



CEOS Cal/Val Portal: status and updates



CEOS Cal/Val Portal



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CEOS Cal/Val Portal - numbers



<http://calvalportal.ceos.org>

Some numbers: 3rd August 2022:

Users

1050 Registered Users

155 CEOS WGCV SAR Subgroup and 2 super-users

23 MTF Members

6 Cal/Val Doc Repository (rights for editing)

21 Terms and Definitions (rights for editing)

System availability

BC uses Nagios (<http://www.nagios.org/>) for monitoring the IT services.

The availability of the Cal/Val Portal is close to 100%.



Latest Updates



There have been some updates in the portal, beyond maintenance and routine ones, the most relevant are:

CCN1 CEOS Cal/Val Portal and MySPPA maintenance and support (for 2 years starting from 2023) - SoW: ESA-EOPG-EOPGMQ-SOW-52 (July 2022) proposal in-progress

SALVAL (Surface Albedo VALidation) (<https://calvalportal.ceos.org/salval>) - June 2022

TSIS-1 Hybrid Solar Reference Spectrum (<https://calvalportal.ceos.org/tsis-1-hsrs>) - June 2022 (to be finalized)

LPV DIRECT V2.1 database (<https://calvalportal.ceos.org/lpv-direct-v2.1>) - April 2022

Terms and Definitions Wiki - (https://calvalportal.ceos.org/t-d_wiki) in continuous progress

QA4SM Evolution in FRM4SM in NEWS, Tools and (FRM4SM) in Project - June 2022

CEOS SAR Subgroup Workshop 2022 Announcement, Program and materials (<https://calvalportal.ceos.org/ws2022>) - July 2022

ACIX-II Land (<https://calvalportal.ceos.org/acix-ii-land>) - Jan. 2022

ACIX-II Aqua (<https://calvalportal.ceos.org/acix-ii-aqua>) - Jan. 2022

CMIX (<https://calvalportal.ceos.org/cmix>) - Jan. 2022



SALVAL (Surface Albedo VALidation)



The **SALVAL (Surface Albedo VALidation) tool** provides the user with:

- A user-friendly interface for comparison of new satellite-based land surface albedo data products against ground reference data and existing validated land surface albedo products.
- A traceable, transparent, and consistent methodology following the CEOS WGCV LPV Surface Albedo validation good practices protocol for conducting the validation exercise.
- A flexible tool that allows for setting up the exercise with user defined requirements, albedo quantities, extents, or periods of interest to analyse results either interactively (via graphs and maps) or creating a standardized validation report in pdf format.
- A tool to benchmark new products, update product validation results or add new ground reference data.

References:

Wang, Z., et. al., Best Practice for Satellite Derived Land Product Validation (p. 45): Land Product Validation Subgroup (WGCV/CEOS), doi: 10.5067/DOC/C [WWW Document]. <https://doi.org/doi:10.5067/DOC/CEOSWGCV/LPV/ALBEDO.001>

The overall aim of SALVAL is to bring together validation good practices protocols, ground data and satellite products to provide users with traceable (i.e. reproducible) validation results allowing reaching CEOS WGCV LPV validation Stage 4.



TSIS-1 Hybrid Solar Reference Spectrum



References

Title: The TSIS-1 Hybrid Solar Reference Spectrum

Authors: Coddington, O. M., Richard, E. C., Harber, D., Pilewskie, P., Woods, T. N., Chance, K., et al. (2021).

Geophysical Research Letters, 48, e2020GL091709. <https://doi.org/10.1029/2020GL091709>

URL: https://lasp.colorado.edu/lisird/data/tsis1_hrsr

CEOS WGCV recommendation

In March 2022, the TSIS-1 HRSR was recommended as the new solar irradiance reference spectrum by the Committee on Earth Observation Satellites (CEOS) Working Group on Calibration and Validation (WGCV).

This webpage is still "hidden" – it has to be reviewed by NPL



LPV DIRECT V2.1 database



Please download here the [DIRECT V2.1 database](#)

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Data description

- LAI, LAI_{eff}, FAPAR and FCOVER upscaled values over 3 km x 3 km
- LAI_NoUnderstory, refers to sites where only overstory was measured and thus are not recommended for accuracy assessment of satellite products.

CEOS Cal/Val Portal
LPV DIRECT V2.1 DB

CEOS WGCV LPV DIRECT V2.1 database

Ground references of high quality are needed to validate satellite-based products. The DIRECT V2.1 database compiles Leaf Area Index (LAI), fraction of absorbed photosynthetically active radiation (FAPAR) and fraction of vegetation cover (FCover) averaged values over a 3 km x 3 km area. The ground data was upscaled using high spatial resolution imagery following CEOS WGCV LPV LAI good practices to properly account for the spatial heterogeneity of the site. Ground measurements including in the first version (DIRECT) were resulting from several international activities including VALERI, BigFoot, SAFARI-2000, CCRS, Boston University and ESA campaigns compiled by S. Garrigues (Garrigues et al., 2008), and later ingested in the CEOS WGCV LPV OLIVE tool (Weiss et al., 2014) for accuracy assessment. F. Camacho reviewed DIRECT to remove those sites without understory measurements (Camacho et al., 2013) and after that expanded the database with ImagineS sites (Camacho et al., 2021). DIRECT V2.1 is the last update including 44 new sites from China (Fang et al., 2019; Song et al., 2021) and 2 sites from ESA FRM4Veg (Brown et al., 2021).

The CEOS WGCV LPV DIRECT V2.1 database constitutes a major effort of the international community to provide ground reference for the validation of LAI and FAPAR ECVs, with a total of 176 sites around the world (7 main biome types) and 280 LAI values, 128 FAPAR and 122 FCOVER values covering the period from 2000 to 2021.

LPV DIRECT 2.1

Direct 2.1

DIRECT 2.1: Sites Classification

Biome Type	Percentage
Crops	50%
Grass	12%
Shrub	8%
Sav	5%
EBF	12%
DBF	1%
NLF	1%
MF	1%
NEF	1%
ME	1%

- From 2000 to 2021
- 176 sites (7 main biome types)
- 280 LAI upscaled values (3km x 3km), 128 FAPAR, 122 FCOVER upscaled values



Terms and Definitions Wiki

The Terms and Definitions are in continuous progress thanks to the “Terms and Definitions” specific group. The webpage is accessible with the following differences:

- Guests can view all the definitions;
- Site members (i.e. registered users) can view, vote and provide comments;
- Members of “Terms and Definitions group” can, in addition, edit the definitions.

Feedback is welcome!

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Wiki Display

FrontPage | Recent Changes | All Pages | Orphan Pages | Draft Pages | Search

FrontPage

Details | Print

In this section, a list of Terms and Definitions is proposed, see pages below for details

Please note that this is work in progress!

Do not cite.

Your feedback is welcome!

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*+ after a term marks a recent addition

*+ after a term marks a term with alternative definitions which might need clarification and harmonisation

Overview pages of related terms

1. [Earth Observation system words](#)
2. [Measurement and Metrology words](#)
3. [Observation properties words](#)
4. [Data Stewardship words](#)

Children Pages

- [1. Earth Observation system words](#)
- [2. Measurement and Metrology words](#)
- [3. Observation properties words](#)
- [4. Data Stewardship words](#)
- [Access](#)
- [Access Collection](#)
- [Access Functional Entity](#)
- [Access Rights Information](#)
- [Access Software](#)
- [Accessibility](#)
- [Accuracy](#)

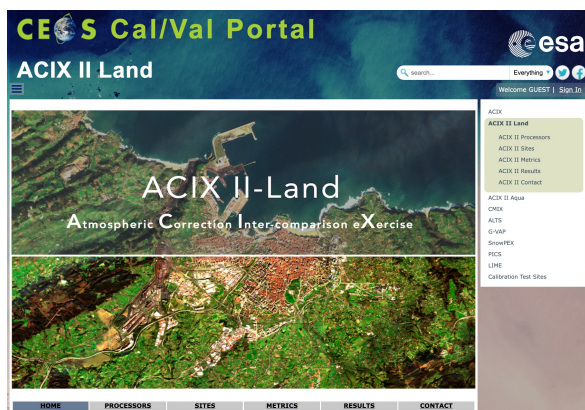


European Space Agency

ACIX-III Land, Aqua and CMIX-II webpages



Webpages are available for Atmospheric Correction Inter-comparison eXercises (Land and Aqua) and for Cloud Masking Inter-comparison eXercise. Description of the projects, processors, sites, reference data, metrics as well as results have been included.



Next Steps and Plan



- To implement GSICS actions: Links to other Cal/Val portals (IMD/ISRO) and Tools; add a summary with links to GSICS tools and a new notebooks infrastructure.
- To implement webpages for ESA IDEAS/QA4EO Cal/Val data and activities.
- CCN1 finalization – KO and PM teleconf.
- To finalize the Actions in progress
- CEOS WGCV teleconf
- Periodic Newsletter – 6 months
- Dedicated teleconferences

