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A pure general relativistic non-singular bouncing origin for the Universe

Wednesday, 7 July 2021 10:05 (25 minutes)

It is argued that the past of the Universe, extrapolated from standard physics and measured cosmological parameters, might be a non-singular bounce without any exotic hypothesis. We show that, in this framework, stringent constraints can be put on the reheating temperature and number of inflationary e -folds. We draw some conclusions about the shape of the inflaton potential and raise the “naturalness” issue in this context. The primordial tensor spectrum is also calculated and possible observational footprints of the model are underlined.

Based on :

Barrau, Eur. Phys. J. C 80 (2020) 6, 579

Renevey, Barrau, Martineau, Touati, JCAP 01 (2021) 018

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