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Landau problem in the static schwarzschild universe

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Abstract

This paper considers the Landau problem in an elected static space time and the are erased levels shifts which are erased as a metric deviation from the Minkowski space time. This research is based on the Weber's method. We try to rewrite the equation of motion of particles in the presence of the gravitational effects and consider the regions limited with the tangent spaces conditions. It would be reasonable to assume the nonrelativistic particles with low speed. We show that due to the Weber's method, the tangent space is always available. Another assumption of this article is time independent tangent space of Schwarzschild universe and use of Riemann's normal coordinates.

Keywords: Landau problem, Weber's method, Schwarzschild metric, tangent space, Riemann's coordinates.

For full article, refer to the Persian section