AN UPDATE ON DEVELOPMENT AND LANDING SITE SELECTION FOR THE NASA MARS 2020 ROVER MISSION. K. H. Williford[1], K. A. Farley[2], the Mars 2020 Project Science Group and the Mars 2020 Landing Site Working Group [1]Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109 USA kenneth.h.williford@jpl.nasa.gov, [2]Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, CA 91125 USA

Introduction: The NASA Mars 2020 rover mission is scheduled to launch in the summer of 2020 and land in early 2021. The objectives of the Mars 2020 mission are to a) explore the geology of an ancient Mars environment, b) assess the habitability of that environment and seek the signs of ancient life there, c) prepare a returnable cache of samples and d) prepare for possible future human exploration of Mars. As the first step toward a possible Mars sample return, landing site selection for Mars 2020 has profound implications for planetary science, astrobiology and the future of Mars exploration.

In situ exploration with the Mars 2020 payload and the possible analysis of returned samples in Earth-based laboratories has the potential to revolutionize Mars system science and planetary science generally. Astrobiology is the primary motivation for the mission, however, and the practicing astrobiologists of today and tomorrow are key stakeholders. With this in mind, we will present an update on the results of the 3rd landing site selection workshop in early February 2017 and an update on the general progress of mission development after the project Critical Design Review in late February 2017.