

Dear Yuri,

Thank you very much for the paper and the analysis note. They are very impressive, congratulations to you and your team!

Dear, Jinhui and Yu-Gang

Thank you for the article revision and comments!

We think that they will add a wider overview of the fresh results from other experiments in this article.

We prepared answers for your comments (in attachment). If you have some corrections or other comments please write to me. If all are correct I will edit the article and AN according to your comments.

Thank you at advance,
with best regards
Yury Stepanenko

I have a few minor comments for your consideration,

1) when we are talking about the Lambda production at low and intermediate energy and refer to FOPI and HADES data, lines 28-30, we may also include the Fixed Target data at STAR, see below (or e-Print: [2407.10110](https://arxiv.org/abs/2407.10110)), it is a measurement of Lambda production at 3.85 AGeV energy, <https://inspirehep.net/literature/2807679>

In text now:

The production of Λ hyperons at low and intermediate energies has been studied in a number of experiments, notably FOPI (GSI) [4] and HADES (GSI) [5].

In new version of article will be:

The production of Λ hyperons at low and intermediate energies has been studied in a number of experiments, notably FOPI (GSI) [4], HADES (GSI) [5] and STAR (RHIC) [Link to].

Also we will add link to bibliography:

M.I. Abdulhamid (American U., Cairo) et al. Strangeness production in $\sqrt{s_{\text{NN}}} = 3$ GeV Au+Au collisions at RHIC, e-Print: [2407.10110](https://arxiv.org/abs/2407.10110) [nucl-ex], DOI: [10.1007/JHEP10\(2024\)139](https://doi.org/10.1007/JHEP10(2024)139), JHEP 10 (2024), 139

2) when we are talking about Lambda production at high energy, and refer to the Lambda global polarization at RHIC and LHC, lines 33-34, we may also include the Lambda production measurement at STAR BES, see below (or e-Print: [1906.03732](https://arxiv.org/abs/1906.03732)). There are a series of papers on this direction, but this one is the latest measurement, <https://inspirehep.net/literature/1738953>

text now:

In addition, data on Λ hyperons have been obtained in the STAR (RHIC) [6] and ALICE (LHC) [7] collider experiments, but in these experiments the focus is on the central fast region and significantly higher energies.

New text:

In addition, data on Λ hyperons at high energies have been obtained in the STAR (RHIC) [6], ALICE (LHC) [7] and STAR BES (RHIC) [link 1] collider experiments, but in these experiments the focus is on the central fast region and significantly higher energies.

Link to bibliography:

[Jaroslav Adam](#) (Brookhaven Natl. Lab., Dept. Phys. and [Brookhaven](#)) et al. (STAR Collaboration), Strange hadron production in Au+Au collisions at $\sqrt{s_{\mathrm{NN}}} = 7.7, 11.5, 19.6, 27, \text{ and } 39 \text{ GeV}$, e-Print: [1906.03732](#) [nucl-ex], DOI: [10.1103/PhysRevC.102.034909](#), Phys.Rev.C 102 (2020) 3, 034909

3) similar to 2), when we are talking about Lambda production at different facilities, in the middle of line 35, “*the focus is on the central fast region and significantly higher energies.*”, it may be helpful to refer to the comprehensive review on STAR BES hyperon, hypernuclei production by the Chinese colleagues including myself, see below (or e-Print: [2407.02935](#)) <https://inspirehep.net/literature/2853245>

So we can add this to the sentence above as link2

In addition, data on Λ hyperons at high energies have been obtained in the STAR (RHIC) [6], ALICE (LHC) [7] and STAR BES (RHIC) [link 1] [link 2] collider experiments, but in these experiments the focus is on the central fast region and significantly higher energies.

Link to bibliography

Properties of the QCD matter: review of selected results from the relativistic heavy ion collider beam energy scan (RHIC BES) program, Jinhui Chen (Fudan U.), Jin-Hui Chen (Fudan U.), Xin Dong (LBNL, NSD), Xionghong He (Lanzhou, Inst. Modern Phys.), Xiong-Hong He (Lanzhou, Inst. Modern Phys.) et al. e-Print: [2407.02935](#) [nucl-ex], DOI: [10.1007/s41365-024-01591-2](#), Nucl.Sci.Tech. 35 (2024) 12, 214