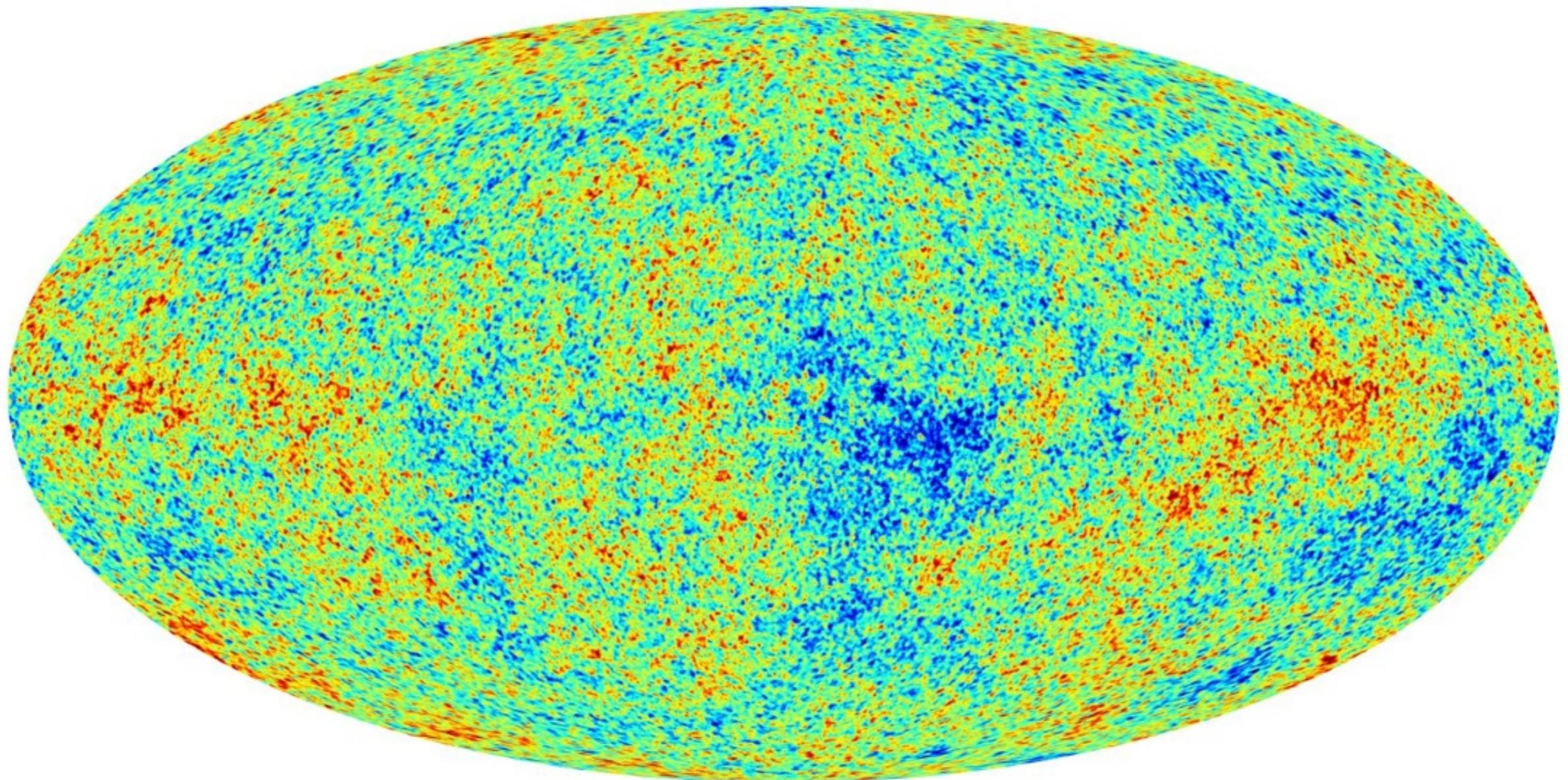


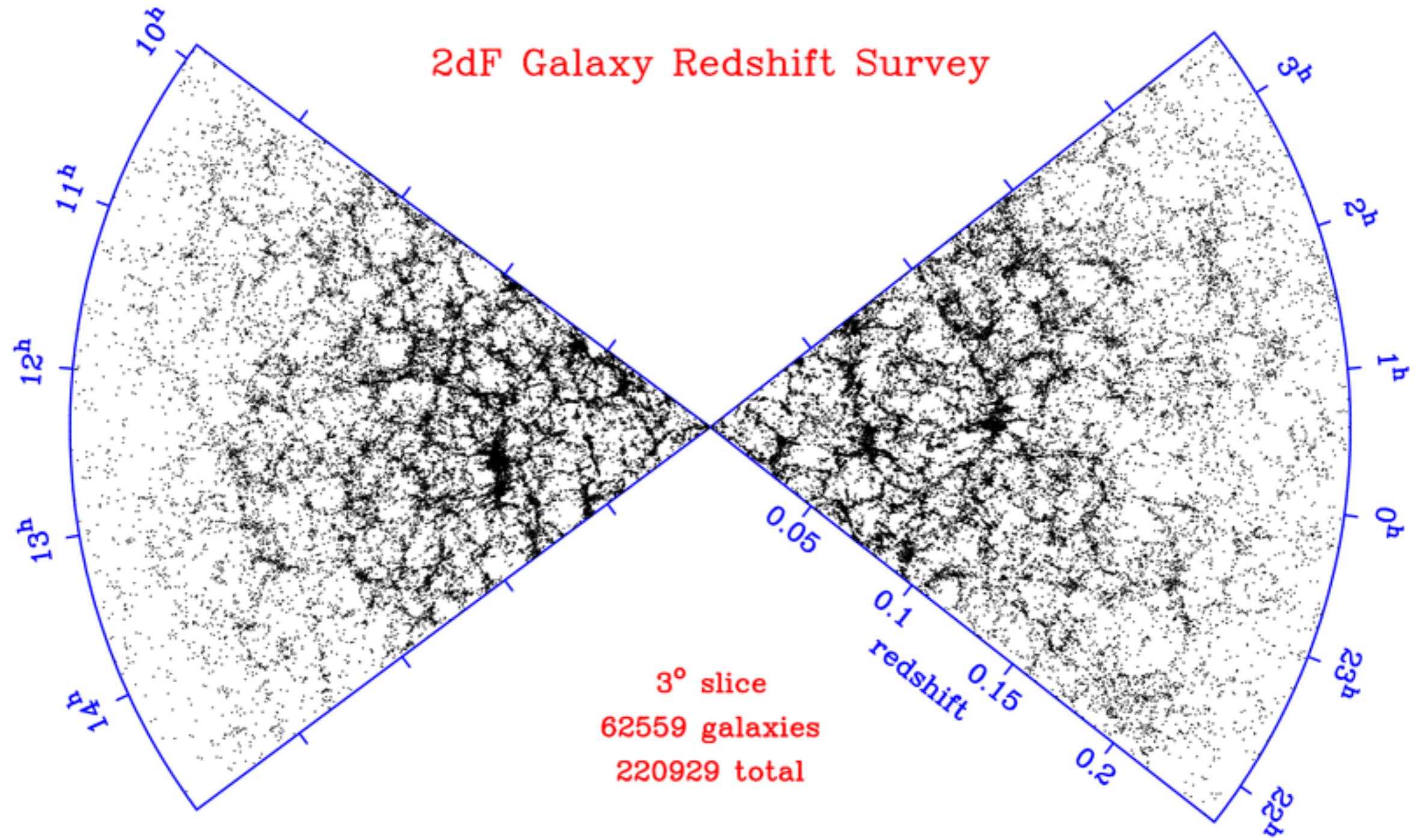
Galaxies, Voids, and the Large-scale Structure of the Universe

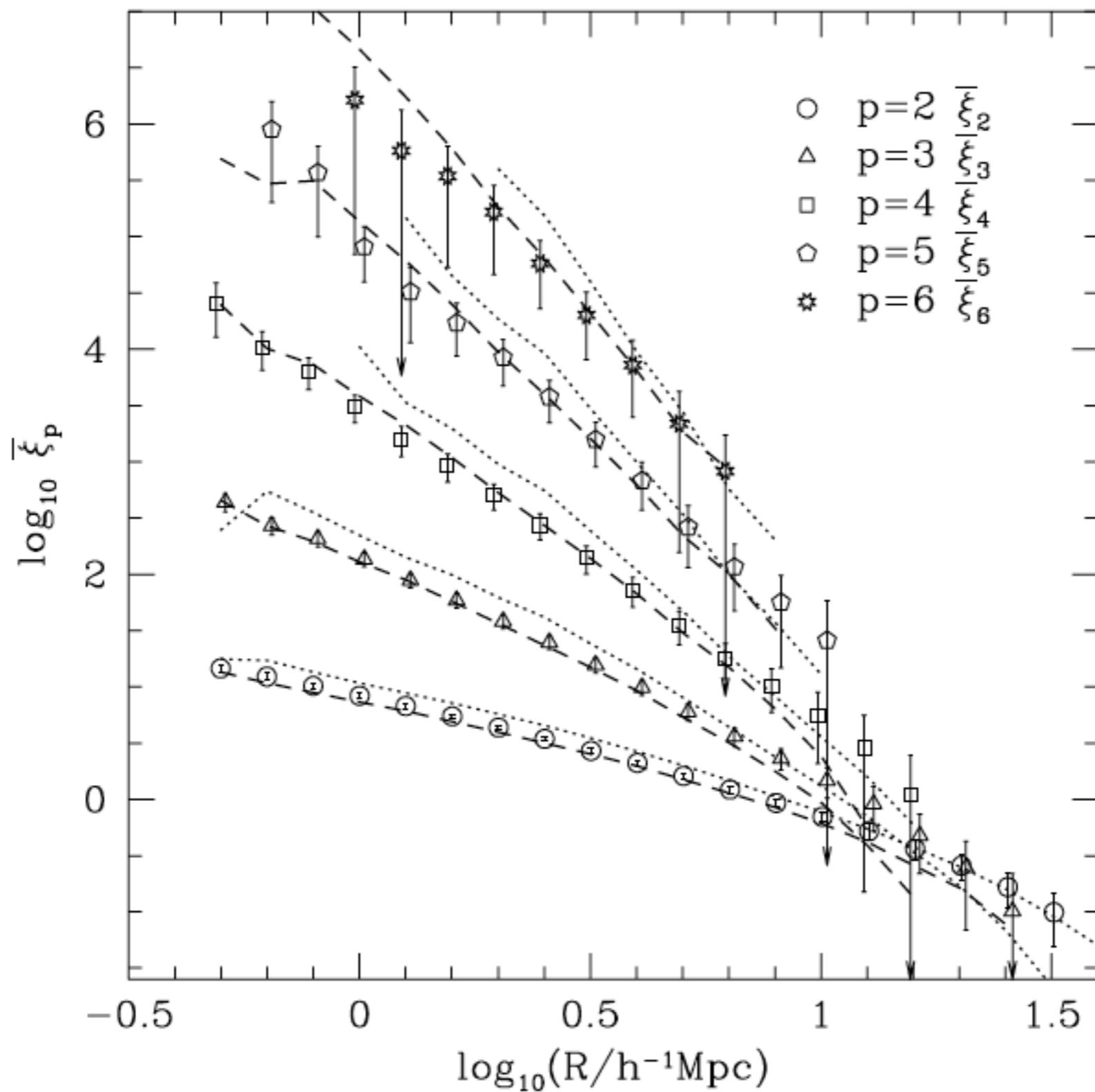
Darren Croton, Carlton Baugh, Enrique Gaztanaga,
Peder Norberg
[Swinburne, Durham, IEEC, Edinburgh]



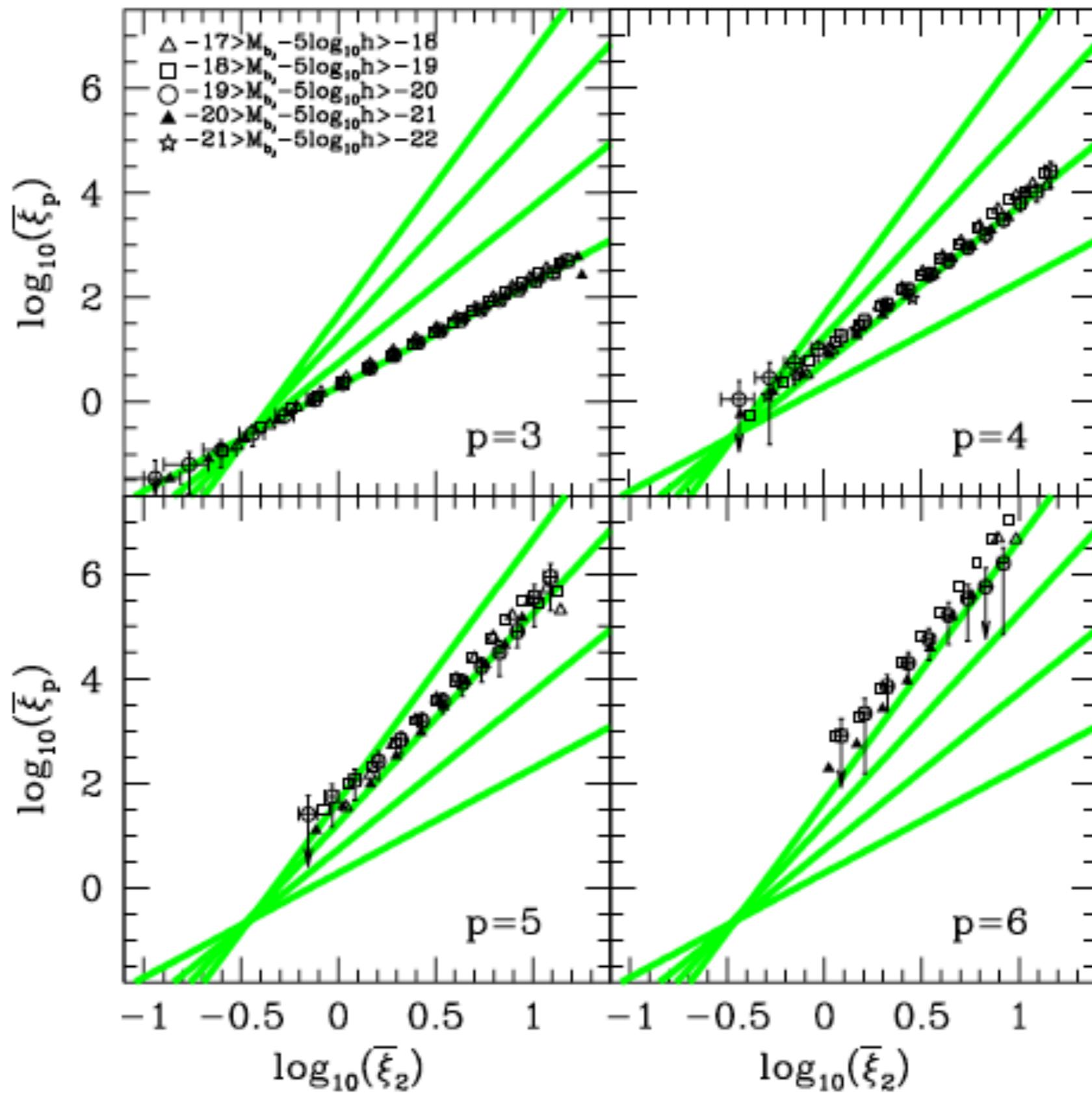
-300 uK

+300 uK

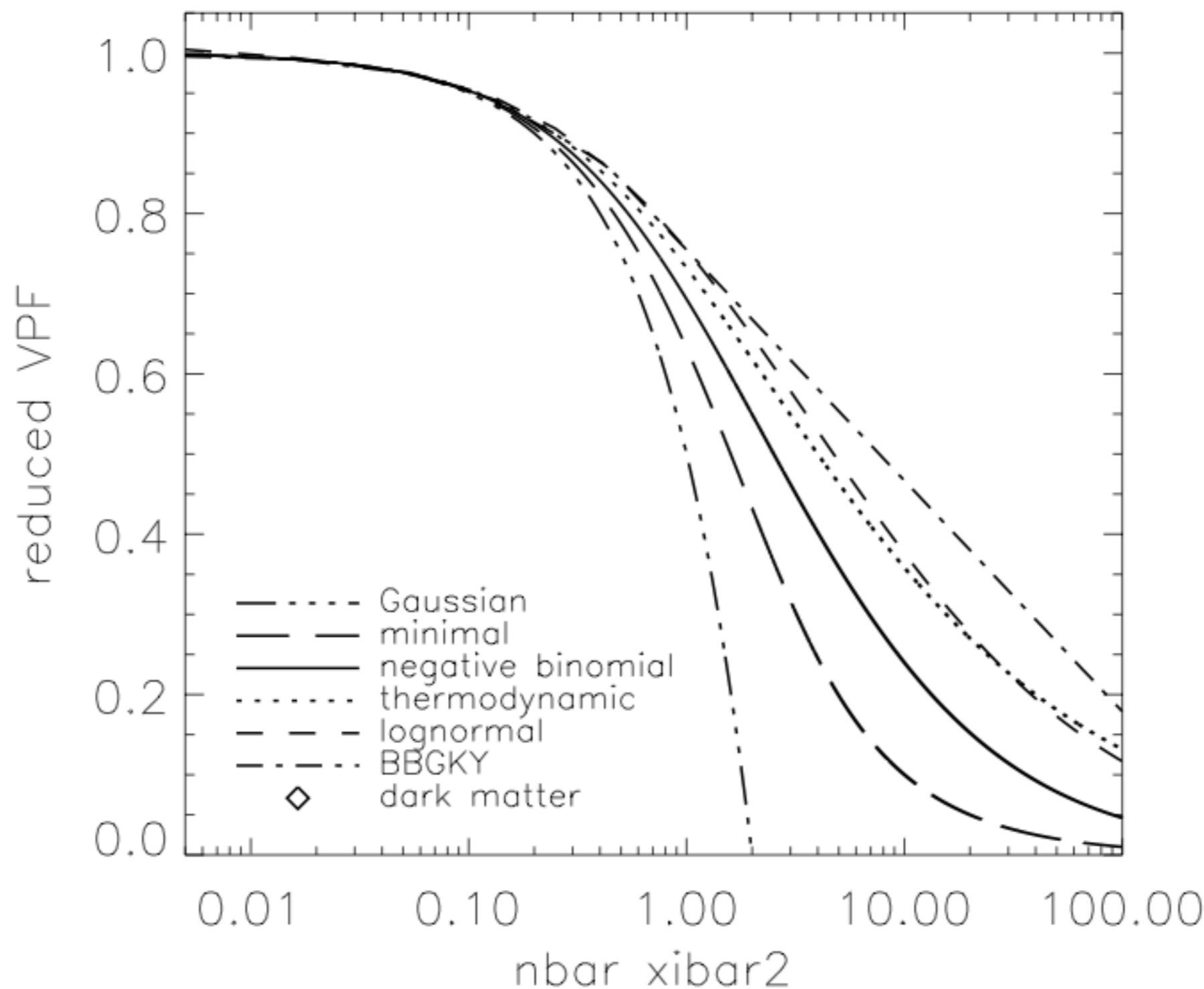


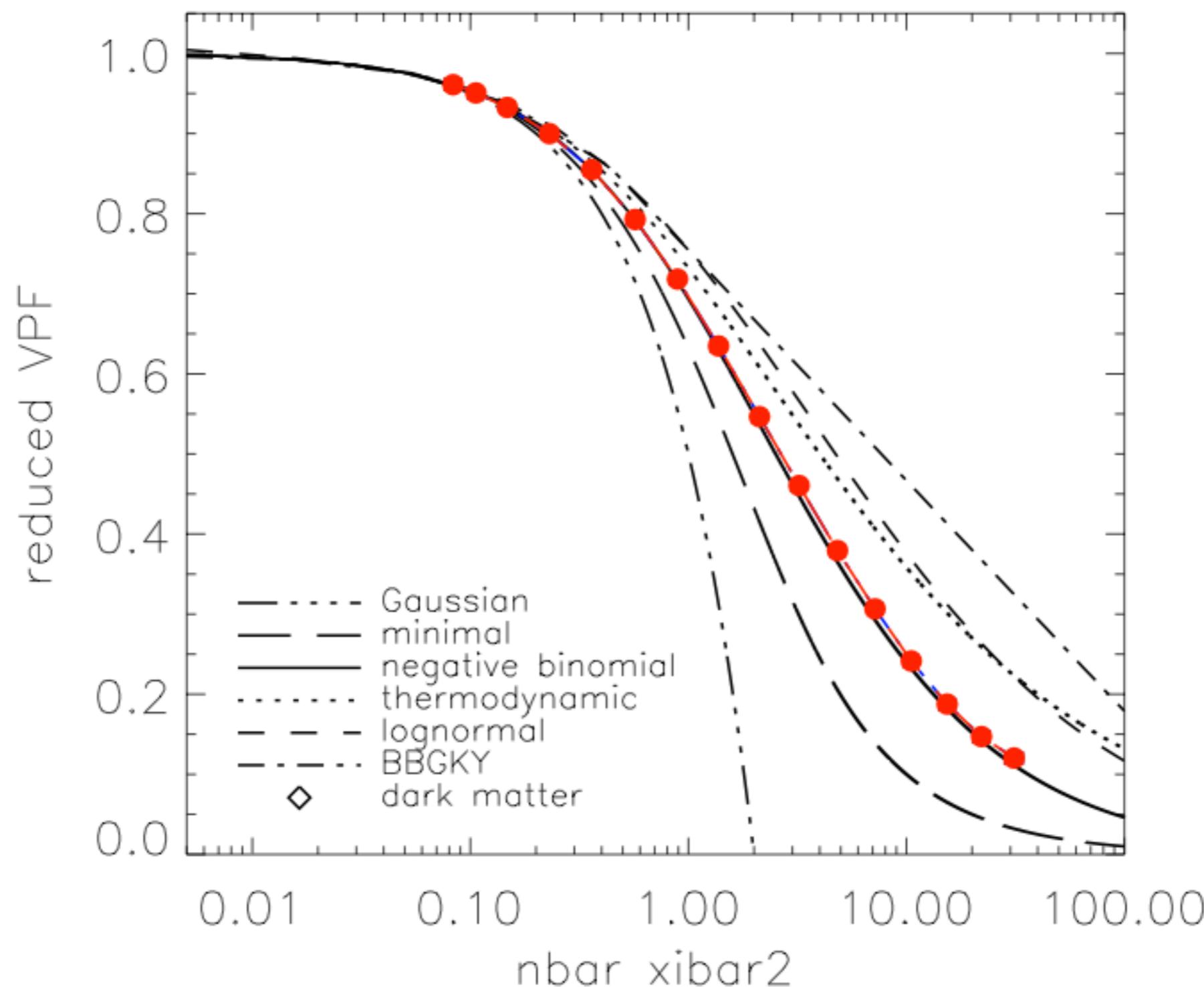


2dFGRS: Croton et al. 2004

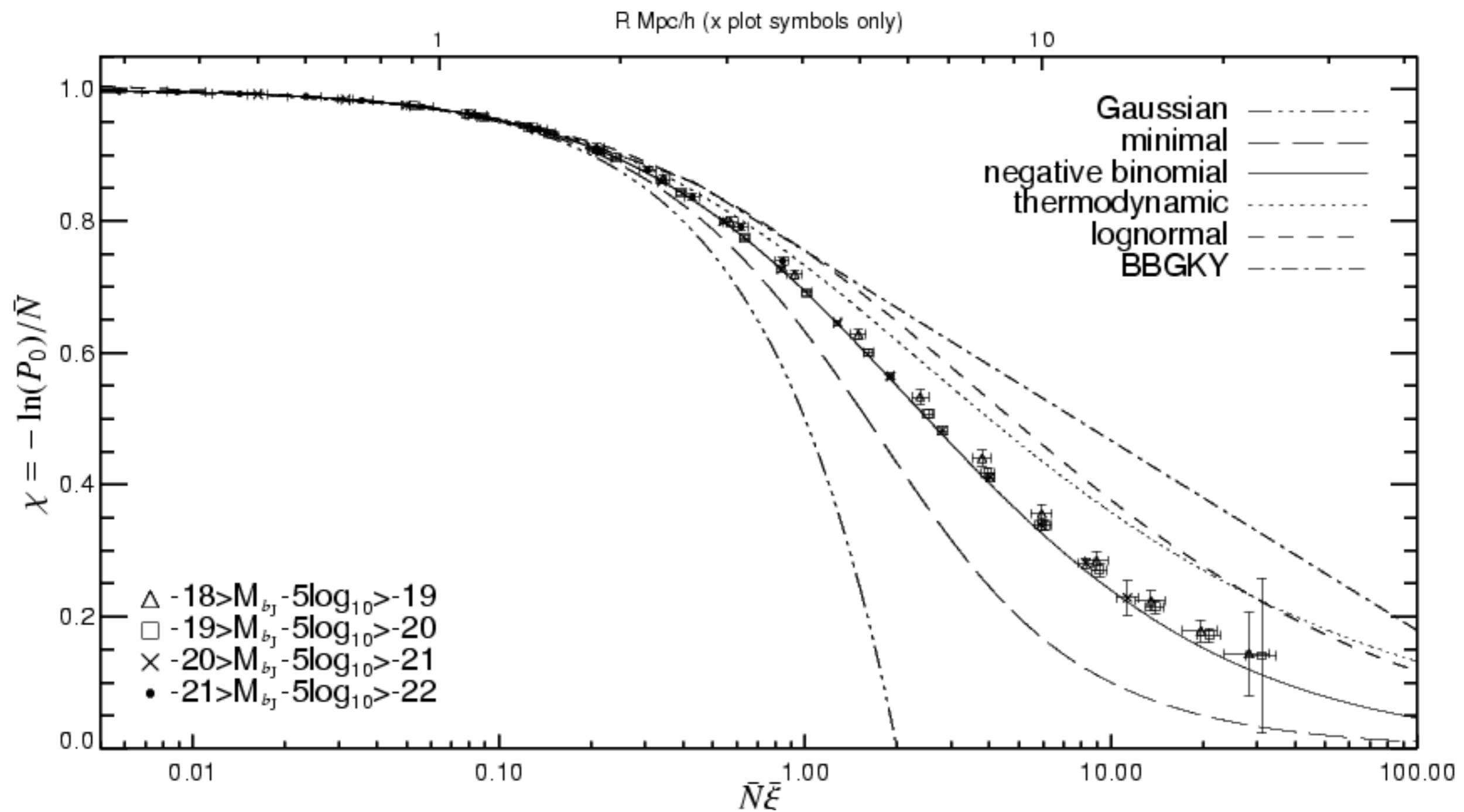


2dFGRS: Baugh et al. 2004



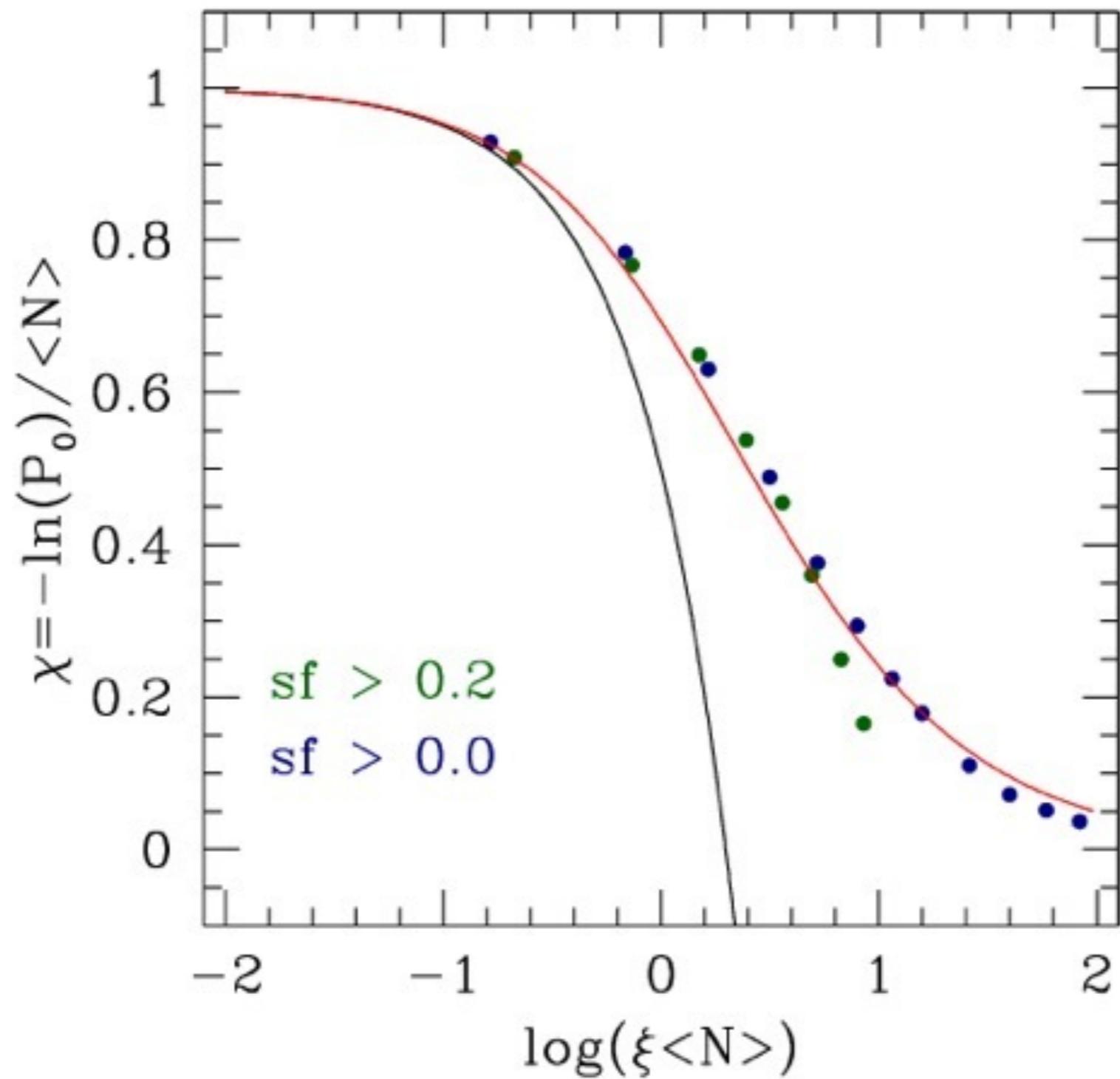


SDSS (unpublished)

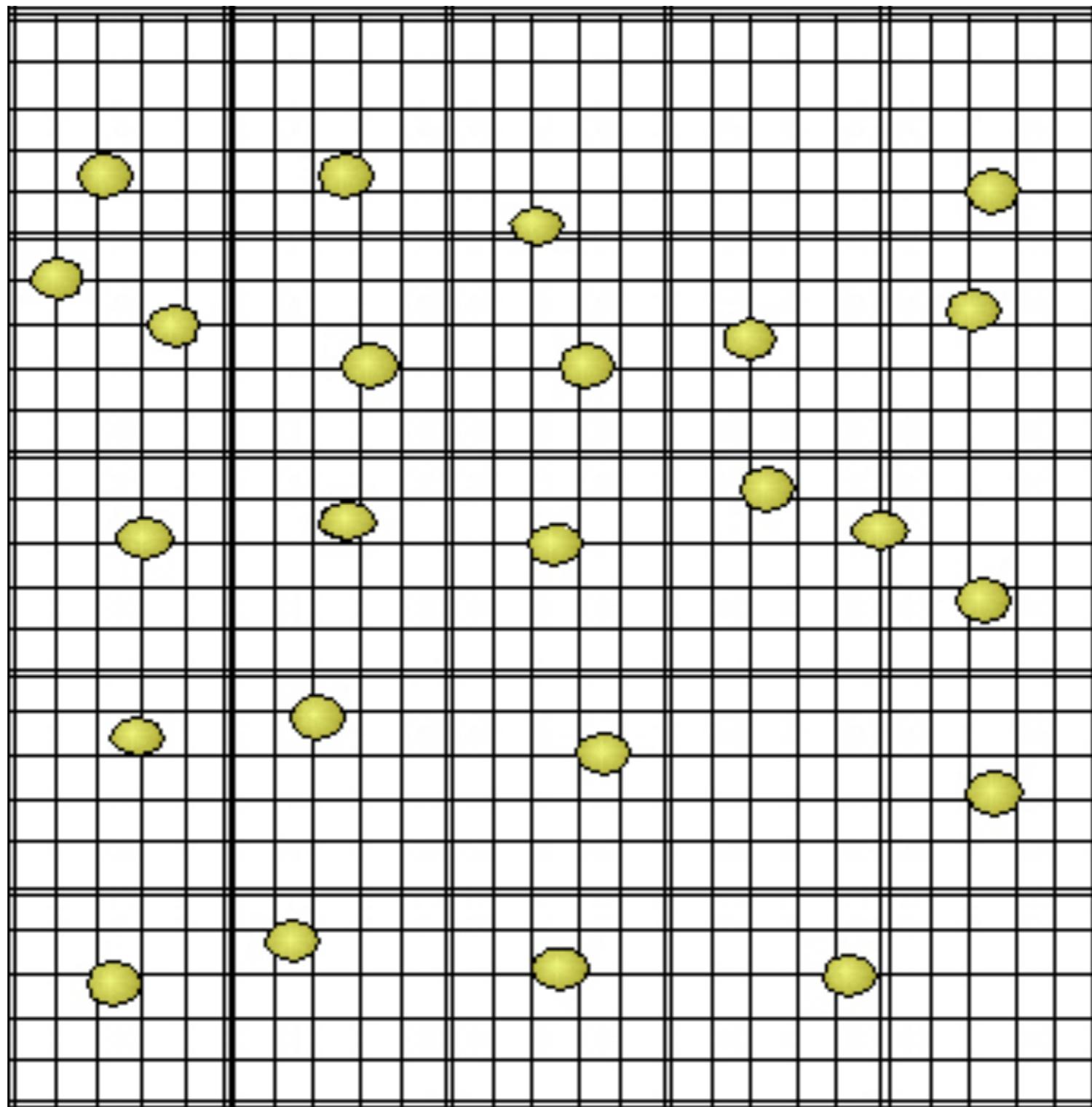


2dFGRS: Croton et al. 2005

Bin=1/1 WS=1



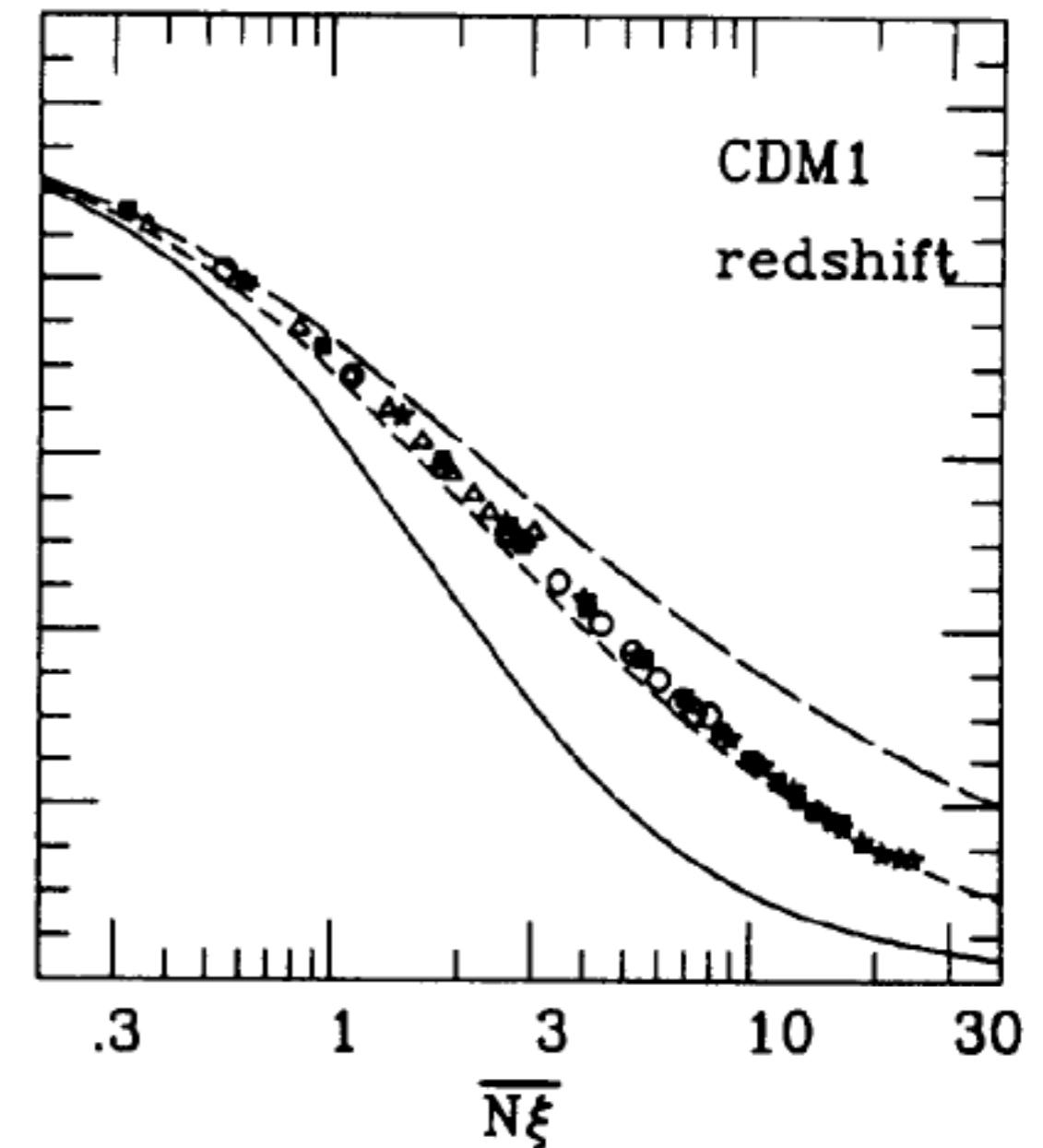
WiggleZ: Contreras et al. (in prep)



Elizalde & Gaztanaga 1992

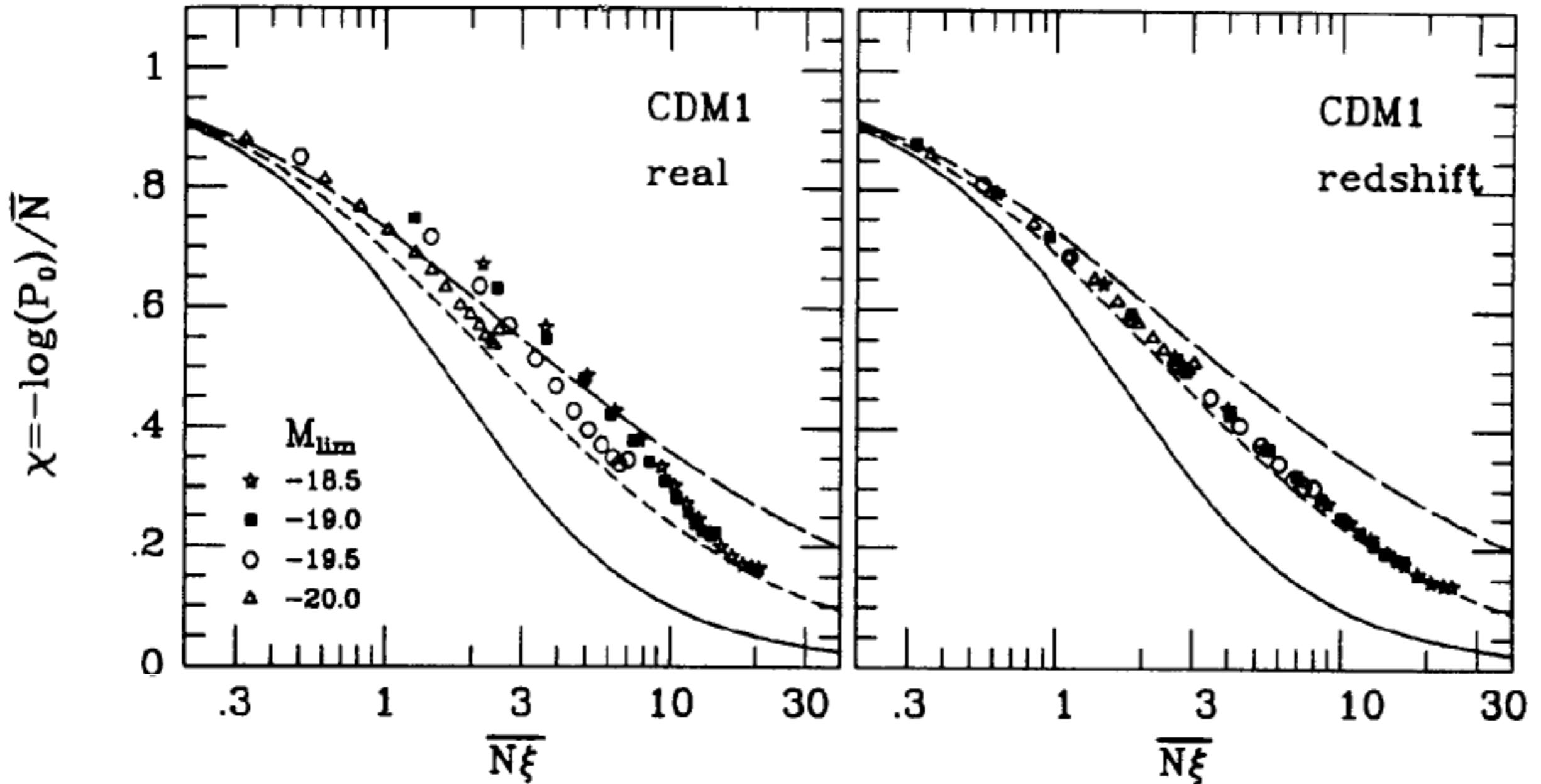
Redshift vs real space

$$\chi = -\log(P_0)/\bar{N}$$



Vogeley et al. 1994

Redshift vs real space



Vogeley et al. 1994

Shot noise corrections?

$$k_2 = \mu_2 - \bar{N},$$

$$k_3 = \mu_3 - 3k_2 - \bar{N},$$

$$k_4 = \mu_4 - 7k_2 - 6k_3 - \bar{N},$$

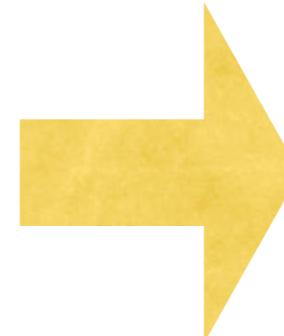
$$k_5 = \mu_5 - 15k_2 - 25k_3 - 10k_4 - \bar{N},$$

$$k_6 = \mu_6 - 31k_2 - 90k_3 - 65k_4 - 15k_5 - \bar{N},$$

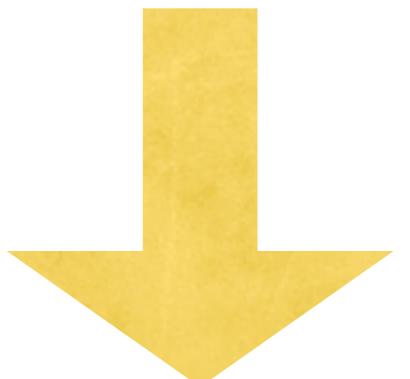
$$k_7 = \mu_7 - 63k_2 - 301k_3 - 350k_4 - 140k_5 - 21k_6 - \bar{N},$$

$$k_8 = \mu_8 - 127k_2 - 966k_3 - 1701k_4 - 1050k_5 - 266k_6$$

$$- 28k_7 - \bar{N},$$



$$\bar{\xi}_p = k_p / \bar{N}^p$$

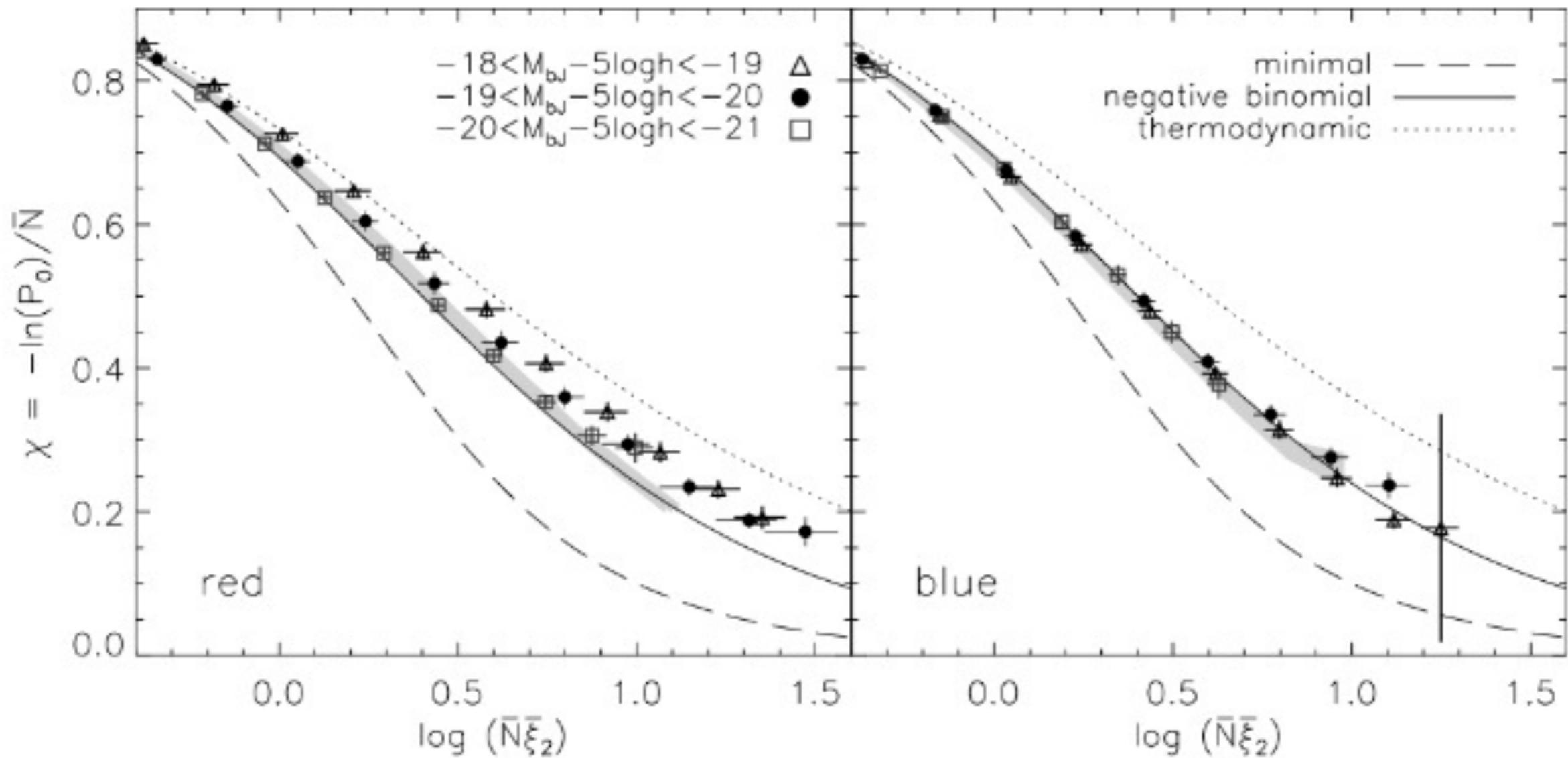


$$\chi = \ln(1 + \bar{N}\bar{\xi}) / \bar{N}\bar{\xi} \quad (\text{negative binomial}),$$

$$S_p = (p-1)! \quad (\text{skewness: } S_3 = 2).$$

Gaztanaga et al. 1994

Croton et al. 2005



2dFGRS: Croton et al. 2007