

## ***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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The comment made by Norini and Groppelli on the paper Urbani et al (2020) is well written and documented. Norini and Groppelli show a good field knowledge of the study area, already exposed in previous papers, and use that to argue against 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, 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 to support their comment are solid and demonstrate

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a good knowledge of the geology of Los Humeros caldera and generates 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 and of the geological constraints used, the resulting model may not be reliable and, therefore, needs revision. I feel the Norini and Groppelli's comment should be published as it is.

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