
SAF in support to NoWCasting & Very Short Range Forecasting

PEP 25 years

Valladolid, 7-8 May 2005

P. Fernández

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1. European Meteorological Satellites

EUMETSAT

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Project

Products

Users

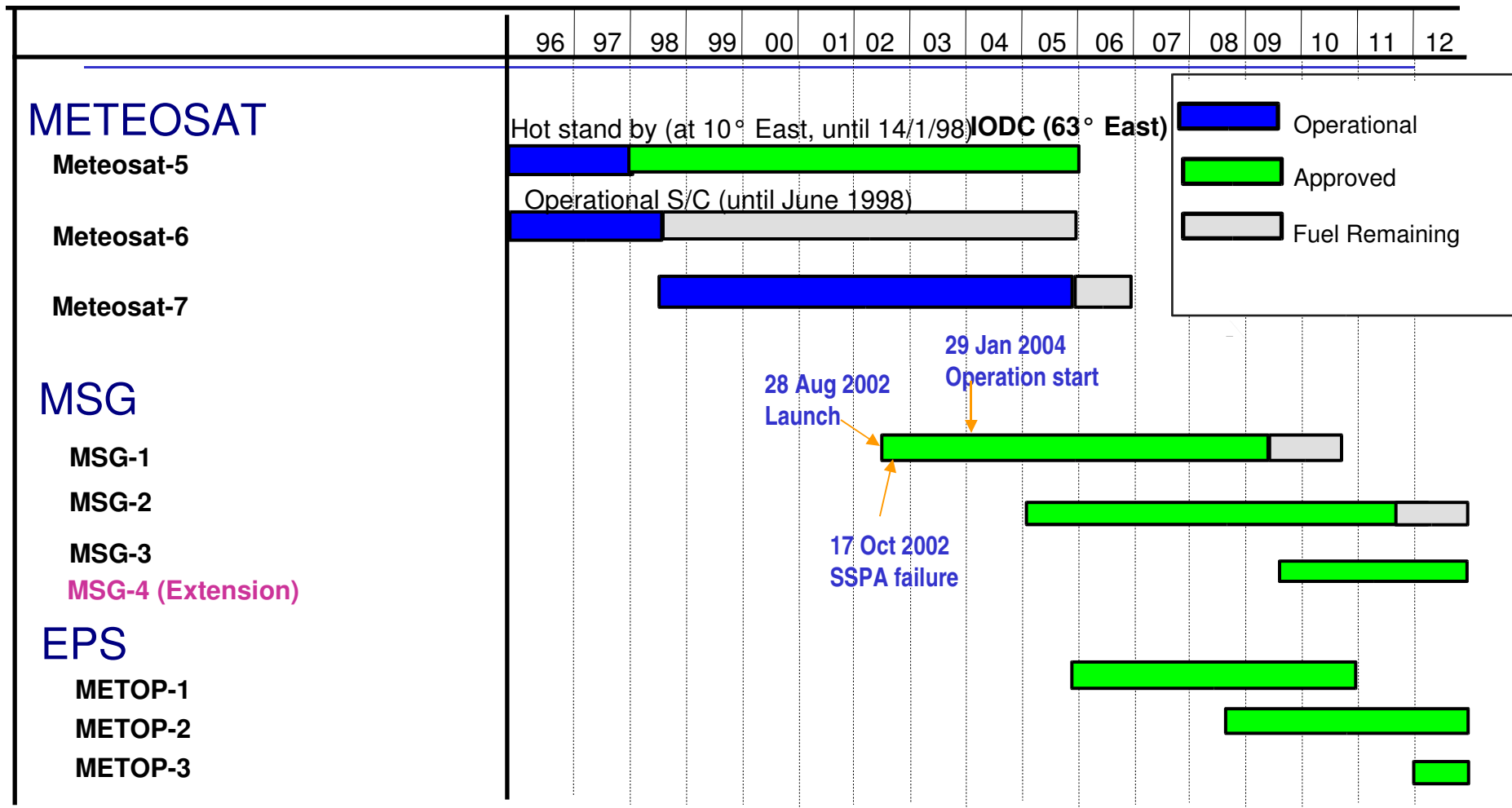
Operations

EUMETSAT: Objectives

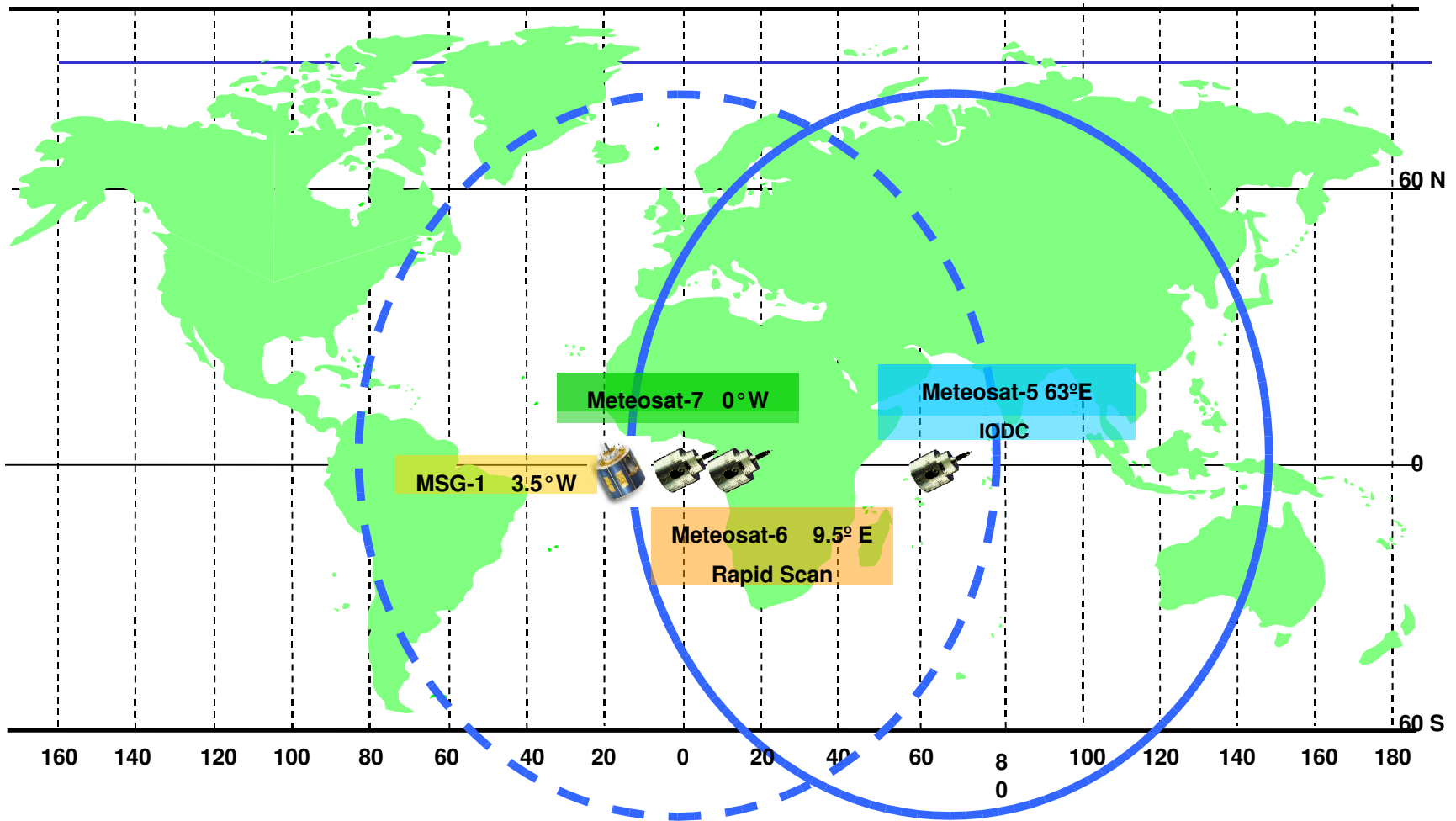
- European Organization for Operational Meteorological Satellites.
 - Operational Meteorology
 - Climate y Climate Change
 - World coordination



EUMETSAT: Programs



Meteosat: November 2004 configuration



MSG: On board payload

- **SEVIRI** (Spinning Enhanced Visible and Infrared Imager) radiometer for earth disc continuous observation



Meteorological purposes

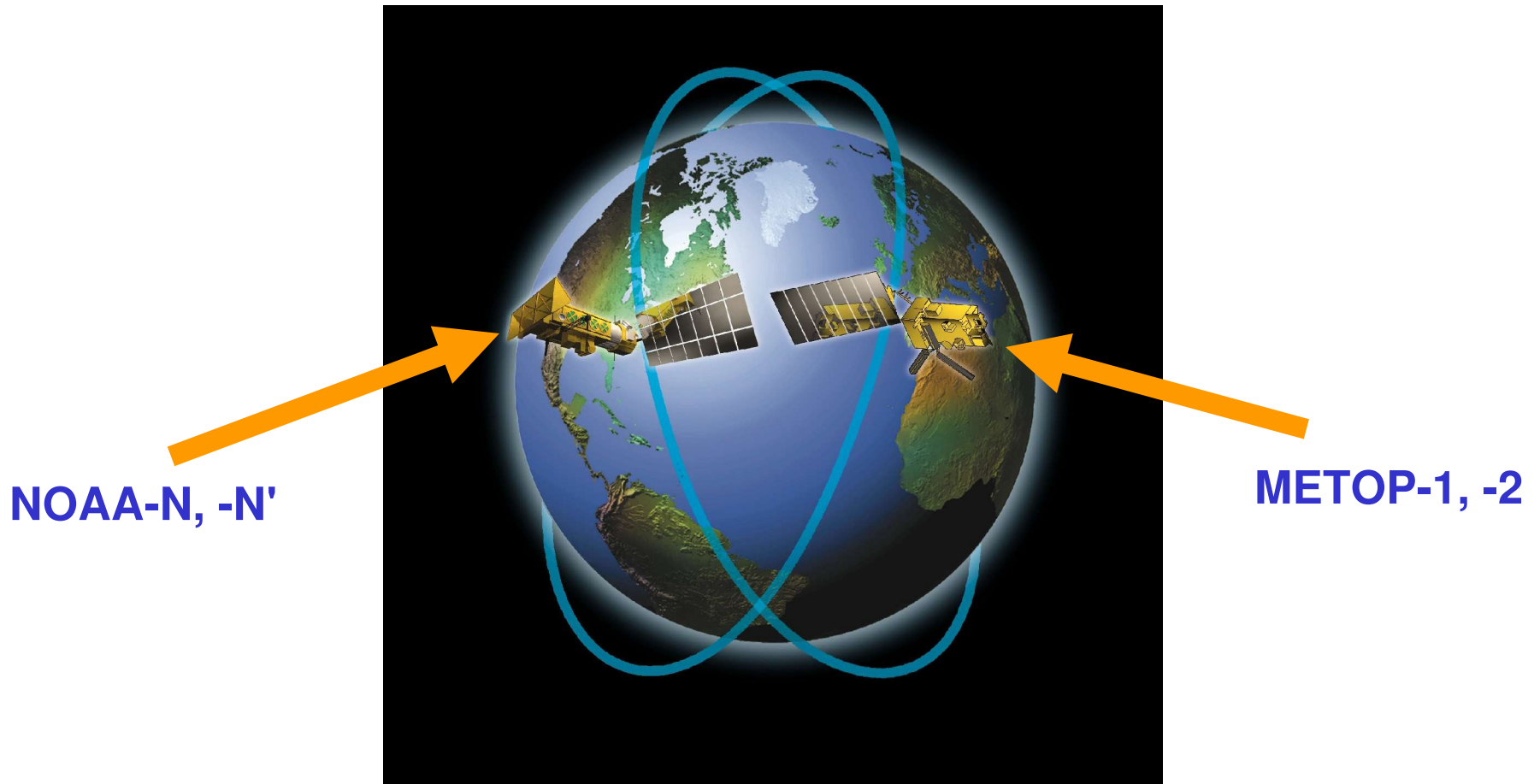
<http://www.eumetsat.de>

- **GERB** (Geostationary Earth Radiation Budget) for Short Wave (SW) and Long Wave (LW) radiation components on the top of the atmosphere

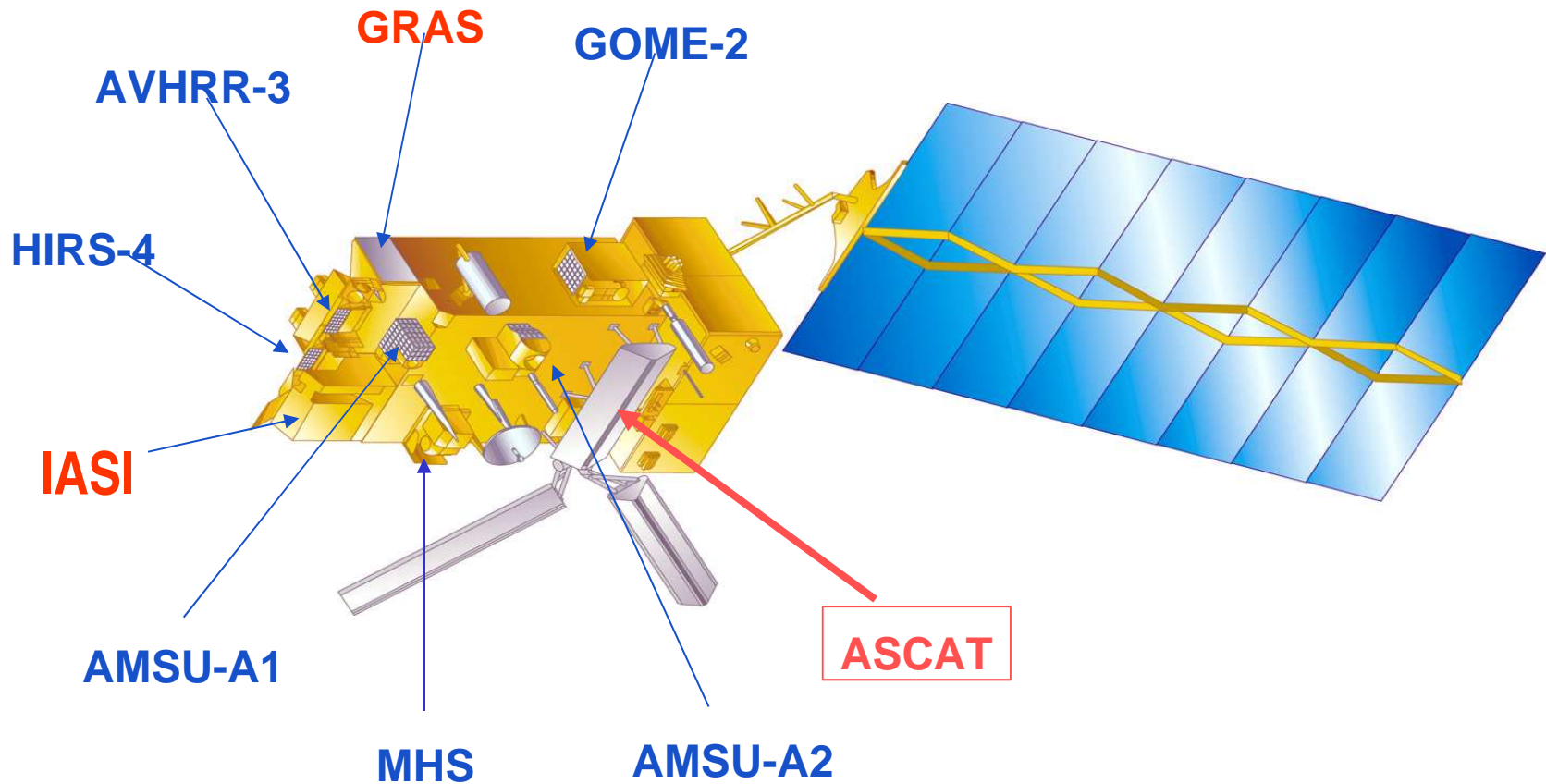


Climatological purposes

EPS: Initial Joint Polar System (IJPS)



METOP: On board payload



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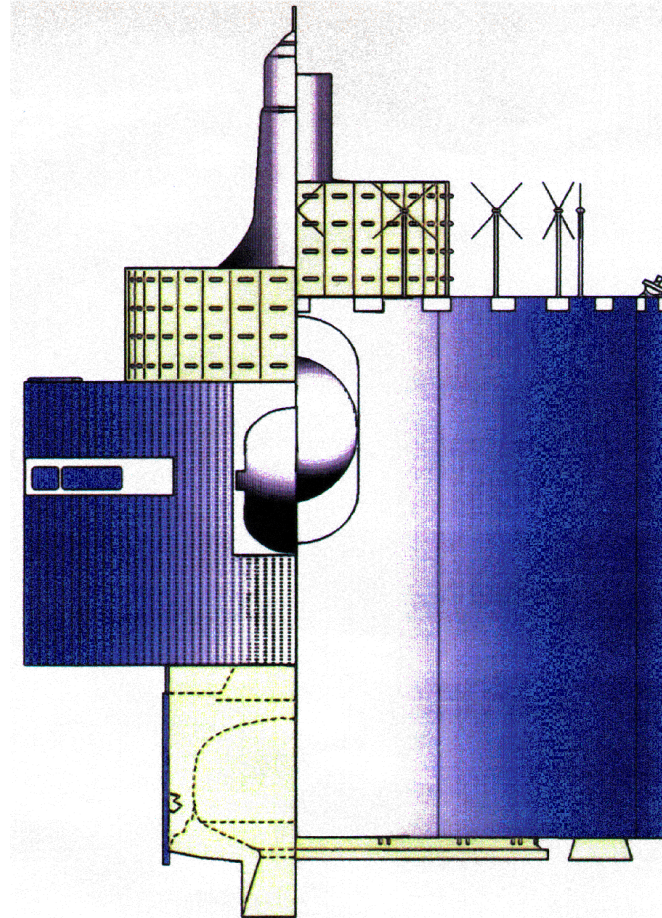
Users

Operations

Comparison Meteosat (MTP)-MSG

METEOSAT

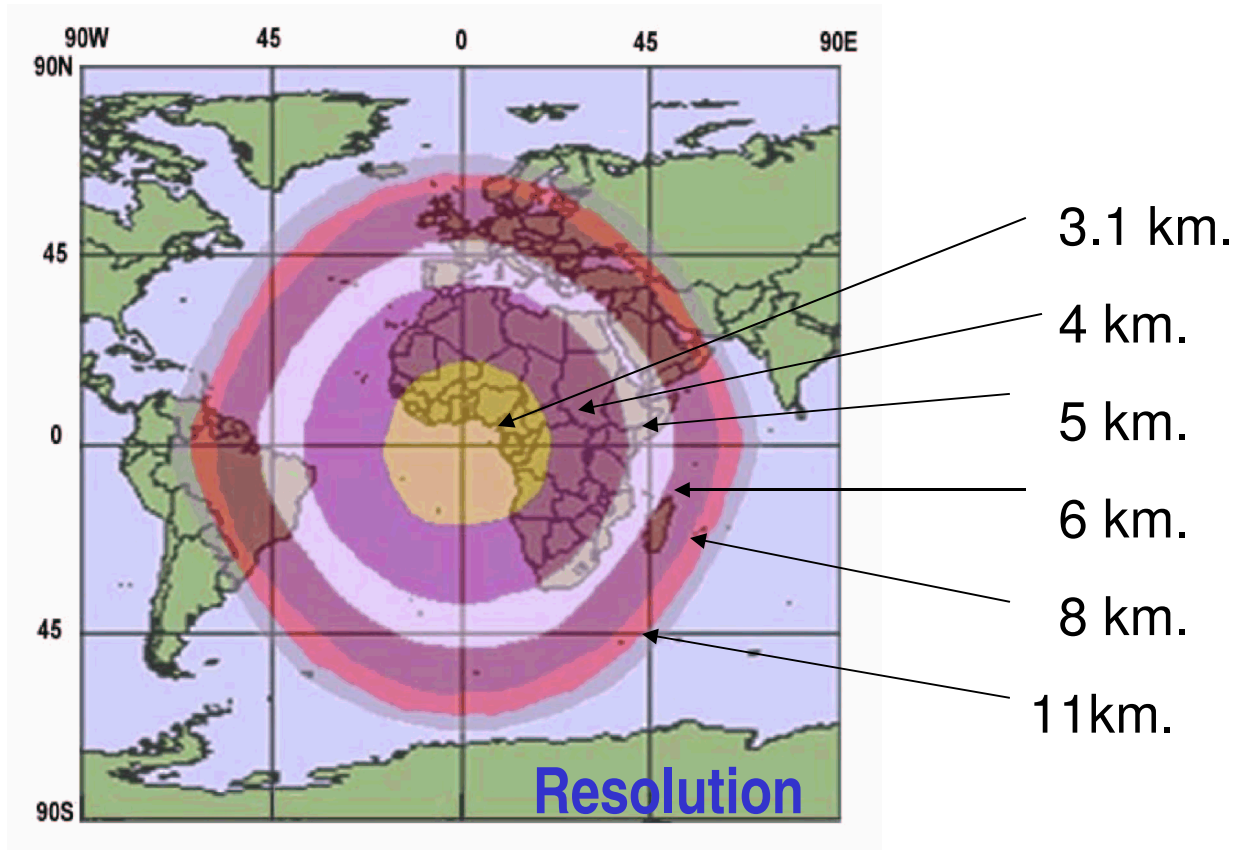
- 30 minutes repetition cycle
- **3 channels**
- 8 bits per pixel
- 5km nadir resolution
- 2.5km VIS channel



MSG (SEVIRI)

- 15 minutes repetition cycle
- **12 channels**
- 10 bits per pixel
- 3km nadir resolution
- 1km High Resolution VIS channel

MSG: Spatial Resolution SEVIRI Canales VISIR

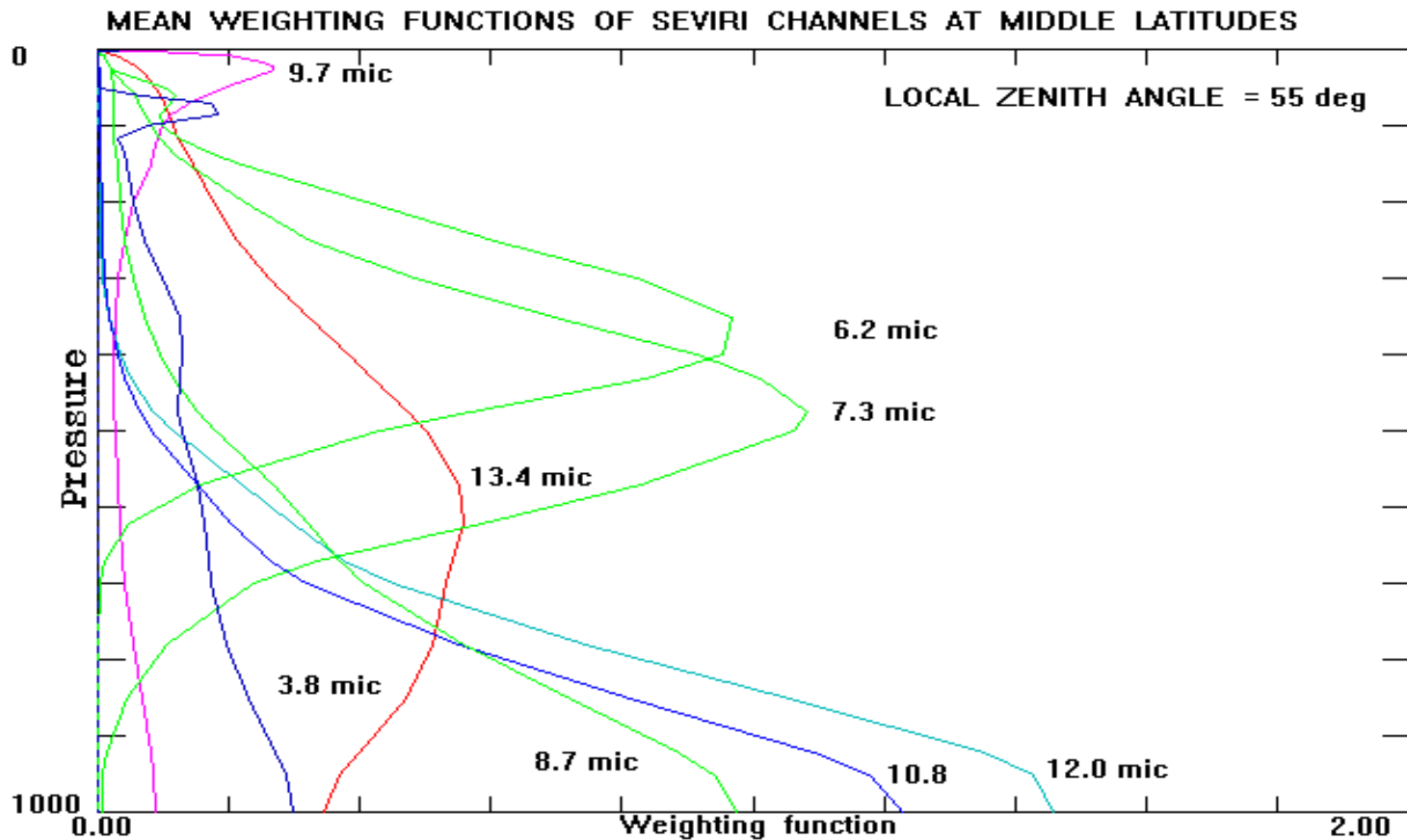


MSG: SEVIRI channels

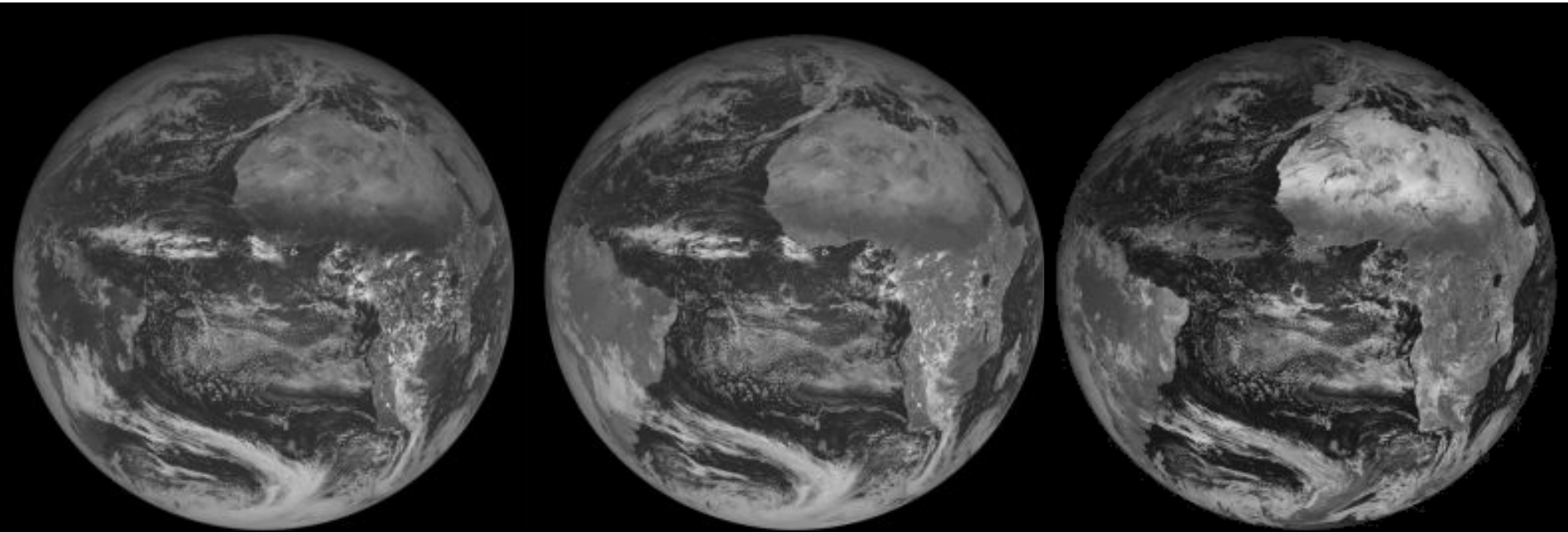
Basics	Band (μm)	Air Mass	Band (μm)
VIS 0.6	0.56-0.71	WV 6.2	5.35-7.15
VIS 0.8	0.74-0.88	WV 7.3	6.85-7.85
IR 1.6	1.50-1.78	IR 8.7	8.30-9.10
IR 3.9	3.48-4.36	IR 9.7	9.38-9.94
IR 10.8	9.80-11.80	IR 13.4	12.40-14.40
IR 12.0	11.00-13.00		
HR VIS	0.5-0.9		

3 km resolution, except HRV (1 km)
15 minutes image cycle

MSG:SEVIRI channels Weighting Function



MSG first images: 28th November 2002

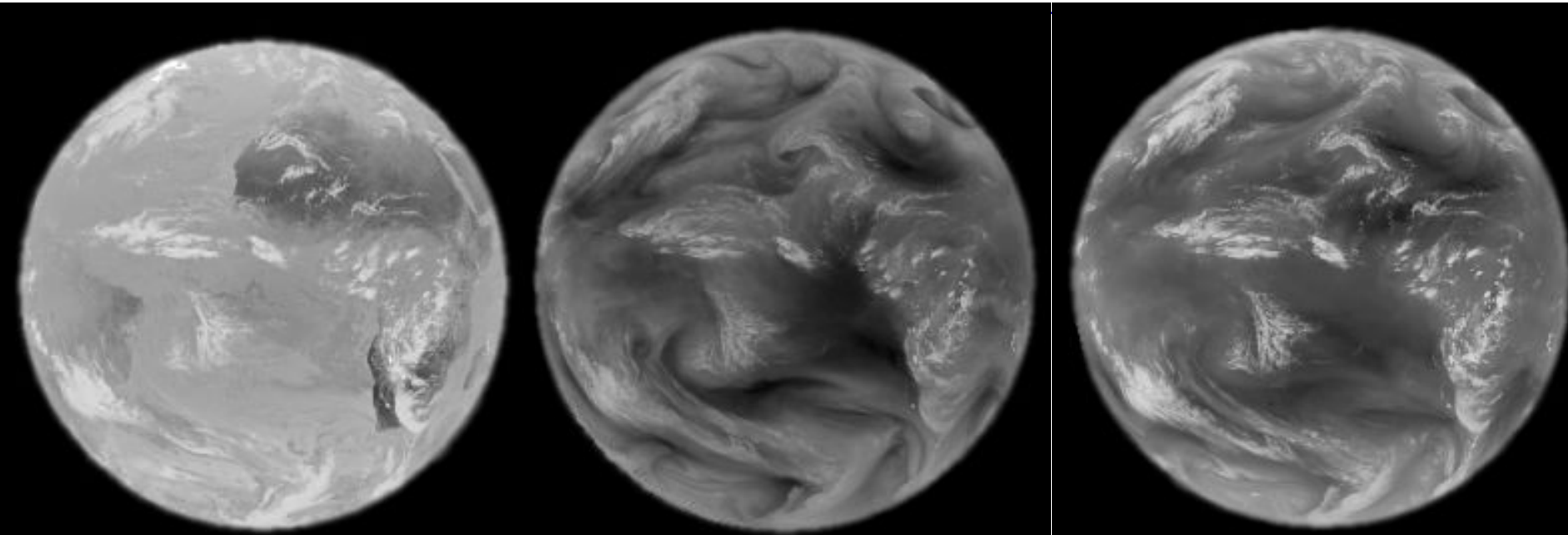


VIS0.6

VIS0.8

NIR1.6

MSG first images: 28th November 2002

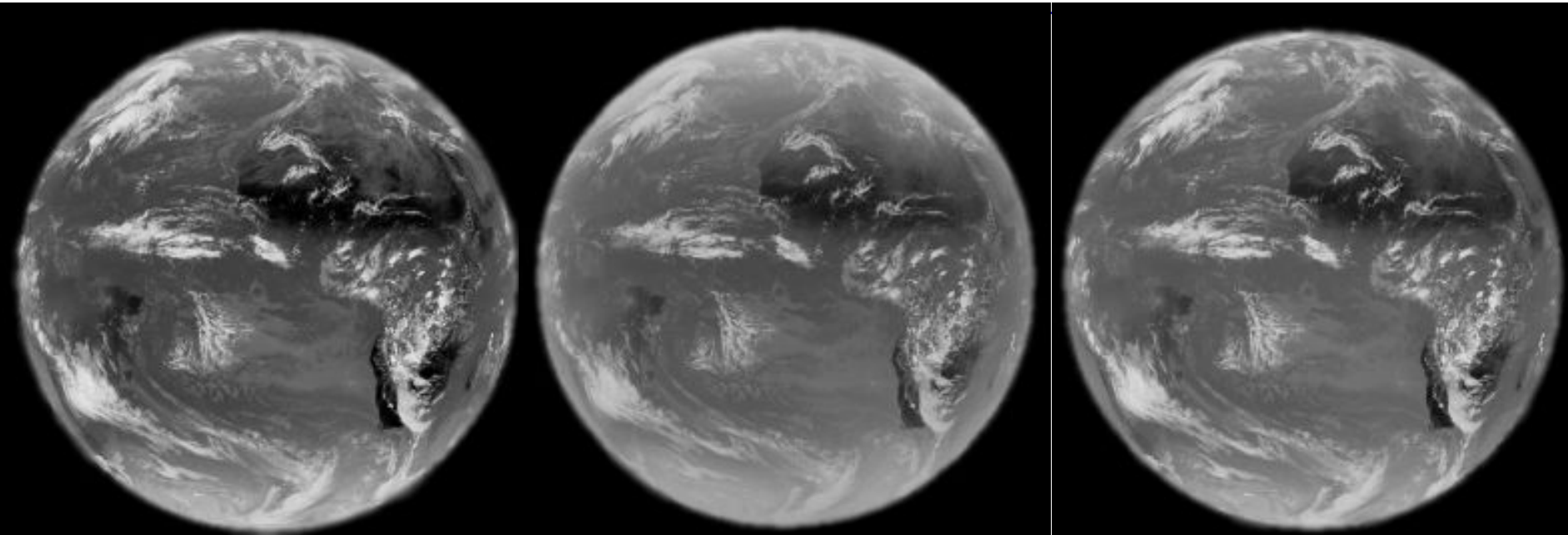


IR3.9

WV6.2

WV7.3

MSG first images: 28th November 2002

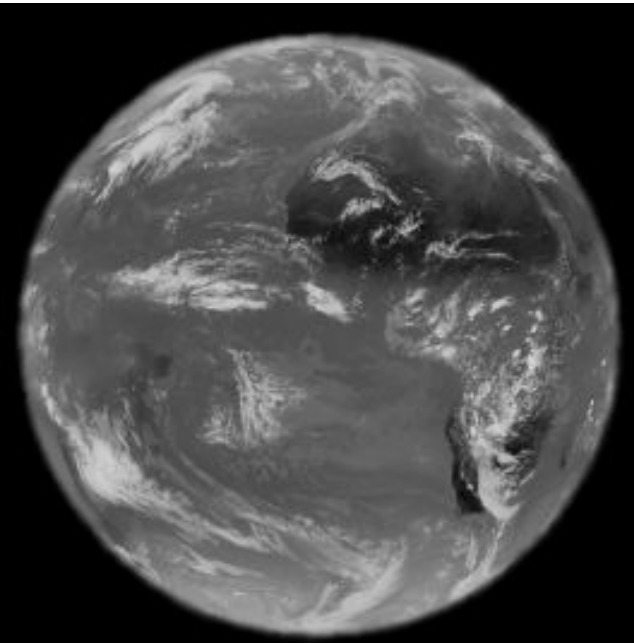


IR8.7

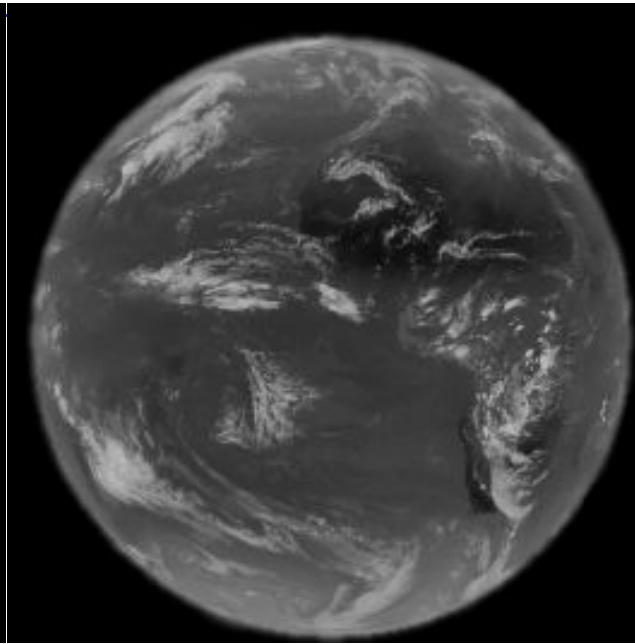
IR9.7

IR10.8

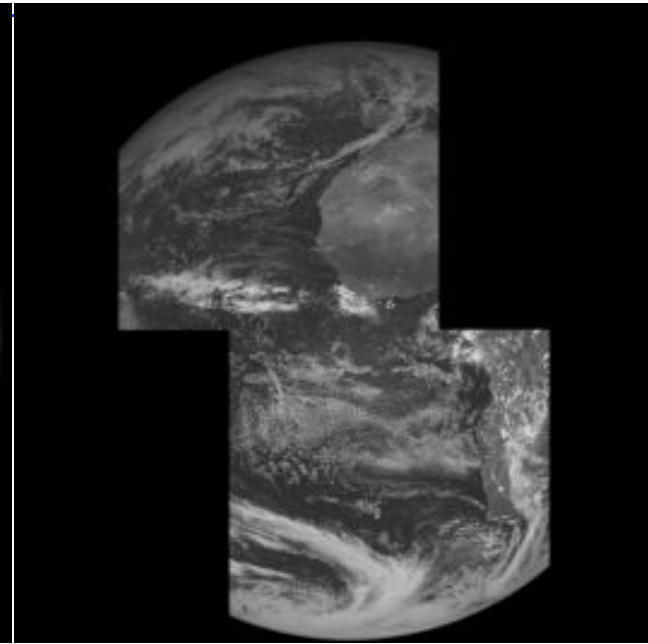
MSG first images: 28th November 2002



IR12.0

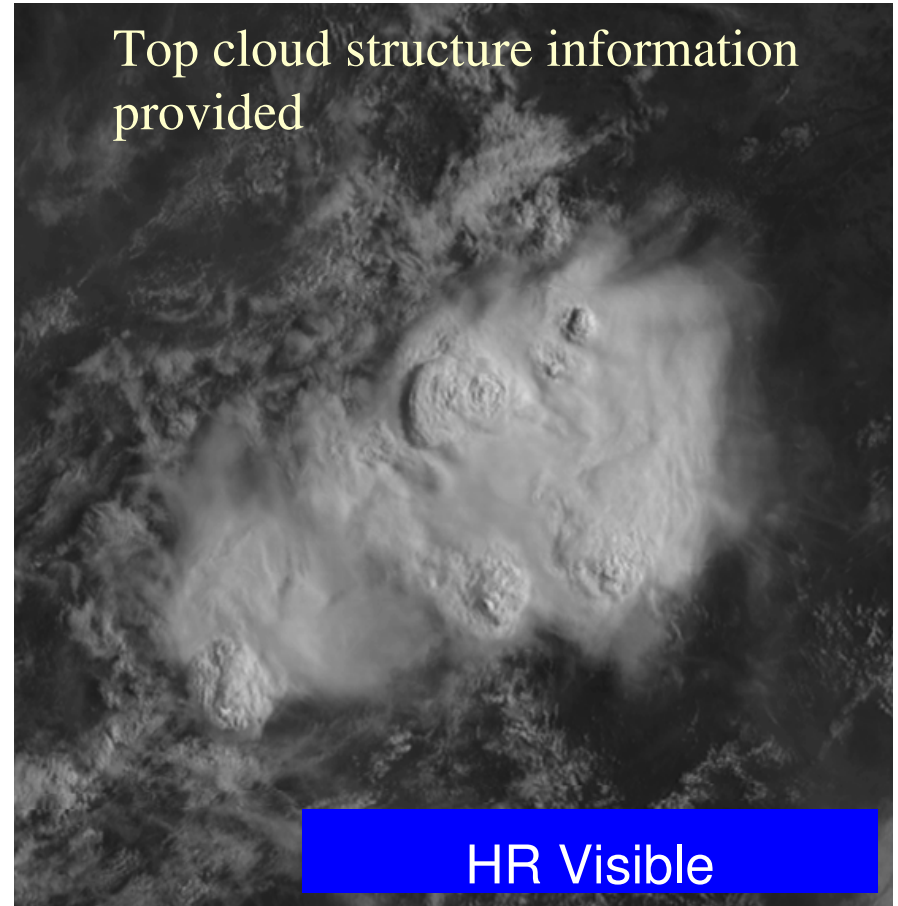
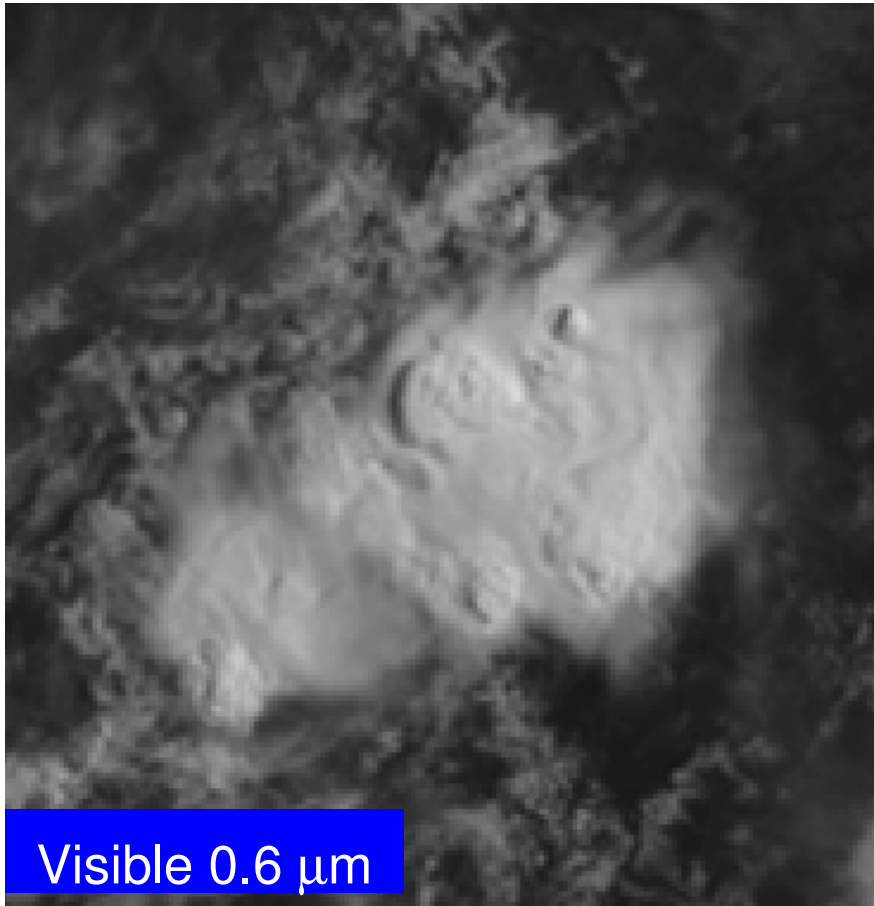


IR13.4

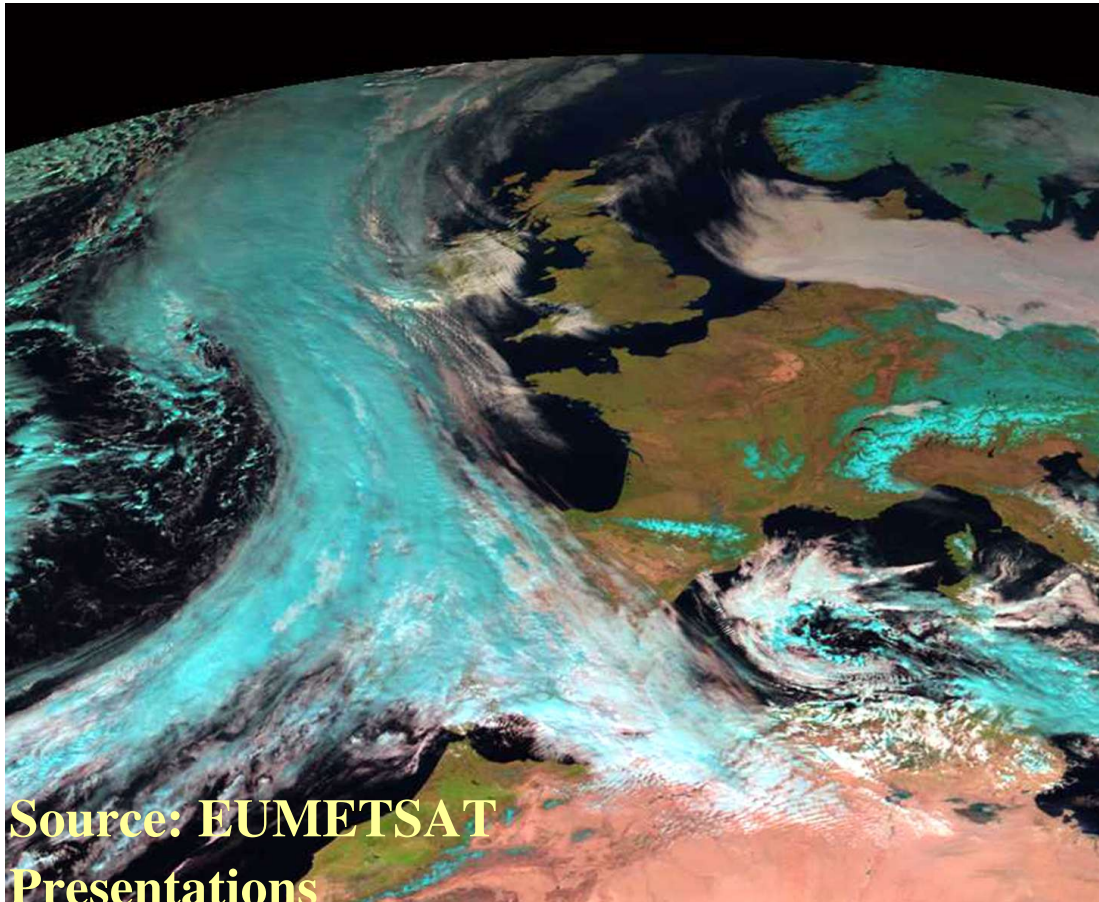


VIS-HRV

Cumulonimbus: VIS0.6 / HRV comparison



Cloud Phase (Ice/Water)

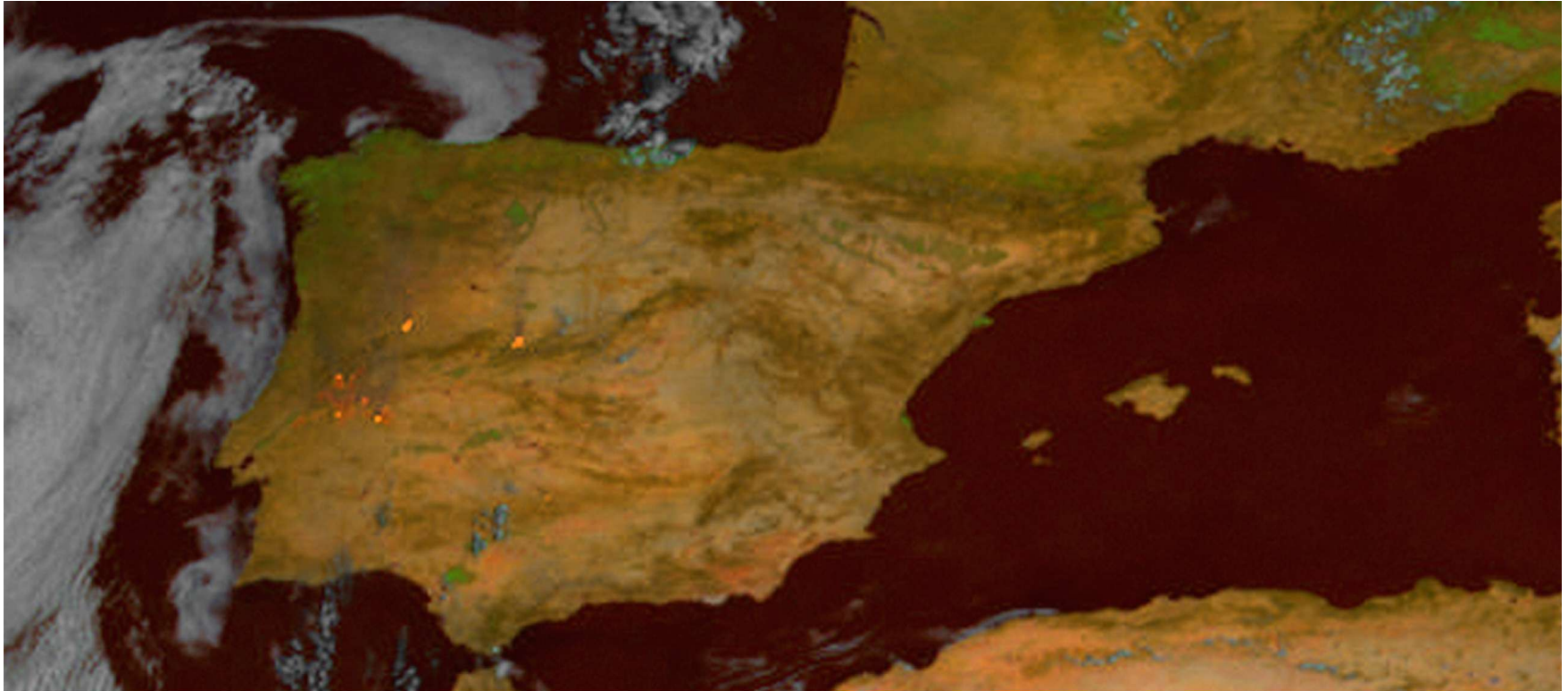


Source: EUMETSAT
Presentations

Ice
Water

MSG-1
28th February 2003
13:00 UTC
RGB Image
IR 1.6 / VIS 0.8 / VIS
0.6

Fire



Meteosat - 8

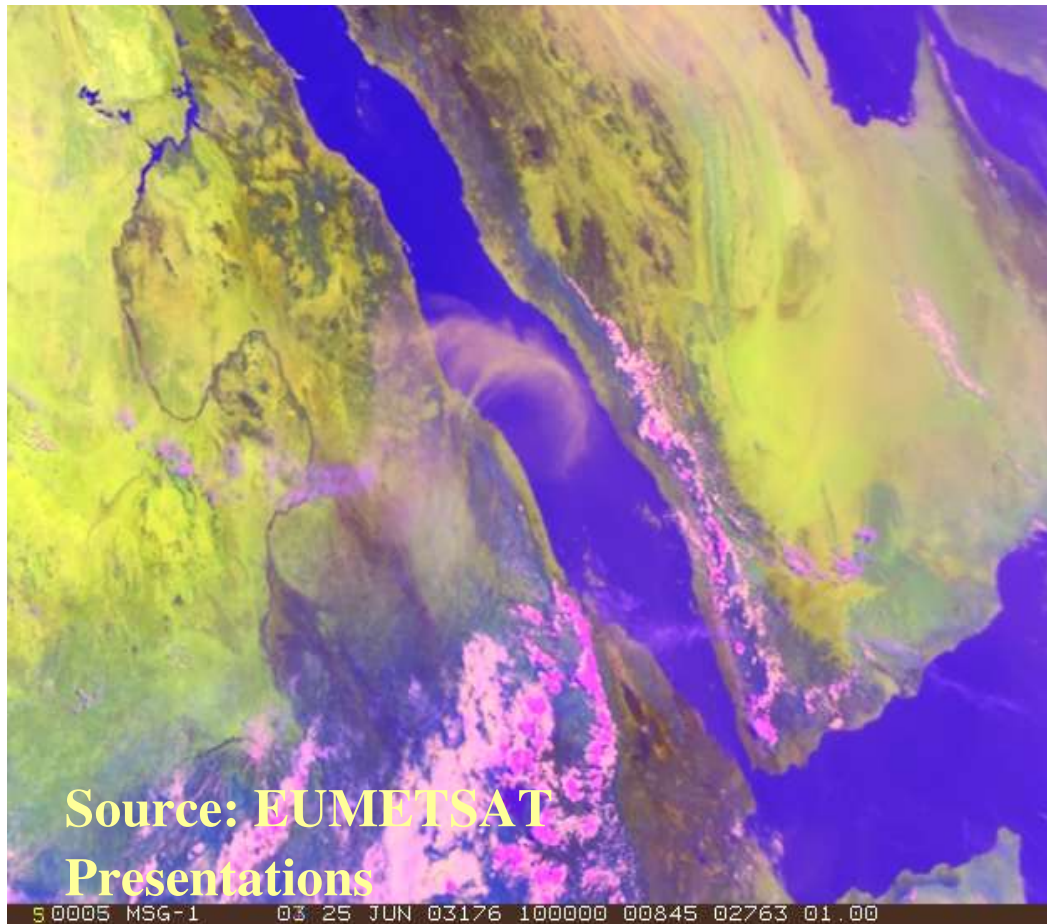
04/08/2003 10:45

Fires in Portugal & S

Source: EUMETSAT Presentations

RGB: 3.9 / 0.8 / 0.6

Dust & Aerosols



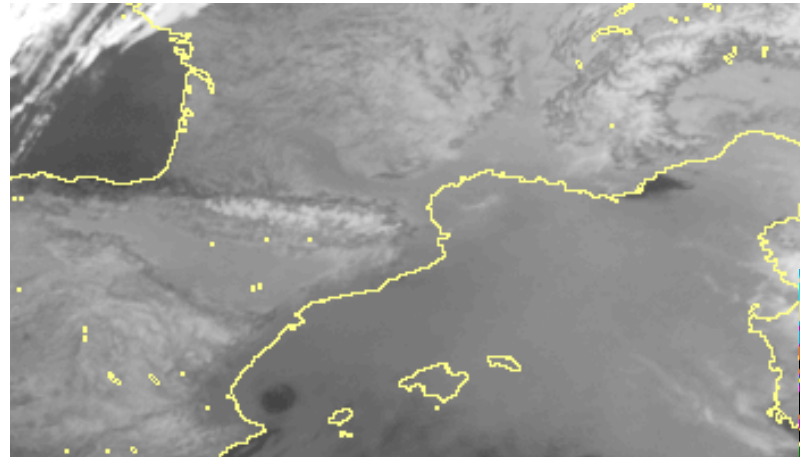
MSG-1
25th June 2003
10:00 UTC

Dust storm over the
Red Sea

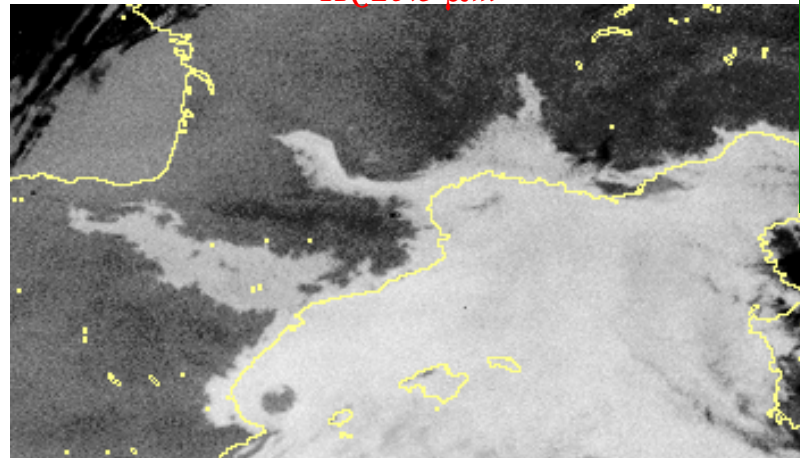
RGB Image:

VIS 0.6 / **NIR 1.6** / **IR**
3.9

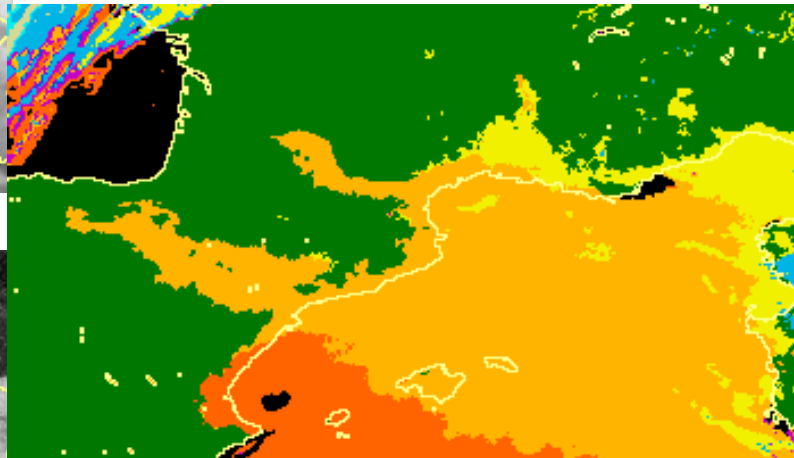
Low clouds & fog: 5th February 2004 00 UTC



IR 10.8 μm



T10.8 μm - T3.9 μm (night)



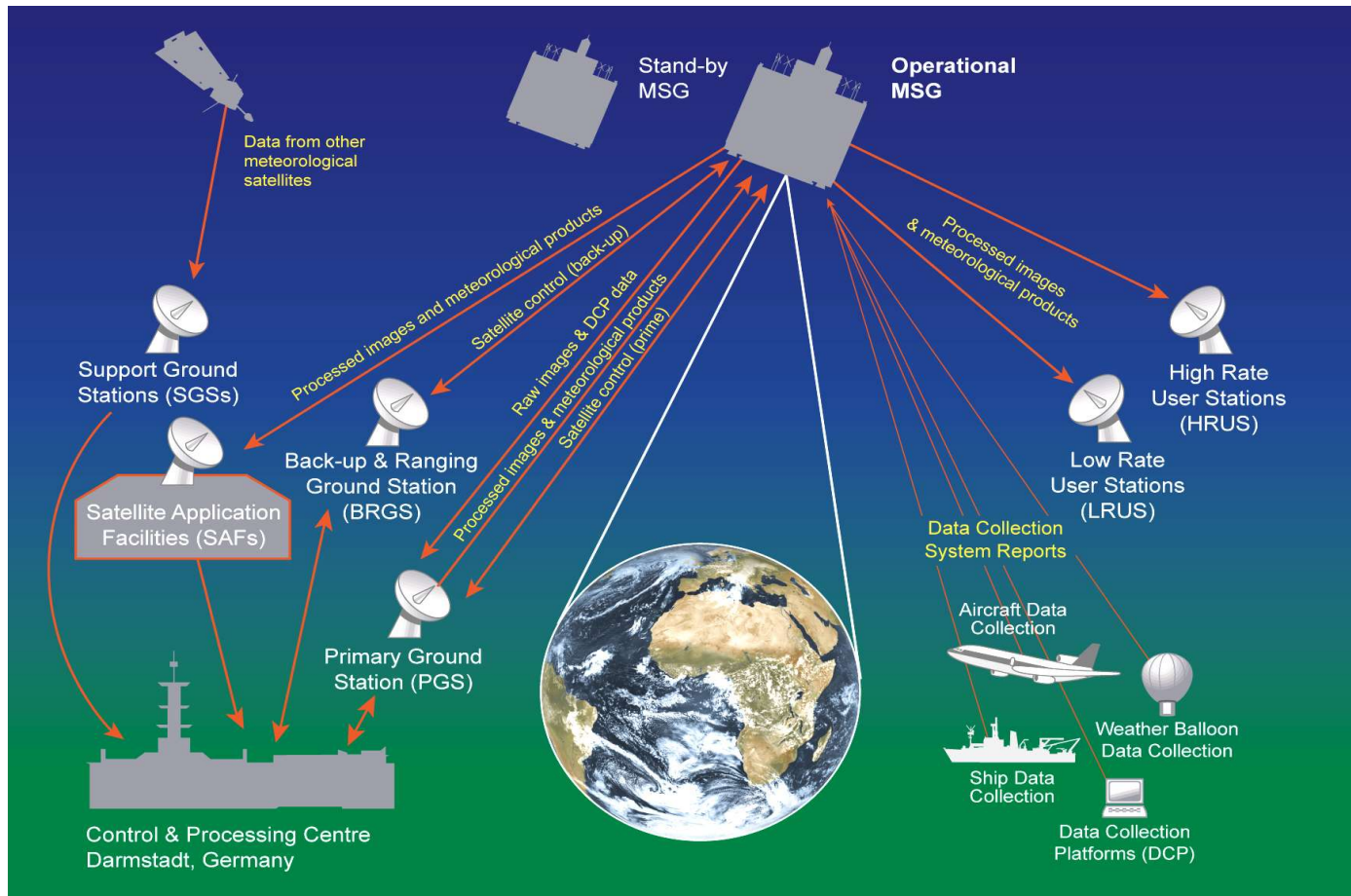
**Source: Météo-France Presentation:
CMA & CT (Cloud Mask and Type)
NWC SAF products.**

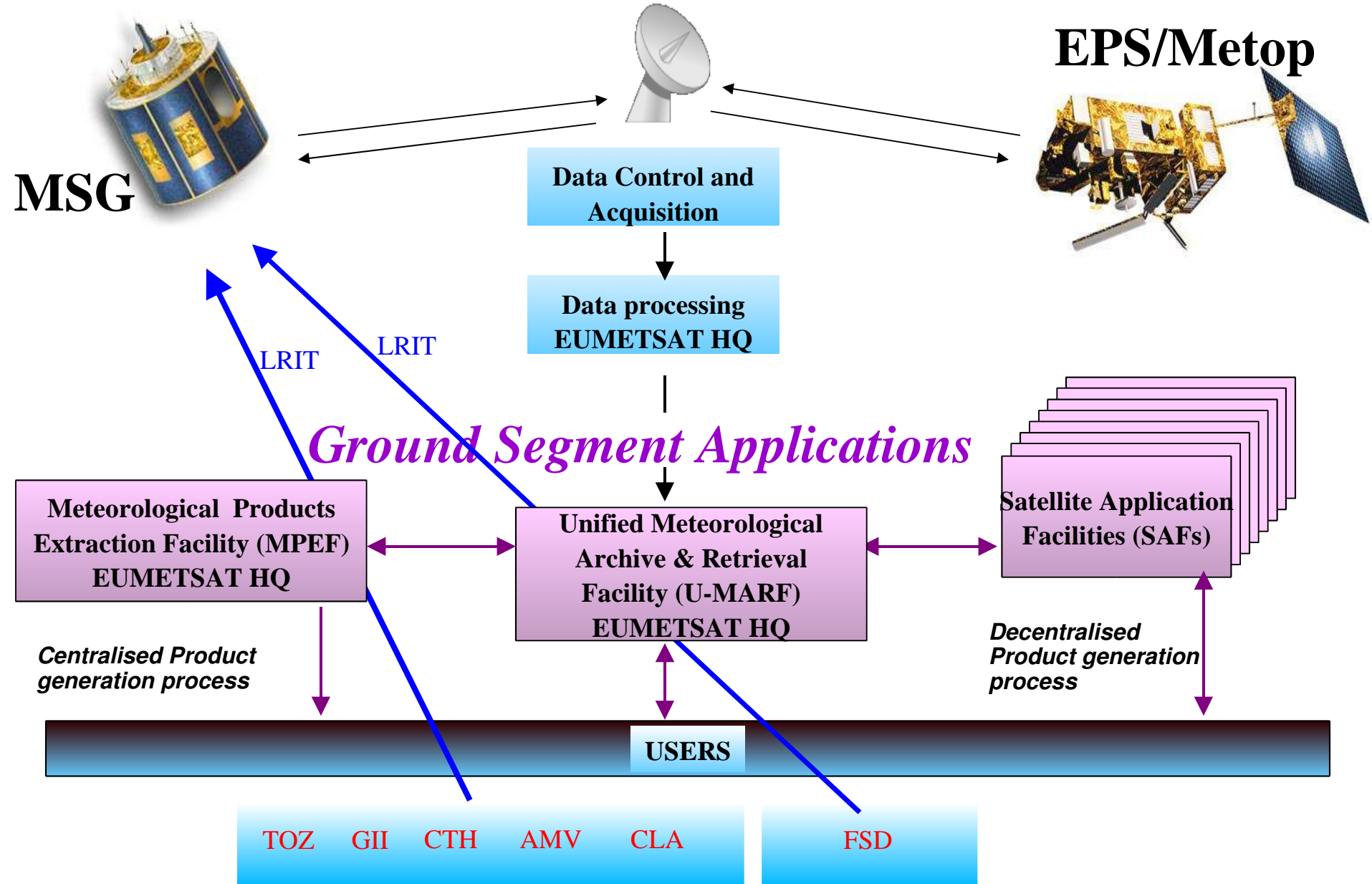
**(First Joint Training Workshop
(MFL.ZIP), <http://nwcsaf.inm.es>).**

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EUMETSAT SAF Structure





EUMETSAT SAF Network

7 SAFs have been approved by the EUMETSAT Council

- SAF on support to Nowcasting and VSRF
 - SAF on Ocean and Sea Ice
 - SAF on Ozone Monitoring
 - SAF on Climate Monitoring
 - SAF on Numerical Weather Prediction
 - SAF on GRAS Meteorology
 - SAF on Land Surface Analysis
-
- Possible: Hydrology & Water management SAF

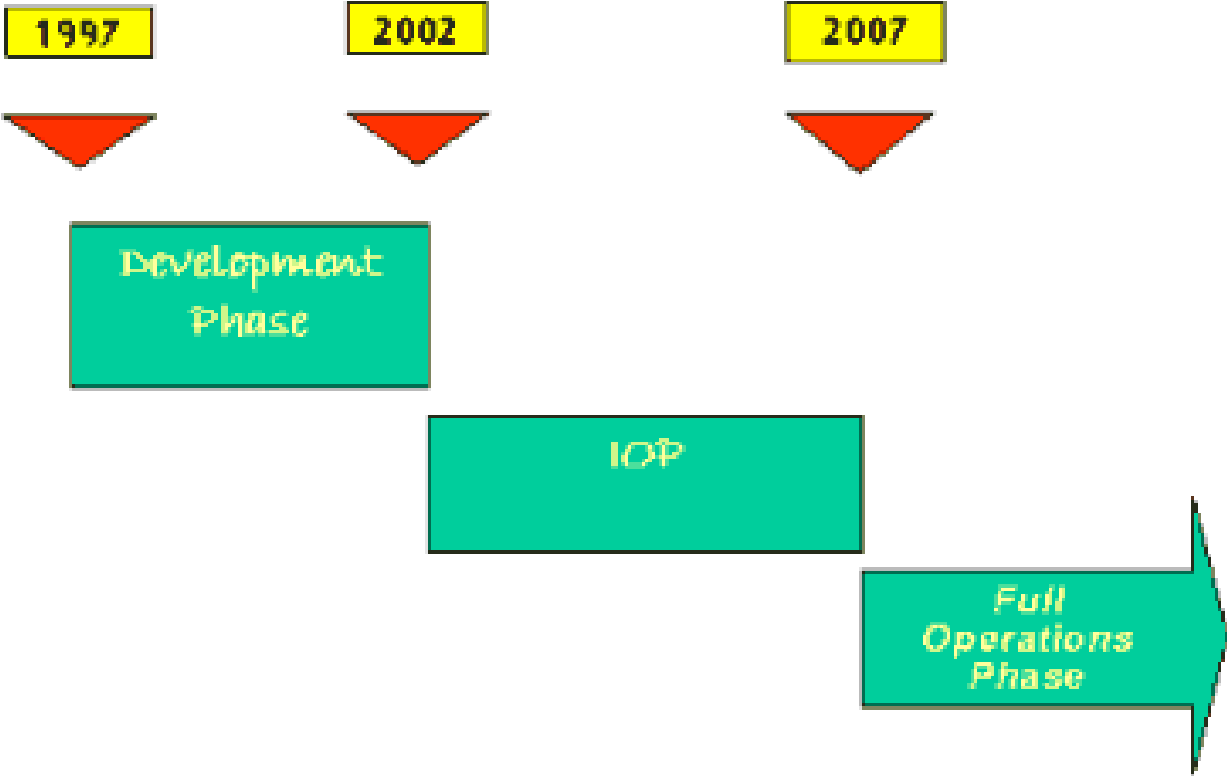
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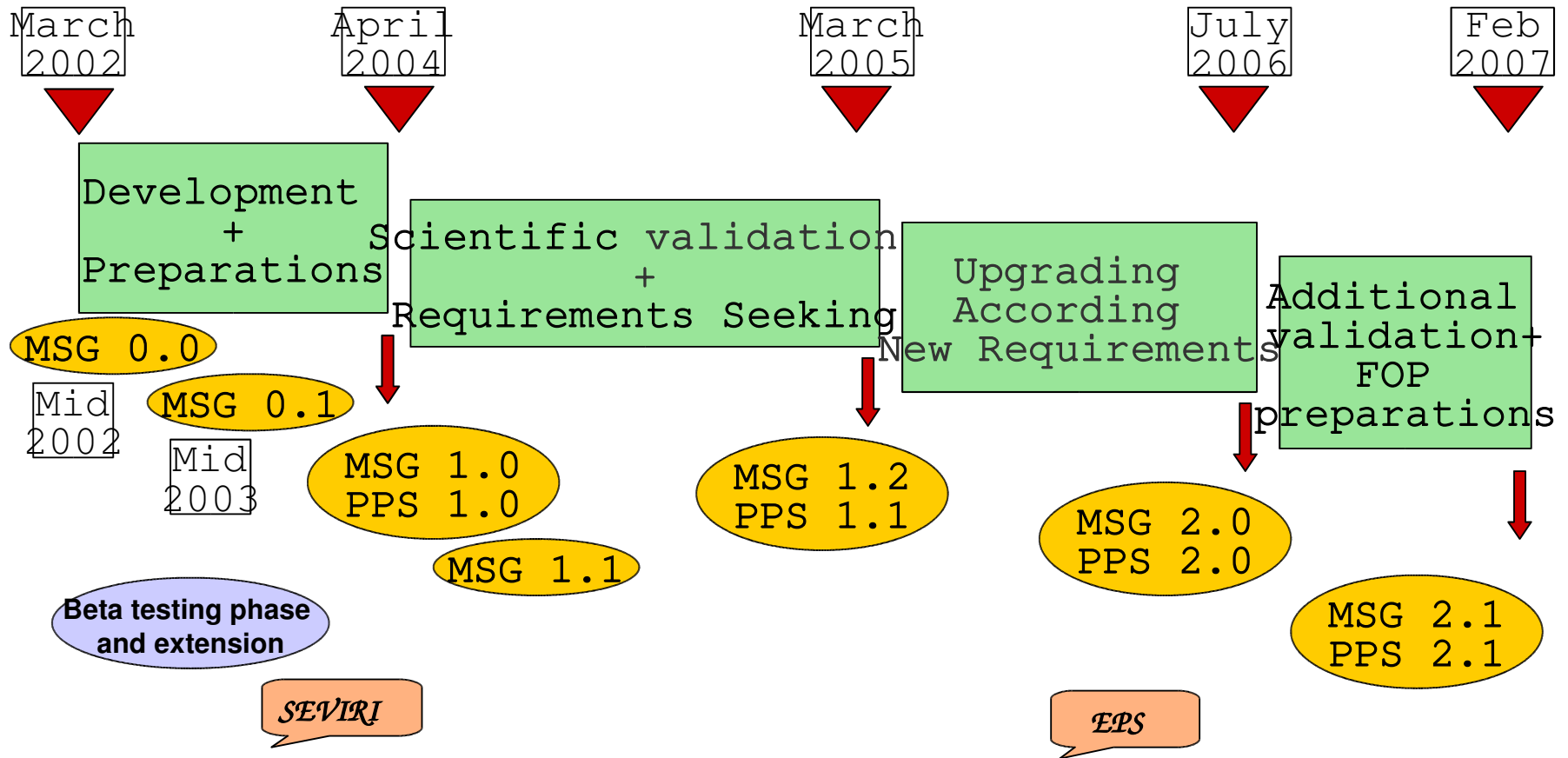
SAFNWC Objectives & involved organizations

- Under the leadership of the Spanish Meteorological Institute (INM), the SAFNWC is developed by a Project Team involving Météo-France, Sweden (SMHI) and Austria (ZAMG) Meteorological Institutes.
- The main goal is the development of Nowcasting products derived from both MSG and PPS satellite systems to be delivered to users as SW Packages.
- The SAFNWC is responsible for the development and maintenance of the appropriate SW Packages, as well as all related User's support tasks.
- The User's support is made through dedicated Help Desk.
- The SAFNWC intends to be a Centre of Excellence for Nowcasting in EUMETSAT.

SAFNWC Plan



SAFNWC IOP Scheduler



SAFNWC Products

Product Group	<u>Products based on data from MSG</u> (Acronym, Product No.)	<u>EPS/NOAA</u> (Acronym, Product No.)
Cloud products	<ul style="list-style-type: none"> • Cloud Mask (CMa, 1) • Cloud Type (CT, 2) • Cloud Top Temperature & Height (CTTH, 3) 	<ul style="list-style-type: none"> • Cloud Mask (CMa, 1) • Cloud Type (CT, 2) • Cloud Top Temperature & Height (CTTH, 3)
Precipitation products	<ul style="list-style-type: none"> • Precipitating Clouds (PC, 4) • Convective Rainfall Rate (CRR, 5) 	<ul style="list-style-type: none"> • Precipitating Clouds (PC, 4)
Air mass products	<ul style="list-style-type: none"> • Total Precipitable Water (TPW, 6) • Layer Precipitable Water (LPW, 7) • Stability Analysis Imagery (SAI, 8) • Air Mass Analysis (AMA, 12) 	
Wind product	<ul style="list-style-type: none"> • High-Resolution Winds (HRW, 9) 	
Thunderstorm product	<ul style="list-style-type: none"> • Rapidly Developing Thunderstorms (RDT, 11) 	
Conceptual Models product	<ul style="list-style-type: none"> • Automatic Satellite Image Interpretation (ASII, 12) 	

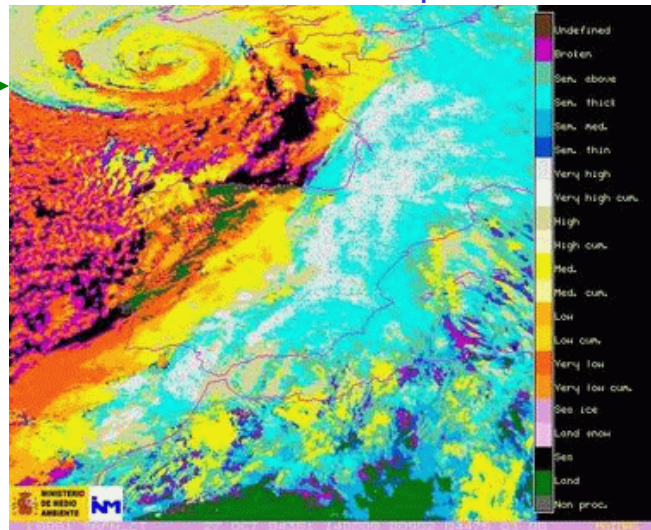
Cloud Products

• **Cloud Mask (CMA)**

Delineate all cloud-free pixels in a satellite scene with a high confidence. The product also provides information on the presence of snow/sea ice, dust clouds and volcanic plumes.

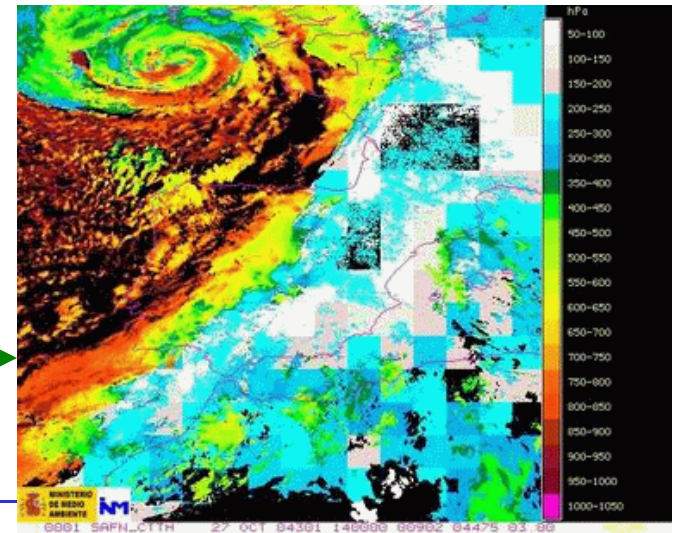
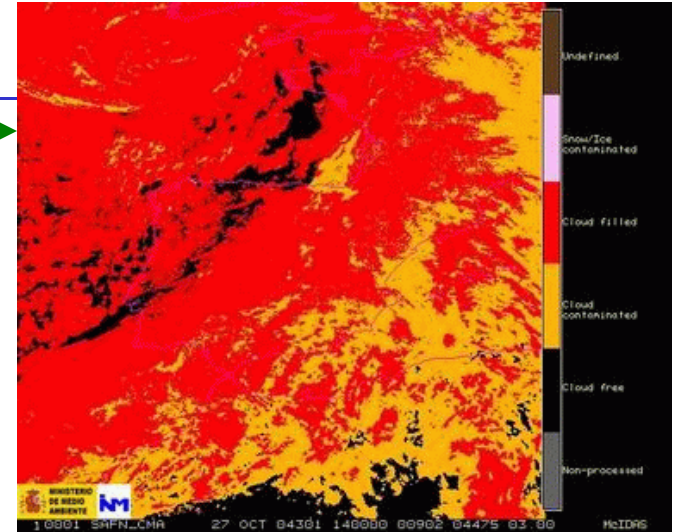
• **Cloud Type (CT)**

Delineate all cloud-free pixels in a satellite scene with a high confidence. The product also provides information on the presence of snow/sea ice, dust clouds and volcanic plumes



• **Cloud Temperature & Heigh (CTTH)**

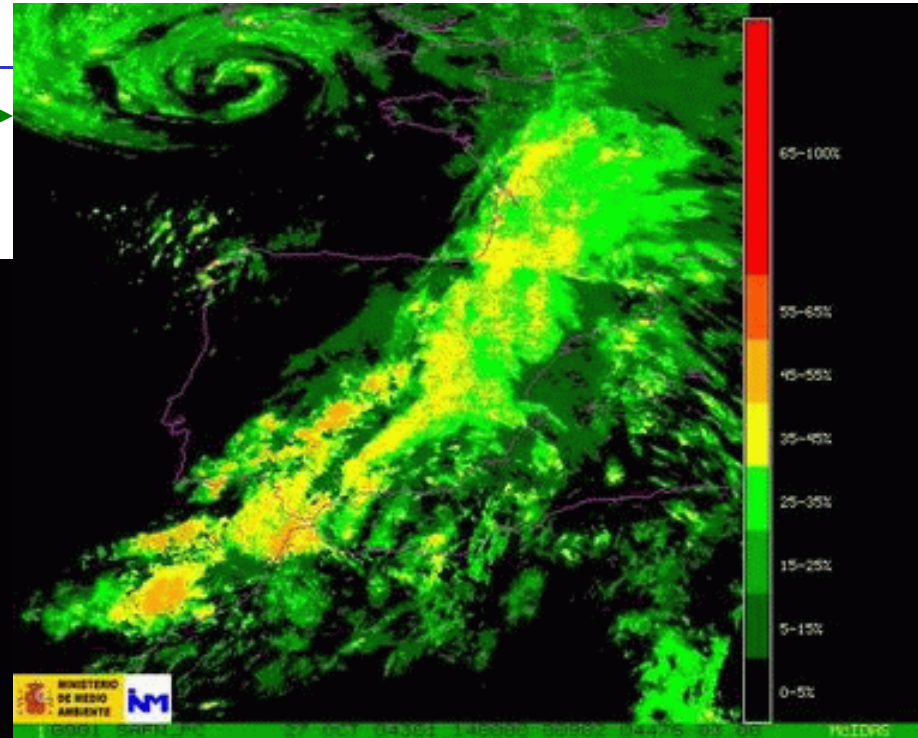
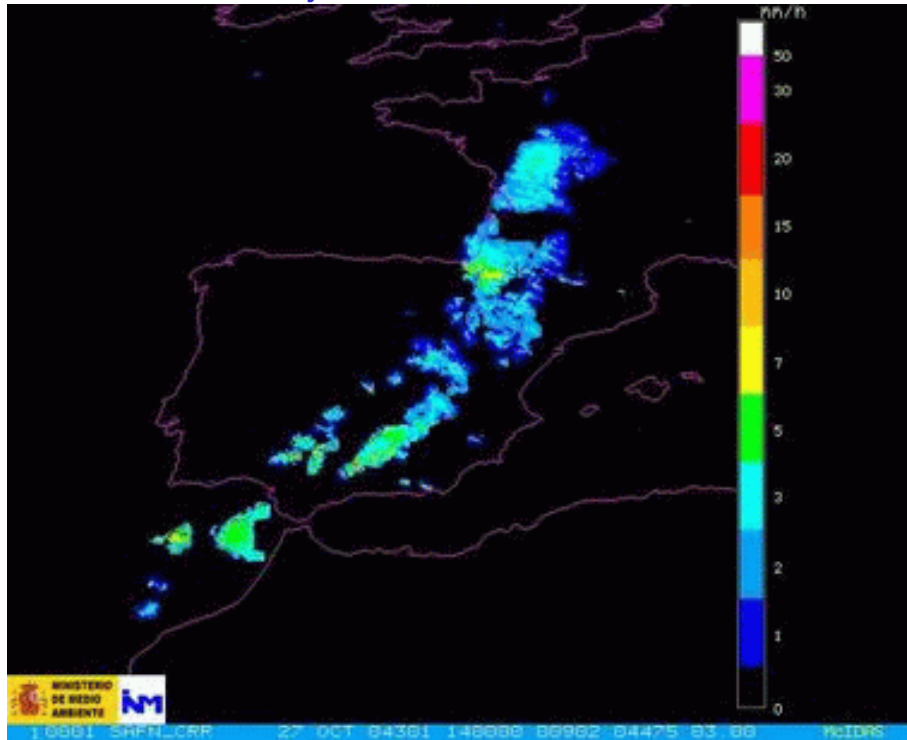
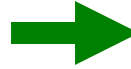
Contains information on the cloud top temperature, pressure and height for all pixels identified as cloudy in the satellite scene.



Precipitation Products

• *Precipitating Clouds (PC)*

Probability of precipitation intensities in pre-defined intensity intervals.



• *Convective Rainfall Rate (CRR)*

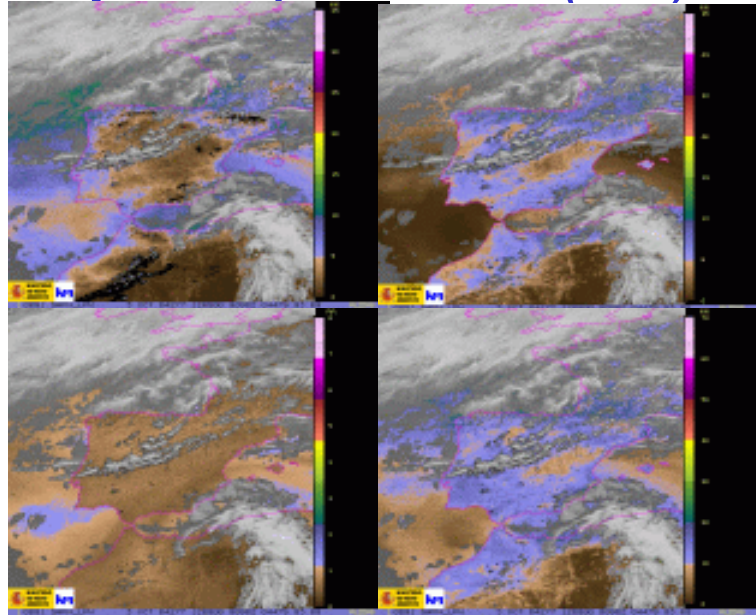
Precipitation estimated rate associated to convective clouds in mm/hr divided into classes in an image format.

Clear Air Mass Products

- **Total Precipitable Water (TPW)**

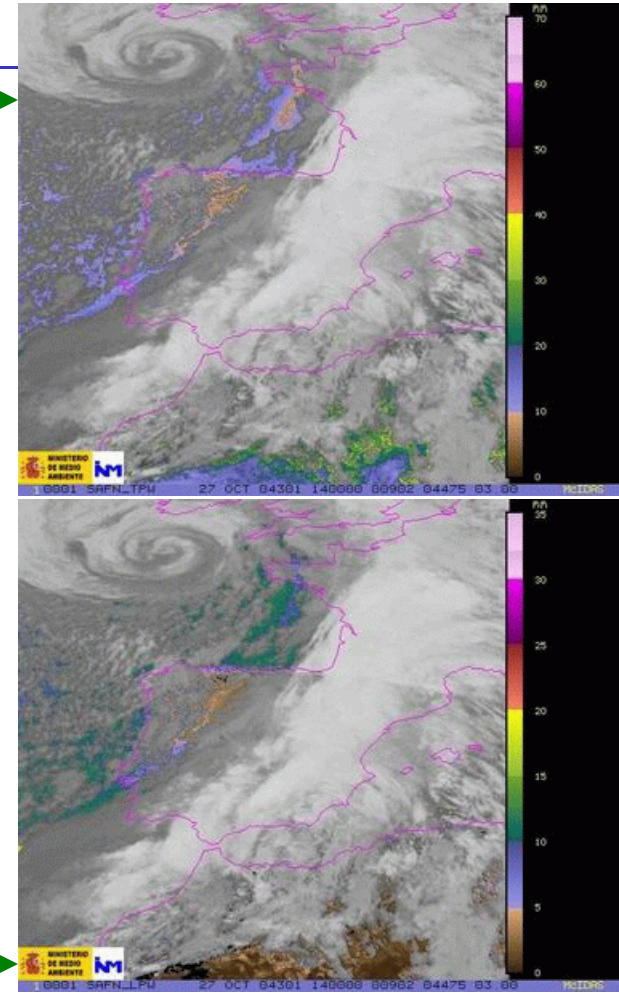
Total amount of liquid water, in mm, if all the atmospheric water vapour in the column from the Earth's surface to the "top" of the atmosphere were condensed.

- **Layer Precipitable Water (LPW)**



Water vapour contained in a vertical column of unit cross-section area in three layers in the troposphere: Low Layer, Middle Layer & High Layer.

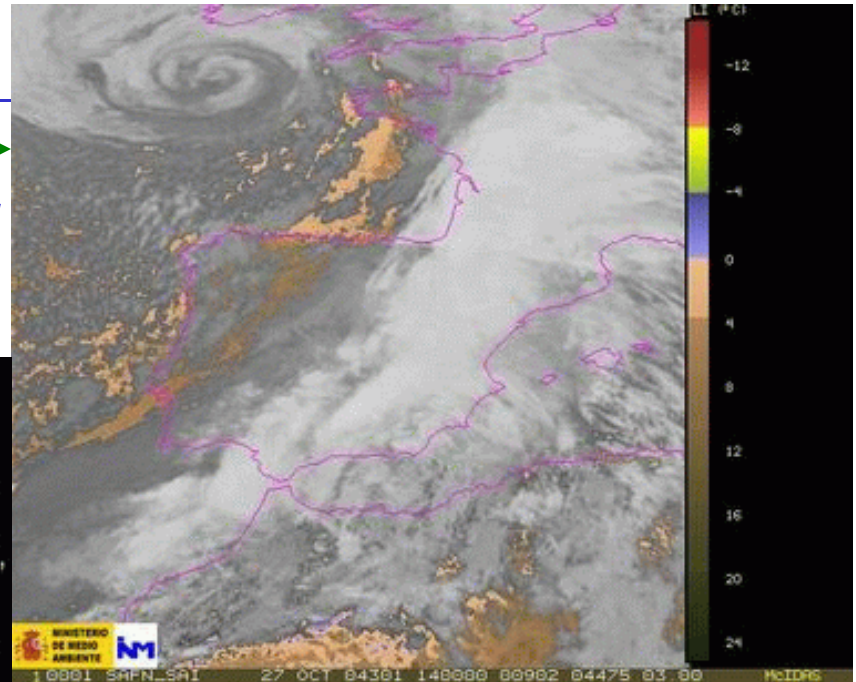
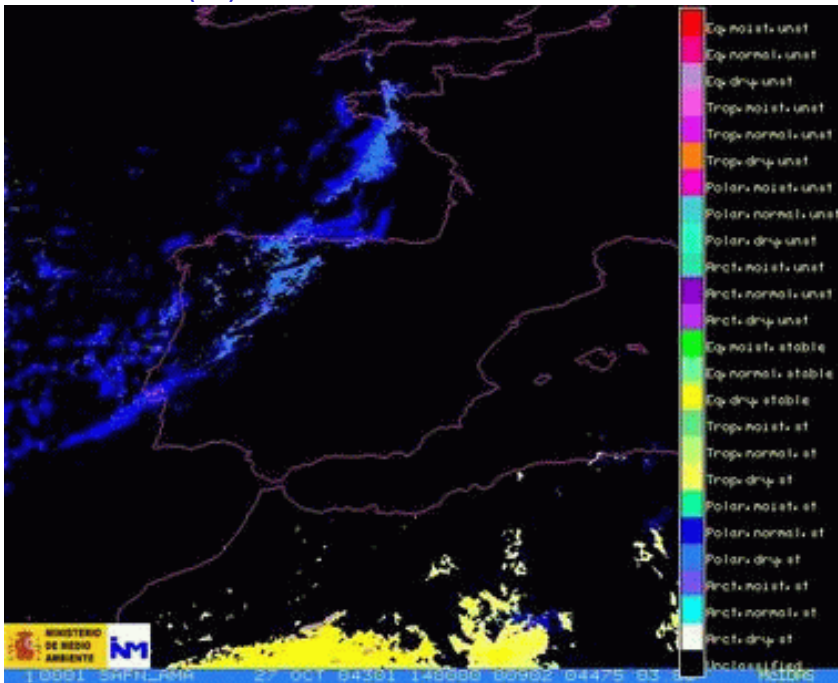
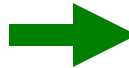
TPW is provided for validation purposes



Clear Air Mass Products

• *Stability Air Imagery (SAI)*

Provides estimations of the atmospheric instability in cloud-free areas. Among all stability indexes, Lifted Index (LI) has been chosen.

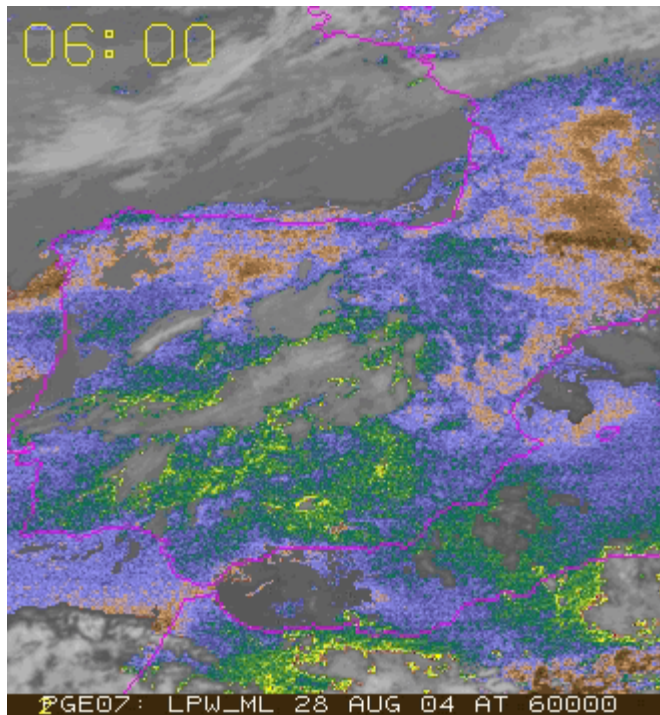


• *Air Mass Analysis (AMA)*

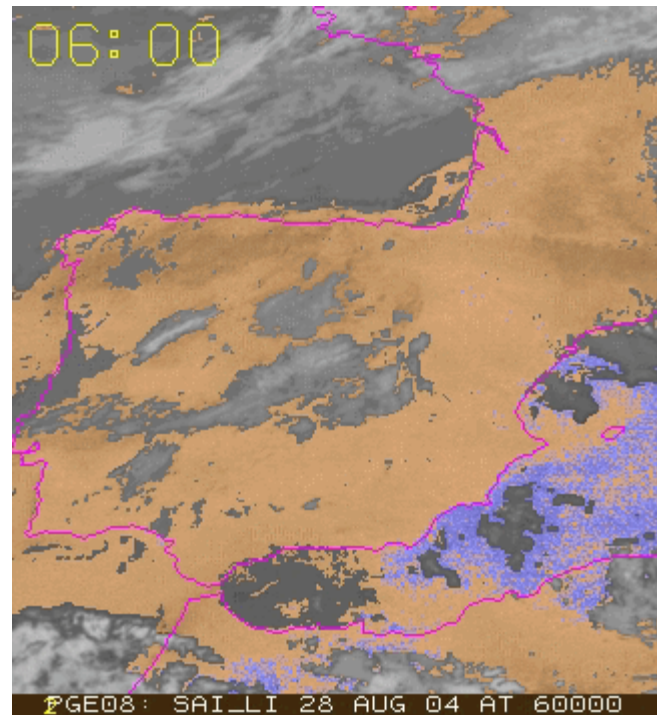
Evaluates basic quantities describing air masses (upper and middle level humidity, mean temperature, atmospheric stability, cloud pattern, etc) to combine them into one integrated classification of the air mass.

Case Study

28th August 2004: Pre-convective situation



LPW: Middle levels



SAI: Lifted Index

Winds and Conceptual Model Products (BUFR)

- ***High Resolution Wind (HrW)***

Detailed and frequently updated sets of daytime winds from HRV SEVIRI data including wind pressure level information and wind quality control flags giving as well some indication of its error in probabilistic terms.

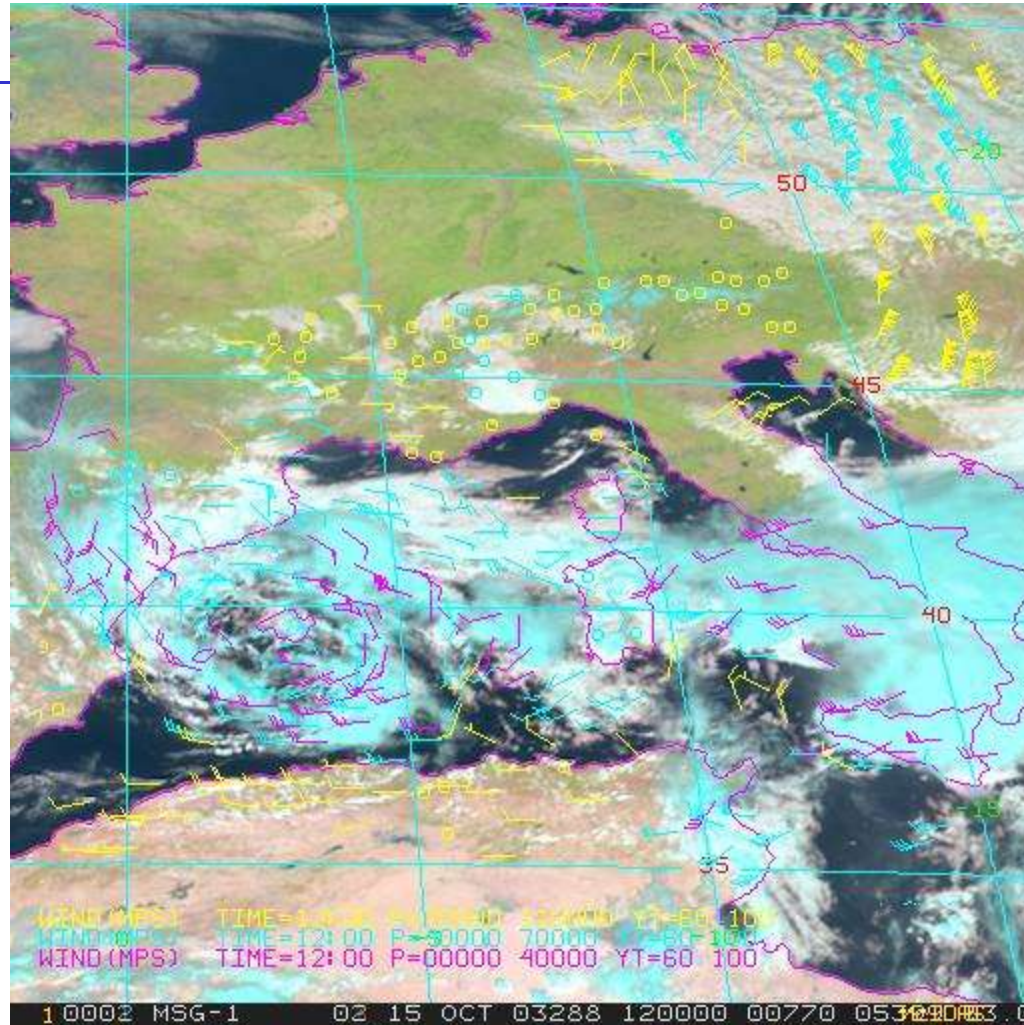
- ***Rapid Development Thunderstorm (RDT)***

Twofold objectives: identification, monitoring and tracking of intense convective systems, and detection of rapidly developing convective cells

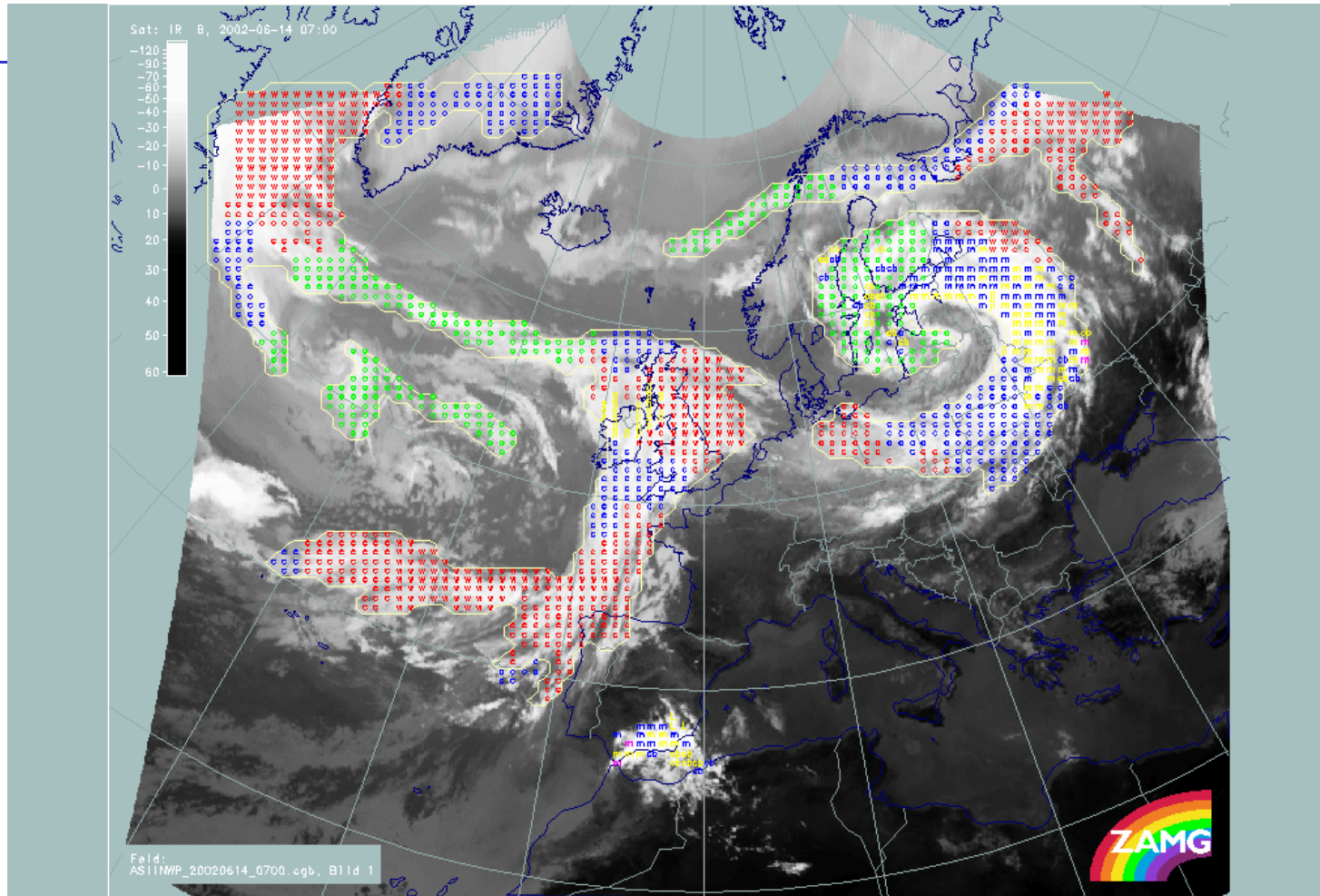
- ***Automated Satellite Interpretation Imagery (ASII)***

Automatic interpretation of features seen on satellite images identifying fronts, wave structures, areas of intensification at fronts by jet streak crossing, position of the jet axis, comma clouds, enhanced convection areas, etc.

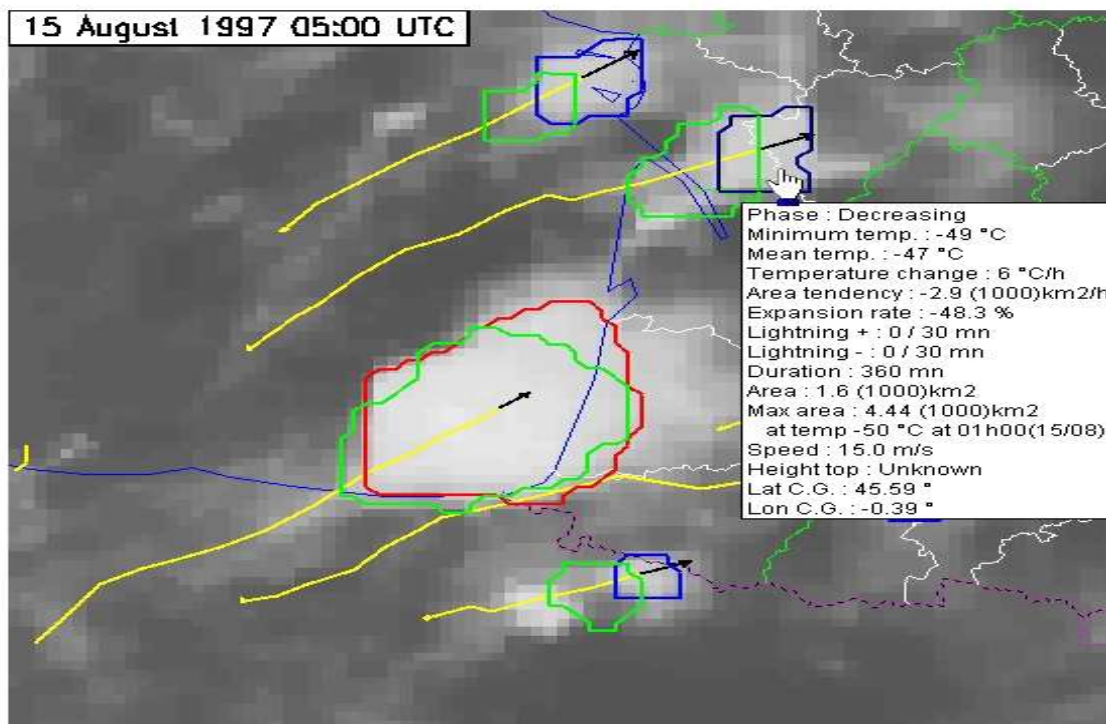
HRW



ASII



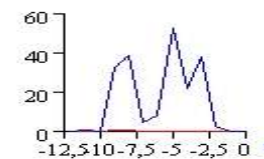
RDT



Time series of lightning CG FLASHES

Negative flashes

Positive flashes

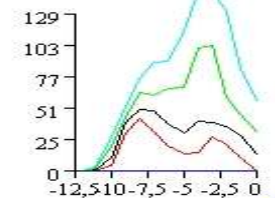


Time series of area (100 km2)

T ≤ -60°C T ≤ -50°C

T ≤ -40°C T ≤ -30°C

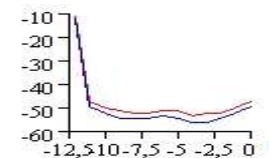
T ≤ -46°C



Time series of temperature

Minimum temp.

Mean temp.



The Help Desk tool <http://nwcsaf.inm.es>

- Supports the SAFNWC application providing a single entry for the SAF Users Group (SUG)
- Easy access, update and retrieval of all configuration items (documentation, SW, SPRs, actions, ...) by the Consortium Members.
- Friendly tool for SW recovery, Mail Box interaction (questions, comments), Software Problem Reports (SPRs), Real time products display, Documentation, FAQs, ...



Help Desk open area: Meteorological Products




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[Meteorological Products](#)
[Consortium Members](#)
[Visiting Scientist Activities](#)
[SW Delivery Conditions](#)

Meteorological products from the previous day



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Meteorological Products
 PGE01: CMa (Cloud Mask) PGE02: CT (Cloud Type) PGE03: CTTH (Cloud Top Temperature and Height) PGE01b: CM (Cloud Mask)
CMa, CT & CTTH Examples from MSG/SEVIRI, MODIS and GOES-East **CM AVHRR Examples**
 PGE04: PC (Precipitating Clouds) PGE05: CRR (Convective Rainfall Rate) PGE06: TPW (Total Precipitable Water) PGE02b: CT (Cloud Type)
CRR Meteosat-7 Examples **TPW AVHRR & GVAR Examples** **CT AVHRR Examples**
 PGE07: LPW (Layer Precipitable Water) PGE08: SAL (Stability Analysis Imagery) PGE09: HRW (High-Resolution Winds) PGE03b: CTTH (Cloud Top Temperature and Height)
HRW Meteosat-7 Examples **CTTH AVHRR Examples**
 PGE10: ASII (Automatic Satellite Image Interpretation) PGE11: RDT (Rapid Developing Thunderstorms) PGE12: AMA (Air Mass Analysis) PGE04b: PC (Precipitating Clouds)
PC AVHRR Examples

23 License Agreements signed

DWD (Germany)

FMI (Finland)

SMHI (Sweden)

TMS (Turkey)

OMS (Hungary)

INMH (Romania)

Météo Swiss (Switzerland)

Météo-France (France)

IM (Portugal)

SMFAI (Italy)

Met Eireann (Ireland)

SHMU (Slovakia)

KNMI (The Netherlands)

ZAMG (Austria)

BGIO (Germany)

DNMI (Norway)

DMI (Denmark)

RMBI (Belgium)

HNMS (Greece)

DMHZ (Croatia)


ARSO (Slovenia)

Met Office (UK)

IMGW (Poland)

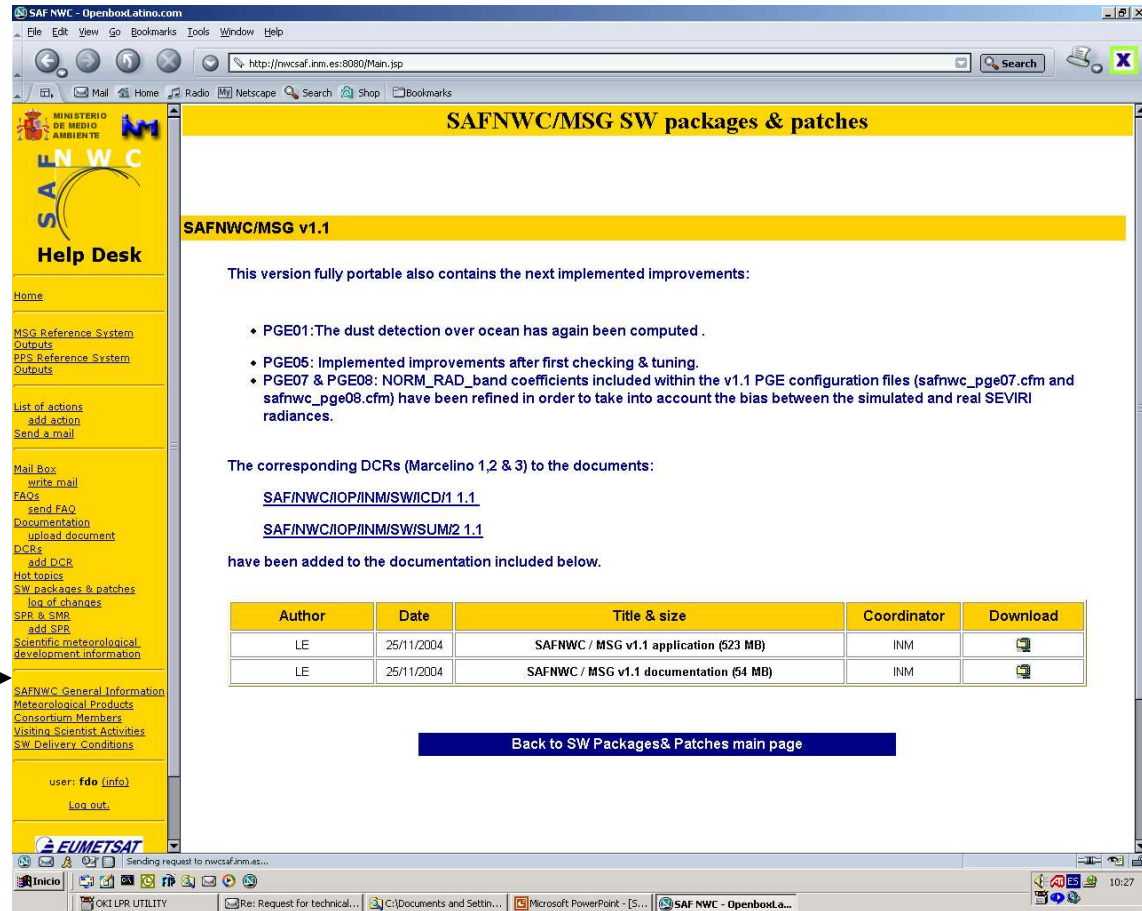
Access Credentials to the Help Desk have been provided

Help Desk users area: SW Packages & Patches



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[FAQS](#)
[Documentation](#)
[DCR](#)
[Hot Topics](#)
[SW Packages and Patches](#)
[SPR & SMR](#)
[Development information](#)

To access and recover the latest version and patches for the SAFNWC software application



SAFNWC/MSG SW packages & patches

SAFNWC/MSG v1.1

This version fully portable also contains the next implemented improvements:



- PGE01: The dust detection over ocean has again been computed.
- PGE05: Implemented improvements after first checking & tuning.
- PGE07 & PGE08: NORM_RAD_band coefficients included within the v1.1 PGE configuration files (safnwc_pge07.cfm and safnwc_pge08.cfm) have been refined in order to take into account the bias between the simulated and real SEVIRI radiances.

The corresponding DCRs (Marcelino 1,2 & 3) to the documents:

[SAFNWC/IOP/INM/SWICD1 1.1](#)


[SAFNWC/IOP/INM/SWSUM2 1.1](#)

have been added to the documentation included below.

Author	Date	Title & size	Coordinator	Download
LE	25/11/2004	SAFNWC / MSG v1.1 application (523 MB)	INM	
LE	25/11/2004	SAFNWC / MSG v1.1 documentation (54 MB)	INM	

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Help Desk users area: Mail Box



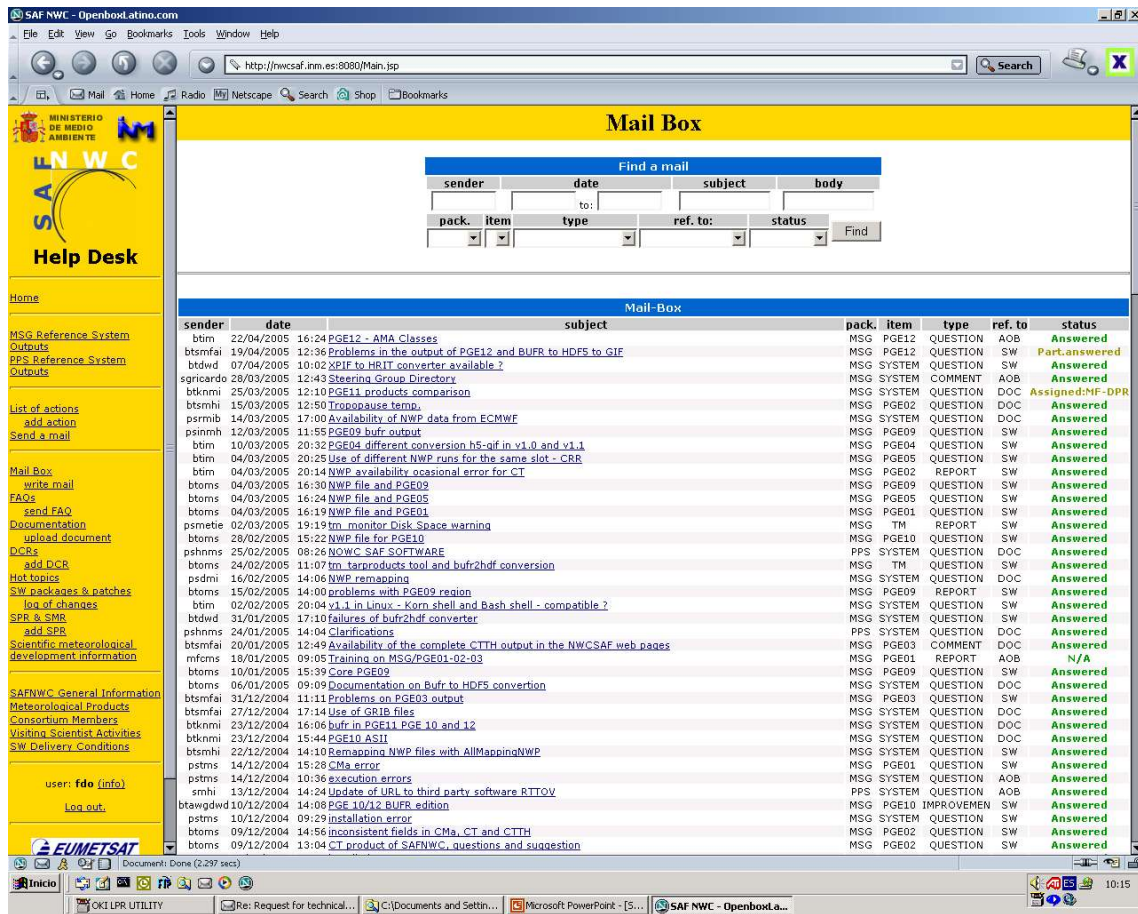
MINISTERIO DE MEDIO AMBIENTE

SAFNWC

Help Desk

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Place where all
SUG members are
able to introduce
questions or
comments to be
answered by the
SAFNWC project
members



SAFNWC - Openbox.ato.com

http://nwcsaf.inm.es:8080/Main.jsp

Mail Box

Find a mail

sender	date	subject	body
pack.	item	type	ref. to
			status

Find

sender	date	subject	pack.	item	type	ref. to	status
btm	22/04/2005 16:24	PGE12 - AMA Classes	MSG	PGE12	QUESTION	AOB	Answered
btsmfai	19/04/2005 12:36	Problems in the output of PGE12 and BUFR to HDF5 to GIF	MSG	PGE12	QUESTION	SW	Part. answered
btwd	07/04/2005 10:02	XPIF to HRIT converter available?	MSG	SYSTEM	QUESTION	SW	Answered
spicardo	28/03/2005 12:43	Steering Group Directory	MSG	SYSTEM	COMMENT	AOB	Answered
btknmi	25/03/2005 12:10	PGE11 products comparison	MSG	SYSTEM	QUESTION	DOC	Assigned:INF-DPR
btsmbi	15/03/2005 12:50	Troponause temp.	MSG	PGE02	QUESTION	DOC	Answered
psrmb	14/03/2005 17:00	Availability of NWP data from ECMWF	MSG	SYSTEM	QUESTION	DOC	Answered
psinmh	12/03/2005 11:55	PGE09 bufr output	MSG	PGE09	QUESTION	SW	Answered
btm	10/03/2005 20:32	PGE04 different conversion h5-qif in v1.0 and v1.1	MSG	PGE04	QUESTION	SW	Answered
btm	04/03/2005 20:25	Use of different NWP runs for the same slot - CRR	MSG	PGE05	QUESTION	SW	Answered
btm	04/03/2005 20:14	NWP availability occasional error for CT	MSG	PGE02	REPORT	SW	Answered
btoms	04/03/2005 16:30	NWP file and PGE02	MSG	PGE09	QUESTION	SW	Answered
btoms	04/03/2005 16:24	NWP file and PGE05	MSG	PGE05	QUESTION	SW	Answered
btoms	04/03/2005 16:19	NWP file and PGE01	MSG	PGE01	QUESTION	SW	Answered
psmete	02/03/2005 19:19	tm_monitor Disk Space warning	MSG	TM	REPORT	SW	Answered
btoms	28/02/2005 15:22	NWP file for PGE10	MSG	PGE10	QUESTION	SW	Answered
psinms	25/02/2005 09:26	NOWC SAF SOFTWARE	PPS	SYSTEM	QUESTION	DOC	Answered
btoms	24/02/2005 11:07	tm_tarproducts tool and bufr2hdf conversion	MSG	TM	QUESTION	SW	Answered
psdmi	16/02/2005 14:06	NWP remapping	MSG	SYSTEM	QUESTION	DOC	Answered
btoms	15/02/2005 14:00	problems with PGE09 rejoin	MSG	PGE09	REPORT	SW	Answered
btm	02/02/2005 20:04	v1.1 in Linux - Korn shell and Bash shell - compatible?	MSG	SYSTEM	QUESTION	SW	Answered
btwd	31/01/2005 17:10	Failures of bufr2hdf converter	MSG	SYSTEM	QUESTION	SW	Answered
psinms	24/01/2005 14:04	Clarifications	PPS	SYSTEM	QUESTION	DOC	Answered
btsmfai	20/01/2005 12:49	Availability of the complete CTTH output in the NWC SAF web pages	MSG	PGE03	COMMENT	DOC	Answered
mfmms	18/01/2005 09:05	Training on MSG/PGE11-02-03	MSG	PGE01	REPORT	AOB	N/A
btoms	10/01/2005 15:39	Core PGE09	MSG	PGE09	QUESTION	SW	Answered
btoms	06/01/2005 09:09	Documentation on Bufr to HDF5 conversion	MSG	SYSTEM	QUESTION	DOC	Answered
btsmfai	31/12/2004 11:11	Problems on PGE03 output	MSG	PGE03	QUESTION	SW	Answered
btsmfai	27/12/2004 17:14	Use of GRIB files	MSG	SYSTEM	QUESTION	DOC	Answered
btknmi	23/12/2004 16:06	bufr in PGE11 PGE 10 and 12	MSG	SYSTEM	QUESTION	DOC	Answered
btknmi	23/12/2004 15:44	PGE10 ASII	MSG	SYSTEM	QUESTION	DOC	Answered
btsmbi	22/12/2004 14:10	Remapping NWP files with AllMappingNWP	MSG	SYSTEM	QUESTION	SW	Answered
psinms	14/12/2004 15:28	CMa error	MSG	PGE01	QUESTION	SW	Answered
psinms	14/12/2004 10:36	execution errors	MSG	SYSTEM	QUESTION	AOB	Answered
smhi	13/12/2004 14:24	Update of URL to third party software RTTOV	PPS	SYSTEM	QUESTION	AOB	Answered
btawgdwd	10/12/2004 14:08	PGE 10/12 BUFR edition	MSG	PGE10	IMPROVEMEN	SW	Answered
psinms	10/12/2004 09:29	installation error	MSG	SYSTEM	QUESTION	SW	Answered
btoms	09/12/2004 14:56	inconsistent fields in CMa, CT and CTTH	MSG	PGE02	QUESTION	SW	Answered
btoms	09/12/2004 13:04	CT product of SAFNWC, questions and suggestion	MSG	PGE02	QUESTION	SW	Answered

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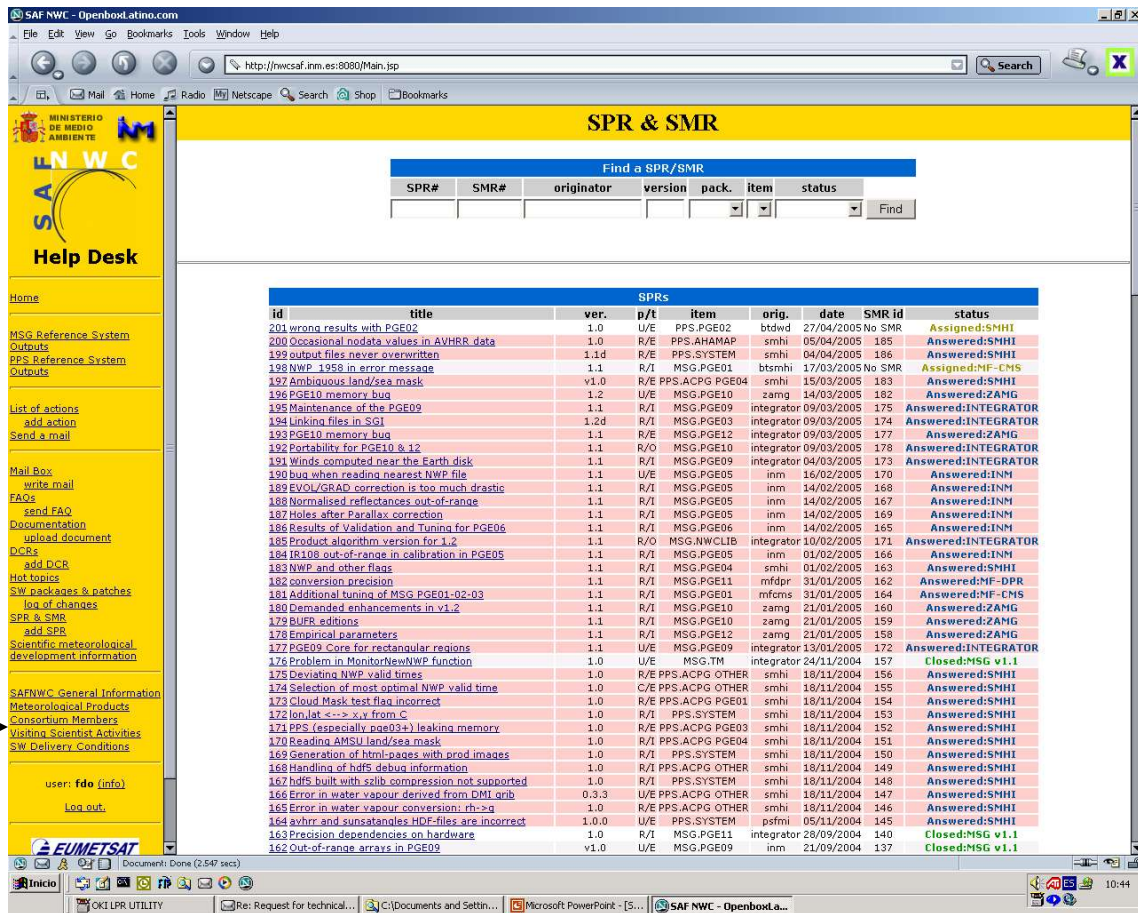
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A SPR (Software Problem Report) is the way to the user report a detected problem in the SW application. A SMR (Software Modification Reports) describes the changes to be implemented in the code in order to solve the detected problem



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SPR#	SMR#	originator	version	pack.	item	status		
SPRs								
id	title	ver.	p/t	item	orig.	date	SMR id	status
201	wrong results with PGE02	1.0	U/E	PPS.PGE02	bdwld	27/04/2005	NR	Assigned:SHHI
200	Occasional nodata values in AVHRR data	1.0	R/E	PPS.AHAMAP	smhi	05/04/2005	185	Answered:SHHI
199	output files never overwritten	1.1d	R/E	PPS.SYSTEM	smhi	04/04/2005	186	Answered:SHHI
198	NWP_1958 in error message	1.1	R/I	MSG.PGE01	btsmhi	17/03/2005	NR	Assigned:MF-CMS
197	Ambiguous land/sea mask	v1.0	R/E	PPS.ACPG PGE04	smhi	15/03/2005	183	Answered:SHHI
196	PGE10 memory bug	1.2	U/E	MSG.PGE10	zamg	14/03/2005	182	Answered:ZAMG
195	Maintenance of the PGE09	1.1	R/I	MSG.PGE09	integrator	09/03/2005	175	Answered:INTEGRATOR
194	Linking files in SGI	1.2d	R/I	MSG.PGE03	integrator	09/03/2005	174	Answered:INTEGRATOR
193	PGE10 memory bug	1.1	R/E	MSG.PGE12	integrator	09/03/2005	177	Answered:ZAMG
192	Portability for PGE10 & 12	1.1	R/O	MSG.PGE10	integrator	09/03/2005	178	Answered:INTEGRATOR
191	Winds computed near the Earth disk	1.1	R/I	MSG.PGE09	integrator	04/03/2005	173	Answered:INTEGRATOR
190	bug when reading nearest NWP file	1.1	U/E	MSG.PGE05	inm	16/02/2005	170	Answered:INM
189	EVOL/GRAD correction is too much drastic	1.1	R/I	MSG.PGE05	inm	14/02/2005	168	Answered:INM
188	Normalised reflectances out-of-range	1.1	R/I	MSG.PGE05	inm	14/02/2005	167	Answered:INM
187	Holes after Parallax correction	1.1	R/I	MSG.PGE05	inm	14/02/2005	169	Answered:INM
186	Results of Validation and Tuning for PGE06	1.1	R/I	MSG.PGE06	inm	14/02/2005	165	Answered:INM
185	Product algorithm version for 1.2	1.1	R/O	MSG.NWCLIB	integrator	10/02/2005	171	Answered:INTEGRATOR
184	IR108 out-of-range in calibration in PGE05	1.1	R/I	MSG.PGE05	inm	01/02/2005	166	Answered:INM
183	NWP and other flags	1.1	R/I	MSG.PGE04	smhi	01/02/2005	163	Answered:SHHI
182	conversion precision	1.1	R/I	MSG.PGE11	mfdpr	31/01/2005	162	Answered:MF-CPR
181	Additional tuning of MSG PGE01-02-03	1.1	R/I	MSG.PGE01	mfmcs	31/01/2005	164	Answered:MF-CMS
180	Demanded enhancements in v1.2	1.1	R/I	MSG.PGE10	zamg	21/01/2005	160	Answered:ZAMG
179	RUF.R editions	1.1	R/I	MSG.PGE10	zamg	21/01/2005	159	Answered:ZAMG
178	Empirical parameters	1.1	R/I	MSG.PGE12	zamg	21/01/2005	158	Answered:ZAMG
177	PGE09 Core for rectangular regions	1.1	U/E	MSG.PGE09	integrator	13/01/2005	172	Answered:INTEGRATOR
176	Problem in MonitorNewNWP function	1.0	U/E	MSG.TM	integrator	24/11/2004	157	Closed:MSG v1.1
175	Deviating NWP valid times	1.0	R/E	PPS.ACPG OTHER	smhi	18/11/2004	156	Answered:SHHI
174	Selection of most optimal NWP valid time	1.0	C/E	PPS.ACPG OTHER	smhi	18/11/2004	155	Answered:SHHI
173	Cloud Mask test flag incorrect	1.0	R/E	PPS.ACPG PGE01	smhi	18/11/2004	154	Answered:SHHI
172	lon,lat <-> x,y from C	1.0	R/I	PPS.SYSTEM	smhi	18/11/2004	153	Answered:SHHI
171	PPS (especially paged31) linking memory	1.0	R/E	PPS.ACPG PGE03	smhi	18/11/2004	152	Answered:SHHI
170	Reading AMSU land/sea mask	1.0	R/I	PPS.ACPG PGE04	smhi	18/11/2004	151	Answered:SHHI
169	Generation of html-pages with prod images	1.0	R/I	PPS.SYSTEM	smhi	18/11/2004	150	Answered:SHHI
168	Handling of hdf5 debug information	1.0	R/I	PPS.ACPG OTHER	smhi	18/11/2004	149	Answered:SHHI
167	hdfs built with zlib compression not supported	1.0	R/I	PPS.SYSTEM	smhi	18/11/2004	148	Answered:SHHI
166	Error in water vapour derived from DMI orb	0.3.3	U/E	PPS.ACPG OTHER	smhi	18/11/2004	147	Answered:SHHI
165	Error in water vapour conversion: rfc3a	1.0	R/E	PPS.ACPG OTHER	smhi	18/11/2004	146	Answered:SHHI
164	svhr_ and sunsastandies: HDF-files are incorrect	1.0	U/E	PPS.SYSTEM	psfmi	05/11/2004	145	Answered:SHHI
163	Precision dependencies on hardware	1.0	R/I	MSG.PGE11	integrator	26/09/2004	140	Closed:MSG v1.1
162	Out-of-range arrays in PGE09	v1.0	U/E	MSG.PGE09	inm	21/09/2004	137	Closed:MSG v1.1

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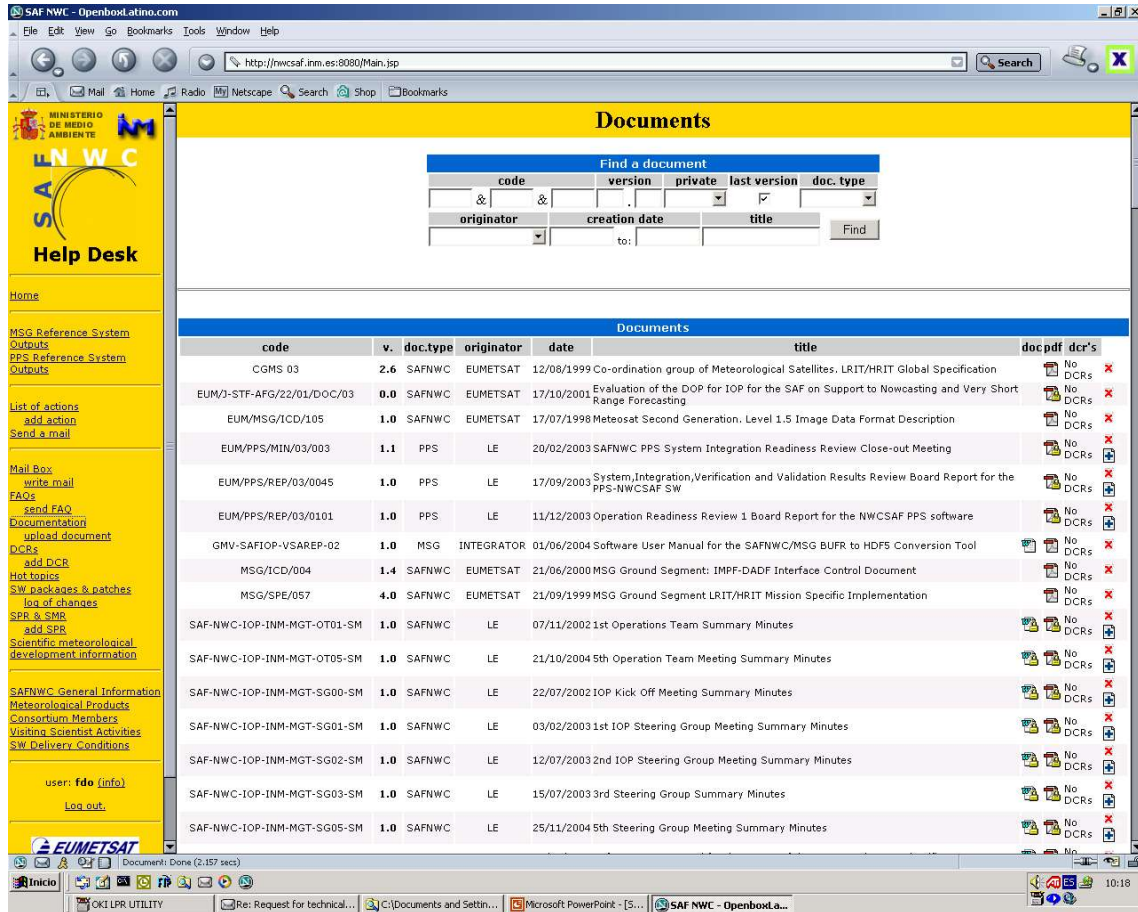
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originator	creation date	title		Find

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CGMS 03	2.6	SAFNWC	EUMETSAT	12/08/1999	Co-ordination group of Meteorological Satellites. LRIT/HRIT Global Specification	No	DCRs
EUM/J-STF-AFG/22/01/DOC/03	0.0	SAFNWC	EUMETSAT	17/10/2003	Evaluation of the DOP for IOP for the SAF on Support to Nowcasting and Very Short Range Forecasting	No	DCRs
EUM/MSG/ICD/105	1.0	SAFNWC	EUMETSAT	17/07/1998	Meteosat Second Generation. Level 1.5 Image Data Format Description	No	DCRs
EUM/PPS/MIN/03/003	1.1	PPS	LE	20/02/2003	SAFNWC PPS System Integration Readiness Review Close-out Meeting	No	DCRs
EUM/PPS/REP/03/0045	1.0	PPS	LE	17/09/2003	System,Integration,Verification and Validation Results Review Board Report for the PPS-NWCSAF SW	No	DCRs
EUM/PPS/REP/03/0101	1.0	PPS	LE	11/12/2003	Operation Readiness Review 1 Board Report for the NWCSAF PPS software	No	DCRs
GMV-SAFIOP-VSAREP-02	1.0	MSG	INTEGRATOR	01/06/2004	Software User Manual for the SAFNWC/MSG BUFR to HDF5 Conversion Tool	No	DCRs
MSG/ICD/004	1.4	SAFNWC	EUMETSAT	21/06/2000	MSG Ground Segment: IMPF-DADF Interface Control Document	No	DCRs
MSG/SPE/057	4.0	SAFNWC	EUMETSAT	21/09/1999	MSG Ground Segment LRIT/HRIT Mission Specific Implementation	No	DCRs
SAF-NWC-IOP-INM-MGT-OT01-SM	1.0	SAFNWC	LE	07/11/2002	1st Operations Team Summary Minutes	No	DCRs
SAF-NWC-IOP-INM-MGT-OT05-SM	1.0	SAFNWC	LE	21/10/2004	5th Operation Team Meeting Summary Minutes	No	DCRs
SAF-NWC-IOP-INM-MGT-SG00-SM	1.0	SAFNWC	LE	22/07/2002	IOP Kick Off Meeting Summary Minutes	No	DCRs
SAF-NWC-IOP-INM-MGT-SG01-SM	1.0	SAFNWC	LE	03/02/2003	1st IOP Steering Group Meeting Summary Minutes	No	DCRs
SAF-NWC-IOP-INM-MGT-SG02-SM	1.0	SAFNWC	LE	12/07/2003	2nd IOP Steering Group Meeting Summary Minutes	No	DCRs
SAF-NWC-IOP-INM-MGT-SG03-SM	1.0	SAFNWC	LE	15/07/2003	3rd Steering Group Summary Minutes	No	DCRs
SAF-NWC-IOP-INM-MGT-SG05-SM	1.0	SAFNWC	LE	25/11/2004	5th Steering Group Meeting Summary Minutes	No	DCRs

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blawdwid 1	blawdwid	SAF/NWC/IOP/INM/SW/ICD/3 0 1	Normal	General	10/11/2003	INTEGRATOR	Answered
Eay12 1	integrator	SAF/NWC/IOP/INM/SW/ICD/1 1 3	Minor	Local	31/01/2005	INTEGRATOR	Answered
integrator 1	integrator	SAF/NWC/IOP/INM/SW/SUM/2 0 0	Normal	General	11/03/2003	INTEGRATOR	Answered
LE 2	fdo	SAF/NWC/IOP/INM/SW/SUM/2 0 1	Normal	General	14/04/2004	INTEGRATOR	Answered
fdo	fdo	SAF/NWC/IOP/INM/SW/ICD/1 0 1	Normal	General	14/04/2004	INTEGRATOR	Answered
LE 2	le	SAF/NWC/IOP/INM/MGT/GLO 1 2	Minor	General	25/02/2003	LE	Answered
Marcelino 3	inn	SAF/NWC/IOP/INM/SW/ICD/1 1 1	Editorial	Local	24/11/2004	INM	Answered
Marcelino 2	inn	SAF/NWC/IOP/INM/SW/SUM/2 1 1	Editorial	Local	24/11/2004	INM	Answered
Marcelino 1	inn	SAF/NWC/IOP/INM/SW/SUM/2 1 1	Editorial	Local	24/11/2004	INM	Answered
MF/CMS 1	le	SAF/NWC/INM/URD/1 2 1 1 2 1	Major	General	01/04/2004	LE	Answered
mfcms 1	mfcms	SAF/NWC/IOP/INM/RQ/3 1 1	Major	General	19/02/2003	INTEGRATOR	Answered
mfdpr 5	mfdpr02	SAF/NWC/IOP/INM/RQ/3 1 1	Normal	Local	11/03/2003	LE	Answered
mfdpr 4	mfdpr02	SAF/NWC/IOP/INM/RQ/3 1 1	Normal	Local	11/03/2003	LE	Answered
mfdpr 3	mfdpr02	SAF/NWC/IOP/INM/RQ/3 1 1	Normal	Local	11/03/2003	LE	Answered
mfdpr 2	mfdpr02	SAF/NWC/IOP/INM/RQ/3 1 1	Major	General	11/03/2003	LE	Answered
mfdpr 1	mfdpr02	SAF/NWC/IOP/INM/SS/2 1 0	Major	General	26/02/2003	LE	Answered
QRR-1 2	integrator	SAF/NWC/IOP/INM/SW/PL/03 0 0	Normal	Local	13/05/2004	INTEGRATOR	Answered
QRR-1 1	integrator	SAF/NWC/INM/SW/RQ/2 4 4 1	Normal	General	13/05/2004	INTEGRATOR	Assigned:INTEGRATOR
PPS/ORR 1	smhi	SAF/NWC/IOP/INM/MGT/GLO 1 2	Normal	General	11/02/2004	LE	Assigned:LE
SW/ORR/1 4	smhi	SAF/NWC/IOP/INM/SS 0 4	Normal	General	19/12/2003	LE	Answered
PPS/ORR/1 3	smhi	SAF/NWC/IOP/INM/SS 0 4	Normal	General	19/12/2003	LE	Answered
PPS/ORR/1 2	smhi	SAF/NWC/IOP/INM/SS/2 1 1	Normal	General	19/12/2003	LE	Assigned:LE
PPS/ORR/1 1	smhi	SAF/NWC/IOP/INM/SS/2 1 1	Normal	General	19/12/2003	LE	Assigned:LE
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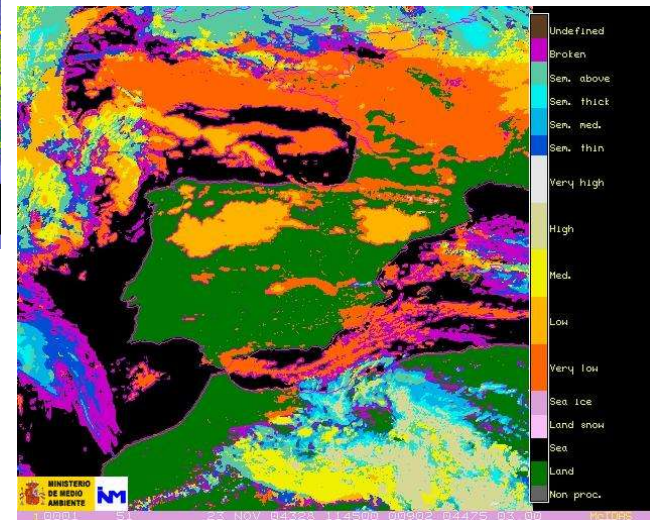
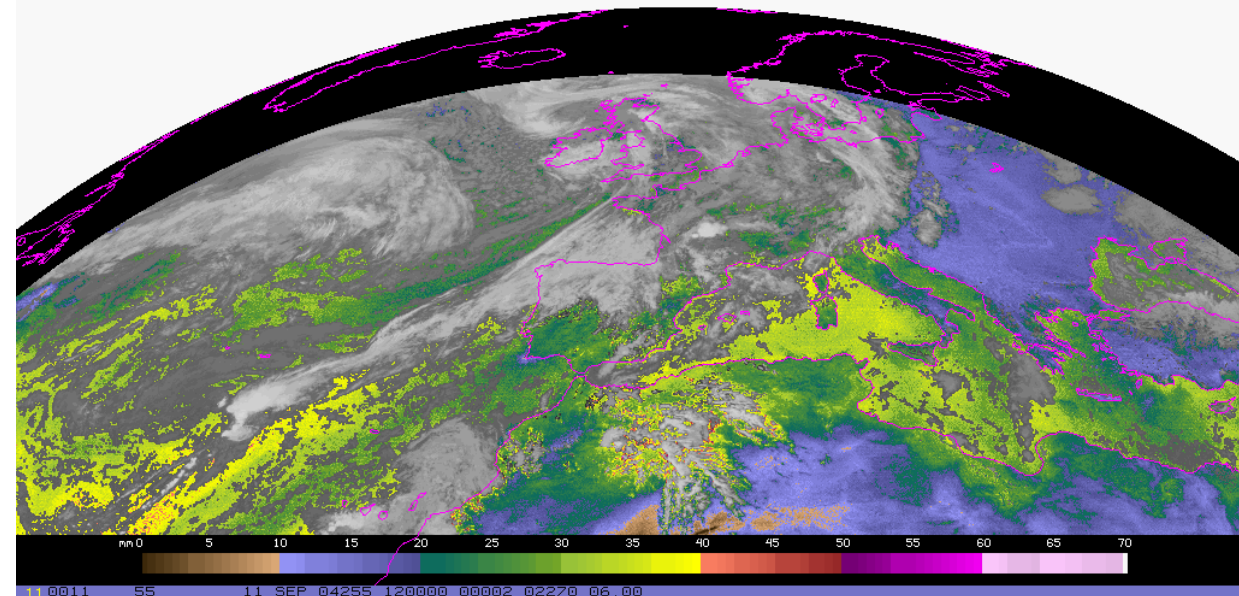
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Products obtained from the INM Reference System. Users can compare their products with the referenced.

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Examples of SAFNWC v1.1 SEVIRI products

The outputs displayed below from SAFNWC v1.1 are the same as for SAFNWC v1.0 except for:
PGE05 with a new SW code
PGE07 & PGE08 with new configuration files

Click on icons to full size the images and on text to display a 3 hours Real Time LOOP.
Click on PGE11 icon for a Real Time DEMO or in text for a RDT SHORT DESCRIPTION.

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SAFNWC Conclusions

- The SAF in support of NoWCasting & Very Short Range Forecasting delivered its first operational versions in June 2004.
- Users from 23 National Meteorological Services along Europe have been authorised to recover and use the SAFNWC SW packages.
- A new portable version for the MSG part (running in Linux) was delivered in November 2004.
- The last Training Workshop was held in Madrid in May 2004.
- Two new versions SAFNWC/MSG v1.2 & SAFNWC/PPS v1.1 have successfully passed the EUMETSAT review and will be delivered early June 2005.
- Next Workshop on Product Applicability and User Requirement Upgrading to be held in Madrid, the 3rd Week October 2005 (17th to 21st)