The AAE Special Seminar Series Presents

Atmospheric Entry Studies for Uranus

Parul Agrawal
Senior Research Scientist
NASA Ames Research Center

Friday, June 12, 2015
ARMS 3326
1:30 pm – 2:30 pm

Abstract
Probe entry studies for Uranus, led by Dr. Parul Agrawal, were conducted in 2013-2014. Three NASA centers: 1) Ames Research Center 2) Langley Research Center 3) Jet Propulsion Laboratory, participated in these studies. The prime objective for these studies was to define the trade space for a Uranus atmospheric entry. Two different arrival opportunities; in year 2029 and 2043, were considered. An improved engineering model was developed for the Uranus atmosphere. Two types of entry scenarios were considered for these studies: 1) direct ballistic entry, and 2) aero-capture followed by entry from orbit. The present talk highlights the results from these studies, and outlines the ongoing research on probe concept studies for Ice Giants at NASA Ames and collaborative work with Purdue University.

Bio
Dr. Parul Agrawal is a Senior Research Scientist, a government contractor in Entry Systems Technology Division at NASA Ames Research Center. She received a PhD in Aeronautics and Astronautics from Purdue University, and Bachelors from the Indian Institute of Technology IIT Kanpur, India. Dr. Agrawal has over ten years of experience in thermal-mechanical modeling, testing and characterization of thermal protection and other material systems. She is currently managing the probe concept studies for ice-giants at NASA Ames and actively participating in other projects science projects at NASA including Comet Surface Sample Return and Planetary Defense.