

FAST Proposal Coverpage

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Project Name:

Deep HI imaging of the group NGC 4636: a pilot survey for FAST-ASKAP synergetic HI observations

Project Summary:

Most galaxies in the low redshift universe evolve in groups, and the fate of HI gas in galaxies is a key part of this picture. We propose a project of synergetic HI observations of galaxy groups with the FAST and ASKAP telescopes. The combination of both data sets enables us to detect the diffuse and faint HI, while at the same time resolve the bright HI structures in the groups. We will be able to study in detail how galaxies lose or accrete gas in the groups and the fate of the HI removed from galaxies. As a pilot survey, we propose to use FAST to map the HI in a 30 deg^2 area targeting the nearby NGC 4636 loose group, which will also be observed by ASKAP as part of the WALLABY pilot survey in 2019.