

# **RELATION BETWEEN THE HARANG DISCONTINUITY AND SUBSTORM ONSET**

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The Harang discontinuity is known as the region in the near magnetospheric tail where the earthward plasma flow is divided into the parts passing the Earth on the dawnward or duskward sides. The importance of this bifurcation point for the substorm onset has long been discussed controversially. Presently there is more and more observational evidence provided that the intense field-aligned current (FAC) associated with the substorm break-up is connected to the Harang discontinuity. Based on a catalogue of more than 4000 substorms a statistical study of the onset characteristics has been performed. For about 50 cases nearby CHAMP observations are available. They show systematically the presence of a strong upward FAC in the center flanked by weaker downward currents on the poleward and equatorward sides. In certain cases the magnetic field variations exhibit some helical signatures. We will try to explain the observations in a global picture.

Substorm, ionospheric currents, plasma convection

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