## CONTENTS

1  **GOES-16** ......................................................................................................................... 3  
   1.1  ABI (Advanced Baseline Imager) .................................................................................. 3  
   1.2  GLM (Geostationary Lightning Mapper) ...................................................................... 7  
   1.3  Baseline Products ........................................................................................................ 8  
   1.4  RGB Composites ........................................................................................................ 18  

2  **GOES-17** ......................................................................................................................... 23  
   2.1  ABI (Advanced Baseline Imager) .................................................................................. 23  

3  **METEOSAT** ..................................................................................................................... 27  
   3.1  SEVIRI (Spinning Enhanced Visible Infra-Red Imager) ...................................................... 27  
   3.2  Meteorological Products Extraction Facility (MPEF) ......................................................... 28  

4  **JPSS / Low Earth Orbit** .................................................................................................. 34  
   4.1  VIIRS (Visible Infrared Imaging Radiometer Suite) .......................................................... 34  
   4.2  GCOM-W1 AMSR2 (Advanced Microwave Scanning Radiometer 2) ................................ 36  
   4.3  MIRS (Microwave Integrated Retrieval System) .............................................................. 41  
   4.4  NUCAPS (NOAA Unique Combined Atmospheric Processing System) ....................... 43  
   4.5  BLENDED TOTAL PRECIPITABLE WATER PRODUCTS ........................................ 44  
   4.6  ACTIVE FIRES .............................................................................................................. 45  
   4.7  OCEAN COLOR ............................................................................................................ 46  
   4.8  EVENTS ......................................................................................................................... 47  

5  **FORECAST PRODUCTS** ................................................................................................. 48  
   5.1  GFS (Global Forecast System) ...................................................................................... 48  

6  **MISCELLANEOUS** .......................................................................................................... 50  

7  **THE DATA PROVIDERS** ............................................................................................... 75  

8  **APPENDIX I: READER NOTES** ..................................................................................... 76
1 GOES-16

1.1 ABI (Advanced Baseline Imager)

- Band 02: 0.64 μm (“Red”)

- Band 07: 3.9 μm (“Shortwave Window”)

Data Provider: NOAA-NESDIS
Folder: GOES-R-CMI-Imagery
Format: NetCDF4
Average Size: 76 MB
Frequency: 00, 10, 30 and 40 min (each hour)
Max n° of files a day: 96
Pixel info: Reflectance Factor
Satellite: GOES-16
Instrument: ABI (Advanced Baseline Imager)
Channel: 02
Band Nickname: “Red”
Wavelength: 0.59 to 0.69 μm, cent. at 0.64μm
Projection: Geos
Resolution: 1 km
Naming Convention:
OR_ABI-L2-CMIPF-M*C02_G16_s*_e*_c*.nc

Python Script Available

Web Page:
www.goes-r.gov/products/baseline-cloud-moisture-imagery.html

Data Provider: NOAA-NESDIS
Folder: GOES-R-CMI-Imagery
Format: NetCDF4
Average Size: 28 MB
Frequency: 00, 10, 30 and 40 min (each hour)
Max n° of files a day: 96
Pixel info: Brightness Temperature
Satellite: GOES-16
Instrument: ABI (Advanced Baseline Imager)
Channel: 07
Band Nickname: “Shortwave Window”
Wavelength: 3.80 to 4.00 μm, cent. at 3.90 μm
Projection: Geos
Resolution: 2 km
Naming Convention:
OR_ABI-L2-CMIPF-M*C07_G16_s*_e*_c*.nc

Python Script Available

Web Page:
www.goes-r.gov/products/baseline-cloud-moisture-imagery.html
• Band 08: 6.2 μm (“Upper-Level Tropospheric Water Vapor”)

- **Data Provider:** NOAA-NESDIS
- **Folder:** GOES-R-CMI-Imagery
- **Format:** NetCDF4
- **Average Size:** 20 MB
- **Frequency:** 00, 10, 30 and 40 min (each hour)
- **Max n° of files a day:** 96
- **Pixel Info:** Brightness Temperature
- **Satellite:** GOES-16
- **Instrument:** ABI (Advanced Baseline Imager)
- **Channel:** 08
- **Band Nickname:** “Upper-Level Tropospheric Water Vapor”
- **Wavelength:** 5.77 to 6.6 μm, cent. at 6.19 μm
- **Projection:** Geos
- **Resolution:** 2 km
- **Naming Convention:** OR_ABI-L2-CMIPF-M*C08_G16_s*_e*_c*.nc

- **Python Script Available**

- **Web Page:**
  www.goes-r.gov/products/baseline-cloud-moisture-imagery.html

• Band 09: 6.9 μm (“Mid-Level Tropospheric Water Vapor”)

- **Data Provider:** NOAA-NESDIS
- **Folder:** GOES-R-CMI-Imagery
- **Format:** NetCDF4
- **Average Size:** 20 MB
- **Frequency:** 00, 10, 30 and 40 min (each hour)
- **Max n° of files a day:** 96
- **Pixel Info:** Brightness Temperature
- **Satellite:** GOES-16
- **Instrument:** ABI (Advanced Baseline Imager)
- **Channel:** 09
- **Band Nickname:** “Mid-Level Tropospheric Water Vapor”
- **Wavelength:** 6.75 to 7.15 μm, cent. at 6.95 μm
- **Projection:** Geos
- **Resolution:** 2 km
- **Naming Convention:** OR_ABI-L2-CMIPF-M*C09_G16_s*_e*_c*.nc

- **Python Script Available**

- **Web Page:**
  www.goes-r.gov/products/baseline-cloud-moisture-imagery.html
- **Band 13: 10.3 μm ("Clean" IR Longwave Window)**

  **Data Provider:** NOAA-NESDIS  
  **Folder:** GOES-R-CMI-Imagery  
  **Format:** NetCDF4  
  **Average Size:** 30 MB  
  **Frequency:** 00, 10, 30 and 40 min (each hour)  
  **Max n° of files a day:** 96  
  **Pixel Info:** Brightness Temperature  
  **Satellite:** GOES-16  
  **Instrument:** ABI (Advanced Baseline Imager)  
  **Channel:** 13  
  **Band Nickname:** “Clean” IR Longwave Window  
  **Wavelength:** 10.10 to 10.60 μm, cent. at 10.35 μm  
  **Projection:** Geos  
  **Resolution:** 2 km  
  **Naming Convention:** OR_ABI-L2-CMIPF-M*C13_G16_s*_e*_c*.nc  
  
  ![Image of Band 13]

  *Python Script Available*

  **Web Page:**  
  www.goes-r.gov/products/baseline-cloud-moisture-imagery.html

- **Band 14: 11.2 μm (“IR Longwave Window”)**

  **Data Provider:** NOAA-NESDIS  
  **Folder:** GOES-R-CMI-Imagery  
  **Format:** NetCDF4  
  **Average Size:** 28 MB  
  **Frequency:** 00, 10, 30 and 40 min (each hour)  
  **Max n° of files a day:** 96  
  **Pixel Info:** Brightness Temperature  
  **Satellite:** GOES-16  
  **Instrument:** ABI (Advanced Baseline Imager)  
  **Channel:** 14  
  **Band Nickname:** “IR Longwave Window”  
  **Wavelength:** 10.80 to 11.6 μm, cent. at 11.20 μm  
  **Projection:** Geos  
  **Resolution:** 2 km  
  **Naming Convention:** OR_ABI-L2-CMIPF-M*C14_G16_s*_e*_c*.nc  
  
  ![Image of Band 14]

  *Python Script Available*

  **Web Page:**  
  www.goes-r.gov/products/baseline-cloud-moisture-imagery.html
• Band 15: 12.2 μm ("Dirty" Longwave Window)

Data Provider: NOAA-NESDIS
Folder: GOES-R-CMI-Imagery
Format: NetCDF4
Average Size: 30 MB
Frequency: 00, 10, 30 and 40 min (each hour)
Max n° of files a day: 96
Pixel Info: Brightness Temperature
Satellite: GOES-16
Instrument: ABI (Advanced Baseline Imager)
Channel: 15
Band Nickname: “Dirty’ Longwave Window”
Wavelength: 11.80 to 12.8 μm, cent. at 12.30 μm
Projection: Geos
Resolution: 2 km
Naming Convention:
OR_ABI-L2-CMIPF-M*C15_G16_s*_e*_c*.nc

Python Script Available

Web Page:
www.goes-r.gov/products/baseline-cloud-moisture-imagery.html

Note - On the file naming convention for all CMI files:

OR: Operational System Real-Time Data
ABI-L2: Advanced Baseline Imager Level 2+
CMIPF: Cloud and Moisture Image Product - Full Disk
M3 / M4 / M6: ABI Mode 3 / ABI Mode 4 / ABI Mode 6
C02: Channel number (Band 2 in this example)
G16: GOES-16
sYYYYJJJHHMMSSs: Observation Start
eYYYYJJJHHMMSSs: Observation End
cYYYYJJJHHMMSSs: File Creation
1.2 GLM (Geostationary Lightning Mapper)

- 5 Minute Density (Events, Groups and Flashes)

**Data Provider:** INPE  
**Folder:** GOES-R-GLM-Products  
**Format:** NetCDF4  
**Average Size:** 70 KB  
**Frequency:** 5 minutes  
**Max n° of files a day:** 288  
**Satellite:** GOES-16  
**Instrument:** GLM (Geostationary Lightning Mapper)  
**Resolution:** 8 x 8 km  

**Naming Convention:**  
GLM_DENS_YYYYMMDDHHMN00.nc  

*Python Script Available*

**Where:**  
**YYYY:** Year  
**MM:** Month  
**DD:** Day  
**HHMN:** Hours and Minutes (UTC)
1.3 Baseline Products

- Aerosol Detection (Smoke and Dust)

Data Provider: NOAA-NESDIS
Folder: GOES-R-Level-2-Products
Format: NetCDF4
Average Size: 3.8 MB
Frequency: 00, 10, 30 and 40 min (each hour)
Max n° of files a day: 96
Pixel Unit: m
Satellite: GOES-16
Instrument: ABI (Advanced Baseline Imager)
Projection: Geos
Resolution: 2 km
Naming Convention: OR_ABI-L2-ADPF-M*G16_s*e*c*.nc

Python Script Available
Web Page: www.goes-r.gov/products/baseline-aerosol-detection.html

- Aerosol Optical Depth

Data Provider: NOAA-NESDIS
Folder: GOES-R-Level-2-Products
Format: NetCDF4
Average Size: 6.8 MB
Frequency: 00, 10, 30 and 40 min (each hour)
Max n° of files a day: 96
Pixel Unit: m
Satellite: GOES-16
Instrument: ABI (Advanced Baseline Imager)
Projection: Geos
Resolution: 2 km
Naming Convention: OR_ABI-L2-AODF-M*G16_s*e*c*.nc

Python Script Available
Web Page: www.goes-r.gov/products/baseline-aerosol-opt-depth.html
• Clear Sky Masks

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 20 MB  
Frequency: 00, 10, 30 and 40 min (each hour)  
Max n° of files a day: 96  
Pixel Info: 0 (No Clouds) / 1 (Clouds)  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Geos  
Resolution: 2 km  
Naming Convention:  
OR_ABI-L2-ACMF-M*_G16_s*_e*_c*.nc

Python Script Available

Web Page:  
www.goes-r.gov/products/baseline-clear-sky-mask.html

• Cloud Optical Depth

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 28 MB  
Frequency: 00, 10, 30 and 40 min (each hour)  
Max n° of files a day: 96  
Pixel Info: Cloud Optical Depth at 640 nm  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Geos  
Resolution: 4 km  
Naming Convention:  
OR_ABI-L2-CODF-M*_G16_s*_e*_c*.nc

Python Script Available

Web Page:  
www.goes-r.gov/products/baseline-cloud-opt-depth.html
• Cloud Particle Size Distribution

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 21 MB  
Frequency: 00, 10, 30 and 40 min (each hour)  
Max n° of files a day: 96  
Pixel Info: Cloud Particle Size  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Geos  
Resolution: 2 km  
Naming Convention:  
OR_ABI-L2-CPSF-M*_G16_s*_e*_c*.nc

Python Script Available

Web Page:  
www.goes-r.gov/products/baseline-cloud-opt-depth.html

• Cloud Top Height

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 76 MB  
Frequency: 00, 10, 30 and 40 min (each hour)  
Max n° of files a day: 96  
Pixel Unit: m  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Geos  
Resolution: 10 km  
Naming Convention:  
OR_ABI-L2-ACHAF-M*_G16_s*_e*_c*.nc

Python Script Available

Web Page:  
www.goes-r.gov/products/baseline-cloud-top-height-cloud-layer.html
• **Cloud Top Phase**

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 76 MB  
Frequency: 00, 10, 30 and 40 min (each hour)  
Max n° of files a day: 96  
Pixel Info: 1 (Water), 2 (Supercooled), 3 (Mixed), 4 (Ice), 5 (Uncertain)  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Geos  
Resolution: 2 km  
Naming Convention: OR_ABI-L2-ACTPF-M*_G16_s*_e*_c*.nc

Python Script Available  
Web Page: www.goes-r.gov/products/baseline-cloud-phase.html

• **Cloud Top Temperature**

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 28 MB  
Frequency: 00, 10, 30 and 40 min (each hour)  
Max n° of files a day: 96  
Pixel Unit: K  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Geos  
Resolution: 2 km  
Naming Convention: OR_ABI-L2-AHTF-M*_G16_s*_e*_c*.nc

Python Script Available  
• GOES-16 - Derived Motion Winds (Bands 02, 07, 08, 09, 10 and 14)

**Data Provider:** NOAA-NESDIS  
**Folder:** GOES-R-Level-2-Products  
**Format:** NetCDF4  
**Average Size:**  
- 05 ~ 100 MB (Band 02)  
- 60 MB (Band 07)  
- 80 MB (Band 08)  
- 80 MB (Band 09)  
- 95 MB (Band 10)  
- 55 MB (Band 14)  
- 80 MB (DMWVF Band 08)  
**Frequency:** 60 minutes  
**Max n° of files a day:** 24, per band  
**Satellite:** GOES-16

**Naming Convention:**  
- OR_ABI-L2-DMWF-M3C02_G16_s*e*c*.nc  
- OR_ABI-L2-DMWF-M3C07_G16_s*e*c*.nc  
- OR_ABI-L2-DMWF-M3C08_G16_s*e*c*.nc  
- OR_ABI-L2-DMWF-M3C09_G16_s*e*c*.nc  
- OR_ABI-L2-DMWF-M3C10_G16_s*e*c*.nc  
- OR_ABI-L2-DMWF-M3C14_G16_s*e*c*.nc  
(Winds Derived from ABI Bands 02, 07, 08, 09, 10 and 14)  
- OR_ABI-L2-DMWVF-M3C08_G16_s*e*c*.nc  
(Clear Sky Winds Derived from ABI Band 08)

**Python Script Available**

**Web Page:**  
www.goes-r.gov/products/baseline-derived-motion-winds.html
• Derived Stability Indices

Data Provider: NOAA-NESDIS
Folder: GOES-R-Level-2-Products
Format: NetCDF4
Average Size: 4.2 MB
Frequency: 00, 10, 30 and 40 min (each hour)
Max n° of files a day: 96
Satellite: GOES-16
Instrument: ABI (Advanced Baseline Imager)
Projection: Geos
Resolution: 2 km
Naming Convention: OR_ABI-L2-DSIF-M*_G16_s*_e*_c*.nc

Python Script Available

• Downward Shortwave Radiation (Surface)

Data Provider: NOAA-NESDIS
Folder: GOES-R-Level-2-Products
Format: NetCDF4
Average Size: 126 KB
Frequency: 60 minutes
Max n° of files a day: 24
Pixel Unit: Wm²
Satellite: GOES-16
Instrument: ABI (Advanced Baseline Imager)
Projection: Geos
Resolution: 25 km
Naming Convention: OR_ABI-L2-DSRF-M*_G16_s*_e*_c*.nc

Python Script Available
Web Page: www.goes-r.gov/products/baseline-DSR.html
• Fire / Hot Spot Characterization

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 3 MB  
Frequency: 00, 10, 30 and 40 min (each hour)  
Max n° of files a day: 96  
Pixel Info: 13 (High probability fire pixel), 14 (Medium probability fire pixel) and 15 (Low probability fire pixel), and other (please see pages 39 and 40 of the product ATBD)  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Geos  
Resolution: 2 km  
Naming Convention:  
OR_ABI-L2-FDCF-M*_G16_s*_e*_c*.nc  

Python Script Available  
Web Page:  
www.goes-r.gov/products/baseline-fire-hot-spot.html

• Land Surface Temperature (Skin)

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 0.5 MB  
Frequency: 60 minutes  
Max n° of files a day: 24  
Pixel Unit: K  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Geos  
Resolution: 10 km  
Naming Convention:  
OR_ABI-L2-LSTF-M*_G16_s*_e*_c*.nc  

Python Script Available  
Web Page:  
www.goes-r.gov/products/baseline-LST.html
- Rainfall Rate - Quantitative Precipitation Estimate

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 1.5 MB  
Frequency: 00, 10, 30 and 40 min (each hour)  
Max n° of files a day: 96  
Pixel Unit: mm / h  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Geos  
Resolution: 2 km  
Naming Convention: OR_ABI-L2-RRQPEF-M*_G16_s*_e*_c*.nc

Python Script Available  
Web Page: www.goes-r.gov/products/baseline-rainfall-rate-qpe.html

- Reflected Shortwave Radiation (Top of Atmosphere)

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 294 KB  
Frequency: 60 minutes  
Max n° of files a day: 24  
Pixel Unit: Wm²  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Geos  
Resolution: 25 km  
Naming Convention: OR_ABI-L2-RRQPEF-M*_G16_s*_e*_c*.nc

Python Script Available  
Web Page: www.goes-r.gov/products/baseline-TOA.html
• Sea Surface Temperature (Skin)

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 30 MB  
Frequency: 60 minutes  
Max n° of files a day: 24  
Pixel Unit: K  
Satellite: GOES-16  
Instrument: ABI(Advanced Baseline Imager)  
Projection: Geos  
Resolution: 2 km  
Naming Convention:  
OR_ABI-L2-SSTF-M*_G16_s*_e*_c*.nc  

Python Script Available  

Web Page:  
www.goes-r.gov/products/baseline-SST.html

• Total Precipitable Water

Data Provider: NOAA-NESDIS  
Folder: GOES-R-Level-2-Products  
Format: NetCDF4  
Average Size: 1.5 MB  
Frequency: 00, 10, 30 and 40 min (each hour)  
Max n° of files a day: 96  
Pixel Unit: mm  
Satellite: GOES-16  
Instrument: ABI(Advanced Baseline Imager)  
Projection: Geos  
Resolution: 10km  
Naming Convention:  
OR_ABI-L2-TPWF-M*_G16_s*_e*_c*.nc  

Python Script Available  

Web Page:  
www.goes-r.gov/products/baseline-total-precipitable-water.html
Volcanic Ash: Detection and Height

Data Provider: NOAA-NESDIS
Folder: GOES-R-Level-2-Products
Format: NetCDF4
Average Size: 28 MB
Frequency: 60 minutes
Max n° of files a day: 24
Pixel Unit: m
Satellite: GOES-16
Instrument: ABI (Advanced Baseline Imager)
Projection: Geos
Resolution: 2 km
Naming Convention:
OR_ABI-L2-VAAF-M*_G16_s*_e*_c*.nc

Python Script Available

Web Page:
www.goes-r.gov/products/baseline-volcanic-ash.html

Note - On the file naming convention for all Level 2 files:

OR: Operational System Real-Time Data
ABI-L2: Advanced Baseline Imager Level 2+
CMIPF: Cloud and Moisture Image Product - Full Disk
M3 / M4 / M6: ABI Mode 3 / ABI Mode 4 / ABI Mode 6
C02: Channel number (Band 2 in this example)
G16: GOES-16
sYYYYJJJHHMMSSs: Observation Start
eYYYYJJJHHMMSSs: Observation End
cYYYYJJJHHMMSSs: File Creation
1.4 RGB Composites

- **Day Land Cloud RGB**

  - **Data Provider:** INPE
  - **Folder:** GOES-R-RGB-Composites
  - **Format:** GeoTIFF
  - **Average Size:** 8.0 MB, all 8 sectors
  - **Frequency:** 00, 20, 30 and 50 min (each hour)
  - **Max n° of files a day:** 96, per sector
  - **Pixel Unit:** R, G, B
  - **Satellite:** GOES-16
  - **Instrument:** ABI (Advanced Baseline Imager)
  - **Projection:** Cylindrical Equidistant
  - **Resolution:** 3 km (sectors), 12 km (full disk)
  - **Naming Convention:**
    - G16_DLCREG_YYYYMMDDHHMN.tif
  - **Python Script Available**
  - **Web Page:**
    - [http://rammb.cira.colostate.edu/training/visit/quick_guides/QuickGuide_GOESR_daylandcloudRGB_final.pdf](http://rammb.cira.colostate.edu/training/visit/quick_guides/QuickGuide_GOESR_daylandcloudRGB_final.pdf)

- **Natural True Color RGB**

  - **Data Provider:** INPE
  - **Folder:** GOES-R-RGB-Composites
  - **Format:** GeoTIFF
  - **Average Size:** 8.0 MB, all 8 sectors
  - **Frequency:** 00, 20, 30 and 50 min (each hour)
  - **Max n° of files a day:** 96, per sector
  - **Pixel Unit:** R, G, B
  - **Satellite:** GOES-16
  - **Instrument:** ABI (Advanced Baseline Imager)
  - **Projection:** Cylindrical Equidistant
  - **Resolution:** 3 km (sectors), 12 km (full disk)
  - **Naming Convention:**
    - G16_NTCREG_YYYYMMDDHHMN.tif
  - **Python Script Available**
  - **Web Page:**
    - [http://cimss.ssec.wisc.edu/goes/OCLOFactSheetPDFs/ABIQuickGuide_CIMSSRGB_v2.pdf](http://cimss.ssec.wisc.edu/goes/OCLOFactSheetPDFs/ABIQuickGuide_CIMSSRGB_v2.pdf)
• **Airmass RGB**

Data Provider: INPE  
Folder: GOES-R-RGB-Composites  
Format: GeoTIFF  
Average Size: 6.0 MB, all 8 sectors  
Frequency: 00, 20, 30 and 50 min (each hour)  
Max n° of files a day: 96, per sector  
Pixel Unit: R, G, B  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Cylindrical Equidistant  
Resolution: 3 km (sectors), 12 km (full disk)  
Naming Convention:  
G16_ARMREG_YYYYMMDDHMN.tif  

Python Script Available  
Web Page:  
http://rammb.cira.colostate.edu/training/visit/quick_guides/QuickGuide_GOESR_AirMassRGB_final.pdf

• **Day Microphysics RGB**

Data Provider: INPE  
Folder: GOES-R-RGB-Composites  
Format: GeoTIFF  
Average Size: 8.0 MB, all 8 sectors  
Frequency: 00, 20, 30 and 50 min (each hour)  
Max n° of files a day: 96, per sector  
Pixel Unit: R, G, B  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Cylindrical Equidistant  
Resolution: 3 km (sectors), 12 km (full disk)  
Naming Convention:  
G16_DMPREG_YYYYMMDDHMN.tif  

Python Script Available  
Web Page:  
https://weather.msfc.nasa.gov/sport/training/quickGuides/rgb/QuickGuide_DtMicroRGB_NASA_SPoRT.pdf
• Night Microphysics RGB

Data Provider: INPE  
Folder: GOES-R-RGB-Composites  
Format: GeoTIFF  
Average Size: 6.0 MB, all 8 sectors  
Frequency: 00, 20, 30 and 50 min (each hour)  
Max n° of files a day: 96, per sector  
Pixel Unit: R, G, B  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Cylindrical Equidistant  
Resolution: 3 km (sectors), 12 km (full disk)  
Naming Convention: G16_NMPREG_YYYYMMDDHHMN.tif  

Python Script Available  

• Day Cloud Phase Distinction RGB

Data Provider: INPE  
Folder: GOES-R-RGB-Composites  
Format: GeoTIFF  
Average Size: 8.0 MB, all 8 sectors  
Frequency: 00, 20, 30 and 50 min (each hour)  
Max n° of files a day: 96, per sector  
Pixel Unit: R, G, B  
Satellite: GOES-16  
Instrument: ABI (Advanced Baseline Imager)  
Projection: Cylindrical Equidistant  
Resolution: 3 km (sectors), 12 km (full disk)  
Naming Convention: G16_DCPREG_YYYYMMDDHHMN.tif  

Python Script Available  
• **Cloud Phase RGB**

![Image of Cloud Phase RGB]

- **Data Provider:** INPE
- **Folder:** GOES-R-RGB-Composites
- **Format:** GeoTIFF
- **Average Size:** 8.0 MB, all 8 sectors
- **Frequency:** 00, 20, 30 and 50 min (each hour)
- **Max n° of files a day:** 96, per sector
- **Pixel Unit:** R, G, B
- **Satellite:** GOES-16
- **Instrument:** ABI (Advanced Baseline Imager)
- **Projection:** Cylindrical Equidistant
- **Resolution:** 3 km (sectors), 12 km (full disk)
- **Naming Convention:**
  - G16_CLPREG/YYYYMMDDHHMN.tif
- **Python Script Available**
- **Web Page:**

• **Day Convection RGB**

![Image of Day Convection RGB]

- **Data Provider:** INPE
- **Folder:** GOES-R-RGB-Composites
- **Format:** GeoTIFF
- **Average Size:** 6.0 MB, all 8 sectors
- **Frequency:** 00, 20, 30 and 50 min (each hour)
- **Max n° of files a day:** 96, per sector
- **Pixel Unit:** R, G, B
- **Satellite:** GOES-16
- **Instrument:** ABI (Advanced Baseline Imager)
- **Projection:** Cylindrical Equidistant
- **Resolution:** 3 km (sectors), 12 km (full disk)
- **Naming Convention:**
  - G16_CONxxx/YYYYMMDDHHMN.tif
- **Python Script Available**
- **Web Page:**
**Dust RGB**

**Data Provider:** INPE  
**Folder:** GOES-R-RGB-Composites  
**Format:** GeoTIFF  
**Average Size:** 6.0 MB, all 8 sectors  
**Frequency:** 00, 20, 30 and 50 min (each hour)  
**Max n° of files a day:** 96, per sector  
**Pixel Unit:** R, G, B  
**Satellite:** GOES-16  
**Instrument:** ABI (Advanced Baseline Imager)  
**Projection:** Cylindrical Equidistant  
**Resolution:** 3 km (sectors), 12 km (full disk)  
**Naming Convention:** G16_DSTREG_YYYMMDDHHHMN.tif  

![Dust RGB Image](image)

**Python Script Available**

**Web Page:**  
http://rammb.cira.colostate.edu/training/visit/quick_guides/Dust_RGB_Quick_Guide.pdf

---

**Note - On the file naming convention for all RGB files:**

G16_RGBREG_YYYMMDDHHHMN.tif  
Where: **YYYMMDDHHHMN**: Year, Month, Day, Hour and Minutes (UTC)

**RGB:**

- **DLC:** Day Land Cloud  
- **NTC:** Natural True Color  
- **ARM:** Airmass  
- **DMP:** Day Microphysics  
- **NMP:** Night Microphysics  
- **DCP:** Day Cloud Phase Distinction  
- **CLP:** Cloud Phase  
- **CON:** Day Convection  
- **DST:** Dust

**REG:**

- **FDK:** Full Disk (Low Resolution)  
- **S01:** Sector 01  
- **S02:** Sector 02  
- **S03:** Sector 03  
- **S04:** Sector 04  
- **S05:** Sector 05  
- **S06:** Sector 06  
- **S07:** Sector 07  
- **S08:** Sector 08

---

<table>
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<tr>
<th>Region / Sector</th>
<th>Approx. Coverage</th>
<th>N</th>
<th>W</th>
<th>S</th>
<th>E</th>
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<tr>
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<td>-18.0</td>
<td>-25.5</td>
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<tr>
<td>S07</td>
<td>South Am. South</td>
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<td>-80.0</td>
<td>-65.0</td>
<td>-45.5</td>
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</tbody>
</table>
2 GOES-17

2.1 ABI (Advanced Baseline Imager)

- Band 02: 0.64 μm (“Red”)

  Data Provider: NOAA-NESDIS
  Folder: GOES-S-CMI-Imagery
  Format: NetCDF4
  Average Size: 76 MB
  Frequency: 00, 20, 30 and 50 min (each hour)
  Max n° of files a day: 96
  Pixel info: Reflectance Factor
  Satellite: GOES-17
  Instrument: ABI (Advanced Baseline Imager)
  Channel: 02
  Band Nickname: “Red”
  Wavelength: 0.59 to 0.69 μm, cent. at 0.64μm
  Projection: Geos
  Resolution: 1 km
  Naming Convention: OR_ABI-L2-CMIPF-M*C02_G17_s*_e*_c*.nc

  Python Script Available
  Web Page: www.goes-r.gov/products/baseline-cloud-moisture-imagery.html

- Band 07: 3.9 μm (“Shortwave Window”)

  Data Provider: NOAA-NESDIS
  Folder: GOES-S-CMI-Imagery
  Format: NetCDF4
  Average Size: 28 MB
  Frequency: 00, 20, 30 and 50 min (each hour)
  Max n° of files a day: 96
  Pixel info: Brightness Temperature
  Satellite: GOES-17
  Instrument: ABI (Advanced Baseline Imager)
  Channel: 07
  Band Nickname: “Shortwave Window”
  Wavelength: 3.80 to 4.00 μm, cent. at 3.90 μm
  Projection: Geos
  Resolution: 2 km
  Naming Convention: OR_ABI-L2-CMIPF-M*C07_G17_s*_e*_c*.nc

  Python Script Available
  Web Page: www.goes-r.gov/products/baseline-cloud-moisture-imagery.html
• Band 08: 6.2 μm (“Upper-Level Tropospheric Water Vapor”)

Data Provider: NOAA-NESDIS
Folder: GOES-S-CMI-Imagery
Format: NetCDF4
Average Size: 20 MB
Frequency: 00, 20, 30 and 50 min (each hour)
Max n° of files a day: 96
Pixel Info: Brightness Temperature
Satellite: GOES-17
Instrument: ABI (Advanced Baseline Imager)
Channel: 08
Band Nickname: “Upper-Level Tropospheric Water Vapor”
Wavelength: 5.77 to 6.6 μm, cent. at 6.19 μm
Projection: Geos
Resolution: 2 km
Naming Convention:
OR_ABI-L2-CMIPF-M*C08_G17_s_e_c*.nc

Python Script Available
Web Page:
www.goes-r.gov/products/baseline-cloud-moisture-imagery.html

• Band 09: 6.9 μm (“Mid-Level Tropospheric Water Vapor”)

Data Provider: NOAA-NESDIS
Folder: GOES-S-CMI-Imagery
Format: NetCDF4
Average Size: 20 MB
Frequency: 00, 20, 30 and 50 min (each hour)
Max n° of files a day: 96
Pixel Info: Brightness Temperature
Satellite: GOES-17
Instrument: ABI (Advanced Baseline Imager)
Channel: 09
Band Nickname: “Mid-Level Tropospheric Water Vapor”
Wavelength: 6.75 to 7.15 μm, cent. at 6.95 μm
Projection: Geos
Resolution: 2 km
Naming Convention:
OR_ABI-L2-CMIPF-M*C09_G17_s_e_c*.nc

Python Script Available
Web Page:
www.goes-r.gov/products/baseline-cloud-moisture-imagery.html
- **Band 13: 10.3 μm ("Clean" IR Longwave Window)**

  Data Provider: NOAA-NESDIS  
  Folder: GOES-S-CMI-Imagery  
  Format: NetCDF4  
  Average Size: 30 MB  
  Frequency: 00, 20, 30 and 50 min (each hour)  
  Max n° of files a day: 96  
  Pixel info: Brightness Temperature  
  Satellite: GOES-17  
  Instrument: ABI (Advanced Baseline Imager)  
  Channel: 13  
  Band Nickname: “Clean” IR Longwave Window  
  Wavelength: 10.10 to 10.60 μm, cent. at 10.35μm  
  Projection: Geos  
  Resolution: 2 km  
  Naming Convention: OR_ABI-L2-CMIPF-M*C13_G16_s*_e*_c*.nc  

  ![Image of Band 13](image.png)

  Python Script Available  
  Web Page:  
  www.goes-r.gov/products/baseline-cloud-moisture-imagery.html

- **Band 14: 11.2 μm (“IR Longwave Window”)**

  Data Provider: NOAA-NESDIS  
  Folder: GOES-S-CMI-Imagery  
  Format: NetCDF4  
  Average Size: 28 MB  
  Frequency: 00, 20, 30 and 50 min (each hour)  
  Max n° of files a day: 96  
  Pixel info: Brightness Temperature  
  Satellite: GOES-17  
  Instrument: ABI (Advanced Baseline Imager)  
  Channel: 14  
  Band Nickname: “IR Longwave Window”  
  Wavelength: 10.80 to 11.6 μm, cent. at 11.20μm  
  Projection: Geos  
  Resolution: 2 km  
  Naming Convention: OR_ABI-L2-CMIPF-M*C14_G17_s*_e*_c*.nc  

  ![Image of Band 14](image.png)

  Python Script Available  
  Web Page:  
  www.goes-r.gov/products/baseline-cloud-moisture-imagery.html
- Band 15: 12.2 μm ("Dirty" Longwave Window)

Data Provider: NOAA-NESDIS  
Folder: GOES-S-CMI-Imagery  
Format: NetCDF4  
Average Size: 30 MB  
Frequency: 00, 20, 30 and 50 min (each hour)  
Max n° of files a day: 96  
Pixel Info: Brightness Temperature  
Satellite: GOES-17  
Instrument: ABI (Advanced Baseline Imager)  
Channel: 15  
Band Nickname: “Dirty’ Longwave Window”  
Wavelength: 11.80 to 12.8 μm, cent. at 12.30 μm  
Projection: Geos  
Resolution: 2 km  
Naming Convention: OR_ABI-L2-CMIPF-M*C15_G17_s*_e*_c*.nc

Note - On the file naming convention for all CMI files:

OR: Operational System Real-Time Data  
ABI-L2: Advanced Baseline Imager Level 2+  
CMIPF: Cloud and Moisture Image Product - Full Disk  
M3 / M4 / M6: ABI Mode 3 / ABI Mode 4 / ABI Mode 6  
C02: Channel number (Band 2 in this example)  
G16: GOES-16  
sYYYYJJJJHHMMSSs: Observation Start  
eYYYYJJJJHHMMSSs: Observation End  
cYYYYJJJJHHMMSSs: File Creation
3 METEOSAT

3.1 SEVIRI (Spinning Enhanced Visible Infra-Red Imager)

- Level 1.5 Image Data - MSG - 0 degree

Data Provider: EUMETSAT
Folder: MSG-0degree/IMG-3h
Format: HRIT
Average Size: 90 MB
Frequency: 3 hours
Max n° of files a day: 114 x 8
Satellite: METEOSAT
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
HRV: 1.0 km

Python Script Available

Web Page:
oiswww.eumetsat.org/IPPS/html/MSG/IMAGERY

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

3.2 Meteorological Products Extraction Facility (MPEF)

- Active Fire Monitoring

Data Provider: EUMETSAT  
Folder: MSG-0degree/MetProducts  
Formats: CAP (Common Alert Protocol) and GRIB2  
Files per day: 192 per format  
Volume per day: 2 MB (CAP) and 1.5 MB (GRIB2)  
Frequency: 15 minutes  
Satellite: METEOSAT  
Instrument: SEVIRI  
Naming Convention: L-000-MSG?__-MPEF________-FIRC[_]*  
Python Script Available  

- Atmospheric Motion Vectors

Data Provider: EUMETSAT  
Folder: MSG-0degree/MetProducts  
Format: BUFR  
Files per day: 48  
Volume per day: 52 MB  
Frequency: 60 minutes  
Satellite: METEOSAT  
Instrument: SEVIRI  
Naming Convention: L-000-MSG?__-MPEF________-AMV[_]*  
- Cloud Analysis

Data Provider: EUMETSAT
Folder: MSG-0degree/MetProducts
Format: BUFR
Files per day: 32
Volume per day: 12 MB
Frequency: 3 hours
Satellite: METEOSAT
Instrument: SEVIRI
Naming Convention:
L-000-MSG?__-MPEF________-CLA[\_]*

Web Page:
oiswww.eumetsat.org/IPPS/html/MSG/PRODUCTS/CLAI/index.htm

- Cloud Analysis Image

Data Provider: EUMETSAT
Folder: MSG-0degree/MetProducts
Format: GRIB2
Files per day: 32
Volume per day: 9.5 MB
Frequency: 3 hours
Satellite: METEOSAT
Instrument: SEVIRI
Naming Convention:
L-000-MSG?__-MPEF________-CLA\[\_]*

Web Page:
oiswww.eumetsat.org/IPPS/html/MSG/PRODUCTS/CLAI/index.htm

Python Script Available
• Cloud Mask

Data Provider: EUMETSAT
Folder: MSG-0degree/MetProducts
Format: GRIB2
Files per day: 672
Volume per day: 325 MB
Frequency: 15 minutes
Satellite: METEOSAT
Instrument: SEVIRI
Naming Convention:
L-000-MSG?__.MPEF_______-CLM[.]^*

Python Script Available
Web Page:
oiswww.eumetsat.org/IPPS/html/MSG/PRODUCTS/CLM/index.htm

• Cloud Top Height

Data Provider: EUMETSAT
Folder: MSG-0degree/MetProducts
Format: GRIB2
Files per day: 288
Volume per day: 80 MB
Frequency: 15 minutes
Satellite: METEOSAT
Instrument: SEVIRI
Naming Convention:
L-000-MSG?__.MPEF_______-CTH[.]^*

Python Script Available
Web Page:
oiswww.eumetsat.org/IPPS/html/MSG/PRODUCTS/CTH/index.htm
• Global Instability Index

Data Provider: EUMETSAT
Folder: MSG-0degree/MetProducts
Format: BUFR
Files per day: 192
Volume per day: 840 MB
Frequency: 15 minutes
Satellite: METEOSAT
Instrument: SEVIRI
Naming Convention:
L-000-MSG?__-MPEF________-GII[_]*

• Multi-Sensor Precipitation Estimate

Data Provider: EUMETSAT
Folder: MSG-0degree/MetProducts
Format: GRIB2
Files per day: 288
Volume per day: 80 MB
Frequency: 15 minutes
Satellite: METEOSAT
Instrument: SEVIRI
Naming Convention:
L-000-MSG?__-MPEF________-CTH[_]*

Python Script Available

Web Page:
oiswww.eumetsat.org/IPPS/html/MSG/PRODUCTS/CTH/index.htm
• Normalized Difference Vegetation Index

Data Provider: EUMETSAT
Folder: MSG-0degree/MetProducts
Format: HDF5
Files per day: 2
Volume per day: 9.3 MB
Satellite: METEOSAT
Instrument: SEVIRI
Naming Convention:
L-000-MSG?__-MPEF________-NDVI[_]*

Python Script Available

• Normalized Difference Vegetation Index

Data Provider: EUMETSAT
Folder: MSG-0degree/MetProducts
Format: HDF5
Files per day: 2
Volume per day: 11.5 MB
Satellite: METEOSAT
Instrument: SEVIRI
Naming Convention:
L-000-MSG?__-MPEF________-NDVD[_]*

Python Script Available
Normalized Difference Vegetation Index

Data Provider: EUMETSAT
Folder: MSG-0degree/MetProducts
Format: BUFR
Files per day: 8
Volume per day: 3.5 MB
Frequency: 3 hours
Satellite: METEOSAT
Instrument: SEVIRI
Naming Convention:
L-000-MSG?___MPEF_______-TH[\_]**
4 JPSS / Low Earth Orbit

4.1 VIIRS (Visible Infrared Imaging Radiometer Suite)

- Day Night Band: 0.7 μm (“Low Light Visible”)

Data Provider: NOAA-NESDIS
Folder: JPSS/BANDS/DNB
Format: NetCDF4
Average Size:
6.22 MB (imagery)
30 KB (geolocation)
Frequency: 3 minutes average
Coverage: GOES-East Footprint
(Granules that cover land regions only)
Pixel Unit: K
Satellite: NPP (will be changed to NOAA-20)
Instrument: VIIRS
Wavelength: 0.5 to 0.9μm
Projection: Geos
Resolution:
0.8 km
Naming Convention:
Imagery:
VIIRS_NCC_EDR_npp_s*e*c*.nc
Condensed geolocation file:
VIIRS_NCC_EDR_GEO_subsample_npp_s_e*c*.nc

Python Script Available

Web Page:
www.star.nesdis.noaa.gov/jpss/imagery.php
• Band I5: 11.45 μm (“Long Wave IR Window”)

Data Provider: NOAA-NESDIS
Folder: JPSS/BANDS/I5
Format: NetCDF4
Average Size: 25 MB (imagery)
48 KB (geolocation)
Frequency: 3 minutes average
Coverage: GOES-East Footprint
Pixel Unit: K
Satellite: NPP (will be changed to NOAA-20)
Instrument: VIIRS
Wavelength: 10.5 to 12.4 μm, cent. at 0.64 μm
Projection: Geos
Resolution:
0.371x0.387 km (Nadir)
0.80 x 0.789 km (End of Scan)
Naming Convention:
Imagery:
VIIRS_I5_IMG_EDR_npp_s*e*c*.nc
Condensed geolocation file:
VIIRS_IMG_GTM_EDR_GEO_subsample_npp_s*e*c*.nc

Python Script Available
Web Page:
www.star.nesdis.noaa.gov/jpss/imagery.php
4.2 GCOM-W1 AMSR2 (Advanced Microwave Scanning Radiometer 2)

- Imagery (Brightness Temperatures @ 6.9 GHz, 7.3 GHz, 10.7 GHz, 18.7 GHz, 23.8 GHz, 36.5 GHz, 89 GHz - Vertical and Horizontal Polarizations)

Data Provider: NOAA-NESDIS
Folder: JPSS/PRODUCTS/G-IMAGERY
Format: NetCDF4
Average Size: 270 MB
Frequency: 10 to 12 orbits a day
Max n° of files a day: 12
Satellite: GCOM-W1
Instrument: AMSR-2 (Advanced Microwave Scanning Radiometer 2)
Projection: Geos
Resolution: 6.9 GHz (35 x 62 km), 10.7 GHz (24 x 42 km), 18.7 GHz (14 x 22 km), 23.8 GHz (15 x 26 km), 36.5 GHz (7 x 12 km), 89 GHz (3 x 5 km)
Naming Convention: AMSR2-MBT_v2r0_GW1_s*e*_c*.nc

Web Page: www.ospo.noaa.gov/Products/atmosphere/gpds/maps.html
• Precipitation (Rain Rate, Convective Precipitation, Probability of Precipitation)

Data Provider: NOAA-NESDIS
Folder: JPSS/PRODUCTS/G-PRECIPITATION
Format: NetCDF4
Average Size: 60 MB
Frequency: 10 to 12 orbits a day
Max n° of files a day: 12
Satellite: GCOM-W1
Instrument: AMSR2
(Advanced Microwave Scanning Radiometer 2)
Projection: Geos
Naming Convention: AMSR2-PRECIP_v2r0_GW1_s*e*c*.nc

Python Script Available

Web Page: www.ospo.noaa.gov/Products/atmosphere/gpds/maps.html
**Soil Moisture (Soil Moisture and Land Cover Type)**

Data Provider: NOAA-NESDIS  
Folder: JPSS/PRODUCTS/G-SOILMOISTURE  
Format: NetCDF4  
Average Size: 30 MB  
Frequency: 10 to 12 orbits a day  
Max n° of files a day: 12  
Satellite: GCOM-W1  
Instrument: AMSR2  
(Advanced Microwave Scanning Radiometer 2)

Projection: Geos  
Naming Convention:  
AMSR2-SOIL_v2r0_GW1_s*_e*_c*.nc

Python Script Available  
Web Page:  
www.ospo.noaa.gov/Products/atmosphere/gpds/maps.html

**Soil Moisture (Soil Moisture and Land Cover Type)**

Data Provider: NOAA-NESDIS  
Folder: JPSS/PRODUCTS/G-SEAICE  
Format: NetCDF4  
Average Size: 62 MB (NS) / 40 MB (SH)  
Frequency: 2 files a day  
Satellite: GCOM-W1  
Instrument: AMSR2  
(Advanced Microwave Scanning Radiometer 2)

Projection: Geos  
Naming Convention:  
AMSR2-SEAICE_v2r0_GW1_s*_e*_c*.nc

Python Script Available  
Web Page:  
www.ospo.noaa.gov/Products/atmosphere/gpds/maps.html
**Snow (Snow Cover, Snow Depth, Snow Water Equivalent)**

- **Data Provider:** NOAA-NESDIS
- **Folder:** JPSS/PRODUCTS/G-SNOW
- **Format:** NetCDF4
- **Average Size:** 36 MB
- **Frequency:** 10 to 12 orbits a day
- **Max n° of files a day:** 12
- **Satellite:** GCOM-W1
- **Instrument:** AMSR2 (Advanced Microwave Scanning Radiometer 2)
- **Projection:** Geos
- **Naming Convention:**
  AMSR2-SNOW_v2r0_GW1_s*_e*_c*.nc

🔗 **Python Script Available**

**Web Page:**
www.ospo.noaa.gov/Products/atmosphere/gpds/maps.html
- **Ocean** (Sea Surface Temperature, Sea Surface Wind Speed, Total Precipitable Water, Cloud Liquid Water)

  Data Provider: NOAA-NESDIS  
  Folder: JPSS/PRODUCTS/G-OCEAN  
  Format: NetCDF4  
  Average Size: 121 MB  
  Frequency: 10 to 12 orbits a day  
  Max n° of files a day: 12  
  Satellite: GCOM-W1  
  Instrument: AMSR2 (Advanced Microwave Scanning Radiometer 2)  
  Projection: Geos (Satellite)  
  Naming Convention:  
  AMSR2-OCEAN_v2r0_GW1_s*._e*._c*.nc

**Web Page:**  
www.ospo.noaa.gov/Products/atmosphere/gpds/maps.html

**Note** - On the file naming convention for the GCOM-W1 AMSR2 files:  
- sYYYYJJJHHMMSSs: Observation Start  
- eYYYYJJJHHMMSSs: Observation End  
- cYYYYJJJHHMMSSs: File Creation
4.3 MIRS (Microwave Integrated Retrieval System)

- Precipitation and Surface Properties (Emissivity, Chi Square, CLW, Snow Grain Size, IWP, LWP, Sfc Pressure, Rain Rate, Snowfall Rate, RWP, Sea Ice, May Year Ice, First Year Ice, Snow Cover, SWE, Temperature, TPW, Skin Temp., Wind Speed, Water Vapor, etc)

Data Provider: NOAA-NESDIS  
Folder: JPSS/PRODUCTS/MIRS  
Format: NetCDF4  
Average Size: 353 KB  
Frequency: 3 minutes average  
Coverage: GOES-East Footprint  
Satellite: NPP (will be changed to NOAA-20)  
Instrument: ATMS (Advanced Technology Microwave Sounder)  
Projection: Geos

Naming Convention:  
NPR-MIRS-IMG_V11r3_npp_s*_e*_c*.nc

Python Script Available

**Temperature and Moisture Profiles** (Temperature, Water Vapor Content, CLW, Rain, Graupel, Rain and Graupel)

**Data Provider:** NOAA-NESDIS  
**Folder:** JPSS/PRODUCTS/MIRS  
**Format:** NetCDF4  
**Average Size:** 353 KB  
**Frequency:** 3 minutes average  
**Coverage:** GOES-East Footprint  
**Satellite:** NPP (will be changed to NOAA-20)  
**Instrument:** ATMS (Advanced Technology Microwave Sounder)  
**Projection:** Geos  
**Naming Convention:** NPR-MIRS-SND_V11r3_npp_s*_*e*_c*.nc  

Python Script Available

**Web Page:**  
www.star.nesdis.noaa.gov/mirs/index.php

**Note - On the file naming convention for the MIRS files:**

- **sYYYYJJJHHMMSS:** Observation Start  
- **eYYYYJJJHHMMSS:** Observation End  
- **cYYYYJJJHHMMSS:** File Creation
4.4 NUCAPS (NOAA Unique Combined Atmospheric Processing System)

- Sounding Products

**Data Provider:** NOAA-NESDIS  
**Folder:** JPSS/PRODUCTS/NUCAPS  
**Format:** NetCDF4  
**Average Size:** 3 MB  
**Files per day:** 500 average  
**Satellite:** NOAA-20  
**Projection:** Geos

**Naming Convention:**  
NUCAPS-EDR_v2r0_npp_s*_*e_*c*.nc

**Web Page:**  
www.ospo.noaa.gov/Products/atmosphere/soundings/nucaps/index.html

**Note:** Sample image from CIMMS Satellite Blog  
(cimss.ssec.wisc.edu/goes/blog/?s=NUCAPS)

**Note - On the file naming convention for the NUCAPS files:**

- sYYYYJJHHMMSS: Observation Start  
- eYYYYJJHHMMSS: Observation End  
- cYYYYJJHHMMSS: File Creation
4.5 BLENDED TOTAL PRECIPITABLE WATER PRODUCTS

- Blended Total Precipitable Water

Data Provider: NOAA-NESDIS  
Folder: JPSS/PRODUCTS/BTPW  
Format: HDF4  
Average Size: 19MB  
Frequency: Hourly  
Max n° of files a day: 24  
Projection: Mercator (centered at 160 W)  
Resolution: 16 km  

Satellites: NOAA-18, NOAA-19, Metop-A, Metop-B, S-NPP, GCOM-W1, GPM, GOES-West, Met-GPS  
Naming Convention: NPR.COMP.TPW.*.E*.T*.he4  
Python Script Available  
Web Page: www.ospo.noaa.gov/Products/bTPW/Overview.html

- Blended Total Precipitable Water

Data Provider: NOAA-NESDIS  
Folder: JPSS/PRODUCTS/BTPW  
Format: HDF4  
Average Size: 17MB  
Frequency: Hourly  
Max n° of files a day: 24  
Projection: Mercator (centered at 160 W)  
Resolution: 16 km  

Satellites: NOAA-18, NOAA-19, Metop-A, Metop-B, S-NPP, GCOM-W1, GPM, GOES-West, Met-GPS  
Naming Convention: NPR.COMP.PCT.*.E*.T*.he4  
Python Script Available  
Web Page: www.ospo.noaa.gov/Products/bTPW/Overview.html
4.6 ACTIVE FIRES

Suomi NPP - VIIRS - NDE - Active Fires
18 Mar 2016

Data Provider: NOAA-NESDIS
Folder: JPSS/PRODUCTS/AF
Format: NetCDF4
Average Size: 150 KB
Frequency: 3 minutes average
Satellite: NPP (will be changed to JPSS)
Projection: Geos
Naming Convention:
AF_v1r1_npp_s*e*c*.nc

Web Page:
www.star.nesdis.noaa.gov/jpss/fires.php

Note - On the file naming convention for the Active Fire files:

sYYYYJJJHHMSSs: Observation Start
eYYYYJJJHHMSSs: Observation End
cYYYYJJJHHMSSs: File Creation
4.7 OCEAN COLOR

Data Provider: NOAA-NESDIS
Folder: JPSS/PRODUCTS/OC
Format: PNG / TIF
Average Size: 150 KB (PNG) / 8 MB (TIF)
Frequency: 12 per day
Satellite: NPP
Projection: Geos

Naming Convention: VRSWCW_BYYYYJJJ_*edgemask_chlora.png/.tif

Web Page: https://www.star.nesdis.noaa.gov/jpss/oceancolor.php
4.8 EVENTS

Sample Image Description (broadcasted through the GNC-A “JPSS\EVENTS” Channel):

NOAA-20 VIIRS RSB First Light Image: Captured Thomas Fire - Twenty-five days after JPSS-1 (NOAA-20) was launched into Earth orbit, NOAA-20 sent back its first Visible Infrared Imaging Radiometer Suite (VIIRS) science data on December 13, 2017. This VIIRS true color image captured the aggressive wildfires across the Southern California region which forced thousands to flee their homes. The fire spanned more than 370 square miles and remains the strongest blaze for firefighters to battle in Ventura and Santa Barbara counties.

Data Provider: NOAA-NESDIS
Folder: JPSS/EVENTS
Format: PNG’s and other imagery
Average Size: Varies
Frequency: Varies
Max n° of files a day: Varies
Satellite: NPP (will be changed to JPSS)
Instrument: VIIRS (Visible Infrared Imaging Radiometer Suite)
5 FORECAST PRODUCTS

5.1 GFS (Global Forecast System)

- 0.5° South America and Caribbean Forecast Products

Data Provider: MARN El Salvador
Folder: MARN-EI Salvador
Format: GRIIB2
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)

Python Script Available

Note: Please access the list of GFS bands and their meaning at this link.
- 1.0° Global Forecast Products

**Data Provider:** NWS  
**Folder:** ISCS-GRIB2  
**Format:** GRIB2  
**Frequency:** 4 cycles per day (00h, 06h, 12h and 18h), 0 ~ 240 h Forecast  
**Average Size, per file:** 62 KB  
**Spatial Resolution:** 1 degree  
**Naming Convention:** T_PPPPPKWBDDHMNC_KWBC_YYYYMMDDxxxxx_xxxxxxxx-xxxx.bin  
Where:

- **PPPPPP:** Product Type, forth letter varies from “A” (+0h) to “Y” (+240h),  
- **DDHMN:** Day, Hour, Minutes from model run (0000 / 0600 / 1200 / 1800)  
- **YYYYMMDD:** Year, month and day for that given run

 Euros

**Note:** Please access the list of GFS fields and their nomenclature at [this link](#).
6 MISCELLANEOUS

- Monitoring of Vegetation Fires - Multimission

Data Provider: INPE
Folder: INPE
Format: Shapefile (SHP + SHX + DBF)
Average Size: 1500 kB
Frequency: 3 hours
Max n° of files a day: 8
Satellites: AQUA, TERRA, METOP, NOAA, NPP, METEOSAT and GOES
Naming Convention: INPE_MVF_YYYYMMDDHHMN

Python Script Available

Web Page:
www.inpe.br/queimadas
• **ASCAT Coastal Winds at 12.5 km Swath Grid - METOP** (Equivalent neutral 10m winds over the global oceans, with specific sampling to provide as many observations as possible near the coasts)

• **ASCAT Coastal Winds at 25 km Swath Grid - METOP** (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)
Total Ozone Analysis using SBUV-2 and TOVS - TOAST

Data Provider: NOAA-NESDIS
Folder: NOAA-NESDIS
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_YYYMMDD.bin
TOAST_YYMMDD.GRB
toast_YYMMDD.png
tovs.png (latest)
tovs_YYYMMDD.png (historical)

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.png (latest)
toast_nh_YYYYMMDD.png (historical)
tovs_nh.png (latest)
tovs_nh_YYYYMMDD.png (historical)
toast_nh.png (latest)
tovs_nh.png (latest)
tovs_nh_YYYYMMDD.png (historical)

Web Page:
www.ospo.noaa.gov/Products/atmosphere/toast/index.html
• Medium Resolution Sea Ice Drift - METOP

Data Provider: EUMETSAT
Folder: EUMETSAT
Format: NetCDF
Files per day: 2
Volume per day: 1.2 MB
Naming Convention:
S-OSI_-DMI_-MTOP-NH_MRSIDRIFT-
<date>.nc.gz

• Global Low Resolution Sea Ice Drift (North and South Hemispheres) - Multimission

Data Provider: EUMETSAT
Folder: EUMETSAT
Format: NetCDF
Files per day: 2
Volume per day: 130 kB per file
Naming Convention:
S-OSI_-NOR_-MULT-NH_LRSIDRIFT-
<data>.nc.gz
S-OSI_-NOR_-MULT-SH_LRSIDRIFT-
<data>.nc.gz
• Global Sea Ice Type (North and South Hemispheres) - Multimission

Data Provider: EUMETSAT  
Folder: EUMETSAT  
Format: NetCDF  
Files per day: 2  
Volume per day: 4 MB per file  
Naming Convention:  
S-OSI_.NOR_.MULT-GL_SH_TYPEn_-<date>.nc.gz  
S-OSI_.NOR_.MULT-GL_NH_TYPEn_-<date>.nc.gz  

Python Script Available

• Global Low Resolution Sea Ice Drift (North and South Hemispheres) - Multimission

Data Provider: EUMETSAT  
Folder: EUMETSAT  
Format: NetCDF  
Files per day: 2  
Volume per day: 4 MB per file  
Naming Convention:  
S-OSI_.NOR_.MULT-GL_SH_EDGEn_-<date>.nc.gz  
S-OSI_.NOR_.MULT-GL_NH_EDGEn_-<date>.nc.gz  

Python Script Available
- Global Sea Ice Concentration (North and South Hemispheres) - DMSP

![Map of Global Sea Ice Concentration](image1)

**Data Provider:** EUMETSAT  
**Folder:** EUMETSAT  
**Format:** NetCDF  
**Files per day:** 2  
**Volume per day:** 6 MB per file  
**Naming Convention:**  
S-OSI\_DMI\_MULT-GL\_NH\_CONC\_\_\_\_<date>.nc.gz  
S-OSI\_DMI\_MULT-GL\_SH\_CONC\_\_\_\_<date>.nc.gz

- Global Sea Ice Concentration (North and South Hemispheres) - DMSP AMSR

![Map of Global Sea Ice Concentration](image2)

**Data Provider:** EUMETSAT  
**Folder:** EUMETSAT  
**Format:** NetCDF  
**Files per day:** 2  
**Volume per day:** 7 MB per file  
**Naming Convention:**  
S-OSI\_DMI\_AMSR\_GL\_NH\_CONC\_\_\_\_<date>.nc.gz  
S-OSI\_DMI\_AMSR\_GL\_SH\_CONC\_\_\_\_<date>.nc.gz

![Python Script Available]
- Global Sea Ice Emissivity - North and South Hemispheres (50 GHz - AMSU and SSMIS)

Data Provider: EUMETSAT
Folder: EUMETSAT
Format: NetCDF
Files per day: 2
Volume per day: 6 MB per file
Naming Convention:
S-OSI-DMI-MULT-GL_NH_EMIS__<date>.nc.gz
S-OSI-DMI-MULT-GL_SH_EMIS__<date>.nc.gz

- Sea Surface Temperature (IASI) - METOP

Data Provider: EUMETSAT
Folder: EUMETSAT
Format: NetCDF
Files per day: 480
Volume per day: 130 kB
Naming Convention:
S-OSI-FRA-MTOP-IASI-SSSTFIELD-<date>.nc
• Sea Surface Temperature (Full Resolution Metagranules) - METOP

Data Provider: EUMETSAT  
Folder: EUMETSAT  
Format: NetCDF  
Files per day: 480  
Volume per day: 3.8 MB  
Naming Convention:  
S-OSI_-FRA_-MTOP-MGRSST_FIELD-<date>.nc

• Sea Surface Temperature (0.05°) - METOP

Data Provider: EUMETSAT  
Folder: EUMETSAT  
Format: NetCDF and GRIB2  
Files per day: 2 per format  
Volume per day: 40 MB (NetCDF) and 8.5 MB (GRIB2)  
Naming Conventions:  
S-OSI_-FRA_-MTOP-GLBSST_FIELD-<date>.grb.gz  
Python Script Available
• Sea Surface Temperature - GOES-East

Data Provider: EUMETSAT
Folder: EUMETSAT
Format: NetCDF and GRIB
Files per day: 24 per format
Volume per day: 11 MB (NetCDF) and 1.7 MB (GRIB)
Naming Conventions:
S-OSI_-FRA_-GOES-H__SST_FIELD-<date>.nc

• Sea Surface Temperature - METEOSAT 0 Degree

Data Provider: EUMETSAT
Folder: EUMETSAT
Format: NetCDF and GRIB
Files per day: 24 per format
Volume per day: 11 MB (NetCDF) and 11 MB (GRIB)
Naming Conventions:
S-OSI_-FRA_-MSG_-H__SST_FIELD-<date>.nc
• Daily and Hourly Surface Solar Irradiance - GOES-East

Data Provider: EUMETSAT
Folder: EUMETSAT
Format: NetCDF
Files per day: 24 (H), 1 (D)
Volume per day: 8 MB
Naming Conventions:
S-OSI_-FRA_-GOES_-DLISSIH-----<date>.nc
S-OSI_-FRA_-GOES_-DLISSID------<date>.nc

H: Hourly
D: Daily

• Daily and Hourly Surface Solar Irradiance - METEOSAT 0 Degree

Data Provider: EUMETSAT
Folder: EUMETSAT
Format: NetCDF
Files per day: 24 (H), 1 (D)
Volume per day: 8 MB
Naming Conventions:
S-OSI_-FRA_-MSG_-DLISSIH-----<date>.nc
S-OSI_-FRA_-MSG_-DLISSID------<date>.nc

H: Hourly
D: Daily
• **Advanced TIROS Operational Sounder (ATOVS) - NOAA-19** *(Temperature Profiles, Humidity Profiles, Surface Temperatures, Cloud Top Temperatures, Cloud Top Pressure, Effective Cloud Amount, Cloud Liquid Water Content and Total Columns Precipitable Water)*

Data Provider: EUMETSAT  
Folder: EUMETSAT  
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

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

Data Provider: EUMETSAT  
Folder: EUMETSAT  
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
• Low Resolution Full Disk Satellite Imagery

Data Provider: RANET
Folder: RANET
Format: JPEG
Average Size: 60 kB, per product
Frequency: 60 minutes, per product
Max n° of files a day: 24, per product

Naming Convention:
GOES-East Visible: GEVS
GOES-East Infrared: GEIR
GOES-West Visible: GEWS
GOES-West Infrared: GEWR
METEOSAT 0 Degree Visible: GMVS
METEOSAT 0 Degree Infrared: GMIR
METEOSAT 41.5 Degree Visible: GMVS
METEOSAT 41.5 Degree Infrared: GMIR
MTSAT Degree Visible: MTVS
MTSAT Degree Infrared: MTIR
**Sectorized Satellite Imagery (RANET)**

- **Data Provider:** RANET
- **Folder:** RANET
- **Format:** GIF
- **Average Size:** 150 kB per product
- **Frequency:** 60 minutes per product
- **Max n° of files a day:** 24 per product

**Satellites:**
- GOES-16
- GOES-17
- MTSAT

**Naming Convention:**
- GOES-East Visible and Short Wave - Floater 1: tropical_ge_4km_visir2_floater_1
- GOES-East Infrared Channel Enhanced - Floater 1: tropical_ge_4km_ir4_floater_1
- GOES-East Visible and Short Wave - Floater 2: tropical_ge_4km_visir2_floater_2
- GOES-East Infrared Channel Enhanced - Floater 2: tropical_ge_4km_ir4_floater_2
- GOES-East Visible Channel - Caribbean: rmtcsasec4vis04
- GOES-East Infrared Channel Enhanced - Caribbean: rmtcsasec4ir404
- GOES-East Visible Channel - Mexico: rmtcsasec5vis04
- GOES-East Infrared Channel Enhanced - Mexico: rmtcsasec5ir404
- GOES-East Short Wave Channel Enhanced - Caribbean: rmtcsasec4ir204
- GOES-East Water Vapor Channel Enhanced - Caribbean: rmtcsasec4ir304
- GOES-East Visible Channel - Mexico: rmtcsasec5vis04
- GOES-East Infrared Channel Enhanced - Mexico: rmtcsasec5ir404
- GOES-West Visible and Short Wave - Floater: tropical_gw_4km_visir2_floater
- GOES-West Infrared Channel Enhanced - Floater: tropical_gw_4km_ir4_floater
- MTSAT-2 Visible and Short Wave - Floater 1: tropical_mtsat_4km_visir2_floater
- MTSAT-2 Infrared Channel Enhanced - Floater 1: tropical_mtsat_4km_ir4_floater
• Miscellaneous RANET Products

Data Provider: RANET  
Folder: RANET  
Format: GIF  
Average Size: 70 kB per product  
Frequency: 60 minutes per product  
Max n° of files a day: 24 per product

Naming Convention:

Precipitable Water Index - North America: BTDNA  
Precipitable Water Index - South America: BTDSA  
Normalized Difference Vegetation Index - North America: NDVSA  
Normalized Difference Vegetation Index - South America: NDVNA  
Hazards Outlook - Central America - English: central_americ_hazard  
Hazards Outlook - Central America - Spanish: central_americ_hazard_sp  
Hazards Outlook - Hispaniola Island - English: haiti_hazard  
Hazards Outlook - Hispaniola Island - French: haiti_hazard_fr  
Accumulated Precipitation Forecast - 24 hs - Central America: 24h_precip1a  
Accumulated Precipitation Forecast - 3 days - Central America: 3day_totp  
Accumulated Precipitation Forecast - 1 week - Central America: week1_totp  
Sea Surface Temperature - Region 40N 10S 120W 0: wkatlcaribpac  
Sea Surface Temperature - Global: gsstanim
- Surface Forecast (South Americas) / Quantitative Forecast and Winds (Caribbean)

**Data Provider:** RANET  
**Folder:** RANET  
**Format:** GIF  
**Average Size:** 70 kB per product  
**Frequency:** 60 minutes per product  
**Max n° of files a day:** 24 per product

**Naming Convention:**
- Surface Forecast - Day 1 - South America: d1  
  Surface Forecast - Day 2 - South America: d2  
  Surface Forecast - Day 3 - South America: d3  
  Surface Forecast - Day 4 - South America: d4  
  Surface Forecast - Day 5 - South America: d5  
  Surface Forecast - Day 6 - South America: d6  
- Quantitative Precipitation Forecast and Winds - Day 1 - West Caribbean: crb1_west  
  Quantitative Precipitation Forecast and Winds - Day 2 - West Caribbean: crb2_west  
  Quantitative Precipitation Forecast and Winds - Day 3 - West Caribbean: crb3_west  
  Quantitative Precipitation Forecast and Winds - Day 1 - Central Caribbean: crb1_central  
  Quantitative Precipitation Forecast and Winds - Day 2 - Central Caribbean: crb2_central  
  Quantitative Precipitation Forecast and Winds - Day 3 - Central Caribbean: crb3_central  
  Quantitative Precipitation Forecast and Winds - Day 1 - East Caribbean: crb1_east  
  Quantitative Precipitation Forecast and Winds - Day 2 - East Caribbean: crb2_east  
  Quantitative Precipitation Forecast and Winds - Day 3 - East Caribbean: crb3_east
- WRF Stream Lines Forecast and Winds Forecast (250 ~ 925 hPa) - Cent. America and Caribbean

Data Provider: IMN-CostaRica
Folder: IMN-CostaRica
Format: PNG
Average Size: 25 kB per product
Frequency: Daily, per forecast per product

Naming Convention:
- lineas_de_corriente-06h-250hPa
- lineas_de_corriente-12h-250hPa
- lineas_de_corriente-18h-250hPa
- lineas_de_corriente-24h-250hPa
- lineas_de_corriente-30h-250hPa
- lineas_de_corriente-36h-250hPa
- lineas_de_corriente-06h-500hPa
- lineas_de_corriente-12h-500hPa
- lineas_de_corriente-18h-500hPa
- lineas_de_corriente-24h-500hPa
- lineas_de_corriente-30h-500hPa
- lineas_de_corriente-36h-500hPa
- lineas_de_corriente-06h-850hPa
- lineas_de_corriente-12h-850hPa
- lineas_de_corriente-18h-850hPa
- lineas_de_corriente-24h-850hPa
- lineas_de_corriente-30h-850hPa
- lineas_de_corriente-36h-850hPa
- lineas_de_corriente-06h-925hPa
- lineas_de_corriente-12h-925hPa
- lineas_de_corriente-18h-925hPa
- lineas_de_corriente-24h-925hPa
- lineas_de_corriente-30h-925hPa
- lineas_de_corriente-36h-925hPa
- viento-06h-250hPa
- viento-12h-250hPa
- viento-18h-250hPa
- viento-24h-250hPa
- viento-06h-500hPa
- viento-12h-500hPa
- viento-18h-500hPa
- viento-24h-500hPa
- viento-06h-850hPa
- viento-12h-850hPa
- viento-18h-850hPa
- viento-24h-850hPa
- viento-06h-925hPa
- viento-12h-925hPa
- viento-18h-925hPa
- viento-24h-925hPa
- viento-06h-500hPa
- viento-12h-500hPa
- viento-18h-500hPa
- viento-24h-500Pa
- viento-06h-925hPa
- viento-12h-925hPa
- viento-18h-925hPa
- viento-24h-925hPa
- Drought Monitor - North America - English / Spanish / French:

**North American Drought Monitor**

*January 31, 2014*

*Data Provider:* NADM

*Folder:* NADM

*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
```

*Data Provider:* NADM

*Folder:* NADM

*Format:* PDF

*Average Size:* 118 kB

*Frequency:* Monthly

*Naming Conventions:*

```
nadm-narr-YYYYMM
nadm-narr-YYYYMM-sp
nadm-narr-YYYYMM-fr
```
• **Real Time Ozone Animated - North America:**

   *Hourly Ozone AQI*
   *Thursday, March 21, 2019 12:40 AM EDT*

   **Data Provider:** USEPA  
   **Folder:** USEPA  
   **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*

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

**ILLUSTRATED PRODUCT CATALOG**

- **Average Height and Direction of Waves - Southern South Americas:**

  ![Map of Average Height and Direction of Waves](image)

  Data Provider: CONAE  
  Folder: CONAE  
  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:**

  ![Map of Significant Wave Height and Direction](image)

  Data Provider: CONAE  
  Folder: CONAE  
  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

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.

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:

• NO Notices - METNO/WIFMA

• NT Notices - TEST MSG [System related]

• NW Notices - Warning related and/or cancellation

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.

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:

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

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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: 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-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:**

`yyyymmdd_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:** GRIB2 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.rmttn``

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.rmttn

**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
**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.

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

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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.
7 THE DATA PROVIDERS

The image below shows the current GEONETCast-Americas Data Providers, which in your station will be represented in **data channels**, or **folders in the ingestion directory**. The ingestion directory location may be configured by users in the FAZZT Software.

The current list of providers is found below:

- **CONAE**: National Space Activities Commission (Argentina)
- **EUMETSAT**: European Organisation for the Exploitation of Meteorological Satellites
- **INPE**: National Institute for Space Research (Brazil)
- **IMN**: National Meteorological Institute (Costa Rica)
- **MARN**: Ministry of Environment and Natural Resources (El Salvador)
- **NOAA-NESDIS**: National Oceanic and Atmospheric Administration (USA)
- **NWS**: National Weather Service (USA)
- **RANET**: Radio and Internet for the Communication of Hydro-Meteorological and Climate Related Information (USA)
- **USEPA**: United States Environmental Protection Agency