

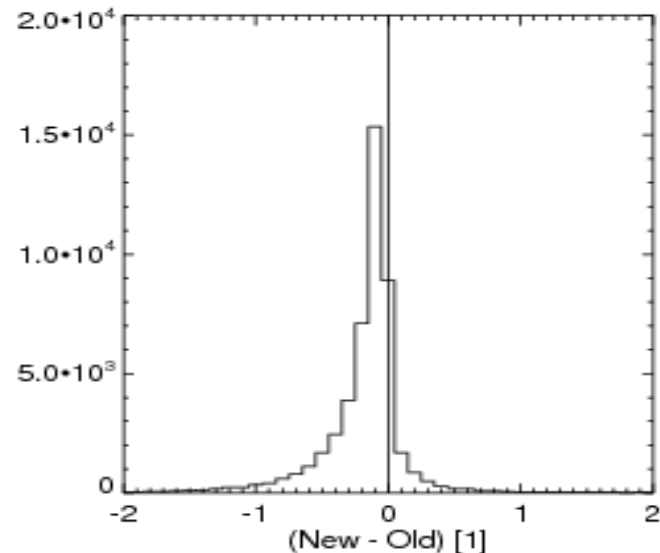
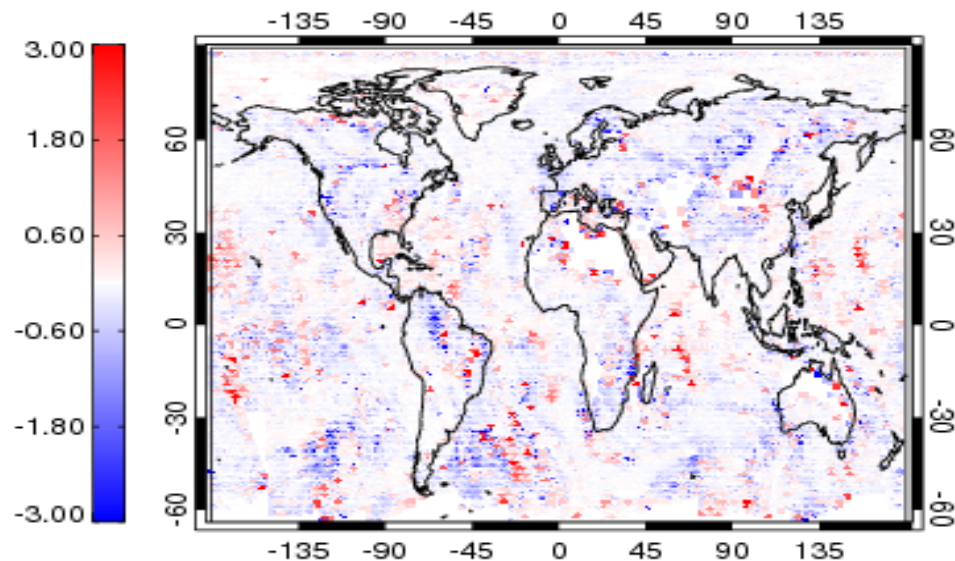
Impact of Aqua MODIS VIS/NIR Misregistration on Cloud Properties (MYD06)

Two approaches:

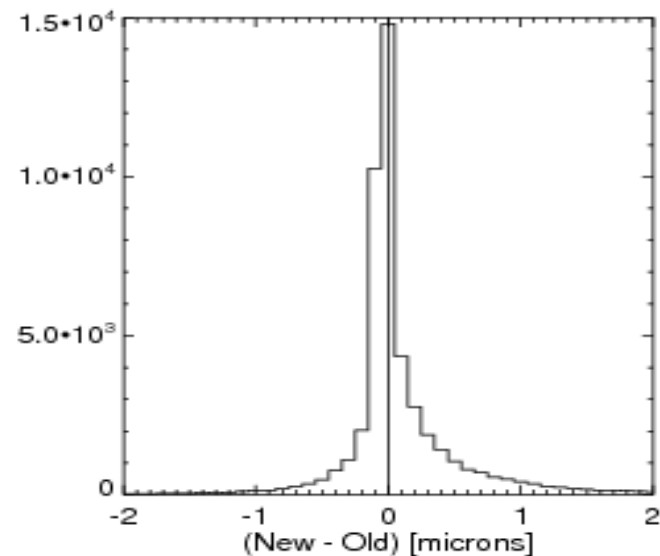
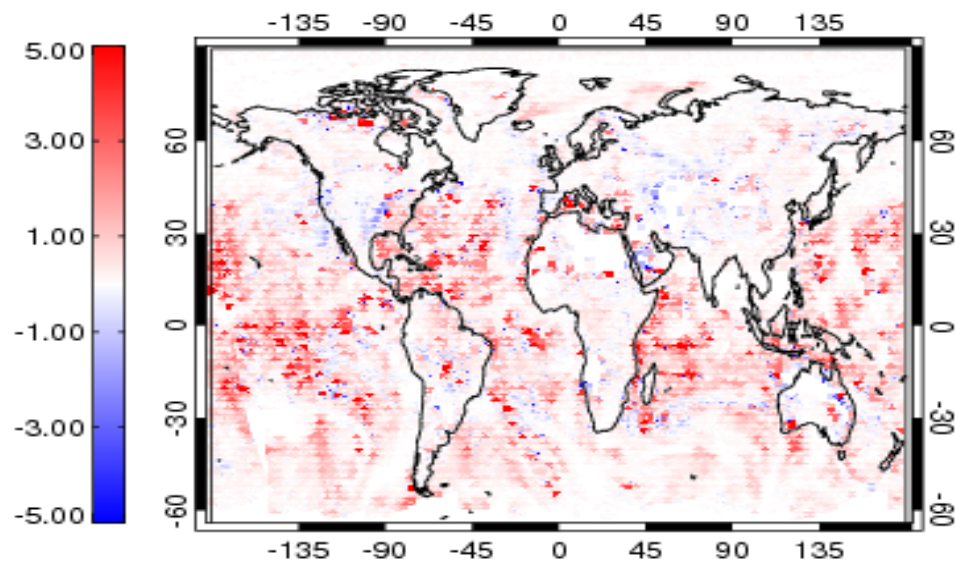
1. Improve VIS/NIR focal plane registration by adjusting 250m pixel position (Bennartz, Moeller, Holz, Dutcher)
 - Empirically-derived weights for correcting focal-plane mismatch from 250m resolution channels (cross-correlation minimization of the aggregated VIS vs. NIR channels for selected scenes using Levenberg-Marquardt minimization).
 - Apply weights to 250m data and replaces data in the 1 km file.
 - Process one day of global 1° aggregated MYD06 results at Wisconsin PEATE.
2. Understand sensitivity by de-registering Terra MODIS 250m pixels (Platnick, Hubanks, Kuyper, Xiong)
 - “Move” 250m pixel location by 1 (along-track) and 2 (cross-track) positions.
 - Aggregate to 1km per usual.
 - Process one month of MOD06 Level-3 data (April 2005).

Approach #1

Mean Optical Thickness Difference (New-Old) [1]

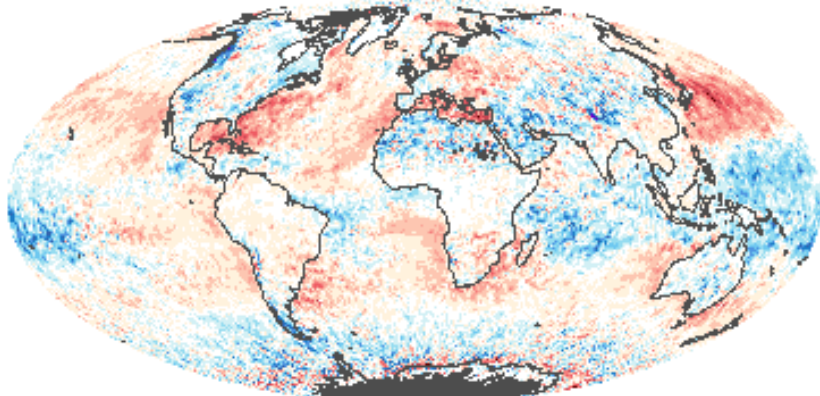


Mean Effective Radius Difference (New-Old) [micron]

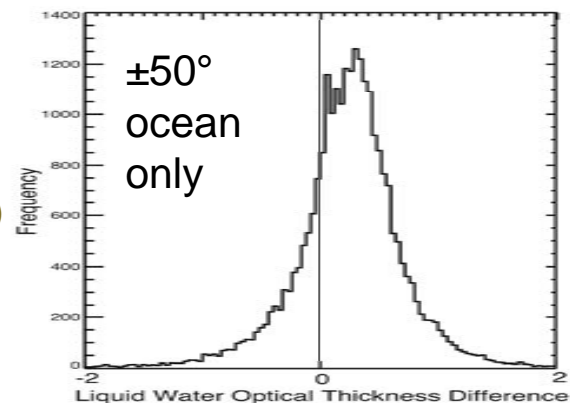


Approach #2

Cloud_Optical_Thickness_Liquid_Mean_Mean

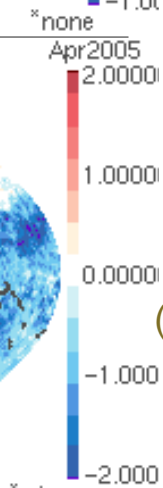
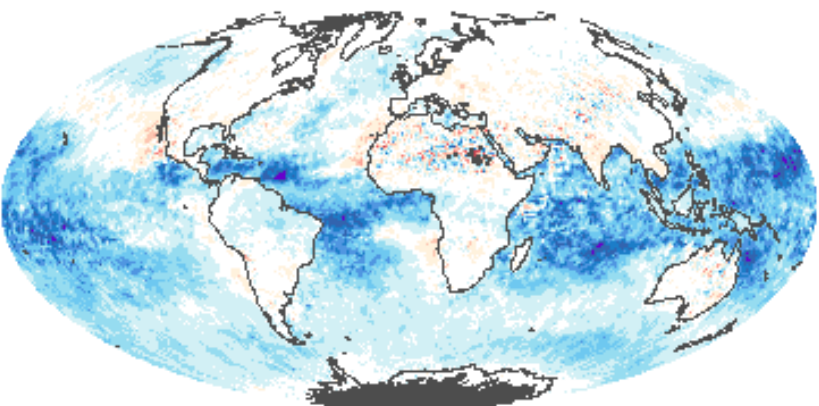


Δ Liquid Cloud
Optical Thickness
(Terra dereg - C5)

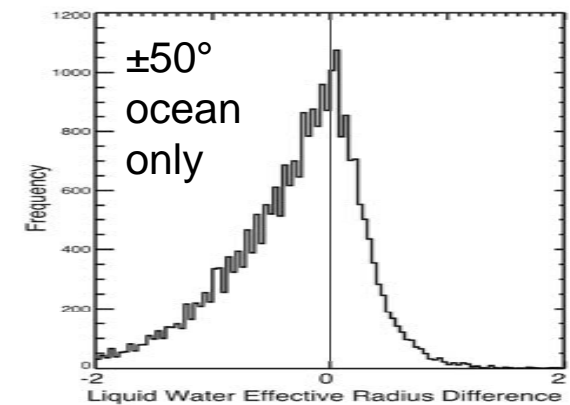


Terra:DeRegistered38 - C5Oper38

Cloud_Effective_Radius_Liquid_Mean_Mean

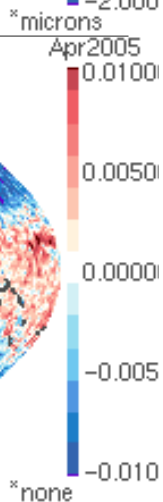
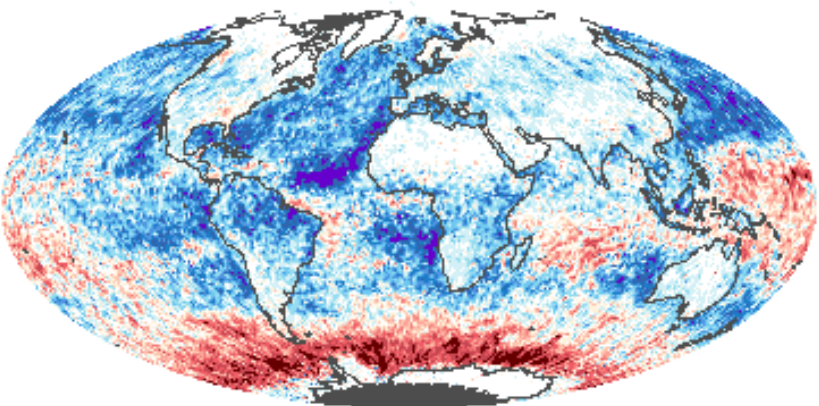


Δ Liquid Cloud
Effective Radius
(Terra dereg - C5)

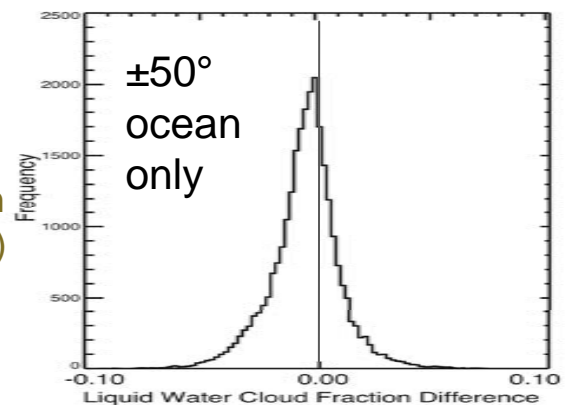


Terra:DeRegistered38 - C5Oper38

Cloud_Fraction_Liquid_FMean



Δ Liquid Cloud
Retrieved Fraction
(Terra dereg - C5)



Terra:DeRegistered38 - C5Oper38

Approach #2 Liquid_Mean_Mean

