Pickavance fil Northern Universities Accelerator Group Minutes of Meeting Held at Birmingham on August 6th, 1958

Present:

H. W. B. Skinner (Chairman), J. M. Cassels and M. J. Moore (Liverpool), S. Devons (Manchester), P. B. Moon and L. Riddiford (Birmingham), A. McFarlane (Glasgow), T. G. Pickavance, J. D. Lawson, W. Walkinshaw and J. J. Wilkins (Harwell).

The Chairman reported that two objections had been raised conerning the feasibility of the 6 GeV electron synchrotron project which had been recommended to the Physics Committee of the National Institute as a second national accelerator following previous meetings of the Northern Group. These were (i) the possibility of radiation damage to the vacuum tube, and (ii) the prospect that Professor Livingston 's cost estimate for the Cambridge accelerator may turn out to be low. It was considered that the Physics Committee should be informed that neither of these criticisms was well-founded. The Hamburg group was now committed to a Cambridge type machine, and planned to use a Ceramic domet. They already have a site.

Moore

stated that the Cambridge group consisted of about 25 people, half physicists and half engineers, but that they would like to have 35-40 engaged on the project. It was expected the machine would be operational in three years. The foundations were now in, and contracts for the magnet were in hand. Livingston maintains that the total cost (including \$ 2.3 x 106 for the building) will not exceed \$ 7.5 x 106. This is less than the amount allowed in the proposal submitted by the Northern group, equating \$2.8 to the pound. The Hamburg machine will be more expensive as they will use a larger magnet aperture and radius.

Since it appeared that a British machine would be about three years behind Cambridge, and probably also some time behind Hamburg, further consideration was given to other types of accelerator.

Pickavance

thought that money would be available for planning and site development from April 1960. He also stated that Vickers-Armstrong were interested in building and maintaining a multi-BeV electron linear accelerator. It was pointed out that the Stanford report indicated that running costs of such a machine would be very high.

Although it would produce no strange particles, a high current 900 MeV cyclotron (spiral-ridged) was again considered. Walkinshaw said there would be difficulty with the ridges near the centre of 13 spiral-ridge groups in U.S.A., six were seriously interested in building, but mainly in the 25-50 MeV region. Devons reported that Flowers was interested in the possibility of a colliding beam experiment using 300 MeV electrons.

Cassels

and others expressed the need for someone from within the Universities to take a personal interest in the project.