Mars Exploration Program Analysis Group (MEPAG)

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

Goals Document: Recent Updates and Future Plans

MEPAG #26 4 October 2012

Vicky Hamilton, Chair

hamilton@boulder.swri.edu

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Overview

- Committee representative changes
- Goals Document Revisions
- Future Activities

Committee Representative Changes

- **ゆ**Goal I (Life)
 - Tori Hoehler (NASA Ames)
 - Frances Westall (CNRS)
- **♥**Goal II (Climate)
 - Scot Rafkin (SwRI)
 - 10 Paul Withers (BU)
- **O**Goal III (Geology and Geophysics)
 - **10** Steve Ruff (ASU) replacing Vicky Hamilton
 - **1** Aileen Yingst (PSI) replacing Jeff Plescia
- **™** Goal IV (Prepare for Human Exploration)
 - Darlene Lim (NASA Ames)
 - **10** TBD replacing Abhi Tripathi
- Dave Beaty and Charles Budney Mars Program Office

Goals Document Revisions

- Community input solicited via MEPAG mailing list (9/28/12), Planetary Exploration Newsletter (9/30/12), handouts at this meeting
- Proposed revisions to Goal III incorporate results of MEPAG NET-SAG study, completed March 2010
 - Edits to language of Investigations IIIA-7 (Crust) and IIIB-1 (Interior)
- Update Goal IV to bring it into alignment with the results of the MEPAG P-SAG (Precursor Science Analysis Group), completed mid-2012
 - Major reworking of Goal IV text

Goal IV - Incorporate Precursor SAG

- Prepare for human exploration of Mars
- P-SAG report structured in the form of descriptions of "strategic knowledge gaps" and "gap-filling activities", along with an update to our understanding of their priority and required timing
 - Edits incorporate this style and revised priorities

Goal IV Update Schematic

2010 version

2012 version

1A Atmosphere for EDL

1B Biohazards

2E Forward Planetary Protection

2B Radiation

2C Dust toxicity

2D Atmospheric electricity

2A ISRU Atmosphere & Water

3 Dust - engineering effects

4 Landing site hazards

1A Atmosphere for EDL

1B Biohazards

2B Forward Planetary Protection

2A Dust - engineering effects

3A Orbital particulates *NEW*

3B Radiation

3C Dust toxicity

3D Regolith properties *NEW*

3E Landing site hazards

4A Atmospheric electricity

4B ISRU Atmosphere

5 ISRU Water

Future Goals Updates

- Near-term activity
 - Identify new Goal IV representative (in progress)
- Mid-term activities (kickoff summer 2013)
 - Update investigation descriptions and priorities for Goal I (Life) and Goal
 IIIA (Crust) in light of MSL results and to feed into 2018-2020 planning
- Long-term activities (2015-2018)
 - Update investigation descriptions and priorities for Goal II (Climate) to incorporate results from MAVEN
 - Update Goal IIIB (Interior) to incorporate InSight results