SPICE Newsletter

August 2022
Provided by NASA's Navigation and Ancillary Information Facility (NAIF)

The Outlook for NAIF

NAIF's financial situation appears to be sound. In April 2022 NAIF successfully passed its quinquennial NASA PDS Supporting Nodes Performance Review, receiving the highest marks in all ranked categories and obtaining commitment from NASA to continue NAIF's PDS funding for the next five years. We believe we have good relations with our flight project customers and are doing reasonably well at supporting SPICE users across the whole Planetary Data Ecosystem.

SPICE Training

NAIF is planning to restart its in-person SPICE classes with the next class conducted in the Pasadena area during the week of October 24-28, 2022. This will be a traditional SPICE beginner's class taking 3 full days. For complete details about the class see this announcement. Those who cannot attend a live class can follow the self-training package consisting of the tutorials and lessons used in the "live" classes.

Open Position at NAIF

The NAIF team is seeking to hire a team member whose primary job will be the development of the next generation SPICE Toolkit (SPICE 2.0), implemented in C++11. Complete details about this position and instructions for applying are available at the JPL Careers website.

The SPICE Toolkit

The latest SPICE toolkit, N0067, was released In January 2022 and is available in five languages from the NAIF server. In this latest version NAIF added new high-level APIs, new reference frame types, and a large number of C, IDL, MATLAB, and JNI wrappers, and substantially improved user documentation.

The Next Generation C++11 SPICE Toolkit

NAIF continues full speed ahead with its development of the next generation C++11 SPICE toolkit, SPICE2, designed to address shortcomings of the traditional FORTRAN-based SPICE Toolkits – lack of support for multithreading and run-time data ingestion, and limited scalability due to use of static storage. While NAIF has made great strides towards completing a SPICE2 alpha prototype, it will still be a while before this prototype reaches sufficient maturity to be distributed for early evaluation.

WebGeocalc

With help from ODC Space, this year NAIF upgraded its on-line geometry engine, WebGeocalc, to be based on the N0067 Toolkit and to include two new calculations. The latest WebGeocalc is deployed on WGC servers at JPL (GUI-only WGC and GUI-plus-API WGC2), at ESA (ESS WGC), and JAXA (DARTS WGC).

SPICE-Enhanced Cosmographia

With help from Fifth Star Labs, NAIF continued development of its 3-D Mission Visualization Tool, SPICE-Enhanced Cosmographia, and in February released its new version, 4.1, adding support for SPICE DSK files and many user-requested interface features and scripting functions.

Leapseconds Kernel (LSK)

The IERS announced there will **NOT** be a new leap second declared at midnight on December 31, 2022. As a consequence, the current SPICE LSK, naif0012.tls, will remain current until at least July 01, 2023.

Feedback

NAIF is always interested to hear suggestions for improvements or new functionality from SPICE users, including projects and users that are outside of those known to NAIF. Send a quick feedback note to a member of the NAIF Team.