

Gravitating Bag as Source of the Kerr Geometry: Combining the Naked and Dressed Electron in an Integrated Bag-String-Quark System

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Abstract

Gravitating bag as source of the Kerr geometry: Combining the naked and dressed electron in an integrated bag-string-quark system. Abstract: The Kerr-Newman black hole solution with $a \gg m$ loses horizons and obtains a naked singular ring which creates two-sheeted topology. This space is regulated by the Higgs mechanism of broken symmetry leading to a bubble-bag model of the source of the KN solution. We show that this source has much in common with the known MIT- and SLAC-bag models, but has the important advantage, of being in accordance with the KN gravity. The Kerr-Newman bag model inherits from the hadron bag models a pliancy to deformations, and the spinning Kerr-Newman bag takes the oblate ellipsoidal form, creating a ring-string structure which is completed by a singular pole, circulating along the sharp border of the disk. This model allows us to consider the point-like electron as a single quark enclosed inside the bag in the state of (zitterbewegung), which unifies the dressed and bare electron in an integrated bag-string-quark system similar to the bag models of hadrons.