

List of publications

Ing. Jan Vaněk

This document provides an overview of my publications related to my Ph.D. research. First listed are published publications, those submitted or under review are listed at the bottom of the list. During my Ph.D. studies, my research has been conducted at the Nuclear Physics Institute (NPI) of the Czech Academy of Sciences. For that reason, my affiliation within the STAR Collaboration was the NPI and because of STAR internal policies, it was my only affiliation. For that reason, many of my publications have affiliation with NPI only. It was agreed by STAR, that students can have double affiliations on February 22nd 2022. Only recent publications have the Faculty of Nuclear Sciences and Physical Engineering (FNSPE) affiliation.

Publications in this list with FNSPE affiliation are the following:

- Papers: 3. and 4.
- Proceedings: 1., 2., and 7.

Papers

1. J. Vaněk, for the STAR Collaboration, *Open-Charm Hadron Measurements in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV by the STAR Experiment*, Universe 2019, 5(9), 196, <https://www.mdpi.com/2218-1997/5/9/196>.
 - Paper presenting preliminary results (at the time of publication) of my analysis and results from other open-charm analyses at STAR. Paper also includes previously unpublished details about topological selection criteria used in my analysis.
2. J. Adam, *et al.* [STAR Collaboration], *Observation of D_s^\pm/D^0 Enhancement in Au + Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, Phys. Rev. Lett., 127:092301, <https://link.aps.org/doi/10.1103/PhysRevLett.127.092301>.
 - I was a member of a review committee for this paper on position of Code QA. My contribution was a check of the analysis software and verification of the presented physics results. I was also involved in revision and approval of the text of the paper draft.
3. STAR Collaboration, *Measurement of D^\pm meson production and total charm production yield at midrapidity in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV*, to be submitted to Physics Letters B

- Paper with my primary authorship, containing results from analysis presented in my thesis. I was responsible for preparation of the results, writing the paper draft and supporting documents (analysis note). I am also the corresponding author for this publication.
 - Publication under review within STAR Collaboration at the time of preparing of this document.
4. STAR Collaboration, *Measurement of D^0 and D^* production in $p+p$ collisions at $\sqrt{s} = 500$ GeV*, to be submitted to Physical Review D
- Paper with my primary authorship, containing results from analysis of D^0 and D^* mesons in $p+p$ collisions at $\sqrt{s} = 500$ GeV. My responsibility is determination of trigger efficiency of high- p_T D^0 mesons.
 - Publication under review within STAR Collaboration at the time of preparing of this document.

Proceedings

1. J. Vaněk, for the STAR Collaboration, *Measurements of D^\pm meson production and total charm quark production yield at midrapidity in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV by the STAR experiment*, PoS(PANIC2021)247, <https://doi.org/10.22323/1.380.0247>.
2. J. Vaněk, for the STAR Collaboration, *Production of D^\pm mesons in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV at the STAR experiment*, PoS(ICHEP2020)584, <https://doi.org/10.22323/1.390.0584>.
3. J. Vaněk, for the STAR Collaboration, *Measurements of open charm hadrons in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV by the STAR experiment*, Slovak Physical Society, Czech Physical Society (ISBN 978-80-89855-13-1), 2020, <https://indico.cern.ch/event/851173/attachments/1960505/3658688/sbornikkonference.pdf>.
4. J. Vaněk, for the STAR Collaboration, *Measurement of D^\pm meson production in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV with the STAR experiment*, PoS(HardProbes2020)065, <https://doi.org/10.22323/1.387.0065>.
5. J. Vaněk, for the STAR Collaboration, *Measurements of open-charm hadrons in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV by the STAR experiment*, Springer Proceedings in Physics, vol 250. Springer, https://doi.org/10.1007/978-3-030-53448-6_16.
6. J. Vaněk, for the STAR Collaboration, *Production of Open-Charm Hadrons in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV Measured by the STAR Experiment*, Proceedings, 10(1), 2019, <https://www.mdpi.com/2504-3900/10/1/10>.
7. J. Vaněk, for the STAR Collaboration, *Measurements of open charm hadrons in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV by the STAR experiment*, submitted to International Journal of Modern Physics E.