

Array Experiments (Phase 1) Volume 4

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U.S. Department of Energy

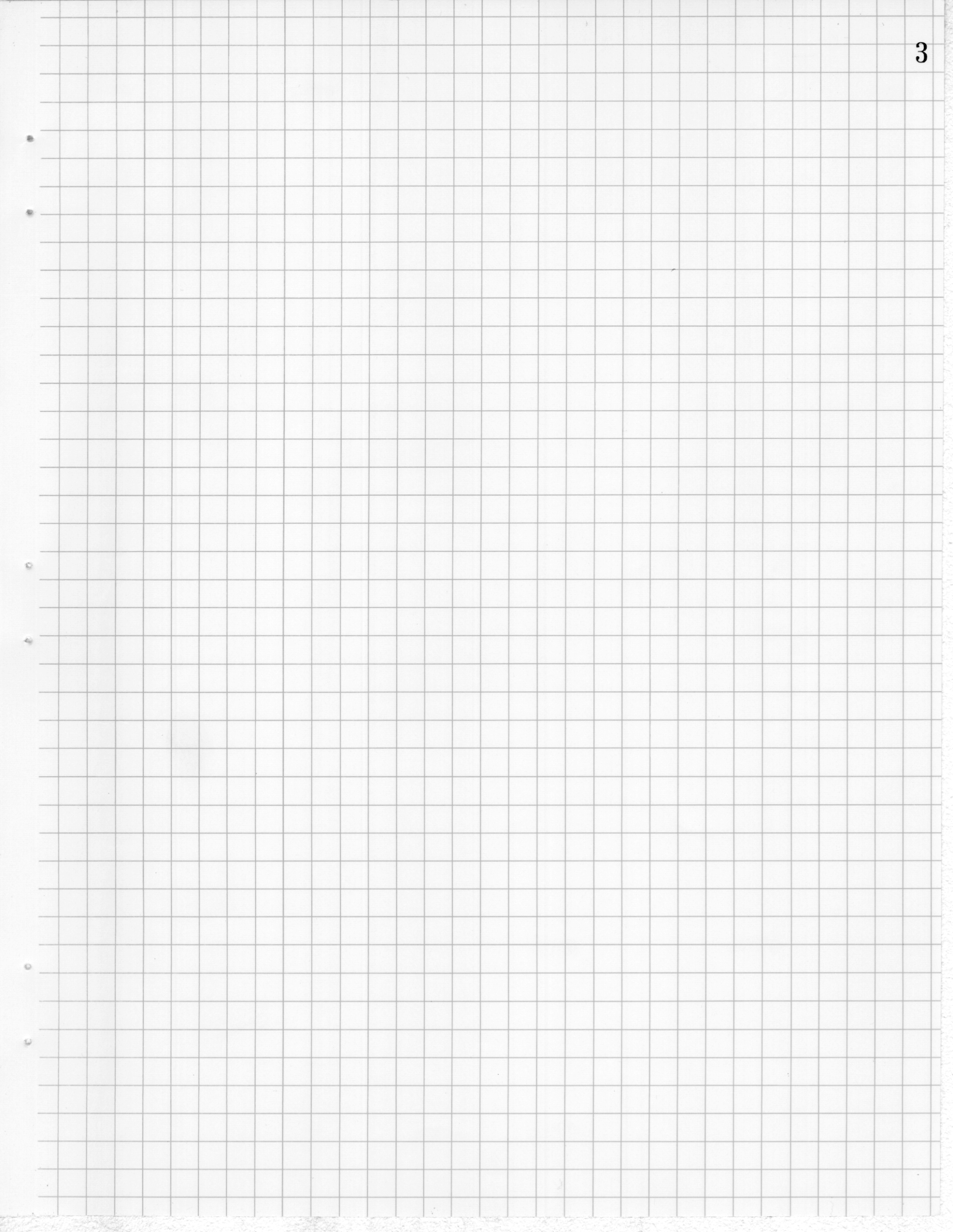
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ARRAY
EXPERIMENT
VOL - 4



5-23-66

4

Flux Traverses continued from Vol. 3.

U^{235} Probe moved to center of top fuel plane of previous assembly.

We will close this assembly. 2-17 : STS = 3.052 cm

Fast Stop : T-1 = 23128 T-2 = 36612
 T/C's Room = 73 #2 = 117 #3 = 123

Crit @ H = .022 cm
 and level A = 4.640 cm

Power = 2500

Beck #1 = $.8 \times 10^{-7}$

Beck #2 = $.7 \times 10^{-7}$

Rams #1 = .2 #2 = .7 #3 = .7
 #4 = .5 #5 = .3

T/C's Room = 72 #2 = 106 #3 = 112

Flux Traverse

cm	U^{235} cts / 1500000 cts TUB	Norm. to 1 st run @ 13.195 (33137 cts)
-3.000	10166	.3068
-2.000	/	
-1.000	12629	.3811
0.000	13901	.4195
1.000		
2.000	18573	.5605

<u>cm</u>	<u>Probe/TUB</u>	<u>Norm.</u>
3.000	-	
4.000	22805	.6882
5.000	-	
6.000	23609	.7124
7.000	-	
8.000	23444, (23990, 24426, 24401)	.7075
9.000	25363, 25732, 26044, 26424	.7654
10.000	24599	.7423
11.000	-	
12.000	27184	.8203
13.145	28353	.8556
14.000	27824	.8396
16.000	24886	.7510
17.000	24200	.7303
18.000	22379, (23293, 23569)	.6753, .7029
19.000	22555	.6806
20.000	22863 (22911)	.6899
22.000	22801	.6881
24.000	20068	.6056
26.000	15463	.4666
28.000	11677	.3524
30.000	9645	.2911

• North-South Traverse of lower plane of fuel

X " " " " " " " " of void fuel
 ⊙ " " " " " " " " top " "

1.2

1.0

.8

.6

.4

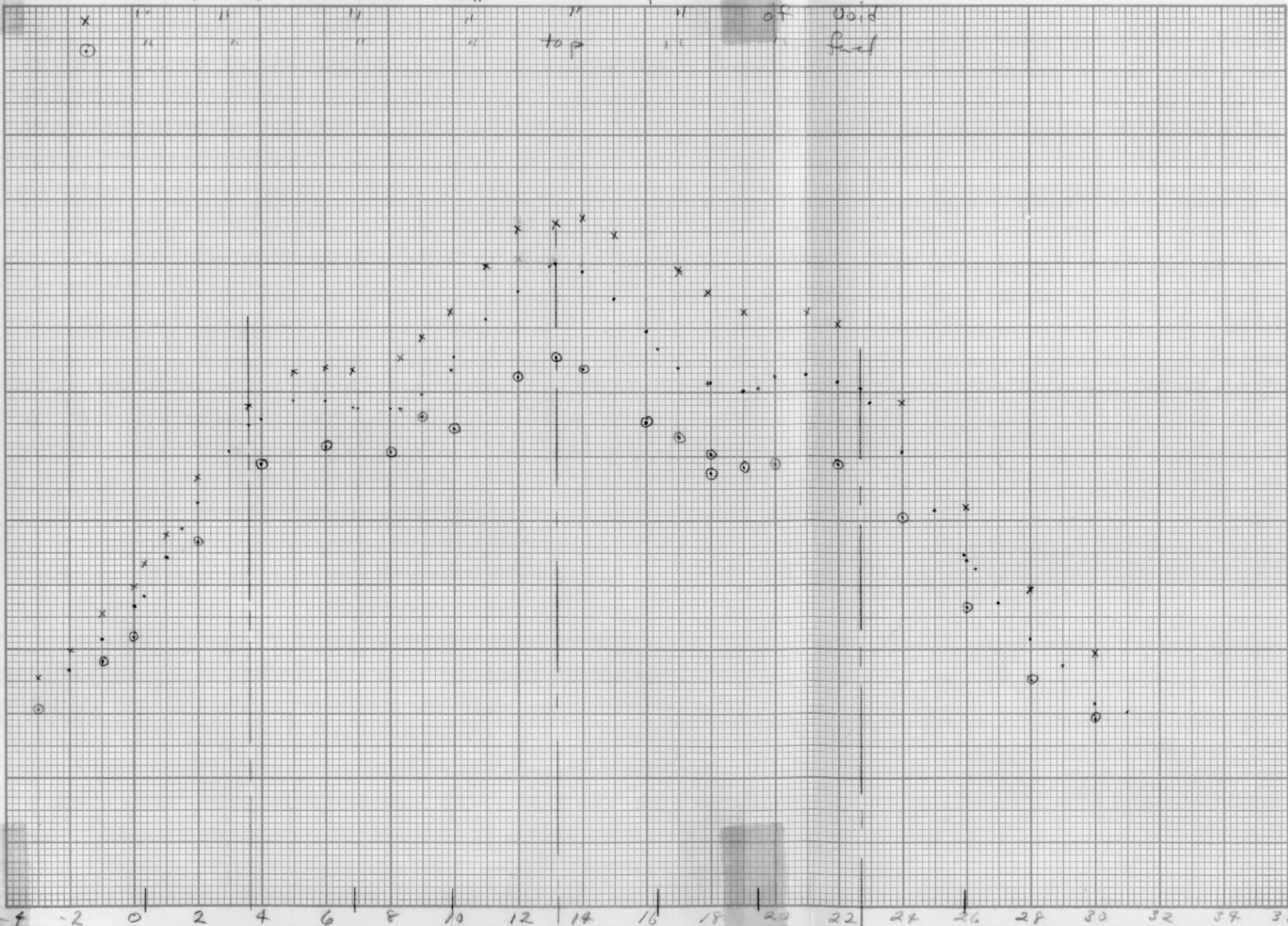
.2

0

South

X (cm)

North



5-24-66

It appears we have been having problems with our flux traverses. Our probe count rate was following the power level so we may have been saturating the tube. We have placed our small reflector in front of the tube in order to decrease the count rate.

Continue with flux traverses. Approx. power level log N : 20.90
T/C's Room = 72 #2 = 104 #3 = 109 Becks 1: 0.5×10^{-9}

<u>cm</u>	<u>Rate/TUB</u>	<u>Name</u>
-3.000	10548	
-2.000	11713	
-1.000	12662	
0.000	14100	
.345	14938	
1.000	16019	
2.000	18792	
3.000	20945	
3.595	22405	
4.000	23553	
5.000	23723	
6.000	23936	
6.845	23366	
7.000	23001	
8.000	23189, 23643, 23791, 23933	

cm

Probe/TUB

Norm.

7

8.370

9.000

9.895

10.000

11.000

12.000

13.000

13.175

14.000

15.000

16.000

16.395

Problems

We changed the preamp with the Tennetex.
We will try again.

More problems which looks like the amp.
for the Norm. Tub. Another amp. used.

1 Cm

Probe/TUB (20000)

Norm

-3.000

13730, 14142, 14710, 14500

-2.000

5-25-66

We will try again. With luck we will give it a good try.

Fast Stop

T-1 = 23191

T-2 = 37890

T/C's

Room = 72

#2 = 113

#3 = 116

Crit and Level @

H = 0.022

Norm

A = 5.060

Power = 30%

Beck #1 = 1×10^{-7}

Beck #2 = $.9 \times 10^{-7}$

Roms

#1 = .3

#2 = .9

#3 = .99

#4 = .6

#5 = .35

T/C's

Room = 72

#2 = 104

#3 = 109

1 Cm

Probe/TUB (100000)

Norm

-3.000

9439

-2.000

10107

-1.000

10768

0.000

11770

.345

12180

1.000

13160

2.000

14466

Cm

Probe/TUB

Norm.

9

3.000

16265

3.595

17679

4.000

18318

5.000

21014

6.000

23244

6.845

25235, 25853, 26123

5/25/66

Did a great deal of testing on counters to determine the cause of erratic counter performance. Ran plateau on the reference TUB counter. Found that we were below the HV plateau level. Re-ran a comprehensive set of counter checks - settings and discriminators.

Still observed some problems with power dependence of the fission probe. Re-adjusted discriminators some more.

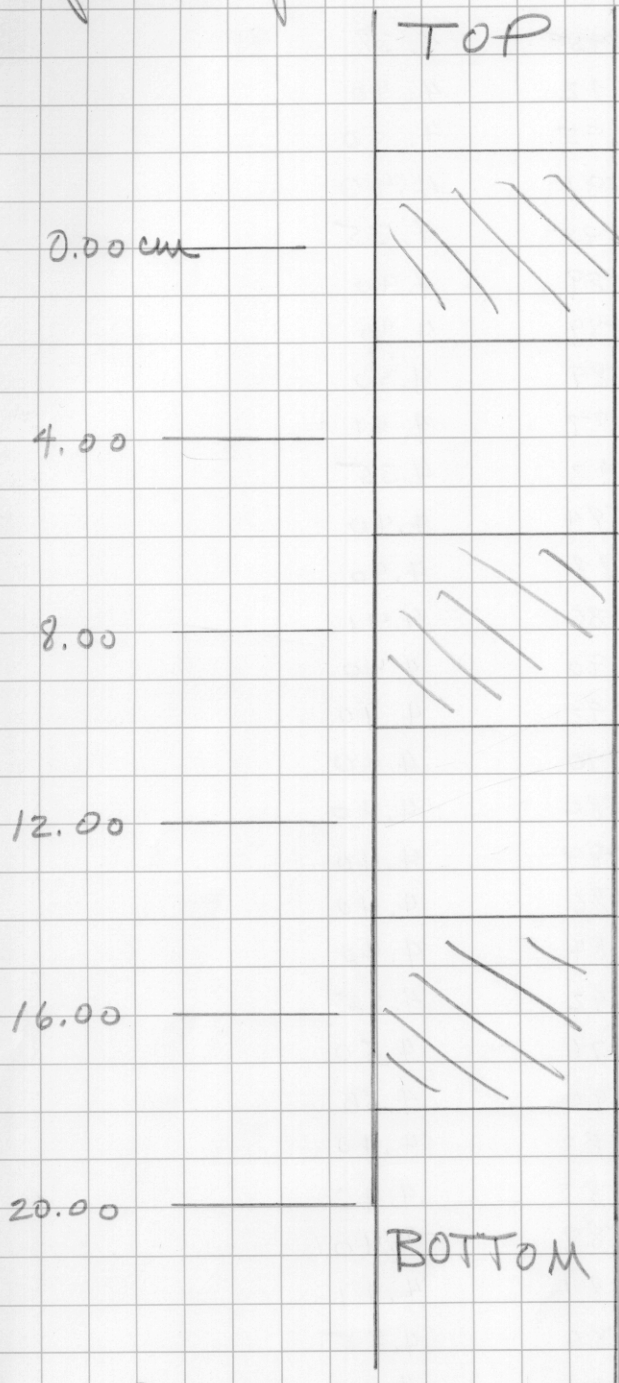
Register (Cm)	Probe/TUB	Count Time (MIN.)	Beck 1 0.00 cm	Pwr %
118.0 (0.00)	10401	0.932	2.82×10^{-8}	10
118.0 (0.00)	10833	0.454	5.98	20
118.0 (0.00)	10558	0.601	4.40	15
53.9 (-3.00)	7323	0.592	4.45	
75.2 (-2.00)	7981	0.596	4.45	
96.6 (-1.00)	9043	0.604	4.35	
125.4 (0.345)	11071	0.599	4.40	
139.4 (1.000)	12113	0.600	4.39	
150.1 (1.500)	12666	0.595	4.41	
160.8 (2.00)	13414	0.590	4.41	
171.5 (2.50)	14072	0.594	4.40	
182.2 (3.00)	14483	0.589	4.40	
194.8 (3.595)	14721	0.597	4.40	
203.6 (4.00)	14903	0.599	4.40	
225.0 (5.00)	14674	0.590	4.41	

<u>Register (cm)</u>	<u>Probe / $600000 \pm$ TUB</u>	<u>Count time, min</u>	<u>Beck 1</u>
235.7 (5.50)	14643	0.595	4.38
246.4 (6.00)	14513	0.592	4.40
257.1 (6.50)	14811	0.595	4.40
264.3 (6.845)	14587	0.591	4.40
267.8 (7.00)	14665	0.595	4.35
278.5 (7.50)	14761	0.589	4.40
289.2 (8.00)	14782	0.589	4.40
296.9 (8.37)	14991	0.589	4.40
310.6 (9.00)	15468	0.587	4.41
329.5 (9.895)	16380	0.593	4.35
332.0 (10.00)	16310	0.584	4.40
342.7 (10.50)	16874	0.588	4.40
353.4 (11.00)	17486	0.586	4.41
374.8 (12.00)	17848	0.590	4.40
396.2 (13.00)	17647	0.592	4.40
398.9 (13.145)	17689	0.590	4.40
418.6 (14.00)	16708	0.584	4.40
440.0 (15.00)	15672	0.589	4.40
461.4 (16.00)	14695	0.586	4.40
468.4 (16.395)	14670	0.584	4.40
482.8 (17.00)	14196	0.592	4.35
501.0 (17.92)	14195	0.576	4.50
504.2 (18.00)	14013	0.590	4.36
525.6 (19.00)	13937	0.583	4.40
533.5 (19.44)	14229	0.587	4.40
547.0 (20.00)	14210	0.589	4.40
568.4 (21.00)	13863	0.581	4.41
589.8 (22.00)	13231	0.586	4.35
603.0 (22.695)	12339	0.580	4.45
611.2 (23.00)	11911	0.585	4.40
632.6 (24.00)	10571	0.582	4.40
654.0 (25.00)	9056	0.586	4.40
672.4 (25.945)	8112	0.586	4.40

Re-checked the position calibration - everything is O.K.

Red motion 7.005 to 6.089 cm

Reference Diagram



Probe says about 0.5 cm

Center of fissure chamber is $\frac{1}{8}$ in + $\frac{3}{16}$ in = $\frac{5}{16}$ in
or 0.79 in back from actual end of the probe, which
was used for position location.

5/27 New ^{in void} traverse between top two billets 4.00 cm

Requiter / (cm)	Probe / 60000cts TUB	Count Time min.	Beck 1
53.9 (-3.00)	8538	0.622	4.40×10^{-8}
75.2 (-2.00)	9579	0.626	4.39
96.6 (-1.00)	11009	0.628	4.40
118.0 (0.00)	12307	0.623	4.40
139.4 (1.00)	13800	0.616	4.41
150.1 (1.50)	14777	0.625	4.38
160.8 (2.00)	14995	0.615	4.41
171.5 (2.50)	16078	0.617	4.38
182.2 (3.00)	16621	0.618	4.40
203.6 (4.00)	17491	0.619	4.40
225.0 (5.00)	17799	0.620	4.40
235.7 (5.50)	17827	0.616	4.40
246.4 (6.00)	18073	0.620	4.38
257.1 (6.50)	17896	0.615	4.41
267.8 (7.00)	18021	0.616	4.39
278.5 (7.50)	18376	0.614	4.40
289.2 (8.00)	18222	0.613	4.38
310.6 (9.00)	18923	0.602	4.45
332.0 (10.00)	19612	0.613	4.35

Register / (cm)	Pulse / $\frac{60000 \text{cts}}{\text{TUB}}$	Count Time min	Beck 1
342.2 (10.5)	20518	0.611	4.41
353.4 (11.0)	20580	0.607	4.40
374.8 (12.0)	21152	0.605	4.41
396.2 (13.00)	21112	0.607	4.40
418.6 (14.00)	20483	0.605	4.38
440.0 (15.00)	19509	0.603	4.40
461.4 (16.00)	18737	0.610	4.38
482.8 (17.00)	17851	0.601	4.40
504.2 (18.00)	17275	0.597	4.39
525.6 (19.00)	17223	0.602	4.40
547.0 (20.00)	17149	0.603	4.39
568.4 (21.00)	16739	0.595	4.50
589.8 (22.00)	16117	0.604	4.35
611.2 (23.00)	14418	0.594	4.49
632.6 (24.00)	13165	0.604	4.35
654.0 (25.00)	11548	0.596	4.50
675.4 (26.00)	10111	0.606	4.31
696.8 (27.00)	9036	0.601	4.39
718.2 (28.00)	7964	0.598	4.40

New Traverse between center dillits

8.00 cm.

13

<u>Register / (cm)</u>	<u>Pulse / $\frac{60000 \text{ cps}}{\text{TUB}}$</u>	<u>Count Time min</u>	<u>Beck 1</u>
53.9 (-3.00)	9278	0.615	4.39×10^{-8}
75.2 (-2.00)	10239	0.606	4.40
96.6 (-1.00)	12009	0.609	4.40
118.0 (0.00)	13548	0.603	4.40
139.4 (1.00)	15700	0.604	4.40
150.1 (1.50)	16974	0.600	4.49
160.8 (2.00)	18148	0.601	4.40
171.5 (2.50)	18903	0.602	4.39
182.2 (3.00)	19993	0.602	4.40
203.6 (4.00)	20565	0.603	4.40
225.0 (5.00)	20485	0.602	4.35
235.7 (5.50)	20536	0.599	4.39
246.4 (6.00)	20332	0.597	4.41
257.1 (6.50)	20384	0.604	4.40
267.8 (7.00)	19996	0.595	4.40
278.5 (7.50)	20564	0.597	4.41
289.2 (8.00)	20426	0.597	4.40
310.6 (9.00)	21421	0.603	4.31
332.0 (10.00)	23107	0.603	4.39

Register / (cm)	Probe / $\frac{60000 \text{ cts}}{\text{TUB}}$	Count Time min	Beck 1
342.7 (10.50)	23916	0.596	4.40
353.4 (11.00)	24158	0.590	4.41
374.8 (12.00)	25080	0.592	4.39
396.2 (13.00)	25246	0.594	4.36
418.6 (14.00)	23998	0.587	4.50
440.0 (15.00)	22335	0.594	4.35
461.4 (16.00)	20939	0.592	4.41
482.8 (17.00)	20379	0.603	4.35
504.2 (18.00)	19470	0.589	4.45
525.6 (19.00)	20024	0.600	4.30
547.0 (20.00)	20219	0.587	4.50
568.4 (21.00)	19918	0.593	4.39
589.8 (22.00)	18809	0.589	4.40
611.2 (23.00)	17223	0.590	4.40
632.6 (24.00)	15027	0.584	4.41
654.0 (25.00)	13223	0.591	4.41
675.4 (26.00)	11144	0.592	4.32
696.8 (27.00)	9781	0.585	4.40
718.2 (28.00)	8770	0.594	4.39

Rad motion 2.820 to 2.875 cm

5/31/66 New traverse in void between bottom two pellets, 12.00 cm 15
 H: 0.022 cm

<u>Register / (cm)</u>	<u>Probe / $\frac{600000 \text{ cts}}{\text{TUB}}$</u>	<u>Count. Time min</u>	<u>Back 1</u>
53.9 (-3.00)	8938	0.635	4.43×10^{-8}
75.2 (-2.00)	10103	0.632	4.40
96.6 (-1.00)	11226	0.637	4.35
118.0 (0.00)	12737	0.640	4.35
139.4 (1.00)	14607	0.639	4.35
150.1 (1.50)	14946	0.636	4.35
160.8 (2.00)	16224	0.634	4.40
171.5 (2.50)	16909	0.627	4.42
182.2 (3.00)	17524	0.619	4.45
203.6 (4.00)	18346	0.619	4.48
225.0 (5.00)	18684	0.620	4.45
235.7 (5.50)	18861	0.626	4.40
246.4 (6.00)	18756	0.634	4.38
257.1 (6.50)	19069	0.633	4.35
267.8 (7.00)	19092	0.634	4.35
279.5 (7.50)	19606	0.628	4.40
289.2 (8.00)	19722	0.647	4.42
310.6 (9.00)	20180	0.604	4.50
332.0 (10.00)	21155	0.615	4.46

<u>Register / (cm)</u>	<u>Pulse / $\frac{60000}{TU} \frac{ST}{RD}$</u>	<u>Count Time min</u>	<u>Beck 1</u>
342.7 (10.50)	21553	0.619	4.41
353.4 (11.00)	22137	0.621	4.39
374.8 (12.00)	22670	0.614	4.42
396.2 (13.00)	22629	0.611	4.45
418.6 (14.00)	21878	0.606	4.48
440.0 (15.00)	21007	0.613	4.48
461.4 (16.00)	19595	0.610	4.40
482.8 (17.00)	19351	0.614	4.40
504.2 (18.00)	18735	0.616	4.40
525.6 (19.00)	18585	0.619	4.40
547.0 (20.00)	18349	0.617	4.40
568.4 (21.00)	18130	0.621	4.39
589.8 (22.00)	17184	0.621	4.35
611.2 (23.00)	15848	0.621	4.39
632.6 (24.00)	13946	0.615	4.41
654.0 (25.00)	12497	0.621	4.38
675.4 (26.00)	10844	0.622	4.35
696.8 (27.00)	9746	0.624	4.40
718.2 (28.00)	8623	0.617	4.40

Rad motion 4.647 to 5.243 cm

New traverse in hollow layer of fuel 16.00 cm $H = 0.032$ cm 17

<u>Register (cm)</u>	<u>Probe / 60000 d/s TVB</u>	<u>Count Time min</u>	<u>Beck-1</u>
53.9 (-3.00)	7649	0.612	4.41×10^9
75.2 (-2.00)	8618	0.609	4.40
96.6 (-1.00)	9746	0.615	4.40
118.0 (0.00)	11293	0.612	4.40
139.4 (1.00)	12778	0.612	4.40
150.1 (1.50)	13801	0.613	4.39
160.8 (2.00)	14494	0.615	4.40
171.5 (2.50)	15334	0.617	4.35
182.2 (3.00)	16001	0.616	4.35
203.6 (4.00)	16745	0.615	4.40
225.0 (5.00)	16730	0.614	4.38
235.7 (5.50)	16560	0.611	4.35
246.4 (6.00)	16415	0.611	4.35
257.1 (6.50)	16464	0.615	4.38
267.8 (7.00)	16350	0.612	4.39
278.5 (7.50)	16467	0.613	4.40
289.2 (8.00)	16732	0.608	4.40
310.6 (9.00)	17471	0.607	4.42
332.0 (10.00)	18444	0.606	4.39

<u>Register / (cm)</u>	<u>Pulse / $\frac{60000 \text{ cps}}{\text{TUB}}$</u>	<u>Count Time min</u>	<u>Beck 1</u>
342.7 (10.50)	19299	0.610	4.38
353.4 (11.00)	19812	0.610	4.40
374.8 (12.00)	20461	0.610	4.40
396.2 (13.00)	20304	0.601	4.42
418.6 (14.00)	19807	0.605	4.42
440.0 (15.00)	18459	0.604	4.41
461.4 (16.00)	17383	0.607	4.37
482.8 (17.00)	16453	0.608	4.39
504.2 (18.00)	16413	0.609	4.41
525.6 (19.00)	16475	0.602	4.41
547.0 (20.00)	16593	0.603	4.39
568.4 (21.00)	16548	0.608	4.38
589.8 (22.00)	15732	0.609	4.35
611.2 (23.00)	14157	0.608	4.39
632.6 (24.00)	12591	0.607	4.40
654.0 (25.00)	11238	0.607	4.39
675.4 (26.00)	9469	0.606	4.39
696.8 (27.00)	8480	0.610	4.37
718.2 (28.00)	7658	0.610	4.39

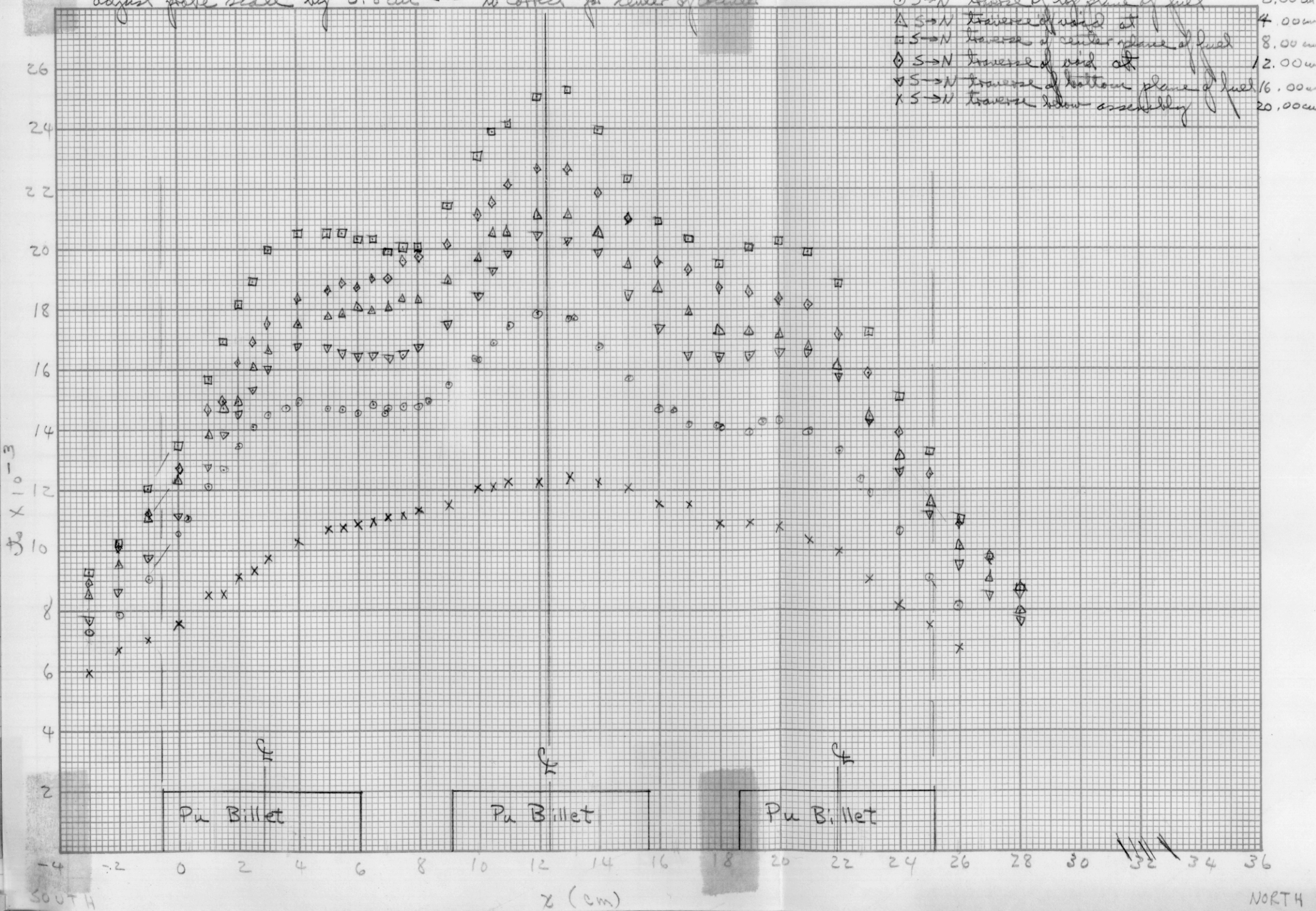
Rad station 6.830 to cm

New traverse below bottom layer of fuel 20.00 cm, H: 0.022 cm 19

<u>Register / (cm)</u>	<u>Probe / ^{60000 cts} TUB</u>	<u>Count Time min.</u>	<u>Beck-1</u>
53.9 (-3.00)	5970	0.621	4.40 X 10 ⁹
75.2 (-2.00)	6681	0.618	4.41
96.6 (-1.00)	7067	0.613	4.40
118.0 (0.00)	7571	0.615	4.40
139.4 (1.00)	8464	0.614	4.39
150.1 (1.50)	8555	0.617	4.40
160.8 (2.00)	9072	0.618	4.38
171.5 (2.50)	9382	0.614	4.40
182.2 (3.00)	9763	0.609	4.42
203.6 (4.00)	10271	0.609	4.40
225.0 (5.00)	10692	0.615	4.38
235.7 (5.50)	10674	0.610	4.40
246.4 (6.00)	10863	0.612	4.40
257.1 (6.50)	10986	0.614	4.39
267.8 (7.00)	11087	0.615	4.35
278.5 (7.50)	11273	0.617	4.38
289.2 (8.00)	11322	0.612	4.40
310.6 (9.00)	11522	0.610	4.40
332.0 (10.00)	12043	0.610	4.38

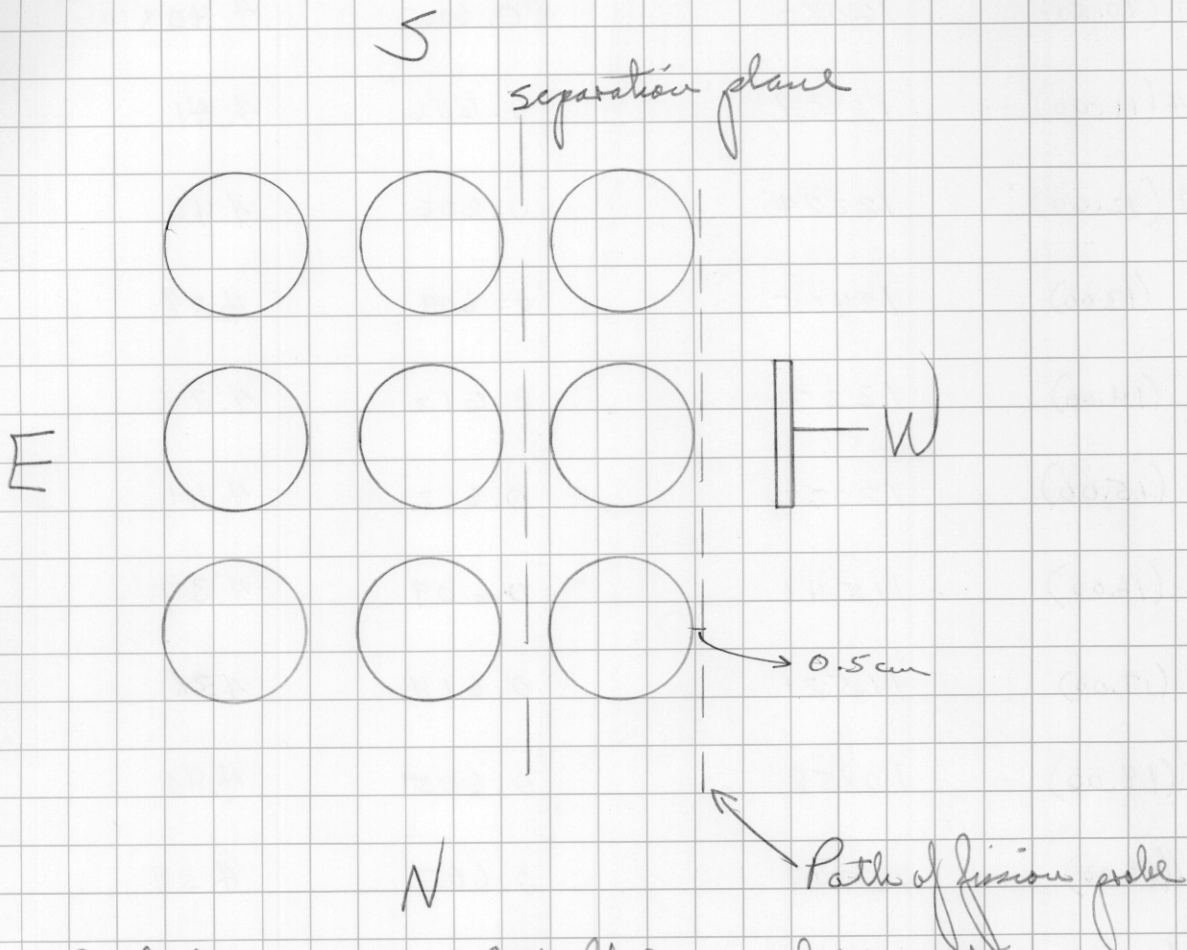
adjust probe scale by 0.8 cm ← to correct for center of counter

- S→N traverse of top plane of fuel 0.00 cm
- △ S→N traverse of side at 4.00 cm
- S→N traverse of center plane of fuel 8.00 cm
- ◇ S→N traverse of side at 12.00 cm
- ▽ S→N traverse of bottom plane of fuel 16.00 cm
- × S→N traverse below assembly 20.00 cm



<u>Register (cm)</u>	<u>Probe / $\frac{60000 \text{ cts}}{\text{TUR}}$</u>	<u>Count Time min</u>	<u>Beck 1</u>
342.7 (10.50)	12080	0.605	4.40×10^{-8}
353.4 (11.00)	12228	0.606	4.41
374.8 (12.00)	12284	0.606	4.40
396.2 (13.00)	12425	0.609	4.38
418.6 (14.00)	12276	0.612	4.36
440.0 (15.00)	12022	0.612	4.41
461.4 (16.00)	11541	0.609	4.39
482.8 (17.00)	11521	0.614	4.38
504.2 (18.00)	10858	0.605	4.40
525.6 (19.00)	10949	0.607	4.39
547.0 (20.00)	10752	0.604	4.40
568.4 (21.00)	10357	0.603	4.39
589.8 (22.00)	9969	0.605	4.40
611.2 (23.00)	9043	0.602	4.40
632.6 (24.00)	8155	0.603	4.41
654.0 (25.00)	7507	0.601	4.41
675.4 (26.00)	6742	0.600	4.40
696.8 (27.00)	6309	0.602	4.40
718.2 (28.00)	5919	0.599	4.40

Rad motion 5.825 to 4.570 cm



Control power was shut off during fission transient
to prevent motion from damaging the probe

Rearranged probe to run on outside of west row of tubes.

Had to re-set calibration of Selsyn system full in at far side of assembly is 131.0 (0.00 cm) and full out at near side of assembly is 695.0 (26.29 cm) H: 0.022 cm 16.00 cm elevation

Register / (cm)	Probe / $\frac{600000}{TVR}$	Count Time min	Beck 1
66.8 (-3.00)	5214	0.648	4.38
88.2 (-2.00)	5254	0.641	4.39
109.6 (-1.00)	5867	0.645	4.40
131.0 (0.00)	6038	0.643	4.39
152.4 (1.00)	6904	0.639	4.39
163.1 (1.50)	7452	0.636	4.40
173.8 (2.00)	7838	0.637	4.42
184.5 (2.50)	8758	0.637	4.41
195.2 (3.00)	8794	0.636	4.41
216.6 (4.00)	9556	0.636	4.40
238.0 (5.00)	9924	0.643	4.37
248.7 (5.50)	9774	0.634	4.41
259.4 (6.00)	9970	0.635	4.40
270.1 (6.50)	9723	0.635	4.40
280.8 (7.00)	9763	0.637	4.40
291.5 (7.50)	9856	0.633	4.40
302.2 (8.00)	9932	0.631	4.39

<u>Register / (cm)</u>	<u>Probe / ⁶⁰⁰⁰⁰⁰⁰TUB</u>	<u>Count Time min</u>	<u>Beck 1</u>
323.6 (9.00)	10026	0.640	4.59
345.0 (10.00)	10465	0.637	4.39
355.7 (10.50)	10542	0.632	4.38
366.4 (11.00)	10657	0.633	4.40
387.8 (12.00)	10776	0.630	4.42
396.2 (13.00)	10875	0.622	4.45
431.6 (14.00)	10640	0.628	4.42
453.0 (15.00)	10208	0.632	4.35
474.4 (16.00)	9918	0.629	4.40
495.8 (17.00)	9622	0.627	4.41
517.2 (18.00)	9777	0.631	4.40
538.6 (19.00)	9828	0.631	4.40
560.0 (20.00)	9913	0.628	4.39
581.4 (21.00)	9069	0.626	4.40
602.8 (22.00)	8398	0.623	4.40
624.2 (23.00)	7565	0.626	4.39
645.6 (24.00)	6575	0.625	4.38
667.0 (25.00)	5963	0.626	4.40
688.4 (26.00)	5517	0.624	4.40
709.8 (27.00)	5299	0.628	4.41
731.2 (28.00)	5006	0.626	4.40

Rod motion 7.081 to ^{5.425} 5.759 cm

Repeat above at 8.00 cm - center of middle plane of fuel.

<u>Register / (cm)</u>	<u>Probe / $\frac{6000000}{\text{TUB}}$</u>	<u>Count Time min</u>	<u>Beck-1</u>
66.8 (-3.00)	5865	0.642	4.38
88.2 (-2.00)	6067	0.641	4.40
109.6 (-1.00)	6623	0.639	4.40
131.0 (0.00)	7178	0.637	4.40
152.4 (1.00)	8133	0.632	4.40
163.1 (1.50)	8934	0.638	4.36
173.8 (2.00)	9793	0.641	4.37
184.5 (2.50)	10067	0.635	4.37
195.2 (3.00)	10463	0.629	4.37
216.6 (4.00)	11755	0.628	4.41
238.0 (5.00)	11795	0.630	4.40
248.7 (5.50)	11821	0.625	4.38
259.4 (6.00)	12056	0.632	4.35
270.1 (6.50)	11800	0.627	4.40
280.8 (7.00)	12058	0.627	4.39
291.5 (7.50)	12016	0.630	4.39
302.2 (8.00)	12091	0.630	4.36
323.6 (9.00)	12192	0.629	4.35

<u>Register / (cu)</u>	<u>Pulse / 600000cts TUS</u>	<u>Count Time min</u>	<u>Beck-1</u>
345.0 (10.00)	12932	0.622	4.41
355.7 (10.50)	13251	0.623	4.40
366.4 (11.00)	13254	0.620	4.40
387.8 (12.00)	13985	0.631	4.35
396.2 (13.00)	13745	0.625	4.39
431.6 (14.00)	13362	0.629	4.40
453.0 (15.00)	12861	0.631	4.33
474.4 (16.00)	12245	0.629	4.35
495.8 (17.00)	11526	0.615	4.40
517.2 (18.00)	11540	0.616	4.40
538.6 (19.00)	11568	0.616	4.41
560.0 (20.00)	11614	0.621	4.40
581.4 (21.00)	11325	0.621	4.35
602.8 (22.00)	10210	0.623	4.39
624.2 (23.00)	8924	0.616	4.40
645.6 (24.00)	8099	0.616	4.40
667.0 (25.00)	7064	0.617	4.40
688.4 (26.00)	6313	0.616	4.40
709.8 (27.00)	6010	0.618	4.39
731.2 (28.00)	5526	0.618	4.35
Rod motion	5.449	to	4.023 cu

Repeat above at 0.00 cm - center of top plane of fuel.

<u>Register (cm)</u>	<u>Probe / 60000 cps TUB</u>	<u>Count Time min</u>	<u>Beck-1</u> H: 0.022 cm
66.8 (-3.00)	4634	0.616	4.58
88.2 (-2.00)	4816	0.612	4.38
109.6 (-1.00)	5056	0.618	4.39
131.0 (0.00)	5384	0.617	4.40
152.4 (1.00)	5978	0.615	4.40
163.1 (1.50)	6555	0.612	4.40
173.8 (2.00)	6789	0.613	4.39
184.5 (2.50)	7201	0.619	4.36
195.2 (3.00)	7660	0.617	4.39
216.6 (4.00)	8559	0.619	4.38
238.0 (5.00)	8667	0.616	4.39
248.7 (5.50)	8864	0.614	4.37
259.4 (6.00)	8552	0.613	4.39
270.1 (6.50)	8825	0.612	4.40
280.8 (7.00)	8834	0.613	4.39
291.5 (7.50)	8743	0.609	4.39
302.2 (8.00)	8947	0.611	4.40
323.6 (9.00)	9048	0.613	4.38
345.0 (10.00)	9069	0.614	4.38

<u>Register/(cm)</u>	<u>Probe / $\frac{6000 \text{ counts}}{\text{TUB}}$</u>	<u>Count Time min</u>	<u>Back - 1</u>
355.7 (10.50)	9296	0.616	4.36
366.4 (11.00)	9578	0.606	4.41
387.8 (12.00)	9642	0.606	4.41
396.2 (13.00)	9687	0.604	4.41
431.6 (14.00)	9412	0.610	4.39
453.0 (15.00)	9235	0.612	4.40
474.4 (16.00)	8694	0.603	4.43
495.8 (17.00)	8614	0.599	4.43
517.2 (18.00)	8616	0.599	4.43
538.6 (19.00)	8521	0.606	4.40
560.0 (20.00)	8561	0.606	4.40
581.4 (21.00)	8056	0.606	4.38
602.8 (22.00)	7313	0.608	4.38
624.2 (23.00)	6636	0.606	4.39
645.6 (24.00)	5854	0.608	4.40
667.0 (25.00)	5052	0.607	4.38
688.4 (26.00)	4813	0.606	4.38
709.8 (27.00)	4629	0.601	4.40
731.2 (28.00)	4359	0.602	4.42

Rad station 4.819 to 4.006 cm

Repeat above at 12.00 cm - center of lower void

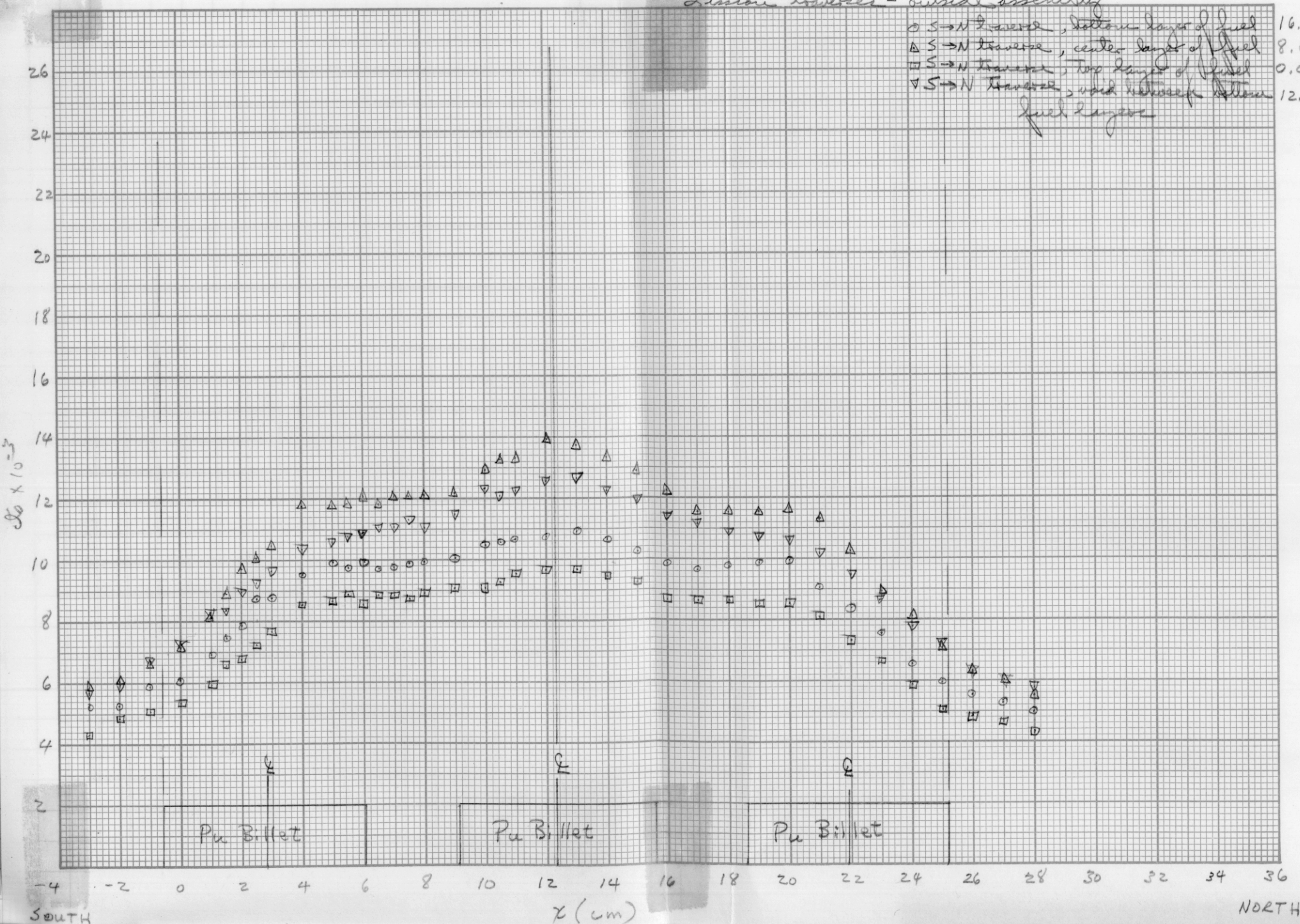
Register / (cm)	Probe / $\frac{6000 \text{ cts}}{\text{TUB}}$	Count Time min	H: 0.022 cm Beck - 1
66.8 (-3.00)	5656	0.655	4.40
88.2 (-2.00)	5957	0.648	4.40
109.6 (-1.00)	6736	0.650	4.41
131.0 (0.00)	7261	0.643	4.42
152.4 (1.00)	8156	0.643	4.41
163.1 (1.50)	8385	0.643	4.40
173.8 (2.00)	8982	0.648	4.40
184.5 (2.50)	9266	0.649	4.39
195.2 (3.00)	9632	0.640	4.40
216.6 (4.00)	10387	0.645	4.41
238.0 (5.00)	10597	0.645	4.40
248.7 (5.50)	10723	0.645	4.39
259.4 (6.00)	10918	0.647	4.39
270.1 (6.50)	11042	0.648	4.38
280.8 (7.00)	11049	0.641	4.40
291.5 (7.50)	11322	0.646	4.41
302.2 (8.00)	11057	0.643	4.38
323.6 (9.00)	11476	0.642	4.36
345.0 (10.00)	12323	0.648	4.38

Register / (cm)	Probe / ⁶⁰⁰⁰⁰⁰⁰ TUB	Count Time min	Beck-1
355.7 (10.50)	12042	0.642	4.39
366.4 (11.00)	12227	0.639	4.38
387.8 (12.00)	12570	0.640	4.40
396.2 (13.00)	12609	0.635	4.42
431.6 (14.00)	12260	0.644	4.35
453.0 (15.00)	11938	0.638	4.38
474.4 (16.00)	11409	0.634	4.41
495.8 (17.00)	11126	0.635	4.39
517.2 (18.00)	10861	0.637	4.39
538.6 (19.00)	10743	0.639	4.39
560.0 (20.00)	10608	0.633	4.41
581.4 (21.00)	10184	0.635	4.40
602.8 (22.00)	9423	0.637	4.40
624.2 (23.00)	8641	0.638	4.37
645.6 (24.00)	7782	0.634	4.36
667.0 (25.00)	7137	0.636	4.40
688.4 (26.00)	6277	0.633	4.39
709.8 (27.00)	6012	0.632	4.41
731.2 (28.00)	5722	0.632	4.40

Rad motion 5.856 to 4.145 cm

Division Traverses - outside assembly

- S → N Traverse, bottom layer of fuel 16.00
- △ S → N traverse, center layer of fuel 8.00
- S → N traverse, top layer of fuel 0.00
- ▽ S → N traverse, void between bottom fuel layers 12.00



6/3/66

29

Unloaded assembly table and put away Pu in storeroom

Finis for Phase I and II-A

Rechecked part no. 007 again for dimensional changes.

Overall length was 2.248 in. (compare with

2.250 in on 5/10, see vol. 3, p 77); therefore, it seems well stabilized.