

The list of publications for the years (2010-2016).
Only the first authors and the PNPI co-authors are shown

1. K. Blaum, Yu.N. Novikov and G. Werth. “*Penning Traps as a Versatile Tool for Precise experiments in Fundamental Physics*”. Contemporary Physics (London), **51** (2010) pp. 149-175.
2. M. Block,...S.A. Eliseev, Yu.N. Novikov, G.K. Vorobyev et al.. “*Direct mass measurements above uranium bridge the gap to the island of stability*”. Nature, **463** (2010) pp.785–788.
3. M. Block,. S. Eliseev,. Yu. N. Novikov, .G. K. Vorobyev et al.. „*Penning trap mass measurements of trans-fermium elements with SHIPTRAP*”. Hyperfine Interaction **196** (2010) pp. 225–231.
4. D. Rodrigues,..S. Eliseev, D. Nesterenko, Y.N. Novikov, A. Popov, A. Vasiliev et al..« *MATS project at FAIR.*» Eur. Phys. J., Special Topics, **183** (2010) pp.1-123.
5. J.D. Vergados, and Yu.N. Novikov. “*Exploring new features of neutrino oscillations with very low energy monoenergetic neutrinos*”. Nucl. Phys. B **839** (2010) pp.1-20.
6. .S. Eliseev, Yu.N. Novikov, M. Seliverstov et al.,“*Direct mass measurements of ^{194}Hg and ^{194}Au : A new route to the neutrino mass determination?*” Phys. Lett. **B 693** (2010) pp. 426-429.
7. Moore, A. Popov, “*A study of on-line gas cell processes at IGISOL*”. Nucl. Instrum. and Methods B **268** (2010) 657-670.
8. J.D. Vergados, Y. Giomataris, and Yu.N. Novikov, “*Neutrino oscillometry*”, J. Phys., Conf. Ser. **259**, Issue 1 (2010) 012100.
9. S.A. Eliseev, .. Yu.N. Novikov et al., “*Resonant Enhancement of Neutrinoless Double-Electron Capture in ^{152}Gd* . Phys. Rev. Letters **106** (2011) 052504.
10. S. Eliseev, D. Nesterenko, ...Yu. Novikov et al., “*Q values for neutrinoless double-electron capture in ^{96}Ru , ^{162}Er , and ^{168}Yb* ”. Phys. Rev. **C 83** (2011) 028501.
11. S. Eliseev, Yu.Novikov et al.,“*Multiple-resonance phenomenon in neutrinoless double-electron capture.*” Phys. Rev. **C 84** (2011) 012501.
12. S. Eliseev, Yu. Novikov et al. “*Octupolar –Excitation Penning-Trap Mass Spectrometry for Q-value Measurement of Double-Electron Capture in ^{164}Er* ”. Phys. Rev. Lett. **107** (2011) 152501.
13. M. Goncharov, S. Eliseev, Yu. Novikov et al., *Probing the nuclides ^{102}Pd , ^{106}Cd , and ^{144}Sm for resonant neutrinoless double- electron capture.*“ Phys. Rev.C **84** (2011) 028501.
14. E. Haettner, S. Eliseev, Yu. Novikov et al.,“*Mass Measurements of Very Neutron-Deficient Mo and Tc Isotopes and their Impact on rp-process Nucleosynthesis*”. Phys. Rev. Lett. **106** (2011) 122501.
15. C. Droese, S. Eliseev, D. Nesterenko, et al.. “*Investigation of the magnetic field fluctuation and implementation of a temperature and pressure stabilization at SHIPTRAP*”. Nucl. Instr. Meth. **A 632**, (2011) 157-163.
16. M. Wurm, S. Eliseev, A. Erykalov, D. Nesterenko, Yu. Novikov, et.al., “*The next generation liquid scintillator neutrino observatory LENA.*” ArXiv:1104.5620v1 [astro-ph.IM], 29 Apr. 2011; also Astr. Part. Phys, **35** (2012) 685-732.
17. Yu.N. Novikov, A.N. Erykalov, D.A. Nesterenko et al., “*Neutrino oscillometry at the next generation neutrino observatory*“. ArXiv:1110.2983 [hep-ex], 13 Oct. 2011.

18. J.D. Vergados, Y. Giomataris, and Yu.N. Novikov, „*On the search of sterile neutrinos by oscillometry measurements.*” ArXiv:1105.3654v1 [hep-ph], 18 May 2011.
19. J.D. Vergados, Y. Giomataris, and Yu.N. Novikov, „*Probing the fourth neutrino existence by neutral current oscillometry in the spherical gaseous TPC.*” Nucl. Phys. **B 854** (2012) 54-66.
20. D.M. Seliverstov, Yu.I. Gusev et al.. „New fast scintillators on the base of BaF2 crystals with increased light yield of 0.9 ns luminescence for TOF PET”. Nucl. Instr. and Meth. A 695 (2012) 369-372.
21. A. Saastamoinen, A. Popov et al.. „Characterization of a cryogenic ion guide at IGISOL” Nucl. Instr. and Methods A 685 (2012) 70–73.
22. V. Sonnenschein, A. Popov et al.. „The search for the existence of ^{229}mTh at IGISOL” V. Sonnenschein, A. Popov et al.. The Euro. Phys. J. A 48 (2012) 52.
23. Новиков Ю.Н., Васильев А.А., Гусев Ю.И., Нестеренко Д.А., Попов А.В., Селиверстов Д.М., Селиверстов М.Д., Хусаинов А., Елисеев С.А., Воробьев Г.К. и др. ”Прецизионные измерения короткоживущих ядер методами развитых систем ионных ловушек высокозарядных ионов (проект MATS)”. Атомная энергия, 12 (2012) 117-124.
24. A. Kankainen Yu.N. Novikov, L. Batist, G. Vorobjev, et al... „*Isomer and decay studies for the rp process at IGISOL.*” Europ. Phys. J. **A 48**, (2012) 49.
25. J.Repp, S. Eliseev, M. Goncharov, Y.N. Novikov, „*PENTATRAP: a novel cryogenic multi-Penning-trap experiment for high-precision mass measurements on highly charged ions*”, Appl. Phys. **B 107** (2012) 983-994.
26. C. Roux, S. Eliseev, M. Goncharov · Y. Novikov, et al...„*The trap design of PENTATRAP*”, Appl. Phys **B 107** (2012) 997-1005.
27. C. Droese, S. Eliseev, Y.N. Novikov, et al.. „*Probing the nuclide ^{180}W for neutrinoless double-electron capture exploration*”, Nucl. Phys. **A 875** (2012) 1–7.
28. J.D. Vergados, Y. Giomataris, and Y.N. Novikov. „*Novel way to search for sterile neutrinos*”, Phys. Rev. **D 85** (2012) 033003.
29. A. Kankainen, Y.N. Novikov, H. Schatz, C. Weber, „*Mass measurements of neutron-deficient nuclei and their implications for astrophysics*”, Eur. Phys. J. **A 48** (2012) 11–19.
30. A. Kankainen, Y.N. Novikov, L. Batist, et al...„*Isomer and decay studies for the rp process at IGISOL,*”Eur. Phys. J. **A 48** (2012) 1–11.
31. J.D. Vergados, Y. Giomataris, and Y.N. Novikov, „*Neutrino oscillometry*”, Nucl. Phys. B Proc. Suppl. **229-232** (2012) 381 – 385.
32. E. Minaya, S. Eliseev, D. Nesterenko, Yu.N. Novikov, et al.. „*Direct mapping of nuclear shell effects in the heaviest elements*“, Science **337** (2012) 1207-1210.
33. K. Loo, D. Nesterenko, Y.N. Novikov, et al.. „*Hunt for θ_{13} with LENA*“, J. Phys., Conf. Ser. **375** (2012) 042053.
34. D.A. Nesterenko, S. Eliseev, Y.N. Novikov, M.V. Smirnov, I.I. et al... „*Double- β transformations in isobaric triplets with mass numbers $A=124, 130, \text{ and } 136$* “, Phys. Rev. **C 86** (2012) 044313.

35. S.A. Eliseev, Y.N. Novikov, and K. Blaum, “*Search for resonant enhancement of neutrinoless double-electron capture by high-precision Penning-trap mass spectrometry*”, J. Phys. G **39** (2012) 124003.
36. S. Eliseev, D.A. Nesterenko, Yu.N. Novikov, et al., “*Phase-imaging ion-cyclotron-resonance measurements for short-lived nuclides*”. Phys. Rev.Lett. **110** (2013) 082501.
37. C. Droese, S. Eliseev, D. Nesterenko, Y.N. Novikov, et al.”*High-precision mass measurements of $^{203-207}\text{Rn}$ and ^{213}Ra with SHIPTRAP*”, Eur. Phys. J. **49** (2013) 1-7.
38. M. Block, S. Eliseev, D. Nesterenko, Yu.N. Novikov, et al.. “*Extending Penning trap mass measurements with SHIPTRAP to the heaviest elements*”, AIP Conf. Proc.**1521** (2013) 191-199.
39. S. Eliseev, T. Eronen, and Yu.N. Novikov, “*Penning-trap mass spectrometry for neutrino physics*”, Int. J. Mass Spectrometry, **349-350** (2013) 102-106.
40. E. Minaya Ramirez, S. Eliseev, D. Nesterenko, Yu.N. Novikov et al.. “*Recent developments for high-precision mass measurements of the heaviest elements at SHIPTRAP*”, Nucl. Instr. Meth. **B 317** (2013) 501-505.
41. S. Eliseev, Y.N. Novikov, and K. Blaum, “*Penning-trap mass spectrometry and neutrino physics*”, Ann. der Phys. **525** (2013) 707-719.
42. C. Roux, S. Eliseev, D.A. Nesterenko, Yu.N. Novikov et al...” *Data analysis of Q-value measurements for double-electron capture with SHIPTRAP.*” Eur. Phys. J. D **67** (2013) 146-155.
43. LAGUNA-LBNO collaboration: S. Agarwalla, S.Eliseev, A. Erykalov, G. Gavrillov, S. Kosianenko, D. Nesterenko, Yu.Novikov, V. Suvorov, A.Vorobyev et al..”*The mass hierarchy and CP-violation discovery reach of the LBNO long-baseline neutrino experiment*”. JHEP (2013) 1-35.
44. Guseva I.S., Gusev Yu.I. “ *The comparison of binary and ternary fission configurations close to the instant of scission*”. PEPAN Letters 2013, V.10, №4 (181), 532-539
45. S.Eliseev, D. Nesterenko, Yu. Novikov et al..”*A phase-imaging technique for cyclotron-frequency measurements*”. Appl. Phys. **B 114** (2014) 107-128.
46. P. Filianin, S. Eliseev, Yu. Novikov et al..”*On the keV sterile neutrino search in electron capture*” J. Phys. G: Nucl. Part. Phys. **41** (2014) 095004.,
47. J.D. Vergados and Yu.N. Novikov. “*Prospects of detection of relic antineutrinos by resonant absorption in electron capturing nuclei*”. J. Phys. G: Nucl. Part. Phys. **41** (2014) 125001.
48. D. Nesterenko, S. Eliseev, Yu. Novikov, P. Filianin, S. Chenmarev et al...”*Direct determination of the atomic mass difference of ^{187}Re and ^{187}Os for neutrino physics and cosmochronology*”. Phys. Rev. **C 90** (2014) 042501.

49. K. Blaum, S. Eliseev, Yu. Novikov et al. "Electron capture ^{163}Ho -experiment ECHO". J. Low Temp. Phys. 176 (2014) 876-884
50. F. Schneider, T. Beyer, K. Blaum, M. Block, S. Chenmarev, H. Dorrer, Ch.E. Duellmann, K. Eberhardt, M. Eibach, S. Eliseev, J. Grund, U. Koester, Sz. Nagy, Yu.N. Novikov, D. Renisch, A. Tuerler, and K. Wendt. "Preparatory studies for a high-precision Penning-trap measurement of the ^{163}Ho electron capture Q -value", Eur. Phys. J. A (2015) 51: 89.
51. Eliseev, K. Blaum, M. Block, S. Chenmarev, H. Dorrer, Ch.E. Düllmann, C. Enss, P.E. Filianin, L. Gastaldo, M. Goncharov, U. Köster, F. Lautenschläger, Yu.N. Novikov, A. Rischka, R.X. Schüssler, L. Schweikhard, and A. Türler. "Direct Measurement of the Mass Difference of ^{163}Ho and ^{163}Dy Solves the Q -Value Puzzle for the Neutrino Mass Determination", Physical Review Letters 115 (2015) 062501.
52. M.V. Smirnov, K.K. Loo, Yu.N. Novikov, W.H. Trzaska, M. Wurm. "A search for neutrino-antineutrino mass inequality by means of sterile neutrino oscillometry". Nuclear Physics B 900 (2015) 104–114.
53. Ю.И. Гусев, В. Гусельников, С.А. Елисеев, Т.В. Конева, Д. Нестеренко, Ю.Н. Новиков, А.В. Попов, М.В. Смирнов, П.Е. Филянин, С.В. Ченмарёв. «Ионные ловушки Пеннинга для высокоточных измерений масс нейтроноизбыточных ядер на реакторе ПИК», Атомная Энергия 118 (2015) 334-339.
54. F. Köhler, K. Blaum, M. Block, S. Chenmarev, S. Eliseev, D.A. Glazov, M. Goncharov, Jiamin Hou, A. Kracke, D.A. Nesterenko, Yu.N. Novikov, W. Quint, E. Minaya Ramirez, V.M. Shabaev, S. Sturm, A.V. Volotka & G. Werth. "Isotope dependence of the Zeeman effect in lithium-like calcium". Nature, Communications 7:10246, January 18 (2016), DOI: 10.1038/ncomms10246.
55. C. Hassel, K. Blaum, S. Eliseev, P. Filianin, M. Goncharov, Yu. Novikov, et al. "Recent Results for the ECHO Experiment". J. Low Temp. Phys. February 18 (2016); DOI 10.1007/s10909-016-1541-9.
56. P. Filianin, S. Schmidt, K. Blaum, M. Block, S. Eliseev, F. Giacoppo, M. Goncharov, F. Lautenschlaeger, Yu. Novikov, K. Takahashi. "The decay energy of the pure s -process nuclide ^{123}Te ". Physics Letters B 758 (2016) 407–411.
57. K.K Loo, Yu.N. Novikov, M.V. Smirnov, W.H. Trzaska, and M. Wurm. "Omnibus experiment: CPT and CP violation with sterile neutrinos". Journal of Physics: Conference Series 718 (2016) 062063.
58. Ю. И. Гусев, Ю. Н. Новиков, А. В. Попов, В. И. Тихонов. "ОБ ИЗУЧЕНИИ РАСПАДА ИЗОМЕРА ТОРИЯ-229 МЕТОДОМ КОНВЕРСИОННОЙ СПЕКТРОСКОПИИ ". ИЗВЕСТИЯ РАН. СЕРИЯ ФИЗИЧЕСКАЯ, 2016, том 80, № 8, с. 958–962.

59. K. Takahashi, K. Blaum, Yu.N. Novikov . “*SYNTHESIS OF THE S-ONLY ^{122,123,124}TE ISOTOPES AND THE SELECTIVE DEPLETION OF ¹²³TE BY ELECTRON CAPTURE PROCESS IN MASSIVE STARS*”. The Astrophysical Journal, 819:118 (7pp), 2016 March 10; doi:10.3847/0004-637X/819/2/118.