# SDP Toolkit and HDF-EOS EOSDIS Core System Project



The SDP Toolkit provides the interface between EOS science data production software and the remainder of the Science Data Production System. It allows portability of science software across approved computing platforms at the DAACs and also across the Science Computing Facility development environments and the DAACs. A goal of the Toolkit is reduced integration expense at the DAAC and enhanced maintainability of software.

SCF version: The SCF version of the Toolkit is specifically tailored for use at Science Computing Facilities. The Toolkit API (library calls from science software) will not change in the DAAC environment.

MTD version: The MTD Toolkit is a subset of SCF Toolkit, providing tools for Metadata handling and Time/Date conversion. The primary purpose of this tool set is to allow EOSDIS extended data providers the capability of formatting their products in ECS standard formats, without requiring the entire SDP Toolkit package. Toolkit\_MTD will also allow creation of and access to ECS standard metadata. Toolkit\_MTD is intended to be used by data providers who will produce products at their local facilities and then deliver those products to be archived and distributed from ECS Data Active Archive Centers (DAACs). The tools are not intended to be used by ECS instrument teams who will deliver production code to the DAACs. For this reason, the metadata and time conversion tools have been extracted from the rest of the Toolkit, giving a streamlined version for use by external (to ECS) data providers.

The Hierarchical Data Format (HDF) is a data format designed to facilitate sharing of scientific data in a heterogeneous computing environment. Features include platform independence, user extendibility, and embedded metadata such as units, labels, and other descriptors. The data may reside in any of five data types: multidimensional array, text, table, raster image, and palette. Both C and FORTRAN functions are available to access and process the data. HDF was developed by The HDF Group (THG).

HDF-EOS is standard HDF with ECS conventions and metadata added. The principal distinction is the specification of three geolocation data types: point, grid, and swath, which allow the file contents to be queried by earth coordinates and time. An HDF-EOS file also contains ECS core metadata which is essential for ECS search services. An HDF-EOS file can be read by any tool that processes standard HDF files. However, it will be difficult for a standard HDF call to interpret HDF-EOS geolocation or temporal information without further knowledge of the file structure. A data product need not fit any of the grid, point or swath models to be considered HDF-EOS. As long as ECS metadata are included, it will be a valid HDF-EOS file.

### Latest Releases

- SCF Toolkit 5.2.20, HDF-EOS 2.20, HDF-EOS5.1.16 & associated software have been released<----(January 10, 2018)</li>
- HDF-EOS Plug-in for HDFView2.10.1 has been released<----(June 5, 2014)
- The Latest MTD Toolkit version 5.2.19 was released<----(March 24, 2014)
- HEG 2.15 was released<----(April, 2019)
- -- HEG 2.15 Release Notes --
- HDF-EOS2 to HDF-EOS5 conversion tool version 4.0 has been released<----(March 24, 2014)

#### **TOOLKIT Listserver**

NASA created a new SDPToolkit listserver to replace the old one. If you had subscribed to this listserver before June 2012, you will need to subscribe again since old one was removed completely. This listserver informs users on new releases of TOOLKIT and related software, and may be used for informing users on SDP Toolkit related subjects that will benefit users immediately.

• Please Join HDF-EOS Listserver!

**HDFView HDF-EOS Plug-in** 

**HDF-EOS to GeoTIFF Conversion Tool (HEG)** 

#### **Toolkit configuration and Operation Systems**

Toolkit development and supported Operating systems

## Feedback

 $Send \ feedback \ and \ questions \ regarding \ the \ SDP \ Toolkit, \ HDF-EOS \ and \ Our \ Tools \ to \ sdps-support@earthdata.nasa.gov.$ 

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This site is maintained by the ECS Toolkit Team Last Update: April 24, 2019