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## Femtoscopic study of the $\Omega\alpha$ interaction in heavy-ion collisions

Wednesday, October 30, 2024 10:00 AM (30 minutes)

$\Omega - ^4He(\alpha)$  two-particle momentum correlation functions are studied.

Such correlations as an alternative source of information can help us further understand the interaction between  $\Omega$  and nucleons (N).

$\Omega - \alpha$  potentials in the single-folding potential approach are constructed by employing two different state-of-the-art  $\Omega - N$  interactions in  $^5S_2$  channel, i.e., one is based on the (2 + 1)-flavor lattice QCD simulations near the physical point by the HAL QCD collaboration, and another is based on the meson exchanges with effective Lagrangian.

By extracting the scattering length and the effective range from obtained  $\Omega - \alpha$  potentials, the correlation functions are calculated within the Lednicky-Lyuboshits formalism.

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