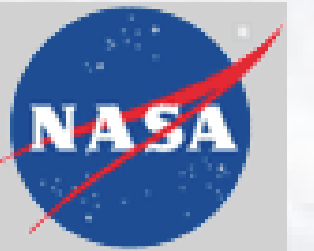


Aerosol Remote Sensing in the Vicinity of Clouds

J. Redemann¹, Q. Zhang¹, P. Russell², B. Schmid³

¹BAER Institute, ²NASA Ames, ³PNNL

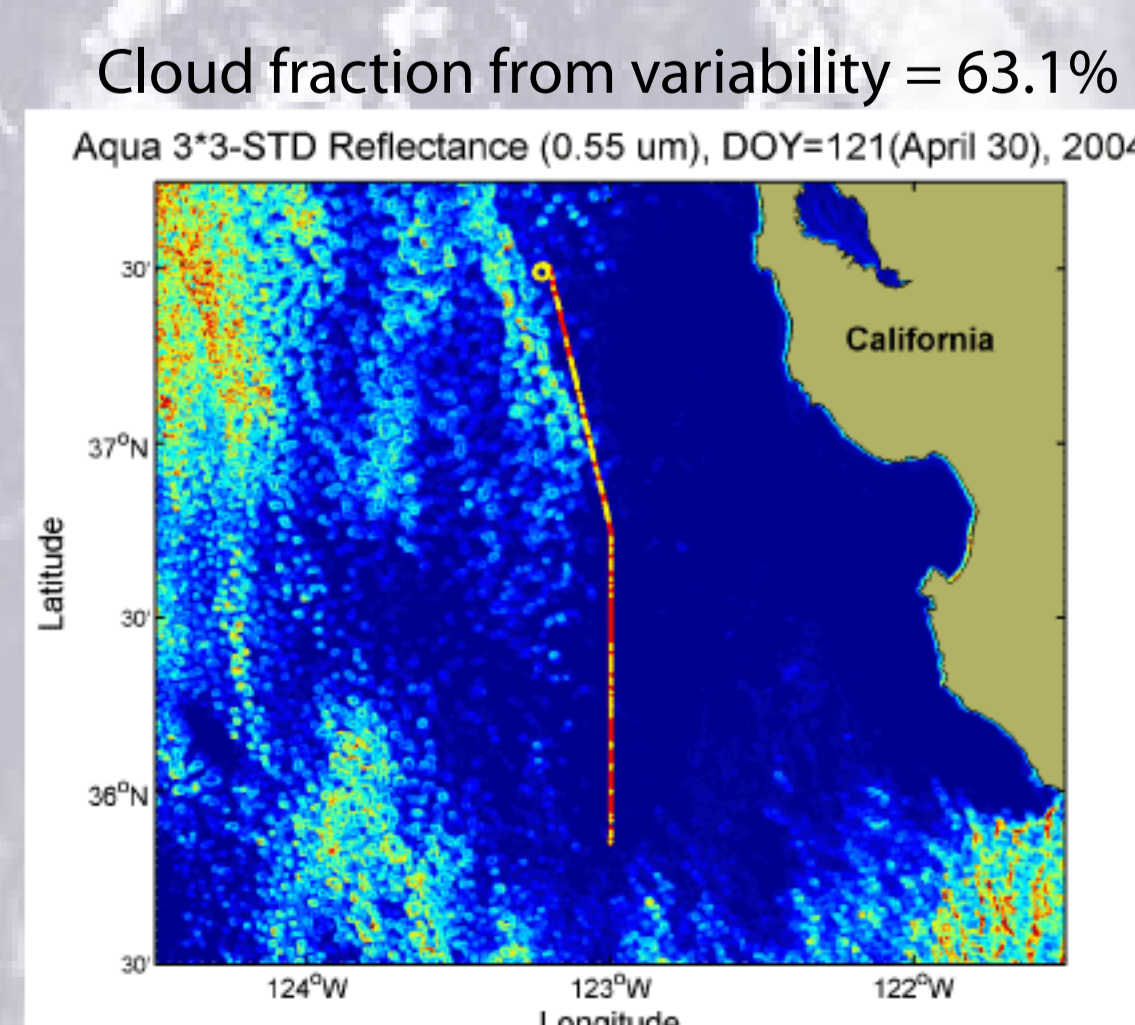
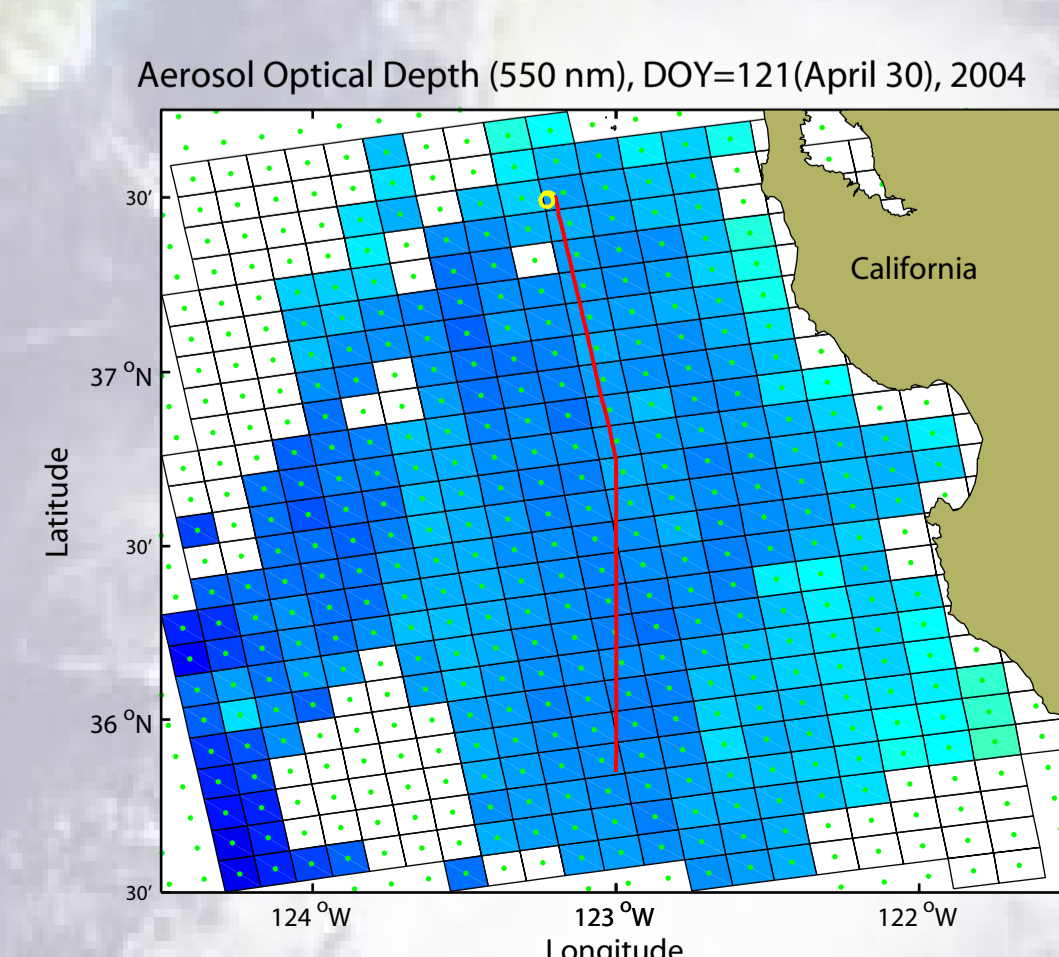
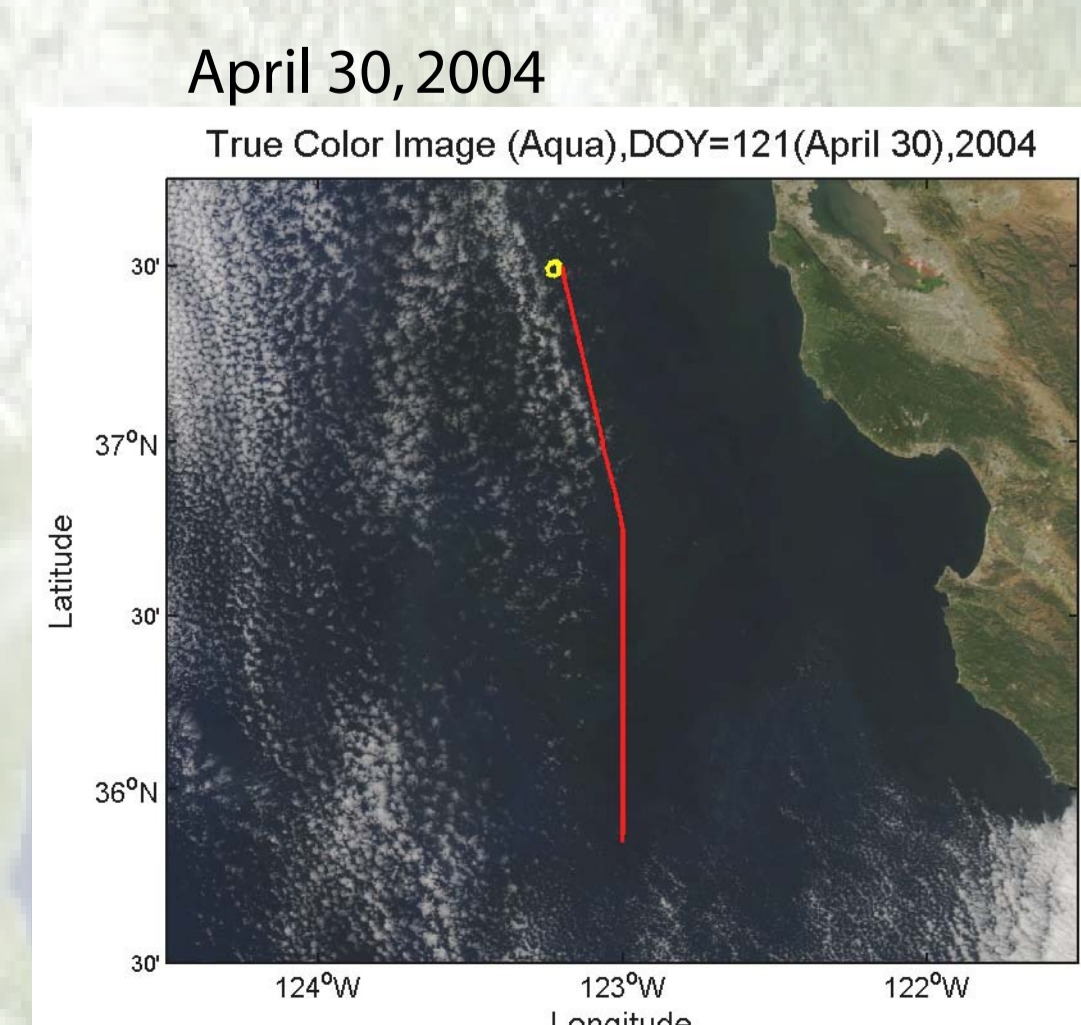
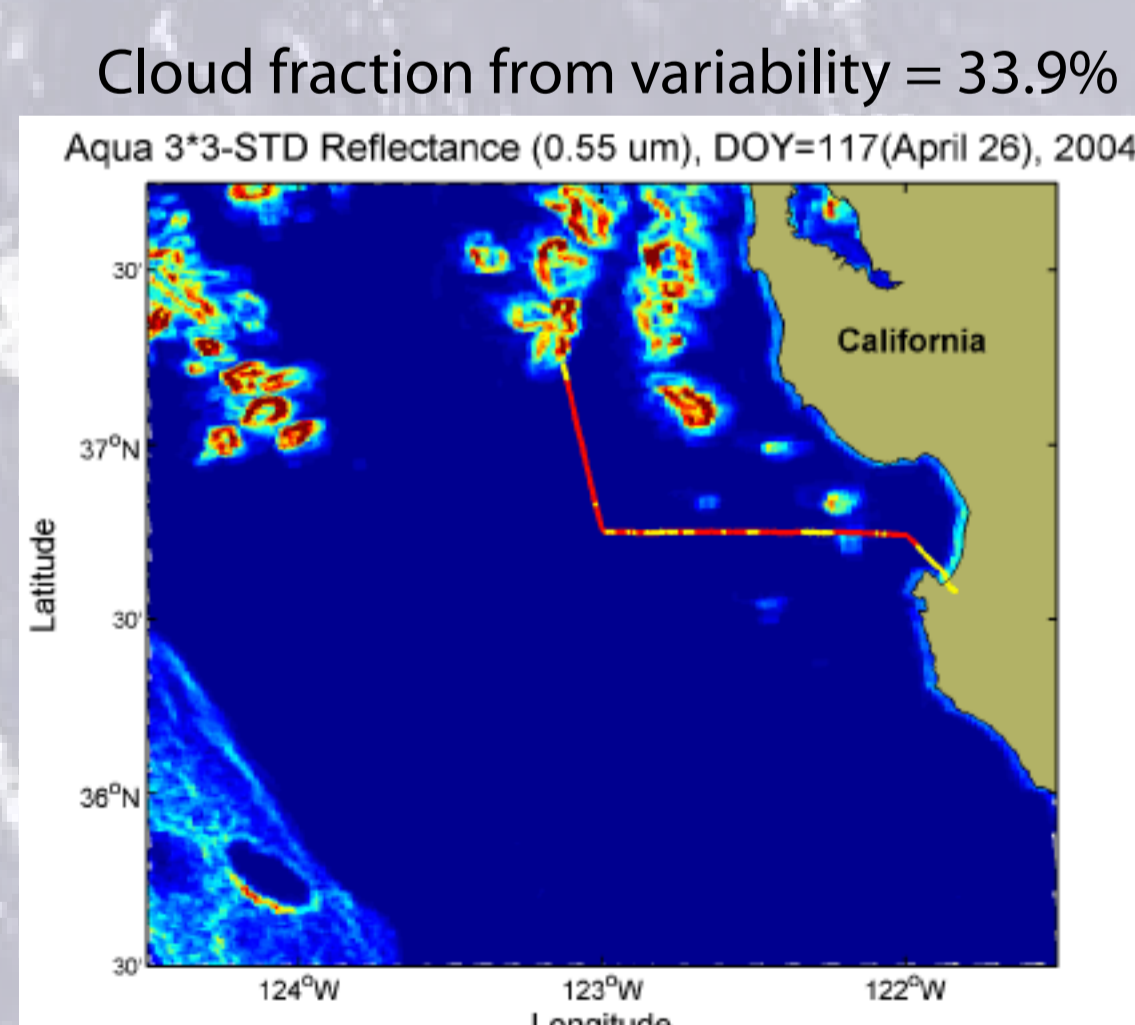
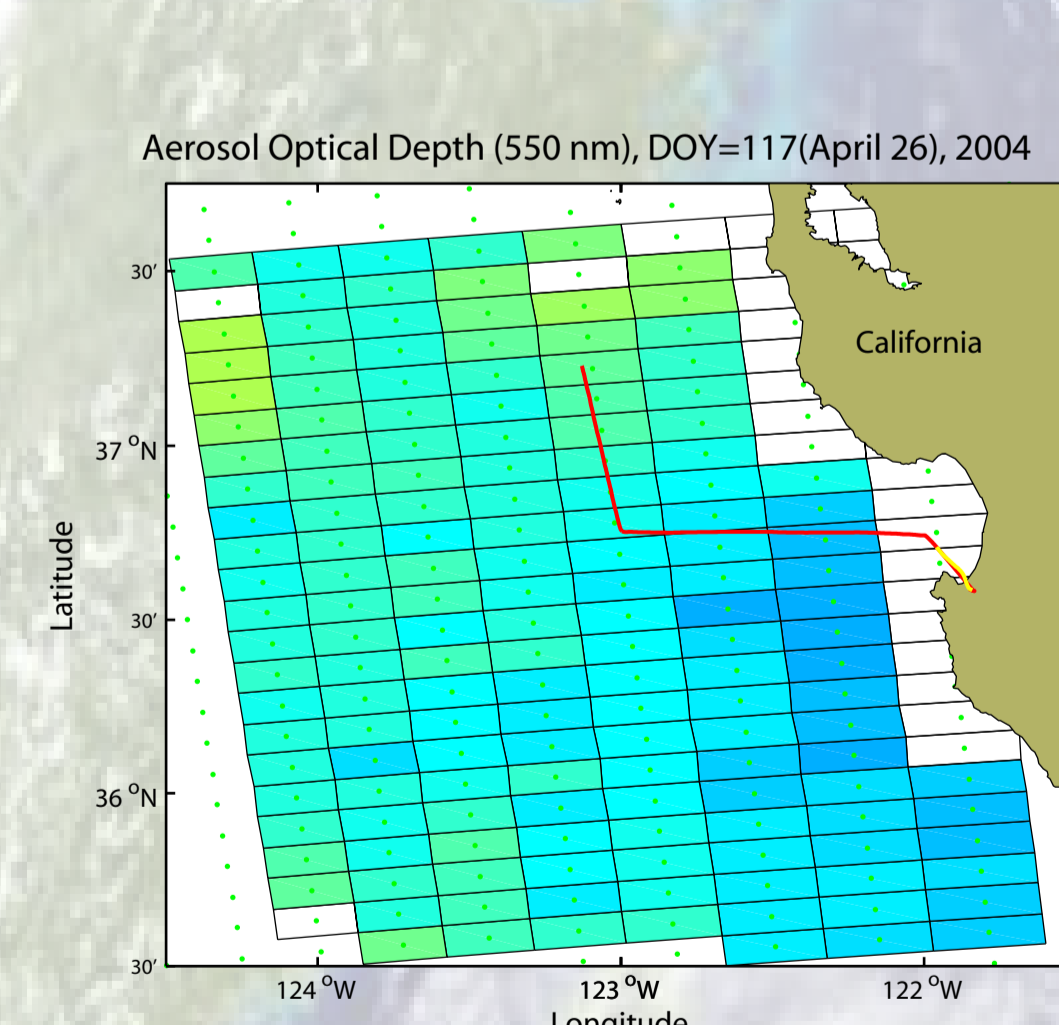
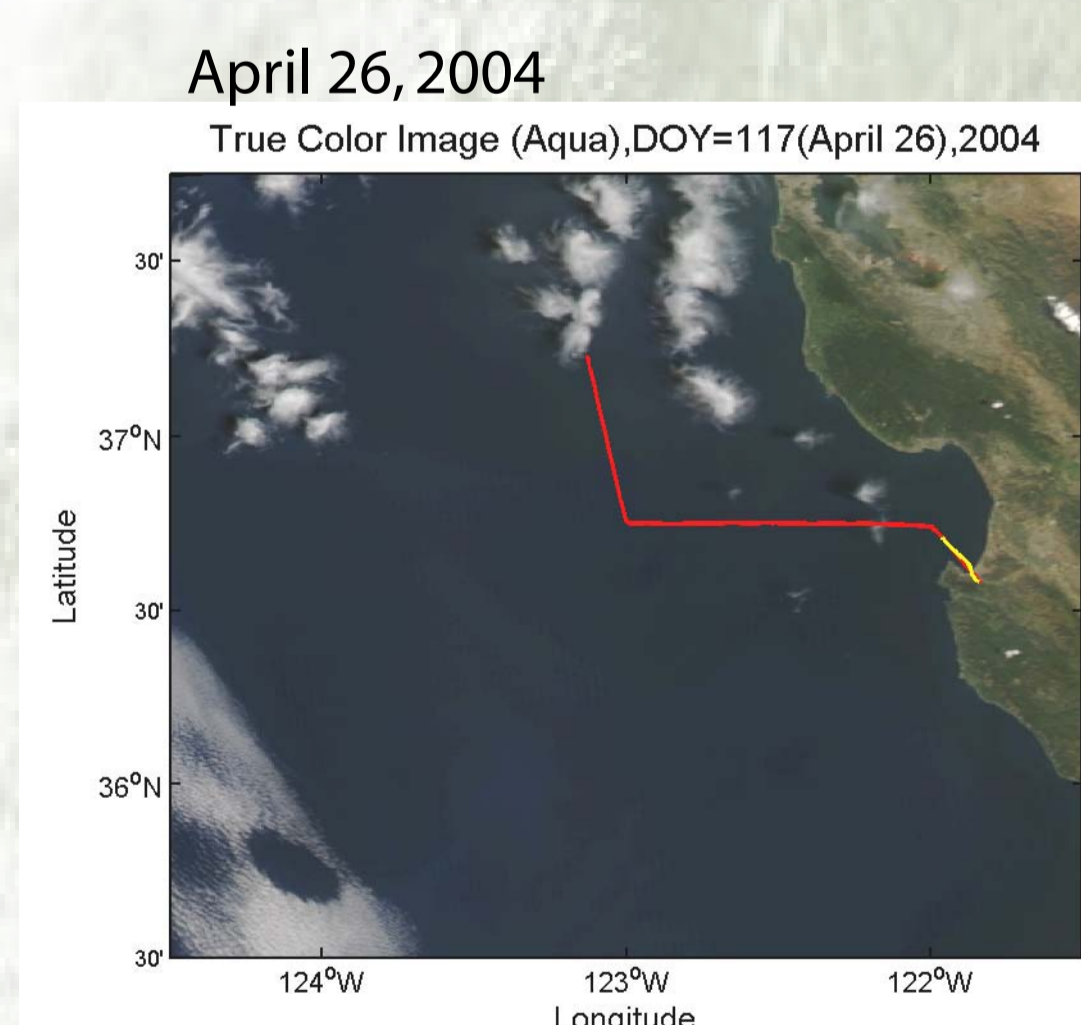
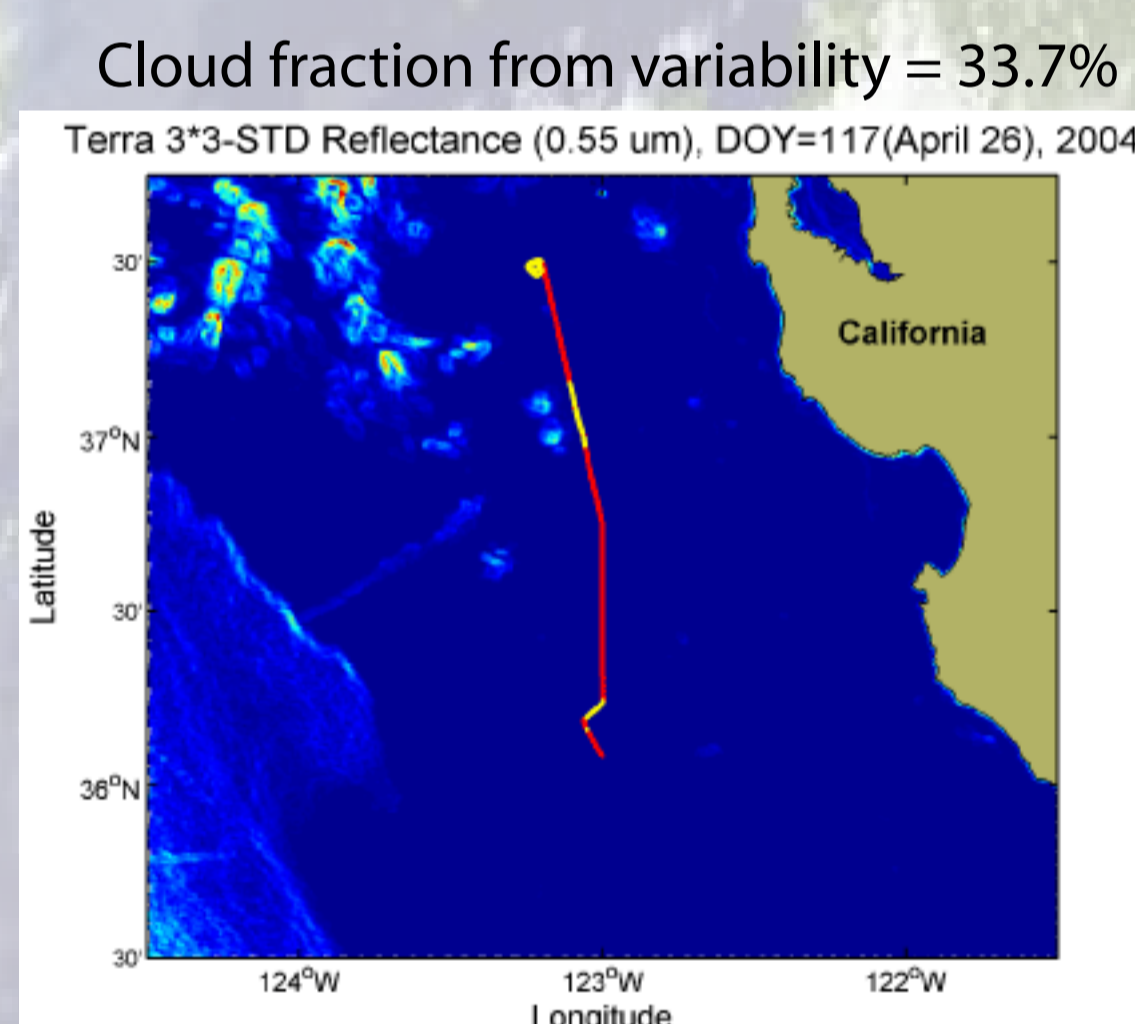
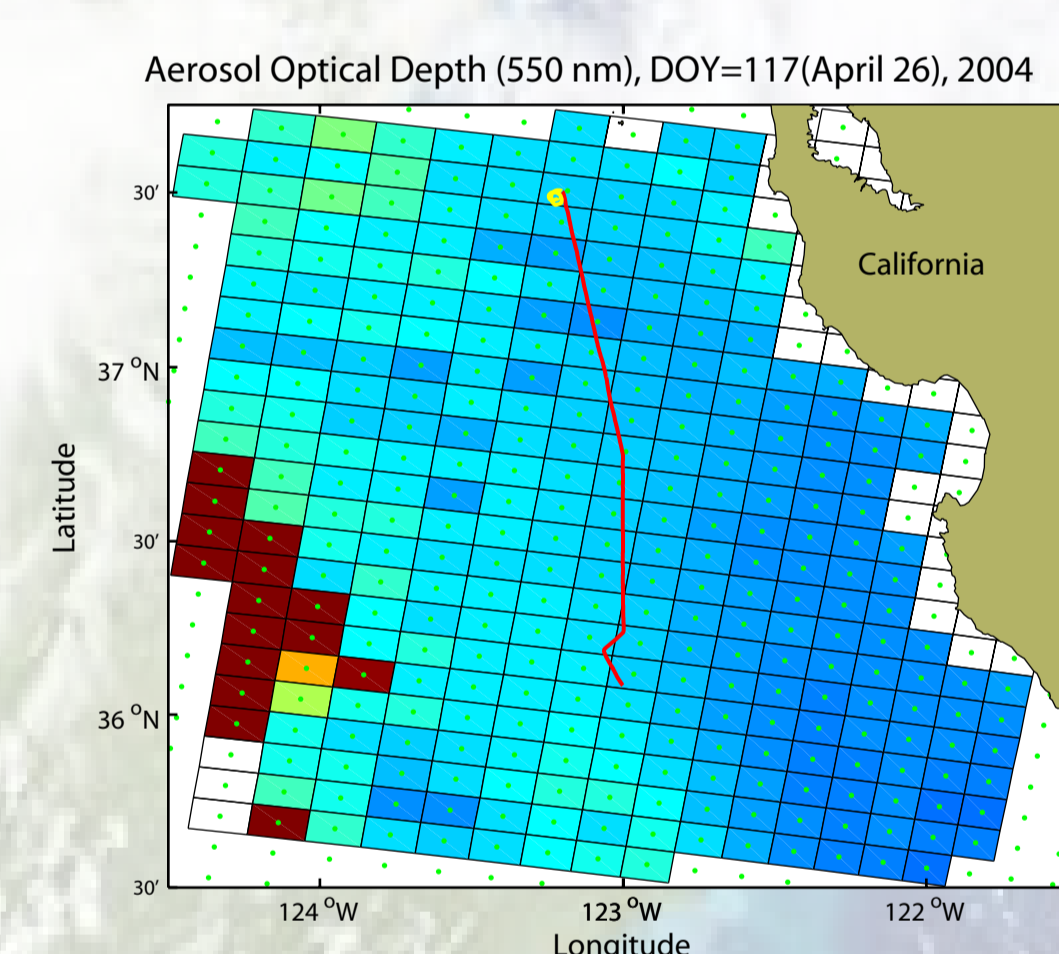
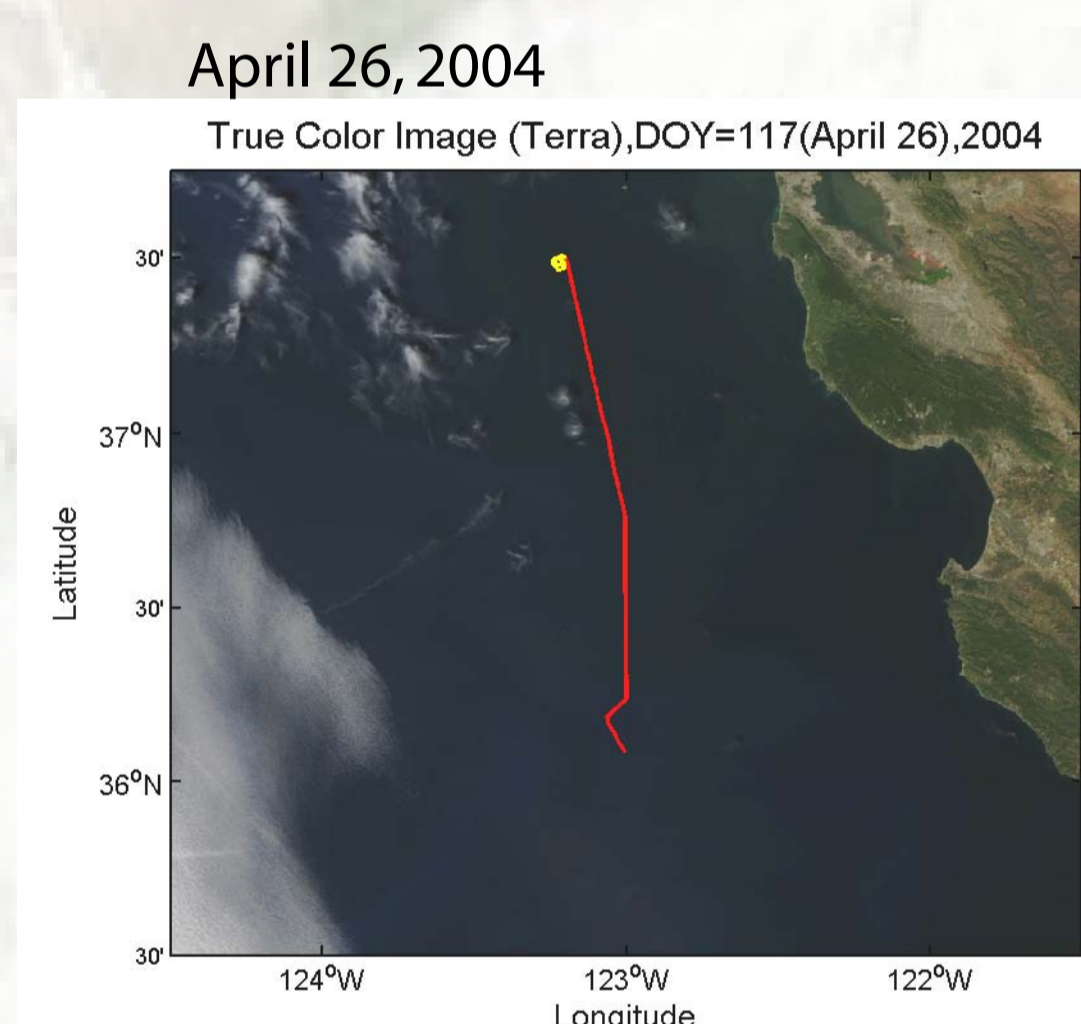
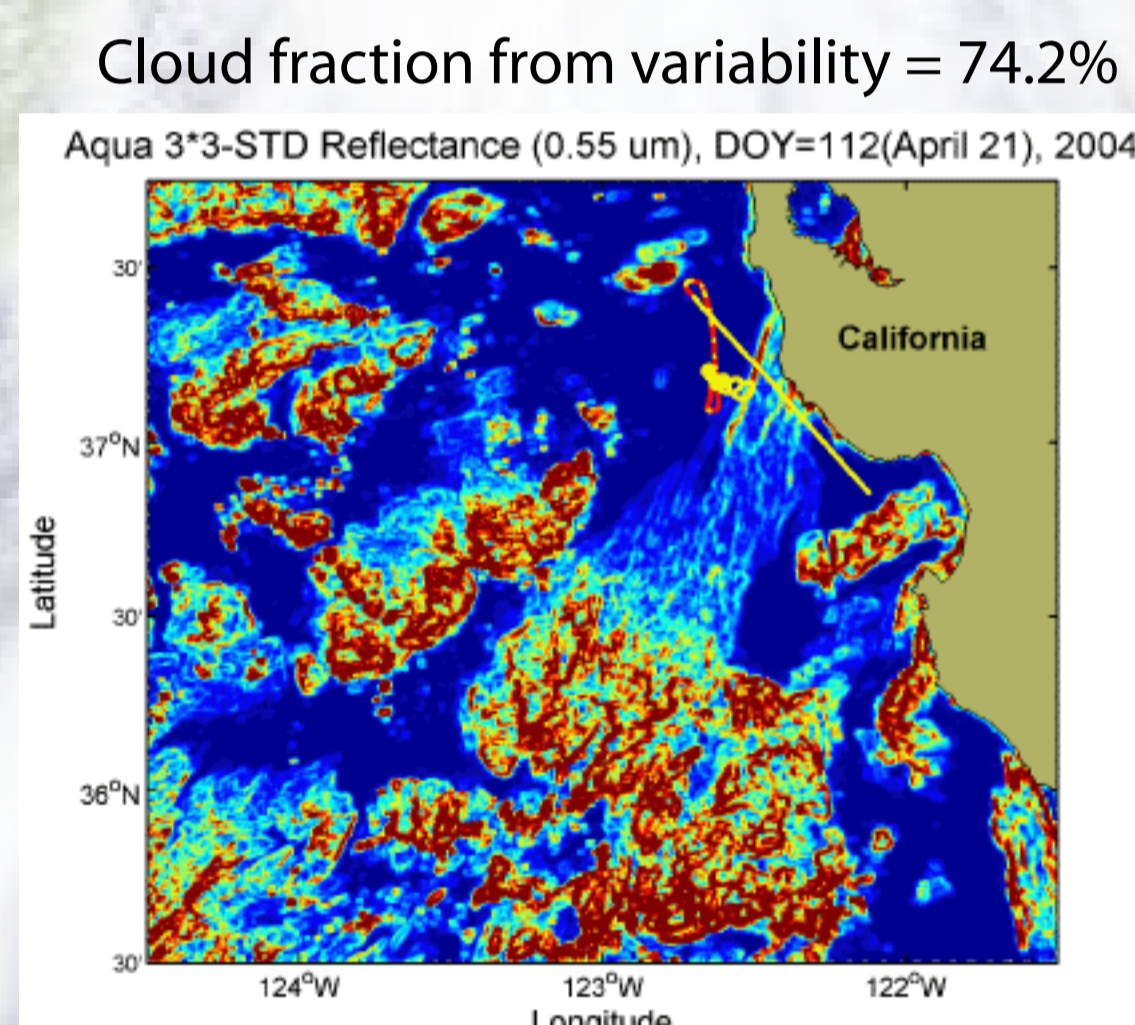
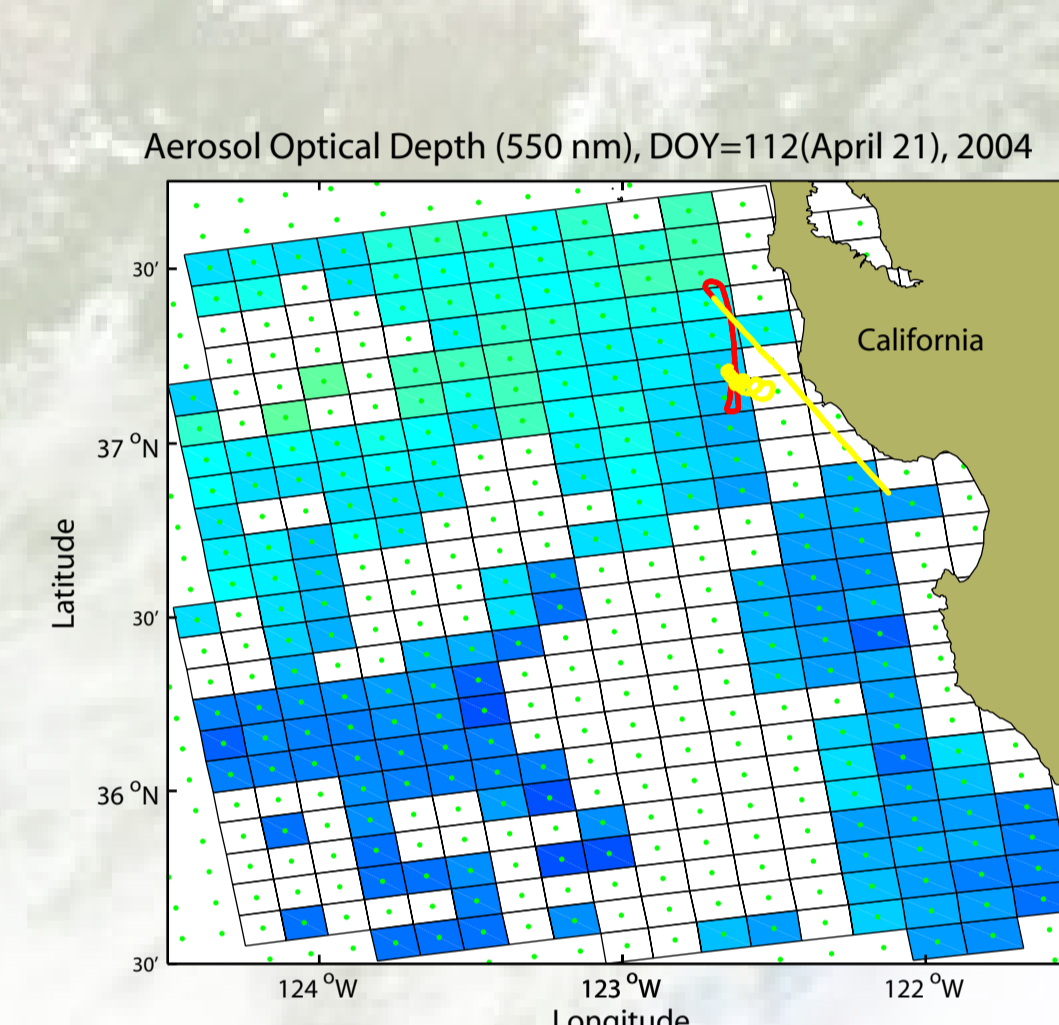
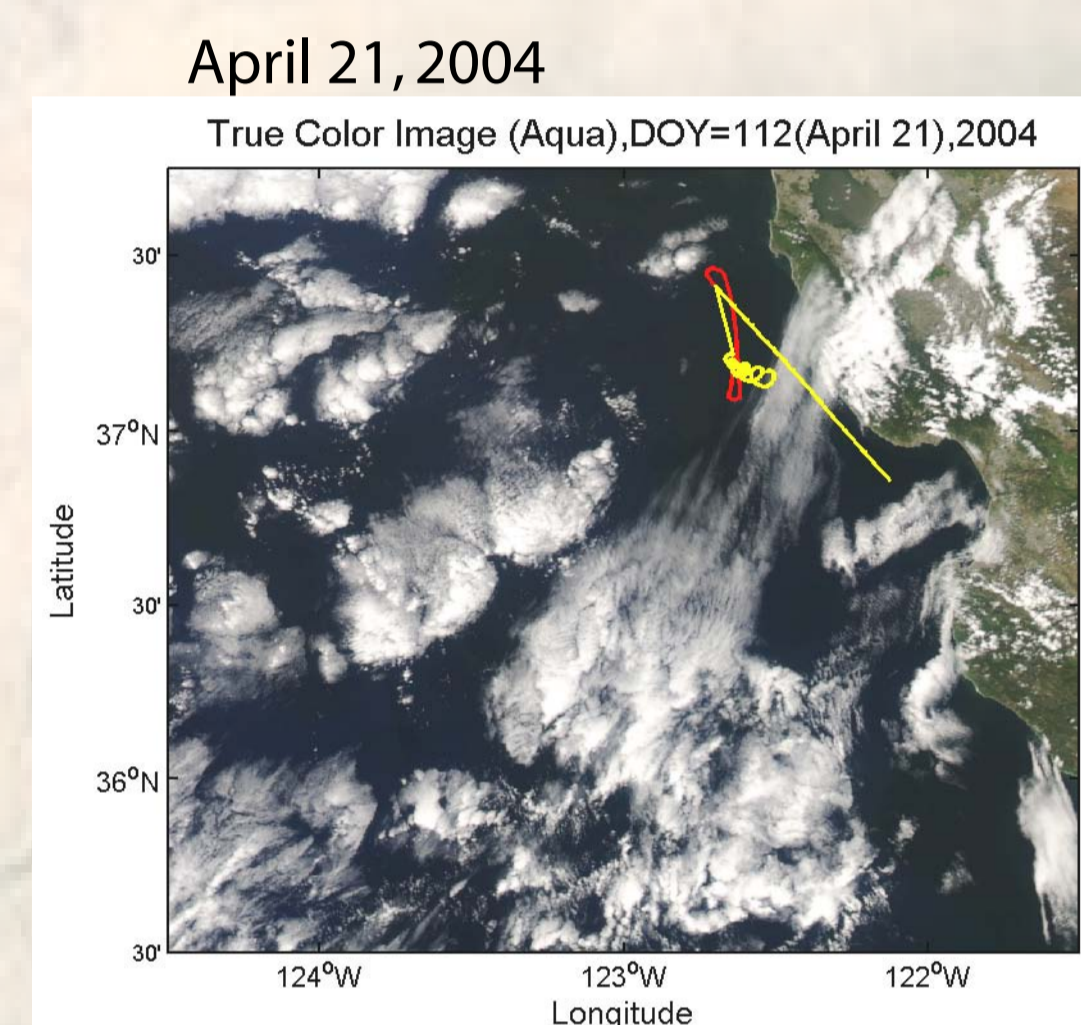
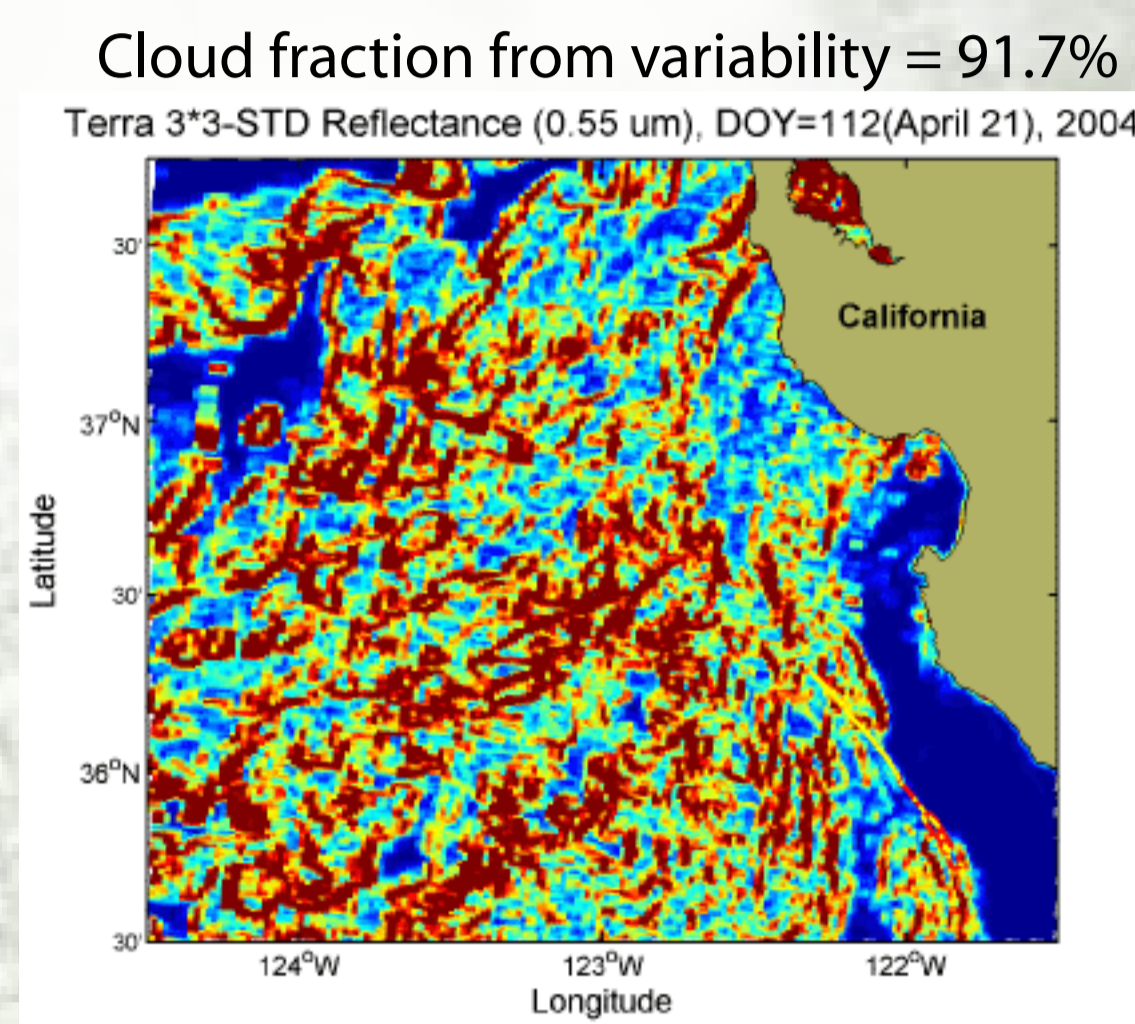
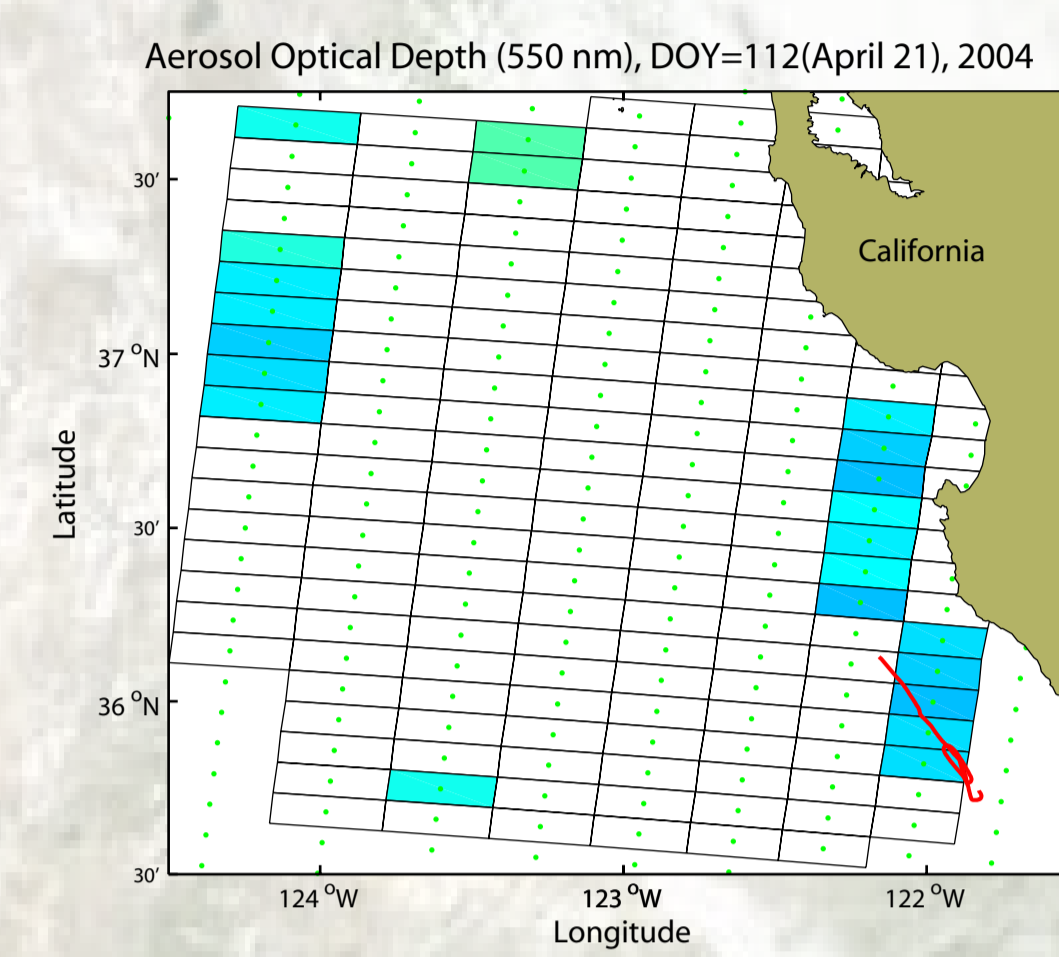
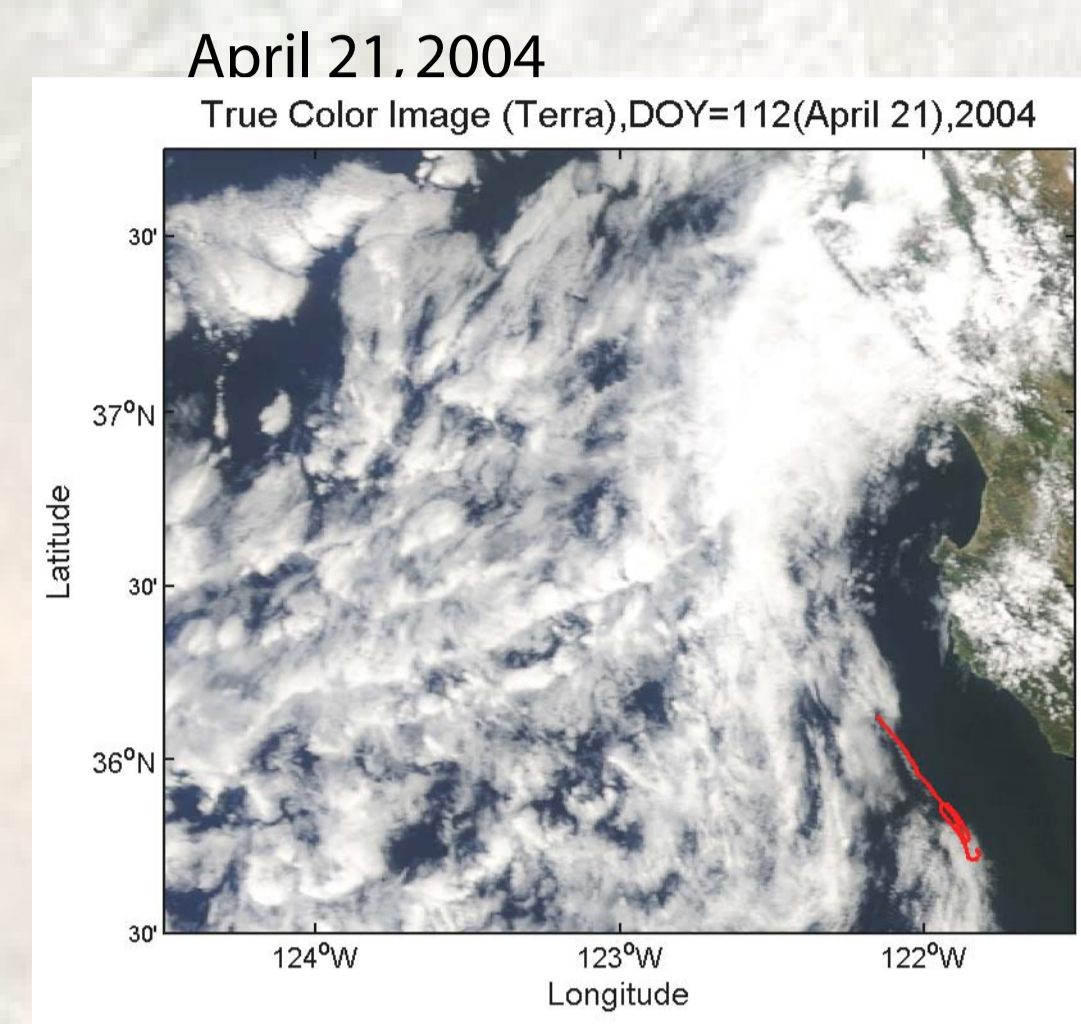
Contact information:
Jens Redemann - jredemann@mail.arc.nasa.gov
Ph.: (805) 658-2637



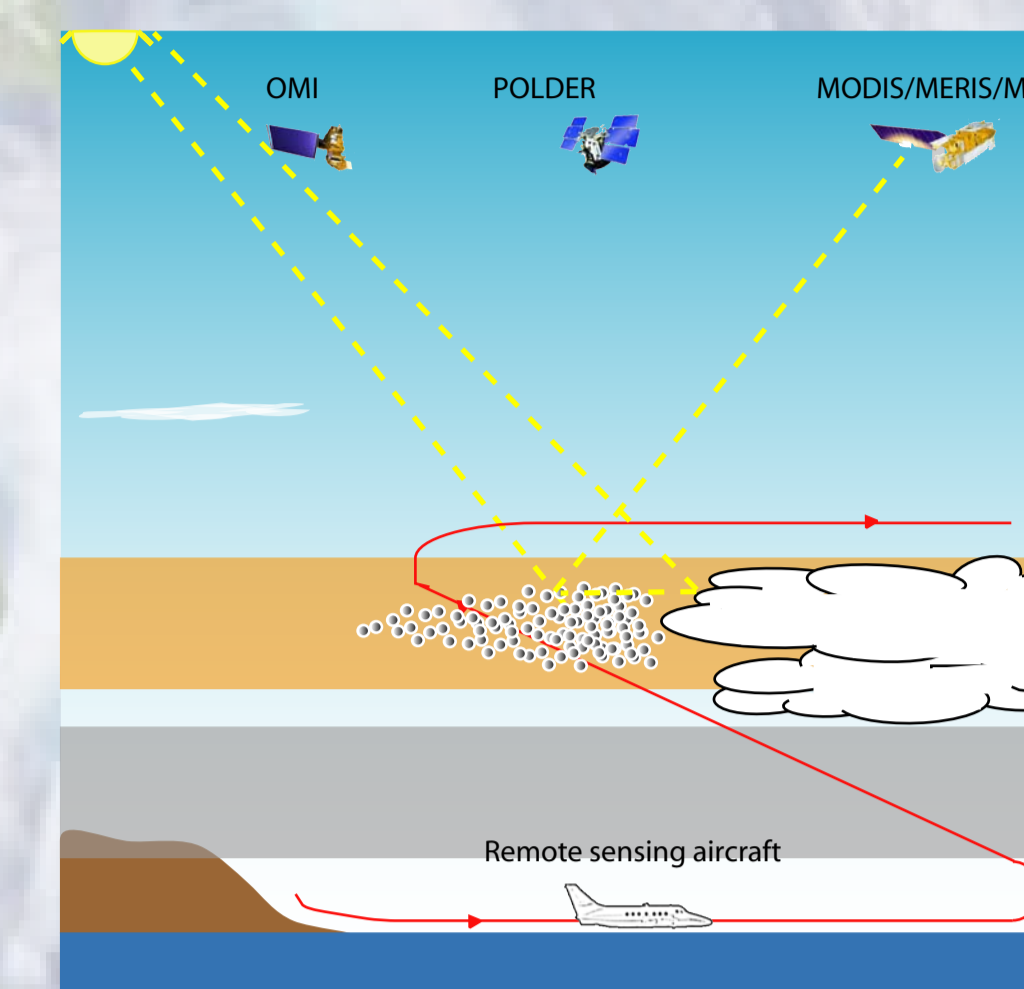
1-3-4 true color

AOD (550 nm)

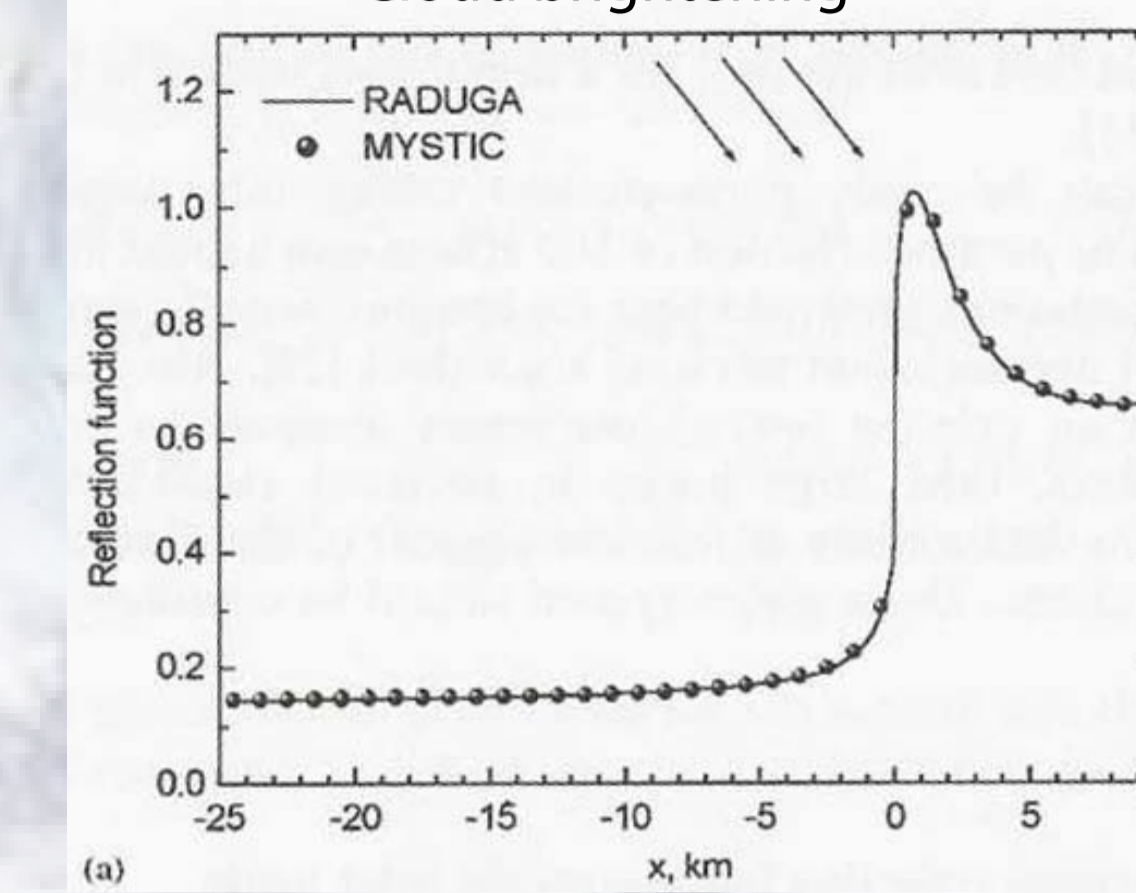
std(3x3 reflectance)



Problem

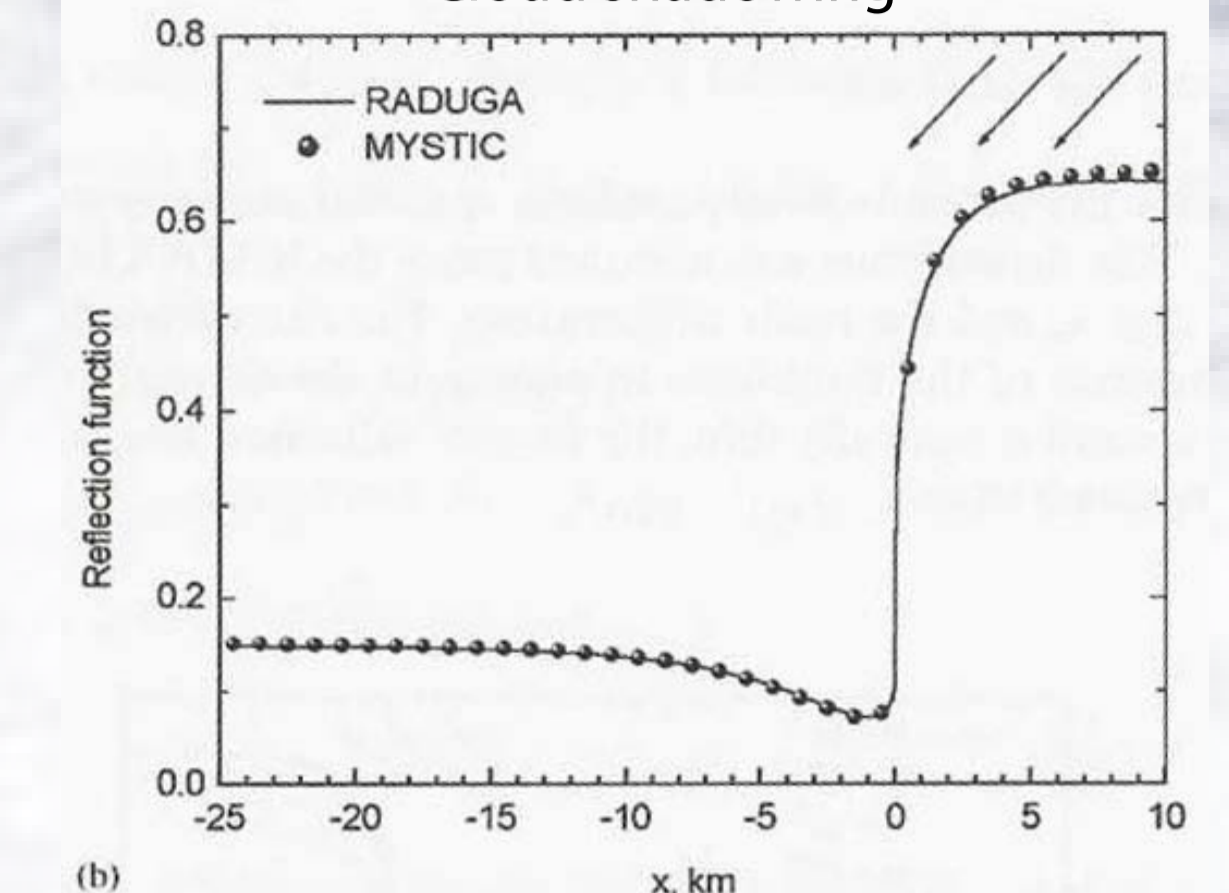


Cloud brightening



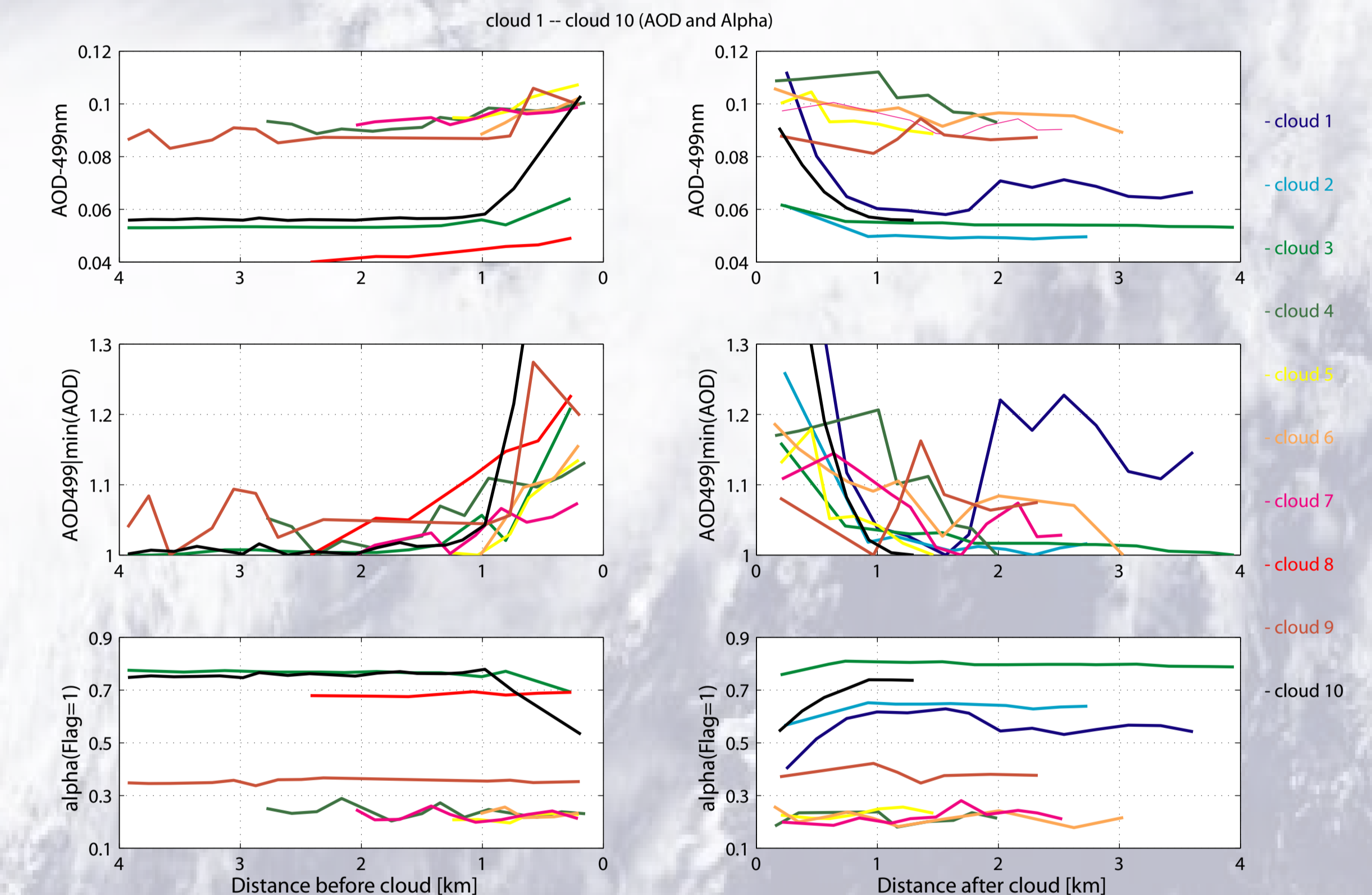
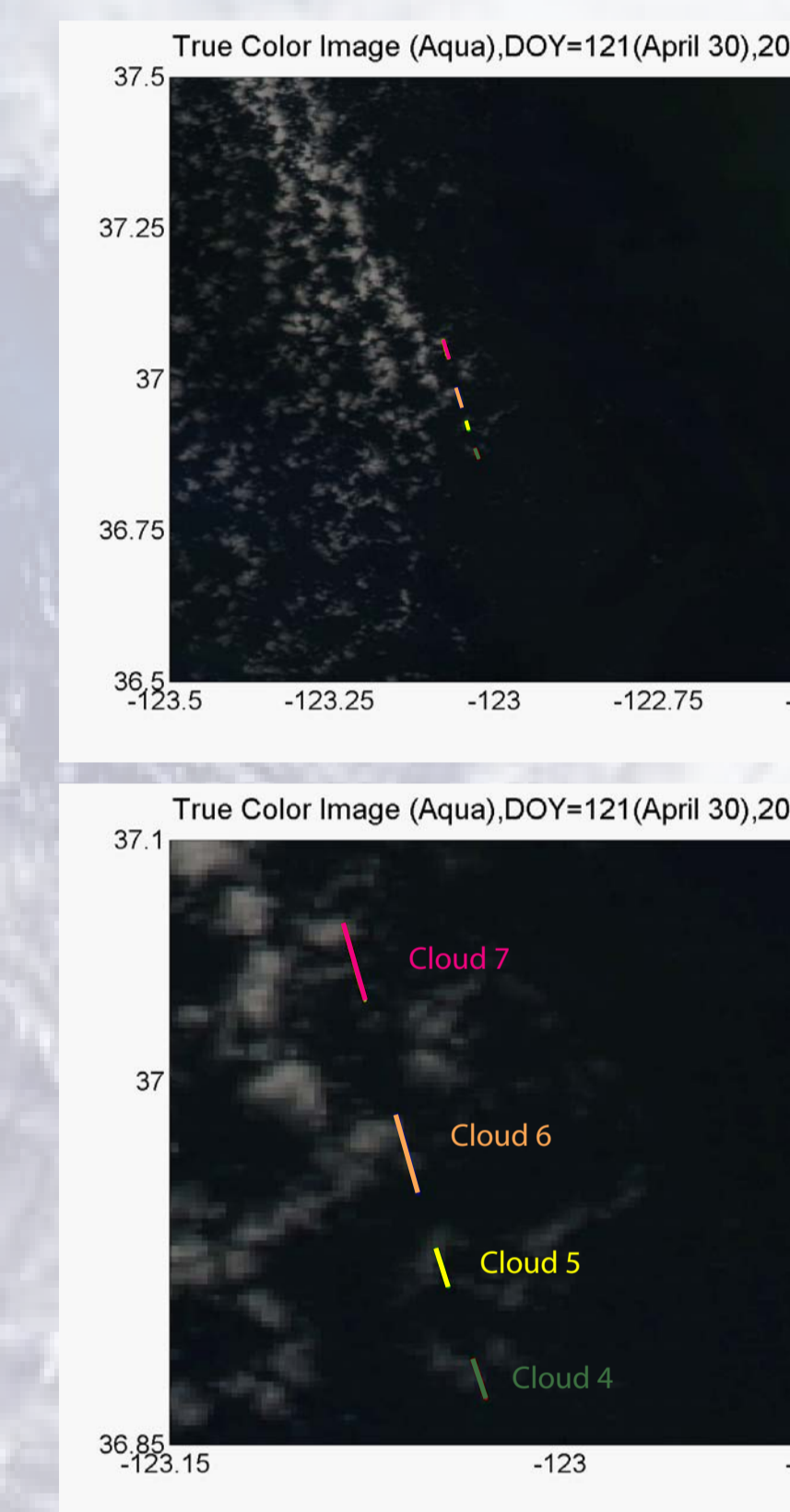
Theory

Cloud shadowing

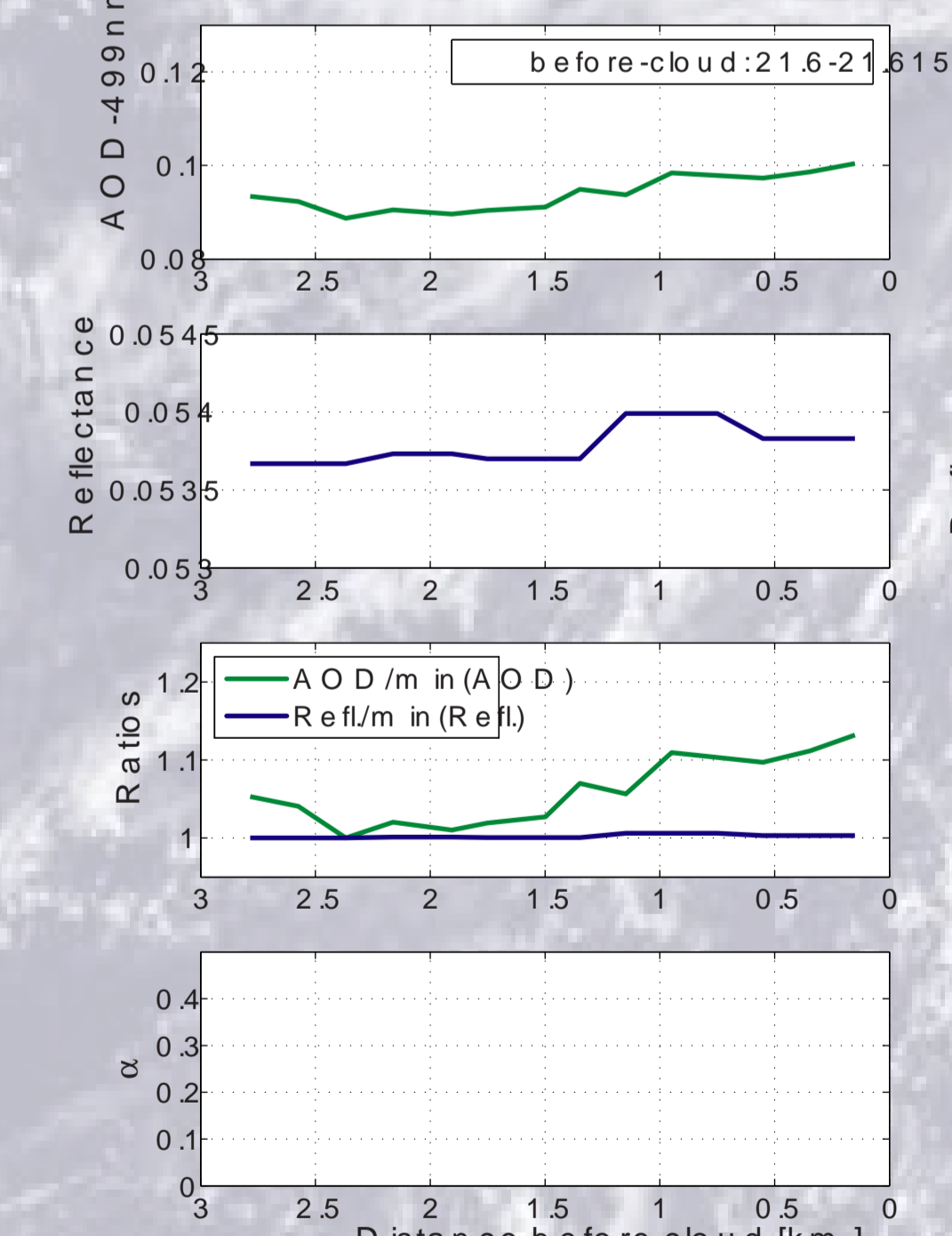


Nikolaeva et al., JQSR, 2005

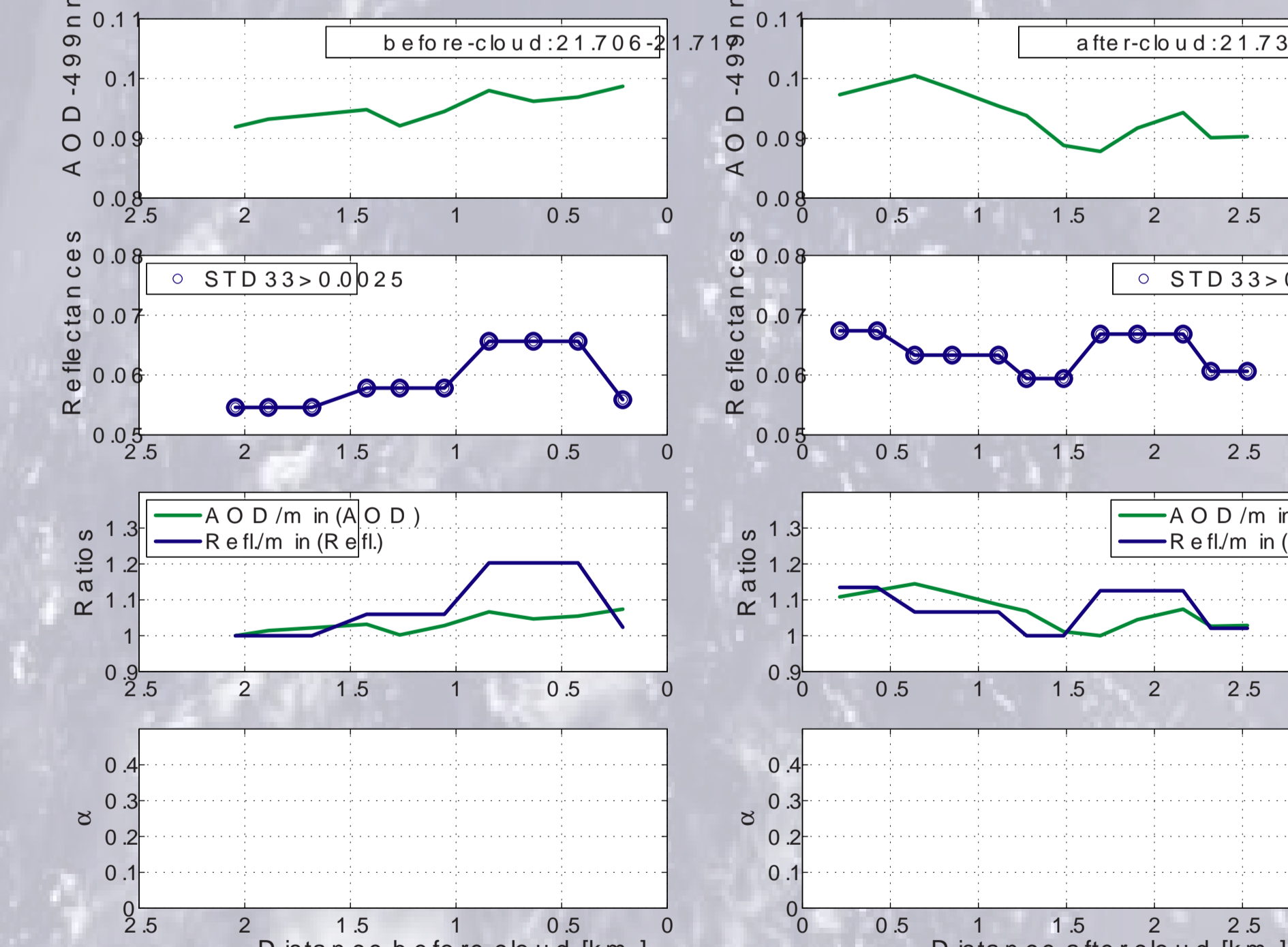
Simultaneous MODIS and AATS measurements near clouds



Cloud 4: EVE 30.4.2004, 21.6-21.637 UT, MODIS Aqua 121 (band-4) 21:30



Cloud 7: EVE 30.4.2004, 21.706-21.75 UT, MODIS Aqua 121 (band-4) 21:30



Platform: CIRPAS Twin-Otter

EVE - experiment summary



AATS-14 at Mauna Loa

EVE flight calendar

Date	Flight No.	Flight times (UT)	Comments	Terra overpass time(UTC)@Peak	Aqua overpass time(UTC)@Peak
04/18/04	CHR00	18.9 - 20.9	Test flight, possible comparison with Terra	19:46:07	21:22:16
04/21/04	CHR01	16.04 - 19.39	with Terra	18:26:54	A, B, C, D, E, F, G, H
04/21/04	CHR02	21.14 - 23.56	possible comparison	18:26:54	A, B, C, D, E, F, G, H
04/26/04	CHR03	17.22 - 20.56	possible comparison	18:45:20	A, B, C, D, E, F, G, H
04/26/04	CHR04	21.52 - 24.17	with Terra and Aqua	18:45:20	A, B, C, D, E, F, G, H
04/28/04	CHR05	18.19 - 23.10	with Terra and Aqua	18:33:01	A, B, C, D, E, F, G, H
04/30/04	CHR06	17.27 - 23.55	with Aqua	18:20:50	E, H

Blue letters A-H indicate points outside 40°N, with satellite elevation greater than 40° = good overpass
Red letters A-H indicate points outside 40°N, with satellite elevation between 30 and 40° = not as good