

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.

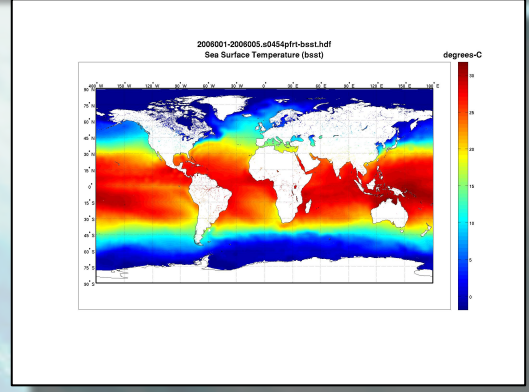
A list of examples for the different data centers, click on the [Examples] in the table below.

NASA Data Centers	Product Examples using different tools							
GESDISC		[Examples]						
LAADS		[Examples]						
LP DAAC		[Examples]						
LaRC		[Examples]						
NSIDC		[Examples]						
PO.DAAC		[Examples]						
	PO.DAAC Product	Type						
		File						
		Code						
		Plots						
		Note						
	Grid	2006001-2006005.s0454pfrt-bsst.hdf	NCL	MATLAB	IDL	NCL	MATLAB	IDL
		SW_S3F_2003100.20053531923.hdf	NCL	MATLAB	IDL	NCL	MATLAB	IDL
		QS_XWGRD3_2008001.20080021608.hdf	NCL	MATLAB	IDL	NCL	MATLAB	IDL
Ocean Biology Processing Group								
GHRC								

See 1 Sample Data Files and Code Examples [Examples]

```
% Open the HDF4 file.
FILE_NAME='2006001-2006005.s0454pfrt-bsst.hdf';
SD_id = hdfsd('start',FILE_NAME, 'r', 'r');
% 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



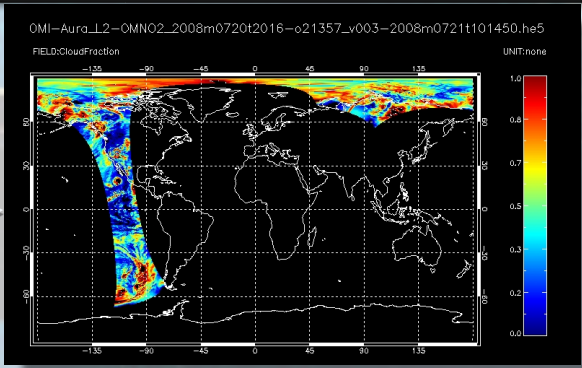
PO.DAAC AVHRR MATLAB

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.

Product	Code	Plots
MERRA	MERRA300_prod_assim_inst3_3d_chm_Nv_20021201.hdf	NCL MATLAB IDL NCL MATLAB IDL
MERRA	MERRA300_prod_assim_inst3_3d_chm_Nv_20021201.hdf	NCL MATLAB IDL NCL MATLAB IDL
TOMS	TOMS-EP_L3-TOMSEPL3_2008m0101_v8.HDF	NCL MATLAB IDL NCL MATLAB IDL
OMI	OMI-Aura_L2-OMNO2_2008m0720t2016-o21357_v003-2008m0721t1101450.he5	NCL MATLAB IDL NCL MATLAB IDL
OMI	OMI-Aura_L2-OMCLO2Q_2007m0129_v002-2007m0130t174683.he5	NCL MATLAB IDL NCL MATLAB IDL
OMI	OMI-Aura_L3-OMTO3e_2005m1214_v002-2006m0929t143855.he5	NCL MATLAB IDL NCL MATLAB IDL
MLS	MLS-Aura_L2GP-BrO_v01-52-c01_2007a029.he5	NCL MATLAB IDL NCL MATLAB IDL
MLS	MLS-Aura_L2GP-BrO_v02-73-c01_2010a0255.he5	NCL MATLAB IDL NCL MATLAB IDL

```
; Open file
file_name='OMI-Aura_L2-OMNO2_2008m0720t2016-o21357_v003-2008m0721t1101450.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

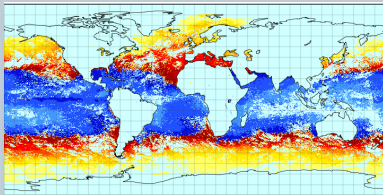
GES DISC: AIRS, TRMM, MERRA, TOMS, OMI, MLS, HIRDLS, MEaSUREs, GOSAT/acos
 LAADS: MOD, MYD LP DAAC: MCD, MOD, MYD LaRC: CERES, MISR, MOPITT, TES
 NSIDC: AMSR-E, MODIS, NISE PO.DAAC: AVHRR, SeaWinds, QuikSCAT, Aquarius
 OBPG: OCTS, SeaWiFS, CZCS, MODIS ICESat-2: mabel GHRC: LIS SCF

OPeNDAP

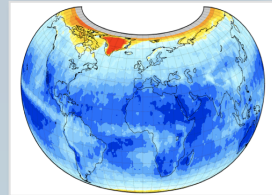
The HDF-EOS Tools & Information Center

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.

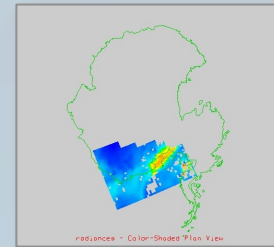
Accessing and Visualizing HDF-EOS Data



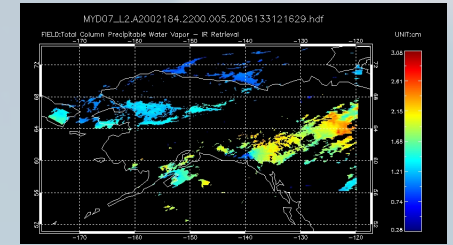
OBPG MODIS Terra Panoply (Grid)



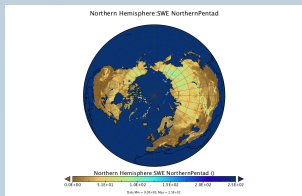
LaRC MISR Panoply (Grid)



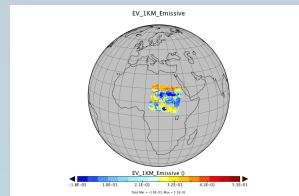
GES DISC AIRS IDV (OPeNDAP)



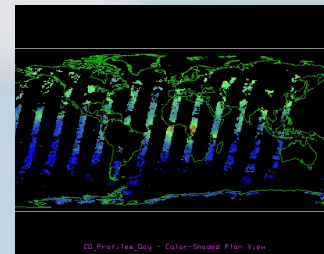
LAADS MODIS IDL



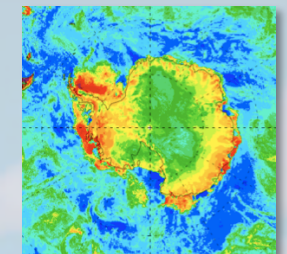
NSIDC AMSR-E Panoply (Swath)



LAADS MODIS Aqua Panoply (Swath)

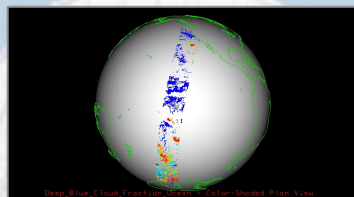


LaRC MOPITT IDV (OPeNDAP)

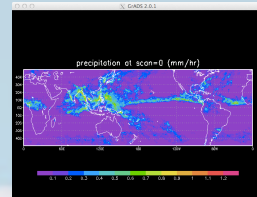


NSIDC AMSR-E NCL

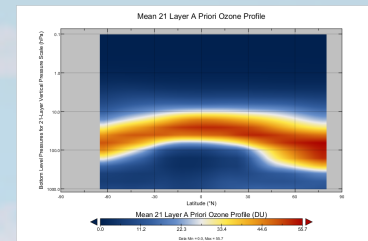
These example data are accessed via OPeNDAP from GES DISC.



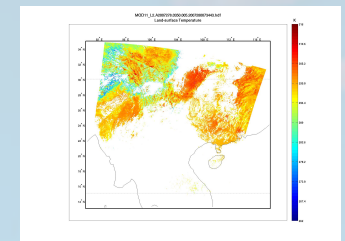
MEaSURES SeaWiFS IDV (Swath)



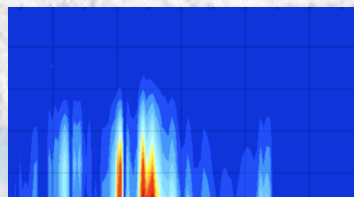
TRMM GrADS (Grid)



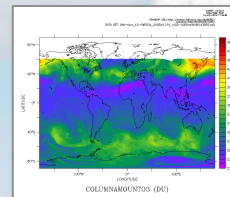
GES DISC SBUV Panoply (OPeNDAP)



LP DAAC MODIS MATLAB



MLS Panoply (Swath)



OMI Ferret (Grid)

HDFEOS.org

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