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Anisotropic Strange Stars through Complexity Factor

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By using the gravitational decoupling method to create an exact solution to the field equations, this talk discusses the formulation of a charged anisotropic spherically symmetric strange star model. The initial decoupled system is split into Einstein-Maxwell and quasi-Einstein systems using minimal geometric modification. By employing the complexity factor to solve quasi-Einstein field equations, a well-known model for the isotropic spherical matter distribution is adopted with MIT bag equation of state incorporating electromagnetic field and generalize it to an anisotropic model. By visualizing metric functions, density, pressure, anisotropy parameter, energy requirements, and stability criterion for various strange star candidates, the physical viability of the resulting charged anisotropic solution is investigated. The generated model's physical acceptability is ensured by the fact that all physical aspects behave properly.

Primary author: SADIQ, Sobia (University of Education, Lahore)

Co-author: Dr SALEEM, Rabia (COMSATS Lahore)

Presenter: SADIQ, Sobia (University of Education, Lahore)

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