Technical corrections: acp-2013-916

Reviewer 1:

I commend the authors for their thorough response to both reviewers comments and extra effort to incorporate CERES radiation fluxes and meteorological indices into the analysis. Overall, the authors adequately addressed my main concerns and nicely tied their response into the manuscript. Other than clarifying a few technical details I think this manuscript is ready for publication.

Technical details:

1. L243: Check the formatting of the unit "Wm-2,'" a superscript is needed on the number "-2.'" This formatting issue also occurs for km2 elsewhere in the manuscript.

Thank you, I have corrected this and check for missing superscripts throughout the text.

2. The blue data points in Figure 10 do not match the blue color used in the legend.

I have corrected this.

3. Please check, and specify that the "NET" top of atmosphere shortwave radiation flux is being used in figure 5. Also, consider plotting the shortwave albedo instead since the solar zenith angle (and downward flux) can vary across the domain of the volcano and possibly bias the interpretation of the results.

I have clarified that the top of atmosphere values presented in Figure 5 are upwards SW fluxes throughout the text. I have also added a reference to the impact of variation in solar zenith angle to the section on 'Satellite Data': "*Although differences in solar zenith (expected to be <10 ° in all cases and <5 ° for majority of retrievals) may result in variations in SW flux across the region surrounding the volcano, correlations with either cloud properties or wind direction are improbable and are therefore unlikely to affect comparison of upwind and downwind SW fluxes*"

Although 'Cloud Radiative Effect (CRE)' ToA NET shortwave fluxes are available as a CERES Level 3b product, these have a resolution of 1°x1° and would therefore be very unlikely to show the effects that we detect in the 20 km x 20 km reflected SW flux data.

Reviewer 2:

1. I have a problem with the use of acronyms throughout the manuscript. The authors should consistently introduce acronyms the first time the full term is used (e.g. cloud optical depth COD, cloud droplet effective radius CER, liquid water path LWP, etc) and consistently use the acronym for the rest of the paper. Further, I suggest introducing the acronyms AIE for "aerosol indirect effect" and VAIE for "volcanic aerosol indirect effect" throughout the paper.

I have introduced all cloud and aerosol property acronyms at the start of the section titled 'Satellite Data', and refer to retrieved cloud and aerosol properties only by their acronym after this point. I introduce AIE and VAIE as abbreviations in the introduction, as described below.

2.The authors should make a statement very early in the paper that the effects they are looking at are strictly speaking not "aerosol indirect effects'', as that terminology is reserved for effects resulting from anthropogenic- on top of natural emissions. With such a statement included and a phrase like "...for reasons of readability, we however speak of VAIEs..." the formulation will be clear.

I have added a sentence o the beginning of the second paragraph of the introduction "*Aerosol indirect effects (AIE) encompass the combined effects of both anthropogenic and natural emissions*'' and to the end of the first paragraph of the section on volcanic aerosol indirect effects: " *Volcanic emissions are one source of natural aerosol that, in combination with anthropogenic aerosol, result in AIE. For readability, we refer to this contribution as `volcanic aerosol indirect effects' (VAIE)*."

3. Line 121: impact on the radiative budget

Corrected.

4. Lines 186-187: There seems to be a miswording in this sentence

This has been corrected. It now says: "*This study presents an approach for detecting a volcanic aerosol indirect effect for the particular case of isolated, active volcanic islands*", and the following sentence has been removed.

5. Line 214: put the 2 in km2 as superscript

Done

6. Lines 615-617: If I understand this sentence correctly, the authors are trying to say the ERA-Interim is not able to reproduce the wind field in close proximity to the volcano? If this is what is trying to be said, I totally agree but shouldn't it say *"...used to rotate the data will be more representative of local wind fields...*''

I have deleted this sentence as it was misleading and actually repeated ideas that were expressed in the previous paragraph. It now reads just: "*Isolated topographic peaks, such as these volcanoes, introduce perturbations to the regional wind fields, resulting in local turbulence near the volcano itself and local differences from the ECMWF wind fields (spatial resolution = 1.5°) used in our analysis.*"

7. Lines 779-781: It is not clear to which volcanoes the first part of the sentence refers to.

I have corrected this: "*Top of Atmosphere Short Wave radiative flux is apparently elevated by at least 10 Wm^{-2} downwind of all three degassing volcanoes at distances > 150 km, and is even higher within 100~km downwind of Kilauea and Piton de la Fournaise*.''