Proposal Abstract:

We propose using FAST to observe the HI emission lines of six host galaxies of Fast Radio Bursts (FRBs): FRB 20180301A, FRB20190303A, FRB 20190520B, FRB 20211212A, FRB 20220912A, and FRB 20240114A. With many but not yet thoroughly evaluated models of FRB's origin and radiation mechanism, examining the host galaxy and birth environment of FRBs helps us further constrain these theories. By measuring the cold gas content, we aim to explore dynamic perturbations in the host galaxies that may lead to the formation of the FRB progenitors. Analyzing the asymmetry of the line profile of the HI emission of the host galaxy can provide insight into its recent history, including possible merger events. The FAST observations will also provide basic estimation and the zero points used for future interferometry array observations for gas mapping.