

MINUTES OF PROJECT M MEETING NO. 27

Date: November 21, 1958.

Place: Room 27, Microwave Laboratory

Present: Mozley, Loew, Gallagher, Richter, Dedrick, Jones, Goerz, Turner, Neal, Olson, Ginzton, Wadensweiler, Lebacqz, Jasberg, Mallory, Pindar, Barber, Bumiller, Panofsky, Conner, Chodorow, Kirk.

Next Meeting: December 5, 1958 at 4:10 p.m. in Room 27, Microwave Laboratory.

I. Report of Project Status

Mr. Panofsky began the meeting by reporting on the most recent developments in Washington. The President's Scientific Advisory Committee has now approved a plan calling for full construction authorization of a two-mile machine which would have an initial energy of about 10 Bev (240 klystrons). Such a machine would be ultimately expandable to perhaps 40 Bev or more, but such expansion would not take place until it became clear that significant work could be done at the higher energies. It is not certain, at this writing, which of the agencies interested in our proposal will actually sponsor the project. When final authorization of the project occurs, if it occurs, it is probable that certain funds will be made available almost immediately (in fiscal 1959), and that we shall be expected to get going as rapidly as possible. One of the first pieces of business will likely be a request to revise our original proposal to bring it up-to-date. It is for this reason, among others, that the various sub-committees, listed below, have been re-established.

II. Sub-Committees

The following sub-committees have now been set up (with the chairmen indicated by asterisks).

Klystrons	- Lebacqz*, Ginzton, Sonkin, Soderstrom, Jasberg
End Station	- Mozley*, Panofsky, Richter, De Staebler, Friedman
Shielding	- Dedrick*, Barber
Beam Dynamics	- Neal*, Panofsky, Chu
Drive System and Phasing	- Neal*, Gallagher, Goerz, Loew, Mallory, Pine
Specifications	- Ginzton*, Panofsky, Brown, Neal, Mallory
Modulators	- Turner*, Dedrick, Jasberg, Jones
Power	- Jones*, Conner, Neal, Wadensweiler

Instrumentation - Olson,[†] Mallory, Conner, Debs
Site and Development - Pindar,[†] Bunker, Ginzton

At the present time the problems associated with transportation and communication are not thought to be pressing, and are therefore being temporarily ignored.

Mr. Ginzton suggested that each of the sub-committees try to meet weekly, if possible. Meetings of the full Project M Committee are now scheduled every second week. It was decided that each of the sub-committees should draw up a statement of what it believes to be its purposes and areas of jurisdiction. These sub-committee statements should be distributed to the full committee during or before the December 5 meeting so that what each sub-committee thinks it is doing may be made manifest to the whole.

III. Sub-Committee Reports

Instrument Committee. Mr. Olson reported on the first meeting of the Instrument Committee, and noted that his committee had begun to consider the problem of what controls and instrumentation should be located at the main control panel and at each of the 250-foot (or other) consoles. Mr. Panofsky suggested that the Instrument Committee make an attempt to reconsider, in a fundamental way, the differences between our original proposal and the Brobeck study, with a view to reconciling these.

End Station. Mr. Mozley reported on some of the matters which the End Station Committee now has under active consideration. An attempt is being made to lay out an end station which would be suitable for work at 15 Bev. Each of the committee members is setting up certain mock experiments to see what sort of distances, etc. would be involved. Mr. Panofsky noted that at least 3 separate experimental areas would be required for continuous operation of the machine.

Report on Shunt Impedance Investigations. Mr. Neal discussed the recent work that has been done on possible accelerator structures. It appears that some increase in shunt impedance is possible with at least one of these structures. However, the gain in energy obtainable in this way would mean a corresponding reduction in current. During the next 6 months or so all of the present Mark IV Accelerator will be replaced, in 5-foot sections, by one of the new structures which appears promising.

Messrs. Ginzton and Lebacqz briefly discussed the work of the Klystron Committee. This will be covered in more detail at the next full committee meeting. Mr. Lebacqz asked for comments on the klystron specification memo which has been distributed to all of the committee members.

IV. Name for Project

Certain suggestions have been made concerning an appropriate name for

the project. For example,

MOLE - (MONster, Linear, Electrons)
SEAL - (Stanford Electron Accelerator, Linear)

and that sort of thing. The authors of these wish to remain, perhaps understandably, anonymous. Additional suggestions are encouraged. Entries are limited to 25 words or less.

V. General Notes

To assure complete distribution of sub-committee or full committee memos, please consult the distribution lists which are on file with Mrs. Mundie or Miss Becker.

Adjourned: 5:15 p.m.