We want it all and we want it now

A gathering of nearly 100 British planetary scientists and space engineers has voted almost unanimously (only 1 against) for the return of a sample of Mars within a decade. Colin Pillinger of the Open University, leader of the Beagle 2 team, reports.

The meeting, called by the Open University, the British National Space Centre and Astrium, with the encouragement of the Science Minister Lord Sainsbury, took place at the Royal Society on 23 March. It was designed to gauge the likely support for Mars exploration via sample return, bearing in mind that both PPARC and the ESA are considering their future programmes.

In PPARC’s case the question being addressed is “should planetary science be the focus of a bid at Astrium describe various mission concepts for returning samples from Mars. He concluded that if the community was prepared to accept limited landing accuracy, then the return of 200 g of Mars is possible from a 2009 launch, using natural extensions of Beagle 2 technology and other Mars concepts already under development in Europe.

A first order question to be addressed, was “could a 200 g sample be useful?” The answer was certainly yes, since the surface of Mars is only suggested without impact to NASA’s other science programmes.”

The venerable Mir space station re-entered Earth’s atmosphere on 23 March. Its 15-year mission ended in a spectacular fireball over the Pacific Ocean as the 137 ton station broke into at least half a dozen pieces. The $200m insurance policy purchased by the Russian Aviation and Space Agency became redundant when the fragments splashed down without incident.

Reports that the top-secret US National Imagery and Mapping Agency (NIMA) has found the missing Mars Polar Lander in images taken by the Mars Global Surveyor spacecraft have been dismissed as premature. NIMA researchers believed they had found signs of the lander and its protective aeroshell on images of the Martian surface. NASA suggested the features could be noise in the camera system. The lost spacecraft is only about 2 m across – barely a stone’s throw from the rover’s orbit. It was lost as it entered the Martian atmosphere, though whether it was either destroyed or merely lost contact with Earth was not known. More images will be collected later this year.

The first steps towards sample return? Beagle 2 with its solar panels unfolded. (All rights reserved Beagle 2 www.beagle2.com.)

The next CSR?” ESA, being more proactive, is seeking ideas for an optional programme of planetary exploration to be put to a meeting of its ministerial council in Edinburgh at the end of this year. To ESA’s astonishment, its announcement of opportunity generated 291 responses, with 104 relating to Mars, 38 with sample return. Not all the Mars proposals came from the Beagle 2 team, although we are as keen as anybody to discuss whether the UK could participate in a Mars sample return mission.

Opening the debate, I reminded the audience of the last time there was a major opportunity to extend Europe’s space profile – the UK was almost asked to leave ESA for being the only vote against; as a consequence the Director General of BNSC resigned. Perhaps now there are grounds for more optimism.

With hardly a spare seat available, the audience heard Mark Smith of Arecibo describe various mission concepts for returning samples from Mars. He concluded that if the community was prepared to accept limited landing accuracy, then the return of 200 g of Mars is possible from a 2009 launch, using natural extensions of Beagle 2 technology and other Mars concepts already under development in Europe.

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