

HEAVY ION COLLISIONS AT HIGH ENERGIES

Moscow Institute of Physics and Technology (National Research University)

Degree or qualification is awarded: **PhD (Candidate of Science)**

Language of study: **English**

Mode of study: **full-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **375 000 RUB**

Programme curator: **Denis Ustyuzhaninov**

Tel.: **+7 (498) 713 91 70**

E-mail: interadmission@phystech.edu

Entry requirements:

- Master's degree / equivalent in a related field
- B2 level of English
- Good track record of publications related to the topic of the intended research
- Strong research proposal 1,500 - 3,500 words

Research supervisor:

[Alexey Aparin](#)

PhD

Supervisor's research interests:

Main research activity is dedicated to analysis of STAR experiment data on heavy ion collisions. It involves research of charged particle production, correlation analysis of net protons, particle femtoscopy. Generally, group activities lay in the fields of light flavor spectra and bulk properties investigations.

Research highlights:

Our group is a part of STAR collaboration. It implies involvement in collaboration activities. Short term visits to other STAR groups outside Russia are possible.

Supervisor's specific requirements:

- Linux, C/C++, LaTeX.
- Basics of quantum mechanics.
- Experimental particle physics.
- Basics of particle acceleration and principles of particle detection.

Main publications:

- Beam energy dependence of jet-quenching effects in Au+Au collisions at $\sqrt{s_{NN}} = 7.7, 11.5, 14.5, 19.6, 27, 39,$ and 62.4 GeV, Phys. Rev. Lett., 121 (2018) n.3, 032301.
- Measurement of interaction between antiprotons, Nature, 527 (2015), 345-348.
- Global Λ hyperon polarization in nuclear collisions: evidence for the most vortical fluid, Nature, 548 (2017), 62-65.

Specializations within this programme