

Magnetized Quark stars and anisotropic stellar structure

The fact that a magnetic field in a fermion system breaks the spherical symmetry suggest that the intrinsic geometry of this system is axisymmetric rather than spherical. In this work we analyze the impact of anisotropic pressures, due to the presence of a magnetic field, in the structure equations of a magnetized quark star. We assume a cylindrical metric and an anisotropic energy momentum tensor for the source. We found that there is a maximum magnetic field that the star can sustain, closely related to the violation of the virial relations

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