Atmos. Chem. Phys. Discuss., 15, C7157–C7158, 2015 www.atmos-chem-phys-discuss.net/15/C7157/2015/

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## **ACPD**

15, C7157-C7158, 2015

Interactive Comment

## Interactive comment on "Improving aerosol interaction with clouds and precipitation in a regional chemical weather modeling system" by C. Zhou et al.

## **Anonymous Referee #4**

Received and published: 24 September 2015

1.Introduction: The sentence "Hygroscopic aerosols can act as cloud condensation nuclei (CCN) or ice nuclei (IN)" should be revised as " Aerosols....", it is more general. Since cloud nucleation processes are sometime involved into a very complicated microphysical process, such as freezing nucleation, not only for "hygroscopic aerosols".

2. Introduction: authors should notice that WRF-CHEM model has same aerosol-cloud interaction scheme, which should be mentioned in this part. One of weak points is that WRF-CHEM uses a relatively rough emission sheme for regions in China, so authors also should clearly state what emission source is used in your model.

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Interactive Discussion

Discussion Paper



3. Section 3.2 Numerical experiment designs: please give the horizontal resolution of simulation, which is important to simulation cloud and precipitation processes.

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 15755, 2015.

## **ACPD**

15, C7157-C7158, 2015

Interactive Comment

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