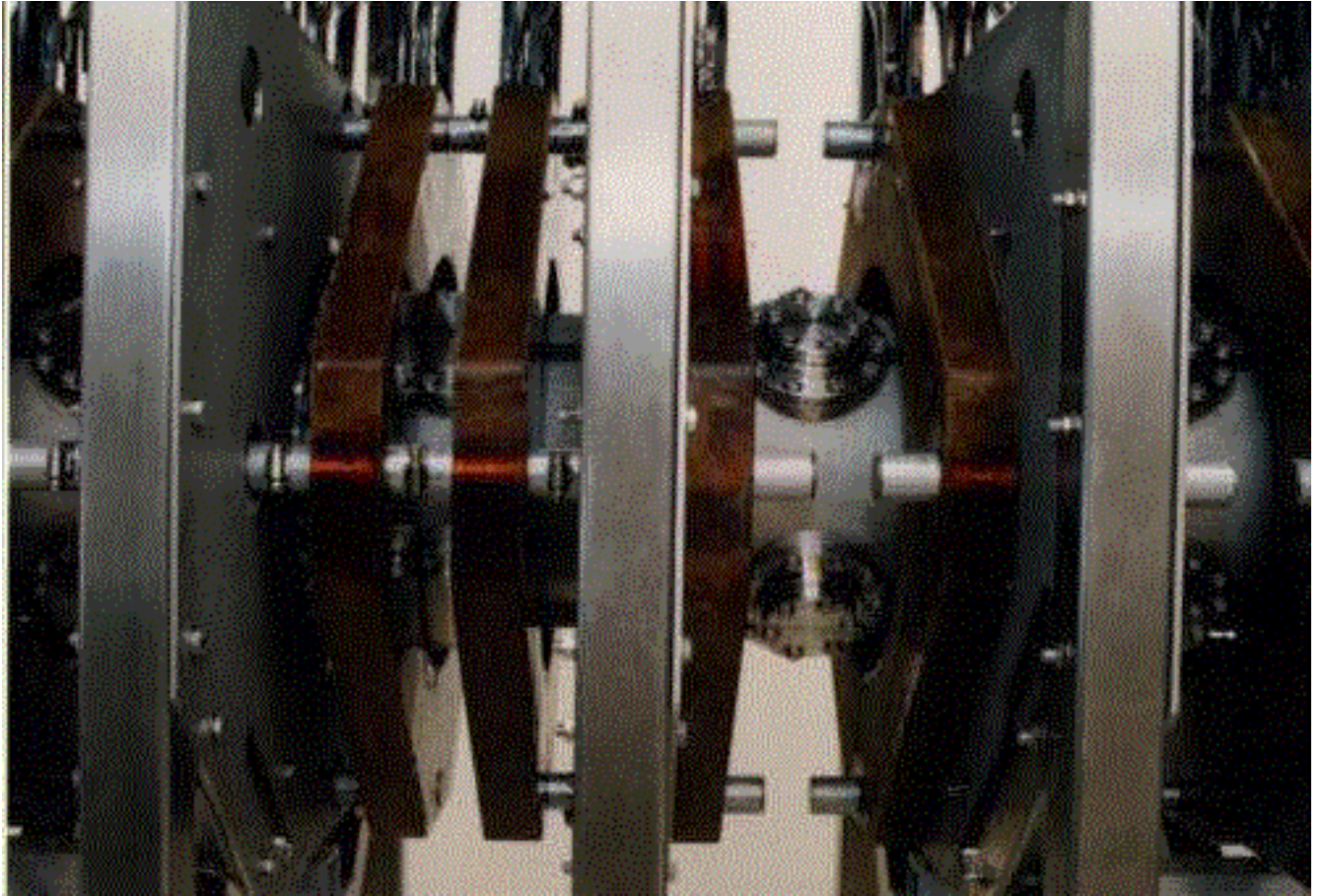


## Q Machines

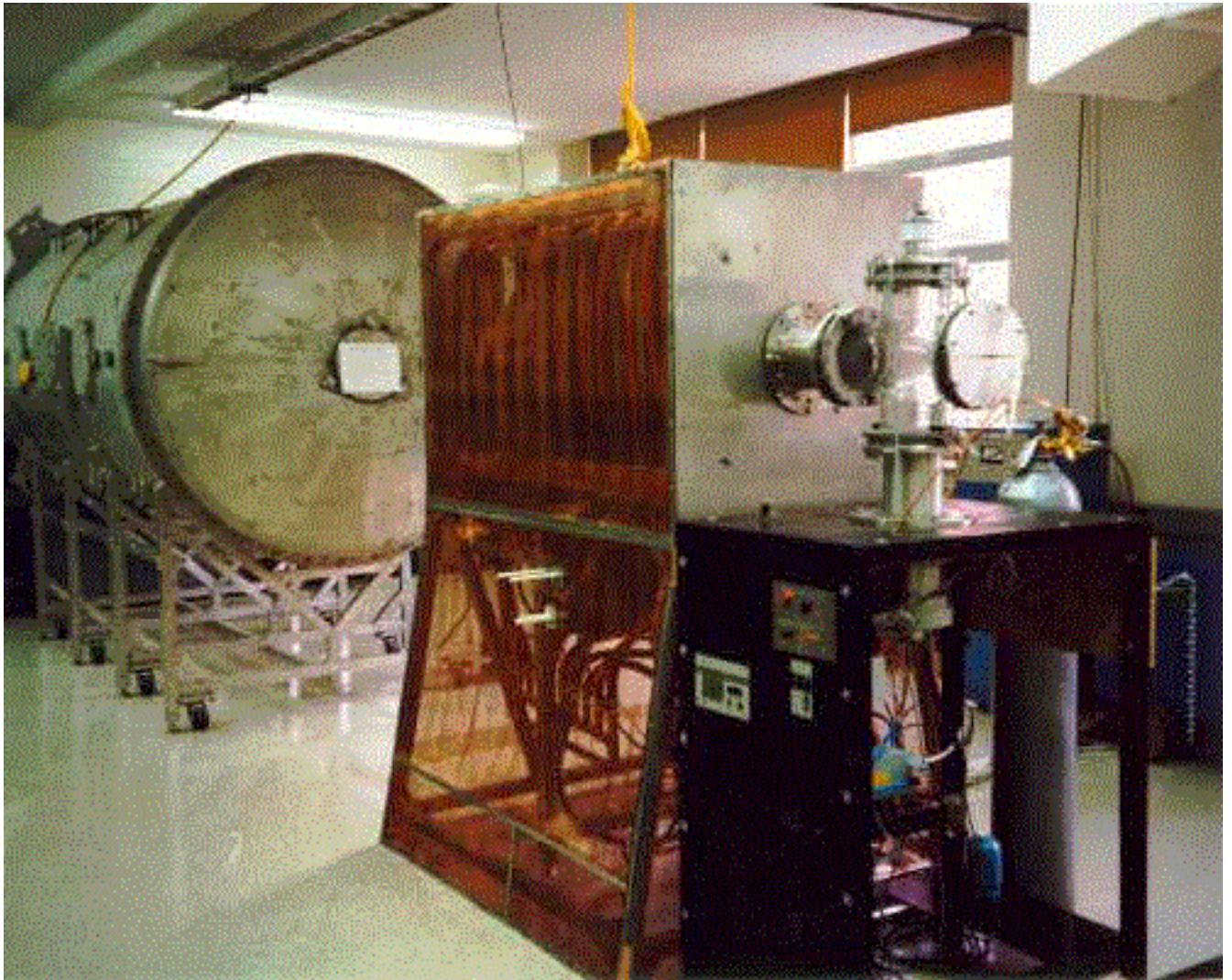
This type of device was first invented at Princeton University (Rynn and D'Angelo, Review of Scientific Instruments, vol. 31, p. 1326 (1960)). The plasma column contained in the vacuum chamber a length of 3.0 m, a radius of 4 cm, a plasma density of  $10^{10}$  particles/cm<sup>3</sup>, and a temperature of 0.2 eV for electrons and for ions. Barium, potassium, and cesium are commonly used for the plasma, but other alkali metals are also used. The magnetic coils that surround the vacuum chamber can be slid along the cylindrical axis for adjustable access to individual side ports of the chamber. Spacers on four coil-support rods maintain the desired combination of coil-to-coil spacings during plasma experiments.



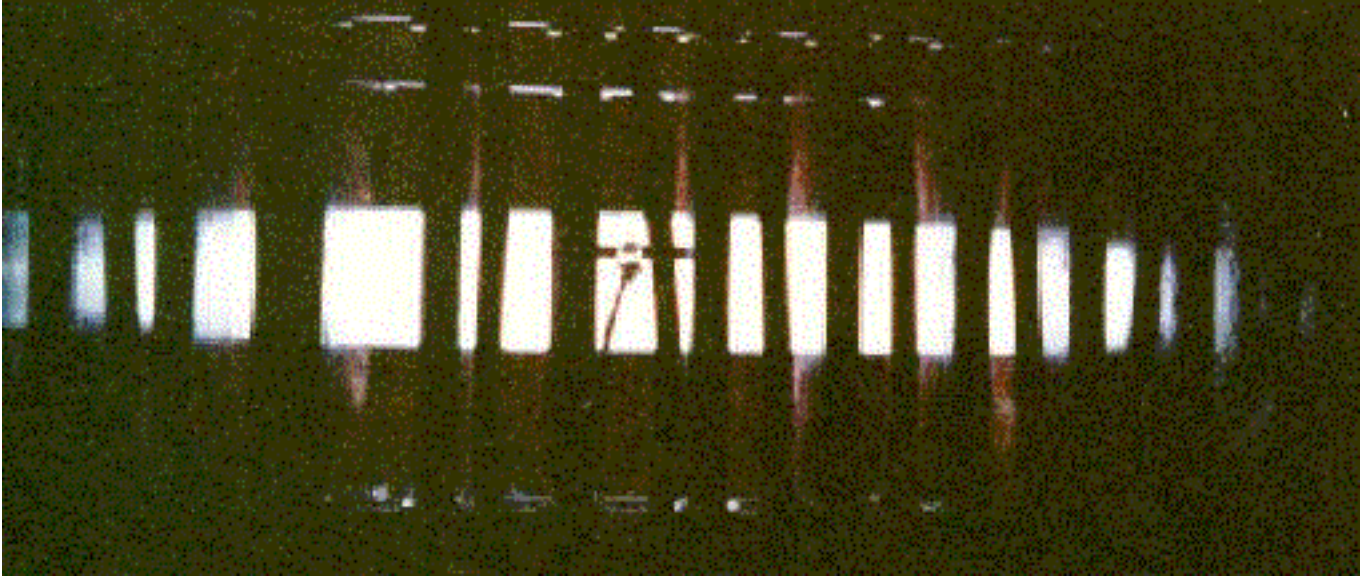




# HELICONS



The WVU Space Simulation Laboratory which includes the Space Simulation Chamber (background) and Helicon Plasma Source (foreground). A typical argon plasma in our source is shown below.



A low density argon plasma in the WVU Helicon experiment.