
Subject: Re: reading and importing EOS-HDF
Posted by [Maarten\[1\]](#) on Tue, 09 Jun 2009 09:08:40 GMT
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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 fairly 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
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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 fairly 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

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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 fairly 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 too 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
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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 fairly high-level, although the
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- > 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.
