Solid Earth
Discussions

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Interactive comment on "Comment on "Estimating the depth and evolution of intrusions at resurgent calderas: Los Humeros (Mexico)" by Urbani et al. (2020)" *by* Gianluca Norini and Gianluca Groppelli

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As I indicated in my previous review of the comment made by Norini and Groppelli on the paper of Urbani et al (2020), this is well written and documented comment that challenges some of the interpretations and conclusions of the original paper. This new version of the comment is more polite and less aggressive than the previous one, and states on those points of disagreement with the Urbani et al (2020) paper. Repeating what I said in my former review, Norini and Groppelli show a good field knowledge of the study area and on the previous literature, and use it to discuss some of the results and interpretations presented by Urbani et al (2020). The main contradictions

are found concerning the interpretation of some faults, the identification and geometry of uplifter areas inside the caldera, the validation of the proposed model of Urbani et al (2020) with well logs, and the stratigraphy and radiometric ages they present. The arguments presented by Norini and Groppelli generate doubts about the work done by Urbani et al (2020), at least for what concerns their interpretation of the data presented and, particularly, the conceptual model proposed. I fully agree with Norini and Groppelli when they say that "the boundary conditions of a model and the validation of the modelling results should always be based on the geological constraints that the natural prototype imposes", so if there is doubt on the suitability and accuracy of the geological constraints used, the resulting model may not be reliable and, therefore, needs revision. I feel that this revised version of the Norini and Groppelli's comment should be published as it is.

Interactive comment on Solid Earth Discuss., https://doi.org/10.5194/se-2020-168, 2020.