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ROTATING PERFECT FLUID UNIVERSE COUPLED WITH ELETROMAGANETIC CHARGE INTERACTING WITH GRAVITATIONAL FIELD

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Abstract

In the course of presentation of some interesting new solution, the dynamics of rotating charged perfect fluid distribution are investigated. The nature and role of the metric rotation $\Omega(r, t)$ as well as that of the metric rotation $\omega(r, t)$ are studied for uniform and non-uniform motions. The effects of the charged field on the rotational motion are discussed from every possible angle. In some solutions we find out the temporal restrictions on the models which are realistic astrophysical situations. Rotating models which are expanding as well as are obtained in which cases the rotational velocities are found to decay with time, and these models may be taken as good examples of real astrophysical objects in this universe.

Key Words : *Expanding universe*, *Rotational and un-rotational universe*, *Astrophysics object*. AMS Subject Classification : 83CO5.

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