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Atmospheric Measurement Techniques Discussions

Interactive comment on "Software and database structure to analyze the relationship between aerosol, clouds and precipitation: SAMAC" *by* S. Gagné et al.

Anonymous Referee #1

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Review of "Software and database structure to analyze the relationship between aerosol, clouds and precipitation: SAMAC" by Gagne et al.

This study introduces a software program that researchers can use for the analysis of aerosol-cloud-precipitation data from airborne field campaigns. The topic of aerosol-cloud-precipitation interactions is a very important one and examining the data consistently and accurately across campaigns and research groups can be improved. I applaud the authors for trying to provide a framework for researchers to assist with their potential needs to do quick analysis in the field. The paper is written well, the title and abstract are appropriate, and the figures and tables are mostly clear.

The major issue for this reviewer is that the scientific significance of the work needs to increase before publication can be recommended. This reviewer prefers to be more convinced by the authors that there is great value in a tool like this in light of the fact that there are existing softwares and methods that are commonly and easily used already in the field. I question how useful this tool can be for scientists who want to get deep into the analysis and produce publication-worthy figures and tables. Also, taking a generic approach to analyse aerosol-cloud-precipitation data arguably can also have the side-effect of stunting creativity in how people use data. Field scientists have software packages and routines of their own that are efficient in terms of having the basic plots ready to go and also the ability to conduct more detailed analyses within the same framework, such as with IGOR software (amongst others probably) which is often used by aerosol researchers. I encourage the authors to do an improved job of convincing seasoned field data users as to why this software should be used and how this can benefit them beyond using the software packages that people have been using for years in the field quite efficiently already. The authors could also provide more motivation text about what target audiences would benefit most from this type of software since this reviewer's views are based on that of someone who has had extensive field experience; perhaps, the more relevant target audience are more inexperienced students? To increase the value of this manuscript and software package, the issues above should be addressed which can help considerably.

Minor comments: Figure 6: y-axis units are wrong. LWP is generally g m-2. Page 3648, Line 22: "fulfil" spelled wrong

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