

Validity of the fluid description of ballooning onset in the near-Earth high-beta plasma sheet

Akira Miura[1]

[1] Earth and Planetary Physics, Tokyo Univ

The validity of the fluid description of the onset of ballooning instability in a high-beta plasma of the near-Earth plasma sheet depends on the ratio of the growth rate of ballooning instability to the bounce frequency of particles in the near-Earth plasma sheet. This ratio is calculated for a realistic near-Earth tail model and it is shown that the fluid description is valid even in the high-beta plasma of the near-Earth plasma sheet.