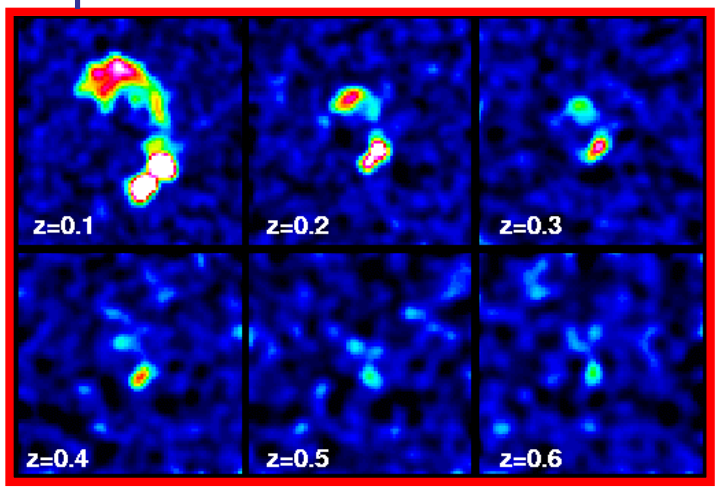
HI Deep Field

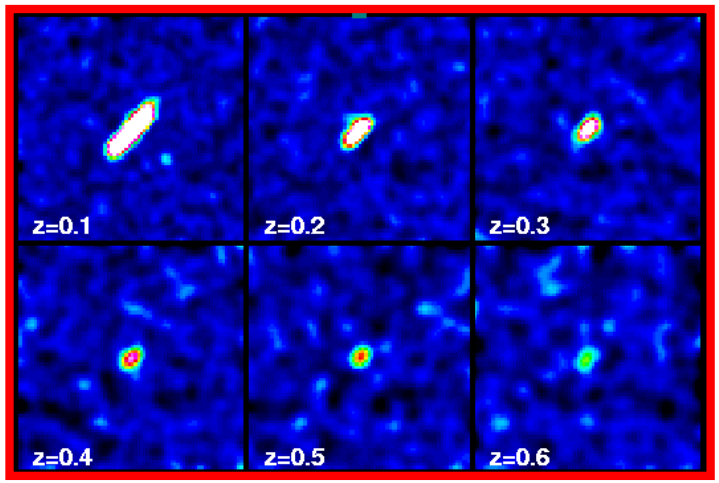
- 50′ x 50′ field from z=0.2 to 1.0
- 7″ and 20 km s^{-1} resolution

Arp 299



110″

NGC 4565



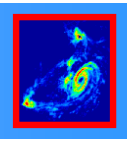
Assuming NO evolution:

- Velocities and HI masses for 2500 galaxies, 30% at z>0.6
- spatial and kinematic mapping to z=0.5
- unique survey of gas-rich galaxies, unbiased to stellar content or SFR
- explore dynamical evolution of peculiars/irregulars for z=0.2-0.5
- measure evolution of Ω_{gas} to z=1

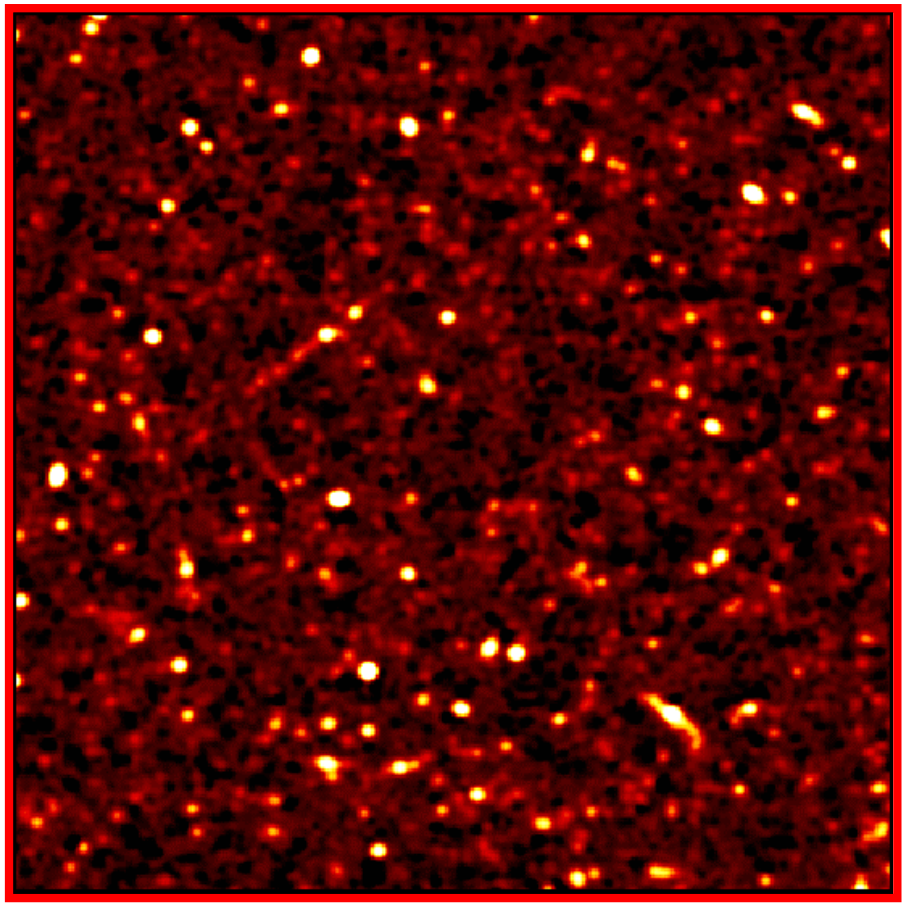
Assuming simple evolution:

- triple detection rate for sources between z=0.5-1.0

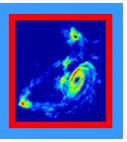
VLA Expansion: HI Working Group



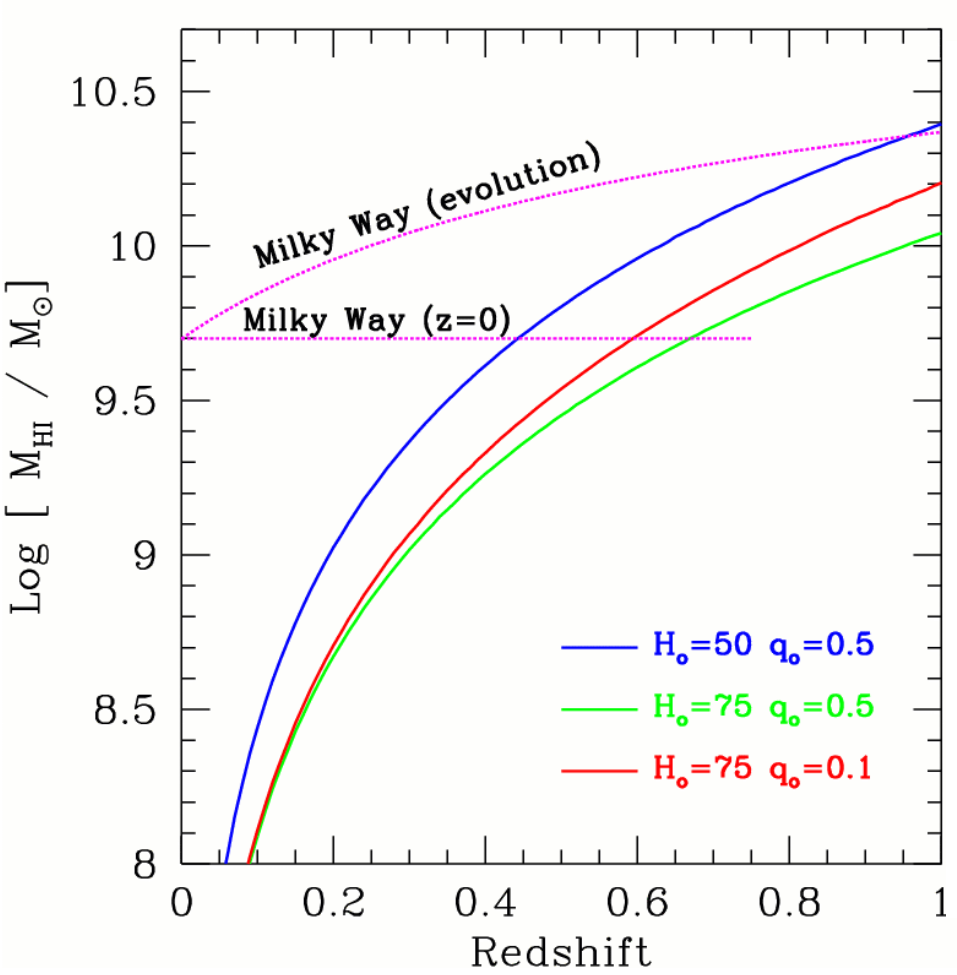
Radio Continuum Deep Field



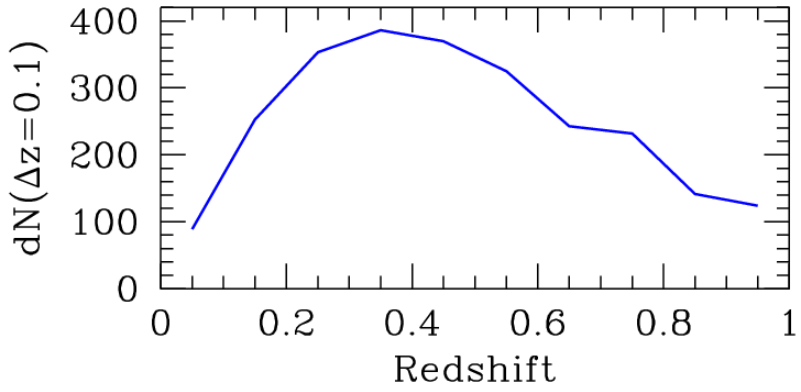
- 40,000 sources
- detections to 0.5 μJy at 2″ resolution
- 1000 rotation measures for large-scale magnetic field structure
- traces star formation history of the Universe, irrespective of dust extinction:
  Milky Way to z=1
  Arp 220 to z=10

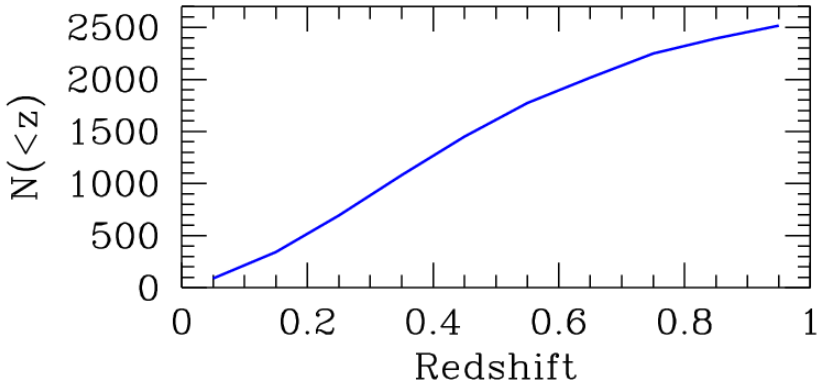


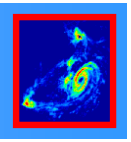
HI Deep Field



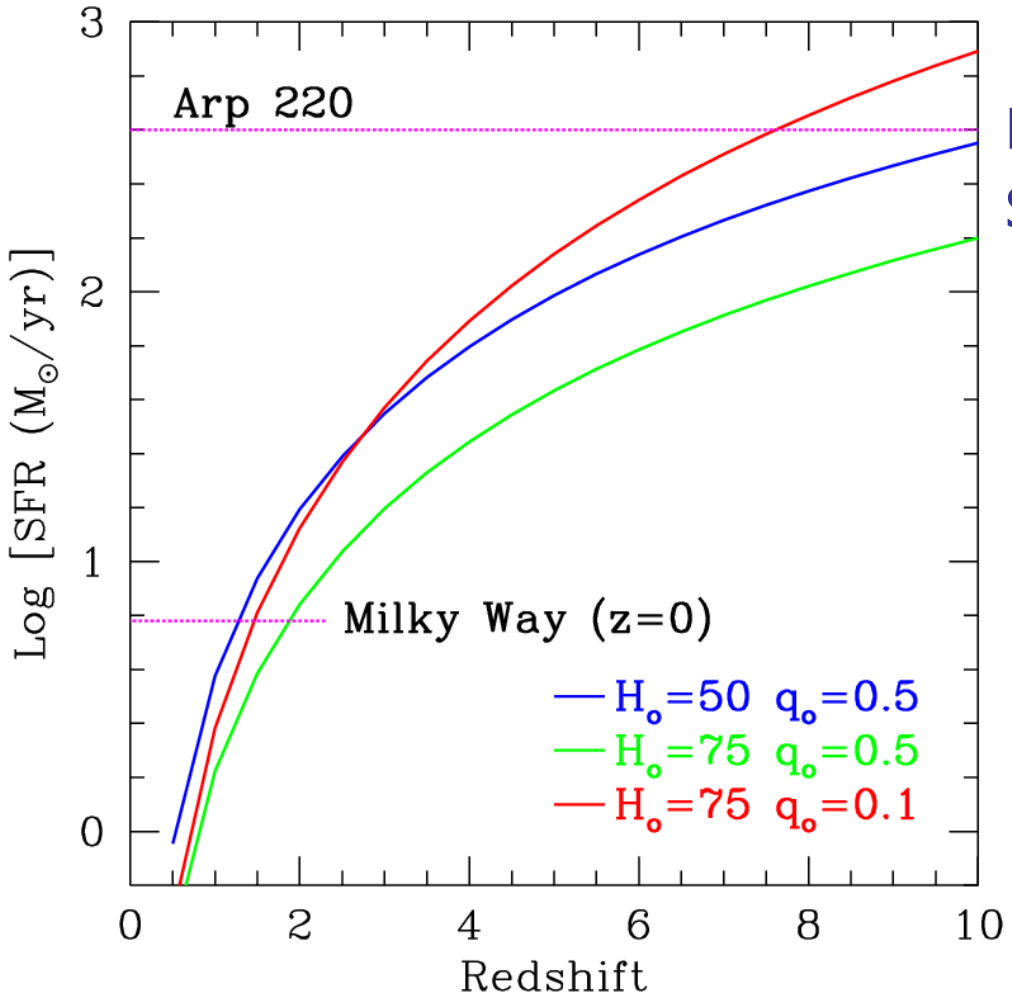
No evolution, S/N=5

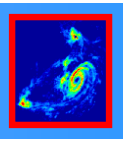






Radio Continuum Deep Field



BW=500 MHz

S/N=8