

Impact of magnetic field on shape and velocities of compact objects

We study two macroscopic signals where the contribution of the magnetic field has an important role. The first one is related to kicks pulsar induced by neutrino emission from the core of neutron stars. The anisotropic neutrino emission produces a rocket effect that contributes to the star's kick velocity. We find that the computed values for the kick velocity lie within the range of the observed values. On the other hand, we study the shape of strange stars generalizing the Tolman-Oppenheimer-Volkov equations based on the metrics where the parameter relates the deformation with the anisotropy in the pressures.

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