
Cosmological Evolution of Neutral Gas Mass

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Résumé

The cosmological evolution of neutral gas mass, Ω_{HI} , provide information on the gas reservoir for star formation and accretion phenomena on global scales. Measurements at $z > 2$ based on large surveys of quasar absorbers observed at optical wavelengths now provide reliable estimates of this quantity. Observations at $z \sim 0$ of HI emission of galaxies at radio wavelength also offer a strong constraint on Ω_{HI} , with a value considerably lower than measured at high-redshifts. ASKAP, MeerKAT (and ultimately SKA) offer prospects to derive this quantity at $z > 0$ with direct emission detections, stacking and blind absorption techniques, thus providing important clues on the evolution of Ω_{HI} in a so-far little-probed time range.

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