

Interactive comment on “One-year analysis of rain and rain erosivity in a tropical volcanic island from UHF wind profiler measurements” by A. Réchou et al.

A. Réchou et al.

arechou@univ-reunion.fr

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Reviewer 3 (file name amtd-6-C1442-2013)

We thank the reviewer for his kind encouragement and careful reading of the manuscript. Please note that T. Narayana Rao and O. Bousquet, who actively participated in the revision of the paper, have also been added as co-authors.

The literature discussion is a very good and concise review. The one dynamical feature that might be added is a sentence about MJO effects since that is tropical phenomena now.

C3103

There are a number of minor changes and typos:

Abstract line 16: replace “mere” with “simple” Abstract line 18: replace “to” with “with”, ie: “. . . associated with strong . . . ” Page 3, line 5: Reword: “. . . most previous studies focus on the Northern Hemisphere” Page 4, line 1: insert “for” prior to “which” (ie, “for which”) Page 4, line 16: replace “revealed” with “found”, make technique plural ie techniques Page 4 line 19: replace “every” with “all” Page 5, line ???: replace “to” with “with” Page 5 line 13: Reword: “Such an instrumental setup enables calibration of the radar data and investigation of the . . . ”

Page 5 line 18: “pluviometer” is a very unusual word in English, why not just use “raingauge”. Reply: Above grammatical mistakes and typos are corrected in the revised version. Page 6: indicate how far the profiler is from hills or significant terrain. How far is the profiler from the mountain or mouth of the valley? Reply: The required information is given in the revised manuscript. UHF radar is located about 3 km away from the edge of the lava plateau and is located at the mouth of the river.

Page 6 line 7: Circuse is another word not used in English, I’m not sure what the meaning is here, perhaps volcanic basin or watershed? At the bottom of page 6 is “littoral” and it is unclear what that is, perhaps coast? “Planeze” is close enough to the English “plane” to be left as is. Circuse has been replaced by cirque - Planeze is replaced by lava plateau

Page 6, line 22: Is Gillot a location name or a missing reference? Reply: Gillot is a location name.

Page 7, line 4: Reword: “During a 4 minute cycle, in clear air and rain, it provides vertical profiles of reflectivity, the three components of wind, Doppler spectral width and skewness.” Reply: The above sentence has been rewritten in the revised version.

Page 8 line 25: replace “attenuated” by “reduced” Page 9 line 4: The threshold on skewness very efficiently removes snow echoes. Page 9, line 15: is 40m/s a typo?

C3104

Should it be mm/h? Page 10, line 19: replace “concerned” with “influenced” Page 13, line 12: “consistent” Page 14 line 9 : “consistency” Page 15, line 7: “another” Figure 2: mark the location of the wind profiler Figure 6 caption: “Profile”, also either write “dark blue” or “black” (not just “dark”). Figure 7: Write: “These images are proved by Meteosat” (not “Such”). Also please indicate the position of Reunion Is. with an arrow or similar. Reply: Above grammatical mistakes and typos were corrected in the revised version. Figure 8: “particules” is not an English word, but particles also doesn’t fit, what is meant here? Note that in 3) there are more data, since all data were taken into account Figure 10 caption: “associated” Reply: Corrected. Figures 8 – 11: the plots are rather small. Care will need to be taken in the final version that the labels are readable. In those captions, it is not necessary to include “the” before the date; eg, “(a) 2 Feb 2010, . . . ”. Reply: These figures were redrawn in the revised version. Labels are now clearly visible and readable. Grammatical mistakes have also been corrected.

Please also note the supplement to this comment:

<http://www.atmos-meas-tech-discuss.net/6/C3103/2013/amtd-6-C3103-2013-supplement.pdf>

Interactive comment on Atmos. Meas. Tech. Discuss., 6, 3249, 2013.