March 1, 2012

Dear ESA SPICE Class Students—

ESA's Planetary Science Archive (PSA) at ESAC and NASA's NAIF Team from JPL are looking forward to meeting you on Monday, April 16 and continuing through Thursday, April 19, to help you begin learning to use ancillary data provided in the "SPICE" style as a tool for planning and analyzing space science observations, or for carrying out mission engineering activities.

The class will consist of lectures, using the latest SPICE tutorials, and some "hands-on programming lessons" done by you.

The "hands-on programming lessons" are designed to get you quickly immersed in some practical SPICE-based programming. The lessons are offered in all four languages supported by the NAIF Team: ANSI Fortran 77, ANSI C, Interactive Data Language (IDL) and MATLAB. Each lesson is broken into several small parts, called "tasks." For each task NAIF provides a task statement, helpful tips, all the needed SPICE kernels, and, "on the next page," our own solution. So you may think of these lessons as "open book" lessons. (But don't peak ahead unless you are really stuck!!!) During the lessons NAIF team members will be available to help guide you towards the correct answers.

There are eight lessons having the following names: binary_pck, event_finding, insitu_sensing, othr_stuff, remote_sensing, start_programming, toolkit_contents, and toolkit_programs. Each lesson is available for unix (including Linux and MAC OSX) platforms, and for PC/Windows platforms. Select the set of eight lesson packages that is appropriate for your platform.

Please read the "aareadme.txt" file first to see important instructions about obtaining and installing these lessons. **Pay particular attention to the bottom paragraph about installing the HTML versions of the lessons… this will help you immensely!**

Each lesson package has several components:

1. The actual lesson, provided in all four languages, and for each language, provided in both plain text format and in html format. (We realize you need the lesson in only one language, but it is easiest for us if we package all language versions together; simply ignore the three languages you don't need.)

2. A folder containing all of the SPICE data files ("kernels") needed for the lesson.

3. Where appropriate, a folder containing a set of diagrams illustrating what each step in the lesson is supposed to accomplish, offered in both PowerPoint and PDF format.

The lessons are available at this location:

ftp://ssols01.esac.esa.int/pub/workshops/10_SPICE_Workshop_ESAC_2012_April/Lessons

It is not necessary, but if you wish to you may download the SPICE Tutorials to your own computer before coming to the class. These are available here:

ftp://ssols01.esac.esa.int/pub/workshops/10_SPICE_Workshop_ESAC_2012_April/Tutorials

, and are available as individual files and as a ZIP package containing the individual files. Note: this collection is ordered differently from those available at the NAIF web site, and it also contains a few recent updates.

It is important that you have downloaded, installed, and tested your ability to use one of the current (Version N64) SPICE Toolkit software packages before you arrive at the class. Your testing should include writing a small program that you link to the Toolkit library… just to be sure you have a compiler (or an Integrated Development Environment) that works correctly.

If you are an "Icy" (IDL) or "Mice" (MATLAB) user, be sure you have a license arrangement in place that will allow you to use that product during the class. (Some of you have asked for a loaner license; those will be provided a bit later on.)

To help with the Toolkit installation and configuration, please read the tutorial "preparing_for_programming."

The class will begin promptly at 14:00 on Monday. We encourage you to arrive at the classroom 30 – 60 minutes early to ensure you have time to get settled in, establish a wireless connection and take care of any outstanding email, because once the class starts the material will fly at you at a quick pace. If you're not prepared in advance you'll be quickly left behind.

It is sometimes helpful if two or even three students work on the programming lessons together. Please feel free to take this approach if it suits you.

If you have any questions about this preparatory work, please contact Jose Luis Vazquez-Garcia <jlvazquez@sciops.esa.int> right away to get some help.