

Interactive comment on “Inclusion of biomass burning in WRF-Chem: impact of wildfires on weather forecasts” by G. Grell et al.

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Q: I concur with the first review that some additional information and critical statement could be provided in respect to aerosol effects and convective parameterization used. However, I do see this work as a process study, thus more cases and more rigorous approach are required to make a full assessment of impacts before these processes could be included in operational NWP.

A: See responses to reviewer #1. Additionally we added a paragraph at the end of the conclusions: While the improved simulation of the sounding for our case study is encouraging and a focus on online integrated systems may be timely even for Numerical Weather Prediction (NWP) models, much more research and discussion may be needed for NWP (see also discussion in Grell and Baklanov, 2011). Additionally,

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better and more complete representations of physical and chemical processes and interactions in both air quality and weather prediction models are needed. The model complexity in our study is already significantly increased compared to models commonly used in operational environments, yet we feel it still needs a more complete representation of the processes involved.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 30613, 2010.