



Series 7
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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 synchrtron, 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.50191. (15). The radiofrequency system has not yet been connected to the synchrotron, as experiments on it are still in progress. Our picture shows Mr. David Caro in his laboratory, which will eventually be the synchrotron control room, working on a coaxial line oscillator. A pair of these oscillators, one with fixed frequency and one variable, is used to obtain a radiofrequency voltage with varying frequency for amplification by the power amplifier. (6/50).