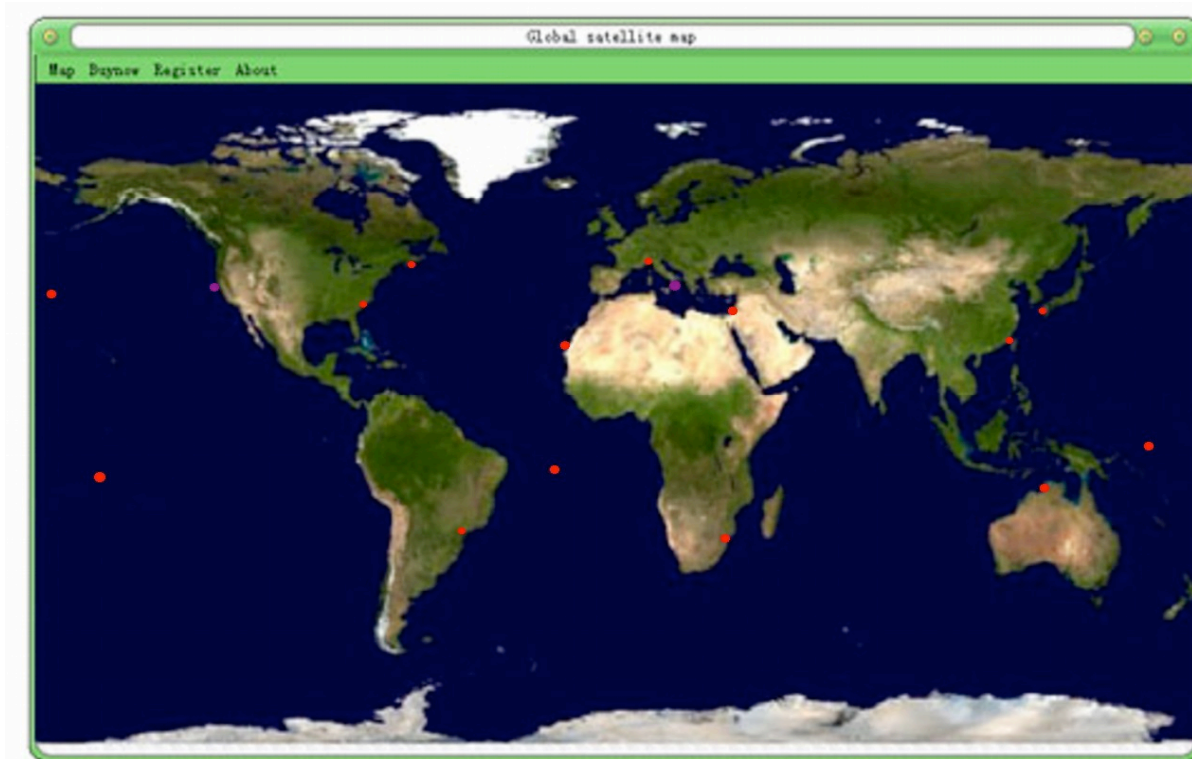


Evaluation of the MODIS aerosol optical thickness daily and monthly basis:

- Effect of different cloud screening MODIS/AERONET
- Diurnal cycle--> Terra/Aqua - Aeronet

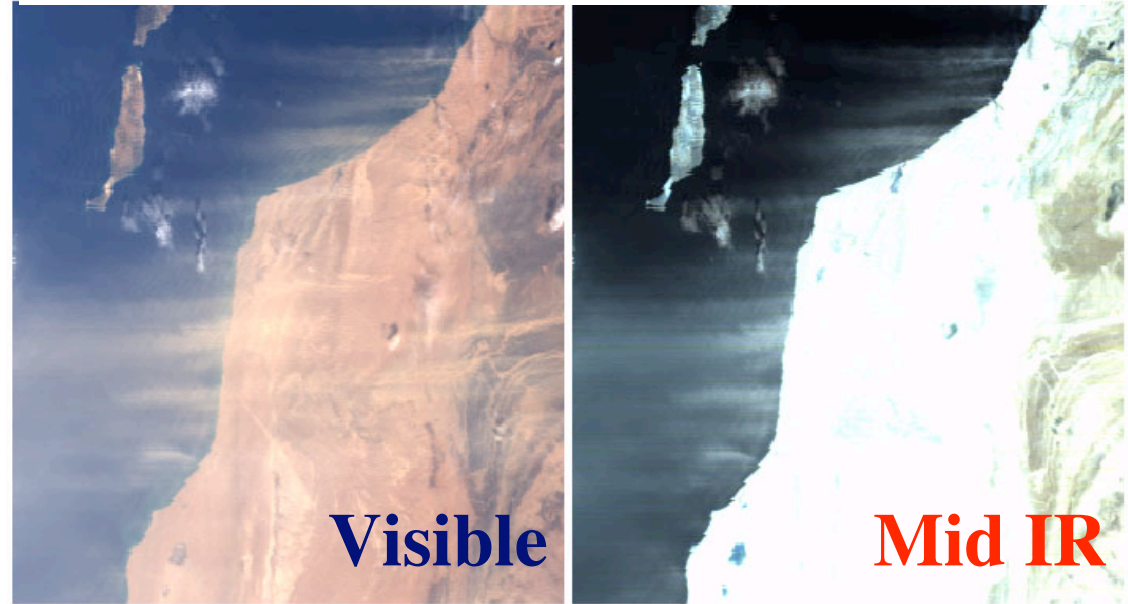
## Over Ocean



## MODIS: Saharan dust, Jan. 2002

**MODIS wide  
spectral range:**

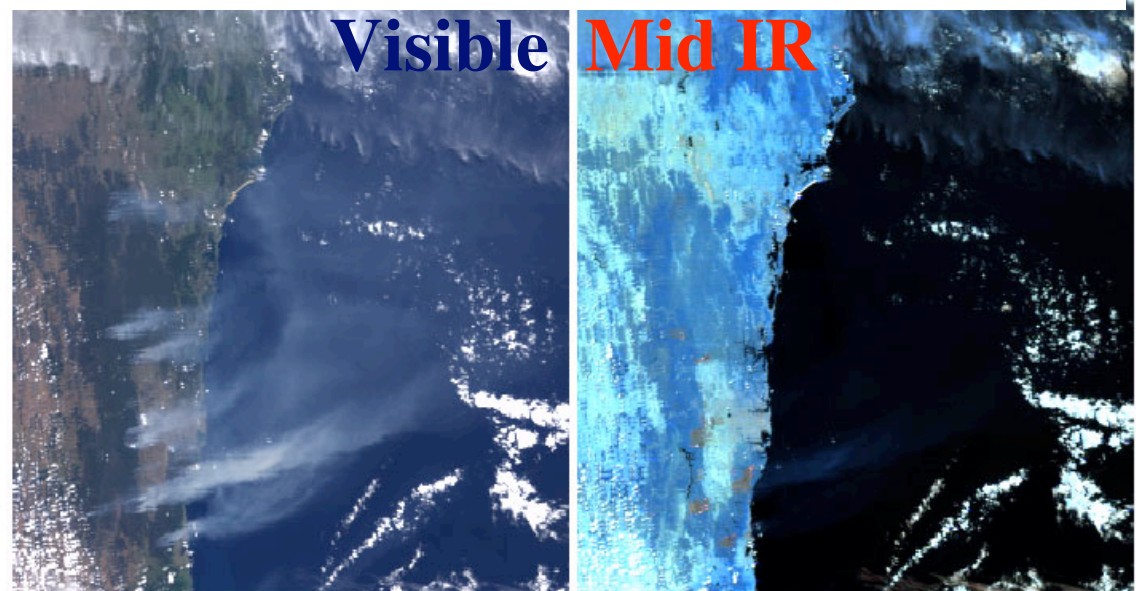
- **Distinguish dust  
from smoke /  
pollution  
aerosol**



## Fires in Australia, Dec 2001

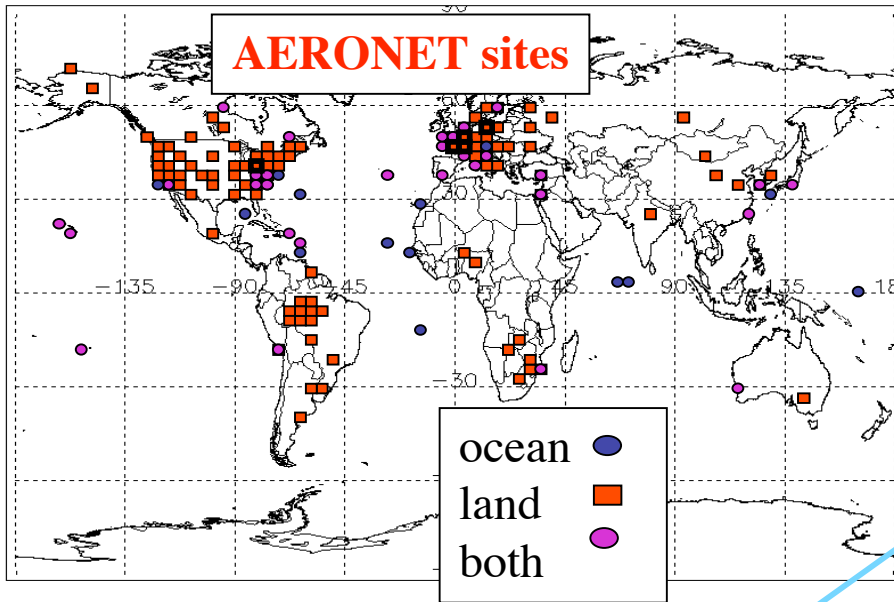
- **Distinguish  
aerosol from  
land reflectance**

Kaufman et al., Nature 2002



# Testing - $\pm 30$ min, $\pm 25$ km

MODIS aerosol validation 2000-2002



66% of MODIS aerosol retrievals  
over ocean fall within expected uncertainty

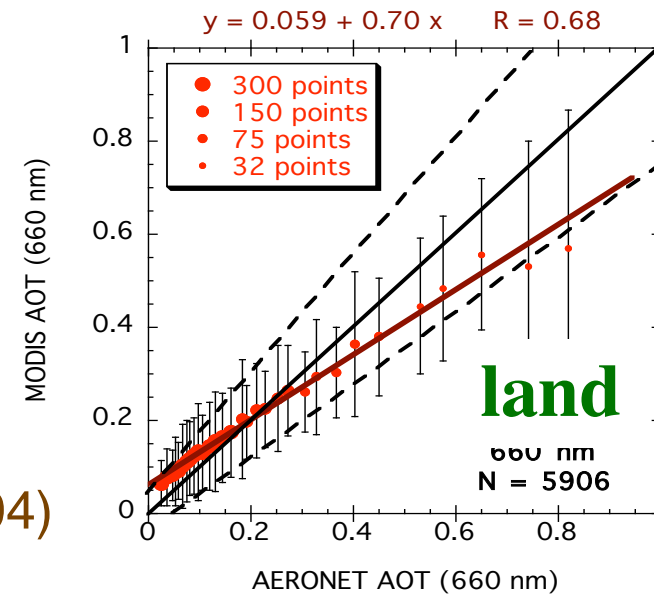
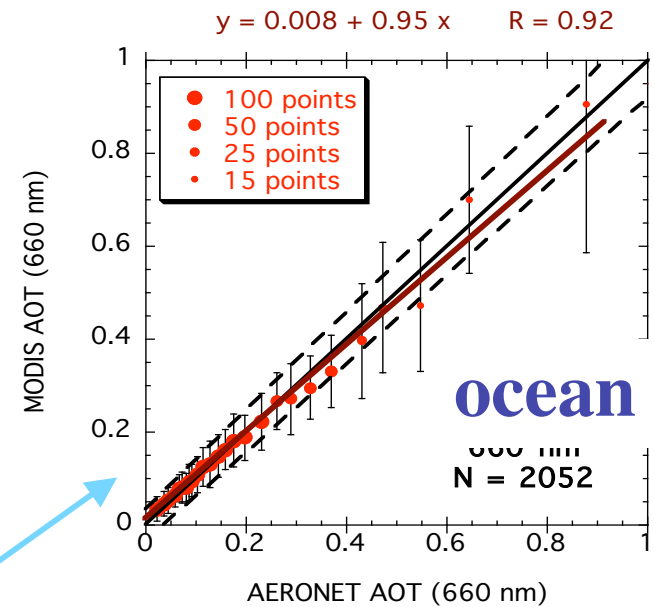
71% of MODIS aerosol retrievals  
over land fall within expected uncertainty

Ichoku et al. 2002

Chu et al. 2002

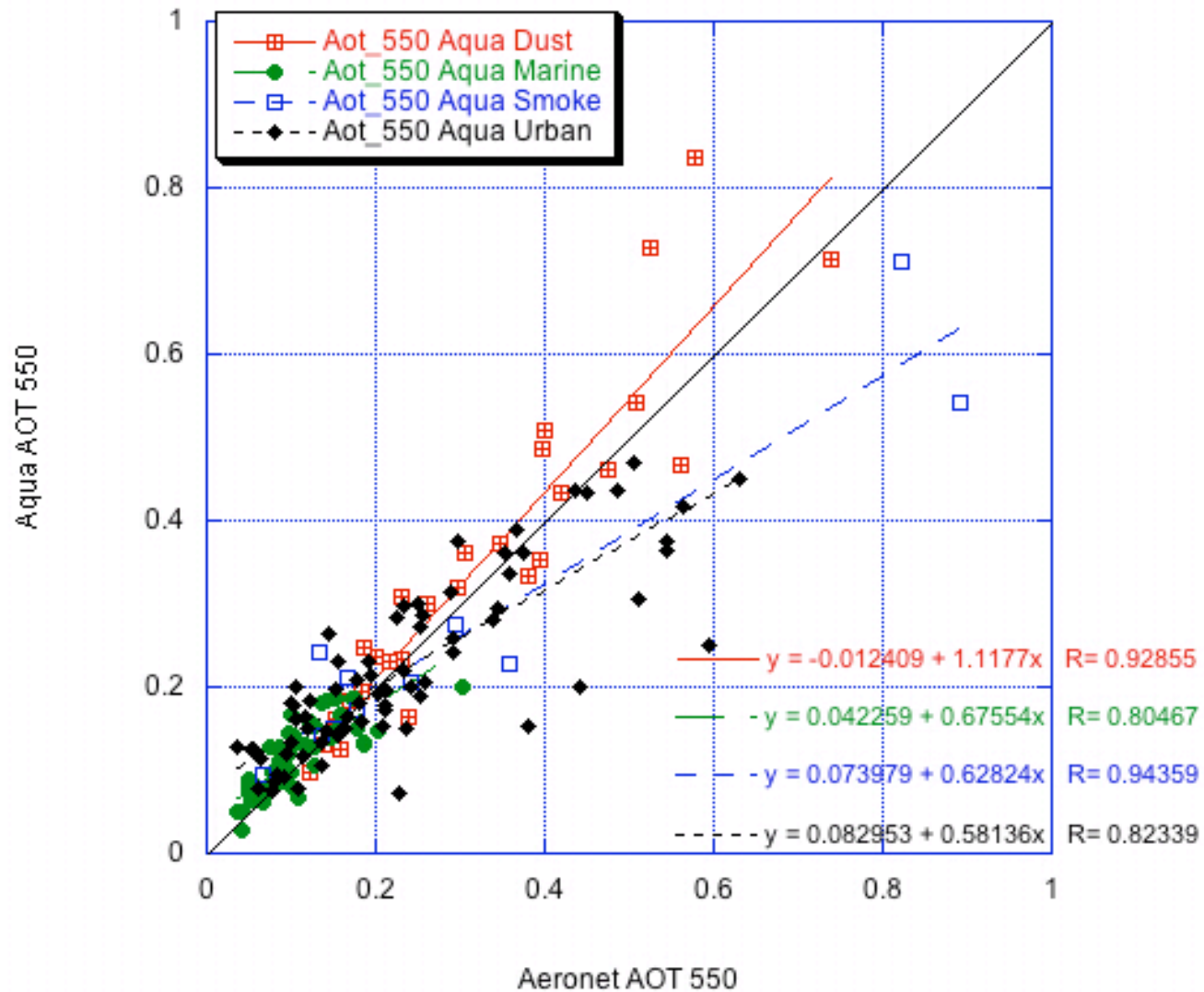
Remer et al. 2002

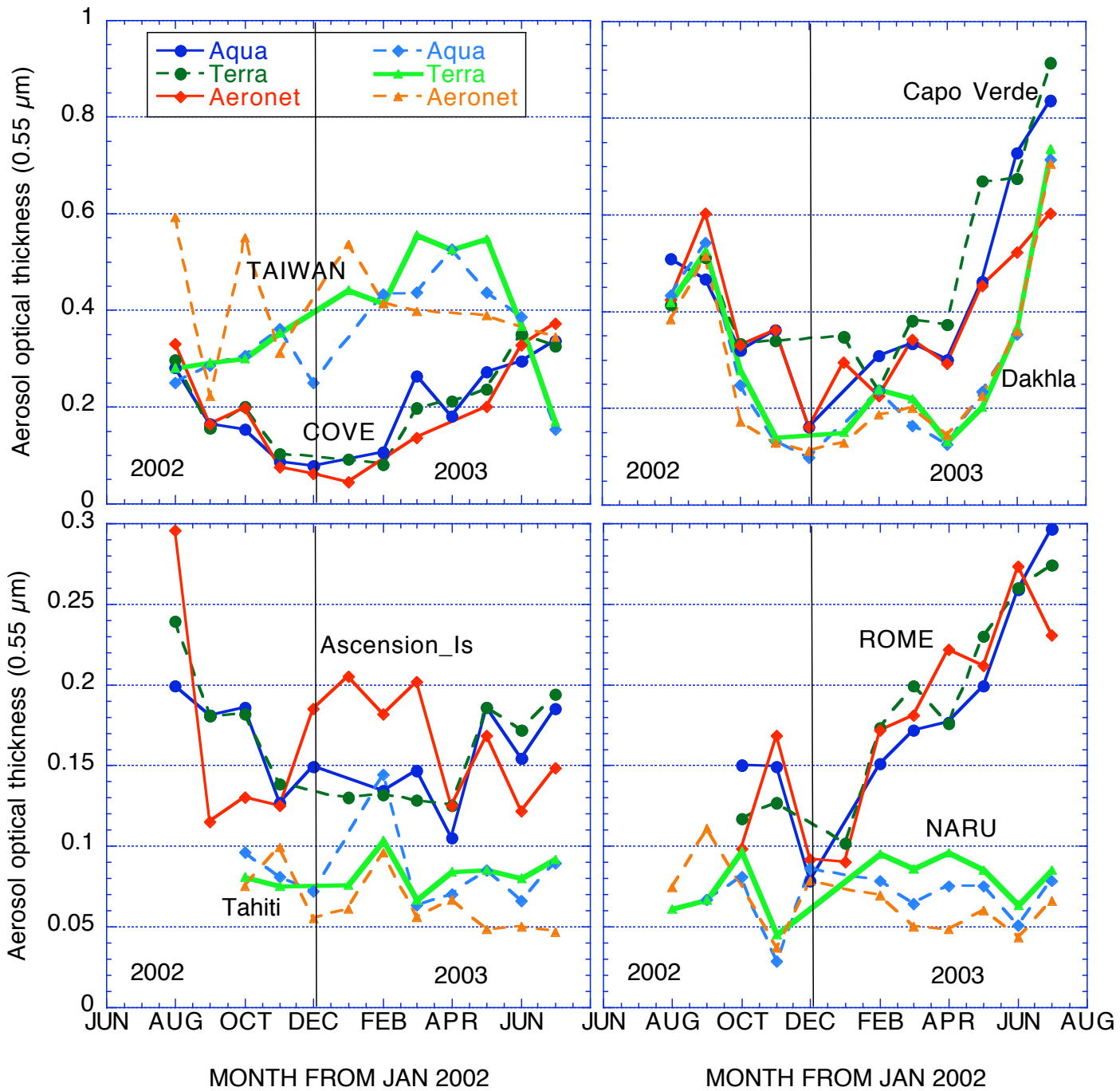
Remer et al. (2004)



# Testing - average in one month, 1°x1°

Aqua vs Aeronet AOT 550  
Ocean Monthly Means  
Unweighted Results





minimum 5 days per months

Site	# months	AOT_550	aq-terra	terra-aer	aqu-aer
Halifax	11	0.09	0.047	0.088	0.135
San_Nicolas	7	0.078	0.001	0.069	0.073
Capo_Verde	10	0.38	-0.022	0.068	0.043
Azores	7	0.12	-0.018	0.035	0.021
El_Arenosill	4	0.09	-0.016	0.030	0.019
CCNY	8	0.19	0.001	0.028	0.009
IMC_Oristar	10	0.15	-0.013	0.027	0.019
Dahkla	10	0.27	-0.008	0.024	0.009
Tahiti	8	0.065	0.003	0.016	0.019
Nauru	9	0.074	-0.014	0.014	0.005
COVE	9	0.18	-0.002	0.012	0.002
Rome	8	0.174	0.000	0.001	-0.002
Ascension_	10	0.17	-0.007	-0.001	-0.004
Jabiru	9	0.143	-0.008	-0.004	-0.009
Taiwan	9	0.42	-0.023	-0.045	-0.070
Taipei	6	0.495	-0.038	-0.053	-0.117
average	8.44	0.19	-0.01	0.019	0.010