

Home

Online Library ACP

- Recent Final Revised Papers
- Volumes and Issues**
- Special Issues
- Library Search
- Title and Author Search

Online Library ACPD

Alerts & RSS Feeds

General Information

Submission

Review

Production

Subscription

Comment on a Paper

Impact  
Factor  
4.865

ISI  
indexed



▣ Volumes and Issues ▣ Contents of Issue 6

Atmos. Chem. Phys., 5, 1697-1719, 2005

www.atmos-chem-phys.net/5/1697/2005/

© Author(s) 2005. This work is licensed under a Creative Commons License.

## Intercomparison of satellite retrieved aerosol optical depth over ocean during the period September 1997 to December 2000

G. Myhre<sup>1,2</sup>, F. Stordal<sup>1,2</sup>, M. Johnsrud<sup>1</sup>, D. J. Diner<sup>3</sup>, I. V. Geogdzhayev<sup>4</sup>, J. M. Haywood<sup>5</sup>, B. N. Holben<sup>6</sup>, T. Holzer-Popp<sup>7</sup>, A. Ignatov<sup>8</sup>, R. A. Kahn<sup>3</sup>, Y. J. Kaufman<sup>9</sup>, N. Loeb<sup>10</sup>, J. V. Martonchik<sup>3</sup>, M. I. Mishchenko<sup>4</sup>, N. R. Nalli<sup>8</sup>, L. A. Remer<sup>9</sup>, M. Schroedter-Homscheidt<sup>7</sup>, D. Tanré<sup>11</sup>, O. Torres<sup>12</sup>, and M. Wang<sup>13</sup>

<sup>1</sup>Norwegian Institute for Air Research (NILU), Kjeller, Norway

<sup>2</sup>Department of Geosciences, University of Oslo, Oslo, Norway

<sup>3</sup>Jet Propulsion Laboratory, California Institute of Technology, Pasadena California, USA

<sup>4</sup>NASA Goddard Institute for Space Studies, New York, New York, USA

<sup>5</sup>Met Office, Exeter, UK

<sup>6</sup>Biospheric Sciences Branch, NASA Goddard Space Flight Center, Greenbelt, Maryland, USA

<sup>7</sup>Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Deutsches Fernerkundungsdatenzentrum (DFD), Oberpfaffenhofen, Germany

<sup>8</sup>NOAA/NESDIS/Office of Research and Applications/Climate Research and Applications Division, Washington, D.C., USA

<sup>9</sup>Laboratory for Atmospheres, NASA/Goddard Space Flight Center, Greenbelt, Maryland, USA

<sup>10</sup>Center for Atmospheric Sciences, Hampton University, Hampton, VA., USA

<sup>11</sup>Laboratoire d'Optique Atmosphérique, Université de Lille/CNRS, Villeneuve d'Ascq, France

<sup>12</sup>Joint Center for Earth Systems Technology, University of Maryland Baltimore County, Baltimore, Maryland, USA

<sup>13</sup>University of Maryland-Baltimore County, NASA Goddard Space Flight Center, Greenbelt, Maryland, USA

**Abstract.** Monthly mean aerosol optical depth (AOD) over ocean is compared from a total of 9 aerosol retrievals during a 40 months period. Comparisons of AOD have been made both for the entire period and sub periods. We identify regions where there is large disagreement and good agreement between the aerosol satellite retrievals. Significant differences in AOD have been identified in most of the oceanic regions. Several analyses are performed including spatial correlation between the retrievals as well as comparison with AERONET data. During the 40 months period studied there have been several major aerosol field campaigns as well as events of high aerosol content. It is studied how the aerosol retrievals compare during such circumstances. The differences found in this study are larger than found in a previous study where 5 aerosol retrievals over an 8 months period were compared. Part of the differences can be explained by limitations and deficiencies in some of the aerosol retrievals. In particular, results in coastal regions are promising especially for aerosol retrievals from satellite instruments particularly suited for aerosol research. In depth analyses explaining the differences between AOD obtained in different retrievals are clearly needed. We limit this study to identifying differences

Search ACP

Library Search

Author Search

News

- Sister Journals AMT & GMD
- Financial Support for Authors
- Journal Impact Factor
- Public Relations & Background Information

Recent Papers

01 | ACPD, 10 Feb 2009: Bromocarbons in the tropical marine boundary layer at the Cape Verde Observatory – measurements and modelling

02 | ACPD, 10 Feb 2009: Long-term study of VOCs measured with PTR-MS at a rural site in New Hampshire with urban influences

03 | ACPD, 10 Feb 2009: Validation of urban NO<sub>2</sub> concentrations and their diurnal and seasonal variations observed from space (SCIAMACHY and OMI)

and similarities and indicating possible sources that affect the quality of the retrievals. This is a necessary first step towards understanding the differences and improving the retrievals.

▣ [Final Revised Paper](#) (PDF, 809 KB) ▣ [Discussion Paper](#) (ACPD)

Citation: Myhre, G., Stordal, F., Johnsrud, M., Diner, D. J., Geogdzhayev, I. V., Haywood, J. M., Holben, B. N., Holzer-Popp, T., Ignatov, A., Kahn, R. A., Kaufman, Y. J., Loeb, N., Martonchik, J. V., Mishchenko, M. I., Nalli, N. R., Remer, L. A., Schroedter-Homscheidt, M., Tanré, D., Torres, O., and Wang, M.: Intercomparison of satellite retrieved aerosol optical depth over ocean during the period September 1997 to December 2000, *Atmos. Chem. Phys.*, 5, 1697-1719, 2005. ▣ [Bibtex](#) ▣ [EndNote](#) ▣ [Reference Manager](#)