

ISAPP 2024: Particle Candidates for Dark Matter



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Slow Stable Hybrid Stars

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Exploring the interplay of different baryons and the quark matter, we emphasize the effects of a slow phase transition at the hadron-quark interface. We observe that the maximum mass is attained before the fundamental mode's frequency diminishes for slow phase transitions. This observation implies the stability of stellar configurations with higher central densities than the maximum mass, called Slow Stable Hybrid Stars (SSHSs), even under small radial perturbations. The length of these SSHS branch depends upon the energy density jump between two phases and the stiffness of the quark EoS.

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Session Classification: Flash Talks by Students