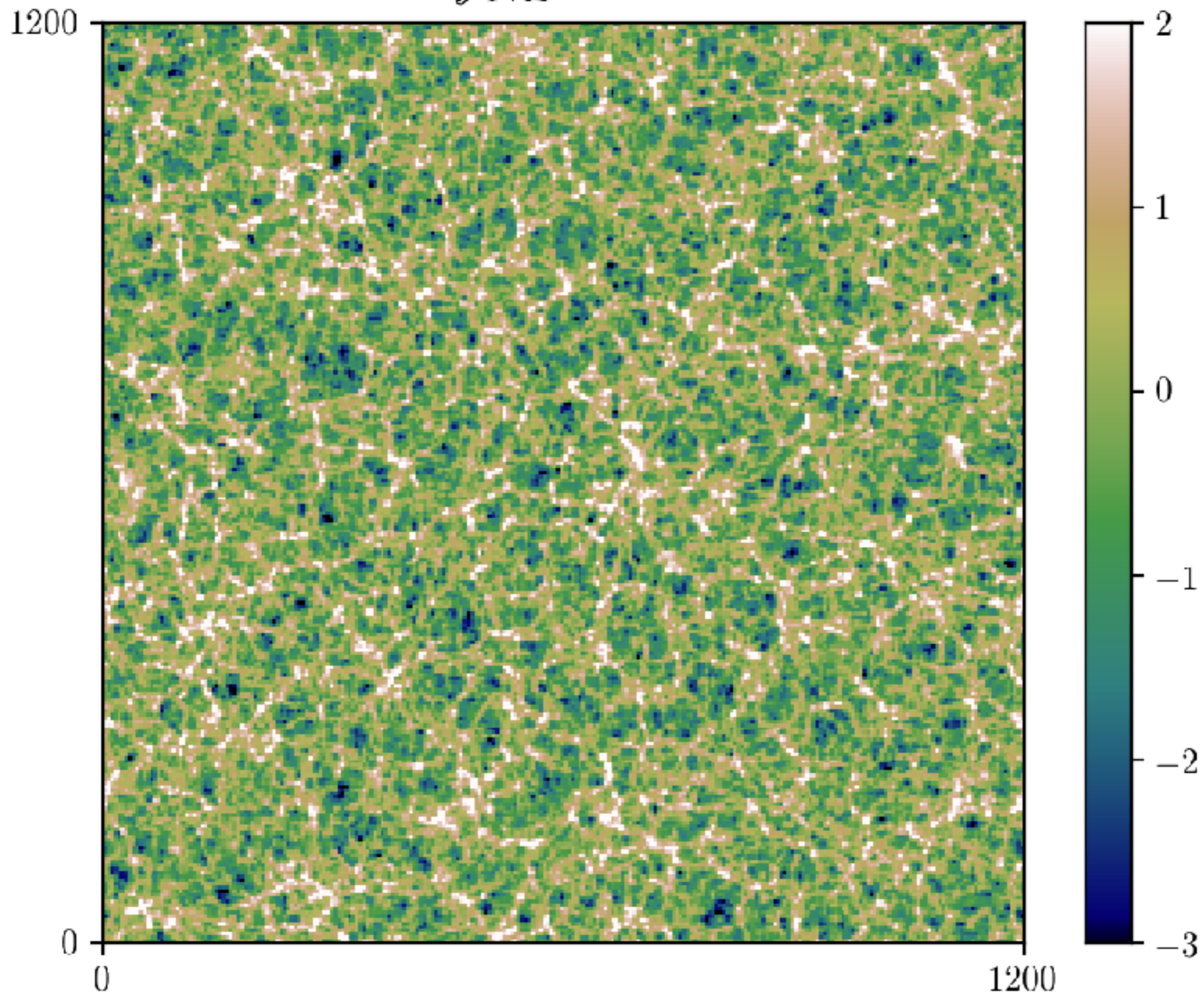


We rely on nature to do the biasing for us to
produce a f_{NL} signal in the
galaxy power spectrum ...

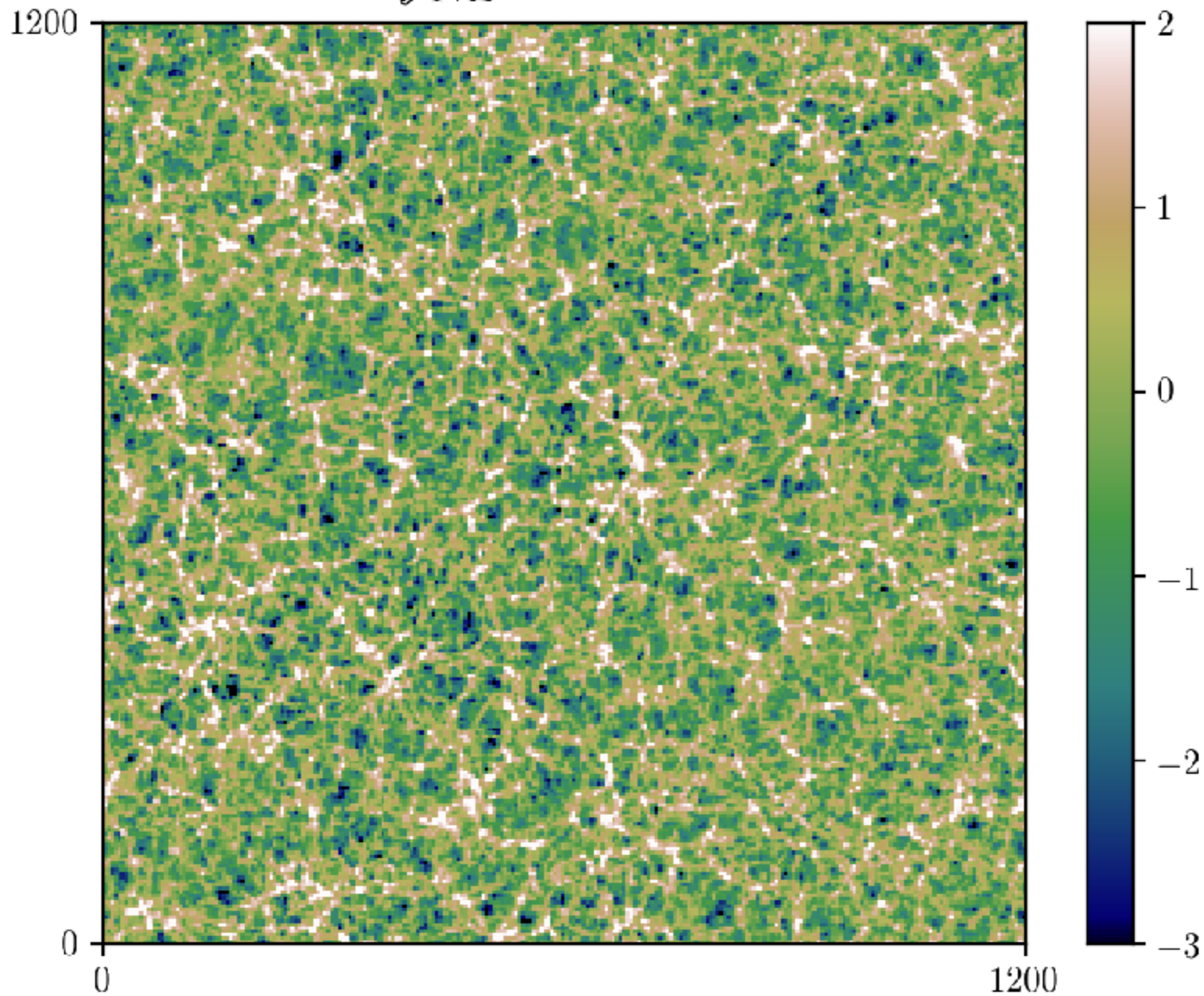
Can we further improve the signal?

$$f_{\text{NL}} = 0$$



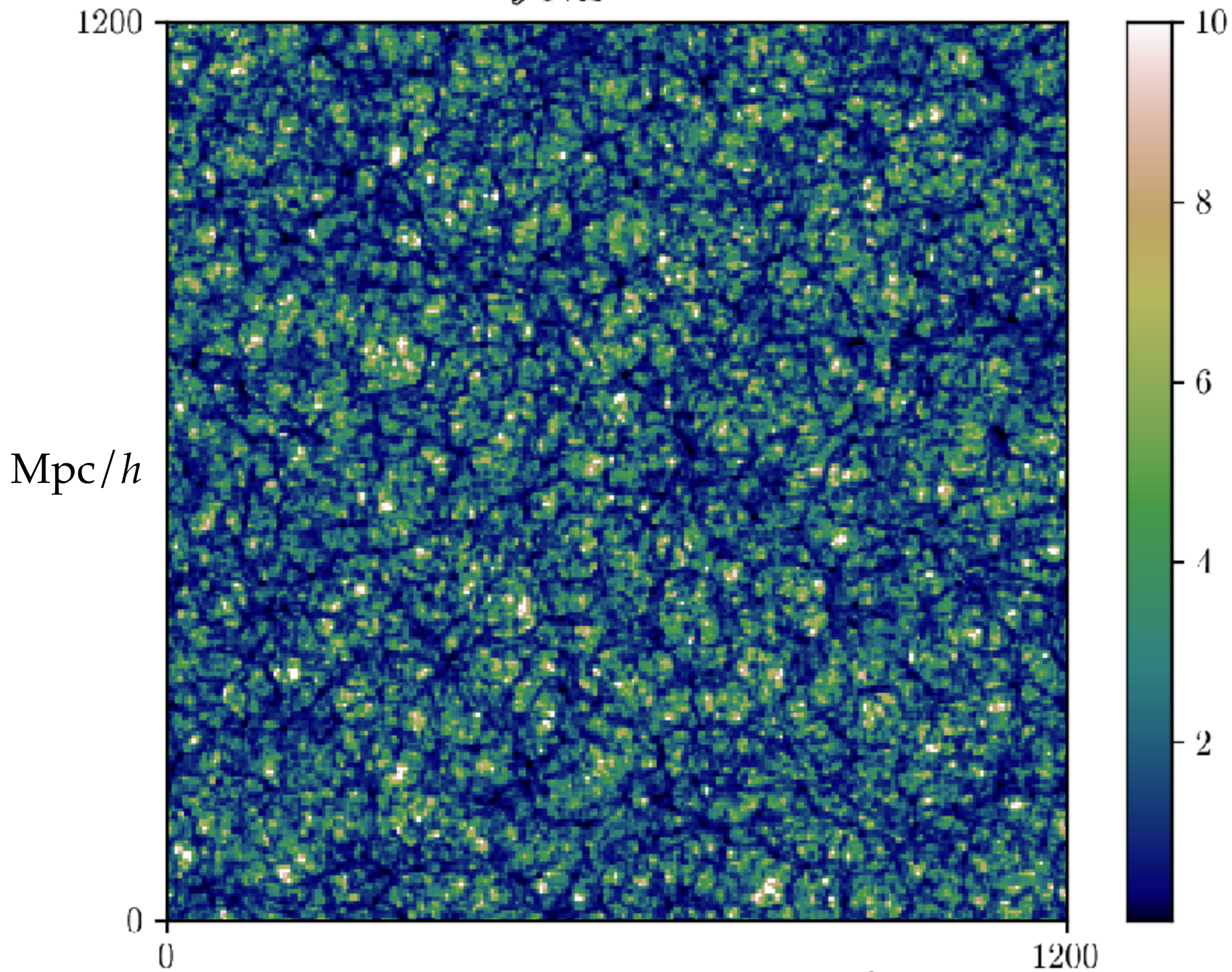
Gaussianized density

$$f_{\text{NL}} = +750$$



Gaussianized density

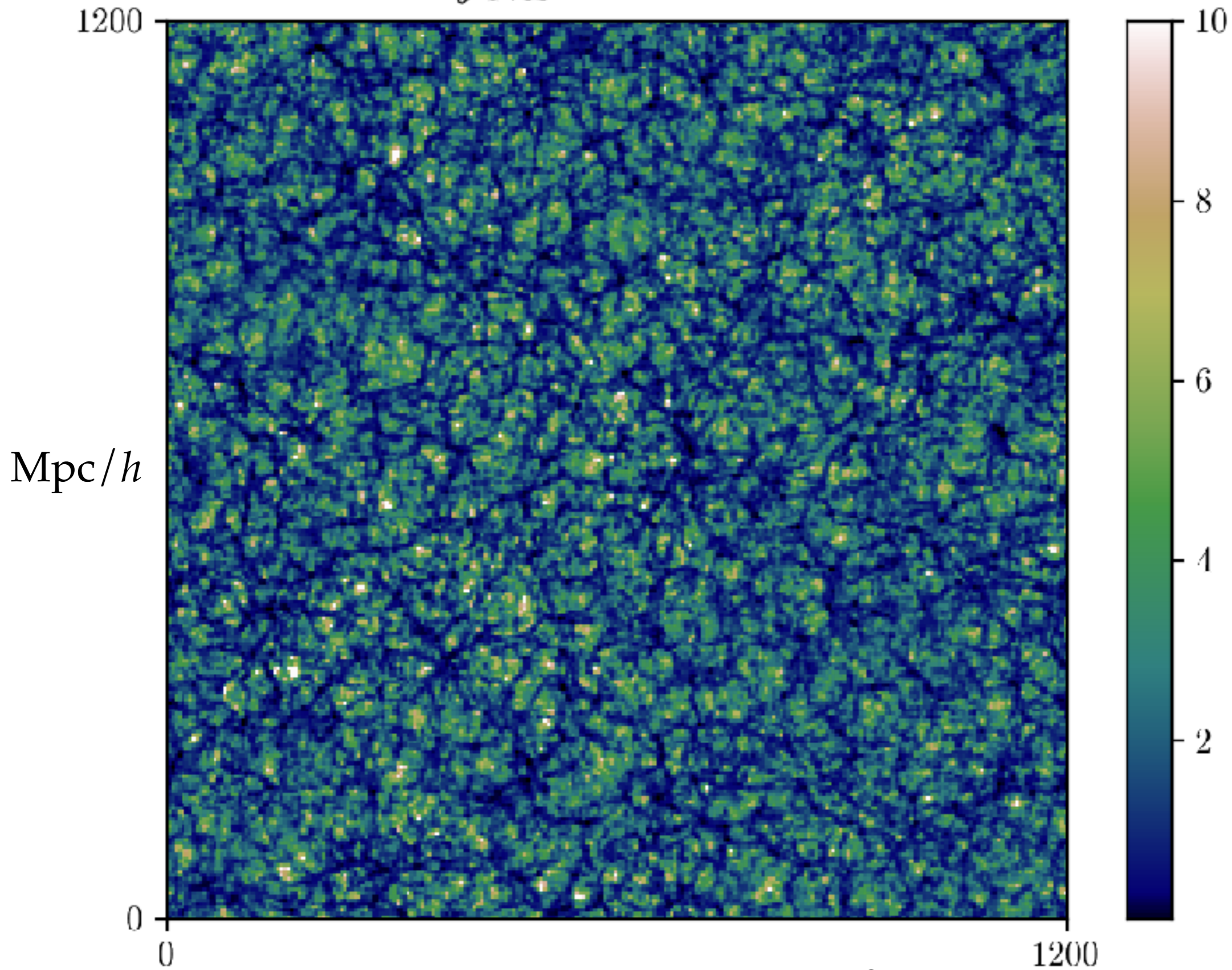
$$f_{\text{NL}} = 0$$



Mark Neyrinck

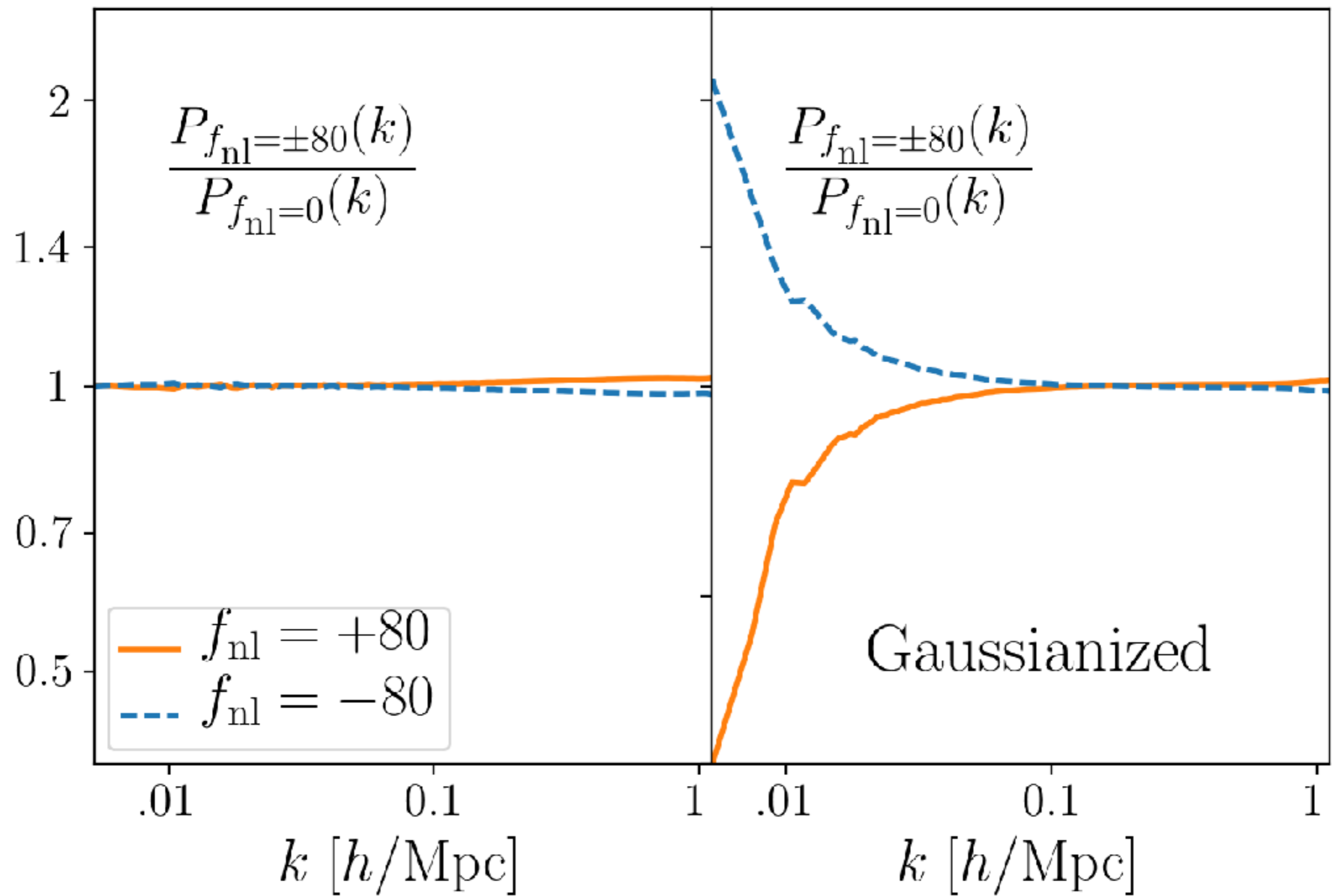
Inverse density $1/(1+\delta)$

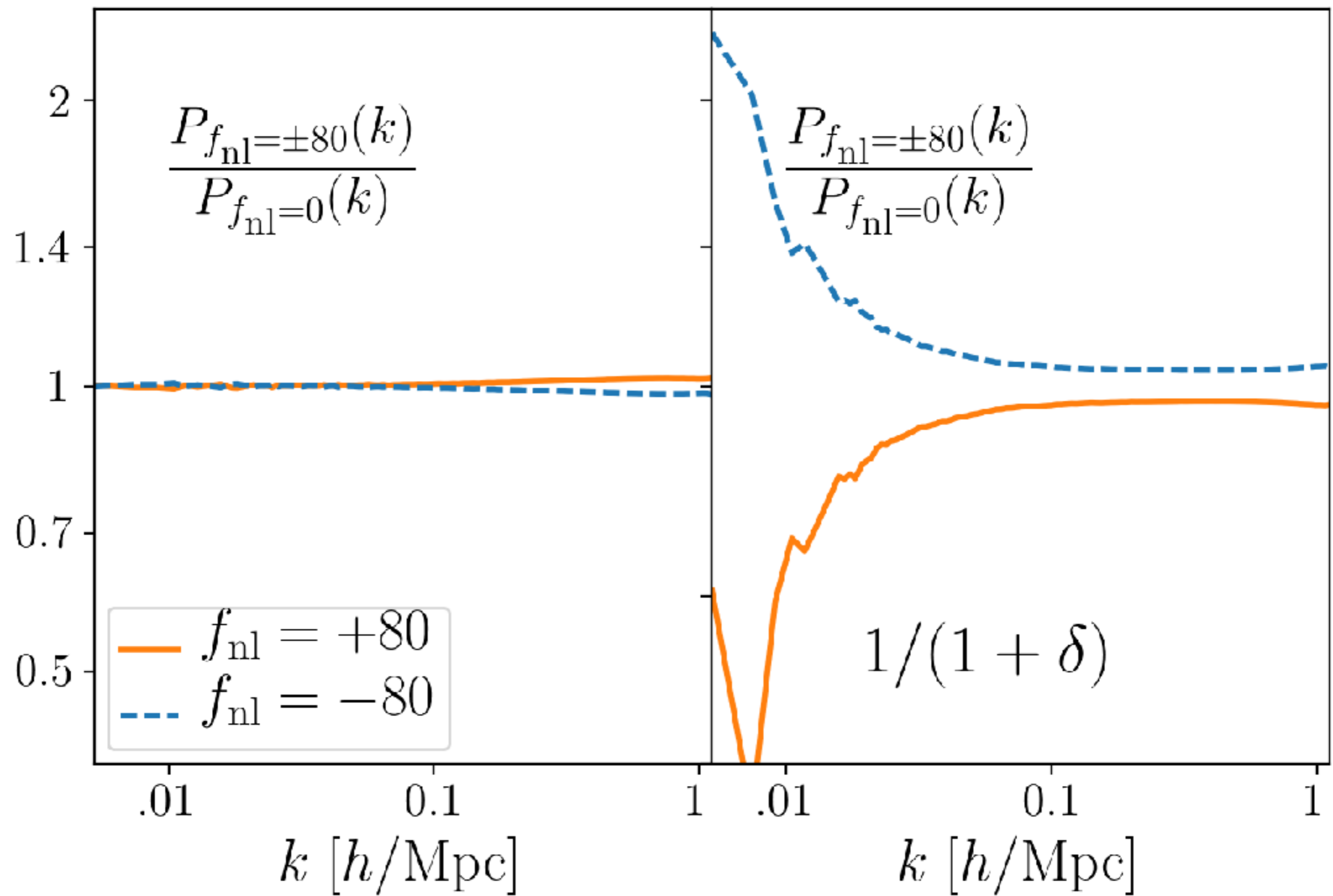
$$f_{\text{NL}} = +750$$



Mark Neyrinck

Inverse density $1/(1+\delta)$





This was matter ... what about galaxies?

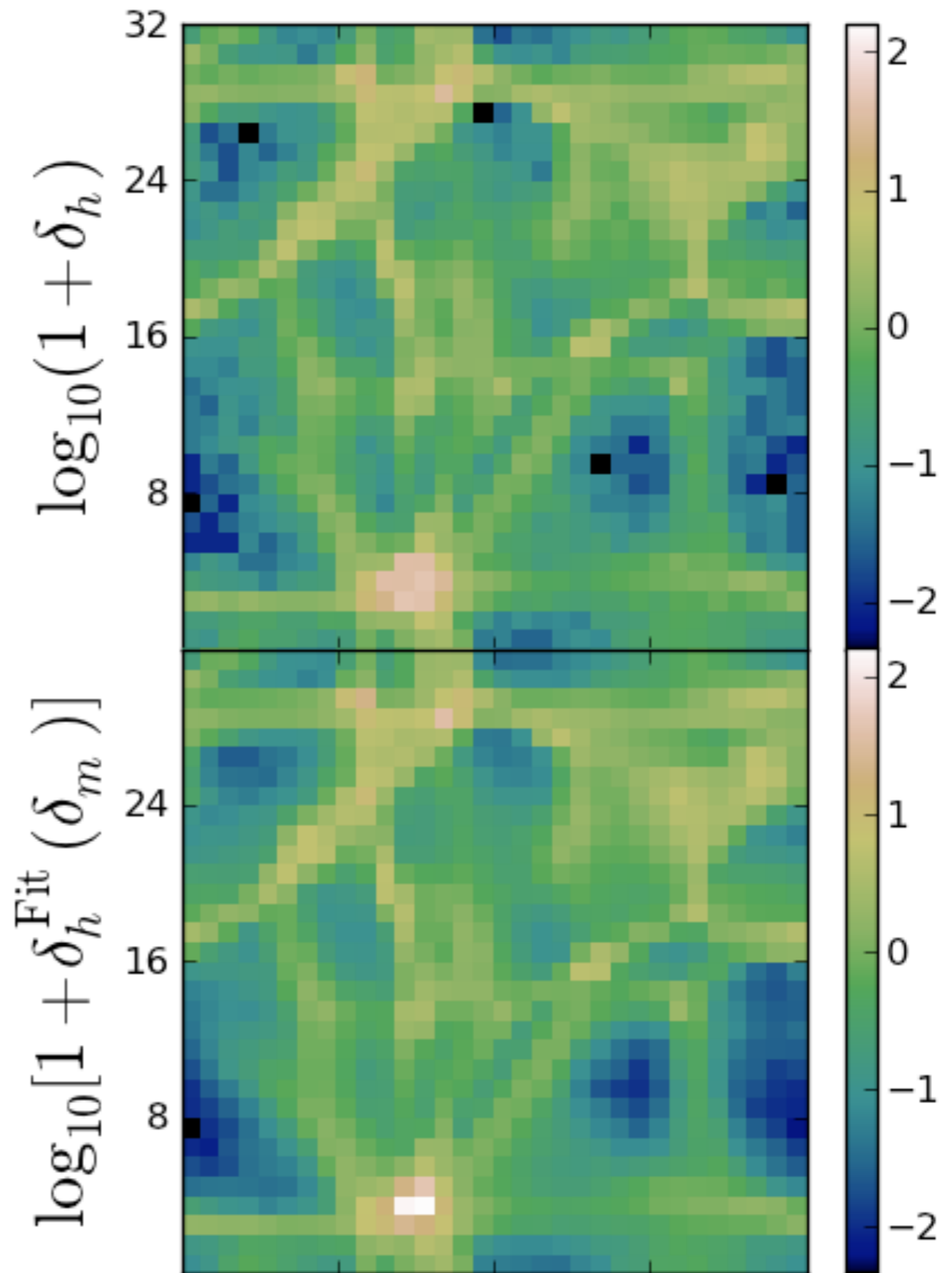
- Suppose the galaxy-density field is some (strictly increasing) function of the matter density field.
- Then doing mappings to each field to give each the same PDF will give the *same field*.

Comparison of:

Halo-density field

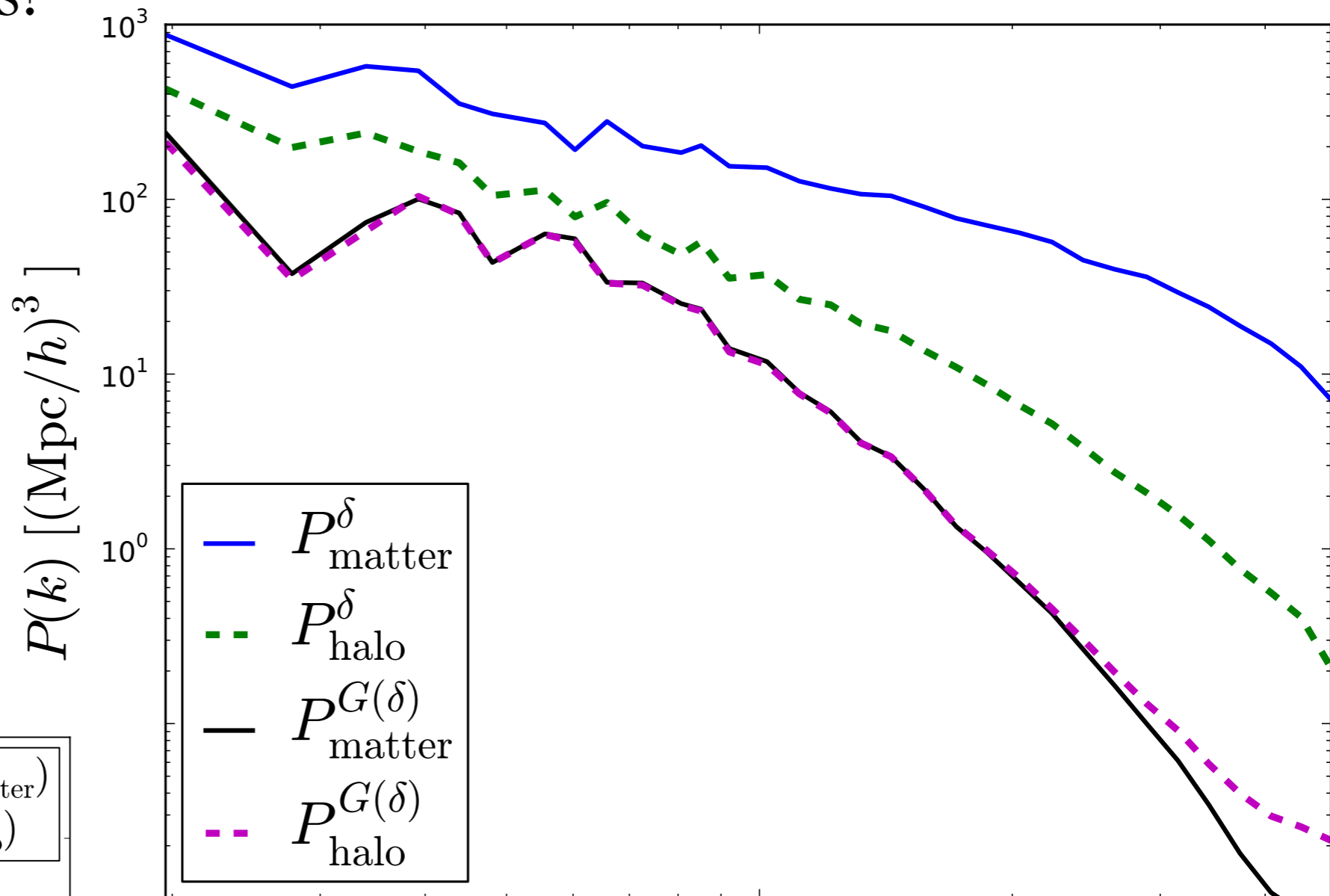
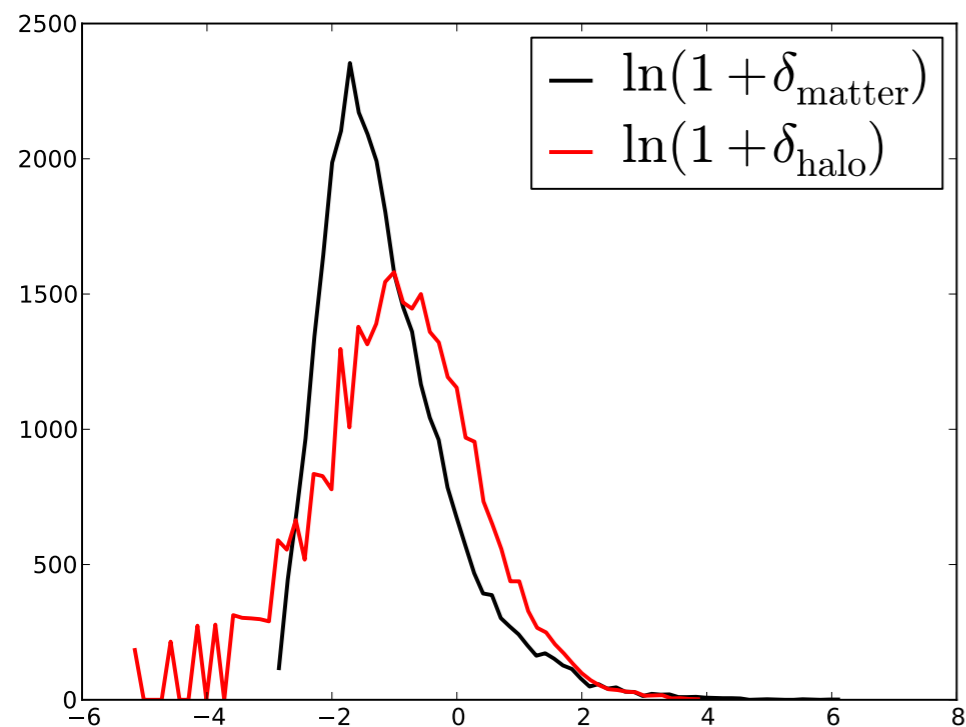
with

Halo-density field
predicted from the
matter field



Without shot noise, Gaussianizing both fields largely undoes galaxy bias!

$$\delta_h = \delta_h(\delta_m) \Rightarrow G(\delta_h) = G(\delta_m)$$



k [h/Mpc] Power spectra --
Gaussianization on
 $1 h^{-1}$ Mpc grid