exchange). It is also obtainable from Polycrystal Book Service, P.O.Box 11567, Pittsburgh, Pa. 15238, U.S.A., or from any bookseller.

The volume contains extracts from more than 80 of the most important early papers on X-ray crystallography, arranged in such a way as both to form a history of the science and to serve as a teaching aid. The papers span the period 1912-1934. The five chapters are entitled: *The discovery of X-ray diffraction by crystals, interpretations and some of the first structure determinations; The reciprocal lattice; The intensity factors of the kinematical theory; The dynamical theory; The f-factor continued, extinction, anomalous scattering.* A second volume covering the development of X-ray crystallography in the 'trial-and-error' period and the (re)birth of the Fourier method is planned.

International Union of Crystallography

Commission on Crystallographic Apparatus

Single-Crystal Radiation Damage Survey

Changes in the integrated intensities of some single-crystal reflexions have been observed as a function of increasing exposure to X-rays. With certain crystals, substantial variation has been noted in the first few hours while a more common pattern is of relatively small intensity changes over longer exposure periods. The integrated intensity of a given reflexion may either increase or decrease or be subjected to a combination of effects with different time dependences as the radiation damage continues. As a result, major systematic error may enter both the diffractometer measurement of intensity and the values of structure factors derived without adequate attention to the functional effects of radiation damage.

The Commision on Crystallographic Apparatus plans to conduct a premilinary survey of the extent to which systematic changes in integrated intensity are caused by radiation damage. All crystallographers making integrated intensity measurements with a diffractometer are cordially invited to take part in the survey. In order to encourage the widest possible participation, the experimental requirements of the survey are designed to be easily accommodated within normal crystal structure data collection procedures.

Participants will be invited to select a small group of reflexions, from a crystal of their choice (which may be one they are currently investigating), on the basis of relative magnitude and position in reciprocal space. The integrated intensities of this group are to be remeasured at periodic intervals throughout the duration of the experiment. It is expected that the participants' normal experimental time for crystal structure data collection will be increased only by a moderate amount on taking part in this survey. An indication of the sensitivity of various categories of chemical composition to radiation damage is likely to be among the results of this survey, which will be disseminated as soon as possible after its completion.

Details of the experimental information to be supplied by participants may be obtained from Commission member: Dr. S.C.Abrahams, Bell Telephone Laboratories, Inc., Murray Hill, N.J. 07974, U.S.A.

Recent Advances in Crystallographic Apparatus

During the VIIIth Congress of the International Union of Crystallography, the Commision on Crystallographic Apparatus sponsored an exhibition of recently developed non-commercial apparatus. There were over fifty exhibits of apparatus and descriptive material in the form of reprints, preprints, photographs and diagrams. Recent developments in the following areas were featured: high-pressure and high-and low-temperature cameras and diffractometer accessories, solid-state detectors, safety devices, X-ray interferometers, sphere grinders, goniometer heads and crystal models and model-building equopment. In addition a model of a small-angle neutron diffraction unit, a moving-film oscillation camera, an automatic pole figure plotter, and an image intensifier for dynamic X-ray diffraction studies were on display. A list of the exhibits, names and addresses of the exhibitors and references to any published descriptions of the apparatus is available from the Commission member concerned: Dr Reuben Rudman, Chemistry Department, Adelphi University, Garden City, New York, 11530, U.S.A.

Index of Crystallographic Supplies

The Commission on Crystallographic Apparatus plan to publish a new edition of the *Index of Crystallographic Supplies*. The readers of this Journal are urged to assist in the preparation of the Index by supplying us with the names and addresses of manufacturers and distributors of instruments and accessories used in X-ray diffraction studies. We are most interested in obtaining information regarding small, relatively unknown manufacturers of specialized accessories, in particular, those located outside the U.S.A. Please send all information to Dr Rudman at the above address.