

Title:

HAGRPS: an H-alpha narrow-band imaging survey of galaxy groups in the Local Supercluster

Abstract:

I will introduce HAGRPS, an H-alpha narrow-band imaging survey of galaxy groups in the Local Supercluster, which is a large observing program carried out with the VLT Survey Telescope (VST). H-alpha imaging data are gathered to study the role of the environment on galaxy evolution.

Indeed, H-alpha observations reveal the ionized hydrogen emission, which is a direct tracer of recent star formation, and are a powerful probe in the identification of perturbing mechanisms such as ram pressure stripping, tidal interactions, and starvation in dense regions.

Since these perturbing mechanisms acting on galaxies are expected to vary with the halo mass, observations must cover a wide range of environments, from massive clusters down to groups of $M_{\text{halo}} \sim 10^{13} \text{ Mo}$.

This survey has been designed to extend previous narrow-band imaging studies of massive clusters down to intermediate mass groups.

I will present the scientific objectives of the survey and describe the development of a ad-hoc data reduction pipeline especially tailored for the reduction and calibration of the narrow band H-alpha imaging data and optimized for the detection of faint low surface brightness extended features such as those produced by the interaction of galaxies with the hostile surrounding environment.

I will also show the first results of the survey through the analysis of representative galaxies.