

Baikal Summer School on Physics of Elementary Particles and Astrophysics

July 11-18, 2025

Student talks July, 12:

- 1. **Nikita Pozdnukhov** Search for photon-induced EAS at the Carpet-3 experiment;
- 2. **Anastasia Zueva** Spectral form factors for curved spacetimes with horizon;
- 3. **Fedor Lazarev** Electromagnetic interactions in neutrino scattering on electrons, nucleons and nuclei as a probe of transverse neutrino spin polarization;
- 4. **Nikolay Pozdnyakov** Accretion in the very early Universe and charge asymmetry.

Student talks July, 13:

- 1. Elizaveta Konstantinova Analysis of hypernuclei in simulated data of the BM@N experiment;
- 2. **Anna Efimova** Classicality test on neutral pseudoscalar meson qubits;
- 3. **Mikhail Sekretov** High-energy dark matter particles in astrophysics;
- 4. **Mikhail Slautin** Pion off-shell form factors in the Bethe-Salpeter approach.

Student talks July, 15:

- 1. **Alexander Shchepkin** Absorption of a twisted photon by an electron in strong magnetic fields;
- 2. Alisa Suray Analysis of Cosmic Ray Arrival Directions According to Telescope Array Data;
- 3. Yuri Akberov Reconstruction of the direction and energy of neutrinos based on BAIKAL-GVD data;
- 4. Muzhi Xu Quark Sector of Multi-Higgs-Doublet Models with Symmetry Group A4;
- 5. **Daniil Davydov** Phenomenology of axion-like particle emission by type la supernovae.

Student talks July, 16:

- Mikhail Shulga Research of the Hamamatsu R5912 photomultiplier tube characteristics for the water Cherenkov detector in the TAIGA-100 astrophysical complex;
- 2. Polina Danilihina The photon decay in crossed fields;
- 3. **Korneliia Nugaeva** Reconstruction of eas arrival direction and estimation air-shower front curvature;
- Egor Morgunov Modernization of the calibration telescopes system for the Cherenkov water detector NEVOD;
- 5. **Dmitrii Ostapovich** Rare four-leptonic B-meson decays in orthogonal amplitudes technique.

Posters July, 17:

- 1. Daria Kargina Attosecond-scale features of Cherenkov radiation in phase space;
- 2. Rinat Abdullin g-Factor Isotopic Shifts: Theoretical Limits on New Physics Search;
- 3. Maxim Maximov Diffraction of twisted waves on different apertures;
- 4. **Savelii Omelianchuk** Separation of particle trajectories by events accumulated over a single timeslice in the SPD NICA detector using graph neural networks;
- 5. **Leonid Snytko** Testing silicon photomultipliers for Mobile Muon Hodoscope.