

Curriculum Vitae

Mykola Zarytskyy

Personal Information

DATE OF BIRTH: 29 August 1996
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SPOKEN LANGUAGES: Ukrainian(native), Russian(native), English(advanced), Italian(basic)

Education

Bachelor	September 2013 - June 2017	Taras Shevchenko National University of Kyiv, Faculty of Physics
	Title of diploma work: "Data analysis of experiment for search for double beta-decay of ^{106}Cd "	
Master	September 2017 - June 2019	Taras Shevchenko National University of Kyiv, Faculty of Physics
	Title of diploma work: "Search for double beta decay of ^{106}Cd and background simulations for the CROSS and CUPID experiments"	
PhD	October 2019 - Present	Institute for Nuclear Research of NASU, 03028 Kyiv, Ukraine
	Title of thesis: "Monte Carlo simulations for the double beta decay experiments"	

Competencies

- C++: ROOT, Geant4, MPI
- Python: Numpy, Pandas, Jupyter Notebook
- Work in Linux environment
- Basic knowledge of neural networks algorithms
- C#, ASP.NET MVC, SQL, JavaScript, HTML

Scientific interests

Search for dark matter, properties of neutrino, search for neutrinoless double beta decay, development of rare decay experimental techniques, Monte Carlo simulations and software development.

Internships

Place: CNRS, LAL, Orsay, France. Duration: 2 month. Goals and purposes: Monte-Carlo simulations and data analysis.

Reports at conferences

1. School-workshop of young scientists "*Scintillation Processes and Materials for Registration of Ionization Radiation*", Kharkiv, Ukraine - September 2018
2. Annual KINR Conference, "*Search for double beta-decay of ^{106}Cd using the enriched $^{106}\text{CdWO}_4$ crystal scintillator in coincidence with CdWO_4 detectors*", Kyiv, Ukraine - April 2019

Poster presentations

1. M.M.Zarytskyy, O.G.Polischuk, F.A.Danevich, "*Data analysis of experiment for search for double beta decay of ^{106}Cd with the help of the enriched scintillation detector $^{106}\text{CdWO}_4$ in coincidence with the CdWO_4 detectors*", Scientific conference of the Physical Faculty of the Taras Shevchenko National University of Kyiv, Kyiv, Ukraine, 16-18 May 2017.
2. M.M.Zarytskyy, O.G.Polischuk, F.A.Danevich, "*Data analysis of experiment for search for double beta decay of ^{106}Cd with the help of the enriched scintillation detector $^{106}\text{CdWO}_4$ in coincidence with the CdWO_4 detectors*", Annual science conference of the Institute for Nuclear Research, Kyiv, Ukraine, 10-13 April 2017.

Scientific publications

- [1] M.M.Zarytskyy, O.G.Polischuk, F.A.Danevich, Data analysis of experiment for search for double beta decay of ^{106}Cd with the help of the enriched scintillation detector $^{106}\text{CdWO}_4$ in coincidence with the CdWO_4 detectors, Abstract of the 24th annual scientific conference of the Institute for Nuclear Research, Kyiv, Ukraine (2017) 67–68.
- [2] P.Belli, R.Bernabei, V.B.Brudanin, et al., Search for double beta decay in ^{106}Cd in the DAMA/CRYS setup, AIP Conf. Proc. 1894, 02005 (2017) 4.
- [3] A. Di Marco, A. S. Barabash, P. Belli, et al., Recent developments and results on double beta decays with crystal scintillators and hpge spectrometry, Universe 4 (12).
- [4] I. C. Bandac, A. S. Barabash, L. Berg, et al., The $0\nu 2$ -decay cross experiment: preliminary results and prospects, J. High Energ. Phys. (2020) 2020: 18,