

# **Solar Probe: Humanity's First Visit to a Star**

**D.M. Hassler** (1) and the Solar Probe Science and Technology Definition Team  
Southwest Research Institute, Boulder, CO, USA (hassler@boulder.swri.edu)

Solar Probe will experience first hand the processes and conditions in the solar atmosphere that ultimately impact our planet and shape the harsh solar system environment. It will be humanity's first visit to a star and will explore a previously inaccessible region of the inner heliosphere. The 2003 Space Science Enterprise Strategy called for study of a Solar Probe to "fly through the solar atmosphere to answer fundamental questions that can be answered in no other way." The mission received highest priority in the National Academy of Sciences' decadal research strategy in solar and space physics in 2002. Significant advances have been made in the areas of solar and solar wind science, instrument technology, mission resources, and the mission environment since the previous Solar Probe Science Definition Team reports of 1989, 1995, and 1999. The 2004-05 Solar Probe Science and Technology Definition Team (STDT) recently completed a detailed study of the Solar Probe Mission based on an earliest launch date of October 2014. The report and its Executive Summary were published by NASA in September 2005, and can be found at the website <http://solarprobe.gsfc.nasa.gov>. This talk provides an overview of the Solar Probe mission and a summary of the efforts of the STDT.