Dear David,

Thank you for your thorough review of our paper. We have addressed all of your very good points which we think will significantly improve the quality of the paper. Below, we go through the points in detail.

"My first scientific request is for the authors to add one parameter to their study. They already consider densities, speeds, temperatures, and magnetic fields within the jets, but I request they add another parameter: deflection of flow away from the sun-earth line. I think it would be interesting to know if the jets maintain flow along this line as they approach the magnetopause or are deflected just like the background magnetosheath plasma flow. "

This is an excellent suggestion. It can be deduced rather easily: We can look at the relation V_yz/V_x within the jet as average, median and maximum value. Another possibility is to look at the path of the jet and compare this to the path of a random plasma parcel within the background magnetosheath flow. We shall add this characteristic to the paper.

"My second scientific request is that the authors tell whether or not there is a difference in event occurrence patterns in their simulation results regarding location behind the quasi-parallel and quasi-perpendicular bow shock. I am expecting there would be more events in the dawn than the dusk magnetosheath for the spiral IMF orientations they simulate. Can the authors please add some words about that?"

This is very interesting question, to which we can at least partly answer in the paper: In the revised version, we can compare the normalised number of events in the 30-degree cone angle runs between dawn and dusk, concentrating to the final position of the jet. Indeed, you are right, and these statistics show that there are more events ending at the dawn side. We shall add this figure and corresponding text into the revised version. For MMS statistics this is probably a bit more difficult, as it requires a database of jets for Qperp and Qpar bow shock, hence we leave it as a topic of a follow-up paper.

"My third scientific request is that the authors tell what the vertical pressure stripes are in the magnetosheath. They are so prominent in Figure 1. What is causing them?"

The large-scale flow pattern in the magnetosheath in Vlasiator is as expected: streamlines diverge from the Sun-Earth line. However, the distribution of the velocity magnitude and the density is more complex, due to kinetic processes arising at the quasi-parallel shock, which results in the large-scale structures we observe in the magnetosheath. In essence, these stripes are remnants of the ULF wave fluctuations at the bow shock. We will add this information to the revision.

Line 6, page 1. Using a statistics –> using statistics Line 21, Page 5. At force –> in force The stars in Figure 1 are too small. Lines 5-7 on Page 10. Can the authors state a typical dimension at this point? Line 22 on Page 10. No need for 'RE' Lines 25-26. Page 10. Can the authors state that the jets appear to be disintegrating or dying by diffusion here?

Thank you for these comments, we shall correct them in the revision. We think based on Figure 10 that the jet "dies" through diffusion, because towards the end of its lifetime there are no steep gradients within the jet parameters (without counting the final seconds).

On behalf of all the co-authors, Minna Palmroth