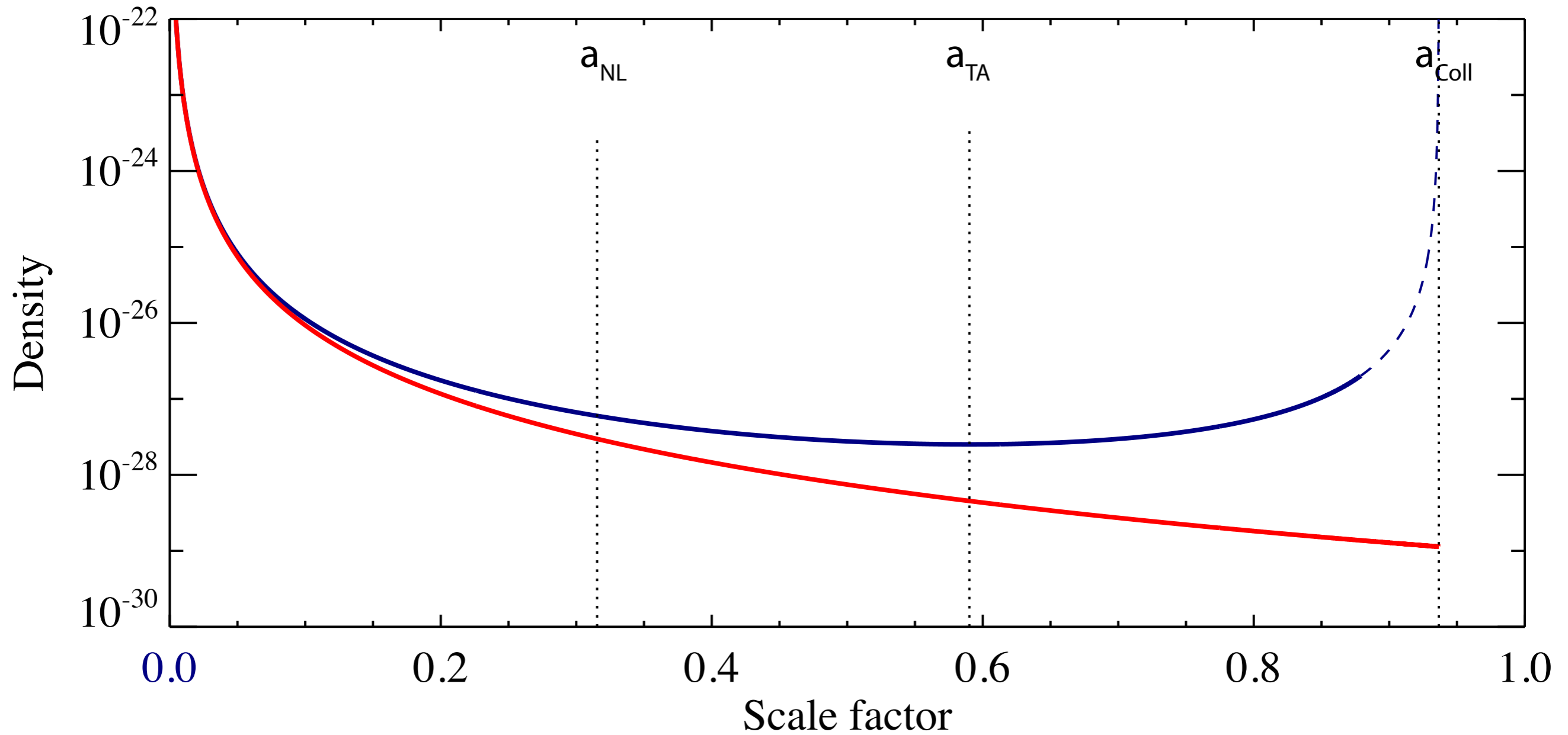
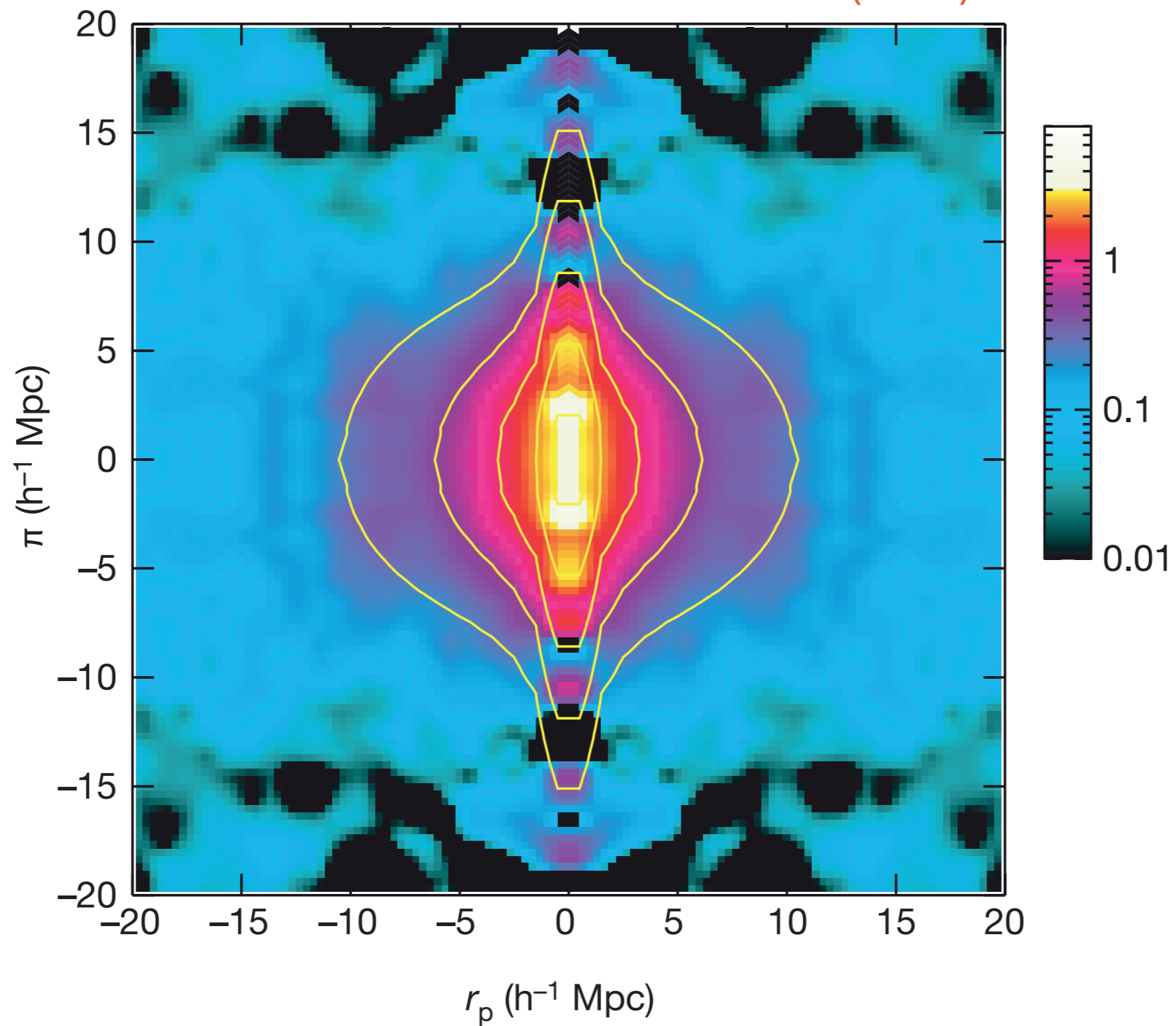


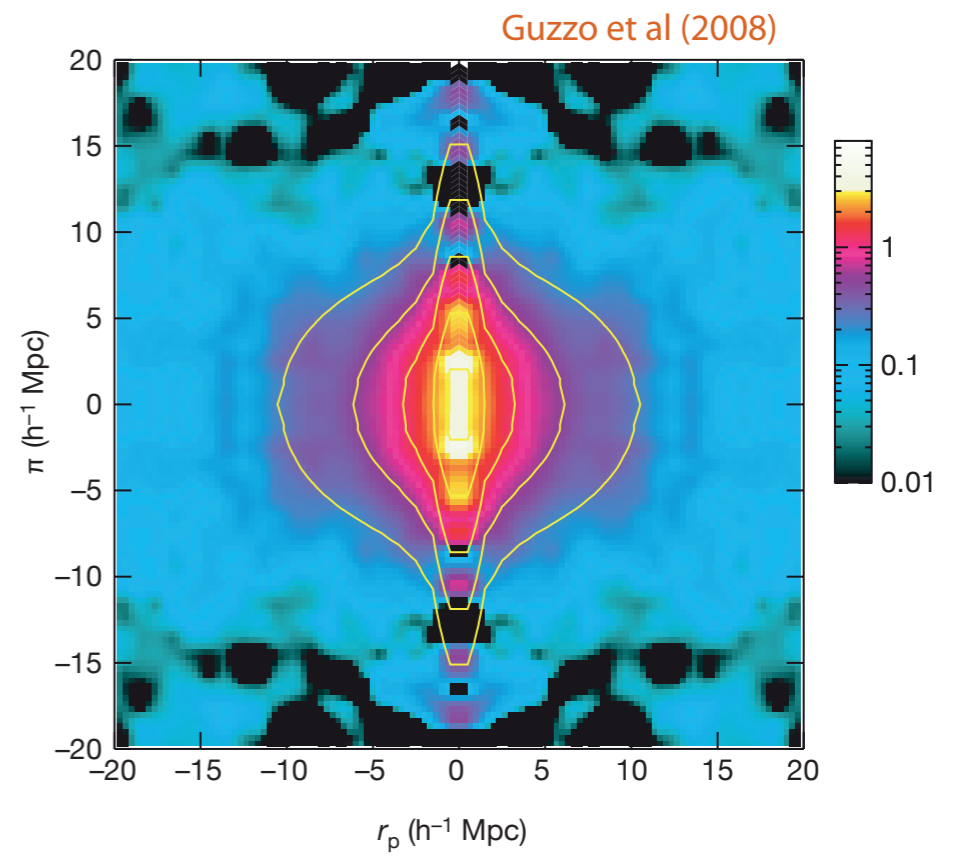
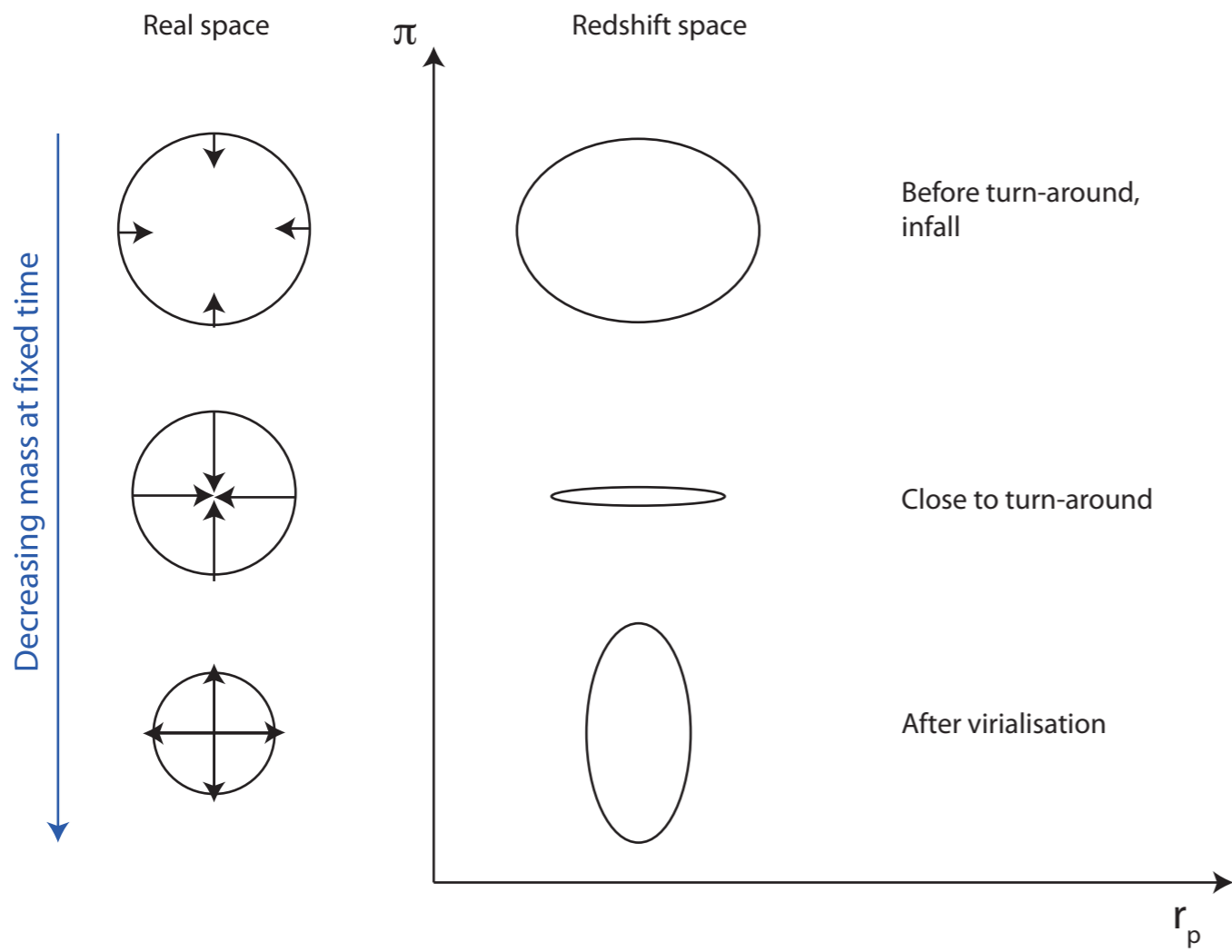
Spherical collapse



Redshift space distortions

Guzzo et al (2008)







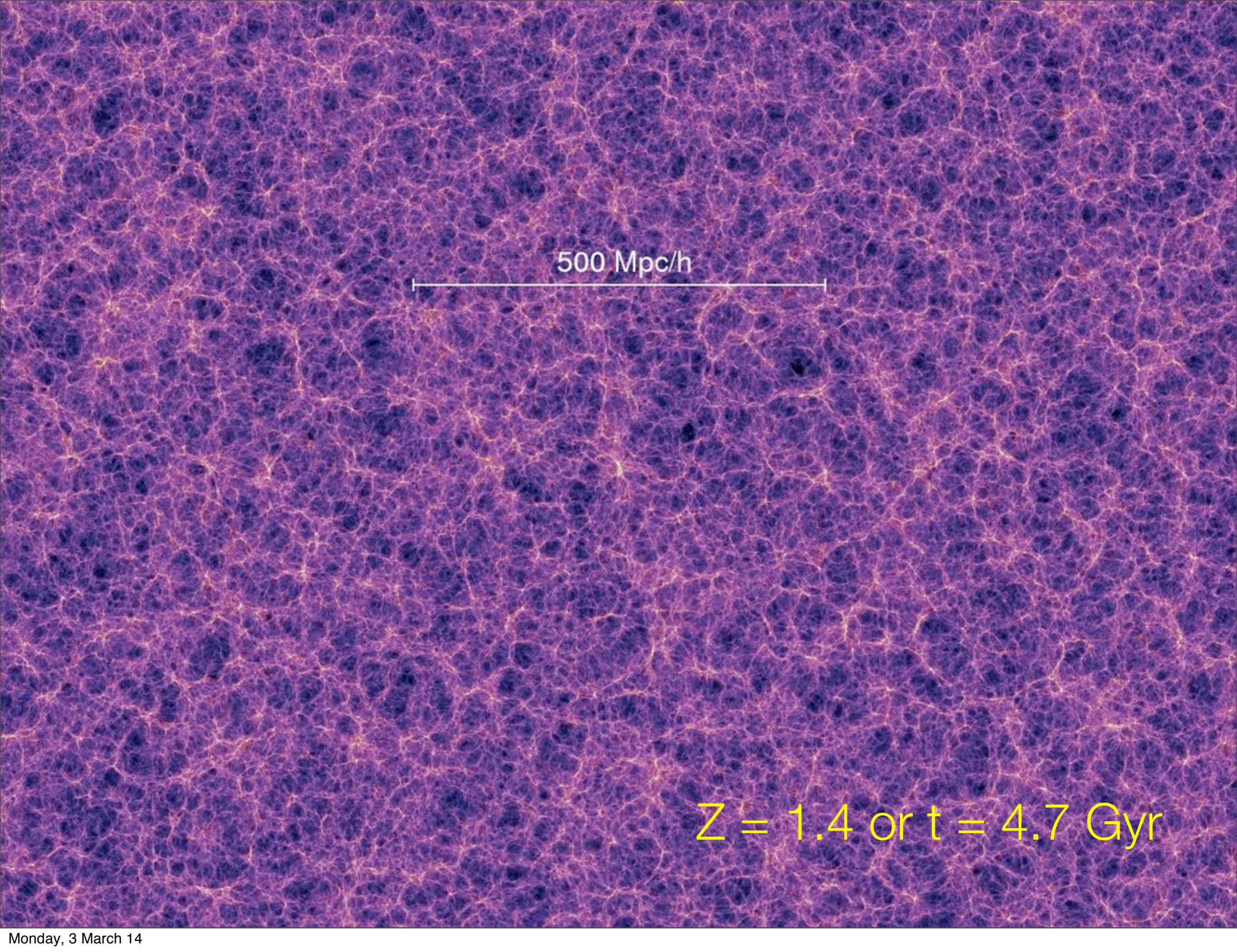
500 Mpc/h

$Z = 18.3$ or $t = 0.21$ Gyr

A visualization of the cosmic web at high redshift, showing a dense network of filaments and nodes. The color scale ranges from dark purple (low density) to bright yellow (high density). A horizontal scale bar is located in the upper-middle part of the image.

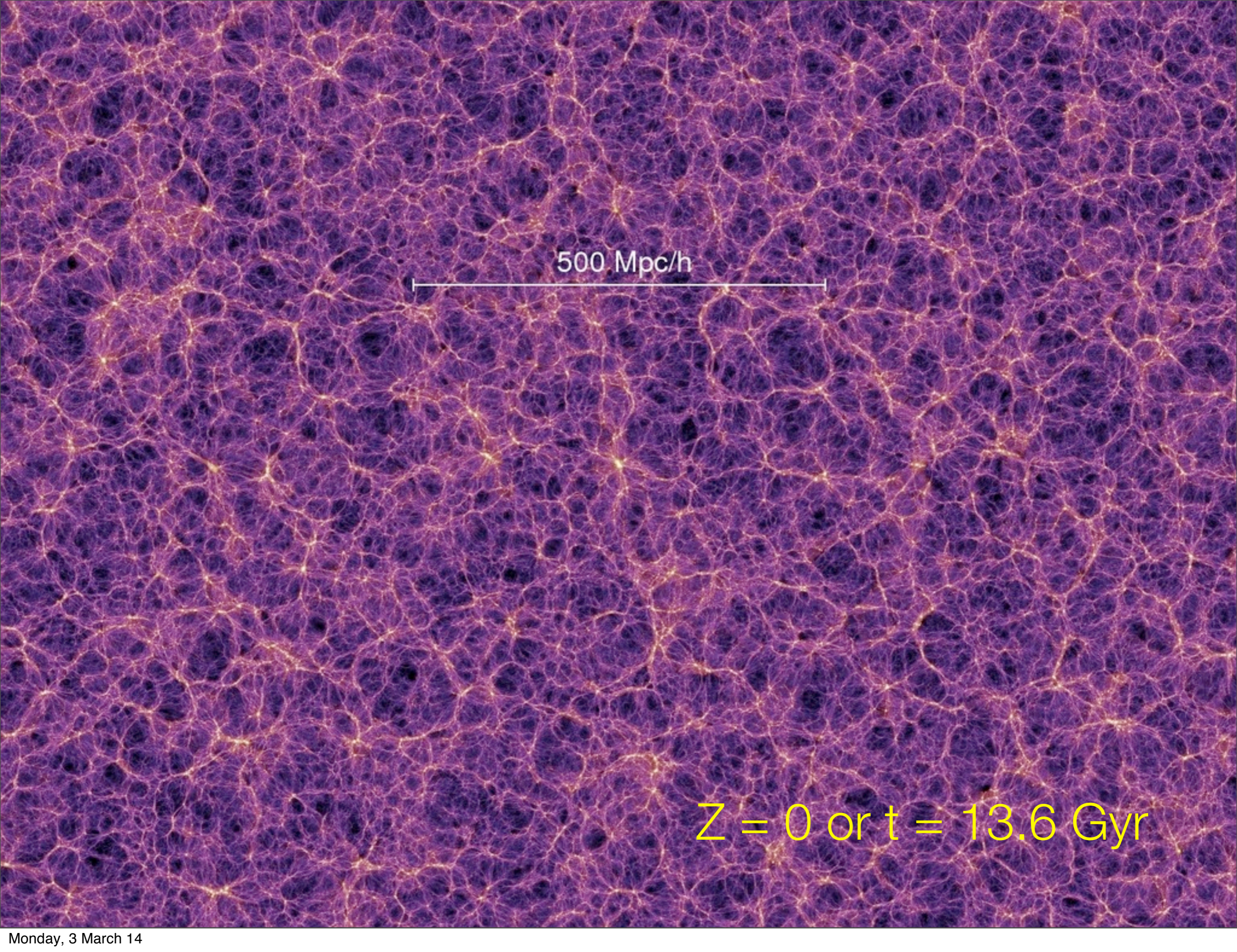
500 Mpc/h

$Z = 5.7$ or $t = 1$ Gyr



500 Mpc/h

$Z = 1.4$ or $t = 4.7$ Gyr



500 Mpc/h

$Z = 0$ or $t = 13.6$ Gyr

Testing the P-S formalism

- ✓ Define objects in a simulation (using a group finder).
- ✓ Measure their mass.
- ✓ Compare the resulting mass function to model predictions.

Result: Need ellipsoidal collapse

$$f_{\text{EC}}(\nu) = A \left(1 + \frac{1}{\hat{\nu}^{2q}} \right) f_{\text{PS}}(\hat{\nu})$$

$$\hat{\nu} = 0.84\nu \quad q = 0.3 \quad A \approx 0.322$$

Sheth & Tormen (1999)

