

1 **Identical Pion Interferometry from Au+Au Collisions at $\sqrt{s_{NN}} = 3.2,$**
2 **3.5, and 3.9 GeV in the STAR Experiment at RHIC**

3 Vinh Luong (for the STAR Collaboration)

4 Joint Institute for Nuclear Research

5 Two-pion interferometry provides access to the spatial and temporal size,
6 shape and evolution of their sources created in heavy ion collisions and hence
7 offers strong constraints for the models of heavy ion collisions. In this work, we
8 will report the measurement of correlation strength (λ) and femtoscopic radii
9 ($R_{\text{out}}, R_{\text{side}}, R_{\text{long}}, R_{\text{out-long}}$) extracted from the two-pion correlation function in
10 Au+Au collisions at $\sqrt{s_{NN}} = 3.2, 3.5,$ and 3.9 GeV. The dependence of these
11 parameters on pair transverse momentum, pair rapidity, collision centrality,
12 and collision energy will be presented and their physics implications will be
13 discussed.