Geophysical Research Abstracts, Vol. 8, 07602, 2006 SRef-ID: 1607-7962/gra/EGU06-A-07602 © European Geosciences Union 2006



Solar wind from coronal funnels

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The coronal pressure is determined by the energy balance of the transition region which also heavily influences the solar wind mass flux. The properties of the solar transition region are constrained by observed fluxes and profiles of spectral lines originating in that region. In particular the Lyman alpha emission, which is the strongest emission by far, places strong constraints on the plasma parameters in the transition region.

In the past solar wind models have ignored the observational constraints in the chromosphere/transition region. In the talk we present a study investigating whether solar wind models can be derived that are consistent with the the Ly-alpha emission and that at the same time agree with corona and in situ solar wind observations.