

LISM Inhomogeneities and the IBEX Ribbon

Adama Sylla and Horst Fichtner

Institut für Theoretische Physik, Ruhr-Universität Bochum, Germany (asy@tp4.rub.de)

The Energetic Neutral Atom (ENA) full-sky maps obtained with the Interstellar Boundary Explorer (IBEX) show an unexpected bright narrow band of increased intensity. This so-called ENA ribbon results from charge exchange of interstellar neutral atoms with protons in the inner heliosheath and/or beyond. According to a recent hypothesis this ribbon may be related to a neutral density enhancement, a so-called H-wave, in the local interstellar medium. It is shown on the basis of an analytical model of the principal large-scale heliospheric structure that this scenario for the ribbon formation is consistent with the observed location of the ribbon in the full-sky maps at all energies detected with high-energy sensor IBEX-Hi.