Low-z Survey Parameters

(z < 0.07, comoving radial distance = 296 Mpc)

Survey	Area	Pixels *	Overlap Area	Overlap Pixels	Overlap Volume	Sensitivity/pixel	Galaxy density	# Galaxies
NCP 3° radius	28 deg^2	45K	100% w/ WIYN survey	45K	70K Mpc^3	1.3 mK	WIYN/Hydra** $29x10^{-3}$ /Mpc^3	2000
Dec 59	216 deg^2	350K	70 deg^2 w/ Sloan	120K	180K Mpc^3	3 mK	Sloan $6.6x10^{-3}$ /Mpc^3	1188
Dec 26	389 deg^2	630K	160 deg^2 w/ Sloan, ALFALFA, FAST	260K	410K Mpc^3	4 mK	Sloan $6.6x10^{-3}$ /Mpc^3 ALFALFA $2.2x10^{-3}$ /Mpc^3	2600 860

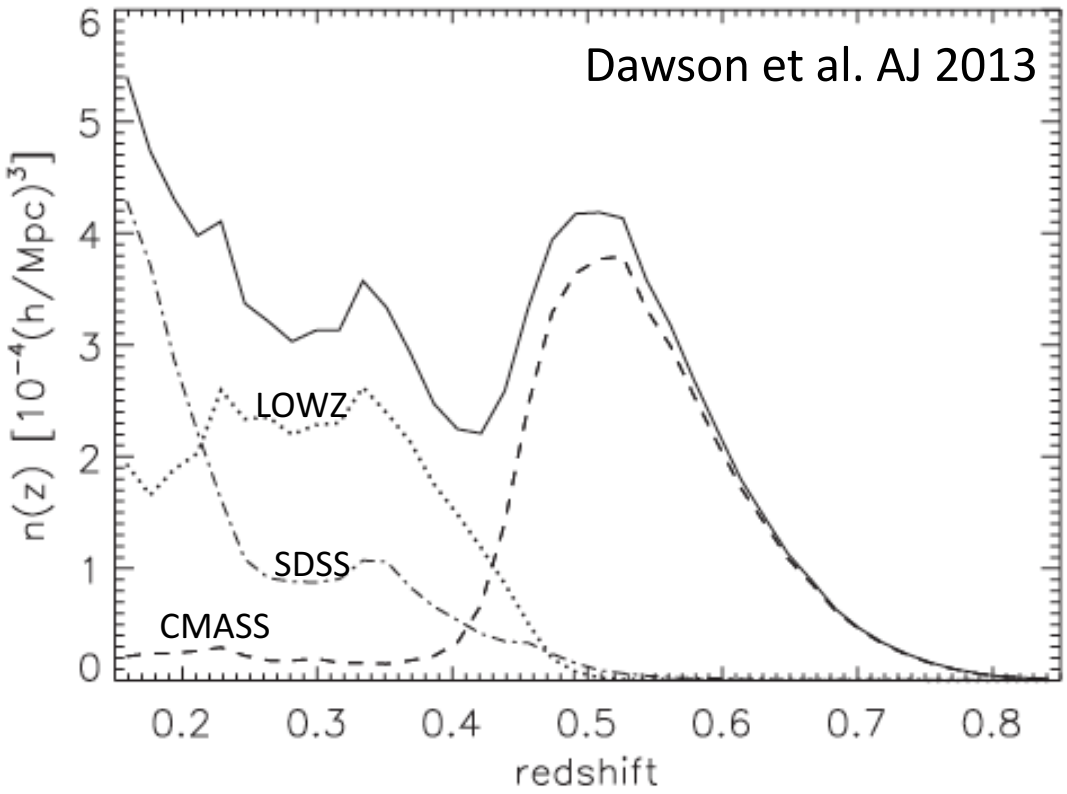
* 0.25x0.25x1 deg^2 MHz

**assumes 2000 galaxies

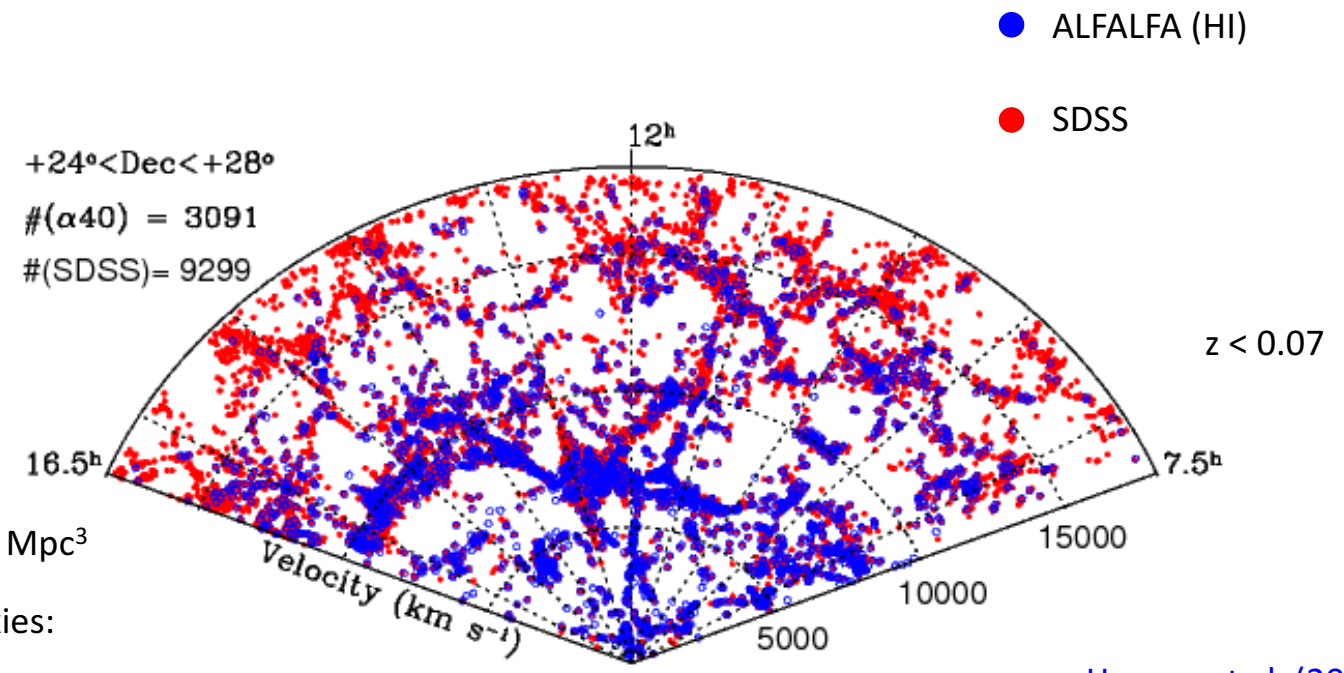
Easy way to estimate the expected significance of an HI-galaxy cross-correlation?

SDSS BOSS number density of galaxies

Survey goes to z ~ 0?



SLOAN and ALFALFA



Survey volume: 1.4×10^6 Mpc^3

Number density of galaxies:
SLOAN: 6.6×10^{-3} /Mpc^3
ALFALFA: 2.2×10^{-3} /Mpc^3

Haynes et al. (2011)