

S3T1

Stability Assessment of Satellite Sea Surface Temperature Estimates Using the Penalized Maximal T-Test

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The sea surface temperature (SST) is an important indicator of climate change and changes to the SST have been used as a metric of climate change over the oceans in numerous studies and assessments. The SST datasets used have typically been based on homogenized and bias adjusted in situ observations made over the last 150 years. Satellite based records have typically been too short and tied to the in situ record through comparison and calibration with drifting buoy measurements. Recent efforts, through the European Space Agency's (ESA) Climate Change Initiative (CCI), have sought to address this through the creation of an independent satellite based SST dataset calibrated through radiative transfer modeling and homogenized across satellites and to a common reference time (1030 am/pm local) to avoid aliasing of the diurnal cycle. In this presentation we present an assessment of the stability of the ESA CCI SST dataset through comparison with in situ dataset using the Penalized Maximal T-test, highlighting obstacles with the in situ data and how these have been overcome.

Oral

- **Integrating In-situ / satellite data sources**