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A Solution of the Cosmological Constant and DE and Arrow of Time, Using Model of a Nonsingular Universe from Rosen from Volume (56) Ettore Majorana International Science Series, Physics, 1991

Tuesday, 6 July 2021 09:40 (25 minutes)

We reduplicate the Book “Dark Energy” by M. Li, X-D. Li, and Y. Wang, given zero-point energy calculation with an unexpected “length” added to the ‘width’ of a graviton wave just prior to specifying the creation of ‘gravitons’, using the Rosen and Israelit model of a nonsingular universe. In doing so we are in addition to obtaining a wavelength 10^{30} times greater than Planck’s length so we can calculate DE, may be able to with the help of the Rosen and Israelit model have a first approximation as to the arrow of time, and a universe with massive gravity. We have left the particulars of the nonsingular starting point undefined but state that the Rosen and Israelit model postulates initial temperatures of 10^{-180} Kelvin and also a value of about Planck temperature, at 10^{-3} centimeters radii value which may satisfy initial conditions asked by t’Hooft for describing an arrow of time. A key assumption is that the DE is formed at 10^{-3} cm, after an expansion of 10^{30} times in radii, from the Planck length radius nonsingular starting point. The given starting point for DE in this set of assumptions is where there is a change in the cosmic acceleration, to a zero value, according to Rosen and Israel, with time $t = 1.31$ times 10^{-42} seconds. Which may be where we may specify a potential magnitude, V , which has ties into inflaton physics. The particulars of the model from Rosen and Israelit allow a solution to be found, without discussion of where that nonsingular starting point came from, a point the author found in need of drastic remedies and fixes.

Subject Areas

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