ID de Contribution: **177** Type: **Lecture**

Nuclear Hadronization Studies at JLab: Present and Future

jeudi 21 septembre 2023 08:50 (40 minutes)

In 2004, the CLAS detector at Jefferson Lab collected experimental data on a broad range of nuclear targets, from heavy nuclei like Lead to lighter ones such as Carbon or Deuterium, employing a 6 GeV electron beam. These data enabled us to investigate various facets of nuclear phenomena, encompassing the nuclear hadronization process, nuclear color transparency, short-range nuclear collations, and two-pion correlations. Notably, the varying sizes of nuclei facilitated an exploration of the phenomenon of nuclear hadronization in relation to nuclear medium size. The studied final hadron types included charged and neutral pions, protons with substantial statistics, and, with fewer statistics, kaons, etas, omegas, and lambdas. Moving forward to the first quarter of 2024, the experiment will be replicated on CLAS12 with CEBAF12, offering higher energy, an expanded kinematic range, and increased statistical precision for diverse types of hadrons. Within the presentation, I will outline the previous experiment, delve into the impending 12 GeV experiment, and elucidate the perspectives and scientific significance of the envisioned 24 GeV experiment.

Auteur principal: HAKOBYAN, Hayk (Universidad Tecnica Federico Santa Maria)

Orateur: HAKOBYAN, Hayk (Universidad Tecnica Federico Santa Maria)

Classification de Session: Plenary