Status of MATCH Edition II Runs

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2009 November 4
CERES Science Team Meeting
Surface to TOA Fluxes Working Group
Fort Collins, CO

Model for Atmospheric Transport and Chemistry

Terra/Aqua MODIS
level 3 (daily 1 x 1
gridded) AOD

NCEP/NCAR
reanalysis met fields
6-hourly 1.9 x 1.9
28 levels

→ MATCH → SARB

MATCH supplements MODIS AOD retrievals with information required for radiative transfer
- AOD when missing MODIS retrieval (clouds, bright surface)
- aerosol 4D mass distribution by species
- SARB aerosol optical models give single scattering albedo, asymmetry parameter

MATCH Simulation

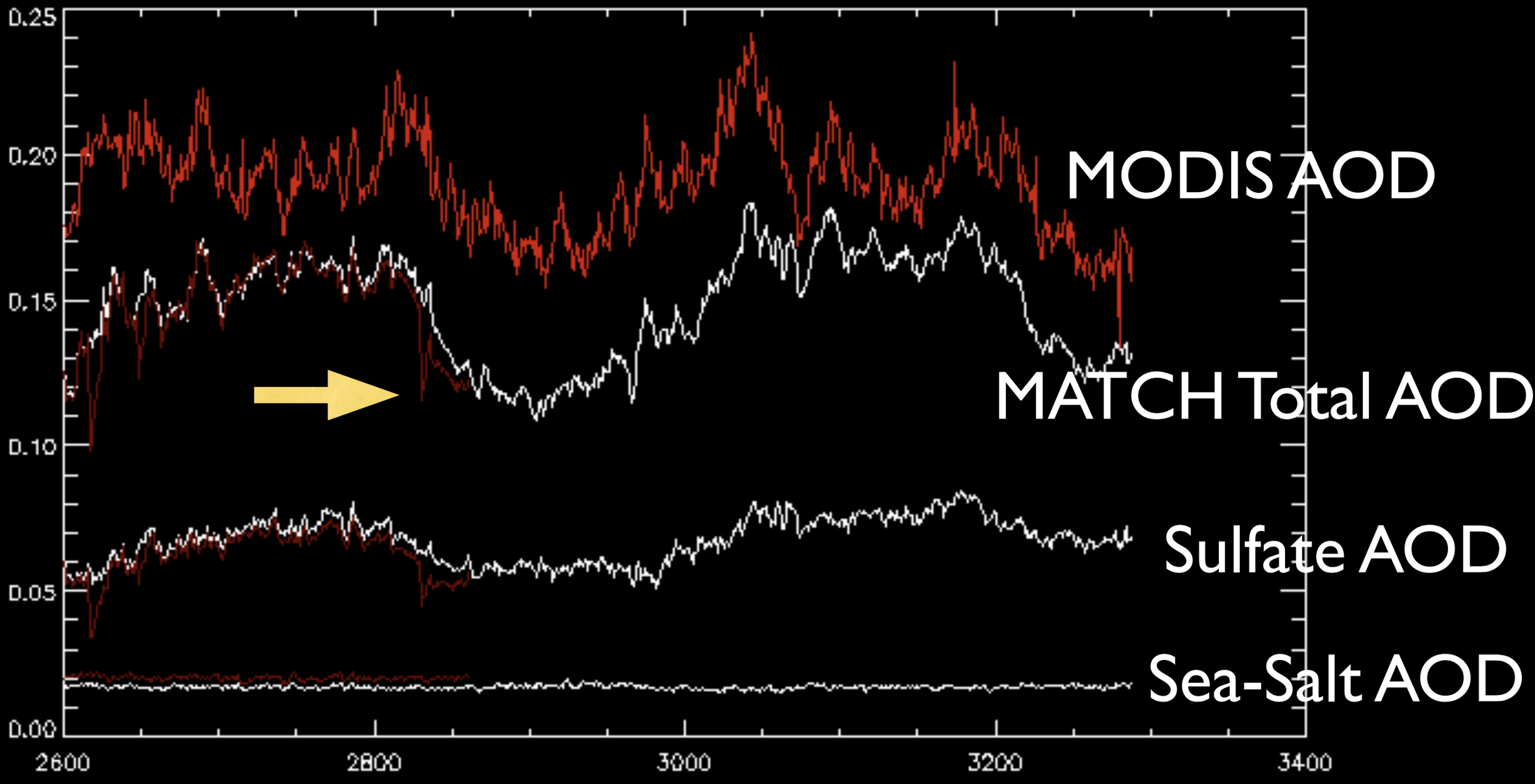
March 2000
MODIS Collection IV

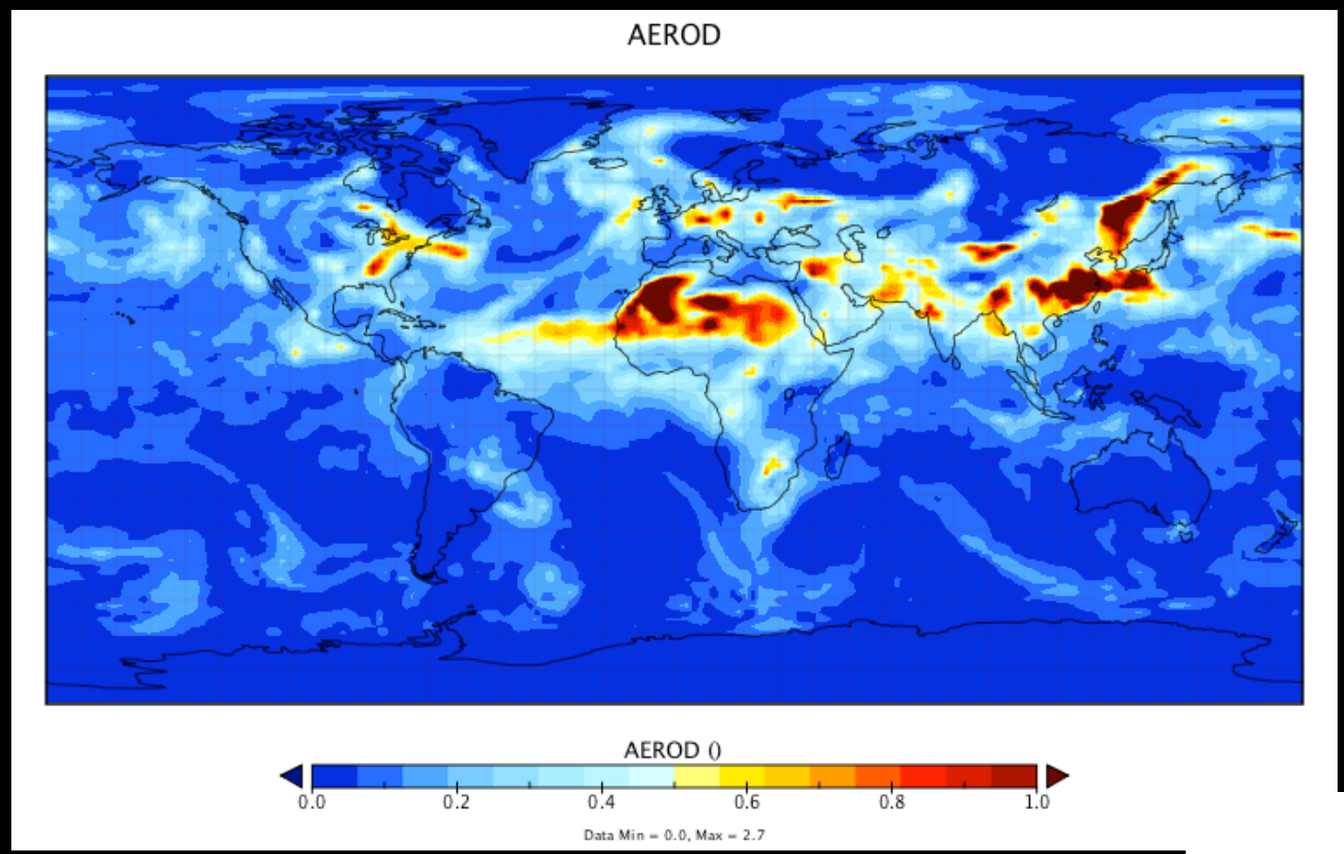
January 2006
MODIS Collection V

December 2007

May 2002
Terra + Aqua

Daily Time Series Global Mean AOD




AEROD
AEROD ()
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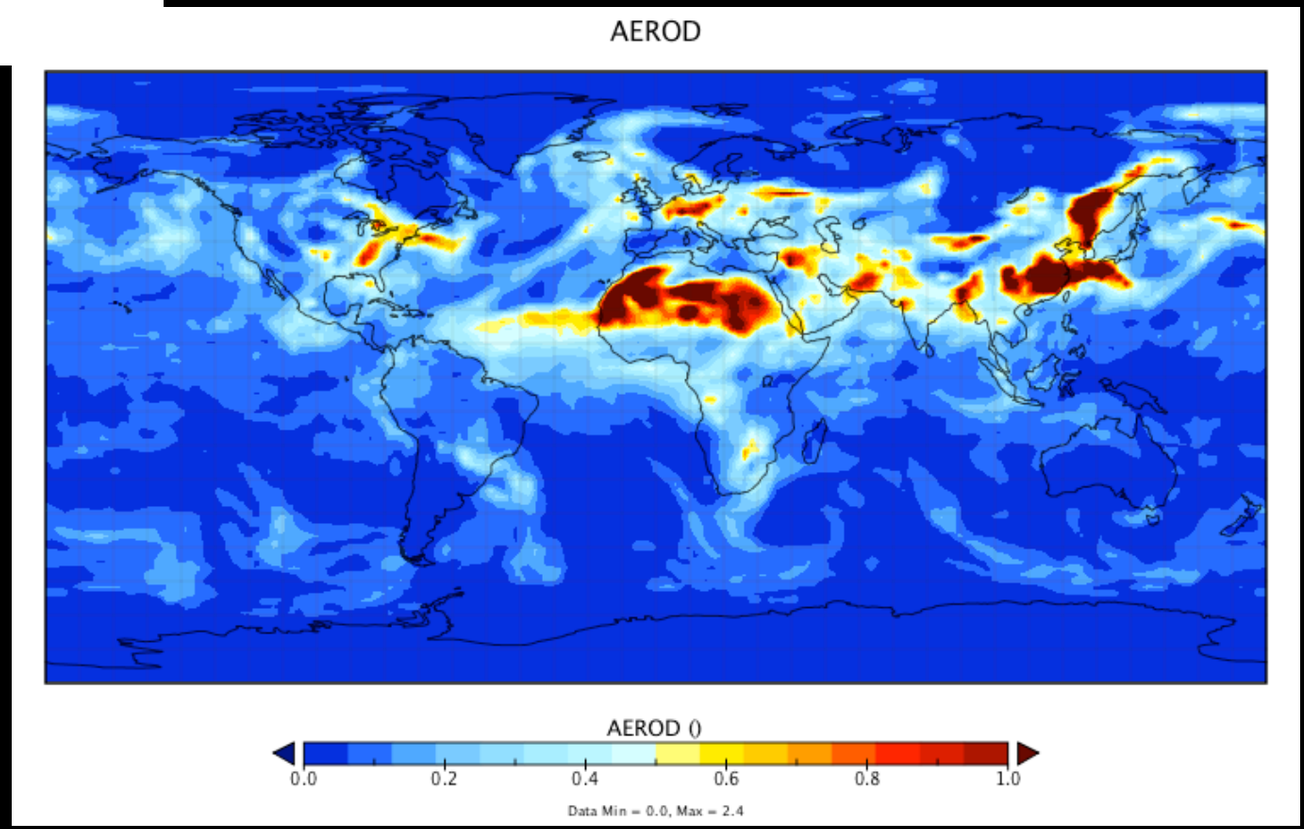
0.2
0.4
0.6
0.8
1.0
Data Min = 0.0, Max = 2.7

2007-06-01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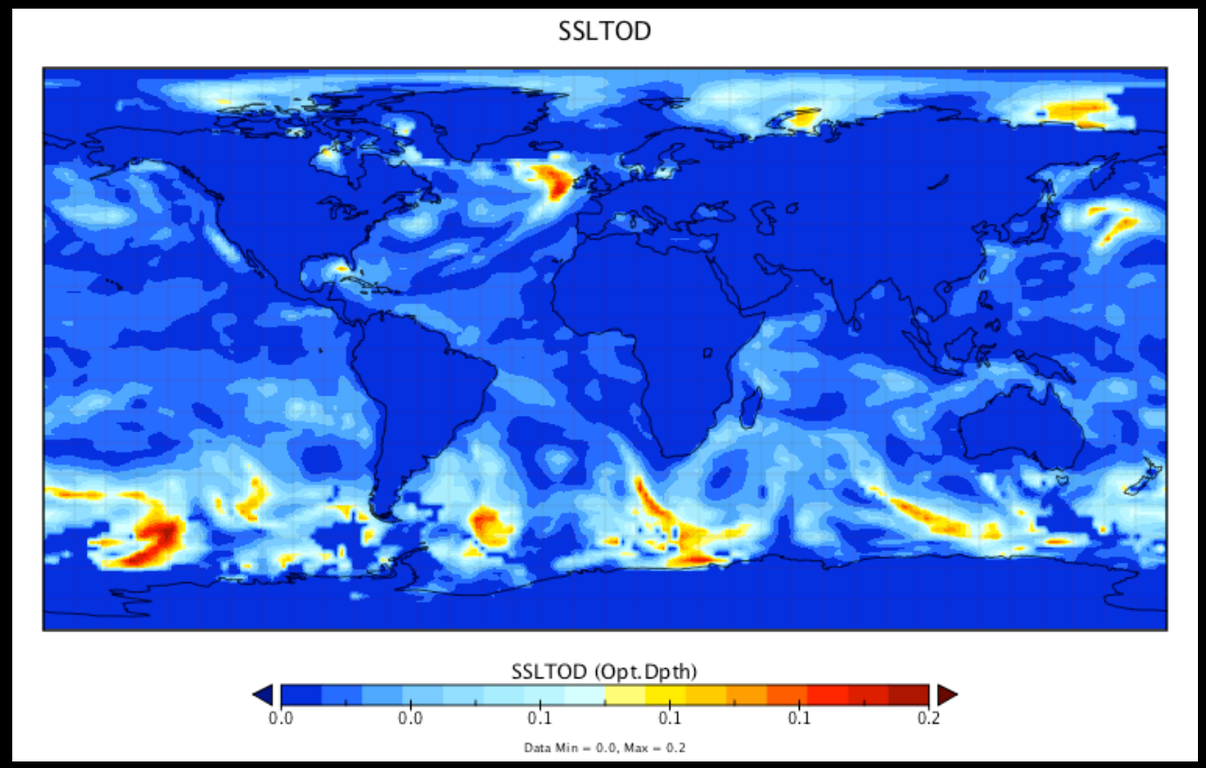
SSLTOD
SSLTOD (Opt.Dpth)
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0.1
0.1
0.1
0.2
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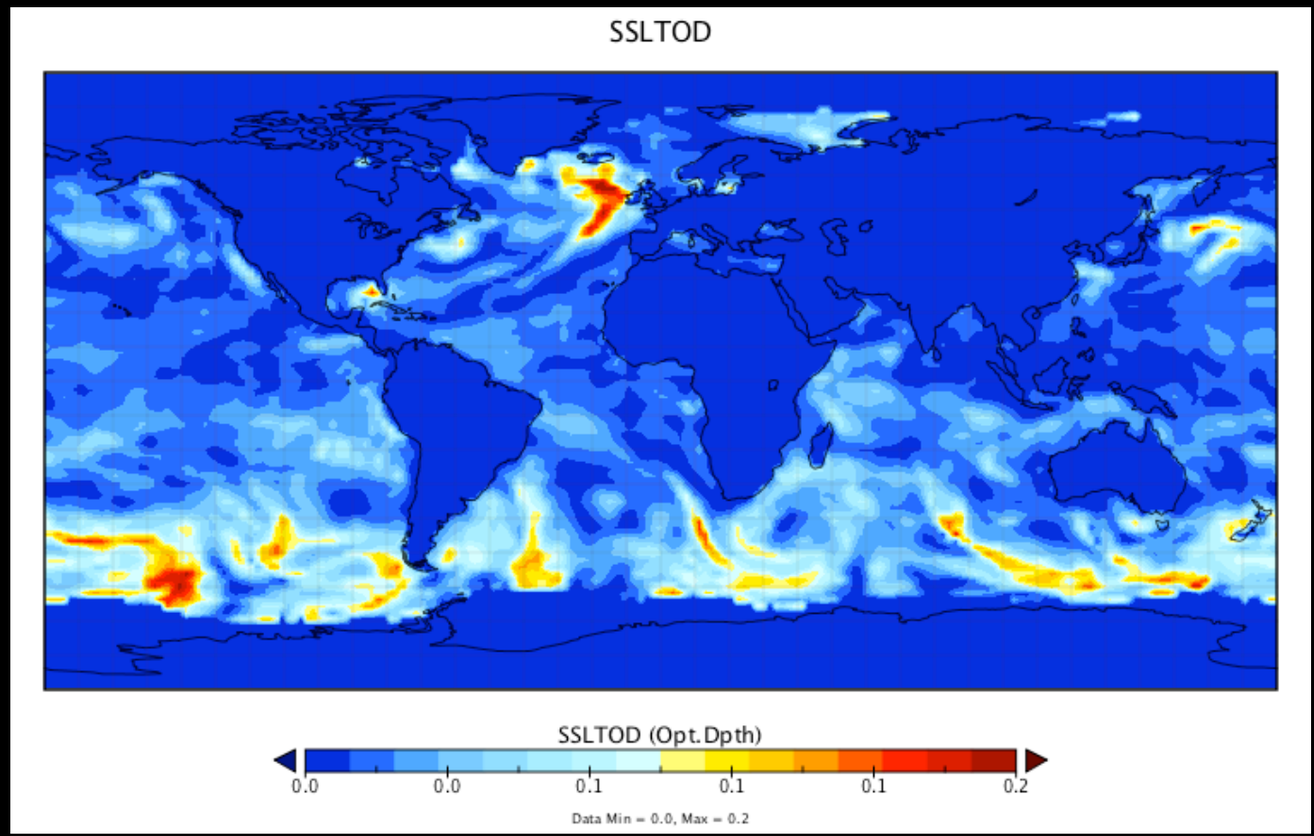
2007-06-01


SSLTOD
SSLTOD (Opt.Dpth)
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0.0
0.1
0.1
0.1
0.2
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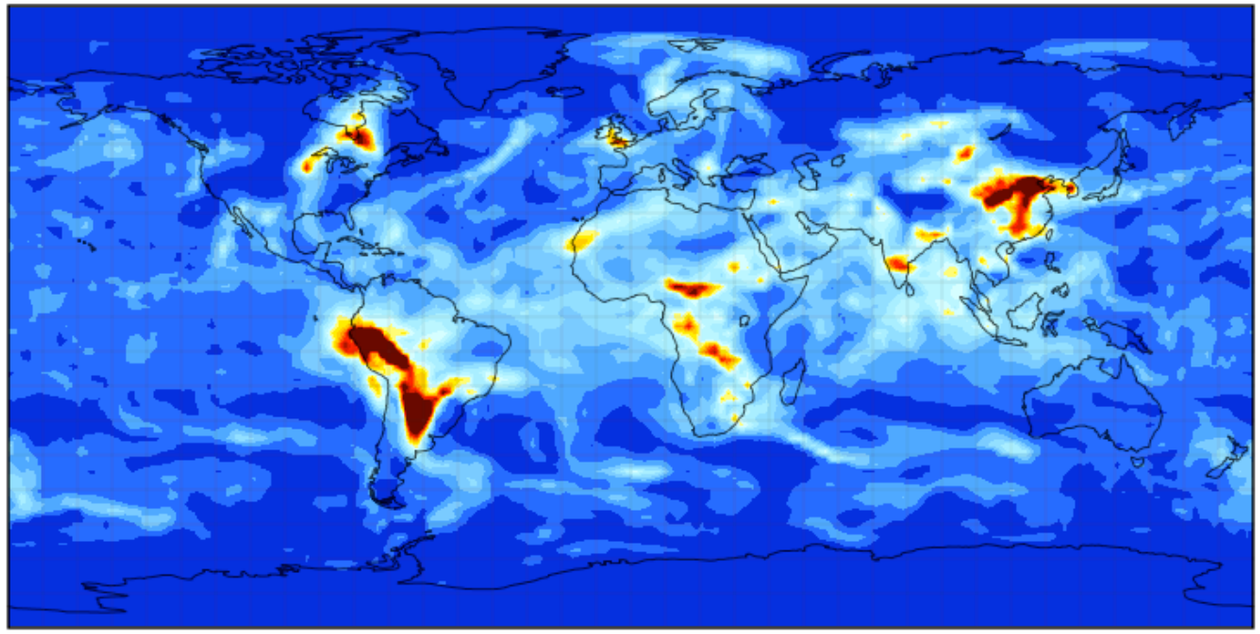
AEROD



AEROD ()

0.0 0.2 0.4 0.6 0.8 1.0

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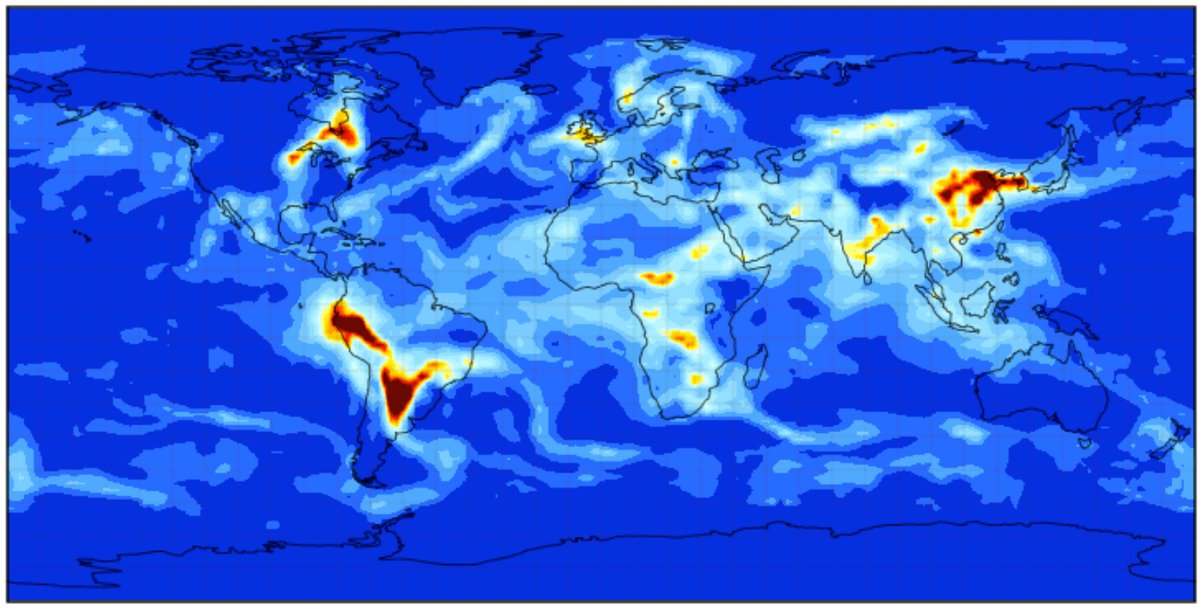
2007-09-30

AEROD

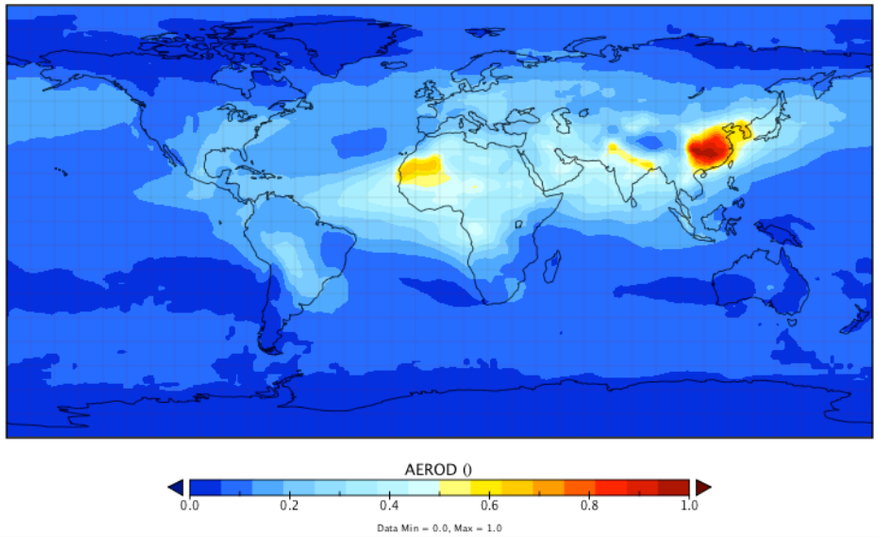


AEROD ()

0.0 0.2 0.4 0.6 0.8 1.0

Data Min = 0.0, Max = 2.2

AEROD



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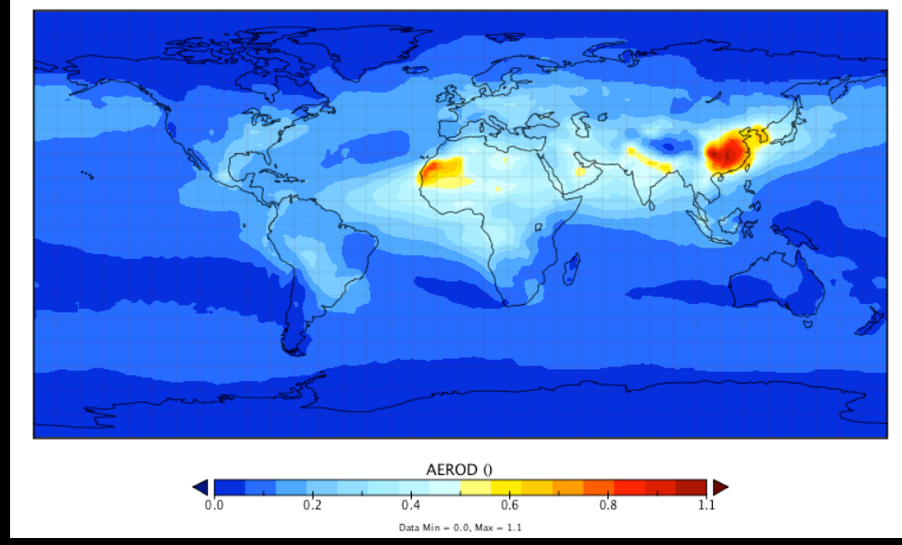

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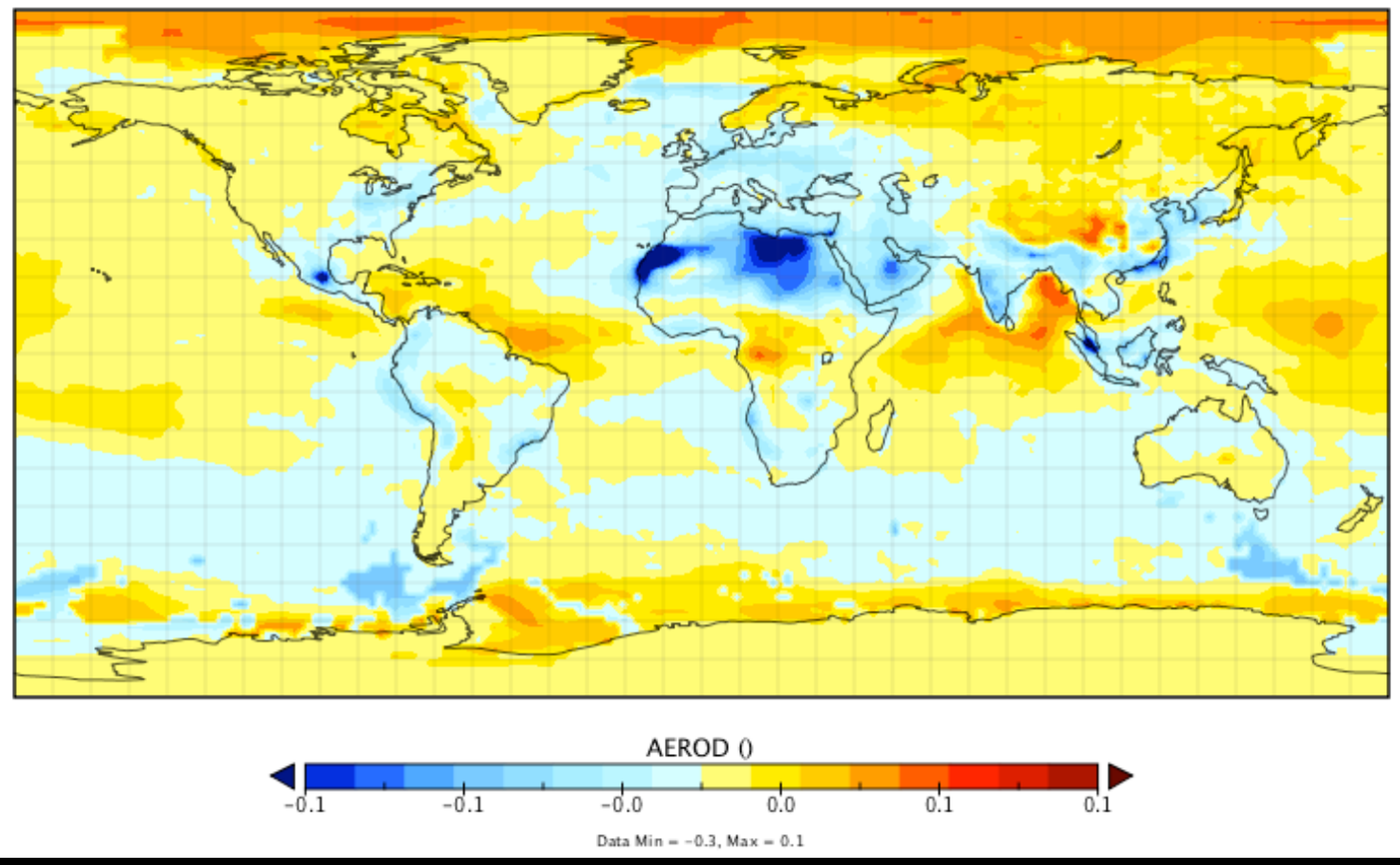

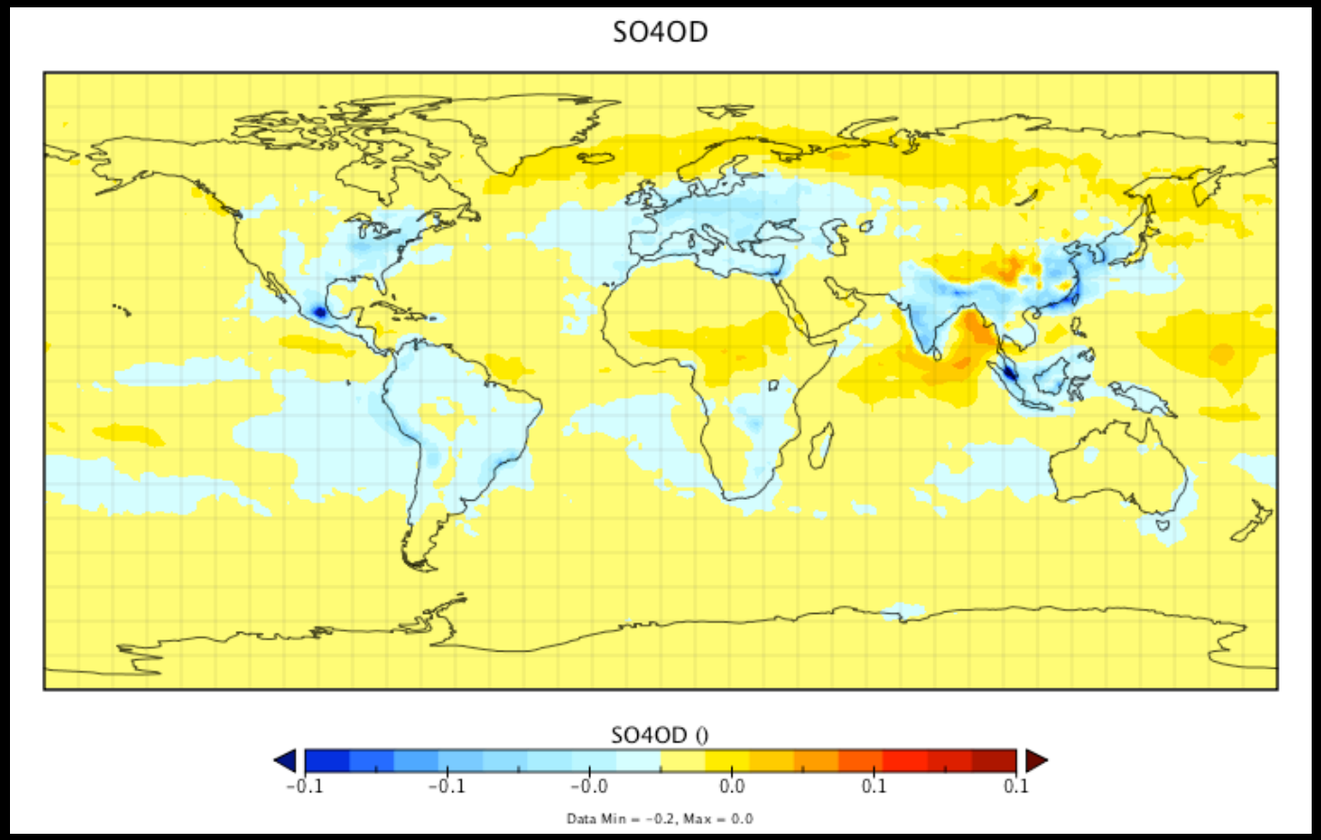
SO4OD
SO4OD ()
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−0.1
−0.0
0.0
0.1
0.1
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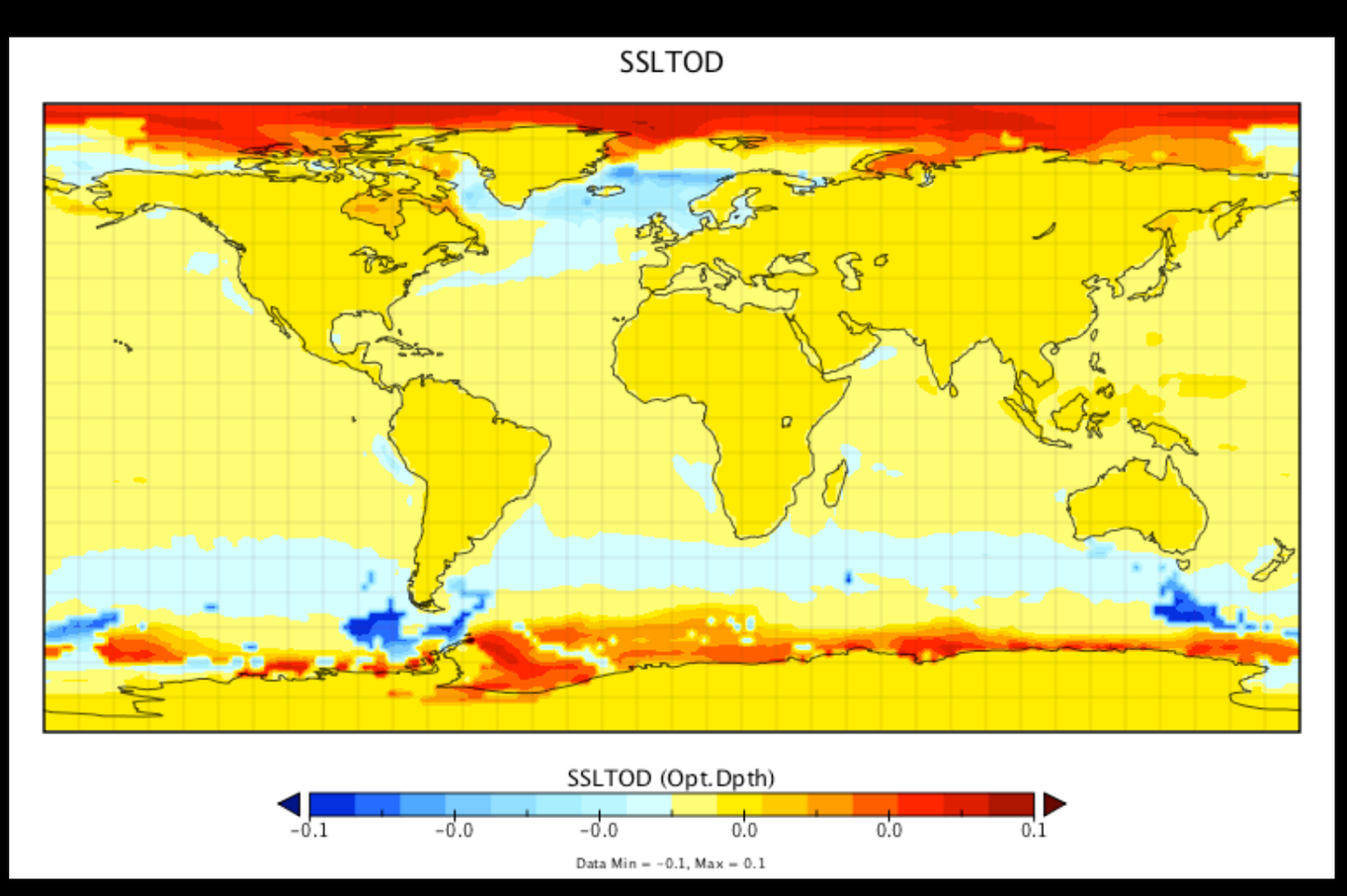
SSLTOD
SSLTOD (Opt.Dpth)
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−0.0
−0.0
0.0
0.0
0.1
Data Min = −0.1, Max = 0.1