

1 Measurements of Ω and $\bar{\Omega}$ production in Au+Au collisions at
2 $\sqrt{s_{NN}} = 200$ GeV with the STAR experiment

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4 $\Omega(\bar{\Omega})$, composed of three strange quarks, serves as a sensitive probe into the characteristics
5 of the quark-gluon plasma (QGP). Measurement of its production can be used to extract the
6 temperature and baryon chemical potential at the chemical freeze-out with the statistical
7 hadronization model, providing information on the QCD phase diagram. Also, the Ω/ϕ ratio as
8 a function of transverse momentum (p_T) can be utilized to test hadronization model predictions
9 and to possibly extract the strange quark p_T distribution at hadronization.

10 In this poster, we will present p_T spectra and yields of $\Omega(\bar{\Omega})$ in Au+Au collisions at
11 $\sqrt{s_{NN}} = 200$ GeV. The data analyzed were collected by STAR in 2019, when the iTPC was in
12 operation. The iTPC extends the rapidity coverage and enhances the particle identification
13 capability compared to previous results.