Comments on Reply to Referee 2

Thank you for considering my comments so thoroughly. I have just have some further minor points then it should be ready for publication.

Regarding the title: ‘rapid variations’ is vague. Variations in what? ‘rapid geomagnetic variations’ is more precise.

Regarding my second major comment, you state it is a ‘well known fact that the precipitation in the cusp is soft and hardly ionizes the E-region,’. If so, please provide references. It isn’t clear in your response what references you have added.

I do like Figures 1 and 2 in your reply. I’m glad they are included.

L74: ‘We are unsure what exactly the referee means.’ What I was trying to say was if you took the results from one of your stations, say STF, and could bin them by whether STF was on open or closed field lines, would this change the results. For example, do you get more detections when STF is on open field lines instead of closed? I appreciate there is ambiguity in determining which side of the OCB a given station is on. I think these results could be interesting. You have your Feldstein model so even just using this to tag

Regarding my comment 7, I like this explanation. Make sure a comment on these lines is in the new script.

Regarding your answer to my comment 11, you say the solar illumination increases. UV? X-ray? Be clear.

Regarding comments 14/15, I think my confusion was regarding which mantle you were talking about. The ‘plasma mantle’, or the hot rocky mantle under our feet! No harm in clarification.

Regarding typographic comment 2 about ‘many to come.’ This implies to me references from the future, which I don’t think is allowed. You don’t need to put anything there at all, as you’ve put e.g. at the start. So just (e.g. ref1, ref2, ref3) is fine.