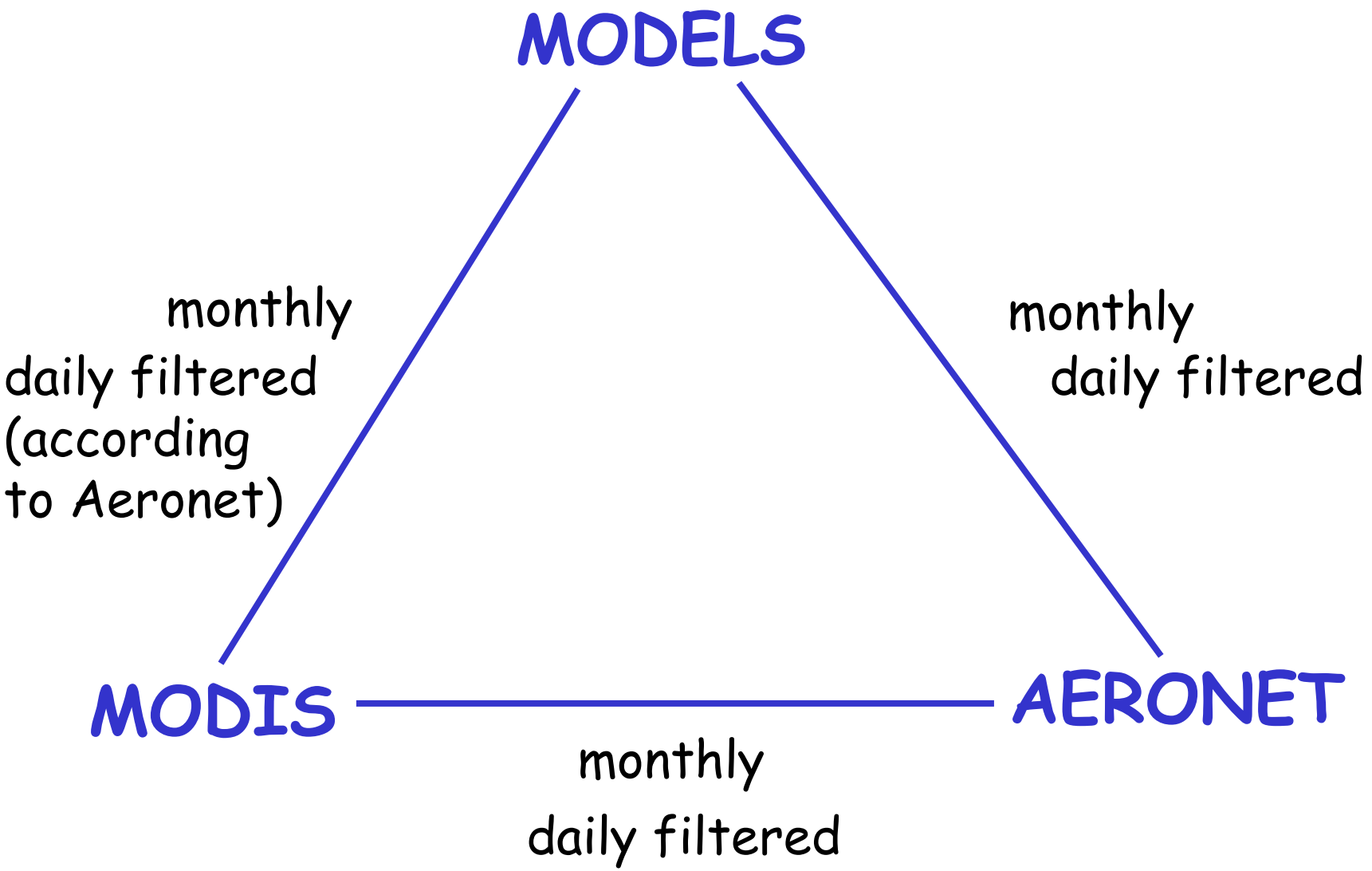
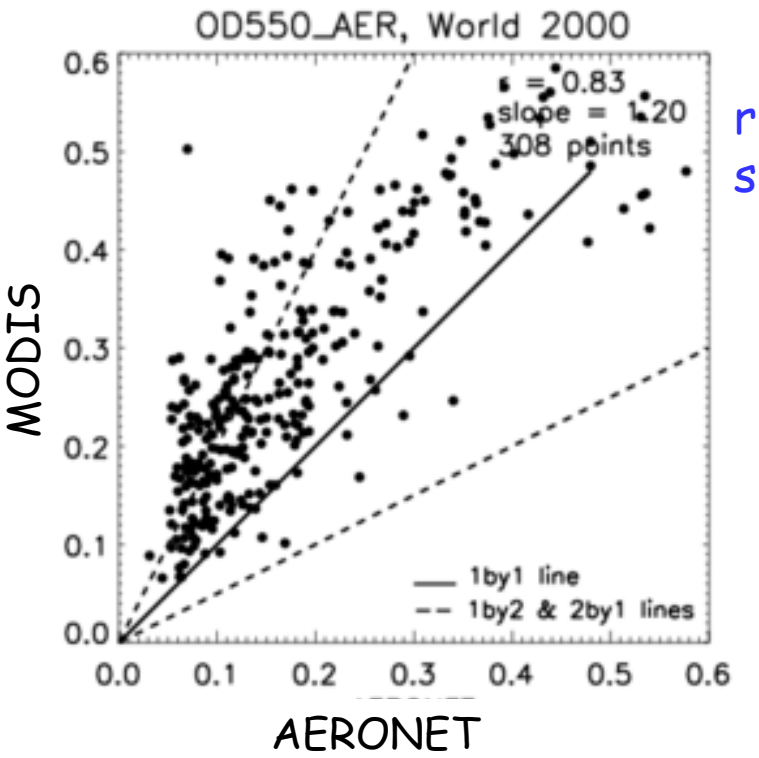

MODELS
monthly
daily filtered
(according
to Aeronet)
monthly
daily filtered
MODIS
AERONET
monthly
daily filtered

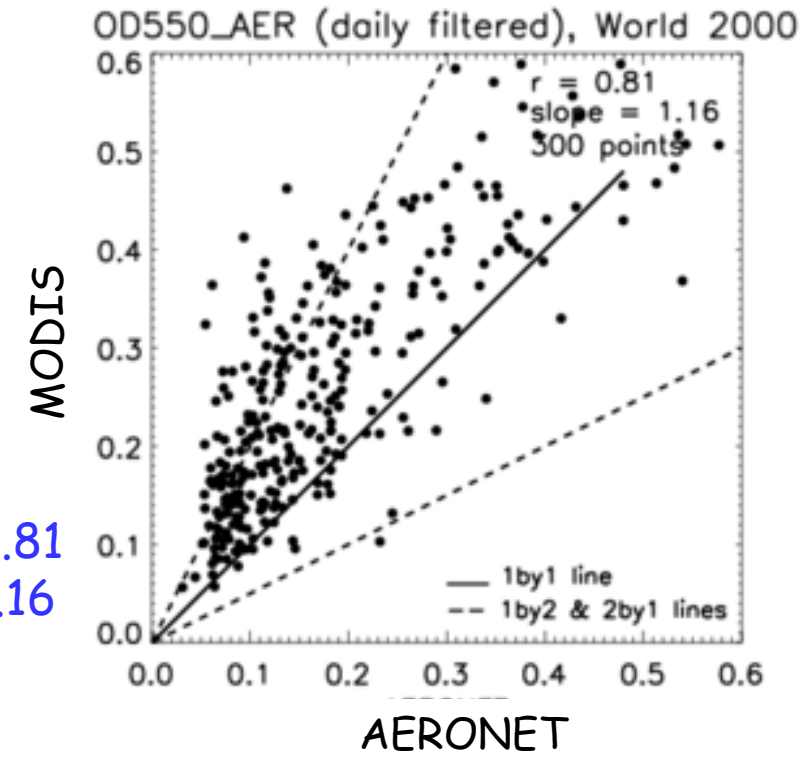
MODIS versus AERONET

monthly



r = 0.83
s = 1.2

daily filtered



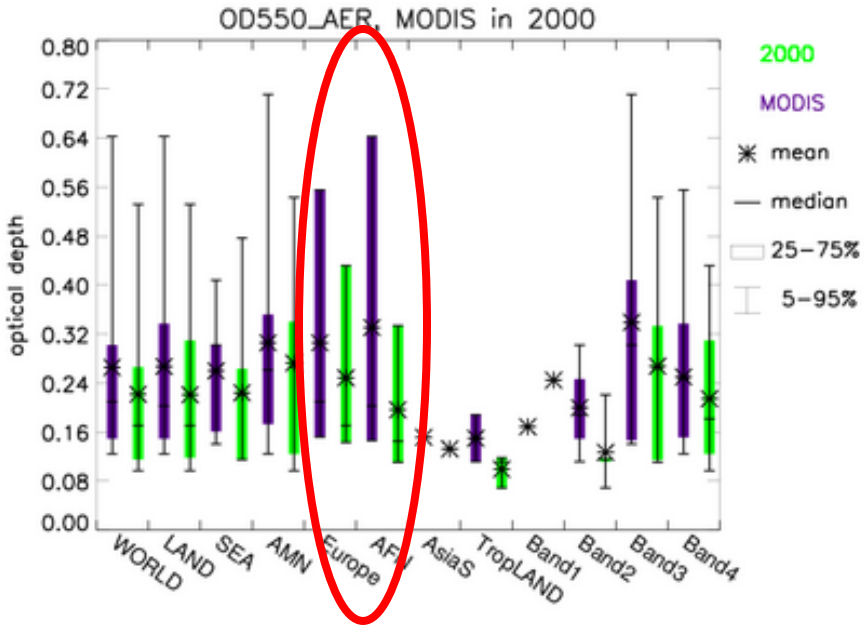
r = 0.81
s = 1.16

No effect a priori of daily filtering

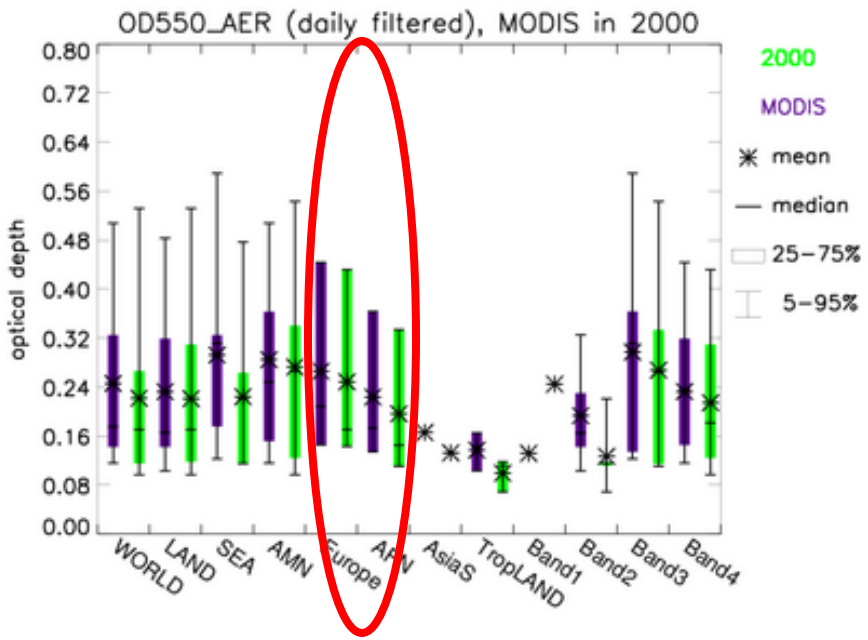
No mountains sites

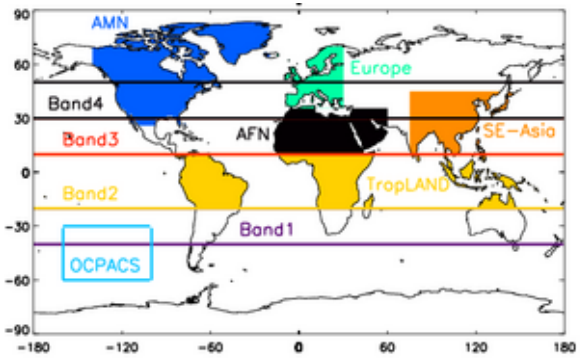
MODIS versus AERONET

monthly



daily filtered





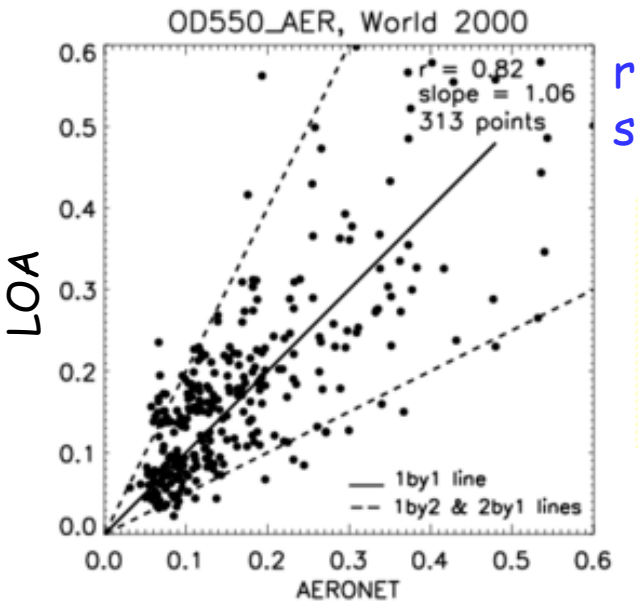
Daily filtered =>

- better agreement of the mean
- less spread in Europe and AFN but less than 30 points

Models versus AERONET

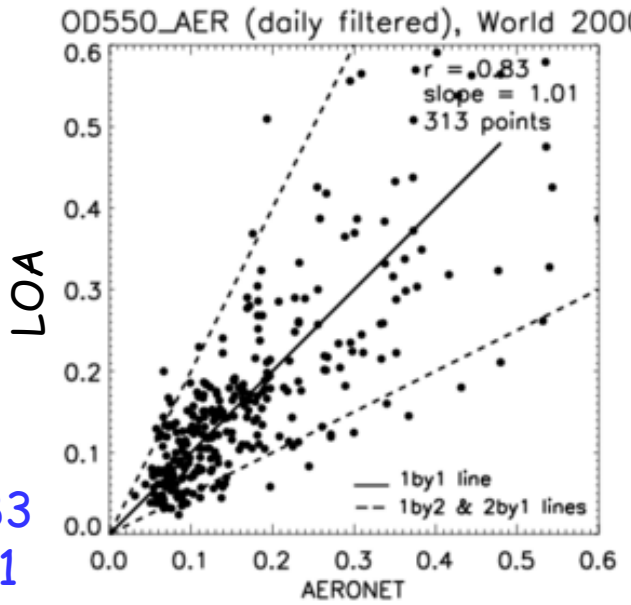
monthly

daily filtered

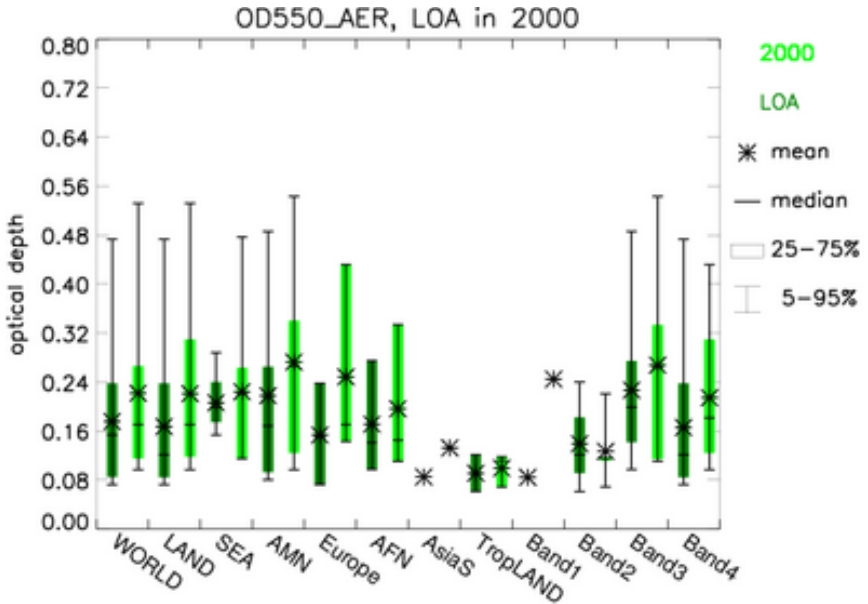


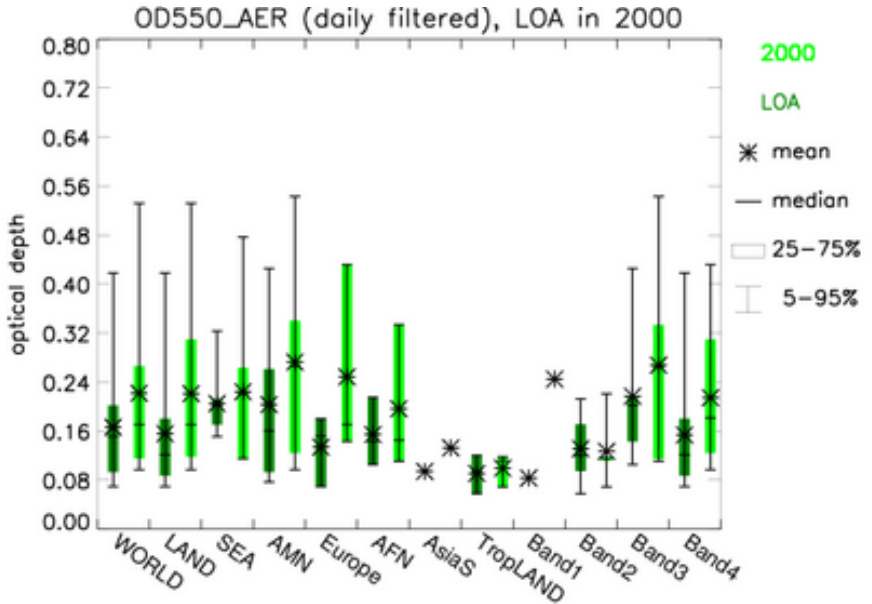
r = 0.82
s = 1.06

No effect
a priori
of daily filtering



r = 0.83
s = 1.01

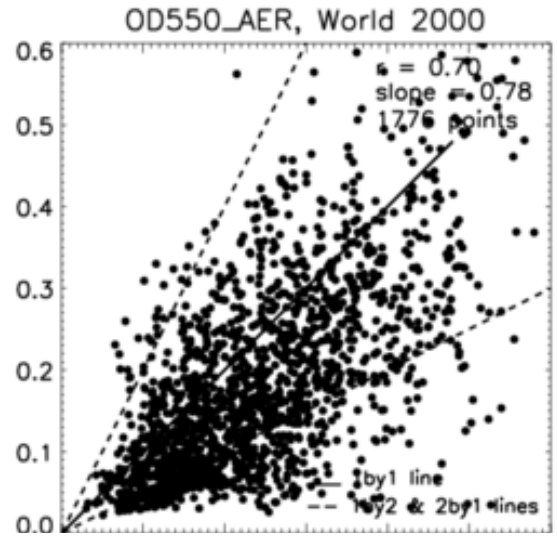




monthly

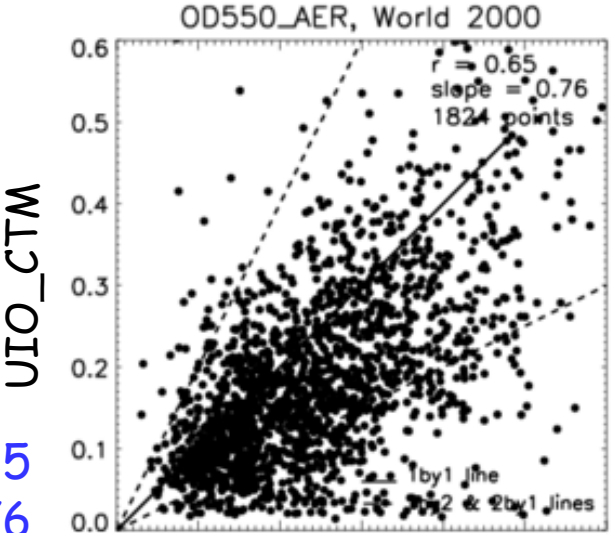
Models versus MODIS

monthly



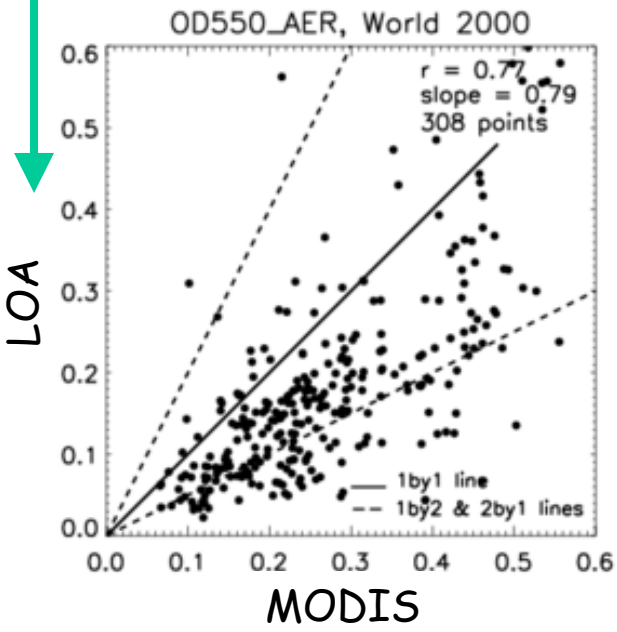
r = 0.70
s = 0.78
1776#

All stations
(no mounts)



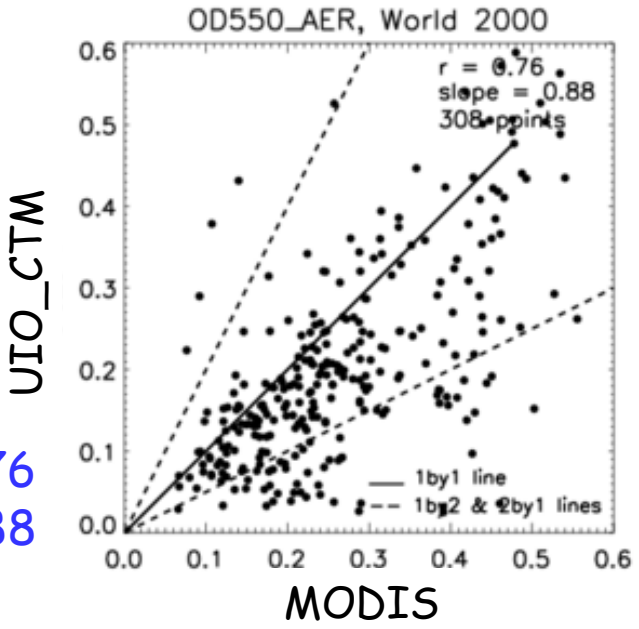
r = 0.65
s = 0.76

Increase of correlation when comparison only at Aeronet station



r = 0.77
s = 0.79
308#

Aeronet
stations
(no mounts)



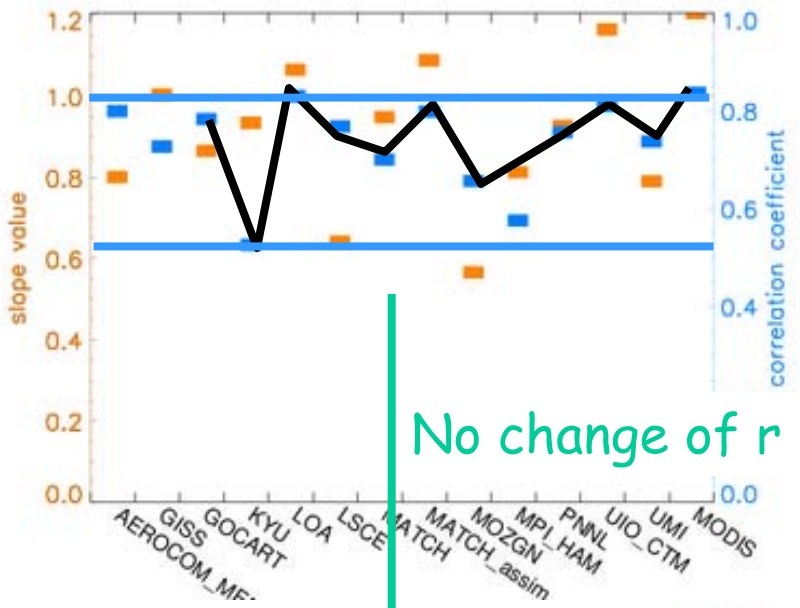
r = 0.76
s = 0.88
308#

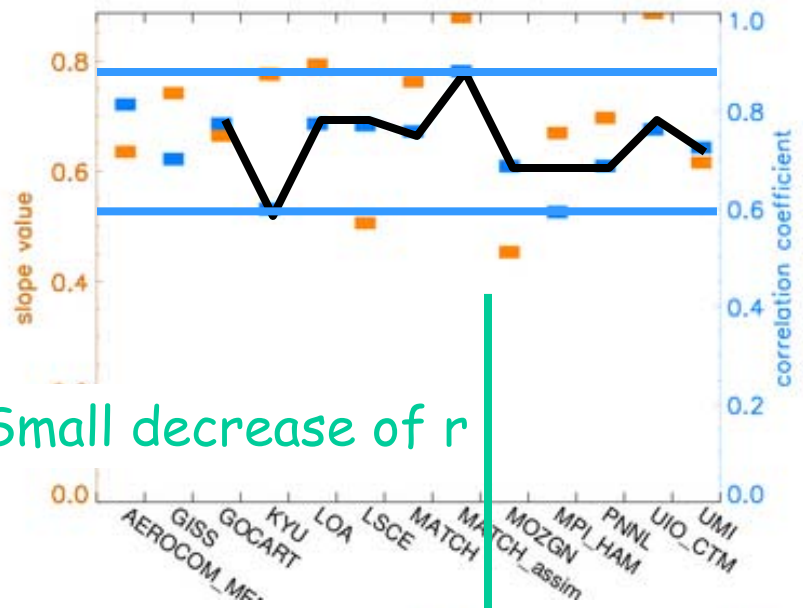
Models versus AERONET

Models versus MODIS

(restricted to Aeronet stations)

monthly

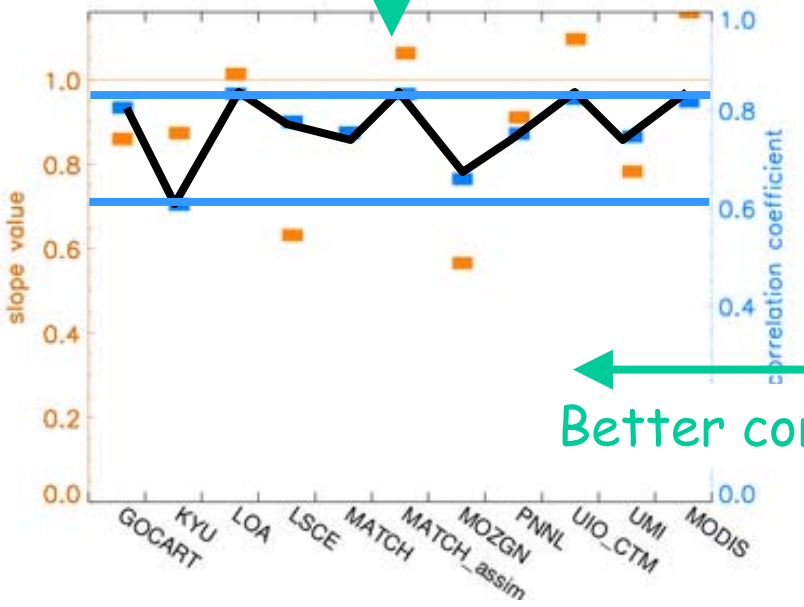


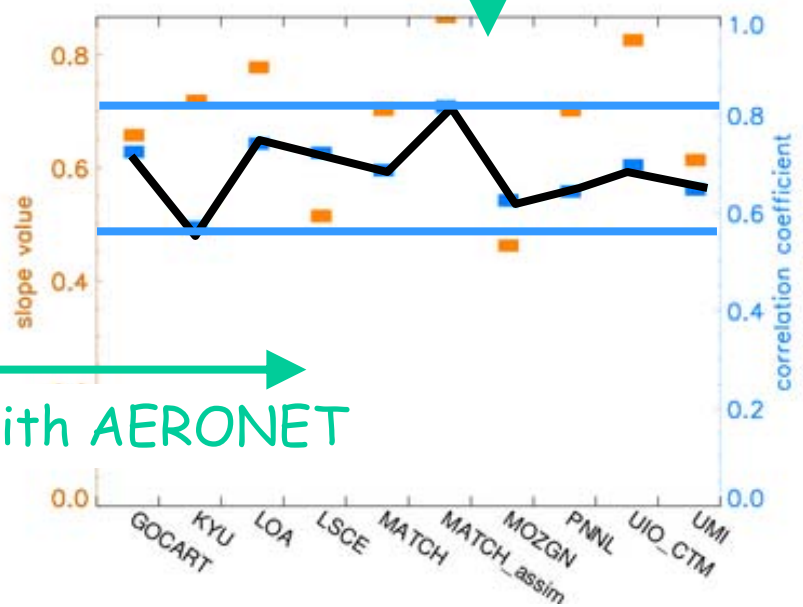


No change of r

Small decrease of r

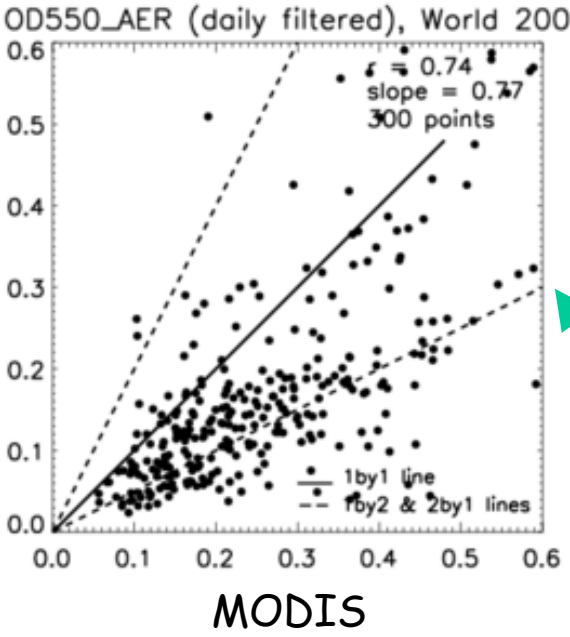
daily





Better correlation with AERONET

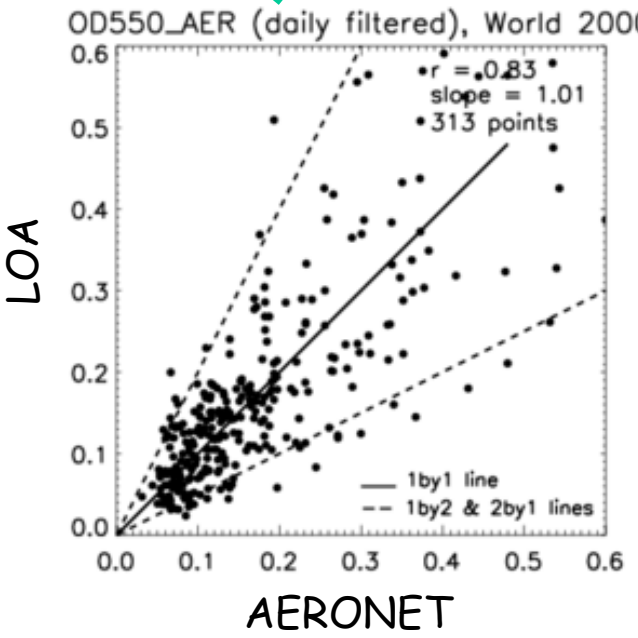
WORLD
Daily filtered



r = 0.74
s = 0.77

Underestimation
of the model

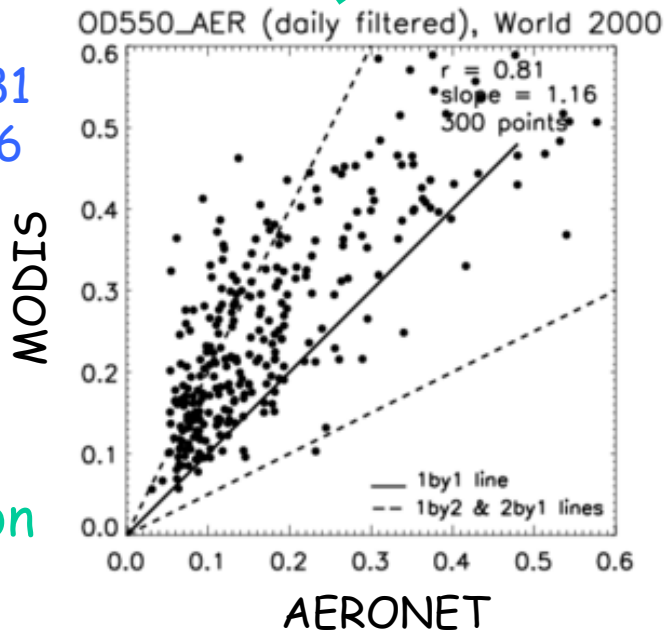
Smaller
correlation



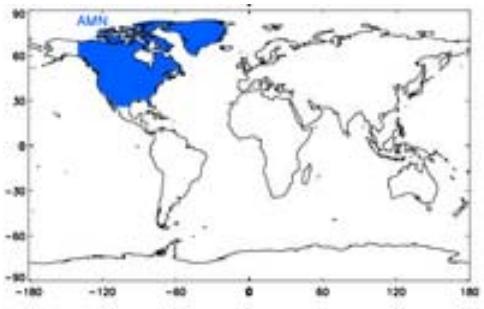
r = 0.83
s = 1.01

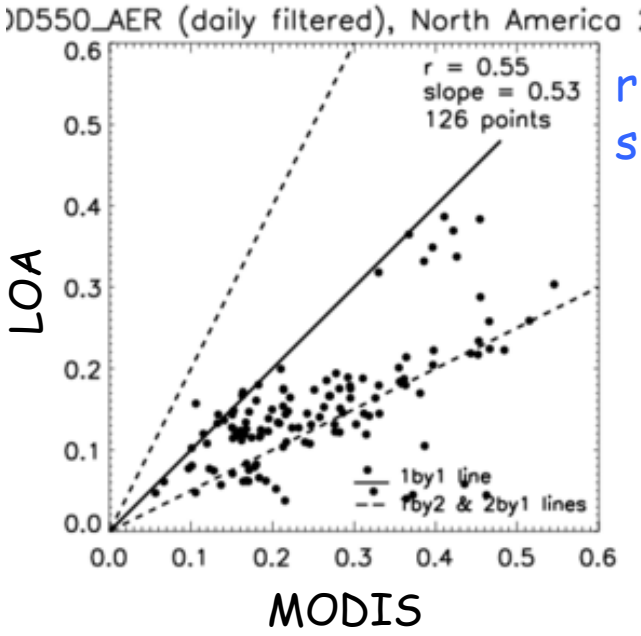
r = 0.81
s = 1.16

Overestimation
by MODIS



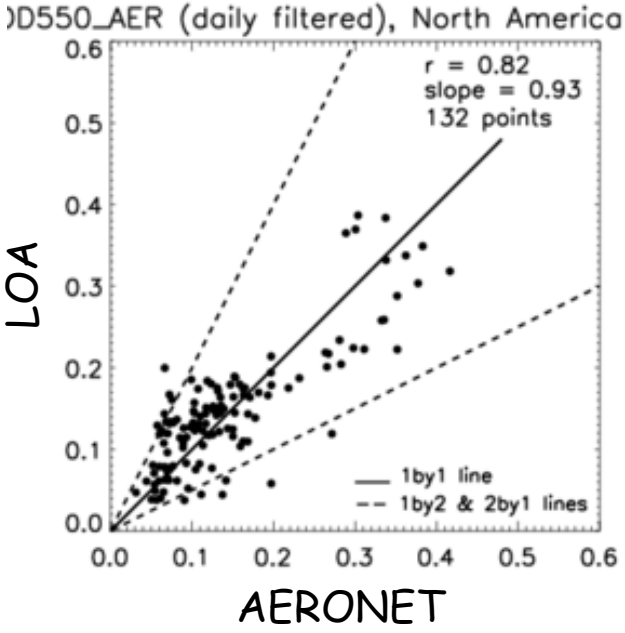
NORTH AMERICA
Daily filtered





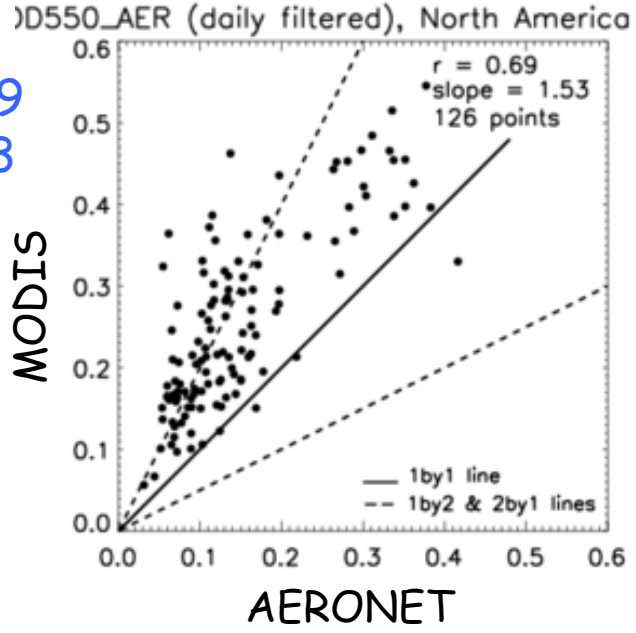
r = 0.55
s = 0.53

Same conclusion than for WORLD but a bit worst

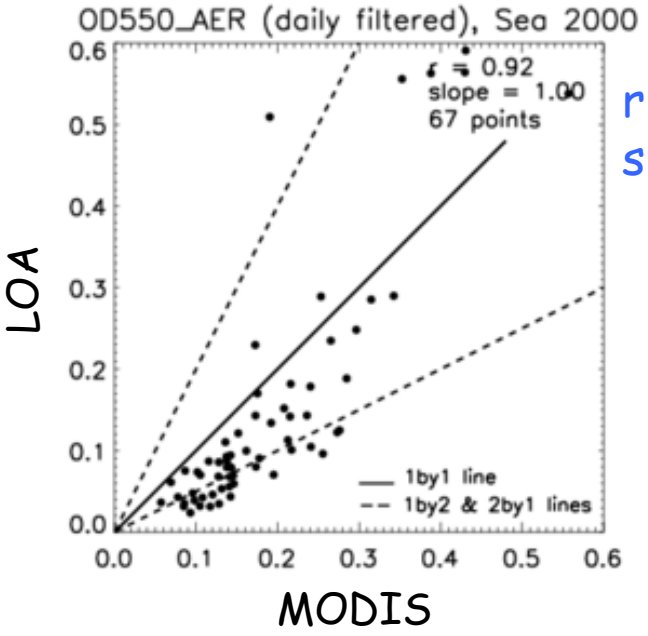


r = 0.82
s = 0.93

r = 0.69
s = 1.53

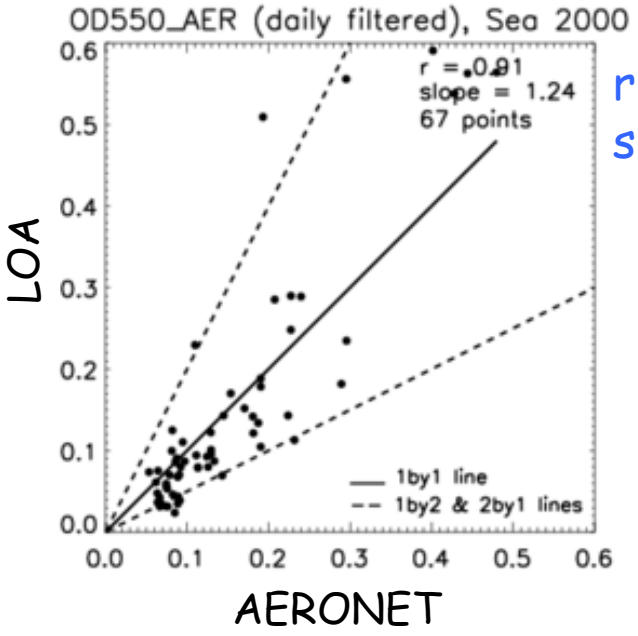


SEA
Daily filtered



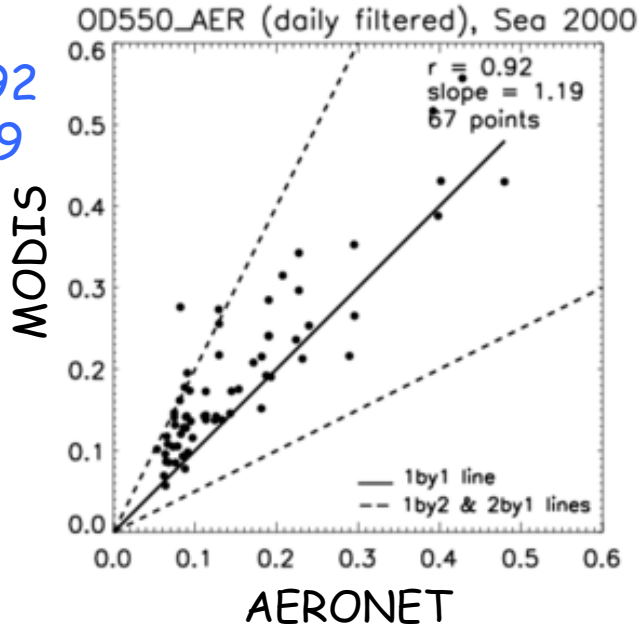
r = 0.92
s = 1.00

Better agreement
for the SEA stations



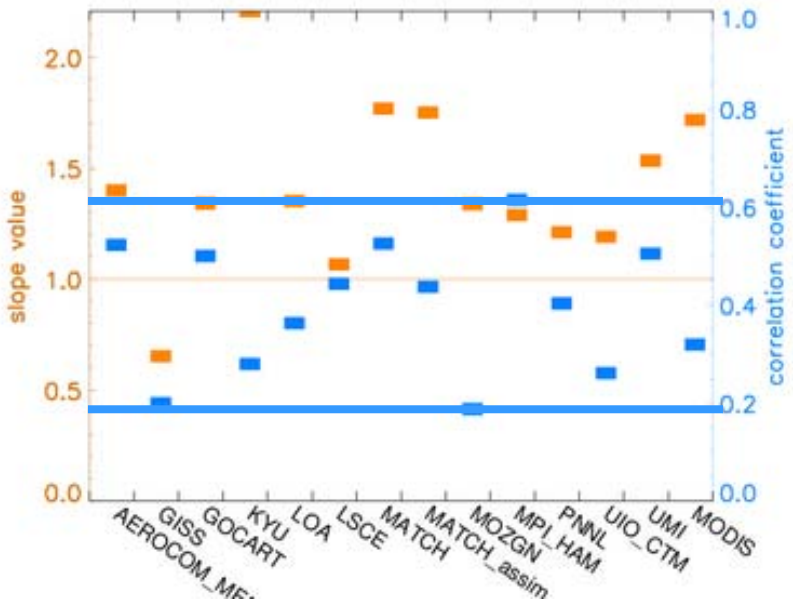
r = 0.91
s = 1.24

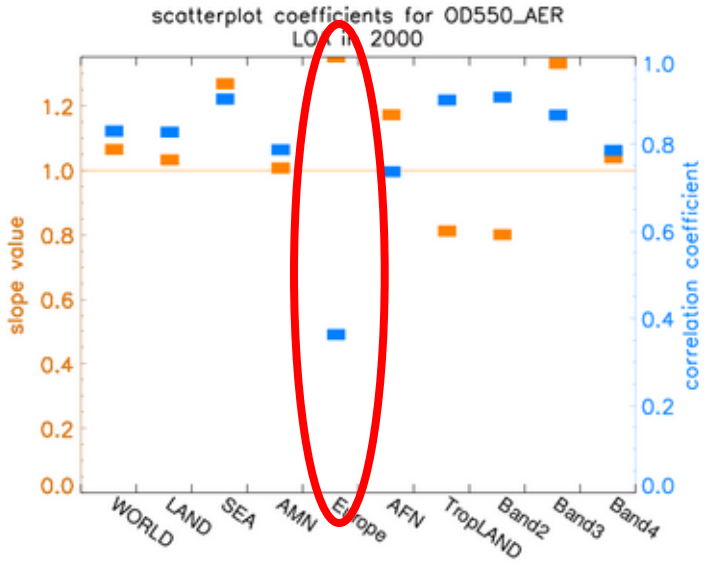
r = 0.92
s = 1.19



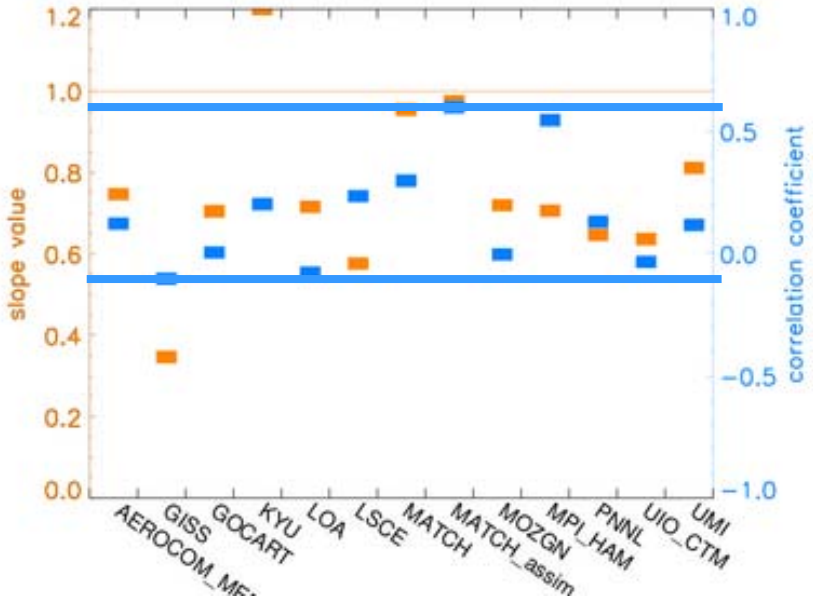
Europe case

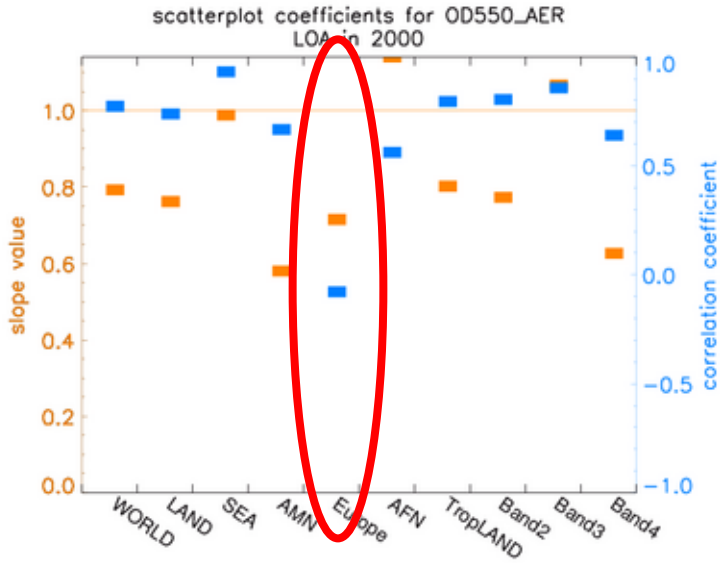
Vs AERONET

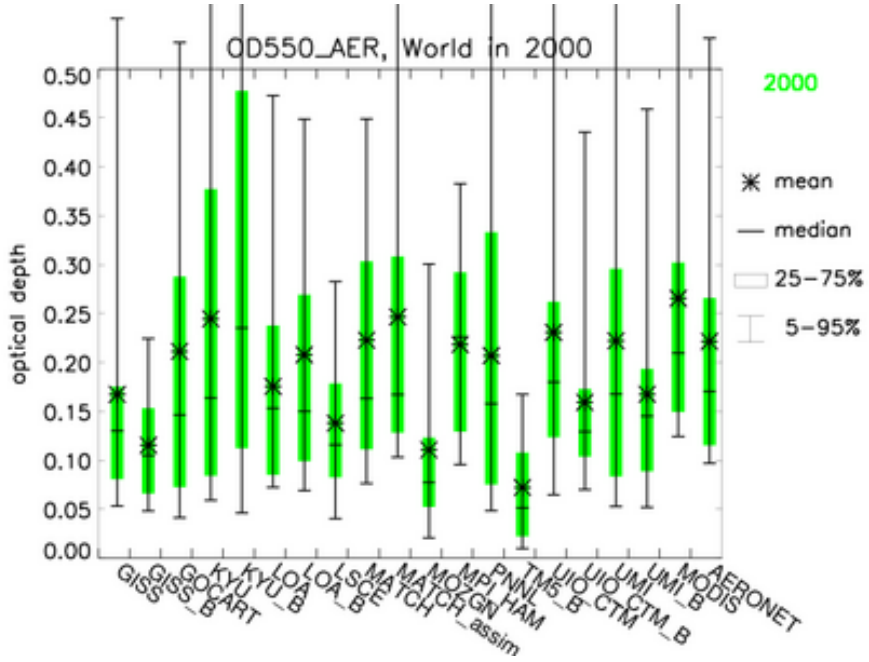


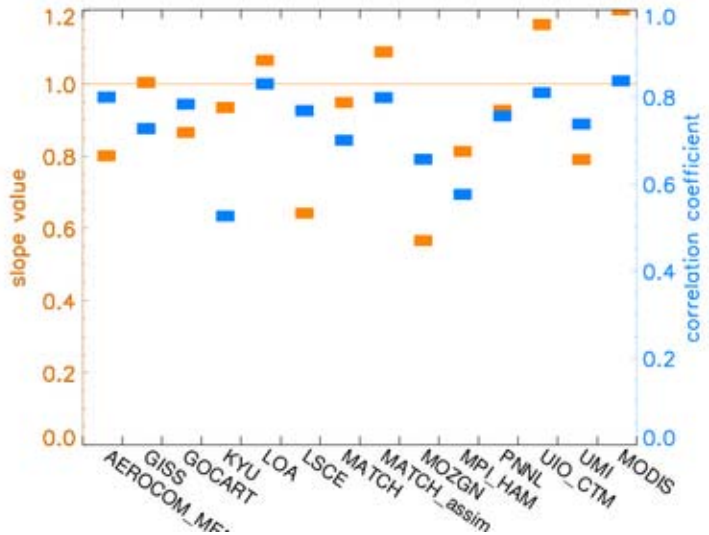


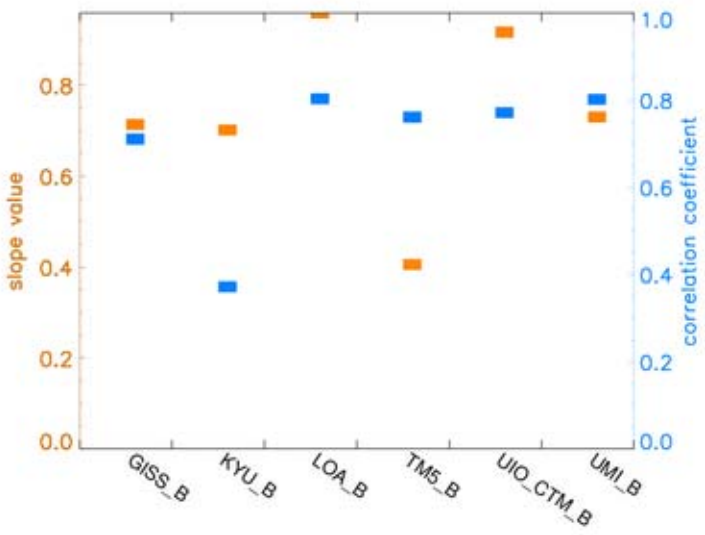
Vs MODIS

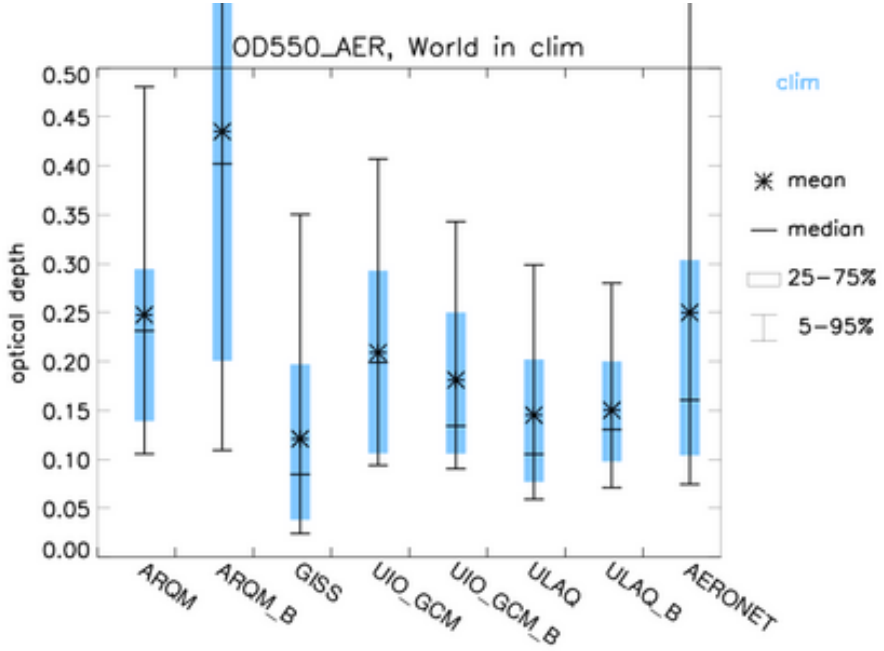


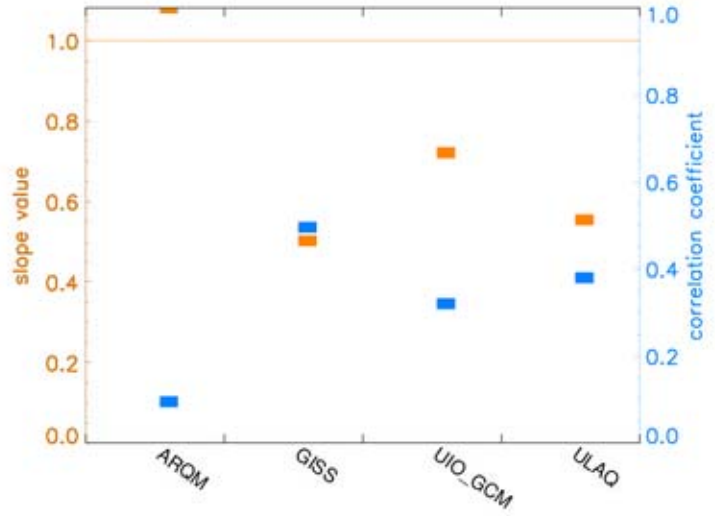


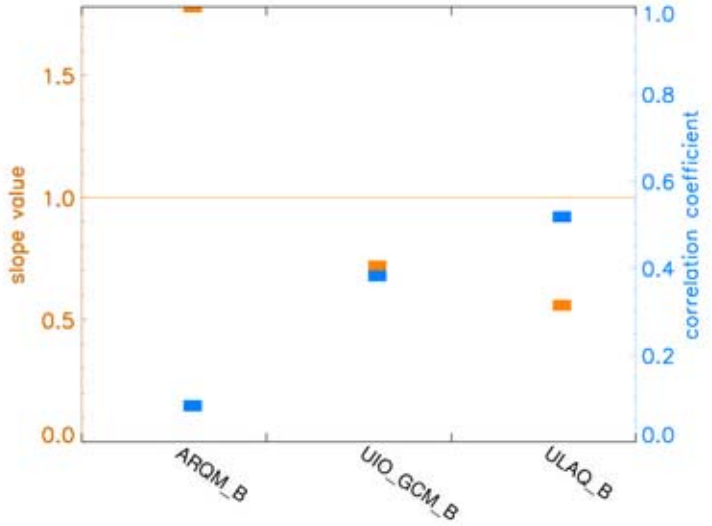

OD550_AER, World in 2000
2000
optical depth
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
0.45
0.50
mean
median
25–75%
5–95%
GISS
GISS_B
GOCART
KYU
KYU_B
LOA
LOA_B
LSCE
MATCH
MATCH_assim
MOZGN
MPI_HAM
PNNL
TM5_B
UIO_CTM
UIO_CTM_B
UMI
UMI_B
MODIS
AERONET

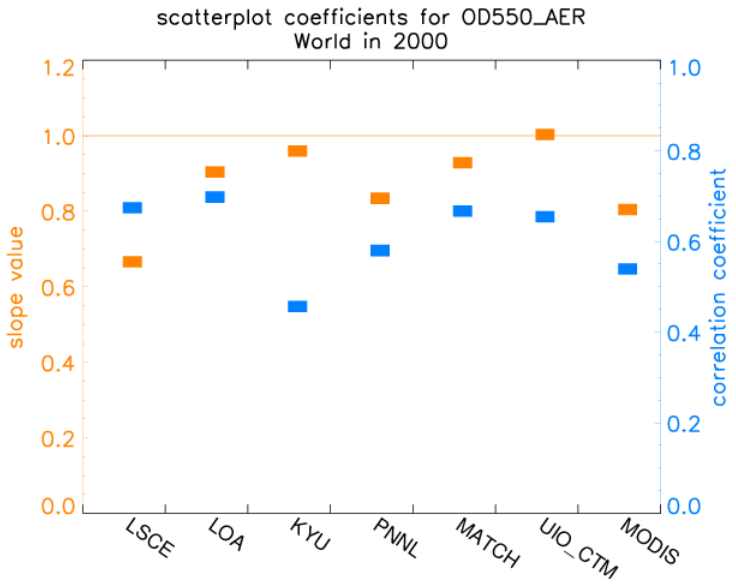

slope value
correlation coefficient
0.0
0.2
0.4
0.6
0.8
1.0
1.2
AEROCOM_ME
GISS
GOCART
KYU
LOA
LSCE
MATCH
MATCH_assim
MOZGN
MPI_HAM
PNNL
UIO_CTM
UMI
MODIS

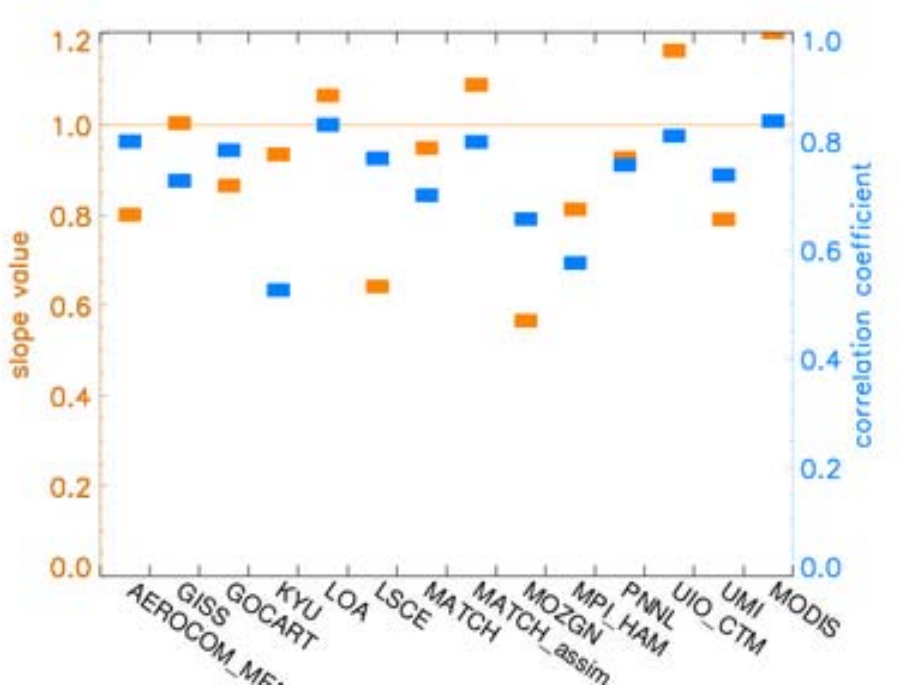

slope value
correlation coefficient
0.0
0.2
0.4
0.6
0.8
1.0
GISS_B
KYU_B
LOA_B
TM5_B
UIO_CTM_B
UMI_B


OD550_AER, World in clim
clim
optical depth
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
mean
median
25–75%
5–95%
AROM
AROM_B
GISS
UIO_GCM
UIO_GCM_B
ULAQ
ULAQ_B
AERONET


slope value
correlation coefficient
1.0
0.8
0.6
0.4
0.2
0.0
AROM
GISS
UIO_GCM
ULAQ


slope value
correlation coefficient
1.5
1.0
0.5
0.0
0.8
0.6
0.4
0.2
AROM_B
UIO_GCM_B
ULAQ_B


scatterplot coefficients for OD550_AER
World in 2000
slope value
correlation coefficient
1.2
1.0
0.8
0.6
0.4
0.2
0.0
LSCE
LOA
KYU
PNNL
MATCH
UIO_CTM
MODIS


slope value
correlation coefficient
1.2
1.0
0.8
0.6
0.4
0.2
0.0
AEROCOM_ME
GISS
GOCART
KYU
LOA
LSCE
MATCH
MATCH_assim
MOZGN
MPI_HAM
PNNL
UIO_CTM
UMI
MODIS