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Erratum

GEOTAIL observation of tilted X-line formation during flux transfer events (FTEs) in the dayside magnetospheric boundary layers

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In the mentioned paper, published in Annales Geophysicae (2004) 22: 2907–2916, there were mistakes on the directions of the magnetic field lines projected onto the 2-D ion distribution functions, shown in Fig. 6. The corrected version is indicated below. In accordance with this figure correction, we also must correct several sentences in the text. The corrected sentences and their positions to be replaced in the text are raised below.

1) "(along the B direction)", L 4–5 from the bottom in the left column, pp 2914.

2) "Here, although the D-shaped ion distribution can be observed, associated gaps seen in d) cannot be found, even though similar B_n bipolar signatures can be observed.", L 21–23 from the top in the right column, pp 2914.

3) "However, in the LLBL, a clear D-shaped ion distribution was observed in the B direction (dawnward direction) around the B_n bipolar signature.", L 1–2 from the top in the left column, pp 2915.

4) "This suggests that the ions originating from the magnetosheath flowed in the direction parallel to the intrinsic magnetic field lines (B) (or the dawnward direction).", L 3–5 from the top in the left column, pp 2915.

5)"However, the magnetosheath cold ions predominantly flowed in the B direction (duskward direction) during the interval when the B_n bipolar signature was observed, although the clear D-shaped ion distribution without associated gaps was found.", L 29–33 from the top in the left column, pp 2915.

These corrections do not change the conclusions stated in the paper.

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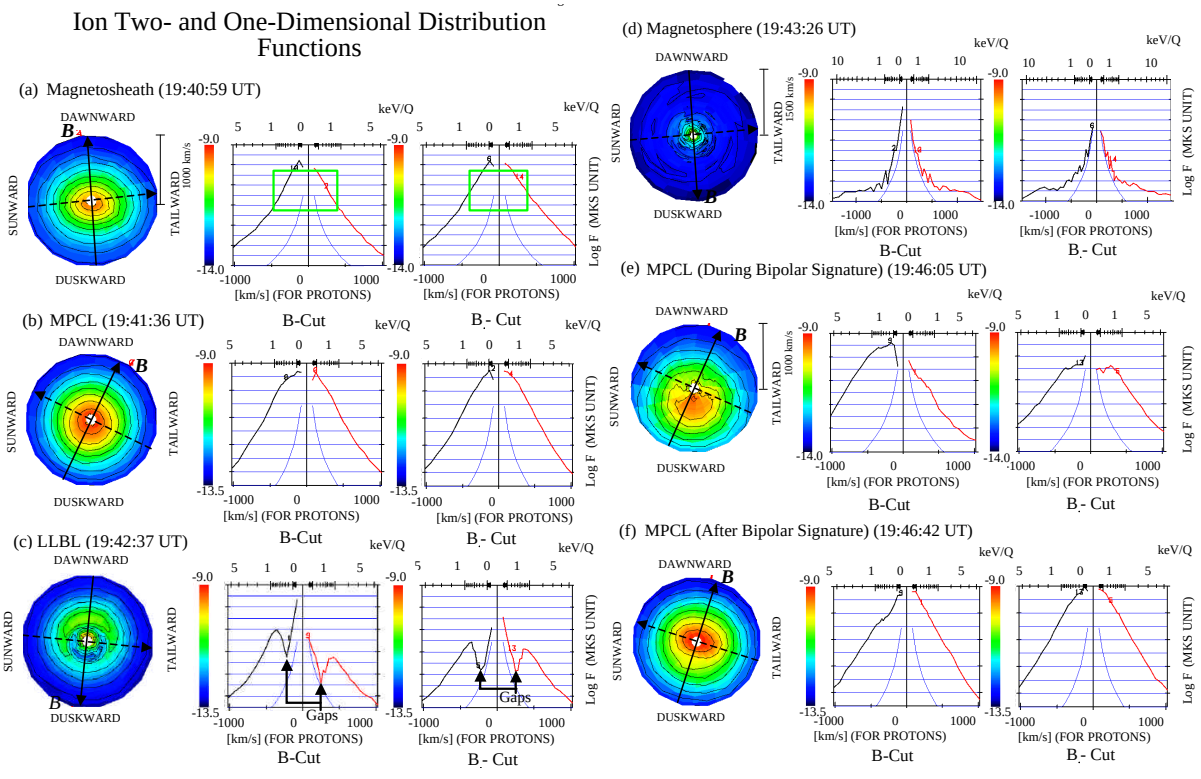

Fig. 6. Two- and one-dimensional ion distribution functions in the (**a**) magnetosheath, (**b**) first MPCL, (**c**) LLBL, (**d**) magnetosphere, (**e**) second MPCL during the interval in which the B_n bipolar signature can be found, and (f) second MPCL after the B_n bipolar signature disappears. The left-hand panel shows the two-dimensional distribution function projected onto an equatorial plane. The upper, lower, left- and right-hand sides correspond to the dawnward, duskward, sunward and antisunward (tailward) directions, respectively. The color code is assigned according to the logarithm of phase space density in units of $m^{-6}s^3$. The direction of the magnetic field line projected onto an equatorial plane (shown with B) and the direction perpendicular to B are also superimposed on the distribution function. The middle and right-hand panels show the one-dimensional distribution functions cut along the B direction (B-cut) and the direction perpendicular to B ($B_\perp$-cut), respectively. The lower, upper and left-hand axes provide the ion bulk velocity (km/s), its corresponding energy (keV/Q) and the logarithm of the phase space density ($m^{-6}s^3$) which corresponds to the color of the color bar, respectively. The positive directions are shown by the arrowheads.