

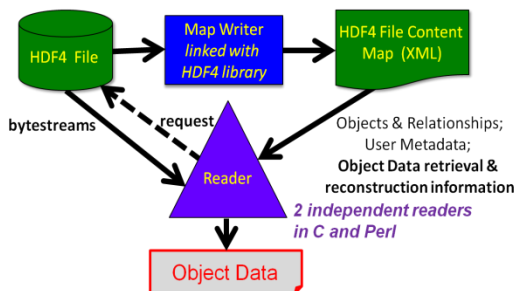
## How do you ensure the long term access of HDF-EOS data?

### h4mapwriter

The normal way to access HDF-formatted data is through the HDF software libraries, either by using the HDF Application Programming Interface (API) directly or by using HDF tools that depend on the HDF libraries.

However, there is a risk in depending solely on the HDF libraries to access HDF-formatted data over the long term. It is possible, especially in the distant future, that the software may not be as readily available as it is today. To address this risk, it is desirable to have a way to retrieve the data *independently*.

A desire to read HDF4 files without relying on HDF4 libraries prompted the construction of text-based "maps" of the actual data in NASA's HDF4 files, allowing simple readers to be written to access the data in the files. The format selected for the maps is XML documents.



**h4mapwriter:** Long Term Archive Tool for HDF4 Files.

## Who We Are

### About Us

The HDF Group maintains these tools with support from the NASA ESDIS project. It is our goal to help the easy access of NASA HDF (primarily HDF-EOS) data.



## Contact Information

Website: <http://www.hdfgroup.org/>

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# HDF TOOLS FOR EOSDIS

Supported by The HDF Group

# Tools for Easy Access and Interoperability

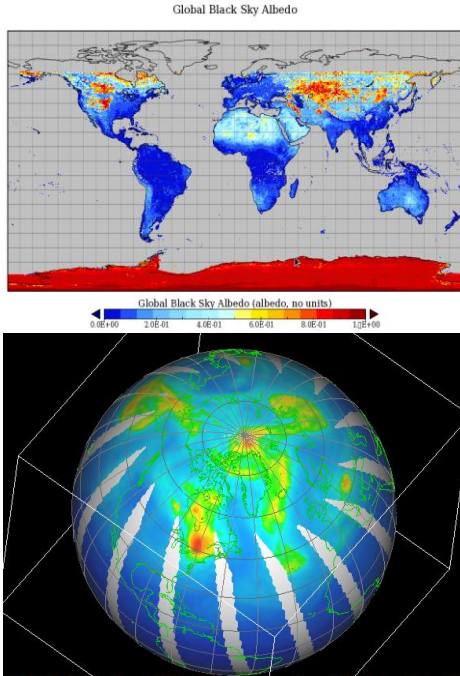
## HDF4/HDF5 OPeNDAP Handlers

The HDF OPeNDAP handler software can be used to access HDF data remotely via OPeNDAP's Data Access Protocol.

The handler can support OPeNDAP's visualization client tools such as Panoply and IDV to access various NASA HDF products.

The handlers have some limitations. Not all NASA HDF data products can be accessed and visualized by OPeNDAP's visualization client tools. Please visit the following URLs for details:

[http://hdfeos.org/software/hdf4\\_handler.php](http://hdfeos.org/software/hdf4_handler.php)  
[http://hdfeos.org/software/hdf5\\_handler.php](http://hdfeos.org/software/hdf5_handler.php)



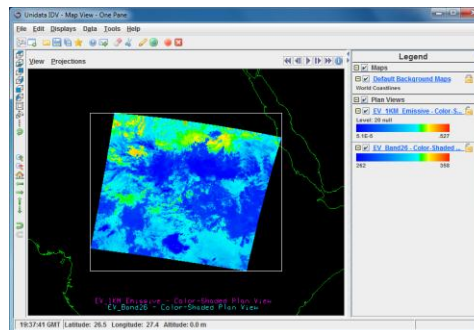
Panoply (above) and IDV (below) display NASA data served by HDF4/HDF5 OPeNDAP Handlers.

## H4CF Conversion Toolkit

The H4CF Conversion Toolkit provides a unified way of accessing different types of HDF4 and HDF-EOS2 files.

*"My main objective is to get HDFEOS files (level-2) converted to a netcdf-3 file. Do you have a suggestion for what is the best way to make the needed conversion? I typically use OMI and AIRS files." – a user from wsu.edu*

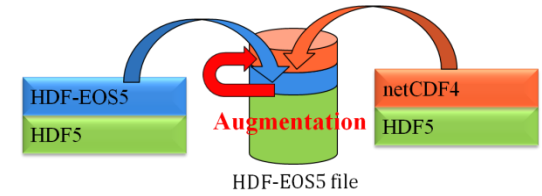
- It provides access to all coordinate and data variables and attributes.
- It adds CF-metadata to data variables for meaningful access.
- It has an option to convert files to NetCDF-3 or NetCDF-4.



IDV displays the NetCDF-3 file that is converted from NASA MODIS HDF-EOS2 file using H4CF Toolkit.

## HDF-EOS5 Augmentation Tool

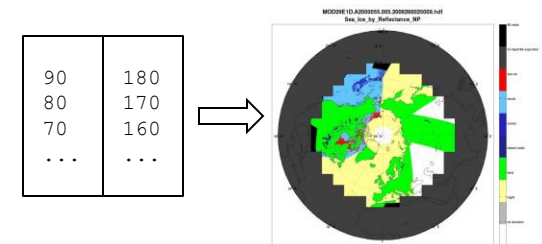
This tool helps users to access HDF-EOS5 data with NetCDF tools. The following NASA data products can be augmented: HIRDLS, MLS, OMI, TES, and GSSTF.



The HDF-EOS5 Augmentation Tool adds information to an HDF-EOS5 file that makes it readable as a NetCDF4 file.

## HDF-EOS2 Dumper

This tool helps users to access HDF-EOS2 using NCL, IDL, and MATLAB by extracting key geo-location information.



MATLAB reads latitude / longitude ASCII values from HDF-EOS2 dumper to visualize HDF-EOS2 data in Lambert Azimuthal Equal Area projection.

## Other Tools

We provide other tools such as **h4toh5** and **eos52nc4** to help users to convert HDF-EOS2 and HDF-EOS5 products to HDF5 that can be accessed by netCDF-4.

For more information, please visit <http://hdfeos.org/software/tool.php>