

## ***Interactive comment on “Contribution of ammonium nitrate to aerosol optical depth and direct radiative forcing by aerosols over East Asia” by R. S. Park et al.***

**Anonymous Referee #2**

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1<sup>iij</sup> Many researchers have discussed the errors of MODIS AOD in China. The authors ought to cite those papers to definite the errors range of MODIS AOD in the region. 2<sup>iij</sup> In the paper, the particulate and air pollutants are serious in China, but it is lack of evaluating the accuracy of CMAQ modeling results in region. The comparison in Japan and Korea was not enough, because the emission and climate of two countries are very different with China. The comparison was necessary in China. 3<sup>iij</sup> DRF was valid under clear-sky conditions, but not under the cloud or rain conditions because of no sunlight. Why did you calculate DRF under all-sky conditions? Just because the model can calculate the value. But the value is not true. 4<sup>iij</sup> Error range

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of the retrieved results should be made in the figures. (eg. fig 4-6 and so on) 5<sup>iij</sup> Since the simulate AOD and DRF from the model were good consistent with the AERONET sites and MODIS results, I suggest that the authors evaluate the contributions of all kinds of aerosols to AOD and DRF, not just for ammonium nitrate.

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