Finding the Invisible Streams that Drive the Evolution of Galaxies

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The flow of gas through galactic halos is thought to be crucial to the evolution of galaxies, as these flows may dictate the star formation properties of galaxies and regulate their metallicity. Outflows through the circumgalactic medium (CGM) carry metals away from galaxies (although many may return), while infalling metal-poor gas from the intergalactic medium dilutes the metals in galaxies and provides new fuel for star formation. The nature of gaseous infall onto galaxies that may fuel star formation, in particular, is of great interest, but such gas has historically been difficult to identify. I'll describe the constraints we now have on the invisible circumgalactic gas and what they may mean for understanding galaxy evolution.