Demonstrations of New SPICE Capabilities C. H. Acton[1], B. V. Semenov[1] N. J. Bachman[2], and E.D. Wright[1],,
[1]Jet Propulsion Laboratory, 4800 Oak Grove Dr., Pasadena CA, charles.acton@jpl.nasa.gov.

Introduction: The Navigation and Ancillary Information Facility (NAIF) provides NASA's space science enterprise an information system named SPICE, comprising both data and software, used by scientists to plan observations and to analyze the data returned from those observations. SPICE data include items such as solar system body's ephemerides, sizes, shapes and orientations; spacecraft trajectory and orientation; instrument pointing and field-of-view geometry; reference frame (coordinate system) specifications and parameters needed for time conversion capabilities.

Since the time of the last Planetary Data Workshop NAIF has released two new tools: **WebGeocalc**, a Graphical User Interface to a SPICE geometry engine, and **Cosmographia**, a SPICE-enabled data 3D mission visualization tool. NAIF has also greatly enhanced a **Digital Shape Kernel** subsystem, useful in providing observation geometry information based on high-fidelity models of target bodies.

In parallel to the 2nd Planetary Data Workshop NAIF will offer a SPICE class illustrating how these new capabilities may be used.