

Interactive comment on “The mirror mode: A superconducting space plasma analogue” by Rudolf A. Treumann and Wolfgang Baumjohann

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This is a very interesting and well-formulated paper that addresses the phenomenology of the saturation of mirror mode evolution, and its manifestation as a chain of mirror mode bubbles. The treatment abandons the typical quasilinear analysis with its limited usefulness. A detailed comparison of the theoretical description of mirror mode plasma physics with that of type II superconductors described macroscopically by Landau-Ginzburg theory is laid out successfully. The investigation yields testable predictions, and if measurements confirm the findings, the comparative analysis will expand our cursory knowledge of mirror mode evolution and saturation. This is a valuable treatment of mirror mode plasma physics, as a more comprehensive description based on the physics of (weak) turbulence seems intractable.

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This paper is written well, and by necessity the analysis is intriguingly interdisciplinary, meticulously pointing out the distinction between quantum and classical phenomena in the correspondence analysis. I have no comments to add to this paper, and provide only a list of minor typos.

page 2 line 31: capital θ_i : the index should be j here. page 6 line 20: typo page 7 line 6: full stop needed. page 9 line 23: Identification page 10 line 26: adjusts page 11 line 7: longer \rightarrow larger; also some instances further below. page 12 line 26: type

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