

# Report on the Inaugural Asia-Oceania Neutron Facility Directors Meeting.

14:00 - 17:30 BATAN-Bandung, Indonesia, 19 May 2011

## Attendees (Neutron Facility):

Shane Kennedy	(OPAL & Interim chair/facilitator)
Dongfeng Chen	(CARR)
Hesheng Chen	(CSNS)
Iman Kuntoro	(G. A. Siwabessy)
Kye-Hong Lee	(HANARO)
Mitsuhiro Shibayama	(JRR-3M-Universities)
Yasuhiko Fujii	(observer from AONSA EC)

## Apologies:

Samrath Chaplot	(DHRUVA)
Masatoshi Arai	(J-PARC)

## 1. Introductions

All attendees presented themselves and business cards were exchanged.

## 2. Short statement from each facility

### 2.1 CARR: Dong feng (CIAE)

#### (a) Technical issues

- CARR first criticality was on 13 May 2010, but problems with safety rods prevent operation. Restart is anticipated between Oct. 2011 and Jan. 2012.
- CNS is not yet built. Plan to finish over next 2-3 yrs with users support.
- All first phase neutron beam instruments are built: HRPD, Residual Stress, Four Circle Diffractometer, SANS, Reflectometer, Texture diffractometer and TAS.
- Further instrument are under development with participating user groups; e.g. High Intensity Powder Diffraction with Beijing University, Thermal TAS with IOP-CAS and PGAA & another University.

#### (b) User Program

- First neutrons for users should be available early in 2012.
- CARR and CSNS have jointly run an annual national users meeting since 2009. It is held in Nov/Dec, typically with ~200 delegates.

### 2.2 CSNS: Hesheng Chen: (IHEP)

#### (a) Technical issues

- Construction is in two stages;
  - 1<sup>st</sup> stage is 100kW power with LINAC at 85 MeV,
  - 2<sup>nd</sup> stage is 500kW power with upgrade of LINAC to 250 MeV.
- The budget is tight, so user investment in instruments is encouraged.

- First funded instruments will be; High Intensity Powder Diffractometer, Multi-purpose reflectometer and SANS.
- Ground breaking will be in Sept. 20`1. First neutrons should be in 2016.

**(b) User Program**

- CSNS have had 6 user meetings since 2004. Since 2009 this has been in conjunction with CIAE & IOP (see above).
- The science advisory committee consists of 12 members. So far they are mostly concentrating on advice with construction & facility scope.
- User training is being promoted at foreign sources.

**2.3 Hanaro: Kye hong Lee (KAERI)**

- A facility report will be given to the AONSA EC.
- There are no issues to report for this meeting.

**2.4 JRR3-U: Mitsuhiro Shibayama (ISSP-Tokyo)**

**(a) Technical issues**

- JRR3 damage is not serious, but a licensing process is necessary before restart.
- Safety repairs are highest priority for JAEA.

**(b) User Program**

- The JRR3 University user program is mature, but human resources are low with only 12 staff and some support from Tohoku Uni for operation of 13 neutron beam instruments.
- ISSP and JAEA each receive ~300 experiment proposals per annum. (in addition to the 130 proposals for JPARC).
- Reactor management is independent of the user programmes so ISSP and JAEA facility directors need to negotiate usage issues.
- JAEA is in a difficult situation, so there is some pressure to close JRR3.
- An expression from the Facility Directors in support of the user programs at JRR-3 to JAEA, may be helpful.

**2.5 GA Siwabessy: Imam Kuntoro (BATAN)**

**(a) Technical Issues**

- Siwabessy has 7 Neutron Beam Instruments. All but the TAS, which is undergoing an upgrade, are fully operational.
- BATAN have 8 PhD scientists operating these instruments.
- Reactor operates at 15 MW for ~3500 hrs/year.
- Reactor cycles are; 11 days on, 9 days off, then 4 days on and 4 days off. This is mainly geared to radioisotope production. (Start-up is often on weekend)

**(b) User Program**

- There is no formal user program, so the instruments are not fully utilized.
- Residual Stress diffractometer and SANS are the busiest. All others have available capacity
- The reactor operating schedule is difficult for neutron beam users. Staff are not compensated for after hours work.
- Open for regional user for the remaining beam times. The most frequent

- regional users, by now, are coming from Malaysia and Japan.

## **2.6 OPAL: Shane Kennedy (ANSTO)**

### **(a) Technical issues**

- In 2010 OPAL operated for 279 days. The CNS was out of action for 43 days, due to technical problems.
- In 2011 CNS was out of action until 14 May. Now it is operating again.
- There are 6 instruments under development, two of which will be commissioned this year; TOF-INS & cold-TAS (with NSC, Taiwan). The other 4 instruments are due for completion in 2013
- Funding has been approved for building extensions to the Bragg Institute (> 120 people + co-location of National Deuteration Facility (NDF) labs).
- We are planning our strategy for development of a 2<sup>nd</sup> neutron guide hall.

### **(b) User Program**

- Seven neutron beam instruments & the NDF are running.
- There are ~ 6 month backlogs of experiments on Reflectometer & SANS due to the problems with CNS operation.
- OPAL is in its sixth user proposal round.
- We have now moved to regular 6 month calls for proposals (May & Nov)
- Proposal success rate is around 60% -70%, with 47% Australian community, 31% overseas, and 22% ANSTO.
- We now face a challenge in growing the Australian community to match the projected growth in instrument capabilities.

## **3. Aim and scope of Directors Meetings**

- to coordinate activities in support of AONSA,
- to provide an execution path for requests from AONSA EC,
- to raise operational issues for the user communities to consider,
- to coordinate requests to AONSA for support for our various initiatives,
- to foster deeper discussion of our technical developments, and of specific issues related to provision of service to our user communities.

## **4. Membership of Directors Meetings**

- All agreed to continue to include the current members.
- The criteria for eligible facilities and directors need to be defined; e.g.
  - definition of eligible facility could include source power and/or facility size, and
  - definition of eligible director could include one who operates a user program and/or one who owns instruments.
- N.B. Neither definition was decided at this meeting.
- Other facilities/directors who do not meet the criteria for membership could be given observer status.

## **5. Possible facility issues for collaboration and discussion.**

### **5.1 Co-ordination of user support activities**

- Provision of reactor/source schedules to each other would facilitate backup for urgent projects. Directors from HANARO, JRR3-U & OPAL all support this idea.
- OPAL provides an open proposal portal on the web, and HANARO is opening their web based proposal portal in June. Others may benefit from advice on provision of portal services. Also there may be benefit from co-ordination of timing of calls for proposals.
- Prof. Fujii suggested that neutron source & proposal schedules could be posted on the AONSA home page.

## **5.2 Support for facility outages**

- Recent events, such as the earthquake and tsunami in Japan and the extended outages of the OPAL CNS, highlight the value of close collaboration in support of our user communities.
- In the first instance Japanese neutron beam users benefitted by provision of beam time at HANARO & OPAL. In the second instance Australian neutron beam users benefitted by the provision of beam time at HANARO.
- The facility directors could provide a forum for coordination of support for neutron facility outages (both planned and unplanned outages).

## **5.3 Training and workshops**

- Instrument scientists would benefit from shared knowledge, particularly in respect of complementary capabilities at other facilities in the region.
- This could be achieved by periodic workshops for instrument scientist. (e.g. as satellite meetings of the Asia-Oceania Conferences on Neutron Scattering).
- These workshops should each have specific themes, and may be best run as invitational, with 2-3 nominated representatives per facility.
- It was agreed that a workshop be held as a satellite to the AOCNS in Tsukuba (possibly on Friday 25<sup>th</sup> Nov). Prof. Shibayama agreed to coordinate the planning for this (see actions below).
- The meeting generally agreed that neutron powder diffraction and SANS would be worthwhile topics for the first workshop in Tsukuba.

## **6. Request from the AONSA Executive regarding “AONSA Visiting Fellows”**

- The meeting welcomes the suggestion of such a scheme & could potentially provide support.
- Secondments of 6 month to 12 months, or even longer, are favoured.
- The aims of scheme should be clearly differentiated from those that are managed under bilateral agreements.
- The directors would like to encourage AONSA Executive to develop the concept further.

## **7. Future meetings, activities & actions arising from this meeting**

- All agree that there is a good reason for regular AONSA Neutron Facility Directors meetings.

- All agree to holding the next meeting during the Asia Oceania Conference on Neutron Scattering, in Tsukuba (20-24 Nov 2011), with Rob Robinson as chair. [**ACTION: Rob Robinson**]
- It was generally agreed to hold the meetings biannually, in conjunction with the AONSA-EC meetings. It may be necessary to arrange video conferencing for those who cannot attend.
- A mission statement for the Facility Directors Meeting is to be drafted and circulated for comment. [**ACTION: Shane Kennedy**]
- Directors agree to propose that the Facility Reports to the AONSA Executive Committee be scheduled early in that meeting to reduce repetition and hence to save time in the Facility Directors meeting, allowing more time for focussed discussion. [**ACTION: Shane Kennedy**]
- The Facility Directors propose to organise 1-2 instrumentation focussed workshops immediately after AOCNS to promote direct exchange between specialist instrument scientists at the member facilities (see item 5.3) [**ACTION: Mitsuhiro Shibayama**]
- Chair to provide a brief summary report of this meeting for AONSA-EC on Friday 20<sup>th</sup> May. [**ACTION: Shane Kennedy**]

## **8. Other Business**

No other business was raised.

## **9. The meeting closed at 17:30**

### **Appendix 1: Mission statement**

**S J Kennedy, 3<sup>rd</sup> June 2011**

## **Draft Mission Statement for the Asia-Oceania Neutron Facility Directors Meeting**

*The aim of the Asia-Oceania Facility Directors meetings is to provide tangible benefit to each other through enhanced utilization of our neutron sources. Mechanisms for achieving this include co-ordination of our user programs, multilateral exchange of technical information and provision of support to users of facilities that are at reduced capacity.*