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Interactive comment on "Simulations and parameterisation of shallow volcanic plumes of Piton de la Fournaise, La Réunion Island using Méso-NH version 4-9-3" *by* S. G. Sivia et al.

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Received and published: 5 December 2014

The manuscript describes modelling efforts of a volcanic gas plume at Piton de la Fournaise using LES type simulations and quasi 1D simulations with a plume model. The article is reasonable, useful and generally well written. I only ask for a few minor but mandatory corrections and clarifications:

-page 8364, lines 14-15: saying '1 dimensional (single column) model with 1 km resolution' is odd. Clarify, you might use something like 'quasi-1D model using 3x3 columns' ...

-clarify in text why you decided to entrain all at the first model level at 40 m and if you

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formulation is vertical resolution dependent, also if your mass you wish to entrain can be larger than Delta p of first model level

-page 8364: change title '2 Materials' to something more sensible -page 8369: change notation for r_mix for the gas constant as one can easily think this is a mixing ratio -page 8373 and 8374: The definition of the fluxes in (100 and (11) is incorrect. It should write (q_u-q) and (T_u-T) as there isn't any flux if there is no difference in scalar value

Typos: -page 8362 line 25, add 'comma' after 'convection' -page 8373, line 13;'atleast'

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Interactive comment on Geosci. Model Dev. Discuss., 7, 8361, 2014.