

BOOK87R

Notes:

Blank pages: inside front cover sheets, 1, 5, 8, 18, 19, 29-152, inside back cover sheets

-page 8 has drawing taped to it

-blank piece of lined paper between pages 44/45

Scanned by:

Sheila Finch

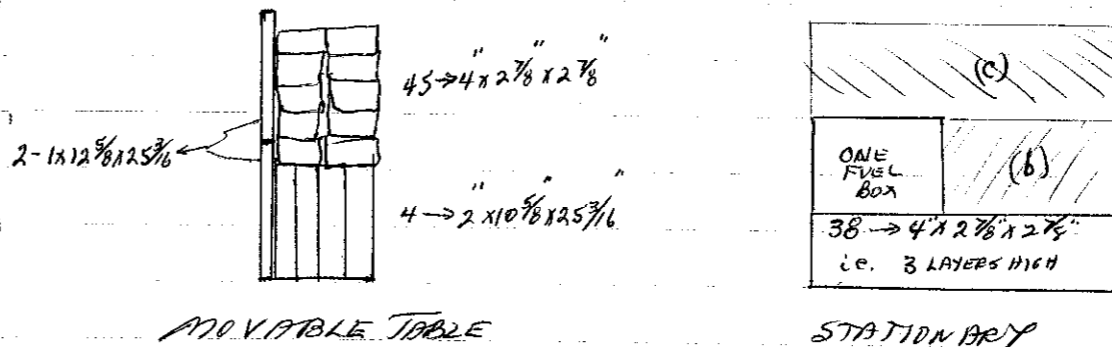
RSICC /Oak Ridge National Lab.

September 1, 1999

SECTION (C) as run on EXP#125
 4 - 2" x 20³/₈" (E-W) x 14³/₈" (N-S)
 14 - Blocks VERT. ON BACK
 18 - BLOCKS HORIZ. (E-W) ON WEST SIDE
 2 SHORT + 1 long 1" slabs flat on TOP

Instrument Check on 28MAR69 Source Co⁶⁰

PM-1	OK	Low Trip	OK	Alarm Trip	
PM-2				Alarm Trip	
IC-1	3x10 ⁻¹¹	Meter Trip	OK	Fast Trip	OK
IC-2	3x10 ⁻¹¹	Meter Trip	OK		BLDG ALARM OK
IC-3	RESPONDS	Calibration	JRT&CC		TEMP. = 22°C
IC-4	RESPONDS	Calibration	JRT&CC		PRESS. = 0.04
CRM		Meter Trip			



NOTE: ALL 4x2⁷/₈ x 2⁷/₈" HAVE A 3/16" DIA. HOLE IN CENTER LENGTHWISE.

EXP#123 AS SHOWN ABOVE, OVERALL DIMENSIONS.

MOVABLE TABLE C: 25¹/₄" x 9" x 25³/₁₆"

FIXED TABLE C: 8⁵/₈" x 17³/₄" (N-S) x 24" (E-W)

SUB-CRITICAL

Instrument Check on 31MAR69 Source Co⁶⁰

PM-1	OK	Low Trip	OK	Alarm Trip	
PM-2				Alarm Trip	
IC-1	3x10 ⁻¹¹	Meter Trip	OK	Fast Trip	OK
IC-2	3x10 ⁻¹¹	Meter Trip	OK		BLDG ALARM OK
IC-3	RESPONDS	Calibration	JRT&CC		TEMP. =
IC-4	RESPONDS	Calibration	JRT&CC		PRESS. = 0.06
CRM		Meter Trip			

EXP#124 ADD 7" C TO 3 SIDES OF FUEL BOX (b ABOVE)
 AT CLOSURE: SUB-CRITICAL. (b) MADE UP OF SMALL 2" x 1" SLABS @ SIDES AND LONG 1" SLAB ON REAR.

4

EXP#125 ADD 29" ACROSS ENTIRE TOP ^{OF CONF} ON FIXED TABLE. (C ABOVE).
SUB-CRITICAL @ CLOSURE.

EXP#126 ADD ^{ONE} PERIPHERALS TO REAR (SOUTH) OF CONFIGURATION
19⁵/₈" (UP) X 23⁷/₈" (WIDE) X 1"
@ CLOSURE SUB-CRITICAL

EXP#127 ADD 2⁷/₈" TO N-S-E & W SIDES (USING THE BLOCKS)
SOME "OPEN CREVICES" UNAVOIDABLE. (NO SHIM).
also added 2⁷/₈" to top of movable table.
@ CLOSURE SUB-CRITICAL.

NO VISIBLE MULTIPLICATION.

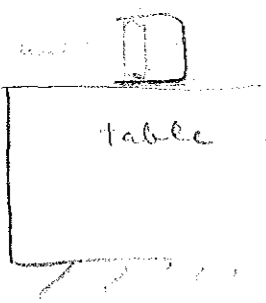
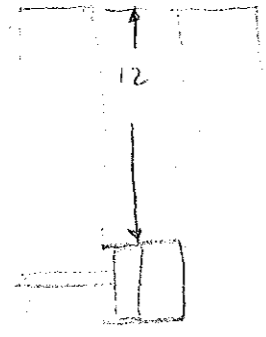
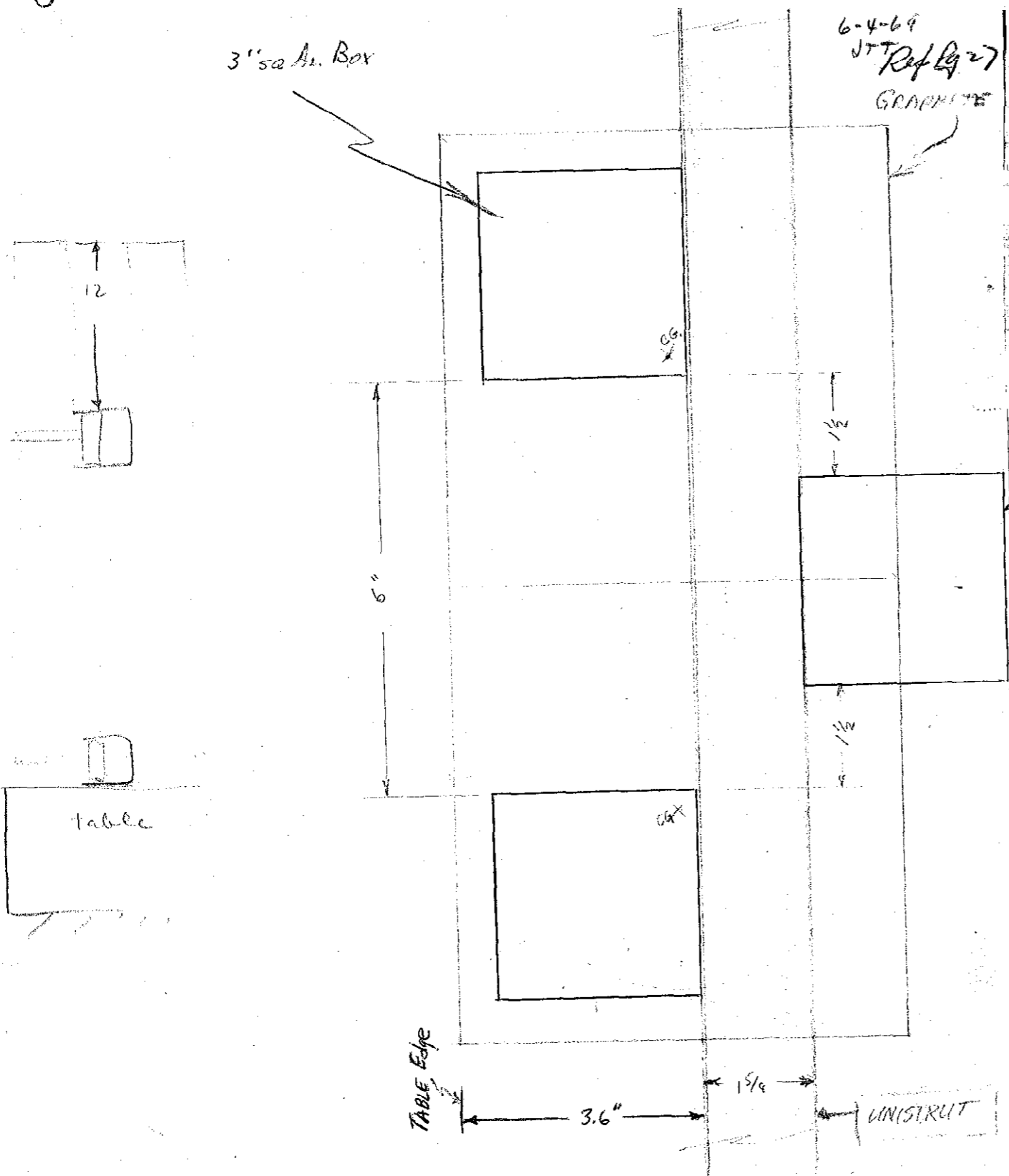
END OF 1 BOX EFFORTS.

Rec'd Blocks machined to 8.2" sq. base 4-16-69

Box No	Wt kg	A	B	C	D	X	Y	Z
14		2.021	2.020	2.023	2.021	8.60	8.60	3.104
6		2.019	2.021	2.021	2.023	8.60	8.60	3.100
9		2.021	2.019	2.022	2.022	8.60	8.60	3.100
11		2.022	2.021	2.024	2.022	8.601	8.596	3.100
10		2.023	2.022	2.022	2.024	8.598	8.597	3.101
4		2.022	2.020	2.023	2.021	8.60	8.598	3.100
8		2.025	2.023	2.019	2.020	8.60	8.60	3.105
7		2.022	2.021	2.025	2.021	8.60	8.597	3.100
5		2.020	2.023	2.021	2.021	8.60	8.60	3.100
15		2.021	2.022	2.021	2.021	8.60	8.60	3.100
1		2.025	2.023	2.020	2.022	8.60	8.597	3.104
13		2.024	2.023	2.019	2.021	8.60	8.596	3.100
16		2.021	2.020	2.022	2.021	8.596	8.60	3.105
3		2.022	2.021	2.023	2.022	8.60	8.60	3.104
12		2.023	2.022	2.024	2.022	8.60	8.596	3.100
2		2.024	2.025	2.020	2.018	8.60	8.60	3.100

Rec'd Blocks Machined to 6.6" sq. base 5-23-69

wt, (kg)	A	B	C	D	X	Y	Z
1.88	1.027	1.021	1.012	1.020	6.6	6.6	2.099
1.90	1.024	1.022	1.022	1.024	6.6	6.6	2.099
1.89	1.033	1.034	1.010	1.011	6.6	6.6	2.099
1.89	1.015	1.034	1.029	1.008	6.6	6.6	2.100
1.89	1.029	1.018	1.015	1.029	6.6	6.6	2.098
1.88	1.013	1.024	1.033	1.018	6.6	6.6	2.100
1.89	1.014	1.024	1.016	1.018	6.6	6.6	2.102
1.90	1.022	1.029	1.022	1.012	6.6	6.6	2.099
1.90	1.019	1.014	1.025	1.027	6.6	6.6	2.101
1.88	1.022	1.026	1.021	1.015	6.6	6.6	2.100
1.89	1.021	1.017	1.021	1.027	6.6	6.6	2.100
1.90	1.033	1.006	1.011	1.037	6.598	6.6	2.100
1.88	1.022	1.029	1.022	1.018	6.6	6.6	2.101
1.88	1.021	1.037	1.028	1.010	6.6	6.6	2.102
1.88	1.017	1.028	1.021	1.017	6.6	6.6	2.100
1.89	1.021	1.026	1.023	1.023	6.6	6.6	2.102



Expr. 128

Instrument Check on 4-17-69 Source Co⁶⁰

PM-1	Low Trip	OK	Alarm Trip	OK
PM-2				
IC-1	> 3 x 10 ⁻⁴	OK		OK
IC-2	> 3 x 10 ⁻⁴	OK		Personal Alarm
IC-3	Responds	JA		Alarm OK
IC-4	Responds	JA		Rec. ~ 0.3
CPM				Rm Temp. 25°C

Eight units assembled in standard arrangement, disassembled on table top. Check for criticality when close packed. $k < 1$ at closure. On removal of source all instr. but IC-2 showed decrease, it increased. IC-2 on 3 x 15¹⁰ scale. Alignment in N-S direction off about 1/8". Removed IC-4 for service.

Expr. 129 Set alignment. have placed a 6 x 8 x 1" piece of Plexiglas 5.5 cm from S-face of assembly. $k < 1$ at closure.

Expr. 130 Plexiglas in Contact.
 $k > 1$ at closure. $4.94 \text{ dis/sec} \Rightarrow T = 42.15 \text{ sec } C_5 = 17.9254$
 $k < 1$ pulled Plexiglas. $4.767 \text{ dis/sec} \Rightarrow T = 103.58 \text{ sec } C_5 = 24.3844$
 $P_+ \text{ Rho} = 16.74$ Worth of Plexiglas 42.309
 $P_- \text{ Rho} = 25.1$ Rho " " " 41.844

Instrument Check on 18 APR 69 Source C⁶⁰

PM-1 Low Trip OK Alarm Trip OK
 PM-2 Alarm Trip OK
 IC-1 > 3x10⁻¹¹ Meter Trip OK Fast Trip OK
 IC-2 > 3x10⁻¹¹ Meter Trip OK PERSONNEL ✓
 IC-3 RESPONDS Calibration JPT & CC ALARMS ✓
 IC-4 RESPONDS Calibration JPT & CC PRESS. = 0.03
 CRM Meter TEMP = 26°C

EXP #131A SAME AS EXP. 130 BUT ALIGNED "BETTER" USING 6"X6"X1" PLEXI SHIM.
 TOO SLOW POSITIVE PERIOD WITH THIS SHIM.

131B Use 8"X6"X1 5/16" SHIM.

k > 1 @ closure rhoette = +15.81⁺

k < 1 (SHIM AWAY) P = -24.51⁺ PLEXI WORTH = 40.32⁺

EXP #132 PUT "REMOTELY MOVABLE SHIM HOLDER" (NO SHIM ON IT) IN PLACE. EVALUATE.

Use 8"X6"X1" shim to "GET UP".

k > 1 @ closure P = +15.26⁺

k < 1 (shim away) P = -25.83⁺

EXP #133 attach shim 10"X10"X1" to movable holder. BOTTOM edge is 2 1/4" ^{ABOVE} off table.

k = 1 @ closure with shim @ 4" away.

TABLE SEPERATED ^(4.38 REV) 0.225⁺ & shim near contact ^(TOP TOUCHING) -> k = 1

A SMALL CRACK PERSISTS. SHOWING AT TOP SECTION OF BOTTOM BOX.

Instrument Check on 21 APR 69 Source C⁶⁰

PM-1 Low Trip OK Alarm Trip OK
 PM-2 Alarm Trip OK
 IC-1 > 3x10⁻¹¹ Meter Trip OK Fast Trip OK
 IC-2 > 3x10⁻¹¹ Meter Trip OK PERSONNEL ✓
 IC-3 RESPONDS Calibration JPT & CC ALARMS ✓
 IC-4 RESPONDS Calibration JPT & CC PRESS. = 0.03
 CRM Meter Trip TEMP = 24.5°C

EXP #134 MOVABLE SHIM WITHDRAWN ALL WAY MECHANICALLY. (8 3/16")

Use 8x6x1 SHIM TO GET UP (PLACED @ EDGE OF STOCK.)

k > 1 @ closure P = +10.30⁺

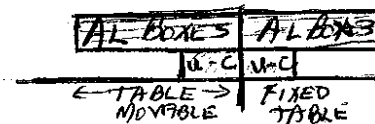
k < 1 (PULL 8x6x1) P = -18.36⁺

EXP #135 MEASURE WORTH OF TABLE SEPARATION. Use 10"X10"X1" remote shim.

TABLE DIAL (REV)	DISTANCE FROM CLOSURE (INCHES)	RHOETTE (F)	Σ P (F)
3.60	0.174	+6.93	68.03
3.39	.160	-8.37*	61.10
3.39	.160	+6.82	
3.20	.148	-4.72*	45.91
3.20	.148	+7.17	
2.60	.113	-9.37*	34.02
2.60	.113	+6.53	
1.80	.067	-9.67*	18.21
1.80	.067	+6.10	
0.90	.023	-3.29*	2.35
0.90	.023	+0.94	
0.00	.000		0

*REMOVE SHIM VALUE BY MOVING IT AWAY.

EXP #136



EVALUATE A2 SUPPORT BOXES.

TABLE DIAL = 2.60 REVOLUTIONS FROM CLOSURE. P = +12.45⁺

NO SHIMS INVOLVED.

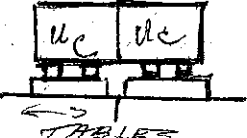
EXP #137

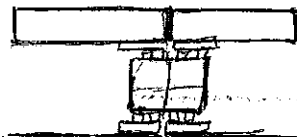
SAME AS EXP #136 EXCEPT A LARGE SUPPORT FE PLATE IS ADDED TO A2 BOXES ON FIXED SIDE ONLY. P = +20.22⁺
 DIAL = 2.60 AGAIN.

Instrument Check on 22 Feb 9 Source Co⁶⁰

PM-1	Low Trip	OK	Alarm Trip	OK	
PM-2			Alarm Trip		
IC-1	>3x10"	Meter Trip	OK	Fast Trip	OK
IC-2	>3x10"	Meter Trip	OK	SCRAM	OK
IC-3	Responds	Calibration	JRT & CC	PRESS. = 0.03	
IC-4	Responds	Calibration	JRT & CC	TEMP. = 26°C	
CRM		Meter Trip			

EXP#138 EIGHT UNIT ASSEMBLY IN STANDARD ARRANGEMENT EXCEPT:
 1/2" C IS ADDED TO TOP & BOTTOM AND 1" C ADDED TO CENTER (HORIZ.).
 USING 6x8x1 shim centered but on table.
 R > 1 @ closure Rhoette = +16.49[†] IC3 = +17.6[†]
 R < 1 (pull shim) P = -14.14[†] IC3 = -13.5[†]

EXP#139 RAISE CONF. OFF TABLE 2 AL BOXES HIGH. (BASIC UNITS).

 Use 12x9x1 shim centered and resting on al box (bottom coplanar with C. bottom.)
 R > 1 @ closure Rhoette = +18.80[†] Ref 131 B
 R < 1 (shim away) P = -77.16[†] shim = 96[†]



EXP#140A ADD SUPPORT MUCK-UP TO TOP (2 sets of "complete" al boxes resting on 2 high al boxes)
 a slight crack (but 2/3 of ht) is visible @ closure.
 R > 1 @ closure P = +17.90[†]
 R < 1 (shim away) P = -39.63[†] (8x8x1 width) = 57.5[†]

EXP#140B Repeat #140A after re-adjusting stack.
 Set 8x8x1 shim off center.
 R > 1 @ closure P = +10.48[†]
 R < 1 (shim away) P = -46.40[†]
 out pg 14

Instrument Check on 23 APR 69 Source Co⁶⁰

PM-1	Low Trip	OK	Alarm Trip	OK
PM-2			Alarm Trip	
IC-1	> 3x10 ⁻¹¹	Meter Trip	OK	Fast Trip
IC-2	> 3x10 ⁻¹¹	Meter Trip	OK	ALARMS ✓
IC-3	RESPONDS	Calibration	JPT & CC	PRESS 0.03
IC-4	RESPONDS	Calibration	JPT & CC	TEMP: 26°C
CRM		Meter Trip		AREA CLEARED ✓

EXP #140c Repeat 140A after re-adjusting stack.
 k > 1 @ closure Rho₁₀ = +13.77[†]
 k < 1 (shim away) P = -41.93[†]

USE SHIM AT OFF CENTER POSITION

EXP #140d Repeat after readjusting again.
 k > 1 @ closure P = +17.43[†]
 k < 1 (shim away) P = -39.51[†] small crack visible but best yet so use.
 #140d vs 139 = Δ boxes = 37.65[†]

EXP #141 ADD THE 3/4" Fe PLATE TO TOP ON STATIONARY SIDE. EVALUATE FE, REF #140D.
 k > 1 @ closure P = +18.74[†] 140D vs 141
 k < 1 (shim away) P = -35.97 Δ Fe = 3.54[†]

Instrument Check on 24 APR 69 Source Co⁶⁰

PM-1	Low Trip	OK	Alarm Trip	OK
PM-2			Alarm Trip	
IC-1	> 3x10 ⁻¹¹	Meter Trip	OK	Fast Trip
IC-2	> 3x10 ⁻¹¹	Meter Trip	OK	ALARMS OK
IC-3	RESPONDS	Calibration	TAYLOR-CROSS	PRESS 0.03
IC-4	RESPONDS	Calibration	CROSS-TAYLOR	TEMP: 24.5°C
CRM		Meter Trip		AREA CLEARED ✓

EXP #142 REPEAT OF #139 Eq 12 (SHIM NOT CENTERED)
 k > 1 @ closure Rho₁₀ = +13.22[†] IC3 = +15.5[†]
 k < 1 (shim away) Rho₁₀ = -77.73[†]

Instrument Check on 25 APR 69 Source Co⁶⁰

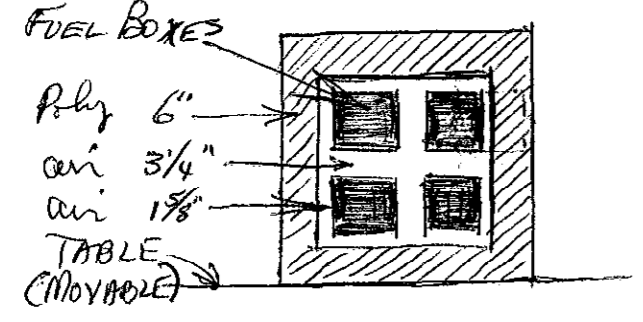
PM-1	Low Trip	OK	Alarm Trip	OK
PM-2			Alarm Trip	
IC-1	> 3x10 ⁻¹¹	Meter Trip	OK	Fast Trip
IC-2	> 3x10 ⁻¹¹	Meter Trip	OK	ALARMS ✓
IC-3	RESPONDS	Calibration	JPT & CC	PRESS 0.03
IC-4	RESPONDS	Calibration	JPT & CC	TEMP: 25°C
CRM		Meter Trip		AREA CLEARED ✓

EXP #143 To the comp. of EXP #139, add a raised stack of al boxes ^{to TOP} (3 boxes wide N-S & 5 boxes high). Use 12"x8"x1" shim positioned co-planer with East and Bottom edge of carbon.
 k > 1 @ closure P = +9.08[†] IC#3 = +10.67[†]
 k < 1 (shim away) P = -51.46[†] shim (across) = 60.5[†]
 #139 vs #143 = 26.27[†]

Instrument Check on 28 Apr 69 Source Co⁶⁰

PM-1	Low Trip	OK	Alarm Trip	OK	
PM-2					
IC-1	23x10"	Meter Trip	OK	Fast Trip	OK
IC-2	23x10"	Meter Trip	OK		ALARMS ✓
IC-3	RESPONDS	Calibration	JRT & C.C.		PRESS. = 0.03
IC-4	RESPONDS	Calibration	JRT & C.C.		TEMP. = 25°C
CRM		Meter Trip			

1 of 8 EXP#144 CONF. SYMMETRICALLY BUILT.



EXP#144 SEE MOVABLE TABLE (HALF) SECTION OPPOSITE Pg (16)

- 8 UNIT ARRAY. EACH UNIT HAS 1 5/8" AIR AT EACH OF ITS FACES.
- EACH FACE TO FACE SITUATION! HAS 3 1/4" AIR (C TO C).
- SIX (6") THICK POLYETHYLENE SURROUNDS THE ENTIRE ARRAY.
- SOURCE PROJECTED INTO CENTER OF ARRAY.
- OBTAINED 1 DECADE (OF POWER) VIA SOURCE

R < 1 (remove source) = IC#3 = -2.12 ±
 IC#4 = -2.11 ±

Instrument Check on 26 MAY 69 Source Co⁶⁰

PM-1 Low Trip OK Alarm Trip OK
 PM-2 Alarm Trip
 IC-1 $> 3 \times 10^{-11}$ Meter Trip OK Fast Trip OK
 IC-2 $> 3 \times 10^{-11}$ Meter Trip SCRAM OK ALARMS OK
 IC-3 RESPONDS Calibration JRT & CC PRESS = 0.03
 IC-4 RESPONDS Calibration JRT & CC TEMP. = 20.5°C
 CRM Meter Trip

RHETTO : ALL 3 UNITS OVERLOADED - ERR. ONTO PROBLEM

U.C. ^{BASE} 8 UNIT ARRAY WITH 6.6" GRAPHITE BOXES, STANDARD ARRANGEMENT.

EXP #145 $k > 1$ @ 13.1 REV. ON DIAL ^{15.7/4} ^{11.4/3} IC3 = + 11.37[†]
 "Bare Base" on table. IC4 = + 11.45[†]
^{2.5} $k = 1$ @ 13.49 REV. ON DIAL IC3 & 4 → ∞

Rhette is now functional.

EXP #146 RAISE THE 8 UNIT ARRAY OFF OF TABLE (2 al BOXES HIGH as in EXP #139)
 $k > 1$ @ 11.20 Rev. on dial IC3 = + 12.4[†]
 IC4 = + 13.1[†]
^{3.5} $Pette = + 10.93[†]$
 $k = 1$ @ 11.6 Rev. → ∞
 #145 vs #146 from Sep. Curve = -57[†]

EXP #147 Install "movable shim mechanism" (no shim on it) in the withdrawn position.
 $k > 1$ @ 11.20 Rev. on dial Rhetto = + 12.74[†]
 $k = 1$ @ 11.64 Rhetto = ∞

Instrument Check on 27 MAY 69 Source Co⁶⁰

PM-1 Low Trip OK Alarm Trip OK
 PM-2 Alarm Trip
 IC-1 $> 3 \times 10^{-11}$ Meter Trip OK Fast Trip OK
 IC-2 $> 3 \times 10^{-11}$ Meter Trip OK ALARMS OK
 IC-3 RESPONDS Calibration JRT & CC PRESS = 0.03
 IC-4 RESPONDS Calibration JRT & CC TEMP. = 19.2°C
 CRM Meter Trip Rhette OK

EXP #148 Put 10" x 10" x 1" shim onto drive
 "In Position" = Shim is 1/4" from South surface of carbon. It is centered E & W. Shim protrudes above the top of the carbon 2 1/4". "Out position" = 8"

RUN SPACING EVALUATION (array is "al" boxes off table)

REV. (DIAL)	SEP. (")	Rhette (+)		SEP. (from "C")
14.95	1.14	+8.41		1.14
15.26	1.19	∞ *	8.91	1.18
15.26	1.19	-11.03	11.03	1.10
14.50	1.10	+10.18 *	21.21	1.10
14.50	1.10	-10.45		1.03
13.82	1.02	+10.13 *	20.58	1.03
13.82	1.02	-10.38		0.962
13.11	0.96	+10.76 *	21.14	0.962
13.11	0.96	-9.91		0.90
12.50	0.856	+10.35 *	20.26	0.90
12.50	0.856	-10.27		0.84
11.81	0.795	+10.87 *	21.14	0.84
11.81	0.795	-0.98		0.84
11.80	0.794	∞ *	0.98	0.819

* "MOVED" table.

Instrument check @ 14.95 dial $Pette = + 8.41[†]$
 IC # 3 = + 10.62[†]
 IC # 4 = + 9.65[†]

EXP#149 Put the array back down onto table top
 (ref. EXP#145) Top of 10x10 shim = 3 3/4" above top of C.
 RUN SPACING EVALUATION. (array on table).

REV. (Chal.)	SEP (IN)	Choette (+)	
16.16	1.27	+13.93	Shim in (1/4" away)
16.61	1.32	∞ *	
16.61	1.32	-16.11	
15.60	1.21	+14.94 *	31.05
15.60	1.21	-15.20	
14.55	1.11	+16.63 *	31.83
14.55	1.11	-12.19	
13.70	1.02	+15.41 *	27.60
13.70	1.02	+2.87	
13.81	1.04	∞	* Shim Out (8" away)

* MOVED TABLE

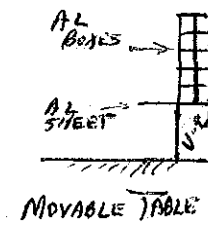
Instrument Check on 28 MAY 69 Source Co⁶⁰

PM-1	Low Trip	OK	Alarm Trip	OK	
PM-2			Alarm Trip		
IC-1	> 3x10 ⁻⁴	Meter Trip	OK	Fast Trip	OK
IC-2	> 3x10 ⁻⁴	Meter Trip	OK	Alarms	OK
IC-3	Responds	Calibration	JRT & CC	Press = 0.3	
IC-4	Responds	Calibration	JRT & CC	Temp = 18.5°C	
CRM		Meter Trip		Choette OK	

EXP#150 Add al boxes to top of each half. 2 boxes wide (N-S) and 5 boxes high. Array still on the table.

Table Rev.	SEP	Lette
15.70	1.22	+13.82 ⁺
16.16	1.27	∞ (-0.1 ⁺)

#145 vs #150 from curve = +84⁺



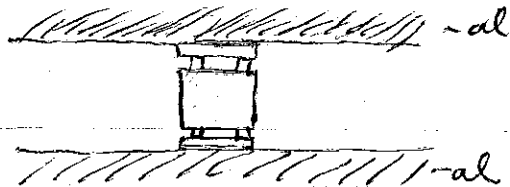
EXP#151 Raise array "2 boxes" off table with (2x5 al boxes on top) as above except the mockup is raised (2 al boxes) above the UC

12.33 Rev.	→ 0.88"	+11.29 ⁺	→ IC3	= +13.05 ⁺
12.78	0.93"	∞		

#146 vs #151 from curve → = +34.5⁺

Instrument Check on 2 Jun 69 Source Co^{60}

PM-1	Low Trip	OK	Alarm Trip	OK	
PM-2			Alarm Trip		
IC-1	$> 3 \times 10^{-11}$	Meter Trip	OK	Fast Trip	OK
IC-2	$> 3 \times 10^{-11}$	Meter Trip	OK	Alarm	OK
IC-3	Responds	Calibration	VRT & CC	Pres = 0.03	
IC-4	Responds	Calibration	VRT & CC	Temp = 24.7°C	
CRM		Meter Trip		Rhett's OK	



EXP #152

Put "large" al base mock-up on TOP as shown.

12.00 Rev. DIAL Sep. \rightarrow $f_{ctd} = +15.37^\circ$

IC 3: $= +17.3^\circ$

IC 4: $= +17.3^\circ$

12.55 Dial Sep \rightarrow $f_{ctd} = \infty$

#151 vs #152 = $+6^\circ$

#146 vs #152 = $+29^\circ$

EXP #153 Same as #152 except that the large Fe is placed on stable table side on top of al.

12.18 dial sep = $+16.40^\circ$

12.75 dial sep = ∞

#152 vs #153 = $+6^\circ$

EXP #154 Put array again directly onto table and add "large" al boxes to top of array. (both sets).

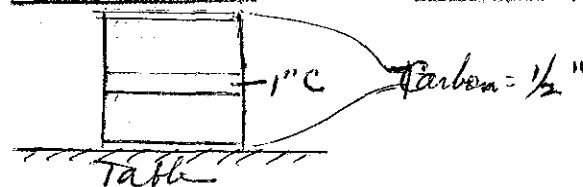
16.50 Rev. dial sep. = $+12.96^\circ$

16.92 Rev. dial sep = ∞ (-0.1°)

#145 vs #154 = $+113^\circ$

Instrument Check on 3 Jun 69 Source Co^{60}

PM-1	Low Trip	OK	Alarm Trip	OK	
PM-2			Alarm Trip		
IC-1	$> 3 \times 10^{-11}$	Meter Trip	OK	Fast Trip	OK
IC-2	$> 3 \times 10^{-11}$	Meter Trip	OK	Alarm	OK
IC-3	Responds	Calibration	TAYLOR & CROSS	Pres = 0.03	
IC-4	Responds	Calibration	TAYLOR & CROSS	Temp = 24.5°C	
CRM		Meter Trip		Rhett's OK	



EXP #155

397 Min
 9.40 Rev. dial Sep = $+16.66^\circ$
 9.92 Rev. dial Sep = ∞ (-0.25°)
 #145 vs #155 = -107° (from curve)

EXP #156 Reflected (polyethylene) assembly, boxes separated by $3/4"$ as shown Pg 16.

6.00 Rev. dial Sep \rightarrow $+12.70^\circ$

7.15 Ref dial Sep \rightarrow ∞

Instrument Check on 4 Jun 69 Source Co⁶⁰

PM-1	Low Trip	OK	Alarm Trip	OK	
PM-2			Alarm Trip		
IC-1	$> 3 \times 10^{-11}$	Meter Trip	OK	Fast Trip	OK
IC-2	$> 3 \times 10^{-11}$	Meter Trip	OK	Alarm	OK
IC-3	Responds	Calibration	Taylor-Cross	Resp = 0.03	
IC-4	Responds	Calibration	Taylor-Cross	Temp = 25°C	
CRM		Meter Trip		Phette = OK	

EXP #157 Reflected Assembly (Poly) with Boxes separated by $3\frac{3}{4}$ " from each other. Boxes from Poly = $1\frac{3}{8}$ ". Otherwise, it is as shown on Pg 16.
@ closure \rightarrow Sub-Critical

Instrument Check on 5 Jun 69 Source Co⁶⁰

PM-1	Low Trip	OK	Alarm Trip	OK	
PM-2			Alarm Trip		
IC-1	$> 3 \times 10^{-11}$	Meter Trip	OK	Fast Trip	OK
IC-2	$> 3 \times 10^{-11}$	Meter Trip	OK	Alarm	OK
IC-3	Responds	Calibration	JRT @ CC	Temp = 24.2°C	
IC-4	Responds	Calibration	JRT @ CC	Resp = 0.03	
CRM		Meter Trip		Phette OK	

EXP #158 Reflected Assembly (Poly) with Boxes separated by $3\frac{1}{2}$ ". Boxes from Poly = $1\frac{3}{4}$ ". Otherwise, as above.
@ closure \rightarrow Sub-Critical
However, there is visibly slightly more multiplication than in #157.

EXP #159 Same except separation = $3\frac{3}{8}$ " & $1\frac{1}{16}$ " resp.

@ closure IC #3 & #4 "leveled with source @ 1006 & .009 respectively. Pull source and measure negative period from .004 & .006 resp.
IC #3 = -10.95¢
IC #4 = -8.01¢

EXP #160 "Bare" 8 unit array raised 3 feet above the table. Atop all boxes endwise. See sketch.

R > 1 @ 10.00 Rev. (0.67 in) \rightarrow +10.94¢
R = 1 @ 10.34 Rev. (0.70 in) \rightarrow
R < 1 @ 11.00 Rev. (0.76 in) \rightarrow -18.83¢

EXP #161 Same as #160 except the source rig has been moved (x 2) distance away.

R > 1 @ 10.00 Rev. (0.67 in) \rightarrow +15.00¢
R = 1 @ 10.51 Rev. (0.715 in) \rightarrow
R < 1 @ 10.95 Rev. (0.755 in) \rightarrow -14.37¢

Instrument Check on 9 Nov 69 Source Co⁶⁰

PM-1 Low Trip OK Alarm Trip OK
 PM-2 Alarm Trip
 IC-1 $> 3 \times 10^{-11}$ Meter Trip OK Fast Trip OK
 IC-2 $> 3 \times 10^{-11}$ Meter Trip OK Alarm OK
 IC-3 Responds Calibration VRT & CC Press = 0.03
 IC-4 Responds Calibration VRT & CC Temp = 25°C
 CRM Meter Trip Rh_{alt} = OK

EXP#162 Replace the cross-uni-struct on stationary table upright for "base" run
 R > 1 @ 10.04 Rev. → + 12.69 \$.671
 R = 1 @ 10.44 Rev. → 320.3 %
.675

EXP#163 Put up ~ 1/2 of sim. supports on top of stationary table for evaluation, i.e. 3 al boxes 18" long
 R > 1 @ 10.04 Rev. → + 18.24 \$
 R > 1 @ 10.44 Rev. → + 6.74 \$ 338.2 %
11.50

EXP#164 Now put 3 al boxes on movable table. Now have full mock-up of supports.
 R > 1 @ 10.04 Rev. → + 23.35 \$ 353.8 %
12.78
 R > 1 @ 10.44 Rev. → + 10.57 \$ 372.2 %
 R = 1 @ 10.80 Rev. → .707