Geophysical Research Abstracts Vol. 19, EGU2017-1750, 2017 EGU General Assembly 2017 © Author(s) 2016. CC Attribution 3.0 License.



## The INMS Case for Habitability at Enceladus

- J. Hunter Waite (1), Chris Glein (1), Rebecca Perryman (1), Brian Magee (1), Jonathan Lunine (2), Mark Perry (3), Jacob Grimes (1), Greg Miller (1), Scott Bolton (1), and Kelly Miller (1)
- (1) Southwest Research Institute, Space Science and Engineering Division, San Antonio, United States (hwaite@swri.edu), (2) Cornell University, Astrophysics and Planetary Science, Ithaca, NY, United States, (3) Johns Hopkins University/Applied
- (2) Cornell University, Astrophysics and Planetary Science, Ithaca, NY, United States, (3) Johns Hopkins University/Applied Physics Laboratory, Laurel, MD, United States

Cassini carried out 22 flybys of Enceladus. During seven of these flybys (E2, E3, E5, E7, E14, E17, E18, and E21) the Cassini Ion Neutral Mass Spectrometer obtained important information about the composition of the plume. The data sets will be reviewed with an emphasis on what we have learned about the characteristics of the internal ocean and what this tells us about the potential habitability of Enceladus. Particular emphasis will be given to the recent E21 observations that were specifically targeted to the measurement of  $H_2$  gas in the plume.