

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

Kosuke Okubo (for the STAR Collaboration)
University of Tsukuba

1 Non-central heavy-ion collisions produce a large angular momentum that leads
2 to vorticity of the created system. Due to the spin-orbit coupling, spin directions
3 of particles are aligned with the orbital angular momentum of the system. Global
4 polarization of Λ and $\bar{\Lambda}$ hyperons has been measured in Au+Au collisions from
5 $\sqrt{s_{\text{NN}}} = 7.7$ GeV to 200 GeV[1][2]. The STAR fixed target program provides an
6 opportunity to extend such measurements at even lower energies. Additionally, Λ
7 global polarization is also influenced by magnetic field at the initial stage. It would
8 be interesting to investigate such effects towards lower beam energies. In this talk,
9 measurement of global polarization of Λ hyperons in Au+Au collisions at $\sqrt{s_{\text{NN}}} =$
10 7.2 GeV with the fixed-target configuration is reported.

11 **References**

- 12 [1] L.Adamczyk et al.(STAR) Nature 548 62 (2017).
13 [2] J.Adam et al.(STAR), Phys. Rev. C 98 14910 (2018)