

## **Mass modification of Phi mesons through dileptons, and Kaons in proton induced reactions**

*Wednesday, April 2, 2025 2:55 PM (25 minutes)*

The possibility of observing mass and width modifications of phi mesons in dense matter is an important tool to better understand the behaviour of strongly interacting matter in extreme conditions. Here, I used a BUU transport approach to examine the mass modification of phi mesons and its consequences on the dilepton and kaon invariant mass spectra in several proton-induced reactions with Cu and Pb targets at 12 GeV and 30 GeV bombarding energies. The simulations indicate that the dilepton spectra give a cleaner signal on the mass modifications; however, the kaon yields and the shape of their invariant mass distribution strongly depend on the applied mean fields; therefore, by examining both spectra, we could obtain information not just on the mass modifications but also on the kaon mean fields.

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