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(See Feature Set Intro. No.296)

BIRMINGHAM PROTON SYNCHROTRON.

Under the supervision of Professor Marcus Oliphant, F.R.S., members of the Physics Department of the Birmingham University are constructing what will be one of the largest proton synchrotrons in the world. It will be used for accelerating protons to an energy of 1,300,000,000 electron-volts for use as projectiles in the study of nuclear structure.

It is hoped that, with the aid of the synchrotron, it will be possible to find some clue to the force which holds together the particles in the nucleus of an atom. Mesons will be produced in the collision of these energetic protons with the atomic nuclei. These mesons are particles with weights intermediate between that of the proton and the electron.

The proton synchrotron is to be used for fundamental research in nuclear physics and cannot have immediate uses in applied science.

D.50189. (7). The protons, formed in an ion source, are accelerated to 500,000 electron-volts in energy and for this purpose a high tension set is required. It is at present being used for another research project and will later be moved to its position adjoining the synchrotron. Our picture shows the high voltage set, in the foreground, being used for research purposes. Colin Mackenzie (seated) is at the control panel with students Bill Davey (centre) and Effat Kamal. (6/50).