Why is the GOES-R Cloud Thickness Important?

GOES-R Cloud Thickness Fields estimate the depth of the lowest deck of clouds made up of water droplets. This field can be used to estimate when radiation fog might dissipate: the last field that is produced before sunrise is correlated with dissipation time as shown in the scatterplot below.

**Application:** GOES-R Cloud Thickness can be used to predict how quickly radiation fog will dissipate. The GOES-R Cloud Thickness Value computed just before sunrise is correlated with time to burn-off.

Application: The accuracy of this product varies seasonally and by location. Routine use will allow you to relate values to burn-off times in your particular location.

**Limitation:** GOES-R Cloud Thickness is derived from 3.9 µm emissivities at night using a linear relationship based on past emissivity observations benchmarked to sodar observations of cloud thickness on the West Coast of the United States.

**Limitation:** This product is not computed during the 90-120 minutes that surround sunrise and sunset.

**Limitation:** This product is not produced for glaciated or mixed-phase clouds.

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