Response to the First Referee.

First, we would like to thank the Referee for her/his comments, all of which we have attempted to address. We think that the paper has been improved by them. Now we detail our response to each comment.

1. **There were no specific explanations for the choice of the set of parameters: nu, eta and N.**

   The choices are related to the findings in Domínguez et al. (2017), where we found that these values yield a good match between statistical features of the shell model and the fractal features of the *Dst* geomagnetic index. We have added explanations after Eq. (2) in this regard.

   The new text reads:

   Based on Domínguez et al. (2017), where a comprehensive analysis of the statistical properties of the shell model for various values of ν and η is carried out, we set $\nu = \eta = 10^{-4}$, as it is in the range where the model is able to best reproduce the intermittent behavior observed in magnetized plasmas. Given the values of the dissipative coefficients ν and η, we take $N = 19$, also consistent with the choices in Refs. Domínguez et al. (2017, 2018), a value which guarantees a nonlinear range sufficiently large to describe the system dynamics.

2. **Magnetic dissipation rate is calculated but not the velocity dissipation rate. Why?**

   A velocity dissipation rate would be related to heating, which is not considered in our model. We have also added explanations after Eq. (3).

   The new text reads:

   Notice that a dissipation rate for the velocity field can also be defined. However, this is not relevant to our model, as it would be related to heating, whereas there is no equation for temperature in our analysis. Magnetic storms, on the other hand, are related to magnetic dissipation rates.