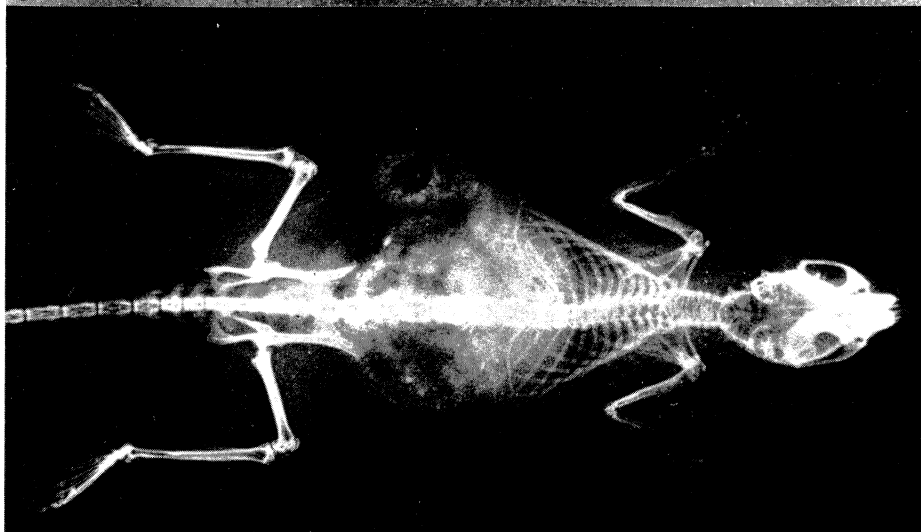
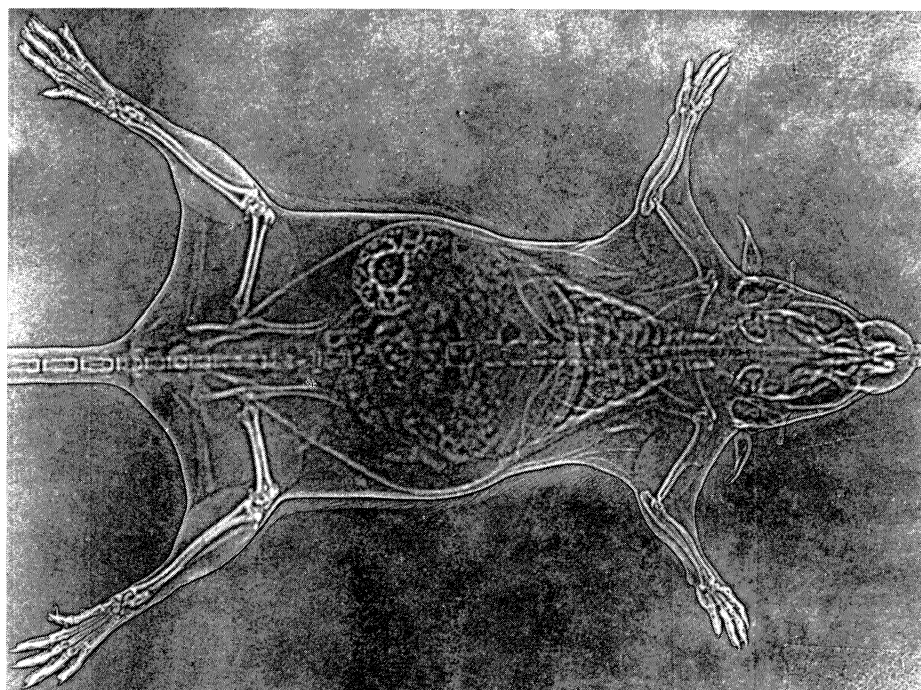
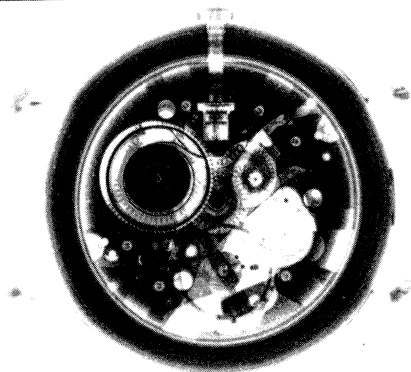
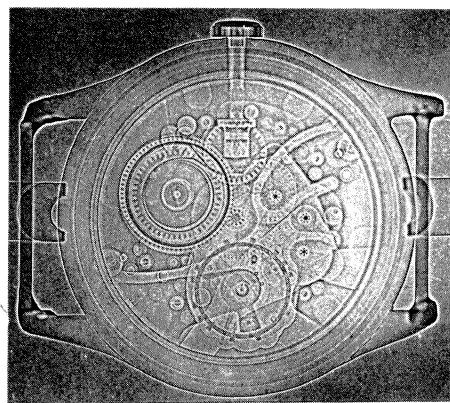


Photographs of objects taken using proton scattering radiography in contrast to conventional X-rays:

1. A radiograph of a watch (watch face in contact with the film) taken in a 160 MeV proton beam with its X-ray equivalent (280 kV) below.
2. A radiograph of a mouse (back in contact with the film, feet 2.5 cm away) again taken using 160 MeV protons with its X-ray equivalent (22 kV) below.



1. the abilities of the technique. The Los Alamos team also think of doing the proton count electronically rather than on film so that a computer could bring out the image using much less proton flux.

The 'edge enhancement' effect can also be achieved with X-rays using a charged selenium plate rather than a film. The change in the charge distribution which the X-rays produce is made visible by dusting the plate with a fine powder. The process is known as Xero-radiography and has become widely used in the USA for breast radiography.

Proton scattering radiography has yet to assert itself as a clearly preferable alternative to the other techniques. Its features are, however, sufficiently different and its results sufficiently convincing that it will be surprising if applications do not emerge for the technique somewhere during the next few years.

2.

Conferences

Three forthcoming conferences which may be of interest to some readers: On 25-27 November, the 'INS Symposium on Electron and Photo Interactions in Resonance Region and on Related Topics' will be held in Tokyo. Further information is available from S. Homma, Institute for Nuclear Study, University of Tokyo, Tanashi, Tokyo 88. On 22-24 April 1976, an 'International Conference on the Production of Particles with new Quantum Numbers' will be held at the Wisconsin Center in Madison. Further information is available from J.J. Kolonko, Department of Physics, 1150 University Avenue, Madison, Wisconsin 53706. On 29 June-1 July, the '1976 Topical Conference on Weak Interactions' will be held at the Univ. of Sussex, UK. Information: from L. Lawrence, Meetings Officer, Inst. of Physics, 47 Belgrave Square, London SW1X 8QX.

DESY

Four view HPD

The building of a new bubble and streamer chamber evaluation chain, based on the HPD flying spot digitizer, began at DESY in 1973. With this new chain DESY will be able to handle data reduction for all the track chamber experiments in which it will be involved.

The increased pattern complexity in the pictures from the new generation of bubble chambers, such as the 3.7 m European bubble chamber at CERN, as well as the faintness of the track images of current streamer chamber events, make it necessary to have an interactive system in measuring the tracks. Furthermore the use of discharge chambers (such as streamer chambers) in complex hybrid systems is becoming more and more common since better time resolution and higher