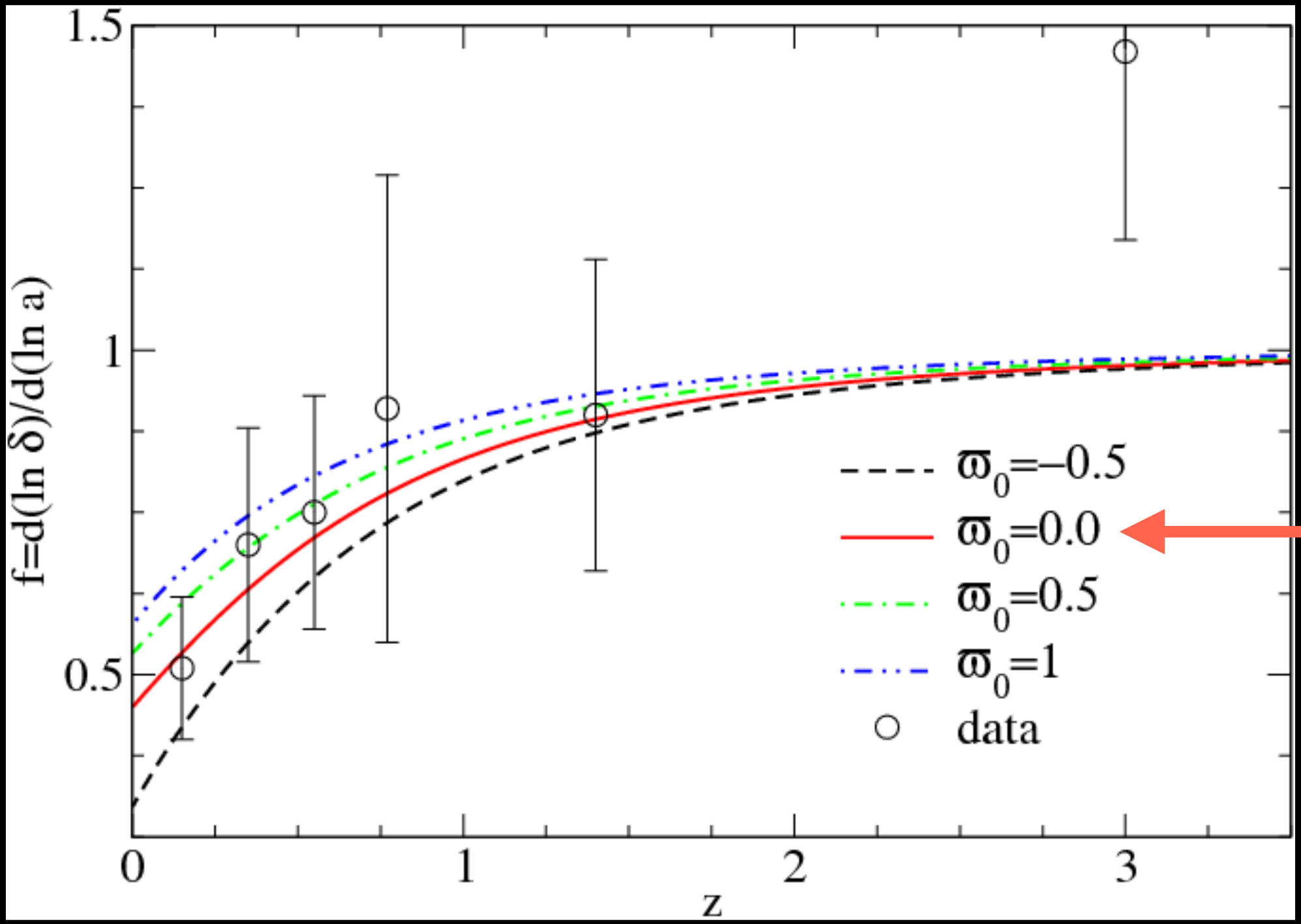
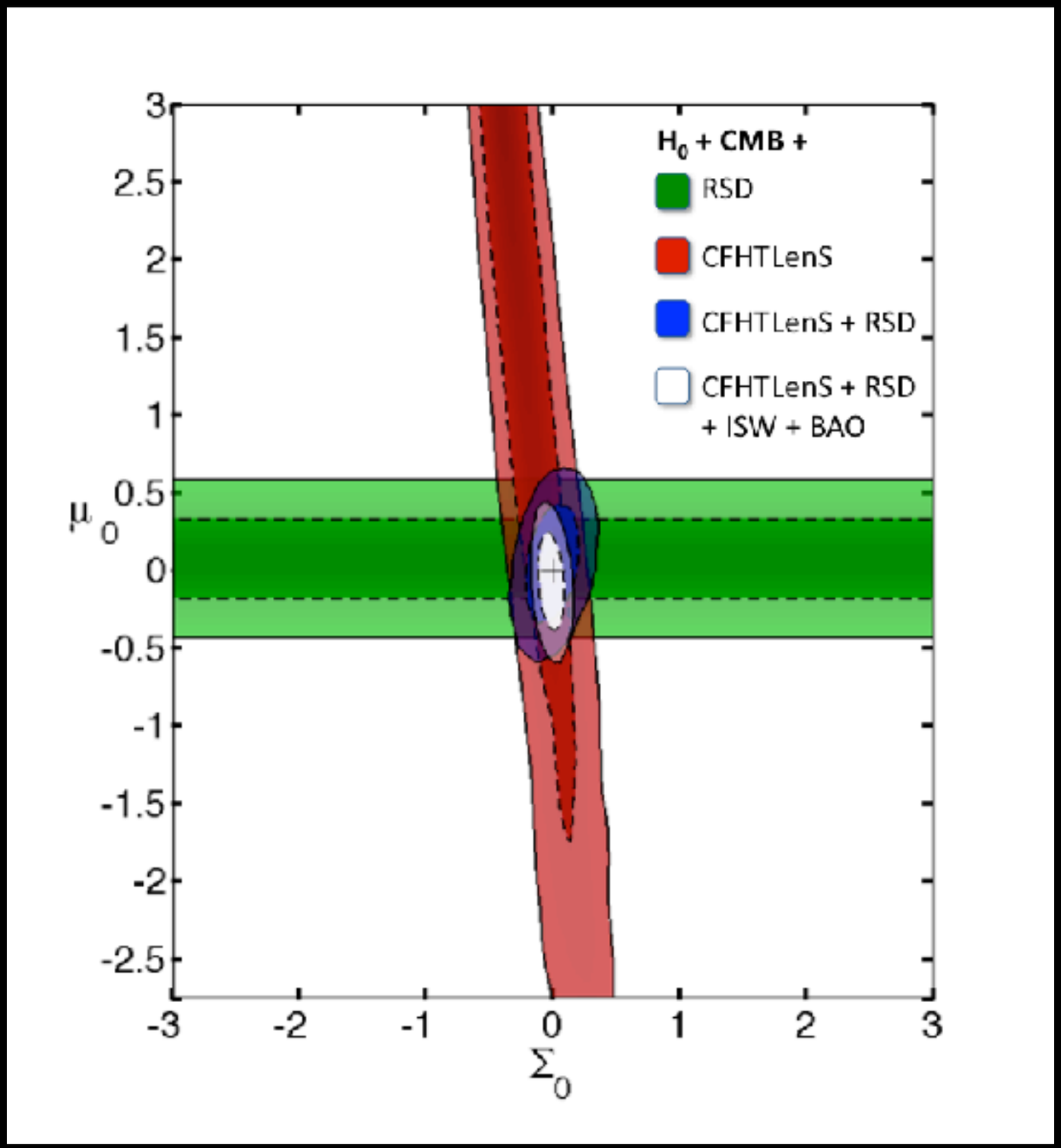
Figures

Growth Rate



Daniel et al., 2008

Constraints on μ and Σ



Simpson et al., 2012

GW+EM Signals from GW170817

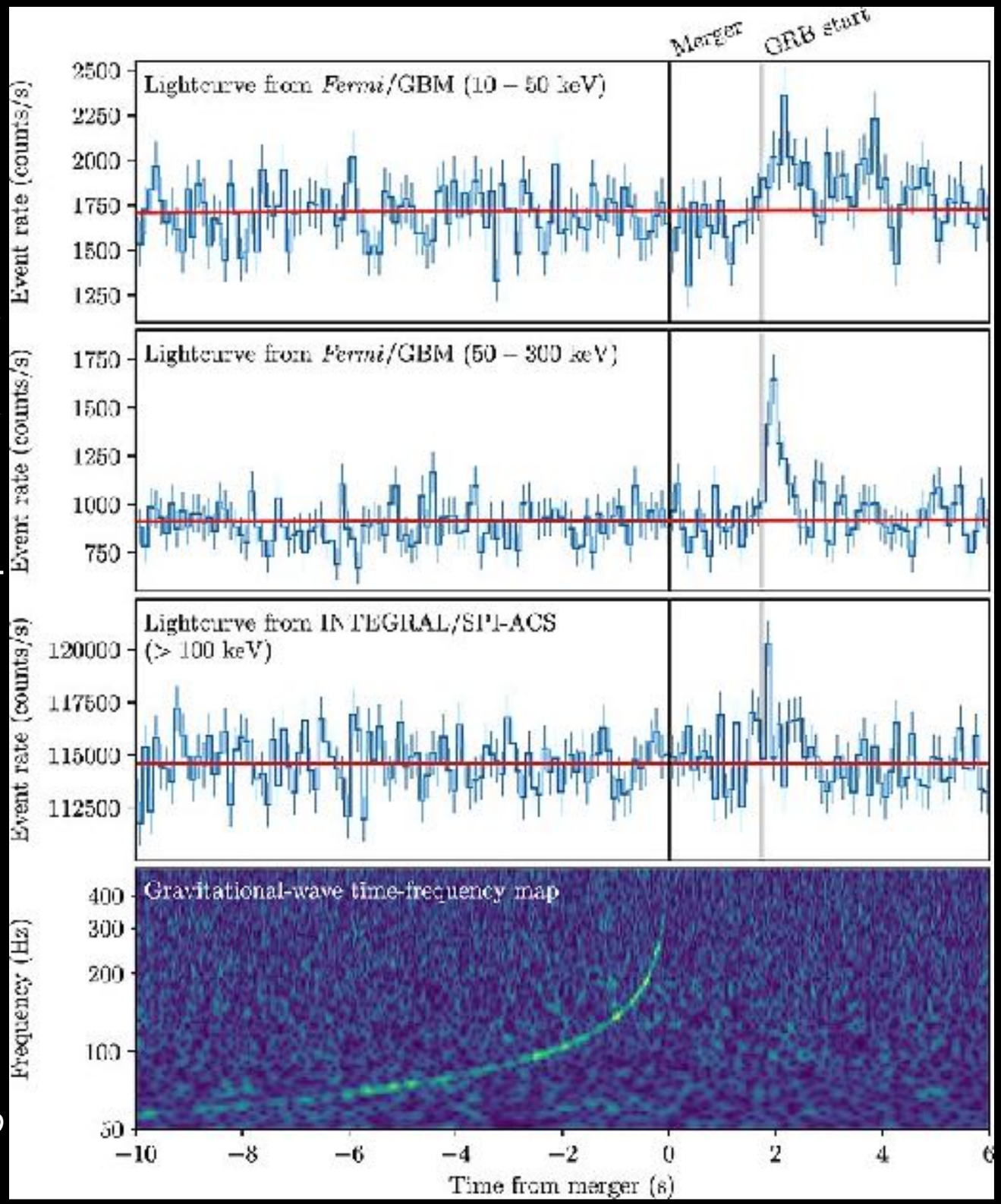


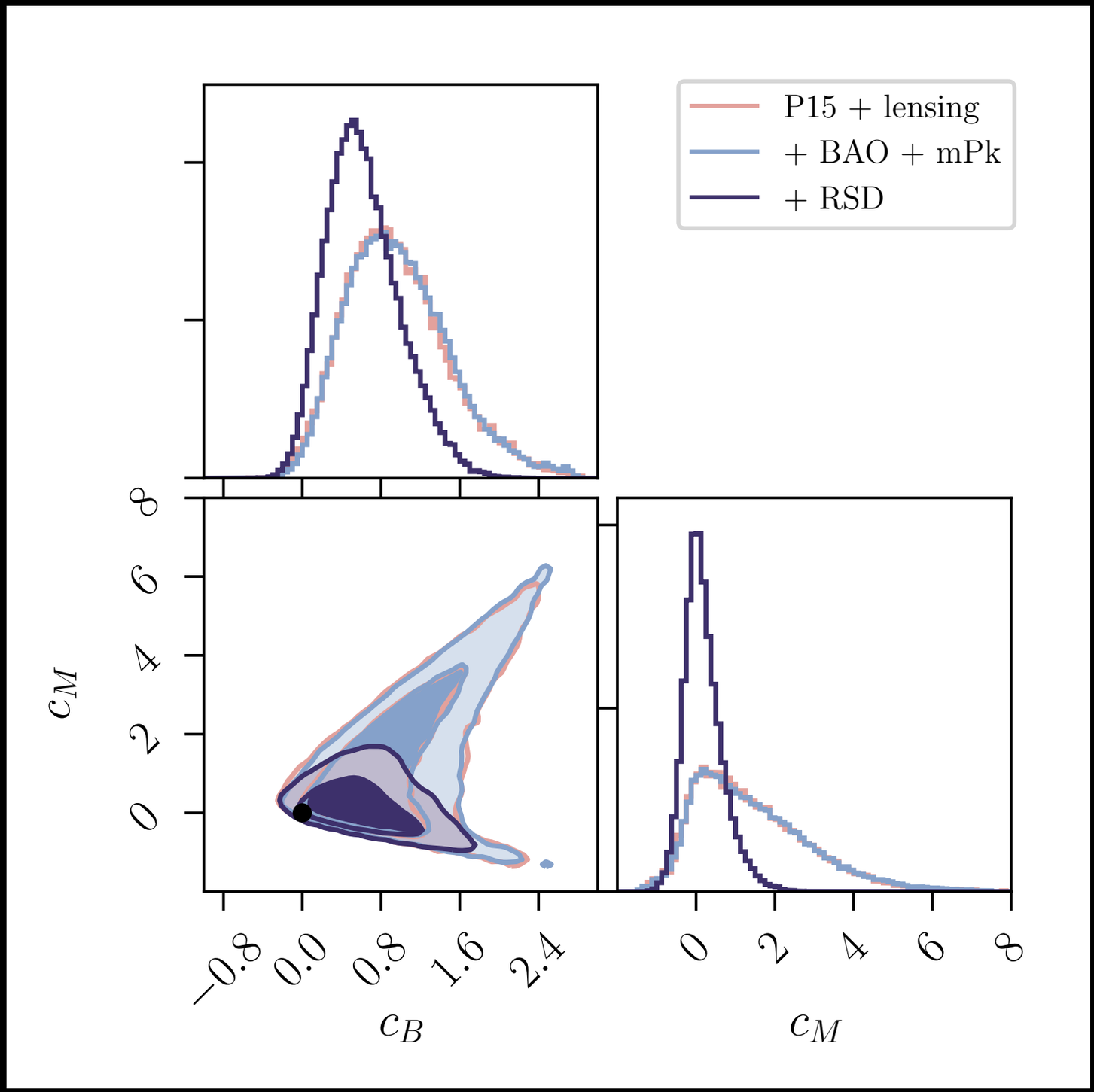
Image: LIGO-VIRGO Collaboration, ApJ 848:2 (2017).

Alpha Parameters

Model Class		$\alpha_{\rm K}$	$\alpha_{\rm B}$	$\alpha_{\rm M}$	$\alpha_{\rm T}$
ΛCDM		***0***	***0***	***0***	***0***
quintessence	[1, 2]	$(1-\Omega_{\rm m})(1+w_X)$	0	0	0
k-*essence*/perfect fluid	[45, 46]	$\frac{(1-\Omega_{\rm m})(1+w_X)}{c_{\rm s}^2}$	0	0	0
kinetic gravity braiding	[47–49]	$\frac{m^2(n_m+\kappa_\phi)}{H^2M_{\rm Pl}^2}$	$\frac{m\kappa}{HM_{\rm Pl}^2}$	0	0
galileon cosmology	[57]	$-\frac{3}{2}\alpha_{\rm M}^3H^2r_{\rm c}^2e^{2\phi/M}$	$\frac{\alpha_{\rm K}}{6}-\alpha_{\rm M}$	$\frac{-2\dot\phi}{HM}$	0
BDK	[26]	$\frac{\dot\phi^2K_{,\dot\phi\dot\phi}e^{-\kappa}}{H^2M^2}$	$-\alpha_{\rm M}$	$\frac{\dot\kappa}{H}$	0
metric $f(R)$	[3, 72]	0	$-\alpha_{\rm M}$	$\frac{B\dot H}{H^2}$	0
MSG/Palatini $f(R)$	[73, 74]	$-\frac{3}{2}\alpha_{\rm M}^2$	$-\alpha_{\rm M}$	$\frac{2\dot\phi}{H}$	0
f(Gauss-Bonnet)	[52, 75, 76]	0	$\frac{-2H\dot\xi}{M^2+H\dot\xi}$	$\frac{\dot H\dot\xi+H\ddot\xi}{H(M^2+H\dot\xi)}$	$\frac{\ddot\xi-H\dot\xi}{M^2+H\dot\xi}$

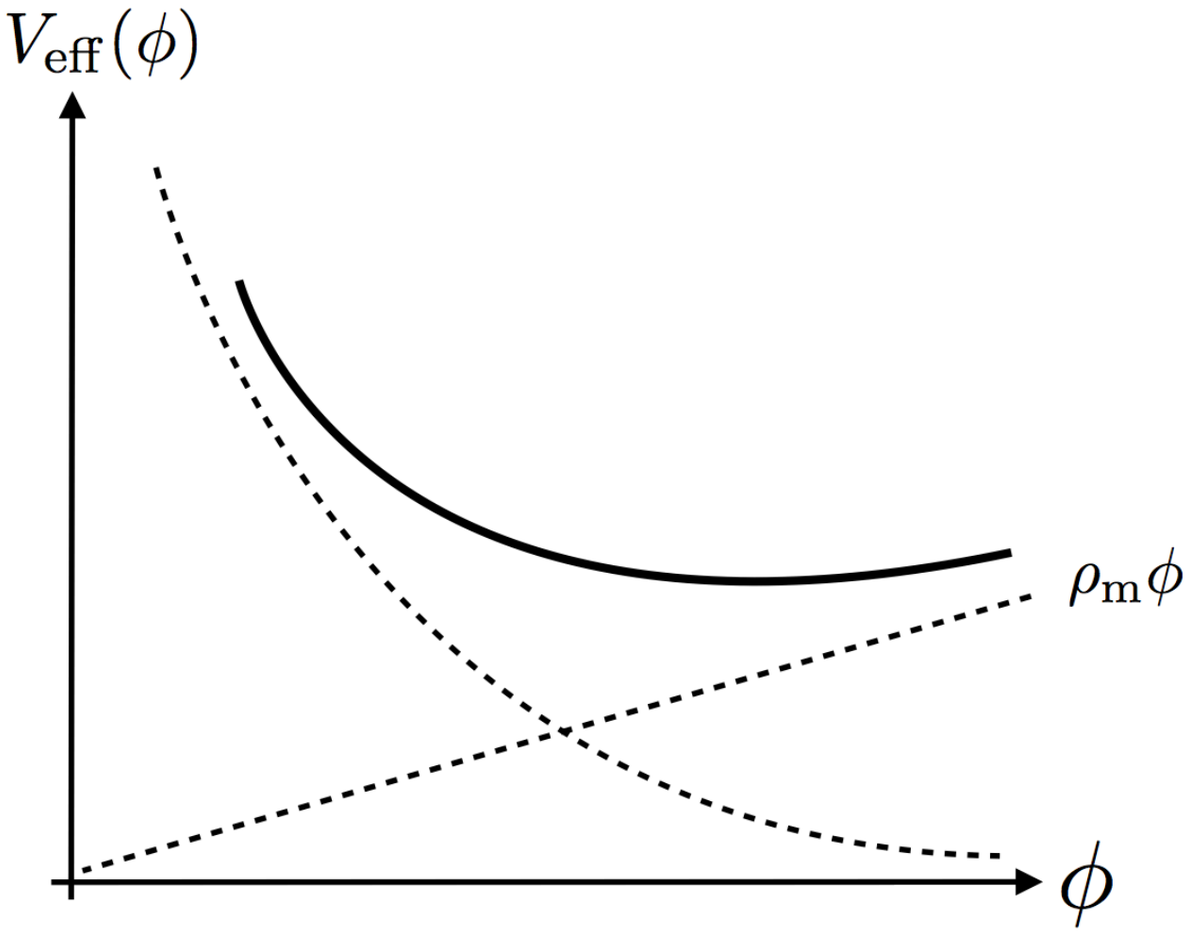
Bellini & Sawicki, 2014

Bounds on the Horndeski Alphas

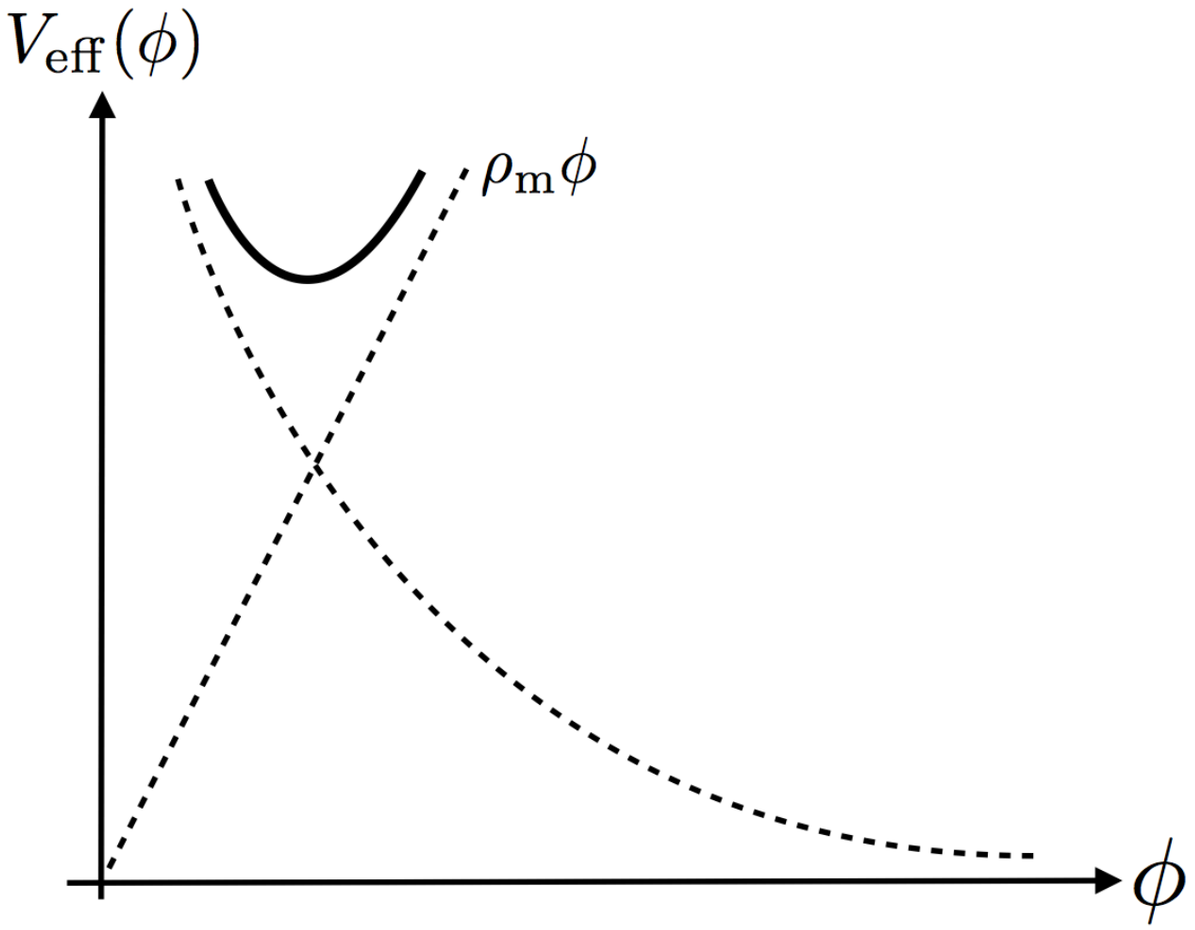


Noller & Nicola, 2018.

Chameleon Mechanism



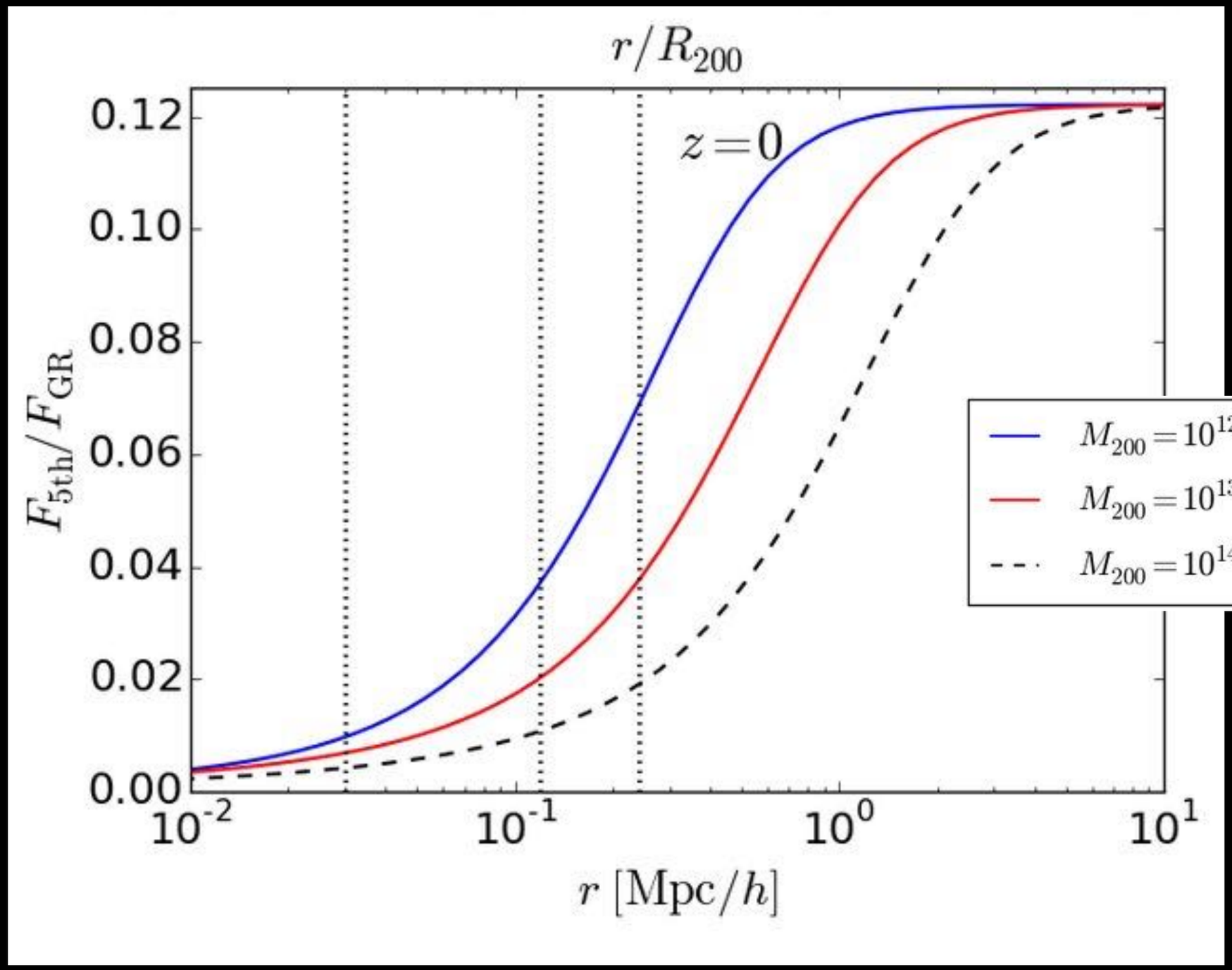
low density



high density

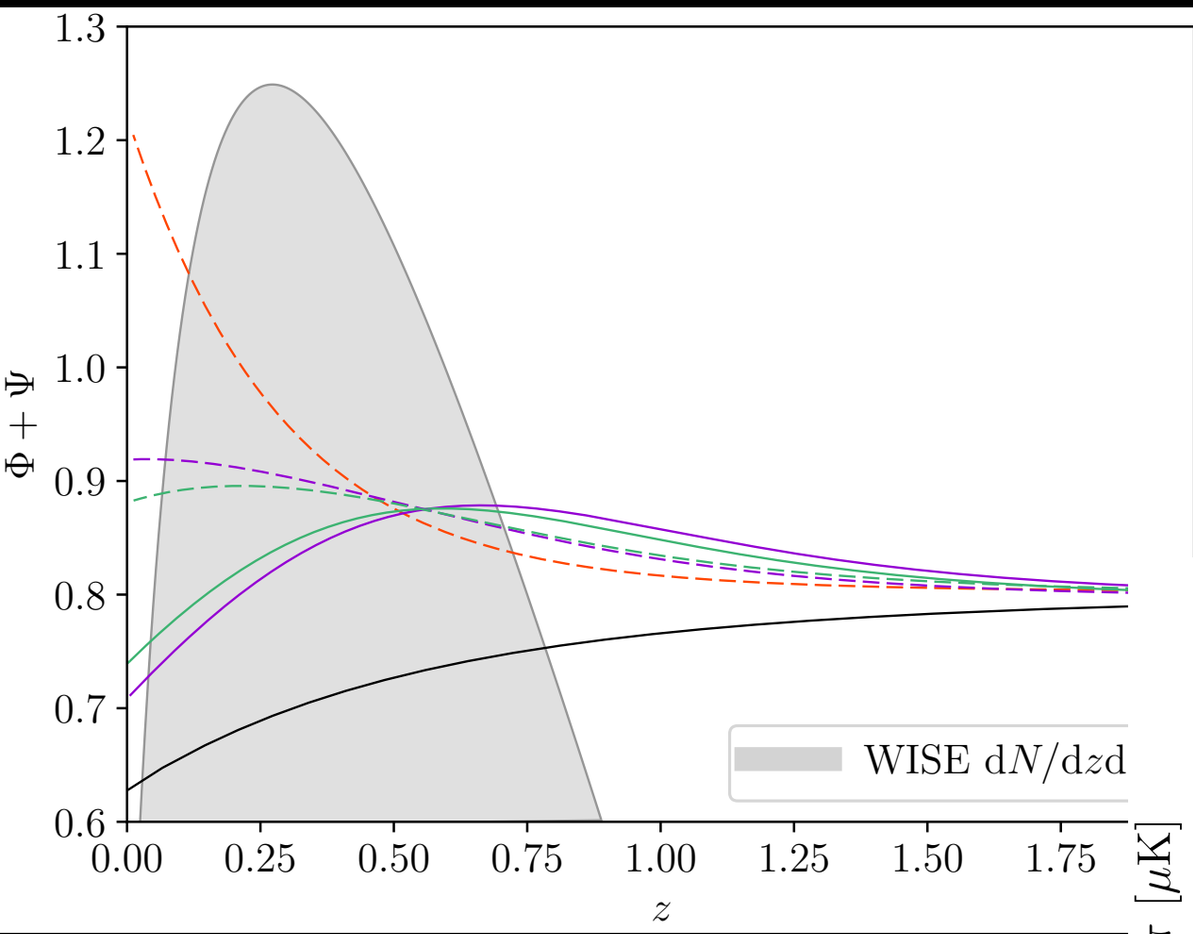
Joyce et al., 2014

Vainshtein Mechanism in Haloes

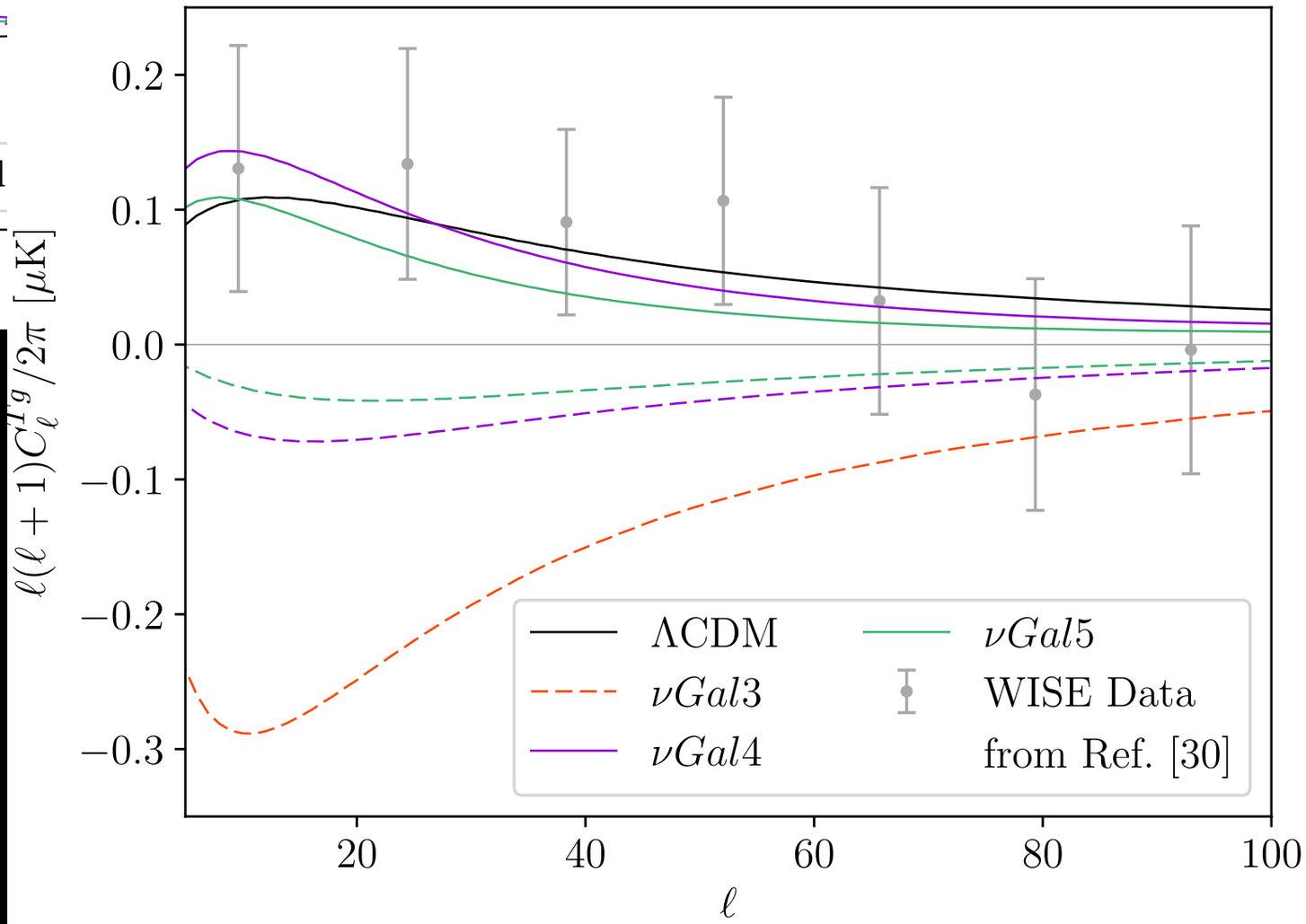


Barreira, Bose & Li, 2015

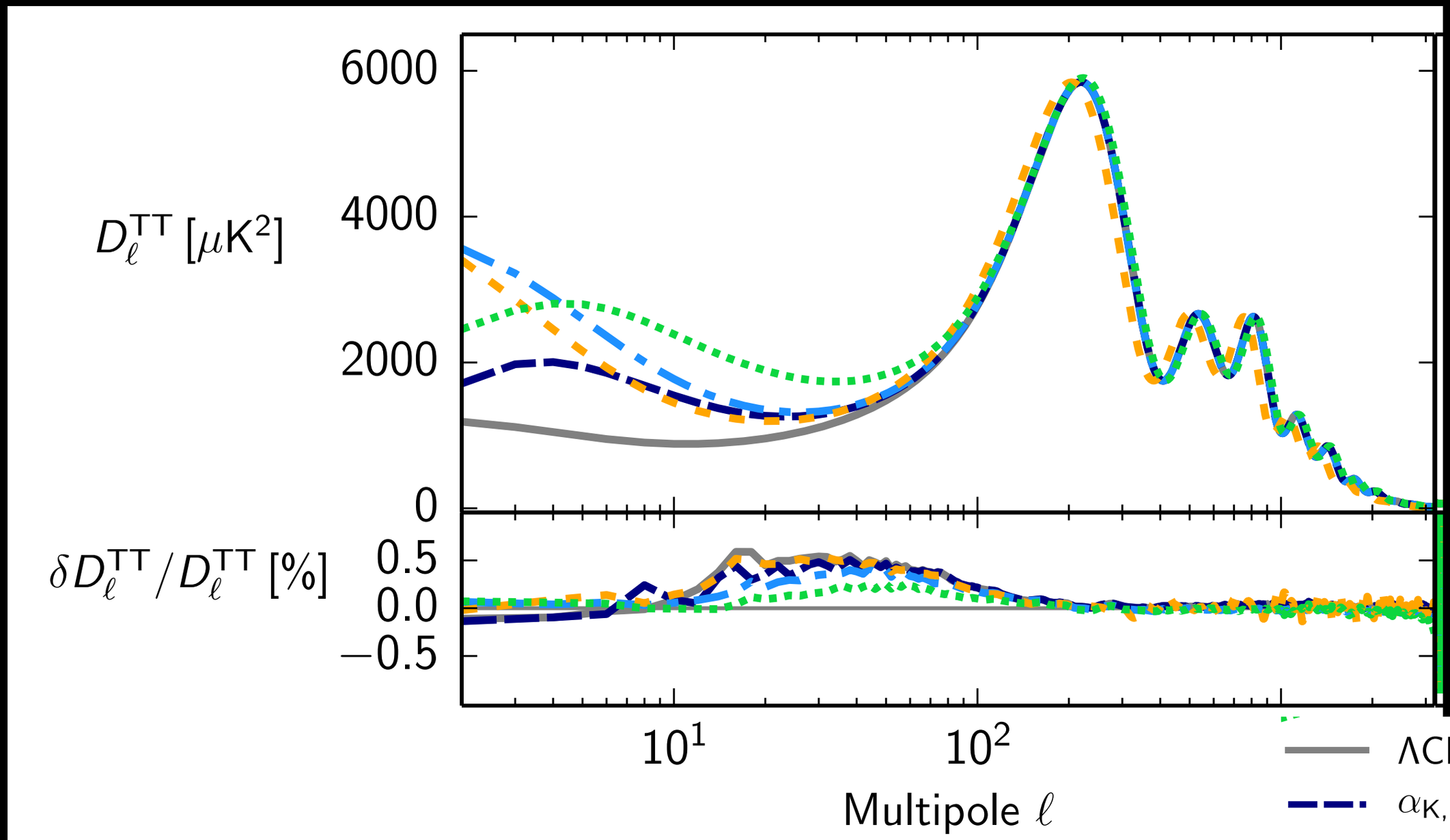
ISW & the Cubic Galileon



Renk et al., 2017

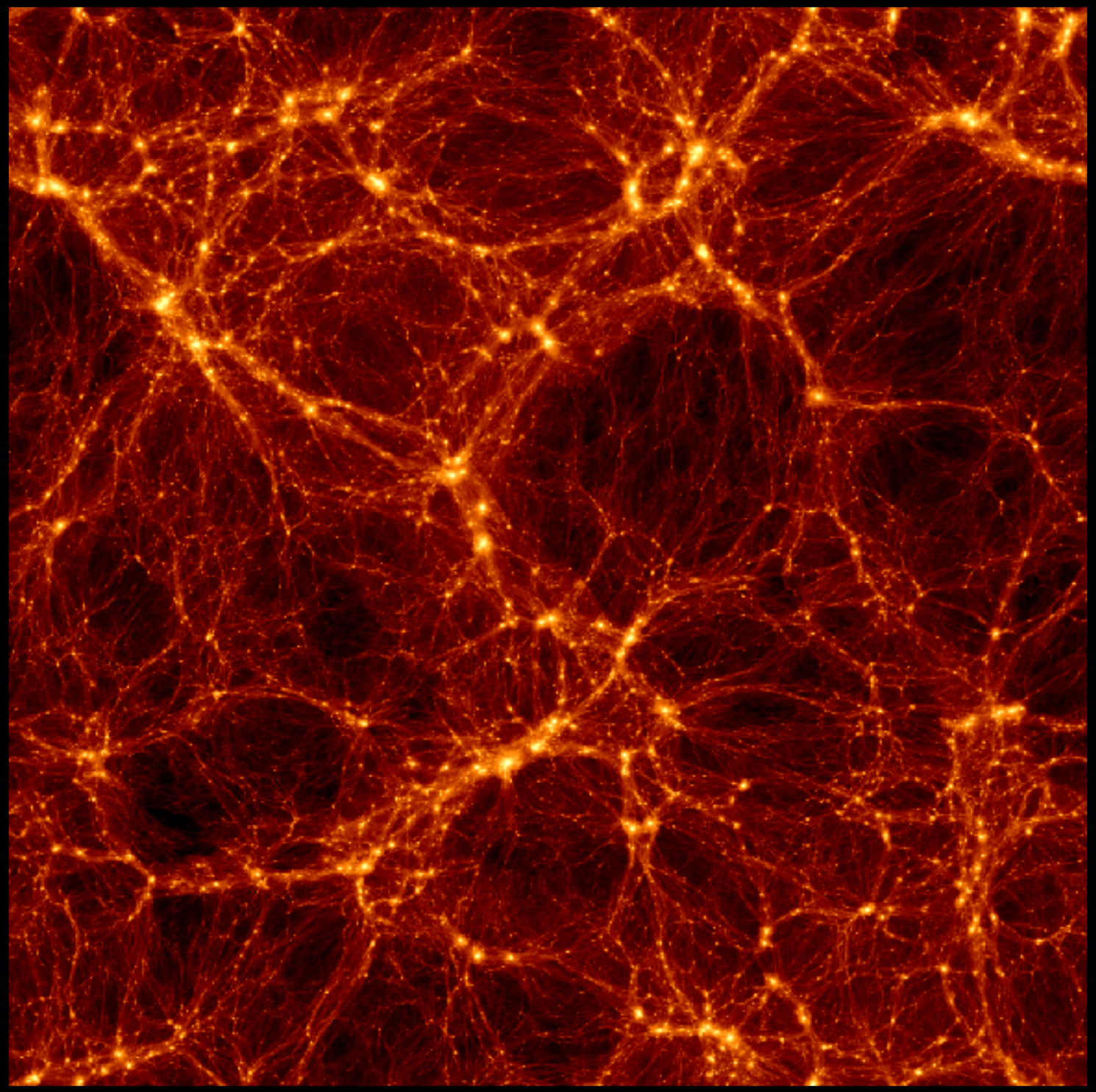


The ISW Plateau

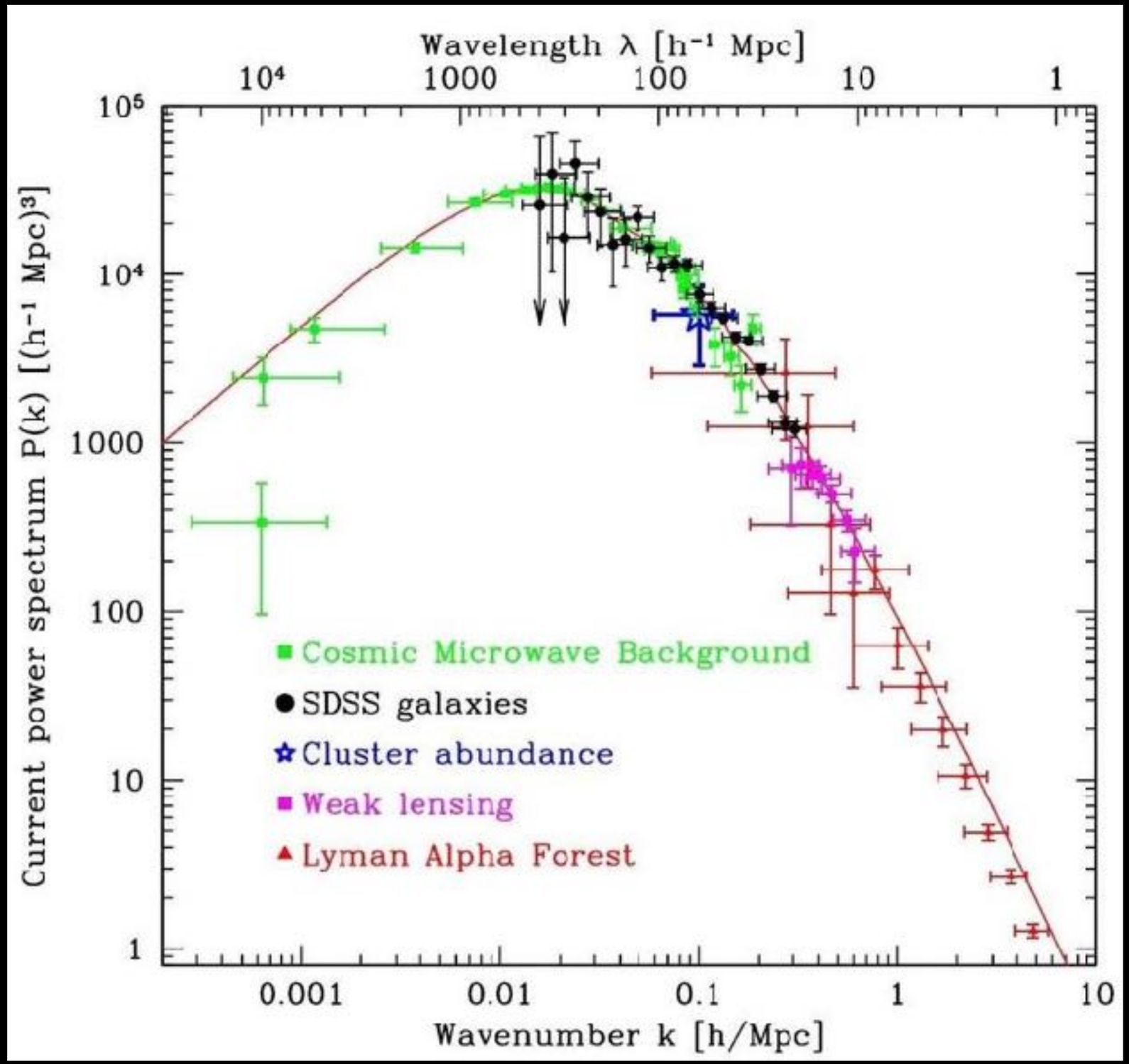


Bellini et al., 2017

Large-Scale Structure

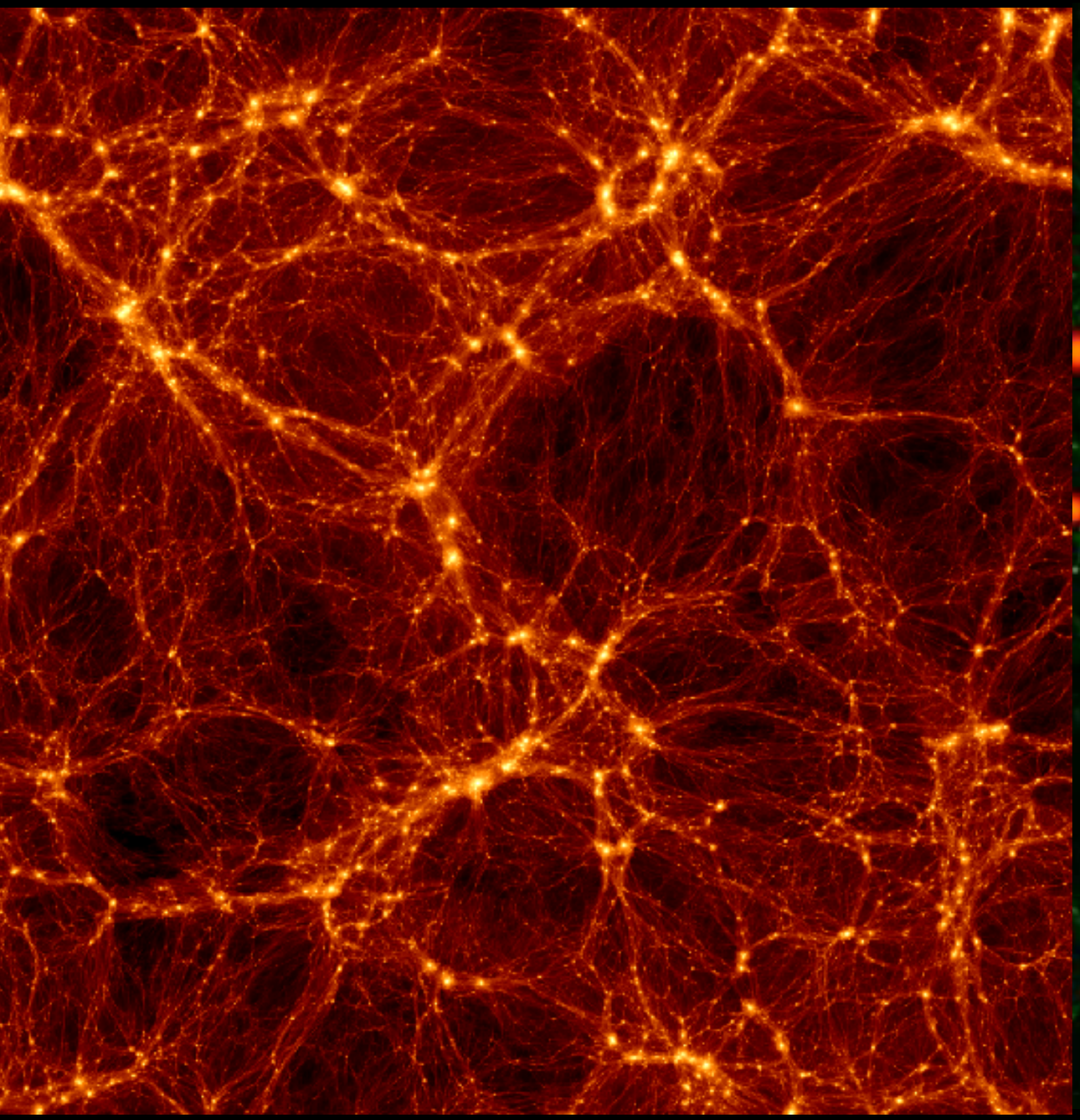


Large-Scale Structure



Tegmark et al., 2014a.

Large-Scale Structure



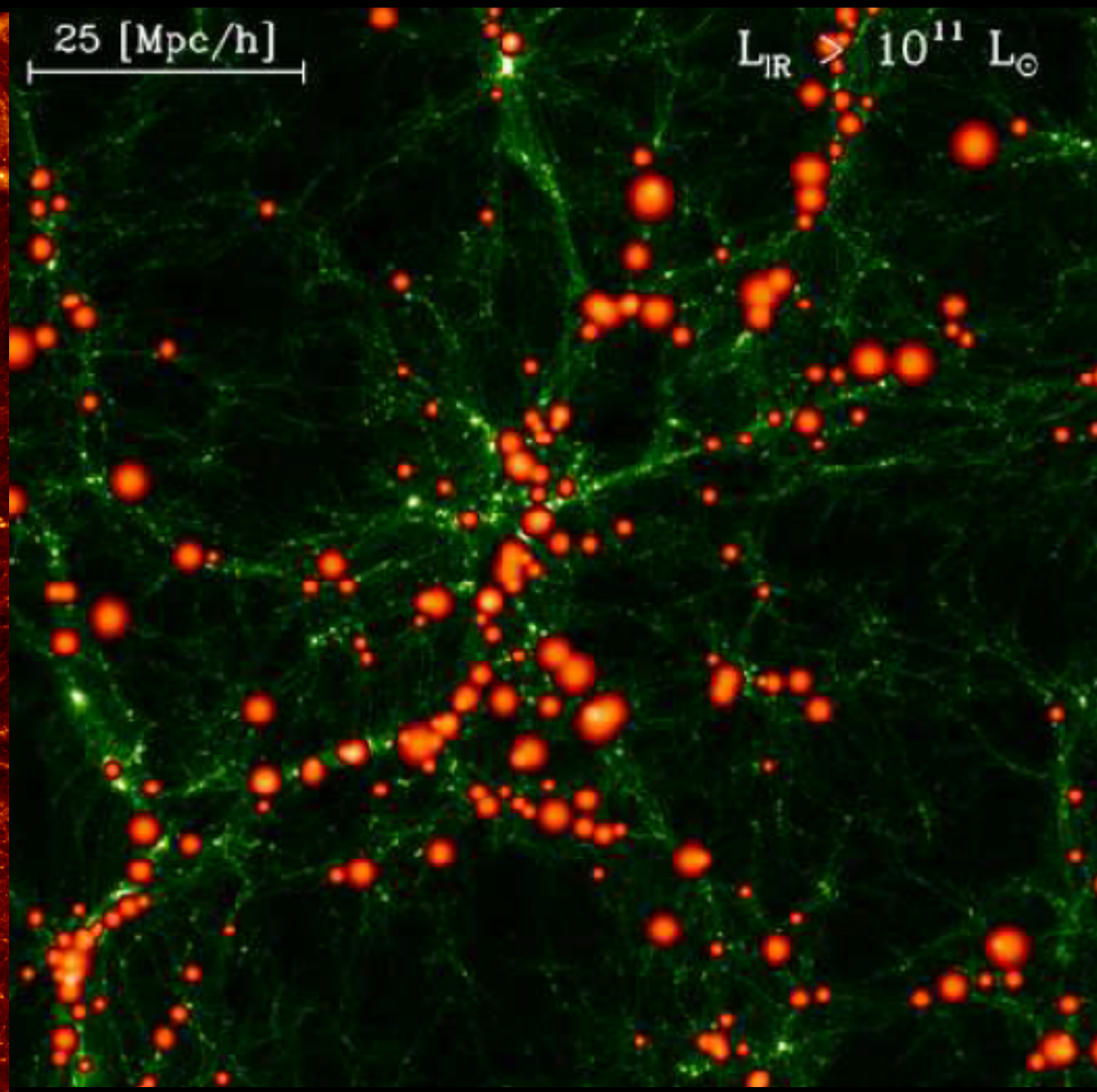
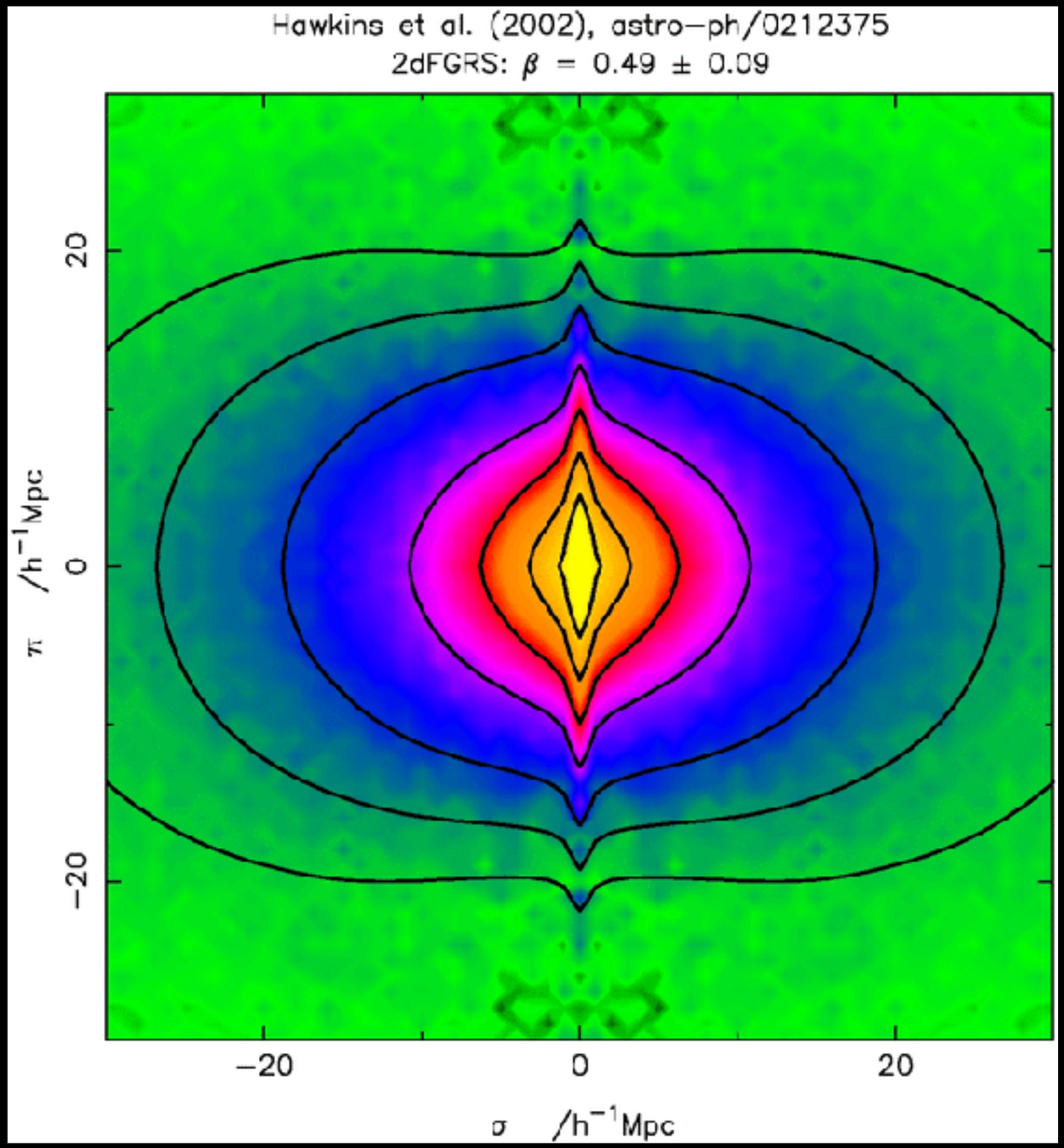
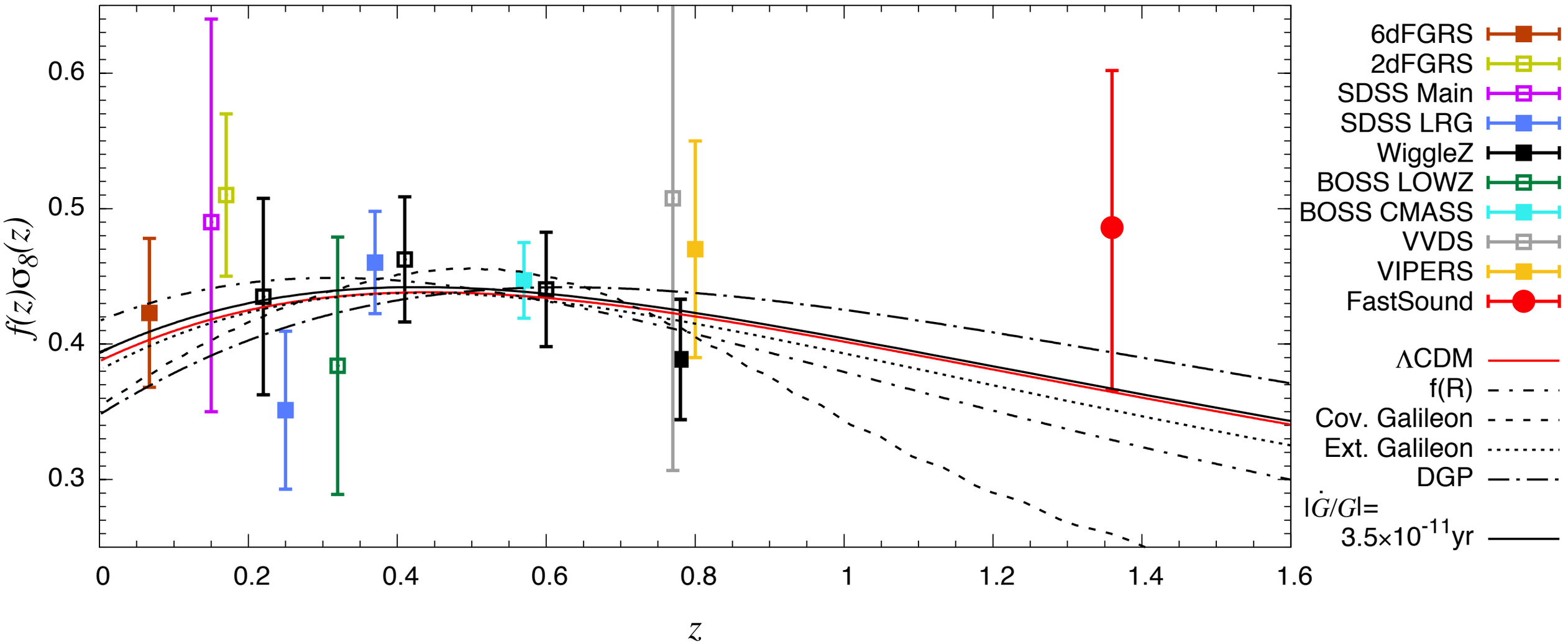


Image credit: Carlton Baugh

Redshift Space Distortions



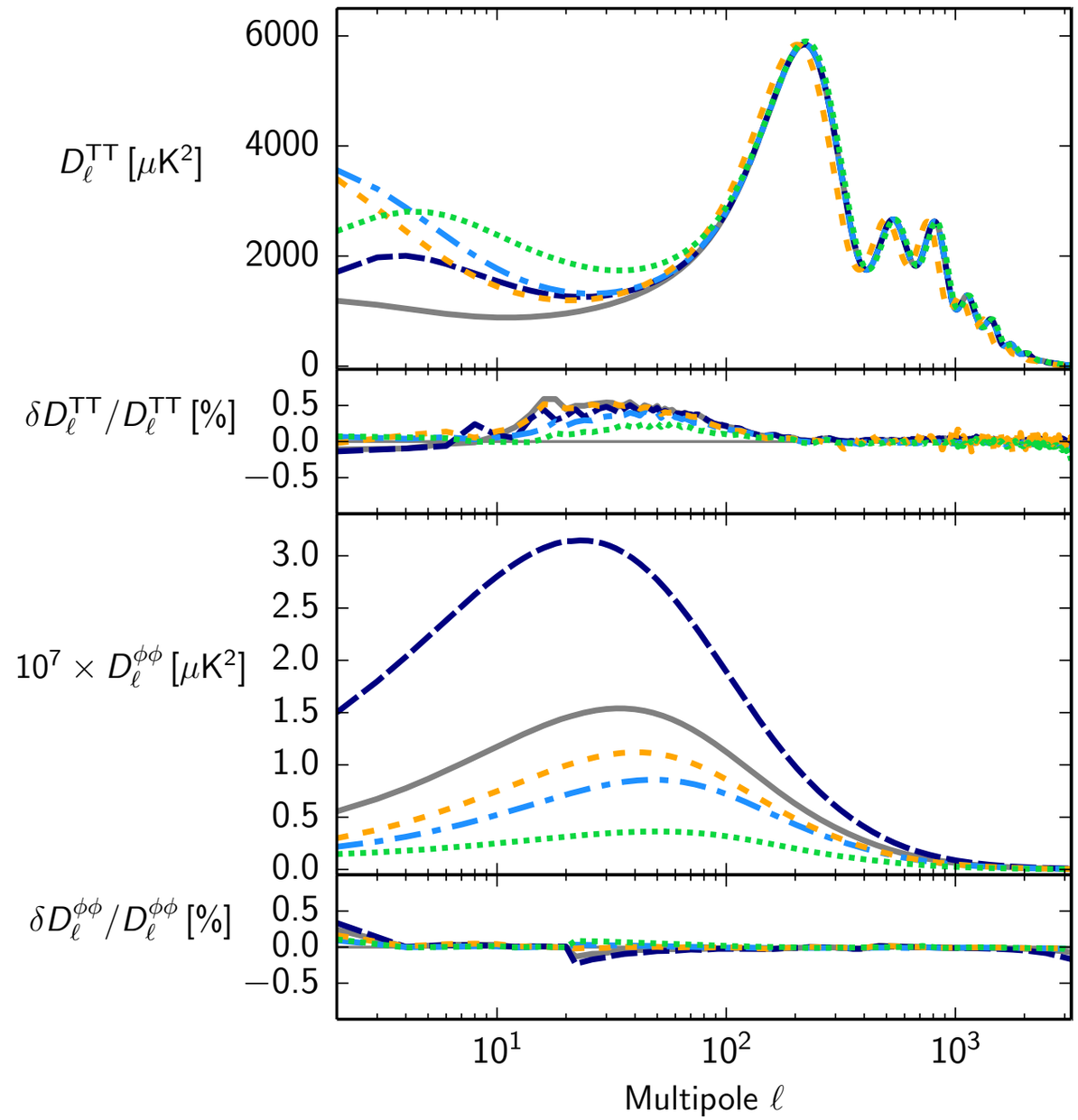
MG Growth Rate



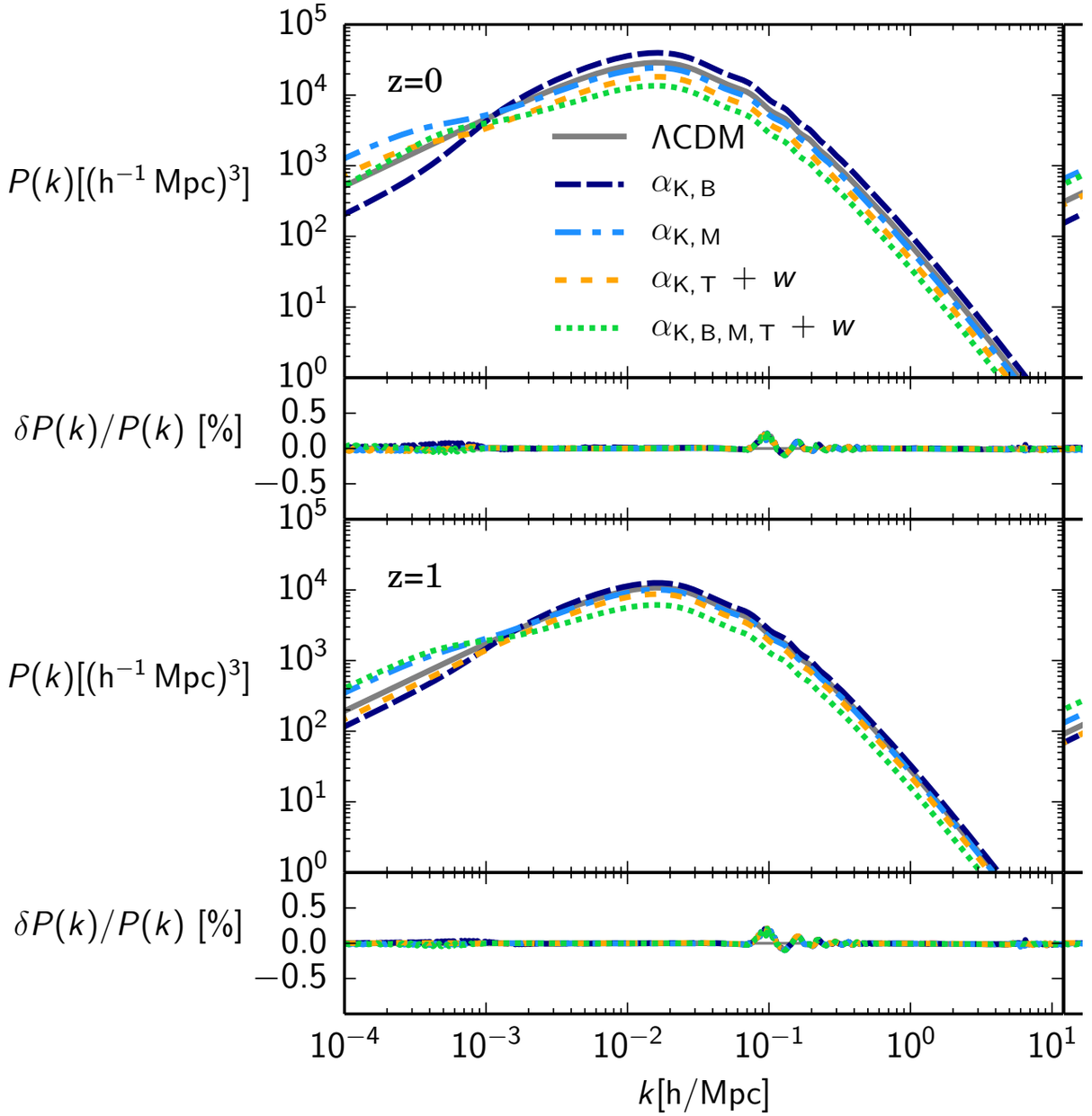
Okumura et al., 2016

Einstein-Boltzmann Solvers

CMB



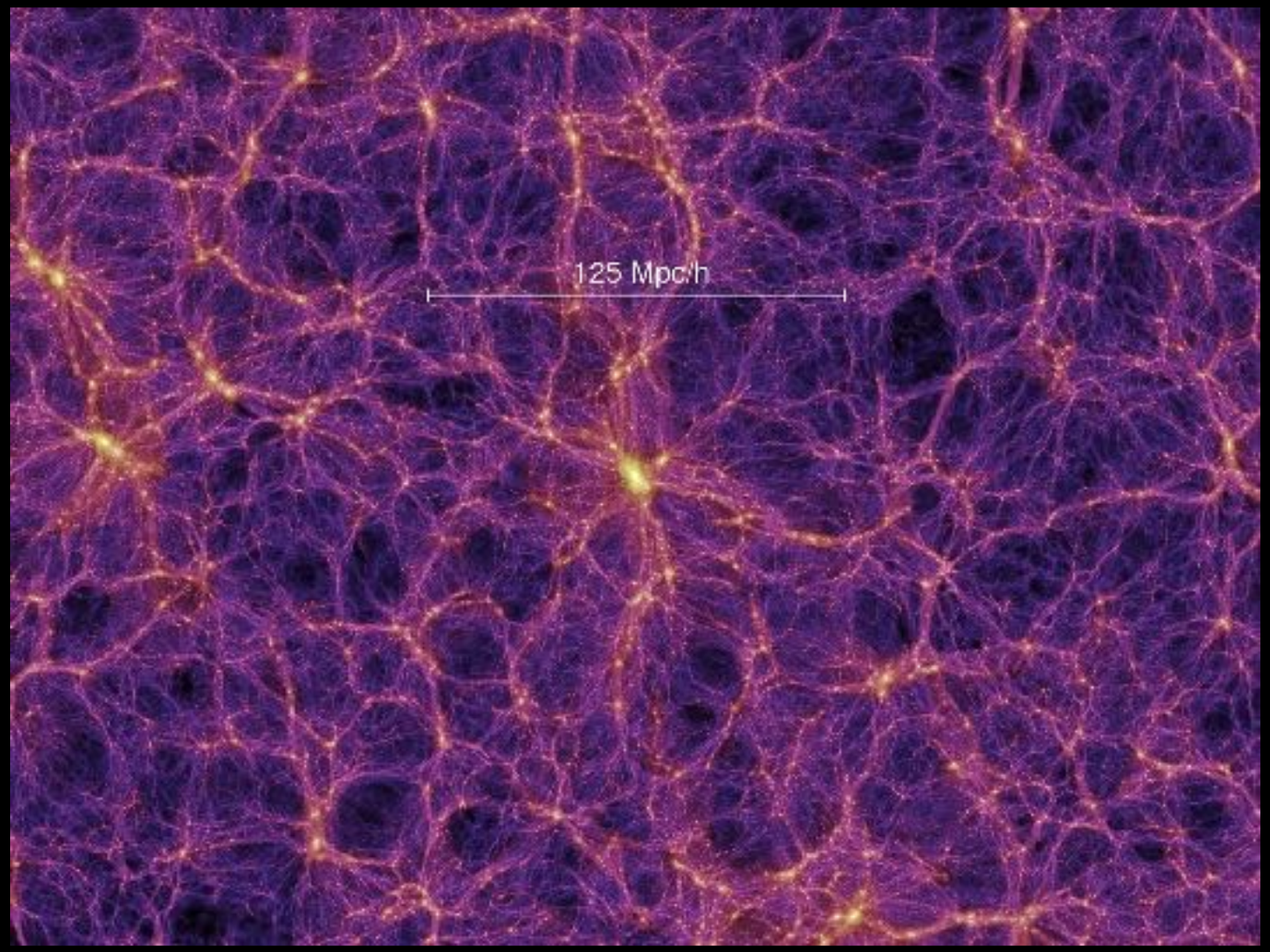
$P_m(k)$



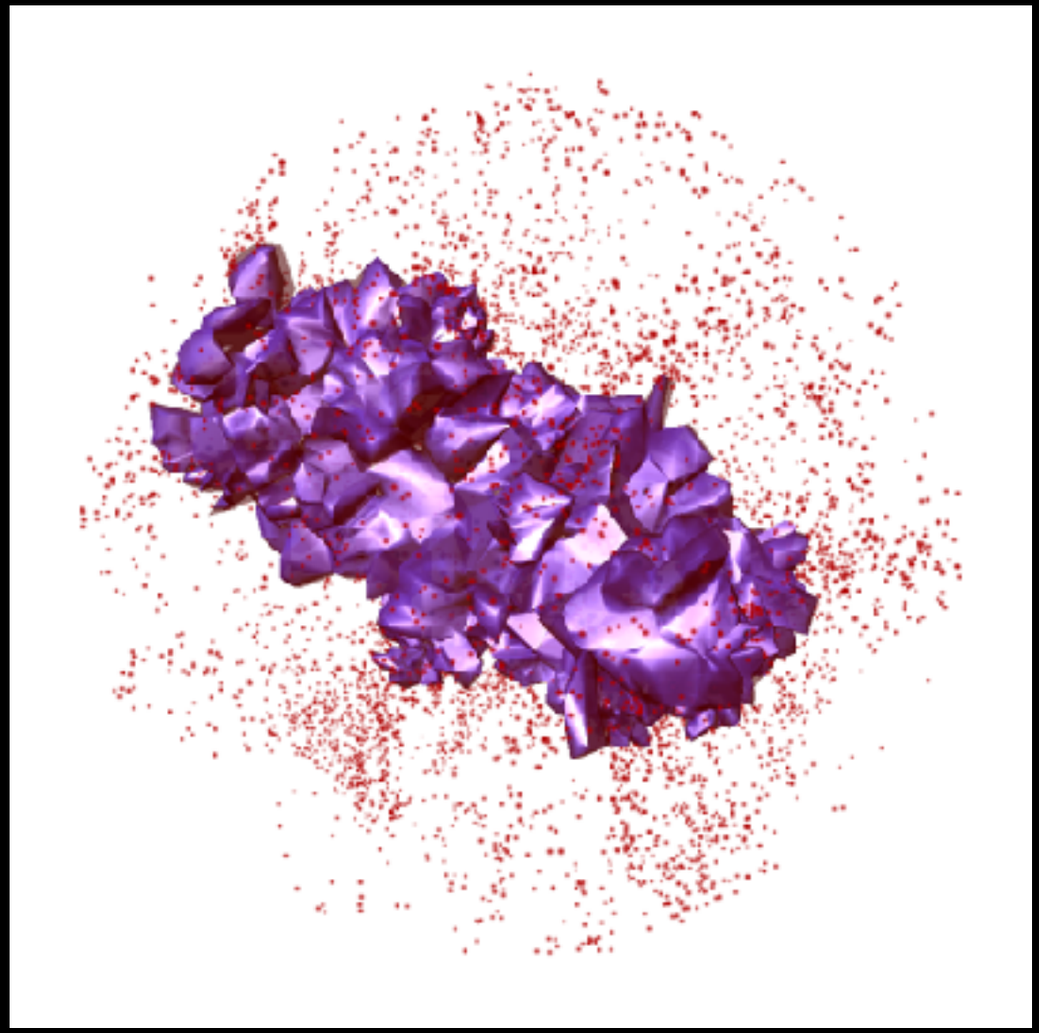
CMB Lensing

Bellini et al., 1709.09135

Voids

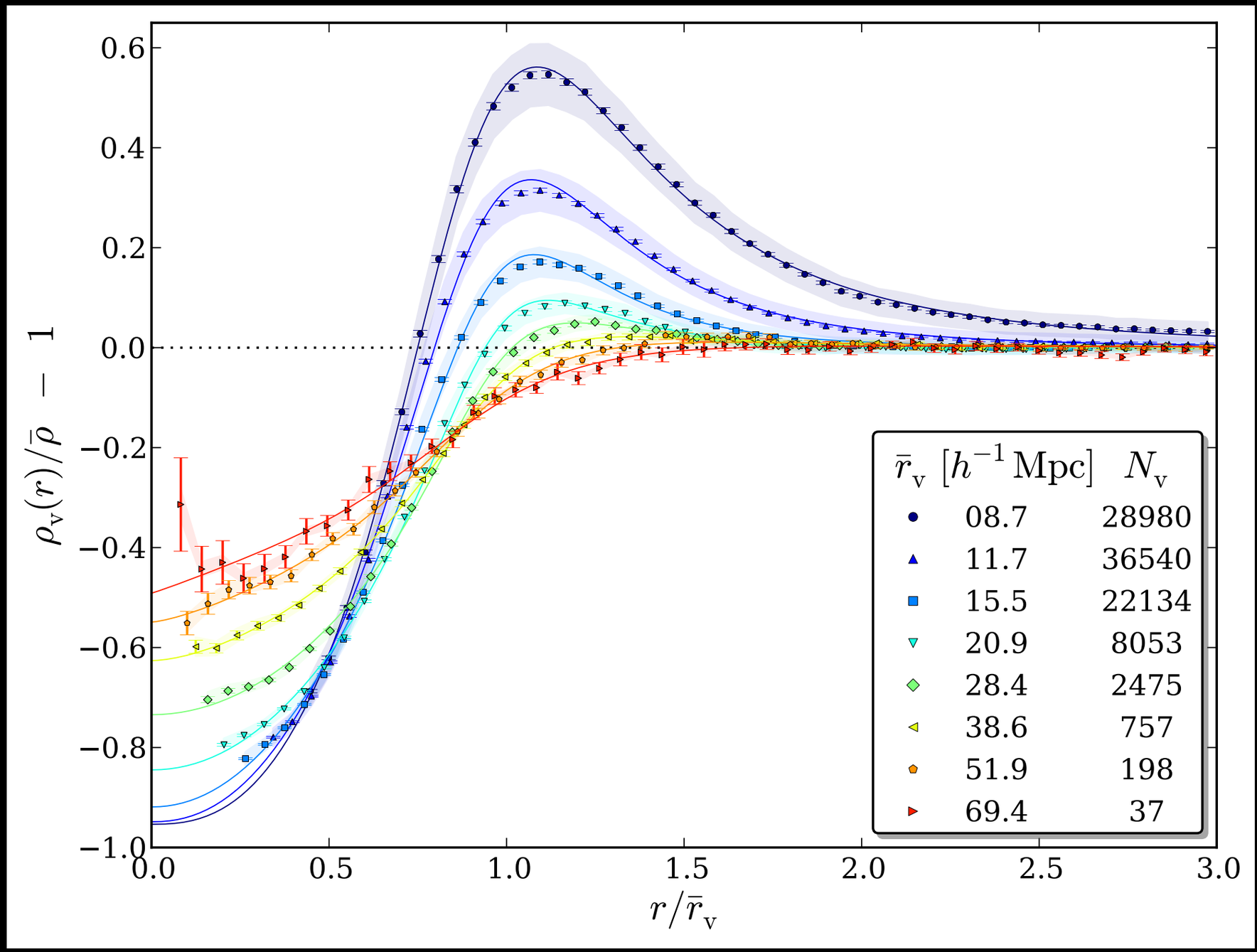


Millenium Simulation Consortium.



Sutter et al., 2012

Voids



Hamaus et al., 2014