

How not to prioritize

A high-level reprimand to US astronomers highlights the need for the objectives of 'big science' to be openly debated.

On 8 January, NASA's administrator Mike Griffin upbraided the annual meeting of the American Astronomical Society in Austin, Texas, for a lack of team spirit. Not only were some of the scientists less than enthusiastic about the human-exploration goals that have been this administration's top priority in space, they were also messing up the agency's astrophysics programme with special pleading to Congress. Such interventions, Griffin warned, would thwart the community's stated goals and blight its future projects.

The meatiest bone of contention was the Space Interferometry Mission (SIM). SIM offers a way of discovering planets by observing slight jitters in the position of their parent stars. NASA has spent nearly \$600 million on it already. On the basis that finishing it might easily cost a further \$1.85 billion (see page 228), the agency had planned to assign it \$22 million in this year's budget, keeping it far from any prospects of flight. Congress gave it three times that much, apparently wishing to see it move into full development. Such development would, warned Griffin, leave NASA no room for any other astrophysics missions of any size, and force delays or cancellations on those already in development.

Griffin sought to portray the boost for SIM as a fratricidal move to circumvent the settled result of the astronomers' 'decadal survey' process. Under the auspices of the National Academy of Sciences, the community gives its funding agencies, and the lawmakers who provide their budgets, regular surveys of its priorities. This process has been much praised, but is marred by shortcomings. In particular, the most recent survey was undercut by a self-deluding ineptitude on matters of cost. The James Webb Space Telescope was just one of the seven 'major initiatives' prioritized by that survey, yet by the time of its launch it will on its own have cost far more than the total that the survey envisaged for all of them. As that most recent wishlist also included spending on as-yet unfinished projects from the previous survey (of which an early form of SIM was one), it is not clear what help it offers decision-makers today.

Another problem is that there are legitimate interests in the future of American space research that such surveys may not capture. SIM is a project based at the Jet Propulsion Laboratory (JPL) in Pasadena, California. The advent of full-cost accounting at NASA, which means that money follows specific projects to a greater extent than ever before, has heightened the importance of flagship projects for the institutions that host them. A healthy budget for SIM could serve to maintain a pool of talent at JPL that might otherwise be eroded; if you want a reason for the lobbying, this is a pretty good starting point. The beauty of such a power-house is no doubt in the eye of the beholder, but everyone should recognize that the benefits of a healthy JPL are felt beyond the precincts of Pasadena.

The lesson for the astronomical community is that the decadal survey should provide a range of more and less capable missions, thus making it easier for policy-makers simultaneously to satisfy the community's goals and the constraints of the public purse. It should also agree that the imprimatur of priority bestowed by a decadal survey has a use-by date — after a certain time, perhaps as little as five years, it is reasonable to ask whether a given mission is still the best way to achieve its stated goal. Anyone setting priorities needs to scrutinize SIM in this spirit.

Meanwhile, NASA's administrator needs to accept that Congress has a legitimate role in setting goals for his agency. He should also consider that portraying the astrophysics budget as a zero-sum game is a tactic that could backfire: if astronomers thus threatened successfully lobby for a significant transfer of funds from human spaceflight to science, his position will be weakened. And Congress should, when exercising its powers, open up a public debate on all the issues involved — which may often go beyond the merits of a single mission. ■

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Deserting the hungry?

Monsanto and Syngenta are wrong to withdraw from an international assessment on agriculture.

"This is a most reluctant decision." These are the words of a spokesman for the agriculture-industry body CropLife International speaking to *Nature* this week. The decision in question is that by two CropLife member corporations, Monsanto and Syngenta, to pull out of the International Assessment of Agricultural Science and Technology. This is an ambitious, 4-year, US\$10-million project that aims to do for hunger and poverty what

the Intergovernmental Panel on Climate Change has done for another global challenge.

The scale of the ambition is clear both in the project's promised outcome, as well as in its internal workings. When published later this year, its reports promise to map how science, technology and accumulated good-farming practice can be used to reduce hunger and improve quality of life for rural people in developing countries (drafts can be accessed from www.agassessment.org). At the same time, the writing and review teams (some 4,000 experts in all) comprise a grand coalition including scientists, government officials, representatives from seven UN agencies, farmers' groups, a rainbow of non-governmental organizations (NGOs) and industry, including chemicals manufacturer BASF and agri-biotech giants Monsanto and Syngenta.