contains its own free format routine and traps all errors inside
the system so the user cannot normally exit from the system by
making a mistake.

The system runs on a DEC-10 computer via a 4014-
Tektronix Graphics Terminal with the enhanced graphics
module. All output displayed on the screen can also be sent to
the line printer and all plots can also be plotted on a
CALCOMP plotter to create hard copy. It is possible to input
a new model and calculate an image of that model in 10–15
min. (Time depends on system load etc.)

The system is written in Fortran with some Macro
assembler routines to drive the 4014-Tektronix terminal. The
system occupies approximately 1000 blocks (1 block = 640
characters on the DEC-10 system). The program is available
to users of the ICF network and copies may be obtained by
contacting the author.

I would like to thank Dr L. Kihlborg and the DEC-10
system, Stockholm, Sweden, the SRC and the ICF, particu-
larly I. Cook and B. Swindells, and the ZIR (ETH),
particularly F. Parkel, A. Gautsche and G. Rogers for their
cooperation, software and assistance in making the system
possible. I would like to thank ETH for the financial support
to work with Dr H.-U. Nissen and the high-resolution group
to establish such a system at ETH and to Dr C. F. Woensdregt
for critical testing of the operation and accuracy of the system.

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Meeting Report

Inter-Congress Symposium on
Accuracy in Powder Diffraction,
National Bureau of Standards,
Washington DC, USA, 11–15
June 1979

A symposium on 'Accuracy in Powder
Diffraction' was held at the National
Bureau of Standards, Washington, DC,
June 11–15, under the sponsorship of
NBS, the National Research Council
of Canada and the International Union
of Crystallography. This is the first such
symposium held in North America, the
last being held in Stockholm in 1959. Talks
covered aspects of accuracy in the
powder method. The proceedings will be
published by the NBS and will be available from the National Technical
Information Service, Washington, DC.

The total diffraction patterns for the X-
ray and neutron cases were covered by
Dr P. Suortti (Finland) and Professor T.
Sabine (Australia), respectively. Both
were able to report results at the 1% level.
Among other topics on the first day were
synchrotron radiation and energy-dis-
persive diffraction (Professor B. Buras,
Denmark), X-ray wavelengths (Dr R.
Deslattes, USA), intensity measurement
techniques (Dr L. Jennings, USA) and
position-sensitive detectors (Dr R.
Hendricks, USA).

Techniques involving profile-fitting
were stressed on the second day. Dr W.
Parrish who organised the Stockholm
symposium (1959) stressed the precision
possible with this method and Dr A. Hewat
(France) and Professor R. Young (USA)
summarised the possibilities of structure
determination for the neutron and X-ray
cases, respectively. A spirited discussion
clearly showed strong interest in these
fields. Dr C. Baerlocher (Switzerland)
spoke on a new profile function being used
to refine a large zeolite structure. Dr M.
Cooper (UK) argued that standard
deviations for the profile (Rietveld)
method had been systematically under-
estimated; a lively discussion revealed
differences of opinion. Dr D. Cox (USA)
described a comparison of the profile
method for the X-ray and neutron cases
and Dr E. Prince gave an account of
profile refinement using constraints.

In sessions stressing materials anal-
ysis, Dr J. Hilliard (USA) showed that
particle-size analysis was possible for
process control. Professor S. Weissman
described micro-photographic tech-
niques applicable to problems of stress-
corrosion and fatigue. Drs deKeijser
and Mittemeijer (Holland) reported on
methods of crystallite size, strain and
concentration analysis in powders of indus-
trial importance; the discussion clearly
showed the importance of these topics.
The accuracy possible when using the
integral breadth method was summarised
by Dr Langford (UK); quite large errors
are possible. Similarly, the accuracy of
lattice-parameter measurement was as-
sessed by Professor Wilson (UK) and the
problems implicit in some methods were
outlined. Professor Wilson joined Dr
Mandel (USA) in raising questions about
the Likelihood Ratio Method.

The various techniques for computer
indexing of powder patterns were re-
viewed by Dr R. Shirley (UK); an active
discussion on figures-of-merit followed.
Dr Louer (France) spoke on the success-
ive dichotomy method, a rigorous but
time-consuming indexing method.

Stress analysis, an industrially impor-
tant topic, was discussed by Professor J.
Cohen (USA) and Dr Kuriyama (USA).
The accuracy possible when using data de-
erived by automated profile analysis of
Guinier films was described by Drs J.
Edmonds (USA) and P.-E. Werner
(Sweden). The latter gave examples
involving large unit cells, and discussed
structure refinements based on such
data. Dr E. Griger (Hungary) described
the increased accuracy possible when
automation was optimised Dr C. Hubbard
(USA) discussed the NBS Standard
Reference Materials for quantitative anal-
ysis and 'd' spacing measurements. A
more complete account of all papers
presented is not possible here.

Paradoxically for a meeting devoted to
powders, the social highlight was a
behind-the-scenes visit to the gem collec-
tion of the Smithsonian Institution. This
magnificent collection of large and very
large single crystals impressed and de-
lighted the devoted adherents of powder
diffraction. Dr D. Appleman of the
Smithsonian was responsible for this
much appreciated event.

The meeting concluded with the report
of the ACA sub-committee on powder-
pattern publication standards (Dr Q.
Johnson, USA) and a panel discussion on
future trends.

Participants enjoyed the possibilities
for relaxed discussion and many spirited
and profitable discussions took place; it is
believed that not all differences of opinion
MEETING REPORT

International Union of Crystallography


Prices of Acta Crystallographica and Journal of Applied Crystallography

The Executive Committee of the International Union of Crystallography has found it necessary to increase the yearly subscription rates and also the prices of back numbers for Acta Crystallographica and Journal of Applied Crystallography as from 1 January 1980. Every endeavour has been made to keep these increases to a minimum.

Acta Crystallographica

The following rates will apply for Volumes A36 and B36 (1980). All subscription rates are fixed in Danish kroner, and the US dollar equivalents given below are subject to exchange-rate fluctuations and amendment with notice.

Complete volumes, regular price per volume

Sections A & B combined (subscription) Dkr 2265 ($436.00)
Section A only Dkr 565 ($109.00)
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Since the charges are fixed in Danish kroner, the US dollar equivalents are subject to exchange-rate fluctuations.

Price of back numbers

The prices of back numbers have been increased so that they are the same as the subscription rates for the volumes to be published in 1980. The prices of Volumes 1–23 of Acta Crystallographica, which were published before the journal was divided into two sections have been increased to the same price as the A volumes. The prices are fixed in Danish kroner and the US dollar equivalents given below are subject to exchange-rate fluctuations.

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