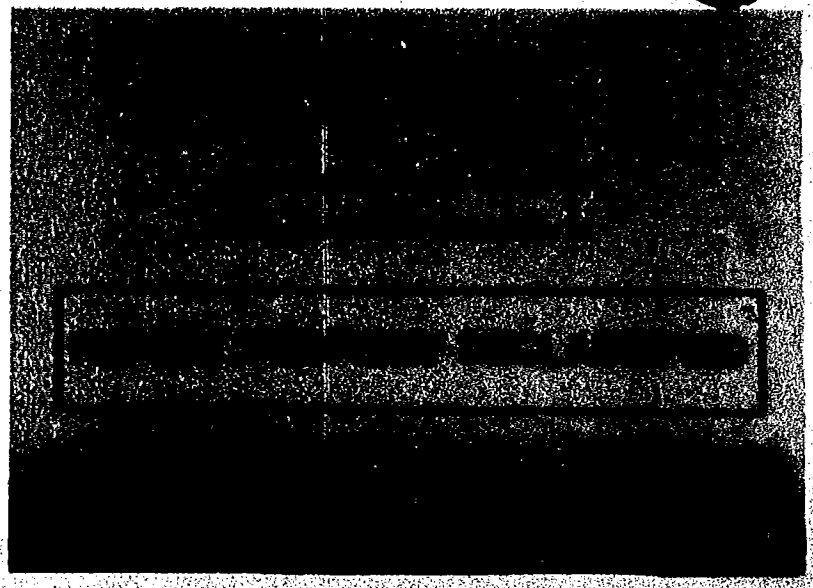
0 0 1 0 0 9 0 2 8 1 1

UCRL 1182

UNIVERSITY OF
CALIFORNIA

Radiation Laboratory



BERKELEY, CALIFORNIA

0 0 0 0 0 9 0 2 8 1 2

RESTRICTED DATA

This document contains restricted data as defined in the Atomic Energy Act of 1946. Its transmittal or the disclosure of its contents in any manner to an unauthorized person is prohibited.

DECLASSIFIED

UNIVERSITY OF CALIFORNIA
Radiation Laboratory

UCRL 1182

Cover Sheet
Do not remove

INDEX NO. 303-60 M7-
This document contains 3 pages
This is copy 15 of 16 Series

CLASSIFICATION CANCELLED
BY THE SAN DIETA DOCUMENT
REVIEW COMMITTEE

DATE FOR THE COMMITTEE

Issued to Info Division

CONFIDENTIAL
classification

Each person who receives this document must sign the cover sheet in the space below.

Cards made

Route to	Noted by	Date	Route to	Noted by	Date
	R.K. Wakerling	3/16/51			
	" "	3-19-51			
		Distributions	1/16/A	A. Hildebrand	
			2/16/A	A. Hildebrand	
	R. Wallace	7-17-51	3/16/A	A. Hildebrand	
			4/16/A	W. M. Brobeck	
			5/16/A	W. B. Reynolds	
			6/16/A	J. S. Norton	
			7/16/A	L. Alvarez	
			8/16/A	R. Ball	
			9/16/A	D. Sewell	
			10/16/A	W. Panofsky	
			11/16/A	A. Longacre	
			12/16/A	E. Lofgren	
			13/16/A	H. Gordon	
			14/16/A	L. Henrich	Dec. 1-30-52
			15/16/A	Info. Division	
			16/16/A	Mech. Eng. File	

0 0 1 0 1 0 9 0 DECLASSIFIED

UCRL 1182

RADIATION LABORATORY - UNIVERSITY OF CALIFORNIA - BERKELEY

ENGINEERING NOTES

CONFIDENTIAL

303-60 M7-1 1

MTA MARK II
DRIFT TUBE POSITION TABLE

A. Longacre

3-9-51

FREQUENCY 12.10 MC

PRELIMINARY

THIS DOCUMENT CONSISTS OF 5 PAGES
NO. 15 OF 16 COPIES, SERIES A

RESTRICTED DATA
This document contains information affecting the National Defense of the United States within the meaning of the Atomic Energy Act, 1946. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited.

CONFIDENTIAL

CLASSIFICATION CANCELLED
BY THE SAN MTA DOCUMENT REVIEW COMMITTEE
DATE 7-31-52
K GLEN WATSON
FOR THE COMMITTEE

DRIFT TUBE NO.	GAP NO.	DISTANCE FROM CENTERLINE TO EXIT END OF CAVITY FT. S_n	LENGTH OF CELL FT. $\beta\lambda - L_n$	GAP LENGTH CELL LENGTH FT. S_n/L_n	CAVITY INSIDE DIA. FT. D	DRIFT TUBE OUTER DIA. FT. W_n	DEUTERON VELOCITY βc	SHUNT IMPEDANCE MEGOHMS/FT. K x 10^{-7}	Gap Length Ft. S_n
	0	00.00	43.76	.442	43.87		350.0	.5383	9.6
1		21.722	43.445		43.90	24.44	344.4	.5345	4.43
	1	43.445	43.21	.435	43.92		339.1	.5316	18.7
2		64.99	42.935		43.95	24.36	333.5	.5282	4.43
	2	86.38	42.66	.431	43.97		328.0	.5248	18.3
3		107.59	42.375		44.00	24.21	322.6	.5213	4.43
	3	128.76	42.11	.426	44.02		317.2	.5181	17.9
4		149.70	41.830		44.06	24.09	311.8	.5146	4.43
	4	170.59	41.52	.422	44.10		306.3	.5108	17.5
5		191.22	41.210		44.14	23.90	300.2	.5070	4.43
	5	211.80	40.96	.418	44.17		296.0	.5039	17.1
6		232.18	40.680		44.21	23.78	290.8	.5004	4.42
	6	252.48	40.38	.414	44.25		285.6	.4968	16.7
7		272.56	40.080		44.29	23.59	280.5	.4931	4.42
	7	292.56	39.77	.409	44.33		275.3	.4893	16.2
8		312.33	39.485		44.38	23.42	270.3	.4857	4.41
	8	332.04	39.17	.405	44.42		265.1	.4819	15.8
9		351.50	38.885		44.47	23.23	260.1	.4784	4.40
	9	370.93	38.56	.401	44.53		255.3	.4744	15.4
10		390.06	38.265		44.58	23.02	250.3	.4707	4.39
	10	409.20	37.93	.397	44.64		245.3	.4666	15.0
11		427.99	37.660		44.68	22.82	240.4	.4633	4.38
	11	446.86	37.30	.392	44.75		235.6	.4589	14.6
12		465.29	37.025		44.81	22.60	230.8	.4555	4.37
	12	483.88	36.68	.388	44.87		226.4	.4512	14.2
13		501.97	36.420		44.92	22.39	221.6	.4480	4.36
	13	520.31	36.04	.384	45.00		217.1	.4434	13.8
14		538.01	35.770		45.06	22.14	212.5	.4400	4.35
	14	556.08	35.39	.379	45.14		208.0	.4354	13.4
15		573.40	35.140		45.20	21.91	203.5	.4323	4.34
	15	591.22	34.73	.375	45.29		199.1	.4273	13.0
16		608.13	34.450		45.36	21.61	194.6	.4238	4.33
	16	625.67	34.08	.371	45.44		190.3	.4192	12.6
17		642.21	33.770		45.52	21.32	186.0	.4154	4.31
	17	659.44	33.40	.367	45.61		181.9	.4109	12.2
18		675.61	33.110		45.68	21.05	177.7	.4073	4.29
	18	692.55	32.73	.363	45.76		173.5	.4026	11.8

0 0 1 0 0 9 0 2 DECLASSIFIED

RADIATION LABORATORY - UNIVERSITY OF CALIFORNIA - BERKELEY

ENGINEERING NOTES

JOB NUMBER 303-60 MT

SUBJECT MTA MARK II DRIFT TUBE POSITION

NAME A. Longacre

DATE 3-9-51

CONFIDENTIAL

PRELIMINARY

FREQUENCY 12.10 MC.

DRIFT TUBE NO.	GAP NO.	DISTANCE FROM CENTERLINE TO EXIT END OF CAVITY FT. z_n	LENGTH OF CELL FT. L_n	GAP LENGTH/CELL LENGTH FT. ℓ_n/L_n	CAVITY INSIDE DIA. FT D	DRIFT TUBE LENGTH FT. t_n	DEUTERON ENERGY MEV K	VELOCITY c β	$\int H^2 dl$ GAUSS^2 FT. x 10^{-7}	Gap Length Ft. ℓ_n
19		708.94	32.395		45.87	20.71	169.4	.3985	4.27	
	19	724.94	32.05	.359	45.96		165.5	.3943		11.50
20		740.39	31.725		46.05	20.41	161.5	.3903	4.25	
	20	756.67	31.38	.355	46.14		157.7	.3860		11.13
21		771.77	31.040		46.23	20.10	153.7	.3819	4.23	
	21	787.71	30.68	.346	26.33		149.8	.3774		10.76
22		802.87	30.32		46.44	19.75	146.0	.3730	4.20	
	22	818.03	29.97	.346	46.54		142.4	.3687		10.38
23		832.84	29.63		46.63	19.42	138.6	.3645	4.17	
	23	847.66	29.30	.343	46.73		135.1	.3604		10.04
24		862.14	28.93		46.84	19.08	131.5	.3559	4.14	
	24	876.59	28.57	.338	46.95		128.0	.3515		9.66
25		890.71	28.22		47.05	18.73	124.5	.3471	4.11	
	25	904.81	27.86	.334	47.16		121.2	.3428		9.30
26		918.57	27.51		47.26	18.38	117.8	.3385	4.07	
	26	932.32	27.16	.330	47.37		114.5	.3341		8.96
27		945.73	26.80		47.47	18.01	111.3	.3297	4.04	
	27	959.12	26.45	.326	47.57		108.1	.3254		8.61
28		972.18	26.10		47.67	17.66	104.9	.3211	4.00	
	28	985.22	25.74	.321	47.77		101.9	.3167		8.27
29		997.92	25.38		47.87	17.28	98.85	.3122	3.96	
	29	1010.6	25.03	.316	47.97		95.90	.3079		7.91
30		1023.0	24.67		48.07	16.91	92.95	.3035	3.90	
	30	1035.3	24.33	.313	48.16		90.18	.2993		7.59
31		1047.3	23.96		48.24	16.54	87.34	.2947	3.86	
	31	1059.3	23.61	.307	48.32		84.62	.2904		7.24
32		1070.9	23.24		48.41	16.16	81.89	.2859	3.81	
	32	1082.5	22.90	.302	48.48		79.28	.2817		6.90
33		1093.8	22.54		48.55	15.81	76.67	.2773	3.75	
	33	1105.0	22.20	.296	48.61		74.25	.2731		6.56
34		1116.0	21.84		48.67	15.45	71.75	.2687	3.70	
	34	1126.8	21.51	.290	48.72		69.40	.2646		6.22
35		1137.5	21.17		48.76	15.11	67.02	.2604	3.65	
	35	1148.0	20.81	.283	48.84		64.69	.2560		5.88
36		1158.3	20.45		48.89	14.73	62.42	.2516	3.60	
	36	1168.4	20.13	.277	48.94		60.38	.2476		5.56

CONFIDENTIAL

C O N F I D E N T I A L

DECLASSIFIED

UCRL 1182

RADIATION LABORATORY - UNIVERSITY OF CALIFORNIA - BERKELEY

ENGINEERING NOTES

JOB NUMBER 303-60 FILE M7

SUBJECT MTA MARK II
DRIFT TUBE POSITION

NAME A. Longacre

DATE 3-9-51

CONFIDENTIAL

PRELIMINARY

FREQUENCY 12.10 MC

DRIFT TUBE NO.	GAP NO.	DISTANCE FROM CENTERLINE TO EXIT END OF CAVITY FT ξ_n	LENGTH OF CELL FT L_n	GAP LENGTH CELL LENGTH FT ξ_n/L_n	CAVITY INSIDE DIA. FT D	DRIFT TUBE LENGTH FT t_n	DEUTERON ENERGY MEV K	VELOCITY $\frac{v}{c}$ β	$\int H^2 dl$ GAUSS^2 FT x 10^{-7}	Gap Length Ft. ξ_n
19		708.34	32.395		45.87	20.71	169.4	.3985	4.27	
	19	724.94	32.05	.359	45.96		165.5	.3943		11.50
20		740.39	31.725		46.05	20.41	161.5	.3903	4.25	
	20	756.67	31.38	.355	46.14		157.7	.3860		11.13
21		771.77	31.040		46.23	20.10	153.7	.3819	4.23	
	21	787.71	30.68	.346	26.33		149.8	.3774		10.76
22		802.67	30.32		46.44	19.75	146.0	.3730	4.20	
	22	818.03	29.97	.346	46.54		142.4	.3687		10.38
23		832.84	29.63		46.63	19.42	138.6	.3645	4.17	
	23	847.66	29.30	.343	46.73		135.1	.3604		10.04
24		862.14	28.93		46.84	19.08	131.5	.3559	4.14	
	24	876.59	28.57	.338	46.95		128.0	.3515		9.665
25		890.71	28.22		47.05	18.73	124.5	.3471	4.11	
	25	904.81	27.86	.334	47.16		121.2	.3428		9.308
26		918.57	27.51		47.26	18.38	117.8	.3385	4.07	
	26	932.32	27.16	.330	47.37		114.5	.3341		8.960
27		945.73	26.80		47.47	18.01	111.3	.3297	4.04	
	27	959.12	26.45	.326	47.57		108.1	.3254		8.615
28		972.18	26.10		47.67	17.66	104.9	.3211	4.00	
	28	985.22	25.74	.321	47.77		101.9	.3167		8.273
29		997.92	25.38		47.87	17.28	98.85	.3122	3.96	
	29	1010.6	25.03	.316	47.97		95.90	.3079		7.930
30		1023.0	24.67		48.07	16.91	92.95	.3035	3.90	
	30	1035.3	24.33	.313	48.16		90.18	.2993		7.598
31		1047.3	23.96		48.24	16.54	87.34	.2947	3.86	
	31	1059.3	23.61	.307	48.32		84.62	.2904		7.246
32		1070.9	23.24		48.41	16.16	81.89	.2859	3.81	
	32	1082.5	22.90	.302	48.48		79.28	.2817		6.907
33		1093.8	22.54		48.55	15.81	76.67	.2773	3.75	
	33	1105.0	22.20	.296	48.61		74.25	.2731		6.562
34		1116.0	21.84		48.67	15.45	71.75	.2687	3.70	
	34	1126.8	21.51	.290	48.72		69.40	.2646		6.225
35		1137.5	21.17		48.78	15.11	67.02	.2604	3.65	
	35	1148.0	20.81	.283	48.84		64.69	.2560		5.887
36		1158.3	20.45		48.89	14.73	62.42	.2516	3.60	
	36	1168.4	20.13	.277	48.94		60.38	.2476		5.560

C 0 1 0 0 9 0 2 DECLASSIFIED

RADIATION LABORATORY - UNIVERSITY OF CALIFORNIA - BERKELEY
ENGINEERING NOTES
303-60 M7-1 1

CONFIDENTIAL

MTA MARK II
DRIFT TUBE POSITION TABLE

A. Longacre

3-9-51

FREQUENCY 12.10 MC

PRELIMINARY

THIS DOCUMENT CONSISTS OF 5 PAGES
NO. 15 OF 16 COPIES, SERIES A

CLASSIFICATION CANCELLED
BY THE SAN MATEO DOCUMENT REVIEW COMMITTEE
K GLEN WATSON
FOR THE COMMITTEE
DATE 7-31-57

DRIFT TUBE NO.	GAP NO.	DISTANCE FROM CENTERLINE TO EXIT END OF CAVITY FT z_n	LENGTH OF CELL FT $\beta\lambda - L_n$	GAP LENGTH/CELL LENGTH g_n/L_n	CAVITY INSIDE DIA FT D	DRIFT TIME τ_n	DEUTERON VELOCITY	SH^2dl $\times 10^{-7}$	Gap Length Ft. g_n
	0	00.00	43.76	.442	43.87		350.0	.5383	9.60
1		21.722	43.445		43.90	24.44	344.4	.5345	4.43
	1	43.445	43.21	.435	43.92		339.1	.5316	18.79
2		64.93	42.935		43.95	24.36	333.5	.5282	4.43
	2	86.38	42.66	.431	43.97		328.0	.5248	18.37
3		107.59	42.375		44.00	24.21	322.6	.5213	4.43
	3	128.76	42.11	.426	44.02		317.2	.5181	17.96
4		149.70	41.830		44.06	24.09	311.8	.5146	4.43
	4	170.59	41.52	.422	44.10		306.3	.5108	17.52
5		191.22	41.210		44.14	23.90	300.2	.5070	4.43
	5	211.80	40.96	.418	44.17		296.0	.5039	17.11
6		232.18	40.680		44.21	23.78	290.8	.5004	4.42
	6	252.48	40.38	.414	44.25		285.6	.4968	16.70
7		272.56	40.080		44.29	23.59	280.5	.4931	4.42
	7	292.56	39.77	.409	44.33		275.3	.4893	16.28
8		312.33	39.485		44.38	23.42	270.3	.4857	4.41
	8	332.04	39.17	.405	44.42		265.1	.4819	15.86
9		351.50	38.885		44.47	23.23	260.1	.4784	4.40
	9	370.93	38.56	.401	44.53		255.3	.4744	15.45
10		390.06	38.265		44.58	23.02	250.3	.4707	4.39
	10	409.20	37.93	.397	44.64		245.3	.4666	15.04
11		427.99	37.660		44.68	22.82	240.4	.4633	4.38
	11	446.86	37.30	.392	44.75		235.6	.4589	14.63
12		465.29	37.025		44.81	22.60	230.8	.4555	4.37
	12	483.88	36.68	.388	44.87		226.4	.4512	14.23
13		501.97	36.420		44.92	22.39	221.6	.4480	4.36
	13	520.31	36.04	.384	45.00		217.1	.4434	13.83
14		538.01	35.770		45.06	22.14	212.5	.4400	4.35
	14	556.08	35.39	.379	45.14		208.0	.4354	13.43
15		573.40	35.140		45.20	21.91	203.5	.4323	4.34
	15	591.22	34.73	.375	45.29		199.1	.4273	13.03
16		608.13	34.450		45.36	21.61	194.6	.4238	4.33
	16	625.67	34.08	.371	45.44		190.3	.4192	12.65
17		642.21	33.770		45.52	21.32	186.0	.4154	4.31
	17	659.44	33.40	.367	45.61		181.9	.4109	12.26
18		675.61	33.110		45.68	21.05	177.7	.4073	4.29
	18	692.55	32.73	.363	45.78		173.5	.4026	11.87

RESTRICTED DATA
This document contains restricted data as defined in the Atomic Energy Act of 1946. Its transmittal or the disclosure of its contents in any manner to an unauthorized person is prohibited.

0 0 4 1 0 9 0 2 DECLASSIFIED

RADIATION LABORATORY - UNIVERSITY OF CALIFORNIA - BERKELEY

ENGINEERING NOTES

JOB NUMBER 303-60 | PAGE NO M21 | 2

NAME A. Longacre

DATE 3-9-51

MTA MARK II
DRIFT TUBE POSITION TABLE

CONFIDENTIAL

FREQUENCY 12.10 MC. PRELIMINARY

DRIFT TUBE NO.	GAP NO.	DISTANCE FROM CENTERLINE TO EXIT END OF CAVITY FT z_n	LENGTH OF CELL FT $\beta\lambda - L_n$	GAP LENGTH CELL LENGTH FT ϵ_n/L_n	CAVITY INSIDE DIA FT D	DRIFT TUBE LENGTH FT t_n	DEUTERON ENERGY MEV K	VELOCITY c β	$\int H^2 dl$ GAUSS^{2}FT x 10^{-7}	Gap Length Ft. ϵ_n
37		1178.4	19.79		48.99	14.39	58.23	.2434	3.55	
	37	1188.2	19.47	.269	49.04		56.22	.2395		5.251
38		1197.9	19.11		49.13	14.02	54.18	.2351	3.50	
	38	1207.3	18.77	.263	49.22		52.19	.2309		4.946
39		1216.7	18.43		49.31	13.63	50.26	.2268	3.45	
	39	1225.7	18.12	.258	49.39		48.42	.2229		4.670
40		1234.8	17.79		49.50	13.25	46.59	.2188	3.40	
	40	1243.5	17.47	.254	49.67		44.92	.2149		4.443
41		1252.3	17.13		49.83	12.80	43.18	.2108	3.36	
	41	1260.6	16.82	.253	50.00		41.54	.2069		4.244
42		1269.1	16.50		50.16	12.36	39.89	.2030	3.31	
	42	1277.1	16.18	.250	50.33		38.29	.1991		4.053
43		1285.3	15.84		50.57	11.87	36.72	.1949	3.27	
	43	1292.9	15.51	.250	50.81		35.17	.1908		3.882
44		1300.8	15.18		51.03	11.38	33.68	.1868	3.22	
	44	1308.1	14.90	.250	51.23		32.35	.1833		3.726
45		1315.7	14.58		51.46	10.93	30.94	.1794	3.18	
	45	1322.7	14.27	.250	51.70		29.64	.1755		3.568
46		1330.0	13.93		51.95	10.44	28.30	.1714	3.14	
	46	1336.6	13.62	.250	52.19		27.06	.1676		3.405
47		1343.6	13.31		52.43	9.982	25.80	.1637	3.10	
	47	1349.9	13.01	.250	52.66		24.60	.1601		3.252
48		1356.6	12.69		52.87	9.516	23.41	.1561	3.06	
	48	1362.6	12.38	.250	53.08		22.24	.1523		3.095
49		1369.0							3.02	