No. 8    June 1984

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The Nottingham Spring Meeting, attended by some 150 people, was a success. Each of the Groups organized a session, and the plenary lecture was given by Dr David Sayre. In parallel with the meeting, Sir David Phillips gave a lecture to a large audience of 5th-formers. We thank Dr Michael Begley and his colleagues for organizing this interesting and enjoyable meeting.

At the Spring Meeting Sir David Phillips completed his two-year term of office as the first President of the Association. Despite increasingly heavy commitments in policy-making at a national level, he had skilfully steered the BCA during its crucial formative period, when new Groups, procedures, and precedents were being established. The other Officers to retire was the Treasurer, Professor Charles Taylor. His was the task of investing our money, preparing accounts, dealing with the Inland Revenue, and other such joys. Thanks to his efforts he has left the Association in a sound financial state. The Association owes them both a deep debt of gratitude for all their work in the first two years of the BCA's existence. Sir David and Professor Taylor will, however, remain involved in the workings of the BCA in their role as Trustees.

After the various elections held at the Spring Meeting, the composition of the Council is as follows:

- **President**: Professor D.M. Blow FRS
- **Vice-President**: Professor D.W.J. Cruickshank FRS
- **Secretary**: Dr A.C. Skapski
- **Treasurer**: Dr E. Mize
- **Ordinary members**: Dr J.W. Harding, Dr Olga Kennard, Professor J. Zusman

Group representatives:
- Dr D.S. Moss (Biological Structure Group)
- Dr E. Begley (Chemical Crystallography Group)
- Mr B.A. Bellamy (Industrial Group)
- Dr Joan C. Halfpenny (Physical Crystallography Group)
- Dr A.H. Moore (Editor of Crystallography News)
- Dr G.C. Wallwork
- Professor A.J.C. Wilson FRS

The Chairman of BNCU is ex officio a member of the Council, but as our new President is for the time being also the Chairman of BNCU, the Council will temporarily have a leaner look. Professor Blow had been one of the earliest supporters of the formation of a BCA from when the idea was first raised in the BNCU in 1975-9, and was Chairman of the Working Party which led to the creation of the Association at the Durham meeting in 1982.

One of the most attractive meetings this autumn will be the Cruickshank Symposium, which will be held at UMIST on 11-13th September 1984. It has been organized to mark the retirement of Professor Cruickshank (our current Vice-President) from his chair at UMIST, and a splendid cast of speakers has been assembled.

The organizing committee for the Bristol Spring Meeting, led by Dr Judith Howard, met at the end of May. An outline programme now exists, and it is intended to publish a detailed programme in the September issue. The dates for your diary are Monday 25th-Wednesday 27th March, 1985. Please note that this meeting will be spread over three days, and not four as on previous occasions.

**Andrzej Skapski**

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**FELLOWS OF THE ROYAL SOCIETY**

It is a pleasure to record the election of Professor T.L. Blundell, Professor of Crystallography at Birkbeck College, London;

Professor J.B. Pendry, Professor of Theoretical Solid State Physics at Imperial College, London, and

Professor M.M. Woolfson, Professor of Physics in the University of York, to Fellowship of The Royal Society.

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**ILLUSTRATIONS AT NOTTINGHAM**

David Watkins would like to acknowledge the following for illustrations to his talk at the BCA Meeting:

- "GENIUS" by John Glasson
- "NOW WE ARE SIX" by Ernest Shepard
- "BRAVO ERNEST" by Gabriel Vincent
- "WHERE THE WILD THINGS ARE" by Sendak.
MEMBERSHIP — PLEASE READ!

There has been some confusion over the various categories of membership of the B.C.A., and in order to clarify the position and to make quite certain that our records are correct I am asking all members to fill in the form that is enclosed with this Newsletter and to return it to me. It should not take more than a few minutes but will save me a great deal of time.

There are four categories of membership:

- Founder Members (this category is no longer available)
- Ordinary Members (they pay a subscription annually — currently £10)
- Reduced Rate Members (they pay half the ordinary member's rate and must either be students or no longer employed)
- Joint Members (these are members of the B.C.A. or I.C.A. crystallography groups and pay their subscription through those bodies.)

Members in each of these categories may belong to one of the specialist groups without additional payment. In the case of Joint members, the free group is obviously the one through which their membership is derived; for the other three categories, a choice may be made.

Some members may belong to the B.C.A. in more than one category (e.g. a Founder Member or an Ordinary Member may also be a Joint Member through either or both of our associated bodies). Such members are entitled to free membership of one group for each channel of membership. Membership of additional groups costs £1 per annum at the moment.

If you have paid a membership or group subscription to the B.C.A. since Oct. 1st 1981, no further payment is required for 1984.

C.R. TAYLOR (Treasurer)

THEN PLEASE —

FILL-IN & POST A FORM NOW!

1944 and 40 years on

When the BCA meets shortly for its second Spring Conference, it will be almost exactly forty years after another crystallographic meeting of some historical significance. That occasion was the first full conference of the newly-formed X-ray Analysis Group which had been inaugurated as one of the first subject groups of the Institute of Physics, a few months earlier. A detailed report of the meeting which was held on 31 March and 1 April 1944 at the University of Oxford may be found in Nature (1944, 153, 533). It was organised by the first secretary of the Group H. Lipson, the chairman was Sir Lawrence Bragg and amongst the speakers were most of the prominent U.K. crystallographers of the day. In spite of it being wartime over 200 attended of whom more than half had not at that time joined the Group.

The title of the meeting, X-ray Analysis in Industry, did not preclude the more academic aspects of structure determination, as the declared aim of the Group was to bring together work of the Universities and Industry. In this respect the Group was manifestly successful over the next two or three decades, for under its guidance crystallographers of all persuasions, physical, chemical, mineralogical, biological and particularly metallurgical gathered in numbers seldom less than 200 for subsequent meetings.

The 1944 conference, like its successors included an evening discourse, this one by P.P. Ewald, giving his personal account of the development of crystallography and perhaps more pertinently, his ideas on the future organisation of the subject. Ewald's remarks evidently did not go unheard for the X.R.A.G. was to play a major role in the direction taken by international crystallography. At the end of the war when a new journal devoted to crystallography was seen to be essential, a special Publications Committee was set up by the X.R.A.G. to achieve this objective. An exchange of views between members of this committee and others eminent in the field of crystallography internationally may be traced through letters still in existence. Gradually views converged upon the idea of a new independent international journal and once this had been agreed upon, plans for the formation of an organisation (the IUCr) to promote its foundation proceeded rapidly.

Of course the X.R.A.G. still flourishes as the Physical Crystallography Group but changes in its role had started to occur in the late 50's, for one thing its name was changed. More importantly, the development and application of positive and reliable methods of structure determination led many of those involved in chemistry and biophysics to seek associations of a more subject-oriented nature; the X.R.A.G. as a part of the Institute of Physics could not meet this need.

Many of the coordinating functions of the old X.R.A.G. have now been undertaken by the BCA which has the advantage of financial independence. With the freedom of being independent the BCA cannot fail to be as innovative as the X.R.A.G. was.
The First Use of Fourier Methods in Crystal-Structure Determination

It seems to be generally believed that the first crystal structure to be derived by Fourier methods was that of phthalocyanine by J.M. Robertson (J. Chem. Soc., 1936, 1195, 1209). In fact, the crystal structure of copper sulphate pentahydrate by C.A. Beevers and H. Lipson (Proc. Roy. Soc. A. 1934, 146, 570) preceded it and so did the crystal structure of the alums by H. Lipson and C.A. Beevers (Proc. Roy. Soc. A, 1935, 148, 664). Because of the eventual importance of the method, I think that the record should be set straight.

H. Lipson.

BRITISH CRYSTALLOGRAPHY ASSOCIATION

SPRING MEETING

University of Nottingham

NOTICE TO ALL ENRAF-NONIUS CAD-4 USERS

Please note there will be a CAD-4 Users' Meeting on the afternoon of Thursday 5th April 1984 commencing at 2.30 pm. Details of lecture theatre etc. will be posted on the notice board during the Spring Meeting.

25th Annual Medicinal Chemistry Symposium

RECENT ADVANCES IN TECHNIQUES FOR DRUG DESIGN AND CONFORMATIONAL ANALYSIS

State University of New York at Buffalo and
The Medical Foundation of Buffalo, Inc.

June 11-14, 1984

I. Molecular Conformation and Drug Design


II. Computers in Drug Design


III. Mechanisms of Action and Drug Design

A. Arnone, D. Barry, R. and R. Bensch, V. Cody, D. Covey, C. Daber, P. Goodford, J. Katzenellenbogen, D. Matthews, B. Portugese, R. Roth, H. Scheraga, F. Schiller, S. R. Wilson

IV. Poster Session - contributed papers - abstracts due April 14, 1984

V. Computer Graphics Displays and Demonstrations

Molecular Design Limited, Tripoe, Cambridge Crystal Data Base, the PROPHET System.

VI. Computer Generated Films - contributions welcome

Those interested in receiving full details of the program, presenting a film or poster contribution or providing a graphics display or demonstration system please contact

William L. Duax, Ph.D.
Co-chairman 25th Annual Medicinal Chemistry Symposium
Medical Foundation of Buffalo, Inc.
73 High Street
Buffalo, New York 14203
USA
We are pleased to report below details of the programme for the Symposium to mark the retirement of Professor D W J Cruickshank, F.R.S.

The Symposium not only provides an opportunity to honour Professor Cruickshank, but will also provide state-of-the-art reviews of many important areas of structural chemistry. We hope, therefore, that the Symposium will be attended by both experts and students of the areas concerned.

Registration documents are in preparation and will be included with the next edition of Crystallography News. Meanwhile, please make a note of the dates in your diary.

For inclusion on the direct mailing list, please write to Dr B Beagley or Dr R W Mann, Department of Chemistry, UMIST, PO Box 68, Manchester, M60 1QD.

CRUICKSHANK SYMPOSIUM

UMIST, 11-13 SEPTEMBER 1984

Modern Experimental and Theoretical Studies of Crystal and Molecular Structure

PROGRAMME

1 Theme: Computing

Dr J S Rollett, Oxford University Computing Laboratory
Computing Power - Now and To Come.

Professor G H Sheldrick, University of Göttingen
Computing Aspects of Crystal Structure Determination.

Dr G E Pavley, University of Edinburgh
Molecular Dynamics - Crystallography and More.

Professor J E Boggs, University of Texas
Molecular Quantum Mechanics - Where Now and Where Next?

2 Theme: Structural Methods

Professor G A Jeffrey, University of Pittsburgh

Professor O Bentiansen, University of Oslo
Gas-Phase Diffraction - Past, Present and Future.

Dr J R Hellwell, Daresbury Laboratory
Protein Crystallography with Synchrotron Radiation.

3 Theme: Crystallographic Studies

Professor Dorothy Hodgkin, F.R.S.
Odd Observations in the Analysis of Biological Molecules.

Professor A C T North, University of Leeds
The Use of Computer Graphics in Studying Protein Structure and in the Design of Novel Proteins and Drugs.

Professor Mary R Truter, University College London
Crystallography in Co-ordination Chemistry.

4 Theme: Applications

Professor J D Dunitz, F.R.S., ETH, Zurich
Chemical Reaction Paths from Crystal Structure Data.

Professor K N Trueblood, University of California, Los Angeles
Vibrational Parameters in Crystals: Rigid and Non-rigid molecules.

Professor P L Hirschfeld, Weizmann Institute, Israel
Accurate Electron Densities in Molecules.

* Titles subject to modification
SURVEY - PROJECTED MICRODENSITOMETER

Some years ago, my colleague, the late Mr B G Cooksley, designed an excellent microdensitometer for measuring Guinier and other powder films. The instrument converts the blackening of the film to a trace displayed on a CRO that can also be recorded on a chart recorder. By aligning the CRO trace to a fiducial mark, peak position can be determined rapidly with an accuracy corresponding to ±0.005°2d.

The prototype is still in operation at Aberdeen; it was described at the H P Rooksby symposium and displayed at ECM-4 in Oxford in 1975. Anyone who would like to know more about it may contact either myself or Dr R Alan Howie on 0224-40241 (Extensions: 5658/5630/5640).

There is now a possibility that the instrument could be produced commercially, and in order to assess potential interest, I would be grateful if members would fill in the short Questionnaire enclosed with this Newsletter (even if the response is negative). Those who respond positively will be kept informed of developments.

Many thanks.

Lesley S Dart Glasser
MARCONI AVIONICS HIGH POWER ROTATING ANODE X-RAY GENERATORS AND ASSOCIATED EQUIPMENT.

The Applied Physics Division of Marconi Avionics Limited has, for many years, been supplying a range of rotating anode generators, cameras, tubes and other specialised equipment to a wide and varied market.

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Herts. WD6 1RX, England

Telephone: 01-963 2030 ext. 3159
Telex: 22777 (GEC BWD G)
UNIVERSITY OF OXFORD - DEPARTMENT OF PHYSICS
Clarendon Laboratory - Parks Road - Oxford

Telephone Oxford (0865) 59291
Postal Address Clarendon Laboratory
Oxford OX1 3PU

Two SERC (one funded under the JOERS scheme) postdoctoral positions are currently available in the Crystallography Group at the Clarendon Laboratory, to work on the structures and physical properties of electrooptic, optically active, and related crystals. The work, while based in Oxford, will be in collaboration with three other universities and two industrial companies. The normal SERC post is for 2-3 years depending on age, and the JOERS grant is for one year initially, subject to a review in the summer with regard to further continuation. Salary range £17190-9875, the posts to be filled as soon as possible. Candidates should send curriculum vitae and the names of two referees to Dr. A.M. Glazer at the above address.

BIRKBECK COLLEGE
University of London

Department of Crystallography
Makit Street,
London, WC1E 7HX
91-580 6622

POSTDOCTORAL RESEARCH ASSISTANT
Analysis and Prediction of Protein Structure

Applications are invited for an SERC funded post to work with Dr. Mike Sternberg on the analysis and prediction of protein structure with the aim of obtaining rules to guide protein engineering. This is a theoretical project in the Department of Crystallography which has a colour Evans & Sutherland graphics system and access to the College's computer and the Cray 1-S at ULCC. Experience of computing and macromolecular structure is desirable. The appointment is for three years starting between 1st April and 1st October 1984. Initial salary, according to age and experience, will be between £3176 and £3266 including London Allowance. Informal enquiries can be made to Dr. Mike Sternberg while applications including Curriculum Vitae and names of two referees should be sent to the Assistant Secretary (Personnel), Birkbeck College, Malet Street, London WC1E 7HX, England.

UNIVERSITY OF EDINBURGH

Department of Physics

RESEARCH ASSOCIATE IN NEUTRON DIFFRACTION

Applications are invited for the post of research associate to take part in a programme of neutron diffraction experiments associated with the study of structural phase transitions. This project will mainly involve making very accurate high-resolution structure determinations, including anharmonic thermal motion, at various temperatures and pressures, usually with single-crystal samples. Experimental work will be done at the Institut Laue-Langevin, Grenoble, and on the new pulsed sources in the U.K. and U.S.A.

The appointment, for up to three years, commences October 1984 at a salary according to age and experience, on scale IA. Superannuation under USS. Applicants should have, or be about to obtain, a Ph.D.

Applications with the names of two referees and a statement of applicant's interests and career to date to Dr. R.J. Wilmes, Department of Physics, University of Edinburgh, Mayfield Road, Edinburgh EH9 3JZ, to arrive as soon as possible. Further details on request.

UNIVERSITY OF BRISTOL

POST-DOCTORAL RESEARCH ASSISTANTSHIP IN CRYSTAL IMPERFECTION STUDIES USING SYNCHROTRON X-RAYS

Applications are invited for this position which involves collaboration between the SERC Daresbury Laboratory, Professor A. R. Lang (University of Bristol) and Dr N. Moore (Royal Holloway College, University of London). The research will embrace a range of studies in diffraction physics and applications of X-ray topographic techniques. An interest in diffraction theory and computer image simulation is desirable. The post is available from 1 April 1984 for a period up to three years: salary on Scale 1A according to age and experience.

Applications, including curriculum vitae and the names of two referees should be sent to: Professor A. R. Lang, F.R.S., R. H. Wills Physics Laboratory, Royal Fort, Tyndall Avenue, Bristol BS8 1TL.
2 - 5 April 1984

BCA Spring Meeting, Nottingham
Dr M Begley, Dept of Chemistry, University of Nottingham, University Park, Nottingham, NG7 2RD

7 - 19 April 1984

International School on Direct Methods of Solving Crystal Structures, Erice, Sicily.
Prof. L. Riva di Sanseverino, Istituto di Mineralogia, Piazza di Porta San Donato 1, 40127 Bologna, Italy.

15 - 20 April 1984

Dr Om Johari, Director SEM Meetings, P O Box 56587, AMP O'Hare, IL 60666, USA.

20 April - 22 June 1984

Spring College on Crystalline Semiconducting Materials and Devices
Trieste, Italy
International College for Theoretical Physics, P O Box 586, I-34100 Trieste, Italy.

21 - 25 May 1984

ACA Spring Meeting, Lexington
Prof. D E Sands, Dept of Chemistry, University of Kentucky, Lexington, KY 40506, USA

3 - 6 July 1984

Inters. Conf. on Crystal Growth and Characterization of Polytype Structures, Marseilles.
Dr A Barcomet, CEMCC, CNRS, Campus Luminy, Case 913, 13288 Marseille CEDEX 9 France.

9 - 12 July 1984

26th Prague Microsymposium on Macromolecules: Polymers in Medicine and Biology
Prague

26th Microsymposium, FMM Secretariat, c/o Institute of Macromolecular Chemistry, Czechoslovak Academy of Sciences, 16208 Prague 816, Czechoslovakia.

9 - 13 July 1984

MICRO 84.
The Royal Microscopical Society, 37-38 St Clements, Oxford, OX4 1AJ

15 - 20 July 1984

6th American Conf. on Crystal Growth, Atlantic City, USA.
Dr D C Miller, Airtrol. 2000 E Hanover Ave., Morris Plains, NJ 07640, USA.

15 - 21 July 1984

10th Intersat. Liquid Crystal Conference, Univ. of York.
Dr H J Coles, Physics Dept., University of Manchester, Manchester M13 9PL

16 - 19 July 1984

27th Prague Microsymposium on Macromolecules: Physical Optics of Dynamic Phenomena and Processes in Macromolecular Systems
Address above.

16 - 20 July 1984

3rd Internat. Conf. on EXAFS, Stanford, California.
K. Cantwell, Stanford Linear Accelerator Center, Bin 68, P O Box 4348, Stanford, CA 94305, USA

29 July - 3 Aug. 1984

23rd Internat. Conf. on Coordination Chemistry, Boulder, Colorado
Professor C Pierpoint, Campus Box 215, Univ. of Colorado, Boulder, CO 80309, USA

29 July - 4 Aug. 1984

8th International Biophysics Congress, Bristol, England.
Congress Secretariat, 8th Internat. Biophysics Congress, Moon Conference Services, Petersfield, Hants, GU32 3JN.

30 July - 8 August 1984

Summer School on Crystallographic Computing,
Malmheim, Germany

4 - 14 August 1984

27th International Geological Congress,
Moscow, USSR

6 August 1984

Applications of Computer Graphics to Molecular Structure and Activity
Royal Institution, London
Dr J T Tickle, Dept of Crystallography, Birkbeck College, Malet Street, London WC1 7HX

6 - 7 August 1984

Paul Niggli Symp. on Geometric Crystallography
Zurich.
Prof. W Nowacki, Mineralog-Petrogr. Institut der Universität, Balzerstrasse 1, CH-3012 Bern, Switzerland.

6 - 8 August 1984

Symposium on Neutron Scattering, W. Berlin

9 - 18 August 1984

XIII I.U.Cr. Congress, Hamburg

12 - 17 August 1984

Electron Microscopy Society of America and the Microscopical Society of Canada
Detroit, Michigan
Dr C B Lyman, Central Research & Development Dept E I du Pont de Nemours & Co, Experimental Station, E556, Wilmington, DE 19898, USA.

13 - 17 August 1984

6th International Conf. on Thin Films, Stockholm.

13 - 17 August 1984

13th Internat. Conf. on Defects in Semiconductors
Coronado
L C Eimerling, Bell Laboratories, Murray Hill, New Jersey 07974, USA.
13 - 18 August 1984
6th European Congress on Electron Microscopy
Budapest, Hungary
Congress Bureau NOTESZ, Budapest, POB 32, H-1361, Hungary

20 - 23 August 1984
Symp. on Small Angle Scattering. Hamburg

20 - 24 August 1984
Summer School on Symmetry-Related Crystal Structures.
Karlsruhe

20 - 24 August 1984
Int. Conf. on Defects in Insulating Crystals USA
Dr R W Wynn, Dept of Chemistry, UNIST, P O Box 88, Manchester, M60 1QD.

22 - 24 August 1984
Internat. Symp. on Physical Chemistry of Colloids and Macromolecules
Uppsala
Prof B Ranby, Dept of Polymer Technology, Royal Institute of Technology, S-10044, Stockholm, Sweden.

27 - 31 August 1984
6th General Conf. of the European Physical Society, Prague, Czechoslovakia.
Physical Section, Union of Czechoslovak Mathematicians & Physicists, Na Slovance 2, 18200, Prague 8, Czechoslovakia.

27 Aug - 1 Sept 1984
10th Internat. Symp. on Reactivity of Solids
Dijon, France.
10e JSSN, Secrétariat Exécutif, Laboratoire de Réactivité des Solides, Faculté des Sciences Mirande, BP 138, F-21004, DIJON Cedex, France.

10-13 Sept 1984
European Solid-State Device Research Conference
Lille, France
M. Jacques Zimmermann, Secretary ES:DERC-84, Centre Hyperfréquences et Semicducteurs, Bâtiment P3, Université de Lille I, 59655 Villeneuve d'Ascq, France.

11 - 13 Sept 1984
BCA Crucikshank Symposium
Dr Brian Beagley, Dept of Chemistry, UNIST, P O Box 88, Manchester M60 1QD see this issue

16 - 21 September 1984
Philips X-ray Diffraction Conf. Univ Exeter
David Hughes, Pye Unicam Ltd, York St, Cambridge CB1 2EP

17-21 Sept 1984
7th International Conference onTextures of Materials
Noordwijkerhout, The Netherlands
ICOTOM 7, Netherlands Society for Materials Science, P O Box 390, NL-3330 AJ ZWIIJNDECHT, The Netherlands.

19 - 21 September 1984
British Assoc. for Crystal Growth (BACG)
Annual Meeting
Lancaster
Dr I J Saunders, Dept of Physics, Univ. of Lancaster, Lancaster, LA1 4YD

19 - 21 December 1984
Annual Solid State Physics Conf, Univ of Southampton.
Dr J Yeomans, Dept of Theoretical Physics, 1 Keble Road, Oxford.

1985

7 - 11 January 1985
ASU Centennial Conf on High Resolution Electron Microscopy
Scottsdale, Arizona
Dr P R Buseck, Center for Solid State Sciences
Arizona State Univ. Tempe, AZ 85287, USA

11 - 14 February 1985
Characterization and Analysis of Polymers Melbourne, Australia
Dr J H O'Donnell, Polymer & Radiation Group,
Dept of Chemistry, University of Queensland, Brisbane 4067, Australia.

25 - 26 March 1985
Microscopy of Semiconductors
Oxford
Royal Microscopical Society

24 May - 6 June 1985
Static & Dynamic Implications of Precise Structural Information (Course).
Erice, Sicily.
Dr P Murray-Rust, Glaxo Group Research Ltd
Greenford, Middlesex, UB6 OHE

23 - 25 July 1985
Physical Interactions & Energy Exchange at the Gas-Solid Interface.
Hamilton, Ontario

28 July - 3 Aug 1985
Sagamore VIII on Charge, Spin and momentum densities.
Siaga-Siby, Sweden
Prof Ivar Olovsson, Dept of Chemistry, Univ. of Uppsala, Box 531, S-751 21, UPPSALA, Sweden

19 - 23 August 1985
30th Internat. Symp on Macromolecules
The Hague
Dr J AM Smid, Gorlaeus Laboratories, Univ. of Leiden, Dept of Chemistry, P O Box 9502 NL-23 00 RA Leiden, Netherlands.

2 - 6 September 1985
9th European Crystallographic Meeting (ECM9)
Turin
Prof. G Ferraris, Istituto di Mineralogia, Cristallografia e Geochemica, Universita di Torino, via San Massimo 22, 10123 Turino, Italy
18 – 20 December 1985
Annual Solid State Physics Conf.
Reading
Dr J A Blackman, Dept of Physics, Univ. of Reading, Whiteknights, Reading, Berks, RG6 2AF

1986
10 – 19 June 1986
Synchrotron Radiation for X-ray Crystallography
Erice, Sicily
Prof L Riva di Sanseverino, International School of Crystallography, Piazza Porta San Donato 1, 40127 Bologna, Italy.

14 – 18 July 1986
International Conf. on Crystal Growth
ICCG-8, York
P W Ainger, Allen Clark Research Centre, Plessey Research (Caswell) Ltd, Caswell, Towcester, Northants NN12 8EQ

17 – 19 December 1986
Annual Solid State Physics Conf.
Imperial College, London
The Meetings Officer, Institute of Physics
47 Belgrave Square, London SW1X 8QX

1987
12 – 20 August 1987
14th General Assembly and International Congress of Crystallography
Perth, W.A.
Dr E N Maslen, Crystallography Centre, Univ. of Western Australia, Nedlands 6009, Western Australia.

1988
30 May – 7 June 1988
Crystallography of Molecular Biology,
Erice, Sicily
Prof. L Riva di Sanseverino, International School of Crystallography, Piazza Porta San Donato 1, 40127 Bologna, Italy.

1989
16 – 26 Sept 1989
X-ray Crystallography & Drug Action
Erice, Sicily
Prof L Riva di Sanseverino, International School of Crystallography, Piazza Porta San Donato 1, 40127 Bologna, Italy.

CRYSTALLOGRAPHY NEWS

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The 9 programmed learning booklets and the kit provide self-paced learning for a student beginning crystal studies, from the first principles of how atoms pack in simple crystals to unit cell and space group theory and X-ray diffraction. The set was featured in the December, 1984, Newsletter – write for your own free inspection copy and discover why so many other crystallographers bought sets.

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Cost? Around £13,000 for a complete system.
Want to know more?
Write or phone
Anaspec International Limited, Anaspec House, Faraday Road, Newbury, Berkshire RG13 2AD.
Telephone 0635 35733

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It is 1000 times faster than a conventional X-ray detector.
0 Counter wire is resistive quartz or metal wire.