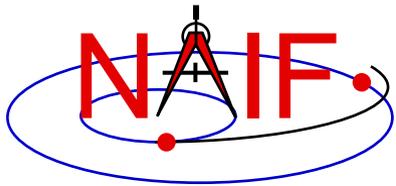




Navigation and Ancillary Information Facility

Using Module Headers

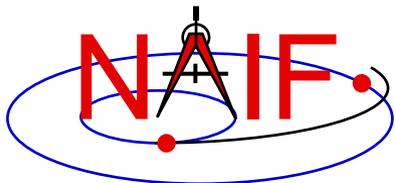
June 2019



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**



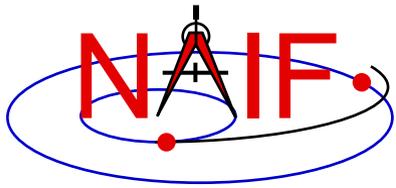
Module Header Contents

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!

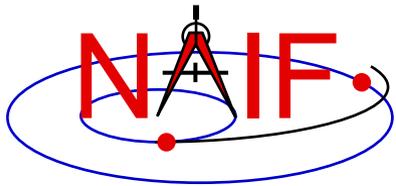
ICY and MICE headers contain only the items shown in **blue**;
see the corresponding CSPICE header for full details.



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	<code>spkezt_c</code>	<code>cspice_spkezt</code>	<code>cspice_spkezt</code>
STR2ET	<code>str2et_c</code>	<code>cspice_str2et</code>	<code>cspice_str2et</code>

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