

## **03.06.01 Physics and Astronomy**

### **Theoretical Physics**

*Graduation department:* Theoretical Nuclear Physics Department (№ 32).

Founded in 1946. The first Head of Department was academician, the Nobel Prize laureate I. Tamm.

#### **Program objective**

- Research in theoretical and mathematical physics;
- Development of new methods for the study of physical phenomena and processes;
- Mathematical modeling of physical phenomena and processes;
- Planning of experimental studies and analysis of their results.

#### **Competitive advantages of the program**

- Special educational programs, individual training plans, academic university mobility;
- Involvement of the leading specialists into educational process and student practical training and research groups formation within the leading research organizations

#### **Professional activity**

- Theoretical study and mathematical modeling of physical processes and phenomena in nature and experiment
- Development of new research methods in various areas of theoretical physics, including the quantum and classical fields theory, plasma physics, condensed matter physics, nuclear physics and elementary particles physics, nonlinear and stochastic dynamics, astrophysics, cosmology etc.
- Participation in preparation and planning of physical experiments;
- Development and modeling of diagnostic tools and devices.

#### **Partners for industrial and research practical training and future employment**

- NRC “Kurchatov Insititute”
- Russian Federal Nuclear Centers RFNC-VNIIEF and RFNC–VNIITF
- FSBI “Institute for Theoretical and Experimental Physics”
- VNIIA named by N.L. Dukhov and other enterprises of “ROSATOM” corporation

- institutes of the Russian Academy of Sciences, including Lebedev Physical Institute, Institute for Crystallography, Space Research Institute, Institute for Spectroscopy and others.