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ROTATING ELECTROMAGNETING ANISOTROPIC TWO-FLUID MODEL UNIVERSES COUPLED WITH SCALAR FIELD IN GENERAL RELATIVITY

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Abstract

Anisotropic two-fluid model universes coupled with an electromagnetic field when a slow rotation is introduced in them, where the anisotropic pressure is generated by the presence of two non-interacting perfect fluids which are in relative motion with respect to each other. Special discussion will be made of the physically interesting class of models in which one fluid is a commoving perfect fluid which is taken to model the cosmic microwave background and the second a non-commoving perfect fluid which will model the observed material content of the universe. The effects of rotation on these models will be studied and the reaction of the scalar fields with respect to the rotational motion will be discussed.

Key Words : *Anisotropic expansion, Two-fluid model, Rotational universe.*

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