

## ***Interactive comment on “Plasma density gradients at the edge of polar ionospheric holes: the presence and absence of phase scintillation” by Luke A. Jenner et al.***

**Luke A. Jenner et al.**

ljenner136@gmail.com

Received and published: 8 December 2019

Response to reviewer 2 of Jenner et al., Plasma density gradients at the edge of polar ionospheric holes: The absence of phase scintillation

\*\*\* This document includes details of all responses to reviewer 2. The same information is contained in the document which gives a response to both reviewers \*\*\*

We thank the reviewer for their detailed and careful review of this paper. We note that the reviewer stated that this paper is clear, well written and worthy of publication after minor revisions. We thank the reviewer for this comment.

C1

Reviewer 2 raised a number of important points. All of these have been addressed below, and a revised version of the manuscript has been submitted. For the convenience of the reviewer, two versions have been uploaded. ‘Jenner\_et\_al\_track\_changes’ shows every individual change and ‘Jenner\_et\_al\_revised’ has all changes implemented, with major changes highlighted in yellow. We believe that these revisions substantially enhance the manuscript.

Detailed response to comments from Anonymous Reviewer 2

Comment 1: Purpose of the paper as discussed in the abstract and conclusion

The reviewer commented that “The conclusions are currently described in a rather vague way. In the abstract, the last sentence “It may be that ...” should be revised. In the conclusions section, also the last sentence should be revised.” We agree with this comment that the conclusions should be stronger, and have revised lines 441-446 accordingly. We also amended lines 435-439 to enhance the clarity of the paper. A corresponding change has been made in the abstract to line 23.

Comment 2: Purpose of the paper as discussed in the introduction

The reviewer commented that “It seems that the objective of the paper is to present observational proof for the comment in Aarons (1982) as described in Lines 251-253. I recommend to add this to the last part of the introduction.” We agree with this comment that this should be more explicit, and have revised lines 134-135 accordingly.

Comment 3: Minor typos / change of tense in lines 166, 170, 176, 200 and 227

We thank the reviewer for identifying these. They have all been corrected in the revised manuscript, with the corrections occurring in lines 270, 282, 285, 347 and 383 respectively.

Comment 4: Table 1 should use the same exponent in each cell to enable easier comparisons

C2

Agreed. This change has been made.

Please also note the supplement to this comment:

<https://www.ann-geophys-discuss.net/angeo-2019-112/angeo-2019-112-AC2-supplement.pdf>

---

Interactive comment on Ann. Geophys. Discuss., <https://doi.org/10.5194/angeo-2019-112>, 2019.