# **Lawrence Berkeley National Laboratory**

# **LBL Publications**

## **Title**

Minutes of Meeting of MTA Review Committee Held December 20, 1951

## **Permalink**

https://escholarship.org/uc/item/9m95h7qt

#### **Author**

Moore, Milton F

# **Publication Date**

1951-12-01

UCRL-





lts transmittal or the disclosure of its contents in any manner to an unauthorized person is prohibited.

# TWO-WEEK LOAN COPY

This is a Library Circulating Copy which may be borrowed for two weeks. For a personal retention copy, call Tech. Info. Division, Ext. 5545

# RADIATION LABORATORY

#### **DISCLAIMER**

This document was prepared as an account of work sponsored by the United States Government. While this document is believed to contain correct information, neither the United States Government nor any agency thereof, nor the Regents of the University of California, nor any of their employees, makes any warranty, express or implied, or assumes any legal responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by its trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof, or the Regents of the University of California. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof or the Regents of the University of California.

#### UNIVERSITY OF CALIFORNIA Radiation Laboratory

Cover Sheet Do not remove

INDEX NO	ucrl 1625			
This document	contain	s <u> </u>	pages	
This is copy	18 0	1 20	_series	<u>A</u>

Information Division

DECLASSIFIED Saue d to

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

Route to	Noted by	Date	Route to	Noted by	Date
					-
<del></del>					
					<u> </u>
<del></del>					



UNIVERSITY OF CALIFORNIA RADIATION LABORATORY Contract No. W-7405-Eng-48

CLASSIFICATION CANCELLED

BY AUTHORITY OF THE SAN MTA

ON 7-31-51

SIGNATURE

CALIFORNIA RESEARCH & DEVELOPMENT COMPANY Contract No. AT(11-1)-74

MINUTES OF MEETING OF MTA REVIEW COMMITTEE
HELD DECEMBER 20, 1951
AT LIVERMORE, CALIFORNIA

Milton F. Moore

RESTRICTED DATA

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

Berkeley, California

SECRET

CURTPY INFORMATION



# Atomic Energy Commission, Berkeley Atomic Energy Commission, Chicago Atomic Energy Commission (Production Division), San Francisco Atomic Energy Commission (Production Division), Washington California Research & Development Company University of California Radiation Laboratory Copy Numbers 1-2 3 4 5 6-9 10-20

RESEARCH SERVICE BRANCH Atomic Energy Commission Berkeley Area Berkeley, California



# MINUTES OF MEETING OF MTA REVIEW COMMITTED ECLASSIFIED HELD DECEMBER 20, 1951 AT LIVERMORE, CALIFORNIA

Present: UCRL: Alvarez, Brobeck, Bradner, Cooksey, Latimer, Lawrence,

Lofgren, Norton, Reynolds, Thornton, Van Atta

UCRL: Consultant - Pitzer

CR&D: Cope, Hildebrand, Mayer, Milton, Powell, J. Powell

AEC: Campbell, Derry, Fidler, Fleckenstein, Moore, O'Donnell

Twitchell reported that drift tube number 6 had been suspended in the tank. Tube number 8 will be delivered tomorrow. The remaining drift tubes are in final assembly and cleaning stages. It is hoped that all drift tubes can be installed before the first evacuation with Hg diffusion pumps the middle of January. All drift tube stems have been delivered to Livermore with the remaining gear already assembled at Berkeley and awaiting shipment.

Thirteen oscillators have been tested at high power but are not ready for shipment until a water circuit for the grid suppressor rings has been added. Eighteen oscillator tubes have been tested, with 12 tubes found in useable condition.

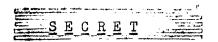
Both the pre-exciters have been tested and found in good condition. Pre-exciters and transmission lines will be shipped early in January. The rf crowbar equipment is almost finished. The ion injector is expected to be tested and ready for shipment to Livermore on January 15.

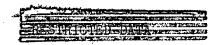
Hildebrand desired to know whether the vacuum testing of the vessel should take place before the rf testing with all drift tubes in place. Mayer suggested making the vacuum test first and while down for minor repairs (approximately 15 days) the remaining drift tubes could be installed.

Leaks have been found in several transmission lines at the loop gasket seal and the lines will be removed from the vessel.

Brobeck stated that since it is possible to evacuate around the transmission line seals and thus prevent leaking, this should be done to prevent delaying the scheduled operation date.

Mayer stated that Myvaseal was no longer available from DPI. Since it is not known when more will be available, it was suggested that Hycar seals be obtained and used even though this seal has a higher vapor pressure.







All the Hg diffusion pumps have been returned from DPI. The liquid N system is almost completed.  $^2$ 

Miller stated that at present the high conductivity in the distilled H<sub>2</sub>O system was causing some trouble. The main impurity is Calcium. Since high conductivity in the cooling system may cause trouble in the drift tubes and ion injector, it was felt this impurity should and would be removed by using an ion exchange by-pass column.

Lawrence stated that Baker had cleaned the sphere in the B-1 cavity with a white cotton glove. Upon loading the cavity to 2.15 Mv, the X-ray level was reduced by a factor of 250 over previous results. The sparks now occur about one every hour. It is felt that removal of dust by the cotton glove is mainly responsible for this large reduction in X-ray level and that X-rays no longer present a problem.

Hildebrand reported that model work has started on the long drift tube test. The gap splitters will be designed with smooth surfaces with provision to attach ridged plates to study the effect on electron multipactoring.

Hildebrand mentioned that since the distance between drift tubes is the order of inches on the first few drift tubes in Mark II, it is not known whether the drift tube stems can be designed to prevent the magnets from touching one another. A 1/3 size scale magnetic model will be built to determine the magnetic forces required to decide this problem.

Lofgren reported that a new ion pump was being assembled to be installed on the B-1 cavity. A new effect has been noted in the operation of ion pumps. If air at 1000 1/sec. is admitted, no increase in pressure is noted. If argon under above conditions is admitted, the pressure rises instantly. Selective gas adsorption is thought to account for this.





DECLASSIFIED

BEERET