

Interactive comment on “In situ continuous visible and near-infrared spectroscopy of an alpine snowpack” by Marie Dumont et al.

C. He

cenlinhe@atmos.ucla.edu

Received and published: 9 January 2017

The authors measured snow spectral albedo in the visible/NIR range at an alpine site and highlighted the effects of snow specific surface area, impurity content, presence of liquid water, and slope on variations of spectral snow albedo. I have a short comment.

In addition to the factors mentioned by the authors, recent studies also showed that snow grain shape and how impurities mixed with snow grains are two critical factors in determining snow albedo (e.g., Liou et al., 2014; He et al., 2014). I suggest including these references and adding some discussions on this aspect, which would be very interesting.

References:

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Liou, K. N., Takano, Y., He, C., Yang, P., Leung, L. R., Gu, Y., and Lee, W. L.: Stochastic parameterization for light absorption by internally mixed BC/dust in snow grains for application to climate models, *J. Geophys. Res.-Atmos.*, 119, 7616-7632, doi:10.1002/2014jd021665, 2014.

He, C., Li, Q. B., Liou, K. N., Takano, Y., Gu, Y., Qi, L., Mao, Y. H., and Leung, L. R.: Black carbon radiative forcing over the Tibetan Plateau, *Geophys. Res. Lett.*, 41, 7806-7813, doi:10.1002/2014gl062191, 2014.

[Interactive comment on The Cryosphere Discuss.](#), doi:10.5194/tc-2016-266, 2016.

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