OC.IT.03 THE REVISED EDITION OF VOLUME C AND PLANS FOR ELECTRONIC DISSEMINATION. E. Prince, Department of Materials and Nuclear Engineering, University of Maryland, College Park, MD 20742, USA, and Reactor Radiation Division* , National Institute of Standards and Technology, Gaithersburg, MD 20899, USA

Preparations for the publication of a revised and expanded edition of Volume C of the International Tables for Crystallography were about 85% complete at the time of the death of the previous editor, A. J. C. Wilson. This work has been continued by the current editor, and it is expected that the revised edition will be published in the late spring of 1997. It was recognized right from the beginning, however, that the material in this volume, Mathematical, Physical and Chemical Tables, was subject to rapid obsolescence due to ongoing experimental and theoretical research. This, along with the revolution in information technology during the past decade, makes it necessary to make as much as possible of this information be available in electronic form. It will then be possible not only to issue more frequent revisions at lower cost but also to distribute up to date information via the Internet and the World Wide Web. An effort is therefore being directed toward locating any existing electronic files and converting them to a uniform format that can be viewed or printed on a wide variety of platforms and also to ensuring that any new material is maintained inmachine-readable form.

OC.IT.04 STATUS OF VOLUME D OF THE INTERNATIONAL TABLES OF CRYSTALLOGRAPHY, PHYSICAL PROPERTIES OF CRYSTALS. A. Authier, Universite P. et M. Curie, Paris, France.

Volume D consists of three parts:

- Part 1 is devoted to Tensorial Aspects of Physical Properties: mathematical introduction and reduction of polar and axial tensors according to crystal symmetry, group theory and representations, mechanical properties including non-linear elasticity, thermal expansion, dielectric properties, magnetic properties, classical and non-linear optical properties, transport properties, anisotropic displacement parameters, tensors for quasiperiodic systems.
- Part 2 is devoted to Symmetry Aspects of Excitations (phonons, electrons, Raman scattering, Brillouin scattering).
- Part 3 is devoted to the Symmetry aspects of Structural Phase Transitions, Twinning and Domain Structures.

Relevant tables will be included in an accompanying diskette or CD ROM.

The preparation of Volume D is progressing regularly. The overall plan of the whole volume is now finalized and authors have been found for all Chapters. About half of the manuscripts have already been submitted.

OC.IT.05 STATUS OF VOLUME E. D.B. Litvin, Department of Physics, Penn State-Berks Campus, P.O. Box 7009, Reading, PA 19610-6009, U.S.A. and V. Kopsky, Institute of Physics, Academy of Sciences of the Czech Republic, 180 40 Prague 8, Czech Republic.

An outline of Volume E is:

Part 1: Subperiodic Group Tables: Frieze Group, Rod Group, and Layer Group Types.
- Section 1: Symbols and Terms Used in Part 1.
- Section 2: Guide to the Use of the Subperiodic Group Tables.
- Section 3: The 7 Frieze Groups.
- Section 4: The 75 Rod Groups.
- Section 5: The 80 Layer Groups.

Part 2: Scanning of Space Groups.
- Section 6: Symbols and Terms Used in Part 2.
- Section 7: Guide to the Use of the Scanning Tables.
- Section 8: The Scanning Tables.
- Section 9: Theory of the Scanning of Space Groups.

The status of this volume will be given and examples of the material will be shown and discussed.

OC.IT.06 STATUS OF VOL. A1: MAXIMAL SUBGROUPS OF SPACE AND PLANE GROUPS. Wondratschek, H., Institut fuer Kristallographie, Universitaet, D-76128 Karlsruhe Germany

In Vol. A of IT (1983) data on maximal subgroups of space groups are included. In these data the subgroups are listed partly individually, partly by type, or, for isomorphic subgroups, only by those of lowest indices.

The complete data were not available in 1983 but have been derived since. Following the demand by users of Vol. A the Executive Committee of IUCr has approved in August 1995 the publication of a new volume A1 under the title *Maximal subgroups of space and plane groups*. This volume will contain lists of maximal subgroups as well as Sections on their theory and their applications. The complete list of maximal subgroups of indices 2, 3, and 4 will be given. The infinitely many maximal isomorphic subgroups will be presented by formulae with the index as parameter. Classes of conjugate subgroups will be indicated. Where applicable, transformation to the standard description of the subgroup will be presented.

The state of the preparation of the volume at the time of the Congress will be explained.

OC.IT.07 INTERNATIONAL TABLES FOR CRYSTALLOGRAPHY VOL.A2: N-DIMENSIONAL CRYSTALLOGRAPHY. T. Janssen, University of Nijmegen, Nijmegen, The Netherlands

This volume will consist of a computer programme and an accompanying printed volume with a manual and a treatment of the theory of symmetry in arbitrary dimension. This implies that it gives the information on two- and three-dimensional point groups and space groups as well. For more than three dimensions these groups are used already by crystallographers dealing with incommensurate phases and quasicrystals.

The quickly increasing number of space groups when one goes to higher dimensions makes it inconvenient to present the information as a printed volume. The idea behind the programme is that one generates the information from data in a data base only for those cases that present themselves in practice. From the data base are calculated the space groups, the symmetry elements, the Wyckoff positions, the general and special extinction rules, in short all that can be found in the existing tables for 2 and 3 dimensions, with the advantage that it will be easy to change origin and setting in an arbitrary way.

The interaction between user and computer goes via menus, with which one can make a selection, and via a list of instructions, written in a special language, if one wants to go beyond the preset selections. The results are also presented in graphical form, for example as presentations in 3 dimensions of symmetry elements and crystal structures that are described by means of the symmetry groups of arbitrary dimension. For the usual two- and three-dimensional structures this is no problem. For systems with higher-dimensional symmetry groups, the physical structure is the restriction to physical space of a higher-dimensional lattice-periodic structure. This can be viewed by selecting a volume in three-dimensional space and plotting the intersection of the higher-dimensional structure with this volume.

The programme will be constructed to be used on a variety of platforms, such as IBM-type PC's, MacIntosh and Unix work stations.

The theory of higher-dimensional crystallography and the nomenclature, as far as it will have crystallized out, will be given in a printed volume.