

Return to the space race

The future of space science and exploration has been much discussed over the past few months, on both sides of the Atlantic. In September, NASA administrator Michael Griffin announced plans for returning humans to the Moon, as a stepping stone to Mars and beyond. It would supposedly cost US\$104 billion, would stay within NASA's existing budget and would have astronauts on the Moon by 2018.

A month later, the UK Royal Astronomical Society issued a report on the "Scientific Case for Human Space Flight", arguing that Britain should take part in the new space race. Among the claimed benefits was that human space exploration motivates children to get interested in science.

There's no denying that. Shar-

ing a stage with an astronaut (as I have) is like standing beside a rock star. There is also no denying that returning to the Moon has greater potential scientific benefit than continuing the space shuttle and the International Space Station. But then it is hard to think of any US\$100-billion project that would not have greater scientific benefit.

If it's a question of inspiring young people to learn science, it would be cheaper and, perhaps, wiser to follow the suggestion of a recent National Academy of Science report, which proposed spending money to train teachers in public schools to teach science, and to teach it creatively.

There is cause for concern that the NASA plan will hurt science, even if it does get us back to the



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Moon (which is also debatable). Working within the current budget implies the reallocation of resources from other NASA programmes. If history is any guide, those programmes are likely to be the ones that involve real science, and which up to now have used much cheaper unmanned probes such as the Mars Rovers. Exciting projects — such as the search for gravitational waves, new probes of the cosmic microwave background, and the successor to the Hubble space telescope — have already been delayed by the shifting of funds from unmanned to manned space exploration. I am all for adventure, but only if we are honest about the costs and the benefits for science as well.

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