

Interactive comment on “Ground based characterization of spectral optical properties of haze and Asian dust episodes under Asian continental outflow during winter 2014” by Jinsang Jung et al.

Anonymous Referee #1

Received and published: 5 December 2016

General Comments Aerosol is very important to impact atmospheric cycle and climate system by direct and indirect effects, a hot issue of scientific researches internationally. Haze is a typical heavy pollution in East Asia, mainly caused by fine particles named as PM_{2.5}. The growth of emissions and human activities with rapid urbanization is the most important reason for the increase of air pollution in this region. Also, the East Asia is an important source of dust, with large implications of regional environment and climate changes in downwind areas. The paper presents an intensive measurements of aerosol optical properties during one typical haze and Asian dust episodes in Korea, and analyze these optical properties and compare their difference between this two pe-

C1

riods. In fact, high aerosol burden regions such as urban areas in Asia are still not well characterized in terms of particle amount. The topic of this paper is of common interest within the scientific community. Although the manuscript includes some important data, however, the quality is not sufficient in the current state to be directly published. The authors should take the suggestions made here into consideration for revision.

Specific suggestions 1. As for the title, it should be changed as “.of aerosol (spectral) optical properties.”. 2. In section 3.1, Figure 2 gives a temporal variation of wind, PM₁₀, etc. the paper should address the time resolution of these values clearly, such as PM_{2.5}, PM₁₀, at hourly? Daily? 3. There are so many ground-based measurements of aerosol optical properties in East Asia. In fact this paper uses normal instruments, data and analyses as prior, however no clear new points. Although some available data, I suggest that the paper should add more deep analyses for aerosol mixing or aging due to transport using optical properties. 4. There is some room for revision in english.

Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2016-961, 2016.

C2