

Accelerating Effect in Kerr-Newman-Kasuya Field

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Abstract: We have obtained expressions of the accelerating effect in Kerr-Newman-Kasuya field. These expressions include four parameters: mass m , angular momentum a , electric charge q , and magnetic charge φ . Furthermore we study its special case ($v^i=0$). We get the following conclusion. In the gravitation field of source mass with electric charge q and magnetic charge φ , the acceleration of test particle has not only radial component but also transverse component. When $\theta=0$, the acceleration is minimum, and when $\theta=\pi/2$, the acceleration is maximum. Furthermore, we discuss the effects of electric charge q and magnetic charge φ respectively.

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Key words: acceleration, magnetic charge, Kerr-Newman-Kasuya field

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