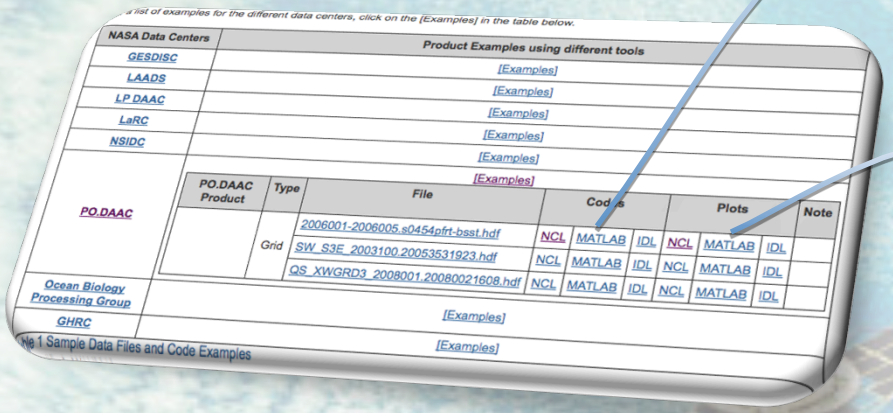
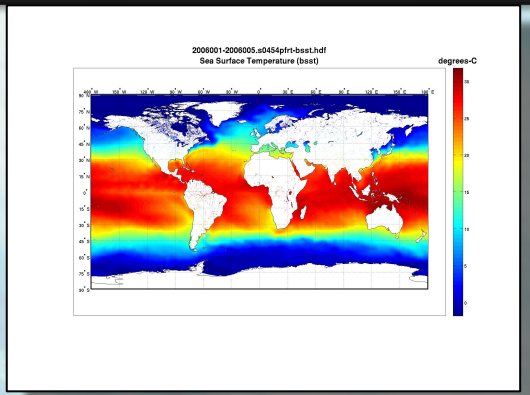
# Comprehensive Examples

The examples page of the HDF-EOS website provides comprehensive examples for NASA HDF-EOS2, HDF-EOS5, HDF4, and HDF5 files from different NASA data centers.




```
% Open the HDF4 file.
FILE_NAME='2006001-2006005.s0454pfrt-bsst.hdf';
SD_id = hdfsd('start',FILE_NAME, 'rdonly');
% Read data from the data field.
DATAFIELD_NAME='bsst';
sds_index = hdfsd('nametoindex', SD_id, DATAFIELD_NAME);
sds_id = hdfsd('select',SD_id, sds_index);
[name, rank, dimsizes, data_type,nattrs, status] = hdfsd('getinfo', sds_id);
 . . .
```

Grid

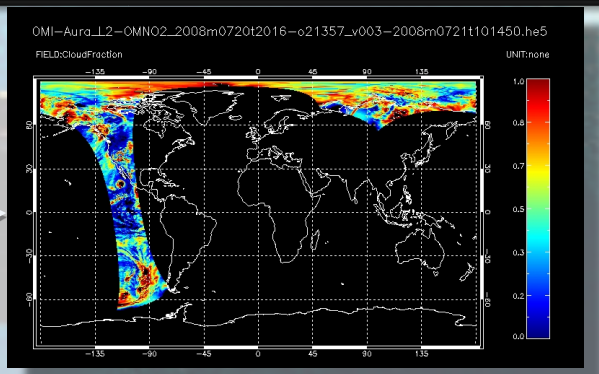



*PO.DAAC* **AVHRR** MATLAB

These example codes are provided because not all HDF and HDF-EOS data products can be accessed with a single method. The HDF-EOS file formats are flexible; they were designed to accommodate differences required by NASA EOS data products.


```
; Open file
file_name='OMI-Aura_L2-OMNO2_2008m0720t2016-
o21357_v003-2008m0721t101450.he5'
file_id=H5F_OPEN(file_name) datafield_name='/HDFEOS/SWATHS/
ColumnAmountNO2/Data Fields/CloudFraction'
 data_id=H5D_OPEN(file_id,datafield_name)
dataspace_id=H5D_GET_SPACE(data_id)
Dims=H5S_GET_SIMPLE_EXTENT_DIMS(dataspace_id)
Dims=float(Dims)
data=H5D_READ(data_id)
. . .
```

Swath




*GES DISC* **OMI** IDL

The HDF-EOS website contains several hundred NCL/MATLAB/IDL codes and the corresponding visualizations of HDF/HDF-EOS data available from EOSDIS data centers.

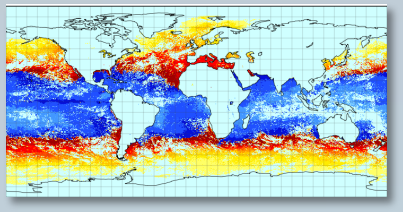
## Products

*GES DISC*: **AIRS, TRMM, MERRA, TOMS, OMI, MLS, HIRDLS, MEaSUREs, GOSAT/acos**
*LAADS*: **MOD, MYD** *LP DAAC*: **MCD, MOD, MYD** *LaRC*: **CERES, MISR, MOPITT, TES**
*NSIDC*: **AMSR-E, MODIS, NISE** *PO.DAAC*: **AVHRR, SeaWinds, QuikSCAT, Aquarius**
*OBPG*: **OCTS, SeaWiFS, CZCS, MODIS** *ICESat-2*: **mabel** *GHRC*: **LIS SCF**

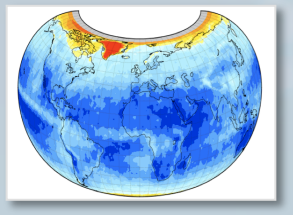
http://hdfeos.org/zoo

# OPeNDAP

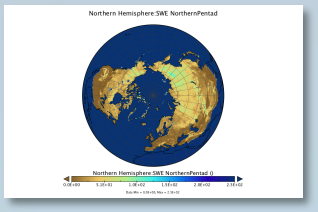
In addition, there are examples to access NASA HDF-EOS and HDF data via OPeNDAP using visualization and analysis tools such as IDV, Panoply, MATLAB, NCL, IDL, Ferret, and GrADS at the HDF-EOS website.



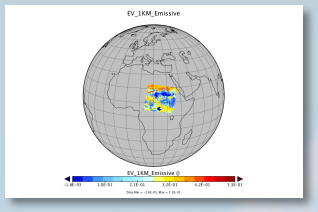
*OBPG* **MODIS Terra** Panoply (Grid)



*LaRC* **MISR** Panoply (Grid)

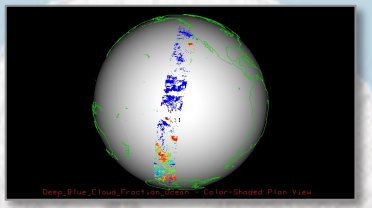


*NSIDC* **AMSR-E** Panoply (Swath)

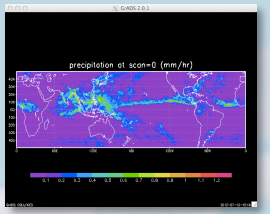


*LAADS* **MODIS Aqua** Panoply (Swath)

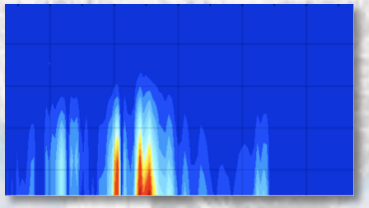
These example data are accessed via OPeNDAP from GES DISC.



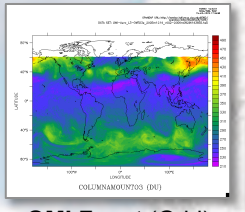
**MEaSUREs SeaWiFS** IDV (Swath)



**TRMM** GrADS (Grid)



**MLS** Panoply (Swath)

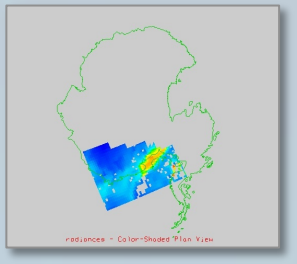


**OMI** Ferret (Grid)

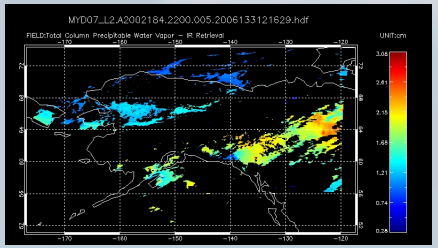
http://hdfeos.org/software/hdf4_handler.php
http://hdfeos.org/software/hdf5_handler.php

# The HDF-EOS Tools & Information Center

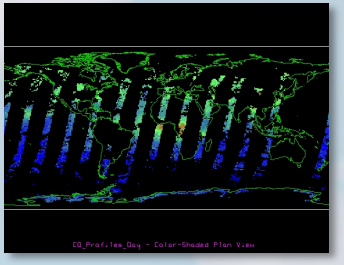
## Accessing and Visualizing HDF-EOS Data



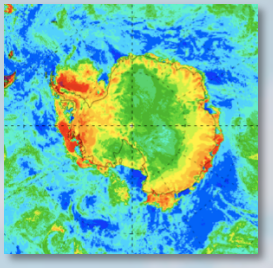
*GES DISC* **AIRS** IDV (OPeNDAP)



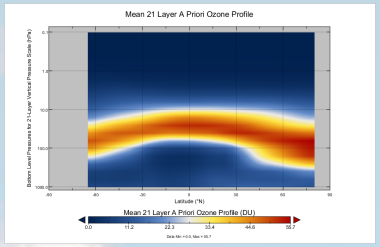
*LAADS* **MODIS** IDL



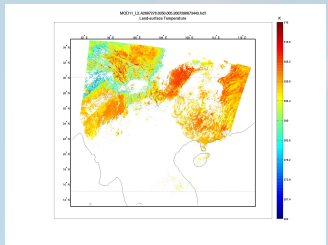
*LaRC* **MOPITT** IDV (OPeNDAP)



*NSIDC* **AMSR-E** NCL



*GES DISC* **SBUV** Panoply (OPeNDAP)



*LP DAAC* **MODIS** MATLAB

HDFEOS.org