

Interactive comment on “Direct radiative effect of carbonaceous aerosols from crop residue burning during the summer harvest season in East China” by Huan Yao et al.

Anonymous Referee #2

Received and published: 6 December 2016

This is a well-written manuscript focusing on the timely subject of DRE of carbonaceous aerosols emitted by crop-residue burning in East China. I believe that the manuscript is suitable for publication in ACP. Below are a few comments: 1. Line 245: AOD calculations. Instead of doing linear interpolation to obtain AOD at 550, it is more appropriate to use a power-law fit – i.e. calculate the Angstrom Exponent from the other wavelengths. 2. Line 314: the cited studies present global maps of DRE due to BrC absorption. It would be informative to compare results not with the global means, but with the DRE in East China from those studies (as could be inferred from the maps). I expect this to actually yield a good comparison. 3. Figure 3: It would be useful to also show scatter plots of modeled vs observed with a 1:1 line. 4. Figure 6: Why are there

C1

negative values for BC DRE and DRE due to BrC absorption? Those should be strictly positive.

Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2016-759, 2016.

C2