

Scalars 2017



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Constraints on running vacuum model with $H(z)$ and σ_8

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Content :

We set the cosmological constant Λ is not constant but a function of Hubble parameter, and Λ can decay with matter and radiation in the expansion universe. We examine the running vacuum model with $\Lambda(H) = 3\nu H^2 + \Lambda_0$, where ν is the model parameter and Λ_0 is the cosmological constant. From the data of the cosmic microwave background radiation, weak lensing and baryon acoustic oscillation along with the time dependent Hubble parameter $H(z)$ and weighted linear growth $f(z)\sigma_8(z)$ measurements, we find that $\nu = 1.37 \times 10^{-4}$ with the best fitted χ^2 value slightly smaller than that in the Λ CDM model.

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