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Title: **Overview of the Chemistry-Aerosol Mediterranean Experiment/Aerosol Direct Radiative Forcing on the Mediterranean Climate (ChArMEx/ADRIMED) summer 2013 campaign**.
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Anonymous Referee #3

The article gives an overview of an extensive field campaign including ground based in-situ and remote sensing measurements as well as airborne observations. The described ChArMEx/ADRIMED campaign incorporates existing ground based stations and adds valuable additional measurements at several super sites and secondary sites. Furthermore even satellite observations are considered and several different models are compared using the vast amount of observations. I agree with the reviewer 1 & 2 the paper is not strong in presenting new scientific findings. Nevertheless, this article paves the way for further investigations on the same data set and sets a basis for future publications.
The aims of the campaign are clearly outlined in the introduction and all observations are well presented. Additionally, some results are summarized and emphasized in the Conclusions with the hint to future publications. To my understanding proving existing knowledge, like the reasonable agreement of observed and modelled AOD and the negative radioactive forcing (found by others before) is often neglected in literature, but it is an important finding.
Especially the changes and answers followed by questions of reviewer 2 & 1 improve the quality of the paper a lot. I would like to emphasise the importance of such an overview paper of a big campaign and recommend the paper to be published after including a few more changes:

Major comments:
Page 19671 Conclusion:
In your introduction you have outlined the aims of the campaign very well. But from the conclusion only the first two aspects are addressed. The first aspect is obviously fulfilled. For the second Page 19672 line 20 and line 23: Remind the reader on previous published values and compare briefly. How does this improve the understanding of the Mediterranean DRF?
And the third aspect is almost left out. In fact could you summarize how the modifications of the radiative budget due to aerosols affect the sea-surface evaporation fluxes, relative humidity profiles, cloud-cover, and precipitation?
And more largely the Mediterranean hydrological cycle. Or at least try to incorporate some of these aspects.

Figure 1, 5, 6: Could you show the average of AERONET stations over the same time period? I noticed some stations already exist since at least 2003. It would be

a useful addtion to mention in text as well, if at all possible. Similar for Figure 28: How does the satellite compare? Of course it is averaged over a bigger area, but would be still interesting, e.g. to exclude/identify local effects. You could also suggest/outlook for future investigations.

Minor comments:
Page 19627 line 6: Give a short introduction reminder on how many sites, e.g. ‚During the campaign XX super sites and XX secondary sites were set up, which are decribed in the following.'

Page 19634 line 8: Are they really deployed just fort the campaign? Or did you use existing AERONET sites (checking on the AERONET page, it looks like many of the stations have been there longer). Please revise. As well give a brief summary, how many sites you have used, just a short sentence is enough.

Page19646 line 27: The order of words in the sentence is somewhat confusing, please revise.

Page 19653 line 15: ‚almost scattering' seems not to be the right term, maybe none absorbing of mainly scattering?

Page 19656 line 24: be consistent with the figure: Angström Exponent (AE)

Page 19663 line 8: be consistent Table capital (check document). Article ‚the' not needed.

Page 19667 line 21: ...the ..model...simulates (s is missing)

Page 19668 line 16: The order of words in the sentence is not correct, please revise.

Table 1 caption: ....gas concentrations.....

Table 2: It would be helpful to add information about the photometer type used, e.g. how many wavelength filters, with or without polar filter.

Table4: ...sounding balloon (no ‚s') flights...

Table 6: ....in the Table (be consistent, with capital T)

Table 7: It is not clear to me, why you only choose 4 stations. State a reason or show all stations. (Actually I think this table is removed in the new version, since shown in the figure)

Figure 2: The two aircrafts....

Figure 3: I think it should be ....flight trajectories...