

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



Beitrag ID: 169

Typ: Talk

## Thermal photon measurements at PHENIX

*Dienstag, 28. März 2023 17:10 (20 Minuten)*

Photons are emitted at all stages of relativistic heavy-ion collisions and do not interact with the medium strongly. With access to the versatility of RHIC, measurements of low momentum direct photons are made possible across different system size and beam energies. An excess of direct photons, above prompt photon production from hard scattering processes, is observed for a system size corresponding to  $dN_{ch}/d\eta$  of 20-30, with a large azimuthal anisotropy and a characteristic dependence on collision centrality. After subtracting the prompt photon component, the inverse slope of the spectrum is continuously increasing with the effective temperature ranging from 250 MeV/c at  $p_T$  of 1-2 GeV/c to about 400 MeV/c at 2-4 GeV/c. Within the experimental uncertainty, there is no indication of a system size dependence of the inverse slope. In this talk, results from Au+Au collisions from the PHENIX experiment will be presented.

### Experiment/Theory

PHENIX

### Affiliation

Stony Brook University

**Hauptautor:** ESHA, Roli (Stony Brook University)

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**Sitzung Einordnung:** Parallel: Electromagnetic & Electroweak Probes

**Track Klassifizierung:** Electromagnetic and electroweak probes