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AND PRODUCT OPERATIONS**

NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

Meteosat-8 Indian Ocean Data Coverage (IODC)

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Outline

- Current Met-8 IODC logistical information and schedule
- Data acquisition/dissemination strategy



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Met-8 IODC Information and Schedule

- Met-8 (MSG-1) took over as the primary IODC service as of Feb 1, 2017
- Expected Met-8 IODC service period: Feb 1, 2017 – 2019* (TBC)
- Data dissemination from Met-7 will end on March 31, 2017 at 0900 UTC
 - Re-orbiting / Decommission of Met-7 – April 3-11, 2017

*Based on fuel limitations



Met-8 IODC Data Acquisition & Processing

- Regional service is provided by EUMETCast-Europe/Africa direct broadcast – these data are encrypted
- NOAA receives these data from
 - EUMETCast terrestrial-based multicast service (NESDIS STAR)
 - Staged on STAR FTP servers (latency is ~30 mins)
 - McIDAS Systems
 - Uses ADDE protocol; included M-8 into the global geo and arctic composites processing as well
 - Secure terrestrial point-to-point protocols (EUM MSDS → PDA)
 - Currently receiving data from EUM's ops systems
 - NOAA/NESDIS investigating the feasibility of transitioning M-8 HRIT data pulls from the STAR server to the PDA to support McIDAS image processing
 - Objective is to improve reliability and timeliness for McIDAS users (e.g. NCEP, SAB)
 - WMO GTS circuits (EUM → GTS → WSH RTH)
 - NCEP is acquiring these data from GTS to-date and storing these data in the Supercomputer BUFR tanks

Note - direct broadcast dissemination from Met-8 is **not** available due to a SSPA-C failure that required the transmitter to be disabled for power management purposes to preserve the mission.



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Met-8 IODC Data Distribution

- Met-8 data is available for distribution from PDA
- PDA Distribution Policy for Met-8 data
 - NOAA is permitted to deliver a maximum frequency of three-hourly MSG FD data to *all* users without restriction within the US Territory. As a NOAA affiliate/US Government Agency, **DoD has permitted access to the full 15 minute MSG FD imagery**. Non U.S. government agencies or non affiliates requires a licensing agreement with EUMETSAT for full 15 minute FD access.



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Met-8 Catalog in PDA

ESPDS USER PORTAL

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<input type="checkbox"/>	Name	Producer	Satellite(s)	Data Type	Directory	Format	Periodicity	Coverage	Active	Acquisition ...
<input type="checkbox"/>	CLAI	EUMETSAT	MET8	Atmosphere	in/iodc	HRIT	10800	NONE	true	Thu Dec 01 0...
<input type="checkbox"/>	CLM	EUMETSAT	MET8	Atmosphere	in/iodc	HRIT	900	NONE	true	Thu Dec 01 0...
<input type="checkbox"/>	CRM	EUMETSAT	MET8	Atmosphere	in/iodc	HRIT	86400	NONE	true	Thu Dec 01 0...
<input type="checkbox"/>	CSR	EUMETSAT	MET8	Atmosphere	in/iodc	HRIT	3600	NONE	true	Thu Dec 01 0...
<input type="checkbox"/>	CTH	EUMETSAT	MET8	Atmosphere	in/iodc	HRIT	900	NONE	true	Thu Dec 01 0...
<input type="checkbox"/>	DIV	EUMETSAT	MET8	Atmosphere	in/iodc	HRIT	3600	NONE	true	Fri Dec 16 00...
<input type="checkbox"/>	FIR	EUMETSAT	MET8	LAND	in/iodc	HRIT	900	NONE	true	Thu Dec 15 0...
<input type="checkbox"/>	GII	EUMETSAT	MET8	NONE	in/iodc	HRIT	900	NONE	true	Fri Dec 16 00...
<input type="checkbox"/>	MPE	EUMETSAT	MET8	NONE	in/iodc	HRIT	900	NONE	true	Thu Dec 01 0...
<input type="checkbox"/>	MSG_IODC_EPI	EUMETSAT	MET8	NONE	in/iodc	HRIT	3600	NONE	true	Thu Dec 01 0...
<input type="checkbox"/>	MSG_IODC_HRV	EUMETSAT	MET8	Atmosphere	in/iodc	HRIT	3600	NONE	true	Thu Dec 01 0...
<input type="checkbox"/>	MSG_IODC_IR-087	EUMETSAT	MET8	Cloud Cover	in/iodc	HRIT	3600	NONE	true	Thu Dec 01 0...
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<input type="checkbox"/>	MSG_IODC_IR_039	EUMETSAT	MET8	Cloud Cover	in/iodc	HRIT	3600	NONE	true	Thu Dec 01 0...
<input type="checkbox"/>	MSG_IODC_IR_097	EUMETSAT	MET8	CRYOSPHERE	in/iodc	HRIT	3600	NONE	true	Thu Dec 01 0...
<input type="checkbox"/>	MSG_IODC_IR_108	EUMETSAT	MET8	Cloud Cover	in/iodc	HRIT	3600	NONE	true	Wed Jan 11 ...
<input type="checkbox"/>	MSG_IODC_IR_120	EUMETSAT	MET8	Atmosphere	in/iodc	HRIT	3600	NONE	true	Thu Dec 01 0...

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[Generate Product Images](#)

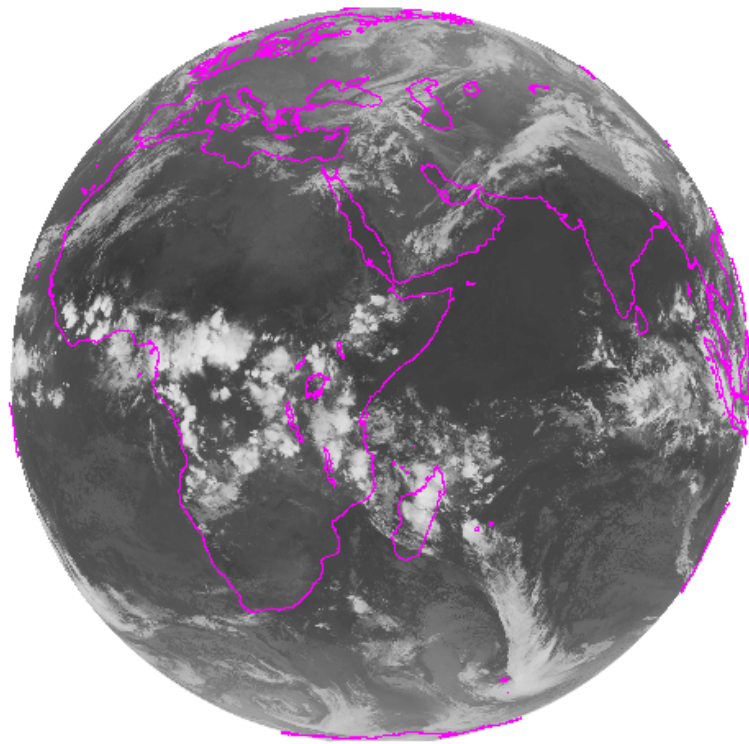


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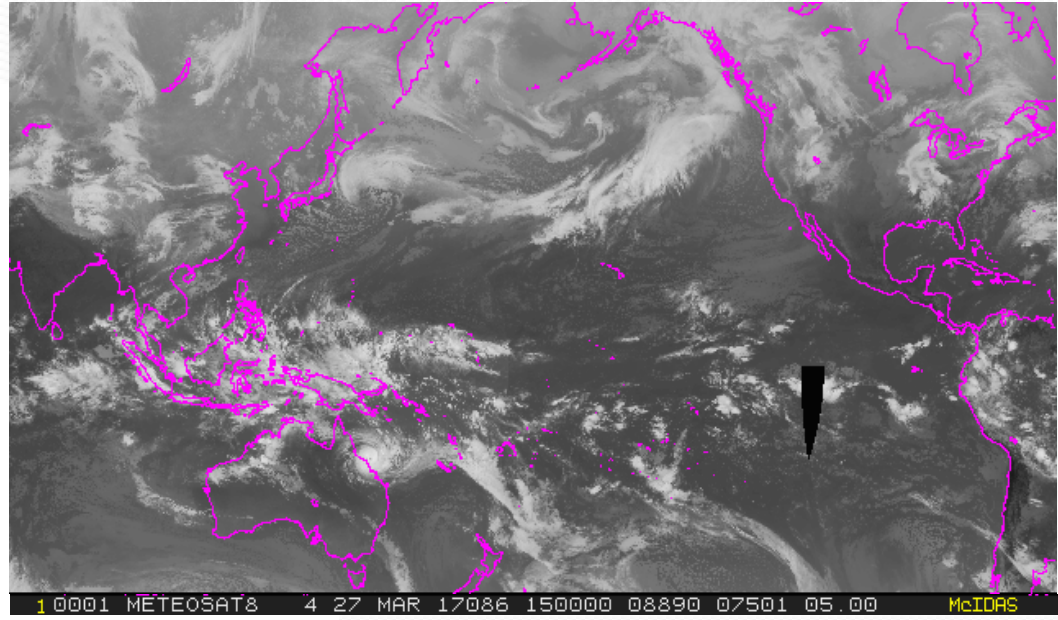
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Met-8 Imagery on McIDAS



1 0001 METEOSAT8 9 27 MAR 17086 183000 00003 00003 24.00 McIDAS

Meteosat Band-9 (10.8 um)



1 0001 METEOSAT8 4 27 MAR 17086 150000 08890 07501 05.00 McIDAS

Global Mosaic for IR 8KM



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Discussion



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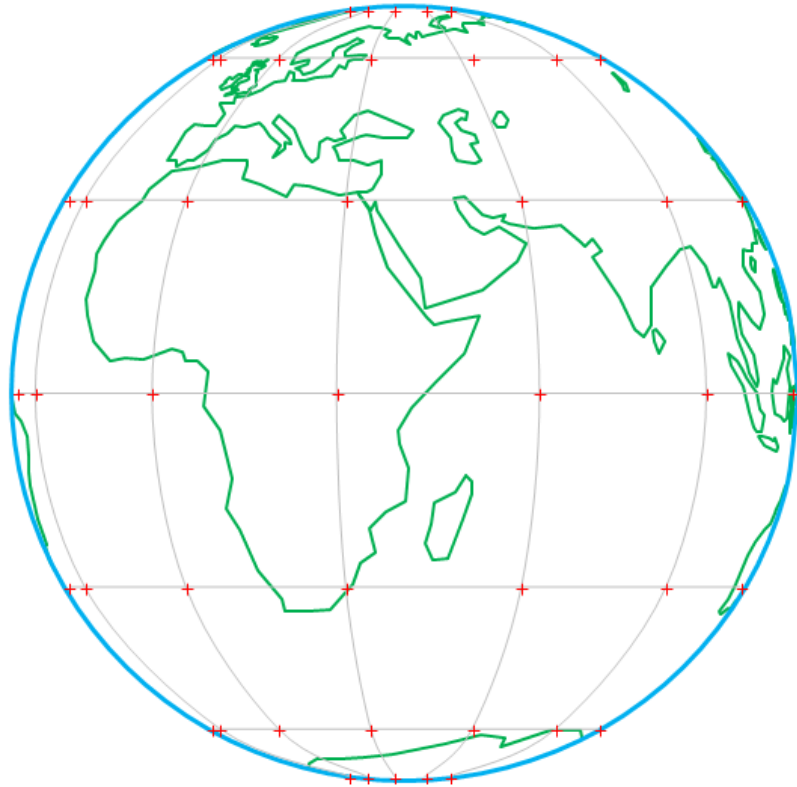
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Backup

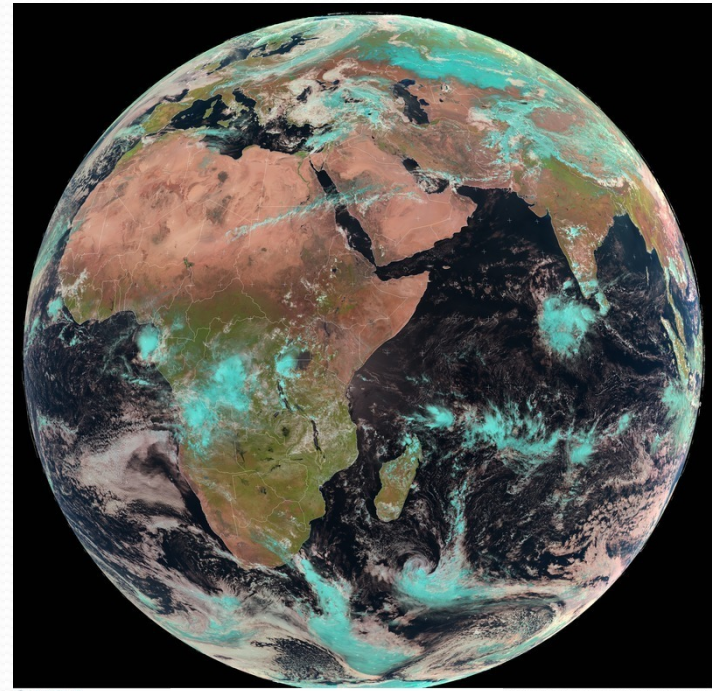


Met-8 IODC Services – Image Data



View from 41.5 deg

- Full Earth scan - 12 channels/15 Minutes
- Scan Coverage: $\sim 40^{\circ}$ West to $\sim 120^{\circ}$ East
- HRV Scan pattern: upper/lower window shift



© EUMETSAT

Meteosat IODC Natural Colour, 2017-03-15 10:00:00 UTC



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Met-8 IODC Product Notes

- EUMETSAT will follow their established internal processes for releasing IODC product
- Met-8 Image data will be made available in HRIT image format and will be labelled as IODC
- Kernel products “imagery” (equivalent to KPPs) will be provided first to costumers
- Some of the EUMETSAT L2 products will be provided over WMO/GTS circuits
- The list of potential L2+ products are located in backup section



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EUMETSAT Proposed Meteorological Products

Product Name	Product Acronym	Number/Day	Product Name	Product Acronym	Number/Day
Active Fire Monitoring	FIR	96	Divergence	DIV	24
<i>Aerosol Over Sea</i>	<i>AES</i>	1	Global Instability Index	GII	96
Atmospheric Motion Vectors	AMV	24	<i>High Resolution Precipitation Index</i>	<i>HPI</i>	1
All-Sky Radiances	ASR	24	Multisensor Precipitation Estimate	MPE	96
Clear-Sky Radiances	CSR	24	Normalized Difference Vegetation Index	NDVI	1
Clear Sky Reflectance Map	CRM	1	Normalized Difference Vegetation Index – decadal	NDVI-D	1/10 days
<i>Climate Data Set</i>	<i>CDS</i>	96	Optimal Cloud Analysis	OCA	24
Cloud Analysis	CLA	24	Tropospheric Humidity	TH	24
Cloud Analysis Image	CLAI	8	Total Ozone	TOZ	96
Cloud Mask	CLM	96			0
Cloud Top Height	CTH	96	Volcanic Ash	VOL	96 (netCDF) (CAP-on request)

Italic: only to Data Centre



- Current IODC Service: Meteosat-8 (MSG-Series)
- In service since Aug 28, 2002
- Primary IODC Service since Feb 1, 2017
- Imager Resolution:
 - 1 km VIS (HRV) and 2 km “channels 1-11” VIS, IR and WV
 - Image frequency – every 15 mins
- Operator: EUMETSAT
- Expected Decommission/Re-Orbit Time Frame: late 2019 (TBC)