

Call for *Letters of Application* for Membership on the Science Definition Team for the 2020 Mars Science Rover

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The National Aeronautics and Space Administration (NASA) invites scientists, technologists, and other qualified and interested individuals at U.S. institutions and elsewhere to apply for membership on the Science Definition Team (SDT) for the 2020 Mars science rover mission (hereafter Mars-2020). Mars-2020 is a strategic mission sponsored by NASA's Planetary Science Division, through the Mars Exploration Program, all of which are part of the Science Mission Directorate (SMD).

This mission will advance the scientific priorities detailed in the National Research Council's Planetary Science Decadal Survey, entitled "Vision and Voyages for Planetary Science in the Decade 2013-2022" (the Decadal Survey is available at <http://www.nap.edu>). Mars-2020 rover development and design will be largely based upon the Mars Science Laboratory (MSL) architecture that successfully carried the *Curiosity* rover to the Martian surface on August 6, 2012 (UTC). The 2020 rover is intended to investigate an astrobiologically relevant ancient environment on Mars to decipher its geological processes and history, including the assessment of its past habitability and potential for preservation of biosignatures within accessible geologic materials.

Furthermore, because NASA is embarking on a long-term effort for eventual human exploration of Mars, the mission should provide an opportunity for contributed Human Exploration Mission Directorate (HEOMD) or Space Technology Program (STP) participation via payload elements aligned with their priorities and compatible with SMD priorities for Mars-2020 (e.g., MEPAG P-SAG report, posted June 2012 to MEPAG website: <http://mepag.jpl.nasa.gov>).

The members of the Mars-2020 SDT will provide NASA with scientific assistance and direction during preliminary concept definition (Pre-Phase A) activities. Near-term activities of the SDT will include the establishment of baseline mission science objectives and a realistic scientific concept of surface operations; development of a strawman payload/instrument suite as proof of concept; and suggestions for threshold science objectives/measurements for a preferred mission viable within resource constraints provided by NASA Headquarters. The products developed by the SDT will be used to develop the NASA Science Mission Directorate (SMD) Announcement of Opportunity

(AO) that will outline the primary science objectives of the baseline mission and the character of the payload-based investigations solicited under open competition via the AO. The SDT will be formed in January 2013, and disbanded after the work is complete approximately four months later.

All reports and output materials of the Mars-2020 SDT will be publicly available, and the SDT will be disbanded prior to any future Announcement of Opportunity (AO) for participation in the Mars-2020 mission, including provision of instrumentation and investigation support. Participation in the Mars-2020 SDT is open to all qualified and interested individuals. The formal NASA charter for the Mars-2020 SDT will be posted to the NASA Science Mission Directorate Service and Advice for Research and Analysis (SARA) website (<http://science.nasa.gov/researchers/sara/grant-solicitations/>).

DETAILS OF THIS CALL FOR SDT PARTICIPATION

Response to this Call for Membership in the Mars-2020 SDT is in the form of a *Letter of Application*. SDT members will be selected by NASA Headquarters senior officials from the pool of respondents and other qualified candidates. The selected members will have demonstrated expertise and knowledge in areas highly relevant to the Mars-2020 primary scientific goals and related technologies and instrumentation. The *Letter of Application* should provide clearly defined evidence of the candidate's demonstrated expertise in one or more areas associated with the preliminary mission description given above.

The *Letter of Application* may also contain a brief list of references to scientific or technical peer-reviewed papers the applicant has published that formally establish their position of scientific leadership in the community. The letter should also contain a statement confirming the applicant's time availability during the next three to six months to participate on the SDT, particularly if there are any major schedule constraints that may restrict full engagement in the significant amount of work that will be required in a reasonably short time frame. Applicants should indicate interest in serving as the chair or co-chair of the SDT.

Membership in the SDT will be determined by NASA after formal review of the *Letters of Application* solicited by this Call for Membership. Approximately 12-15 SDT members and an SDT Chair will be selected. The NASA Mars-2020 Program Scientist, the NASA Mars Exploration Program Lead Scientist, and possibly other Agency representatives will serve as *ex officio* members of the SDT.

Letters of Application are invited only from individuals, and group applications will not be considered. In addition, collaborations and teams will not be considered.

Each *Letter of Application* is limited to two pages, with 11-point font with 1-inch margins. *Letters of Application* submitted by E-mail are preferred, but may also be submitted by regular mail or fax. Responses to this invitation should be received by the Mars-2020 Program Scientist no later than January 10, 2013, at the address below.

The issuance of this Call for *Letters of Application* does not obligate NASA to accept any of the applications. Any costs incurred by an applicant in preparing a submission in response to this Call are the responsibility of the applicant.

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