Intercomparison of satellite retrieved aerosol optical depth over ocean


• A tool for validating our global model
• Analyse and compare different satellite aerosol retrievals over ocean and land
• Develop satellite aerosol products better suited for users over ocean and land
• Two AVHRR retrievals, POLDER, OCTS, TOMS, SeaWiFS, VIRS
8-months period, Nov 96 – Jun 97
Period from Sep 1997 to Dec 2000

Global

AOD 550 nm

AVHRR-1  AVHRR-2  TOMS  SeaWiFS  AVHRR-1 QC  AVHRR-1 6S  VIRS

AOD 550 nm

Sep 97  Nov 97  Jan 98  Mar 98  May 98  Jul 98  Sep 98  Nov 98  Jan 99  Mar 99  May 99  Jul 99  Sep 99  Nov 99  Jan 00  Mar 00  May 00  Jul 00  Sep 00  Nov 00

June 2-3, 2003
Scatter plot for the individual satellite retrievals and AERONET
AOD comparison in events of high AOD or aerosol campaigns
Summary

• Significant differences between the satellite retrievals
• No single data set which stands out as very different from the others
• Cloud screening is likely one major reason for the differences
• Comparison with AERONET data
  • No particular region with large differences
  • No retrieval with especially large differences
  • No particle size (Ångstrøm exponent) where differences particularly large