

11th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



Beitrag ID: 72

Typ: Poster

Particle yield modification in jet-like azimuthal V^0 -hadron correlations in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV with ALICE

Dienstag, 28. März 2023 18:15 (2 Stunden)

Two-particle azimuthal correlations are a powerful tool to investigate the details of the mechanisms of jet quenching and hadron production. Suitable candidates for these studies are strange mesons (K_S^0) and baryons ($\Lambda/\bar{\Lambda}$), as their relative production rates differ for jets originating from quark or gluon. Measurements of near- and away-side hadron yields associated with these hadrons as trigger particles therefore provide additional constraining power for in-medium energy loss of different high- p_T partons and their fragmentation properties.

In this contribution, we present ratios of per-trigger yields in Pb-Pb collisions with respect to pp collisions, I_{AA} measured at midrapidity in the most central 0-10% collisions with the ALICE detector, with K_S^0 , $\Lambda/\bar{\Lambda}$ and charged hadrons as trigger particles. A significant enhancement of I_{AA} for various particle species is found at the lowest associated-particle $p_{T,assoc}$ on both the near- and away-side, while a strong suppression of I_{AA} for $p_{T,assoc} > 3$ GeV/c on away-side is observed, as expected from strong in-medium energy loss. The data are compared to HIJING, AMPT and EPOS models, where the latter two qualitatively describe the near- and away-side yield modifications at intermediate and high $p_{T,assoc}$.

Experiment/Theory

ALICE

Affiliation

CERN

Hauptautor: Herr ANAAM, Mustafa

Vortragende(r): Herr ANAAM, Mustafa

Sitzung Einordnung: Poster Session

Track Klassifizierung: High momentum hadrons and correlations