

The Mars Journal Publishes Its First Papers

December 15 2005

The Mars Journal, a new peer-reviewed online open-access scholarly journal, has published its first two papers. The first paper is a 4-page editorial entitled "The Mars Journal" by David A. Paige of the Dept. of Earth and Space Sciences, UCLA, and Chief Editor of The Mars Journal.

The second paper is a 54-page science paper entitled "The sedimentary rocks of Sinus Meridiani: Five key observations from data acquired by the Mars Global Surveyor and Mars Odyssey orbiters" by Kenneth S. Edgett of Malin Space Science Systems.

The Mars Journal, which is published formally as "Mars: The International Journal of Mars Science and Exploration", is the first scholarly journal devoted to the planet Mars. It is intended to accelerate the pace of Mars science and exploration activities by publishing peer-reviewed, scholarly papers on Mars science, technology and policy.

The journal is open-access, which allows anyone to read, download and print the full texts published papers free of charge. Mars Journal papers are in the form of printable PDF manuscripts with links to author-supplied supporting data that allow researchers to download full resolution images, databases or computer code.

"The Mars Journal" editorial, the first paper published in the journal, outlines the rationale for the creation of the journal and describes how it will serve the growing Mars community.

"The sedimentary rocks of Sinus Meridiani: Five key observations from data acquired by the Mars Global Surveyor and Mars Odyssey orbiters" by Kenneth S. Edgett is the first science paper published in the journal.

It presents an extensive analysis of imaging and topographic data obtained by the Mars Global Surveyor and the Mars Odyssey orbiters in the Sinus Meridiani region, the field site of NASA's ongoing Opportunity Rover mission.

The existence of exposed sedimentary rocks in this region of Mars had been suspected for some time. The data obtained by Opportunity have now confirmed this fact in spectacular fashion. Edgett's analysis of orbiter observations shows that the 6 or 7 meters of exposed sedimentary rock explored by Opportunity represent less than 1% of the approximately 800 meters of sedimentary rock that can be seen in orbiter images of this region.

In fact, the vast outcrops of sedimentary rocks exposed in Sinus Meridiani cover an area larger than the Colorado Plateau of North America and exhibit a greater diversity than seen by the Opportunity Rover. Edgett's analysis also shows that the sediments in the Sinus Meridiani region have experienced multiple episodes of burial and exhumation, suggesting a complex geologic and climatic history for this region that may extend over a longer period than thought previously.

Edgett's paper includes 52 figures, including seven images obtained by the Mars Orbiter Camera (MOC) on NASA's Mars Global Surveyor (MGS) orbiter that have not been previously released to the public.

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