PPARC is the funding agency for high energy particle physics, astronomy and space science in the UK. The three main aims of our science and society programme are to stimulate public interest in current research, to support researchers to communicate with public audiences, and to engage young people. The main drivers are the need to account to the public for the work funded by taxpayers and the UK need for a skilled workforce in science and technology. There are shortages of graduates in physics, maths and engineering, and a shortage of school teachers with good physics knowledge. We are capitalising on the excitement value of astronomy and space for young people to encourage more to study science and engineering subjects, especially beyond 16.

Our vigorous media programme includes press releases and media briefings. In a recent example of the Cassini-Huygens space mission and the Huygens landing on Titan, there were 380 articles and broadcasts in the UK media, 252 of which included quotes from British scientists; and a special TV ‘Stardate’ programme drew 1.7M viewers to the original and the repeat broadcasts. We are linking more with the UK science museums/centres sector, which has grown substantially with around 13M visits per year to centres. There are currently three touring exhibitions across Britain: ‘Space Detectives’, ‘UK Goes to the Planets’, and ‘Move Over Einstein’—the latter aimed at 11-14 year olds and part of the Einstein Year (World Year of Physics) celebrations. A publishing programme produces posters, brochures, education packs and catalogues of educational resources in astronomy and space.

We are helping astronomers and space scientists through:

• funding for public engagement work—directly from their research grant money
• special funding schemes for communications projects
• specialist advisers (media, schools) and project outreach co-ordinators
• free communications training
• free popular publications and resources to support their communications work
The report to the UK Government’s Treasury Department by Sir Gareth Roberts ‘SET for Success’ outlined the need for a skilled workforce in an increasingly knowledge-based economy. It identified shortage areas and problems in the ‘supply chain’ of recruiting young people into science and technical subjects through school and university.

Much of PPARC science and society funding goes to projects addressing teachers of 11-16 year olds or involving young people directly. Supported by our awards schemes, a very wide range of organisations have included astronomy and space in their work with young people including Science Centres, Youth Hostels Association, Summer Camps, Hospital for Sick Children, National Academy for Gifted & Talented Youth, local education authorities, Girl Guides/Scouts, etc. Both the formal and informal education sectors are represented in the approximately 350 awards given over the past 10 years. Priority is given to projects addressing previously unengaged audiences (see below) or addressing 11-16 year-olds.

Examples of particular interest include those where young people get involved in ‘real’ science or engineering. We have invested nearly £1M in the Faulkes Telescope Project (see also, article by Dr Paul Roche) in which school groups use professional standard 2m telescopes over the internet. ‘Classroom Space’ (www.star.le.ac/classrooms) provides space contexts to deliver points in the UK’s national curricula for students aged 11-16. Lastly, schools’ radio astronomy projects encourage young people in hands-on engineering and electronics projects which are inspired by a wider and exciting application of the kit they have helped to build: awards to a network of schools in the SouthWest of England at Bristol and Taunton have supported this.

A current development is that of linking ‘space’ better with school education (see also, article by Ian Jones). The recently built National Space Centre at Leicester has made a good impact and hosts the only Challenger Learning Centre outside North America. PPARC is a member of the British National Space Centre, a partnership recently joined by the UK’s Education Ministry, and a coming consultancy report will advise us on how national agencies can best add value to the UK space education community. Likely outcomes include a space education office (for the UK but also ESA’s office in the UK), a national forum, a one-stop-shop website for the best resources, programmes of visits and teacher training, and continuing provision of resources linking missions and their new science with schools’ curriculum—recent and current examples being Mars Express and Beagle2, Cassini-Huygens, Cryosat and Venus Express.
Much of the UK science communications effort does not connect well with audiences not traditionally engaged with science and technology—such as some ethnic minority groups. A national framework has been set up, and a PPARC contribution to this in 2005 is ‘Cosmic Africa’, a project in which a black African astronomer is visiting schools and community groups in three cities with significant African-Caribbean representation. This pilot should help us see how to use astronomy as a good subject and activity to engage under-represented audiences including young people.

Paramount in a funding agency’s communications work are the partnerships we have—with research groups, journalists, science centres, teacher associations, learned societies, etc. Amongst the sciences, astronomy is relatively accessible in a non-threatening way to all groups and all ages and provides a good subject for inclusion in hands-on activities and lifelong learning. Evaluating communications work is generally hard, so I end with a call for further and detailed national and international exchange of best practice—and evaluation of impacts—in this area.