

Proposal Abstract:

We propose to map NGC4565 with FAST to a distance of approximately 100 kpc to the northeast. Previous GBT pointing observations revealed HI emission at one pointing 100 kpc away from NGC4565, with no clear optical counterparts (down to an r-band magnitude of ~ 24 AB). Although the GBT observation detected HI emission in several pointings around the galaxy, the distribution and dynamics of cold gas in CGMs remains unknown. To trace the distribution and dynamics of the cold circumgalactic medium in the region about 100 kpc from the center galaxy, and to search for signatures of cold accretion gas from the cosmic web, we propose a 24.8-hour FAST observation to unveiling the properties of the cold gas in CGM.