

A Special Issue:

Instrumentation

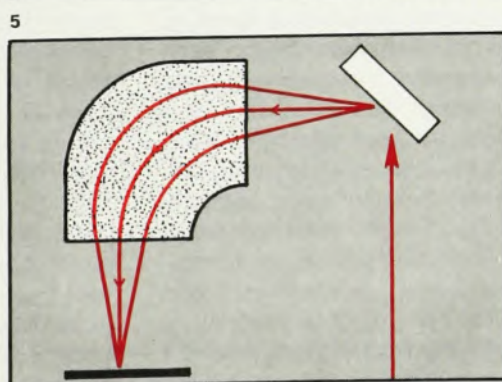
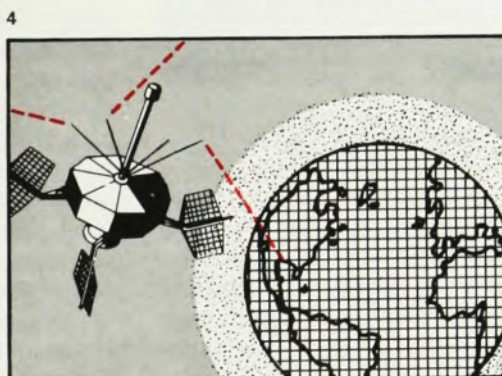
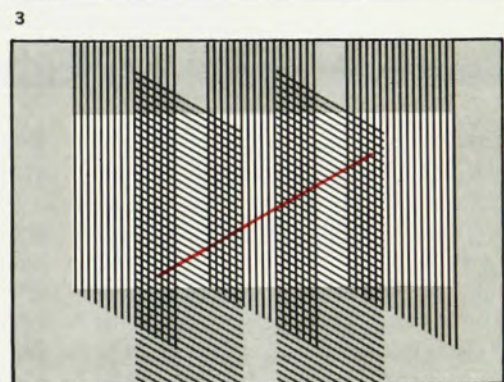
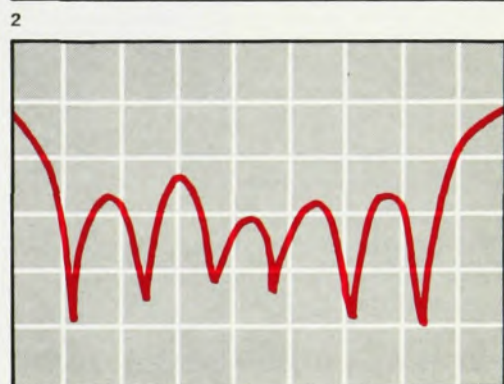
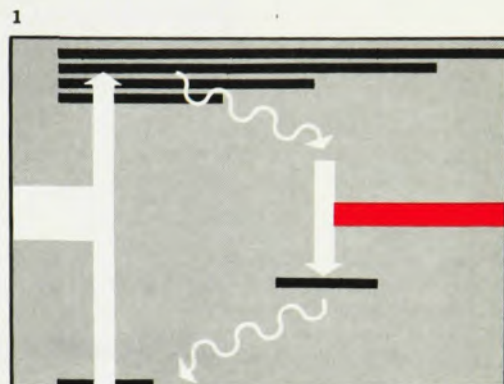
The articles in this special issue are all quite different. To give the reader a sense of the diversity of instrumentation in physics today, we have chosen five distinct subjects of current interest: lasers, Mössbauer studies, magnetic spectrographs, wire spark chambers and geophysics.

Moreover, as an indication of the variety of ways in which instrumentation can be viewed, each topic is presented from a different standpoint. Thus Theodore Maiman concentrates chiefly on applications of lasers, while Gunther Wertheim in describing Mössbauer instrumentation emphasizes detailed experimental problems of modulation, calibration, detection and so forth.

The relatively long history of magnetic spectrographs, about 30 years for nuclear-reaction studies, enables Harald Enge to discuss their evolution as well as design and operation. He shows how current designs, capable of recording rapidly and easily vast amounts of high-resolution data, developed from simple magnets of limited data-gathering capability.

Winslow Baker concentrates on a particular instrument—the wire spark chamber—and how it is used as a detector in high-energy particle physics. He describes design and operation details and shows how spark chambers fit into the data-reduction process.

John Howard takes still another approach and surveys geophysics instrumentation according to the four principal vantage points from which data are taken: from aircraft, from balloons and rockets, from satellites and from the ground.



1. Laser Applications
2. Mössbauer Effect
3. Wire Spark Chambers
4. Geophysical Measurements
5. Magnetic Spectrographs