

CEOS Cal/Val Portal: Update

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New Cal/Val Portal Online!



The screenshot shows the CEOS Cal/Val Portal website. At the top left is the CEOS Cal/Val Portal logo, and at the top right is the ESA logo. A navigation menu includes: Home, CEOS Cal/Val Sites, Docs & Forum, Data Access & Tools, News & Events, CEOS WGCV, Feedback, and a search bar. A main header reads "The new CEOS Cal/Val Portal". Below this is a "News" section with a list of activity reports: CALCON, CEOS, and SMOS. A "Slideshow" section features a satellite image of a landscape. A "Tools" section includes a link to "Guidelines for the use of EO products dedicated to calibration and validation of EO products". A "Cal/Val" section lists various meetings and campaigns: May 2013, WGCV-31 Meeting - 23-28 Sept 2012, Session on Land Product Validation, SMOS EVENT! Tuz Golu Campaign - Aug 2010, SMOS Validation and Retrieval Workshop - Dates available, and WGCV-31 Meeting - Presentations available@. A quote by Lord Kelvin (1883) is displayed: "When you can measure what you are speaking about and express it in numbers you know something about it; but when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind". Below the quote is the heading "... A Memory from the first lesson of Physics." and a diagram showing four target graphs with arrows pointing towards the center, labeled "Increasing Accuracy and Decreasing Uncertainty". The diagram axes are "Increasing Truthness" and "Increasing Precision".

Funding extended through 2016

1. Upgrade of system – New Portal installed, hardware upgraded
2. Content re-organisation.
 - a. Major clean up of un-used pages
 - b. Simplification of Menu
3. ACSG placeholder for data access added to WGCV section (IVOS actively used)
4. Re-design of data access portlet (on-going)
5. Access to ISMN data via the data access portlet (on-going)
6. DCIO initiative completed – Database to be published soon via the data access portlet
7. Section on Test Sites under review to incorporate different disciplines
8. From Stat Info Collected during past months, some of documents have been downloaded 80,000 times.

Tools: DIMITRI – COVE – 6s - OLIVE



The screenshot shows the CEOS Cal/Val Portal website. The header includes the CEOS Cal/Val Portal logo and the ESA logo. A navigation bar contains links for Home, CEOS WGCV, Docs & Forum, Projects, Cal/Val Sites, Data Access & Tools, and Feedback. A search bar is present with the text 'Everything'. The main content area is titled 'Tools' and contains a paragraph of introductory text and a list of links. A dropdown menu is open under 'Data Access & Tools', listing 'DIMITRI', 'COVE', '6s input configuration', and 'OLIVE'. A sidebar on the right is titled 'Data Access & Tools' and contains a 'Tools' section with the same four items listed. At the bottom, a table titled 'CalVal Software Tools' provides detailed descriptions for BEAM, WOPP, 6s, and TELIMAGO.

Tools

This section of the CalVal Portal provides the access to:

- [CalVal Software Tools](#)
general and specific software to support the calibration tasks. Presently, download links to the Radiative Transfer Code '6s' is provided. It is planned to further extend the range of tools when they become available.
- [CalVal Software Services](#)
services to support the calibration tasks. In its target state, the CalVal Portal shall perform typical, predefined calibration tasks on the server and supply the user with a result set consisting of calibration coefficients.

Presently, the generation of 6s input files from a combination of site, date, and user-supplied information is implemented.

CalVal Software Tools

| Tool | Description |
|--------------------------|---|
| BEAM | BEAM is the Basic ERS & Envisat (A)ATSR and Meris Toolbox and is a collection of executable tools and an application programming interface (API) which have been developed to facilitate the utilisation, viewing and processing of ESA MERIS, (A)ATSR and ASAR data. |
| WOPP | The Water Optical Properties Processor (WOPP) allows calculation of the inherent optical properties of pure water at atmospheric pressure and at a specific water temperature and salinity, namely absorption (absorption coefficient), scattering (scattering coefficient for any angle, for back -, forward-, and total scattering) and real part of the index of refraction. It was developed by GKSS. |
| 6s | Radiative Transfer Code. E. Vermote, D. Tanr, J. Deuz, M. Herman, and J. Morcette, Second simulation of the satellite signal in the solar spectrum 6S\ : An overview IEEE Trans. Geosci. Remote Sensing, vol. 35, no. 3, pp. 675--686, 1997. |
| TELIMAGO | ALOS Expert tool by GAEL Consultant (Linux). |

Last Workshops: L1, LPVE, Sentinel 3 Cal/Val Planning



1. CVP is being used to store and publish presentations and MoMs of workshops, meeting and conferences.
2. Workshop on “EO L1 – Lessons Learnt” is online, but hidden to the common public, access is restricted to participants
3. Land Product Validation and Evolution Workshop is available
4. Sentinel 3 Cal/Val Planning Meeting + Virtual community created to underpin the collaboration within the community (mySPPA)



New Mission Portlet



1. New Search Interface allows to query a database of sensors (per resolution, per wavelength, etc..)

| | | |
|---------------------------------|--------------------------------|---------------------------------|
| SLIM-6 (UK-DMC) | MSI (RapidEye) | MSC (KOMPSAT-2) |
| NRSCC (China) | | |
| MSI-BJ1 (null) | | |

Sensor Filter Criteria

General Values

Name

Description

Status

Satellite

Launch Year

 >=

Sensor Type

Measurements and Applications

Technical Characteristics

Resolution

Min

Max

Unit

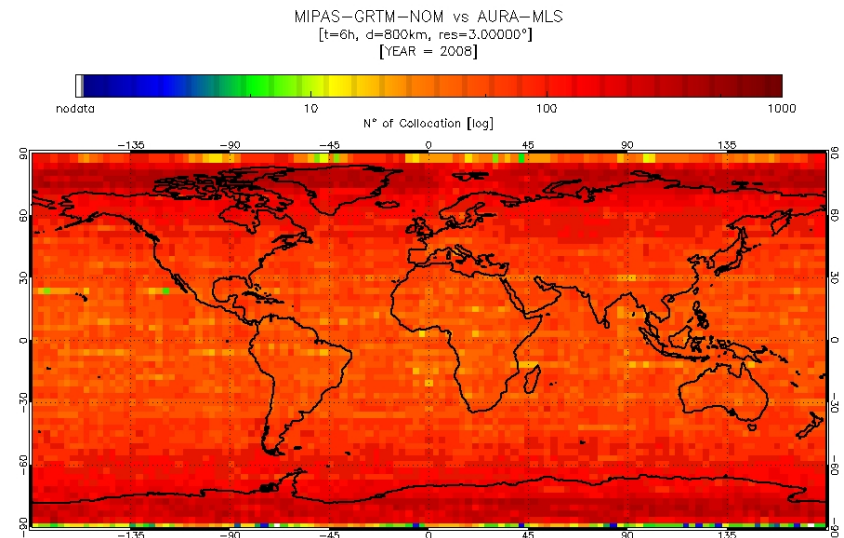
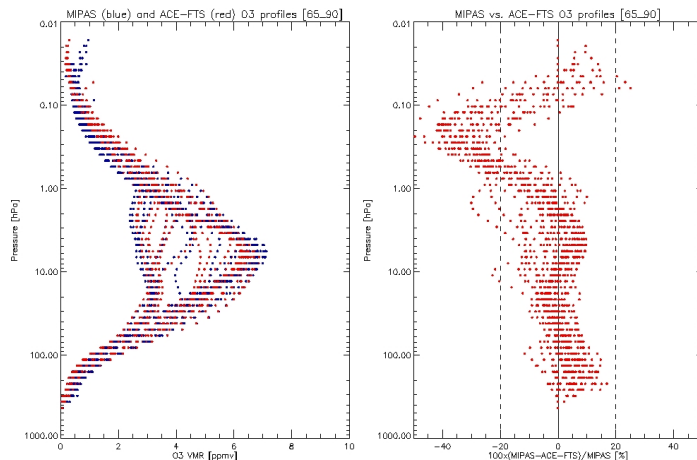
Wavelength

Unit

Search matching sensors

Reset

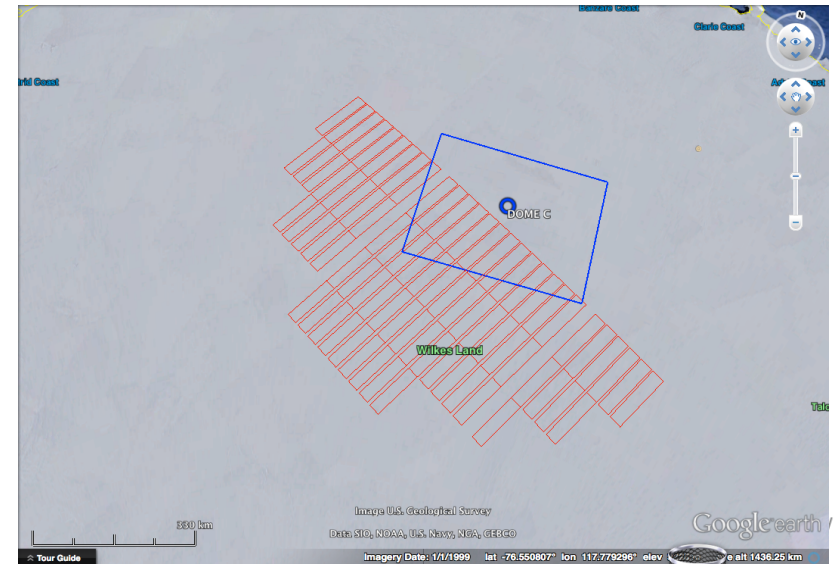
1. Atmospheric Intercomparison Tool (L2 – Sat to sat and Sat to Ground) prototyped
2. Overpass database completed
3. Collocation database completed for MIPAS – SCHIAMACHY – GOMOS – MLS – ACE-FTS
4. First results published at the Living Planet Symposium
5. Overpassing tool for Nadir data prototyped
6. Source code and reading routines will be made available via CVP
7. ESA data extractions on request



Extraction of Sciamachy Level 1



1. Overpass database has been populated – based on Postgres/postgis, orbits are stored per state to allow a fast access to spectra
2. Calibration Module is completed – ESA SCIAL1C tool is used to process data from L1B to L1C (calibrated Spectra)
3. Python Extraction Module – On going
4. Extracted data will be stored in Hdf5 or netCDF (if possible the CF convention will be taken into account)
5. Open points – resolution of obs changes along the spectra. (high res spectra will be averaged)
6. Cloud Screening not directly implemented in L1 -> to identify a cloud detection algorithm.



Completed – Integration of ISMN

Overview on ISMN:

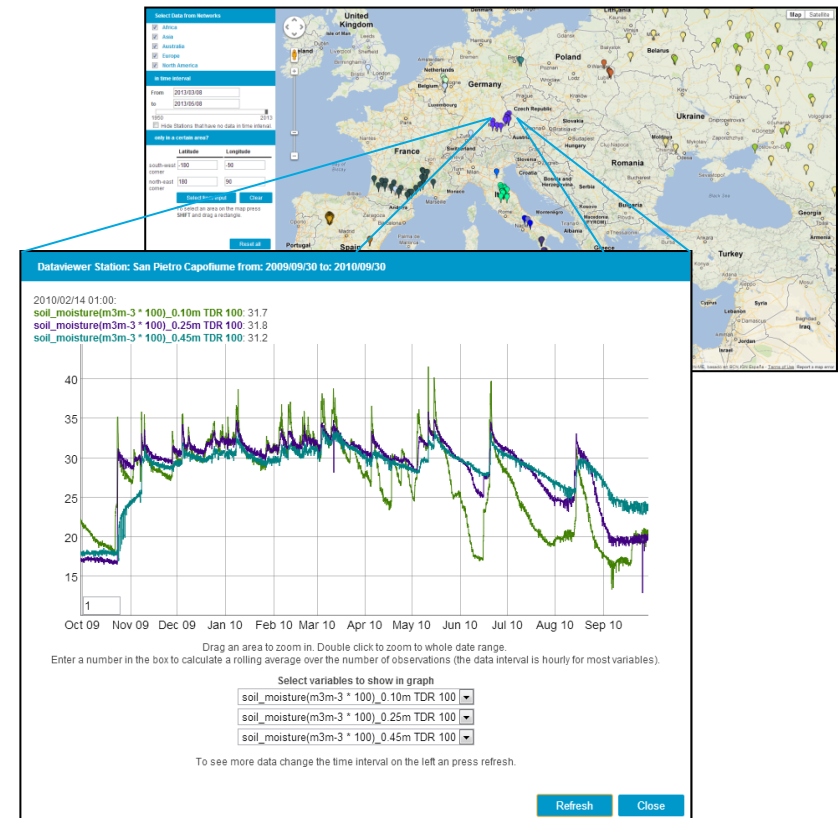
The International Soil Moisture Network is an international cooperation to establish and maintain a global in-situ moisture database.

Objectives:

- To allow easy access to ISMN data via CVP interface
- To allow access to correlative SMOS data
- Systematic subset of SMOS data over ISMN Test sites
- To facilitate validation of SMOS data

To be implemented this year

Direct Access to data



RadCalNET as a project within the portal



1. A new project (currently hidden to the public) has been created – RadCalNET
2. RadCalNET project members have editing credential for the project page. Document Repository, Forum and Pages.
3. Project Results will be available to the public.
4. We encourage to use the portal for international projects! SnowPEX is a winning example as the portal can be used as a collaborative platform across agency (European and American agencies/companies involved). Reference dataset will be hosted by the portal.

Suggestions?



1. New subgroups contributions are encouraged
2. External Cal/Val contributions, such as SnowPEX, welcome
3. What do you expect to find in the portal? Docs? Data? Tools?
4. Is the portal meeting the WG and SGs needs and expectations?