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Nonlinear Processes in Geophysics
Discussions

Interactive comment on "Study of the fractality in an MHD Shell model forced by solar wind fluctuations" *by* Macarena Domínguez et al.

Anonymous Referee #1

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General comments

The authors provide an interesting extension of their research on fractal dimensions generated from their modified MHD GOY shell model. In particular, the authors choose the forcing term in the velocity Langevin equation as a Gaussian noise while for the magnetic Langevin equation the forcing term is generated by the observed solar wind fluctuations of the velocity and the z-component of the magnetic field. The fractal dimensions of the magnetic energy dissipation rate, the magnetic forcing term and the magnetic energy forcing rates are then compared and conclusions are made from these comparisons.

The presentation of the method used, the history of the development of the magnetic shell model, and the estimates of the fractal dimensions are all clearly described. And

their final results are reasonably explained.

Specific comments

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

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

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