALONG WITH MATRIX AND/OR LISTING
OF LOOK UP TABLE

3. INSTALL NEW LOOK-UP TABLE
AND CALIBRATION FOR EVENT TYPE 13
ON V-2 AS PER ATTACHED LISTING

Install first

TTF FTT FFT

B 26 Y 28 Y

IIL3:

voyager-2

VOYAGER-2

ALPHA IIL3 ALPHA IIL3

THRESHOLD 27.24
CEILING 69.07
EVENT TYPE 13

CHANNELS 1- 59
RECORDS 339- 340

LOW	HIGH	LOW	HIGH	CHANNEL	ENERGY	GEOMETRY
62 63	71	56	~~66~~ 63 66	1	27.243	1.6848
62 63	70	55	~~64~~ 62	2	27.368	1.6848
61 62	70	53	~~63~~ 59	3	27.517	1.6848
61 62	70	52	~~61~~ 55	4	27.727	1.6848
61 62	69	50	~~59~~ 54	5	27.974	1.6848
60 61	68	48	~~55~~ 54	6	28.261	1.6848
59 60	68	46	~~53~~ 52	7	28.587	1.6848
58 59	67	43 44	51 50	8	28.947	1.6848
57 58	66	42	50 49	9	29.340	1.6848
57 58	65	40 41	48 47	10	29.763	1.6848
56 57	64	39	46 45	11	30.218	1.6848
55 56	63	37 38	45	12	30.699	1.6848
54 55	62	36	44	13	31.210	1.6848
53 54	61	35	42	14	31.742	1.6848
51 53	60	34	41	15	32.295	1.6848
50 52	59	31 33	39	16	32.870	1.6848
49 51	58	29 31	38	17	33.471	1.6805
48 50	57	29 ~~30~~	37	18	34.090	1.6708
47 49	56	29 30	36	19	34.726	1.6603
45 48	55	28 ~~29~~ 26	35	20	35.379	1.6495
45 48	54	27 28 24	34	21	36.049	1.6383
44 47	53	~~27~~ 24	33	22	36.733	1.6121
42 44	51	~~25~~ 23	32	23	38.614	1.5453
42 44	50	~~25~~ 23	31	24	39.197	1.5346
41 43	50	24 23	31	25	39.815	1.5236
41 43	49	24 23	30	26	40.473	1.5126
40 42	48	23 22	30	27	41.164	1.5069
39 41	48	23 22	29	28	41.880	1.4946
39 41	47	22 21	29	29	42.614	1.4821
38 40	47	22 21	28	30	43.362	1.4692
37 39	46	21 20	28	31	44.125	1.4571
37 39	45	21 20	27	32	44.902	1.4502
37 38	45	19 20	27	33	45.689	1.3698
37 38	44	19 20	26	34	46.487	1.3571
36 37	44	18 19	~~26~~ 24	35	47.296	1.3440
35 36	43	18 19	26 ~~25~~ 23	36	48.112	1.3309
34 36	42	18 19	25 22	37	48.936	1.3249
34 35	42	17 18	25 22	38	49.769	1.3112
33 35	41	17 18	25 22	39	50.609	1.2974
32 34	41	16 18	24 22	40	51.455	1.2700
32 33	40	16 17	~~24~~ 22	41	53.547	1.2156
31 33	39	15 17	23 21	42	54.190	1.2050
31 33	39	15 17	23 21	43	54.910	1.1984
31 32	39	15 16	23 21	44	55.676	1.1850
31 32	38	15 16	23 21	45	56.471	1.1737
30 31	38	14 16	22 20	46	57.300	1.1657
30 31	38	14 16	22 20	47	58.140	1.1516
29 31	37	14 15	22 19	48	58.945	1.1273
29 30	37	14 15	22 19	49	58.979	1.1034
28 30	36	14 15	21 19	50	59.508	1.0882
28 30	36	14 15	21 19	51	60.378	1.0739
28 29	36	14 15	21 18	52	61.255	1.0666
28 29	35	14	21 18	53	62.138	1.0527
27 ~~28~~	35	14	20 18	54	63.026	1.0413
27 ~~28~~	34	14	20 17	55	63.921	1.0333
27 ~~28~~	34	14	20 17	56	65.967	0.9797
26 ~~27~~	34	13	~~20~~ 17	57	66.668	0.9687
26	34	13-17		58		
26 -32		13 ~~17~~ 16		59		
26 -32		13 -~~17~~ 16		60		

done done done

FULL SCALE MeV = ~~40~~ x 4

ZBPAS £140
ZB2NL £140
£CBK01

16040
16752 II 67
17130

Let C Event Type 22

	Radius	thickness
L_1	.95 cm	34.47 microns
L_2	.94	33.21
L_3	1.13	460.9
L_4	1.13	445.1

$L_1 L_2$ Separation = 4.084 cm

Threshold = 2.71

Full scale MeV = 1903.04 (Calc. max stopping energy = 8.56)

Add to Look-up table

L_1	L_2	L_3
17 -23	18 -23	61
17 -22	18 -23	62
17 -22	18 -23	63
17 -21	18 -23	64
17 -21	18 -22	65
17 -21	18 -22	66
17 -21	18 -22	67

Let D Event Type 24

	Radius	thickness
L_1	0.95 cm	33.9 microns
L_2	0.95	35.33
L_3	1.13	393.9
L_4	1.13	441.6

Threshold Energy = 2.78

$L_1 L_2$ separation = 4.061 cm

Calc max stopping energy = 7.97

Full scale MeV = 1901.

	L_1	L_2	L_3
	17 -23	19 -23	60
	17 -23	" "	61
	17 -22	" "	62
	17 -22	" "	63

	H	He	
no thresholds:	2.8 – 8.56 ch 1-16	2.67 – 8.536 ch 1-64	nothing starred in either

H1 L3 line only: no effect from ↑

H1 L4 line only: no effect from ↑

L0 L3 line only: yes, affects start of H track and no effect on He

	new	old
L4 3	2-64 2.715- 8.551	3-64 2.748- 8.551	3-61 2.77- 8.67
L C 3	2-67 2.690- 8.643	3-67 2.719- 8.643	3-60 2.71- 8.29
* L D 3 he wanted to extend to 63	2-62 2.725-8.033	4-62 2.782-8.033	4-59 2.78- 8.16

1st iteration summary

use ~.5 thresh

1.8 MeV

FSMeV	248	FSMeV 312	1975.6	using 1.13 cm
	L1	L2	L3	L4
radius	.947 cm	.949 cm	.942 cm	.942
thickness	[34.35] 1 ~~.5 μ~~ 33.5	[36.23] 35.3	[461.2] 448.0	[461.2]
spacing	0	4.075 cm	4.285 cm	4.60 cm

3μ dead layer

40750 — 36.23 — 2064 — 461.2 — 2689

1975.6 = FSMeV

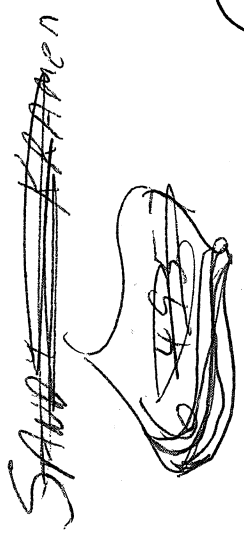
2.77 MeV for He for L3

radius

9470 microns

1.03

4096 channels for all



1 micron = 10^{-6} meter × 100 $\frac{cm}{meter}$ = 10^{-4} cm

10,000 microns = 1 cm

2 PM

.947 cm × $\frac{1\,\mu m}{10^{-4}\,cm}$

40750
35
40785

42850
40785
2065

599
40000
42311
2689

42850
448
43298

599
40000
43298
2702

RUN V-2

MATRICES

EVENT TYPE 4

9/5 - 10/8/1991

1 X 1 COMPRESSION

4 X 4

A_1 vs ΣC

A_2 vs ΣC

1 micron = 10^{-6} meter

1000 microns = 10^{-3} meter = 1 mm

10 000 microns = 10^{-2} meter = 1 cm

$10^{-6} \frac{m}{\mu m} \times \frac{1000 mm}{m} = 10^{-3} \frac{mm}{\mu m}$

$\frac{1 \mu m}{10^{-3}} = 1 mm$

$1933 \mu = 2 mm$

$1933 \mu \times$

.625

3.

Vlet model

~~H~~ IA3 10-54 all zero 5 bins zero

He IA3 19-56 no zero 3 bins zero

3 ← 4 B
4 B
1 B
OUTPUT3A
OUTPUT3B
OUTPUT3B
OUTPUT3B
OUTPUT3B

8 means A

3
4
3
5 ← 8
8

8 means here

3 ← 4
2 ← 4
4
3

		L1	L2	
L3	62	16-21	18-23	Lex A
	63	"	"	
	64	"	"	V2

extend

NASA
National Aeronautics and
Space Administration

Goddard Space Flight Center
Greenbelt, Maryland 20771

LHEA

Laboratory for High Energy
Astrophysics

Date: 1/27/94 Total Pages Including Cover: 2

To: Pam Schuster Fax Number: 6 1771

From: Don Reamer Fax Number: (301) 286-1682

Sender's office phone number: (301) 286-

Sender's E-mail address:

Notes:

```
II ISEE VLET2 CALIBRATION DATA (ENTERED 7/10/80)
C
C       FILE NAME: IV2LOZ.DET
C
C     MODES       GAINS
        1           1
C
C ELEM    NO.  THICK  AMP-AST   BST    PEN THRESHOLDS SPACING   RADIUS CURV
                 2.5      7      7      7                   0     7710    1
     D1     1   15.5      1      7      7    .26     .26 33122     7710    1
                 .16      7      7      7                   0     7710    1
     D2     2   16.2      2      7      7    .26     .26  4349     7710    1
                  .4      7      7      7                   0    11163    1
     E      3    319      3      7      7   1.08      .0  2997    11163    1
     E      4    320      6      7      7    .92      .0     0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
            0      0      7      7      7                   0    11163    1
C
C
CHANNLS     OFFSET      FSMEV
   2048      -2.62      149.0      D1
   2048      -1.38      146.0      D2
   1024       -.02      1078.      E
      0                    1.
      0                    1.
      0                    1.
      0                    1.
      0                    1.
      0                    1.
      0                    1.
      0                    1.
C
C
C
C                          SLANT 1                    SLANT 2
C    1     2  BOTH   GN    CH1    CH2    CH3    SUM    CH1    CH2    CH3    SUM
    E1    E0    E0    1     1.    .43   1.48   -25.    1.    .43   1.48  -78.0

C
C                 NUMBER OF SPECIES
C     MODES         GAIN        GAIN
        1            12           0
C
C NAME      Z          A
  HE3-      2       3.01
  HE4-      2       4.00
  B11-      5      11.00
  C12-      6      12.00
  N14-      7      14.00
  O16-      8      15.99
  F19-      9      18.99
  NE20     10      19.99
  NA23     11      22.99
  MG24     12      23.99
  AL27     13      26.98
  ST28     14      27.98
```

10

```
####
 4VOYAGER-2   FLUX FOR TIME 87/ 1/ 1 TO 87/12/31
      FLUXES FROM 24 HOUR SUBSUMS
 ET 18
    1.802        3.251        PROTON     3.2404E-04   7.2003E-06   1
    3.251        5.588        PROTON     5.0729E-05   2.1282E-06   2
    4.319        6.040        PROTON     3.0611E-05   1.9478E-06   3
    6.498        8.382        PROTON     1.8834E-05   1.4404E-06   4
 ET 22
    1.822        3.317        PROTON     4.1271E-04   8.0941E-06   5
    3.317        5.636        PROTON     6.7005E-05   2.5111E-06   6
    4.388        6.079        PROTON     3.8540E-05   2.1251E-06   7
    6.528        8.370        PROTON     2.5432E-05   1.7327E-06   8
 ET 24
    1.807        3.309        PROTON     3.5867E-04   7.6347E-06   9
    3.309        5.600        PROTON     5.2659E-05   2.2348E-06  10
    4.363        6.041        PROTON     2.7410E-05   1.9465E-06  11
    6.486        8.043        PROTON     2.5192E-05   1.9532E-06  12
 MEAN REQUEST OF ABOVE: 18, 22, 24, MEAN VALUES
    1.811        3.292        PROTON     3.4043E-04   4.8887E-06  13
    3.292        5.608        PROTON     6.0276E-05   1.8951E-06  14
    4.357        6.053        PROTON     4.8219E-05   2.2036E-06  15
    6.504        8.265        PROTON     4.0916E-05   2.2299E-06  16
 ET 4
    4.360        6.000        PROTON     1.7222E-05   1.0665E-06  17
    6.437        8.224        PROTON     1.3891E-05   1.0581E-06  18
    6.437        10.71        PROTON     1.3238E-05   6.3549E-07  19
    10.71        16.48        PROTON     1.9380E-05   6.4887E-07  20
    16.48        27.92        PROTON     3.5630E-05   6.2794E-07  21
    19.55        26.47        PROTON     3.6563E-05   8.1429E-07  22
    27.92        42.79        PROTON     6.0246E-05   7.6445E-07  23
    42.79        54.86        PROTON     9.3488E-05   1.1437E-06  24
 ET 11
    4.360        6.050        PROTON     0.0000E+00  -1.0000E+00  25
    6.552        8.206        PROTON     0.0000E+00  -1.0000E+00  26
    6.552        10.53        PROTON     0.0000E+00  -1.0000E+00  27
    10.53        16.71        PROTON     0.0000E+00  -1.0000E+00  28
    16.71        27.85        PROTON     0.0000E+00  -1.0000E+00  29
    19.65        26.48        PROTON     0.0000E+00  -1.0000E+00  30
    27.85        42.75        PROTON     0.0000E+00  -1.0000E+00  31
    42.75        54.95        PROTON     0.0000E+00  -1.0000E+00  32
 MEAN REQUEST OF ABOVE: 4, 11,  MEAN VALUES
    4.360        6.025        PROTON     1.7222E-05   1.0665E-06  33
    6.494        10.62        PROTON     1.3238E-05   6.3549E-07  34
    10.62        16.60        PROTON     1.9380E-05   6.4887E-07  35
    16.60        27.89        PROTON     3.5630E-05   6.2794E-07  36
    27.89        42.77        PROTON     6.0246E-05   7.6445E-07  37
    42.77        54.91        PROTON     9.3488E-05   1.1437E-06  38
 ET 7
    19.53        26.44        PROTON     4.7321E-05   8.8676E-07  39
    27.96        43.04        PROTON     5.0094E-05   6.0057E-07  40
    43.04        54.94        PROTON     8.3719E-05   9.7093E-07  41
    55.55        69.41        PROTON     1.1196E-04   1.1830E-06  42
 ET 14
    19.62        26.45        PROTON     0.0000E+00  -1.0000E+00  43
    27.92        43.08        PROTON     0.0000E+00  -1.0000E+00  44
    43.08        55.09        PROTON     0.0000E+00  -1.0000E+00  45
    55.09        69.37        PROTON     0.0000E+00  -1.0000E+00  46
 MEAN REQUEST OF ABOVE:  7, 14, ONE BIN ONLY,  MEAN VALUE
    55.32        69.39        PROTON     1.1196E-04   1.1830E-06  47
#######
 ET 18
    1.803        2.781        ALPHA      1.8574E-05   1.9951E-06  48
    2.807        4.672        ALPHA      1.5599E-05   1.2367E-06  49
    4.469        5.860        ALPHA      2.6525E-05   1.8887E-06  50
    6.313        8.306        ALPHA      4.6580E-05   2.2206E-06  51
```

11

ET 22

1.801	2.663	ALPHA	5.7616E-05	3.6186E-06	52
2.842	4.625	ALPHA	1.5660E-05	1.3203E-06	53
4.427	5.893	ALPHA	2.3329E-05	1.7790E-06	54
6.225	8.286	ALPHA	4.7995E-05	2.2571E-06	55

ET 24

1.803	2.658	ALPHA	3.4266E-05	3.0811E-06	56
2.822	4.633	ALPHA	1.5103E-05	1.2898E-06	57
4.436	5.893	ALPHA	2.5448E-05	1.8755E-06	58
6.223	8.160	ALPHA	4.5961E-05	2.1401E-06	59

MEAN REQUEST OF ABOVE: 18, 22, 24, MEAN VALUES

1.802	2.701	ALPHA	7.1008E-05	3.9445E-06	60
2.824	4.643	ALPHA	2.8953E-05	1.6299E-06	61
4.444	5.882	ALPHA	4.4382E-05	2.2499E-06	62
6.254	8.251	ALPHA	5.3292E-05	2.1078E-06	63

ET 4

4.360	5.940	ALPHA	2.5771E-05	1.3099E-06	64
6.514	8.224	ALPHA	5.8087E-05	2.0837E-06	65
6.234	10.05	ALPHA	6.4688E-05	1.4243E-06	66

ET 11

4.360	6.020	ALPHA	0.0000E+00	-1.0000E+00	67
6.483	8.336	ALPHA	0.0000E+00	-1.0000E+00	68

ET 4

10.05	16.10	ALPHA	1.2050E-04	1.5183E-06	69
16.10	27.18	ALPHA	1.6390E-04	1.3273E-06	70
19.16	26.81	ALPHA	1.6367E-04	1.5978E-06	71
27.36	42.60	ALPHA	1.4034E-04	1.1328E-06	72
42.60	56.70	ALPHA	9.3476E-05	1.0648E-06	73

ET 11

6.234	10.06	ALPHA	0.0000E+00	-1.0000E+00	74
10.06	16.17	ALPHA	0.0000E+00	-1.0000E+00	75
16.17	27.15	ALPHA	0.0000E+00	-1.0000E+00	76
19.09	26.81	ALPHA	0.0000E+00	-1.0000E+00	77
27.32	42.57	ALPHA	0.0000E+00	-1.0000E+00	78
42.57	56.60	ALPHA	0.0000E+00	-1.0000E+00	79

MEAN REQUEST OF ABOVE: 4, 11, MEAN VALUES

4.360	5.980	ALPHA	2.5771E-05	1.3099E-06	80
6.498	8.280	ALPHA	5.8087E-05	2.0837E-06	81
6.234	10.05	ALPHA	6.4688E-05	1.4243E-06	82
10.05	16.14	ALPHA	1.2050E-04	1.5183E-06	83
16.14	27.16	ALPHA	1.6390E-04	1.3273E-06	84
27.34	42.58	ALPHA	1.4034E-04	1.1328E-06	85
42.58	56.65	ALPHA	9.3476E-05	1.0648E-06	86

ET 7

19.16	26.78	ALPHA	2.1395E-04	1.7483E-06	87
27.36	42.73	ALPHA	1.3277E-04	9.7833E-07	88
42.58	56.69	ALPHA	1.0115E-04	9.9452E-07	89
56.20	70.49	ALPHA	7.0296E-05	9.2649E-07	90

ET 14

19.16	26.77	ALPHA	0.0000E+00	-1.0000E+00	91
27.38	42.63	ALPHA	0.0000E+00	-1.0000E+00	92
42.63	56.51	ALPHA	0.0000E+00	-1.0000E+00	93
56.19	69.76	ALPHA	0.0000E+00	-1.0000E+00	94

ET 6

19.19	26.88	ALPHA	0.0000E+00	-1.0000E+00	95
27.38	42.58	ALPHA	0.0000E+00	-1.0000E+00	96
42.58	56.28	ALPHA	0.0000E+00	-1.0000E+00	97
56.28	70.51	ALPHA	0.0000E+00	-1.0000E+00	98

ET 13

19.17	26.79	ALPHA	1.5992E-04	1.1096E-06	99
27.38	43.10	ALPHA	1.2801E-04	6.8957E-07	100
43.10	57.31	ALPHA	1.0203E-04	7.3675E-07	101
56.46	70.50	ALPHA	8.8733E-05	7.9028E-07	102

MEAN REQUEST OF ABOVEL 7, 14, 6, 13, MEAN VALUES

19.17	26.80	ALPHA	1.7369E-04	9.2983E-07	103
27.37	42.82	ALPHA	1.2871E-04	5.5991E-07	104

voycrs:pam

v193all

Fri Feb 4 16:11:51 1994

lw / LaserJet 4

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lw voycrs:pam  Job: v193all  Date: Fri Feb  4 16:11:51 1994
lw voycrs:pam  Job: v193all  Date: Fri Feb  4 16:11:51 1994
lw voycrs:pam  Job: v193all  Date: Fri Feb  4 16:11:51 1994
lw voycrs:pam  Job: v193all  Date: Fri Feb  4 16:11:51 1994
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recall, V1 HI data not reliable after d40 of 82 or so

LL1