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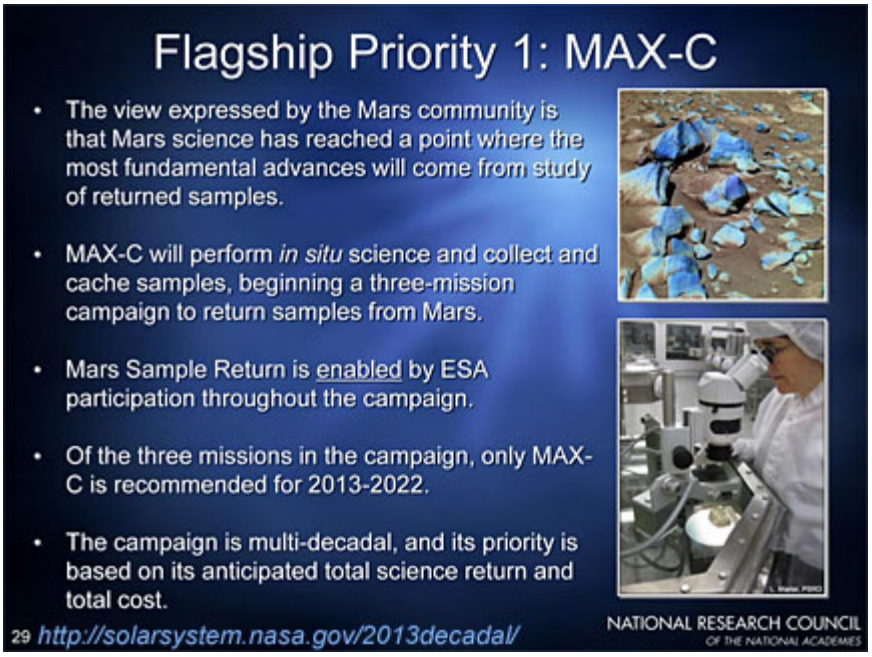
Planetary Science Decadal Survey

On Monday, March 7, 2011 the National Research Council released the Planetary Science Decadal Survey 2013-2022 report. Steve Squyres of Cornell University, who served as chair, described the survey's course of action as, "articulating a program for the coming decade that represents as fully as possible the true consensus view of the U. S. planetary science community." The report covers the key priorities for planetary missions as well as research and analysis programs, technology development, and ground-based observations. It serves as the primary scientific input to NASA and NSF, the agencies who commissioned the decadal survey.

During his briefing to a standing-room-only audience at the 42nd Lunar and Planetary Conference on March 7, Dr. Squyres identified the three themes for the coming decade:

- Building New Worlds: Understanding Solar System Beginnings
- Planetary Habitats: Searching for the Requirements for Life
- Workings of Solar Systems: Revealing Planetary Processes Through Time



The report recommends that missions in flight and in development be continued. Significantly, the number one priority for a new flagship mission in the next decade is a Mars sample return campaign. The so-called Mars Astrobiology Explorer-Cacher (MAX-C) mission, with a NASA and ESA partnership, would serve as the first step in a multi-part and multi-decadal effort to return samples from the planet. Cosmochemists know the importance of obtaining well-chosen samples from known sites (the Moon, comet Wild 2, and asteroid Itokawa, for examples) and analyzing these samples in the laboratory as new measurements become possible with improved instruments and new analytical techniques. The recommended second priority mission is to study Jupiter's moon Europa from orbit and the third priority is an orbiter+probe to the ice-giant planet Uranus. Appropriately, the report has contingency plans if NASA's budget over the decade cannot support a flagship mission. Then, the report says NASA should delay the flagship to fund the smaller-scale missions in its New Frontiers and Discovery programs. Overall, the plans expressed in the report emphasize high science returns per dollars spent, paving the way for exciting new discoveries in planetary science. The scientific community is ready to do the work.

See:
Planetary Science Decadal Survey website at The National Academies and ***at NASA***.

Scientific White Papers submitted to the Survey.
Decadal Survey announcement video from March 7, 2011 (livestream.com).

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