

What mean-field models can offer to the neutrino interaction community (ONLINE)

Monday 24 October 2022 16:50 (25 minutes)

Within the framework of a relativistic mean-field approach, I will discuss some relevant nuclear effects that affect neutrino-nucleus cross sections at the energies of interest for neutrino-oscillation experiments, such as Pauli blocking, binding energies and hadron final state interactions. I will stress the differences between this relativistic and quantum mechanical approach and the models and methodology that is inside the Monte Carlo neutrino event generators. The results that I will present are mainly based on our recent articles: PRL 123, 052501 (2019); PRC 100, 045501 (2019); PRC 105, 025502 (2022); PRC 105, 054603 (2022); arXiv:2203.09996; arXiv:2207.02086v1.

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