

Quark Matter 2019 - the XXVIIIth International Conference on Ultra-relativistic Nucleus-Nucleus Collisions



Contribution ID: 775

Type: **Poster Presentation**

Low mass dielectron studies with the HADES and CBM experiments at GSI/FAIR*

Monday 4 November 2019 17:40 (20 minutes)

The High Acceptance DiElectron Spectrometer (HADES) and the Compressed Baryonic Matter experiment (CBM) are dedicated to study strongly interacting matter at high baryon densities and moderate temperatures. Being penetrating probes, dielectrons are a key observable to get direct access to the fireball.

Currently the HADES experiment is located at SIS 18 at GSI, Darmstadt and will be moved in future to the CBM pit and continue its physics program at SIS100. Both experiments are complementary to each other in terms of detector setup and measureable energy range making it interesting to study one system at both experiments for comparison and verification of the CBM results. Currently Ag+Ag collisions at 4.5A GeV is favored. A major component for electron identification in both experiments is a RICH detector. The HADES RICH detector has been successfully upgraded within FAIR Phase-0 and showed an excellent performance in the recent Ag+Ag beamtime at 1.58A GeV at SIS 18 in March 2019.

In this poster we present dielectron spectra based on the data collected in this beamtime, clearly showing the potential of dielectrons at HADES. Furthermore simulation results regarding dielectron spectra at HADES and CBM in Ag+Ag collisions at 4.5A GeV are shown as those are planned to be measured at SIS 100.

*supported by BMBF 05P15RGFCA, 05P19R6FCA and GSI

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Session Classification: Poster Session

Track Classification: QCD at finite temperature and baryon density