

## MARS GLOBAL SURVEYOR: A GLOBAL MAPPING MISSION

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The Mars Global Surveyor Mission will launch a single spacecraft to Mars in November 1996. After arrival at the planet in September 1997 aerobraking will be used to lower the spacecraft into a low, sun-synchronous, polar-mapping orbit over several months. Early in 1998 mapping observation will begin and continue for a Mars year (687 days). Following completion of this first Mars year of mapping the spacecraft will continue to act as a relay orbiter for an additional three earth years. The five instruments carried involve magnetometry, surface and atmosphere imaging, atmospheric sounding, laser altimetry, gravity and thermal emission spectroscopy. In addition, the spacecraft carries a Mars relay receiver/transmitter which will operate over the entire five year orbital mission ending in January of 2003. The Mars Global Surveyor mission is intended to accomplish a portion of the scientific objectives of the Mars Observer mission which was lost in 1993 three days before entering Mars orbit. The instrumentation to be used for the magnetometers, cameras, laser altimeter, emission spectrometer and radio science are very nearly the same as those carried by Mars Observer. The spacecraft design will be new but will use spare equipment from Mars Observer and has a mass about two and one-half times smaller. All experiments will be controlled remotely from their investigators home institution. The long planned period of observation supports the mission's global and seasonal objectives.

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2. Session: 1'S 11

3. Dr. Daniel J. McCleese and Professor Dr. Heinrich Wänke

4. Standard equipment is satisfactory.

5. Preference is for an oral presentation