

List of Publications

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21 March 2012

Peer-reviewed Journal Articles

- [1] A. Benedetti, J. W. Kaiser, and J.-J. Morcrette. Global Aerosols [in “State of the Climate in 2011”]. *Bull. Amer. Meteor. Soc.*, submitted, 2012.
- [2] T. C. Bond, S. J. Doherty, D. W. Fahey, P. M. Forster, T. K. Berntsen, O. Boucher, B. J. DeAngelo, M. G. Flanner, S. J. Ghan, B. Kärcher, D. Koch, S. Kinne, Y. Kondo, U. Lohmann, P. K. Quinn, M. C. Sarofim, M. Schultz, M. Schulz, C. Venkataraman, H. Zhang, S. Zhang, N. Bellouin, S. Guttikunda, P. K. Hopke, M. Z. Jacobson, J. W. Kaiser, Z. Klimont, J. P. Schwarz, D. Shindell, T. Storelvmo, S. G. Warren, and C. S. Zender. Bounding the role of black carbon in the climate system: A scientific assessment. *J. Geophys. Res.*, submitted, 2012.
- [3] J. W. Kaiser, A. Heil, M. O. Andreae, A. Benedetti, N. Chubarova, L. Jones, J.-J. Morcrette, M. Razinger, M. G. Schultz, M. Suttie, and G. R. van der Werf. Biomass burning emissions estimated with a global fire assimilation system based on observed fire radiative power. *Biogeosciences*, 9:527–554, 2012.
- [4] J. W. Kaiser and G. R. van der Werf. Global Biomass Burning [in “State of the Climate in 2011”]. *Bull. Amer. Meteor. Soc.*, submitted, 2012.
- [5] J.-J. Morcrette, A. Benedetti, J. W. Kaiser, and A. M. Tompkins. Aerosol-cloud-radiation interactions and their impact on ECMWF/MACC forecasts. *J. Geophys. Res.*, submitted, 2012.
- [6] O. Stein, J. Flemming, A. Inness, J. W. Kaiser, and M. G. Schultz. Global reactive gases forecasts and reanalysis in the MACC project. *Journal of Integrative Environmental Sciences*, submitted, 2012.
- [7] A. Benedetti, J. W. Kaiser, and J.-J. Morcrette. Global Aerosols [in “State of the Climate in 2010”]. *Bull. Amer. Meteor. Soc.*, 92(6):S65–S67, 2011.
- [8] C. Granier, B. Bessagnet, T. Bond, A. D’Angiola, H. Dernier van der Gon, G. Frost, A. Heil, J.W. Kaiser, S. Kinne, G. Klimont, S. Kloster, J.F. Lamarque, C. Lioussé, T. Masui, F. Meleux, A. Mieville, T. Ohara, J.C. Raut, K. Riahi, M. Schultz, S.J. Smith, A. Thompson, J. van Aardenne, G.R. van der Werf, and D.P. van Vuuren. Evolution of anthropogenic and biomass burning emissions of air pollutants at global and regional scales during the 1980–2010 period. *Climatic Change*, 109(1-2):163–190, 2011.
- [9] V. Huijnen, J. Flemming, J. W. Kaiser, A. Inness, J. Leitao, A. Heil, H. Eskes, M. Schultz, et al. Hindcast experiments of tropospheric composition during the summer 2010 fires over Western Russia. *Atmos. Chem. Phys. Discuss.*, 11:31851–31909, 2011.
- [10] J. W. Kaiser, A. Heil, and G. R. van der Werf. Global Biomass Burning [in “State of the Climate in 2010”]. *Bull. Amer. Meteor. Soc.*, 92(6):S72–S74, 2011.

- [11] J. W. Kaiser and J. G. Goldammer. Global Biomass Burning [in "State of the Climate in 2009"]. *Bull. Amer. Meteor. Soc.*, 91(6):S51–S52, 2010.
- [12] J. W. Kaiser, A. Benedetti, and J.-J. Morcrette. Global Aerosols [in "State of the Climate in 2009"]. *Bull. Amer. Meteor. Soc.*, 91(6):S45–S47, 2010.
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- [14] A. Benedetti, J.-J. Morcrette, O. Boucher, A. Dethof, R. J. Engelen, M. Fisher, H. Flentje, N. Huneeus, L. Jones, J. W. Kaiser, S. Kinne, A. Manglold, M. Razinger, A. J. Simmons, and M. Suttie. Aerosol analysis and forecast in the European Centre for Medium-Range Weather Forecasts Integrated Forecast System: 2. Data assimilation. *J. Geophys. Res.*, 114(D13):D13205, 2009.
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- [30] J.W. Kaiser, V.V. Rozanov, and J.P. Burrows. Theoretical precisions for SCIAMACHY limb retrieval. *Adv. Space Res.*, 29(11):1837–1842, 2002.
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Book

- [1] J.W. Kaiser. *Atmospheric parameter retrieval from UV-vis-NIR limb scattering measurements*. Logos Verlag, Berlin, 2002.

Proceedings Contributions

- [1] J.W. Kaiser, A. Benedetti, J. Flemming, J.-J. Morcrette, A. Heil, M.G. Schultz, G.R. van der Werf, and M.J. Wooster. From fire observations to smoke plume forecasting in the MACC services. In *Proc. 'Earth Observation for Land-Atmosphere Interaction Science', Frascati, Italy, 3–6 November 2010*. European Space Agency, January 2011. SP-688.
- [2] O. Stein, J. Flemming, A. Inness, J. W. Kaiser, and M. G. Schultz. Global reactive gases forecasts and reanalysis in the MACC project. In *Sixth International Symposium on Proc. Sixth International Symposium on Non-CO2 Greenhouse Gases (NCGG-6)*, Amsterdam, NL, 2011.
- [3] J. W. Kaiser, M. Suttie, J. Flemming, J.-J. Morcrette, O. Boucher, and M. G. Schultz. Global real-time fire emission estimates based on space-borne fire radiative power observations. *AIP Conf. Proc.*, 1100:645–648, 2009.

- [4] J. W. Kaiser, M. G. Schultz, J. M. Gregoire, C. Textor, M. Sofiev, E. Bartholome, M. Leroy, R. J. Engelen, and A. Hollingsworth. Observation Requirements for Global Biomass Burning Emission Monitoring. In *Proc. 2006 EUMETSAT Met. Sat. Conf.*, 2006.
- [5] J. Brazile, J.W. Kaiser, D. Schläpfer, J. Nieke, M.E. Schaepman, and K.I. Itten. Parallelization of APEX airborne imaging spectrometer product generation. *e-proceedings EARSeL*, 2005.
- [6] J.W. Kaiser, J. Nieke, D. Schlaepfer, J. Brazile, and K.I. Itten. Sensitivity Study for Atmospheric Applications with APEX. In B. Zagajewski, M. Sobczak, and M. Wrzesień, editors, *Proceedings of 4th EARSeL Workshop on Imaging Spectroscopy*. EARSeL and Warsaw University, 2005.
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- [11] J. Nieke, J. W. Kaiser, D. Schläpfer, J. Brazile, K. I. Itten, P. Strobl, M. Schaepman, and G. Ulbrich. Calibration methodology for the airborne dispersive pushbroom imaging spectrometer (APEX). *Proc. SPIE*, 5570:445–452, 2004.
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Selected Other Publications

- [1] A. Benedetti, J. W. Kaiser, J.-J. Morcrette, R. Eresma, and S. Lu. Simulations of volcanic plumes with the ECMWF/MACC aerosol system. Tech. Memo. 653, ECMWF, 2011.
- [2] J. W. Kaiser, A. Heil, M. G. Schultz, O. Stein, G. R. van der Werf, M. J. Wooster, and W. Xu. Final report on implementation and quality of the D-FIRE assimilation system. MACC deliverable D_D-FIRE_7, ECMWF, Dec 2011.
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- [7] J. W. Kaiser, M. G. Schultz, and M. J. Wooster. Improved quantitative fire description with multi-species inversions of observed plumes. Scientific report of ESF Exploratory Workshop, European Science Foundation, 2009.
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- [12] J.-J. Morcrette, P. Bechtold, A. Beljaars, A. Benedetti, A. Bonet, F. Doblas-Reyes, J. Hague, M. Hamrud, J. Haseler, J. W. Kaiser, M. Leutbecher, G. Mozdzyński, M. Razinger, D. Salmond, S. Serrar, M. Suttie, A. Tompkins, A. Untch, and A. Weisheimer. Recent advances in radiation transfer parametrizations. Tech. Memo. 539, ECMWF, Reading, UK, 2007.

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