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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. 50202. (5). A glass ionization gauge is used for measuring the pressure obtained when using a diffusion pump on a vacuum system. Our picture shows Mr. Richard Goldberg manipulating the controls on the power supply for the ionization gauge, as he reads the pressure on the galvanometer. The porcelain vacuum box section under test can be seen centre back, with the ionization gauge projecting from it. (6/50).