Contribution ID: **26** Type: **not specified**

Electromagnetic radiation from Au+Au collisions at 2.4 GeV center of mass energy measured with HADES

The HADES at SIS18 (GSI, Darmstadt) investigates QCD matter formed in heavy-ion collisions at 1-2 GeV per nucleon. In this energy regime the colliding nuclei are rather compressed than heated, reaching net baryon densities of a few times normal nuclear matter density. To understand the microscopic structure of matter in the region of high baryochemical potential, HADES systematically measures virtual photons from elementary and heavy-ion collisions. These electromagnetic probes access the entire space-time-evolution of the fireball and leave the collision zone without further interactions. Furthermore, in contrast to real photons, they carry additional information like their invariant mass. Thus they provide unique information about the various stages of the collision. The results from the largest system - Au+Au at 2.4 GeV center of mass energy - indicate strong medium effects beyond a pure superposition of individual NN collisions. The low invariant mass spectra are characterized by a nearly exponential shape, suggesting strong in-medium modifications of the vector meson spectral function due to coupling to abundant baryon resonances. In this contribution the results of the differential data analysis will be presented and compared to available model calculations.

Primary author: DITTERT, Dominique (TU Darmstadt)

Presenter: DITTERT, Dominique (TU Darmstadt)

Session Classification: Afternoon session

Track Classification: Default