

## Some astrophysical implication of gas profiles in a new galaxy clusters model

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The structure of the dark matter and the thermodynamical status of the hot gas in galaxy clusters is an interesting and widely discussed topic in modern astrophysics. Recently, Rasia et al. (2004) have proposed a new dynamical model for the mass density profile of clusters of galaxies as a result of a set of high resolution hydrodynamical simulations of structure formation. We analyze the implication of the gas density and temperature profiles of the Rasia et al. (2004) model on the properties of the X-ray emission and the comptonization parameter that determines the CMBR temperature decrement due to the Sunyaev-Zel'dovich effect.

*BDMH 2004 – Baryons in Dark Matter Halos  
5–9 October 2004  
Novigrad (Croatia)*