

Navigation and Ancillary Information Facility

Using Module Headers

September 2009



Topics

Navigation and Ancillary Information Facility

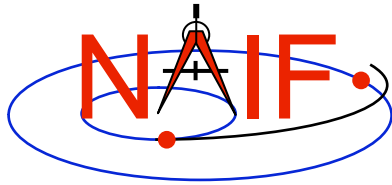
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Module Header Purpose

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- **NAIF uses source code module headers to provide SPICE users with detailed information describing a module's function and design.**
- **These headers are provided for all Toolkit modules, whether FORTRAN, C, IDL, or MATLAB Toolkits.**
 - All FORTRAN, C, and MATLAB source code files include a module header; Icy does not.
 - All Toolkit distributions include HTML versions of the module headers.
- **The next four charts provide the header locations.**
 - Using the HTML formats is usually the best approach.



Fortran Module Header Locations

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- In FORTRAN Toolkits, the headers are provided within the source code modules.
 - [<path to SPICELIB>/toolkit/src/spicelib/<name.f or <name>.for](#)
 - In most cases there is a single “header” at the top of the source code. For cases where a FORTRAN module has multiple entry points, there are additional “headers” at each entry point. For example:
 - » “keeper.f” has entries for:
 - FURNISH, KTOTAL, KINFO, KDATA, KCLEAR, and UNLOAD
- HTML versions of the headers are also available:
 - [<path to SPICELIB>/toolkit/doc/html/spicelib/index.html](#)



C Module Header Locations

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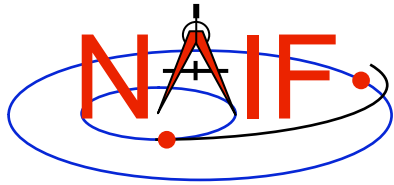
- In C Toolkits, the headers are provided within the source code modules.
 - [<path to CSPICE>/cspice/src/cspice/<name>_c.c](#)
- HTML versions of the headers are also available
 - [<path to CSPICE>/cspice/doc/html/cspice/index.html](#)



Icy Module Header Locations

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- In IDL (“Icy”) toolkits, two sets of headers are provided.
 - Icy headers in HTML format:
 - » `<path to icy>/icy/doc/html/icy/index.html`
 - CSPICE headers, in text and HTML formats:
 - » `<path to icy>/icy/src/cspice/<name>_c.c`
 - » `<path to icy>/icy/doc/html/cspice/index.html`
- The information provided in an “Icy” wrapper is minimal in some cases; the corresponding CSPICE wrapper provides more detail.
 - A link to the corresponding CSPICE wrapper is provided in the Icy wrapper.

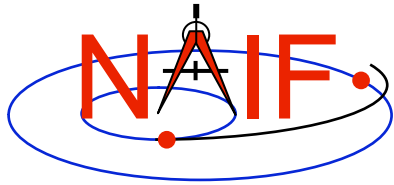


Mice Module Header Locations

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- In Matlab (“Mice”) toolkits, two sets of headers are provided.
 - Mice headers in HTML format:
 - » [<path to Mice>/mice/doc/html/mice/index.html](#)
 - » The user can also access the information presented in the HTML document via the Matlab `help` command, e.g.

```
>> help cspice_str2et
```
 - CSPICE headers, in text and HTML formats:
 - » [<path to Mice>/mice/src/cspice/<name>_c.c](#)
 - » [<path to Mice>/mice/doc/html/cspice/index.html](#)
- The information provided in a “Mice” wrapper is minimal in some cases; the corresponding CSPICE wrapper provides more detail.
 - A link to the corresponding CSPICE wrapper is provided in the Mice wrapper.



Examine a Typical Header

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- As example, look for and examine one of these headers:

<u>FORTRAN</u>	<u>C</u>	<u>IDL (lcy)</u>	<u>MATLAB (Mice)</u>
SPKEZR	spkezr_c	cspice_spkezr	cspice_spkezr
STR2ET	str2et_c	cspice_str2et	cspice_str2et