

Dark Matter and Stars: Multi-Messenger Probes of Dark Matter and Modified Gravity

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Constraints on the Size of Extra Compactified Dimensions from Compact Star Observations

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Compact stars with Kaluza-Klein excitations are considered and constraints on the size of compactified extra dimensions are given.

The model is a static, spherically symmetric Kaluza-Klein-based theory with one extra compactified dimension. A realistic equation of state has been introduced and applied in order to reproduce compact star observables. Comparison of the theoretical calculation with available observational data led us to consequences on the size of extra dimensions within the Kaluza-Klein framework.

Primary author: HORVATH, Anna

Presenter: HORVATH, Anna