



Figure 12: Distributions of the radius of curvature (top) and helix angle (bottom) of MFLs in the coordinate plane  $y=0$  in modeled magnetosphere based on theoretical (left) and new algorithm (right) calculations. The dashed line indicates the magnetopause when  $B_z = 27nT, D_p = 3nPa$  [Shue et al., 1998].