Sixteenth Marcel Grossmann Meeting



Contribution ID: 27

Type: Talk in the parallel session

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

Author:BECKWITH, Andrew (Chongqing University, physics)Presenter:BECKWITH, Andrew (Chongqing University, physics)Session Classification:The Early Universe

Track Classification: Early Universe: The Early Universe