Estakhr’s Relativistic Decomposition of Four-Velocity Vector Field of Big Bang (Big Bang’s Turbulence) AHMAD REZA ESTAKHR, Researcher

Estakhr’s decomposition is a mathematical technique to separate the average and fluctuating parts of Big Bang. where the $\mathcal{U}^\mu$ denotes the proper time average called steady component of big bang and $\mathcal{U}'^\mu$ is fluctuating part called Big Bang’s perturbations (Big Bang’s Turbulence). Estakhr’s Proper-Time Averaged of Material-Geodesic Equations Using this mathematical technique, (applications: Big Bang Hydrodynamics, Supernova Hydrodynamics, etc.)

$$\frac{D\mathcal{U}^\mu}{D\tau} = \mathcal{T}^{\nu}_{\;\mu} \partial_{\nu} \mathcal{U}^\mu + \partial_{\nu} \mathcal{T}^{\mu\nu} + \Gamma^\mu_{\alpha\beta} \mathcal{T}^{\alpha\beta} \mathcal{U}^\beta + \partial_{\nu} R^\mu_{\nu} + \Gamma^\mu_{\alpha\beta} R^\beta_{\alpha\nu}$$

EAMG equations are proper time-averaged equations of relativistic motion for fluid flow and used to describe Relativistic Turbulent Flows (such as big bang eruption and/or supernova, etc...).

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