

A lensing and dynamical study of luminous and dark matter in galaxies and clusters of galaxies

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I will report on ongoing programs to measure spatially resolved velocity dispersion profiles of high redshift E/S0 galaxies that are gravitational lenses and brightest cluster galaxies with radial gravitational arcs. By combining lensing and dynamical analysis we can measure the baryonic content, the dark matter density profile, the controversial inner slope of the dark matter halo, and the total mass distribution with good precision out to redshift 1. I will discuss the implications of these measurements on the epoch and mechanism of formation of early-type galaxies, and on the universal dark matter halos predicted by cold dark matter scenarios.

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