

THE NEXT DECADE OF MARS EXPLORATION. D. J. McCleese, Mail Stop 264-426, Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena CA 91109, USA.

Following a 20-year hiatus in missions to Mars, the planet has again become a focus of planetary research for space-faring nations. NASA and space agencies worldwide are returning to Mars with scientific research and public engagement sharing top priority. Collectively, the work to be performed within a decade will address much of the research associated with planetary evolution, past and present climates, and astrobiology.

NASA's science goals are centered on the study of potential habitats – past and present environments that may have been suitable for the origin of life. These goals are approached through in situ measurements and through sample return. CNES has teamed with NASA to return samples, while also extending the research base by adding geophysical measurements via a network of landers. ASI has joined NASA and CNES by providing a drill to access the near sub-surface. ESA will fly an orbiter and, potentially, a lander to Mars with the goal of addressing mineralogy, geochemistry, geology, and biology. ISAS will study

the planet's aeronomy using an orbiter. Many other nations are contributors to these programs of exploration.

The desire for national participation, presence on the Martian surface and, most importantly, samples to analyze motivate all nations involved. So important is public engagement that NASA and CNES will launch a network of communication satellites to improve public participation and enhance scientific data return. Further, NASA is currently preparing a Mars airplane that will undoubtedly engage the public's imagination.

Additional research investigations will be sought; particularly those able to utilize small spacecraft on and above the surface. A recently announced NASA/CNES series of MicroMissions offers a means of pursuing discoveries, scouting potential landing sites for sample return, and further broadening the scope of scientific research. The timing for these opportunities will be presented.