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Peer Review

Review of: "Coherent Vortices in the Mantle: A Scaling Theory for LLSVPs and the Iceland Plume"

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This is not a scientific paper. It has no new data about the LLSVPs or the Icelandic Plume, both of which are listed in the title. There is no theoretical model to explain the phenomena. Figures 1, 2, 4, 5, 6, and 7 are cartoons, which are artistic creations that bear no relation to observations. The other two figures are images of Earth with a few lines drawn on them.

The first paragraph of the Introduction says what these LLSVPs are and how other authors have interpreted them. The middle paragraph of page 20 gives what the authors suggest is the decisive question, which is given in italics. They present a list of quantitative tests, which they name but do not describe, and promise to explore them in future work.

The authors list phenomena from planetary science (Great Red Spot, page 5) and meteorology (hurricanes, storms, rotational dynamics, spiral geometry, supercell, page 7). They claim that they existed when the mantle was molten and got "frozen in" when the mantle cooled. This is pure, idle speculation, and no evidence is presented to support it.

Whoever wrote this paper needs a mentor—someone who can give instruction about what constitutes evidence in science, what constitutes a discovery, and how hypotheses are tested. Without that knowledge, there is no point in continuing this research or resubmitting the paper.

Declarations

Potential competing interests: No potential competing interests to declare.

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