Mars Reconnaissance Orbiter
Preproposal Conference

AO Overview

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AO Highlights

- **The MRO is a Fast Paced, Focused Science Mission Whose Development is Constrained in Cost and Schedule**
  -> NASA is looking for mature investigations that will provide insight into key scientific questions linked to priorities identified by MEPAG and the MRO Science Definition Team.

- **Key MRO Development Target Milestone Dates**

- AO released	6 June 2001	
- Proposals due	22 August 2001	~2.5 months
- Investigation Selection	Mid-November 2001	
- Phase A	Mid Nov. 2001 to Jan. 2002	~2 months
- Phase B	Feb. to July 2002	~6 months
- Phase C/D	Aug. 2002 to Sept. 2005	~37 months
- Launch	Aug. 2005	
- Arrival at Mars	March 2006	
- Phase E	Oct. 2005 to May 2009	~43 months

AO Highlights

- **Two types of science investigations solicited by this AO**
  - -> Principal Investigator (PI) Instrument Investigations
  - -> Facility Team Leader or Member Investigations

- **Four Categories of Science Investigations for MRO:**
  - -> **Recovery of Previously selected MCO Investigations; Instruments Provisionally Selected**
    - Pressure Modulator Infrared Radiometer (PMIRR)
    - Mars Color Imager Wide Angle Camera (MARCI-WA)
    - No new science team members are solicited for these investigations
  - -> **New Facility Investigations**
    - >> MARCI Medium Angle Context imager: provide context for other instruments solicited by this AO
      - No new MARCI-MA science team members are solicited for this investigation
      - Instrument to be operated by original MARCI Science Team; data will be made readily available to other instruments

AO Highlights

>> Subsurface Sounding Radar to be provided by Italian Space Agency (ASI)
- U.S. facility science team members solicited by this AO. Italian team members to be solicited by AO released by ASI
- Team members must be experienced in both science & engineering aspects of radar sounding instruments

-> **New Remote Sensing PI Instrument Investigations**
- Search for sites showing evidence of aqueous and/or hydrothermal activity
- Map & characterize the detailed stratigraphy, geologic structure and composition of globally distributed surface features
- Proposers are free to propose any type of instrument to address the key objectives. The MRO SDT recommended:
  (1) Imaging Spectrometer
  (2) High Resolution imager
- Overall cost guideline of $50 M (Imaging Spectrometer, $18M; High Resolution Imager, $32 M)

AO Highlights

-> **New Facility Investigations Using Spacecraft Engineering Systems**

- Types of Investigations:
  >> Atmospheric structure via acclerometer data
  >> Gravity models via Doppler tracking data
  >> Atmosphere and/or surface characteristics via radio occultation data

- Final implementation of these investigations contingent on provision of required spacecraft hardware, mission design and overall funding