

Mars Exploration Program Analysis Group (MEPAG)

chartered by NASA HQ to assist in planning the scientific exploration of Mars



Looking Ahead

- Trace Gas Orbiter (TGO) and Schiaparelli Lander arrive at Mars October 19
- Next Mars Orbiter studies continue, but the *Objectives and Requirements Definition Team (ORDT)* has been deferred to early 2017
 - See next slides
- Face to Face MEPAG meeting in Feb/March/April 2017 (TBD)
 - See later slide
- Participating in Panel on “Perspectives on the Future of Planetary Exploration”
 - 3rd International Workshop on Instrumentation for Planetary Missions October 24–27
- Formulation of new MEPAG Studies
 - See subsequent slides



Future MEPAG Studies

- ✓ Next Mars Orbiter Science Team Organization / solicitation (AO)
- Studies in Preparation for next Decadal, NF candidates
 - Polar/Ice Science: Objectives and Mission Concepts
 - Astrobiology: How to search for extant life?
 - Follow-on to Biosignatures workshop? To Special Regions SAG?
 - Network Science
 - Others?
- Other possible topics for MEPAG Study
 - HEO: Coordinate with Ben Bussey (e.g., science using proximity tele-robotics); major meetings coming up may help refine topics
 - Small Satellite concepts for future observations
 - Ancillary science on the MAV-lander
 - Planetary Protection: Are there additional analysis activities (like a special regions study)?

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Next Mars Orbiter Team Call

- **Next Mars Orbiter will likely have payload capability beyond what it can afford to populate**
 - The most basic concept includes telecommunications and a HiRISE-class imaging system
- **International (and non-SMD Directorate) partnering can provide additional payload elements augmenting mission capabilities without significant additional cost to NASA**
- **Challenges:**
 - How do we ensure that the total payload conducts a high-priority science mission, consistent with Decadal Survey?
 - MEP will work with international partners to define next level of detail
 - How do we craft opportunities for U.S. scientists to participate?
 - How do we select a science team that melds the various payload contributions into an optimal mission strategy and observing campaign?
 - How should that team and its competitive selection be organized?
 - Facility observatory approach (e.g., HST, Spitzer Space Telescope)
 - Team Leads, deputy team leaders, team members?
- **Considers various options and present findings to MEP**
 - Findings also presented to ORDT when commissioned
 - Findings provide a head-start on a draft AO for science team selection
 - *Note: This is not the Objectives and Requirements Definition Team (ORDT)*