

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.

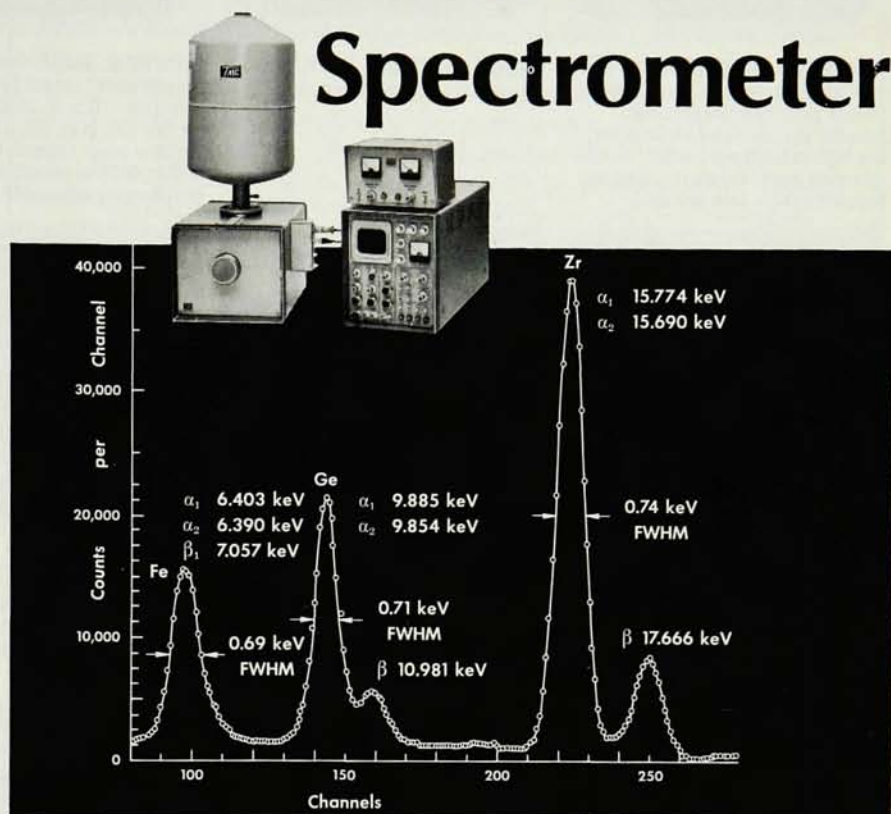
In an effort to reduce the beam aperture, and thereby drastically reduce cost, the Soviet group will soon start testing a system for rapid control of beam position. Pickup electrodes measure beam location; when correction is needed the accelerator applies magnetic deflecting fields and magnetic gradients. 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 milliseconds, 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. □

Energy resolution of less than 1 keV guaranteed with new TMC Photon Spectrometer



Graph of K X-rays of iron, germanium and zirconium, obtained with TMC Photon Spectroscopy System. TMC Lithium Drift Detector: W-80-2A. Detector bias: 200 Vdc. Temperature: 78°K. Time: 100 minutes.

Resolution values of substantially less than 1 keV, FWHM, are being routinely obtained with TMC's new Model 331/332 Photon Spectroscopy System. These values exceed those available anywhere else and are better by a factor of two or more than those normally obtained from a conventional detector-preamplifier system.

What's the secret behind these resolution capabilities? Part of the answer lies in TMC's broad-range experience in all aspects of nuclear spectroscopy, from ultra low-noise semiconductor detectors and preamplifiers to multi-

channel analyzers. That experience is reflected in the unique self-contained design of the 331/332 System, which is supplied complete with detector, FET preamplifier, cryostat, vacuum chamber, ion pump and all necessary power supplies. Since it's designed, built and tested as a single system, TMC can — and does — guarantee its performance on an overall system basis.

For complete specifications, write: Technical Measurement Corporation, 441 Washington Avenue, North Haven, Connecticut, 06473. Telephone (203) 239-2501.

