

Two components of plasmas in the LLBL and IMF dependence

Sadahiro Takashima[1], Tsugunobu Nagai[2]

[1] Earth and Planetary Sci., TITECH, [2] Dept.Earth & Planet. Sci.

We analyzed characteristics of plasma in the low-latitude boundary layer (LLBL) with Geotail data. LLBL exists in the low-latitude flanks of the magnetotail. In the LLBL, two components of plasmas are found in Geotail E-t diagrams of ions. The average energy of one component is 10keV and the average energy of the other component is 1keV. When we analyze these two components in the LLBL with the 1995-1998 Geotail data, these two components of plasma are frequently observed in the duskside. We analyzed IMF (Interplanetary Magnetic Field) dependence of two components of plasmas with WIND data and ACE data. Time lag is 1 hour and plasma parameters are averaged for 1hour. As a result, two components of plasmas are found mostly for $B_z > 0$. Non-two components of plasmas are found mostly for $B_z < 0$.