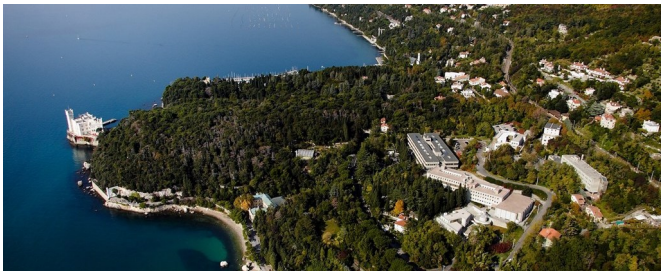

Contribution ID: **33** Type: **not specified**

Dark matter in clusters of galaxies

Thursday 31 August 2023 11:10 (30 minutes)

Dark matter (DM) has been originally discovered in clusters of galaxies by Zwicky (1933). These systems currently remain excellent laboratories for probing DM properties through gravitational lensing, and the dynamical equilibrium of cluster visible components (intra-cluster plasma and galaxies). Comparison of the shape of cluster mass density profiles with predictions from cosmological simulations are used to constrain the properties of DM. Particularly useful in this respect is the determination of the inner slope (gammaDM) of the dark matter (DM) density profile. Cold DM cosmological simulations predict gammaDM˜1. While significantly flatter slopes have been obtained in the literature, new results appear to reconcile the observational determinations of gammaDM with numerical predictions.

Presenter: BIVIANO, Andrea

Session Classification: Plenary Session