

BOOK49R

Notes:

“SULFUR = FBR” on spine

Blank pages: page opposite page 1, 1, 2, 63, 68, 69, 79, 104-151, back cover sheet opposite page 152

-pages 5/6 & 31/32 have a paper clip at top of each sheet

-page 96/97 has 1 (8.5x11) sheet between pages

Scanned by:

Sheila Finch

RSICC /Oak Ridge National Lab.

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Account Book

No. S 149

NO UNITS

Journal

Ledger, Single Entry . .

Ledger, Double Entry .

Record Ruled (27 Lines)

Made in 150, and 300 Pages

MADE IN U. S. A.

TO REORDER, SPECIFY NUMBER,
RULING AND THICKNESS INDICATED
ON BACKBONE OF THIS BOOK.

Sulfur Foils for FBR

11/15/61 →

Ph
7-8237 Bldg 9213

G-151 (FOIL COUNTING)

Sulfur Foils (P. Reinhardt)

Total = 0.3795g

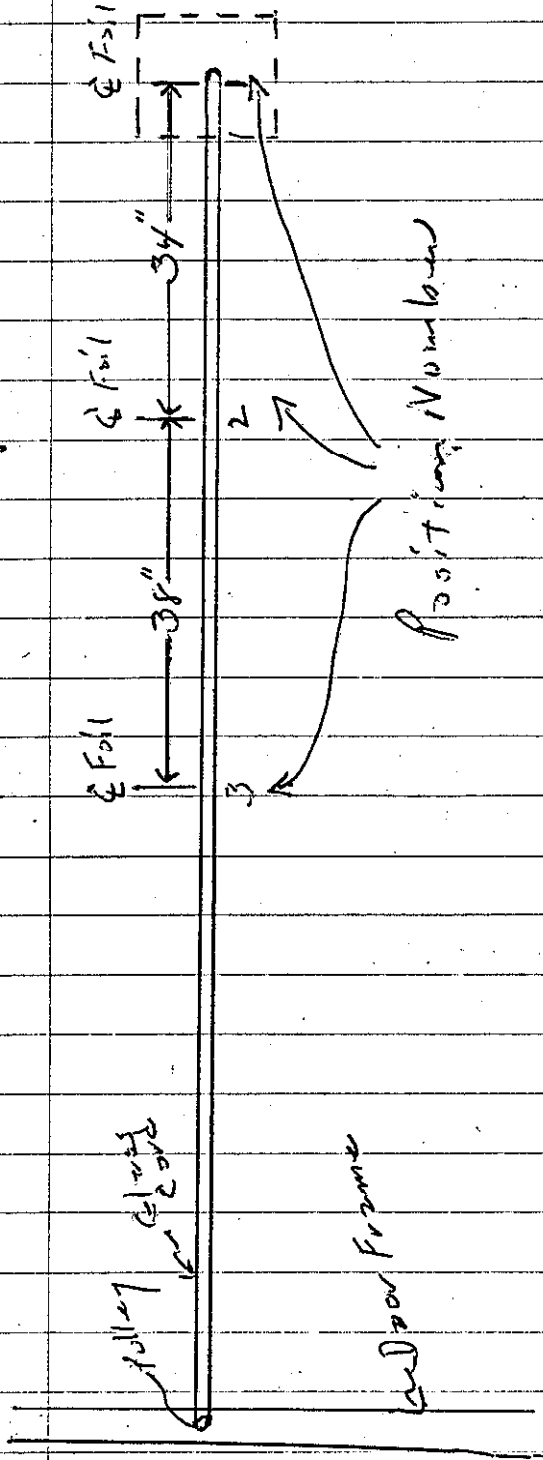
Foil #	Gross Wt	Net Wt (g)	Exposed	Position (P. 5)
1	21.5552	21.1757	"/15/61	3
2	21.5200	21.1405	"/15/61	1
3	21.5733	21.1938	"/15/61	2
4	21.5565	21.1770	"/18 (12)	
5	21.5606	21.1811	"/16/61 (11)	2
6	21.5047	21.1252	"/16/61 (11)	3
7	21.5695	21.1815 21.1900	"/21/61 (15)	1
8	21.6106	21.2311	"/21/61 (15)	
9	21.5499	21.1704	"/18 (11)	
10	21.5712	21.1917	"/17 (8)	2
11	21.6067	21.2272	"/18 (14)	
12	21.5530	21.1735	"/18 (13)	
13	21.5010	21.1215	"/23 (18)	
14	21.4619	21.0824	"/17 (8)	3
15	21.5218	21.1423 21.2436	"/18 (14)	
16	21.5931	21.2136	"/16/61 (11)	1
17	21.6210	21.2415	"/21/61 (16)	
18	21.5482	20.9800 (Droplet) 21.1689	"/24/61 (19)	
19	21.6015	21.2220	"/18 (14)	
20	21.5212	21.1091 21.1417	"/21/61 (16)	
21	21.5172	21.1377	"/18 (13)	
22	21.5991	21.2180 21.2196	"/27 (22)	
23	21.5268	21.1473	"/18 (12)	
24	21.5385	21.1590 ✓	"/18 (11)	

4

Foil #	Gross Wgt	Net Wgt.	Exposed	Position
25	21.5064	21.1269	"/18 (10)	
26	21.5889	21.2092	11/17/61 (8)	1
27	21.4079	21.0284	Burned for practice	
28	21.5968	21.2173	"/18 (10)	
29	21.5579	21.1784	"/18 (10)	
30	21.5925	21.2130	"/17/61 (657)	3
31	21.5515	21.1720	"/17/61 (657)	2
32	21.5924	21.2129	"/17 (9)	
33	21.5122	21.1327	"/17 (9)	
34	21.5050	21.1255	"/18 (11)	
35	21.5838	21.2043	"/17 (9)	
36	21.5343	21.1548	"/17/61 (657)	1 (0532)
38	21.3394	20.9605	"/21/61 (15)	
45	21.1276	20.7385	"/23 (18)	
52	21.4811	21.1020	"/22 (19)	
41	21.1527	20.7433		
49	22.0325	21.6231		
47	21.0465	20.6371		
56	21.0431	20.6337		
58	21.7335	21.3241		
59	21.3450	20.9352		
60	21.3856	20.9722		
63	20.6098	20.2004		
64	21.6083	21.1989		

(C unit p. 60)

Exposure Positions (Room 108)



✓ 6 Count: Run 0 $T_{1/2} = 14.23$ days
 11/16/61 Bkg $8.2/10$ KC = $8.2/KC$
 Unburned

Sample #	Time	E.T.	Total	KC	c/KC
✓ 2	1030	14.2	58070	1	9.807×10^4
			98436	1	9.8436×10^4
					9.825×10^4

3	1030	14	11820	10	1182.0
			12013	10	1201.3
					1.192×10^3

1	1030	14	1991	10	199.1
			1972	10	197.2
			1963	10	196.3
			2012	10	201.2
			1976	10	197.6

11/17/61 Burned

1	1100	35.5	3306	1	
			33547	10	3.355×10^3

11/27/61 Bkg 7.7/KC

✓ 2	1415	28.2	57983	1	5.138×10^4
			57898		
			44867		
			44762		

3 (See p. 14)
 Exposure 11/15/61 20:00 → 2040, ∴ Midpoint = 2020. E

8.33 (10¹⁰)

$$4.24 \frac{(C/KC) \times 10^7}{e^{-\lambda t}}$$

4.3021

$$4.79 \frac{(C/KC) \times 10^7}{e^{-\lambda t}}$$

11/16741

Next C/R

0.9720

4.28 x 10¹⁰

mount to make last side ct.

1.54

x.54

5.4

9.825 x 10⁴

1.184 x 10³

0.9720

5.16 x 10¹⁰

1.5

1.90 x 10⁵

0.9720

8.25 x 10⁹

1.5

1.7

0.9230

8.22 x 10⁹

5 x 10³

5.242

7 x 10⁴

5.138 x 10⁴

0.5643

3.94

3.86 x 10¹⁰

Dead time corr.

Essentially steady levels

8

Use only of resistive ac-dc.

Foil Used in Run 6 11/17/61 (04380532)

REACTOR

11/17/61

30

31

30

 $BK_0 = 79/10 = KC =$

Foil #

Time

E.T

Total

KC

E/KC

10

1130

975

10

1000

Burned

1625

15752

10

 1.586×10^3

15934

15884

5

1130

81

10

Burned

1435

322

10

31.57

295

330

0

1645 (Burned)

148

10

16.2

177

532)

10³ 1.578 x 10³

4/10

66.7

66.7

23.67

10³

8.3

10

Runs 6-7

End of 7-05 1117

11/17/61

Foil #

Time

ET

Total

KC

c/KC

30

1133

6

7792

10

7.826 x 10⁴

7861

10

Burned

1000

10.5

17793

1

1.77 x 10⁴

17592

1

17714

31

1145

6

236

10

20.6

Burned

31

1400

10.5

2432

10

2.429 x 10⁴

2481

2375

30

1150

6

111

10

11.1

Burned

30

1415

10.5

508

10

49.7

474

507

-NAT C/KE

e^{-x}

θ (μ/cm^2)

7.80

7.744 x 10²

0.9879

3.32 x 10¹⁰ N.C.

1.77 x 10⁴ x 1.0006

1.781 x 10⁴

0.9789

4.1 ✓
~~4.09~~ x 10¹⁰

12.7

0.9879

5.45 x 10⁸

2.9347 x 10⁵

0.9789

5.42 x 10⁸

3.2

4.15

0.9789

9.57 x 10⁷

12

Run 8

(1) ← 34 → (2) ← 38 → (3)

	✓ Reant	✓ 26	✓ 10	✓ 14	✓ +	✓
Run 9 ✓	35	33	32		+	1
10 ✓	25	28	29		x	
11 ✓	29	34	9		x	2
12 ✓	23	4			x	
11/10 5/10 P 13 ✓	21	1 ✓			x	3
14	19	11	15			4

35 - Pintale?

14/27/61

12.7/64

3 (p. 6)	1420	282	7028	10	$\left[\frac{10^7 (7373.5 - 77) \times 4.24}{10 \cdot 5243} \right]$	9
			6846			10
			7891			11
			7729		$\phi = 5.48 \times 10^{10}$	12

11/22/61

Exposure Summary

Run #	Burst Time	ϕ_1	ϕ_2	ϕ_3
1	11/16 2808			
2	11/16 1032			
3	11/16 1132			
4	11/16 2436 A 1236			
5	11/17 0200			
6	0443			
7	0505			
8	2103			
9	2228			
10	11/18 0100 1339			
11	0139			
12	1625			
13	1823			
14	2313			

4.24

-43

" 14

Blk ~~ED~~ 8.7 c/k²

11/20/61 Run 8 : 2103 am 11/17/61

Foil #	Time	ET	Total	KC	c/k ²	W c/l
	1000	61	3772	1	3.794 x 10 ³	3.71
			3892			
			3789			
			3764			
			3751			

<u>10</u>	1000	61	560	10	55.1	46
			558			
6 ⁸			534			

11/21/61 / 11:45	Burned	86.5	9111	10	910.4	90
			9097			

<u>14</u>	1015	61	167	10	16.3	7.
2 ⁷			144			
			177			

11/21/61	11:55	Burned	87	1462	10	148.7	1.60
				1444			
				1732			

11/27/61	26	1430	2335 2095	28016	10	24925	2.48
				21834			

cut
2/122

 e^{-12}
 $4(12/20^2)$
 3.785×10^3
 0.8835
 1.816×10^{11}

* $1.61 \times 10^7 (2.12) = 1.89$; \therefore This must have been "lost" side cannot

46.4

 0.8805
 2.23×10^9 N.E.

$1.044(2.23) = 2.37$, which is $2\frac{1}{2}$ below
lowest count. \therefore "cold" side

906.7

 0.8390
 2.43×10^9 ✓

7.6

 0.8835
 3.6×10^8 N.E.
 1.60×10^2 ✓

 0.838 ✓

 4.34×10^8 ✓

 2.485×10^3
 0.6226
 ~~0.6537~~
 1.69×10^{11}

16

Bly = 8.7

11/20/61

Run 9 : 2228 on 11/16/61

Foil #

Time

ET

Total

KL

2/122

35

1030

60

70470

1

7.058 x 10⁵

70531

70702

70616

33

1030

60

1154

1

1.142 x 10³

11406

10

11311

10

32

1030

60

1890

10

1.805 x 10⁵

1912

1806

11/21/61

1200

Burned

85.5

34674

10

3.457 x 10³

3446

1

33

Burned

11/21/61

1345

87

223127

1

2.204 x 10⁴

21881

1

22111

8.8

11/21/61 (35)

1345

159

61210

1

6.933 x 10⁴

60844

1

Turned over

77435

1

77853

1

1/2	lect C/KC	π	φ (4/2)
28 x 10 ⁴	7.057 x 10 ⁴	0.8854	3.38 x 10 ¹² N.E. x 1.007 = 3.42 x 10 ¹²

Probably only ~~18~~ side & last down

2 x 10 ³	1.133 x 10 ³	0.8854	5.42 x 10 ¹⁰ N.E. "C" 12' side count
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5 x 10 ²	1.782 x 10 ²	0.8854	8.53 x 10 ⁹ N.E.
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17 x 10 ³	3.449 x 10 ³	0.8407	9.26 x 10 ⁹ -
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04 x 10 ⁴	2.204 x 10 ⁴ x 1.0075 = 2.220 x 10 ⁴	0.8382	5.96 x 10 ¹⁰ x 1.0075 = 6.00 x 10 ¹⁰
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33 x 10 ⁴	6.933 x 10⁴ 7.122 x 10 ⁴ (at low count)	0.7243	4.17 x 10 ¹⁰ (corr) 4.05 x 10¹⁰
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11 18

Bly = 8.7

11/20/61 Run 10: 0105 11/18/61

Foil #	Time	E.T.	Total	K2	2/120
25	1050	58	57594	1	5.7928 x 10 ⁴
			57985		
			57878		
			57922		

28	1055	58	967	1	
			9135	10	9.146 x 10 ²
			9129		
			9174		

Burned

14/21/61	1210	83	18348	1	1.821 x 10 ⁴
			17935		
			18360		

29	1105	58	1543	10	1.574 x 10 ³
			1595		
			1585		

14/21/61	Burned				
	1330	84.5	2842	1	2.803 x 10 ³
			2773		
			2865		

11/24/61			2732		
25	1350	59	50018	1	5.665 x 10 ⁴
			49612		
			63652		
			53322		

Unit
e/kc

e - 12

$\phi(n/2)$

0.8890

~~0.8908~~

2.76 x 10¹²

N.C.

x10⁴ 5.792 x 10⁴

5.922

2.82

x10² 9.059 x 10²

0.8890

~~0.8908~~

4.02 x 10¹⁰

N.C.

x10⁴ 1.821 x 10⁴

0.8450

4.89 ✓
~~4.82~~ x 10¹⁰ ✓

1.007

1.834 x 10⁴

x10⁵ 1.487 x 10⁵

0.8890

~~0.8908~~

7.08 x 10⁹

N.C.

x10³ 2.795 x 10³

0.8425

~~9.750~~ x 10⁹ ✓

x10⁴ 5.789 x 10⁴

0.727 ✓

3.37 ✓
~~3.30~~ x 10¹² ✓

5.605 x 10⁴

Deal Times com

" 20

10.21

11/20/61

Run 11: 1339 on 11/18/61

Foil

Time

E.T.

Total

Kc

2/Kc

Net
C/K

24

1115

45.5

106443

1

1.066×10^5

1.06

106752

106746

106629

34

1115

45.5

1678

1

1.644×10^3

1.63

1607

16482

10

u.2

Burned

11/21/61

1330

72

32297

1

3.241×10^4

3.24

32196

3.27

32736

9

1125

45.5

3239

10

3.255×10^2

3.16

3271

Burned

3 11/21/61

1330

72

5909

1

5.975×10^3

5.96

6121

5894

11/27/61

24

1440

217

77892

1

8.844×10^4

9.15

8.84

98999

4.6561
5.5433

wt
C/KC

e-15

φ (u/r)

2
x10⁵ 1.066 x10³

0.9118

4.96 x10⁵ ✓ NE

Probably "cold" side etc.

4 x10³ 1.635 x10³

0.9118

7.60 x10¹⁰ ✓ NE

x10⁴ 3.240 x10⁴ x1.012 = 0.8641
2,279 x10⁴

8.60 ✓
8.00 x10¹⁰ ✓

5 x10² 3.168 x10²

0.9118

1.47 x10¹⁰ ✓ NE

5 x10³ 5.967 x10³

0.8641

1.56 x10¹⁰ ✓

4 x10⁴ 9.157
8.444 x10⁴

0.6438

6.03 ✓
5.80 x10¹²

22

7:35

11/20/61

Run IV: 1625 on 11/18/61

Foil #

Time

Est.

Total

KE

4/KE

23

1130

43

137432

1

1.373 x 10⁵

136905

137424

4

1130

43

2262

1

2.248 x 10³

2256

6

2226

Burned

11/21/61

1330

69

44603

1

4.445 x 10⁴

44302

11/27/61

23

1445

214

102278

1

1.161 x 10⁵

129937

4.6268
5.5102

wt 2/100

e^{-1x}

$\phi(w/2m^2)$

1.373 x 10⁵

0.9164

6.35 x 10¹²

NS

?

2.240 x 10³

0.9164

1.04 x 10¹¹

NS

Cold field

4.445 x 10⁴ x 1.017 = 0.8693

1.18

4.10 x 10¹¹

✓

4.5²⁰

1.215
1.761 x 10⁵

0.6478

7.95

~~7.58~~ x 10¹²

24

Blg ~ 8.7
5307

11/20/61 Run D: 1823 on 11/20/61

Foil	Time	ET	Total	1/22	4/122
21	1135	41 ✓	131457	1	1.3166 x 10 ⁵
			131692	1	
			131826		

12		41 ✓	13 2145	1	2.113 x 10 ³
			2122		
12			2089		
			2095		

	Time	ET	Total	1	4/122
11/21/61	1335	67 ✓	41265	1	4.125 x 10 ⁴
			41235		

11/27/61	1445	212.5 ✓	9608	1	1.096 x 10 ⁵
21			122803		

4.6077
5.4874

wt
C/K2

e-12

Q (1/2/2)

10⁵

1.3166 x 10⁵

0.9202

6.07 x 10⁵

N.E.

3

2.104 x 10³

0.9202

9.69 x 10¹⁰

NE

4

4.125 x 10⁴ x 10¹⁶ 0.8729
4.191

1.09
~~4.07~~ x 10¹¹

5

1.144
~~1.056~~ x 10⁵

0.6497
~~0.6574~~

7.46
~~7.14~~ x 10¹²

Foil #	Time	E.T.	Total	KL	C/KL	
26	Run 14	2313	0.47			
11	1140	36.5	3064	1	3.068 x 10 ³	3
			3076			
			3063			
	Burned					
11/21/61	1340	62.5	58703	1	5.871 x 10 ⁴	5
			58127			
15	1145	36.5	5504	10	5.611 x 10 ³	5
			5794	10		
			5536			
	Burned		5611			
11/21/61	1340	62.5	10910	1	1.095 x 10 ⁴	1
			11052			
			10896			
19	1155	36.5	191539	1	1.915 x 10 ⁵	1
			191418			
			190709			
	Burned					
17/1/61	Burned					
	11.00	300	9.88 x 10 ³	1		8
19	Time	0.2234	10.3105	10.095	To - lost	

4.5665 x 10⁵ (2/2)

5.4376

last
2/100

e-1t

φ (6/200)

168 x 10³ 3.059 x 10³

0.9286

1.40 x 10³ " NE

41 x 10⁴ 1.5841 x 10⁴ x 10²²⁵

0.8809

1.50 x 10³ ✓

5.97 x 10⁴

11 x 10³ 5.524 x 10³

0.9286

2.52 x 10³ " NE

75 x 10⁴ 1.055 x 10⁴

0.8809

2.82 x 10³ ✓

2 x 10⁵ 1.912 x 10⁵ x 10²⁷⁸

0.9286

5.41
8.93 x 10³ " ? NE

2.061 x 10⁵

could still count

8.88 x 10⁵

0.5440

7.75 x 10³ " = 12.0%

last See p. 98

~~8.4 x 10³
9 x 10³~~

11/24/61

Because of the discrepancy between burned and unburned O_2 's and the consistent direction of the disagreement, it was found today that

- 1) The "foil" must be flush with Al counting disk (most apparently were not), and
- 2) both sides of pellet must be counted because of attenuation thru sulfur.

Conclusions:

- 1) Use burned counts and disregard unburned counts measured before 11/24/61
- 2) Re count carefully all unburned pellets.
- 3) Be more careful in future.

#51 was crushed in wrapping. Took 2 fresh samples (weighed) which I hope are representative.

Cannot melt entire pellet and sample melt for burning because P deposits on Al from Walton's S.

Will pulverize entire pellet (2108/2 #19 from run 14) and melt Cl_2 of

homogenized powder.

3.

less

1

sl.

time

cond

me

1

2

1/2

30

①

②

③

Row 15	7		8	38	p.32	1 1/2
16	17		39	20		1 1/2
17	50	← Reversed →	51	52		1 1/2
18	37		13	45		1 1/2
19	28		47	54		1 1/2
20	42		43	53		1 1/2
21	46		40	55		1 1/2
22	48		47	22		1 1/2
23		41-49-61				1 1/2
24	62		63	64		1 1/2
25	57		58	59		1 1/2
26	65		60	56		1 1/2

32

11/21 0846 P - 2044

11/22 1158 A

11/22 0616 P - 1816

11/23 0108 A

11/24 1021 A

11/24 0508 P - 1708

11/25 0109 A

11/27 1044 A

11/27 0239 P

11/28 1045 A

11/28 1:55 P

11/28 4:50 P

32

Bluff 89/10

3:14

11/24/61

Run 15: 11/24/61 @ 2046

Foil #

Time

E.T.

Total dts

KC

2/KC

7

1325

64.5

208124

1

2.0888 x 10⁵

209641

1

8

1325

64.5

3536

1

3.574 x 10³

3575

3626

3561

38

1330

64.5

652

6359

6718

6810

not
down 10

Down 10

Don't
use

6.764 x 10⁵

7 (over)

1355

65

265572

1

2.6579 x 10⁵

266019

8 (over)

1355

65

4070

1

4.003 x 10³

3929

4009

11/27/61

Brinn

38

1535

159
1385

10655

1

10663

27/10

10671

1

4.833

4.835

NET C/KC

-2X

φ 1.096 X 10³

2.0588 X 10³ X 1.086 0.8773

(~~1.009~~ X 10³) (Avg. both sides)

2.268 X 10³

~~1.148~~ X 10³ → 1.26 X 10³

3.565 X 10³

0.8773

(1.723 X 10³)

1.827 X 10³ ✓

2.676 X 10³ ✓

0.8773

3.226 X 10³ ✓

2.6579 X 10³ X 1.1125 0.8764

✓ 1.431
(~~1.286~~ X 10³)

2.957 X 10³

3.994 X 10³

0.8764

✓
(1.932 X 10³)

1.066 X 10³

0.7543
~~0.7558~~

✓
3.23 X 10³

34

12:32

Run #	Time	ET	Total	LC	1/12	
11/24/61	1355	50.5	271607	1		3.0376 x 10 ⁵
			270401			
(over)	1400		336727			
			336317			

39	1400	50.5	4539	1		4.882 x 10 ³
			4704			
(over)			5869			
			5117			

20	1400	50.5	947	1		
			8982	10		9.009 x 10 ³
(over)			9137	10		

Run #	Time	ET	Total	LC		
11/27/61	1535	124	14744	1		14662
20			14581			

Let
2/142

π

φ

$\times 10^5$

~~3.0376~~ $\times 10^5$

0.9026

~~1.437~~ $\times 10^{13}$

3.440 $\times 10^5$

1.616

$\times 10^6$

4.873 $\times 10^3$

0.9026

2.29 $\times 10^{11}$

$\times 10^7$

8.971 $\times 10^2$

0.9026

4.214 $\times 10^{10}$

1.4662 $\times 10^4$

0.7775

4.27 $\times 10^{10}$

36

31.44

11/24/61	Run #17: 11/24/61 @ 1816					
Foil	Time	E.T.	Total	KC	C/KC	
50	1415	44✓	5860	1	5.567 ³	5
			5948			
(over)			5267			
			5173			

51 (Broken)	1420	44✓	337666	1		3
(ended)			337209			3

52	1425	44✓	1095	1		
			10400	10	1.0413 ³	1-
(over)			10427			

11/27/61	Banned					
52	1530	117✓	16214	1	1.615 ⁴	1.
			16092			1

	Banned					
51-1	1540	117	173392	1		1.

51-2	1540	117	148987			1.4
------	------	-----	--------	--	--	-----

51-3	1540	117	179863			1-
------	------	-----	--------	--	--	----

51-4	1540	117	232954			2.
------	------	-----	--------	--	--	----

4.636
6.0733

2	Nut C/KL	$e^{-1\pi}$	ϕ
7×10^3	5.558×10^3	0.9146	4.566 2.577×10^3 ✓

3.374×10^5	0.9146	(4.564×10^{13})
$\times 1.147 =$		1.754
$3.870 (5)$		

3×10^3	1.032×10^3	0.9146	4.784×10^{10}
-----------------	---------------------	--------	------------------------

$1.615 \times 10^4 \times 1.006$	0.7887	4.62×10^{10}	2.1×10^3
$1.624 (4)$			

1.7339×10^5	"	1.735×10^{13}
0.6069×8		

1.4895×10^5	"	1.528×10^{13}
0.5999×8		

1.7982×10^5	"	1.468×10^{13}
0.744×8		

2.3295×10^5	"	1.5664×10^{13}
0.903×8		1.569×10^{13}

38

11/24/61 Run 18: 11/23/61 @ 0108 ^{22:52}

Foil #	Time	ET	Total	KC	2/102
37	1430	37.5	441411	1	4.000 x 10 ⁵
over			358750		

13	1430	37.5	6862	1	6.518 x 10 ³
over			6850		
			6187	1	
			6268		
			6087		

45	1435	37.5	1123	1	
			11537	10	1.153 x 10 ³
			11523		

11/27/61 Burned					
45	1530	110.5	17826	1	1.7880 x 10 ⁴
			17934		

1/9/62					
37	1400	162.1	20258	1	18218
			20271		
			16268		
			16075		

Net
C/KC

e - 12

4

4.500 x 10⁵

0.9267

17832 x 10¹³

4.728 x 10⁵

2.16 (13)

6.510 x 10³

0.9267

2.978 x 10¹¹

1.144 x 10³

0.9267

5.234 x 10¹⁰

0.4
1.2 470

1.7880 x 10⁴

x 1.007 0.7991

5.17 x 10¹⁰

1.400

5.21

1.821 x 10⁴

3.729 x 10⁻²

2.07 x 10⁰

3.8
13.2

1.007

3.2890

2.08

1.834

40

Bly 11/27/61 77/10

13:39

11/27/61

Run 19: 11/24/61 @ 1021

Foil #

Time

E.T.

Total

KC

2/KC

18

1455

76.5

486743

1

44

1500

76.5 ✓

6584

1

6.048x10³

6482

5641

5567

54

1500

76.5 ✓

11725

10

1.1624x10³

11523

11/17/61

Brunswick

54

1215

434 ✓

10659

1

10669.5

10680

120	Met 9/120	e^{-1x}	ρ	
	4.067×10^5	0.8562	2.014×10^{13}	(Broken - several pieces)
	$\times 1.183$		2.38 (13)	
	4.811×10^5			

48×10^3	6.06×10^3	0.8562	3.00×10^{10}
------------------	--------------------	--------	-----------------------

24×10^3	1.155×10^3	0.8562	5.72×10^{10}
------------------	---------------------	--------	-----------------------

69.5	1.0612×10^4	.4145 0.4232	5.81×10^{10}
------	----------------------	----------------------------	-----------------------

1.6 B

42

By 7/10 at end 6:50

11/27/61 Run rd: 11/24/61 @ 1708

Foil #	Time	E.T.	Total	g/Kg
--------	------	------	-------	------

42

Did not

count. >

Wgt Burned ~ 1.2682

43

1510

70
~~44~~

7509

1

6982

7391

6467

6543

53

1510

70
~~44~~

12671

10

1272.4

12778

17/12/61

Burned

53

1215

427

11845

1

11907

11969

Nat
E/KC

e-12

φ

(Broken - curled
& somewhat
wavy).

✓
6.974 X 10³

0.8276
~~0.8129~~

3.41
~~3.244~~ X 10¹¹

✓
1.265 X 10³

0.8276
~~0.8129~~

6.18
~~5.89~~ X 10¹⁰

3.5⁹⁰

7
1.1859 X 10⁴

0.4225

6.40 X 10¹⁰

44

Dly 17/1/61 8 ✓ / 10 K

17/1/61 Run #21 1425761 @ 010922.51

Foil #	Time	City	Total	ILC	CLC	N ₂
40	1515	W ✓	9658	1	9101.5	9.3

9554

8657

8497

55	1515	W ✓	17028	10	1697.1	1.1
----	------	-----	-------	----	--------	-----

14914

12/12/61 Branned /

55	1215	419	15923	1	15951	1.1
----	------	-----	-------	---	-------	-----

15979

#46 Branned by t = ? melted and ∴ lost counter

Net ✓
e/ke

9.094 x 10³

e - 1 π

0.8818

φ

(4.622)

~~1.051 x 10³~~ 4.37 x 10³ ✓

1.690
1.697 x 10³

0.8818 ✓

8.110 x 10³ ✓

5.400

51 1.5943 x 10⁴

0.4273 ✓

8.57 x 10¹⁰ ✓

water

46

alg 7/1/61 105/1000

11/29/61 Run #22: 11/27/61 @ 1044 13:14

Foil #	Time	ET	Total	KL	2/KL	N.
48	1015	47.5	125360	1	1.1201 x 10 ⁵	1.1
			125464			1.1
			98216			
			98993			

47	1015	47.5	17461	10	1653.4	1.6
			15609			

22	1030	47.5	3077	10	312.8	3.
			3128			
			3185			
			3124			

17/1/61	Burned					
47	1030	95.5	21985	10	21880.5	2.1
			21776			

22	1030	95.5	4098	1	4107.5	4.
----	------	------	------	---	--------	----

17/5/61	Released		4117			
22	0915	190.5	3192	1		
			3146			
			3185			

47	p.60		9882	3	329.4	3.3
----	------	--	------	---	-------	-----

4.669
5.814

M-21
2/KC

$\mu - 1.2$

$\rho = 5.47$ ✓
~~5.43~~ $\times 10^3$ ✓^m

15

1.170×10^3

0.9081

~~5.43~~ $\times 10^3$ ✓^m

1.171×10^3

1.643×10^3

0.9081

7.67×10^{10} ✓

3.023×10^2 ✓

0.9081

1.41×10^{10} ✓
X

3

2.187×10^4

0.8238 ✓

0.16×10^{10} ✓

24.5

5

4.097×10^3

0.8238

1.12×10^{10} ✓

~~9.05~~ $\times 10^9$ X

26.8

0.6794

~~1.05~~ $\times 10^{10}$ ✓

1.05×10^{10} ✓

29.9

4

3.285×10^3 ✓
~~3.001~~ $\times 10^3$ ✓

48

9:24

11/27/61

Rem 23: 11/27/61 @ 1439

Fold

Time

E.T.

Total

142

2/122

wa
2/1

41

1040

44 ✓

2434

10

2445

2.2

4927

20

4877

20

49

1055

44 ✓

14119

10

1335.1

1.3

12583

61

1100

44.5 ✓

100475

1

9.000 x 10⁷

9.
9.

100630

79418

79561

12/1/61

Brown

49

1035

9 ✓

21239

1

21334

2.1

Dirty; definitely

21429

Brown

9 ✓

3521

1

3392

4.1

41

1035

9 ✓

3389

1

3317

3.1

3343

3317

3343

Black; maybe one crystalline area at edge

See p. 60

net
2/11/2
2.24 x 10³

e-12
0.9146

φ
1.04 x 10¹⁰

1.325 x 10³

0.9146

6.14 x 10¹⁰

9.326
~~9.000~~ x 10⁴

0.9136

4.33
~~4.18~~ x 10¹²

2.1324 x 10⁴

0.8297

5.74
~~5.693~~ x 10¹⁰

7.0

x 1.000

3.382 x 10³

0.8297

5.41 x 10⁹

10.5

edge

50

11/29/61 Run 24: 11/28/61 @ 1045 ^{13:15}
 Fuel Time ET Total K2 C/K2
 62 1105 24.5 14183.2 1 1.2689 x 10⁵
 141706
 14276
 111742

63 1110 24.5 2033 1 1919.5
 20265 10
 18125 10

64 1120 24.5 3645 10 373.4
 3694
 3825
 3773

11/1/61 Banned
 63 1240 72 30269 1 29858
 29448

Banned
 64 1245 72 5450 1 5472.7
 5503
 5425

Good & clean; some tiloch on side
 11/29/62
 62 1450 1491 7621 1 6757
 7582
 5910
 5910

4.456
5.543

Let
e/kc

e - 1x

φ

x10⁵

~~7.2689~~ x10⁵

0.9515

~~4.456~~ 5.65 x10⁵

1.334(5)

5.94

1.989 x10³

0.9515

8.51 x10⁷

3.629 x10

0.9515

1.62 x10¹⁰

2.9848 x10⁴

0.8641

8.28
~~8.49~~ x10¹⁰

3.9 2.8

1.0115 - 3.019(4)

7

5.462 x10³

0.8641

1.43 x10¹⁰

133

7

6.750 x10³

4.855 x10²

3.820²

5.89 x10¹²

0.8
~~4.2~~ 7

52

11/29/61 Run 25: 11/28/61 @ 1359 ^{12:01}

Foil	Time	ET	Total	Kc	2/Kc
57	1130	2115 ✓	97404 98177 76785 76764	1	8.728 X 10 ⁴

58	1130	2115 ✓	1339 13424 12268	1 10	1287.6
----	------	--------	------------------------	---------	--------

59	1140	2115 ✓	2344 2351	10	234.7
----	------	--------	--------------	----	-------

12/1/61	Run	ET	Total	Kc	2/Kc
58	1045	6815 ✓	19469 19640	1	19555

Very hard; possibly

59	1045	6815 ✓	3635 3710 3573	1	3639
----	------	--------	----------------------	---	------

Family clean, but a little sandy

4.4251
5.504

cut
2/12

$2 - \pi$

φ

$\times 10^4$

8.7248×10^4

0.9573

~~3.87~~ $\times 10^{12}$

5.0344

4.00

1.274×10^3

0.9573

5.64×10^{13}

2.242×10^4

0.9573

9.53×10^9

1.9545×10^4

0.8702

5.04×10^{10}

11.9

only one small unburnt area in edge

3.629×10^3

0.8702

9.54×10^9

4.0

54

1057, 10 100 "1/29/61

"1/29/61

Rem 24: "1/28/61 @ 1650

7:10

Foil

Time

ET

Total

100

2/100

58

1145

19

4482

10

438.95

4297

60

1150

19

24132

10

2297.8

21824

65

1200

19

172180

1

1.537 x 10⁵

171775

135410

135277

17/14

Brewed

60

1045

66

31475

1

31624

31773

Dark; sides also dark

56

1050

66

6280

1

6324

6360

6333

Pretty clean; some "water marks" on sides

4.40657
5.474

Lat

1/2
2/2
2.95
4.284 x 10²

2-15
0.9622

φ
1.85 x 10¹⁰

2.8
2.287 x 10³

0.9622

1.01 x 10¹¹

7 x 10⁵
1.537 x 10⁵
1.633 (5)

0.9622

7.19
6.77 x 10¹² Recounted;
Apparently ~ 4% counting
low on this

-4
3.1614 x 10⁴ x 1.014
3.199
0.8747

8.35
8.25 x 10¹⁵
20.9
20.7

1
6.314 x 10³

0.8747

1.68 x 10¹⁵
125

56

175761

1/2~1/61 @ 1816

51-20 0.9687 - 0.2255 = 0.7432

1000 303.5 154250 1

155.129

51-21 0.8269 - 0.12300 = 0.5969

1000 121189 1

121110

51-23 0.8650 - 0.2254 = 0.6396

1000 132359 1

133054

175761 1.82 avg

0.540v

1.5471 x 10³1.85 x 10³ x 1.06v =
1.9651.2115 x 10³

0.540v

1.80 x 10³ x 1.04v =
1.8801.3273 x 10³

0.540v

1.84 x 10³ x 1.053 =
1.937

58

175761

51-24 0.8290 - 0.2230 = 0.6060

1005

121300

1

121896

51-26 0.9469 - 0.2234 = 0.7233

1005

148308

1

148070

$$1.2/60 \times 10^5$$

$$0.5452$$

$$1.28 \times 10^3 \times 1.048$$

$$1.865$$

$$1.4819 \times 10^3$$

$$0.5402$$

$$1.82 \times 10^3 \times 1.06$$

$$1.929$$

$$= 1.916 \times 10^3$$

avg
(corrected)

$$\text{avg wgt} = 0.6618$$

60

Bly 90/10

47 7/24

Run 22 (Relay) 1344 on "1/28/61" wpt
 0945 / 18229 ~~17891~~ 1 20.6371
 1925 18451 18/61

1.83
3.40
1.1

49

Run 23 (Relay) 1439 "1/27/61" 21.6231
 0940 187 17096 10 1.70
 17562
 17144
 175011 ?

41

0945 27524 2746 1 20.7433 2.78
 27527 10

Run 24 (Relay) 1045 on "1/28/61"

64

0945 / 4573 4568 1 21.1989 4.49
 167.0 4483 4368
 4440

Run 25 (Relay) "1/28/61" @ 1359

58

0950 164 15328 1 21.3241 1.61
 15382
 15207
 15162 1.6

59

0950 164 25276 10 20.9356 2.8
 8618 3

Run 24 Relay "1/28/61" @ 1650

60

0955 161 25663 1 20.9762 2.5
 25512

56

1000 5325 1 20.6337 5.3
 5334
 15884 3

1.007

1.837

3.400 x 10⁴

0.6754

~~4.16~~ x 10³

6.116 x 10³

2.18

2.515 x 10³

1.844

6.30

31

1.753 x 10⁴

0.6843

5.67 x 10³

7.9 x 10³

33

2.783 x 10³

0.6843

9.09 x 10³

10.7 x 10³

39

4.494 x 10³

0.7126

1.43 x 10³

13.3 x 10³

41

1.618 x 10⁴ x 1.006

0.7170

5.07 x 10³

10.6

4.2 x 10³

1.628 x 10⁴

5.10

56

2.891 x 10³

0.7170

9.22 x 10³

7.7 x 10³

76

2.554 x 10⁴

0.7213

8.10 x 10³

2.5 x 10³

337

5.320 x 10³

0.7213

1.71 x 10³

10.5 x 10³

62

12/8/41

#27

66

67

68 - 12/8/41 11:10A

#27A

71

70

72 - 12/8/41 2:09 PM

Weights:

Foil #	Gross	Tare	Net
54	21.3786	0.3054	21.0732
53	21.4735	"	21.1681
55	21.1629	"	20.8575
67	21.7413	"	21.4559
68	21.6237	"	21.3183
72	21.0496	"	20.7442
70	21.3530	"	21.0476

64

17/11/61 Bly 97/10 KC

12:50

17/11/61	Run 27	178761 @ 1112			
Foil #	Time	ET	Total	KC	\$/KC
46	1100	72	7204 ✓	1	14223
			15993		
			12534		
			12523		

47	1105	72 ✓	2088	10	224.8
			2148		

17/11/61	Banned		2396		
			2359		
	1200	97	417 ✓	1	415 ✓
			4091		
			419 ✓		

68	1120	72 ✓	481 → 4-1.90	10	46.1
			441		

17/11/61	Banned				
	1200	97	7105	10	710.5

Unit

	$\frac{c}{Kc}$	$e^{-\lambda x}$	ϕ	
3	1.4214×10^4 1.428×10^4	0.8241	6.97×10^{11} 7.01	
8	2.135×10^3	0.8241	1.06×10^{10}	5.69
✓	4.144×10^3	0.8213	1.13×10^{10}	
.1	36.8	0.8241	1.81×10^9	5.59 Note embury Count!
.5	702.2	0.8213	1.97×10^9	

66

17/11/61 Bly 93/10/100

9:51

17/11/61

Run 27A: 12/8/61 @ 1409

Foil #

Time

ET

Total

KE

c/100

71

1125

69.5 ✓

50912

10

45721

4.5

50792

X1.0

40777

40403

73

1130

69.5 ✓

7484

10

701.3

6.9

7288

6711

17/11/61

Banned

70

1200

94 ✓

6509

12138

1

12258.5

1.22

12329

1.

72

1145

69.5 ✓

1382

10

135.1

1.2

1320

17/11/61

Banned

1210

94 ✓

2187

1

2164

2.1

2100

2166

2177

2192

$\frac{1}{2} \pi$
 $\frac{2}{100}$
 4.5712×10^4
 $\times 1.017 = 4.649$

$e^{-\pi}$
 0.8685

q
 2.23×10^{12}
 $2.27 (12)$

1.3 6.92×10^4 0.8685 3.38×10^{10}

8.5 1.2250×10^4 0.8264 3.37×10^{10}
 $1.004 = 1.230$ 3.38

2.1 1.258×10^4 0.8685 6.14×10^9

4 2.156×10^4 0.8264 6.02×10^9

2.50

70

1/2/62

Run 28

73

74

75

Run-29

76

77

78

1/2/62

1-3-62

Run

32A

1-45

79

80

81

Run

34

5:58 P

175V

split

82

83

84

✓ 1-3-62

Run 35

88

89

90

1010⁸ ~~split~~

44/6V

Run 36 ✓

11 PFA

44/6V

Run 37 ✓

05-48-1724

85

86

87

91

92

93

44/6V

11 PM

15 38 ✓

0126

95

96

97

45/6V

1030 39

98

99

100

45/6V

1708 40

94

101

102

45/6V

235 41

106

107

Bly 74/10

71

1/5762
 ✓ S-23 1500 15706 1.7894 x 10⁴ 7.83 x 10⁵
 Pm 12 1150.5 15873 e^{-λt} = 0.09687 7.88 (12)
 1/18761 @ 1025 19793 x 1.007 = 1.801(4)
 20235 / 1790.7

✓ S-65 1500 29643 2.646(4) 7.11
 Pm 26 910 29613 2.6197 x 10⁴ x 1.01 7.04 x 10⁵
 e^{-λt} = 0.1578
 1/28761 @ 1025 22754
 22808 / 26204.5

✓ S-21 1500 14957 1.7010 x 10⁴ x 1.005 7.46
 Pm 13 1148.5 14634 e^{-λt} = 0.09727 7.41 x 10⁵
 1/18761 @ 1823 19305 1.712(4)
 19173 / 17017.2

✓ S-17 1510 37855 4.327(4) 1.57
 Pm 14 1059.5 37029 4.2591 x 10⁴ x 1.016 1.55 x 10⁵
 e^{-λt} = 0.1167
 1/2761 @ 1128 47543
 47689 / 42559

✓ S-48 1510 21163 1.922(4) 5.143
 Pm 22 940.5 21231 1.8869 x 10⁴ x 1.007 5.35 x 10⁵
 e^{-λt} = 0.14833
 1/2761 @ 1048 16582
 16529 / 18876.2

72

Run 34

1/27/62 ✓

82

1515
(45.5)

83167

1

74758

83510

66156

66199

83

1520
(46.0)

{ 1047

1

112455

{ 10701

10

11790

10

~1.5131 - 12278 = 21.2823

84

1530
(46.0)

2171

10

2148

2125

~1.0431 - 12278 = 20.8153

1/27/62

1010 (208.5) 2662

1

2658.1

26542

10

4.650 x 10⁷

~~2.4750 x 10⁵~~

0.9118

3.54 ✓
~~3.48 x 10¹²~~

7.694 (4)

1.1169 x 10³

0.9109

5.20 ✓ x 10¹⁵

2.072 x 10² ✓

0.9109

9.64 x 10⁹ ✓

2.648 (3)

0.6551

9.00 (5) ✓

3.690

74

Row 35 11576 ✓

1.44
2216 1/3/6 ✓

88

1535 /
(41.0)

54765

1

62565

6.6
6.2

54880

70151

70464

89

1535 /
(41.0)

8829

10

939.95

93

9970

20.8474 - 2278 = 20.6196

1/12/6 ✓

1005 (204.0)

122978

10

12297.8

127

12062

1

10

90

1545 /
(41.5)

1735

10

168.1

1.6

1428

21.2116

-2278

= 20.9838

1/12/6 ✓

1000 (203.0)

2222

1

2219.9

22

22199

10

6.410
~~6.2557 x 10⁵~~

0.9202 ✓

2.95 ✓
~~2.66 x 10¹²~~

932.35

0.9202 ✓

4.30 x 10¹⁰ ✓

1.229 x 10⁴ x 1.004 ✓
1.234

0.6611

4.34
~~4.32~~ (10)

1.605 x 10² ✓ ~~1.35~~

0.9192 ✓

7.40 x 10⁹ ✓

2.210 x 10³

0.6617

7.62 (9) ✓

390

76

Pen 32A

7576 ✓

79

1555

6379 ✓

1

57266

50741

57258x5

78

42 1/6/62 0134

103

104

105

80

12.46

Run 36

1114

1/4/62

1/8/62

85

09.55

94.5

190436

9.77(12)

1

1.7098 x 10⁵

1.85

1.72

190297

151560

151611

86

09.55

94.5

2449

1

2.5945 x 10⁵

2.5

2451

2748

2730

21.1660 - 0.2814 = 20.8846

87

1000

95.0

4819

10

4.801 x 10⁵

4.

4784

20.9033 - 0.2814 = 20.6219

1/12/62

1000

191

7103

1

7111

7.1

7025

7205

5
1.830 (5)
~~1.7095 x 10⁵~~

0.8255

9.45 ✓
8.78 x 10¹⁰ ✓

7
2.585 x 10³

0.8255

✓
1.33 x 10¹¹

✓
4.705 x 10⁵ ✓

0.8247

✓
2.42 x 10¹⁰

7.101 (3)

0.6787

✓
2.43 (10)

82

6.36
Run 37 1724 on 1/4/62

49.6 ✓
91 1155 905 241515 1 21188 x 100
Inlet 296082 - 1.51(13)
20.7419 - 0.2241 = 20.5178

92 ✓
1010 89.0 45759 10 4312.1
40483
20.7803 - 0.2814 = 20.4989

93 1015 89.0 7497 10 761.8
7739 ← 0.88 = 0

1/17/62 ✓
93 0930 184 12194 1 12119.5
12045

2.958 (5)
2.187 x 10⁵

0.8323

1.527
1.11 x 10³

4.3029 x 10³

0.8348

2.185 x 10³

7.526 x 10²

0.8348

3.82 x 10¹⁰

1.211 x 10⁴

0.6884

4.00 (10)

63

84

Run 38

^{2.04}
0126 am 1576 ✓

1/4 ✓

95

1155

82.0 ✓

333436 - 1.62(10)

1

303371

inverted

273306

96

1025

81.0 ✓

4987

1

4914

4957

4945

4768

$21.0408 - 0.2814 = 20.7594$

97

1025

81.0 ✓

8620

10

883.2

$9045 \leftarrow 10 = 4.49$

$21.0281 - 0.2814 = 20.7467$

1/5 ✓

97

0930

176.0 ✓

13503

1

13573.7

13726

1345 ✓

95

$21.1342 - 2241 = 20.9101$

1 3.434 (5)
~~3.2226~~ x 10⁵

0.8459

1.72 ✓
7.52 x 10¹³

4.505 x 10³

0.8485

✓
2.45 x 10¹¹

3.2 8.74 x 10²

0.8485

✓
4.37 x 10¹²

29

573.7 1.356 x 10⁴

0.6997

✓
4.47 (12)

86

1/17/62 94/100

Run 39

10:30
1330 on 1/37/62

1/19/62
98

1055 69.5 65257 1 58705
52953

99

1040 69.0 8515 10 875.7
899960-4.38

21.4432 - 0.2814 = 21.1618

4/12/62

0945 164.0 13931 1 1397.3
14015

100

1045 69.0 1637 10 163.7
1642

21.4424 - 0.2814 = 21.1610

1/17/62

Burned

100

0940 164.0 2485 1
24899 10 2487.4

5	6.026 5.8656 x 10 ⁴	0.8685	2.93 0.87 x 10 ¹⁰	
7	8.665 x 10 ⁵	0.8653	4.23 x 10 ¹⁰	4.23
7.3	1.394 x 10 ⁴	0.7170	4.41 (10)	
7	1.545 x 10 ⁵	0.8623	7.54 x 10 ⁹	8.2
7.4	2.478 x 10 ⁵	0.7170	7.82 (5)	

88

Qty 92/10 1/876 ✓ 6.5 ✓

Run 40 1708 1/576 ✓

1/876 ✓

94

1200 67.0 ✓ 418826 1 392963

Melting &
Inches

367101

101

1055 66.0 ✓ 7433² 1 7034.7

7577

648 ✓

6647

10 ✓

1100 66.0 ✓ 11845 10 1208.8

11921

12374

12214

$21.2280 - 0.2814 = 20.9466$

94

$20.8492 - 0.2240 = 20.6252$

3 4.623 ✓
3.5295 x 10³ ✓
0.8729 ✓
7.91 x 10¹⁰ ✓
2.24

7 7.0255 x 10³ ✓
0.8747 ✓
3.405 x 10¹¹ ✓

8 1.1996 x 10³ ✓
0.8747 ✓
5.87 x 10¹⁰ ✓

1.25

Run 41

~ 35 on 15/6 ✓

4/8/6 ✓

106

11.5

41.0 ✓

57493

1

51497

Bushland

45191

45812 ✓

$21.4080 - 22.43 = 21.1843$

107

11.5

40.5 ✓

8157

10

770.9

7262 ✓

$21.4245 - 0.2814 = 21.1431$

1/12/6 ✓

0945

155.0 ✓

12045

1

12159.5

12274

5.25V
~~5.488~~ x 10⁴

0.8835

~~2.47~~ x 10¹²
2.5V

7.617 x 10²

0.8845

3.65 (10)

390

5 1.2150 x 10⁴

0.7301

3.77 x 10¹⁰

Run 4 \checkmark

²²²⁶
0134 7/6/6 \checkmark

7/8 \checkmark

103	1150	58.0	118989	1	107354
			119398		
			95800		
			95239		

104	1130	58.0	17212	10	1640.2
			1555 \checkmark		

21.4003 - 0.2814 = 21.1189

105	1140	58.0	2927	10	282.3
			2720		

21.2547 - 0.2814 = 20.9733

7/12/6 \checkmark	0550	15 \checkmark	4190	1	4180
			4217		
			4133		

54 $1.120(5)$
 4.07345×10^5 0.8890 5.1×10^5
 5.34

2 1.631×10^3 0.8890 7.78×10^3

3 2.73×10^3 0.8890 1.30×10^3

2 4.170×10^3 0.7346 1.30×10^3

9.5 $4.004(4)$
 ~~3.9432×10^4~~ 0.3181 5.34
 ~~3.25×10^{12}~~ (1.1454) ~~1.35×10^9~~

9.7 4.243×10^3 2.958×10^{12} 6.00×10^{12}
 (3.5071) 3.11×10^9

9.8 2.771×10^4 3.729×10^{12} 3.15×10^{12}
 (3.2890) 5.7×10^9

9.8 9.467×10^4 $0.294 \checkmark$ 1.36×10^{11}
 (1.2205) 2.2×10^9

9.7 6.474 $0.294 \checkmark$ 9.33
 6.316×10^4 9.12×10^{12} 13.6

9.7 4.716×10^3 4.65×10^{12} 4.00×10^{12}
 (3.0678) 2.5×10^9

96

Bly 73/101 ✓

$\frac{1}{2}$ 5/16 ✓ Run 19 11/24/61 @ 1021 (p. 40)
 ✓ 44 1445 1588.5 3268 10 301.8
 3078
 2936
 2790

Run 25 11/28/61 @ 1359 (p. 52)
 ↓ 57 1500 1489 5191 1 4592
 5131
 4086
 3965

Burn #24 & #57 #1 side up. This will result in
 side of #57 being melted. Reasoning the
 then the bottom during melting, it could

57 Run 25 11/28/61 @ 1359 (p. 52) 21.2316 - 2294
 1500 3/9/62 2425.5 37935 3122 38030
 38121

24 Run 11 11/18/61 @ 1339 (p. 20) 21.3850 - 2252
 1500 3/9/62 2713.5 38113 3122 37959
 37805

3/9/6 ✓

Banner

57 1500 JKL 37939 ✓
" " " 38121

24 1510 " 38113 ✓
" " " 37805

19 1510 1KL 11495

95 1515 1KL 405615

4 ✓ 1515 1KL 63100

23 1515 " 57118

106 " " 55038

7 1520 " 29891

91 " " 266851

95 " " 30275 ✓

$$2.945 \times 10^3$$

$$3.983 \times 10^3$$

$$3.13 \times 10^3 \quad 4.38$$

$$(3.2231)$$

$$4.585 \times 10^3$$

$$4.874 \times 10^3$$

$$3.99 \times 10^3 \quad 3.19$$

$$(3.0212)$$

in the hot side of ΔT 's being done & then cold
 P^{32} migrates to the sides of the cup rather
 to explain some low current counts.

$$= 21.8022$$

$$\Delta T = 4.520$$

$$1.267 \times 10^4$$

$$7.256 \times 10^{-3}$$

$$3.56 \times 10^3 \quad 0.78$$

$$= 21.1594$$

$$\Delta T = 5.5002$$

$$1.265 \times 10^4$$

$$4.062 \times 10^{-3}$$

$$7.05 \times 10^3 \quad 1.88$$

5-13 (burned part - 10.09g - p. 26) used for
determining dead time on P.R.3 counter.
Count rate, corrected for decay to 0930 on
17/61, extrapolated to 9.85×10^5 ET
but when run (11/18/61 @ 23:13) to 0930 17/61 =
442.5 lw, $At = 0.8974$, $e^{-\lambda t} = 0.4075$.

$$\phi = \frac{9.85 \times 10^5 (4.79 \times 10^3)}{10.09 (0.4075)} \sim 1.15 \times 10^{13}$$

After obtaining the counting losses,
all ^{count} rates in the preceding pages
was converted by the appropriate
factor(s) and the flux recomputed.
Where the two sides of a path
showed different C.R., each count
was corrected separately before
averaging.

19

Rest of broken path: 11.3030 - 2240 = 11.0790

To obtain counting losses, the data on the following 4 pages was plotted
 1) Count rate (observed) vs time (for $T_{1/2}$)
 2) Observed count rate vs CR corrected for 14.23 day $T_{1/2}$

The first plot showed no indication of a different half-life.
 The second curve was extrapolated to 0 observed CR, giving an intercept of 9.85×10^5 (decay corrected). The CR correction was then plotted as the ratio $\frac{9.85 \times 10^5}{\text{Decay corrected CR}}$ for the factor

From curve (2):

Observed CR	Decay ^x -Corrected CR	$\frac{9.85}{x}$
4×10^4	9.7×10^5	1.0155
8×10^4	9.55	1.0314
1.2×10^5	9.40	1.0478
2	9.1	1.0824
2.4	8.95	1.1006
3.2	8.65	1.1387
4	8.35	1.1796
4.4	8.2	1.2017
4.8	8.05	1.2236
5.4	7.82	1.2596

100 Raw Data Copies from Paul Reinhardt's Notes
P.R. for count loss correction.

<u>Date</u>	<u>Time</u>	<u>g/ke</u>	<u>g/ke</u> <small>AV</small>	<u>E.T. (from '77)</u>
177/6.1	0930	709559	708788	0
		708017		
178	0900	691338	691338	23.5
1711	0900	621110	620718	95.5
		619042		
		622003		
1712	0900	597607	596956	119.5
		596300		
1713	0900	572723	573613	143.5
		573997		
		574120		
1715	1530	517538	517538	198
1718	0900	463383	463383	263.5
1719	1600	446704	446704	294.5
1720	1600	431622	431978	318.5
		432334		
1721	1600	417951	417951	342.5
1722	1400	401034	401034	364.5
1726	1000	329165	329165	456.5
1728	0900	312981	312981	503.5
1729	0900	297482	297482	527.5
17	0900	248450	248450	623.5
173	1635	238474	233845	655
		238295		

1st book. 5-19 was burned and counted by

7/2

$\lambda \pi$	$e^{-\lambda \pi}$	$\frac{2/kc}{e^{-\lambda \pi}}$
0	1	7.088×10^5
0.04748	0.9534	7.251×10^5
0.1938	0.8238	7.535×10^5
0.2425	0.7847	7.607×10^5
0.2912	0.7474	7.675×10^5
0.4017	0.6692	7.734×10^5
0.5346	0.5859	7.909×10^5
0.5975	0.5502	8.119×10^5
0.6462	0.5240	8.244×10^5
0.6949	0.4991	8.374×10^5
0.7396	0.4773	8.402×10^5
0.9262	0.3960	8.312×10^5
1.0216	0.3600	8.694×10^5
1.0703	0.3429	8.675×10^5
1.2651	0.2822	8.804×10^5
1.3290	0.2647	8.834×10^5

1/4	1200	228086	228205	679
		228437		
1/5	1315	219736	219436	700
1/8	0900	191660	191660	767.5
1/9	0900	182649	182649	791.5
1/10	1130	174690	174690	818
1/11	1230	167810	167810	843
1/12	1100	161549	161125	865.5
		160702		
1/15	0900	139696	139696	935.5
1/16	1000	132956	132433	960.5
		131911		
1/17	1300	126246	126083	987.5
		126521		
1/18	1300	121636	121510	1011.5
		121385		
1/19	0900	116601	116601	1031.5
1/22	0930	100980	101123	1104
		101266		
1/23	1000	95536	95536	1128.5
1/24	1030	90528	90528	1158
1/25	1600	86829	86829	1182.5
1/26	1400	82052	82352	1204.5
1/29	1000	71802	71560	1277.5
		71319		

1.3777	0.2521	9.054×10^{-5}
1.4203	0.2416	9.083×10^{-5}
1.5572	0.2107	9.256×10^{-5}
1.6059	0.2007	9.101×10^{-5}
1.6597	0.1902	9.184×10^{-5}
1.7104	0.1808	9.281×10^{-5}
1.7561	0.1727	9.350×10^{-5}
1.8581	0.1498	9.322×10^{-5}
1.9488	0.1424	9.300×10^{-5}
2.0036	0.1348	9.375×10^{-5}
2.0523	0.1284	9.463×10^{-5}
2.0929	0.1233	9.457×10^{-5}
2.2400	0.1064	9.570×10^{-5}
2.2897	0.1013	9.431×10^{-5}
2.3496	0.09541	9.488×10^{-5}
2.3993	0.09078	9.565×10^{-5}
2.4439	0.08624	9.485×10^{-5}
2.5920	0.07487	9.568×10^{-5}

PHS. ♂

Gain 8 x ? ← adv. ju ltd of 4370

v ≈ 700

Libby Johnson
483-6429