

e-geos

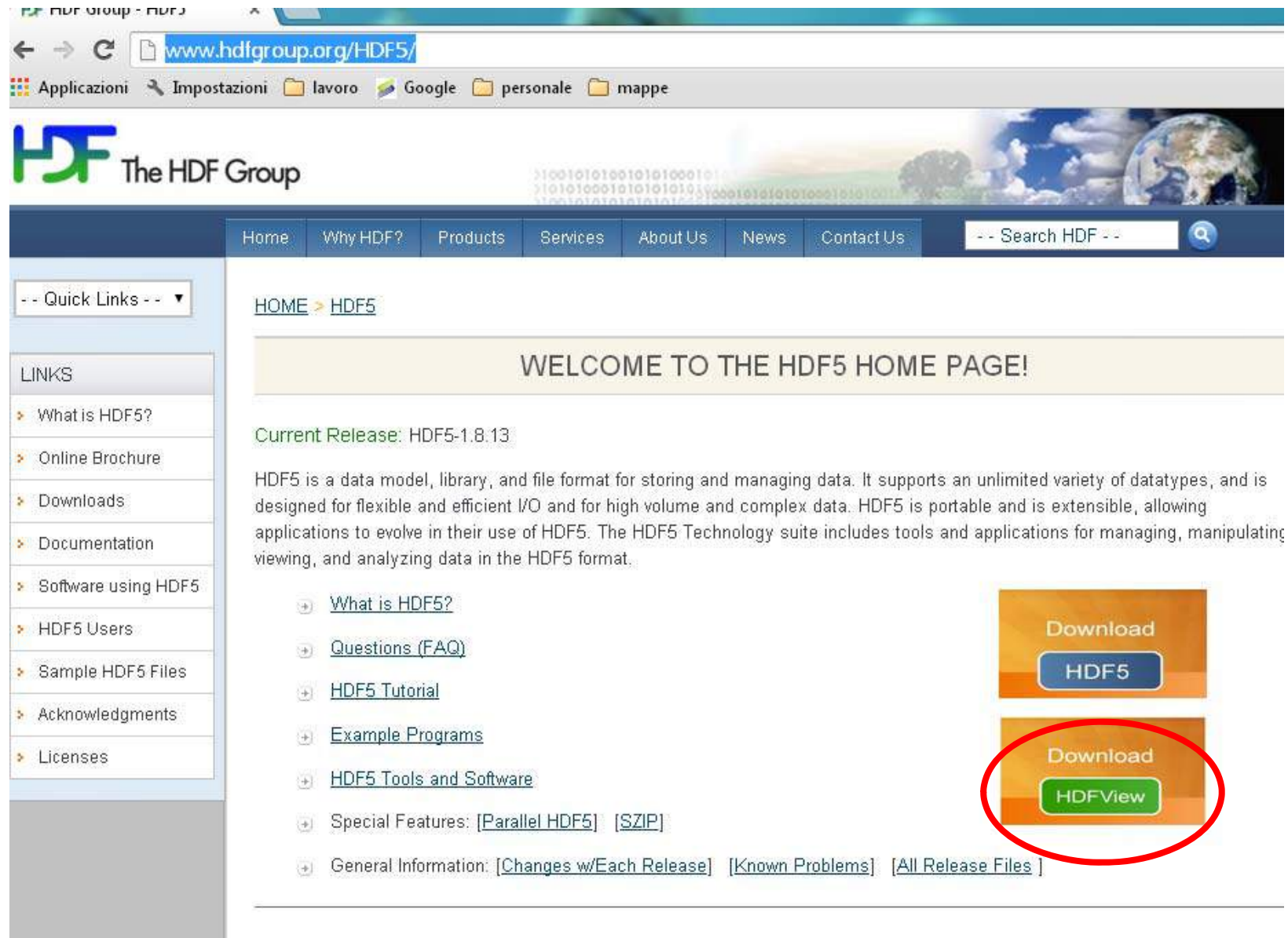
AN ASI / TELESPAZIO COMPANY

**COSMO-SkyMed
compatible IP software**



HDF5 group homepage

(<http://www.hdfgroup.org/HDF5/>)



The screenshot shows the HDF5 group homepage in a web browser. The browser's address bar displays www.hdfgroup.org/HDF5/. The page features a navigation menu with links for Home, Why HDF?, Products, Services, About Us, News, and Contact Us. A search bar is located in the top right corner. On the left side, there is a 'Quick Links' dropdown menu and a 'LINKS' section with various resources. The main content area includes a welcome message, the current release version (HDF5-1.8.13), a description of HDF5, and a list of links for further information. Two download buttons are visible on the right side: 'Download HDF5' and 'Download HDFView', with the latter being circled in red.

Home Why HDF? Products Services About Us News Contact Us -- Search HDF --

-- Quick Links --

LINKS

- What is HDF5?
- Online Brochure
- Downloads
- Documentation
- Software using HDF5
- HDF5 Users
- Sample HDF5 Files
- Acknowledgments
- Licenses

HOME > HDF5

WELCOME TO THE HDF5 HOME PAGE!

Current Release: [HDF5-1.8.13](#)

HDF5 is a data model, library, and file format for storing and managing data. It supports an unlimited variety of datatypes, and is designed for flexible and efficient I/O and for high volume and complex data. HDF5 is portable and is extensible, allowing applications to evolve in their use of HDF5. The HDF5 Technology suite includes tools and applications for managing, manipulating, viewing, and analyzing data in the HDF5 format.

- [What is HDF5?](#)
- [Questions \(FAQ\)](#)
- [HDF5 Tutorial](#)
- [Example Programs](#)
- [HDF5 Tools and Software](#)
- Special Features: [\[Parallel HDF5\]](#) [\[SZIP\]](#)
- General Information: [\[Changes w/Each Release\]](#) [\[Known Problems\]](#) [\[All Release Files\]](#)

Download
HDF5

Download
HDFView

- Free SW distributed by ESA (European Space agency)
- <https://earth.esa.int/web/nest>
- Compatible with COSMO data
- SAR functions (import, basic processing, IFSAR coherence, DEM, DIFSAR, filtering polarimetry/POLSARPro)



Simple HDF5 viewer

(view quicklook, browse metadata...)

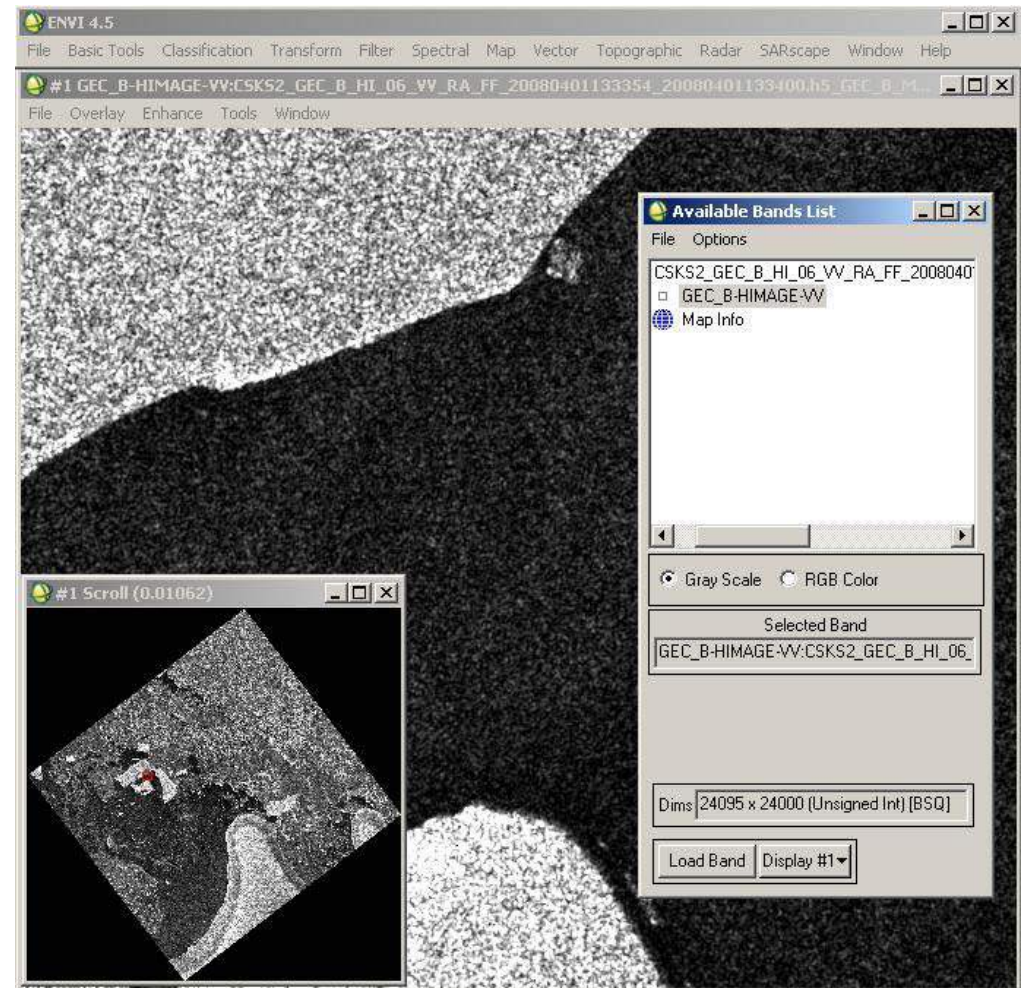
The screenshot displays the Simple HDF5 viewer interface. The main window shows a satellite image of a terrain. A 'Properties' dialog box is open, displaying metadata for the image. The metadata table is as follows:

Name	Value	Type	Array Size
Rank	10	8-bit unsigned character	1
Reference Descrpting Ti...	4.901479487129467E-5	64-bit floating-point	1
Sampling Rate	1.95E8	64-bit floating-point	1
Synthetic Aperture Durati...	2.747057225347372	64-bit floating-point	1
Doppler Ambiguity	0	16-bit integer	1
Azimuth Bandwidth per...	7752.173657066709	64-bit floating-point	1
Azimuth Focusing Bandw...	7970.29702970297	64-bit floating-point	1
Azimuth Focusing Trans...	7970.29702970297	64-bit floating-point	1
Azimuth Multibeaming Tran...	0.0	64-bit floating-point	1
ECEF Beam Pointing for...	-0.9670335854934374...	64-bit floating-point	15 x 3
Range Bandwidth per L...	2.120047598563602E8	64-bit floating-point	1
Range Focusing Bandw...	2.154785158250003E8	64-bit floating-point	1
Range Focusing Transi...	0.0	64-bit floating-point	1
Range Multibeaming Tran...	2.120047598563602E8	64-bit floating-point	1
RAW Statistic Block Size	368, 947	32-bit unsigned integer	2
Centre Geodetic Coordi...	-5.954820768780006, -	64-bit floating-point	3

Below the table, the coordinates are listed: -5.954820768780006, -49.64888834068133, 0.0

ENVI / IDL

- ENVI 5 (and following), as well as the previous versions and the latest version of SARSCAPE are fully compatible with COSMO-SkyMed hdf5 products
- <http://www.exelisvis.com/>
- HDF5 libraries in IDL
- Basic functions in ENVI (import, approx. Geocoding, filtering....)



SARscape (SARMAP)

www.sarmap.ch

- www.sarmap.ch
- Full SAR processing capability (incl. basic functions, filtering, interferometry, polarimetry ...)
- Runs with ENVI



sarmap
your information gateway

- **Company**
- **SARscape®**
- **Overview**
- **Product's Example**
- **Newsletters**
- **Order Online**
- **Distributors**
- **Software Airborn**
- **Services**
- **Capacity Building**
- **News**

Overview

Synthetic Aperture Radar (SAR) systems can acquire data in different ways, such as:

- Single or dual channel mode (for instance HH or HH / HV or VV / VH);
- Interferometric (single- or repeat-pass) mode;
- Polarimetric mode (HH,HV,VH,VV);
- By combining interferometric and polarimetric acquisition modes.

Obviously, different acquisition modes are subject to different processing techniques. They are:

Processing of SAR Intensity
The product generation is limited to the intensity processing.

Interferometric SAR (InSAR/DInSAR/PS) Processing
The product generation includes Intensity, and Interferometric phase processing.

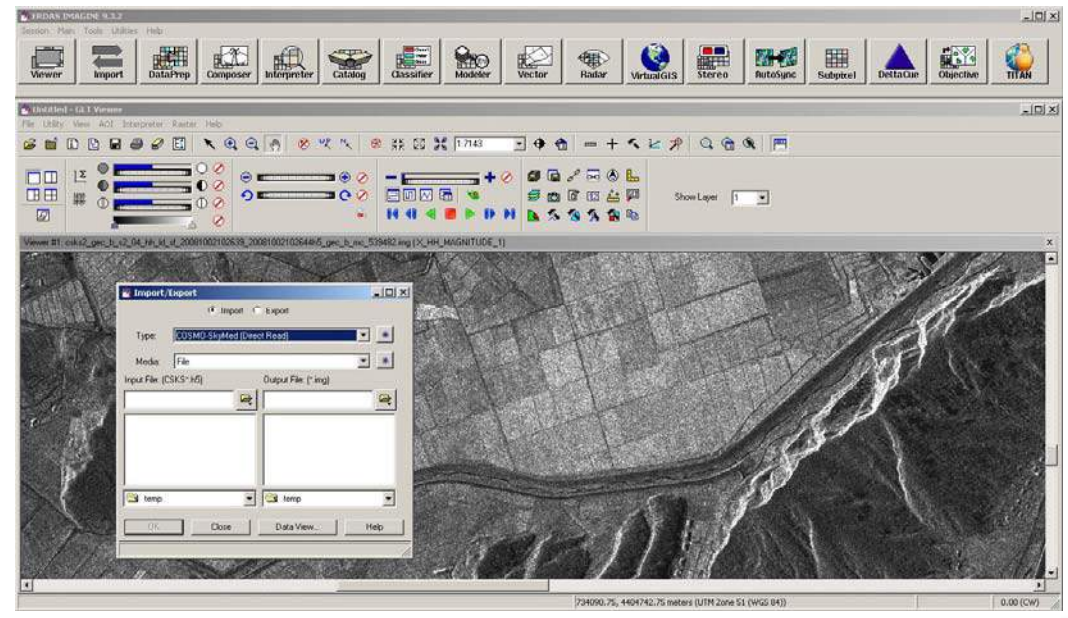
Polarimetric SAR (PolSAR) Processing
The product generation includes intensity, and polarimetric phase processing.

Polarimetric-Interferometric SAR (PolInSAR) Processing
The product generation includes Intensity, polarimetric, and Interferometric phase processing.

In order to support these processing techniques, SARscape® provides following modules:

- **Basic** - It includes a set of processing steps for the generation of SAR products based on intensity including multi-purpose tools. This module is complemented by:
 - **Focusing** - It supports the focusing of RADARSAT-1, ENVISAT ASAR, and ALOS PALSAR data.
 - **Gamma and Gaussian Filtering** - It includes a whole family of SAR specific filters. They are particularly efficient to reduce speckle, while preserving the radar reflectivity, the textural properties and the spatial resolution, especially in strongly textured SAR images.
- **Interferometry** - It supports the processing of Interferometric SAR (2-pass interferometry, InSAR) and Differential Interferometric SAR (n-pass interferometry, DInSAR) data for the generation of Digital Elevation Model, Coherence, and Land

- Erdas Radar Suite is fully compatible with COSMO-SkyMed products
- <http://www.hexagongeospatial.com/products/ERDAS-IMAGINE/Details.aspx>
- Full SAR processing capability (data import, basic functions, interferometry, radargrammetry, polarimetry, filtering.....)



Socet Set

- Socet Set / Socet GXP from BAE Systems can import COSMO data
- <http://www.geospatialexploitationproducts.com/content/products/socet-gxp>

- PHOTOMOD Software is able to read and process COSMO-Skymed data
- www.racurs.ru

- GAMMA Software is now able to read and process COSMO-SkyMed data
- All SAR related processing functions (basic, interferometry ...)
- http://www.gamma-rs.ch/no_cache/software.html

e-geos
AN ASI / TELESPAZIO COMPANY

All COSMO-SkyMed images © ASI - Agenzia Spaziale Italiana
e-GEOS S.p.A – L.O. Contrada Terlecchie snc – Matera / HQ Via Tiburtina, 965 – Roma