

Interactive comment on “An EARLINET Early Warning System for atmospheric aerosol aviation hazards” by Nikolaos Papagiannopoulos et al.

Anonymous Referee #2

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The paper authored by Papagiannopoulos et al. treats on methodology to detect airborne hazards for aviation in Near Real-Time (NRT). This methodology is mainly based on LiDAR network strategically deployed over the European region: EARLINET (European Aerosol LiDAR Network) network. The high resolution pre-processed data allows to obtain optical and microphysical parameters which could be helpful to develop the basis of a NRT Early Warning System (EWS) for aviation activity. The aims of the paper are clearly written by the authors and focus on the natural hazards which impacted the aviation sector. As reported by the authors, the development of a NRT-EWS is a crucial point after the aviation crisis due the Eyjafjallajökull volcanic eruption in 2010. This paper is interesting about this point. The methodology described by the authors to develop a NRT-EWS from LiDAR observations are quite

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convincible. They evaluated this methodology by the analysis of two case studies. Nevertheless, the presentation of the results should be improved in order to help the reader to understand the conclusion of the study. The figures are fairly clear and helpful to support the key arguments provided in the paper. I think that the manuscript may become acceptable after minor revisions. My suggestions are reported in the supplement file.

Please also note the supplement to this comment:

<https://www.atmos-chem-phys-discuss.net/acp-2020-178/acp-2020-178-RC2-supplement.pdf>

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2020-178>, 2020.

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