

NASA Selects Proposals for Future Mars Missions and Studies

January 9 2007

On Monday, NASA selected for concept study development two proposals for future robotic missions to Mars. These missions would increase understanding of Mars' atmosphere, climate and potential habitability in greater detail than ever before.

In addition, NASA also will fund a U.S. scientist to participate in a proposed European Mars mission as well as fund instrument technology studies that could lead to further contributions to future Mars missions.

"These mission selections represent unprecedented future research that will lead to further advancing our knowledge and understanding of the Red Planet's climate, and atmospheric composition," said Mary Cleave, associate administrator for NASA's Science Mission Directorate, NASA Headquarters, Washington.

Each Mars mission proposal will receive initial funding of approximately \$2 million to conduct a nine-month implementation feasibility study. Following these detailed mission concept studies, NASA intends to select one of the two proposals by late 2007 for full development as a Mars Scout mission. The mission developed for flight would have a launch opportunity in 2011 and cost no more than \$475 million.

The selected Mars mission proposals are:

- * Mars Atmosphere and Volatile Evolution mission, or MAVEN: The mission would provide first-of-its-kind measurements and address key

questions about Mars climate and habitability and improve understanding of dynamic processes in the upper Martian atmosphere and ionosphere. The principal investigator is Bruce Jakosky, University of Colorado, Boulder. NASA's Goddard Space Flight Center, Greenbelt, Md., will provide project management.

* The Great Escape mission: The mission would directly determine the basic processes in Martian atmospheric evolution by measuring the structure and dynamics of the upper atmosphere. In addition, potentially biogenic atmospheric constituents such as methane would be measured. The principal investigator is Alan Stern, Southwest Research Institute, Boulder, Colorado. Southwest Research Institute, San Antonio, will provide project management.

NASA has selected Alian Wang of Washington University, St. Louis, to participate as a member of the science team for the European Space Agency's ExoMars mission. Wang will receive approximately \$800,000 to study the chemistry, mineralogy and astrobiology of Mars using instrumentation on the ExoMars mission, scheduled for launch in 2013.

NASA also has selected two proposals for technology development studies that may lead to further NASA contributions to ExoMars or other Mars missions. The two technology development studies, funded for a total of \$1.5 million, are:

* Urey Mars Organic and Oxidant Detector: The Urey instrument would investigate organics and oxidant materials on Mars using three complementary detection systems. The principal investigator is Jeffrey Bada, University of California at San Diego.

* Mars Organic Molecule Analyzer, or MOMA: The instrument would investigate organic molecular signatures and the environment in which they exist using a mass spectrometer and gas chromatograph. The

principal investigator is Luann Becker, University of California at Santa Barbara.

These selections were judged to have the best science value among 26 proposals submitted to NASA in August 2006 in response to an open announcement of opportunity.

NASA's Mars Exploration Program seeks to characterize and understand Mars as a dynamic system, including its present and past environment, climate cycles, geology and biological potential. The Mars Exploration Program Office is managed by NASA's Jet Propulsion Laboratory, Pasadena, Calif., for the Mars Exploration Program, Science Mission Directorate, Washington.

Source: NASA

Citation: NASA Selects Proposals for Future Mars Missions and Studies (2007, January 9)
retrieved 25 April 2024 from <https://phys.org/news/2007-01-nasa-future-mars-missions.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--