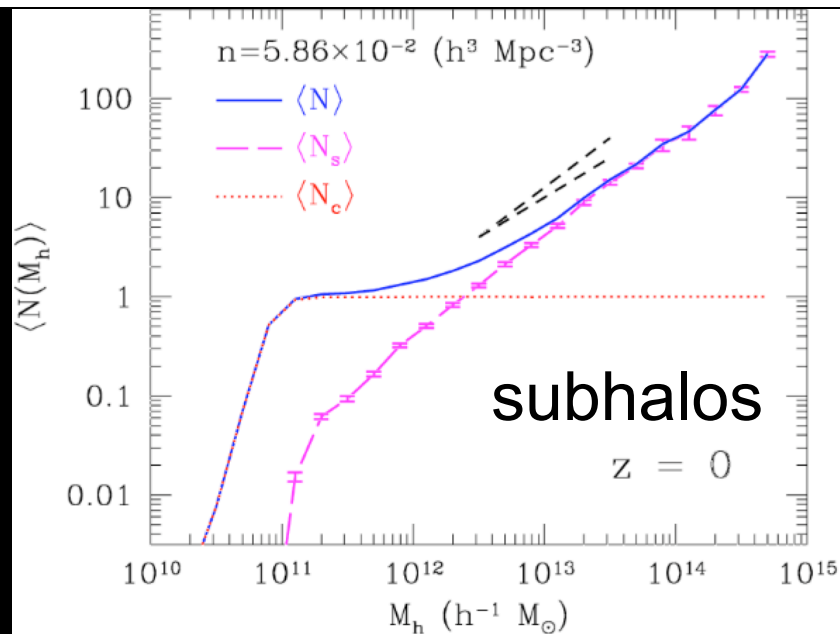
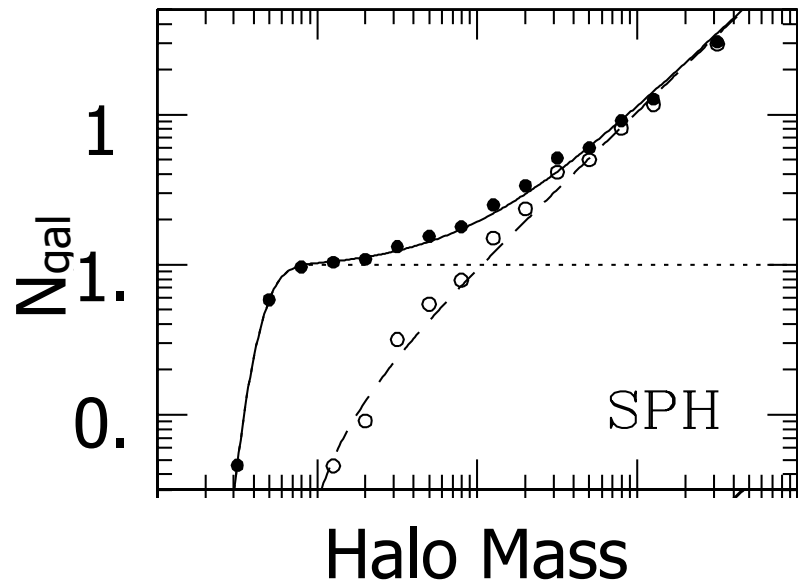


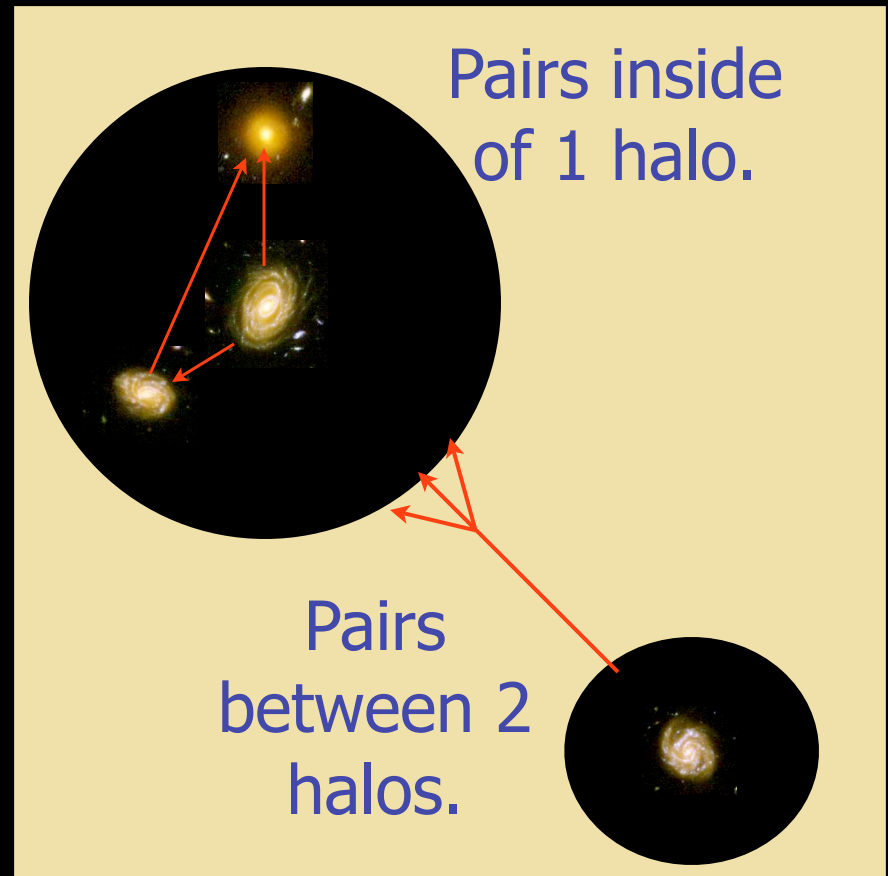
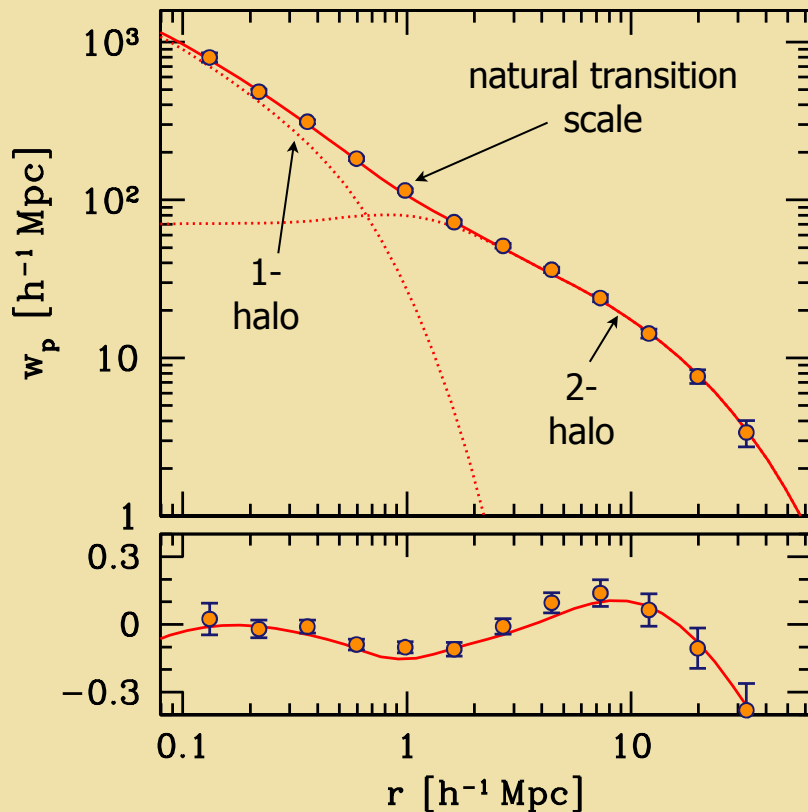
# the halo occupation distribution



- Statistical prescription for the connection between galaxies and dark matter halos:  $P(N|M)$
- Specifying HOD provides full description of galaxy spatial distribution.
- Can constrain the HOD from observational clustering data.

# Deconstructing galaxy clustering

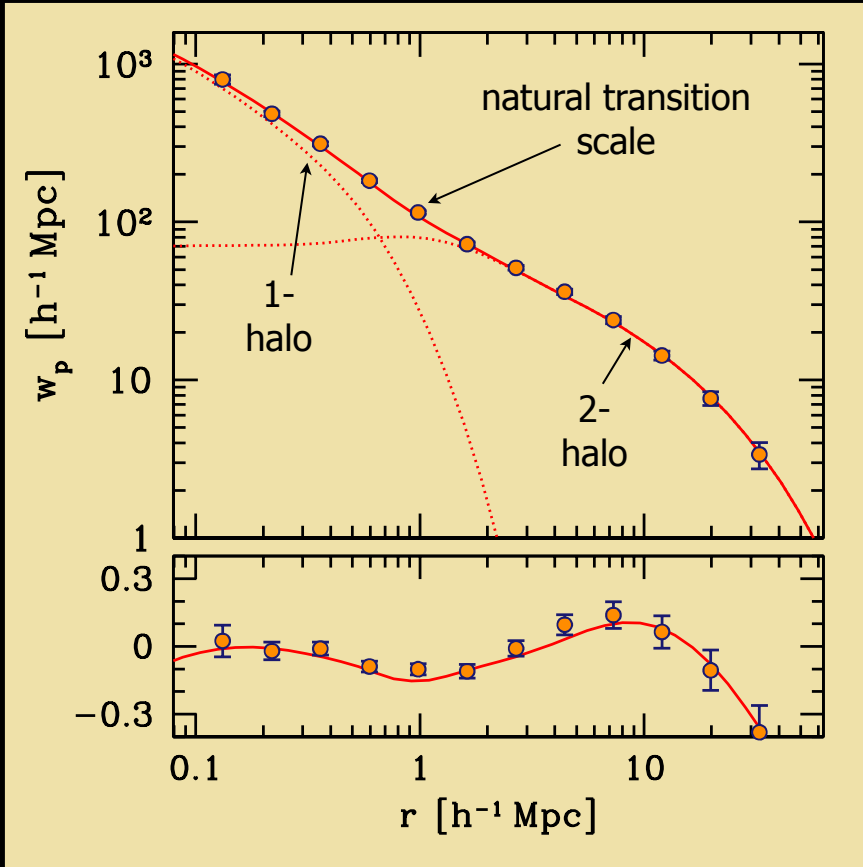
clustering measurements  
SDSS DR7,  $M_r < -21$  galaxies.



See, i.e., Zehavi et al 2004 for DR2 results  
Zehavi et al 2011 for DR7 results

# Deconstructing galaxy clustering

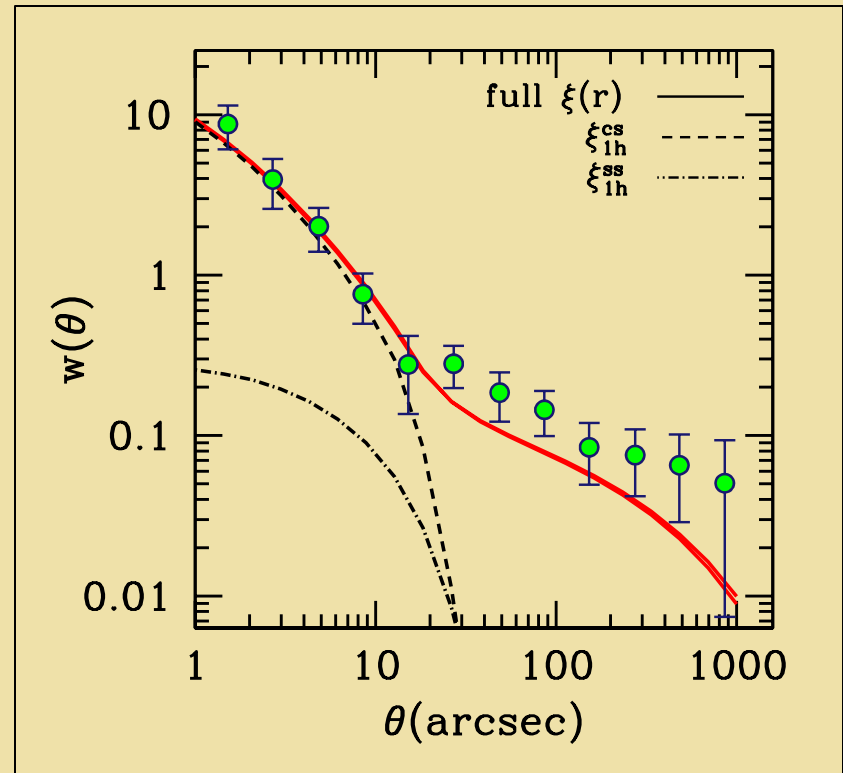
clustering measurements  
SDSS DR7,  $M_r < -21$  galaxies.



See, i.e., Zehavi et al 2004 for DR2 results  
Zehavi et al 2011 for DR7 results

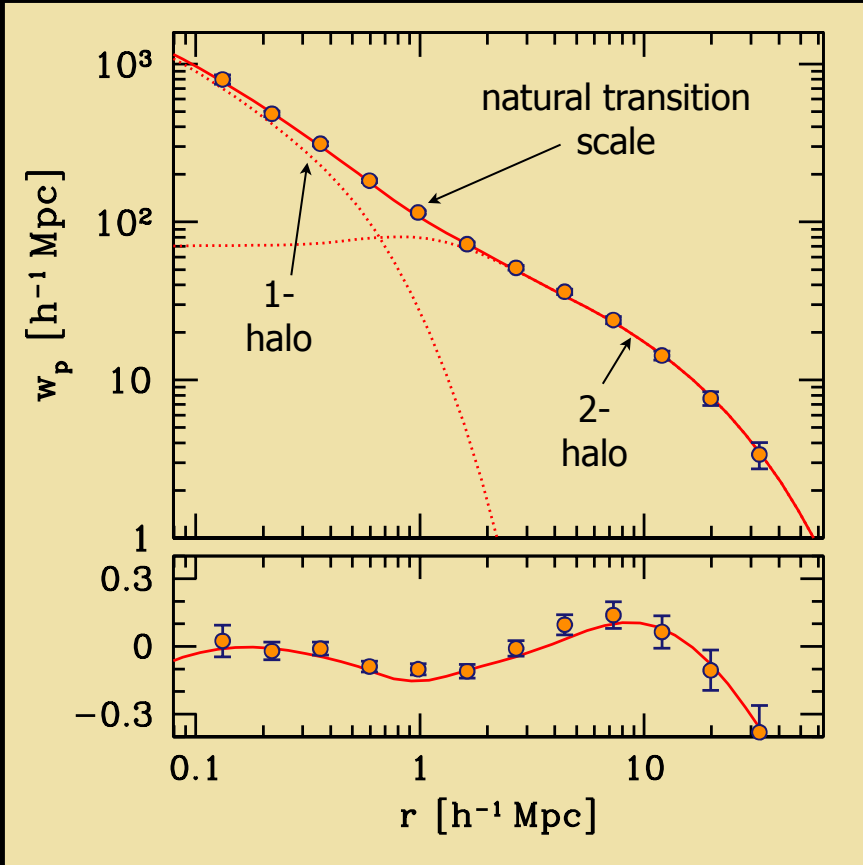
Transition more apparent at  
high redshift

Tinker, Wechsler, Zheng 2010

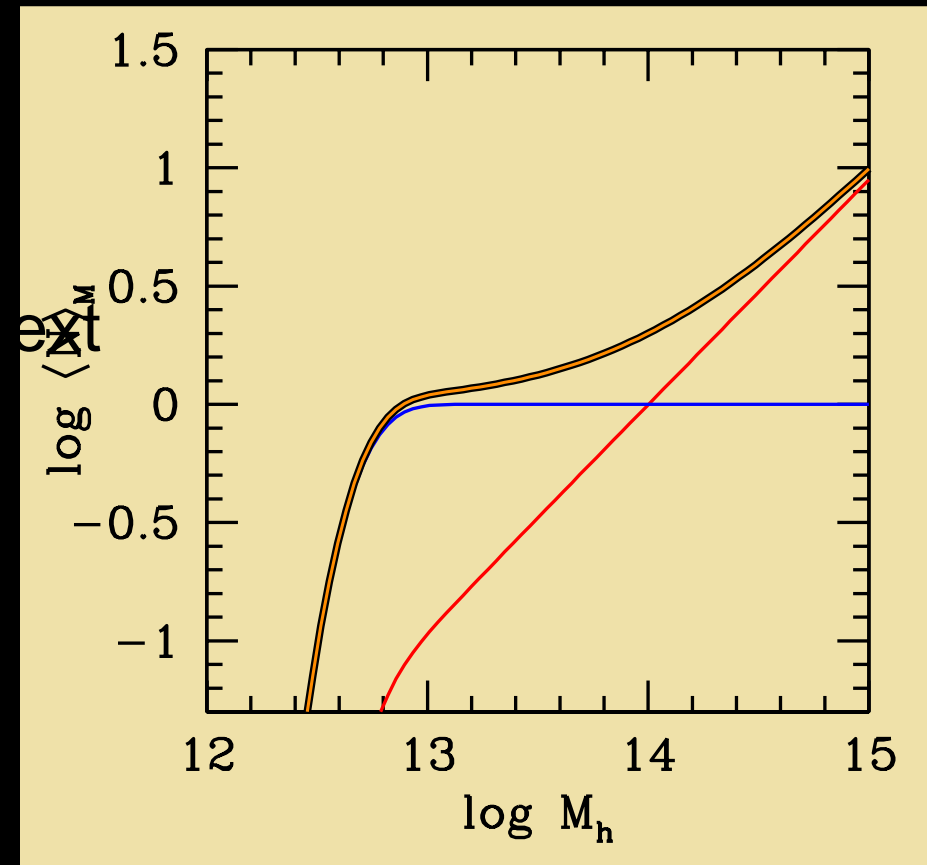


# Deconstructing galaxy clustering

clustering measurements  
SDSS DR7,  $M_r < -21$  galaxies.



Use the data to constrain  
this galaxy-halo relation



See, i.e., Zehavi et al 2004 for DR2 results  
Zehavi et al 2011 for DR7 results