Transitioning an existing near real-time MODIS cloud and above-cloud absorbing aerosol retrieval algorithm into a new MODIS/VIIRS continuity product

PI: Kerry Meyer; Co-Is: Sam LeBlanc, Kristina Pistone; Team: Nandana Amarasinghe, Gala Wind

Objectives:
• To transition a MODIS cloud and above-cloud absorbing aerosol retrieval algorithm (MOD06ACAERO), currently in LANCE NRT processing, into a NASA MODIS/VIIRS Standard Continuity product (CLDPROPACAERO)

ACAERO: Retrieval algorithm using multiple spectral channels in the VNIR/SWIR (0.47, 0.55, 0.66, 0.87, 1.24, 2.xµm) to simultaneously retrieve cloud optical/microphysical properties and above-cloud absorbing aerosol optical thickness

Monthly statistics for ORACLES 2016/2017 deployment periods
Status/Updates
• MODIS “Standard” algorithm running since 2016 in LANCE NRT (integrated in support of ORACLES)
• Currently updating forward LUTs to accommodate SNPP/NOAA-20 VIIRS and updated liquid cloud radiative model assumptions (consistent with CLDPROP)
• Working with Co-Is from 4STAR team on new aerosol radiative models derived from ORACLES

Needed Satellite Products
• MYD03, MYD021KM, VNP03_MOD, VNP02_MOD, CLDMSK_MODIS/VIIRS, CLDPROP_MODIS/VIIRS, various ancillary

Known Issues or Concerns
• No logistical concerns – strong working relationship with A-SIPS

Recent/Relevant Publications
Methodology described in: