

Evidence for ongoing cold accretion in the local universe?

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One of the key questions in astronomy today is how galaxies accrete the gas they need to fuel ongoing star formation. While many interferometric surveys have revealed populations of low mass HI clouds around galaxies, they have not found enough gas to sustain continued star formation. One possible explanation of this deficit is that this HI is extended and diffuse such that it is missed by interferometers. To rectify this problem, my collaborators and I are conducting a Green Bank Telescope (GBT) HI survey of the galaxies in the THINGS and HALOGAS samples. The GBT's unique design makes it the ideal single-dish telescope for observing low column density HI and makes it capable of detecting HI emission from analogs to Lyman limit systems. I will present the initial results from our search for ongoing accretion from the “cosmic web”, how it compares with theoretical predictions, and our future plans.