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 μm, cent. at 0.63 μm  
  **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 μm, cent. at 6.50 μm  
  **Projection**: Rectangular  
  **Resolution**: 4 x 4 km  
  **Naming Conventions**: GoesEastNH04I3jjjHHMM / GoesEastSH04I3jjjHHMM

- **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 μm, cent. at 10.70 μm  
  **Projection**: Rectangular  
  **Resolution**: 4 x 4 km  
  **Naming Conventions**: GoesEastNH04I4jjjHHMM / GoesEastSH04I4jjjHHMM
• 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 μm, cent. at 0.63 μm  
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 μm, cent. at 6.50 μm  
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 μm, cent. at 10.70 μm  
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 μm
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 μm
Projection: Rectangular
Resolution: 4 x 4 km
Naming Convention: abbacurrents

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 μm
Projection: Rectangular
Resolution: 4 x 4 km
Naming Conventions:
abbaYYYYjjj
abbaYYYYjjjHHMM.g13
abbaYYYYjjjHHMM.g15

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- 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 μm  
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 μm  
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  

- **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  

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

![Sample image: Rain Rate](image)

- **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)*

![Sample image: Snow Water Equivalent](image)

- **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)*

![Sample image: Snow Cover](image)

- **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

• 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

• 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
• **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

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

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_YYYYMMDD.GRB  
toast_YYYYMMDD.png
• Total Ozone Analysis using SBUV-2 and TOVS - TOAST - Northern Hemisphere

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

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

• 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 μm, cent. at 0.63 μm
 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 μm, cent. at 6.50 μm
 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 μm, cent. at 10.70 μm
 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 μm, cent. at 6.50 μm  
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 μm, cent. at 10.70 μm  
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 μm, cent. at 10.70 μm  
9.80 to 11.80 μm, cent. at 10.80 μm  
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 μm, cent. at 10.70 μm  
  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 μm, cent. at 0.63 μm  
  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 μm, cent. at 3.90 μm  
Projection: Rectangular  
Resolution: 4 x 4 km  
Naming Convention:  
INPE_GWN_YYYYMMDDHHMMN

• 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 μm, cent. at 6.50 μm  
Projection: Rectangular  
Resolution: 4 x 4 km  
Naming Convention:  
INPE_GWW_YYYYMMDDHHMMN

• 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 μm, cent. at 10.70 μm  
Projection: Rectangular  
Resolution: 4 x 4 km  
Naming Convention:  
INPE_GWI_YYYYMMDDHHMMN
• **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 μm, cent. at 0.63 μm
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: W/m² x 10
Satellite: GOES-13
Instrument: GOES-13 Imager
Channel: 1
Wavelength: 0.52 to 0.71 μm, cent. at 0.63 μm
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 μm, cent. at 10.70 μm  
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 μm, cent. at 10.70 μm  
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_YYYYMMDDHHMMN

• 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_YYYYMMDDHHMMN

• 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_YYYYMMDDHHMMN
**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________-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

- **Active Fire Monitoring - MSG - 0 degree**

  **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

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

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](image1.png)

  **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_12

• **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](image2.png)

  **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_12
• **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_bufr
  - ascat_YYYYMMDD_HHMMSS_metopb_orbit#_eps_o_coa_ovw.l2_bufr

• **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_bufr
  - ascat_YYYYMMDD_HHMMSS_metopb_orbit#_eps_0_250.l2_bufr
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

![Image](image1.png)

**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

![Image](image2.png)

**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

![Image](image3.png)

**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*

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**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

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- **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

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**PROVIDER: USEPA**

(US Environmental Protection Agency - USA)

- **Real Time Ozone Animated - North America**

**Hourly Ozone AQI**

Monday, March 31, 2014 12:20 AM EDT

- **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**

**Hourly PM2.5 AQI**

Monday, March 31, 2014 1:00 AM EDT

- **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**

- **Significant Wave Height and Direction of Maximum**

Formats: PDF and Text (compressed)
Average Size: 3.18 MB
Frequency: 360 minutes
Max nº 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
  
  **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
  
  **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

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

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

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

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

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

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 nº of files a day: 864 (overwriting)
  Satellite: GOES-13
  Instrument: GOES-13 Imager
  Channel: 1
  Wavelength: 0.52 to 0.71 μm, cent. at 0.63 μm
  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 nº of files a day: 864 (overwriting)
  Satellite: GOES-13
  Instrument: GOES-13 Imager
  Channel: 3
  Wavelength: 5.77 to 7.33 μm, cent. at 6.50 μm
  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 nº of files a day: 864 (overwriting)
  Satellite: GOES-13
  Instrument: GOES-13 Imager
  Channel: 4
  Wavelength: 10.20 to 11.20 μm, cent. at 10.70 μm
  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**

  ![850 Hpa Wind Map](image1)

  **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**

  ![GDI Map](image2)

  **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**

  ![GDI Map](image3)

  **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**

  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**

  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**

  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**

[Image of WRF Model - Total Accumulated Precipitation in 24 hours]

- Format: JPEG
- Average Size per image: 110 kB
- Frequency: 3 images per day
- Spatial Resolution: 15 km
- Naming Convention: ppt24h_1 to ppt24h_22

• **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**

**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]

Sample image: Temperature @ Ground or water surface
### GFS Model Field: Moisture

#### 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]

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### GFS Model Field: Momentum

#### 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]
- v-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

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]

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

GFS Model Field: Long Wave Radiation

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]

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

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]

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

GFS Model Field: Thermodynamic Stability Indices

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]

Sample image: Convective available potential energy @ Ground or water surface
GFS Model Field: Trace Gases

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

Available Datasets

2D grid:
- Albedo @ Ground or water surface [%]
GFS Model Field: Vegetation / Biomass

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]

Sample image: Ground Heat Flux @ Ground or water surface

GFS Model Field: Soil

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]

Sample image: Field Capacity @ Ground or water surface
GFS Model Field: Fire Weather

Available Datasets

2D grid:
- Haines Index @ Ground or water surface

GFS Model Field: Ice

Available Datasets

2D grid:
- Ice cover @ Ground or water surface
- Ice thickness @ Ground or water surface [m]
GFS Model Field: Mass

**Available Datasets**

**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]
- 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]

*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]

*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:**

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

**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 ?????
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]

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)
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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]

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)
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"_BBB" appears only when the product contains the addition, correction or amendment
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:

- **yyy** = 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.

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

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
Channel: ISCS-PIC

Content: Multiple graphic format products.

Format: BUFR, Binary, ???
Average Size per image: 55.76 kB / 0.0545 MB
Frequency: 1 file every 1.97 minutes
Max n° of files a day: 728

Naming Convention:
T1T2 A1A2ii_CCCC_ddhhmm[___BBB]

Where:
T1T2 A1A2ii = WMO data designators.
CCC = 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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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.
CCC = 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.
CCC = 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-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.
CCC = 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

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:  
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  

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