Subject: Re: reading and importing EOS-HDF Posted by Maarten[1] on Tue, 09 Jun 2009 09:08:40 GMT View Forum Message <> Reply to Message

On Jun 9, 8:01 am, drgur...@icimod.org wrote:

- > I am very new to IDL and trying to read/import EOS-HDF. Any
- > references, tutorials and guidance much appreciated.

Which version of HDF-EOS, or from which instrument or dataset?

HDF-EOS-2 (based on HDF-4) is fully supported in IDL, see the documentation for the eos_pt_*, eos_gd_* and eos_sw_* routines in the online help. These routines are failrly high-level, although the calling order can be somewhat odd (especially when writing data to a file).

HDF-EOS-5 (yes, based on HDF-5) has no special routines available in IDL, here you'll need to use the plain HDF-5 routines. Although a little more sanitized when compared to the HDF-4 routines, these are still low level routines. Over at [1] you'll find some instructions for HDF-(EOS-)5, in this case for the OMI (EOS-Aura) project.

I suggest that you at least install HDFView [2]. This tool allows you to inspect all variants of HDF files, and is a great aid in finding which field you actually want to read.

Best,

Maarten

- [1] http://www.knmi.nl/omi/research/product/read_tool_omi_level2 .php
- [2] http://www.hdfgroup.org/hdf-java-html/hdfview/

Subject: Re: reading and importing EOS-HDF Posted by David Fanning on Tue, 09 Jun 2009 12:39:26 GMT View Forum Message <> Reply to Message

Maarten writes:

- > HDF-EOS-2 (based on HDF-4) is fully supported in IDL, see the
- > documentation for the eos_pt_*, eos_gd_* and eos_sw_* routines in the
- > online help. These routines are failrly high-level, although the
- > calling order can be somewhat odd (especially when writing data to a
- > file).

Humm. I guess my definition of "high-level" must be different

from yours. Nevertheless, I find this alphabetical listing of routines you *could* use if you knew what the hell you were doing (which you don't) to be totally off-putting and depressing. Since years of IDL experience doesn't seem to help get through the morass, I can only imagine what I would think if I were approaching it as an IDL novice. "Matlab", probably. :-(

Cheers,

David

P.S. I do find it immensely cheering that things are "fully supported" though. ;-)

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: reading and importing EOS-HDF Posted by Maarten[1] on Tue, 09 Jun 2009 13:04:41 GMT View Forum Message <> Reply to Message

On Jun 9, 2:39 pm, David Fanning <n...@dfanning.com> wrote:

- > Maarten writes:
- >> HDF-EOS-2 (based on HDF-4) is fully supported in IDL, see the
- >> documentation for the eos_pt_*, eos_gd_* and eos_sw_* routines in the
- >> online help. These routines are failrly high-level, although the
- >> calling order can be somewhat odd (especially when writing data to a
- >> file).

>

- > Humm. I guess my definition of "high-level" must be different
- > from yours.

It is a matter of gradation. The hdf-5 routines are mostly god-awful, while the hdf-eos2 routines almost make sense. Part of my experience is with the C-interface, which IDL follows a little to closely for comfort. In the C-world, the difference is even more remarkable.

- > Nevertheless, I find this alphabetical listing of
- > routines you *could* use if you knew what the hell you were
- > doing (which you don't) to be totally off-putting and
- > depressing.

Agreed, there are things you could do with your time that are more

fun. Still, the eos_sw_* interface isn't totally bogus (open file, open swath, read data, close swath, close file - makes sense to me). The eos_gd_* interface has too many options for defining the grid, I hope your files don't use the most exotic ones.

- > Since years of IDL experience doesn't seem to
- > help get through the morass, I can only imagine what I would
- > think if I were approaching it as an IDL novice. "Matlab",
- > probably.:-(

Python, especially if you have to deal with hdf-5. PyTables is the best interface for HDF-5 on any platform I've used.

- > P.S. I do find it immensely cheering that things are
- > "fully supported" though. ;-)

For HDF-EOS-2: you can at least create files that are compliant, something that is impossible with HDF-EOS-5, although you can fake things to fool most software.

Maarten

Subject: Re: reading and importing EOS-HDF Posted by jameskuyper on Tue, 09 Jun 2009 14:24:03 GMT View Forum Message <> Reply to Message

David Fanning wrote:

> Maarten writes:

>

- >> HDF-EOS-2 (based on HDF-4) is fully supported in IDL, see the
- >> documentation for the eos_pt_*, eos_gd_* and eos_sw_* routines in the
- >> online help. These routines are failrly high-level, although the
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- > Humm. I guess my definition of "high-level" must be different
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- > depressing. Since years of IDL experience doesn't seem to
- > help get through the morass, I can only imagine what I would
- > think if I were approaching it as an IDL novice. "Matlab",
- > probably. :-(

You might find the information available at http://hdfeos.org/docs.php helpful. It doesn't document the IDL wrappers for the HDF-EOS routines, but if you know the name of the appropriate C routine, it's usually not

too difficult to locate the corresponding IDL routine.

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