

Society of Crystallographers in Australia



SCA

Newsletters

No 24, April 1994

The SCA homepage is located at <http://www.sca.asn.au>

PAST PRESIDENT'S REPORT

Presented to SCA XVIII, Medlow Bath, April 1994

During the past year or so scientists in Australia have been confronted by a series of important decisions, taken by government, the ramifications of which could influence the direction of the practice of science and technology in Australia for the next decade. Decisions taken in 1988 to make the CSIRO and *Ansto* earn a proportion of their budget from industrial interactions have led to significant difficulties for both institutions in 1994. Both are under threat politically and financially. Many lay-people believe that the 1988 decisions now prevent these organisations from acting honestly in matters involving their consortium partners. Obviously such distrust by lay-people and politicians does nothing but harm to their ability to pursue their assigned scientific roles in the community.

It is within this context that we found ourselves preparing a submission for the Research Reactor Review which was undertaken by Professor McKinnon, the Vice-Chancellor of Wollongong University. The contents of our submission were outlined in a previous Presidential Report. We supported the creation of a new research reactor facility because of its demonstrable value to:

- ° Australian science and technology;
- ° the development of an Australian scientific instrument industry;
- ° the nuclear medicine industry;
- ° the electronics industry;
- ° environmental surveying;
- ° the fulfilment of our international treaty obligations, and
- ° the retention of our status in nuclear science in the Asian region.

I gave evidence at the enquiry when it came to Canberra. I was not happy with the hearing I received, and I wrote a protest note enclosing further information for the further edification of the committee members.

Members of the SCA Executive live in many different places in Australia so contact between members tends to be rather indirect. We try to maximize any contact we are able to make, and we are always aware of the need to conserve the financial resources of the SCA. The IUCr Congress afforded us the opportunity to meet and discuss a number of issues. One of these was to attempt to set up e-mail conferencing to discuss urgent matters. We discussed the need to implement triennial budgeting for the SCA. At an informal open meeting of SCA Members we tried to find a consensus on the question of the merger of the CSIRO and *Ansto*, proposed by the (then) Minister for Science and Small Business, Senator Chris Schacht. Because no consensus resulted I did not write to him on the subject. Fortunately the issue was settled politically elsewhere.

The final major decision was that the *SCA Newsletter* would be distributed together with the *IUCr Newsletter*.

Politics plays a large role in science these days. I have taken any opportunity to talk to politicians of all colours, from both the House of Representatives and the Senate. In these discussions I tried to develop a proper dialogue with them in which I could attempt to convince them of the need for appropriate science policy to stimulate the growth of productive and imaginative science in Australia. I have talked with Senators Schacht, Coulter and Newman in some depth, and Rod Kemp from the House of Representatives. Recently I sent a letter to the new Minister for Science and Technology, Senator Peter Cook, outlining the SCA's position on issues raised in the *ASTEC Major Facilities Programme* document.

There has been some discussion concerning a venue and date for the 1995 Asian Crystallographic Meeting. Suffice to say here that the venue is likely to be Malaysia, but there are problems because the Malaysian bureaucracy appears to be unwilling to meet the ICSU requirements for free and unhindered entry of bona fide scientists to their country.

We are concerned that students are not being encouraged by their supervisors to present papers on their work-in-progress at conferences like Crystal XVIII. For Crystal XIX we hope that students and supervisors alike will act to increase the participation rate in the presentation of papers. I would like here to express my appreciation to the Organizing Committee of Crystal XVIII for a job very well done. Special thanks are due to the Conference Secretary, Ms Margaret Edmonston, for the work she has done to ensure the smooth operation on this conference.

Finally, as I hand over the presidency to Ian Grey at the end of this meeting, I would like to thank all the members of the SCA Council for their support during my period as president.

And please...keep informing politicians of your displeasure whenever decisions are taken by government which in your opinion is harmful to the proper development of science and technology in this country. And try to talk to ordinary people about your work. These measures will assist you in simplifying your thought processes and make your audience aware of the significance of science and technology in their lives.

Dudley Creagh

FROM THE NEW PRESIDENT

Crystal XVIII was by all measures a great success. The Hydro Majestic Hotel, with its magnificent views of the Blue Mountains, and excellent conference room, provided an outstanding setting for the conference. The organisers, hotel staff, exhibiting companies and sponsors and delegates are all to be thanked for making it such a success.

Considerable thought had clearly gone into the program preparation, resulting in a balanced mix of presentations covering the fields of protein crystallography, materials science, crystal physics, instrumentation and theoretical developments. Professor John Helliwell, the 1987 Fellow, presented the Conference Lecture on the application of synchrotron radiation to biological structures. He gave an excellent overview of new developments in data collection methods at synchrotron facilities, with special emphasis on the use of Laue methods for data collections from protein crystals. Another highlight of the conference was the after-dinner presentation by Sandy Mathieson on aspects of the early history of crystallography in Australia. We look forward to further historical perspectives at future conferences.

There were about 110 participants at Crystal XVIII, and contributions of 36 lectures and 41 posters, the quality of which was uniformly high. Of the participants, 25 were student members. The majority of the students presented posters or gave oral presentations. Five students received some financial support from the SCA and the 1987 fund. It is worth noting that not all the funds set aside for student support were used because of the small number applying for assistance.

During the next 12 months we will be working towards increasing student participation at Crystal XIX, and will be circulating information on Studentships.

Following the SCA meeting at Medlow Bath, a workshop on Powder Diffraction was held at the Redleaf Motel, Blackheath. The emphasis of the workshop was on developments at the Australian National Beam Line Facility (ANBF) at the Photon Factory, Tsukuba, and on the performance of Big Diff, the Australian designed and constructed powder diffractometer. Dr. Hiroo Hashizume gave an

overview of the synchrotron facility at Tsukuba and the ANBF. Richard Garrett gave further details on the setting up of the ANBF and the commissioning of the Big Diff. Andrew Stevenson, Rod Hill and Terry Sabine had "hot off the press" results from the Big Diff to report. The general prognosis was that the instrument is performing extremely well in relation to resolution, diversity of experiments that can be performed and the effectiveness of the image plates for data collection. Dudley Creagh and Steve Wilkins mentioned new developments in the pipeline which include a Sagittal focussing monochromator for wavelength selection, a second condensing channel cut monochromator to further improve resolution at high angles and an analyser crystal to replace the diffracted beam slits. A flat specimen holder is now awaiting installation as an alternative to capillaries.

It is worth reminding SCA members that the ANBF is available for use by all Australian scientists through their submission of a research proposal to the management of the facility. Submissions can also be made for travel funds to the Photon Factory. Forms for proposals and for travel fund applications are available from Ms Margaret Edmonson at *Ansto*.

In the coming newsletters I would like to present a series of brief sketches of Crystallography laboratories around Australia and New Zealand, that provide information on personnel, research interests, facilities and equipment, and contact coordinates. An important aspect of the survey of individual centres would be to explore possibilities for providing specialist assistance and equipment access to research students and scientists from other centres. We hope to cover two or three centres in each newsletter. Eventually the surveys could be gathered together into a Crystallography Research Directory, analogous to those prepared in other fields such as the Condensed Matter Research Directory. To start the process off, a sketch of the A.D. Wadsley laboratory at CSIRO, Division of Mineral Products is presented in this

issue. This venture is dependent on receiving equivalent information from all the other Crystallography laboratories and we welcome contributions.

Having just finished the CRYSTAL XVIII meeting, it is a shock to the system to realise that we have to start planning immediately for CRYSTAL XIX. The next meeting is only 12 months away. It is planned for the week following Easter, as for CRYSTAL XVIII, which makes it 18-21 April, in or near to Melbourne. Confirmed members of the organising committee are Andrew Stevenson (CSIRO Materials Science and Technology), Jonathon White (Melb. Uni. Chemistry), Michael Lawrence (Biomolecular Research Institute), and Lachlan Cranswick and myself (CSIRO Mineral Products). Any of the above people would welcome ideas and input on conference topics, visiting scientists in Australia at that time, speakers etc..

Ian Grey

TREASURER'S REPORT

Presented to SCA XVIII, Medlow Bath

April 1994

In this my inaugural report as Treasurer of the Society of Crystallographers in Australia I first of all seek the indulgence of members for some of the details of the report dealing with the period of 1992 preceding my taking over the reins as Treasurer at the beginning of 1993. This includes non-entry of details of payment of some 1992 dues, affecting about 12 members. These members have been notified and their records now are current. We do suffer badly from decentralisation (Adelaide-Brisbane) but our records should now be largely correct, with the operational protocol (*re* collection of dues etc.) becoming more familiar to us. While on the matter of members and membership, I would like to raise the point regarding lapsed membership through non-payment of SCA dues. Our previous Treasurer took some action in sending letters to such members reminding them of their status and requesting either payment or an indication of a desire to resign.

Regarding our financial affairs, call on resources has been heavy, particularly in support for student members but we can report an overall profit of \$750 for the 1 July 1992 to 31 March 1994 period. While the profits are down on the corresponding years, this is not unexpected considering the unfavourable interest rates currently received (ca 5%) and our resolve to support student participation at crystallography conferences which resulted in 6 students attending the International Meeting at Beijing (\$10,100) (supplemented by \$6000 from XIV IUCr-87) while \$1950 was provided to assist 5 students to attend CRYSTAL XVIII here at Medlow Bath (see statement at foot of this report). This is to be supplemented by an IUCr-87 contribution of \$1500. Also a \$2000 loan to the AsCA Committee prior to the Singapore meeting in 1992 was repaid in early 1993. A deposit of \$5000 for securing the Hydro Majestic Hotel at Medlow Bath for CRYSTAL XVIII appears in the 1992-1993 expenditure and reappears as Income 1993-1994 on repayment by the NSW Organizing Committee. A working loan of \$3000 to the Crystal XVIII Committee remains outstanding. A sum of \$300 was also deposited at the Flinders University of SA to provide working funds for the Secretary. A contribution of \$500 was also made to a working fund at La Trobe University to assist the compilation of the History of Australian Crystallography by Sandy Mathieson. I would like clarification of the situation regarding this project, possibly decided upon at a previous meeting of the SCA and what further support SCA might be making to this worthy project.

An audit of the SCA accounts is currently being completed by the accountant recommended by the past Treasurer in his last report and will be presented after the end of the current financial year. I would also like to implement an annual audit of the SCA affairs.

Location of Funds

Most of the SCA funds are deposited in the UNICREDIT account No. 3248, either as a WORKING ACCESS ACCOUNT (S1) or as VARIABLE-PERIOD CASHABLE DEPOSITS, as shown below. All attract 5% interest or better.

S1	Current Account			
I3	6154	28 May 1994	5.0%	3500.00
	8267	3 April 1994	5.0%	4000.00
I6	3412	10 August 1994	5.0%	1500.00
	4089	7 July 1994	5.0%	2000.00
	7860	18 June 1994	5.0%	4540.00
I12	3151	24 October 1994	6.0%	1000.00
	5352	21 May 1994	6.0%	1000.00
I22	11370	28 September 1994	6.0%	8000.00
	6987	25 June 1994	6.0%	11500.00
Unicredit,			Total	\$38179.35
Australian Guarantee Corporation			2.5%	\$14000.00
Total				\$52179.35

Graham Smith

STATEMENT FOR SCA

Income	1992-1993	1993-Mar94
Membership	1442.16	3027.00
Interest	3118.72	1519.56
IUCr87	6000.00	-
Refund: AsCA '92	2000.00	-
Refund: Crystal XVIII	-	5000.00
	12838.56	9546.56
Expenditure	1992- 1993	1993-Mar94

Scholarships	10100.00 ¹	1950.00 ²
FASTS Membership	578.10	578.10
Special Contribution	-	500.00 ³
CRYSTAL XVIII Working	3000.00	-
CRYSTAL XVIII Deposit	5000.00	-
State Government Tax	1.50	5.85
Petty Cash	15.50	300.00
Wreath	-	95.50 ⁴
TOTAL	18195.10	3429.45
PROFIT/LOSS	-5356.54	6117.11

Notes:

Scholarships

1 XVI IUcr Congress (Beijing)			2 CRYSTAL XVIII		
1.	R. Malby	\$1700	1.	M. Beuchat	\$350.00
2.	T. Izard	\$1700	2.	B.K. Gan	\$650.00
3.	J. R. Hester	\$1600	3.	A.K. Green	\$350.00
4.	A. McCoy	\$1600	4.	Kharisun	\$450.00
5.	M.Niewenhuyzen	\$1700	5.	D. Shi	<u>\$150.00</u>
6.	L. Chung	<u>\$1700</u>			
TOTAL		<u>\$10100</u>			<u>\$1950.00</u>

³ \$500 was provided for Sandy Mathieson to support a production of History of Australian Crystallography.

⁴ At the instigation of the Secretary (SCA), a wreath was sent on the death of Jim King.

SKETCHES OF CRYSTALLOGRAPHY LABORATORIES

The A.D. Wadsley Laboratory

CSIRO Division of Mineral Products

Port Melbourne

The X-Ray diffraction laboratory at the Division of Mineral Products was named the A.D. Wadsley Laboratory in April 1991, in a special dedication ceremony to honour the memory of one of Australia's most outstanding crystallographers, Dr. David Wadsley. The laboratory is divided into two sections, covering service and research activities, which are run by Mr. Lachlan Cranswick and Mr. Ian Madsen respectively.

(a) Scientific Services Powder X-ray Diffraction Laboratory.

The Service part of the laboratory deals with the analysis of powder samples and is built around two networked, PC controlled, automated Philips diffractometers (PW1710 and XPERT systems) with diffracted beam curved graphite monochromators and 42-sample automatic sample changers. The diffractometers have both semi and full radiation enclosures to provide a safe working environment. There is a separate preparation area with sink, fume hood, preparation benches, microniser and centrifuge. A separate data analysis area has two networked 486 PCs using up-to-date software with the emphasis on user-friendliness. This includes the latest DOS JCPDS-ICDD powder diffraction data base on hard-disk for fast searches, latest DOS and MS-Windows XPLOT search-match software for easy data manipulation, Philips APD software for DOS, RIET7 Rietveld for DOS, ATOMS for DOS and also MS-Windows, Sheb93 for DOS, Word for Windows, 123 for Windows, SigmaPlot for DOS (and MS-Windows). Site XRD users and visitors have easy access to the internet via TCP-IP software, including the user-friendly PINE e-mail program. Applications include routine phase identification, quantitative analysis (using both Rietveld and non-Rietveld methods) and structure refinement using the Rietveld method.

The main internal research area of the laboratory is the application and optimisation of the Rietveld method for quantitative analysis and structure refinement. Another is involvement in developing the internet for the benefit of crystallographic communication via such facilities as the Usenet news groups, gopher and World Wide Web. Visitors from academia and other research organisations, who do not have access to powder XRD facilities, are welcome to use the equipment for fundamental research. Collaborative projects are possible and Lachlan is on hand to give assistance to users when requested. Industry users are also welcome but must pay commercial rates to use the equipment or have samples analysed.

(b) The Research Laboratory

The 'research' side of the laboratory houses a wide range of single crystal and powder diffraction equipment, including 3 Weissenberg cameras, 2 precession cameras and 2 Guinier powder cameras. Single crystal data sets can be collected using the recently revitalised Siemens AED diffractometer. A new, microprocessor based diffraction controller has been added to facilitate data collection using PC based software. The need to achieve the highest possible resolution in powder diffraction patterns prompted the Division of Mineral Products to include an incident beam focussing monochromator (IBFM) as a part of existing diffraction equipment. A Huber 611 monochromator with a curved Ge(111) crystal for Cu K(alpha) has been adapted to work with a conventional Philips PW1050 goniometer. All of the adaptors required for the IBFM were designed and manufactured within the Division.

The Division has recently purchased a new powder diffractometer based on the Inel CPS120 curved position sensitive detector. The instrument will allow the collection of 120 degrees of diffraction data simultaneously, and will be ideally suited to the study of dynamic effects, e.g. high temperature studies. A range of sample holders have also been purchased, thus allowing the study of capillary specimens as well as conventional powder samples in both reflection and transmission mode. Staff in the Division have extensive experience in the application of the Rietveld method in both its structural and non-structural applications. Dr. Rod Hill has worked with Dr. Chris Howard from *Ansto* on major developments of the original Wiles and Young Rietveld code. Rod and Ian Madsen have carried out systematic studies to determine the optimum data collection conditions for Rietveld analysis, including the development of a novel variable counting time strategy which ensures that all peaks are collected with approximately equal counting statistics.

The Division also has considerable experience in the application of the Rietveld method for quantitative phase analysis and crystallite size/strain determination on a wide range of mineral and inorganic phase systems. The development of user-friendly software to remove the need for specialist crystallographic knowledge has been a feature of this work.

For further details, contact:

I.C. Madsen, tel (03) 6470366, Fax (03) 6463223

e-mail ianm@dmp.csiro.au

L. Cranswick, tel (03) 6470367, Faxes above

e-mail lachlan@dmp.csiro.au

NEWS ITEM

From the Swiss/Norwegian Beamline comes news that there is a possibility of a Student Scholarship to attend a one week Spring School on Synchrotron Radiation in Grenoble in the spring of 1995. There is also a possibility of staying on at ESRF in Grenoble for a few months on a Scholarship.

Contact Steve Wilkins for details or:

Prof Hans-Peter Weber

Swiss-Norwegian Beamline

e-mail: Hans-Peter.Weber@ic.unil.ch

AUSTRALIANS WHO HOLD OFFICE IN ISCU AND AFFILIATED BODIES

PERSON,	INTERN'AL BODY	POSITION
Dr D. C. Creagh	IUCr	<i>Chairman:</i> Commission on Crystallographic Apparatus
Dr S.R. Hall	IUCr	<i>Editor:</i> <i>Acta Crystallographica C</i> <i>Member:</i> Commission on Crystallographic Data <i>Member:</i> Commission on Journals
Dr R.J. Hill	IUCr	<i>Chairman:</i> Commission on Powder Diffraction <i>Member:</i> International Centre for Diffraction Data
Dr C.J. Howard	IUCr	<i>Member:</i> Commission on Journals <i>Co-Editor:</i> <i>Journal of Applied Crystallography</i>
Dr C. Kennard	IUCr	<i>Member:</i> Commission on Crystallographic Data <i>Consultant:</i> Commission on Crystallographic Teaching
Dr M.F. Mackay	IUCr	<i>Member:</i> Commission on Small Molecules
Dr M.R. Taylor	IUCr	<i>Member:</i> Commission on Journals <i>Co-Editor:</i> <i>Acta Crystallographica</i>
Dr T.R. Welberry	IUCr	<i>Consultant:</i> Commission of Crystallographic Teaching
Prof. J.W. White	IUCr	<i>Chairman:</i> Commission on Neutron Scattering <i>Ex-Officio Member:</i> Commission on Charge, Spin and Momentum Densities
Dr M.A. Spackman	IUCr	<i>Member:</i> Commission on Charge, Spin and Momentum Densities
Dr E.N. Maslen	IUCr	<i>Chairman:</i> Committee on Electronic Publishing, Dissemination and Storage of Information <i>Ex-Officio Member:</i> Commission on Crystallographic Data <i>Representative:</i> International Council for Scientific and Technical Information
Dr S.W. Wilkins	IUCr	<i>Member:</i> Commission on Synchrotron Radiation

NATIONAL COMMITTEE FOR CRYSTALLOGRAPHY

Report to SCA XVIII by the Chairman

General

The Australian National Committee for Crystallography continues to serve as the interface between Australian crystallography and international bodies and to facilitate national initiatives in crystallography and has worked in close liaison with the Society of Crystallographers in Australia (SCA) which continues its complementary activity of organising scientific meetings. This close collaboration has again been much appreciated.

A major change in neutron crystallography in Australia in 1993 was the assimilation of most of the staff of the Australian Nuclear Science and Engineering (ANSE) organisation into *Ansto*. *Ansto* at the same time has undertaken a refurbishment program, as far as its resources will allow and it will be important to see how this new arrangement continues to serve nuclear science in Australia especially given the change in management arrangements at *Ansto*.

The growth in access to overseas facilities springing from the 1989 report of the Australian National Committee of Crystallography continues apace. In particular, developments of the Australian Beamline at the Photon Factory, Tsukuba, Japan, are now entering the second phase where the instrument is being used for some applications and tests on it for a wider range, subsequent to its installation at Tsukuba in September/October 1993, are proceeding.

Also in 1993 arrangements were concluded with the Rutherford Appleton Laboratory of the Science and Engineering Research Council (UK) for limited formal access by Australian neutron users to facilities at the ISIS Pulsed Neutron Spallation Source there. As part of this agreement it was decided to build a new instrument, "SURF" - a neutron reflectometer for studying the structure of very thin films and surface layers by this new technique.

XVI IUCR Beijing, China

In August 1993 at the general Assembly of the International Union of Crystallography held at Beijing, China, the Australian delegation comprised John White, Hans Freeman, Dudley Creagh, Ian Grey (alternate delegate). At the meeting of the Neutron Diffraction Commission it was agreed that the name of the Commission should be changed to the Neutron Scattering Commission and this was accepted by the General Assembly. Also at the meeting of the Neutron Diffraction Commission John White was elected Chairman of the Commission.

Access to "Big Science" Facilities

The Photon Factory, Tsukuba, Japan

Australian interaction with the Photon Factory is mediated through a joint Australian/Japanese Steering Committee. The Australian membership comprises Dr David Cook (Executive Director, *Ansto*), Professor J.W. White (Chairman, National Committee for Crystallography) and Associate Professor D. C. Creagh (Member of National Committee for Crystallography; Chairman, Society of Crystallographers in Australia). In addition there is an Australian Management Committee comprising the above members with also Professor H.C. Freeman, Dr S. Wilkins (CSIRO), Dr P. Coleman (CSIRO), Professor D. James (representing the Australian Research Council). Under the Management Committee is a Technical Committee charged with the construction of the Beamline and its further development. This is headed by Professor D.C. Creagh and has as its members, Dr J. Boldeman (*Ansto*), Dr R. Garrett (*Ansto*), Dr S. Wilkins (CSIRO), Professor J.W. White (Australian National University). There is in addition a Program and Review Committee, chaired by Professor J.W. White and the membership comprises Dr J. Boldeman (*Ansto*), Professor D. Creagh (ADFA), Professor H.C. Freeman, Dr R. Garrett (*Ansto*), Dr J. Vargese (CSIRO), Dr S. Wilkins (CSIRO).

In October 1993 the instrument "BIGDIF" was taken from the research laboratories at the CSIRO in Melbourne and installed at the Photon Factory in Japan. The instrument has now been aligned and shows great promise for powder diffraction, EXAFS, reflectometry and topography. A major effort, is being made to bring the intensity of this, one of the weakest beams at the Photon factory, to within a factor of 3 to 10 of the best beamline there using a focussing monochromator system under development in Dudley Creagh's laboratory at University College, ADFA. It is expected that this will be installed in October/November 1994 and the instrument may then be used for protein crystallography.

With the advent of the Australian Beamline interest in the use of Japanese synchrotron radiation facilities has grown apace and many experiments have been conducted on other beamlines at the Photon Factory. There is an indication that the Australian Beamline collaboration has induced further activity there.

An interesting question for the future is whether to further develop at the Photon Factory or to look forward to developments on the SPRING 8 or on the new facilities now becoming available at the European Synchrotron Facility (Grenoble, France) or the Advanced Photon Source at Argonne National Laboratory, USA. These sources will be the premier sources in the world in a few years time. A meeting is being convened by the National Committee of Crystallography to examine these questions.

Neutron Facilities

Members of the National Committee, John White and Chris Howard were informally invited to join the International Science Advisory Committee of the Rutherford Appleton Laboratory, UK and are members of the Science Assessment Panels and Selection Committees of that Laboratory as a result of the Australian participation there started in 1993. The new instrument "SURF" is now under construction at the Rutherford Appleton Laboratory and is expected to be operational late in 1994. There is likely to be a strong Australian participation in the use of this instrument.

McKinnon Commission on the Need for Replacement for the HIFAR Reactor

As reported last year the National Committee for Crystallography has been involved in both the technical aspects of submissions to this Review and also on a wider study during the Christmas vacation 1992/1993, on safety, decommissioning, cost effectiveness etc. As a representative of the Australian Academy of Science John White testified at the McKinnon Commission at its hearings in Canberra in March 1993. When the Commission reported, John White was consulted by the Academy on a number of occasions in connection with the Academy's response.

The McKinnon Commission's recommendations are disappointing. An important opportunity for Australia to move ahead as a leader in the neutron and nuclear science of the Asia Pacific region has been lost for at least five years and, in the view of this National Committee, the strong advice of the Academy of Science on these matters has not been adequately heeded.

The results of the Review have been even more damaging because its very specific recommendations for bridging the period between now and a future decision, have not been taken up by government. In particular, the recommendation of an investment program to bring some of the nuclear facilities at Lucas Heights to a competitive standard with reactors of the same kind overseas have not been funded. The particular proposal that a cold source should be installed appears to be in a stalemate. Without this Australia cannot hope to maintain its home based facilities in anything like a competitive state or even ensure the full value of current investments in instruments at HIFAR. This is a grave matter which the Academy of Science could take up at the highest levels.

Merger of ANSTO and CSIRO

The National Committee at the invitation of the President of the Academy of Science helped the Academy in the formulation of advice on this matter. This matter was an excellent illustration of the importance of consultative process between government and major advice centres such as the Academy of Science. The apparent lack of consultation from the Minister was a major plank in the submissions from the Academy about the damage likely to be produced from the proposed merger. It was reassuring that government finally was able to accept the advice of the Academy and other bodies who strongly moved on this point.

The Future needs of Australia for Synchrotron Radiation

Funding arrangements are now in place for a meeting to be sponsored by the National Committee for Crystallography to discuss *Future Plans for Synchrotron Radiation Use in Australia*. This meeting is in response to growing use of synchrotron radiation and will comprise a working group of approximately ten people to discuss the different options including increased access to Japan, the United States or Europe, and the possibility of a specially adapted Australian synchrotron.

John White

NEWS OF SCHOLARSHIPS

International Centre for Diffraction Data

Crystallography Scholarship Awards

To encourage promising graduate students to pursue crystallographically-oriented research, the International Centre has established a Crystallography Scholarship Fund. While the Ewald Prize is awarded every three years to an internationally recognized crystallographer, little effort has been made by science departments to cultivate aspiring crystallographers. Convinced of the beneficial, scientific impact of the proposed scholarships for crystallographically-oriented research, the ICDD has solicited funds from private and industrial sectors to support this program. The ICDD awarded two scholarships in 1992, two in 1993 and three in 1994. Applications for the 1995 awards must be received by ICDD no later than 31 October 1994.

Qualifications of the applicants

The applicant should be a graduate student seeking a degree with major interest in crystallography (crystal structure analysis, crystal morphology, modulated structures, correlation of atomic structure with physical properties, systematic classification of crystal structures, phase identification and materials characterization). There are no restrictions on country, race, age or sex. The term of the scholarship is one year. Application for one renewal may be made by the recipient at the end of the first year. Because a limited number of scholarships are awarded, renewal applications will be considered on a competitive basis in conjunction with all applications that have been submitted up to the closing date.

Submit:

a. *Curriculum Vitae*.

b. A one-page proposal by the graduate student describing the type of crystallographic research to be partially supported by scholarship.

c. A supportive letter from the sponsoring professor of an accredited university or an institute of technology.

Restrictions on the scholarship fund:

a. The scholarship stipend of \$2,000 is to be used by the graduate student to help defray tuition and laboratory fees. A portion of the stipend may be applied to registration fees to accredited scientific meeting related to crystallography.

b. No more than one scholarship will be awarded to any one accredited institution per year.

c. The funds of the scholarship are not to be used for travel.

The awarding of the scholarships shall be administered by a committee consisting of the ICDD Chairman, the Chairman of the ICDD Technical Committee, and the Chairman of the ICDD Education Subcommittee. One or more accredited professors (with no conflicts of interest) may be invited to assist in the selection of successful candidates.

Applications must be received by 31 October 1994.

Please mail to:

Secretary, International Centre for Diffraction Data

Newtown Square Corporate Campus

12 Campus Boulevard

Newtown Square, PA 19073-3273 U.S.A.

COUNCIL NOTES

It was noted that *Ansto* had agreed to take over from Dave Winkler as the National Affiliated Centre for the Cambridge Database.

Council members were disappointed with the number of applications received in response to the advertising of "1987 Studentships" to assist students to attend CRYSTAL XVIII. It was suggested that supervisors be asked to encourage students to apply. Earlier notice will be given of available financial support for travel to attend CRYSTAL XIX.

At the next business meeting the Council intends to bring forward a motion to increase the annual subscription to \$7 for students and \$25 for full members, discounted as at present if paid by April 1st. The treasurer is to investigate the possibility of enabling payment of subscriptions by credit card.

FUTURE MEETINGS

It is planned that the next meeting of the Asian Crystallographic Association, AsCA will be held in November or December 1995 at a venue yet to be decided but possibly in Malaysia.

The next meeting of the SCA, CRYSTAL XIX is planned to be held in the Melbourne area in the week following Easter 1995; that is 18-21 April. The members of the organizing committee are Andrew Stevenson (CSIRO Materials Science and Technology), Jonathon White (Melb. Uni. Chemistry), Michael Lawrence (Biomolecular Research Institute), and Lachlan Cranswick and Ian Grey (CSIRO Mineral Products).

These meetings have been referred to elsewhere in this issue.

EDITORIAL

This issue of the *SCA Newsletter* marks another change in Editor. Although the Secretary of the SCA has in the past also held the position of Editor these two positions have been split with Max Taylor remaining as Secretary. This issue was produced in Perth but has been distributed together with the *IUCr Newsletter* by the Secretary. However it is proposed that in future both newsletters will be sent to you by the Editor.

This issue of the Newsletter includes reports to the SCA meeting at Medlow Bath from the Past-President Dudley Creagh, the Treasurer Graham Smith and the Chairman of the National Committee for Crystallography, John White. Included in John White's report is a list of Australians who hold office in IUCr and affiliated organisations. We seem to be very well represented on all the commissions and also on *Acta Crystallographica*. Also included is an article from the incoming President Ian Grey.

As mentioned by Ian Grey in his article, future editions of the *SCA Newsletter* will present outlines of each of the Crystallography Laboratories around Australia and New Zealand with two or three being included in each issue dependent on available space. The first of these, that for the Wadsley Laboratory of CSIRO, Division of Mineral Products, is included in this issue.

Since it is expected that the *SCA Newsletter* will be distributed quarterly, members of the various laboratories should send their submissions by early July to be included in the next issue. Other articles of crystallographic interest are also welcomed by the editor. Contributions such as these and any other items of news should be sent to the Editor by e-mail, preferably in ASCII format or as a BinHex, UUENCODE, or EUDORA file.

Brian Skelton
