



## Science & Technology Facilities Council

### **Nuclear Physics Cross Community Committee**

**28 November 2017, Daresbury Laboratory**

Present: Tom Davinson (Edinburgh) - Chair  
Ken Livingston (Glasgow)  
Paul Nolan (Liverpool)  
John Simpson (STFC Daresbury)  
John Smith (UWS)

In Attendance: Jenny Hiscock (STFC Programmes Directorate and acting secretary)  
Ian Lazarus (STFC Daresbury)  
Jane Long (STFC Programmes Directorate)

Apologies: Alison Laird (York)  
Gavin Smith (Manchester)

#### **1. Minutes of Last Meeting**

1.1. The minutes of the previous meeting were agreed.

#### **2. Brief reports from Cross-Community Groups**

2.1. The Daresbury, Liverpool and Manchester mechanics effort consists of Grant, Burrows, Cordwell, Seddon and Smith. Over the past year, they have worked on a range of projects including:

- AGATA as it moves into the next phase, delivering preliminary designs for a  $4\pi$  instrument at different facilities.
- Completed NEDA@GANIL
- Kept a watching brief on the Low Energy Building at FAIR. GSI has asked for cross-community effort to carry out design work but this has not yet been agreed.
- R3B – participating in the assembly and commissioning.
- ISOL-SRS – technical support in commissioning the MRI magnet at CERN.
- 3D portable gamma ray spectrometer delivered for Sellafield (part of an IPS grant)
- Cryostat for Ge detector of RITU spectrometer at JYFL
- Design for FATIMA is now being used for other experiments
- MARA – provided advice on moving the equipment
- Delivered designs for PARIS
- Delivered designs for CATANIA at RIKEN

- Triple foil plunger for JYFL
- CRIS beamline
- SHARC II at TRIUMF
- Ge Array at RIKEN

2.2. The Daresbury and Liverpool software and electronics effort consists of Thornhill, Judson, Wells, Coleman-Smith, Kogimtzis, Pucknell, Laff and Lazarus. Over the past year, they have worked on a range of projects including:

- NEDA
- Support of AGATA
- ISOL-SRS DAQ systems
- Support for ALICE
- AIDA
- LYCCA, now commissioned at Koln
- FATIMA – DAQ systems used at a range of experiments
- R3B silicon tracker
- JYFL timestamp acquisition system
- MINIBALL DAQ
- General support of systems and software
- MIDAS system being updated
- CRIS DAQ at CERN
- New ways of merging timestamp data
- Applied projects – CLASP and IPS scheme

2.3. The cross-community team has also provided support to the collaborations submitting statements of interest: DRACULA, AGATA and ELI-NP.

2.4. The CCC noted that the cross-community team is recognised internationally for their work.

2.5. A report was not available on the Manchester effort.

### **3. Allocation of Cross-Community Effort**

3.1. The CCC considered three scenarios for allocating the cross-community effort against the projects, consolidated grant themes and general support. It was noted that the effort had not yet been profiled by year. The currently ring-fenced project effort will finish at approximately the same time as the new projects start, which will assist with profiling.

3.2. The scenarios had been designed to reflect the feedback from the Nuclear Physics Grants Panel including the ranking of the consolidated grant themes. The CCC agreed the scenario with the following scaling:

- CG themes – top: 100% of request
- CG themes – high: 75% of request
- CG themes – medium: 60% of request
- CG themes – low: 0% of request

- Projects: 70% of request
- CC activities – 75% of request

3.3. The CCC considered that this scenario, whilst not optimal, would best support the whole programme. The CCC recognised that scaling of lower ranked themes was unavoidable. The CCC considered that participation in the projects was important for motivating the cross-community team. The CCC noted that it was unlikely that all requested projects would be supported by STFC (given the available funding); so scaling the request was considered reasonable. Should the projects not require all the allocated effort, this could be used to further support the consolidated grant themes. A scaled amount of effort was allocated to applied activities. The CCC recommended that the community should request funding for technical effort on their proposals unless it required a specific expertise only found in the CC team.

3.4. The CCC thanked Ian Lazarus for providing the allocation scenarios and requested that profiling of the effort by year and staff member now take place. This should be done in conjunction with the CG PIs. Should there be issues with the profiling, this should be brought to the attention of the CCC Chair (with STFC Programmes Directorate in cc.).

3.5. There were some issues which may have an impact on the future allocations if not resolved:

- Daresbury had been allocated an additional 0.3 FTE software effort and had been unable to recruit yet. It is hoped that other effort from Technology Department can be found to make a more substantive post; therefore making the post more attractive for recruitment purposes.
- As a result of one person now working part-time; Liverpool has 0.5FTE electronics effort until October 2018. This position had been filled and was supporting the ALICE project; however the person left. It would be difficult to recruit into this position given the short duration of the post. The CCC agreed that it would be appropriate for Liverpool to buy the effort from Daresbury, given the short duration of the post.
- The assembly and integration of the R3B silicon tracker was using additional CC effort. Issues had been identified with the ladders during assembly. Effort is currently being diverted from the ISOL-SRS project and activities for JYFL; although with a limited impact. It is intended to ship the silicon tracker to GSI in March 2018, for beam tests in June 2018, ahead of the Phase-0 science programme in late 2018. The CCC recommend that the CC team continue with testing and de-bugging the tracker until January 2018; however if wider issues were identified then discussion with the main stakeholders (collaboration, PIs of CC effort, chair of CCC and STFC Programmes Directorate) would need to take place. There were potential political and reputational issues should there be issues with delivery of the silicon tracker. The R3B international collaboration was aware of the issue and was considering how they could run initial experiments which did not require the silicon tracker.

#### **4. CC Effort for Future Projects**

- 4.1. The process for requesting CC effort on future projects was confirmed:
- Collaborations to discuss effort required and skills available within the CC team, with John Simpson.
  - CC effort to be fully costed on project proposal (e.g. collaborations need to assume that no support is available through the CC team).
  - PPRP asks the CCC to comment on the availability of requested CC effort, as part of the PPRP review. If effort is unavailable, this needs to be funded through the project grant, if expertise can be found. If effort is available, this will reduce costs on project grant.
  - PPRP review the request for CC effort and recommend the appropriate level of support – this will form the basis for the ring-fenced allocation by the CCC.
  - In the case that a project is being reviewed at the same time as the CGs, special care will need to be taken to ensure communication between the NPGP and PPRP. This could take the form of a 'caretaker' member of the NPGP for each project being reviewed.
- 4.2. CC effort requested on IPS/CLASP proposals should be subject to discussion with the CCC Chair and John Simpson prior to submission of a grant proposal.
- 4.3. The revised process needs to be communicated to the community. STFC will provide some wording to John Simpson which will be placed on the NPG website.

#### **5. Succession Planning and Continuity Management**

- 5.1. The CCC was concerned about succession planning and possible retirements within the cross community team. Retirements will impact the CC allocation plan.
- 5.2. At Liverpool, there may be a possible retirement within the CG period. 0.5FTE was available through CG funding, so Liverpool will look for additional funding and try to recruit at a lower level. Liverpool had previously managed to maintain continuity of expertise following a previous retirement by gaining short duration funding to allow personnel overlap for transfer of expertise.
- 5.3. At Daresbury, there may be some retirements within the CG period. Some overlap in key personnel had taken place within the electronics effort; and documenting of processes was ongoing. Within the mechanical effort, all staff are funded at 100% so it would be possible to recruit into this area. Within the software area, should a part funded staff member retire; additional funding would need to be found in order to recruit a full time post.
- 5.4. The CCC noted the importance of overlapping staff where possible in order to maintain the world renowned expertise and knowledge of the cross community effort; and encouraged the cross community PIs to consider carrying this out wherever possible.

5.5. The CCC noted that skills in firmware development were becoming increasingly important; and encouraged the cross community teams to consider how they could develop these skills.

## **6. Any Other Business**

6.1. The request for a joint data management capability within the NP consolidated grant had not been funded.

6.2. The next meeting would be held in November 2018.