

Interactive comment on “Biomass burning aerosols in the southern hemispheric midlatitudes as observed with a multiwavelength polarization Raman lidar” by Athena Augusta Floutsi et al.

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The authors would like to thank the reviewers for their effort in reading the manuscript and providing constructive feedback.

In this study, we tried to demonstrate that the pristine environment of Punta Arenas is regularly disturbed by events of smoke aerosol advection from either short or long distances. In most studies, the Southern Oceanic regions are depicted as pristine environments, where marine conditions dominate. The observations from the DACAPO-PESO campaign, however, revealed that regularly the troposphere above Punta Arenas is far from pristine but influenced by an increased aerosol burden. Obviously, this message

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could not be transferred to the reviewers. To our knowledge there are not many studies investigating the aerosol burden in the troposphere above Southern Hemispheric mid-latitude locations (often referred to as Southern oceans). We therefore think, it would have been worth to share this knowledge as a prerequisite to improve the understanding on cloud formation processes in these regions and in general, which finally would also be a benefit for climate modelling.

However, due to the extensive quality assurance of the lidar data that is needed after each transport of the lidar system, the submission was delayed with respect to the dramatic wildfires in Australia in the end of 2019/ beginning of 2020. We therefore regret, that after the intense discussion of these record-breaking smoke emissions in Australia in beginning of 2020, our scientific message was obviously not of high interest for the Referees anymore. Considering both reviewers' comments, we refrain from submitting a comment by comment response and a revised version.

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