

**X17a            A Jansky VLA 4 – 8 GHz Deep Survey in the SXDS**

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We present early results from our pencil-beam sub- $\mu$ Jy 4 – 8 GHz continuum survey of star-forming galaxies at  $0 < z < 2$  with  $0.3''$  resolution using the Jansky VLA. The survey covers a 35 arcmin. sq. region in the SXDS that is covered by CANDELS and 3D-*HST*. Our goal is to measure the distribution of star formation (SF) for  $\sim 100$  star-forming galaxies in an extinction-free manner, and compare the spatially-resolved distribution of SF with that of the old stellar population probed by rest-frame optical observations. The final sample from our program will allow us to (1) determine how the relative proportions of core- and disk-dominated star formation evolve out to  $z \sim 2$ ; (2) constrain the fraction and study the effects of major mergers and in-situ SF in driving SF and assembling galaxies; and (3) provide spatially-resolved star formation rate observations that can be combined with future ALMA/Jansky VLA CO observations to study the spatially-resolved SF law at high- $z$ .