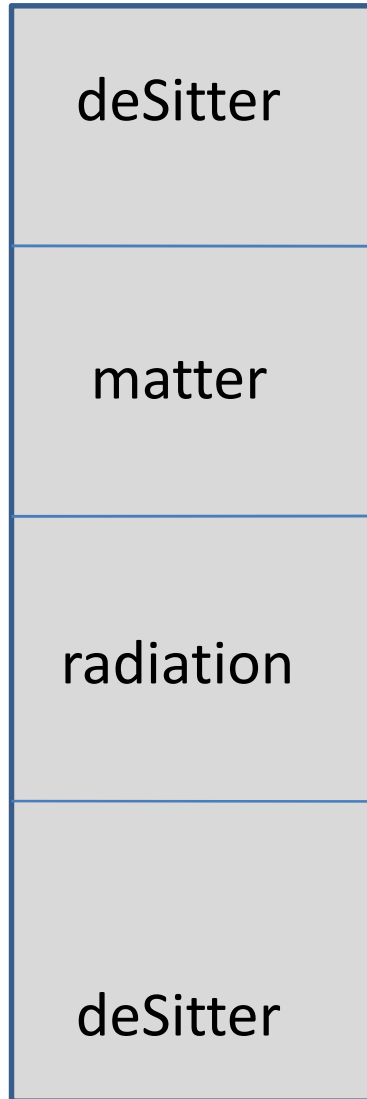


Cosmic History



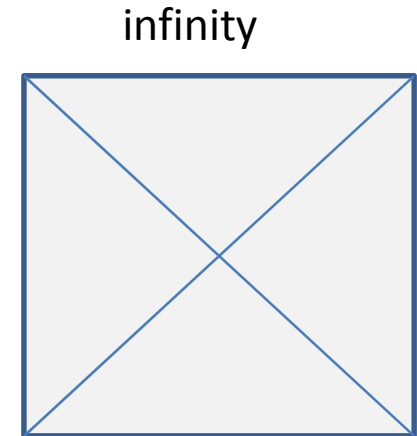
$$ds^2 = -dt^2 + e^{2Ht} [dx^2 + dy^2 + dz^2]$$

$$ds^2 = \frac{1}{(-H\eta)^2} [-d\eta^2 + dx^2 + dy^2 + dz^2]$$

$$ds^2 = -dt^2 + t^{4/3} [dx^2 + dy^2 + dz^2]$$

$$ds^2 = -dt^2 + t [dx^2 + dy^2 + dz^2]$$

$$ds^2 = -dt^2 + e^{2Ht} [dx^2 + dy^2 + dz^2]$$



Isotropic
Gaussian
Scale free

fluctuation

AdS/CFT と宇宙

$$ds^2 = dy^2 + e^{2Hy} \left[-dt^2 + dy^2 + dz^2 \right]$$

AdS/CFT対応



Lifshitz point

$$t \rightarrow iy, H \rightarrow -iH, x \rightarrow it$$

Anisotropic de Sitter

$$ds^2 = -dt^2 + e^{2Ht} \left[dx^2 + dy^2 + dz^2 \right]$$

$$ds^2 = -dt^2 + e^{2Ht} \left[e^{-4\Sigma t} dx^2 + e^{2\Sigma t} (dy^2 + dz^2) \right]$$

$$S = \int d^4x \left[\frac{1}{2} R - \frac{1}{2} (\partial\phi)^2 - V(\phi) - \frac{1}{4} f^2(\phi) F^{\mu\nu} F_{\mu\nu} \right]$$

dS/CFT対応

Lifshitz-deSitter/CFT 対応？

Inflation の記述は可能なのか？

anisotropy

Non-Gaussianity

Spectral index

fluctuation