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Evidence for Emergent Dark Energy

Tuesday, 6 July 2021 09:50 (20 minutes)

We discuss a generalised form of an emergent dark energy model with one degree of freedom for the dark energy sector that has the flexibility to include both ΛCDM model as well as the Phenomenologically Emergent Dark Energy (PEDE) model proposed by Li & Shafieloo (2019) as two of its special limits. The free parameter for the dark energy sector, namely Δ, has the value of 0 for the case of the Λ and 1 for the case of PEDE. We confront the model with various cosmological observations and put constraints on the Δ parameter and show that at the current status of cosmological observations, there is considerable evidence in favor of emergent dark energy with respect to the case of the cosmological constant. I will also briefly discuss how near future observations can make things clear in favor or against this model.

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Session Classification: Dark Energy and the Accelerating Universe

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