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Note on a graphic display version of program *ORTEP*. By ANDERS G. NORD, *Institute of Inorganic and Physical Chemistry, University of Stockholm, S*-10405 *Stockholm* 50, *Sweden*

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The graphic display version of *ORTEP*, (program *INGRID*), has been modified and speeded up by use of the IBM Graphic Programming Services.

The graphic display version of *ORTEP* (Johnson, 1965) called *INGRID* (Nord, 1971), formerly used the display routine package *GPAK* (Wolpe *et al.*, 1966). However, upon the request of many users, it has now been rewritten to use the IBM Graphic Programming Services (1971) *GPS*. Program *INGRID* is written for an IBM 360/75 computer and an IBM 2250 graphic display unit.

The main features and the flow chart of the program are almost unchanged, but the *GPAK* routines are replaced by 27 *GPS* routines. At each stage of the program, those function keys (FK) which can be used are now lit to avoid mistakes. Whenever the user is requested to do something, a sound is heard from the display unit and a text is displayed.

The program section used to change rotations has also been simplified. After the appropriate FK has been pressed, the three 'old' rotation angles about the axes are displayed. The user may then enter the new rotation angles through the alphanumeric keyboard. Alternatively, depression of another function key instead of the entry of a new angle value causes the former rotation angle to be retained.

The elapsed CPU time is constantly displayed on the screen. When the program is unloaded two sounds are heard from the display unit. The user can terminate the program at any time. The present version is twice as fast as the old *GPAK* version.

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Crystallographers

Dr. **M. E. Straumanis,** Professor Emeritus of Metallurgical Engineering and Senior Research Investigator in the Graduate Center for Materials Research died at his home on March 16, 1973. He had been on the Rolla campus of the University of Missouri for 26 years.

Graduated from the University of Latvia in 1925 as chemical engineer, he early gained recognition for his approach, still used today, to the study of metal corrosion. Associated with the University of Latvia until 1944, he introduced X-ray diffraction techniques there after being introduced to them during a 1931 study period at the Kaiser Wilhelm Institut für Metallforschung. The Straumanis method of precision lattice-parameter measurements was developed some three years later.

A scholarship memorial fund has been established in his name. Further information may be obtained from Professor William J. James, University of Missouri, Rolla, Missouri 65401, U.S.A.

Dr **Gen Shirane** and Dr **John D. Axe** of the Brookhaven National Laboratory have received the second Bertram Eugene Warren Diffraction Physics Award for their work on the dynamics of solid-state phase transformations, employing inelastic neutron scattering. The Award is made every three years for outstanding work during the preceding six-year period in the physics of solids or liquids using X-ray, neutron, or electron diffraction techniques.

Professor **G. A. Jeffrey,** University of Pittsburgh, has been appointed a Co-editor of *Acta Crystallographica* with effect from 1 August 1973.

Book Reviews

Works intended for notice in this column should be sent direct to the Book-Review Editor (M. M. Woolfson, Physics Department, University of York, Heslington, York YO1 5DD, England). As far as practicable books will be reviewed in a country different from that of publication.

The crystal chemistry and physics of metals and alloys. By W. B. PEARSON. Pp.xix +806. New York: Wiley Interscience, 1972. Price £13·80.

In an illuminating preface Professor Pearson argues that metal structures have been treated as poor relations in most books on crystal chemistry. The discussions that have been given in the past seldom extend beyond f.c.c., h.c.p. and b.c.c.. However, nearly seven hundred metal structures have now been reported and a coherent treatment is overdue. This substantial and valuable book, the first monograph of its kind in the English language, provides such a treatment.

The book's 800 pages are divided into a preface, a 'pre-chapter' entitled 'Jargon' and 11 regular chapters; there are 557 figures, 63 tables and 852 references (organized at the end of each chapter), also full subject and formula indexes. There is no separate author index. The term 'metals and alloys' is used in a broad sense and solid solutions and many metal borides, carbides, nitrides and oxides are included in addition to metals and intermetallic compounds. In the first six chapters the various factors influencing the stability of alloy phases are discussed in a systematic manner, starting with a summary of the crystal chemistry of metals and alloys and proceeding through discussions of geometrical, chemical-bond, electrochemical and