Why is the Clear Sky Mask Important?
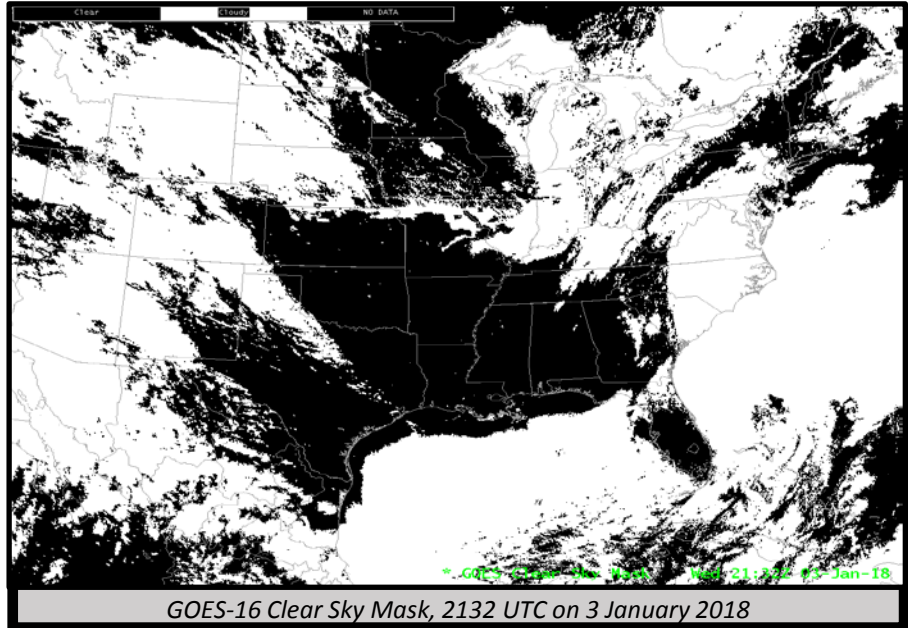
Many Derived Products require the presence of clear skies. The GOES-16 Baseline Product that establishes the presence or lack of clouds is the first product created. Clear skies are assumed by the algorithm, which then tries to find evidence of clouds.

GOES-16 Clear Sky Mask, 2132 UTC on 3 January 2018

Clear Sky Temporal Cadence

Domain	Temporal Refresh
Full Disk	15 minutes
CONUS	15 minutes
Mesoscale	5 minutes

Other Information

Local Zenith Angle Range	ABI Bands Used
0º-70º (Quantitative) 70º-90º (Qualitative)	0.64 μm, 1.38 μm, 1.61 μm, 7.3 μm, 8.4 μm, 11.2 μm, 12.2 μm

Impact on Operations

Primary Application: The Clear Sky Mask is used in many subsequent algorithms.

Application: Compare this product to visible and Snow/Ice Imagery, to Cirrus Channel Imagery, and to Split Window Difference Imagery if you see a suspicious feature.

Limitations

Limitation: Misclassification can occur near coastlines, for warm low clouds, in regions far from nadir, and near new snow edges, especially over mountains.

Limitation: The channels used, and the efficacy of the product, differs from day to night. The terminator is typically visible in this product

Limitation: Low clouds at night are the most challenging cloud to detect.

Link to Clear Sky Mask at goes-r.gov

Contributor: Scott Lindstrom at UW CIMSS

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