dosimetry: the state of the art

Twelve months ago a scientist noted at a meeting in Vienna that "radiation monitoring is no longer only a fascinating hobby ... but has become an ordinary profession.
We have to consider radiation detection devices as tools that have to be developed according to precise specifications and have to be used for precisely defined monitoring tasks ..."

He was speaking at a symposium on new developments in physical and biological radiation detectors (reported in the Bulletin Vol. 13 No.1), a meeting at which papers presented reached out to the frontiers of this fascinating — and very practical and necessary — branch of science. In earlier years the IAEA organized similarly symposia on personnel dosimetry for radiation accidents, the assessment of radioactivity in man, and the handling of radiation accidents, as part of its overall programme of work in this field.

The IAEA is now preparing for a symposium on dosimetry techniques applied to agriculture, industry, biology and medicine, to be held from 17 to 21 April 1972. On the invitation of the Government of the Czechoslovak Socialist Republic, the symposium will be held in Prague.

This symposium will range even more widely than those referred to earlier in this article. The greatest use of radiation until recent years has been in diagnostic and therapeutic medicine but, with the increasing availability of large radiation sources, applications have spread to virtually every technology. Whenever radiation is used to achieve some effect it is necessary to know the magnitude of the dose delivered; this determination requires equipment and techniques which may be unique to the application in question.

But the principles of the interaction of matter and radiation are the same whether the radiation is used for medical purposes, for food pasteurization or industrial processing; in each case the factors of interest are the dose delivered and its rate of application, the volume affected, the precision of measurement of dose required and so on. It is the purpose of this coming symposium to bring together scientists using dosimetry in their work, whether in a hospital or in a factory, to allow them to cross-fertilize their ideas and to become aware of technical developments in their own and in others' areas of work.

The papers to be presented may consider the effects of neutron, gamma, X-ray and charged particle sources of radiation over a broad energy range, and may also take into account dependence of observed effects upon dose rate. The Agency has invited papers dealing with small volume dosimetry; calorimetry; liquid dielectric ionization chambers; film, chemical, thermoluminiscent, radiophotoluminescent, plastics and dye dosimetry; thermally stimulated electron emission; direct charge detector dosimetry; semiconductor dosimetric systems; biological dosimeters and other dosimetric systems.

As is always the case, the nomination of a participant in the symposium will be accepted only if it is presented by the Government of an Agency Member State or by an international organization which is invited to participate. Further information may be obtained from competent national authorities. Again following standard practice, all papers presented at the symposium and discussion of them will be published as proceedings.

forthcoming conferences

Date	Subject	Place
22-26 November	Symposium on the Assessment of Radioactive Organ and Body Burdens	Stockholm
29 November-3 December	Symposium on Analytical Methods in the Nuclear Fuel Cycle	Vienna
13-17 December	Symposium on the Use of Isotopes and Radiation in Research on Soil-Plant Relationships including Applications in Forestry	Vienna
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6-10 March	Symposium on Neutron Inelastic Scattering	Grenoble, France
20-24 March	Symposium on the Use of Isotopes in Studies of Farm Animal Physiology	Athens
17-21 April	Symposium on Dosimetry Techniques applied to Agriculture, Industry, Biology and Medicine	Prague