

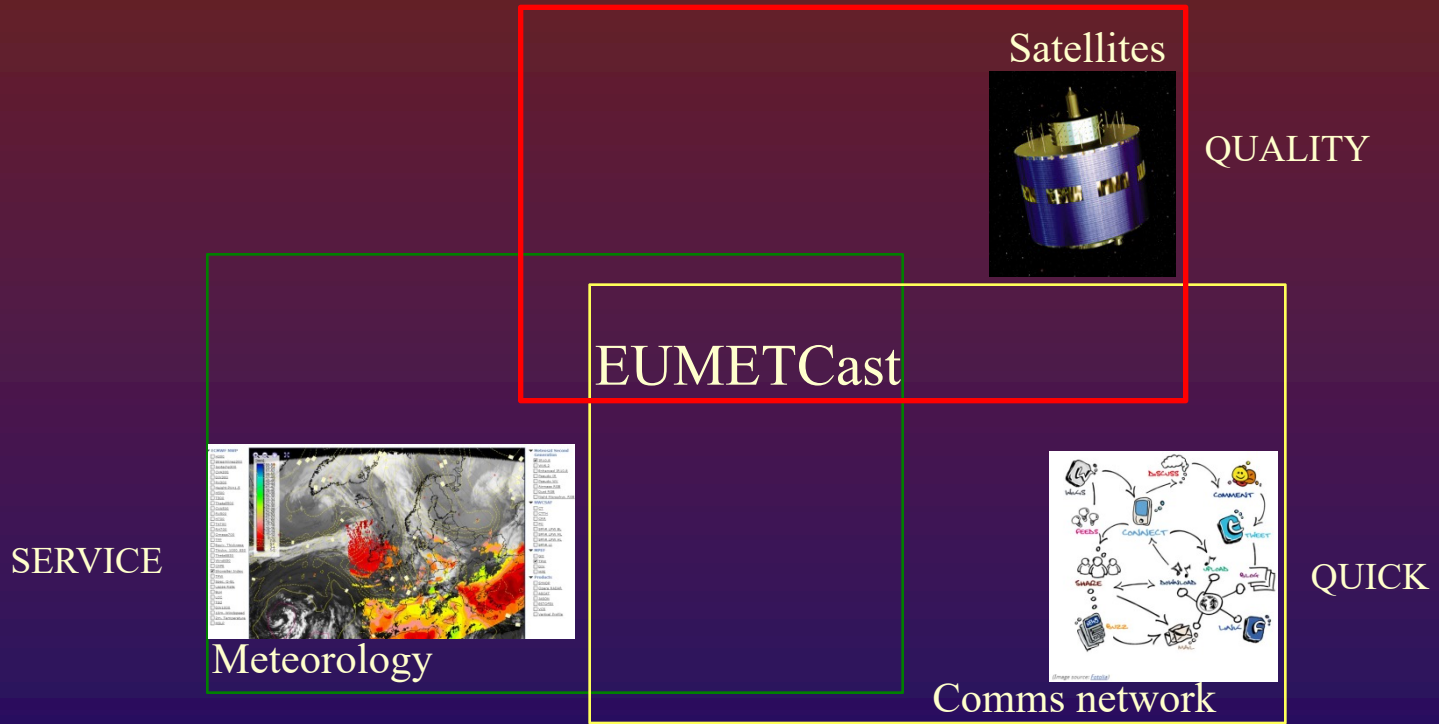
EUMETCast

Meteorological data distribution via satellite



jose.prieto@eumetsat.int

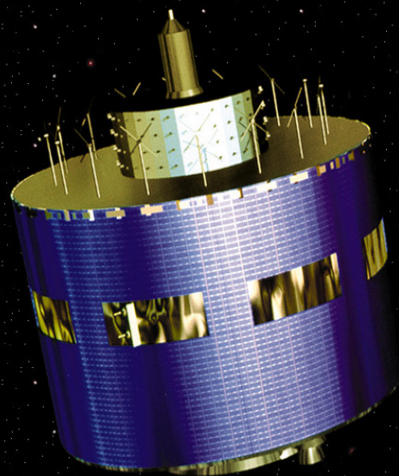
A creative intersection



...of user communities

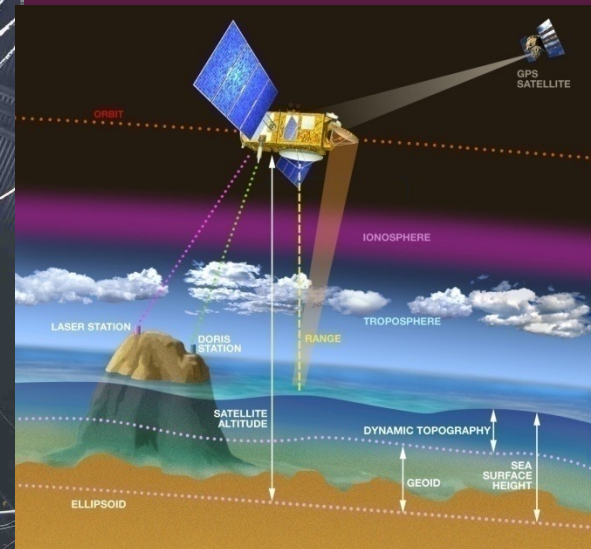
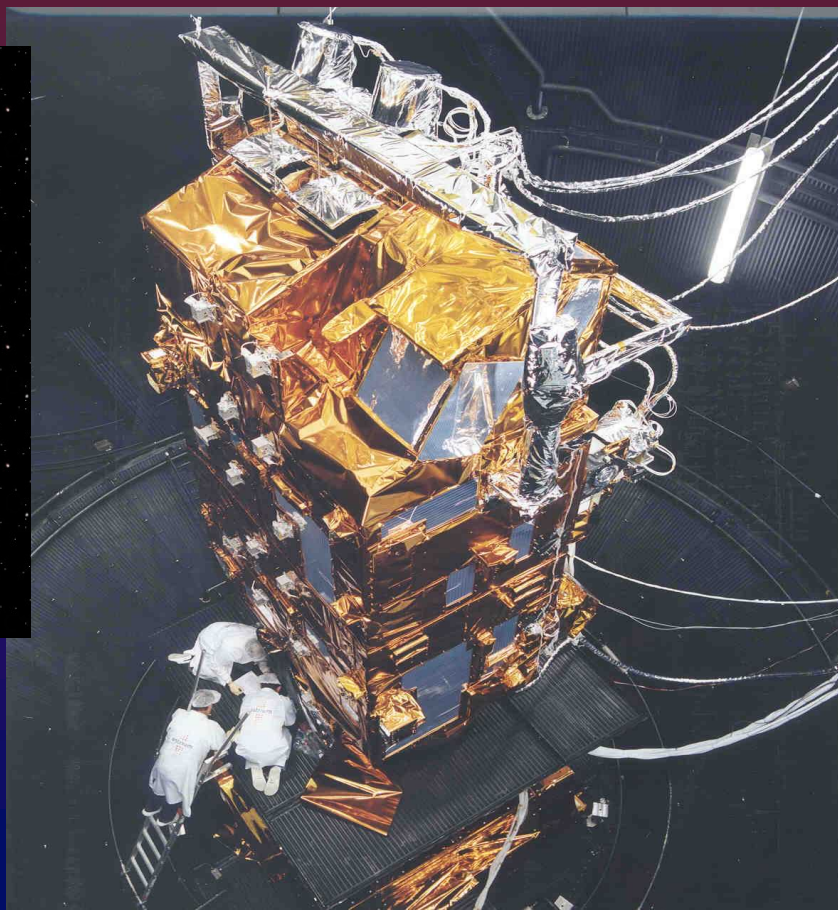
EUMETSAT programs

- Geostationary: **Meteosat**
- Polar : **Metop**
- Altimetry: **Jason-2**



From 2003

From 2006

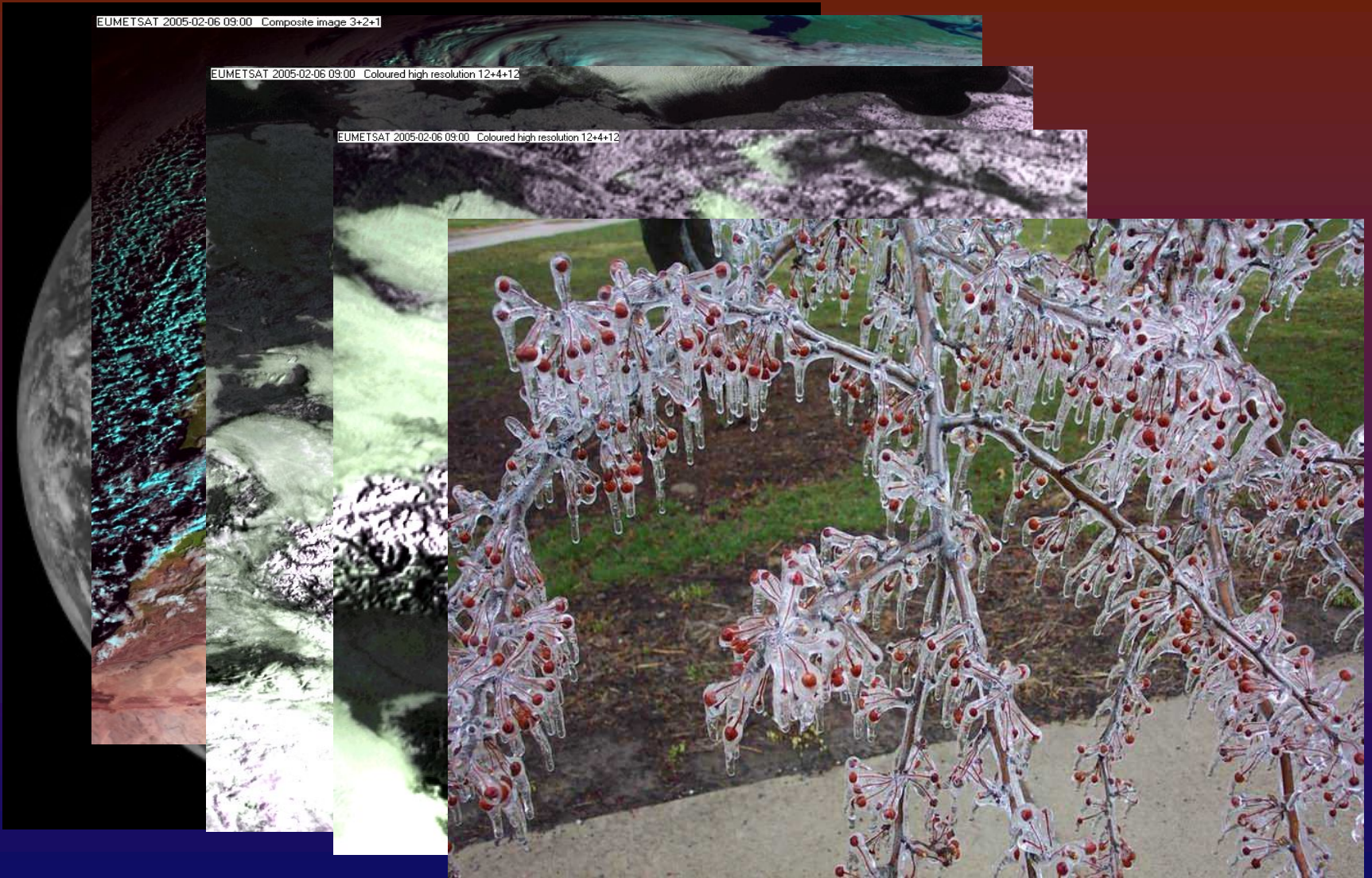


2008

EUMETSAT 2005-02-06 09:00 Composite image 3+2+1

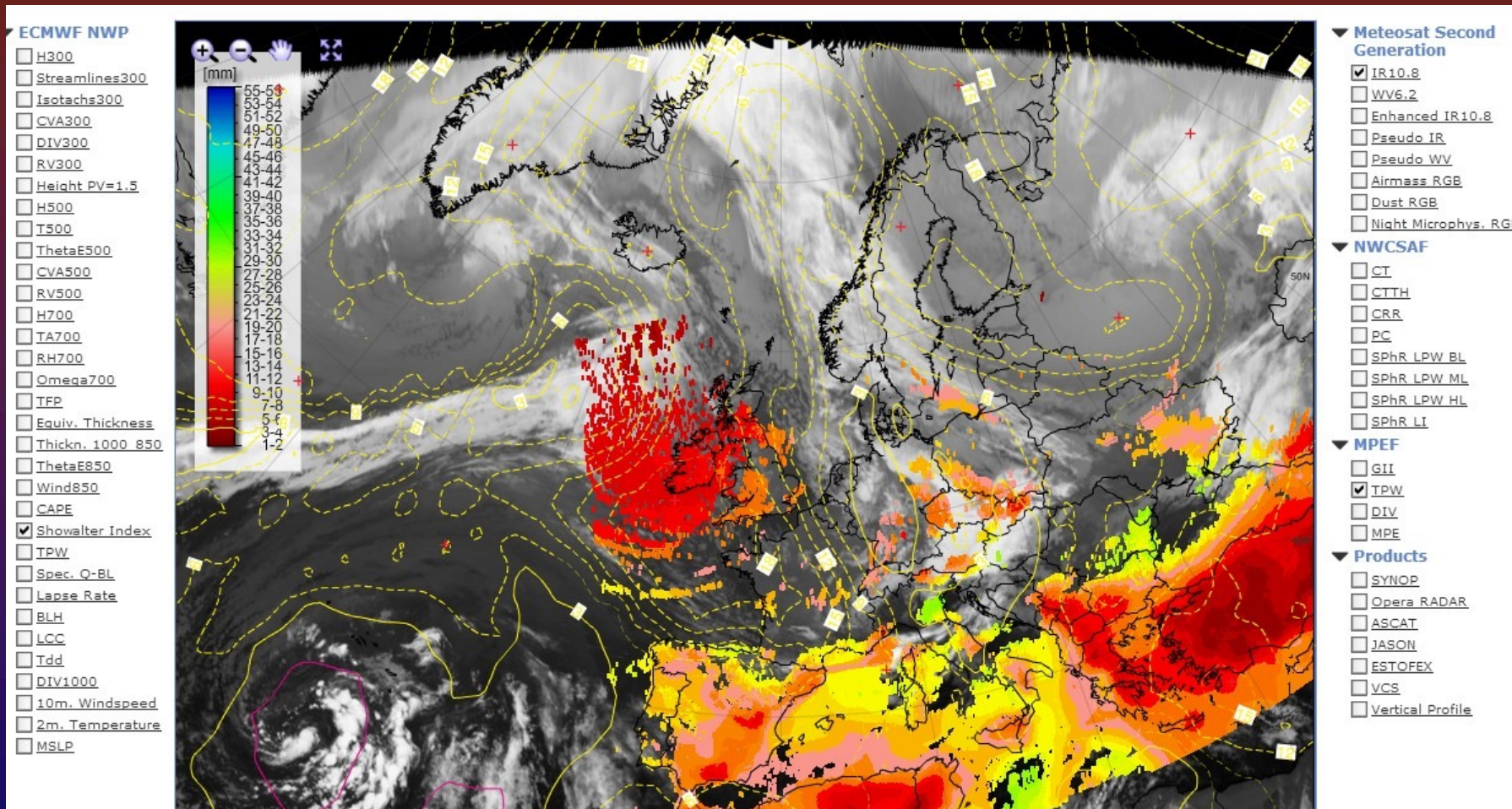
EUMETSAT 2005-02-06 09:00 Coloured high resolution 12+4+12

EUMETSAT 2005-02-06 09:00 Coloured high resolution 12+4+12



Meteosat-9

EUMETTrain





Search this site

ARGENTINA

SALLJ & MCSs

ZONDA

AUSTRALIA

EXPLOSIVE

CYCLOGENESIS

SHALLOW COLD
FRONTS

BRAZIL

ATLANTIC
CONVERGENCE ZONE

MESOSCALE
CONVECTIVE
COMPLEXES

SOUTH AFRICA

COL

CONTINENTAL
TROPICAL LOWS

VIEW BY CATEGORY

INVENTORY

QUICK LOOK CASES

LITERATURE

CONTRIBUTORS

Brazil >

Atlantic Convergence Zone (ZCAS)

CLOUD STRUCTURE IN
SATELLITE IMAGES

METEOROLOGICAL
PHYSICAL BACKGROUND

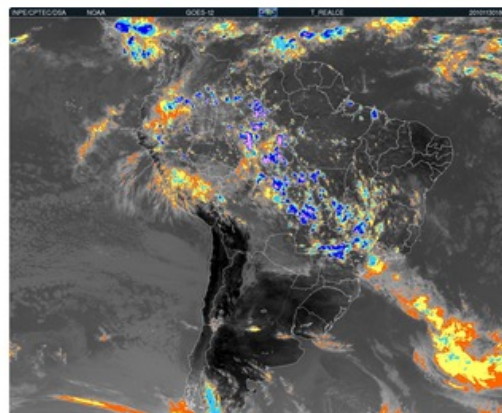
NWP KEY
PARAMETERS

TYPICAL APPEARANCE
IN VERTICAL CROSS
SECTIONS

WEATHER
EVENTS

REFERENCES

Climatologically the South Atlantic Convergence Zone (SACZ) is characterized as a persistent clouds band with northwest-southeast orientation that connects the southern Amazon region with the western portion of the Subtropical South Atlantic having a duration of at least four days with quasi-stationary behavior during the austral summer. **Satellite images, maps of outgoing longwave radiation(OLR) and precipitation** aid in the identification and synoptic climatological of this system.





ACCESS to meteorological DATA

- Data access via antenna (EKU, DVB-S2)
- Web browser access
- Archived data

33 years of data, connected to other expert centres

<http://eoportal.eumetsat.int>



EDIT/VIEW SERVICE SUBSCRIPTIONS

Select the near real-time data and products you wish to receive and your preferred delivery mechanism or register for the Data Centre Service.



EDIT/VIEW USER PROFILE

Modify your contact details, including address details for delivery and invoicing purposes, phone, fax and email, etc.



VIEW/EXTEND LICENCES

View existing licence arrangements, request a licence renewal.



DATA CENTRE APPLICATION

Request new archive data and view status of current and previous Data Centre orders.

EARTH OBSERVATION PORTAL - MY ACCOUNT[HOME](#)[LOGIN](#)[HELP](#)

Authentication

<http://eoportal.eumetsat.int>

Welcome to the Earth Observation portal. Please login to access your account.

PLEASE LOGIN

Please enter your user ID and password to login

User ID: *

Password: *

Please note the fields marked with * are mandatory.

[▶ FORGOTTEN YOUR PASSWORD?](#)[▶ NEW USER - CREATE NEW ACCOUNT](#)[▶ LOGIN](#)

SEARCH

SIMPLE SEARCH

EXTENDED SEARCH

BROWSE BY THEME

SETTINGS

HELP

FEEDBACK

RESET

Extended search

How do you want to search?

Collection Type

- Climate
- Dataset**
- Document
- Software

Societal Benefit Area

- Ecosystems
- Energy
- Health
- Water
- Weather**

Category

- Aerosol
- Analysis
- Atmosphere**
- Calibration
- Cloud

Product Provider

Please select

Dissemination

EUMETCast-Americas

Product Status

Please select

Satellite

Please select

Instrument

Please select

Collection Reference

Collection Name

Description

Time Range

from to

Spatial Extent

▶ DEFINE AREA OF INTEREST

▶ REMOVE AREA OF INTEREST

North Coordinate 0.0

West Coordinate 0.0

East Coordinate 0.0

South Coordinate 0.0

Access Constraint

open Access

Show EUMET SAT Data only

▶ START QUERY

Number of records: 14

Dataset

ATOVS Sounding Products - Metop



The Advanced TIROS Operational Sounder (ATOVS), in combination with the Advanced Very High Resolution Radiometer (AVHRR), covers the visible, infrared and microwave spectral regions and thus has a wide range of applications: supplementing the retrieval of ...

Dataset

ATOVS Sounding Products - NOAA



The Advanced TIROS Operational Sounder (ATOVS), in combination with the Advanced Very High Resolution Radiometer (AVHRR), covers the visible, infrared and microwave spectral regions and thus has a wide range of applications: supplementing the retrieval of ...

Dataset

Cloud Analysis - MSG - 0 degree



Identification of cloud layers with cloud type and coverage, height and temperature. Applications and Users: Weather forecasting, numerical weather prediction, climate research and monitoring.

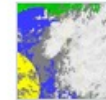


Dataset

Cloud Analysis Image - MSG - 0 degree



Identification of scenes type for each image segment. This is an image product derived along with CLA. Applications and Users: Weather forecasting, numerical weather prediction, climate research and monitoring.

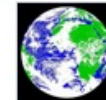


Dataset

Cloud Mask - MSG - 0 degree



The Cloud Mask product describes the scene type (either 'clear' or 'cloudy') on a pixel level. Each pixel is classified as one of the following four types: clear sky over water, clear sky over land, cloud, or not processed (off Earth disc). Applications & ...

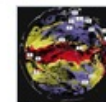


Dataset

Global Instability Index - MSG - 0 degree



Atmospheric air mass instability in cloud free areas. The algorithm is a physical retrieval scheme developed at EUMETSAT. Applications and Users: Nowcasting and short term forecasting (up to 12 hours). Resolution is 3x3 pixels.

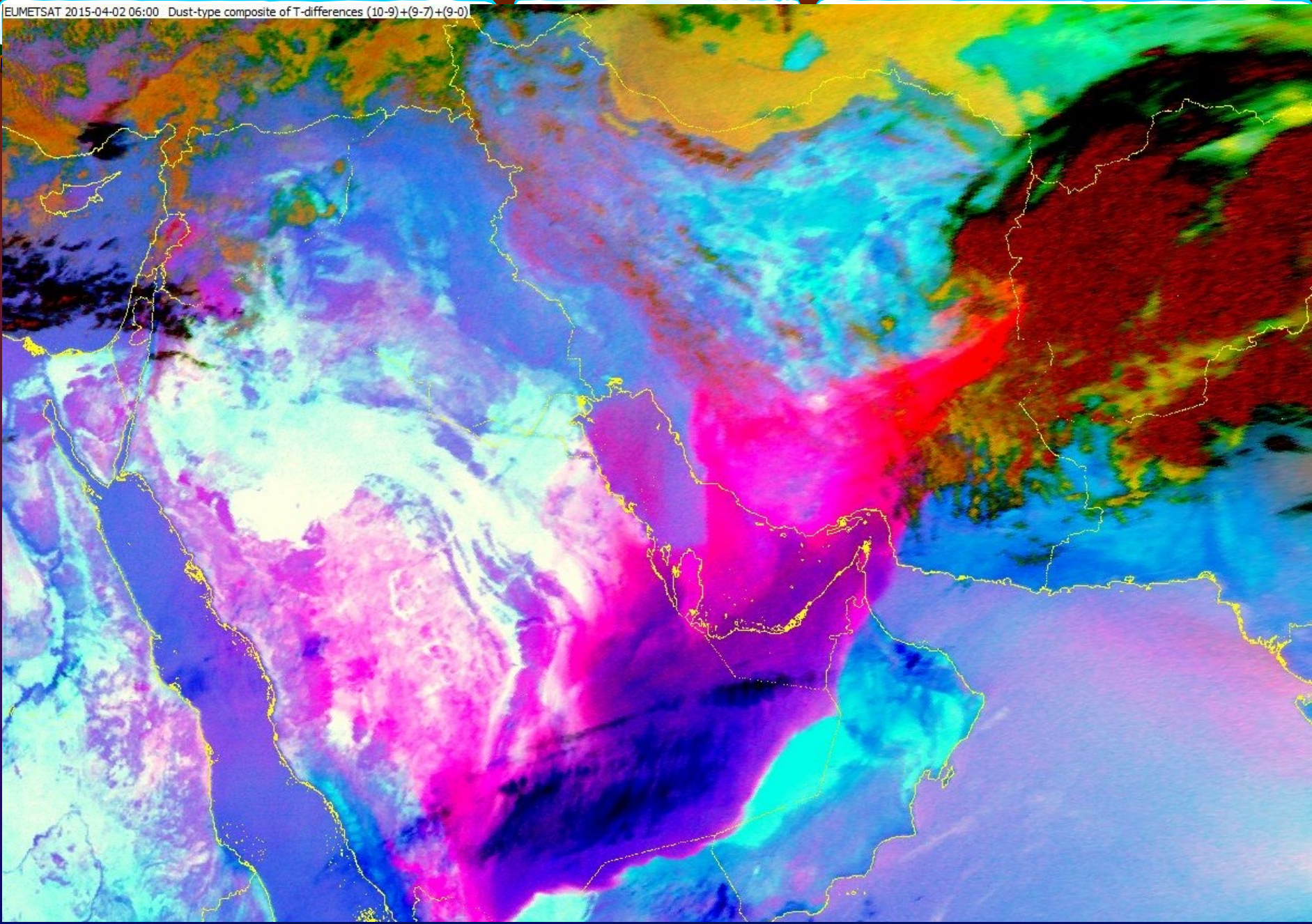




EUMETCast

Meteorological data from EUMETSAT

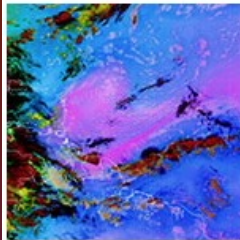
- Digital Video Broadcast standard
- Implemented through 3 telecomm satellites
- Economic reception (3000 USD)
- Free data use (including 15 minute refresh) for education and humanitarian, or just private.
- Meteosat, Metop, GOES, SPOT, MODIS, MTSAT,...



Dust intrusion in the Middle East

Our image library contains imagery and case studies of weather phenomena and environmental events observed by EUMETSAT's fleet of weather satellites.

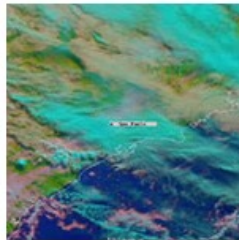
28 RESULTS



DUST FROM AFRICA TRAVELS TO BRAZIL

24 June 2014

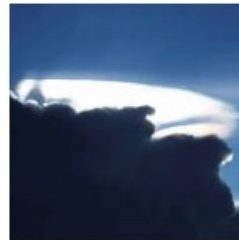
Typically, every year between June and August dust travels across the Atlantic. This example shows dust reaching Brazil, during the FIFA World Cup.



UNUSUALLY HEAVY HAILSTORM IN BRAZIL

18 May 2014

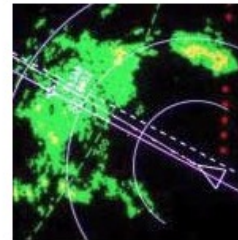
A heavy hailstorm hit São Paulo, Brazil on 18 May, blanketing the city with marble-sized hailstones.



INTENSE THUNDERSTORMS IN ARGENTINA

27 October 2012

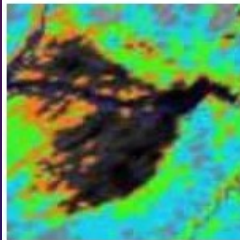
Argentina: a global hotspot for intense thunderstorms.



MPE PRODUCTS AND AIRCRAFT WEATHER RADAR

01 July 2012

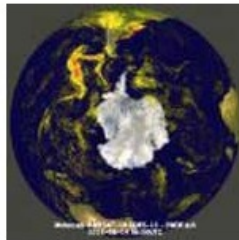
Comparison of EUMETSAT MPE products and aircraft weather radar.



ASSESS GROUND HUMIDITY WITH METEOSAT

04 January 2012

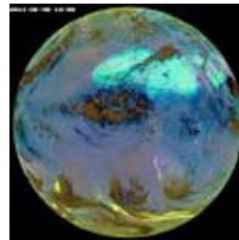
Using Meteosat channel 04 (IR3.9) to assess ground humidity in South America.



PUYEHUE-CORDÓN CAULLE VOLCANIC COMPLEX

14 June 2011

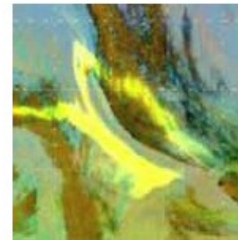
The initial ash and SO₂ plume from the Puyehue-Cordón Caulle Volcanic Complex (PCVCC) reaches South America, after circling the globe in eight days.



STRATOSPHERIC VOLCANIC CLOUD FROM PUYEHUE-CORDÓN

08 June 2011

The stratospheric volcanic cloud (ash and SO₂) from the Puyehue-Cordón Caulle Volcanic Complex (PCCVC) continues to move eastwards.



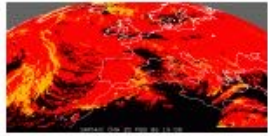
ASH AND SO2 PLUME FROM THE PUYEHUE-CORDÓN

07 June 2011

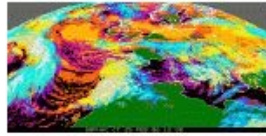
The ash and SO₂ plume from the Puyehue-Cordón Caulle Volcanic Complex (PCCVC) meanders over the Southern Atlantic.

Case studies

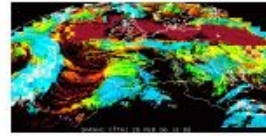
MSG



PGE01: CMa (Cloud Mask)

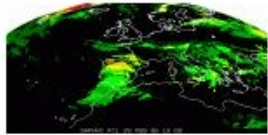


PGE02: CT (Cloud Type)



PGE03: CTTH (Cloud Top Temperature and Height)

CMa, CT & CTTH Examples from MSG/SEVIRI, MODIS and GOES-East

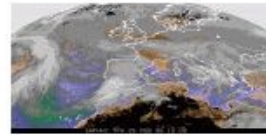


PGE04: PC (Precipitating Clouds)

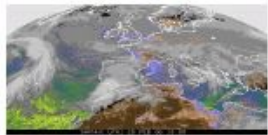


PGE05: CRR (Convective Rainfall Rate)

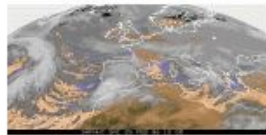
CRR Meteosat-7 Examples



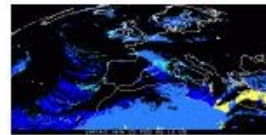
PGE06: TPW (Total Precipitable Water)



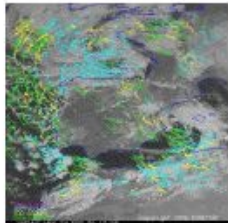
PGE07: LPW (Layer Precipitable Water)



PGE08: SAI (Stability Analysis Imagery)

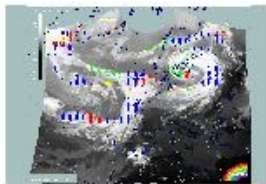


PGE12: AMA (Air Mass Analysis)

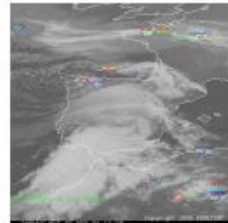


PGE09: HRW (High Resolution Winds)

HRW Meteosat-7 Examples

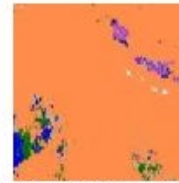


PGE10: ASII (Automatic Satellite Image Interpretation)



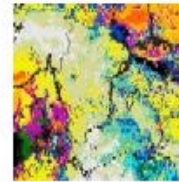
PGE11: RDT (Rapid Developing Thunderstorms)

PPS



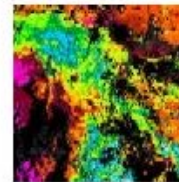
PGE01b: CM (Cloud Mask)

CM AVHRR Examples



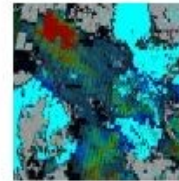
PGE02b: CT (Cloud Type)

CT AVHRR Examples



PGE03b: CTTH (Cloud Top Temperature and High)

CTTH AVHRR Examples



PGE04b: PC (Precipitating Clouds)

PC AVHRR Examples

Nowcasting SAF

Free software

Supplied by AEMET Spain

EUMETCAST SYSTEM OVERVIEW



Receiving station

Physical components

LNB C-band + 2m antenna

800 EUR

DVB card, peripheral

100 EUR

DVB client

60 EUR

EKU access

40 EUR

PC

1000 EUR

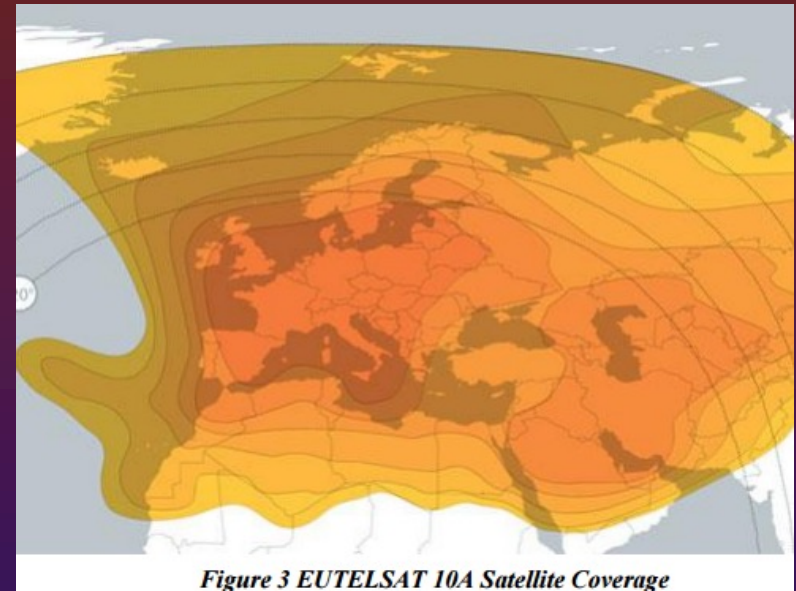
2000 EUR





2-meter Θ antenna

Eumetcast-Africa or Eumetcast-Europe



Ample use in the area: Jordan (3 users), Iran (10),
Irak (6), Israel (7), ..
using both dissemination streams