

Name of research institute or organization:

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**Physikalisch-Meteorologisches Observatorium Davos,  
World Radiation Center**

Title of project:

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Remote sensing of aerosol optical depth

Project leader and team:

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Dr. Christoph Wehrli, project leader  
Dr. Stephan Nyeki

Project description:

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Aerosol optical depth (AOD) has been derived from solar spectral irradiance measurements at Jungfraujoch since 1998. These measurements are made in the context of the Global Atmosphere Watch (GAW) program of the WMO by PMOD/WORCC in collaboration with MeteoSwiss. Quality controlled results are fed into the World Data Center Aerosols (WDCA) for public access. This project is a continuous monitoring activity.

As our Precision Filter Radiometer (PFR) was last exchanged in January 2010, the instrument was not replaced in 2011. However, an exchange is provisionally planned for 2012.

Key words:

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Solar radiation, Aerosol optical depth monitoring, calibration

Internet data bases:

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<http://www.pmodwrc.ch/worcc>  
<http://ebas.nilu.no/>

Collaborating partners/networks:

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MeteoSwiss (MCH)  
Global Atmosphere Watch (GAW), AOD network

Scientific publications and public outreach 2011:

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**Refereed journal articles and their internet access**

Nyeki, S., Halios, C.H., Baum, W., Eleftheriadis K., Flentje H., Gröbner, J., Vuilleumier, L., Wehrli, C., Ground-Based Aerosol Optical Depth Trends at Three High-Altitude Sites in Switzerland and Southern Germany from 1995 – 2010, J. Geophys. Res., submitted 2011.

**Conference papers**

Nyeki, S., C. Halios, K. Eleftheriadis, C. Wehrli, and J. Gröbner, Aerosol Optical Depth Trends in Switzerland from 1995 - 2010, American Geophysical Union Conference, San Francisco, USA, 5-9 December 2011.

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