

# **Astronomy Forum Meeting Notes**

**7 February 2017, Royal Astronomical Society**

**In attendance (see list on page 6)**

## **1. Introduction**

Those present at the meeting elected the President of the Royal Astronomical Society, Prof John Zarnecki, to be the chair.

## **2. Reports on political engagement**

- RAS has spoken to various MPs and MEPs about issues surrounding Brexit; including Stephen Metcalfe, the Chair of the Science and Technology Committee, Chi Onwurah, the Shadow Science Minister; and Clare Moody MEP, who has a particular interest in space policy, as well as members of the shadow Brexit team. Attendees also encouraged to engage with their parliamentary representatives.

## **3. Update from UK SPACE AGENCY**

Dr Katherine Wright, Head of Space Science for the UK SPACE AGENCY, presented an update on the work of the agency. The slides are available at [http://www.ras.org.uk/images/stories/Astronomy\\_Forum/UKSA\\_update\\_to\\_RAS\\_Feb\\_2017.pdf](http://www.ras.org.uk/images/stories/Astronomy_Forum/UKSA_update_to_RAS_Feb_2017.pdf)

She referred to:

- An overview of recent and upcoming missions.
- ESA Ministerial Council decision outcome figures. The ESA Science Programme has an annual adjustment of 1% per year, with most of the annual adjustment going towards the cost of Exomars, so it is approximately flat cash for the science programme; no change in spending power.
- Responses to Green and White Papers (on the Industrial Strategy and on Brexit) encouraged.
- The Space Growth Strategy.

## **Discussion**

- Q: Government White Paper indicates heavy growth intended for applied research, but almost no reference to blue skies research.

- o The Government recognises the value of pure research. There was a £4.7bn increase in funding from Government announced last year; not all of this has yet been allocated - details still being worked through.
- Q: Is it dangerous to try to sell what we do in terms of pure economic value?
  - o The intangible benefits are recognised, more examples are always valuable.
- Q: International links (not just European) - can we use these to sell ourselves to government?
  - o Yes, this would be a good thing to mention although the UK Space Agency prioritises ESA missions to get maximum benefit from subscription. Not enough money available to collaborate with everyone.
- Q: What opportunities does this bring for finding funding outside of Europe?
  - o UK Space Agency has put in applications for extra funding along these lines - there may be some opportunities, but need to read White Paper and find them.
- Q: What is the UK Space Agency doing about pushing back to government about benefits of curiosity-driven research? Timescale to go from scientific breakthrough to actual application is decades - difficult to make government understand benefits.
  - o The Agency does put forward some examples of how pure science leads into useful applications.
- Q: Is there any indication of the future of ESA, and therefore our area, after UK leaves the EU?
  - o The UK will remain a member of ESA, as ESA is a separate organisation to the EU. Issues around some programs, Galileo and Copernicus – the Agency is considering the best way forward on these but outcome not known yet. Looking to sustain strong engagement with ESA, certainly no pullback.
- Q: UK increased investment in telecoms, EO, etc., but we were seen as one of the big countries pushing for flat cash for science.
  - o UK Space Agency has sustained the level of its investment into ESA science (with an annual adjustment to help cover Exomars costs). The level of funding was set purposefully – need to balance , spacing of ESA missions or there won't be enough money available to get full benefit out.
- Q: ESA subscription paid in Euros - concerns over new exchange rates.
  - o UK Space Agency is supported, and government ensured that the change in exchange rates did not impact on our ability to fund the ESA subscription agreed at the Ministerial Council.

- Q: Do delays in space missions affect government's view of the sector? Is there any appetite for cancelling missions if they go over budget?
  - o Delays certainly affect the expense of missions. We need to get better at ensuring that missions fit into time and cost estimates. Cancellations have been discussed, but need agreement of a two-thirds majority of ESA member states, and it's mostly considered worthwhile to extend to get the full benefit out of the mission.
  
- Q: Are you considering the implications of possible freedom of movement restrictions?
  - o Yes, and it's feeding into the central negotiations, it's being considered very seriously both by the Agency and STFC.

#### **4. Update from STFC**

Dr Brian Bowsher, Chief Executive of STFC, and Dr Colin Vincent, Head of Astronomy at STFC, presented an update on the work of the research council. The slides are available at [http://www.ras.org.uk/images/stories/Astronomy\\_Forum/RASforum2017v12.pptx](http://www.ras.org.uk/images/stories/Astronomy_Forum/RASforum2017v12.pptx)

- UKRI - great opportunities, bill currently going through Parliament.
- Funding - £4.7bn extra available by 2020/21, larger than anticipated.
- STFC arguing for increased funding, recognition of capabilities and the value of science.
- Newton / Global Challenge Research Fund (GCRF), Industrial Strategy updates.
- STFC part of high-level forum to advise on Brexit.
- Astronomy Programme funding balance.
- ESO, SKA reports, future projects.

#### **Discussion/points raised**

Discussion centred on key issues including the funding landscape, the impact of leaving the EU, studentships and industrial return.

It was confirmed that increased Government funding for research announced in the Autumn Statement was a real increase, it included Industrial Strategy investment and Government want to see significant activity supporting that strategy. Increase for skills/studentships is also expected in 2017/18.

Flat cash (for the research councils) is having a continuing impact on research funding. Resources from the Global Challenges Research Fund (GCRF) are projected to ramp up over time and can be better utilised by the community.

Loss of European Research Council / EU funding will have a disproportionate impact on blue-skies sciences like astronomy. Government is listening, and understands value of science and innovation. It was acknowledged the Government had been willing to address short term funding issues created by leaving EU, but in the longer term STFC / the astronomical community must continue to provide data and information to ensure the concerns can be recognised and addressed.

These changes affect the whole STFC portfolio, not just particle physics and astronomy.

Delegates pointed out that reduced EU funding opportunities could increase applications and put additional pressure on STFC budget and Research Councils should plan for this.

UK industry is engaged well with ALMA, including instruments. STFC does engage with industry, but can be challenging with industrial concerns centred on risk and return. STFC

appreciates the importance and will continue to seek ways to foster engagement, but there are few easy wins.

Concern raised that UK Research and Innovation (UKRI) will be more responsive to Government's desires, but at the expense of blue skies research. It could also though strengthen constructive dialogue with Government.

Intention is to position the research organisations for success, and Sir Mark Walport, the new CEO of UKRI, seems to be attracting more money.

## **5. AOB**

- RAS invites contributions for official response to Government Industrial Strategy proposals, e.g. any risks seen in shift in priority to applied R+D
- Invitation for STFC to attend NAM 2017, and encouragement for more senior academics to attend.

## List of attendees

John Zarnecki	<i>RAS (Chair)</i>
Robert Massey	<i>RAS</i>
Morgan Hollis	<i>RAS</i>
Katherine Wright	<i>UK SPACE AGENCY</i>
Paul O'Brien	<i>Leicester</i>
Paul Crowther	<i>Sheffield</i>
Rene Oudmaijer	<i>Leeds</i>
Martin Hardcastle	<i>Hertz</i>
Coel Hellier	<i>Keele</i>
Alfonso Aragon-Salamanca	<i>Nottingham</i>
Serena Viti	<i>UCL</i>
Karim Malik	<i>QMUL</i>
Ian Crawford	<i>UCL</i>
Peter Thomas	<i>Sussex</i>
James Wild	<i>Lancaster</i>
Iain Steele	<i>Liverpool</i>
Stephen Smartt	<i>Belfast</i>
Lyndsay Fletcher	<i>Glasgow</i>
Michael Burton	<i>Armagh</i>
Thomas Mash	<i>Warwick</i>
Mark Cropper	<i>UCL</i>
Andrzej Fludra	<i>RAL</i>
Bob Nichol	<i>ICG Portsmouth</i>
Kevin Pimblett	<i>Hull</i>
James Urquhart	<i>Kent</i>
Michael Garrett	<i>Manchester</i>
Mark Birkinshaw	<i>Bristol</i>
Stephen Serjeant	<i>OU</i>
Isabelle Baraffe	<i>Exeter</i>
Andy Fabian	<i>Cambridge</i>