

Ann. Geophys. Discuss., referee comment RC3
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Reply on AC2

Anonymous Referee #2

Referee comment on "Dynamics of variable dusk–dawn flow associated with magnetotail current sheet flapping" by James H. Lane et al., Ann. Geophys. Discuss.,
<https://doi.org/10.5194/angeo-2021-32-RC3>, 2021

The authors have addressed all my concerns/comments in their reply. I have only one further comment which is presented below:

"... Overall, if we were to proceed with this new version of the analysis, it will not alter our fundamental conclusions, in which we already acknowledge the uncertainty in trying to make detailed one-to-one association between the $(\mathbf{J} \times \mathbf{B})_y$ and flow perturbations. We consider that both approaches involve assumptions that limit the extent of the interpretation. Perhaps a wise solution would be to present both approximations in a new Fig.6, and to highlight that the conclusions we have drawn are supported by both?"

In my opinion, it would be good to have both approximations for $(\mathbf{J} \times \mathbf{B})_y$ presented in Figure 6. That would give more information about the situation. Then highlighting that the conclusions the authors have drawn are supported by both of the approximations would be fine.

I am looking forward to read the revised manuscript.