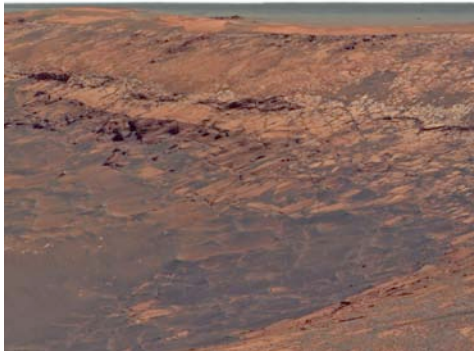


# Mars in Transition: Latest Results from the Red Planet

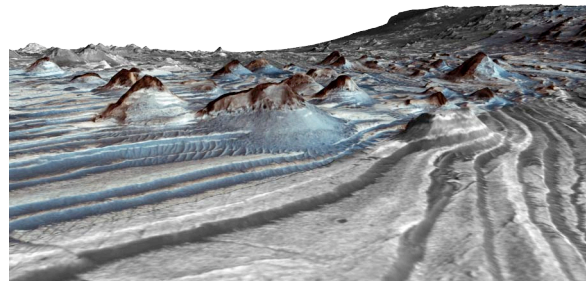
## Richard Zurek

Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA

An impressive armada of spacecraft is operating in orbit and on the surface of Mars today. In 2006 the Mars Reconnaissance Orbiter joined the ESA's Mars Express and NASA's Mars Odyssey spacecraft in orbit, while the Mars Exploration Rovers recently completed their fourth year of surface operations on opposite sides of the planet. Meanwhile, the Phoenix Mars Scout is flying to Mars, headed for a landing in the high northern latitudes of Mars on May 25, even as the Mars Science Laboratory, a new and more capable rover, prepares for a launch to Mars in 2009. These missions are producing new data, unprecedented in their volume and level of detail, and are rapidly changing our understanding of Mars, of the radical climate change that it has undergone, and of its potential habitability, now and in the past. This presentation will review some of the latest findings from the ongoing missions and the prospects for future progress.



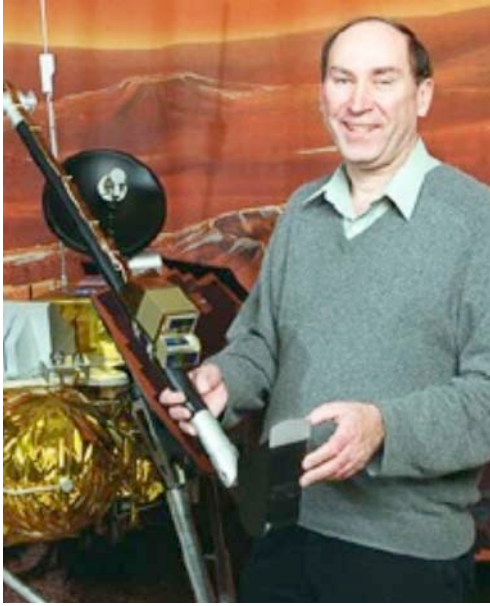
Duck Bay in Victoria Crater  
MER-Opportunity / JPL / NASA



West Candor Chasma  
MRO-HiRISE / U. Arizona / JPL / NASA



Gullies in unnamed Crater  
MRO-HiRISE / U. AZ / JPL / NASA



*Dr. Richard W. Zurek* is currently the Chief Scientist for the Mars Program at the Jet Propulsion Laboratory (JPL), California Institute of Technology. He also serves as the Project Scientist for the Mars Reconnaissance Orbiter (MRO), now several months into its primary science mission at Mars.

Born and raised in southern Idaho, he graduated from Michigan State University with a B. Sc. degree in Mathematics and received his Ph.D. in Atmospheric Sciences from the University of Washington (Seattle). Following post-doctoral appointments at the National Center for Atmospheric Research (NCAR) and the Laboratory for Atmospheric and Space Physics (LASP), University of Colorado in Boulder, Colorado, he went to work at JPL, where he has been employed since 1976.

While at JPL, Dr. Zurek has studied the atmospheres of Earth and Mars, including the causes and effects of the great dust storms that occur episodically on Mars. As a Theoretical Investigator on the Upper Atmosphere Research Satellite (UARS), he helped pioneer studies isolating transport from photochemical effects on ozone change as observed from space. For Mars, he has worked with data from the Viking Orbiter and Lander missions launched in 1975, and he has been heavily involved in the development and implementation of recent missions to Mars. This includes specification of atmospheric and environmental conditions needed for spacecraft design and mission operations. These activities, together with his published research, have led to appointments at JPL as a Senior Research Scientist and a JPL Fellow.