



The Europa Clipper MASPEX Europa Investigation

J. Hunter Waite (1), Tim Brockwell (1), Chris Glein (1), Everett Shock (2), Melissa McGrath (3), Ben Teolis (1), Danielle Wyrick (1), William McKinnon (4), Olivier Mousis (5), Mark Sephton (6), Mikhail Zolotov (2), and Scott Bolton (1)

(1) Southwest Research Institute, Space Science and Engineering Division, San Antonio, Texas, United States (hwaite@swri.edu), (2) Arizona State University, Tempe, Arizona, United States, (3) SETI Institute, Mountain View, California, United States, (4) Washington University, St. Louis, Missouri, United States, (5) Laboratoire D'Astrophysique de Marseille, Marseille, France, (6) Imperial College, London, United Kingdom

The NASA Europa Clipper mission will explore the habitability of the Jovian satellite Europa with a suite of nine instruments in the next decade. The MASPEX Europa mass spectrometer aboard the Europa Clipper mission will determine the composition of any observed plumes and of the atmosphere/exosphere of Europa. The primary objective is the search for molecular and isotopic evidence that reflects the potential occurrence of habitable conditions in the global ocean below the surface ice. This talk will discuss the MASPEX science and measurement objectives in the context of understanding the habitability of the Galilean satellites within the Jovian system, with specific emphasis on Europa. In addition, information on the development status and performance of the Europa Clipper Engineering Model will be presented as well.