ton in which there is only a very small polarizability correction to the hfs splitting. However theorists Sidney Drell and Jeremiah Sullivan of Stanford have recently pointed out that calculations of this correction based on dispersion theory cannot claim an accuracy of better than 10 ppm.

Accelerator Energies Go Up: 40, 45, 70, . . . , 1000 GeV

The 33-GeV AGS at Brookhaven will soon be surpassed by the 70-GeV Serpukhov accelerator and plans are proceeding for large accelerators in Japan, France and the USSR, according to reports that were given at the National Particle Accelerator Conference, held in Washington early last month.

Two last-minute papers by Soviet physicists, who appeared unexpectedly at the meeting, caused a stir. E. Myae reported that the Serpukhov alternating-gradient synchrotron may have a 70-GeV proton beam by the end of the year. And A. Vasilev of the Radio Technical Institute in Moscow said that the institute has completed a 1-GeV model for a 1000-GeV alternating-gradient proton synchrotron.

In an effort to reduce the beam aperture, and thereby drastically reduce cost, the Soviet group will soon start testing a system for rapid control of beam position. Pickup electrodes measure beam location; when correction is needed the accelerator applies magnetic deflecting fields and magnetic gradients. The 1-GeV model has an aperture only 1.6 by 2.1 cm, although the 1000-GeV machine would require a larger aperture.

The Japanese government has approved construction of a 40-GeV alternating-gradient synchrotron and at Saclay plans are being laid for a 45-GeV machine.

. . . also of Interest: TRIGA and a Q Machine

A General Atomic TRIGA Mark 2 reactor, which can produce 250 000 thermal kW peak power for a few millisec, is now running at the University of Pavia, Italy. . . A Q Machine to produce quiescent plasma is being built at the University of California at Irvine, says Nathan Rynn. □