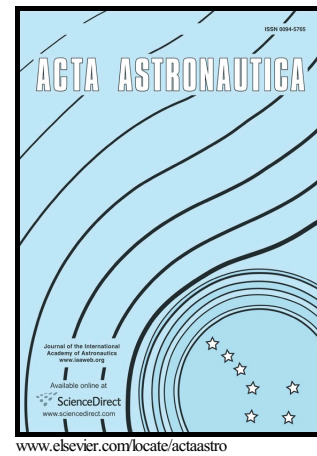


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PII: S0094-5765(15)30112-0
DOI: <http://dx.doi.org/10.1016/j.actaastro.2016.12.018>
Reference: AA6129

To appear in: *Acta Astronautica*

Received date: 21 September 2015
Revised date: 2 September 2016
Accepted date: 15 December 2016

Cite this article as: R.A. Yingst, J. Berger, B.A. Cohen, B. Hynek and M.E. Schmidt, DETERMINING BEST PRACTICES IN RECONNOITERING SITES FOR HABITABILITY POTENTIAL ON MARS USING A SEMI-AUTONOMOUS ROVER: A GEOHEURISTIC OPERATIONAL STRATEGIES TEST, *Acta Astronautica*
<http://dx.doi.org/10.1016/j.actaastro.2016.12.018>

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DETERMINING BEST PRACTICES IN RECONNOITERING SITES FOR HABITABILITY POTENTIAL ON MARS USING A SEMI-AUTONOMOUS ROVER: A GEOHEURISTIC OPERATIONAL STRATEGIES TEST

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Abstract

We tested science operations strategies developed for use in remote mobile spacecraft missions, to determine whether reconnoitering a site of potential habitability prior to in-depth study (a walkabout-first strategy) can be a more efficient use of time and resources than the linear approach commonly used by planetary rover missions. Two field teams studied a sedimentary sequence in Utah to assess habitability potential. At each site one team commanded a human “rover” to execute observations and conducted data analysis and made follow-on decisions based solely on those observations. Another team followed the same traverse using traditional terrestrial field methods, and the results of the two teams were compared. Test results

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