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Cassini-Huygens Ion Neutral Mass Spectrometer and the Future

J. Hunter Waite and the INMS Team

Southwest Research Institute, Space Science and Engineering Division, San Antonio, United States (hwaite@swri.edu)

The Cassini-Huygens Ion Neutral Mass Spectrometer (Cassini INMS) designed and built by Hasso Niemann has revolutionized our understanding of the Saturn system and demonstrated the importance of mass spectrometry as a tool for understanding formation, evolution, and chemical processes. In this talk that honors the accomplishments of Hasso I will discuss: 1) the major discoveries of INMS at Titan, Enceladus, and the other icy moons of Saturn, 2) the new perspective this has given us on understanding the formation and evolution of the outer solar system, and 3) the implications for future studies in the outer solar system using mass spectrometry.