PAVLO BILOUS

Date of birth: 23.03.1989
Kherson, Ukraine

EDUCATION AND RESEARCH EXPERIENCE

2013 – 2015
Kyiv, Ukraine

Physics Engineering Teaching Research Centre of National Academy of Sciences of Ukraine

Advanced student in theoretical physics

Supervisor: Prof. Leonid Yatsenko

Thesis topic: "Correlations between nuclear and atomic degrees of freedom in atom of Th-229".

Worked on the second-order perturbation theory of the hyperfine splitting coefficients for the clock states of the frequency standard based on Th-229.

2007 – 2013
Moscow, Russia

Moscow Institute of Physics and Technology

Master and Bachelor degrees in applied physics and mathematics

Supervisors: Doctor Dmitry Filippov, Prof. Leonid Urutskoev

Participated in Russia-Abkhazia joint program (Sukhumi, Georgia) as the member of the team of theoretical support of the experiment. The work was devoted to the exploration of radioactive decay acceleration in superstrong magnetic field. Co-author of the idea of exotic αβ-decay (with simultaneous creation of α- and β-particles).

2003 – 2006
Kherson, Ukraine

Lyceum of Physics and Mathematics at Kherson National State University

Actively took part in physics competitions. Three-time winner of all-Ukrainian physics contest; was the captain of the team which had become a winner of all-Ukrainian physics tournament.

PUBLICATIONS

P.V. Bilous, L.P. Yatsenko
Analysis of Parasitic Signals in the Method of Recoil Nuclei Applied to Direct Observation of the Th-229m Isomeric State // Ukr. J. Phys – 2015, Vol. 60, N. 4, pp. 376–381

D.V. Filippov, L.I. Urutskoev, A.O. Biryukov, A.A. Rukhadze, P.V. Bilous
Loss of stability of the heavy nuclei in a superstrong magnetic field // Applied Physics – 2012, N. 4, pp.5–14

K.A. Alabin, P.V. Bilous, A.O. Biryukov, G.I. Zhotikov, A.A. Levanov, A.A. Markolia, A.A. Rukhadze, G.K. Steshenko, L.I. Urutskoev, D.V. Filippov, T.V. Shpakovsky
Application of the method of high-speed photography to study the dynamics of expansion of the plasma produced by electric explosion of thungsten wires in a vacuum // Inzhenernaya Fizika – 2013, N. 7, pp. 4–10

L.I. Urutskoev, A.A. Rukhadze, *D.V. Filippov, A.O. Biryukov, A.A. Levanov, T.V. Shpakovsky, G.K. Steshenko, A.A. Markolia, K.A. Alabin, P.V. Bilous*
Study of the Spectral Composition of Optical Radiation during Electrical Explosion of a Tungsten Wire // Bulletin of the Lebedev Physics Institute – 2012, Vol. 39, N. 7, pp. 15–22

L.I. Urutskoev, D.V.Filippov, A.A. Rukhadze, *A.O. Biryukov, A.A. Markolia, K.A. Alabin, T.V. Shpakovsky, G.K. Steshenko, A.A. Levanov, P.V. Bilous*
The development of a research methodology for the gas phase of the electric explosion of conductors // Applied Physics – 2012, N. 4, pp. 60–69

CONFERENCES ATTENDED

2013 Moscow, Russia	20th International Scientific Conference of Students and Young Scientists "Lomonosov". The subject of the report: "αβ-decay in superstrong magnetic field".
2012 Zvenigorod, Moscow region, Russia	39th International (Zvenigorod) Conference on the Plasma Physics and Controlled Thermonuclear Fusion. The subject of the report: "Loss of stability of the heavy nuclei in a superstrong magnetic field"

FURTHER SKILLS

Information technologies in science	▪ Programming languages C/C++ and FORTRAN ▪ Wolfram Mathematica ▪ Document preparation system LaTeX ▪ Programming language Java
Languages	• English – fluent • German, French – can read and translate with dictionary • Russian, Ukrainian – native speaker
Hobbies	Sports, guitar, music