

**Method of solution:** The program enables the user to search the reflections which have been measured during data collection. For each reflection a measure of the signal/noise ratio is determined. The reflections are sorted in order of decreasing  $\theta$  and those reflections which have a signal/noise ratio greater than a value chosen by the user are written to a disk file. The user may then select reflections from this list for use in the determination of precise lattice constants. The 25 highest-angle reflections conforming to the user's criterion are written to the terminal screen and, if for any reason the user is unhappy with the angular range indicated, program execution may be immediately repeated with a different signal/noise cutoff.

**Software environment:** The program was written in Fortran 77 on the IBM 3081D operating under the VM/SP HPO system. The use of special features of Fortran 77 is limited to the use of character variables and to file definition at execution time. No machine- or system-dependent features are used. The program should run on any installation which supports Fortran 77 (or, with minor modifications, Fortran IV).

**Hardware environment:** Compilation and execution of the program requires 952 K of storage on the computer and operating system given above. The program requires one disk file for the reflection data, and one disk file for output. An additional disk file is needed if cell constants are not entered interactively. Since high numerical precision is not required, the number of bits/word is not critical. Any terminal should be adequate for the interactive input.

**Program specification:** There is no limit on the number of reflections which may be read from the input file; however, the number of strong high-angle reflections kept is limited to 1000. This number may easily be changed by the user. The format for reading the reflection data is appropriate for the raw data file (including standards) produced by the PW 1100 diffractometer (Philips Corp., 1976), but may easily be changed. The source code, including comments, contains 480 lines. A typical run using 2788 input reflections with  $\theta$  values less than  $23^\circ$  (Mo radiation) and a signal/noise cutoff of 50 gave 40 reflections above the cutoff, and took 1.7 s on the IBM 3081D.

**Documentation:** The program contains extensive comments regarding the logical structure. Prompts are provided for all terminal input.

**Availability:** The source code will be provided free of charge either as hard copy or in machine-readable form. If machine-readable form is desired the requester should provide either a magnetic tape or, preferably, a  $3\frac{1}{2}$  or  $5\frac{1}{4}$  in floppy disk. Requests should be sent to the author at his permanent address.

**Keywords:** lattice constants.

### Reference

Philips Corp. (1976). *Users Manual for the Computer-Controlled Single-Crystal PW1100 Diffractometer*. Philips Corporation, POB 80000, 5600 JA Eindhoven, The Netherlands.

## Crystallographers

*This section is intended to be a series of short paragraphs dealing with the activities of crystallographers, such as their changes of position, promotions, assumption of significant new duties, honours, etc. Items for inclusion, subject to the approval of the Editorial Board, should be sent to the Executive Secretary of the International Union of Crystallography (J. N. King, International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, England).*

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Professor **A. Authier**, Laboratoire de Minéralogie et Cristallographie, Université Pierre et Marie Curie, 4 place Jussieu, F-75252 Paris Cedex 05, France, was elected President of the International Union of Crystallography at the Fifteenth General Assembly of the Union which was held in Bordeaux in July 1990. The full membership of the Executive Committee of the Union until mid 1993 is as follows: President Professor **A. Authier**, Vice-President Professor **A. Kálmán**, General Secretary and Treasurer Professor **A. I. Hordvik**, Immediate Past President Professor **M. Nardelli**, Ordinary Members Dr **R. Chidambaram**, Dr **P. W. Coddington**, Professor **P. Coppens**, Dr **R. Diamond**, Professor **J. Harada**, Dr **Y. T. Struchkov**.

Professor **C. E. Bugg** was reappointed Editor of *Acta Crystallographica* and Chairman of the Commission on Journals. Dr **A. M. Glazer** was appointed Editor of the *Journal of Applied Crystallography* and Co-Chairman of the Commission on Journals, succeeding

Professor **M. Schlenker** who has retired as Editor of this journal.

Dr **P. W. Coddington**, Professor **S. R. Hall**, Professor **J. R. Helliwell**, Professor **A. Kálmán** and Dr **M. Ohmasa** were appointed as Co-editors of *Acta Crystallographica* and Dr **F. H. Allen** and Professor **J. Trotter** have retired. Dr **J. I. Langford** was appointed a Co-editor and Professor **G. Kostorz** was appointed a Guest Co-editor of the *Journal of Applied Crystallography*. Professor **G. Ferguson** was reappointed as Editor of *Structure Reports* and Professor **A. J. C. Wilson** was reappointed as Editor of *International Tables*. Professor **G. G. Dodson** was re-elected Chairman of the Commission on Biological Macromolecules. Professor **W. Schülke** was elected Chairman of the Commission on Charge, Spin and Momentum Densities. Professor **C. Paorici** was re-elected Chairman of the Commission on Crystal Growth and Characterization of Materials. Professor **D. C. Creagh** was re-elected Chairman of the Commission on Crystallographic Apparatus. Dr **H. D. Flack** was elected Chairman of the Commission on Crystallographic Computing. Dr **F. H. Allen** was re-elected Chairman of the Commission on Crystallographic Data. Dr **S. C. Abrahams** was elected Chairman of the Commission on Crystallographic Nomenclature. Dr **J. P. Glusker** was re-elected Chairman of the Commission on Crystallographic Teaching. Professor **J. M. Cowley** was re-elected Chairman of the Commission on Electron Diffraction. Dr **S. A. Mason** was elected Chairman of the Commission on Neutron Diffraction. Professor **R. A. Young** was re-elected Chairman of the Commission on Powder Diffraction. Dr **W. L. Duax** was elected Chairman of the Commission on Small Molecules. A new Commission on Synchrotron Radiation was established by the General Assembly and Professor **J. R. Helliwell** was elected Chairman of that Commission.

The full memberships of the Commissions of the Union, and the Union representatives on other bodies, will be given in the Report of the Fifteenth General Assembly and International Congress of Crystallography, which will be published in Section A of *Acta Crystallographica* in due course.

Professor **M. Prutton**, Department of Physics, University of York, England, has been awarded the British Vacuum Council Medal and Prize for 1990 in recognition of his substantial contributions to surface physics, with particular emphasis on surface structure studies by low-energy electron diffraction and scanning auger microscopy.