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The author are targeting an important topic, the temporal change and retrieval of different aerosol classes in the Arctic. This is one of the topics which have to be determined and discussed in the context of the phenomenon of Arctic amplification and climate warming. They are using the information and synergy of different instrument types, present a joint observation scheme and a flow diagram of the aerosol retrieval scheme. The aerosol classes were determined for two different atmospheric conditions, a cloud case and a cloud free case. Most of the work is done and hidden behind those two schemes and this and the calculation of results and error bars could be described in more detail. Unfortunately the examination is limited to two single example days. A temporal change of the aerosol classes for a longer time period would be much more comprehensive. The results are discussed and a daily cycle is presented for different aerosol classes. Overall the manuscript is well written and after some minor changes almost ready for publication.

Answer:

Thank you very much.

We agree, that the evaluation of only two days does not contribute much information to the problem of the Arctic amplification. Hence, an analysis of the whole time series is in preparation. The present study is designed to discuss the method to obtain aerosol data from the measurements, and give a characterization of the result.