

FAST Proposal Cover page

Last updated: 01/10/2019

Project Name:

A FAST Survey of HI Gas in Interacting Galaxy Pairs

Project Summary:

We propose to observe the HI content for a sample of interacting galaxy pairs with FAST, to study the effect of interaction on HI and star formation in these systems. So far only a limited number of galaxy pairs have HI information. We will investigate the previously rarely-explored effects of interacting galaxies on the HI gas, especially whether pairs containing AGN hamper or enhance the star formation in the systems. Our ultimate goal is to build the largest sample of HI galaxy pairs, to construct the relation between HI mass, gas fraction, and star formation condition for galaxy pairs at different merging stages and with different levels of AGN activities. The proposed pilot observations will focus on a representative subsample of galaxy pairs in 4 merging stages, one with and one without AGN. This will serve as a first test to evaluate the overall project design, to yield initial results, and to develop a potentially widely applicable deblending technique for galaxy pairs.