

1 Measurement of angular distributions of thermal
2 dielectrons in Au+Au collisions at $\sqrt{s_{\text{NN}}} = 9.2$
3 GeV

4 Zhen Wang
for the STAR collaboration

5 According to lattice Quantum Chromodynamics (QCD) predictions, there
6 exists a phase transition from hadronic matter to Quark Gluon Plasma (QGP) at
7 extremely high temperatures or baryon densities. Thermal dielectrons provide
8 a unique probe to study the properties of the hot QCD medium created in
9 relativistic heavy ion collisions. They can be emitted during the entire evolution
10 of the medium and do not interact strongly with it. The thermal dilepton
11 angular distributions can provide us with more information on their production
12 mechanism.

13 The STAR experiment collected a large dataset from Au+Au collisions at
14 $\sqrt{s_{\text{NN}}} = 9.2$ GeV during the Beam Energy Scan program phase II (BES-II).
15 In this poster, the results of the angular distributions of decay electrons in
16 the rest frame of the dielectron in Au+Au collisions at $\sqrt{s_{\text{NN}}} = 9.2$ GeV will
17 be presented and discussed. Furthermore, the physics implications from this
18 measurement will be discussed.