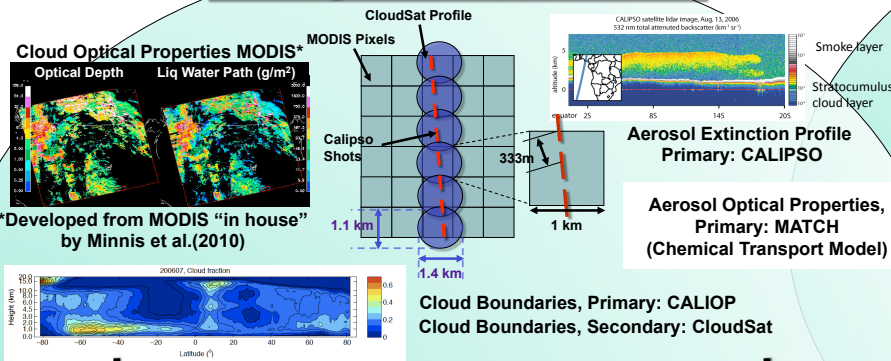


Assessment of the NASA Energy and Water cycle Study (NEWS) CALIPSO-CloudSat-CERES-MODIS (CCCM) Merged Data Product at TOA and Surface



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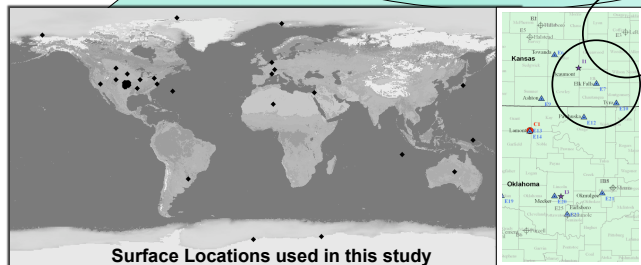
Merge Data Products



-Data are merged into near nadir viewing CERES footprints (~20km size).

-Radiation transfer calculations run for both **standard** CERES(CRS-like) and **enhanced** (CCCM) use Calipso/Cloudsat information

-Product information and access at Langley ASDC
http://eosweb.larc.nasa.gov/PRODOCS/ceres-news/table_ceres-news.html

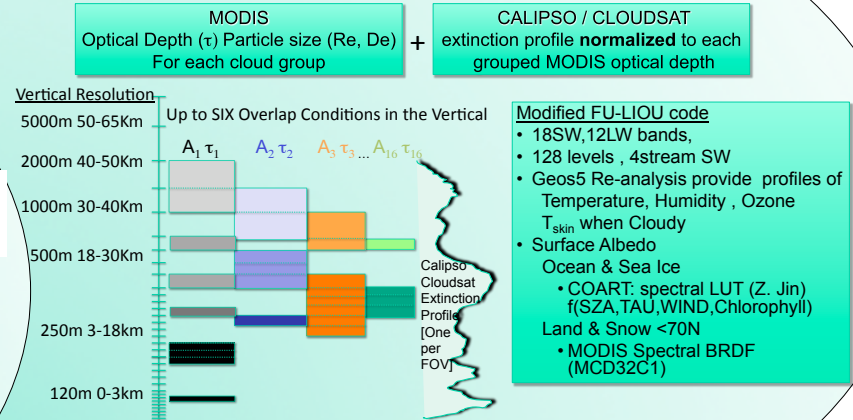


1. NASA Langley Research Ctr., Science Directorate, Hampton, VA.
2. Science Systems and Applications Inc, Hampton, VA

Acknowledgements:
ARM data is made available through the U.S. Department of Energy as part of the Atmospheric Radiation Measurement Program. NEWS data were obtained from the NASA Langley Research Center Atmospheric Sciences Data Center.

Radiation Transfer Model

Similar CALIPSO/CLOUDSAT shots are collected into max of 16 groups per CERES FOV with associated MODIS based cloud properties.



Assessment

Instantaneous errors in SW at the surface can be substantial due to mismatch in observed vs. estimated cloud fraction.

Near nadir only sampling impacts statistics. Note increase in SW standard deviation at E03 but not at E07.

To establish mean statistics, footprints are grouped by site then averaged day & night over 3 years: July 2006 through Dec 2009.

Continental Sites (11)

Polar Sites (5)

Continental Sites (11)

Polar Sites (5)

