

Bulk Viscous Bianchi Type V Cosmological Model with Time Dependent Gravitational Constant and Cosmological Constant in General Relativity

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Abstract : In this paper, we investigate Bulk Viscous Bianchi Type V Cosmological Model with Time dependent gravitational constant and cosmological constant in general Relativity by assuming $\xi(t)=\xi_0 p^m$ where ξ_0 and m are constants. We also assume a variation law for Hubble parameter as $H(R) = a(R^{-n}+1)$, where $a>0$, $n>1$ being constant. Two universe models were obtained, and their physical behavior has been discussed. When $n=1$ the Universe starts from singular state whereas when $n=0$ the cosmology follows a no singular state. The presence of bulk viscosity increase matter density's value.

Keywords : Bulk Viscous Bianchi Type V Cosmological Model, hubble constants, gravitational constant, cosmological constants

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020