



ID de Contribution: 12

Type: Oral Presentation

## Hyperon and Hypernuclei production in Ag+Ag collisions at 1.58 AGeV beam energy with the HADES experiment

*jeudi 12 septembre 2024 17:40 (20 minutes)*

The HADES experiment was designed for the exploration of the QCD phase diagram at high baryochemical potential and moderate temperatures as well as for hadron physics with proton and pion beams. In A+A collisions at 1-2 AGeV strangeness production is close to threshold, thus becomes a rare observable being sensitive to the dense baryonic matter that has been created.

The most recent, high statistics heavy-ion data sample of nearly 16 billion events of Ag+Ag collisions at 1.58 AGeV beam energy allows for detailed analysis of strange hadrons, in particular baryons. The collision energy is right at the strangeness production threshold. Interestingly, it is not only the  $\Lambda$  that has been produced but also light hyper-nuclei. Thanks to the recent addition of an ECAL to HADES and the upgrade of the RICH detector, the  $\Sigma^0$  baryon in its  $\Lambda\gamma$  channel is measured for the first time in subthreshold (with respect to NN) AA collisions. Resulting multiplicities are compared to the statistical hadronization model and transport models clearly showing an impact of the high baryon density environment for strange baryon production.

**Auteur principal:** BECKER, Marten (Justus-Liebig-Universität Gießen)

**Orateur:** BECKER, Marten (Justus-Liebig-Universität Gießen)

**Classification de Session:** Constraints from heavy-ion collisions at relativistic energies

**Classification de thématique:** Constraints from heavy-ion collisions at relativistic energies