



World Meteorological Organization

Weather • Climate • Water

OSCAR demonstration

Facilitated access to satellite data and tools

ET-SUP-7

Document 10.02

Online resources <http://www.wmo.int/sat>

Product Access Guide
(under development)

Data Access,
Preprocessing Software,
Analysis Tools

OSCAR
- User requirements
- Satellite capabilities

The screenshot shows the 'Product Access Guide' page on the WMO website. It features a navigation menu on the left with categories like 'Atmospheric Domain', 'Oceanic Domain', and 'Cross-Cutting'. The main content area includes a 'Browse by Domain and Product category' section and a table of products under 'Atmospheric Domain > Temperature and Humidity'.

Source	Region	Product description and Link
NOAA/OSPO		Sounding products
NOAA/EVL		Total Precipitable Water
EUMETSAT		EUMETSAT SAF on NWP (software and information related with the derivation of vertical profiles of atmospheric temperature and humidity from 2d and microwave satellite sounding instruments)
NWP SAF		

The screenshot shows the 'Data Access & Software Tools' page. It includes a section titled 'Data Access and Software Tools' with a list of resources. Below this is a table titled 'GEO Satellite Data Access'.

Satellite	NRT L1.3 Data Specification	NRT Imagery	Non-NRT Data
COMS	HRIT / LRIT	KMA NSMC	KMA NSMC
Electro-L	HRIT / LRIT		(ftp upon request)
FY-2	S-VISSR(NRT) CMACast	Link	S-VISSR CMACast
GOES	GVAR	RAMSDIS Online OSPO Imagery	NOAA/NEOSD OSPO NOAA CLASS
INSAT-3A	Link	Link	Link
Kalpana	Link	Link	Link
Meteosat 09	EUMETSAT	Link	EUMETSAT Data Centre

The screenshot shows the O.S.C.A.R. website. It features a 'Satellite details' section for GOES-12 (S-America) and a 'Satellite Field of View' section with a map of the satellite's coverage area.

Satellite details

Associated satellite programme and related satellites

Satellite Payload

Satellite Field of View



Introduction to OSCAR

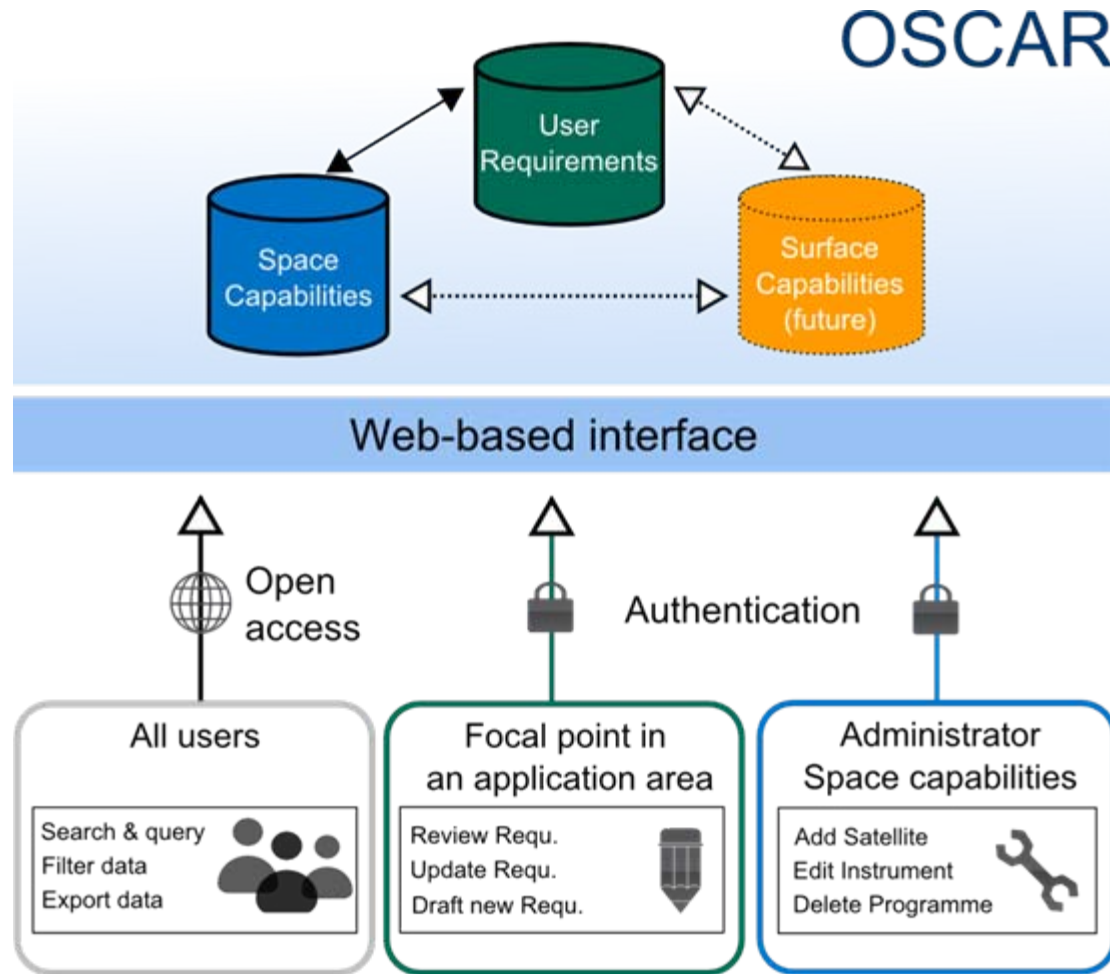


OSCAR | Objectives

- Provide convenient access to detailed satellite, instrument and network metadata for all users
 - Serve as a one stop shop
- Facilitate design, planning and global coordination of global observing systems
 - Ease collection and maintenance of user requirements and aide comparison with actual capabilities
- → Serve as a support tool for the “Rolling Requirement Review” Process



OSCAR | Concept



OSCAR Demonstration

- www.wmo.int/oscar



Satellite Data access information



Current situation (1/2)

- Data access and tools resource (static web page)
 - Links to available real-time and non-real time data by satellite,
 - Software tools for pre-processing and analysis
 - Online since May 2012
 - http://www.wmo.int/pages/prog/sat/accessandtools_en.php.
 - Limited reach



Data Access and Software Tools

The following provides an overview of:

- [Geostationary Satellite Data Access \(Imagery, Near Real-Time L1.5, Non Real-Time\)](#)
- [Low-Earth Orbiting Satellite Data Access \(Direct Broadcast, Non Real-Time\)](#)
- [Pre-Processing Software Tools for Low-Earth Orbiting Satellite Instruments](#)
- [Processing and Analysis Software Tools \(open source, commercial off-the-shelf\)](#)

Multi-mission broadcast systems such as [EUMETCast](#), [CMACast](#), [GEONETCast-Americas](#), [MITRA](#) provide access to a multitude of satellite data and products, and other data (e.g., in-situ) for WMO applications.

GEO Satellite Data Access

Satellite	NRT L1.5 Data Specification	NRT Imagery	Non-RT Data
COMS	HRIT/ LRIT	KMA KMA NSMC	KMA NSMC
Electro-L	HRIT/ LRIT		(ftp upon request)
FY-2	S-VISSR(NRT) CMACast	Link	S-VISSR CMACast
GOES	GVAR	RAMSDIS Online OSPO Imagery	NOAA/NESDIS OSPO NOAA CLASS
INSAT-3A	Link	Link	Link
Kalpana	Link	Link	Link
Meteosat 0°	EUMETCast	Link	EUMETSAT Data Centre

Current situation (2/2)

- OSCAR Tool available since 09-2012
- Access information for about 140 currently active satellites
 - “Data circulation” (Programme level)
 - Satellite Communication Frequencies (Satellite level)
 - *“Data access information” (Satellite level)* (currently hidden)
 - No direct links



Satellite details

Acronym	GOES-13		
Full name	Geostationary Operational Environmental Satellite - 13		
Satellite Description	<ul style="list-style-type: none"> 6th flight unit of the GOES 2nd generation programme. Main mission: operational meteorology. Substantial contribution to space weather. 		
Mass at launch	3210 kg	Dry mass	1540 kg
Power	2300 W		
Data circulation	<ul style="list-style-type: none"> CDA (Command and Data Acquisition station) to receive all data transmitted in real-time. PDR (Processed Data Relay) to broadcast pre-processed images and sounding data in near-real-time (NRT) by using a GOES Variable Data Format (GVAR). MDL (Multiuse Data Link) to transmit diagnostic data including Space weather data. WEFAX (Weather Facsimile) to broadcast a selection of images in analogue form. LRIT (Low Rate Information Transmission), digital follow-on of WEFAX since 2005. DCIS (Data Collection and Interrogation Service) to relay messages from DCP (Data Collection Platform) either at fixed time or upon interrogation. GEOS&R (Geostationary Search & Rescue) to relay emergency signals to Local User Terminals (LUT). EMWIN (Emergency Managers Weather Information Network) to disseminate processed data (updated to EMWIN-N in 2006). 		
Data access information	<ul style="list-style-type: none"> Real-time availability of the full information to the CDA. Near-real time availability of pre-processed IMAGER and SOUNDER data in the GVAR format by the PDR and LRIT links to user stations. Near-real time availability of SXI and SEM (MAG, EPS, HEPAD and XRS) and diagnostic data by MDL. Near-real-time availability of EMWIN-N information. DCP messages through ground lines from the CDA. 		

Associated satellite programme and related satellites

Note: red tag => no longer operational, green tag => operational, blue tag => future

Geostationary Operational Environmental Satellite - 2nd generation

-  [GOES-8](#) (1994 - 2004)
-  [GOES-9](#) (1995 - 2003)
-  [GOES-9 \(GMS backup\)](#) (2003 - 2006)
-  [GOES-10](#) (1997 - 2006)
-  [GOES-10 \(S-America\)](#) (2006 - 2009)
-  [GOES-11](#) (2000 - 2011)
-  [GOES-12](#) (2001 - 2010)
-  [GOES-12 \(S-America\)](#) (2010 - 2013)
-  [GOES-13](#) (2006 - 2015)
-  [GOES-14](#) (2009 - 2016)
-  [GOES-15](#) (2010 - 2020)

Satellite Payload

All known Instruments flying on GOES-13

Acronym	Full name
GEOS&R	Geostationary Search and Rescue
SEM/MAG	SEM / Magnetometer
SOUNDER	GOES Sounder
SXI	Solar X-ray Imager
SEM/EPS	SEM / Energetic Particles Sensor
SEM/HEPAD	SEM / High Energy Proton and Alpha Particles Detector
SEM/XRS	SEM / X-Ray Sensor
DCIS	Data Collection and Interrogation Service
IMAGER	GOES Imager



Discussion

- **Scope**
 - Current Scope: Links to Level 1 and 2 Products
 - Overlap with future Product Access Guide
 - **Reduce scope to Level 1 Data links to avoid duplication**
- **Maintenance issues, coherence, reach**
 - Level of detail required/useful ?
 - Attach information to Satellite Programme Level ?
 - Maintenance responsibilities (31 entries on webpage vs 100 in OSCAR)
 - **Integrate, maintain and display all Data Access information in OSCAR**
 - **Different output formats possible (including as a dedicated list as it is now)**





**World
Meteorological
Organization**

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Thank you for your attention

This space can be used for
contact information