

Measurement of Λ polarization in Au+Au $\sqrt{s_{NN}} = 7.2$ GeV Fixed-target collisions at STAR

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1 The medium generated by non-central nuclear-nuclear collision would have a
2 large angular momentum, also known as vorticity of the created system. Due to
3 the spin-orbit coupling, spin directions of particles could reflect the spin direction
4 aligned with the angular momentum of the system. Global polarization of Λ and $\bar{\Lambda}$
5 hyperons has been measured from $\sqrt{s_{NN}} = 7.7$ GeV to 200 GeV[1][2]. Additionally
6 $\bar{\Lambda}$ global polarization is slightly higher than that of Λ possibly because of magnetic
7 field in the initial state. It would be interesting to test how long the magnetic field
8 could be sustained towards low beam energy.

9 In this talk, current status of the measurement of global polarization of Λ in
10 Au+Au collisions at $\sqrt{s_{NN}} = 7.2$ GeV with the fixed-target configuration are re-
11 ported.

12 References

- 13 [1] L.Adamczyk et al.(STAR) Nature 548 62 (2017).
14 [2] J.Adam et al.(STAR), Phys. Rev. C 98 14910 (2018)