SPHERICAL STARS AND VERY HIGH DENSITIES

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ABSTRACT

Within the framework of RG in a riemannian manifold (U,g), a perfect fluid possesses the following fundamental property: the current lines are geodesics of the riemannian manifold (U,γ) where $\gamma = F^2 g$,F is the index of the fluid. ([1] p.71 to 83).

This is the metric tensor used for physical observations. The consideration of γ implies the existence of a different time-scale. ([2], [3], [4], [5], and [6]).

Further, when the density exceeds that of nuclear matter, the equation of state for the fluid of the star, is near enough: $p = \rho$. ([7] and [8]).

This leads to a description of the star, in its high-density phase, radically different from the classical theory. In effect, the metric tensor γ has no initial singularity.

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