



Contribution ID: 69

Type: **Oral presentation**

## Direct Photon Flow in Au+Au Collisions

*Thursday 12 October 2023 14:50 (20 minutes)*

Photons provide snapshots of the evolution of relativistic heavy-ion collisions as they are emitted at all stages and do not interact with the medium strongly. Measurements of low momentum direct photons at PHENIX across different systems, from p+p to Au+Au have been made possible due to the versatility of RHIC. An excess of direct photons above prompt photon production from hard scattering processes and consistent with thermal photon emission is observed in collisions of large systems. State-of-the-art theoretical models describe the data qualitatively, however, they fall short quantitatively. Precise measurement of the direct photon anisotropy is necessary to constrain these theoretical models and to provide insights into the space-time evolution of relativistic heavy-ion collisions. In this talk, azimuthal anisotropies of direct photons in Au+Au collisions at 200 GeV will be presented, thereby, shedding light on the long-standing direct photon puzzle.

### Is this abstract from experiment?

Yes

### Name of experiment and experimental site

PHENIX Experiment, Brookhaven National Laboratory, NY

### Is the speaker for that presentation defined?

Yes

### Details

Michael Giles, Masters Student Researcher, Stony Brook University, USA, [www.stonybrook.edu](http://www.stonybrook.edu)

### Internet talk

Yes

**Author:** GILES, Michael

**Presenter:** GILES, Michael

**Session Classification:** Parallel Session 4

**Track Classification:** Heavy Ion Collisions