



CEOS Cal/Val Portal



A new collaborative Environment

CEOS WGCV -31 Meeting

Alessandro Burini – ESA

Philippe Goryl - ESA



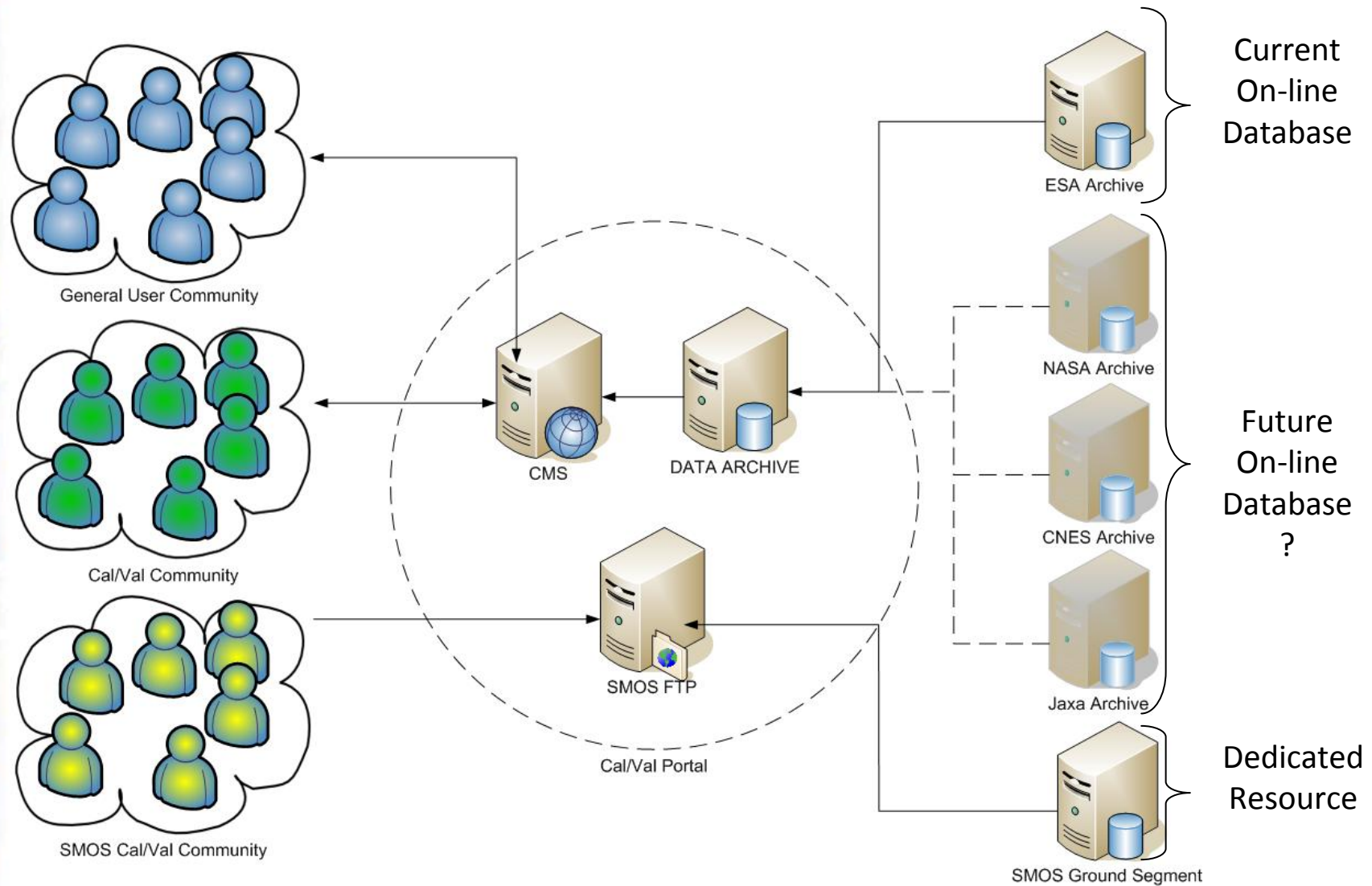
CEOS WGCV Recommendation

- *Cal/Val portal is the ESA response to the CEOS recommendation*
- Initiate an activity
 - document reference methodology
 - to predict Top of Atmosphere (TOA) radiance
 - for intercomparison of currently flying and planned wide swath sensors
 - create a standard for traceability
- Create and maintain a fully accessible web page
 - instrument characteristics
 - database of instrument data
 - specific vicarious calibration sites
 - common format

CEOS Working Group on Calibration and Validation, 18th Plenary Meeting, Beijing, November 2004, Doc No: 12.1



Cal/Val Portal: Logical Structure





What is Content Management System?

A content management system (CMS) is a computer application used to manage work flow needed to collaboratively:

- **Create, Edit, Review,**
- **Index, Search, Publish and**
- **Archive**

various kinds of digital media and electronic text.



A CMS is the energy of the new portal, providing to the **Cal/Val Community** a powerful instrument to exchange information, to request data, to discuss about Cal/Val topics and to easily interact with community members

The Cal/Val portal is a system built for a community!



Cal/Val Portal: An Overview

Introduction

Dynamic Menu

Search Function

Access Info

Leading Article

Cal/Val Events

Latest News

Multimedia Gallery

Slide-Show Gallery

Latest Forum Post

The screenshot shows the Cal/Val Portal homepage. The top navigation bar includes a 'Welcome' message and a 'Dynamic Menu' with links like Overview, Instruments, Sites, Documentation, etc. A 'Search Function' is located below the menu. The 'Access Info' section shows the user is signed in as Alessandro Burini. The 'Leading Article' is a physics-related piece titled 'A Memory from the first lesson of Physics.' The 'Cal/Val Events' section lists upcoming events like the CEOS Land Calibration Event 2010. The 'Latest News' section features a 'SMOS Successfully Launched!' article. The 'Multimedia Gallery' and 'Slide-Show Gallery' sections display various images and videos. The 'Latest Forum Post' section shows a post about the new Cal/Val Portal.



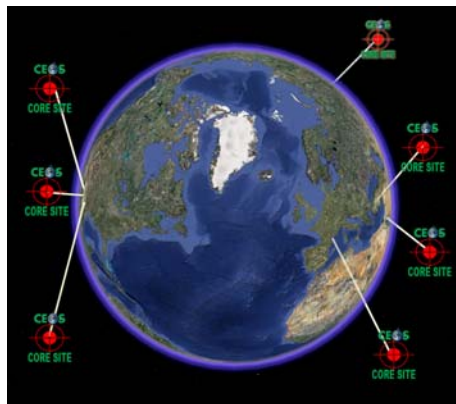
CEOS LANDNET CORE SITES

Detailed information on LANDNET sites, such as

- **Geo-Location,**
- **Ground Based Instrumentation,**
- **Literature**
- **Weather Statistic Info**

...work in progress:

- Satellite Overpass Bulletin
- Multi-Platform Dataset



Cal/Val Home

- Overview
- Instruments
- Sites
- Documentation
- Cal/Val Campaigns
- Tools
- Projects
- QA4EO
- Data Access
- Administrator
- Forum
- Cal/Val Wiki
- Acronyms
- Feedback
- Links

Search...
Everything

CEOS LANDNET Sites

The LANDNET Sites are a set of Land Equipped Sites (LES) endorsed by CEOS as standard reference sites for the post-launch validation of Earth observing sensors. During the CEOS IVOS-19 Meeting, held in Phoenix AZ, eight instrumented sites were identified for field campaigns to obtain radiometric gain and these sites can serve as a focus for international collaboration and cross-comparison to evaluate biases of in-flight and future sensors in a harmonized manner.

CEOS Reference Sites

Name	Latitude	Longitude	Affiliation	E-Mail
Tuz Golu	33.33	38.83	TUBITAK UZAY	selime.gurol@uzay.tubitak.gov.tr
Railroad Valley Playa	-115.69	38.5	NASA/GSFC	kurtis.thome@nasa.gov
Negev	35.01	30.11	Ben Gurion University	karniel@bgu.ac.il
La Crau	4.86	43.56	CNES	patrice.henry@cnes.fr
Ivanpah Playa	-115.40	35.57	NASA/GSFC	kurtis.thome@nasa.gov
Frenchman Flat	-115.93	36.81	NASA/JPL	carol.j.bruegge@jpl.nasa.gov
Dunhuang	94.34	40.13	NSMC/CMA	huxu@cma.gov.cn
DOME-C	123	-74.5	University of Washington	sgw@atmos.washington.edu

Access to satellite data

In-Situ / Reference data

Local (In Situ Data stored in the Cal/ValPortal)

Additional Links:

- AERONET
- METOS
- GlobCOLOUR
- MERMAID
- NOAA NDBC
- Medspiration
- Coriolis
- TEMS

NEXT STEP:

- Collect Data - satellite and in-situ
- build a database
- process the (inter) calibration results

We need to operate LANDNET as a network!



Cal/Val Wiki: A Workspace for the Community

A Wiki page is a web space where users can easily add text, links and images.

The Cal/Val Wiki is a place where the user can find detailed information on Cal/Val related arguments, instruments, techniques and protocols.



The screenshot shows the Cal/Val Portal website. The header includes the CEOS logo and the text 'Cal/Val Portal'. A welcome message for 'Alessandro Burini!' is visible. The main content area is titled 'Cal/Val Wiki' and shows the 'Vicarious Calibration' page. The page includes a search bar, a list of links (Overview, Instruments, Sites, Documentation, etc.), and a detailed description of vicarious calibration. It mentions that vicarious calibration refers to techniques that make use of natural or artificial sites on the surface of the Earth for the post-launch calibration of sensors. The page also lists various sites used for calibration, such as White Sands Missile Range, New Mexico, and Railroad Valley, Nevada. There are also images of calibration sites and a list of additional links.

The aim is to build an encyclopaedia of Cal/Val!

The Portal need also your help!



CEOS IVOS List of Sensors

Information regarding all CEOS IVOS sensors has been published in the “Instruments” Section of the Portal

SENSOR	SATELLITE	Agency	LAUNCH DATE	Resolution	Swath	SPECTRAL BANDS				N. Bands	WGCV	CEOS Constellation
						VIS (μm)	NIR (μm)	MIR (μm)	FIR (μm)			
AATSR	ENVISAT	ESA	2002	1 km	500 km	0.55 - 12.0				7	IVOS	
AMSR-E	AQUA	NASA	2002	5 - 50 km	1445 km	Microwave				6	MWS	
ASTER	TERRA	NASA	2002	15 - 90 m	60 km	0.52 - 11.65				14		
ATSR	ERS	ESA	1995	1 km	500 km	0.65 - 12.5				8	IVOS	
AVHRR	NOAA serie / MetOp	NOAA	2006	1.1 km	3000 km	0.58 - 12.5				6	LPV	
AVNIR-2	ALOS	JAXA	2006	10 m	70 km	0.42 - 0.89				4	IVOS	
AWIFS	RESOURCESAT-1	ISRO	2003	55 m	730 km	0.52 - 1.75				4		
CCD	CBERS-2B	CRESDA (China)/INPE (Brazil)	2007	20 m	113 km	0.45 - 0.89				4	IVOS	LSI
CHRIS	PROBA	ESA	2001	36 m	14 km	0.4 - 1.05				81	IVOS	
CZI	HY-1B	CAST (China)	2007	250 m	500 km	0.4 - 0.695				4		
HSTC	SAC-C	CONAE	2000	300 m 1 km	700 km	0.45 - 0.85				1	IVOS	LSI
Hyperion	NMP EO-1	NASA	2000	30 m	7.5 km	0.4 - 2.5				220		
HRG	SPOT Serie	CNES	2002	10 m	60 km	0.50 - 1.75				4	IVOS	
IASI	MetOp	ESA	2009	25 km	2052 km			3.4 - 15.5		3		
IIR	CALIPSO	CNES	2006	1 km	64 km			8.7 - 12.5		3		
IMAGER	MTSAT-2	JMA (Japan)	2006	1 km	Full Earth Disk	0.55 - 12.5				5		
LISS-IV	RESOURCESAT-1	ISRO	2003	5.8 m	141 km	0.52 - 1.75				3		LSI
IR-MSS	CBERS-2B	CRESDA (China)/INPE (Brazil)	2007	78 m	120 km	0.5 - 12.5						
KMSS	Meteor-MN1	ROSKOSMOS (Russia)	2009	60 m - 100 m	900 km	0.4 - 0.9				6		
MERIS	ENVISAT	ESA	2002	300 m 1 km	1150 km	0.4 - 1.05				15	IVOS IOCGG LPV	OCR
MISR	TERRA	NASA	2002	500 m	380 km	0.44 - 0.86					LPV	
MMRS	SAC-C	CONAE	2000	175 m	360 km	0.48 - 1.7				5		LSI
MODIS	TERRA	NASA	1999	250 m	2330 km	0.4 - 14.4				36	IVOS IOCGG LPV	LSI / OCR
MODIS	AQUA	NASA	2002	250 m	2330 km	0.4 - 14.4				36	IVOS IOCGG LPV	LSI / OCR



Interactive Components and User Management

Many web tools can help the user community in establishing a collaborative environment:

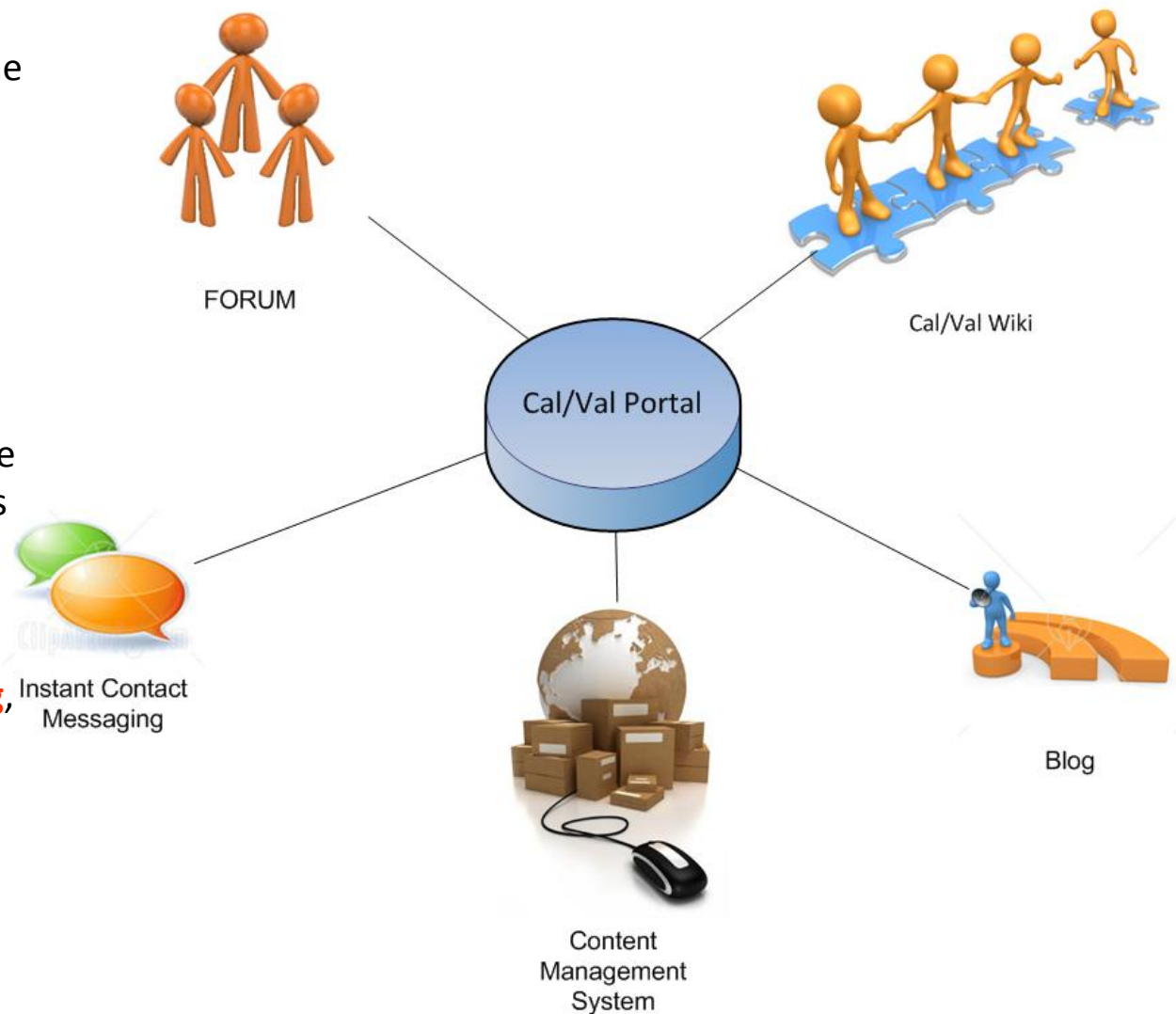
-**Forum**, a place where to discuss Cal/Val Open Issue

-**Cal/Val Wiki**, where the community can easily create or review inter-linked pages

-**Blog**, a tool dedicated to Ground Campaign Events

-**Instant Contact Messaging**, a tool for real-time communication

-**Content Management System**



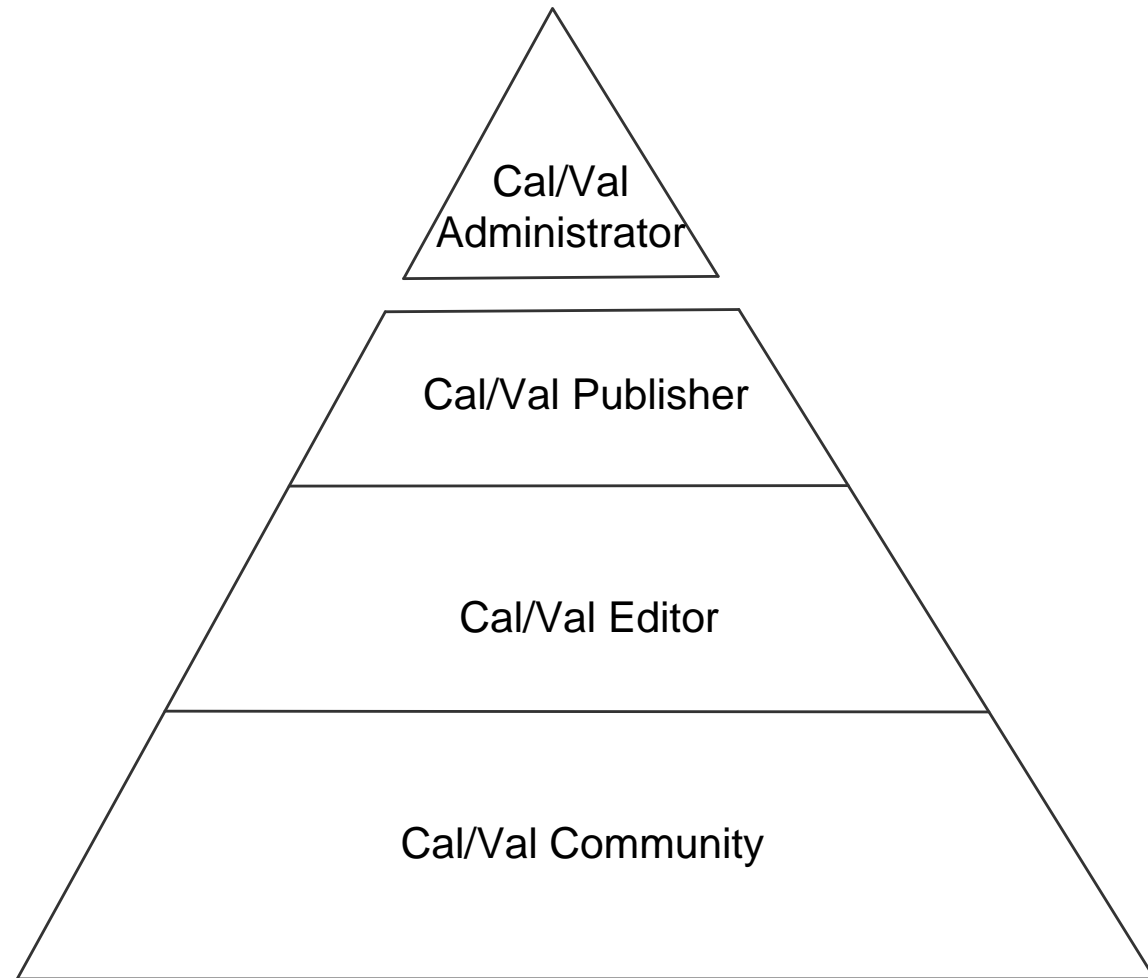


Interactive Components and User Management

The system can manage different levels of users privileges:

- User
- Editor
- Publisher
- Administrator

It is very easy to insert a new content, to edit or delete an article.



Call for a "Cal/Val Experts Board"



Welcome Alessandro Burini!

Cal/Val Portal

Navigation - Look and Feel - Configuration - Close

CalVal Home

- Overview
- Instruments
- Sites
- Documentation
- Cal/Val Campaigns
- Tools
- Projects
- QA4EO
- Data Access
- Administrator

Breadcrumb - [Look and Feel](#) - [Configuration](#) - [Close](#)

[CalVal Home](#) » [Cal/Val Wiki](#)

Wiki - [Look and Feel](#) - [Configuration](#) - [Close](#)

[FrontPage](#) | [Recent Changes](#) | [All Pages](#) | [Orphan Pages](#)

Recent Changes

Page	Revision	User	Date	Summary	Actions
Dunhuang	1.2	Xiuqing HU	2/20/10 6:49 AM		← ✎ ✕

Showing 1 result.

[Atom 1.0](#) [RSS 1.0](#) [RSS 2.0](#)

Web Content Display - [Look and Feel](#) - [Configuration](#) - [Close](#)

[Access to satellite data](#)

Web Content Display - [Look and Feel](#) - [Configuration](#) - [Close](#)

[In-Situ / Reference data](#)

Thanks to the new Cal/Val Portal Collaborative System, Dr Xiuqing Hu successfully updated the Dunhuang Test Site Wiki Page.

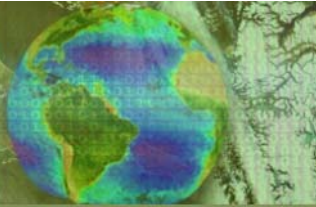

The system registers the revision details.

The community can stay tuned on Portal Updates subscribing the RSS service



Adding a new Article: A quick Guide

How to add a new article to a page?



Cal/Val Portal

Welcome Alessandro Burini!

CalVal Home

- Overview
- Instruments
- Sites
- Documentation
- Cal/Val Campaigns
- Tools
- Projects
- QA4EO
- Data Access
- Administrator
- Forum
- Cal/Val Wiki
- Acronyms
- Feedback
- Links


Search...
Everything



[CalVal Home](#) > [Overview](#)

Information

General information is provided here on calibration and validation activities, questions and answers around calibration and validation, and an interactive forum will be provided where scientists can exchange knowledge and experience.

Most work is organised in projects, and a database of projects is maintained as part of the portal. Summaries of the projects and contact details can be found here.




[Access to satellite data](#)

In-Situ / Reference data

[Local](#) (In Situ Data stored in the CalValPortal)

Additional Links:

- [AERONET](#)
- [METOZ](#)
- [GlobCOLOUR](#)
- [MERMAID](#)
- [NOAA NDBC](#)
- [Medspiration](#)
- [Coriolis](#)
- [TEMS](#)



The Committee on Earth Observation Satellites (CEOS) is providing information and data for Calibration (Cal) and Validation (Val) of Earth Observation (EO) data through this portal.



Adding a new Article: Add Application

1: Select the "Add Application" Option from the right menu



Adding a new Article: Application Selection

2: Select the application from the left side pop-up list

The screenshot displays the Cal/Val Portal interface. On the left, a pop-up window titled 'Add Application' is open, showing a search bar and a list of application categories. The 'Web Content Display' option is highlighted. The main portal area features a header with the CEOS logo and a welcome message for Alessandro Burini. Below the header, there is a sidebar with a list of links (Overview, Instruments, Sites, etc.) and a central content area with an 'Information' section. The right sidebar contains links to satellite data, in-situ data, and additional links like AERONET and METOZ. The footer includes a search bar and a status bar with 'Settings' and 'Online Friends (0)'.

Add Application [X]

Search applications (searches as you type).

Collaboration [X]
Community [X]
Content Management [X]

- Asset Publisher [Add]
- Breadcrumb [Add]
- Categories Navigation [Add]
- Document Library [Add]
- Document Library Display [Add]
- Image Gallery [Add]
- Navigation [Add]
- Nested Portlets [Add]
- Polls Display [Add]
- Recent Documents [Add]
- Site Map [Add]
- Tags Navigation [Add]
- Web Content Display [Add]**
- Web Content List [Add]
- Web Content Search [Add]
- XSL Content [Add]

Entertainment [X]
Finance [X]
Google [X]
News [X]
Religion [X]
Sample [X]
Shopping [X]
Social [X]
Tools [X]

CalVal Home

Overview [X]
Instruments [X]
Sites [X]
Documentation [X]
Cal/Val Campaigns [X]
Tools [X]
Projects [X]
QA4EO [X]
Data Access [X]
Administrator [X]
Forum [X]
Cal/Val Wiki [X]
Acronyms [X]
Feedback [X]
Links [X]

Search...
Everything [X]

CalVal Home » [Overview](#)

Information

General information is provided here on calibration and validation activities, questions and answers around calibration and validation, and an interactive forum will be provided where scientists can exchange knowledge and experience.

Most work is organised in projects, and a database of projects is maintained as part of the portal. Summaries of the projects and contact details can be found here.

[Access to satellite data](#)

[Local](#) (In Situ Data stored in the CalValPortal)

Additional Links:

- [AERONET](#)
- [METOZ](#)
- [GlobCOLOUR](#)
- [MERMAID](#)
- [NOAA NDBC](#)
- [Medspiration](#)
- [Coriolis](#)
- [TEMS](#)

The Committee on Earth Observation Satellites (CEOS) is providing information and data for Calibration (Cal) and Validation (Val) of Earth Observation (EO) data through this portal.

Settings **Online Friends (0)**



Adding a new Article: Application Positioning

3: Drag the application and place it in the page

Welcome Alessandro Burini!

CalVal Portal

Navigation - Look and Feel - Configuration - Close

CalVal Home

- Overview
- Instruments
- Sites
- Documentation
- Cal/Val Campaigns
- Tools
- Projects
- QA4EO
- Data Access
- Administrator
- Forum
- Cal/Val Wiki
- Acronyms
- Feedback
- Links

Breadcrumb - [Look and Feel](#) - [Configuration](#) - [Close](#)

[CalVal Home](#) > [Overview](#)

Web Content Display - [Look and Feel](#) - [Configuration](#) - [Close](#)

Information

General information is provided here on calibration and validation activities, questions and answers around calibration and validation, and an interactive forum will be provided where scientists can exchange knowledge and experience.

Most work is organised in projects, and a database of projects is maintained as part of the portal. Summaries of the projects and contact details can be found here.

Web Content Display

Select existing web content or add some web content to be displayed in this portlet.

[Add Web Content](#)

Web Content Display - [Look and Feel](#) - [Configuration](#) - [Close](#)

[Access to satellite data](#)

Web Content Display - [Look and Feel](#) - [Configuration](#) - [Close](#)

In-Situ / Reference data

[Local](#) (In Situ Data stored in the CalValPortal)

Additional Links:

- [AERONET](#)
- [METOZ](#)
- [GlobCOLOUR](#)
- [MERMAID](#)
- [NOAA NDBC](#)
- [Medspiration](#)
- [Coriolis](#)
- [TEMS](#)

The Committee on Earth Observation Satellites (CEOS) is providing information and data for Calibration (Cal) and Validation (Val) of Earth Observation (EO) data through this portal.



Adding a new Article: Content Editing

4: Insert the text through a WYSIWYG interface

CEOS logo on the left side of the slide.

Form and Presentation

Structure [Select](#) [Remove](#)

Template [Select](#)

Workflow

Status New

Categorization

Type [General](#)

Categories [Select Categories](#)

Tags [Add Tags](#) Or [Select Tags](#) [Suggestions](#)

Searchable ☒

Schedule

Display Date [February](#) [22](#) [2010](#) [1](#) [:17](#) [PM](#)

Expiration Date [February](#) [22](#) [2011](#) [1](#) [:17](#) [PM](#)

Never Auto Expire ☒

Review Date [November](#) [22](#) [2010](#) [1](#) [:17](#) [PM](#)

Never Review ☒

Permissions ☒ Public [Configure »](#)

Abstract

Description

Small Image URL

-- OR -- Small Image [Sfoglia...](#)

Use Small Image ☐

[Save](#) [Save and Continue](#) [Save and Approve](#) [Cancel](#)

[Settings](#) [Online Friends \(0\)](#)



Who is using the Cal/Val Portal?

About 1000 accesses since October 2009 and about 120 registered users:

- 80% Scientists, National Space Agencies and Cal/Val Experts
- 20 % Students interested in Cal/Val (graduated and PhD)





How to stay tuned on Cal/Val

You can follow all the Cal/Val Portal news subscribing the newsletter
(mail to: Alessandro.Burini@esa.int)

You can receive all the Cal/Val Info subscribing the RSS service on the Portal
(News Box on the Main page)

WE NEED ALSO YOUR CONTRIBUTION!!!

Please, send all your inputs (Cal/Val Events, Campaigns, Workshops, etc...) to the Cal/Val Portal.
We need your support!

March 2010

CEOS Cal/Val Portal Newsletter No. 4

The Committee on Earth Observation Satellites (CEOS) is providing information and data for Calibration (Cal) and Validation (Val) of Earth Observation (EO) data through this portal

A new service for the Landnet Sites is currently under testing: a Multi-Platform Test Site Overpass Bulletin is going to be published every two weeks.

The orbital information is derived by means of the tool implemented by NASA (<http://www-angler.larc.nasa.gov/>) and then published on the Portal. Comments, suggestions and feedbacks are welcome!

Cal/Val Portal News

Welcome in 2010! The Cal/Val portal entered the 2010 with a lot of news, events and new projects.

The portal is still growing up, but we need your inputs and help to always keep this space updated!

CALIBRATION TEST SITE PROJECT

This study is part of the ESA strategy for ensuring the quality (calibration, validation and operational quality) of data developed for current and future missions within the Explorers and GMES framework.

The scope of the project is to select, identify and characterise reference test sites that will be used for the calibration and characterisation of different sensor types. The project is organized into 10 different WPs, where the user can find information regarding sensors, calibration techniques and guidelines, information on the most common and used reference surfaces and a climatological statistic for each test site.

All the documentation and presentations can be found in the section :
Documentation -> Calibration Test Site

CEOS LANDNET SITES

In the section dedicated to Test Sites, you can find detailed information on the Landnet test sites, such as photos, people to be contacted, literature and papers, climatological and atmospheric statistics.

ACRONYMS

The "Acronyms" page contains the most used acronyms in Cal/Val. A downloadable file is hosted on the portal, ready to be integrated directly in a document

LIST OF IVOS SENSORS

A list of CEOS IVOS sensors has been created and published in the "Instruments" section of the Portal. This is the starting point to add new information on sensors, points of contact and literature related to calibration

Cal/Val Events

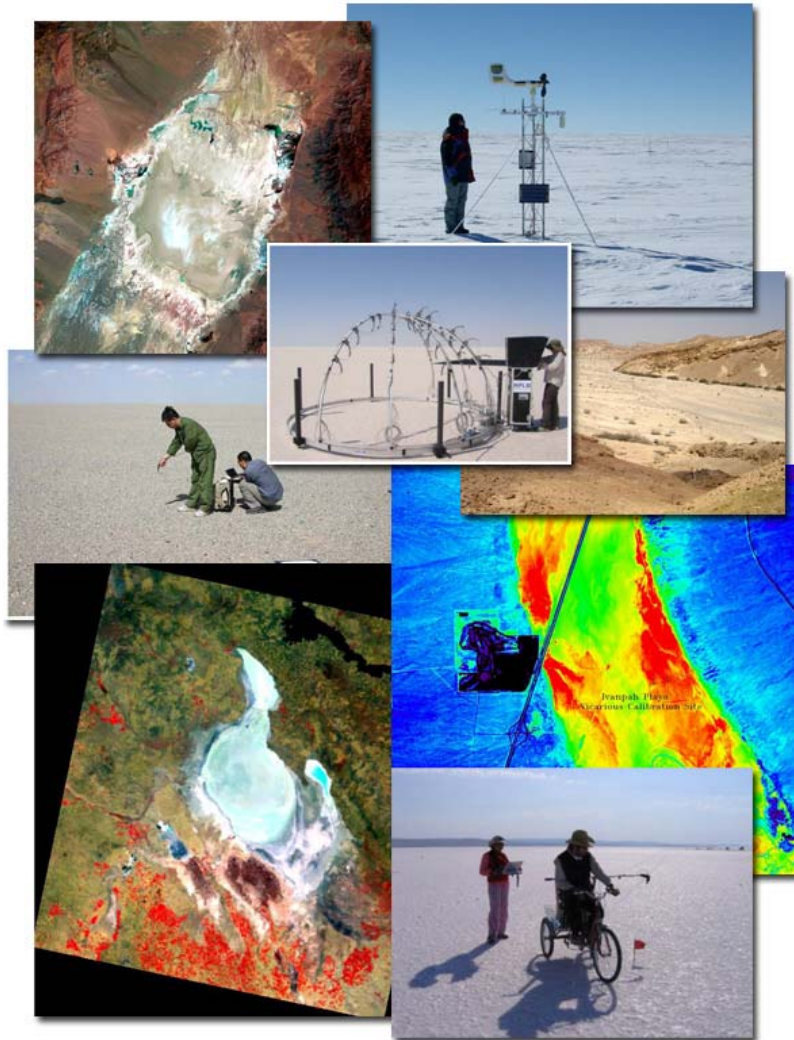
CEOS Inter-Comparison Event: August 2010

In order to evaluate the differences between ground and TOA radiance, CEOS WGCV has agreed to carry out a comparison of measurement techniques and instrumentation used for this purpose using a salt flat in Southern Turkey, Tuz Gölü. This CEOS comparison is to be held in August 2010, sponsored by ESA with support from the hosts Tubitak Uzay and the organiser NPL (with support of UK government BIS and BNSC). This 2010 campaign follows a prototype or "pilot" comparison carried out by a few European organisations in August 2009. The results of this pilot will shortly be published on the Portal

The CEOS endorsed Quality Assurance Framework for Earth Observation (QA4EO) encourages such comparisons to improve international harmonisation and interoperability.



LANDNET: Call for commitment



- **Site Description** (aux files, climatology, ...) – OK
- **Method + Tools** (6s, but we need to improve it!)
- **Satellite Data over Test Site**
(Need for Data Providers Commitment)
- **In Situ Data** (Need for Test Site PI Commitment)

**Need to operate LANDNET as
network common effort**

“United we stand, Divided we fall”



Join the Cal/Val Portal today!

You can find the Cal/Val Portal at the address:

<http://calvalportal.ceos.org>



Contact:

Alessandro.Burini@esa.int