Satellite support for ACTIVATE

SatCORPS* Group, NASA Langley Research Center

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*The **Sat**ellite **ClO**ud and **R**adiation Property retrieval **S**ystem

Products

GOES-16 ABI satellite sensor

- Satellite imagery
  - Visible, infrared, water vapor channel (6.2 µm) multi-channel RGB images and animations

- Satellite cloud retrievals
  - Cloud mask and phase (clear, liquid, and ice), cloud top temperature and height (pressure), base height (pressure).
  - Cloud optical depth, particle effective size (ice and liquid), water path, and cloud droplet number concentration
  - Radiative fluxes, icing potential.
  - 2-km pixel resolution (nadir) and produced every 20 min.

https://satcorps.larc.nasa.gov

NASA LANGLEY CLOUD AND RADIATION RESEARCH

Satellite Imagery And Cloud Products Page

The Satellite ClOud and Radiation Property retrieval System (SatCORPS) is a comprehensive set of algorithms designed to retrieve cloud information from operational and research meteorological satellite imager data. The SatCORPS algorithms have been adapted to utilize imagery from polar-orbiting, geostationary, and precessing-orbit satellites using dedicated satellite intercalibration and spectral correction efforts. This website provides real-time access to cloud retrieval information. This information, in addition to being available in real-time and near-real-time for dedicated and part-time users, expands the frontiers of knowledge and understanding by providing critical data for research in various disciplines. These datasets are available to the American public in the form of both imagery and data-mining-ready binary files. The generation and distribution of these datasets are supported by the NASA CERES and various NASA ROSES programs, as well as the Department of Energy ARM and ASR Programs.

Satellite Imagery and Cloud Product Viewers: Select a domain from the table below to access the satellite channel imagery and cloud products.
Cloud products are derived with VISST/SIST algorithm.
Blue Cell: Real-time domain   White Cell: Discontinued/historical domain

Sidebar (left)
- User Warning, Please read !
- Cloud and Radiation Group
- References
- CERES Algorithms
- *Satellite Calibration:*
- Langley Satellite Calibration
- *Viewers/Tools:*
- New!! OT Climatology Datasets
- SCIAMACHY SBAF
- IASI SBAF
- Spectral Response Function
- Contrail Forecast
- NOAA AVHRR Viewer
- MODIS Viewer
- Mid-Atlantic NEXRAD
- ARM-SGP NEXRAD
- Angles Viewer
- Plot RAP Sounding
- Satellite Overpass Predictor
- *Gridded VISST Products*
- GEO-TISA
- AVHRR-CDR
- New!! US Aircraft Icing
- *Supported Programs:*
- ASR Atmospheric System Research
- *Field Experiments:*
- New!! CPEX-AW
- New!! ACTIVATE
- New!! ATOMIC/EUREC4A

FULL-DISK CLOUD PRODUCTS (Real Time)

GOES-WEST	GOES-EAST	METEOSAT	MET-8	HIMAWARI-8

Merged Global Geostationary Gridded Cloud Products

GOES-17	GOES-16	INSAT	FY2	MTSAT

CLOUD PRODUCTS

GOES WEST	GOES EAST	METEOSAT	Misc Domains	AVHRR/MODIS
North America (RR)		AMF-Azores	Indian Peninsula (INSAT-3D)	ARM-SGP
MERGED CONUS		HIWC-Cayenne	MTSAT	Alaska (Direct Broadcast)
ARM-SGP	ARM-SGP	WEST EUROPE	MANUS	Alaska (Relay)
Alaska/NPacific	GOES-16 SE USA	EUROPE	HIWC	ARM-NSA
Alaska/NPacific G17		ARM-NIAMEY	GOES-9	COVE

Real-time and Historical Satellite Imagery Loops: The links from the table below provide access to the real-time (blue cells) and historical image loops for various satellites.

SATELLITE IMAGERY

N. America GOES-W	N. America GOES-E	Mid-Atlantic US	Southeast US	CONUS
E. Pacific GOES-E	SGP 1KM VIS GOES-E	TWP DARWIN MTSAT	TWP DARWIN FY2C	TWP DARWIN MTSAT & FY2C
CALWater-2/ACAPEX	Florida		GMS-5 TWP	PACS EPIC
Mid-West US (SGP)	Northeast US			
	Pacific/West			

ACTIVATE!

Right sidebar
- + SatCORPS Home
- ACTIVATE
- + ACTIVATE Official Home

Cloud Products
- + Large GOES-16 (2021)
- + Small GOES-16 (2021)
- + GOES-16 (2019)

Satellite Imagery
- + Large GOES-16 (2021)
- + Small GOES-16 (2021)
- + GOES-16 (2019)

Viewers / Tools
- + Legacy Satellite Predictor

Related Datasets
- + NAAMES

Flight Track Overlay
- + All Planes
- + All Planes (2021)
- + All Planes (2020)
- + B200 (All Years)
- + B200 (2021)
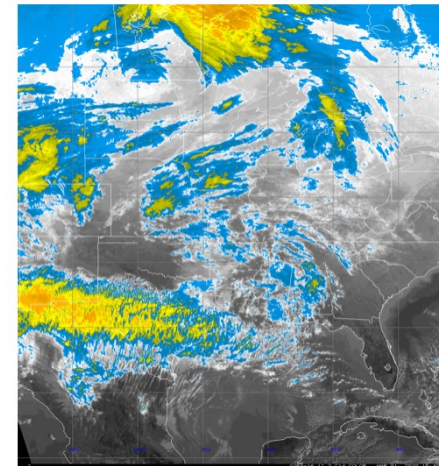- + B200 (2020)
- + Falcon (All Years)
- + Falcon (2021)
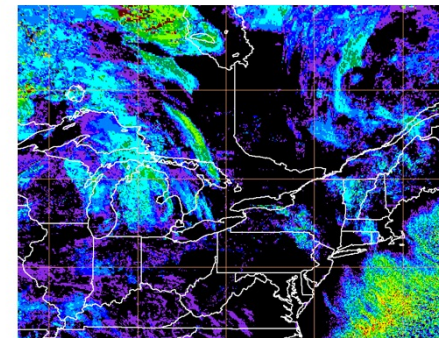- + Falcon (2020)

Datasets
- + Large GOES-16 KML
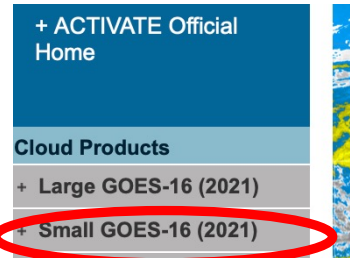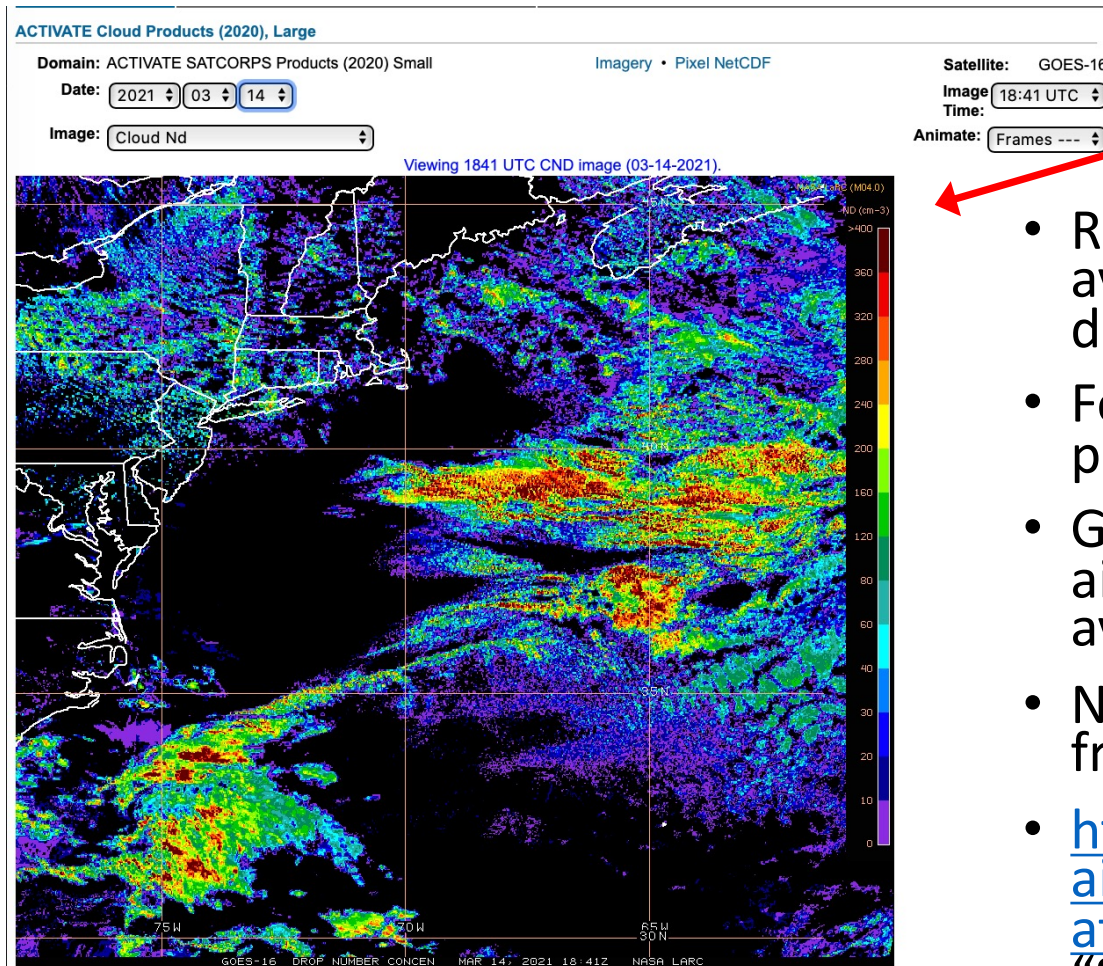- + Small GOES-16 KML

Latest Imagery and Products for AC

GOES-E Color

Satellite products are provided for two domain sizes: small (ACTIVATE domain, 2-km resolution) and large (4-km resolution, see above)

Visualization tool for "small" domain

ACTIVATE Cloud Products (2020), Large

Domain: ACTIVATE SATCORPS Products (2020) Small   Imagery • Pixel NetCDF   **Satellite:** GOES-16

Date: 2021 / 03 / 14   **Image Time:** 18:41 UTC

Image: Cloud Nd   **Animate:** Frames ---

Viewing 1841 UTC CND image (03-14-2021).

Cloud droplet number concentration

- Retrievals and images are available every 20-min for deployment periods.

- For other periods, data are produced every 30-min

- GOES-16 data matched with the aircraft track will be made available.

- Netcdf files can be downloaded from the ACTIVATE repository:

- https://www-air.larc.nasa.gov/missions/activate/index.html, under the "Satellite" link

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