

The UK is in the process of reviewing its future policy with regard to space exploration. Both the Parliamentary Science and Technology Committee (STC) and the UK Space Exploration Working Group (UKSEWG) issued relevant reports on this subject in 2007. A summary of the latter addressing RAS interests can be found in Hapgood and Crawford (2007). In 2008 the government commissioned its own review of the pros and cons of increased involvement in space exploration, including a reassessment of the long-standing UK policy of non-engagement with human spaceflight. This review is not concentrating on science alone, but is giving particular weight to the potential economic and societal benefits of increased involvement in space exploration; the results should be known early in 2009 (Curtis 2008).

The international context for all this activity is the Global Exploration Strategy (GES) that was agreed by 14 space-faring nations, including the UK, in May 2007. This strategy calls for a global effort of solar system exploration, with the ultimate aim of establishing a “sustained and ultimately self-sufficient human presence beyond Earth, supported by robotic pathfinders”. Having signed up in principle to these ambitious goals, the UK must now decide on the actual extent of its future involvement in the GES, and whether our current funding and institutional arrangements are appropriate if we aspire to play a major role. One possible institutional change that could help facilitate increased involvement in the GES would be the creation of a UK Space Agency with the funds and, crucially, the political mandate to advance UK participation in this global activity. It is indeed notable that of the 14 national bodies which signed the GES, only the BNSC (as a “partnership” of government departments and research councils) is not a national space agency.

Pros and cons

The question of a UK Space Agency was considered by the STC in 2007 (pp25–28). Although, for reasons discussed below, the Committee decided not to recommend the creation of an agency at the present time, it received powerful testimony on the desirability of such a development. For example, in its submission the Royal Society (STC Ev.220–223) expressed its view that such an agency would be able to “engage on a more equal footing with ESA and with national agencies in other countries; and generally enable the UK to play a stronger international leadership role in space science”. The UK Space Academic Network (STC Ev.176–179) went further, noting that “the UK is the only G8 country without a Space Agency”, that “the nature and constitution of the BNSC as a loose assembly of partners gravely inhibits the development of a *national space strategy* [their italics]”, and that an agency would be able to “take

OPINION

Does the UK need a Space Agency?

Ian Crawford argues that we need a Space Agency in order to benefit from participation in global space exploration.

a strategic view of developing technologies with relevance for space science and provide support in areas that would enable the UK to play a leading role in future missions”.

The counter arguments, apparently accepted by the STC, are principally:

- that the current size of UK involvement in space is insufficient to justify an agency (which is an indictment in itself, given that the UK’s investment in space falls well below that of other industrial countries);
- that the mere creation of an agency would not in itself provide additional funds; and
- that historically UK space policy has been based on a “user-driven” approach in which “customers” for space services tension the costs of the space segment against other means of achieving their aims, and that the resulting perceived efficiencies “could easily be lost in a stand-alone agency” (STC p26).

Note, however, that these objections would not apply if a high-level political decision were taken to increase UK involvement in space exploration significantly. Any such decision would, of necessity, imply an increase in activity and funding, such that a coordinating agency might be more easily justified. The Committee itself concluded that “if expenditure is substantially increased, the question of an agency should be reviewed” (STC p28). Note also that the “user-driven” approach to space, while it may have merit with respect to some applications of space technology (e.g. communications, remote sensing, etc), does not make sense with regards to space exploration – there are no alternative means to engage in space exploration other than through space missions, and the “user” is the government itself. As these missions will, within

the framework of the GES, necessarily be international in character, it is important that the UK’s contributions are coordinated by a body able to cooperate on an equal footing with the agencies of other countries.

Perhaps the most important argument for coordinating space exploration through a national agency, rather than through a science-based research council such as STFC (as the relevant BNSC partner), is the recognition that science, while undeniably important, is only one thread in a much larger overall case for space exploration. Other threads include potential economic, industrial, educational, geopolitical and cultural benefits (UKSEWG 2007). Any responsibly formulated public space policy must weigh *all* of these factors when considering the extent of involvement in space exploration. In contrast, a research council can only fund involvement in space exploration on the basis of scientific merit, without giving due weight to other strategically and socially important, but essentially non-scientific, considerations.

The RAS is broadly supportive of increased UK involvement in space exploration (RAS 2008), provided that extra funding is provided and that exploration does not draw funds away from other areas of research. The creation of a UK Space Agency (or, perhaps better, a UK Space *Exploration* Agency), with the funding and mandate to pursue space exploration for a combination of scientific, industrial and economic reasons, could help by decoupling space exploration from areas of “pure” science managed by the research councils. This would have the effect of relieving some of the competition for funding that currently exists between space exploration and other areas of science. Without this kind of institutional change it is difficult to see how the UK will ever be able to play a full role in the GES, because every attempt to move forward will founder on the rock of scientific peer review procedures that have neither the mandate nor the competence to assess the wider societal benefits of space exploration. If the government is serious about the UK playing a larger role in space exploration it should consider setting up a dedicated Space Exploration Agency with the funds and mandate that are fit for the purpose. ●

Ian Crawford, Birkbeck College, University of London (i.crawford@ucl.ac.uk).

References

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