

# Inner density of SN 1006

**F. Acero** (1), J. Ballet (1)

DSM/DAPNIA/SAP, CEA Saclay, 91191 Gif-sur-Yvette Cedex, France (facero@cea.fr)

The gamma-ray flux expected from supernova remnant SN 1006 is strongly influenced by its inner density. Using XMM-Newton X-ray observations, we present a study of this density by modeling the rims where the thermal emission dominates (i.e. the North-West and the South-East) with a plane parallel shocked plasma model. In order to map the two rims and to have a better statistic we combined several observations of the remnant. The density found is low and is compatible with the non detection of the remnant by the HESS Gamma-ray observatory.