

Characteristics of plasma waves in the bow shock and magnetosheath regions: GEOTAIL observation

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Various kinds of intense plasma waves can be observed in the bow shock and magnetosheath regions. They are mainly classified into the BEN, NEN, Electron plasma waves and MNB. They are expected to be related to electron beams, which are accelerated in the transition region such as bow shock transition or dayside reconnection region. However, detailed features and generation mechanisms on plasma waves are still unclear, because the bow shock and magnetosheath are very turbulent regions. In order to make clear the generation mechanism of the plasma wave, we perform to clear the characteristics of plasma waves observed by the Geotail spacecraft in the bow shock and magnetosheath regions. We summarize the plasma wave features in these very turbulent regions.