

GOES-18 (G18) ABI L2+ Cloud Top Parameters (CTP) Release
Provisional Data Quality
December 7, 2022
Read-Me for Data Users

The GOES-18 Advanced Baseline Imager (ABI) L2+ Cloud Top Parameters (CTP) - including Height, Temperature, and Pressure - products were declared Provisional Validation Maturity status on December 1, 2022. Provisional Validation Maturity status also applies retroactively to CTP products generated on and after the original Provisional Validation Maturity review date of September 28, 2022.

The GOES-18 ABI CTP product generates the cloud-top height, cloud-top temperature and cloud-top pressure products from the 11 um, 12 um and 13.3 um infrared observations. The GOES-R Series Level I Requirements (L1RD) states the Cloud Top Height shall be produced every 60 minutes for CONUS and Full Disk, and 5 minutes for Mesoscale. The Cloud Top Pressure will be produced every 60 minutes for CONUS and Full Disk. The Cloud Top Temperature will be produced every 15 minutes for Full Disk, and every 5 minutes for Mesoscale. However, in current normal Mode 6 operations, the CTP product is generated every 10 minutes for Full Disk, every 5 minutes over the CONUS region, and every 1 minute over the Mesoscale regions.

A full description and format of the CTP products can be found in the Product Definition and User's Guide (PUG) document (<http://www.goes-r.gov/products/docs/PUG-L2+-vol5.pdf>). The algorithm used to derive the CTP products from GOES-18 ABI observations is described in detail in the "GOES-R Advanced Baseline Imager (ABI) Algorithm Theoretical Basis Document (ATBD) for ABI Cloud Height". ATBDs are available at: https://www.star.nesdis.noaa.gov/goesr/documentation_ATBDs.php.

By definition, Provisional maturity means that:

- Validation activities are ongoing and the general research community is now encouraged to participate.
- Severe algorithm anomalies are identified and being analyzed. Solutions to anomalies are in development and testing.
- Incremental product improvements may still be occurring.
- Product performance has been demonstrated by analyzing a small number of independent measurements.
- Product analysis is sufficient to communicate to users.
- Documentation of product performance exists.
- Testing has been fully documented.
- Product is ready for operational use and for use in comprehensive calibration/validation activities and product optimization.

Persons desiring to use the GOES-18 ABI Provisional Validation Maturity CTP products for any reason, including but not limited to scientific and technical investigations, are encouraged to consult the NOAA/NESDIS/STAR Algorithm Working Group (AWG) scientists for feasibility of the planned

applications. CTP products are sensitive to upstream processing that includes the quality of the calibration, navigation, cloud mask, and cloud type/phase.

Status of the current CTP products and any remaining known issues that are being resolved:

1. The CTP products are currently being upgraded to the enterprise CTP algorithm, which will have updated and improved cloud top parameters needed for improved Derived Motion Wind height assignments.

Contact for further information: OSPO User Services at SPSD.UserServices@noaa.gov

Contacts for specific information on the ABI L2 CTP product:

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