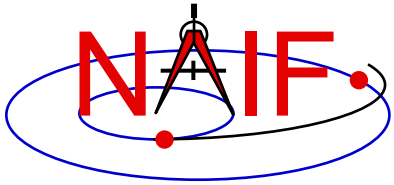


Navigation and Ancillary Information Facility

Using Module Headers

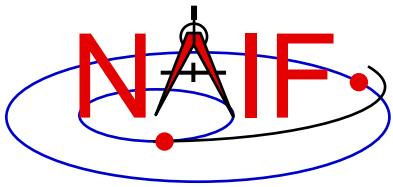
June 2019



Module Header Purpose

Navigation and Ancillary Information Facility

- **NAIF uses module “headers” to provide detailed information describing how to use the module**
 - In FORTRAN, C and MATLAB Toolkits the “headers” are comment blocks inserted in the source code
 - In IDL Toolkits, where there are (currently) no source code files, the “headers” exist as independent files
- **All Toolkit distributions include hyperlinked HTML versions of the module headers.**
 - All but ICY also include plain text versions
- **The next charts provide the header locations**



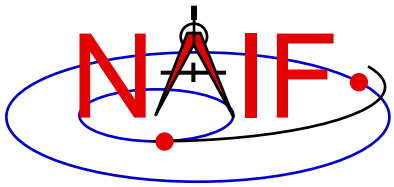
Module Header Contents

Navigation and Ancillary Information Facility

- Procedure or subroutine name
- Brief abstract
- Disclaimer (legalese required for JPL code)
- Required Reading (names of any related SPICE technical reference documents)
- Keywords (single relevant words; not really used)
- Argument type declarations, or Include files (for C and Fortran toolkits)
- Brief Input and Output descriptions
- Detailed Input descriptions
- Detailed Output descriptions
- Parameter definitions, if any
- Exceptions (what happens if a problem is detected)
- Descriptions of any files used
- Particulars (details about what the module does, how it works, any limitations)
- Code usage example(s)
- Restrictions in usage of the module
- Literature references
- Author
- Version
- Index entries (brief phrases used to generate entries for the Permuted Index document)
- Revision history (only in Fortran headers)

The source code goes here!

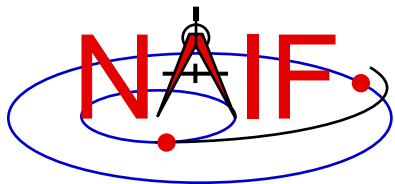
ICY and MICE headers contain only the items shown in blue;
see the corresponding CSPICE header for full details.



C Module Header Locations

Navigation and Ancillary Information Facility

- **Plain text versions:**
 - [**<path to CSPICE>**](#)/cspice/src/cspice/<name>_c.c
- **HTML versions:**
 - [**<path to CSPICE>**](#)/cspice/doc/html/cspice/index.html



Examine a Typical Header

Navigation and Ancillary Information Facility

- As example, look for and examine the headers for the modules named **spkezt** and **str2et**

FORTRAN	C	IDL (lcy)	MATLAB (Mice)
SPKEZR	spkezt_c	cspice_spkezt	cspice_spkezt
STR2ET	str2et_c	cspice_str2et	cspice_str2et

spkezt is the principal ephemeris access module
str2et is a key time conversion module