

Geophysical Research Abstracts,  
Vol. 10, EGU2008-A-02685, 2008  
SRef-ID: 1607-7962/gra/EGU2008-A-02685  
EGU General Assembly 2008  
© Author(s) 2008



## Turbulent cascade in the solar wind

**V. Carbone** (1,2), R. Marino (1), L. Sorriso-Valvo (2), P. Veltri (1), A. Noullez (3),  
R. Bruno (4), B. Bavassano (4)

(1) Dipartimento di Fisica, Università della Calabria, Cosenza - Italy, (2) Liquid Crystal Laboratory INFN, Cosenza - Italy, (3) Observatoire de la Côte d'Azur, Nice - France, (4) IFSI-INAF, Roma - Italy

Direct evidence for the presence of an inertial energy cascade, the most characteristic signature of hydromagnetic turbulence (MHD), is observed in the solar wind by the Ulysses spacecraft. By using the Yaglom exact relation, a linear relation is observed for the scaling of mixed third-order structure functions involving Elsasser variables. This experimental result firmly establishes the turbulent character of low-frequency velocity and magnetic field fluctuations in the solar wind plasma.