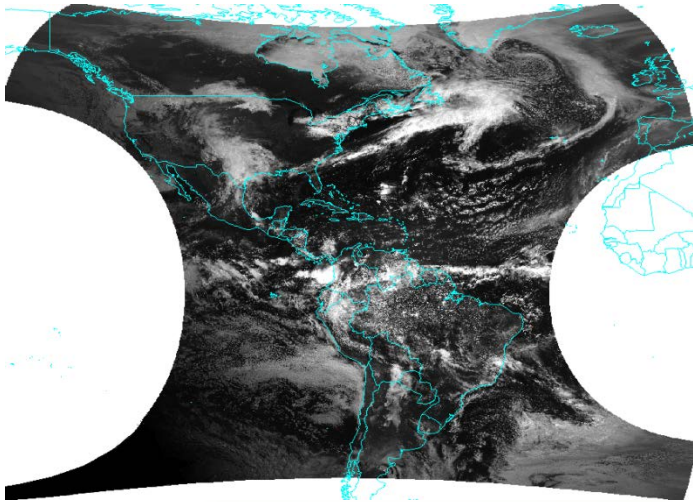


## PROVIDER: NOAA-NESDIS

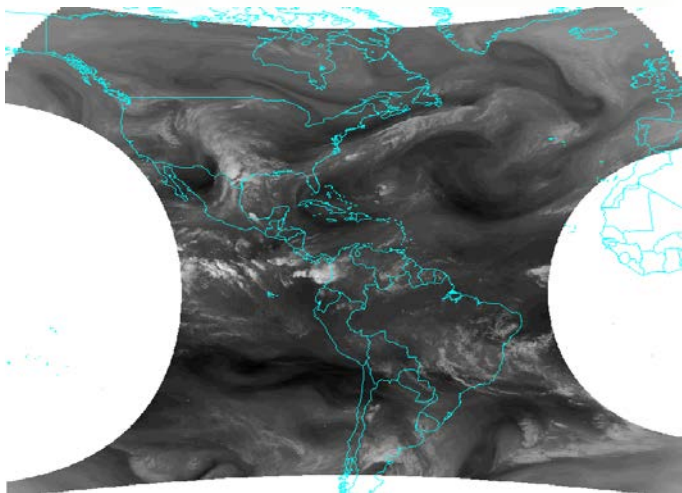
(National Oceanic and Atmospheric Administration – NOAA Satellite and Information Service - USA)

- GOES-13 – Northern Hemisphere Extended / Southern Hemisphere – Visible Channel



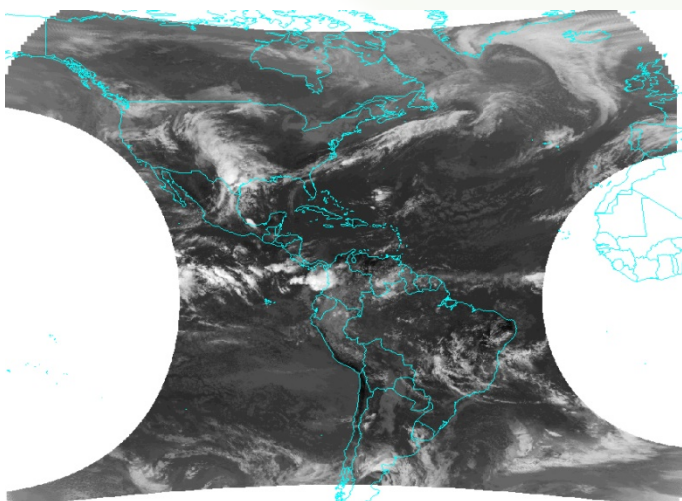
**Format:** GeoTIFF  
**Average Sizes:** 93.40 MB (Northern) / 37.90 MB (South)  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48 per sector  
**GeoTIFF pixel info:** Albedo x 10  
**No image pixel value:** 0  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 1  
**Wavelength:** 0.52 to 0.71  $\mu\text{m}$ , cent. at 0.63  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 1 x 1 km  
**Naming Conventions:**  
 GoesEastNH01VjjjHHMM / GoesEastSH01VjjjHHMM

- GOES-13 – Northern Hemisphere Extended / Southern Hemisphere – Water Vapor Channel



**Format:** GeoTIFF  
**Average Sizes:** 3.20 MB (Northern) / 1.10 MB (South)  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48 per sector  
**GeoTIFF pixel info:** Brightness Temp. x 10  
**No image pixel value:** 0  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 3  
**Wavelength:** 5.77 to 7.33  $\mu\text{m}$ , cent. at 6.50  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Conventions:**  
 GoesEastNH0413jjjHHMM / GoesEastSH0413jjjHHMM

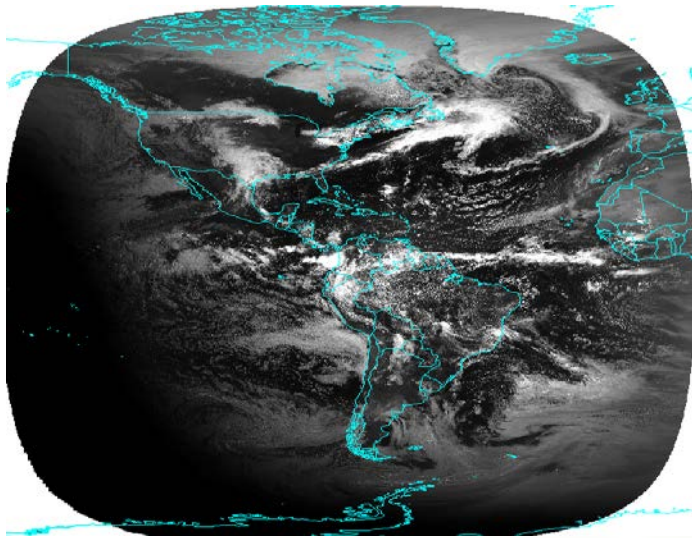
- GOES-13 – Northern Hemisphere Extended / Southern Hemisphere – Infrared Channel



**Format:** GeoTIFF  
**Average Sizes:** 5.70 MB (Northern) / 2.00 MB (South)  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48 per sector  
**GeoTIFF pixel info:** Brightness Temp. x 10  
**No image pixel value:** 0  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 4  
**Wavelength:** 10.20 to 11.20  $\mu\text{m}$ , cent. at 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Conventions:**  
 GoesEastNH0414jjjHHMM / GoesEastSH0414jjjHHMM

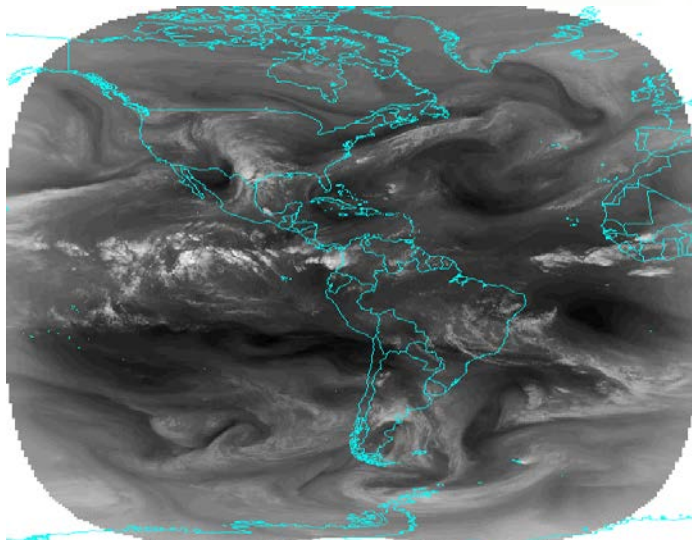


• **GOES-13 – Full-Disk – Visible Channel**



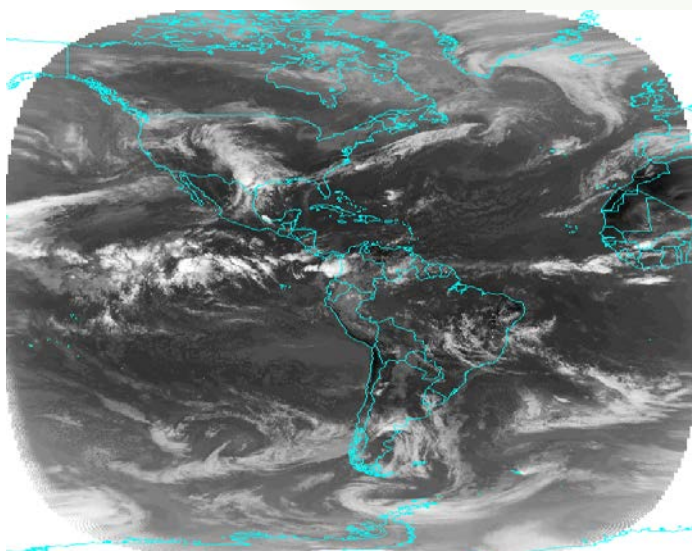
**Format:** GeoTIFF  
**Average Size:** 103 MB  
**Frequency:** 3 hours  
**Max n° of files a day:** 5 (daylight only)  
**GeoTIFF pixel info:** Albedo x 10  
**No image pixel value:** 0  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 1  
**Wavelength:** 0.52 to 0.71  $\mu\text{m}$ , cent. at 0.63  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 1 x 1 km  
**Naming Convention:**  
 GoesEastFD01VjjjHHMM

• **GOES-13 – Full-Disk – Water Vapor Channel**



**Format:** GeoTIFF  
**Average Size:** 48 MB  
**Frequency:** 3 hours  
**Max n° of files a day:** 8  
**GeoTIFF pixel info:** Brightness Temp. x 10  
**No image pixel value:** 0  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 3  
**Wavelength:** 5.77 to 7.33  $\mu\text{m}$ , cent. at 6.50  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 GoesEastFD4I3jjjHHMM

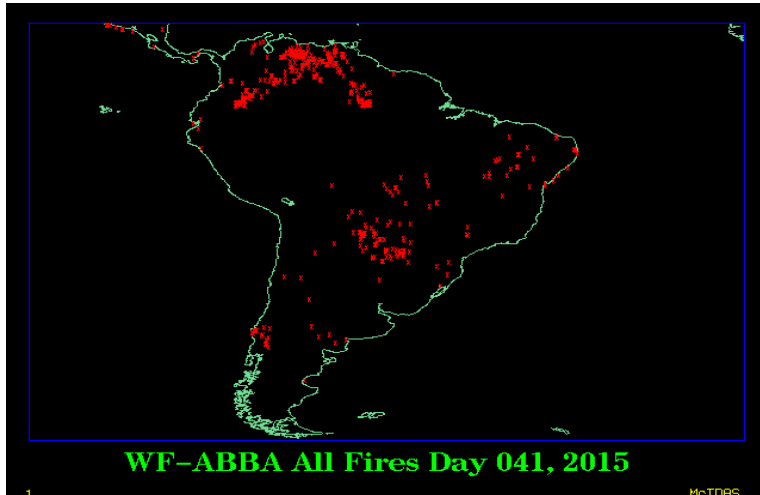
• **GOES-13 – Full-Disk – Infrared Channel**



**Format:** GeoTIFF  
**Average Size:** 89 MB  
**Frequency:** 3 hours  
**Max n° of files a day:** 8  
**GeoTIFF pixel info:** Brightness Temp. x 10  
**No image pixel value:** 0  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 4  
**Wavelength:** 10.20 to 11.20  $\mu\text{m}$ , cent. at 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 GoesEastFD4I4jjjHHMM

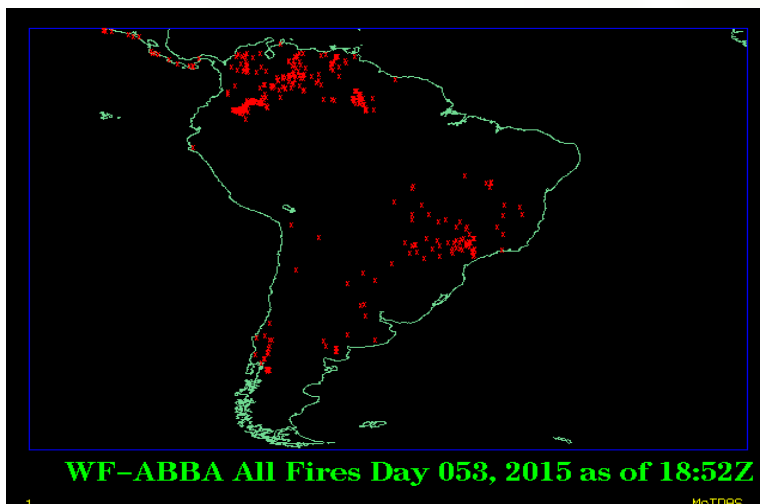


- Automated Biomass Burning Algorithm - ABBA - Accumulated Daily - South America



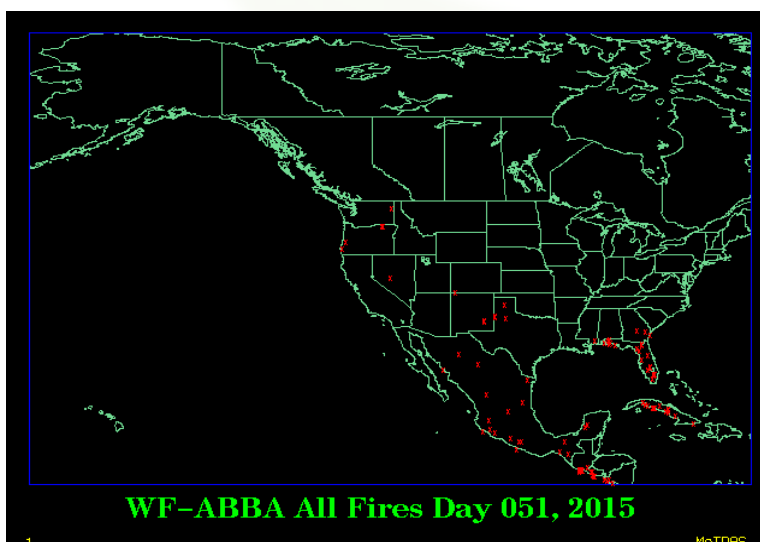
**Format:** GIF  
**Average Size:** 9 kB  
**Frequency:** 1 per day  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 1, 2 and 4  
**Wavelengths:** 0.63, 3.90 and 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 abba24shr

- Automated Biomass Burning Algorithm - ABBA - Current - South America



**Format:** GIF  
**Average Size:** 8 kB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 1, 2 and 4  
**Wavelengths:** 0.63, 3.90 and 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 abba24shr

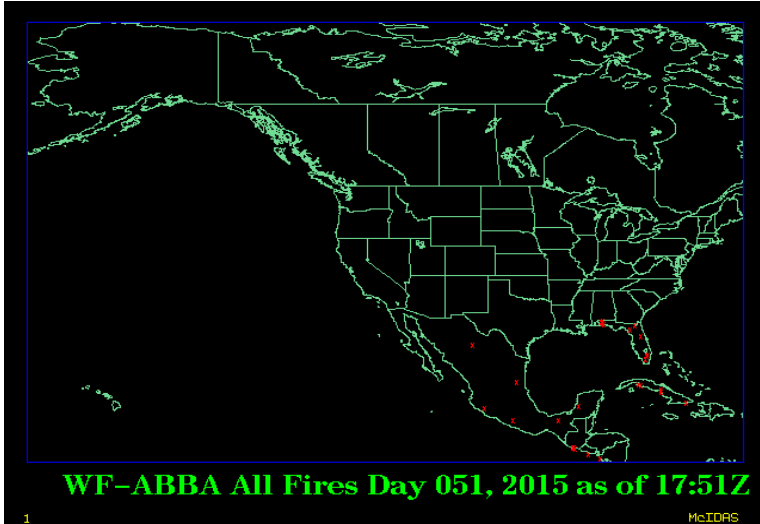
- Automated Biomass Burning Algorithm - ABBA - Accumulated Daily - North America



**Formats:** GIF and CSV  
**Average Size:** 9 kB  
**Frequency:** 1 per day  
**Satellite:** GOES-13 and GOES-15  
**Instrument:** GOES Imager  
**Channel:** 1, 2 and 4  
**Wavelengths:** 0.63, 3.90 and 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Conventions:**  
 abbaYYYYjjj  
 abbaYYYYjjjHHMM.g13  
 abbaYYYYjjjHHMM.g15

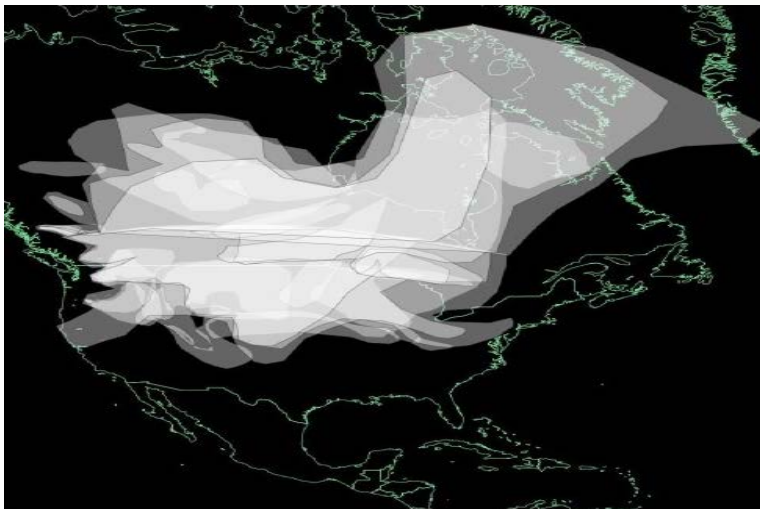


• **Automated Biomass Burning Algorithm - ABBA - Current - North America**



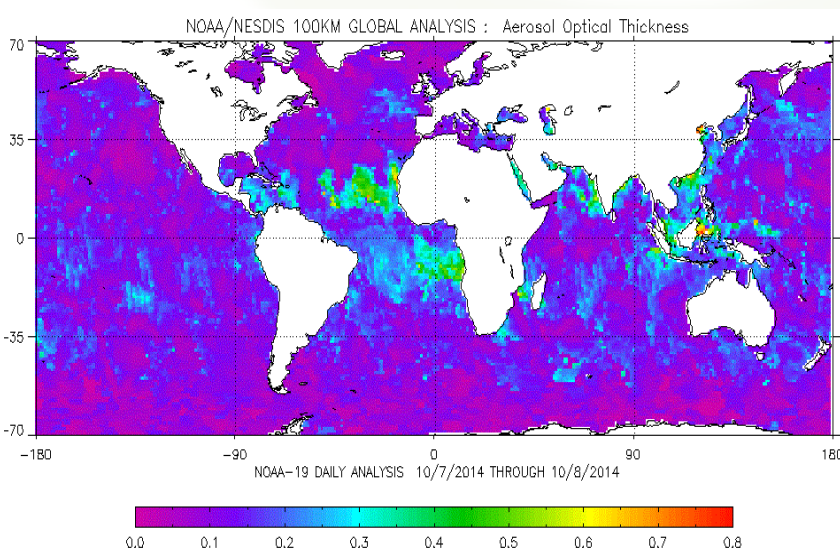
**Format:** GIF  
**Average Size:** 12 kB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 1, 2 and 4  
**Wavelengths:** 0.63, 3.90 and 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 abbacurrent

• **Hazard Mapping System - HMS - Smoke Product - North America**



**Format:** Shapefile (SHP + SHX + DBF)  
 Preliminary Shape and Final Shape  
**Average Size:** 4 kB  
**Frequency:** 72 minutes  
**Max n° of files a day:** 20  
**Satellite:** GOES / NOAA / AQUA / TERRA  
**Instrument:** GOES Imager / AVHRR / MODIS  
**Wavelengths:** 0.63, 3.90 and 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 hms\_smokeYYYYMMDD

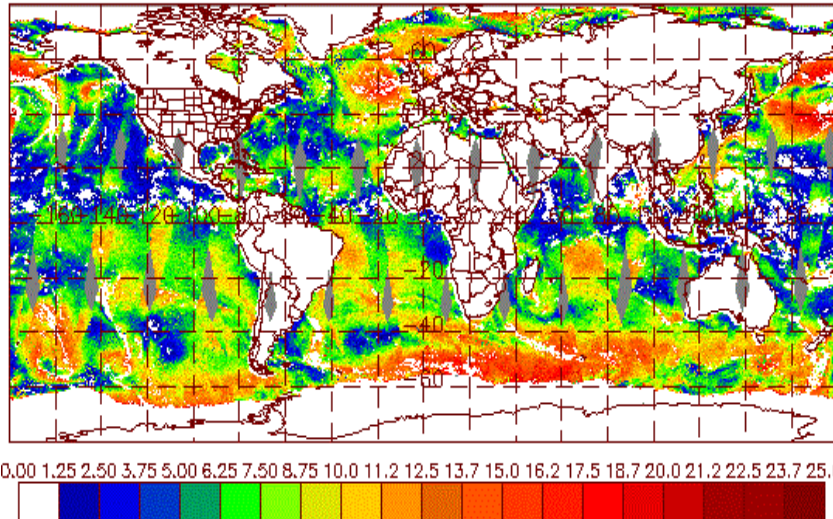
• **NOAA-19 - Aerosol Optical Thickness Daily Analyzed Field - Global**



**Format:** Binary  
**Average Size:** 1.4 MB  
**Frequency:** 1 per day  
**Satellite:** NOAA-19  
**Instrument:** AVHRR  
**Naming Conventions:**  
 aer.field.100km\_global.n19.daily

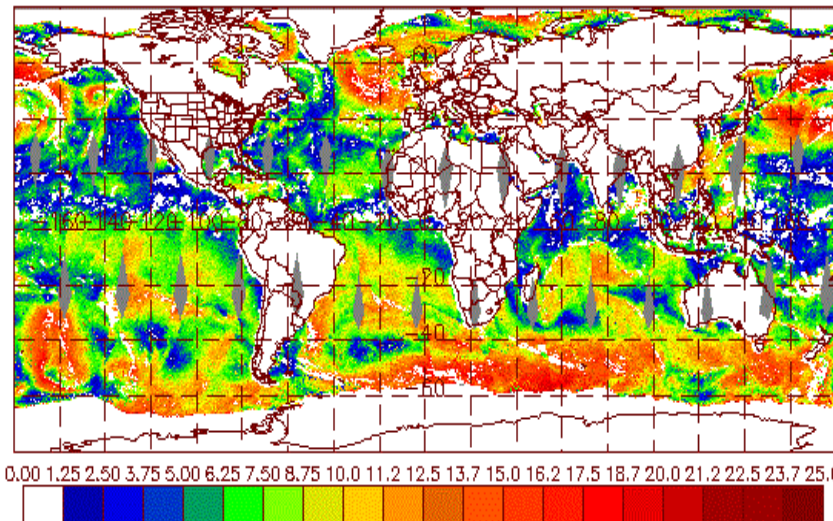


• **DMSP - F16 SSM/IS EDR - Ocean Surface Wind Speed - Global**



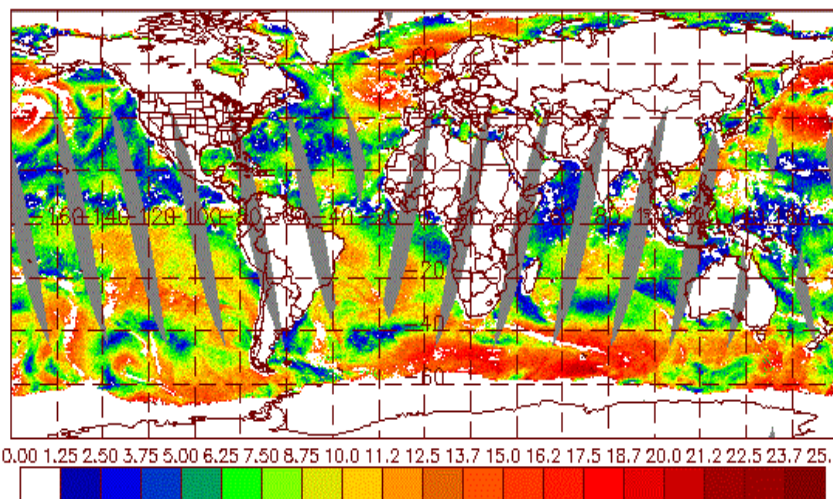
**Format:** BUFR  
**Average Size:** 1.8 MB  
**Frequency:** 120 minutes  
**Max n° of files a day:** 14  
**Satellite:** DMSP (F16)  
**Instrument:** SSM/IS  
**Naming Convention:**  
 NPR.EDEB.SA.D14274.S0001.E0145.  
 B5650910.NS

• **DMSP - F17 SSM/IS EDR - Ocean Surface Wind Speed - Global**



**Format:** BUFR  
**Average Size:** 740 kB  
**Frequency:** 120 minutes  
**Max n° of files a day:** 14  
**Satellite:** DMSP (F17)  
**Instrument:** SSM/IS  
**Naming Convention:**  
 NPR.EDEB.SB.D14198.S1437.E1457.  
 B3972223.MM

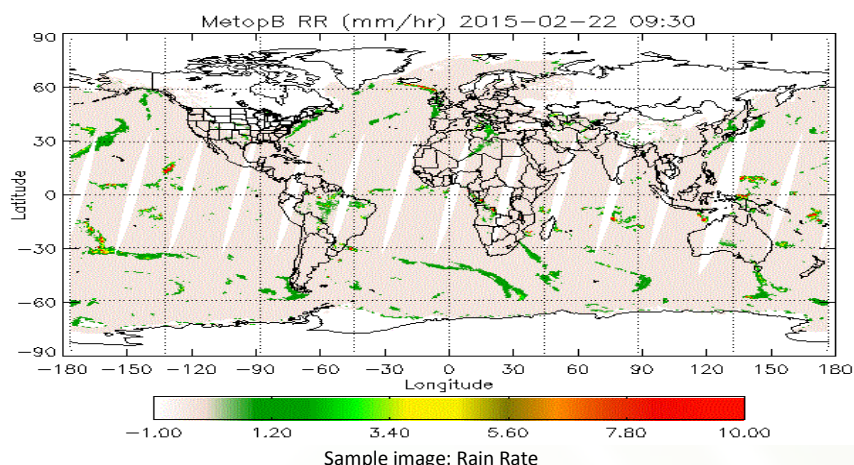
• **DMSP - F18 SSM/IS EDR - Ocean Surface Wind Speed - Global**



**Format:** BUFR  
**Average Size:** 1.8 MB  
**Frequency:** 120 minutes  
**Max n° of files a day:** 14  
**Satellite:** DMSP (F18)  
**Instrument:** SSM/IS  
**Naming Convention:**  
 NPR.EDEB.SC.D14198.S1355.E1539.  
 B2446869.NS

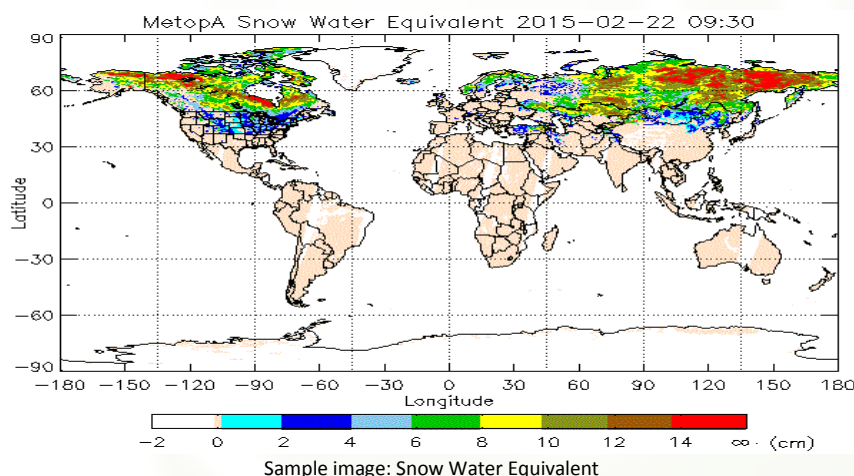


- **Metop-B - MSPPS MHS - Orbital Products – Global** (Rain Rate, Ice Water Path, Snow Water Equivalent and Snow Fall Rate)



**Format:** HDF-EOS  
**Average Size:** 2.0 MB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48  
**Satellite:** Metop-B  
**Instrument:** MHS  
**Resolution:** 17 km at nadir  
**Naming Convention:**  
 NPR.MHOP.M1.D14203.S1308.E1403.  
 B0955960.NS

- **Metop-A - MSPPS MHS - Orbital Products – Global** (Rain Rate, Ice Water Path, Snow Water Equivalent and Snow Fall Rate)



**Format:** HDF-EOS  
**Average Size:** 740 kB  
**Frequency:** 120 minutes  
**Max n° of files a day:** 14  
**Satellite:** Metop-A  
**Instrument:** MHS  
**Resolution:** 17 km at nadir  
**Naming Convention:**  
 NPR.MHOP.M2.D14274.S0839.E1022.  
 B4125253.NS

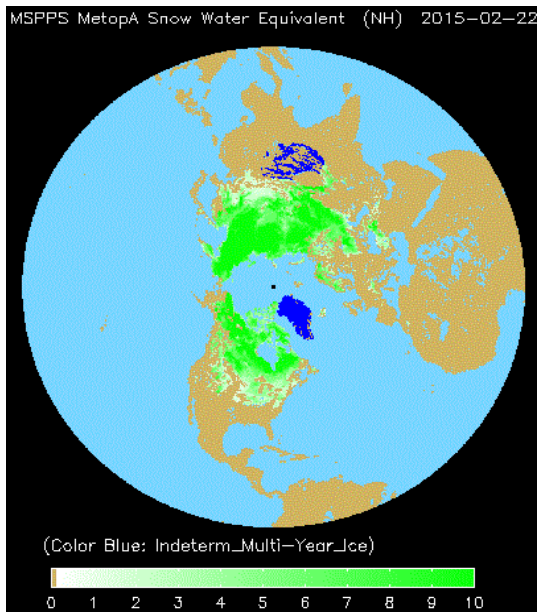
- **Metop-B - MSPPS MHS - Orbital Products - Polar Stereographic – Northern and Southern Hemisphere** (Snow Cover and Snow Water Equivalent)

**Format:** HDF-EOS  
**Average Size:** 9.2 MB  
**Frequency:** Daily  
**Satellite:** Metop-B  
**Instrument:** MHS  
**Resolution:** 17 km at nadir  
**Naming Convention:**  
 NPR.MHMP.M1.D14203

Sample image: Snow Cover



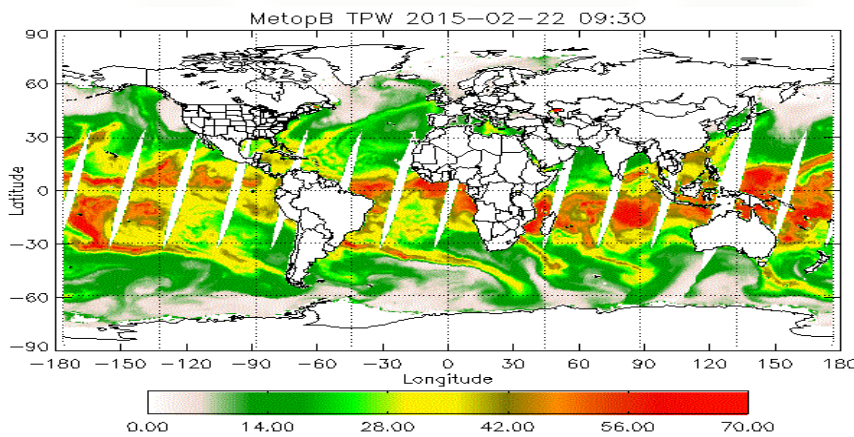
- **Metop-A - MSPPS MHS - Orbital Products - Polar Stereographic – Northern and Southern Hemisphere**  
(Snow Cover and Snow Water Equivalent)



**Format:** HDF-EOS  
**Average Size:** 9.2 MB  
**Frequency:** Daily  
**Satellite:** Metop-A  
**Instrument:** MHS  
**Resolution:** 17 km at nadir  
**Naming Convention:**  
 NPR.MHMP.M2.D14203

Sample image: Snow Water Equivalent

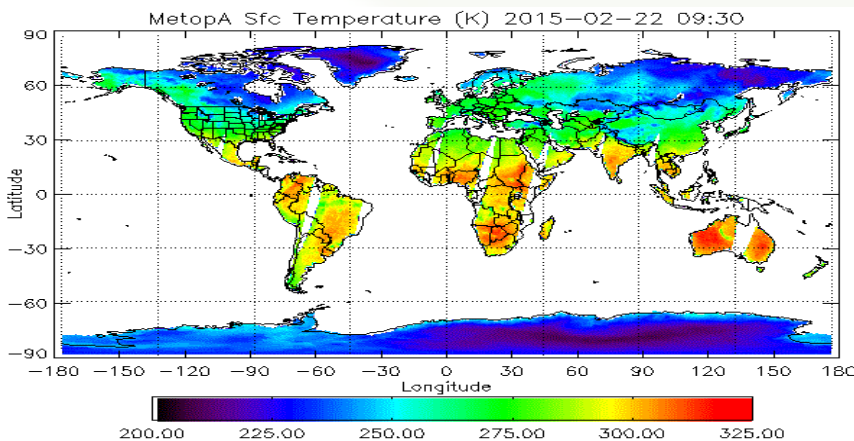
- **Metop-B - MSPPS AMSU-A Daily Products – Global** (Total Precipitable Water, Cloud Liquid Water, Surface Temperature, 23.8 GHz Emissivity, 31.4 GHz Emissivity, 50.3 GHz Emissivity, Sea Ice)



**Format:** HDF-EOS  
**Average Size:** 10.8 MB  
**Frequency:** Daily  
**Satellite:** Metop-B  
**Instrument:** AMSU-A  
**Resolution:** 45 km at nadir  
**Naming Convention:**  
 PRD.AADM.M1.D14203

Sample image: Total Precipitable Water

- **Metop-A - MSPPS AMSU-A Daily Products – Global** (Total Precipitable Water, Cloud Liquid Water, Surface Temperature, 23.8 GHz Emissivity, 31.4 GHz Emissivity, 50.3 GHz Emissivity, Sea Ice)

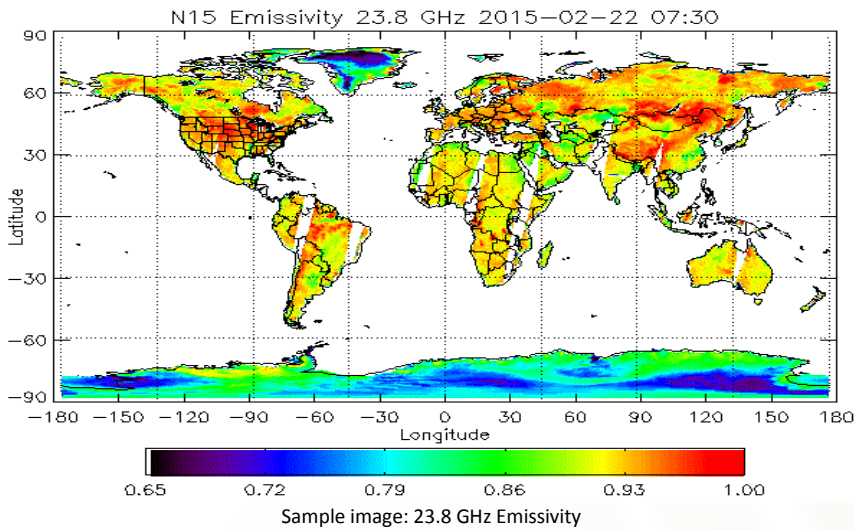


**Format:** HDF-EOS  
**Average Size:** 10.8 MB  
**Frequency:** Daily  
**Satellite:** Metop-A  
**Instrument:** AMSU-A  
**Resolution:** 45 km at nadir  
**Naming Convention:**  
 PRD.AADM.M2.D14203

Sample image: Surface Temperature

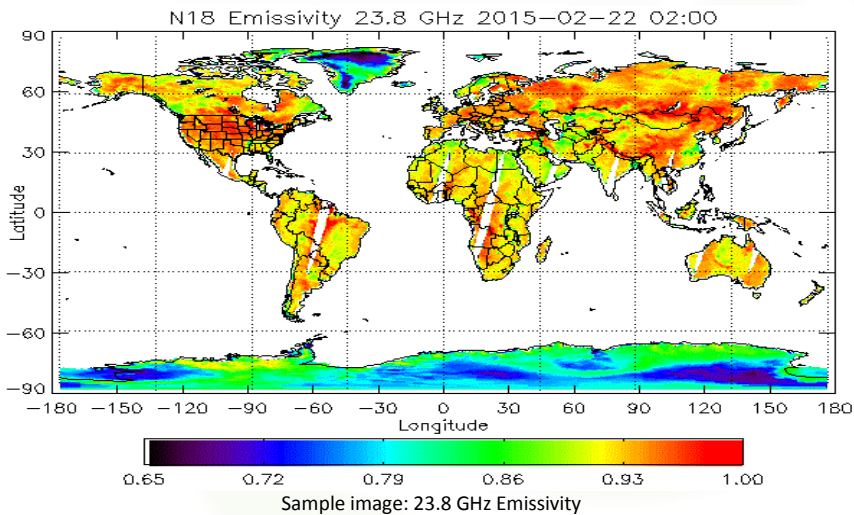


- **NOAA-15 - MSPPS AMSU-A Daily Products – Global** *(Total Precipitable Water, Cloud Liquid Water, Surface Temperature, 23.8 GHz Emissivity, 31.4 GHz Emissivity, 50.3 GHz Emissivity, Sea Ice)*



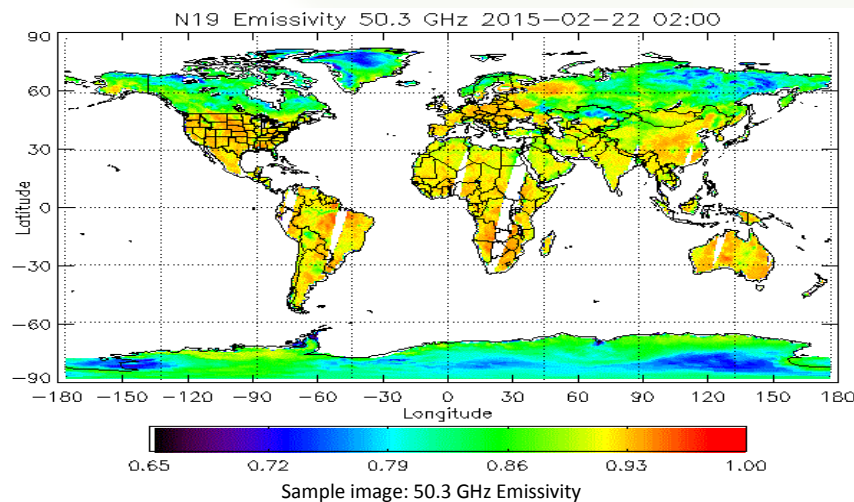
**Format:** HDF-EOS  
**Average Size:** 10.9 MB  
**Frequency:** Daily  
**Satellite:** NOAA-15  
**Instrument:** AMSU-A  
**Resolution:** 45 km at nadir  
**Naming Convention:**  
 PRD.AADM.NK.D14203

- **NOAA-18 - MSPPS AMSU-A Daily Products – Global** *(Total Precipitable Water, Cloud Liquid Water, Surface Temperature, 23.8 GHz Emissivity, 31.4 GHz Emissivity, 50.3 GHz Emissivity, Sea Ice)*



**Format:** HDF-EOS  
**Average Size:** 11.9 MB  
**Frequency:** Daily  
**Satellite:** NOAA-18  
**Instrument:** AMSU-A  
**Resolution:** 45 km at nadir  
**Naming Convention:**  
 PRD.AADM.NN.D14203

- **NOAA-19 - MSPPS AMSU-A Daily Products – Global** *(Total Precipitable Water, Cloud Liquid Water, Surface Temperature, 23.8 GHz Emissivity, 31.4 GHz Emissivity, 50.3 GHz Emissivity, Sea Ice)*

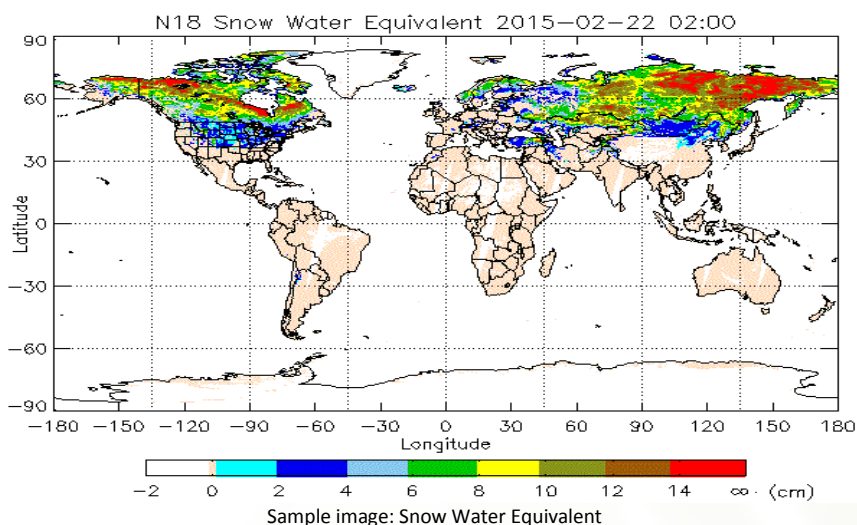


**Format:** HDF-EOS  
**Average Size:** 11.9 MB  
**Frequency:** Daily  
**Satellite:** NOAA-19  
**Instrument:** AMSU-A  
**Resolution:** 45 km at nadir  
**Naming Convention:**  
 PRD.AADM.NP.D14203



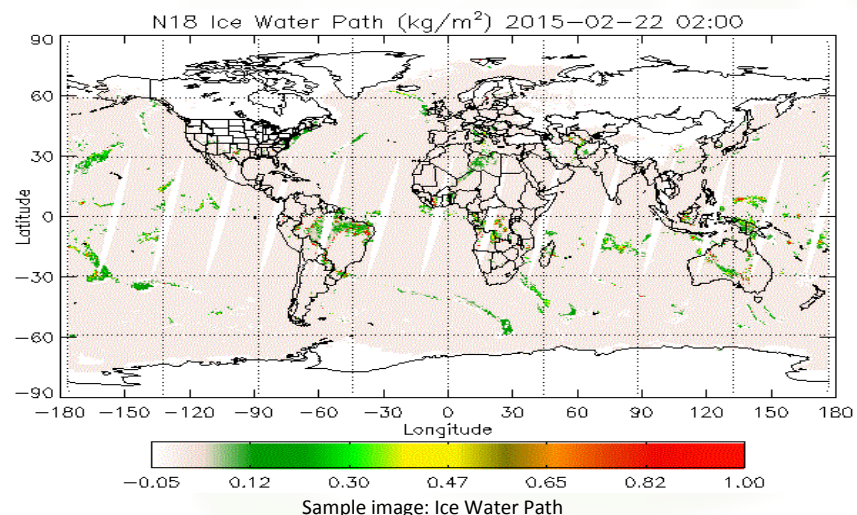


- **NOAA-18 - MSPPS MHS - Orbital Products – Global** (*Rain Rate, Ice Water Path, Snow Water Equivalent and Snow Fall Rate*)



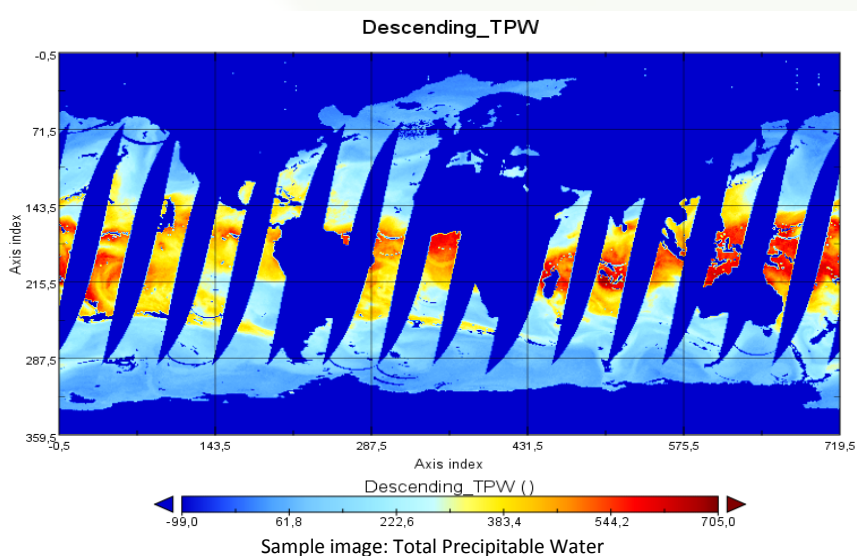
**Format:** HDF-EOS  
**Average Size:** 2.0 MB  
**Frequency:** 120 minutes  
**Max n° of files a day:** 14  
**Satellite:** NOAA-18  
**Instrument:** MHS  
**Resolution:** 17 km at nadir  
**Naming Convention:**  
 NPR.MHOP.NN.D14203.S0929.E1124.  
 B4725657

- **NOAA-19 - MSPPS MHS - Orbital Products – Global** (*Rain Rate, Ice Water Path, Snow Water Equivalent and Snow Fall Rate*)



**Format:** HDF-EOS  
**Average Size:** 740 kB  
**Frequency:** 120 minutes  
**Max n° of files a day:** 14  
**Satellite:** NOAA-19  
**Instrument:** MHS  
**Resolution:** 17 km at nadir  
**Naming Convention:**  
 NPR.MHOP.NP.D14203.S1157.E1343.  
 B2809596.NS

- **DMSP F15 SSM/I Daily Products - Global** (*Total Precipitable Water, Cloud Liquid Water, Cloud Type, Snow Depth, Sea Ice*)

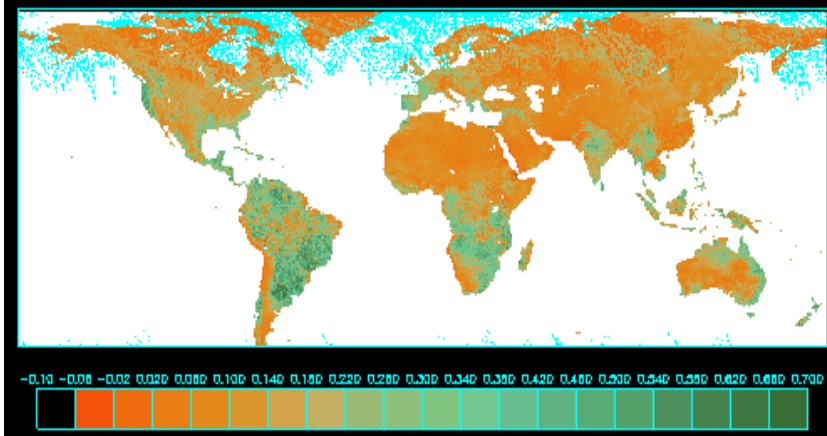


**Format:** HDF-EOS  
**Average Size:** 7.7 MB  
**Frequency:** Daily  
**Satellite:** DMSP (F15)  
**Instrument:** SSM/I  
**Naming Convention:**  
 PRD.SSMIDM.S9.D14203



- **NOAA-18 weekly NDVI in Platee Carree Projection - Global**

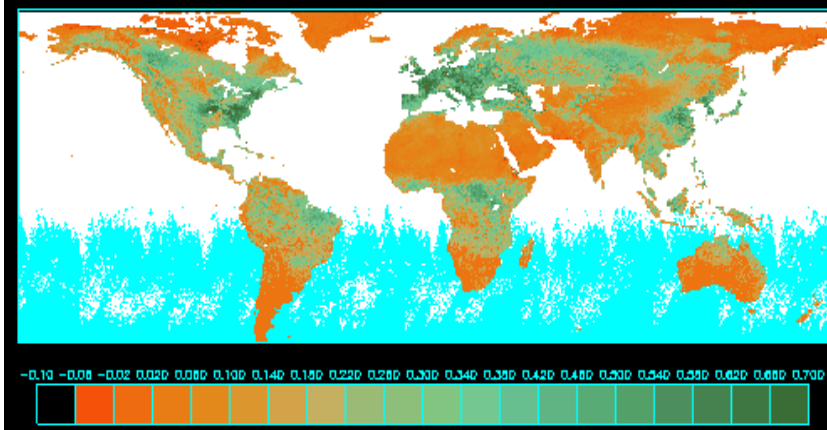
GVI Normalized Difference Vegetation Index: FEB 23 2015



**Format:** BINARY  
**Average Size:** 2.15 MB  
**Frequency:** Daily  
**Satellite:** NOAA-18  
**Instrument:** AVHRR  
**Resolution:** 1 km  
**Naming Convention:**  
 NPR.VACC.NN.D14209.PCWN

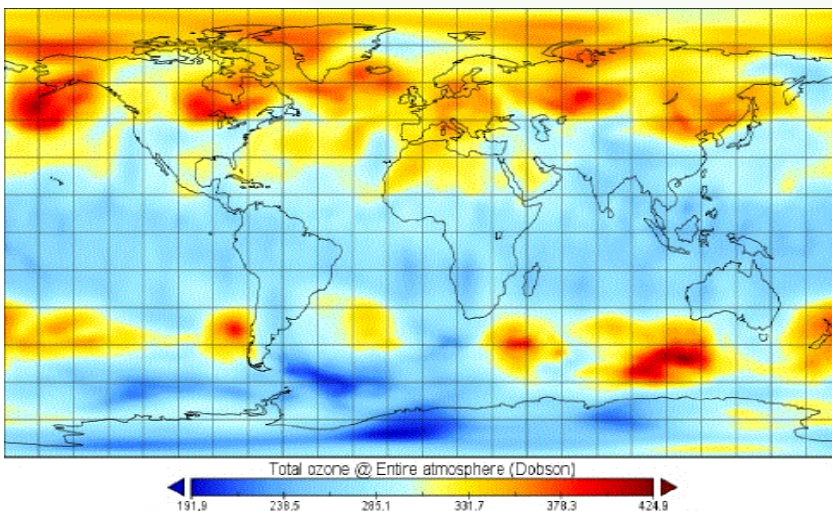
- **NOAA-19 weekly NDVI in Platee Carree Projection - Global**

GVI Normalized Difference Vegetation Index: MAY 17 2015



**Format:** BINARY  
**Average Size:** 2.15 MB  
**Frequency:** Daily  
**Satellite:** NOAA-19  
**Instrument:** AVHRR  
**Resolution:** 1 km  
**Naming Convention:**  
 NPR.VACC.NP.D14209.PCWN

- **Total Ozone Analysis using SBUV-2 and TOVS - TOAST - Global**

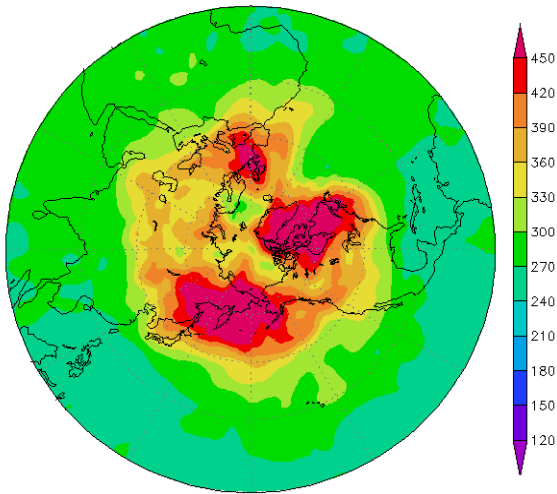


**Formats:** Binary / GRIB / PNG  
**Average Sizes:** 254 kB (Binary), 96 kB (GRIB), 23 kB (PNG)  
**Frequency:** Daily  
**Data Input:** Ozone Retrievals from SBUV/2 (24 to 54 km) and TOVS (4 to 23 km)  
**GRIB pixel info:** Ozone (Dobson)  
**Resolution:** 1 degree  
**Naming Conventions:**  
 toast\_YYYYMMDD.bin  
 TOAST\_YYMMDD.GRB  
 toast\_YYYYMMDD.png



- Total Ozone Analysis using SBUV-2 and TOVS - TOAST - Northern Hemisphere**

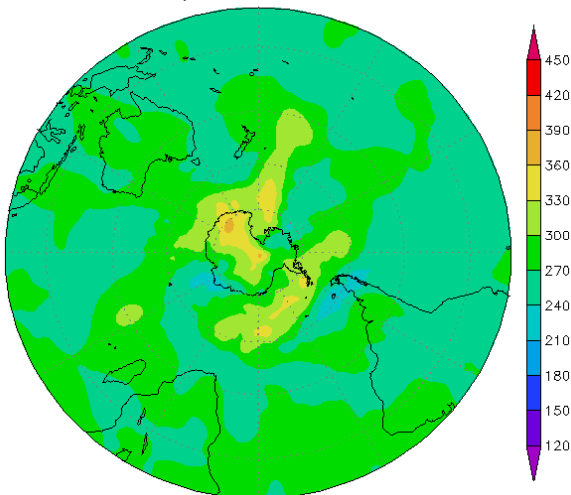
Northern Hemisphere TOAST Analysis on 2014086  
SBUV/2: N19 TOVS: M1



**Format:** PNG  
**Average Size:** 19 kB  
**Frequency:** Daily  
**Data Input:** Ozone Retrievals from SBUV/2 (24 to 54 km) and TOVS (4 to 23 km)  
**Resolution:** 1 degree  
**Naming Convention:** toast\_nh

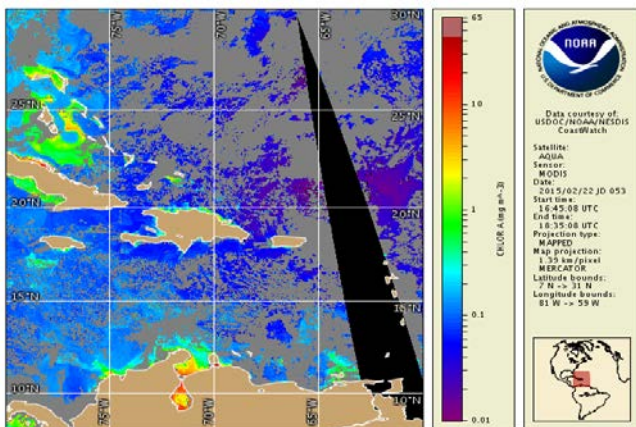
- Total Ozone Analysis using SBUV-2 and TOVS - TOAST - Southern Hemisphere**

Southern Hemisphere TOAST Analysis on 2014086  
SBUV/2: N19 TOVS: M1



**Format:** PNG  
**Average Size:** 19 kB  
**Frequency:** Daily  
**Data Input:** Ozone Retrievals from SBUV/2 (24 to 54 km) and TOVS (4 to 23 km)  
**Resolution:** 1 degree  
**Naming Convention:** toast\_sh

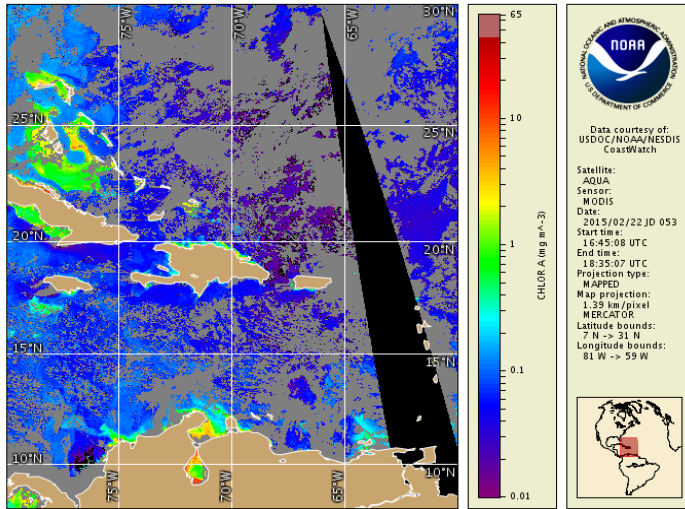
- Sea Surface Chlorophyll - NOAA SWIR - Caribbean**



**Formats:** GeoTIFF and PNG  
**Average Sizes:** 2.9 MB (GeoTIFF), 115 kB (PNG)  
**Frequency:** Daily  
**GeoTIFF pixel info:** 0 ~ 255  
**Satellite:** AQUA  
**Instrument:** MODIS  
**Resolution:** 1.39 km  
**Naming Conventions:**  
 MODWCW\_P2014273\_C5\_1740\_1745\_1915-1925\_CB05\_closest\_chlora  
 MODWCW\_P2014198\_C3\_1755-1805\_CB05\_closest\_chlora

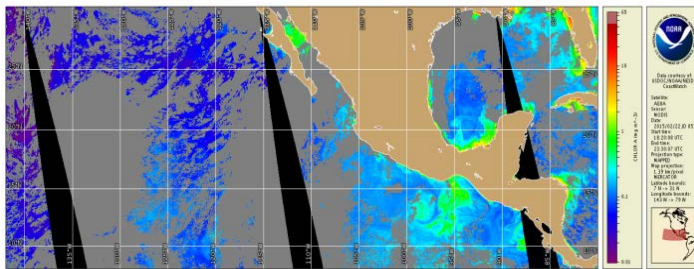


• **Sea Surface Chlorophyll - SEADAS - Caribbean**



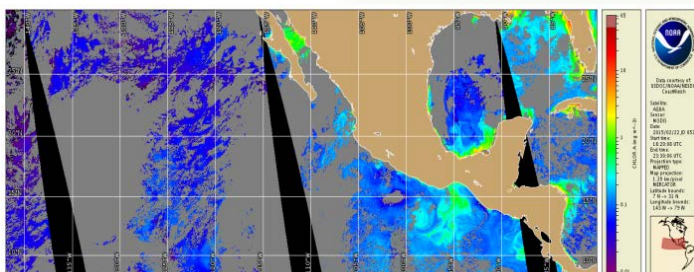
**Formats:** GeoTIFF and PNG  
**Average Sizes:** 2.9 MB (GeoTIFF), 115 kB (PNG)  
**Frequency:** Daily  
**GeoTIFF pixel info:** 0 ~ 255  
**Satellite:** AQUA  
**Instrument:** MODIS  
**Resolution:** 1.39 km  
**Naming Conventions:**  
 MODSCW\_P2014185\_C1\_1655\_CB05\_closest\_chlora  
 MODSCW\_P2014185\_C1\_1655\_CB05\_closest\_chlora

• **Sea Surface Chlorophyll - NOAA SWIR – North America (Eastern Tropical Pacific)**



**Formats:** GeoTIFF and PNG  
**Average Sizes:** 8.85 MB (GeoTIFF), 215 kB (PNG)  
**Frequency:** Daily  
**GeoTIFF pixel info:** 0 ~ 255  
**Satellite:** AQUA  
**Instrument:** MODIS  
**Resolution:** 1.39 km  
**Naming Conventions:**  
 MODWCW\_P2014198\_C9\_1800\_1805\_1935-  
 1945\_2115\_2120\_2255\_2300\_EP05\_closest\_chlora  
 MODWCW\_P2014198\_C9\_1800\_1805\_1935-  
 1945\_2115\_2120\_2255\_2300\_EP05\_closest\_chlora

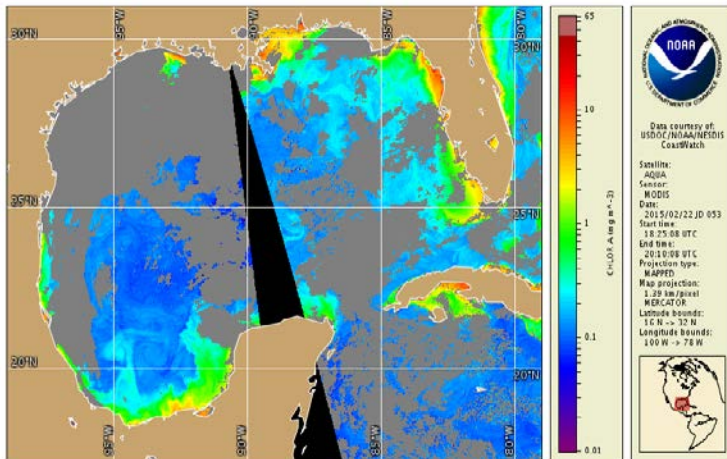
• **Sea Surface Chlorophyll - SEADAS – North America (Eastern Tropical Pacific)**



**Formats:** GeoTIFF and PNG  
**Average Sizes:** 8.85 MB (GeoTIFF), 225 kB (PNG)  
**Frequency:** Daily  
**GeoTIFF pixel info:** 0 ~ 255  
**Satellite:** AQUA  
**Instrument:** MODIS  
**Resolution:** 1.39 km  
**Naming Conventions:**  
 MODSCW\_P2014198\_C9\_1800\_1805\_1935-  
 1945\_2115\_2120\_2255\_2300\_EP05\_closest\_chlora  
 MODSCW\_P2014198\_C9\_1800\_1805\_1935-  
 1945\_2115\_2120\_2255\_2300\_EP05\_closest\_chlora

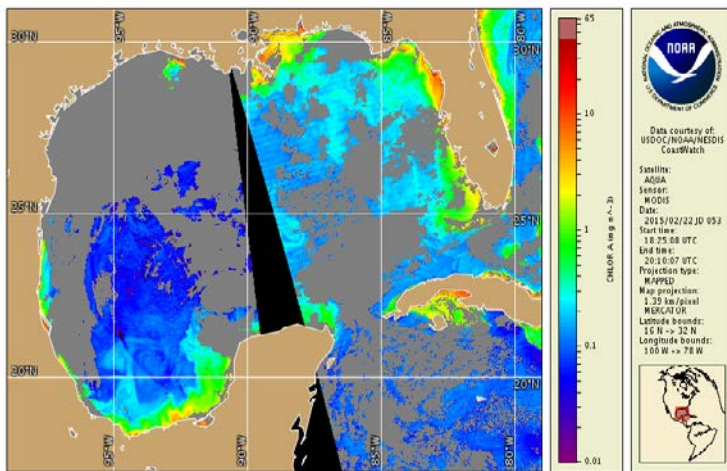


• **Sea Surface Chlorophyll - NOAA SWIR - North America (Gulf of Mexico)**



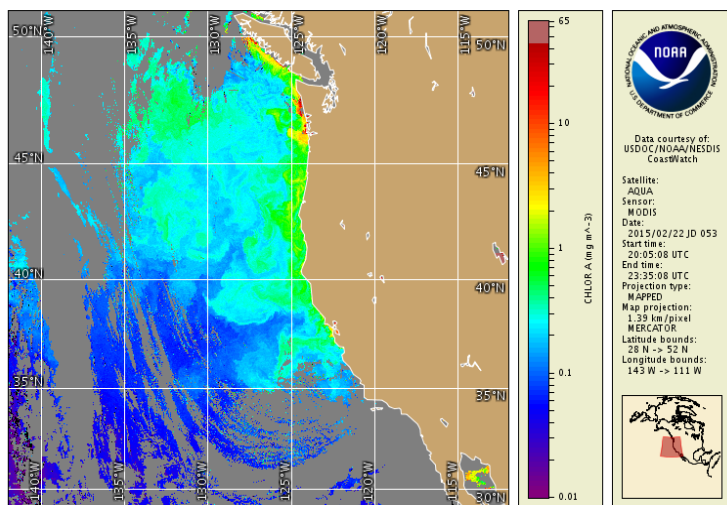
**Formats:** GeoTIFF and PNG  
**Average Sizes:** 1.87 MB (GeoTIFF), 133 kB (PNG)  
**Frequency:** Daily  
**GeoTIFF pixel info:** 0 ~ 255  
**Satellite:** AQUA  
**Instrument:** MODIS  
**Resolution:** 1.39 km  
**Naming Conventions:**  
 MODWCW\_P2014198\_C3\_1800\_1805\_1940\_GM05\_closest\_chlora  
 MODWCW\_P2014198\_C3\_1800\_1805\_1940\_GM05\_closest\_chlora

• **Sea Surface Chlorophyll - SEADAS - North America (Gulf of Mexico)**



**Formats:** GeoTIFF and PNG  
**Average Sizes:** 1.87 MB (GeoTIFF), 137 kB (PNG)  
**Frequency:** Daily  
**GeoTIFF pixel info:** 0 ~ 255  
**Satellite:** AQUA  
**Instrument:** MODIS  
**Resolution:** 1.39 km  
**Naming Conventions:**  
 MODSCW\_P2014198\_C3\_1800\_1805\_1940\_GM05\_closest\_chlora  
 MODSCW\_P2014198\_C3\_1800\_1805\_1940\_GM05\_closest\_chlora

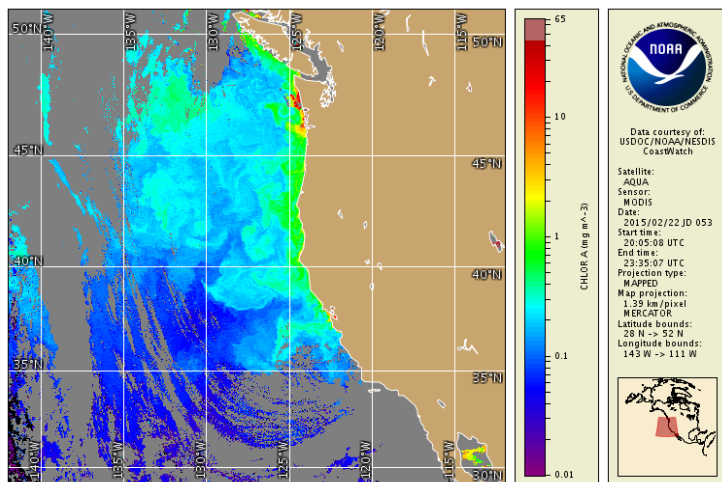
• **Sea Surface Chlorophyll - NOAA SWIR - North America (West Coast [US])**



**Formats:** GeoTIFF and PNG  
**Average Sizes:** 5.34 MB (GeoTIFF), 108 kB (PNG)  
**Frequency:** 480 minutes  
**Max n° of files a day:** 3 per format  
**GeoTIFF pixel info:** 0 ~ 255  
**Satellite:** AQUA  
**Instrument:** MODIS  
**Resolution:** 1.39 km  
**Naming Conventions:**  
 MODWCW\_P2014198\_C5\_1945\_1950\_2120\_2125\_2300\_WC05\_closest\_chlora  
 MODWCW\_P2014198\_C5\_1945\_1950\_2120\_2125\_2300\_WC05\_closest\_chlora

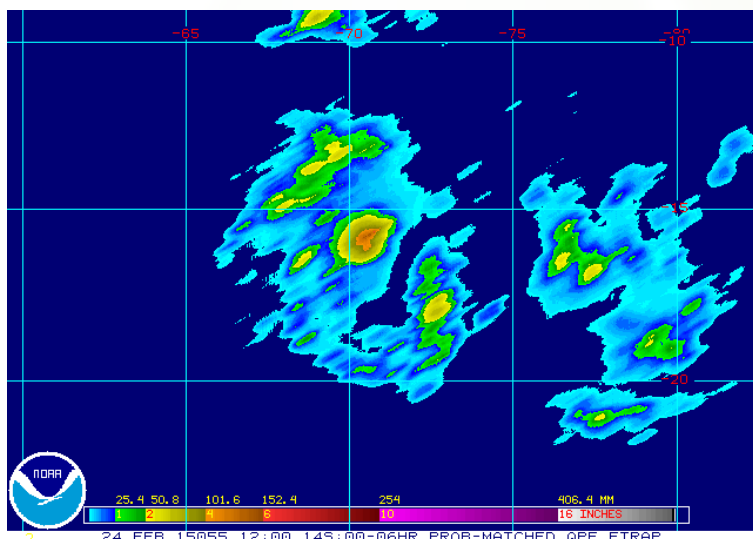


• **Sea Surface Chlorophyll - SEADAS - North America (West Coast [US])**



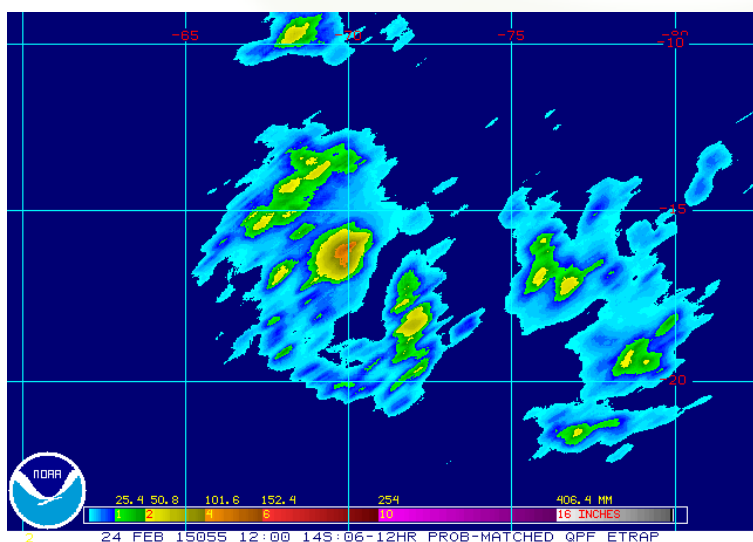
**Formats:** GeoTIFF and PNG  
**Average Sizes:** 5.34 MB (GeoTIFF), 102 kB (PNG)  
**Frequency:** 720 minutes  
**Max n° of files a day:** 2 per format  
**GeoTIFF pixel info:** 0 ~ 255  
**Satellite:** AQUA  
**Instrument:** MODIS  
**Resolution:** 1.39 km  
**Naming Conventions:**  
 MODSCW\_P2014198\_C6\_1945\_1950\_2120\_2125\_2300\_2305\_WC05\_closest\_chlora  
 MODSCW\_P2014198\_C6\_1945\_1950\_2120\_2125\_2300\_2305\_WC05\_closest\_chlora

• **Ensemble Tropical Rainfall Potential - eTRaP - 0 to 6 hours forecast**



**Format:** GIF  
**Average Sizes:** 15 kB  
**Frequency:** Variable  
**Max n° of files a day:** Variable  
**Instruments:** AMSU, TRMM, SSMI and AMSRE  
**Naming Conventions:**  
 eTRaP.\*.p25.\*.00

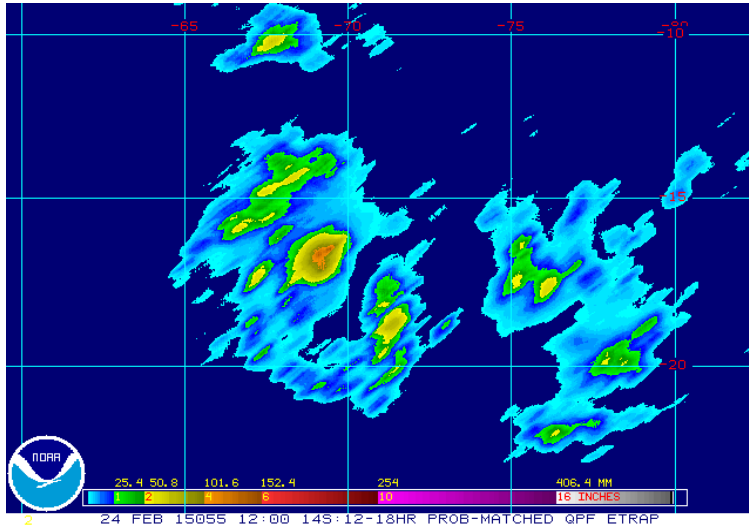
• **Ensemble Tropical Rainfall Potential - eTRaP - 6 to 12 hours forecast**



**Format:** GIF  
**Average Sizes:** 15 kB  
**Frequency:** Variable  
**Max n° of files a day:** Variable  
**Instruments:** AMSU, TRMM, SSMI and AMSRE  
**Naming Conventions:**  
 eTRaP.\*.p25.\*.06

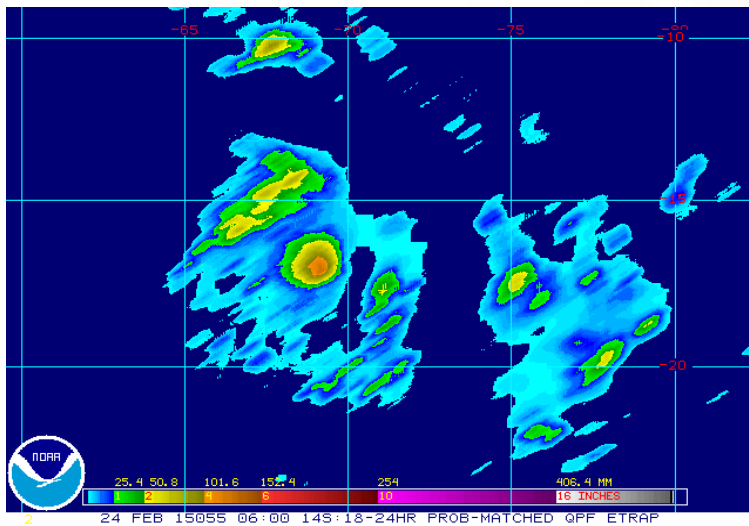


- **Ensemble Tropical Rainfall Potential - eTRaP - 12 to 18 hours forecast**



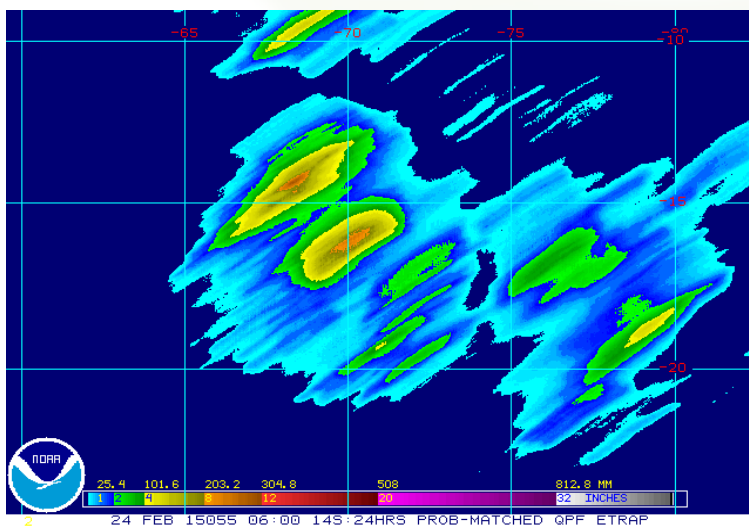
**Format:** GIF  
**Average Sizes:** 15 kB  
**Frequency:** Variable  
**Max n° of files a day:** Variable  
**Instruments:** AMSU, TRMM, SSMI and AMSRE  
**Naming Conventions:**  
 eTRaP.\*.p25.\*.12

- **Ensemble Tropical Rainfall Potential - eTRaP - 18 to 24 hours forecast**



**Format:** GIF  
**Average Sizes:** 15 kB  
**Frequency:** Variable  
**Max n° of files a day:** Variable  
**Instruments:** AMSU, TRMM, SSMI and AMSRE  
**Naming Conventions:**  
 eTRaP.\*.p25.\*.18

- **Ensemble Tropical Rainfall Potential - eTRaP - 24 hours accumulated forecast**



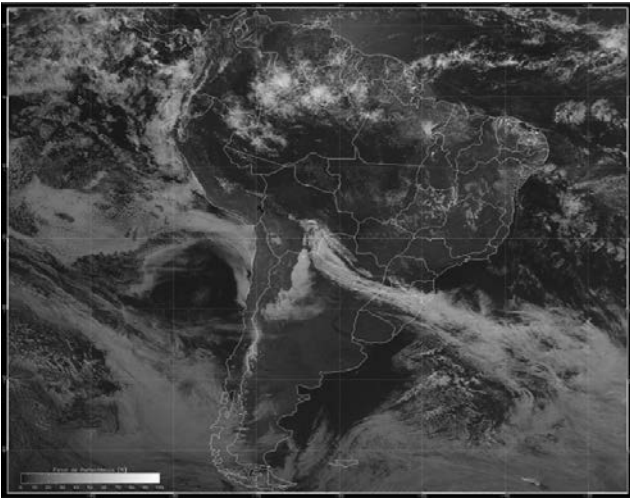
**Format:** GIF  
**Average Sizes:** 15 kB  
**Frequency:** Variable  
**Max n° of files a day:** Variable  
**Instruments:** AMSU, TRMM, SSMI and AMSRE  
**Naming Conventions:**  
 eTRaP.\*.p25.\*.24



## PROVIDER: INPE

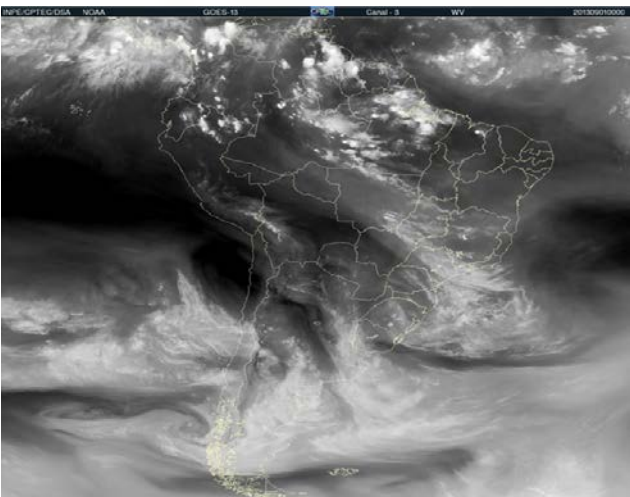
(National Institute for Space Research - Brazil)

- GOES-13 – Visible Channel – South America



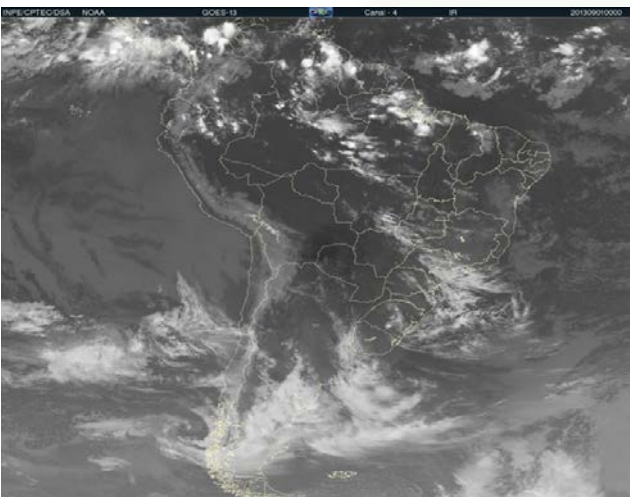
**Formats:** GeoTIFF and JPEG  
**Average Sizes:** 2.30 MB (GeoTIFF) / 590 kB (JPEG)  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48 per format  
**GeoTIFF pixel info:** Albedo x 100  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 1  
**Wavelength:** 0.52 to 0.71  $\mu\text{m}$ , cent. at 0.63  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_SAV\_YYYYMMDDHHMN

- GOES-13 – Water Vapor Channel – South America



**Formats:** GeoTIFF and JPEG  
**Average Sizes:** 1.70 MB (GeoTIFF) / 550 kB (JPEG)  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48 per format  
**GeoTIFF pixel info:** Brightness Temp. x 10  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 3  
**Wavelength:** 5.77 to 7.33  $\mu\text{m}$ , cent. at 6.50  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_SAW\_YYYYMMDDHHMN

- GOES-13 – Infrared Channel – South America

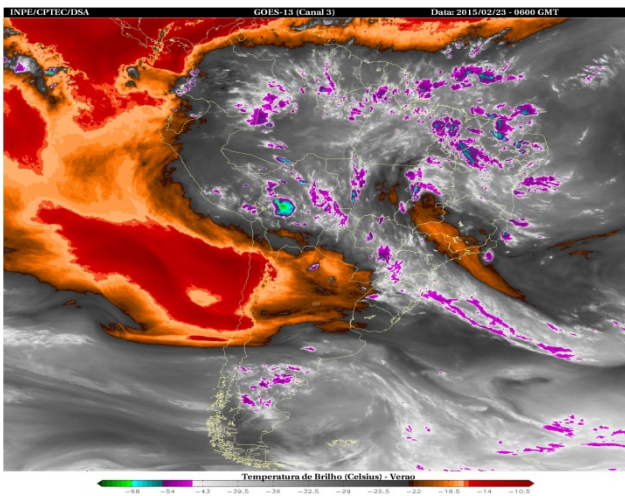


**Formats:** GeoTIFF and JPEG  
**Average Sizes:** 2.70 MB (GeoTIFF) / 640 kB (JPEG)  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48 per format  
**GeoTIFF pixel info:** Brightness Temp. x 10  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 4  
**Wavelength:** 10.20 to 11.20  $\mu\text{m}$ , cent. at 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_SAI\_YYYYMMDDHHMN



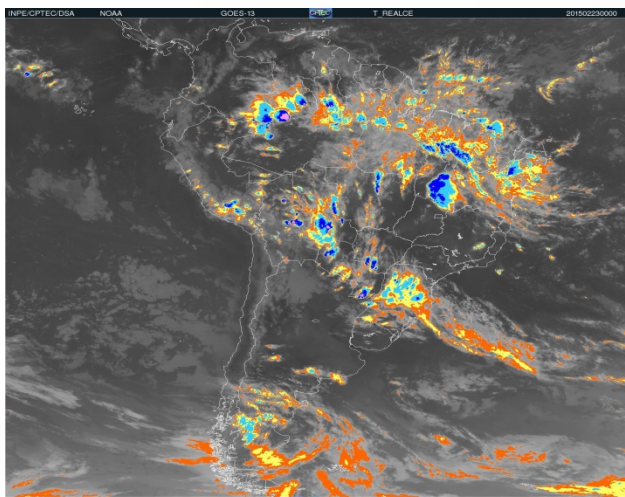


• **GOES-13 – Water Vapor Channel Enhanced – South America**



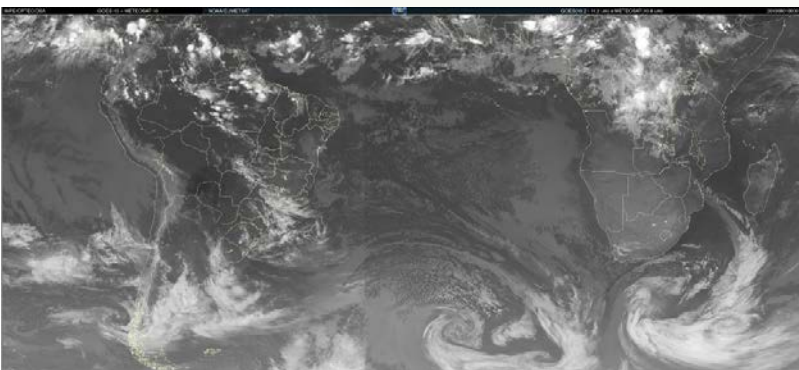
**Format:** JPEG  
**Average Size:** 2.40 MB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 3  
**Wavelength:** 5.77 to 7.33  $\mu\text{m}$ , cent. at 6.50  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_SWE\_YYYYMMDDHHMN

• **GOES-13 – Infrared Channel Enhanced – South America**



**Format:** JPEG  
**Average Size:** 402 kB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 4  
**Wavelength:** 10.20 to 11.20  $\mu\text{m}$ , cent. at 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_SAE\_YYYYMMDDHHMN

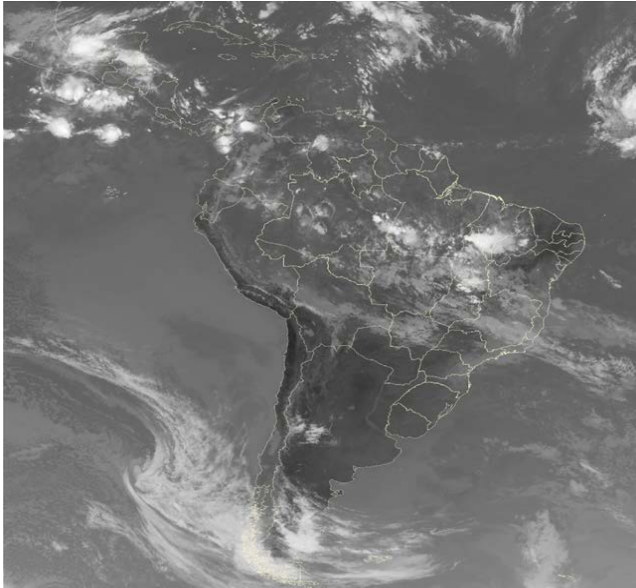
• **GOES-13 + METEOSAT 10 - Infrared Channel - South America and Africa**



**Formats:** GeoTIFF and JPEG  
**Average Sizes:** 6.50 MB (GeoTIFF) / 708 kB (JPEG)  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48 per format  
**GeoTIFF pixel info:** Brightness Temp. x 10  
**Satellites:** GOES-13 and METEOSAT-10  
**Instrument:** GOES-13 Imager / SEVIRI  
**Channels:** 4 and 9  
**Wavelengths:**  
 10.20 to 11.20  $\mu\text{m}$ , cent. at 10.70  $\mu\text{m}$   
 9.80 to 11.80  $\mu\text{m}$ , cent. at 10.80  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_GMC\_YYYYMMDDHHMN

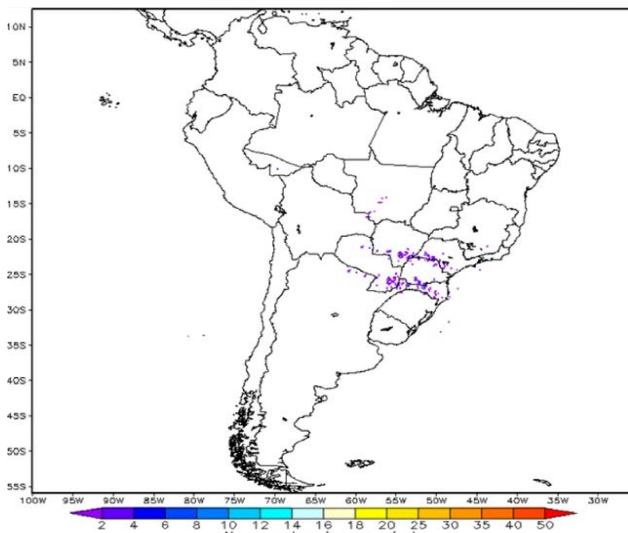


• **GOES-13 – Infrared Channel – Central and South America**



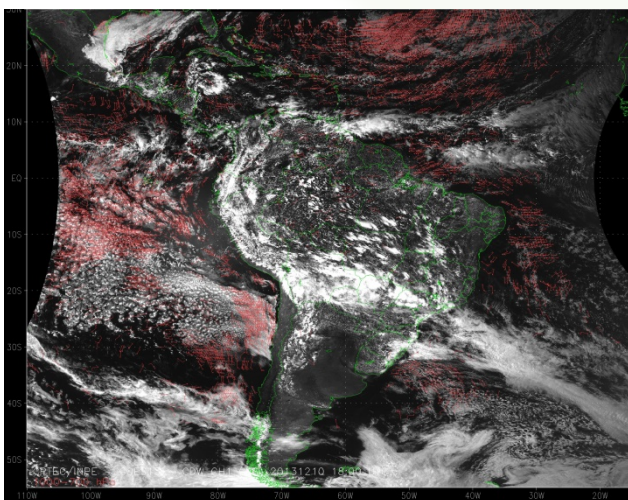
**Format:** GeoTIFF  
**Average Size:** 3.60 MB  
**Frequency:** 3 hours  
**Max n° of files a day:** 8  
**GeoTIFF pixel info:** Brightness Temp. x 10  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 4  
**Wavelength:** 10.20 to 11.20  $\mu\text{m}$ , cent. at 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_CSI\_YYYYMMDDHHMN

• **Lightning Discharges Images – South America**



**Format:** JPEG  
**Average Size:** 64 kB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48  
**Data Input:** Lightning occurrence information collected by RINDAT ground network  
**Naming Convention:**  
 INPE\_LDI\_YYYYMMDDHHMN

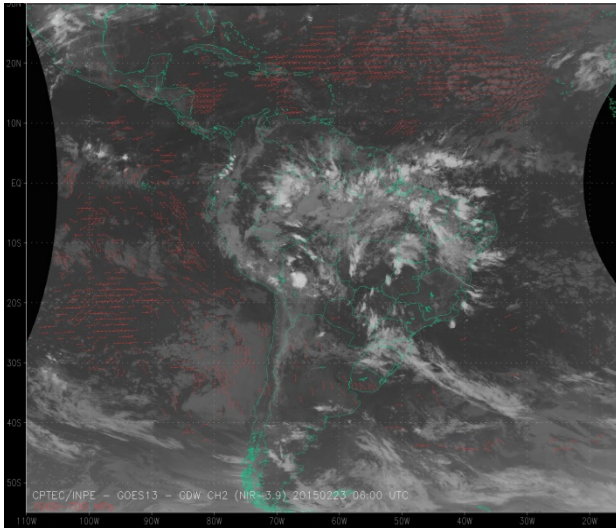
• **Wind Chart - Visible Channel (701-1000 hPa Daytime) - South America**



**Format:** JPEG  
**Average Size:** 2.0 MB  
**Frequency:** 30 minutes (daylight only)  
**Max n° of files a day:** 20  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 1  
**Wavelength:** 0.52 to 0.71  $\mu\text{m}$ , cent. at 0.63  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_GWV\_YYYYMMDDHHMN

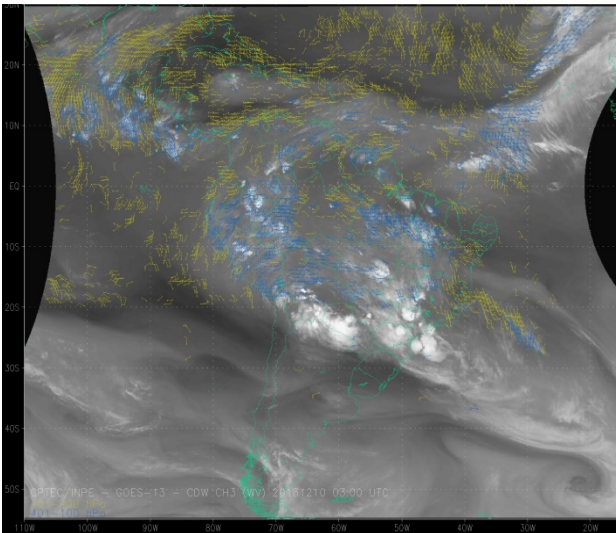


• **Wind Chart - Near Infrared Channel - (701-1000 hPa Nighttime) South America**



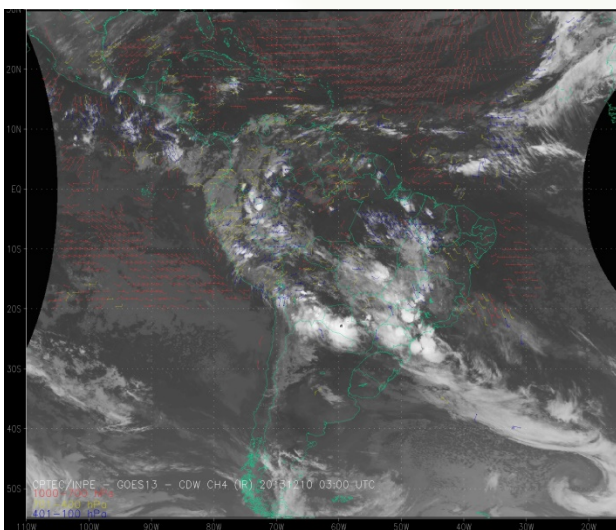
**Format:** JPEG  
**Average Size:** 806 kB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 25 (nighttime only)  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 2  
**Wavelength:** 3.78 to 4.03  $\mu\text{m}$ , cent. at 3.90  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_GWN\_YYYYMMDDHHMN

• **Wind Chart - Water Vapor Channel (100-400 and 401-700 hPa) - South America**



**Format:** JPEG  
**Average Size:** 1.23 MB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 3  
**Wavelength:** 5.77 to 7.33  $\mu\text{m}$ , cent. at 6.50  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_GWW\_YYYYMMDDHHMN

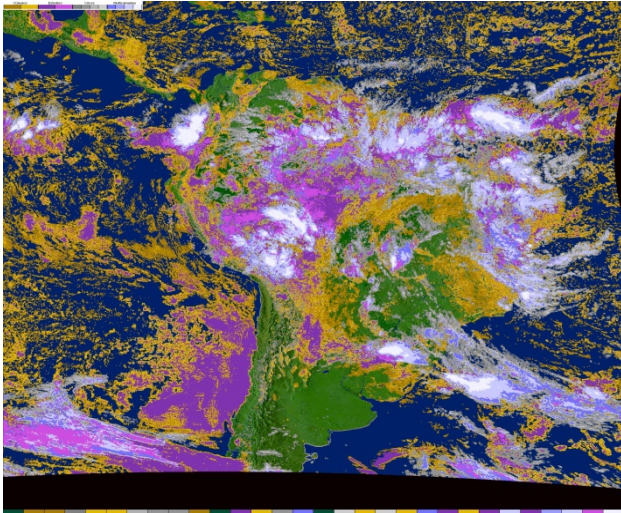
• **Wind Chart - Infrared Channel - All Altitude Levels - South America**



**Format:** JPEG  
**Average Size:** 1.12 MB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 4  
**Wavelength:** 10.20 to 11.20  $\mu\text{m}$ , cent. at 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_GWI\_YYYYMMDDHHMN

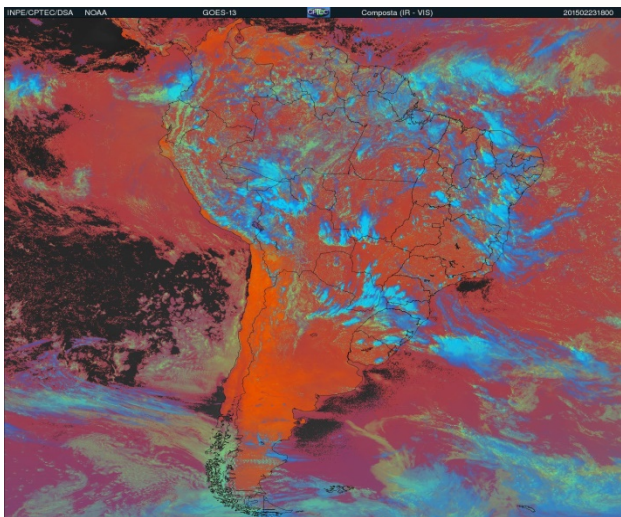


• **GOES-13 - Cloud Classification - South America**



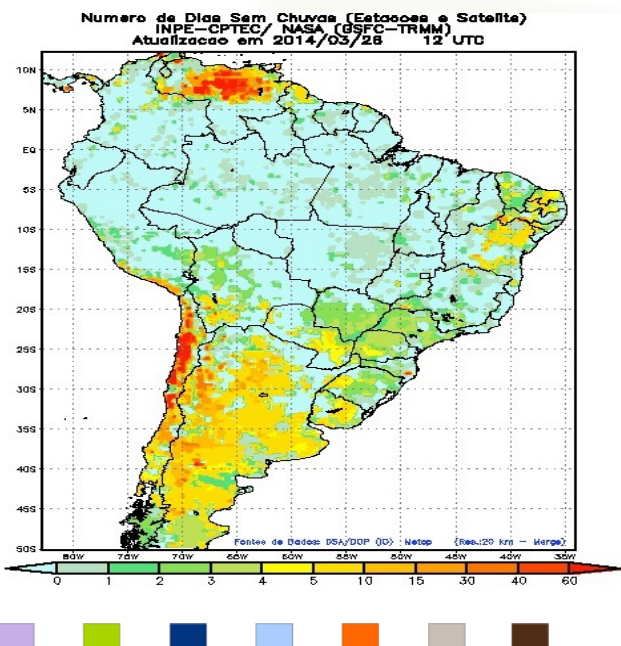
**Format:** JPEG  
**Average Size:** 1.40 MB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 30 (daylight only)  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channels:** 1 and 4  
**Wavelength:** 0.63 and 10.70 μm  
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_CLC\_YYYYMMDDHHMN

• **GOES-13 – Channel Composite - South America**



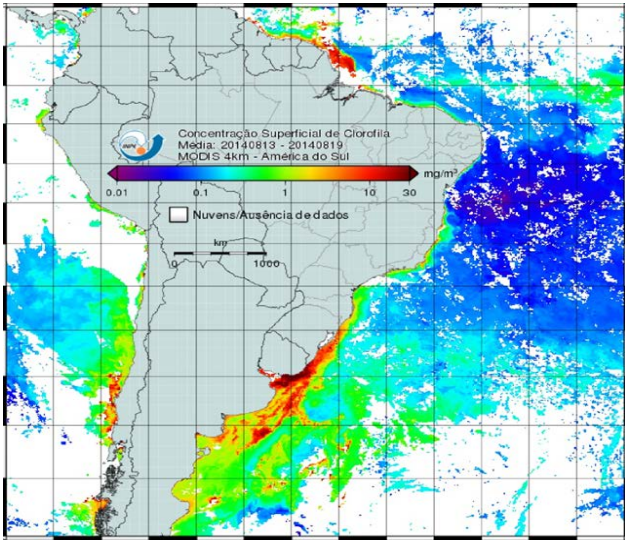
**Format:** JPEG  
**Average Size:** 420 kB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 30 (daylight only)  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channels:** 1 and 4  
**Wavelength:** 0.63 and 10.70 μm  
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_SAC\_YYYYMMDDHHMN

• **Number of Days Without Rain – South America**



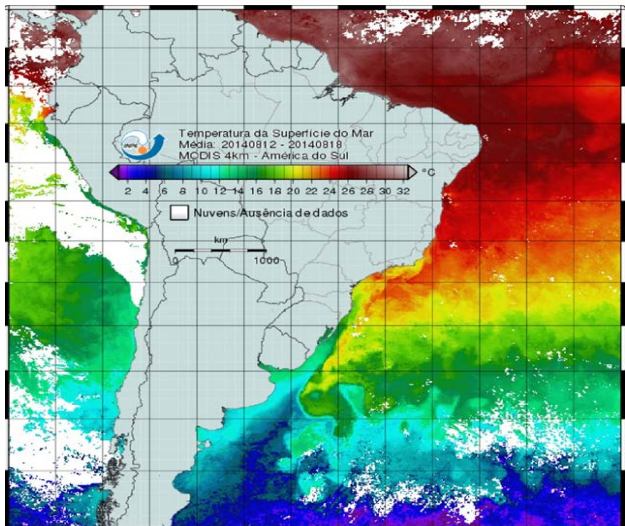
**Format:** JPEG  
**Average Size:** 120 kB  
**Frequency:** Daily  
**Data Input:** TMPA NASA product derived from several satellite inputs (TRMM Radar / GOES-13 / DMSP / Aqua / NOAA) combined with data from Meteorological Surface Stations  
**Projection:** Rectangular  
**Resolution:** 24 x 24 km  
**Naming Convention:**  
 INPE\_NDR\_YYYYMMDDHHMN

• **Sea Surface Chlorophyll - South America**



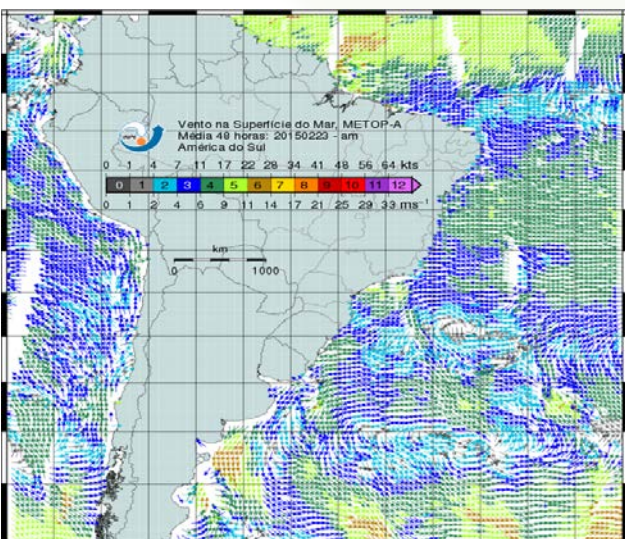
**Format:** PNG  
**Average Size:** 245 kB  
**Frequency:** Daily  
**Satellite:** AQUA  
**Instrument:** MODIS  
**Channels / Bands used:** Channels 8 to 16 (412 nm to 869 nm)  
**Projection:** Rectangular  
**Resolution:** 1 x 1 km  
**Naming Convention:** INPE\_SSC\_YYYYMMDDHHMN

• **Sea Surface Temperature - South America**



**Format:** PNG  
**Average Size:** 410 kB  
**Frequency:** Daily  
**Satellite:** AQUA  
**Instrument:** MODIS  
**Channels / Bands used:** 31 (10.30 – 11.30 μm) / 32 (11.50 – 12.50 μm)  
**Projection:** Rectangular  
**Resolution:** 1 x 1 km  
**Naming Convention:** INPE\_SST\_YYYYMMDDHHMN

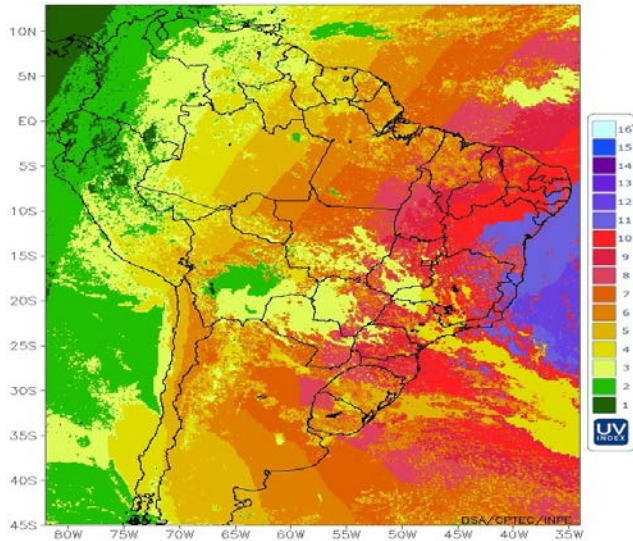
• **Sea Surface Winds - South America**



**Format:** PNG  
**Average Size:** 410 kB  
**Frequency:** Twice a Day  
**Satellite:** METOP A/B  
**Instrument:** ASCAT  
**Projection:** Rectangular  
**Naming Convention:** INPE\_SSW\_YYYYMMDDHHMN

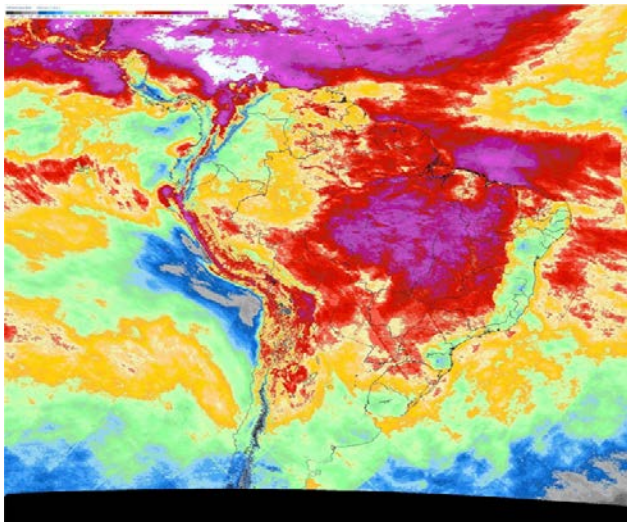


• **Ultraviolet Index – South America**



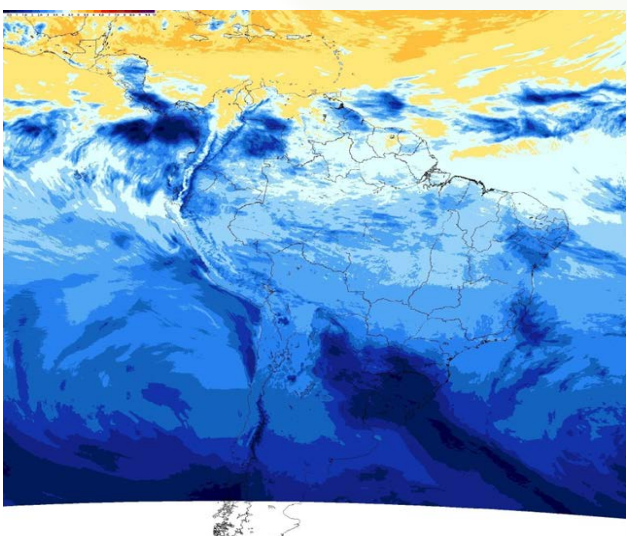
**Format:** JPEG  
**Average Size:** 170 kB  
**Frequency:** 30 min  
**Max n° of files a day:** 25 (daylight only)  
**Data Input:** Ozone concentration from NCEP/NOAA analysis and GOES-13 imagery (Cloud type estimation)  
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_UVI\_YYYYMMDDHHMN

• **Accumulated Average Insolation - South America**



**Format:** JPEG  
**Average Size:** 1.68 MB  
**Frequency:** Daily  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 1  
**Wavelength:** 0.52 to 0.71  $\mu\text{m}$ , cent. at 0.63  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_AAI\_YYYYMMDDHHMN

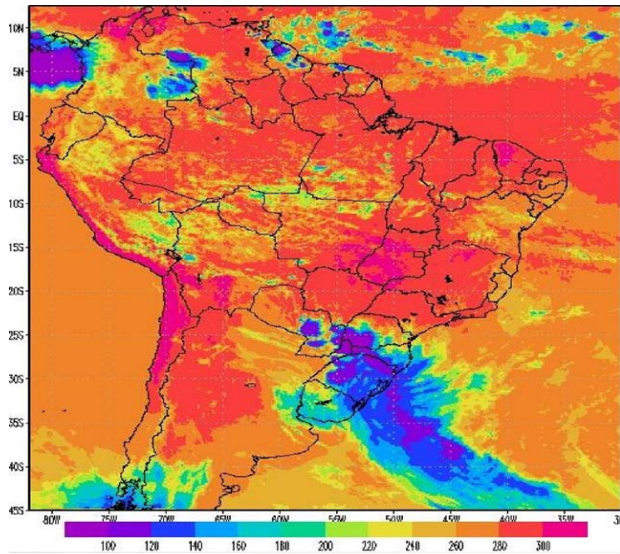
• **Global Solar Radiation - South America**



**Formats:** GeoTIFF and JPEG  
**Average Sizes:** 3.83 MB (GeoTIFF) / 1.07 MB (JPEG)  
**Frequencies:** Monthly (GeoTIFF) / Daily (JPEG)  
**GeoTIFF pixel info:**  $\text{W/m}^2 \times 10$   
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 1  
**Wavelength:** 0.52 to 0.71  $\mu\text{m}$ , cent. at 0.63  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_GSR\_YYYYMMDDHHMN

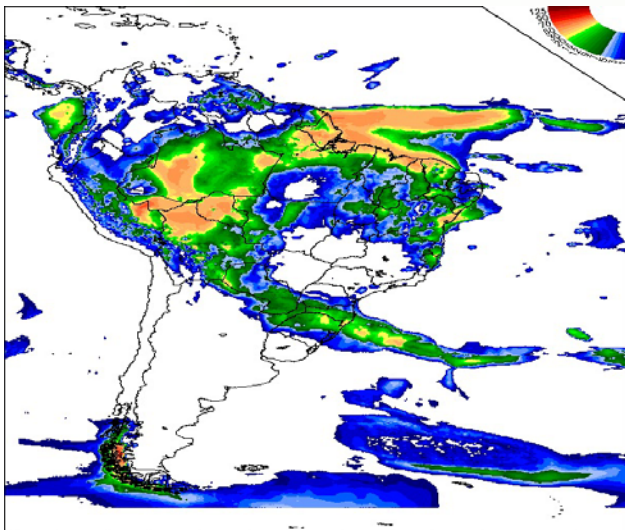


• **Long Wave Radiation - South America**



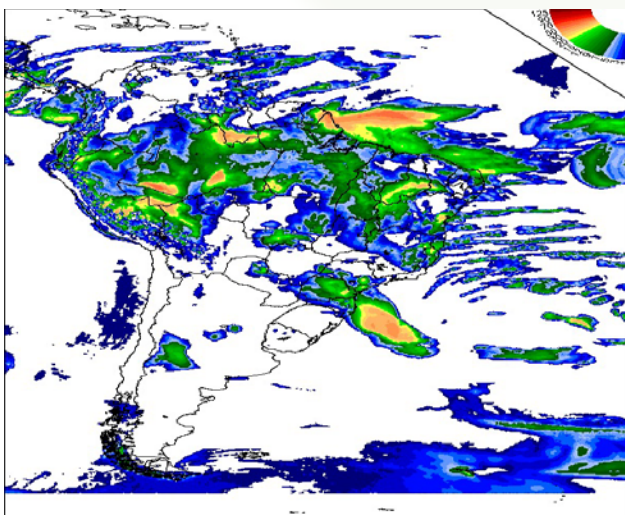
**Format:** JPEG  
**Average Size:** 180 kB  
**Frequency:** 3 hours  
**Max n° of files a day:** 8  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 4  
**Wavelength:** 10.20 to 11.20  $\mu\text{m}$ , cent. at 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_LWR\_YYYYMMDDHHMN

• **Accumulated Precipitation Forecast - 24 Hours - South America**



**Format:** JPEG  
**Average Size:** 180 kB  
**Frequency:** Daily  
**Naming Convention:**  
 INPE\_RP1\_YYYYMMDDHHMN

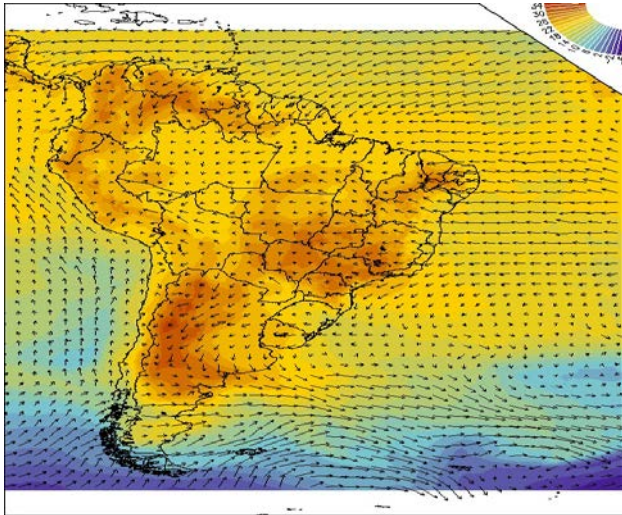
• **Accumulated Precipitation Forecast - 48 Hours - South America**



**Format:** JPEG  
**Average Size:** 200 kB  
**Frequency:** Daily  
**Naming Convention:**  
 INPE\_RP2\_YYYYMMDDHHMN

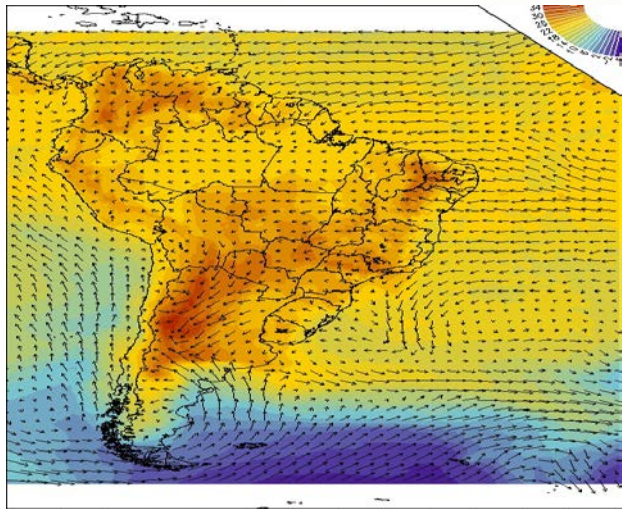


- **Air Temperature and Wind at 925 hPa - 24 Hours - South America**



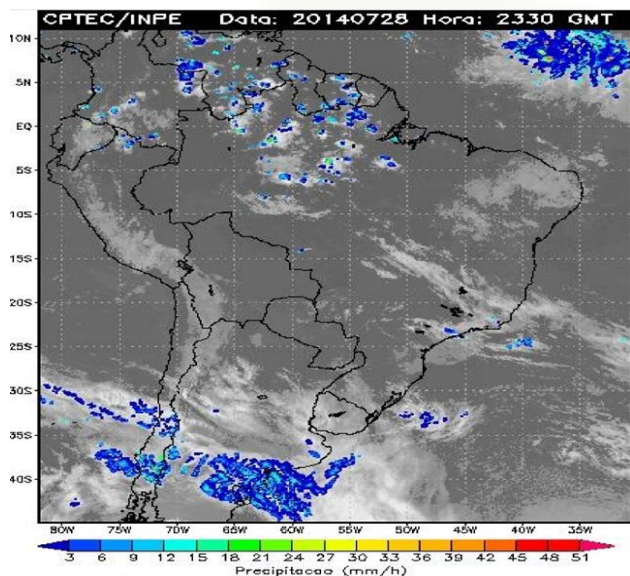
**Format:** JPEG  
**Average Size:** 265 kB  
**Frequency:** Daily  
**Naming Convention:**  
 INPE\_RT1\_YYYYMMDDHHMN

- **Air Temperature and Wind at 925 hPa - 48 Hours - South America**



**Format:** JPEG  
**Average Size:** 265 kB  
**Frequency:** Daily  
**Naming Convention:**  
 INPE\_RT2\_YYYYMMDDHHMN

- **Instantaneous Precipitation - South America**

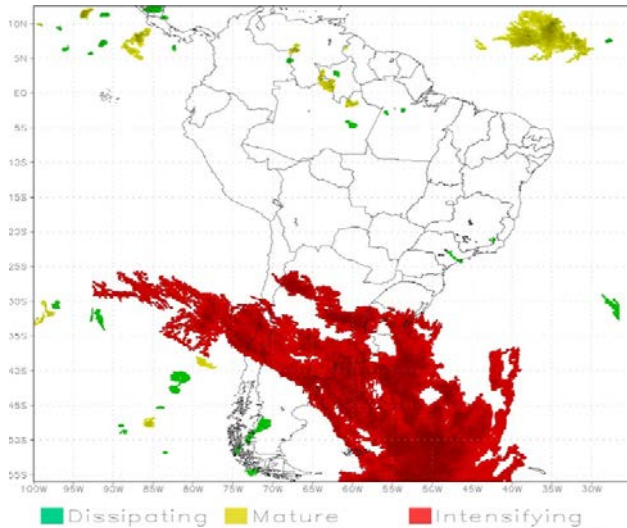


**Formats:** GeoTIFF and JPEG  
**Average Sizes:** 40 kB (GeoTIFF) / 115 kB (JPEG)  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48 per format  
**GeoTIFF pixel info:** 0 ~ 255  
**Max n° of files a day:** 48  
**Data Input:** GOES-13 imagery (Cloud top brightness temperature)  
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_RFS\_YYYYMMDDHHMN



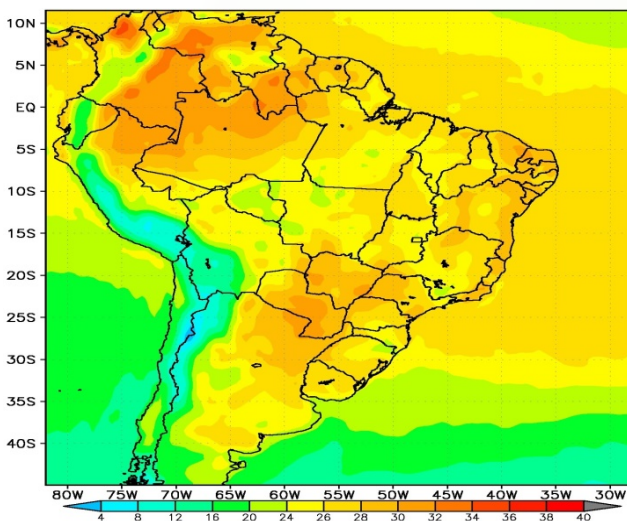


• **Forecast and Tracking the Evolution of Cloud Clusters - ForTraCC - South America**



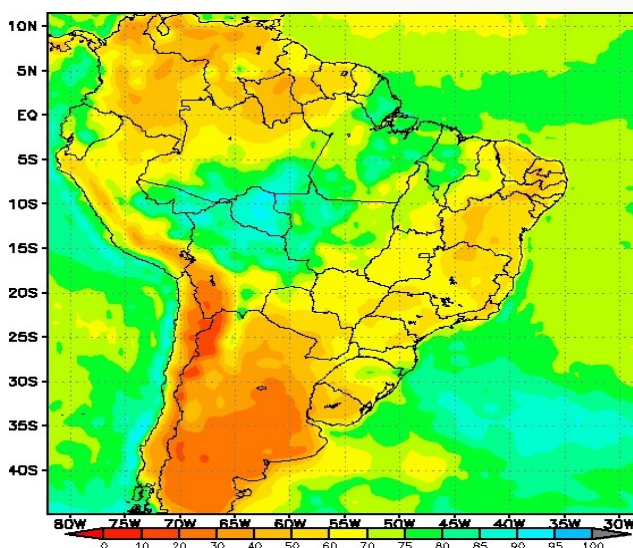
**Format:** JPEG  
**Average Size:** 410 kB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 4  
**Wavelength:** 10.20 to 11.20  $\mu\text{m}$ , cent. at 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_RFS\_YYYYMMDDHHMN

• **Average Maximum Air Temperature - South America**



**Format:** JPEG  
**Average Size:** 145 kB  
**Frequency:** Daily  
**Naming Convention:**  
 INPE\_AMT\_YYYYMMDDHHMN

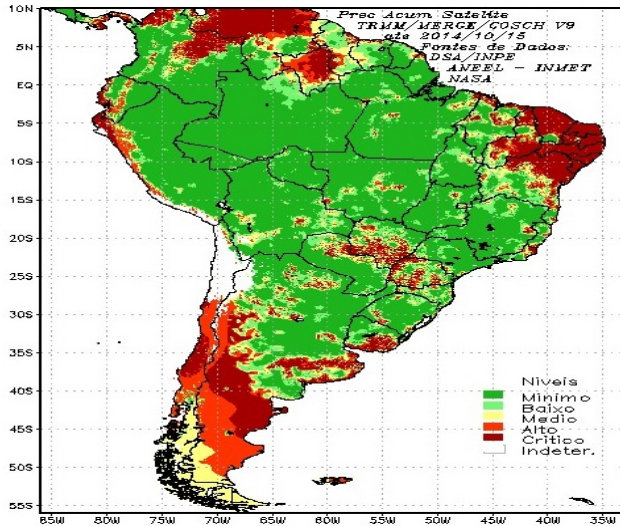
• **Average Minimum Relative Humidity - South America**



**Format:** JPEG  
**Average Size:** 155 kB  
**Frequency:** Daily  
**Naming Convention:**  
 INPE\_ARH\_YYYYMMDDHHMN

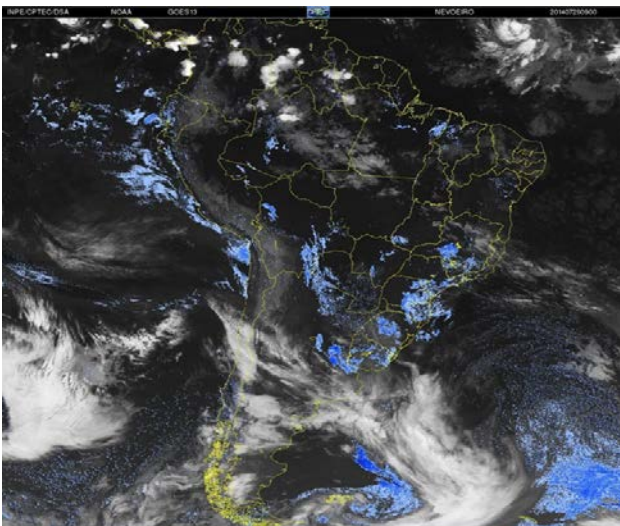


• **Fire Risk Map - South America**



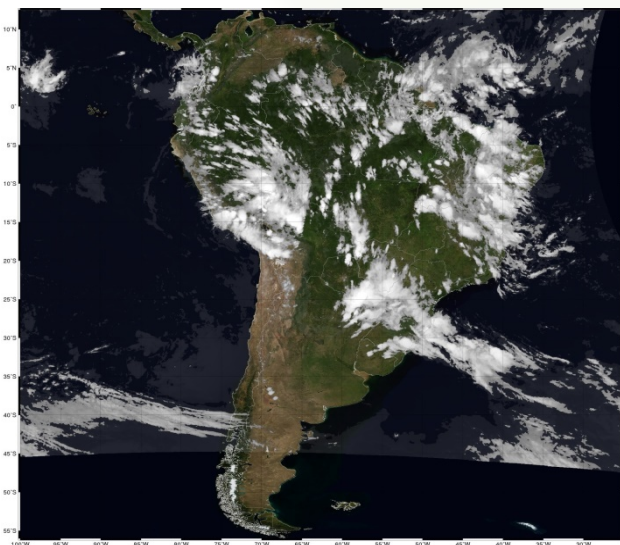
**Format:** JPEG  
**Average Size:** 145 kB  
**Frequency:** Daily  
**Naming Convention:**  
 INPE\_FRM\_YYYYMMDDHHMN

• **Fog - South America**



**Format:** JPEG  
**Average Size:** 1.96 MB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 25 (nighttime only)  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 2 and 4  
**Wavelength:** 3.90 and 10.70 µm  
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 INPE\_SAF\_YYYYMMDDHHMN

• **GOES-13/AQUA/TERRA - Blue Marble - South America**



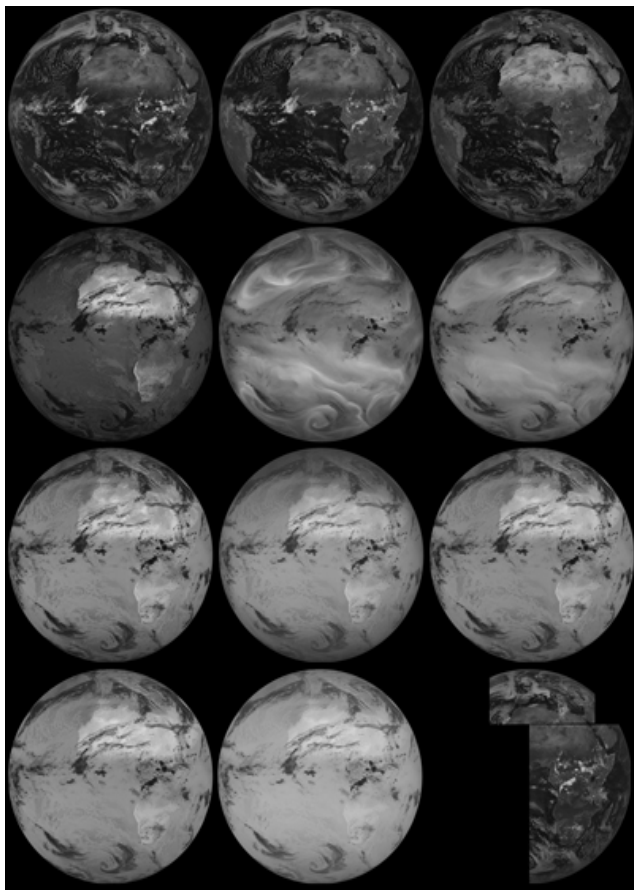
**Format:** JPEG  
**Average Size:** 700 kB  
**Frequency:** 30 minutes  
**Max n° of files a day:** 48  
**Satellites:** GOES-13/AQUA/TERRA  
**Instrument:** GOES-13 Imager  
**Channel:** 4  
**Wavelength:** 10.20 to 11.20 µm, cent. at 10.70 µm  
**Projection:** Rectangular  
**Naming Convention:**  
 INPE\_SAD\_YYYYMMDDHHMN



## PROVIDER: EUMETSAT

(European Organization for the Exploitation of Meteorological Satellites – Europe / Intergovernmental)

- SEVIRI Level 1.5 Image Data - MSG - 0 degree

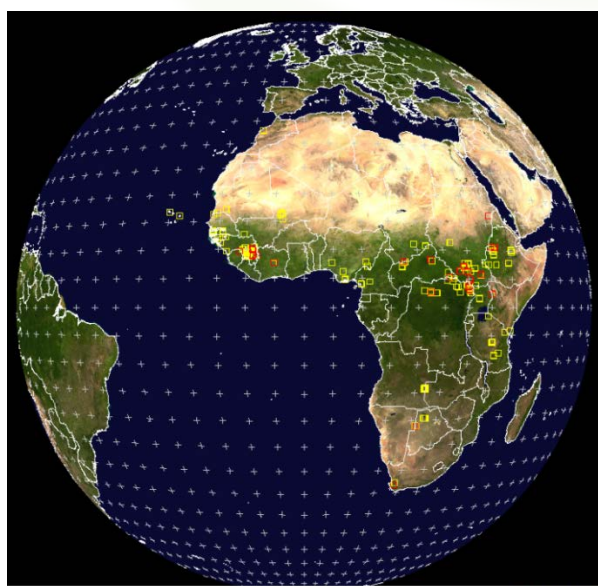


**Format:** HRIT  
**Average Size:** 90 MB  
**Frequency:** 3 hours  
**Max n° of files a day:** 114 x 8  
**Satellite:** METEOSAT-10  
**Instrument:** SEVIRI  
**Channels / Resolutions:**  
 VIS0.6 - 3,0 km  
 VIS0.8 - 3,0 km  
 IR1.6 - 3,0 km  
 IR3.9 - 3,0 km  
 WV6.2 - 3,0 km  
 WV7.3 - 3,0 km  
 IR 8.7 - 3,0 km  
 IR9.7 - 3,0 km  
 IR10.8 - 3,0 km  
 IR 12.0 - 3,0 km  
 IR13.4 - 3,0 km  
 HRV - 1,0 km

**Naming Conventions:**

H-000-MSG3	-MSG3	-IR_120	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-VIS006	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-IR_039	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-VIS008	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-IR_087	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-IR_097	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-WV_062	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-WV_073	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-HRV	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-IR_134	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-IR_108	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-IR_016	000001	-YYYMMDDHHMN--C
H-000-MSG3	-MSG3	-	-PRO	-YYYYMMDDHHMN--
H-000-MSG3	-MSG3	-	-EPI	-YYYYMMDDHHMN--

- Active Fire Monitoring - MSG - 0 degree



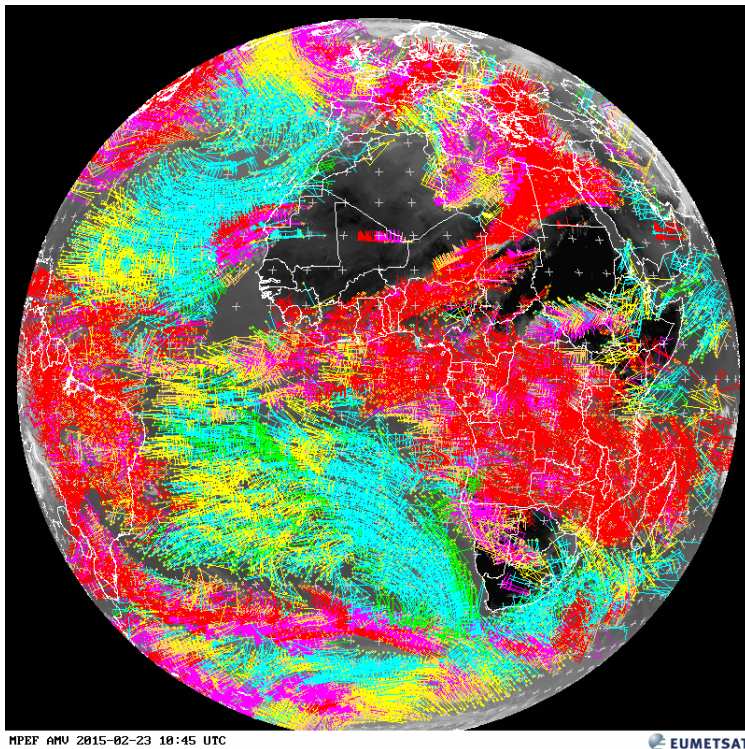
MPEF FIRE 2015-02-23 12:00 UTC  
 Legend: Yellow square = Probability of Fire, Red square = High Probability of Fire  
 EUMETSAT

**Formats:** CAP (Common Alert Protocol) and GRIB2  
**Files per day:** 192 per format  
**Volume per day:** 2 MB (CAP) and 1.5 MB (GRIB2)  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -FIRC[ ]\*

The active fire monitoring product is a fire detection product indicating the presence of fire within a pixel. The underlying concept of the algorithm takes advantage of the fact that SEVIRI channel IR3.9 is very sensitive to hot spots which are caused by fires. The algorithm distinguishes between potential fire and active fire. Applications and Users: Fire detection and monitoring. This product is available in CAP (Common Alert Protocol) format. The CAP formatted product is only disseminated when a fire/potential fire is detected in any given repeat cycle.



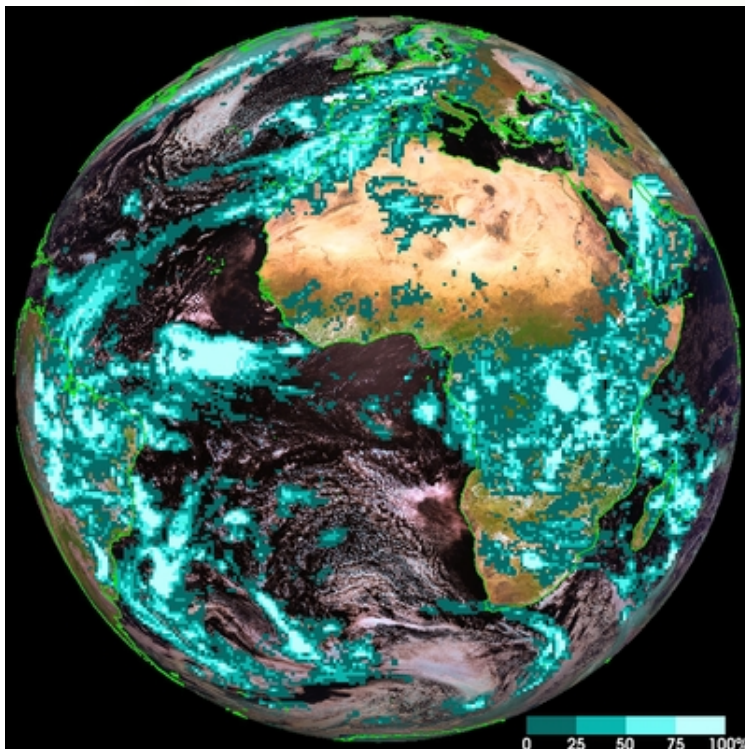
- **Atmospheric Motion Vectors - MSG - 0 degree**



**Format:** BUFR  
**Files per day:** 48  
**Volume per day:** 52 MB  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -AMV[\_]\*

Atmospheric Motion Vectors at all heights below the tropopause, derived from 5 channels (Visual 0.8, Water Vapour 6.2, Water Vapour 7.3, Infrared 10.8 and the High Resolution Visual channel), all combined into one product. Vectors are derived by tracking the motion of clouds and other atmospheric constituents as water vapour patterns. The initial resolution is a 24 pixels grid (HRV 12 high res. pixels), but as the algorithm tries to adjust the position to the point of the maximum contrast (typically cloud edges), the end resolution varies. The height assignment of the AMVs is calculated using the Cross-Correlation Contribution (CCC) function to determine the pixels that contribute the most to the vectors. An AMV product contains between 30 000 and 50 000 vectors depending of the time of the day, and uses SEVERI image data from Meteosat-8 and onwards.

- **Cloud Analysis - MSG - 0 degree**

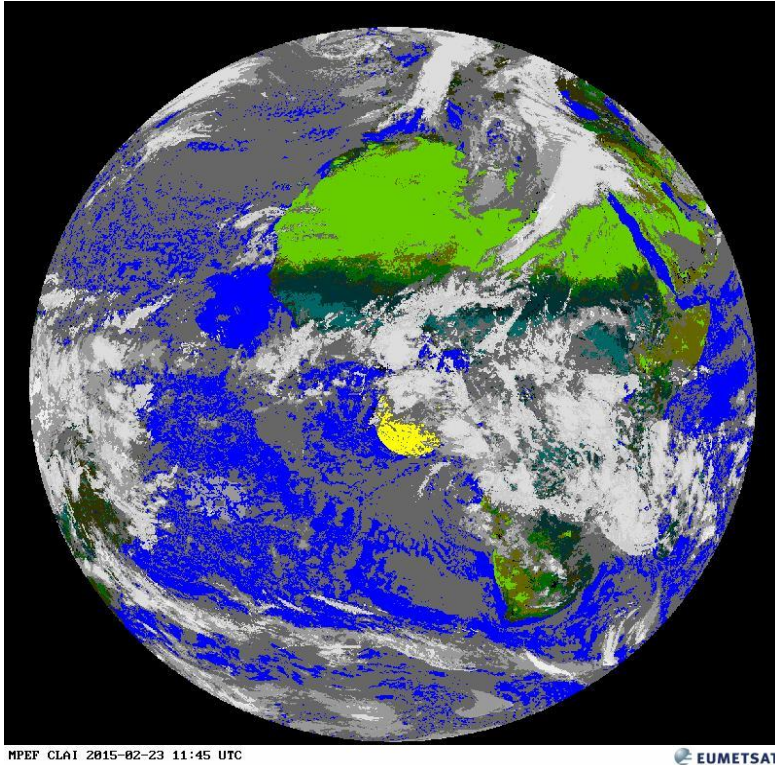


**Format:** BUFR  
**Files per day:** 32  
**Volume per day:** 12 MB  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -CLA[\_]\*

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



- **Cloud Analysis Image - MSG - 0 degree**

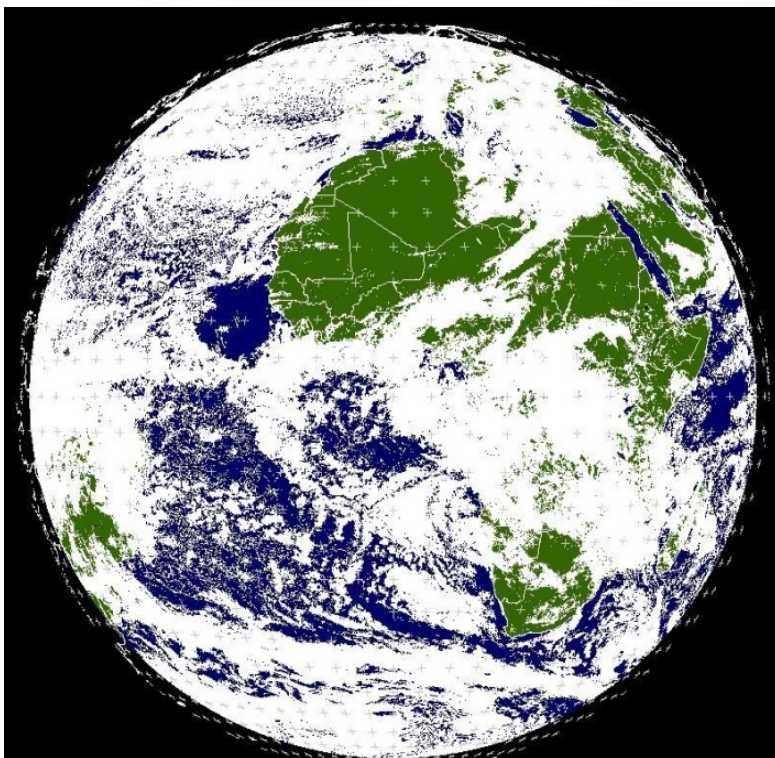


MPEF CLAI 2015-02-23 11:45 UTC EUMETSAT

**Format:** GRIB2  
**Files per day:** 32  
**Volume per day:** 9.5 MB  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -CLAI[\_]\*

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.

- **Cloud Mask - MSG - 0 degree**



MPEF CLM 2015-02-23 11:30 UTC EUMETSAT

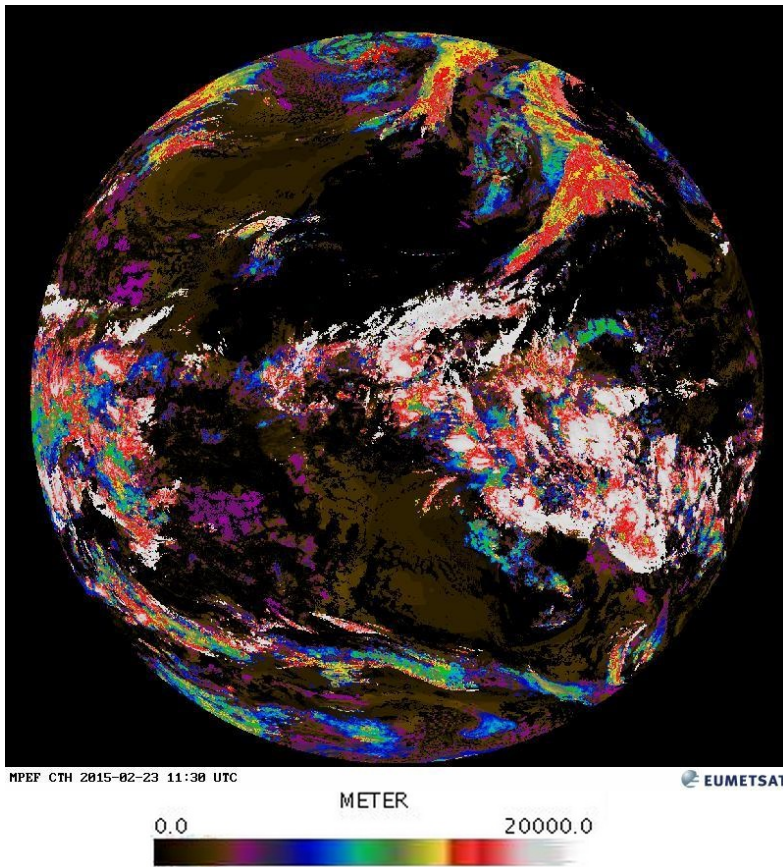
Cloud  
  Land  
  Water

**Format:** GRIB2  
**Files per day:** 672  
**Volume per day:** 325 MB  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -CLM[\_]\*

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 & Uses: The main use is in support of Nowcasting applications, where it frequently serves as a basis for other cloud products, and the remote sensing of continental and ocean surfaces.



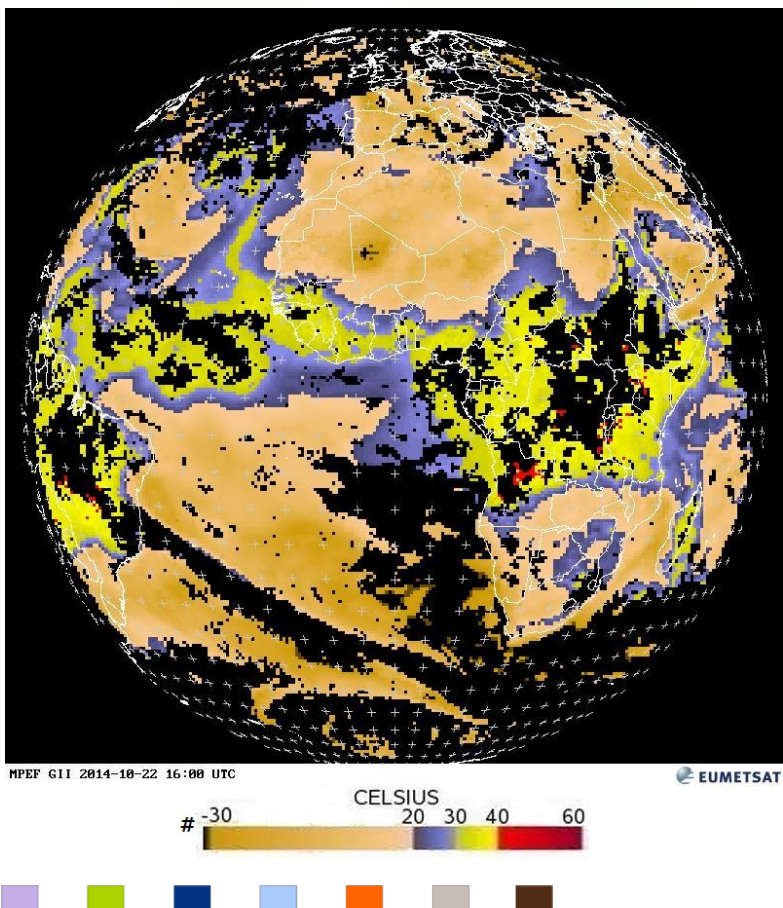
- **Cloud Top Height - MSG - 0 degree**



**Format:** GRIB2  
**Files per day:** 288  
**Volume per day:** 80 MB  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -CTH[\_]\*

The product indicates the height of highest cloud. Based on a subset of the information derived during Scenes and Cloud Analysis, but also makes use of other external meteorological data. Applications and Users: Aviation meteorology.

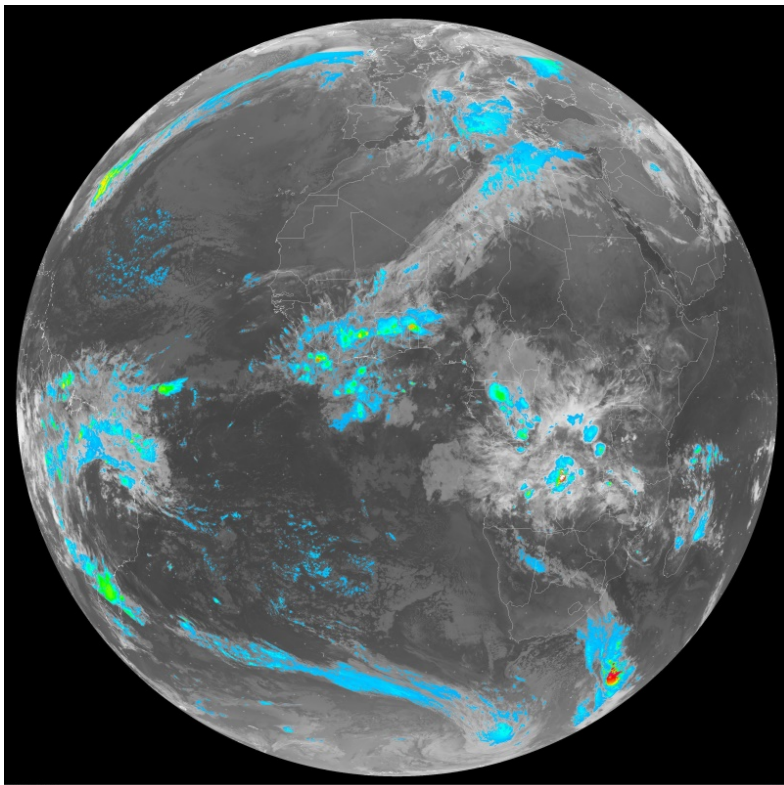
- **Global Instability Index - MSG - 0 degree**



**Format:** BUFR  
**Files per day:** 192  
**Volume per day:** 840 MB  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -GII[\_]\*

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.

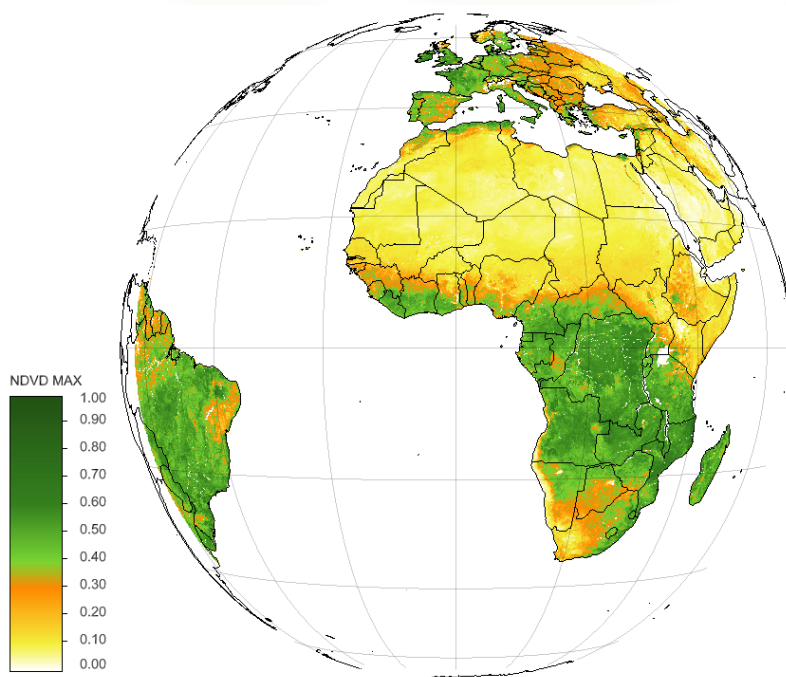
- **Multi-Sensor Precipitation Estimate (GRIB) - MSG - 0 degree**



**Format:** GRIB2  
**Files per day:** 480  
**Volume per day:** 210 MB  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -MPEG[\_]\*

The Multi-Sensor Precipitation Estimate (MPE) product consists of the near-real-time rain rates in mm/hr for each Meteosat image in original pixel resolution. The algorithm is based on the combination of polar orbiter microwave measurements and images in the Meteosat IR channel by a so-called blending technique. The MPE is most suitable for convective precipitation. Applications and Users: Operational weather forecasting in areas with poor or no radar coverage, especially in Africa and Asia.

- **Normalised Difference Vegetation Index Decadal - MSG - 0 degree**

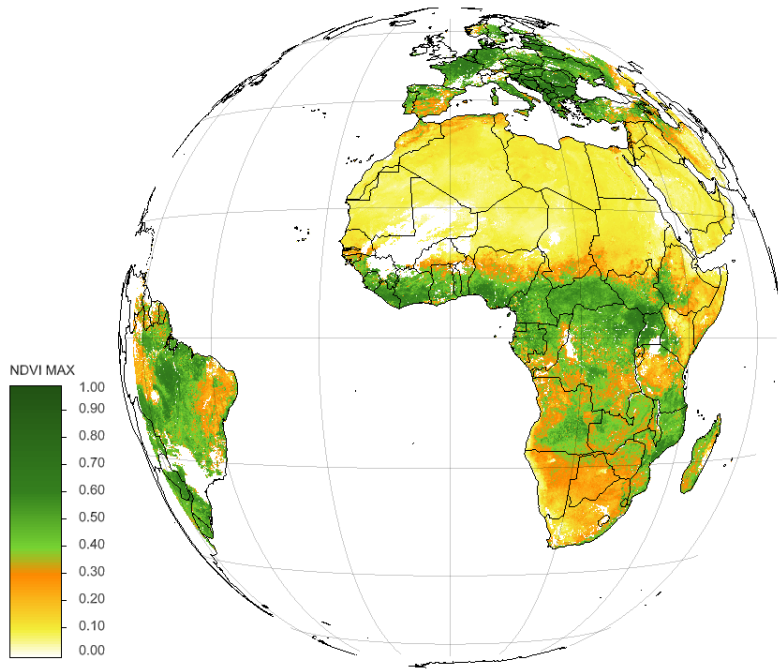


**Format:** HDF5  
**Files per day:** 2  
**Volume per day:** 11.5 MB  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -NDVD[\_]\*

The decadal Normalised Difference Vegetation Index product is derived from the daily NDVI products. The NDVD is an aggregated product based on the daily NDVI products using the following aggregation periods: Aggregated NDVD product covering Days 1 to 10 of each month, Days 11 to 20 of each month and covering Day 21 to the last day of each month. The NDVD product estimates the land surface characteristics derived from satellite data. It is widely used to characterise the density and vigour of the given vegetation cover as well as to identify vegetation stress and drought. Applications and Users: Land surface applications. Used Input Data: Reflectances from the SEVIRI Level 1.5 image data for the VIS0.6 µm and the VIS0.8 µm channels.



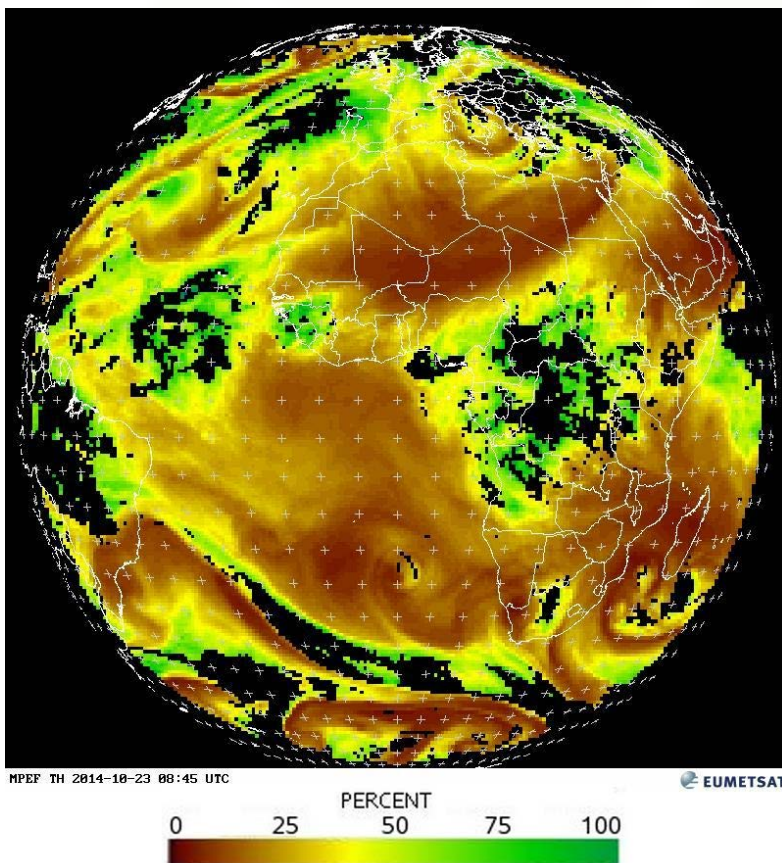
- **Normalised Difference Vegetation Index - MSG - 0 degree**



**Format:** HDF5  
**Files per day:** 2  
**Volume per day:** 9.3 MB  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -NDVI[\_]\*

The Normalised Difference Vegetation Index product is derived from the differences in the VIS reflectances. The daily NDVI product estimates the land surface characteristics derived from satellite data. It is widely used to characterize the density and vigour of the given vegetation cover as well as to identify vegetation stress and drought. Note that no NDVI retrievals will be conducted in cloudy or night time conditions.

- **Tropospheric Humidity - MSG - 0 degree**



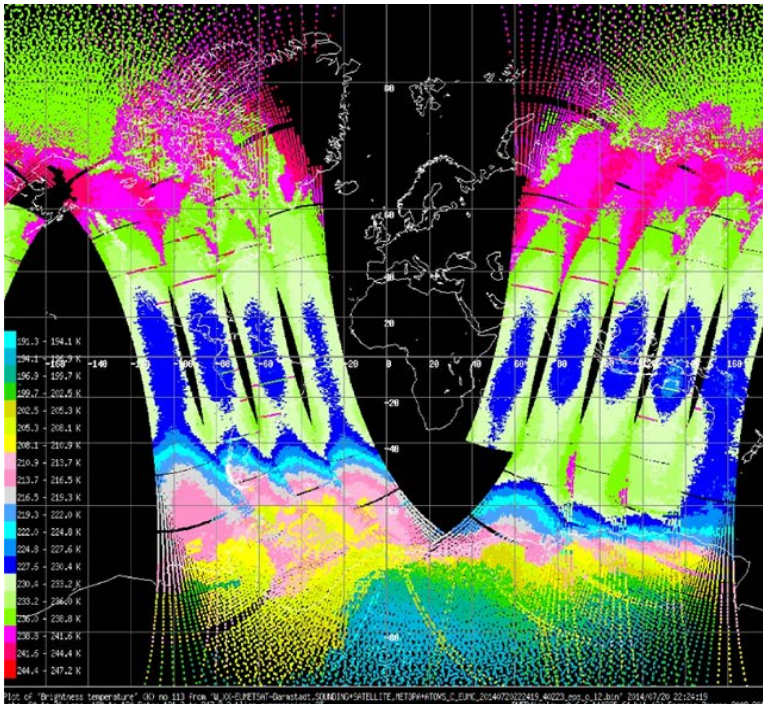
**Format:** BUFR  
**Files per day:** 16  
**Volume per day:** 3.5 MB  
 L-000-MSG?\_\_-MPEF\_\_\_\_\_ -TH[\_]\*

Relative humidity in both mid and upper layers of the troposphere, using a 16 x 16 pixel segment grid. The upper level is derived from the mean layer relative humidity between about 600 hPa and 300 hPa using the WV6.2 micron channel, while mid-tropospheric humidity represents the mean value between 850 hPa and 600 hPa using the WV7.3 micron channel





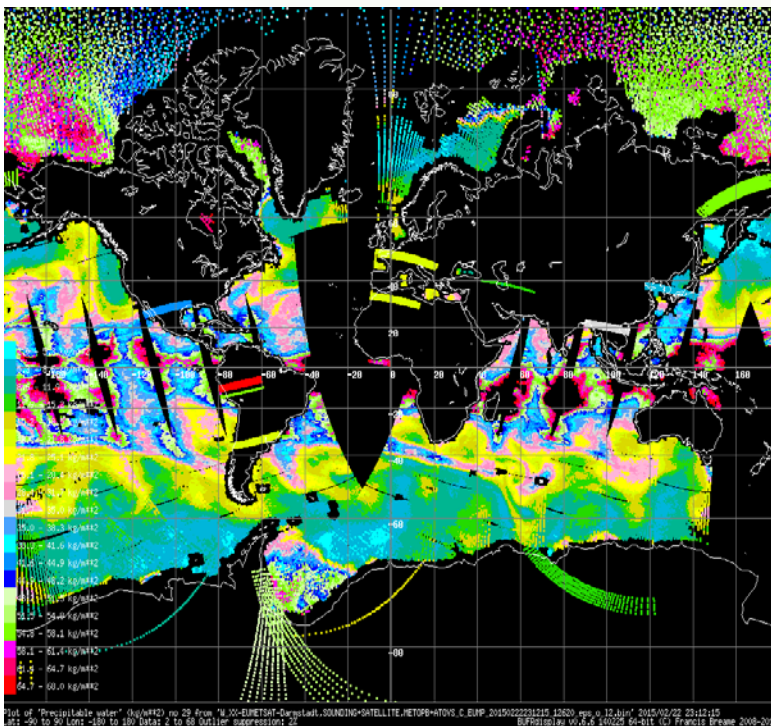
- **METOP A - Advanced TIROS Operational Sounder - ATOVS – Global** (*Temperature Profiles, Humidity Profiles, Surface Temperatures, Cloud Top Temperatures, Cloud Top Pressure, Effective Cloud Amount, Cloud Liquid Water Content and Total Columns Precipitable Water*)



Sample image: Temperature Profile

**Format:** BUFR  
**Average Size:** 180 kB  
**Frequency:** 3 minutes  
**Max n° of files a day:** 480  
**Satellite:** METOP A  
**Instruments:** ATOVS / AVHRR  
**Naming Convention:**  
W\_XX-EUMETSAT-Darmstadt,SOUNDING+SATELLITE,METOPA+ATOVS\_C\_EUMC\_YYYYMMDDHHMNSS\_ORBIT#\_eps\_o\_l2

- **METOP B - Advanced TIROS Operational Sounder - ATOVS – Global** (*Temperature Profiles, Humidity Profiles, Surface Temperatures, Cloud Top Temperatures, Cloud Top Pressure, Effective Cloud Amount, Cloud Liquid Water Content and Total Columns Precipitable Water*)

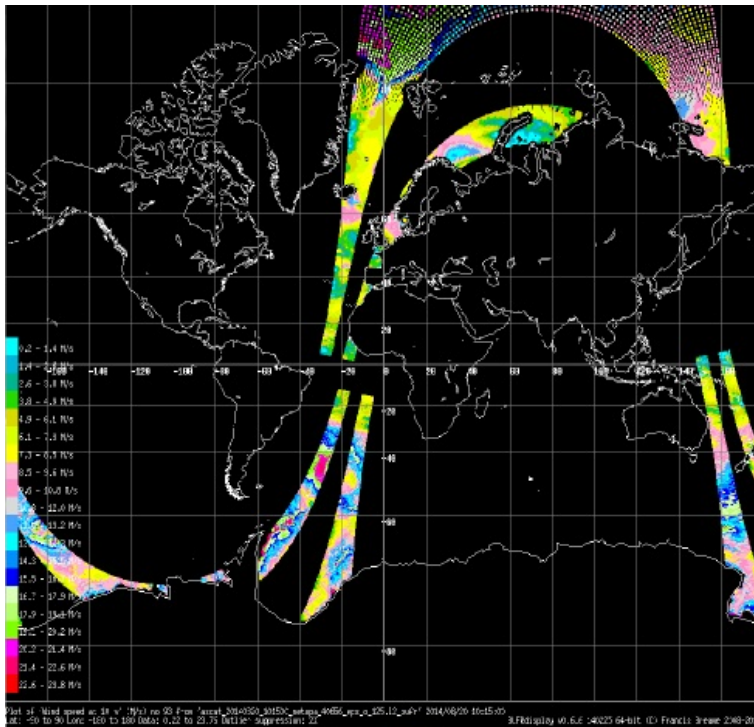


Sample image: Precipitable Water

**Format:** BUFR  
**Average Size:** 180 kB  
**Frequency:** 3 minutes  
**Max n° of files a day:** 480  
**Satellite:** METOP B  
**Instruments:** ATOVS / AVHRR  
**Naming Convention:**  
W\_XX-EUMETSAT-Darmstadt,SOUNDING+SATELLITE,METOPB+ATOVS\_C\_EUMC\_YYYYMMDDHHMNSS\_ORBIT#\_eps\_o\_l2



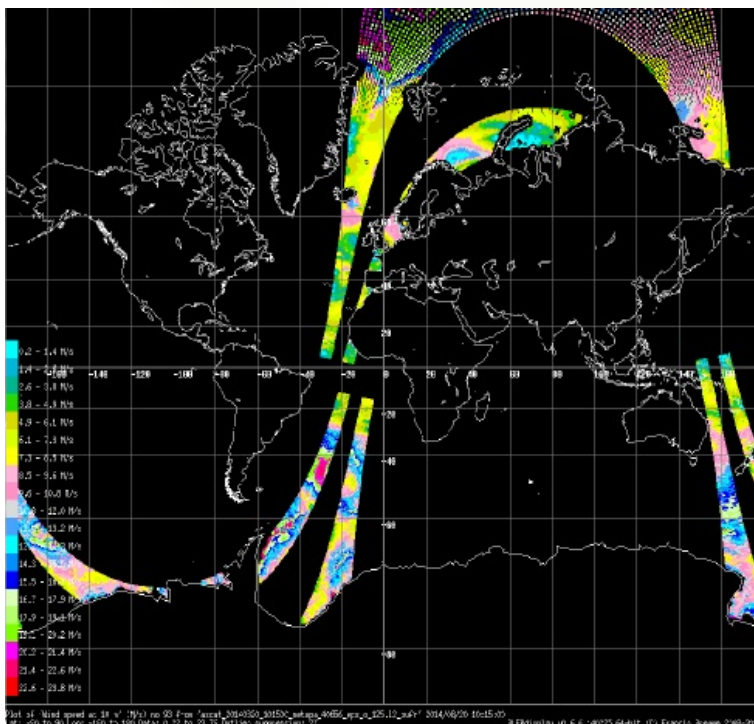
- **METOP A / B – ASCAT Coastal Winds at 12.5 km Swath Grid – Global** (*Equivalent neutral 10m winds over the global oceans, with specific sampling to provide as many observations as possible near the coasts*)



Sample image: Precipitable Water

**Format:** BUFR  
**Average Size:** 400 kB  
**Frequency:** 3 minutes per satellite  
**Max n° of files a day:** 480 per satellite  
**Satellite:** METOP A / B  
**Instrument:** ASCAT  
**Naming Conventions:**  
 ascat\_YYYYMMDD\_HHMMSS\_metopa\_orbit#\_eps\_o\_coa\_ovw.l2\_buf  
 ascat\_YYYYMMDD\_HHMMSS\_metopb\_orbit#\_eps\_o\_coa\_ovw.l2\_buf

- **METOP A / B – ASCAT Winds and Soil Moisture at 25 km Swath Grid – Global** (*Surface Soil Moisture, Mean Surface Soil Moisture, Rain Fall Detection, Snow Cover, Frozen Land Fraction, Inundation and Wetland Fraction, Topographic Complexity, Model Wind Speed at 10 m, Model Wind Direction at 10 m, Ice Probability, Ice age (“a” parameter), Wind Speed at 10 m and Wind direction at 10 m*)



Sample image: Precipitable Water

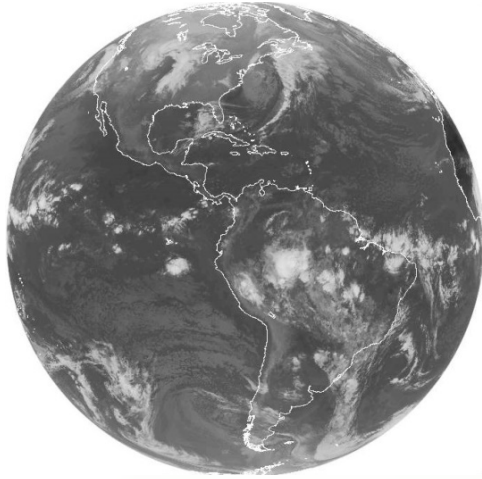
**Format:** BUFR  
**Average Sizes:**  
 385 kB (12.5 km) / 95 kB (25 km)  
**Frequency:** 3 minutes per satellite  
**Max n° of files a day:** 480 per per satellite  
**Satellites:** METOP A / B  
**Instrument:** ASCAT  
**Naming Conventions:**  
 ascat\_YYYYMMDD\_HHMMSS\_metopa\_orbit#\_eps\_0\_250.l2\_buf  
 ascat\_YYYYMMDD\_HHMMSS\_metopb\_orbit#\_eps\_0\_250.l2\_buf



## **PROVIDER: RANET**

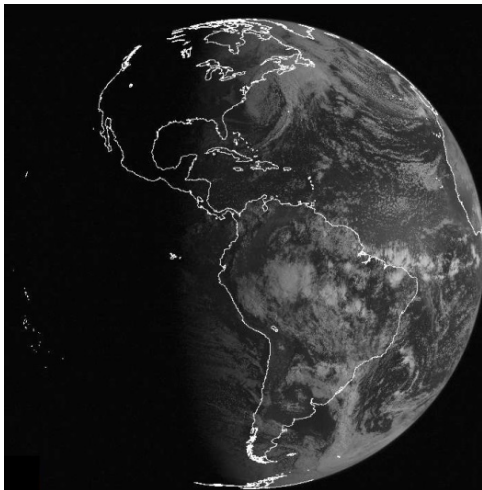
*(Radio and Internet for the Communication of Hydro-Meteorological and Climate Information for Development - USA)*

- **GOES-13 - Infrared Channel - Full Disk - Americas**



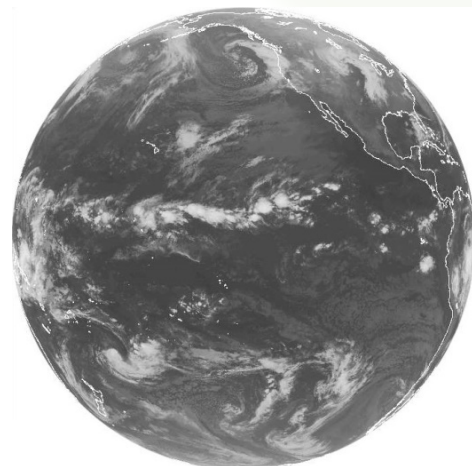
**Format:** JPEG  
**Average Size:** 60 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs2

- **GOES-13 - Visible Channel - Full Disk - Americas**



**Format:** JPEG  
**Average Size:** 60 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs3

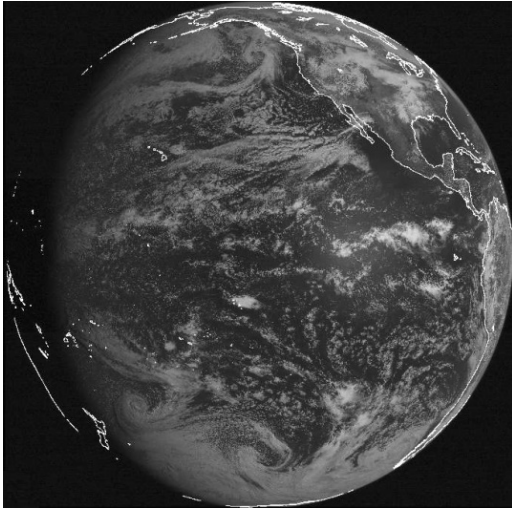
- **GOES-15 - Infrared Channel - Full Disk - Pacific + North America + Western South America**



**Format:** JPEG  
**Average Size:** 60 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs4

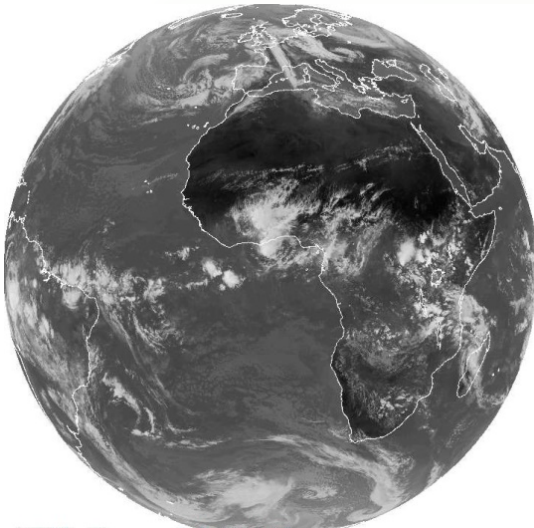


- **GOES-15 - Visible Channel - Full Disk - Pacific Ocean**



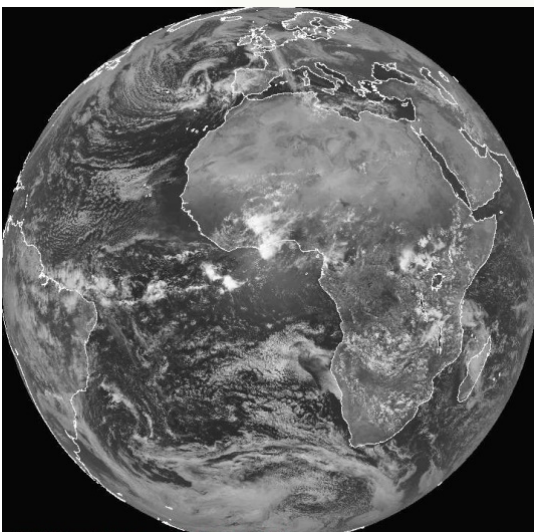
**Format:** JPEG  
**Average Size:** 60 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs5

- **METEOSAT-10 - Infrared Channel - Full Disk - South America + Africa + Europe**



**Format:** JPEG  
**Average Size:** 65 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs6

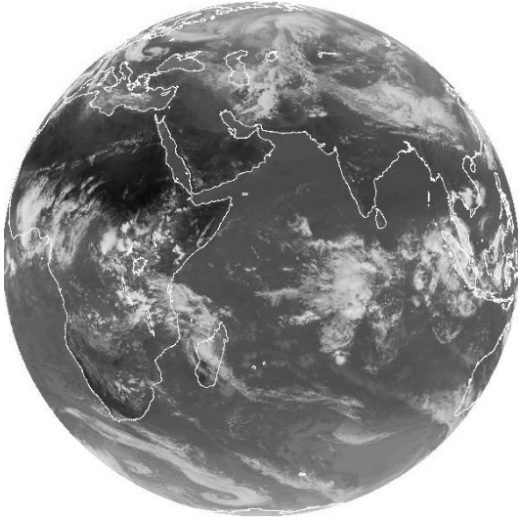
- **METEOSAT-10 - Visible Channel - Full Disk - South America + Africa + Europe**



**Format:** JPEG  
**Average Size:** 60 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs7

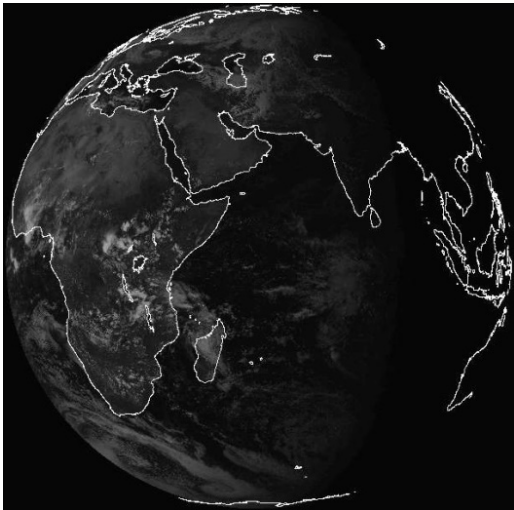


- **METEOSAT-7 - Infrared Channel - Full Disk - Africa + Asia**



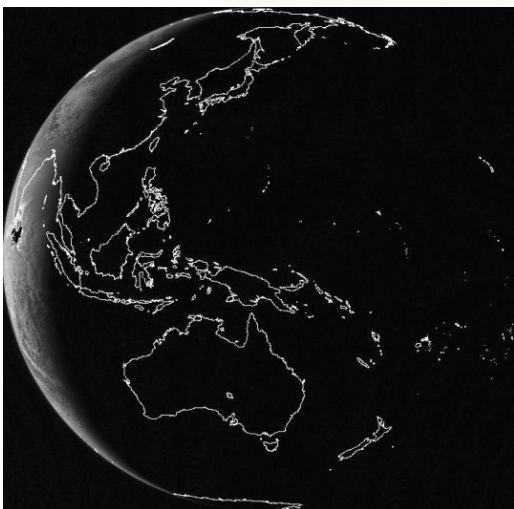
**Format:** JPEG  
**Average Size:** 55 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs8

- **METEOSAT-7 - Visible Channel - Full Disk - Africa + Asia**



**Format:** JPEG  
**Average Size:** 45 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs9

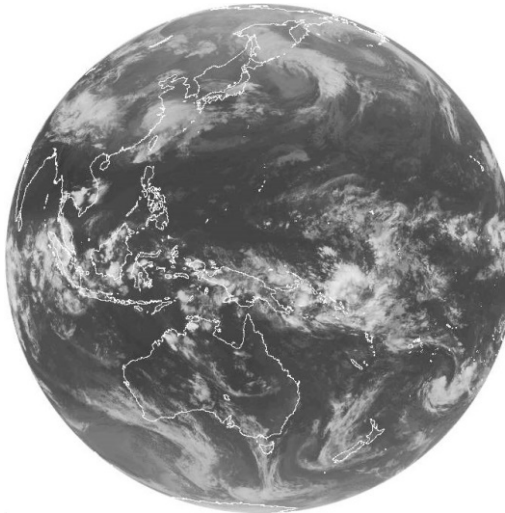
- **MTSAT-2 - Visible Channel - Full Disk - Asia + Oceania**



**Format:** JPEG  
**Average Size:** 65 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs10

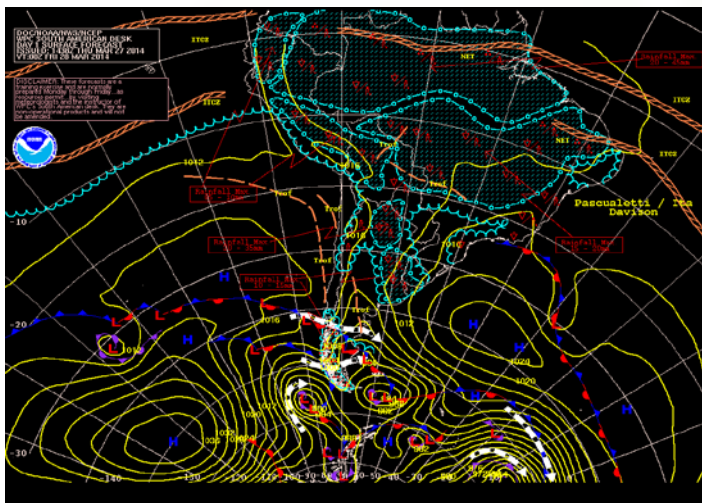


- **MTSAT-2 - Infrared Channel - Full Disk - Asia + Oceania**



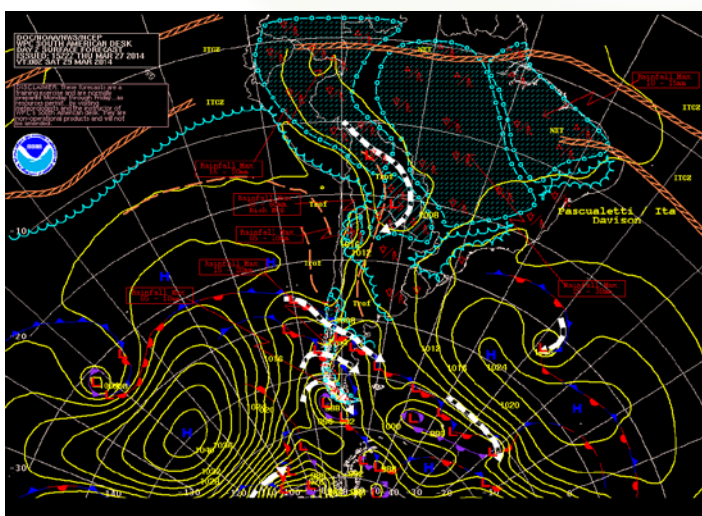
**Format:** JPEG  
**Average Size:** 65 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs11

- **Surface Forecast - Day 1 - South America**



**Format:** GIF  
**Average Size:** 70 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs12

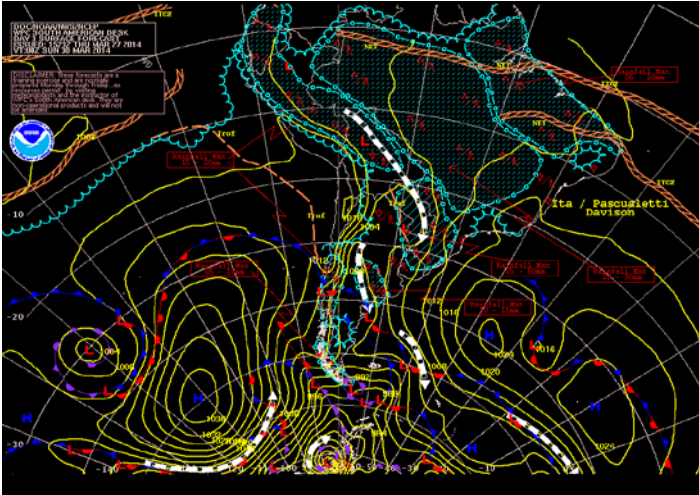
- **Surface Forecast - Day 2 - South America**



**Format:** GIF  
**Average Size:** 70 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs13

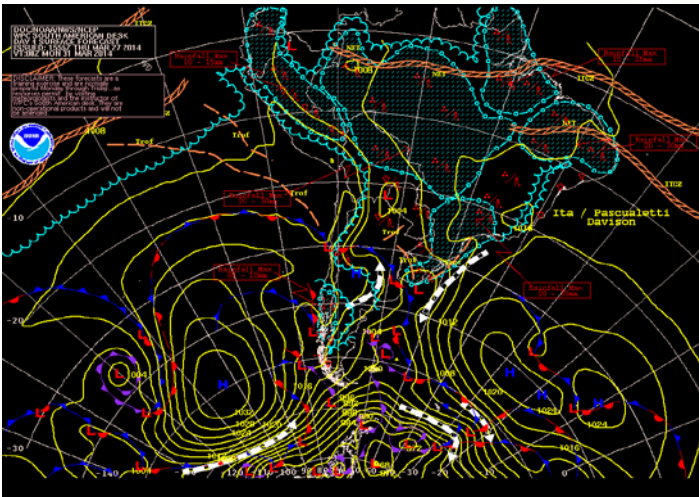


- **Surface Forecast - Day 3 - South America**



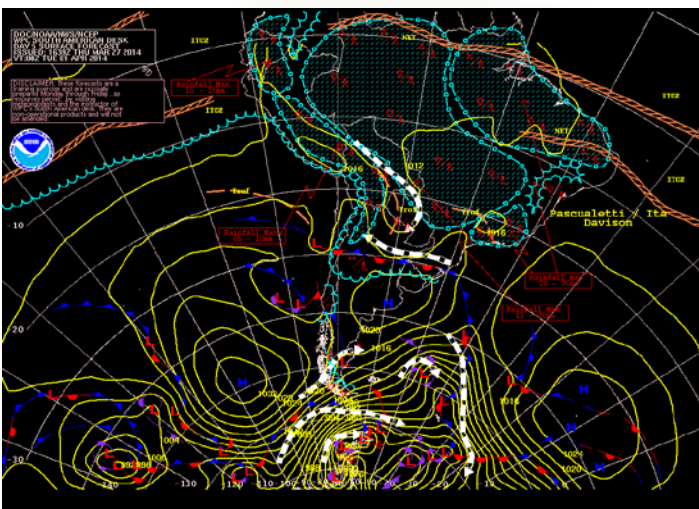
**Format:** GIF  
**Average Size:** 65 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs14

- **Surface Forecast - Day 4 - South America**



**Format:** GIF  
**Average Size:** 65 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs15

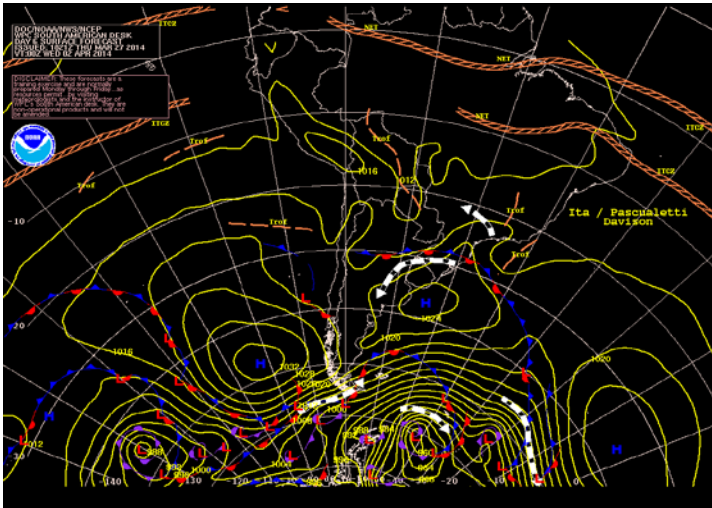
- **Surface Forecast - Day 5 - South America**



**Format:** GIF  
**Average Size:** 60 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs16

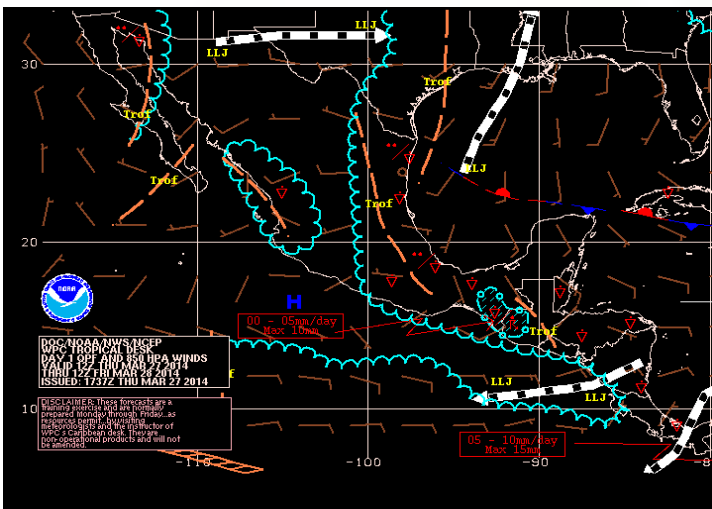


- **Surface Forecast - Day 6 - South America**



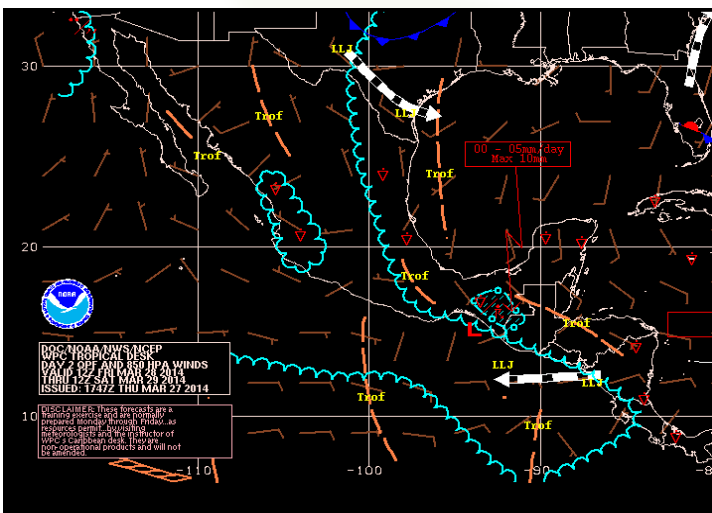
**Format:** GIF  
**Average Size:** 55 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs17

- **Quantitative Precipitation Forecast and Winds – Day 1 - West Caribbean**



**Format:** GIF  
**Average Size:** 30 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs18

- **Quantitative Precipitation Forecast and Winds – Day 2 - West Caribbean**

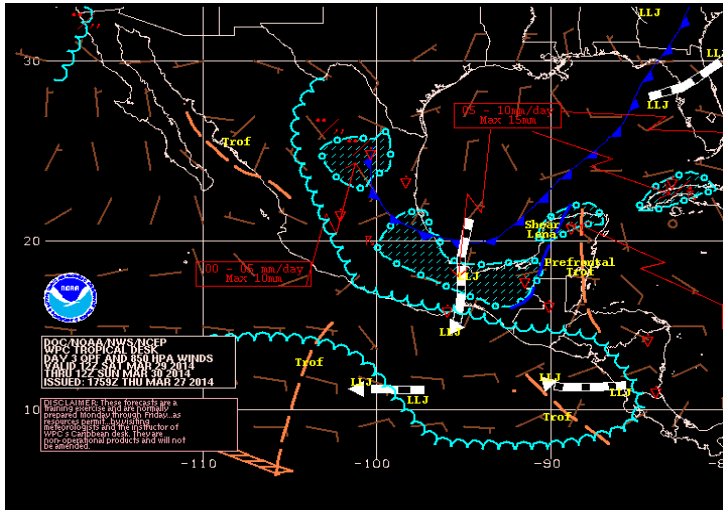


**Format:** GIF  
**Average Size:** 30 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs19



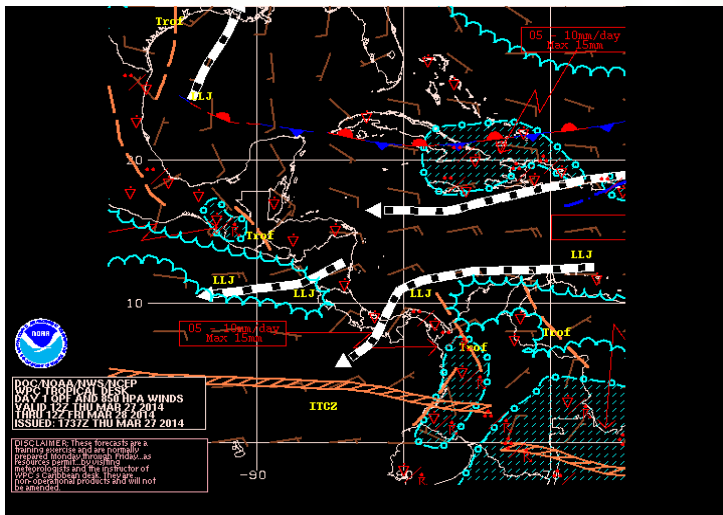


- Quantitative Precipitation Forecast and Winds – Day 3 - West Caribbean



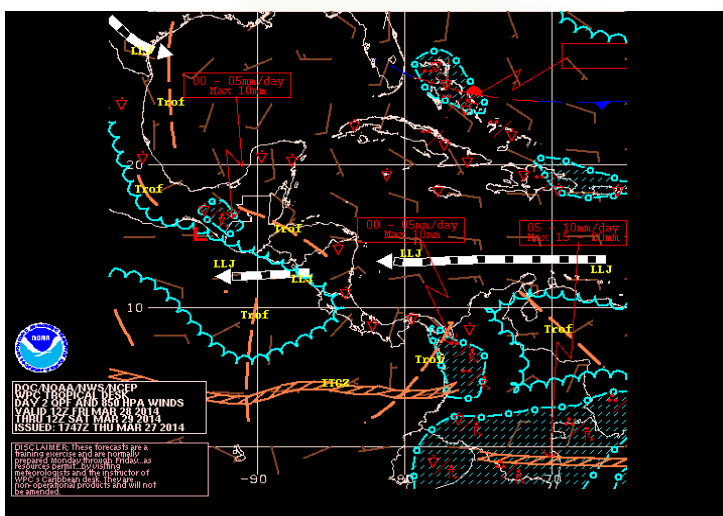
**Format:** GIF  
**Average Size:** 30 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs20

- Quantitative Precipitation Forecast and Winds – Day 1 - Central Caribbean



**Format:** GIF  
**Average Size:** 30 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs21

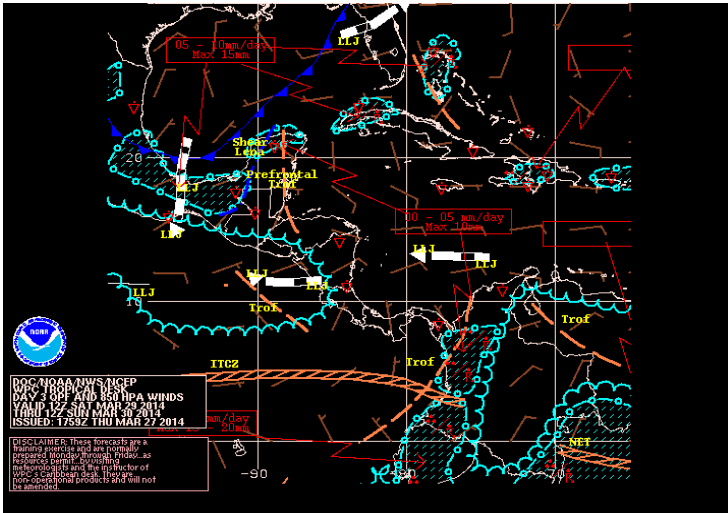
- Quantitative Precipitation Forecast and Winds – Day 2 - Central Caribbean



**Format:** GIF  
**Average Size:** 30 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs22

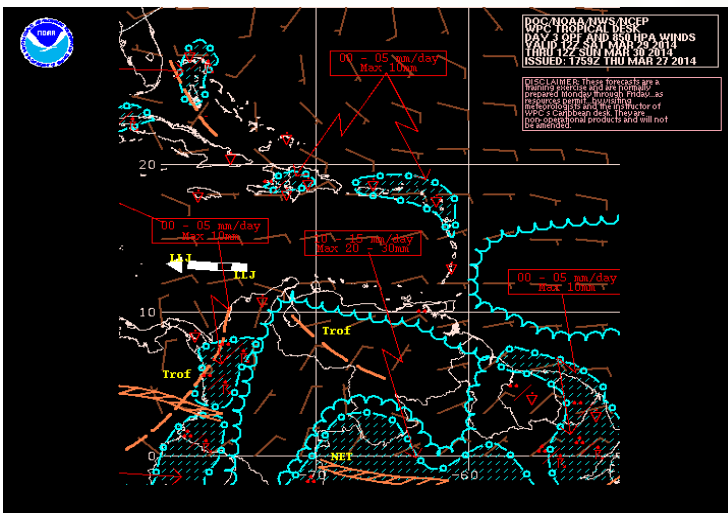


• **Quantitative Precipitation Forecast and Winds – Day 3 - Central Caribbean**



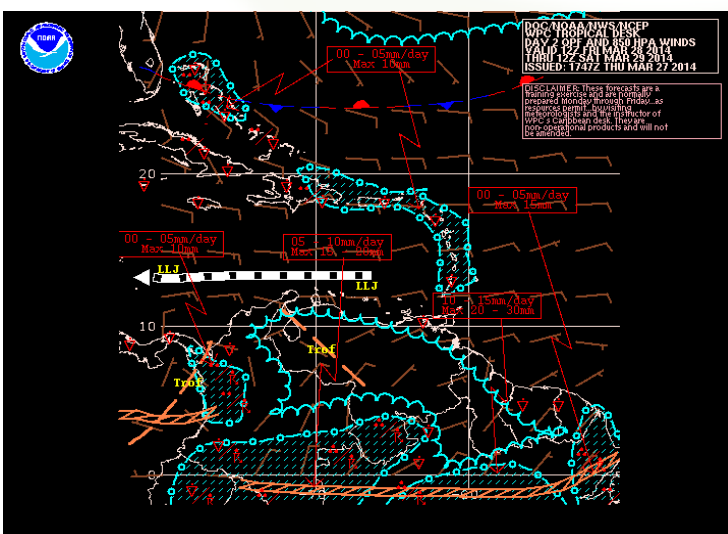
**Format:** GIF  
**Average Size:** 30 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs23

• **Quantitative Precipitation Forecast and Winds – Day 1 - East Caribbean**



**Format:** GIF  
**Average Size:** 30 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs24

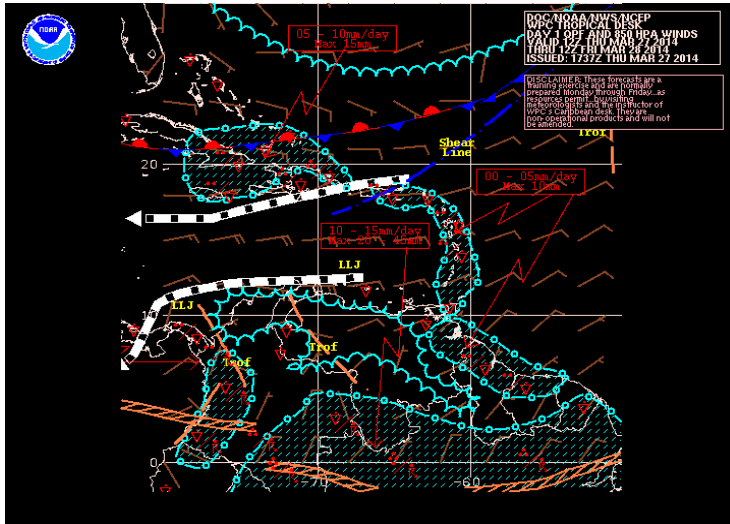
• **Quantitative Precipitation Forecast and Winds – Day 2 - East Caribbean**



**Format:** GIF  
**Average Size:** 30 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs25

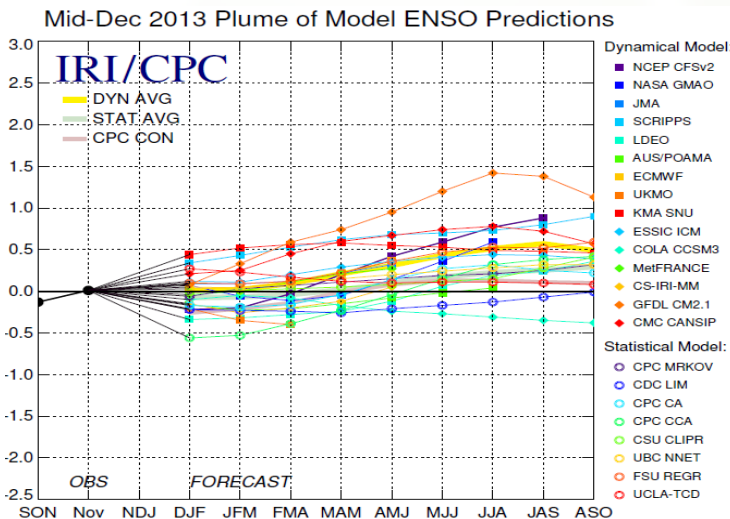


• **Quantitative Precipitation Forecast and Winds – Day 3 - East Caribbean**



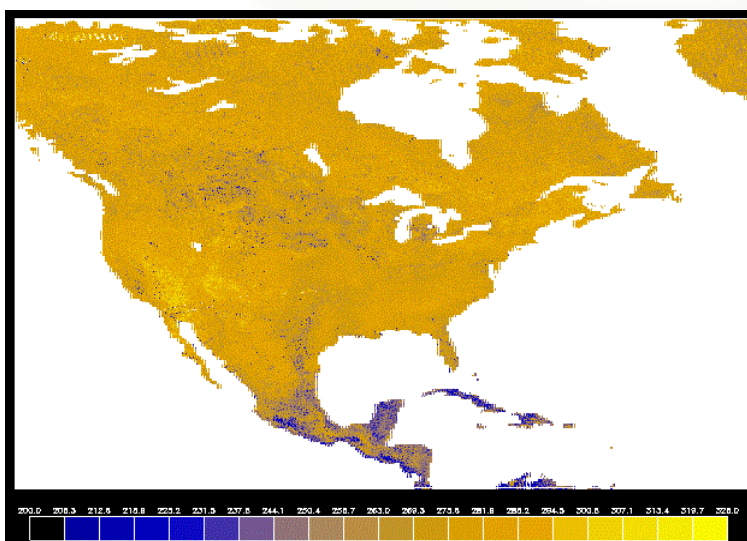
**Format:** GIF  
**Average Size:** 30 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs26

• **El Niño, La Niña and the Southern Oscillation Monthly Report – Region 5S 5N 120W 170W**



**Format:** PDF  
**Average Size:** 165 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs27

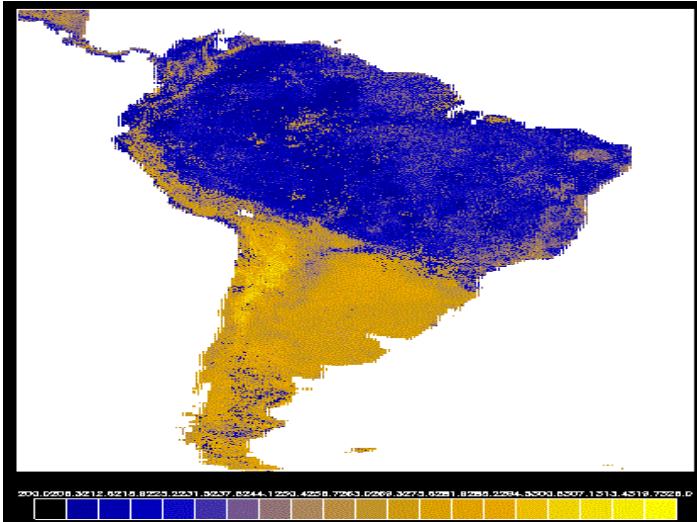
• **Precipitable Water Index - PWI - North America**



**Format:** GIF  
**Average Size:** 55 kB  
**Frequency:** Daily  
**Naming Convention:** rbs28

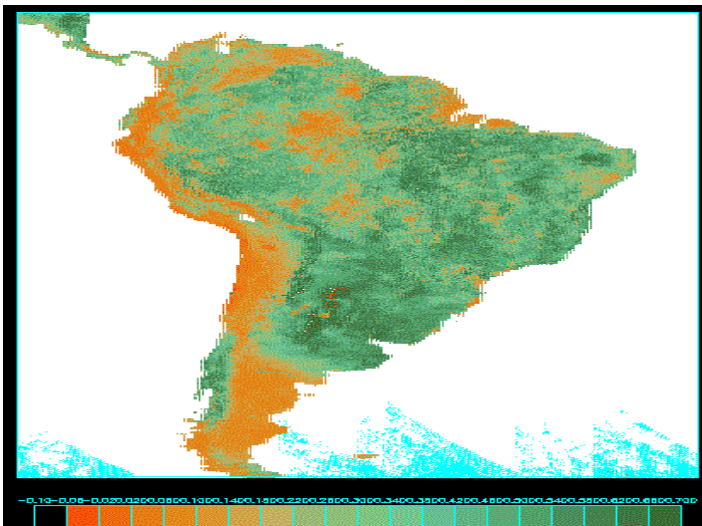


- **Precipitable Water Index - PWI - South America**



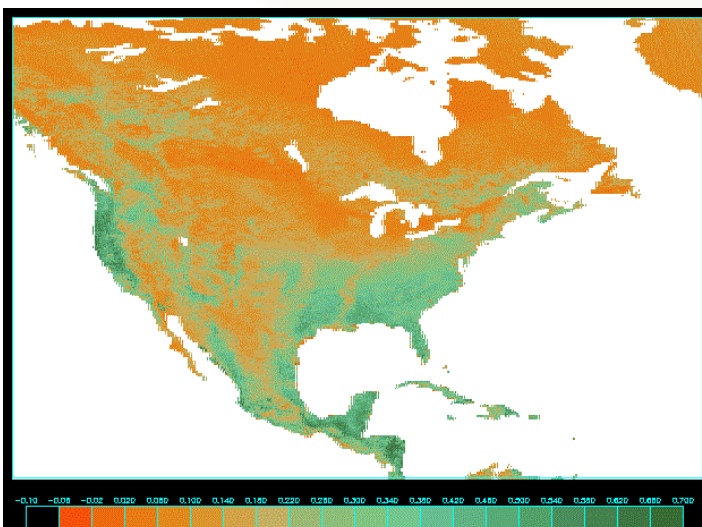
**Format:** GIF  
**Average Size:** 35 kB  
**Frequency:** Daily  
**Naming Convention:** rbs29

- **Normalized Difference Vegetation Index - NDVI - South America**



**Format:** GIF  
**Average Size:** 85 kB  
**Frequency:** Daily  
**Naming Convention:** rbs30

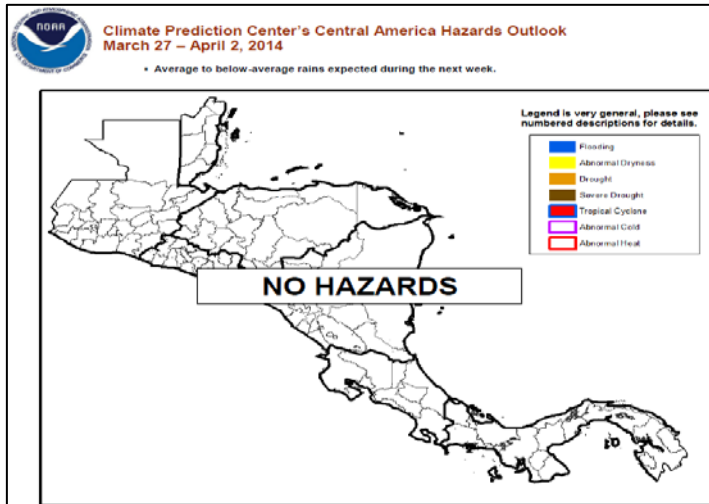
- **Normalized Difference Vegetation Index - NDVI - North America**



**Format:** GIF  
**Average Size:** 140 kB  
**Frequency:** Daily  
**Naming Convention:** rbs31

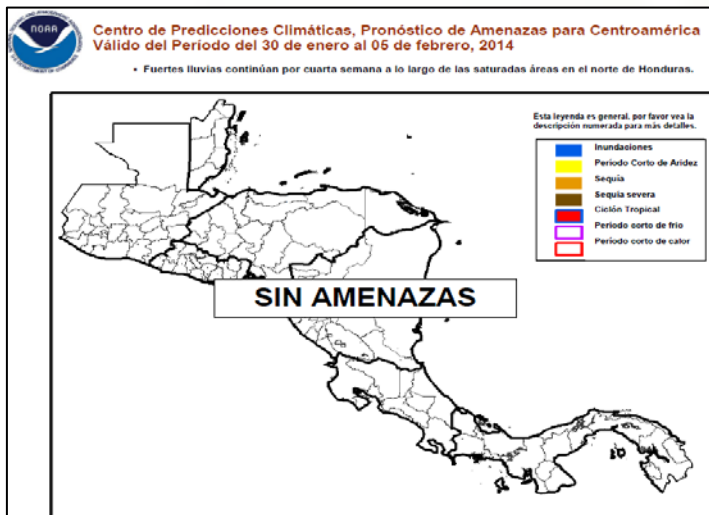


• Hazards Outlook - Central America - English



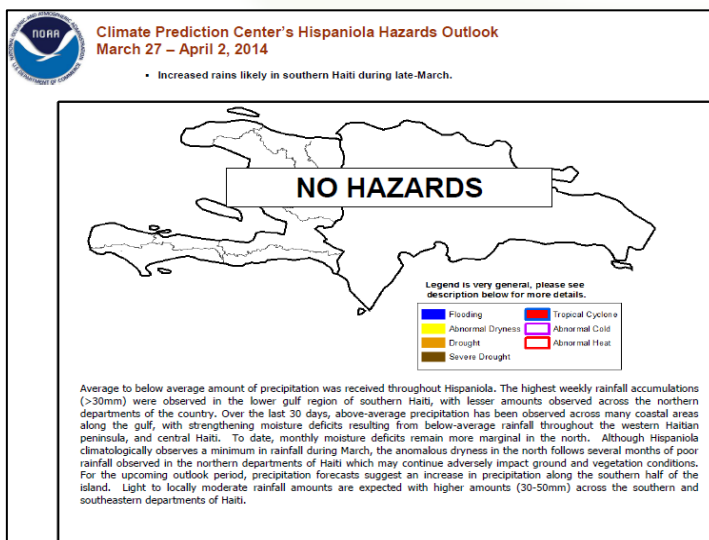
**Format:** PDF  
**Average Size:** 320 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs32

• Hazards Outlook - Central America - Spanish



**Format:** PDF  
**Average Size:** 195 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs33

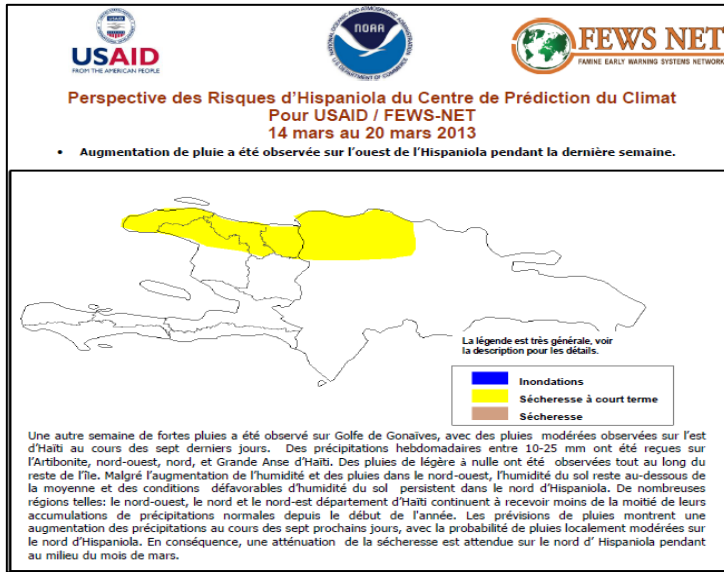
• Hazards Outlook - Hispaniola Island - English



**Format:** PDF  
**Average Size:** 175 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs34

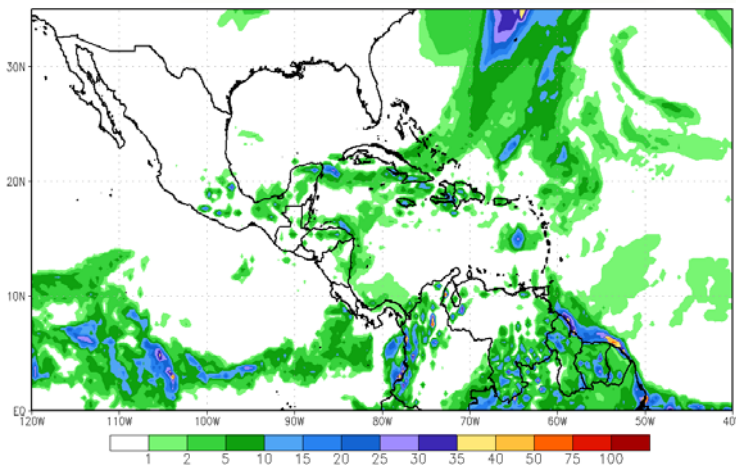


• **Hazards Outlook - Hispaniola Island - French**



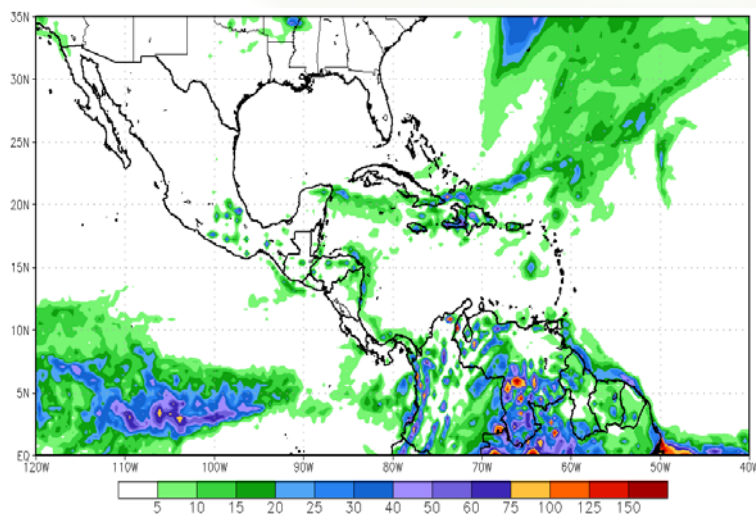
**Format:** PDF  
**Average Size:** 370 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs35

• **Accumulated Precipitation Forecast - 24hs - Central America**



**Format:** GIF  
**Average Size:** 70 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs36

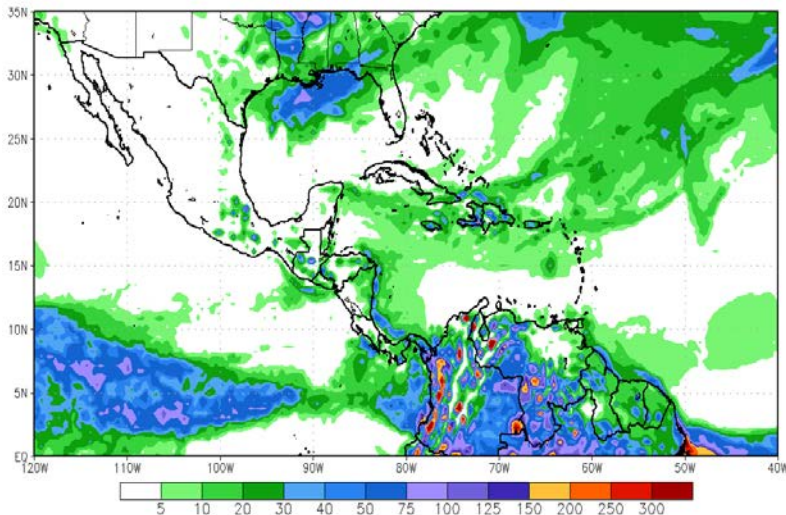
• **Accumulated Precipitation Forecast - 3 Days - Central America**



**Format:** GIF  
**Average Size:** 80 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs37

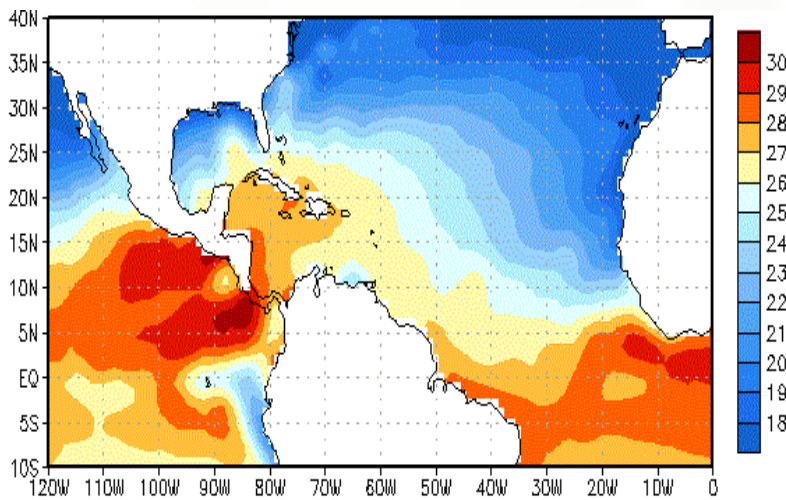


• **Accumulated Precipitation Forecast - 1 Week - Central America**



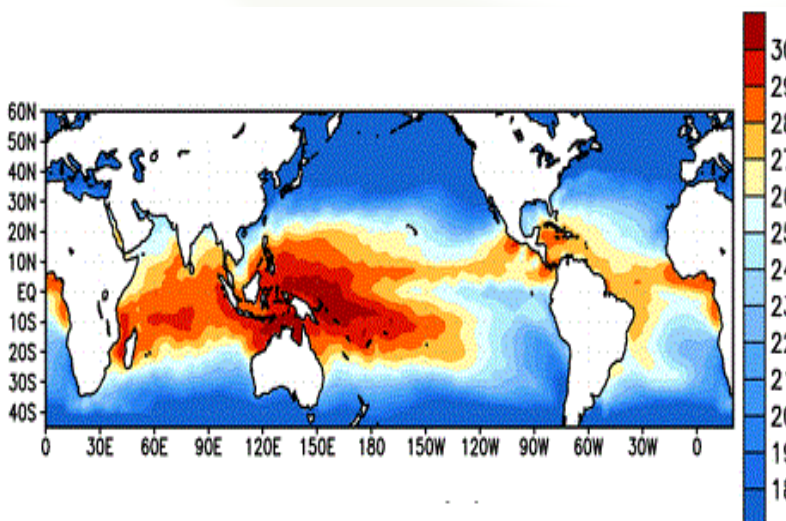
**Format:** GIF  
**Average Size:** 80 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs38

• **Sea Surface Temperature - Region 40N 10S 120W 0**



**Format:** GIF  
**Average Size:** 110 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs39

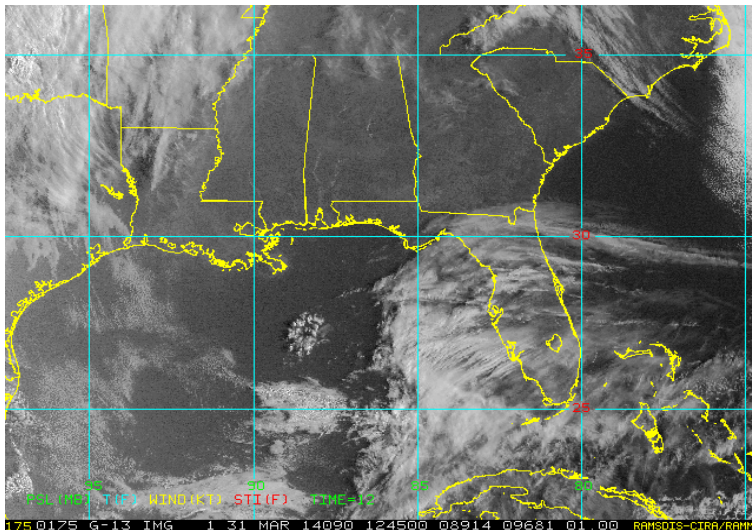
• **Sea Surface Temperature - Global**



**Format:** GIF  
**Average Size:** 110 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs40

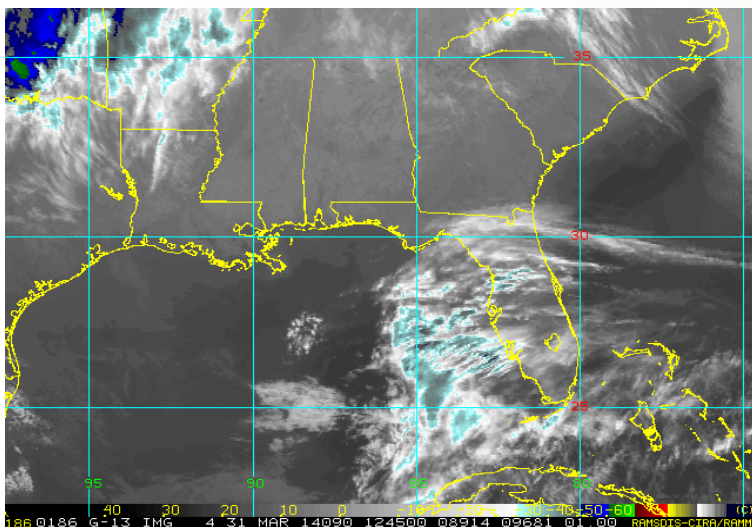


- GOES-13 - Visible and Short Wave Channels – Mexico Gulf**



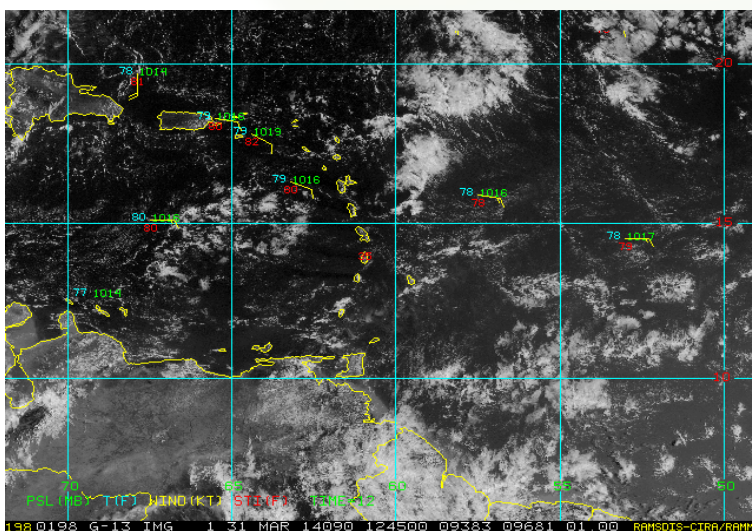
**Format:** GIF  
**Average Size:** 215 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs41

- GOES-13 - Infrared Channel Enhanced - Mexico Gulf**



**Format:** GIF  
**Average Size:** 135 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs42

- GOES-13 - Visible and Short Wave Channels – East Caribbean**

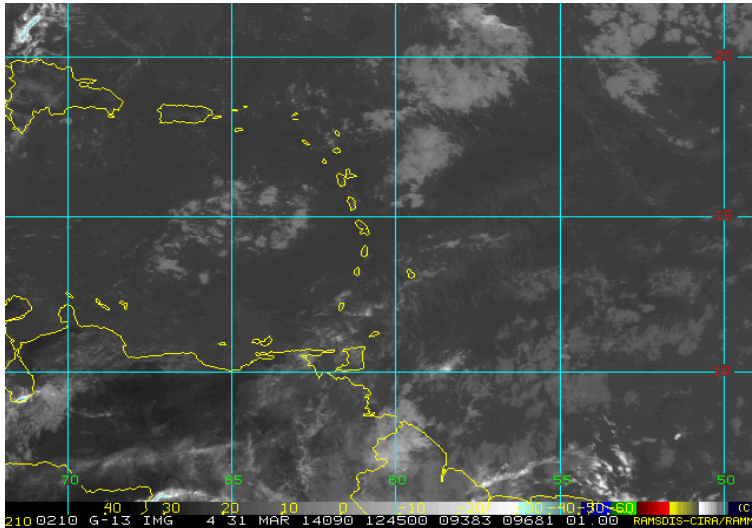


**Format:** GIF  
**Average Size:** 210 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs43



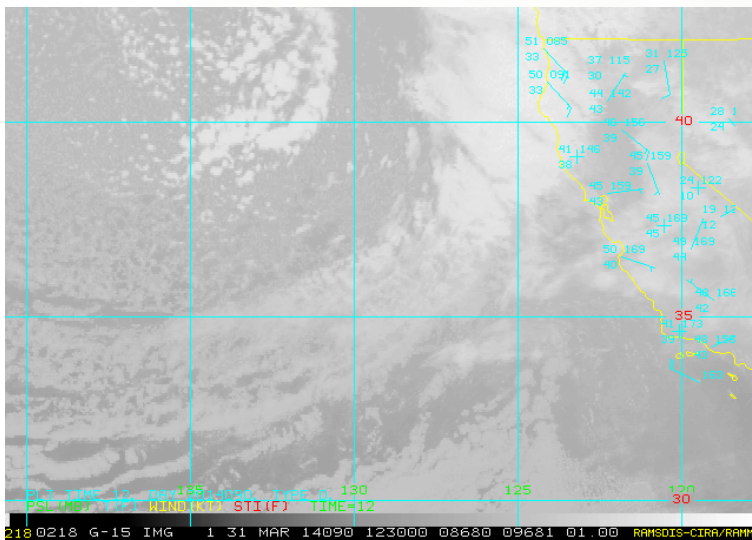


- GOES-13 - Infrared Channel Enhanced - East Caribbean**



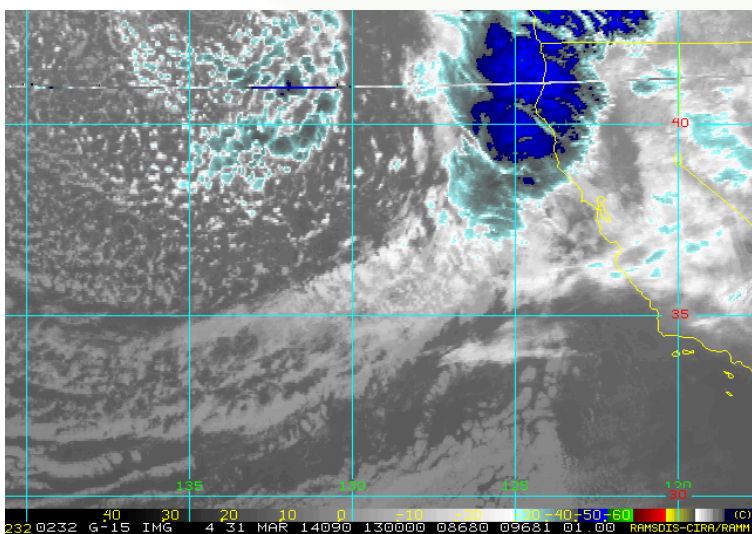
**Format:** GIF  
**Average Size:** 120 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs44

- GOES-15 - Visible and Short Wave Channels – US Northeast Pacific Region**



**Format:** GIF  
**Average Size:** 220 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs45

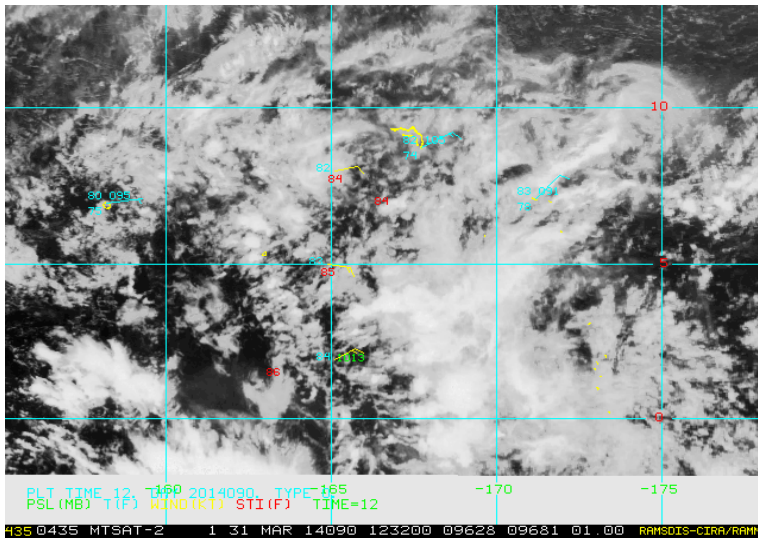
- GOES-15 - Infrared Channel Enhanced – US Northeast Pacific Region**



**Format:** GIF  
**Average Size:** 120 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs46

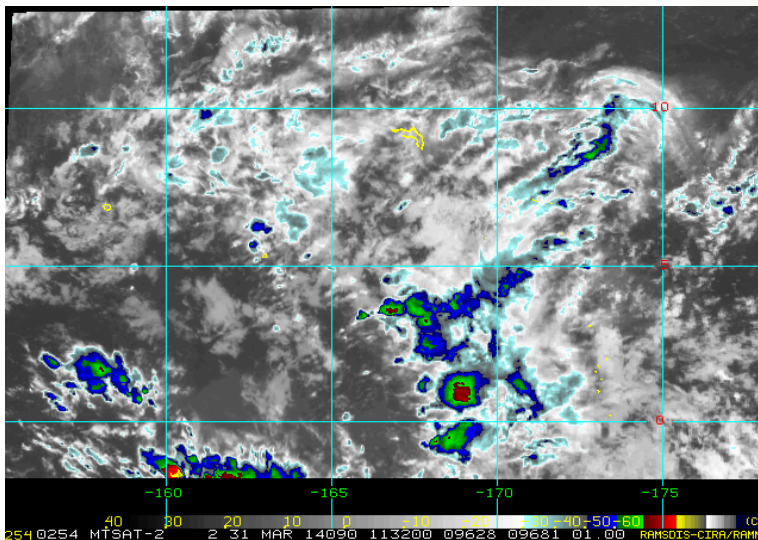


• **MTSAT-2 - Visible and Short Wave Channels - Philippine sea**



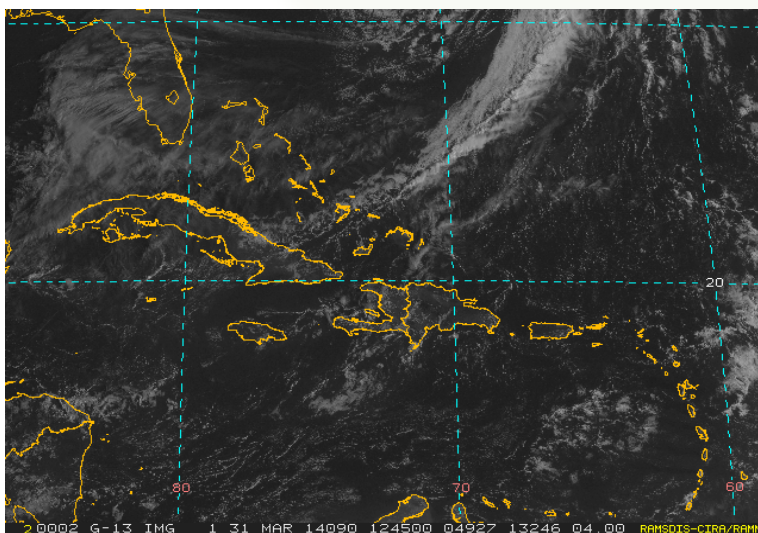
**Format:** GIF  
**Average Size:** 230 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs47

• **MTSAT-2 - Infrared Channel Enhanced - Philippine sea**



**Format:** GIF  
**Average Size:** 155 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs48

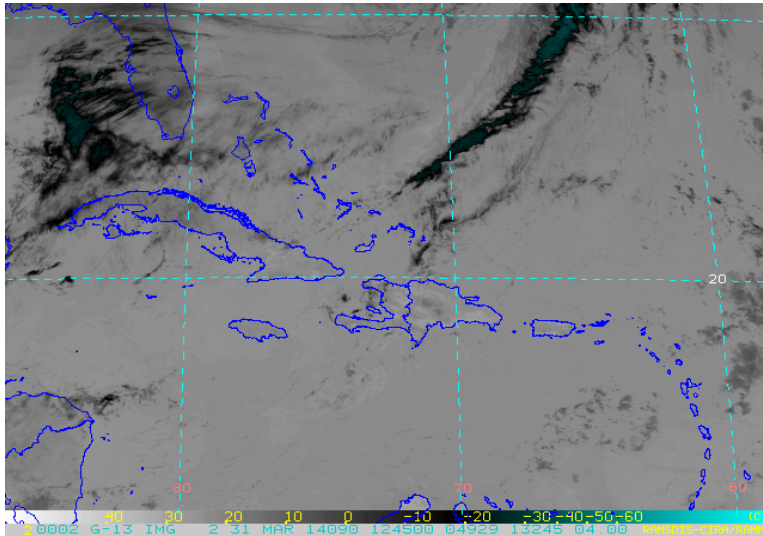
• **GOES-13 - Visible Channel - Caribbean**



**Format:** GIF  
**Average Size:** 150 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs49

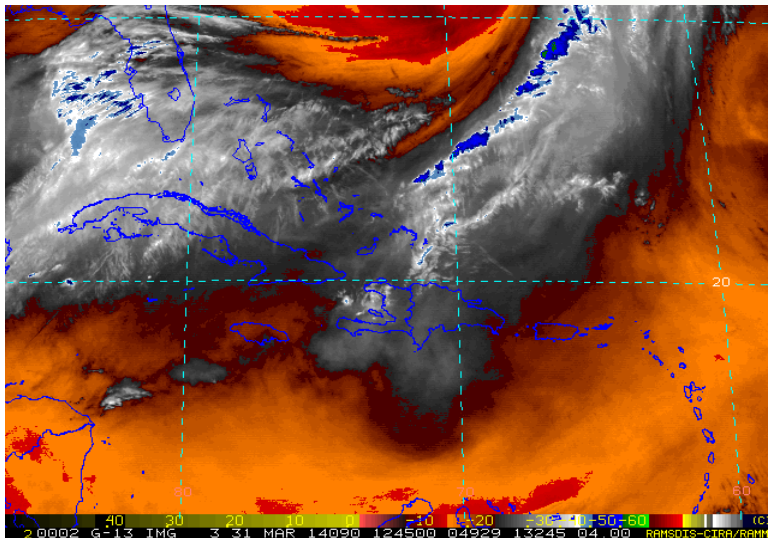


- **GOES-13 - Short Wave Channel Enhanced - Caribbean**



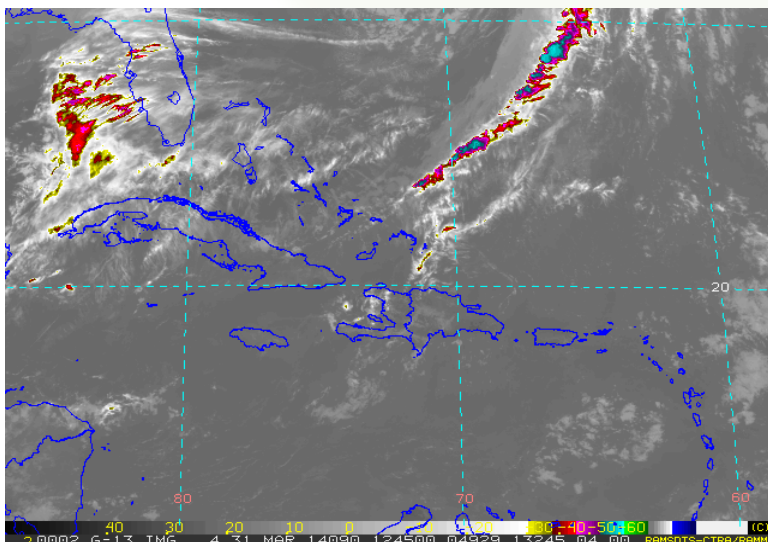
**Format:** GIF  
**Average Size:** 145 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs50

- **GOES-13 - Water Vapor Channel Enhanced - Caribbean**



**Format:** GIF  
**Average Size:** 110 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs51

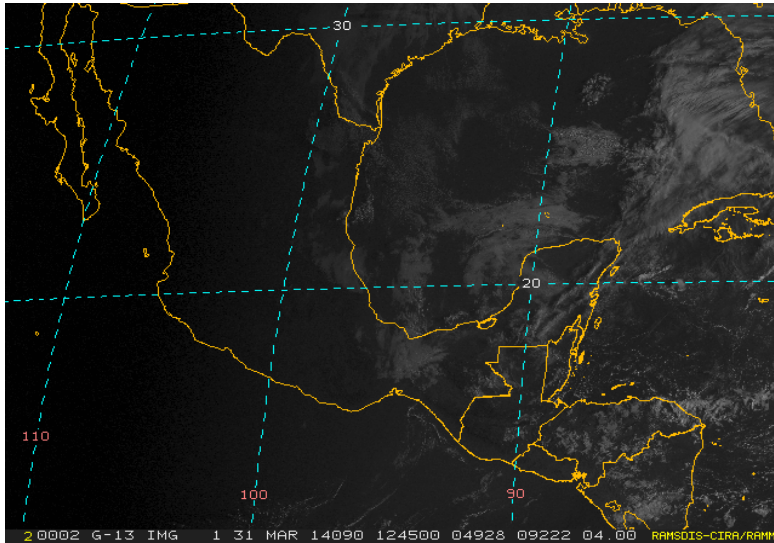
- **GOES-13 - Infrared Channel Enhanced - Caribbean**



**Format:** GIF  
**Average Size:** 120 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs52

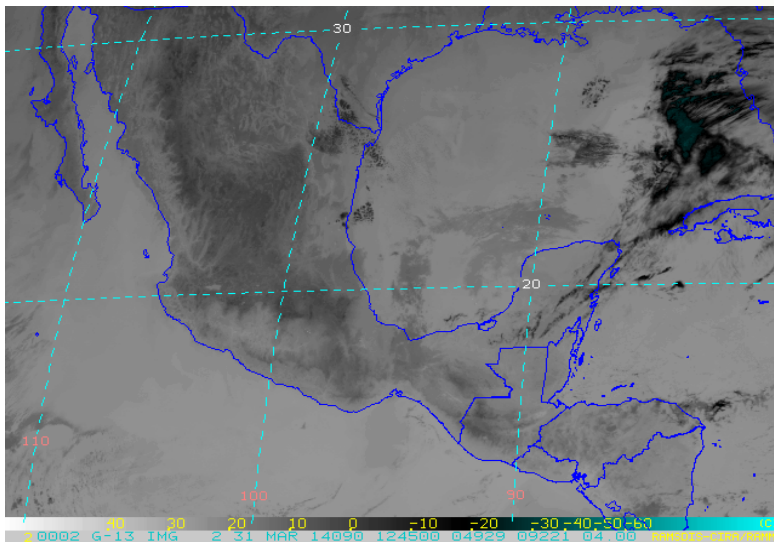


- **GOES-13 - Visible Channel - Mexico**



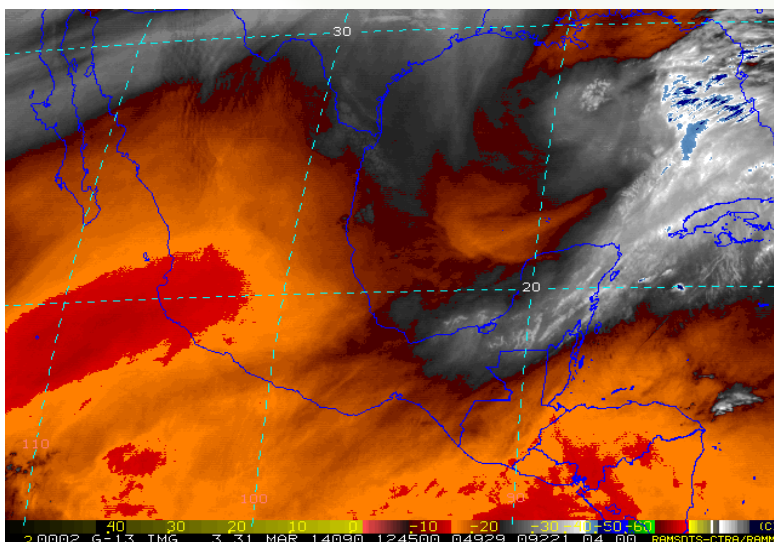
**Format:** GIF  
**Average Size:** 165 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs53

- **GOES-13 - Short Wave Channel - Mexico**



**Format:** GIF  
**Average Size:** 185 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs54

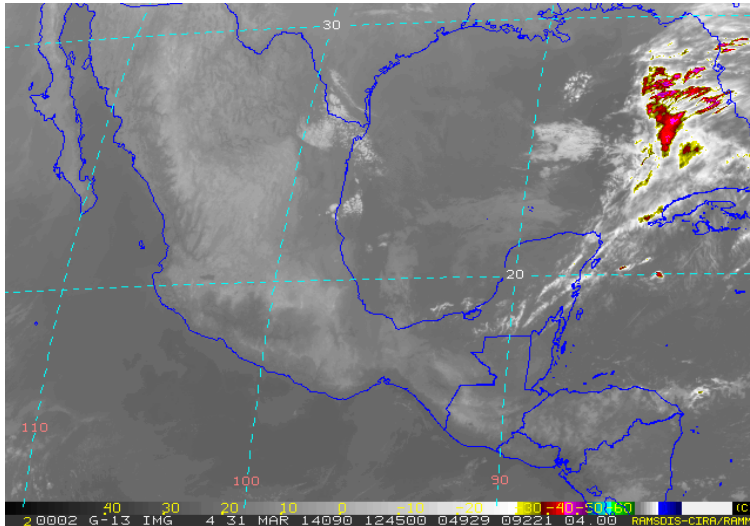
- **GOES-13 - Water Vapour Channel Enhanced - Mexico**



**Format:** GIF  
**Average Size:** 125 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs55

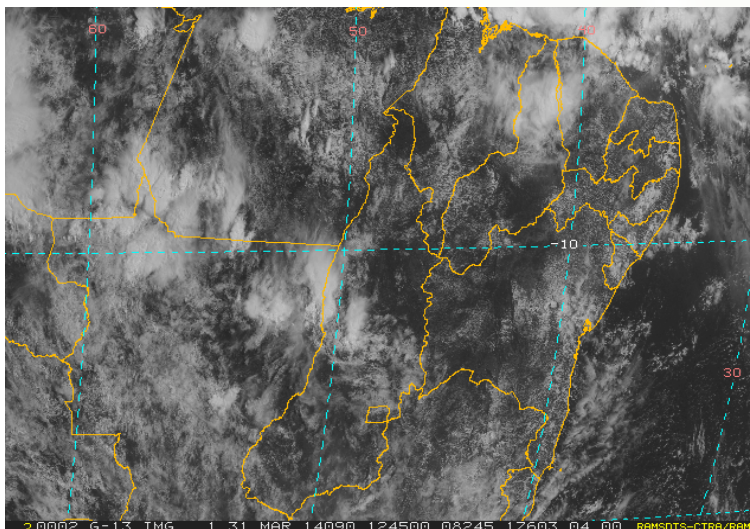


- **GOES-13 - Infrared Channel Enhanced - Mexico**



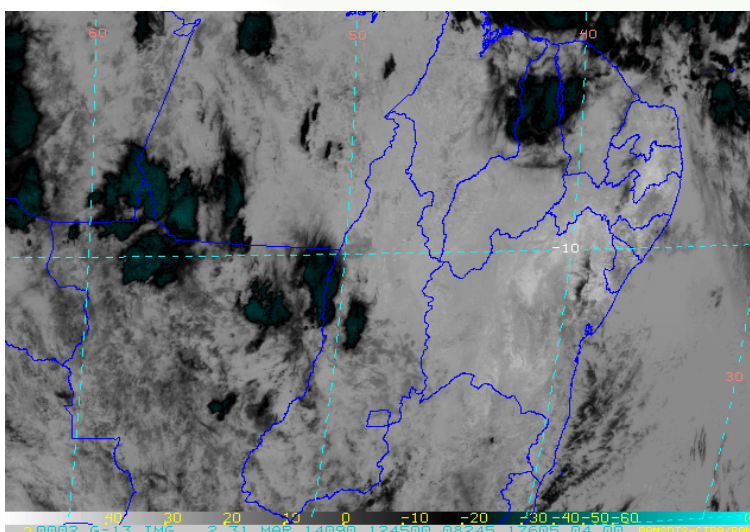
**Format:** GIF  
**Average Size:** 155 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs56

- **GOES-13 - Visible Channel - Northeastern Brazil**



**Format:** GIF  
**Average Size:** 130 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs57

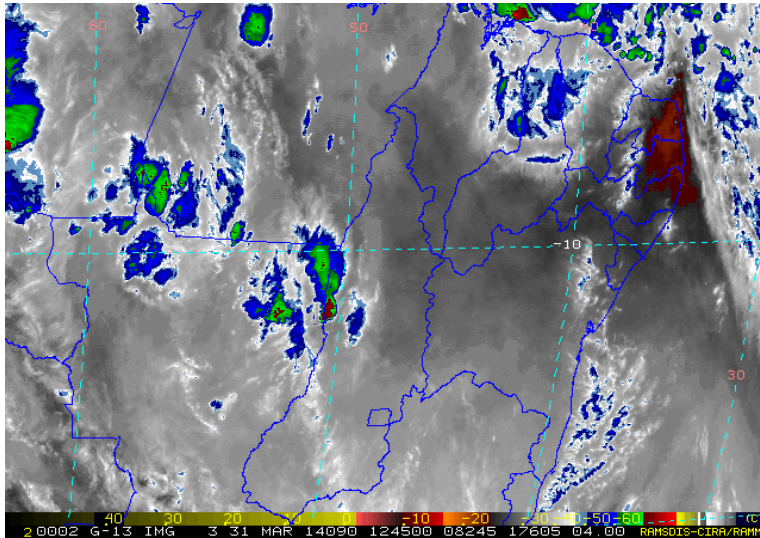
- **GOES-13 - Short Wave Channel - Northeastern Brazil**



**Format:** GIF  
**Average Size:** 135 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs58

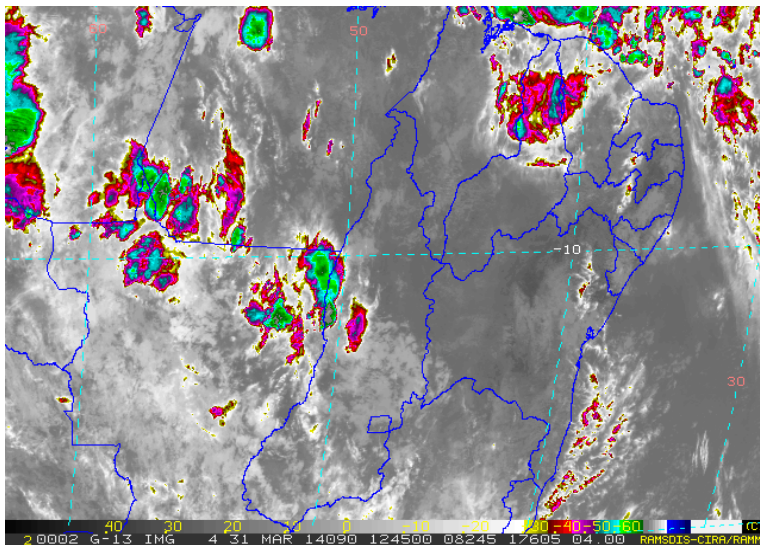


- **GOES-13 - Water Vapor Channel Enhanced - Northeastern Brazil**



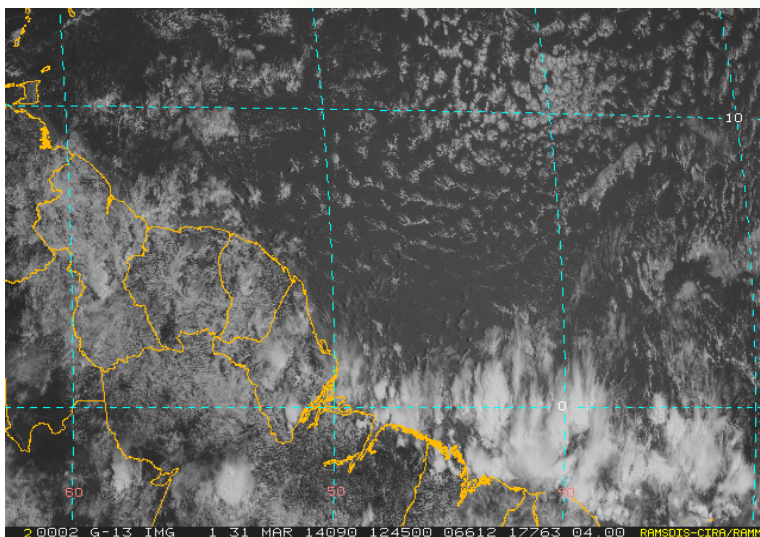
**Format:** GIF  
**Average Size:** 75 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs59

- **GOES-13 - Infrared Channel Enhanced - Northeastern Brazil**



**Format:** GIF  
**Average Size:** 100 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs60

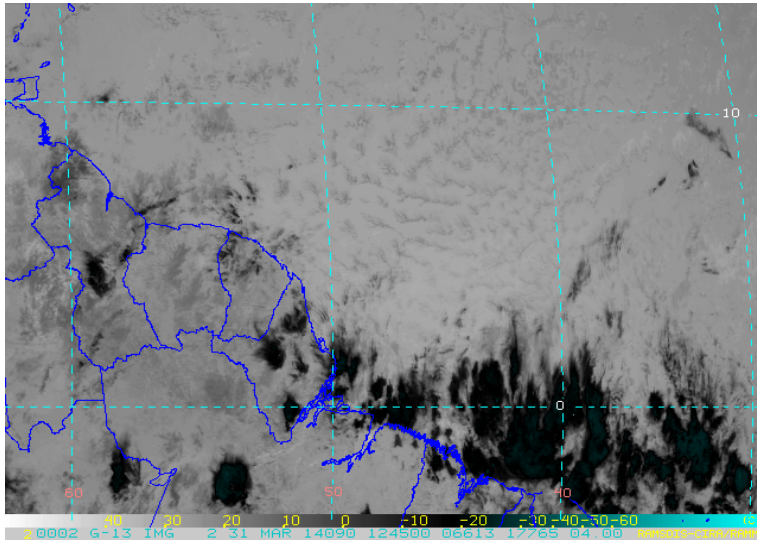
- **GOES-13 - Visible Channel - Northeastern South America**



**Format:** GIF  
**Average Size:** 150 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs61

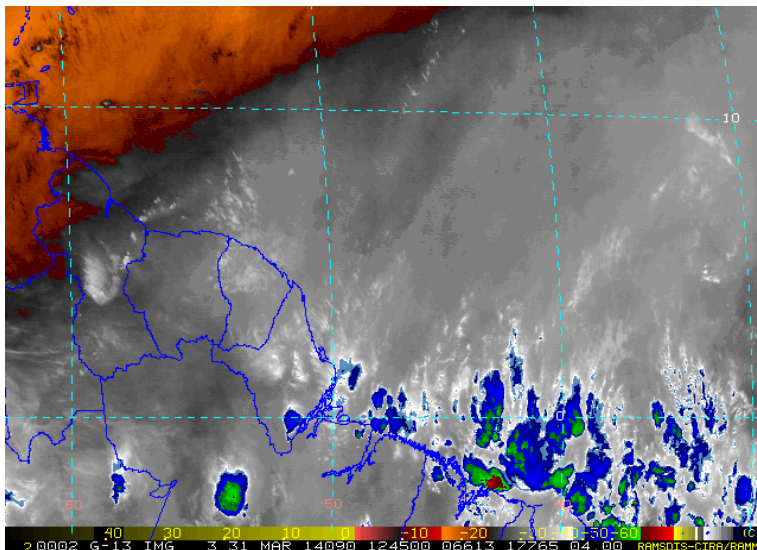


- GOES-13 - Short Wave Channel Enhanced - Northeastern South America**



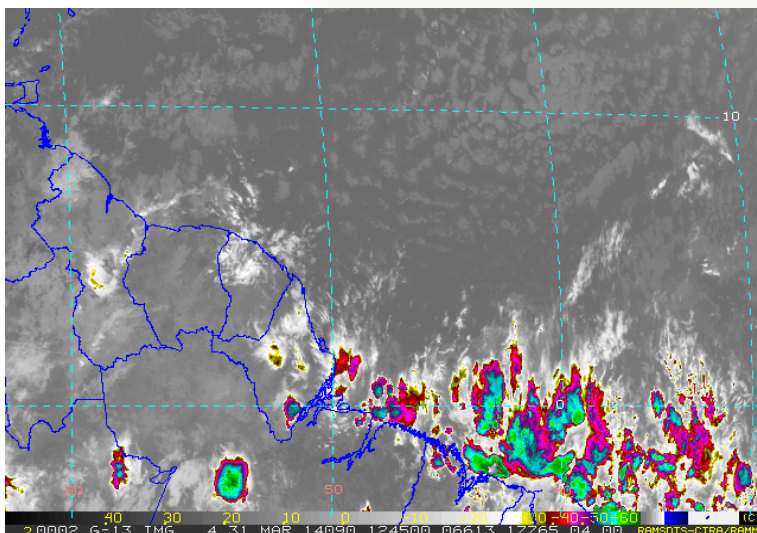
**Format:** GIF  
**Average Size:** 155 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs62

- GOES-13 - Water Vapor Channel Enhanced - Northeastern South America**



**Format:** GIF  
**Average Size:** 95 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs63

- GOES-13 - Infrared Channel Enhanced - Northeastern South America**



**Format:** GIF  
**Average Size:** 120 kB  
**Frequency:** 60 (overwriting)  
**Max n° of files a day:** 24  
**Naming Convention:** rbs64



# PROVIDER: NADM

(North American Drought Monitor – USA / MEXICO / CANADA)

- Drought Monitor - North America – English / Spanish / French

## North American Drought Monitor

January 31, 2014

Released: Tuesday, February 18, 2014

<http://www.ncdc.noaa.gov/nadm.html>

Analysts:  
 Canada - Trevor Hadwen  
 Patrick Bell  
 Mexico - Reynaldo Pascual  
 Adelina Albanil  
 U.S.A. - Anthony Artusa  
 Richard Heim\*

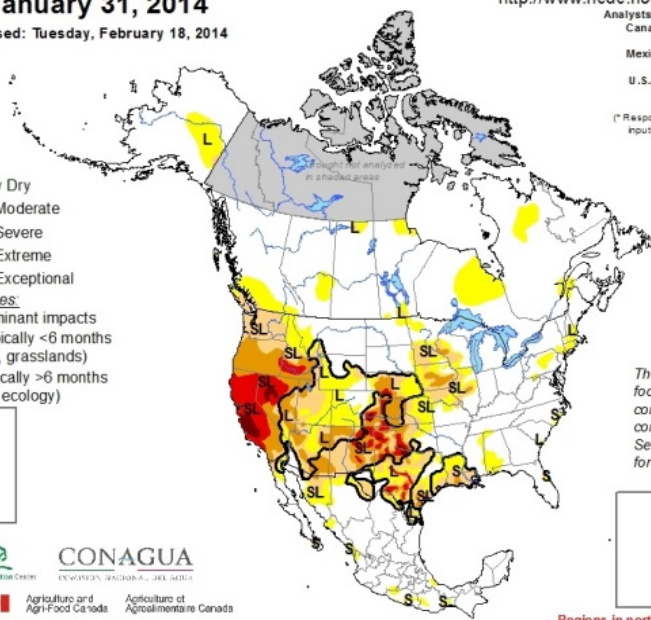
(\* Responsible for collecting analysts' input & assembling the NA-DM map)

**Intensity**

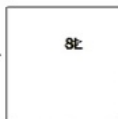
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

**Drought Impact Types**

- Delineates dominant impacts
- S = Short-Term, typically <6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months (e.g. hydrology, ecology)



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text for a general summary.

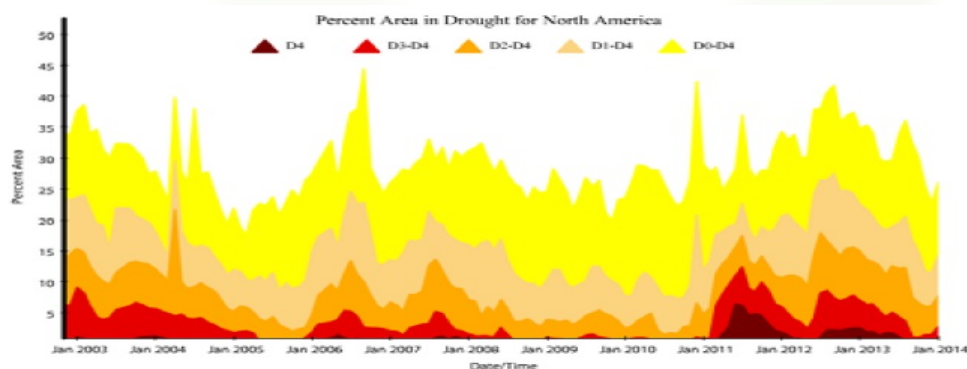


Regions in northern Canada may not be as accurate as other regions due to limited information.

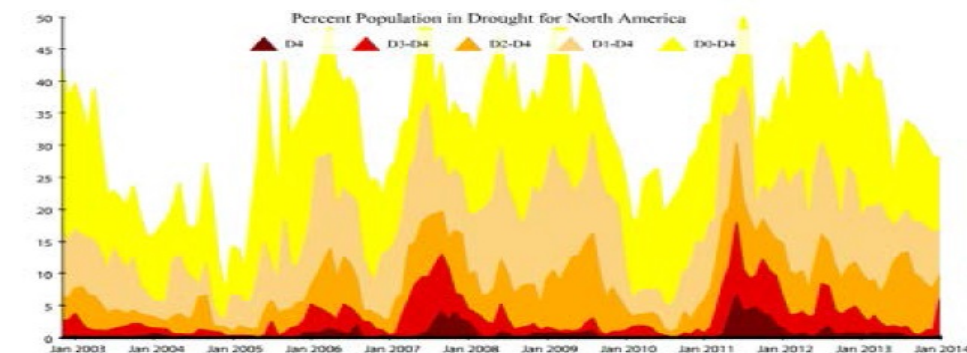


**Formats:** JPEG and PDF  
**Average Sizes:** 600 kB (JPEG) / 1.5 MB (PDF)  
**Frequency:** Monthly  
**Naming Conventions:**  
 nadm-YYYYMM  
 nadm-YYYYMM-sp  
 nadm-YYYYMM-fr

- Drought Monitor Monthly Report - North America – English / Spanish / French



**Format:** PDF  
**Average Size:** 118 kB  
**Frequency:** Monthly  
**Naming Conventions:**  
 nadm-narr-YYYYMM  
 nadm-narr-YYYYMM-sp  
 nadm-narr-YYYYMM-fr

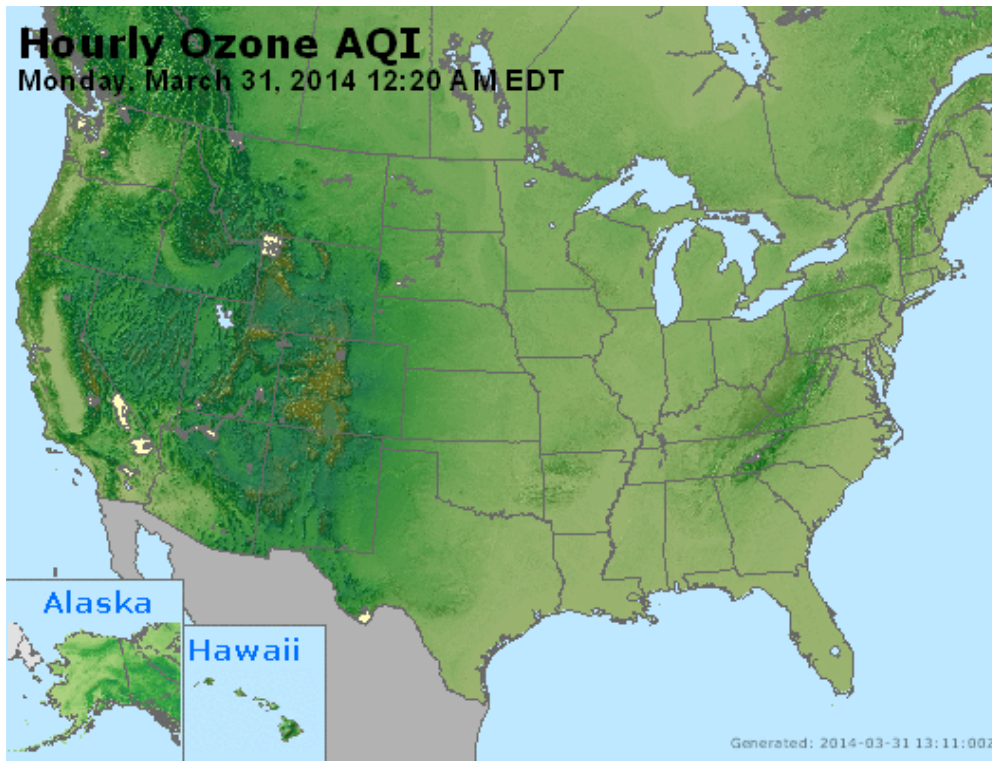




## **PROVIDER: USEPA**

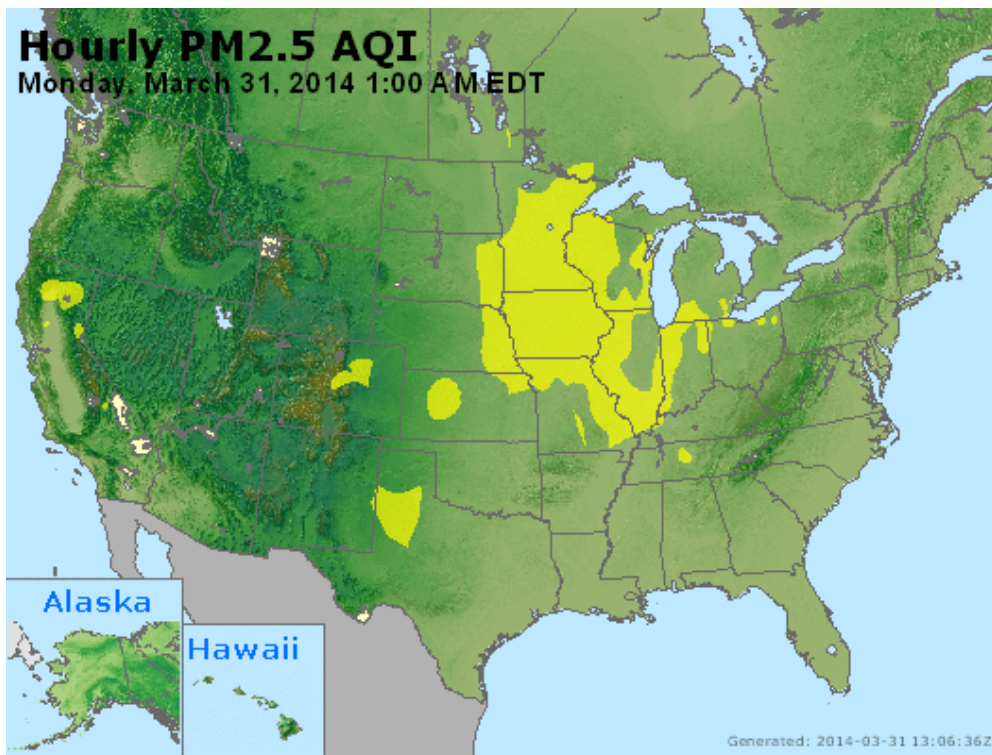
*(US Environmental Protection Agency - USA)*

- Real Time Ozone Animated - North America



**Format:** GIF  
**Average Size:** 165 kB  
**Frequency:** 60 minutes  
**Max n° of files a day:** 24  
**Naming Convention:**  
8a-super

- Real Time Particulate Matter 2.5 Micrometers Animated - North America



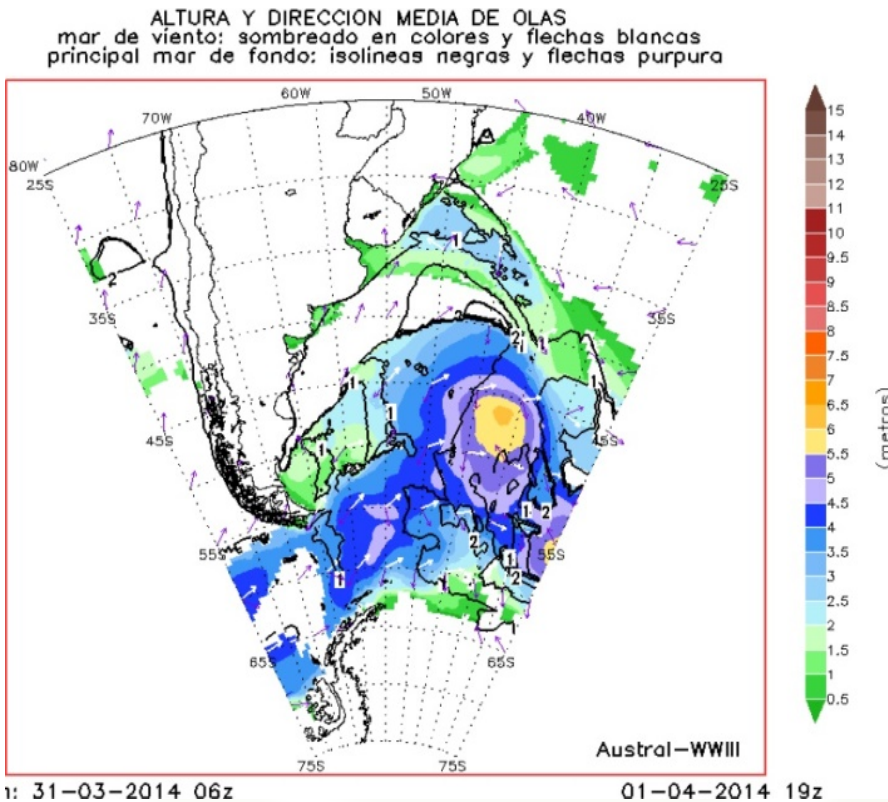
**Format:** GIF  
**Average Size:** 45 kB  
**Frequency:** 15 minutes  
**Max n° of files a day:** 96  
**Naming Convention:**  
pm25-24a-super



# PROVIDER: CONAE

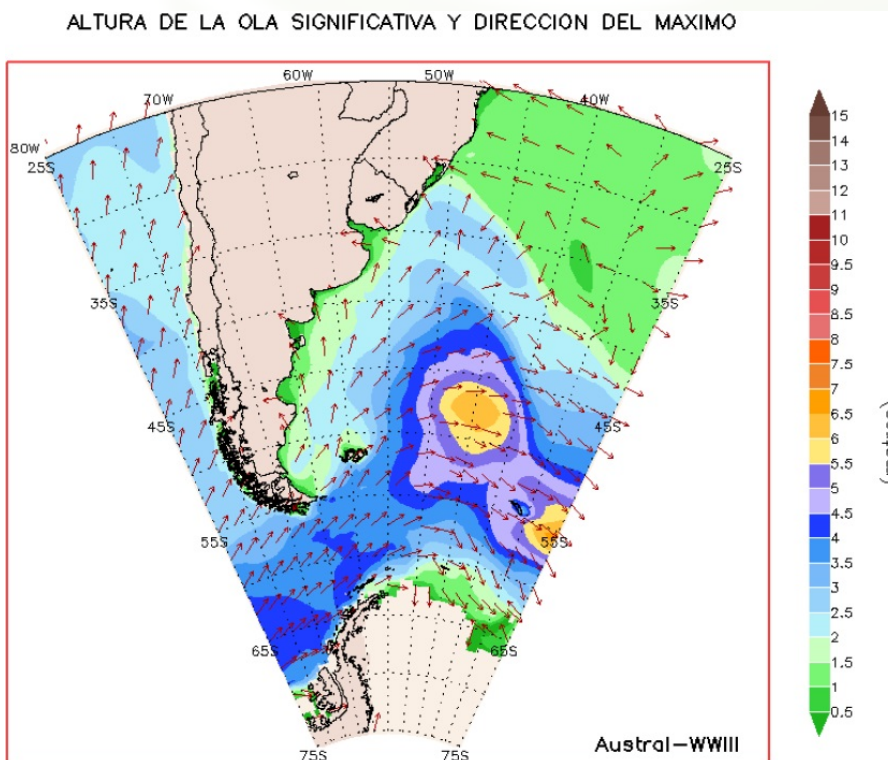
(National Space Activities Commission - Argentina)

- Average Height and Direction of Waves - Southern South America



**Formats:** PDF and Text (compressed)  
**Average Size:** 3.18 MB  
**Frequency:** 360 minutes  
**Max n° of files a day:** 4 per product  
**Naming Conventions:**  
 olas\_austral.zip

- Significant Wave Height and Direction of Maximum



**Formats:** PDF and Text (compressed)  
**Average Size:** 3.18 MB  
**Frequency:** 360 minutes  
**Max n° of files a day:** 4 per product  
**Naming Conventions:**  
 olas\_austral.zip

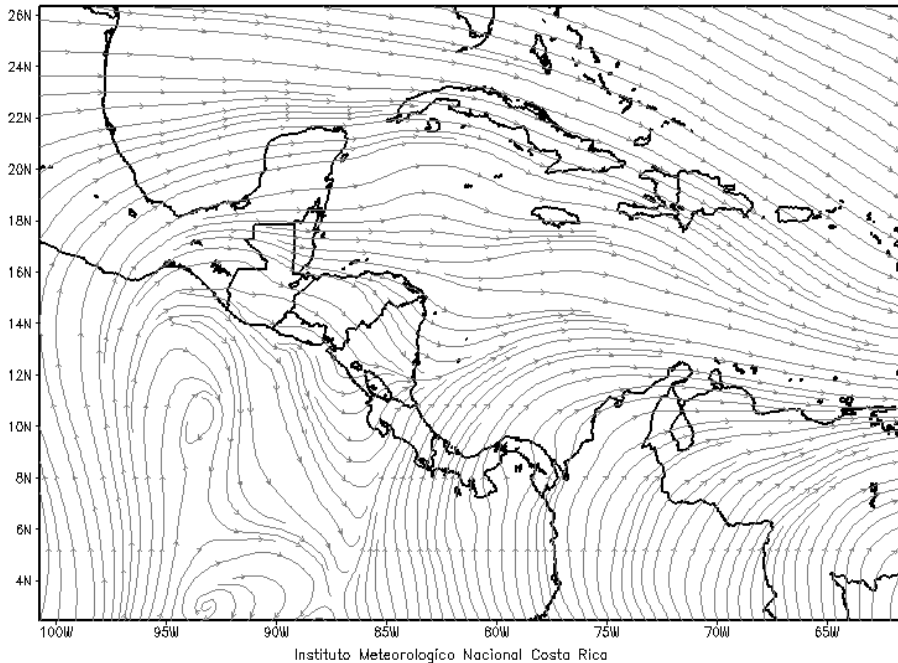


## **PROVIDER: IMN-CostaRica**

*(National Meteorological Institute – Costa Rica)*

- **Stream Lines Forecast - 250 hPa - 6 /12 / 18 / 24 / 30 / 36 hours forecast - Central America and Caribbean**

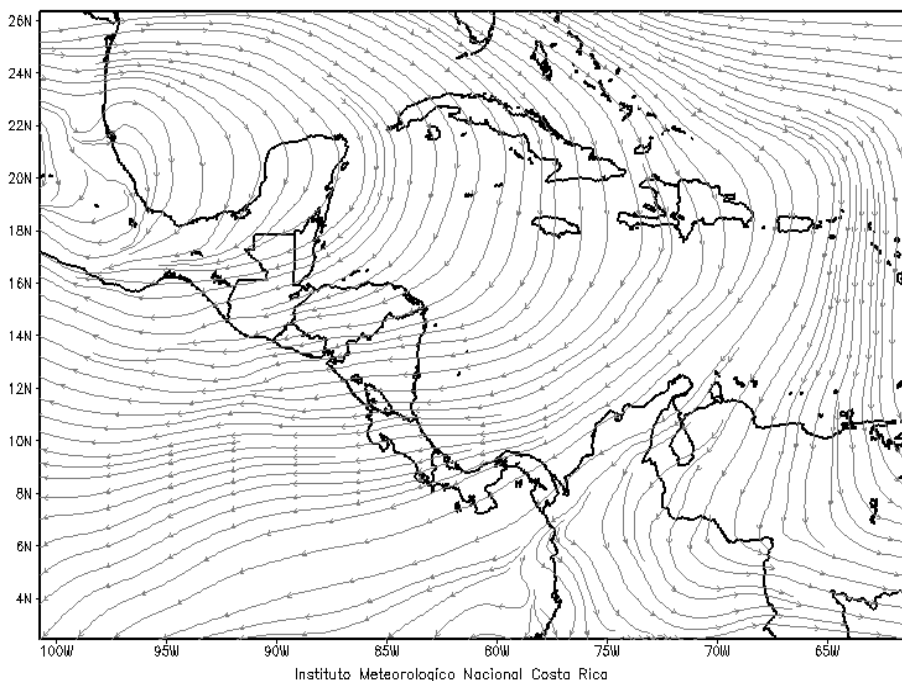
IMN/WRF: Lineas de Corriente (250hPa)  
2015-02-24 06Z



**Format:** PNG  
**Average Size:** 25 kB  
**Frequency:** Daily (per forecast)  
**Naming Conventions:**  
 stream-06h-250hPa-dom2  
 stream-12h-250hPa-dom2  
 stream-18h-250hPa-dom2  
 stream-24h-250hPa-dom2  
 stream-30h-250hPa-dom2  
 stream-36h-250hPa-dom2

- **Stream Lines Forecast - 500 hPa - 6 /12 / 18 / 24 / 30 / 36 hours forecast - Central America and Caribbean**

IMN/WRF: Lineas de Corriente (500hPa)  
2015-02-24 06Z

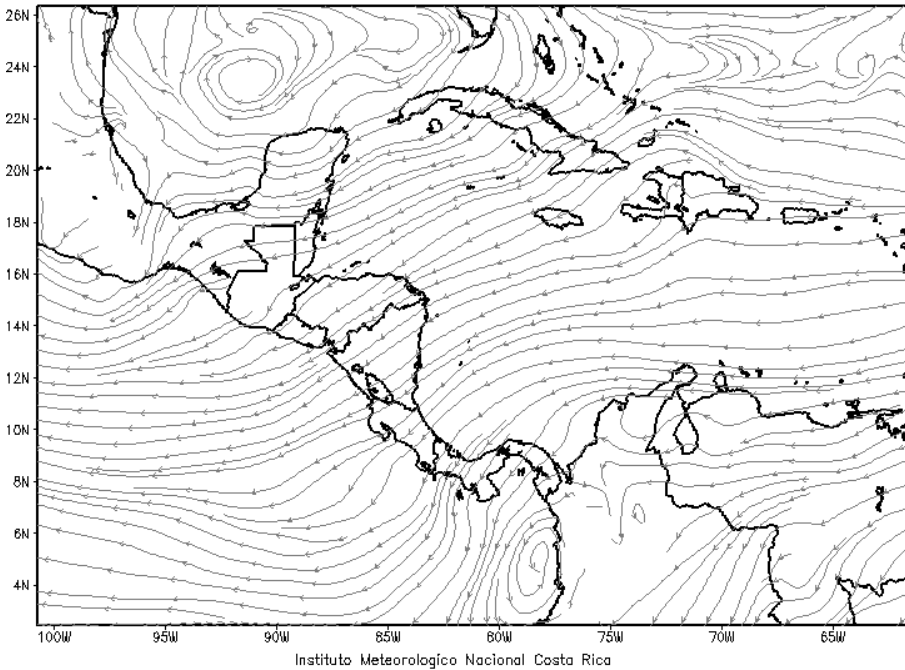


**Format:** PNG  
**Average Size:** 25 kB  
**Frequency:** Daily (per forecast)  
**Naming Conventions:**  
 stream-06h-500hPa-dom2  
 stream-12h-500hPa-dom2  
 stream-18h-500hPa-dom2  
 stream-24h-500hPa-dom2  
 stream-30h-500hPa-dom2  
 stream-36h-500hPa-dom2



• **Stream Lines Forecast - 850 hPa - 6 / 12 / 18 / 24 / 30 / 36 hours forecast - Central America and Caribbean**

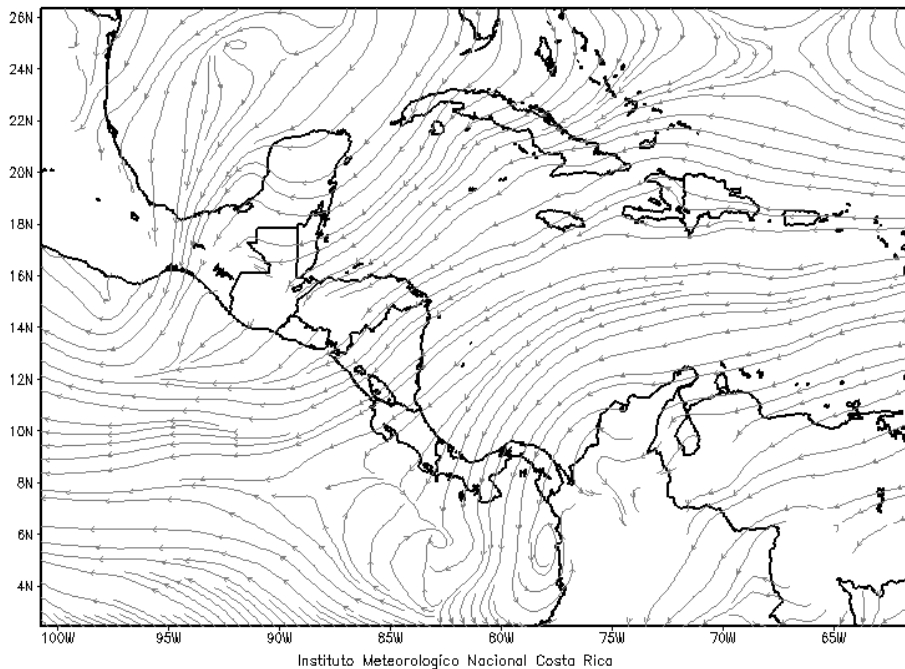
IMN/WRF: Lineas de Corriente (850hPa)  
2015-02-24 06Z



**Format:** PNG  
**Average Size:** 25 kB  
**Frequency:** Daily (per forecast)  
**Naming Conventions:**  
 stream-06h-850hPa-dom2  
 stream-12h-850hPa-dom2  
 stream-18h-850hPa-dom2  
 stream-24h-850hPa-dom2  
 stream-30h-850hPa-dom2  
 stream-36h-850hPa-dom2

• **Stream Lines Forecast - 925 hPa - 6 / 12 / 18 / 24 / 30 / 36 hours forecast - Central America and Caribbean**

IMN/WRF: Lineas de Corriente (925hPa)  
2015-02-24 06Z

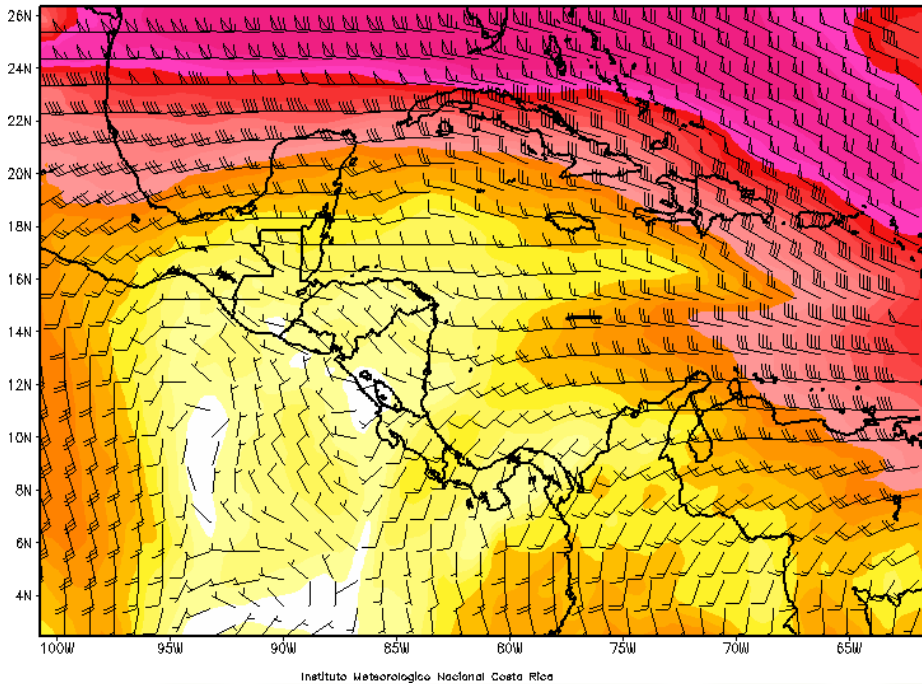


**Format:** PNG  
**Average Size:** 25 kB  
**Frequency:** Daily (per forecast)  
**Naming Conventions:**  
 stream-06h-925hPa-dom2  
 stream-12h-925hPa-dom2  
 stream-18h-925hPa-dom2  
 stream-24h-925hPa-dom2  
 stream-30h-925hPa-dom2  
 stream-36h-925hPa-dom2



• **Wind Forecast - 250 hPa - 6 / 12 / 18 / 24 / 30 / 36 hours forecast - Central America and Caribbean**

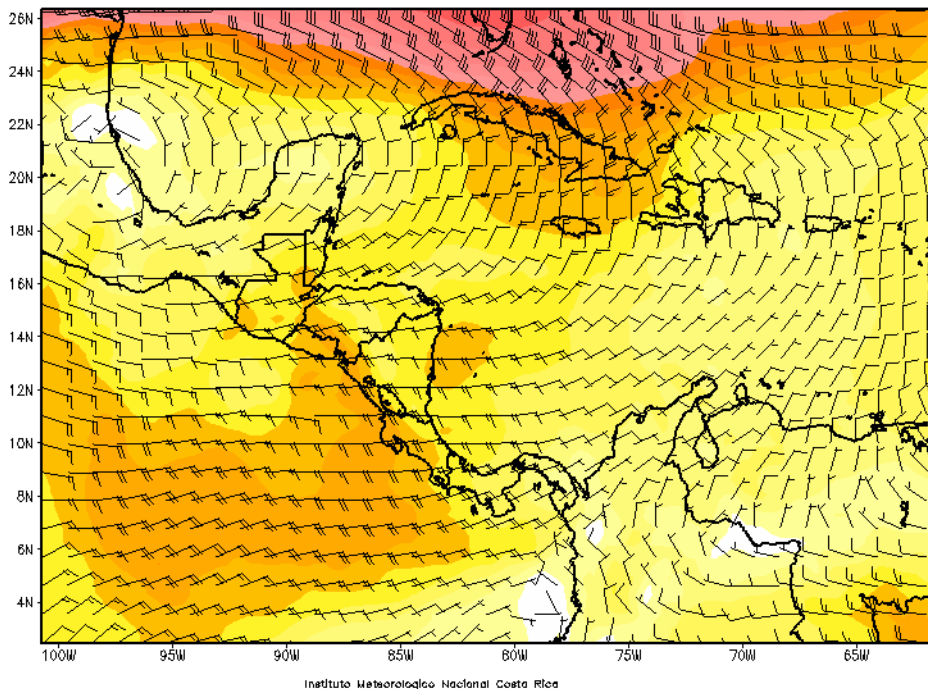
IMN/WRF: Viento (kt) (250hPa)  
2015-02-24 06Z



**Format:** PNG  
**Average Size:** 40 kB  
**Frequency:** Daily (per forecast)  
**Naming Conventions:**  
 wind-06h-250hPa-dom2  
 wind-12h-250hPa-dom2  
 wind-18h-250hPa-dom2  
 wind-24h-250hPa-dom2  
 wind-30h-250hPa-dom2  
 wind-36h-250hPa-dom2

• **Wind Forecast - 500 hPa - 6 / 12 / 18 / 24 / 30 / 36 hours forecast - Central America and Caribbean**

IMN/WRF: Viento (kt) (500hPa)  
2015-02-24 06Z

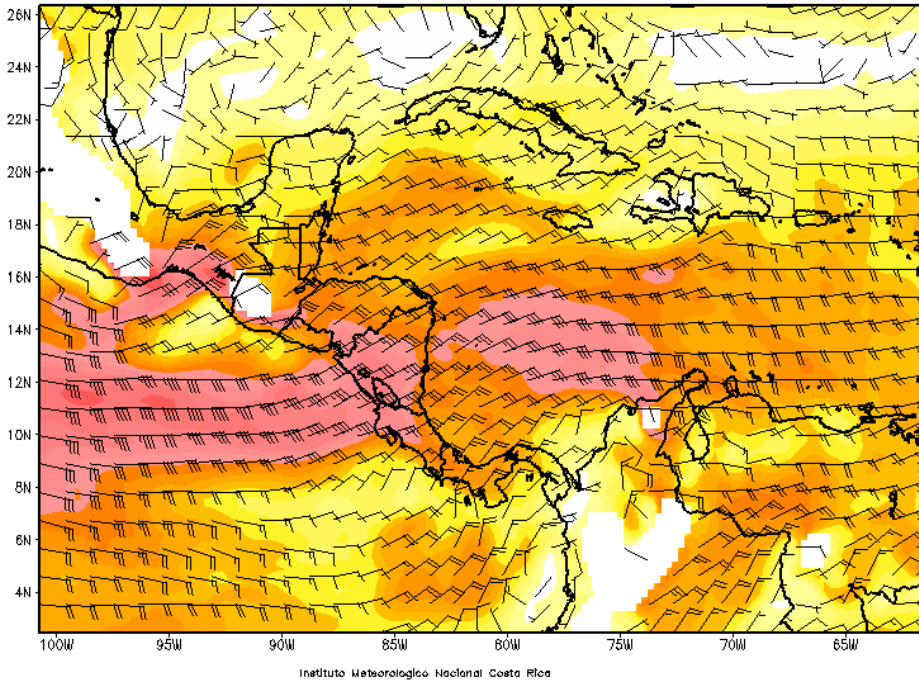


**Format:** PNG  
**Average Size:** 40 kB  
**Frequency:** Daily (per forecast)  
**Naming Conventions:**  
 wind-06h-500hPa-dom2  
 wind-12h-500hPa-dom2  
 wind-18h-500hPa-dom2  
 wind-24h-500hPa-dom2  
 wind-30h-500hPa-dom2  
 wind-36h-500hPa-dom2



• **Wind Forecast - 850 hPa - 6 / 12 / 18 / 24 / 30 / 36 hours forecast - Central America and Caribbean**

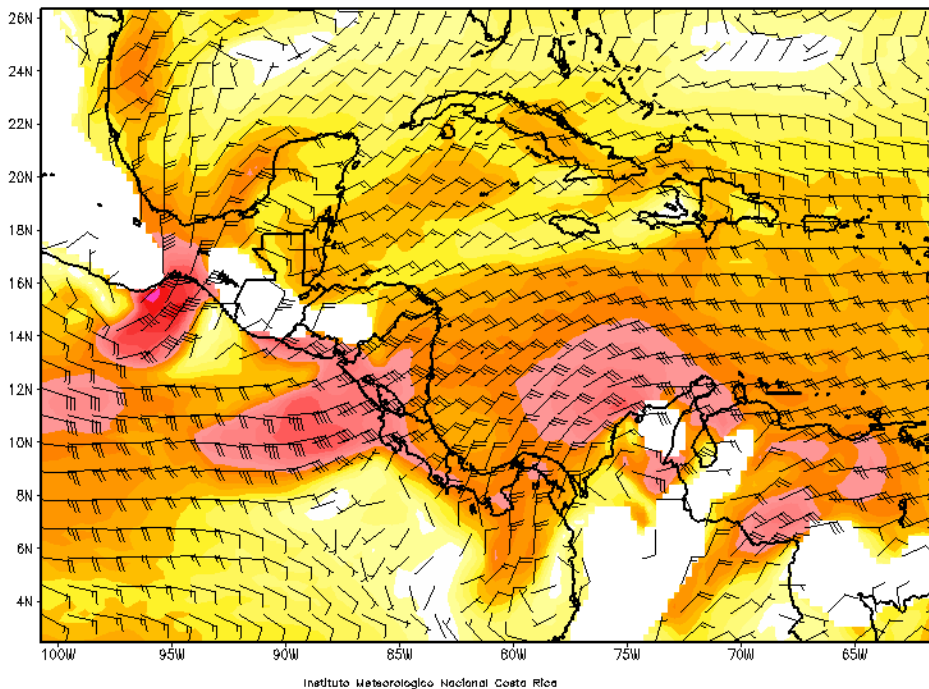
IMN/WRF: Viento (kt) (850hPa)  
2015-02-24 06Z



**Format:** PNG  
**Average Size:** 40 kB  
**Frequency:** Daily (per forecast)  
**Naming Conventions:**  
 wind-06h-850hPa-dom2  
 wind-12h-850hPa-dom2  
 wind-18h-850hPa-dom2  
 wind-24h-850hPa-dom2  
 wind-30h-850hPa-dom2  
 wind-36h-850hPa-dom2

• **Wind Forecast - 925 hPa - 6 / 12 / 18 / 24 / 30 / 36 hours forecast - Central America and Caribbean**

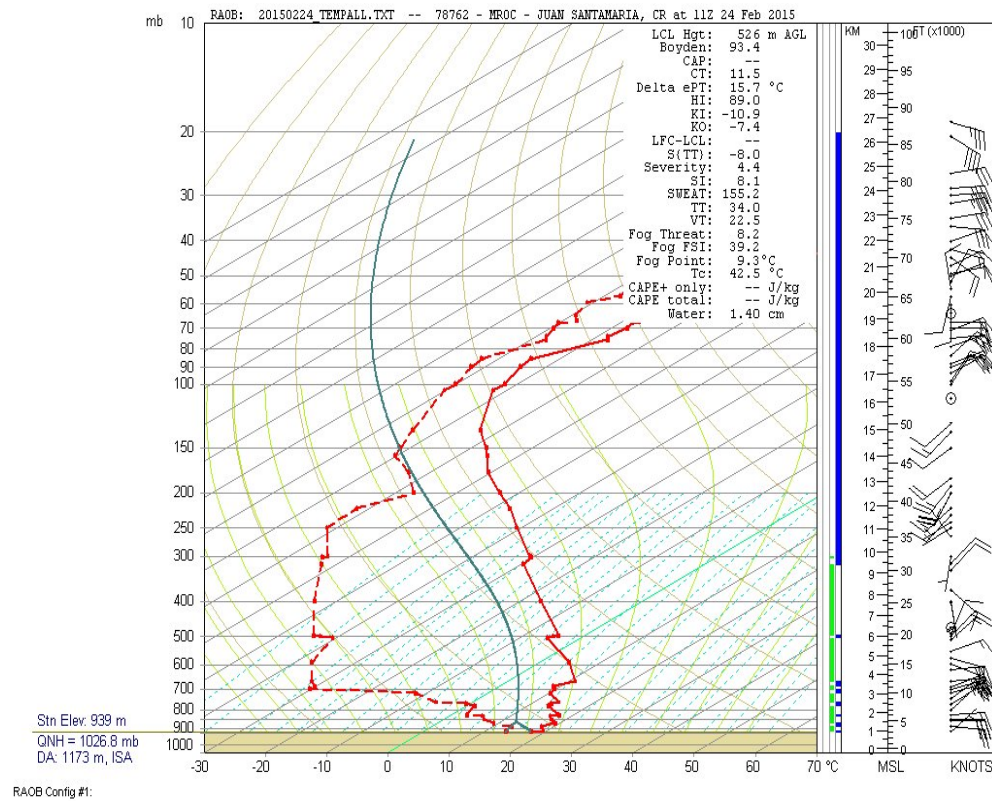
IMN/WRF: Viento (kt) (925hPa)  
2015-02-24 06Z



**Format:** PNG  
**Average Size:** 40 kB  
**Frequency:** Daily (per forecast)  
**Naming Conventions:**  
 wind-06h-925hPa-dom2  
 wind-12h-925hPa-dom2  
 wind-18h-925hPa-dom2  
 wind-24h-925hPa-dom2  
 wind-30h-925hPa-dom2  
 wind-36h-925hPa-dom2



• **Radiosonde Archive**



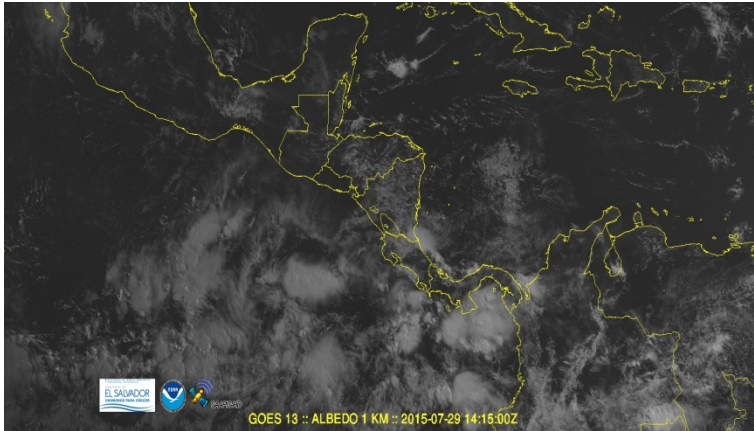
**Formats:** JPEG, BUFR, TXT, AED  
**Average Sizes:**  
 200 kB (JPEG)  
 70 kB (BUFR)  
 2 kB (TXT)  
 245 kB (AED)  
**Frequency:** Daily (per format)  
**Naming Conventions:**  
 YYYYMMDD.AED  
 YYYYMMDDbufr309052\_100.bfr  
 YYYYMMDDbufr309052\_all  
 YYYYMMDD\_TEMPALL



## **PROVIDER: MARN-El Salvador**

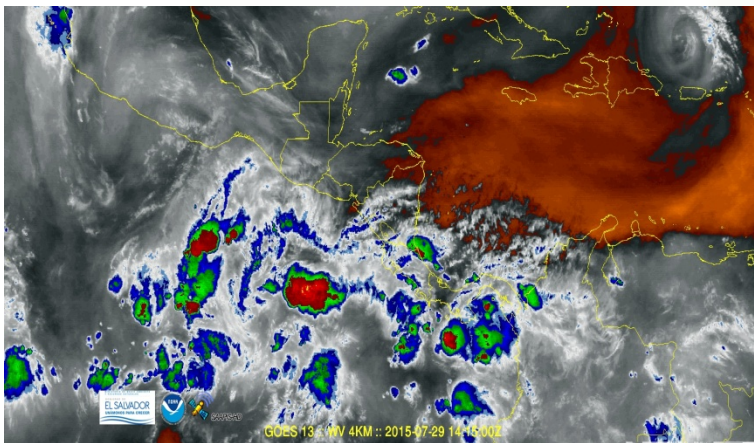
*(Department of Environment and Natural Resources – El Salvador)*

- GOES-13 – Visible Channel – Central America**



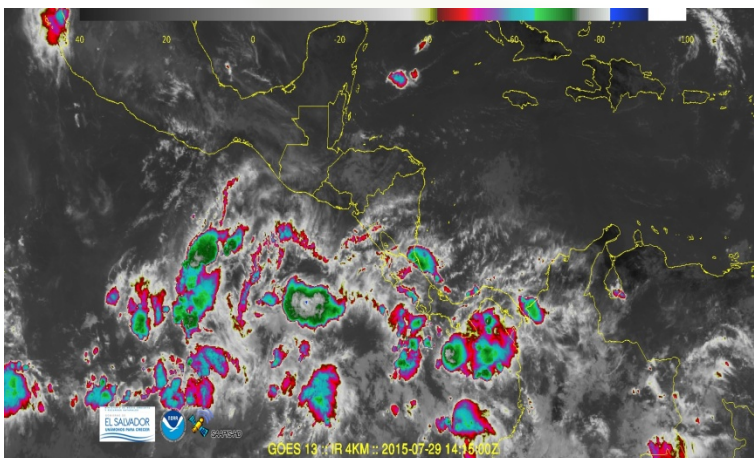
**Format:** JPEG  
**Average Size per image:** 1.10 MB  
**Frequency:** 9 images every 15 minutes  
**Max n° of files a day:** 864 (overwriting)  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 1  
**Wavelength:** 0.52 to 0.71  $\mu\text{m}$ , cent. at 0.63  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 1 x 1 km  
**Naming Convention:**  
 vis4\_1 to vis4\_9

- GOES-13 – Water Vapor Channel Enhanced – Central America**



**Format:** JPEG  
**Average Size per image:** 1.10 MB  
**Frequency:** 9 images every 15 minutes  
**Max n° of files a day:** 864 (overwriting)  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 3  
**Wavelength:** 5.77 to 7.33  $\mu\text{m}$ , cent. at 6.50  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 wv4\_1 to wv4\_9

- GOES-13 – Infrared Channel Enhanced – Central America**

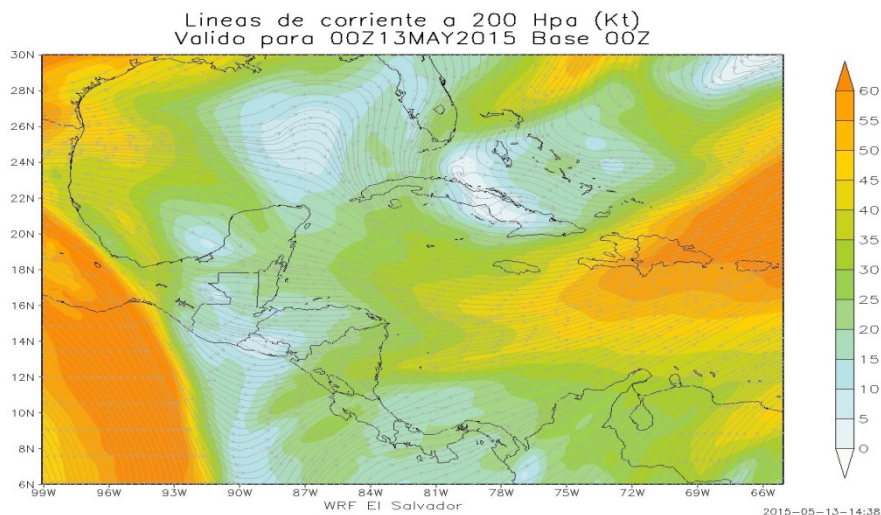


**Format:** JPEG  
**Average Size per image:** 620 kB  
**Frequency:** 9 images every 15 minutes  
**Max n° of files a day:** 864 (overwriting)  
**Satellite:** GOES-13  
**Instrument:** GOES-13 Imager  
**Channel:** 4  
**Wavelength:** 10.20 to 11.20  $\mu\text{m}$ , cent. at 10.70  $\mu\text{m}$   
**Projection:** Rectangular  
**Resolution:** 4 x 4 km  
**Naming Convention:**  
 ir4\_1 to ir4\_9



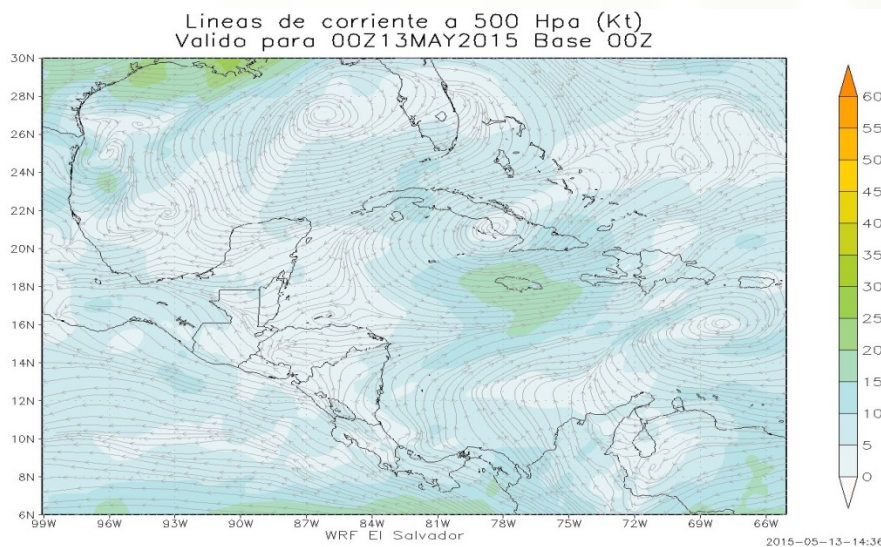


● **WRF Model - 200 Milibars Wind – Central America and Caribbean**



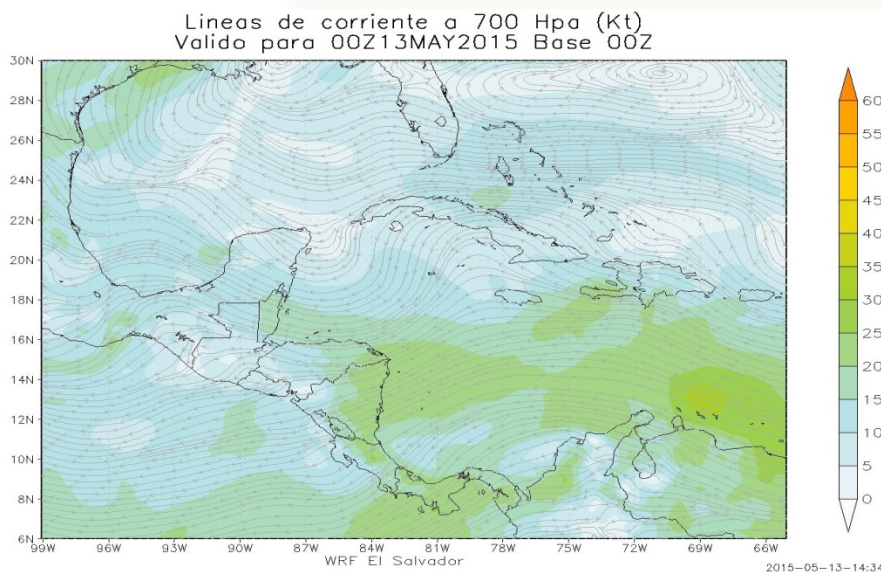
**Format:** JPEG  
**Average Size per image:** 306 kB  
**Frequency:** 73 images per day  
**Spatial Resolution:** 15 km  
**Naming Convention:**  
 strm\_200\_1 to strm\_200\_73

● **WRF Model - 500 Milibars Wind – Central America and Caribbean**



**Format:** JPEG  
**Average Size per image:** 360 kB  
**Frequency:** 73 images per day  
**Spatial Resolution:** 15 km  
**Naming Convention:**  
 strm\_500\_1 to strm\_500\_73

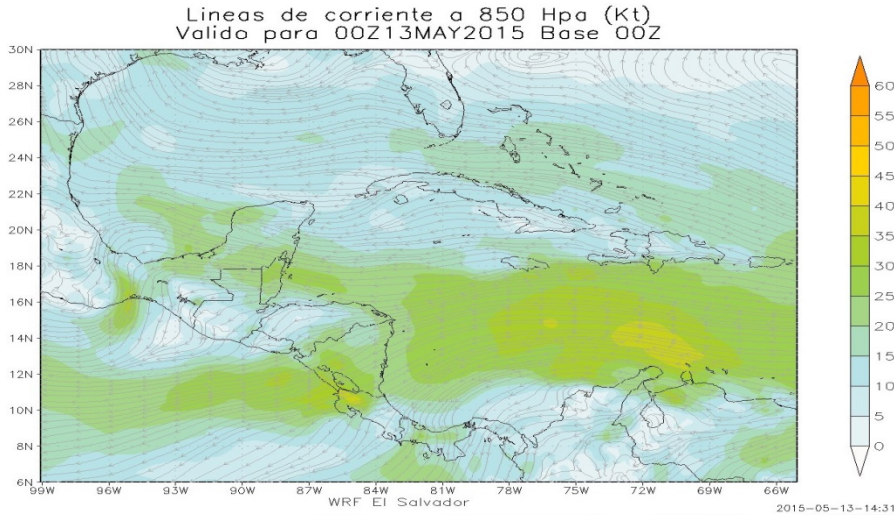
● **WRF Model - 700 Milibars Wind – Central America and Caribbean**



**Format:** JPEG  
**Average Size per image:** 338 kB  
**Frequency:** 73 images per day  
**Spatial Resolution:** 15 km  
**Naming Convention:**  
 strm\_700\_1 to strm\_700\_73

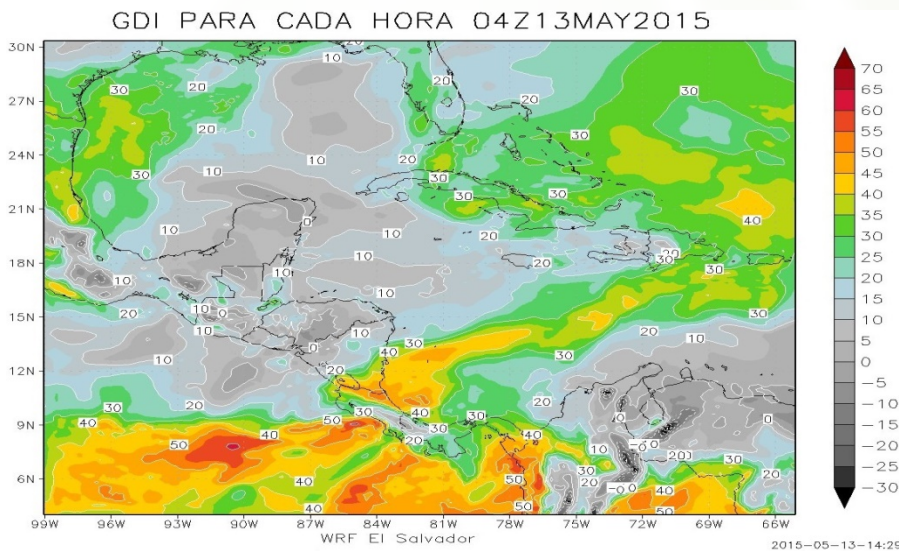


• **WRF Model - 850 Milibars Wind – Central America and Caribbean**



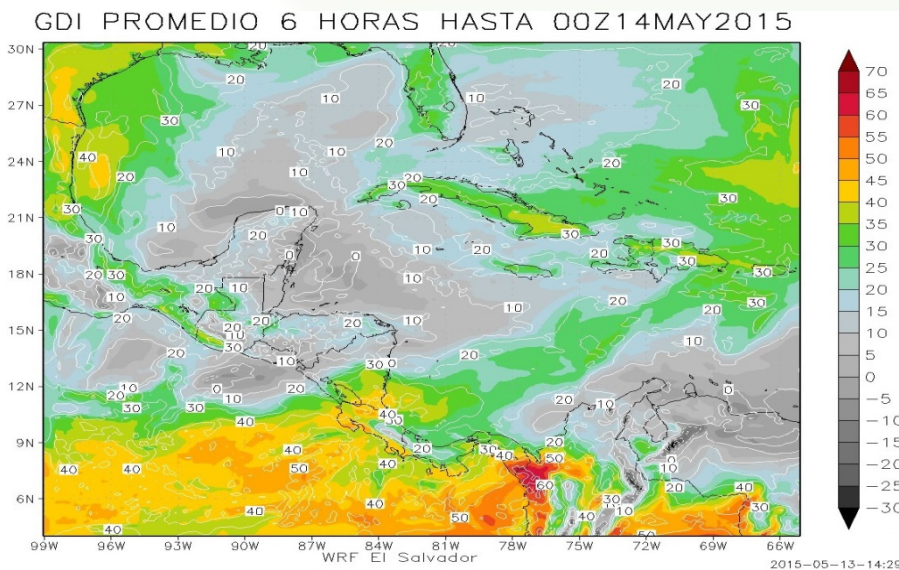
**Format:** JPEG  
**Average Size per image:** 360 kB  
**Frequency:** 73 images per day  
**Spatial Resolution:** 15 km  
**Naming Convention:**  
 strm\_850\_1 to strm\_850\_73

• **WRF Model - Galvez-Davison Index for Convective Instability (GDI) Every Hour**



**Format:** JPEG  
**Average Size per image:** 309 kB  
**Frequency:** 73 images per day  
**Spatial Resolution:** 15 km  
**Naming Convention:**  
 gdi\_1 to gdi\_73

• **WRF Model - Galvez-Davison Index for Convective Instability (GDI) Every 6 Hours**

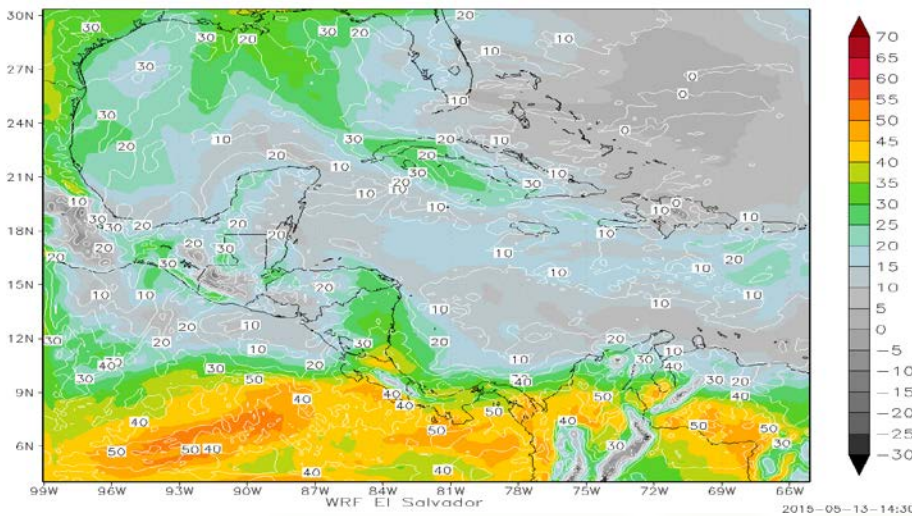


**Format:** JPEG  
**Average Size per image:** 309 kB  
**Frequency:** 12 images per day  
**Spatial Resolution:** 15 km  
**Naming Convention:**  
 gdi\_6h\_1 to gdi\_6h\_12



• **WRF Model - Galvez-Davison Index for Convective Instability (GDI) 24 Hours Average**

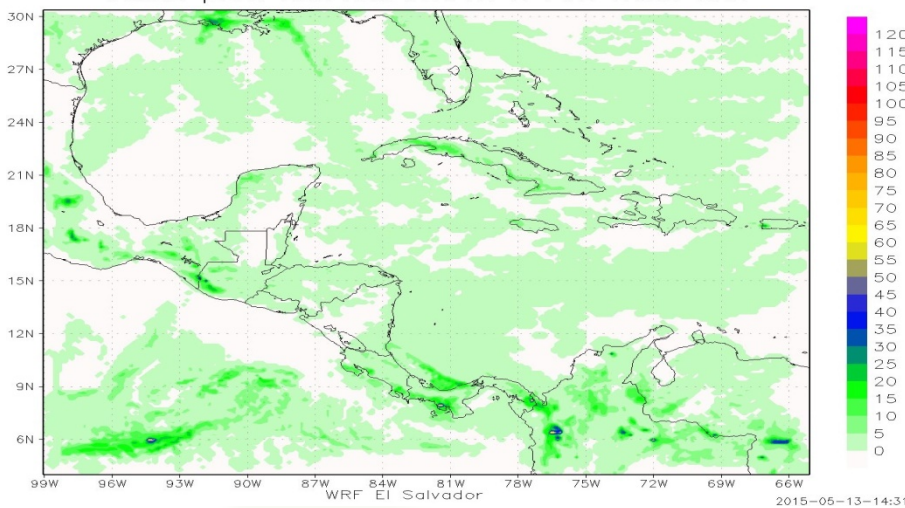
GDI PROMEDIO 24 H AL 00Z16MAY2015 DIA 3



**Format:** JPEG  
**Average Size per image:** 189 kB  
**Frequency:** 3 images per day  
**Spatial Resolution:** 15 km  
**Naming Convention:**  
 gdi\_24h\_1 to gdi\_24h\_3

• **WRF Model - Total Accumulated Precipitation in 3 hours**

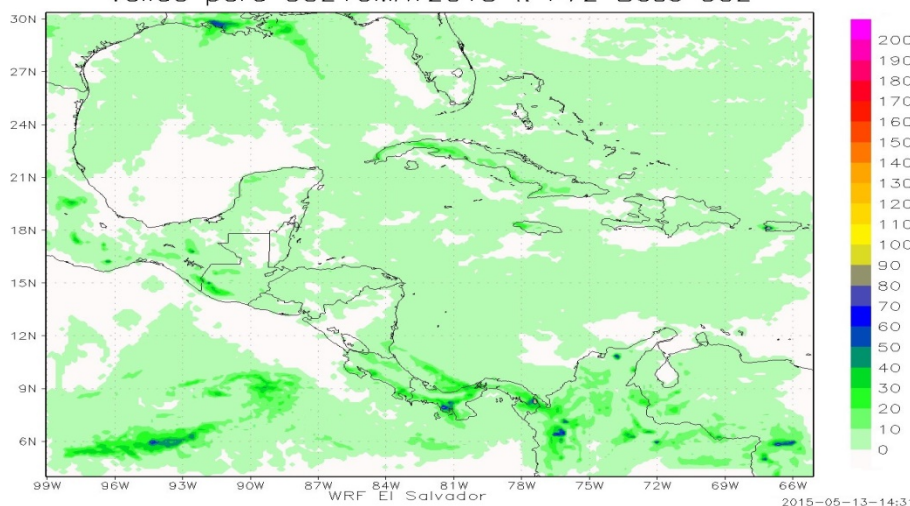
Precipitacion Acumulada cada 3 horas (mm)  
 Valido para 00Z16MAY2015 :: F72 Base 00Z



**Format:** JPEG  
**Average Size per image:** 227 kB  
**Frequency:** 22 images per day  
**Spatial Resolution:** 15 km  
**Naming Convention:**  
 pptcada3h\_1 to pptcada3h\_22

• **WRF Model - Total Accumulated Precipitation in 6 hours**

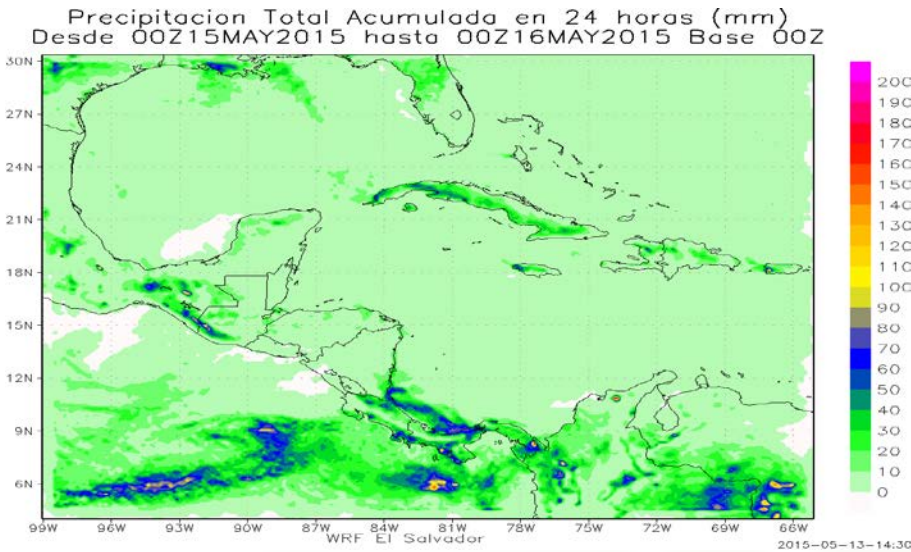
Precipitacion Acumulada cada 6 horas (mm)  
 Valido para 00Z16MAY2015 :: F72 Base 00Z



**Format:** JPEG  
**Average Size per image:** 220 kB  
**Frequency:** 12 images per day  
**Spatial Resolution:** 15 km  
**Naming Convention:**  
 pptcada6h\_1 to pptcada6h\_22



• **WRF Model - Total Accumulated Precipitation in 24 hours**



• **GFS Model - South America / Central America + Caribbean**

**Format:** GRIB2

**Frequency:** 2 cycles per day (00h and 12h), 40 files per cycle, 80 files per region (160 files per day).

**Average Size, per file:** 11 MB (Central America and Caribbean) / 14 MB (South America) – 2 GB per day

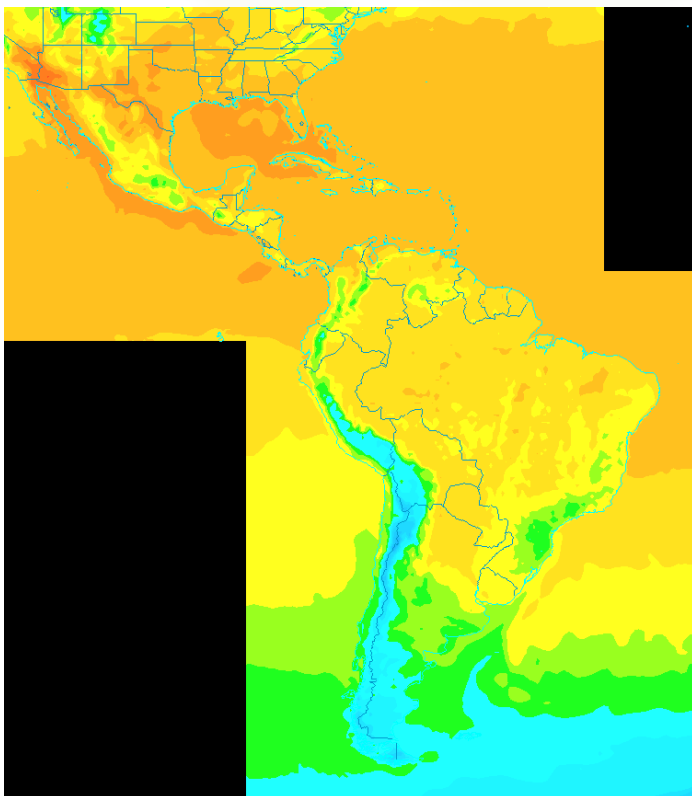
**Spatial Resolution:** 0.5 degree

**Naming Convention:** gfs\_RRR\_0p50\_CC.f0FFF, Where:

**RRR:** Region (**crb**: Central America + Caribbean / **sam**: South America)

**CC:** Execution Cycle (00 and 12 UTC) | **FFF:** Forecast (0 ~ 120 h, every 3 hours)

**GFS Model Field: Temperature**



Sample image: Temperature @ Ground or water surface

**Available Datasets**

**2D grid:**

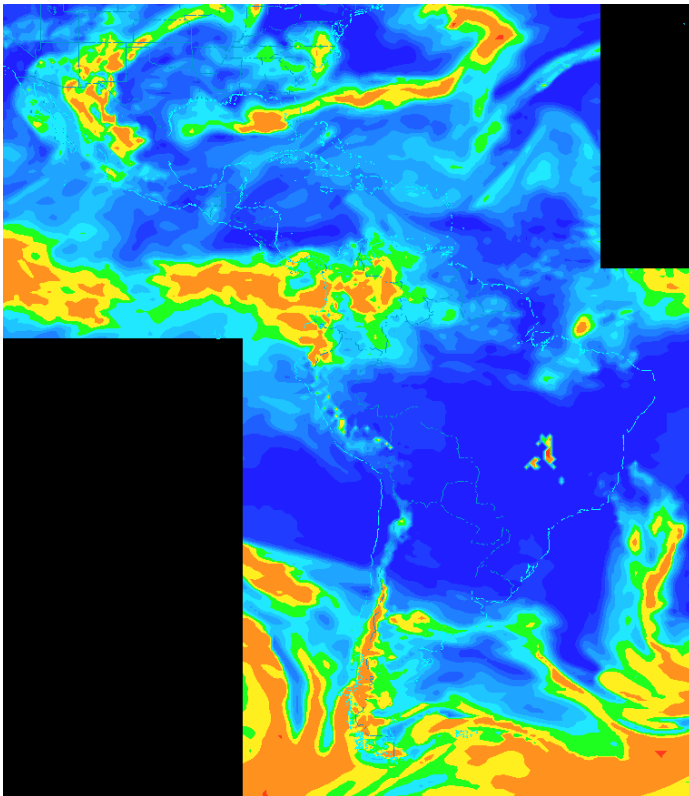
- Temperature @ Ground or water surface [C]
- Temperature @ Maximum wind level [K]
- Temperature @ Tropopause [C]
- Temperature @ Sigma level [K]
- Temperature @ Low cloud top level [K]
- Temperature @ Middle cloud top level [K]
- Temperature @ High cloud top level [K]
- Potential temperature @ Sigma level [K]
- Maximum temperature @ Specified high level above ground [K @ 2.0 m]
- Minimum temperature @ Specified high level above ground [K @ 2.0 m]
- Dewpoint temperature @ Specified height level above ground [K @ 2.0 m]
- Latent heat net flux @ Ground or water surface [W.m-2]
- Sensible heat net flux @ Ground or water surface [W.m-2]

**3D grid:**

- Temperature @ Isobaric surface [C @ 100000.0 Pa]
- Temperature @ Specific altitude above mean sea level [K @ 305 m]
- Temperature @ Specified height level above ground [C @ 2.0 m]
- Temperature @ Level at specified pressure difference from ground to level layer [K @ 1500 Pa]
- Temperature @ Potential vorticity surface [K @ -2E-6 K m2 kg-1 s-1]



**GFS Model Field: Moisture**



Sample image: Relative humidity @ Level of 0°C isotherm

**Available Datasets**

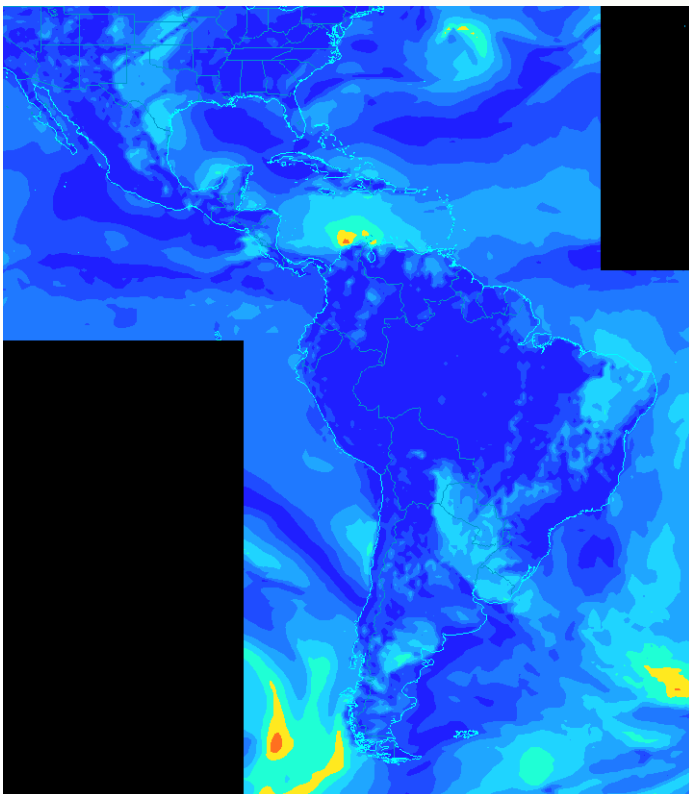
**2D grid:**

- Relative humidity @ Level of 0°C isotherm [%]
- Relative humidity @ Specified height level above ground [% @ 2.0 m]
- Relative humidity @ Sigma level [%]
- Relative humidity @ Entire atmosphere layer [%]
- Relative humidity @ Highest tropospheric freezing level [%]
- Precipitable water @ Entire atmosphere layer [mm]
- Precipitation rate @ Ground or water surface [mm]
- Total precipitation @ Ground or water surface [mm]
- Convective precipitation @ Ground or water surface [mm]
- Snow depth @ Ground or water surface [m]
- Water equivalent of accumulated snow depth @ Ground or water surface [kg.m-2]
- Per cent frozen precipitation @ Ground or water surface [%]
- Categorical Rain @ Ground or water surface
- Categorical Freezing Rain @ Ground or water surface
- Categorical Ice Pellets @ Ground or water surface
- Categorical Snow @ Ground or water surface
- Convective Precipitation Rate @ Ground or water surface
- Potential Evaporation Rate @ Ground or water surface [W.m-2]

**3D grid:**

- Specific humidity @ Isobaric surface [kg/kg @ 100000.0 Pa]
- Specific humidity @ Specified height level above ground [kg/kg @ 2.0 m]
- Specific humidity @ Level at specified pressure difference from ground to level layer [kg/kg @ 1500.0 Pa]
- Relative humidity @ Isobaric surface [% @ 100000.0 Pa]
- Relative humidity @ Sigma level layer [% @ 0.72]
- Relative humidity @ Level at specified pressure difference from ground to level layer [% @ 1500.0 Pa]

**GFS Model Field: Momentum**



Sample image: Wind speed (gust) @ Ground or water surface

**Available Datasets**

**2D grid:**

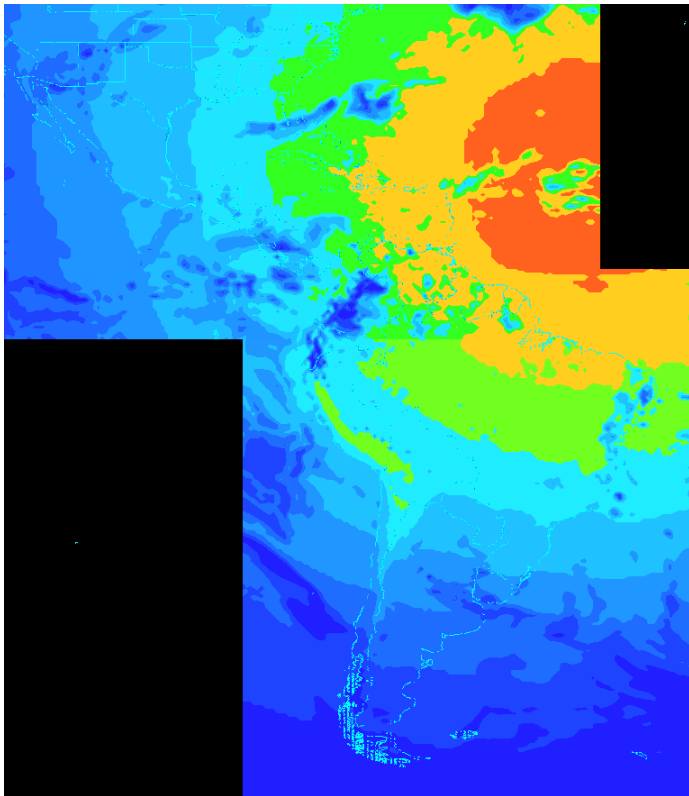
- u-component of wind @ Maximum wind level [m/s]
- u-component of wind @ Tropopause [m/s]
- u-component of wind @ Sigma level [m/s]
- u-component of wind @ Planetary Boundary Layer [m/s]
- u-component of wind @ Maximum wind level [m/s]
- v-component of wind @ Tropopause [m/s]
- v-component of wind @ Sigma level [m/s]
- v-component of wind @ Planetary Boundary Layer [m/s]
- Vertical velocity (pressure) @ Sigma level [Pa/s]
- Momentum flux, u-component @ Ground or water surface [N.m-2]
- Momentum flux, v-component @ Ground or water surface [N.m-2]
- Wind speed (gust) @ Ground or water surface [m/s]
- Vertical Speed Shear @ Tropopause [s-1]
- U-Component Storm Motion @ Specified height level above ground layer [m.s-1 @ 3000.0 m]
- V-Component Storm Motion @ Specified height level above ground layer [m.s-1 @ 3000.0 m]
- Ventilation Rate @ Planetary Boundary Layer [m2.s-1]

**3D grid:**

- u-component of wind @ Isobaric surface [m/s @ 100000 Pa]
- u-comp. of wind @ Specific altitude above mean sea level [m/s @ 305 m]
- u-component of wind @ Specified height level above ground [m/s @ 10 m]
- u-component of wind @ Level at specified pressure difference from ground to level layer [m/s @ 1500 Pa]
- u-comp. of wind @ Potential vorticity surface [m/s @ -2E-6 K m2 kg-1 s-1]
- v-component of wind @ Isobaric surface [m/s @ 100000 Pa]
- v-comp. of wind @ Specific altitude above mean sea level [m/s @ 305 m]
- v-component of wind @ Specified height level above ground [m/s @ 10 m]
- v-component of wind @ Level at specified pressure difference from ground to level layer [m/s @ 1500 Pa]
- v-comp. of wind @ Potential vorticity surface [m/s @ -2E-6 K m2 kg-1 s-1]
- Vertical velocity (pressure) @ Isobaric surface [Pa/s @ 100000 Pa]
- Absolute vorticity @ Isobaric surface [1.0E-5 s-1 @ 100000 Pa]
- Vert. Speed Shear @ Pot. vorticity surface [s-1 @ -2E-6 K m2 kg-1 s-1]



**GFS Model Field: Short Wave Radiation**



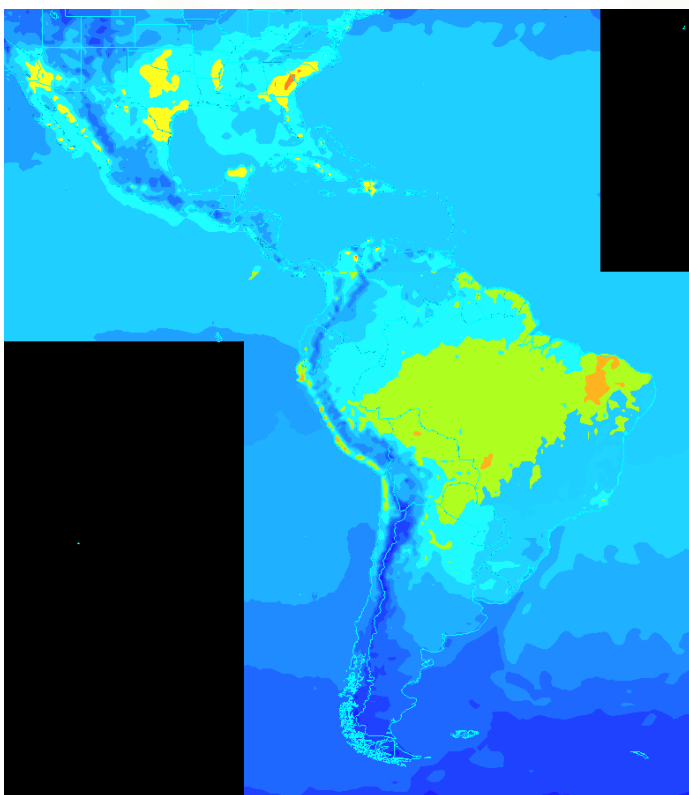
Sample image: UV-B Downward Solar Flux @ Ground or water surface

**Available Datasets**

**2D grid:**

- Downward Short-Wave Radiation Flux @ Ground or water surface [W.m-2]
- Upward Short-Wave Radiation Flux @ Ground or water surface [W.m-2]
- Upward Short-Wave Radiation Flux @ Nominal top of the atmosphere [W.m-2]
- UV-B Downward Solar Flux @ Ground or water surface [W.m-2]
- Clear Sky UV-B Downward Solar Flux @ Ground or water surface [W.m-2]

**GFS Model Field: Long Wave Radiation**



Sample image: Upward Long-Wave Rad. Flux @ Nominal top of the atmosphere

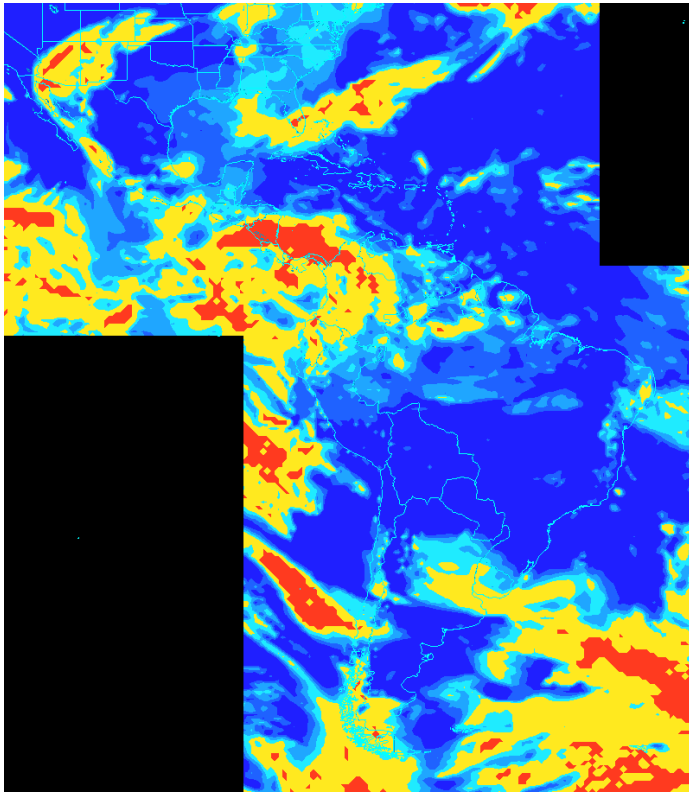
**Available Datasets**

**2D grid:**

- Downward Long-Wave Radiation Flux @ Ground or water surface [W.m-2]
- Upward Long-Wave Radiation Flux @ Ground or water surface [W.m-2]
- Upward Long-Wave Radiation Flux @ Nominal top of the atmosphere [W.m-2]



### GFS Model Field: Cloud



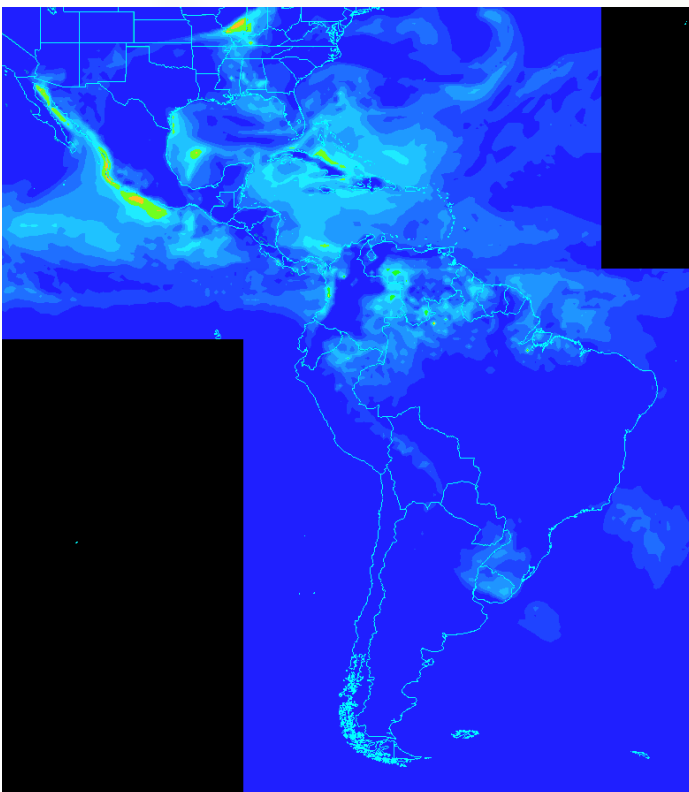
Sample image: Upward Long-Wave Rad. Flux @ Nominal top of the atmosphere

#### Available Datasets

##### 2D grid:

- Total cloud cover @ Entire atmosphere [%]
- Total cloud cover @ Boundary layer cloud layer [%]
- Total cloud cover @ Low cloud layer [%]
- Total cloud cover @ Middle cloud layer [%]
- Total cloud cover @ High cloud layer [%]
- Total cloud cover @ Convective cloud layer [%]
- Cloud water @ Entire atmosphere layer [kg.m-2]
- Cloud Work Function @ entire atmosphere layer [J.kg-1]
- Sunshine Duration @ Ground or water surface [s]

### GFS Model Field: Thermodynamic Stability Indices



Sample image: Convective available potential energy @ Ground or water surface

#### Available Datasets

##### 2D grid:

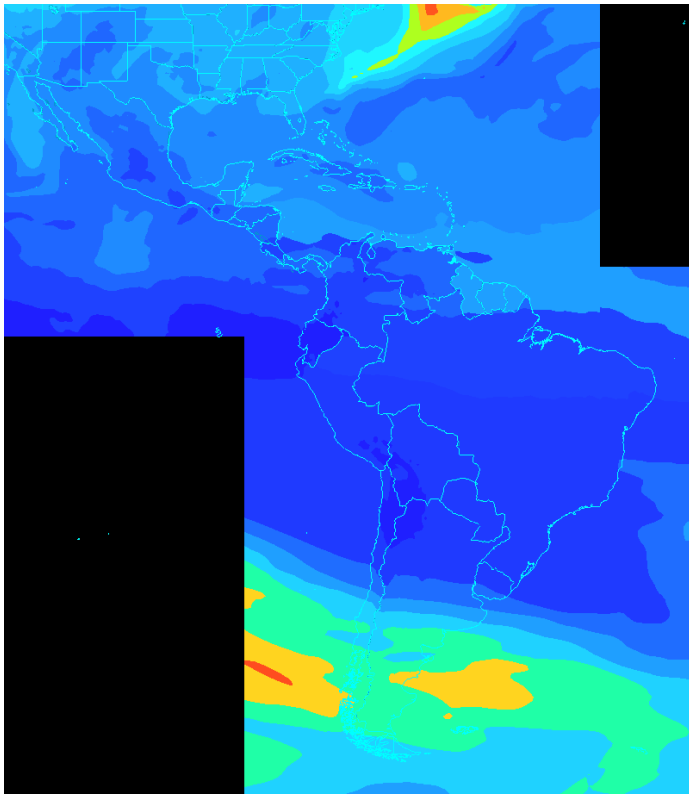
- Convective available potential energy @ Ground or water surface [J/kg]
- Convective inhibition @ Ground or water surface [J/kg]
- Storm relative helicity @ Specified height level above ground layer [K/kg @ 1500 m]
- Surface Lifted Index @ Ground or water surface [K]
- Best (4 layer) Lifted Index @ Ground or water surface [K]

##### 3D grid:

- Convective available potential energy @ Level at specified pressure difference from ground to level layer [J/kg @ 9000 Pa]
- Convective inhibition @ Level at specified pressure difference from ground to level layer [J/kg @ 9000 Pa]



**GFS Model Field: Trace Gases**



Sample image: Total ozone @ Entire atmosphere layer

**Available Datasets**

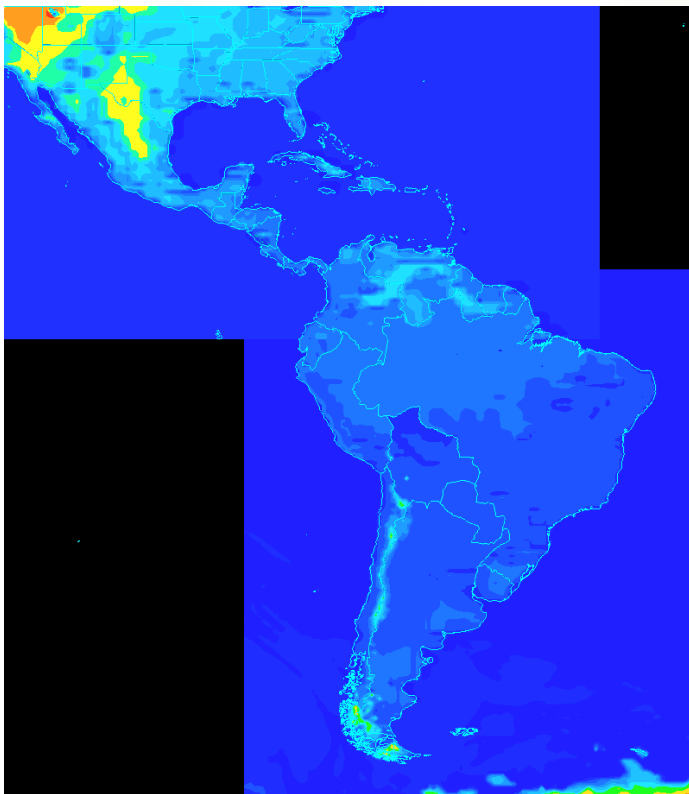
**2D grid:**

- Total ozone @ Entire atmosphere layer [DU]

**3D grid:**

- Ozone Mixing Ratio @ Isobaric surface [kg.kg-1 @ 40000 Pa]

**GFS Model Field: Physical Atmospheric Properties**



Sample image: Albedo @ Ground or water surface

**Available Datasets**

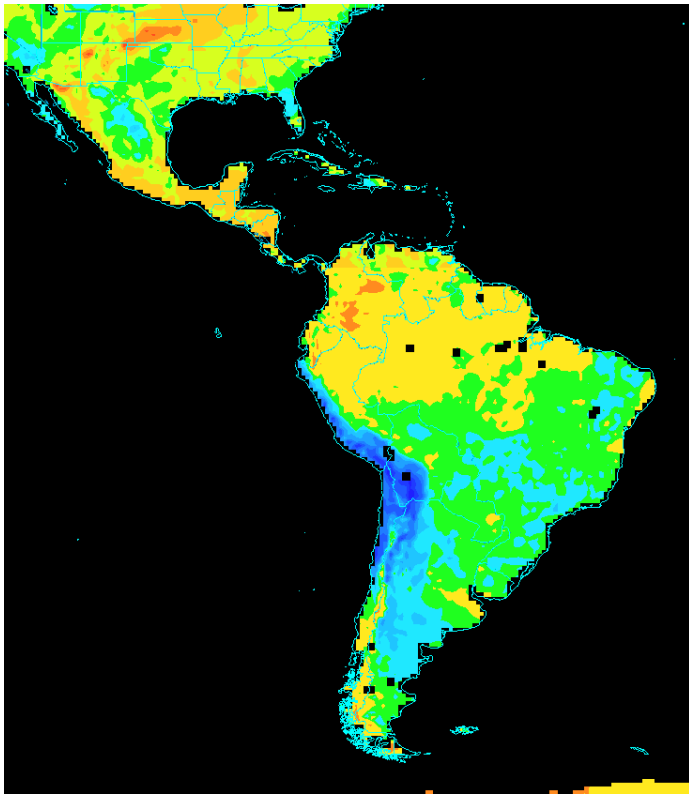
**2D grid:**

- Albedo @ Ground or water surface [%]





**GFS Model Field: Vegetation / Biomass**



Sample image: Ground Heat Flux @ Ground or water surface

**Available Datasets**

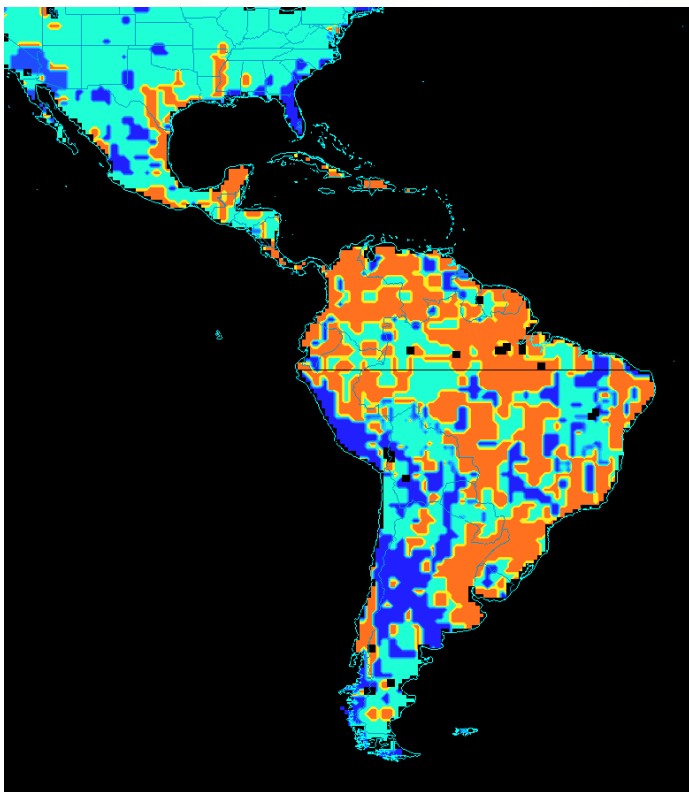
**2D grid:**

- Land cover (0 = sea, 1 = land) @ Ground or water surface
- Water runoff @ Ground or water surface [kg.m-2]
- Ground Heat Flux @ Ground or water surface [W.m-2]
- Plant Canopy Surface Water @ Ground or water surface [kg.m-2]
- Wilting Point @ Ground or water surface

**3D grid:**

- Soil temperature @ Depth below land surface layer [K @ 1,5 -1.0m]
- Volumetric Soil Moisture Content @ Depth below land surface layer [1,5 -1.0m]

**GFS Model Field: Soil**



Sample image: Field Capacity @ Ground or water surface

**Available Datasets**

**2D grid:**

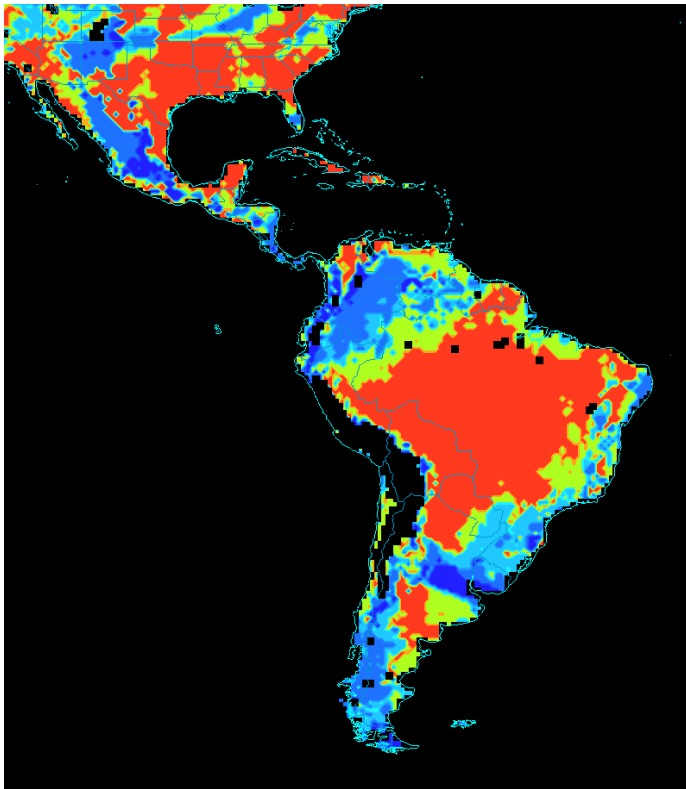
- Field Capacity @ Ground or water surface

**3D grid:**

- Liquid Volumetric Soil Moisture (non Frozen) @ Depth below land surface layer [1,5 -1.0m]



### GFS Model Field: Fire Weather



Sample image: Haines Index @ Ground or water surface

#### Available Datasets

##### 2D grid:

- Haines Index @ Ground or water surface

### GFS Model Field: Ice



Sample image: Ice cover @ Ground or water surface

#### Available Datasets

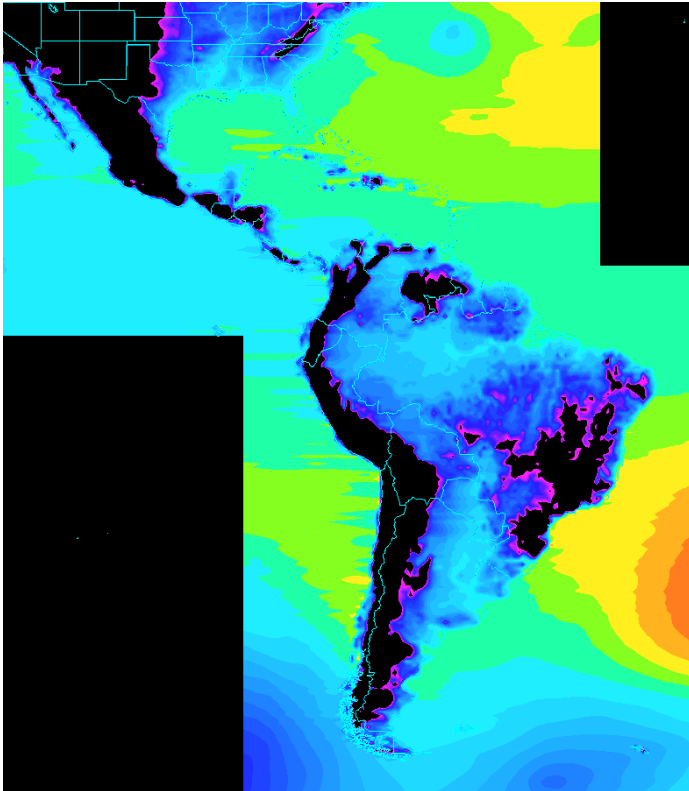
##### 2D grid:

- Ice cover @ Ground or water surface
- Ice thickness @ Ground or water surface [m]



**GFS Model Field: Mass**

**Available Datasets**



Sample image: Pressure @ Ground or water surface

**2D grid:**

- Pressure @ Ground or water surface [hPa]
- Pressure @ Maximum wind level [Pa]
- Pressure @ Tropopause [Pa]
- Pressure @ Specified height level above ground [Pa @ 80 m]
- Pressure @ Low cloud bottom level [Pa]
- Pressure @ Low cloud top level [Pa]
- Pressure @ Middle cloud bottom level [Pa]
- Pressure @ Middle cloud top level [Pa]
- Pressure @ High cloud bottom level [Pa]
- Pressure @ High cloud top level [Pa]
- Pressure @ Convective cloud bottom level [Pa]
- Pressure @ Convective cloud top level [Pa]
- Pressure reduced to MSL @ Mean sea level [hPa]
- ICAO Standard Atmosphere Reference Height @ Maximum wind level [m]
- ICAO Standard Atmosphere Reference Height @ Tropopause [m]
- Geopotential height @ Ground or water surface [gpm]
- Geopotential height @ Level of 0°C isotherm [gpm]
- Geopotential height @ Maximum wind level [gpm]
- Geopotential height @ Tropopause [gpm]
- Geopotential height @ Highest tropospheric freezing level [gpm]
- MSLP (Eta model reduction) @ Mean sea level [hPa]
- 5-Wave Geopotential Height @ Isobaric surface [gpm @ 50000 Pa]
- Zonal Flux of Gravity Wave Stress @ Ground or water surface [N.m-2]
- Meridional Flux of Gravity Wave Stress @ Ground or water surface [N.m-2]
- Planetary Boundary Layer Height @ Ground or water surface [m]
- Pressure of level from which parcel was lifted @ Level at specified pressure difference from ground to level layer [Pa @ 12750 Pa]

**3D grid:**

- Pressure @ Potential vorticity surface [Pa @ -2E-6 K m2 kg-1 s-1]
- Geopotential height @ Isobaric surface [gpm @ 100000 Pa]
- Geopotential height @ Pot. vorticity surface [Pa @ -2E-6 K m2 kg-1 s-1]



## **PROVIDER: NOAA-NWS**

*(National Oceanic and Atmospheric Administration – National Weather Service - USA)  
“International Services and Communication Systems” (ISCS) Activity*

### **Channel: ISCS-ADMIN**

**Content:** Meteorological Notifications, Text Message Notices and Warning Related Notices

**Format:** TXT

**Average Size per product:** 8.23 kB / 0.0080 MB

**Frequency:** 1 file every minute

**Max n° of files a day:** 798

**Naming Convention:**

T1T2 A1A2ii\_CCCC\_ddhhmm[\_BBB]

**T1T2:**

- **NO** Notices - METNO/WIFMA
- **NT** Notices - TEST MSG [System related]
- **NW** Notices - Warning related and/or cancellation

#### **Where:**

**T1T2 A1A2ii** = WMO data designators.

**CCCC** = International four-letter location indicator of the station or center originating or compiling the bulletin

**yyyy** = Year

**dd** = Numeric day of the month

**hh** = Hour (00-23)

**mm** = Minute (00-59)

**BBB** = Indicator of an addition, a correction or an amendment to an existing bulletin

“\_BBB” appears only when the product contains the addition, correction or amendment

### **Channel: ISCS-ANLZ-CLIMATE**

**Content:** Weather Summaries, Analyses and Climatic Data

**Format:** TXT

**Average Size per image:** 0.36 kB / 0.0004 MB

**Frequency:** 1 file every 11.07 minutes

**Max n° of files a day:** 130

**Naming Convention:**

T1T2 A1A2ii\_CCCC\_ddhhmm[\_BBB]

**T1T2:**

- **AB** Weather Summaries
- **AC** Analysis - Cyclone
- **AH** Analysis - Thickness
- **AS** Analysis - Surface
- **AW** Analysis - Weather summary
- **AX** Analysis - Miscellaneous
- **BM** ??????
- **CD** ??????
- **CS** Climatic data - Monthly means (surface)
- **CU** Climatic data - Monthly means (upper air)
- **CX** ??????

#### **Where:**

**T1T2 A1A2ii** = WMO data designators.

**CCCC** = International four-letter location indicator of the station or center originating or compiling the bulletin

**yyyy** = Year

**dd** = Numeric day of the month

**hh** = Hour (00-23)

**mm** = Minute (00-59)

**BBB** = Indicator of an addition, a correction or an amendment to an existing bulletin;

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## Channel: ISCS-BUFR

**Content:** Atmospheric and Oceanographic Observations and Forecasts

**Format:** Binary Universal Form for the Representation of meteorological data (BUFR) format [FM 94 BUFR]

**Average Size per image:** 4.43 kB / 0.0043 MB

**Frequency:** 1 file every 2.33 minutes

**Max n° of files a day:** 618

**Naming Convention:**

T1T2 A1A2ii\_CCCC\_ddhhmm[\_BBB]

**T1T2:**

- **IM** ??????
- **IO** Binary observation - BUFR - Oceanographic/Limnographic (water properties)
- **IU** Binary observation - BUFR - Upper air
- **JU** Forecast Information - BUFR - Upper air

### Where:

**T1T2 A1A2ii** = WMO data designators.

**CCCC** = International four-letter location indicator of the station or center originating or compiling the bulletin

**yyyy** = Year

**dd** = Numeric day of the month

**hh** = Hour (00-23)

**mm** = Minute (00-59)

**BBB** = Indicator of an addition, a correction or an amendment to an existing bulletin;

“\_BBB” appears only when the product contains the addition, correction or amendment

## Channel: ISCS-FCAST

**Content:** Forecast Products

**Format:** TXT

**Average Size per image:** 0.51kB / 0.0005 MB

**Frequency:** 1 file every 0.2 minutes

**Max n° of files a day:** 7044

**Naming Convention:**

T1T2 A1A2ii\_CCCC\_ddhhmm[\_BBB]

**T1T2:**

- **FA** Forecast - Aviation area/GAMET/advisories
- **FB** Forecast - Upper winds & temperatures
- **FC** Forecast - Aerodrome (VT > 12 hours)
- **FK** Forecast - Tropical cyclone advisories
- **FO** Forecast - Guidance
- **FP** Forecast - Public
- **FQ** Forecast - Other shipping
- **FR** Forecast - Aviation route
- **FS** Forecast - Surface
- **FT** Forecast - Aerodrome (VT > 12 hours)
- **FU** Forecast - Upper air
- **FV** Forecast - Volcanic ash advisories
- **FX** Forecast - Miscellaneous
- **FZ** Forecast - Shipping area

### Where:

**T1T2 A1A2ii** = WMO data designators.

**CCCC** = International four-letter location indicator of the station or center originating or compiling the bulletin

**yyyy** = Year

**dd** = Numeric day of the month

**hh** = Hour (00-23)

**mm** = Minute (00-59)

**BBB** = Indicator of an addition, a correction or an amendment to an existing bulletin;

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## Channel: ISCS-GRIB1

**Content:** GRIB1 Format Model Output

**Format:** GRIdded Binary edition 1 (GRIB1)  
**Average Size per image:** 4.47 kB / 0.0044 MB  
**Frequency:** 1 file every 0.062 minutes  
**Max n° of files a day:** 23,254  
**Naming Convention:**  
 yyyyymmdd\_hhmmfzz[z]

**Where:**

**yyyy** = Year  
**mm** = Month  
**dd** = Numeric day of the month  
**hh** = Hour (00-23)  
**mm** = Minute (00-59)

For GRIB1, zz[z] is the forecast hours of: 00, 06, 12, 18, 24, 30, 36, 42, 48, 60, 72, 84, 96, 108, 120, 132, 144, and 168.

**T1T2:**

- **HE** Grid point information (GRIB) - Precipitation
- **HG** Grid point information (GRIB) - Divergence
- **HH** Grid point information (GRIB) - Height
- **HO** Grid point information (GRIB) - Vertical velocity
- **HP** Grid point information (GRIB) - Pressure
- **HR** Grid point information (GRIB) - Relative humidity
- **HT** Grid point information (GRIB) - Temperature
- **HU** Grid point information (GRIB) - Eastward wind component
- **HV** Grid point information (GRIB) - Northward wind component

## Channel: ISCS-GRIB2

**Content:** GRIB1 Format Model Output

**Format:** GRIdded Binary Edition 2 (GRIB2)  
**Average Size per image:** 59.00 kB / 0.0576 MB  
**Frequency:** 1 file every 0.145 minutes  
**Max n° of files a day:** 9,948  
**Resolution:** 1 degree  
**Naming Convention:**  
 YYYYMMDD\_tttt"f"nn".grib2.rmtn"

**Where:**

**YYYYMMDD** = Year, Month and Day of the NCEP model run  
**tttt** = time of the model run (0000, 0600, 1200 or 1800)  
**nn** = forecast hour  
**Example:** 20150407\_0600f00.grib2.rmtn

**T1T2:**

- **YH** GRIB regional use - Height
- **YR** GRIB regional use - Relative humidity
- **YT** GRIB regional use - Temperature
- **YU** GRIB regional use - Eastward wind component
- **YV** GRIB regional use - Northward wind component

**Note:** See ISCS GRIB2 Product Headers (4/15/2015) at:

[http://www.nws.noaa.gov/iscs/Documents/ISCS-GRIB2-Product-Header-Table\\_r150727-1408.xlsx](http://www.nws.noaa.gov/iscs/Documents/ISCS-GRIB2-Product-Header-Table_r150727-1408.xlsx)



## Channel: ISCS-PIC

**Content:** Multiple graphic format products.

**Format:** BUFR, Binary, ??????

**Average Size per image:** 55.76 kB / 0.0545 MB

**Frequency:** 1file every 1.97 minutes

**Max n° of files a day:** 728

**Naming Convention:**

T1T2 A1A2ii\_CCCC\_ddhhmm[\_BBB]

### Where:

**T1T2 A1A2ii** = WMO data designators.

**CCCC** = International four-letter location indicator of the station or center originating or compiling the bulletin

**yyyy** = Year

**dd** = Numeric day of the month

**hh** = Hour (00-23)

**mm** = Minute (00-59)

**BBB** = Indicator of an addition, a correction or an amendment to an existing bulletin;

“\_BBB” appears only when the product contains the addition, correction or amendment

### T1T2:

- **PA** Pictorial information(BUFR/binary) - Radar data
- **PB** Pictorial information(binary) - Cloud
- **PC** Pictorial information(binary) - Clear Air turbulence
- **PF** Pictorial information(binary) - Aerological diagrams (ash clouds)
- **PG** Pictorial information(binary) - Significant weather
- **PH** Pictorial information(binary) - Height
- **PJ** Pictorial information(binary) - Wave height + combinations
- **PM** Pictorial information(binary) - For national use
- **PP** Pictorial information(binary) - Pressure
- **PT** Pictorial information(binary) - Temperature
- **PU** Pictorial information(binary) - Eastward wind component
- **PV** Pictorial information(binary) - Northward wind component
- **PW** Pictorial information(binary) - Wind
- **PY** Pictorial information(binary) - Observational plot chart
- **QA** Pictorial information regional - Radar data
- **QH** Pictorial information regional - Height
- **QP** Pictorial information regional - Pressure
- **QU** Pictorial information regional - Eastward wind component
- **QW** Pictorial information regional – Wind

## Channel: ISCS-SAT

**Content:** Multiple graphic format products.

**Format:** TXT

**Average Size per image:** 59.04 kB / 0.0577 MB

**Frequency:** 1 file every 3.82 minutes

**Max n° of files a day:** 376

**Naming Convention:**

T1T2 A1A2ii\_CCCC\_ddhhmm[\_BBB]

### Where:

**T1T2 A1A2ii** = WMO data designators.

**CCCC** = International four-letter location indicator of the station or center originating or compiling the bulletin

**yyyy** = Year

**dd** = Numeric day of the month

**hh** = Hour (00-23)

**mm** = Minute (00-59)

**BBB** = Indicator of an addition, a correction or an amendment to an existing bulletin;

“\_BBB” appears only when the product contains the addition, correction or amendment

### T1T2:

- **FA** Forecast - Aviation area/GAMET/advisories
- **FB** Forecast - Upper winds & temperatures
- **FC** Forecast - Aerodrome (VT > 12 hours)
- **FK** Forecast - Tropical cyclone advisories
- **FO** Forecast - Guidance
- **FP** Forecast - Public
- **FQ** Forecast - Other shipping
- **FR** Forecast - Aviation route
- **FS** Forecast - Surface
- **FT** Forecast - Aerodrome (VT > 12 hours)
- **FU** Forecast - Upper air
- **FV** Forecast - Volcanic ash advisories
- **FX** Forecast - Miscellaneous
- **FZ** Forecast - Shipping area



## Channel: ISCS-SURFACE

**Content:** Observations land and oceanographic

**Format:** TXT

**Average Size per image:** 1.00 kB / 0.0010 MB

**Frequency:** 1 file every 0.036 minutes

**Max n° of files a day:** 42,157

**Naming Convention:**

T1T2 A1A2ii\_CCCC\_ddhhmm[\_BBB]

**Where:**

**T1T2 A1A2ii** = WMO data designators.

**CCCC** = International four-letter location indicator of the station or center originating or compiling the bulletin

**yyyy** = Year

**dd** = Numeric day of the month

**hh** = Hour (00-23)

**mm** = Minute (00-59)

**BBB** = Indicator of an addition, a correction or an amendment to an existing bulletin;

“\_BBB” appears only when the product contains the addition, correction or amendment

**T1T2:**

- **SA** Surface data - Aviation routine reports
- **SD** Surface data - Radar reports (parts A & B)
- **SE** Surface data - Seismic data
- **SI** Surface data - Intermediate synoptic hour
- **SM** Surface data - Main synoptic hour
- **SN** Surface data - Non-standard synoptic hour
- **SO** Surface data - Oceanographic data
- **SP** Surface data - Special aviation weather reports
- **SS** Surface data - Drifting buoy reports
- **SX** Surface data – Miscellaneous

## Channel: ISCS-UPPER AIR

**Content:** Observations Upper air; atmosphere

**Format:** TXT

**Average Size per image:** 0.27 / 0.0003 MB

**Frequency:** 1 file every 0.14 minutes

**Max n° of files a day:** 10,417

**Naming Convention:**

T1T2 A1A2ii\_CCCC\_ddhhmm[\_BBB]

**Where:**

**T1T2 A1A2ii** = WMO data designators.

**CCCC** = International four-letter location indicator of the station or center originating or compiling the bulletin

**yyyy** = Year

**dd** = Numeric day of the month

**hh** = Hour (00-23)

**mm** = Minute (00-59)

**BBB** = Indicator of an addition, a correction or an amendment to an existing bulletin;

“\_BBB” appears only when the product contains the addition, correction or amendment

**T1T2:**

- **UA** Upper-air data - Aircraft reports
- **UD** Upper-air data - Aircraft reports
- **UE** Upper-air data - Upper-level pressure, temperature, humidity & wind (Part D)
- **UF** Upper-air data - Upper-level pressure, temperature, humidity & wind (Parts C & D)
- **UG** Upper-air data - Upper-wind (Part B)
- **UH** Upper-air data - Upper-wind (Part C)
- **UJ** Upper air data – Radiosonde Data- US
- **UK** Upper-air data - Upper-level pressure, temperature, humidity & wind (Part B)
- **UL** Upper-air data - Upper-level pressure, temperature, humidity & wind (Part C)
- **UM** Upper-air data - Upper-level pressure, temperature, humidity & wind (Parts A & B)
- **UP** Upper-air data - Upper-wind (Part A)
- **UQ** Upper-air data - Upper-wind (Part D)
- **UR** Upper-air data - Aircraft reports
- **US** Upper-air data - Upper-level pressure, temperature, humidity & wind (Part A)
- **UX** Upper-air data - Miscellaneous
- **UZ** Upper-air data - Upper-level pressure, temperature, humidity & wind from a sonde released by carrier balloon or aircraft (Parts A,B,C,D)





## Channel: ISCS-WARNING

**Content:** Warning, AIRMETs and SIGMETs

**Format:** TXT

**Average Size per image:** 0.52 kB / 0.0005 MB

**Frequency:** 1 file every 1.74 minutes

**Max n° of files a day:** 823

**Naming Convention:**

T1T2 A1A2ii\_CCCC\_ddhhmm[\_BBB]

### Where:

**T1T2 A1A2ii** = WMO data designators.

**CCCC** = International four-letter location indicator of the station or center originating or compiling the bulletin

**yyyy** = Year

**dd** = Numeric day of the month

**hh** = Hour (00-23)

**mm** = Minute (00-59)

**BBB** = Indicator of an addition, a correction or an amendment to an existing bulletin;

“\_BBB” appears only when the product contains the addition, correction or amendment

### T1T2:

- **SE** Surface data - Seismic data
- **NW** Notices - Warning related and/or cancellation
- **WA** Warnings - Airmet
- **WB**
- **WC** Warnings - Tropical cyclone (SIGMET)
- **WD**
- **WE** Warnings - Tsunami
- **WF** Warnings - Tornado
- **WG** Warnings - Hydrological/river flood
- **WH** Warnings - Marine/coastal flood
- **WN**
- **WO** Warnings - Other
- **WP**
- **WR** Warnings – Flash flood
- **WS** Warnings - SIGMET
- **WT** Warnings - Tropical cyclone (typhoon/hurricane)
- **WU** Warnings - Severe thunderstorm
- **WV** Warnings - Volcanic ash clouds (SIGMET)
- **WW** Warnings - Warnings & weather summary
- **WX**
- **WY**

