

**WHY**

The visible aerosol optical depth is the most fundamental property to characterize atmospheric aerosol and the primary property in aerosol remote sensing from ground and space. Many global multi-year data are offered from different sensors at different accuracy and varying limitations to global coverage. It is our goal to identify retrieval strengths and combine superior pieces to the **BEST** possible **DATA-SET**.

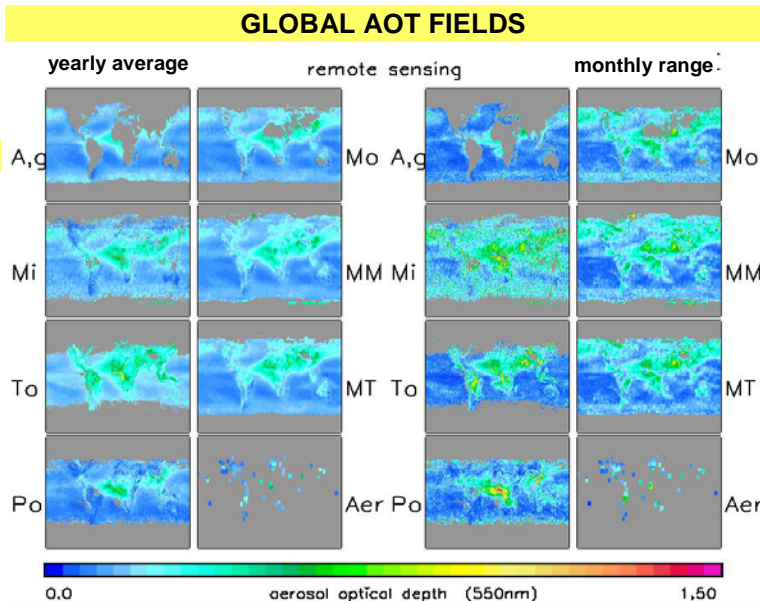
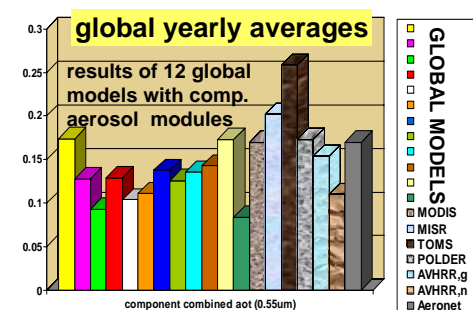
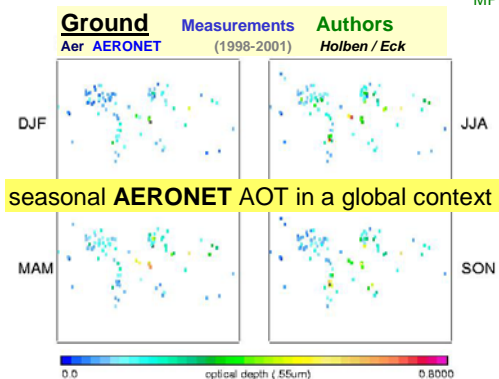
# AEROSOL OPTICAL DEPTH

Global Fields and Regional Averages from Measurements



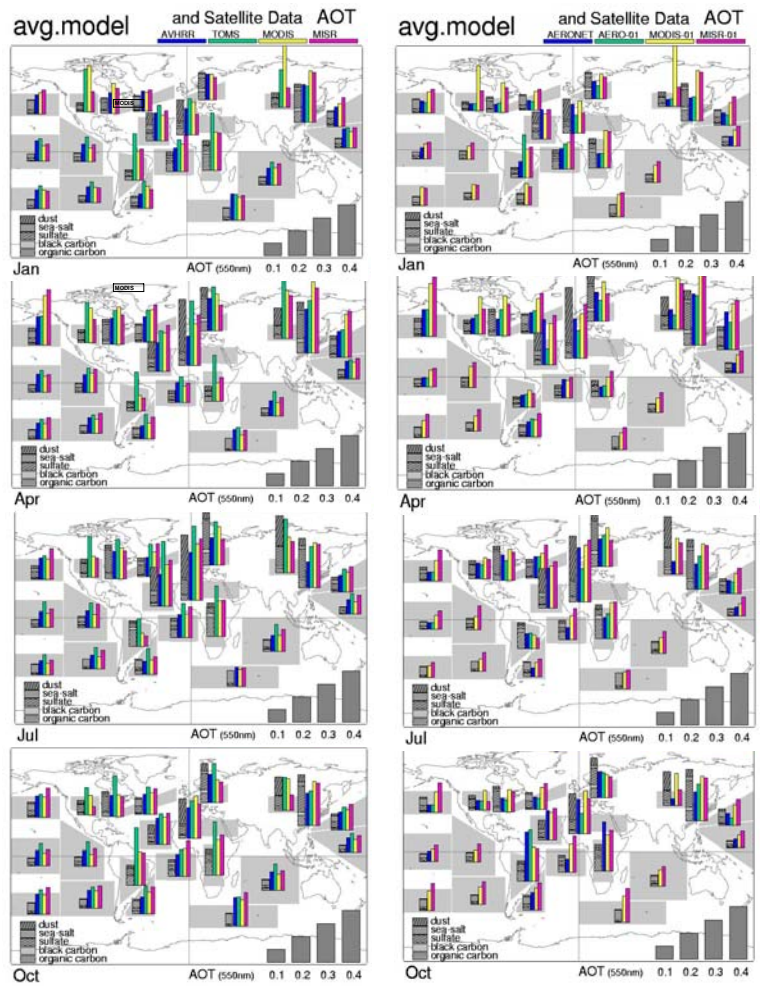
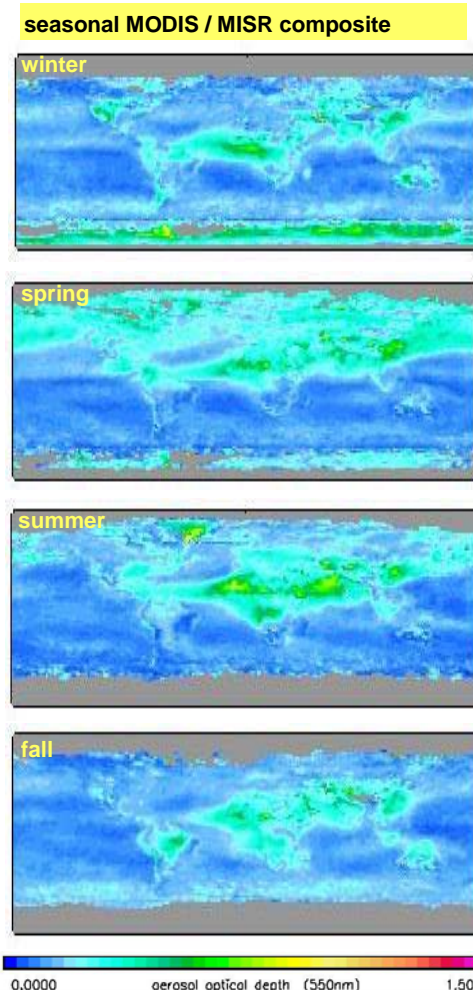
Stefan Kinne and Authors  
MPI for Meteorology, Hamburg, Germany

Satellite	Measurements	Authors
MO MODIS	(2001)	Chu / Kaufmann
MI MISR	(2001)	Kahn / Martonchick
AV AVHRR	(1983-2001)	Mishchenko / Geo.
TO TOMS	(1979-2001)	Torres / Herman
PO POLDER	(1986-1987)	Gouliomb / Tanre
MM MODIS (primary) / MISR (secondary)		
MT MODIS (primary) / TOMS (secondary)		



- multi-year: AVHRR, TOMS
- year 2001: MODIS, MISR
- average in global modeling

- morning data only
- AERONET, MODIS, MISR
- average in global modeling



**next**

**concepts**

- quantify retrieval limitations / develop methods to overcome these limitations with supplementary data (data from other satellite sensors)
- improve connections to ground-data co-located in time and space (only use data from ground-sites that represent on the smallest pixel size)
- develop a recommended best global aot data-set by combining the best components (take advantage of individual retrieval strengths)