

# **THE CUSP PROTON AURORA: CLUSTER, POLAR AND IMAGE OBSERVATIONS**

**Q.-G. Zong** and T.A. Fritz and H.U. Frey

Boston Uni. (zong@bu.edu)

On April 21, 2001, an interplanetary CME started to interact with the magnetosphere when Cluster satellites were travelling in the cusp region. A strong enhancement of energetic particle has been observed by the RAPID/Cluster during the leading phase of the CME. This paper demonstrated that the cusp proton aurora could be also caused during the different IMF orientation although the proton aurora in the cusp region generally happens during IMF northward. The thrust of this study concentrates on the relations between the proton aurora and the in situ energetic particles observations via multi-satellite observations.