

# Cosmology 1

2023/2024  
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## Proposed problem, lecture 10

Topic: horizons.

- (a) For an Einstein-de Sitter universe with  $H_0 = 50 \text{ km s}^{-1} \text{ Mpc}^{-1}$ , reconstruct the past light cone as in figure 2.3 of Vittorio textbook (or as in the notes).
- (b) Assuming that recombination (the emission time of the CMB) took place at  $z_{\text{rec}} = 1100$ , compute its conformal time  $\eta_{\text{rec}}$  and the comoving distance of the visible horizon. How does it compare to the particle horizon?