

The Solar Probe Mission

B. T. Tsurutani and J. E. Randolph (Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109; 818-354-7559; e-mail: btsurutani@jplsp.jpl.nasa.gov).

The Solar Probe mission is now part of the Outer Planets/Solar Probe NASA line and Solar Probe will be launched in 2007. Initial instrument development research, supported by a NASA NRA, has shown that the measurements requirements can be accomplished with a low-mass, low-power core payload. In addition, conjunction experiments with the NEAR and MGS spacecraft show promise for high telemetry rates at perihelion to enhance data return. An AO for instruments has been issued by NASA. The mission design now has two close flybys (one at solar maximum and one at solar minimum) and is based on a radioisotope power source. The mission, scientific objectives, science strawman payload and spacecraft will be discussed. In particular, we will identify some of the new SOHO results and will discuss how Solar Probe will play an essential and unique role in carrying our understanding further.