

# Taking issue with PPARC over STP

Following the PPARC programmatic review announced in the spring of last year, with its gloomy outlook for solar–terrestrial physics, three young scientists in the field mobilized the junior members of the STP community. Gary Abel, Jim Wild and Mick Denton tell the story which led to an unprecedented meeting of early-career scientists, followed by an informative meeting with PPARC chief executive Prof. Keith Mason.

The background to this article lies in the PPARC programmatic review, specifically its implications for UK research in solar–terrestrial physics (STP). The programmatic review has been widely discussed and we do not wish to go over old ground. However, one of the significant outcomes of the programmatic review was the PPARC decision to close down the majority of UK national facilities in the field of ground-based STP. The spring MIST meeting held in Aberystwyth in April saw much discussion on the programmatic review and its effects on the UK and international solar–terrestrial research communities. Behind the scenes actions were taken by senior members of the STP community but, to those not in the know, there were few obvious signs of action. Given that the current raft of PhD students, post-docs and young lecturers would (hopefully) produce the leaders of the field over the next 20 years, the three of us organized a meeting for early-career scientists so we could have our voices heard.

## An unprecedented meeting

On 3 May 2006, at just one week's notice, 49 early-career scientists met at UCL to discuss a response to the programmatic review. These came mainly from the STP community, but also present were representatives of the solar physics and planetary science communities. The morning was devoted to discussing the programmatic review, our response to it, and what the community needed to do to secure its future. The afternoon was devoted to six talks outlining our view of the future directions of our subjects. Some of the general feelings expressed at the meeting were as follows:

- STP is a worthwhile subject of research with many real-world applications.
- The UK is a great place to be doing STP research, with UK researchers leading the field internationally in many areas.

- Early-career scientists felt detached from what was going on.
- There is a lack of communication from senior scientists. In particular there was very little knowledge of what was being done in response to the programmatic review.
- A general feeling of a lack of visibility of senior members of the community and a disappointment at the continued lack of senior scientists at national MIST meetings.

A major element of the meeting was looking to the future. It was noted that bringing together

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early-career scientists clearly had value and was worth continuing in the future. Rather than restricting future meetings and discussions to STP scientists we would extend the group to include solar and planetary science, where much complementary research goes on. To this end we formed the S<sup>3</sup> (Solar-System Science) group (described in the box “What is S<sup>3</sup>?”). This group is initially aimed at early-career scientists but we hope our more senior colleagues will follow our lead and see the worth in this new group.

The final outcome of the meeting was to express our views and concerns to the people in power. A letter was sent to the Chief Executive of PPARC, Prof. Keith Mason, signed by 74 early-career scientists outlining our concerns over the impact of the programmatic review on STP in the UK and asking if the impact on early-career scientists had been fully considered. The letter was then copied to the then Science Minister, Lord Sainsbury, and the head of Research Councils UK, Sir Keith O’Nions, with a cover letter signed by the three of us as organizers of the early-career scientists meeting. We received identical responses from Lord Sainsbury and Sir Keith O’Nions stating that the decisions had been made on the basis of a rigorous review and that the strategy had obtained the general consensus of PPARC’s scientific community. In his response, Keith Mason accepted an invitation we made and agreed to meet the three of us.

## Meeting Keith Mason

On 6 November 2006 the three of us met Keith Mason in London to discuss the programmatic review. The first question we asked was whether the reaction from the early-career scientists in our field was expected? “A brilliant thing to do – long overdue,” was the response. What follows here reflects our overall impression after the meeting and is not just a simple report of the information we were given at the meeting.

## What is S<sup>3</sup>?

S<sup>3</sup> is a new group motivated by changes to funding in UK solar-system science announced in spring 2006. Recognizing that solar-system science is a multidisciplinary field, “S-cubed” promotes a more holistic approach towards comprehending the complex cross-scale physics of the solar system.

In the first instance, S<sup>3</sup> mainly consists of early career scientists, but like-minded colleagues are also adding their support to the building of a framework that unites the existing organizations representing solar–terrestrial, planetary, and solar physics. It is anticipated that the early-career scientist aspect will still be maintained within the

wider group.

S<sup>3</sup> recognizes the importance of how solar-system science is perceived, both by our physics peers and by the public and government. We understand that comprehensive and effective communication is imperative to ensure the health of our disciplines. This is achieved through various avenues, including an S<sup>3</sup> mailing list, new web pages and a web forum to be hosted by the RAS, cross-disciplinary sessions at the NAM, representation of S<sup>3</sup> on the RAS Scientific Groups Committee and promotion of a higher public profile through press releases.

If you would like to join the S<sup>3</sup> mailing list, please visit:

<http://www.jiscmail.ac.uk/lists/s-cubed.html>

The bottom line is that STP is still in the programme (although at a reduced funding level). The discussion kept coming back to the point that the STP community has not made the case, that is it has not convinced PPARC’s Science Committee that STP is of high enough importance to continue existing funding levels. This must be true, otherwise the community would not find itself in its current position. However, we found ourselves asking if the situation was fair, in other words could the Science Committee make a fair and reasonable judgment with no STP representative to argue the case? It was argued that many individual areas of astronomy were not represented on PPARC’s Science Committee and that the members could be relied upon to make informed decisions outside of their own field of expertise. The fact that astronomers may be exposed to other areas of astronomy at national and international astronomy meetings whereas STP researchers tended to attend geophysics meetings was not considered relevant.

We also discussed the future of PPARC in the approaching era of one less research council. The future research council, which is a merger of PPARC and CCLRC, is to be known as the Science & Technology Facilities Council. We expressed concern (as many people have) that there is no word “research” in the name. We were told not to be put off by this – the name is a tool to sell to the government and public and the new council will support science areas dependent on facilities. This left open the question of how all the research currently covered by PPARC would fit in the new research council, which is focused on science dependent on facilities. We asked, for example, how a theoretical astronomer would fit into the new system when they only used a pen and paper? We were told that a pen and paper could be considered facilities.

Returning to the present STP situation, we

were told that the problem with STP is not just a recent thing. Negative feeling in PPARC towards STP has built up over the last decade or so. Often when presented with our science all people hear is “Blah blah blah reconnection blah blah”. We were told that STP scientists have not done a good job of relating our science and the relevance of our science to the wider scientific community. However, it has to be said that when many an STP scientist is presented with cutting-edge astronomy all we hear is “Blah blah blah Active Galactic Nuclei blah blah”.

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## Does PPARC have a strategy?

Our discussions moved on to the question of whether PPARC has a strategy or not. We were left with the feeling that the answer is “not really”. Certainly the nine big questions addressed by PPARC are not a strategy. We were told that should something be found under the PPARC remit that was not covered by these questions and PPARC wanted to do it then PPARC would simply write a new question.

There is some strategy in so far as there is a need to exploit the expertise, strengths and facilities in the UK, but the science needs to be of a high standard. This then begs the question: if all science is rated as high quality by peer review, how is a decision made? We were told: “Peer review is a blunt tool.” If peer review deems all science as high quality, funding decisions are then made by PPARC’s Science Committee based on other information and views that are to hand. This comes back to STP having not made the case. Given some time for reflection since the meeting we are left with the feeling that PPARC does have some kind of strategy after all and that this strategy is contained in the personal views of Science Committee members. However, as PPARC does not have a written or official strategy, it is much harder for us, as scientists, to have a clear picture of such a strategy and, more importantly, it is harder to address or even influence it.

So finally what do we, as STP scientists, need to do to ensure a future for STP research in the UK? First, we need to accept some criticism. We need to ensure our community engages with the wider astronomy and fusion communities. There are many statements made that our science is fundamental to other areas, although few actual interdisciplinary collaborations. As a community, we need to do our utmost to convince the public, the government and PPARC that STP is important. That said, in our opinion, we should continue arguing for fair representation at the higher levels of the PPARC decision-making process. Whatever happens, there is no quick fix. We need to play the long game and consider where we want to be in 5 to 15 years time. ●

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