

**Science Board**

11 July 2013

**Minutes of the Thirty Ninth Meeting**

Polaris House, Swindon and via Teleconference

- Present:** Professor Matt Griffin (**Chair**) – Cardiff University (from Item 4)  
Professor Jon Butterworth – University College London  
Dr Olwyn Byron – University of Glasgow  
Dr Alison Davenport (**Deputy Chair**) – University of Birmingham  
Professor Martin Dove – Queen Mary, University of London  
Professor Julian Eastoe – University of Bristol  
Professor Alan Heavens – Imperial College London  
Professor Robert Warwick – University of Leicester  
Professor Alfons Weber – University of Oxford and STFC RAL
- In Attendance:** Professor Simon Hands, Chair, Particle Physics Theory Grants Panel  
Professor Andrew Liddle, Chair, Gravitational Waves Review Panel
- STFC:** Jenny Hiscock, Programme Manager, Particle Astrophysics  
Lisa Kehoe - Secretary, Science Board  
Mr Tony Medland – Head of Particle & Nuclear Physics  
Sarah Verth, Programme Manager, Particle Physics  
Dr Victoria Wright – Head, Science Strategy  
Dr Janet Seed – Associate Director, Programmes
- Apologies:** Professor Sean Freeman – University of Manchester  
Professor Anthony Lasenby – University of Cambridge  
Professor Ken Long – Imperial College London  
Professor Des McMorrow – University College London  
Professor Bob Newport – University of Kent  
Professor Simon Redfern – University of Cambridge  
Professor Justin Wark – University of Oxford

## 1. Item 1 – Welcome and Introductions

1.1. The Deputy Chair welcomed everyone to the meeting.

## 2. Item 2 - Gravitational Waves Grants Review Panel Report (SB.13.39.01) **SOME REFERENCES IN THIS SECTION HAVE BEEN REDACTED AS PROTECT: PEER REVIEW**

2.1. It was noted that Professor Griffin had a departmental conflict of interest and would join the meeting after item 3. An institutional conflict of interest was also noted for Dr Byron, Glasgow who remained on the call.

2.2. Professor Andrew Liddle, Chair of the Gravitational Waves Review Panel presented the key findings and recommendations of the panel in relation to STFC's support for gravitational waves research.

2.3. The 2009 review of gravitational waves research had recommended that future support should be reviewed at the end of the third year of the existing five year grants (30 September 2013), and a proposal for further funding for 1 October 2013 to 30 September 2017 was invited and received on 1 March 2013. The proposal was from the Universities of Cardiff, Glasgow and Strathclyde (who were already receiving support) and the Universities of Sheffield and the West of Scotland.

2.4. Due to the uncertainty over future funding levels resulting from the ongoing Programmatic and Spending Reviews, the Panel focussed on the UK leadership for both data analysis and hardware and identified what it considered to be the optimal level of funding for the programme together with two de-scoped funding scenarios.

2.5. Professor Liddle noted that the panel considered detection of gravitational waves to be very likely given the collaboration's history of overcoming noise and reaching high levels of sensitivity. The short term focus was Advanced LIGO which was expected to make detections in the next 3-5 years.

2.6. Science Board considered that it was sensible to continue the support for gravitational waves research at this time as the detection was expected to be imminent. The future technology development was focussed on the Einstein Telescope and the use of gravitational waves to further explore the universe. There would need to be a review of future support subsequent to the detection.

2.7. Science Board noted that the panel had been convinced that there was no significant overlap in the request for funding with the collaboration's EPSRC grant.

2.8. The historic funding of the area was discussed. The project had been the only surviving Particle Astrophysics project in the 2009 prioritisation. Science Board noted that funding for gravitational waves had been cut by 10% in the 2009 prioritisation in line with all other alpha 5 projects.

2.9. The Deputy Chair thanked Professor Liddle and the Panel for their work.

2.10. Professor Liddle left the meeting and Science Board held a closed session to discuss its recommendations.

**3. Item 3 - Closed Session (SB.13.39.01) SOME REFERENCES IN THIS SECTION HAVE BEEN REDACTED AS PROTECT: PEER REVIEW**

3.1. Science Board endorsed the recommendation of the panel that the review cycle be brought forward for future rounds to provide sufficient time for the collaboration to plan and advertise new posts to ensure the most efficient use of their funds. The application process for the next review would start in late 2015 to ensure it is concluded by April 2016 at latest.

3.2. Jenny Hiscock left the meeting.

**4. Item 4 - Particle Physics Grants Panel Theory Report (SB.13.39.04) SOME REFERENCES IN THIS SECTION HAVE BEEN REDACTED AS PROTECT: MANAGEMENT**

4.1. Professor Matt Griffin, Professor Simon Hands and Sarah Verth joined the meeting.

4.2. The issue of conflicts of interest was raised. The Chair noted that the recommendations of the grants panel and the process followed would be discussed, not the detail of individual awards. All attendees therefore remained on the call.

4.3. Professor Hands, Chair of the Particle Physics Theory (PPT) Consolidated Grants Review Panel, presented the Panel's recommendations. It was noted that the unconventional timing of the grants round had been chosen to accommodate the international jobs round.

4.4. There had been an increase in the community size with the formation of one completely new Particle Physics Theory group and significant expansion of others. The panel considered this increase in size to be a trend. Science Board noted that this would put additional pressure on the budget.

4.5. The process used for the scoring of projects using the STFC decision making criteria was described. The panel considered that the expert assessment of specific science areas within PPT had worked well by ensuring a thorough review across PPT.

4.6. Pathways to Impact scoring had been assigned by the STFC Public Engagement and External Innovations teams. The differing meanings of Impact within the REF and within the grants round was thought to have resulted in some confusion as this was a REF year.

4.7. DiRAC resource for operating costs was noted as a continuing problem for PPT grants. The groups had bid for £1.8M of grants for DiRAC from the grants panel. The actual cost would depend on the machine used. Subsequent to the grants panel applications, the DiRAC Resource Allocation Committee (RAC) Chair and the panel had revised the costs based on the actual operating costs incurred over the past year.

- 4.8. There had been good representation for computing on the panel including a COSMOS user, the chair of the DiRAC Project Management Board, the co-Chair of the DiRAC RAC and a member of the Computing Advisory Panel.
- 4.9. Science Board noted that due to financial limitations a significant amount of high quality research could not be supported, which was consistent with recent outcomes for other grants panels.
- 4.10. The Chair thanked the PPT Grants Panel and the Panel Chair for their report.
- 4.11. Professor Hands left the meeting and Science Board held a closed session to discuss its recommendations.

**5. Item 5 - Closed Session SOME REFERENCES IN THIS SECTION HAVE BEEN REDACTED AS PROTECT: PEER REVIEW**

- 5.1. Science Board endorsed the report from the Particle Physics Theory Grants Panel, noting that the budget was not yet set.

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- 5.2. Science Board noted that the programme was squeezed. Due to the limited resource there were a large number of high-quality missed opportunities.

**6. Item 6 - Director's report (SB.13.39.03) SOME REFERENCES IN THIS SECTION HAVE BEEN REDACTED AS PROTECT: PEER REVIEW**

- 6.1. Science Board noted paragraph 50 of the report regarding the call to the community inviting capital equipment requests to support STFC's grant-funded particle physics. The funding was primarily for equipment (core) which was applicable to multiple projects. It would be allocated by the grants panel who would need sight of the PPAN Sub-group report for this area. It was noted that the applicants would not have had sight of the report before applying for funding. Science Board agreed that this was acceptable provided the grants panel had the report.
- 6.2. It was clarified that the CERN Mid-Term Plan was science driven and compatible with the European Strategy on Particle Physics. But did not cover neutrino physics in Europe and therefore did not match in all respects. The Mid-Term Plan was updated annually so there would be an opportunity in the near future to address this issue.
- 6.3. The funding gap for the facilities for 13/14 and 14/15 (Paragraph 3) was discussed.

**7. Meeting Minutes (SB.13.37)**

- 7.1. It was agreed that the minutes of the May meeting of Science Board would be agreed offline due to time constraints.

**8. Item 8- Programmatic Review (SB.13.39.04) SOME REFERENCES IN THIS SECTION HAVE BEEN REDACTED AS PROTECT: MANAGEMENT**

- 8.1. The date for publication of the Science Board report on the Programmatic Review was discussed. The report was to be presented to Council on the 16<sup>th</sup> July and the timing of the announcement would be clarified subsequent to the meeting.
- 8.2. The Chair agreed to raise Science Board's concerns about delays to the report's publication at the forthcoming Council meeting.
- 8.3. A Lessons Learned exercise for the Programmatic Review was planned by the Executive and the preliminary responses would be discussed at Science Board's next meeting.

**9. Annual rotation of Science Board members**

- 9.1. The Chair thanked the outgoing members of Science Board for their contributions and noted that this was their last meeting. New members were due to join in September and would be appointed subsequent to approval by Council.