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Abstract:

We propose to obtain the spectral lines of HI for the host galaxies of the recently discovered two low-redshift Hot Dust-Obscured Galaxy (Hot DOG) analogs. Although AGN dominates these systems as the major luminosity source, their host galaxy still shows strong star formation activity. With a total of 5.8 hours of observation with FAST/L-band on these two sources, we will obtain the 30-SNR detection of the HI line for each target. This will be the first HI observation for such highly obscured and highly luminous QSOs with substantial star formation activity at low redshift, which will provide us with critical information on the neutral-gas content in understanding their active star-forming features in host galaxies of highly obscured quasars in their transformation stage.