

Response to the reviewers

We thank the reviewers for this second feedback on our work. We reply here to the comments of Referee 1.

Referee 1

The authors have commendably amended and improved the manuscript. I am happy to recommend publication with only a few minor corrections requested.

L101: Please confirm the -X extent of the simulation. Do the cells stretch that much in the X-direction, or is the extent in fact -300 R_E or similar?

We confirm that the simulation domain is indeed -3000 R_E in the anti-Sunward direction.

L237 and Table 2: should not the middle set be F8 (B clipped) in accordance with the re-naming of feature sets? (also later at e.g. L437)

Indeed. We have edited the manuscript accordingly.

L240: Please at least briefly mention the use of F9 in the table - for that feature set, both PC1 and especially PC2 are impacted by magnetic field magnitude. It is currently down on line 468 so stating that you'll discuss the latter part of the table towards the end of section 4.3 should be enough - or you could move that bit here, especially as it actually discusses the violin plots, not the validation results.

The discussion has been moved to L240 as suggested.