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Hypernuclear physics of compact stars constrained by gravitational-wave observations

Wednesday, 3 March 2021 09:00 (1 hour)

There has been significant recent progress in the understanding of properties of compact stars with cores containing hyperonic matter based on equations of state derived from covariant density functional (CDF) theory. I will discuss the structure, composition, and global properties of hypernuclear stars predicted by CDF models. These properties can be constrained using the current data, in particular, due to very recent gravitational-wave observations. I will also discuss the electroweak processes on hyperons
and neutrino cooling as a probe of the internal composition of compact stars.

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