

Medan gravitasi global monopole dalam teori eddington-inspired born-Infeld = Gravitational field of global monopole in eddington inspired born infeld theory

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Abstrak

Kami mempelajari solusi metrik dari global monopole dalam kerangka teori Eddington-inspired Born-Infeld. Solusi physical metric $g_{\mu\nu}$ tetap memiliki solid deficit angle tetapi tidak dapat direduksi menjadi solusi Schwarzschild kecuali pada kondisi $\alpha = 0$. Radius event horizon dan ruang parameter untuk solusi tersebut juga telah ditemukan. Selain itu, gerak partikel uji bermassa disekitar global monopole dianalisis. Ditemukan potensial efektif dan gaya radial yang dialami partikel uji tersebut.

..... We studied metric solution for global monopole in Eddington inspired Born Infeld theory. The physical metric g solution still has solid deficit angle like global monopole in general relativity, but cannot be reduced to Schwarzschild unless $\alpha = 0$. We also found the event horizon radius and the parameter space for this solution. The geodesic motion of massive test particle around global monopole is analysed. We found the effective potential and the radial force for this test particle.