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Mars Exploration Program Analysis Group (MEPAG) Terms of Reference

Purpose: The Mars Exploration Program Analysis Group (MEPAG) is responsible for providing science input needed to plan and prioritize Mars exploration activities. MEPAG serves as a community-based, interdisciplinary forum for inquiry and analysis in support of Mars exploration objectives. To carry out its role, the MEPAG updates goals, objectives, investigations and required measurements for robotic and human exploration of Mars in response to new discoveries and directions on the basis of the widest possible community outreach. The four overarching MEPAG goals for the exploration of Mars and its moons, as described in the MEPAG “Goals Document” (<https://www.lpi.usra.edu/mepag/goals/>), are:

- I. Determine if Mars ever supported, or still supports, **Life**
- II. Understand the processes and history of **Climate** on Mars
- III. Understand the origin and evolution of Mars as a **Geological System**
- IV. Prepare for **Human Exploration**.

Community: MEPAG meetings are open to all members of the planetary exploration community, particularly those scientists, engineers, project and program personnel, theoreticians and experimentalists, instrument scientists, and modelers who are interested in Mars exploration. International participation is welcomed and solicited as appropriate, including reports of activities by the various space agencies.

Procedure: The MEPAG maintains the Goals Document and conducts analysis activities on topics of relevance to Mars-related exploration. Analysis tasks may be requested by NASA, including its Mars Exploration Program (MEP), its Science and Exploration Systems Development Mission Directorates (SMD, ESDMD), and its advisory committees, such as the Planetary Science Advisory Committee (PAC). Tasks may also be requested through NASA by committees of the National Academy of Sciences (NAS) Space Sciences Board. MEPAG may choose to organize Science Analysis Groups (SAGs) to deal with specific issues; these SAGs report their findings to the full community. Reports are formally approved by the MEPAG Chair, after review by the MEPAG Steering Committee and typically after discussion in an open MEPAG forum. Findings are reported to the requestors and posted to the community on the MEPAG website, and status reports are routinely made to MEP and PAC. MEPAG meets annually in an open meeting and as otherwise needed, including upon request by NASA. Between meetings, activities are handled by the MEPAG Chair, supported by the MEPAG Steering Committee.

Organization: The Chair of the MEPAG is appointed by the MEPAG Steering Committee in consultation with NASA Headquarters. The MEPAG Steering Committee consists of the MEPAG Chair (lead), the MEPAG Vice-Chair (if selected), the previous MEPAG Chair, the MEP Lead Scientist, the Mars Program Office Principal Scientist, the Goals Committee Chair, and up to 10 additional members of the MEPAG community. The ESDMD Chief Exploration Scientist is an ex officio member. The Goals Committee nominally has two members for each of the four goal areas, in addition to its Chair. Membership of the Steering and Goals Committees is solicited from the MEPAG community and determined by the Chair and Steering Committee. Logistical and organizational support to the MEPAG, including its science analysis groups, is provided by SMD/MEP currently through the Lunar and Planetary Institute.