

## INTRODUCTION

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During the past year notable progress was made in several laboratories on design for linear accelerators in the energy range up to and above 1 Bev. Interest in linacs for this energy centers on two possible applications: first, as injectors for 300 to 1000 Bev synchrotrons, and second, as sources of intense meson beams. To review this progress, a conference jointly sponsored by the Brookhaven National Laboratory and Yale University was held at Brookhaven during the week of August 20, 1962.

The minutes of this conference were prepared by Dr. A. van Steenberg, assisted by Drs. H.B. Knowles and S. Ohnuma of Yale University and by Mr. C.K. Sinclair of Cornell University (a summer visitor at Brookhaven).

The conference began with descriptions of the new linacs at the Lawrence Radiation Laboratory and Argonne National Laboratory, and of work in progress at the Rutherford Laboratory. Discussions then followed on design of drift-tube linacs for energies of about 200 Mev and of the iris-loaded section which would be appropriate for extension from 200 Mev to higher energies. A design study in progress at Yale University for a 700-Mev "meson factory" was presented by the Yale group. A later session was devoted to beam dynamics, including phase stability, bunching and debunching, focusing and beam loading. The conference concluded with a discussion of linac technology. Previously, progress in design of superconducting linacs had been presented. Linac technology discussed included development of new rf power sources, vacuum technique, ion sources and mechanical design. At this conference, as at the linac conference held at Brookhaven in April, 1961, universal optimism was expressed about the possibility of design and operation of proton linacs for Bev energies.