Structure Formation, Statistics, and Scalar Field

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1. By making

$$\epsilon = \delta_b(t) - \delta_d(t),$$

then we have

$$\ddot{\delta}_d(t) + 2H\dot{\delta}_d(t) - \frac{3}{2}H^2(\Omega_d\delta_d + \Omega_b\delta_b) = 0,$$

$$\ddot{\delta}_b(t) + 2H\dot{\delta}_b(t) - \frac{3}{2}H^2(\Omega_d\delta_d + \Omega_b\delta_b) = 0,$$

by taking the difference