We thank the referees for their thorough and very helpful reviews. We have responded to each of the referee comments below. The original comment is preceded by “COMMENT:”, and our response by “RESPONSE:”.

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Reviewer #1:

COMMENT: 2. I have some concerns regarding formula (7). First, there is a misprint in it. The areal density of vortices $ n $ must be in (7) but not $ f $. This can be confirmed by dimensional analysis, since $ n $ has the dimension of km^(-2).

The referee is correct: instead of $f$, the term on the far right-hand side should have been $n$. We have corrected the equation in the manuscript.

COMMENT: Second, it is not explicitly stated in the text how exactly $ n $, determined from (7), is converted to $ f $.

COMMENT: Third, looking at the expression for $ b\_max $ on a line below Eq. (7) I noticed the quantity $ \Delta P\_min $ under the radical sign. This quantity is not explained in the text and not used elsewhere in the manuscript. A very similar formula with $ \Delta P\_min $ in it appears in Eq. (6) of the recent article (Kurgansky MV An estimate of convective vortex activity at the InSight landing site on Mars. Icarus 358 (2021)), where an equation analogous to (7) was used to estimate the areal density of InSight vortices based on data presented in Spiga et al. (2020), in eprint arXiv:2005.01134 publication before journal publication in Spiga et al. (2021). [This eprint publication was cited in Jackson et al. (2020); see, AAS Division of Planetary Science meeting #52, id. 308.03. Bulletin of the American Astronomical Society, Vol. 52, No. 6 e-id 2020n6i308p03.] I suppose this could be recognized in this manuscript, and a reference could be made to Kurgansky (2021) regarding Eq. (7).