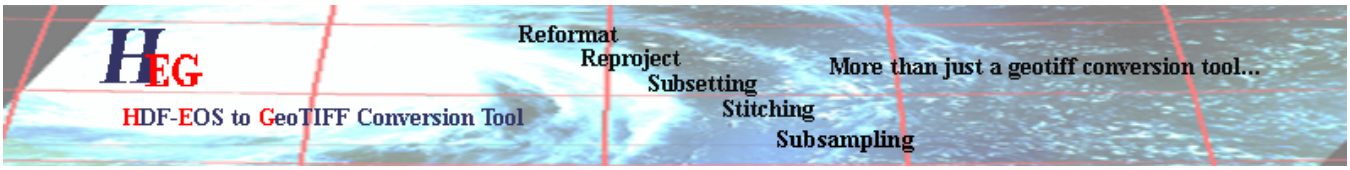
HEG: HDF-EOS to GeoTIFF Conversion Tool



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The HDF-EOS To GeoTIFF Conversion Tool (HEG) is a tool developed to allow a user to reformat, re-project and perform stitching/mosaicing and subsetting operations on HDF-EOS objects. It can also reformats and re-project some SMAP, VIIRS and SRTM products. The output GeoTIFF file is ingestible into commonly used GIS applications. HEG will also write to HDF-EOS Grid & SWATH formats (i.e for Subsetting purposes) and native (or raw) binary. HEG presently works with MODIS (AQUA and TERRA), ASTER, MISR, AIRS, and AMSR-E HDF-EOS data sets.It also handles OMI HDF-EOS5 grid, SMAP L3/L4 HDF5 data sets, VIIRS L2/L3 netCDF/HDF-EOS5 products staged at the DAACs, and some SRTM binary products at LPDAAC.

Brief Summary of Features include:

- **Reprojection**
- **Spatial** (geolocation) **Subsetting**
- **Band** and **Parameter** (aka Field) **Subsetting** of HDF-EOS datasets
- Support for **MODIS, ASTER, MISR, AIRS, AMSR-E, SRTM, VIIRS, and SMAP(and some OMI, MOPITT, etc)** (Check List of Supported Products for full details)
- **Format Conversion** of various output Format types: GeoTIFF, HDF-EOS GRID & SWATH, MultiBand GeoTIFF, Multi-Band HDF-EOS GRID & SWATH, and native binary.
- Format Conversions without reprojection or manipulation of input data. Allows data to remain in original unaltered state.
- **Stitching** (or **mosaicing**) HDF-EOS SWATH and GRID datasets
- Stitching with combinations of Reformatting/Reprojection/Subsetting Operations
- Data subsampling
- Control of various parameters including output pixel resolution and output projection parameters
- Metadata preservation and creation
- **Java GUI**
- **Command-line interface** (Useful for running batch jobs. This is usually seen in automated production environments where large quantities of granules are processed.)
- Supported Platforms: **LINUX, WINDOWS, SUN(old versions of HEG), and MAC OSX** (built on Darwin Kernel Version 16.7.0)

Please note that binaries for 2.12 and older have been removed from our download site.

1. Support for new products
    - AIRS2RET
    - MOPITT
    - VIIRS (VNP13A2, VNP13A3, VNP13C1,VNP14A1, VNP15A2H, VNP21A1D, VNP21A1N, VNP21A2, VNP29, VNP43I1, VNP43I2, VNP43I3, VNP43I4, VNP43IA1, VNP43IA2, VNP43IA3, VNP43IA4, VNP43M1, VNP43M2, VNP43M3, VNP43M4, VNP43MA1, VNP43MA2,VNP43MA3, VNP43MA4)
    - AST_L1T
2. Batch processing added in HEG Stitch GUI process
3. Stitching support for SRTM and VIIRS
4. Support for CF Conventions for SMAP L4 products
5. Field Image for Spatial subset support was only provided for GRID products. Now SWATH products are also supported.
6. Geolocated image was provided only for Sinusoidal Tiles. This version displays the geolocated image of the input file for SWATH and other non-sinusoidal projections as well
7. Other bug fixes including fixes to the conversion script in batch process on Windows

(Released April 2019)

1. More bug fixes concerning issues with multiple runs, output GeoTIFF reading problems by some GIS tools,
2. Improvement in GUI user interaction concerning field images used for subsetting Lat/Lon settings
    - HDFEOS5 products
    - Swath products
3. Support for LINUX 32
4. Support for some new products
    - SMAP-S: Combined SMAP and Sentinel data for high-resolution
    - Soil Moisture product
    - SRTM (Enhanced Shuttle Land Elevation Data from
    - Shuttle Radar Topography Mission) binary data at LPDAAC:
        - SRTMGL1 (1-arc-second)
        - SRTMIMGR (1-arc-second)
        - SRTMIMGM (1-arc-second)
        - SRTMGL3 (3 arc-second)
        - SRTMGL3S (3 arc-second)
        - SRTMGL30 (30 arc-second)
    - VIIRS VNP10, VNP30, VNP21, and VNP14 L2 data

- VIIRS VNP09A1, VNP09H1, VNP09GA, VNP13A1 and VNP09CMG L3 data
- (In addtion to these VIIRS L3 products, the shortnames for other VIIRS L3 products are added to HEG. These products may also work with HEG when they become available and have structure similar to VNP09A1 or VNP09CMG. At the time of this release samples for only 5 L3 products were available for testing.)

5. netCDF output for L2 products
6. MODIS/VIIRS Sinusoidal tile location image
7. Support for more than 20 Ellipsodal/Spherical Earth models/Datums
8. Support for Solaris 11 was dropped becuase of compiler problems
9. Support for Sinusoidal projection in GCTP for Ellipsoidal earth model (WGS84), for support of datum/ellipsoid change

(Released September 2017)

1. More bug fixes concerning issues with multiple runs, output GeoTIFF reading problems by some GIS tools, Subsetting MISR to requested area (after stitching needed blocks), hang-up for some MISR products, Stitch problems with MODIS swath granules, Better interpolation for swath conversion
2. Improvement in GUI user interaction concerning field images for 3-D and 4-D fields used for subsetting Lat/Lon setting
3. Support for Windows 8 and 10 and Solaris 11 (32-bit)
4. Internal batch processing for large quantities of granules from the same product.
5. Support for some new products
    a. SPL3FTA: SMAP L3 Radar Northern Hemisphere Daily 3 km EASE-Grid Freeze/Thaw State
    b. SPL3SMA: SMAP L3 Radar Global Daily 3 km EASE-Grid Soil Moisture
    c. SPL3SMP: SMAP L3 Radiometer Global Daily 36 km EASE-Grid Soil Moisture
    d. SPL3SMAP: SMAP L3 Radar/Radiometer Global Daily 9 km EASE-Grid Soil Moisture
    e. SPL4SMAU: SMAP L4 Global 3-hourly 9 km Surface and Rootzone Soil Moisture Analysis Update
    f. SPL4SMGP: SMAP L4 Global 3-hourly 9 km Surface and Rootzone Soil Moisture Geophysical Data
    g. SPL4SMLM: SMAP L4 Global 9 km Surface and Rootzone Soil Moisture Land Model Constants
    h. SPL4CMDL: SMAP L4 Global Daily 9 km Carbon Net Ecosystem Exchange
    i. MOD09_L2: MODIS Terra Level 2 surface reflectance
    j. MYD09_L2: MODIS Aqua Level 2 surface reflectance
    k. MOD04_3K: MODIS Terra Near Real Time NRT Level 2 aerosol product
    l. MYD04_3K: MODIS AquaÂ Near Real Time NRT Level 2 aerosol product
    m. AE_SID Level-3 gridded product: AMSR-E/Aqua Daily L3 6.25 km Sea Ice Drift Polar Grids (sea ice speed and direction)
    n. MISR_HR_TIP MISR SOM grid with Unstacked blocks
    o. MISR_HR_RPV MISR SOM grid with Unstacked blocks
    p. MISR_HR_BRF MISR SOM grid with Unstacked blocks
6. Subsetted Swath outputs for Swath inputs with hdf-eos output requests
7. HEG source code branching for HDF5 and HDF-EOS5 for quick support of other HDF5 and HDF- EOS5 products in future
8. Inclusion of Time field with geofields when swath output is requested.
9. Support for Lambert Azimuthal Equal Area projection in GCTP for Ellipsoidal earth model (WGS84), for support of SMAP EASE2 grid products

(Released November 2015)

- Support for ICESAT-2 L3/L4 products

- Support for more AURA data and other SMAP products
- Feature to help work with bit fields in the MOD35_L2 Cloud Product.
- MultiBandGeoTIFF for STITCH/MOSAIC output.

Let us know if you have particular interest in some of the above or if you have other suggestions! We appreciate your feedback.

BUGS, PROBLEMS, QUESTIONS, or SUGGESTIONS?Please Contact Us!

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