

太陽風磁気流体乱流の統計解析

谷崎 真介 [1]; 成行 泰裕 [2]

[1] 高知高専・専攻科; [2] 高知高専・電気情報

A statistical analysis of solar wind magnetohydrodynamic turbulence

Shinsuke Tanizaki[1]; Yasuhiro Nariyuki[2]

[1] AC, KNCT; [2] EE, KNCT

In the present study, we statistically discuss the correlation between the magnetic field and the plasma bulk velocity observed by the ACE spacecraft from February 1998 to December 2009. The present analysis shows that the Alfvénicity of the magnetohydrodynamic (MHD) turbulence strongly depends on the solar activity. The Alfvénicity calculated from each vectorial component is similar to one calculated from the total vector. The Shannon entropy of the magnetic field is also evaluated to discuss the relaxation state in the MHD turbulence.