

Thankyou again for your recommendations for improving this manuscript. The 4 points are addressed in detail below. Importantly, your critique has revealed a direct error in the last sentence of section 2.

1. significances

The values of α and their uncertainties have been stated explicitly at the end of section 2. However I note that there was a mistake in this sentence (now corrected): when including *shorter* timescales in the SA there is a steepening of the spectrum, leading to the *higher* value of α . The discussion of the potentially bi-color nature of the spectrum was, however, correct, so this error did not affect the conclusion. The (correct) values are now quoted again in the problematic part of the Conclusion. Indeed, departures of the values of α from 1.5 are not greater than 2 standard deviations, and therefore cannot be considered significantly either anti-persistent or persistent.

2. interpretation of values of α

The non-significance with respect to 1.5 of the determinations of α is now described in the manuscript and the cases referred as *indications* of anti-persistence and persistence for the >1h and >1min analyses respectively.

3. interpretation in terms of electrojet

Really, when referring to “electrojet” I mean ionospheric current systems in the vicinity (North, above, South) of the observation point. These current systems produce the fluctuations in H, but to be more quantitative, other instrumentation would be needed. So, to avoid complication, I have opted for the editor’s suggestion to simply remove the sentence; this is now done in both abstract and conclusion.

4. “excellent agreement”

Since the agreement is *not* particularly excellent, I have reworded this using “qualitative” because the Takalo and Timonen result does indeed indicate a steeper spectrum at shorter timescales such that their hypothesis is still pertinent for this paper.