

Probing the (anti)nucleosynthesis via nuclear flow measurements and hypertriton spin determination via the polarization measurement

Saturday 20 July 2024 17:53 (17 minutes)

The production yield of (hyper)nuclei is commonly described using two conceptually different models: statistical hadronization (SHM) or coalescence. This talk will present the elliptic flow measurements (v_2) of ^3He and ^3H at LHC energies using the large Pb-Pb data sample collected by ALICE during the Run 3 of LHC. Results will be compared with the flow measurements of their nucleon constituents to test the baryon number scaling expected from the coalescence production mechanism. Furthermore, in the presence of elliptic flow, ^3H are expected to be polarized with respect to the beam direction. The first polarization measurement of ^3H will be presented and exploited to determine the ^3H spin, an unknown parameter in theory calculations.

Alternate track

I read the instructions above

Yes

Primary author: BARIOGLIO, Luca (Universita e INFN Torino (IT))

Co-author: COLLABORATION, ALICE

Presenter: BARIOGLIO, Luca (Universita e INFN Torino (IT))

Session Classification: Heavy Ions

Track Classification: 07. Heavy Ions