

Few-Body Systems Group (Sector 11) at BLTP, JINR

2008 Annual Activity Report

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Few-Body Systems Group (Sector 11) at [BLTP](#), [JINR](#) ([Dubna](#))

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[Vladimir B. Belyaev](#)

Prof., Dr. Sc., Principal Researcher

[Alexander V. Matveenکو](#)

Dr.Sc., Leading Researcher

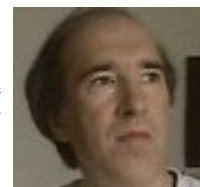


[Gennadii S. Bisnovatyι-Kogan](#)

Prof., Dr. Sc., Principal Researcher (part-time)

[Vladimir S. Melezhiك](#)

Dr.Sc., Leading Researcher



[Sabit S. Kamalov](#)

Dr., Senior Researcher

[Alexander K. Motoviloν](#)

Dr.Sc., Head of the Sector



[Mikhail Kh. Khankhasaev](#)

Dr.Sc., Leading Researcher

[Vasily V. Pupyshov](#)

Dr.Sc., Leading Researcher



[Elena A. Kolganova](#)

Dr., Senior Researcher

[Evgeni A. Solov'ev](#)

Dr.Sc., Leading Researcher

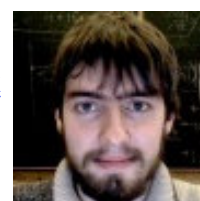


[Anastasia V. Malykh](#)

M.Sc., Junior Researcher

[Ivan I. Shlyk](#)

M.Sc., Ph.D. Student



Status of July 2007. For the [previous version](#) of this page click [here](#).

2 Publications

2.1 Books

1. J. E. Moerlins, M. K. Khankhasayev, S. F. Leitman, and E. J. Makhmudov (Eds.), "Transboundary Water Resources: A Foundation for Regional Stability in Central Asia", Springer-Verlag, NATO Science Series, 2008.

2.2 Journal publications

1. V. B. Belyaev, S. A. Rakityansky, and W. Sandhas, "Three-body resonances Λnn and $\Lambda\Lambda n$ ", *Nucl. Phys. A* **803**, 210-226 (2008).
2. V. B. Belyaev, W. Sandhas, and I. I. Shlyk, "New nuclear three-body clusters ϕNN ", *Few-Body Syst.* **44**, 347-349 (2008).
3. G. S. Bisnovatyi-Kogan, "Jet confinement by nonlinear magneto-torsional oscillations", *J. Mod. Phys. D* **17**, 16951706 (2008).
4. G. S. Bisnovatyi-Kogan, J. V. Artemova, I. V. Igumenshchev and I. D. Novikov, "Black hole advective accretion disks", *Chin. J. Astron. Ap. Suppl.* **8**, 265-272 (2008).
5. G. S. Bisnovatyi-Kogan and S. G. Moiseenko, "Core-Collapse Supernovae: Magnetorotational Explosions and Jet Formation", *Particles and Nuclei, Letters* **39**, 1128-1135 (2008).
6. G. S. Bisnovatyi-Kogan and S. G. Moiseenko, "Core-Collapse Supernovae: Magnetorotational Explosions and Jet Formation", *Progress of Theoretical Physics Supplement* **172**, 145-155 (2008).
7. G. S. Bisnovatyi-Kogan and S. G. Moiseenko, "Magnetorotational supernovae with jets", *Chin. J. Astron. Ap. Suppl.* **8**, 330-340 (2008).
8. G. S. Bisnovatyi-Kogan, S. G. Moiseenko and N. V. Ardeljan, "Different magnetorotational supernovae", *Astron. Zh.* **85**, 1109 (2008) (13 pages).
9. G. S. Bisnovatyi-Kogan and O. Y. Tsupko, "Gravitational lensing by gravitational waves", *Gravitation and Cosmology* **14**, 226-229 (2008).
10. G. S. Bisnovatyi-Kogan and O. Y. Tsupko, "Primordial black hole: Mass and angular momentum evolution", *Gravitation and Cosmology* **14**, 173-175 (2008).
11. G. S. Bisnovatyi-Kogan and O. Y. Tsupko, "Strong gravitational lensing on Schwarzschild black hole", *Astrophysics* **51**, 99-111 (2008).
12. G. S. Bisnovatyi-Kogan and O. Y. Tsupko, "Dynamic stabilization of non-spherical bodies against unlimited collapse", *Monthly Notices of the Royal Astronomical Society* **386**, 1398 (2008)(6 pages).

13. D. Dimitrovski and E. A. Solov'ev, "Detachment from negative ions by an electric pulse; from symmetric to fully asymmetric momentum distribution", *J. Phys. B* **41**, 042721 (2008) (5 pages).
14. A. Fantini, S. S. Kamalov *et al.*, "First measurement of the Sigma beam asymmetry in η photoproduction on the neutron", *Phys. Rev. C* **78**, 015203 (2008) (13 pages).
15. S. S. Kamalov, D. Drechsel, L. Tiator, and S. N. Yang, "Recent results from the MAID and Dubna-Mainz-Taipei PWA analysis", *Eur. Phys. J. A* **35**, 115–120 (2008).
16. O. I. Kartavtsev and A. V. Malykh, "Universal three-body dynamics in binary mixtures of ultra-cold atoms", *Few-Body Syst.* **44**, 229–232 (2008).
17. E. A. Kolganova, A. K. Motovilov, and W. Sandhas, "Ultracold helium trimers", *Few-Body Syst.* **44**, 233–236 (2008).
18. S. G. Moiseenko and G. S. Bisnovatyi-Kogan, "Outflows from Magnetorotational Supernovae", *J. Mod. Phys. D* **17**, 1411-1417 (2008).
19. A. K. Motovilov, "Progress in methods to solve the Faddeev and Yakubovsky differential equations", *Few-Body Syst.*, **43** (2008), 121-127.
20. V. V. Pupyshev, "Construction of regular solutions of Schrödinger and Faddeev equations in the linear three-particle configuration limit", *Theor. Math. Phys.* **155**, 862–883 (2008).
21. V. V. Pupyshev, "Structure of regular solutions of Faddeev equations near the pair impact point", *Theor. Math. Phys.* **156**, 1058–1074 (2008).
22. V. V. Pupyshev, "Coulomb-multipole analogues of Mott effect", *Bulletin of Peoples' Friendship University of Russia. Series: Mathematics. Informatics. Physics.* **2**, 100–105 (2008).
23. S. Saeidian, V. S. Melezhik, and P. Schmelcher, "Multichannel atomic scattering and confinement-induced resonances in waveguides", *Phys. Rev. A* **77**, 042721 (2008) (15 pages).

2.3 Articles in paper collections/conference proceedings

1. G. S. Bisnovatyi-Kogan, "Accretion disks around black holes: physical models vs. observations", In: Proceedings of the 2nd Kolkata Conference on Observational Evidence for Black Holes in the Universe, Kolkata, India, 10-15 February 2008. AIP Conference Proceedings **1053**, 315-324 (2008).
2. G. S. Bisnovatyi-Kogan and O. Y. Tsupko, "Gravitational lensing by gravitational wave pulse", In: Proc. The 12th International Conference and ANGLES Microlensing Workshop, January 21-25 2008, Manchester, UK. PoS(GMC8)063. 5 pp.
3. M. Khankhasayev and S. Leitman, "Transboundary water management issues in the United States and Central Asia: Problem definition, regulation and management", in:

Proc. Facilitating Regional Security in Central Asia through improved Management of Transboundary Water Basin Resources (Eds. J. Moerlins, M. Khankhasayev, and S. Leitman), Springer-Verlag, NATO Science Series, 2008, pp. 65–75.

4. A. V. Matveenکو, E. O. Alt, and H. Fukuda, “Low energy $\bar{p} + H$ physics in hyper-spheroidal coordinates“, In: International Conference on Muon Catalyzed Fusion and Related Topics (μ CF-07), Proc. of the Conference /Eds.: S. A. Bogdanova, M. P. Faifman, V. I. Korobov, V. S. Melezhik, L. I. Ponomarev (JINR, Dubna, 2008), pp. 206–213.
5. V. S. Melezhik, “Non-separable two-body scattering as wave-packet dynamics: applications to atom-atom collisions in traps and other exotic systems“, In: International Conference on Muon Catalyzed Fusion and Related Topics (μ CF-07), Proc. of the Conference /Eds.: S. A. Bogdanova, M. P. Faifman, V. I. Korobov, V. S. Melezhik, L. I. Ponomarev (JINR, Dubna, 2008), pp. 315–322.
6. E. A. Solov’ev, “Hidden crossings description of inelastic processes in muon catalyzed fusion“, In: International Conference on Muon Catalyzed Fusion and Related Topics (μ CF-07), Proc. of the Conference /Eds.: S. A. Bogdanova, M. P. Faifman, V. I. Korobov, V. S. Melezhik, L. I. Ponomarev (JINR, Dubna, 2008), pp.269–275.

2.4 Articles accepted for publication

1. S. Albeverio and A. K. Motovilov, “Operator integrals with respect to a spectral measure and solutions to some operator equations“, *Fundam. Appl. Math.* (accepted).
2. V. B. Belyaev and M. B. Miller, “Induced molecular-nuclear transitions in water and other molecules“, *J. Phys. Liquid Matter* (accepted).
3. G. S. Bisnovaty-Kogan and O. Y. Tsupko, “Gravitational radiospectrometer“, *Gravitation and Cosmology* (accepted).
4. O. I. Kartavtsev, A. V. Malykh, S. A. Sofianos, “Bound states and scattering lengths of three two-component particles with zero-range interactions under one-dimensional confinement“, *ZhETP* (accepted).
5. E. A. Kolganova, A. K. Motovilov, and W. Sandhas, “[Ultracold collisions in the system of three helium atoms](#)“, *Phys. Part. Nucl.* (accepted).
6. A. V. Matveenکو and E. O. Alt, “Elementary hyper-trigonometry of the particle triangle“, *Few-Body Syst.* (accepted).
7. V. S. Melezhik, “Perspectives of laser-stimulated antihydrogen formation“, *Hyperfine Interactions* (accepted).
8. V.V. Pupyshev “Generalizations of the Fock and Kato expansions for three-body quantum systems“ *Phys. Part. Nucl.* (accepted).
9. E. A. Solov’ev, “On foundations of quantum physics“, *Phys. At. Nucl.* (accepted).

2.5 Preprints and data bases

1. S. Albeverio, A. K. Motovilov, and A. A. Shkalikov, “Bounds on variation of spectral subspaces under J -self-adjoint perturbations”, [arXiv:0808.2783](#).
2. G. S. Bisnovatyi-Kogan and O. Y. Tsupko, “Gravitational radiospectrometer”, [arXiv:0809.1021](#).
3. G. S. Bisnovatyi-Kogan and O. Y. Tsupko, “Gravitational lensing by gravitational waves”, [arXiv:0809.1007](#).
4. A. N. Baushev and G. S. Bisnovatyi-Kogan, “Light curve and neutrino spectrum emitted during the collapse of a nonrotating, supermassive star”, [arXiv:0804.1819](#).
5. G. S. Bisnovatyi-Kogan and O. Y. Tsupko, “Strong Gravitational Lensing by Schwarzschild Black Holes”, [arXiv:0803.2468](#).
6. G. S. Bisnovatyi-Kogan and O. Y. Tsupko, “Primordial Black Hole: Mass and Angular Momentum Evolution”, [arXiv:0802.2462](#).
7. G. S. Bisnovatyi-Kogan, “Binary recycled pulsars, as a most precise physical laboratory”, [arXiv:0801.4738](#).
8. G. S. Bisnovatyi-Kogan and O. Y. Tsupko, “Dynamic stabilization of non-spherical bodies against unlimited collapse”, [arXiv:0801.2538](#).
9. S. G. Moiseenko and G. S. Bisnovatyi-Kogan, “Outflows from Magnetorotational Supernovae”, [arXiv:0801.2471](#).
10. S. Saeidian, V. S. Melezhik, and P. Schmelcher, “Multi-channel atomic scattering and confinement-induced resonances in waveguides”, [arXiv:0802.3682](#).

2.6 Conference presentations

1. V. B. Belyaev and M. B. Miller, “Induced molecular-nuclear transitions in water and other molecules”, [International Conference “Physics of Liquid Matter: Modern Problems”](#) (Kiev National Taras Shevchenko University, Kiev, Ukraine, 23-26 May 2008), oral presentation.
2. V. B. Belyaev, W. Sandhas, and I. I. Shlyk, “On possibility of the existence of new meson-nuclear systems”, [XII Scientific Conference of JINR Young Researchers and Specialists](#) (Dubna, Russia, 4 – 8 February 2008), oral presentation.
3. V. B. Belyaev, W. Sandhas, and I. I. Shlyk, “New nuclear few-body clusters”, [the Fifth Workshop on the Critical Stability of Few-Body Quantum Systems](#) (Erice, Italy, 13 – 17 October 2008), oral presentation.
4. G. S. Bisnovatyi-Kogan, “Accretion disks around black holes: physical models vs. observations”, [Second Kolkata Conference on the Observational Evidence for Black Holes in the Universe](#) (Kolkata, India, 10–16 February, 2008), oral presentation.

5. G. S. Bisnovatyi-Kogan, "Large scale magnetic field and advection in accretion disks around black holes", [International Symposium on High Energy Gamma Ray Astronomy](#) (Heidelberg, Germany, July 7–11, 2008), oral presentation.
6. G. S. Bisnovatyi-Kogan, "Binary radiopulsars, as the most precise gravitational laboratory", [13th Russian Gravitational Conference \(RUSGRAV 13\) — International Conference on General Relativity, Cosmology and Relativistic Astrophysics](#) (Moscow, Peoples' Friendship University of Russia, June 23–28, 2008), oral presentation.
7. G. S. Bisnovatyi-Kogan, "Magneto-torsional oscillations and dynamic jet collimation", [Isradynamics 2008 — Dynamical Processes in Space Plasmas](#) (Dead Sea–Ein Bokek–Isrotel, Israel, May 11–19, 2008), oral presentation.
8. G. S. Bisnovatyi-Kogan, "The unique object SS433 and its modeling: Monte - Carlo simulations", [The Fifth Scientific Conference in Honor of Bohdan Babiy "Selected Issues of Astronomy and Astrophysics"](#) (Ivan Franko National University, Lvov, Ukraine), oral presentation.
9. G. S. Bisnovatyi-Kogan, "GRB, SGR and magnetars", [Fourteenth Workshop on Nuclear Astrophysics](#) (The Ringberg castle, Germany, March 10–15, 2008), oral presentation.
10. G. S. Bisnovatyi-Kogan, "Gamma ray bursts and soft gamma repeaters", [8-th Gamow Astronomical Summer School-Conference: "Astronomy on the Border of Sciences — Astrophysics, Cosmology, Radioastronomy, Astrobiology"](#) (18-23 August 2008, Odessa, Ukraine), oral presentation.
11. G. S. Bisnovatyi-Kogan, "Gamma ray bursts, soft gamma repeaters, and magnetars", [Conference on "Physics of Neutron Stars"](#) (St. Petersburg, Russia, June 24–27, 2008), oral presentation.
12. G. S. Bisnovatyi-Kogan, "Gravitational Radio Spectrometer", [The International Symposium "Radio Universe at Ultimate Angular Resolution"](#) (Moscow, October 20–24, 2008), oral presentation.
13. G. S. Bisnovatyi-Kogan, "Cosmic GRBs: Observations and Modelling", "Jet Collimation by Magneto-Torsional Oscillations", [Vulcano Workshop 2008 on "Frontier Objects in Astrophysics and Particle Physics"](#) (Vulcano, Italy, May 26-31, 2008), 2 oral presentations.
14. G. S. Bisnovatyi-Kogan, "Binary radiopulsar, as a laboratory of fundamental physics", [International symposium "The modern physics of compact stars"](#) (Yerevan, Armenia, September 17-23), oral presentation.
15. S. I. Fedotov, O. I. Kartavtsev, and A. V. Malykh, "Consistent description of the $^{12}\text{C}(0_2^+)$ state", [the Fifth Workshop on the Critical Stability of Few-Body Quantum Systems](#) (Erice, Italy, October 13-17 2008), oral presentation.
16. S.S. Kamalov, "Nucleon structure in $\pi - N$ scattering and pion photo-electroproduction on the nucleons", [2008 APCTP-BLTP JINR Joint Workshop on "Quarks and Mesons in Nuclear Physics"](#) (Pohang, South Korea, April 20-24, 2008), invited talk.

17. S.S. Kamalov, “Coherent π^0 photoproduction. Overview of Theory”, International Workshop “Agenda of Crystal Ball at MAMI”, (Mainz, Germany, September 21-23, 2008), oral presentation.
18. E. A. Kolganova “Three-body scattering processes in a framework of Faddeev approach”, [the Fifth Workshop on the Critical Stability of Few-Body Quantum Systems](#) (Erice, Italy, October 13-17 2008), invited talk.
19. V. S. Melezhik “Quantum two-body problem in external field without center-of-mass separation”, [International Conference “Symmetries in Physics”](#) (27 – 29 March 2008, Dubna, Russia), oral presentation.
20. V. S. Melezhik, “Confinement-induced center-of-mass non-separability in quantum two-body problem”, [XIII International Conference “Selected Problems of Modern Theoretical Physics”](#) (23 – 27 June 2008, Dubna, Russia), oral presentation.
21. V. S. Melezhik, “Perspectives of laser-stimulated antihydrogen formation”, [International Conference on Exotic Atoms \(EXA08\) and Low Energy Antiproton Physics \(LEAP08\)](#) (15 – 19 September 2008, Vienna, Austria), session talk.
22. A. K. Motovilov, “Optimal bounds on variation of spectral subspaces under J -self-adjoint perturbations”, [The 8th Workshop on Operator Theory in Krein Spaces and Inverse Problems](#), (18 – 21 December 2008, Berlin, Germany), oral presentation.
23. V. V. Pupyshev, “Asymptotics of Raynal-Revai coefficients at large hypermomentum”, [International Conference “Symmetries in Physics”](#) (27 - 29 March, 2008, Dubna, Russia), oral presentation.
24. V. V. Pupyshev, “Modeling of strong- and weakly bounded states of three identical bosons system”, [International Scientific Conference “Modeling of Non-Linear Processes and Systems”](#) (14 – 18 October 2008, Moscow, Russia), oral presentation.
25. [S. Saeidian](#), V.S. Melezhik, and P. Schmelcher “Multi-Channel Scattering in Cylindrical Confining Trap”, [Meeting of the German Physical Society](#) (10 – 14 March 2008, Darmstadt, Germany), poster.
26. E. A. Solov’ev, “On foundation of quantum physics”, [XIII International Conference Selected Problems of Modern Theoretical Physics](#) (23 – 27 June 2008, Dubna, Russia), oral presentation
27. E. A. Soloviev “The time and canonical transformations in quantum physics”, [International Conference “Symmetries in Physics”](#) (27 – 29 March 2008, Dubna, Russia), oral presentation.
28. E. A. Soloviev “Hidden-crossings and inelastic transitions as result of non-Hermitian nature of Hamiltonian in complex time-plane”, [Workshop on Quantum Physics with Non-Hermitian Operators \(PHHQ VII\)](#) (29 June – 11 July 2008, Benasque, Spain), invited talk.

3 Visits

3.1 Conferences, schools

1. V. B. Belyaev, The Fifth Workshop on Critical Stability of Few-Body Quantum Systems (Erice, Italy, October 13–17, 2008).
2. G. S. Bisnovatyi-Kogan, Second Kolkata Conference on the Observational Evidence for Black Holes in the Universe (S.N. Bose National Centre, Kolkata, India, 10-16 February, 2008).
3. G. S. Bisnovatyi-Kogan, International Symposium on High Energy Gamma Ray Astronomy (Heidelberg, Germany, July 7-11, 2008).
4. G. S. Bisnovatyi-Kogan, Isradynamics 2008 - Dynamical Processes in Space Plasmas (Dead Sea - Ein Bokek - Isrotel, Israel, May 11-19, 2008).
5. G. S. Bisnovatyi-Kogan, Fourteenth Workshop on Nuclear Astrophysics (Ringberg Castle, Germany, March 10 - 15, 2008).
6. G. S. Bisnovatyi-Kogan, The 8-th Gamow Astronomical Summer School-Conference “Astronomy on the border of sciences - astrophysics, cosmology, radioastronomy, astrobiology” (18 - 23 August 2008, Odessa, Chernomorka, Ukraine).
7. G. S. Bisnovatyi-Kogan, The conference on “Physics of Neutron Stars” (St. Petersburg, Russia, June 24-27, 2008).
8. G. S. Bisnovatyi-Kogan, Vulcano Workshop 2008 on “Frontier Objects in Astrophysics and Particle Physics” (Vulcano, Italy, May 26-31, 2008).
9. G. S. Bisnovatyi-Kogan, International Symposium “The Modern Physics of Compact Stars” (Yerevan, Armenia, September 17-23).
10. E. A. Kolganova, The XXVII International Colloquium on Group Theoretical Methods in Physics (Group-27) (Yerevan, Armenia, August 13–19, 2008).
11. E. A. Kolganova, The Fifth Workshop on Critical Stability of Few-Body Quantum Systems (Erice, Italy, October 13–17, 2008).
12. V. S. Melezhik, International Conference on Exotic Atoms and Related Topics (EXA08) and Low Energy Antiproton Physics (LEAP08) (September 15–19, 2008, Vienna, Austria).
13. A. K. Motovilov, The 8th Workshop on Operator Theory in Krein Spaces and Inverse Problems (December 17 – 21, 2008, Berlin, Germany).
14. E. A. Solov’ev, Workshop on Quantum Physics with Non-Hermitian Operators (PH-HQP VII) (June 29 – July 11, 2008, Benasque, Spain)

3.2 Collaboration visits

1. V. B. Belyaev, Physics Institute, Bonn University, Bonn, Germany, 01.12.2008–09.01.2009.
2. S. S. Kamalov, APCTP, Pohang, South Korea, 17.04.2008–25.04.2008.
3. S. S. Kamalov, Institute of Nuclear Physics, Mainz University, Mainz, Germany, 25.05.2008–23.07.2008.
4. S. S. Kamalov, Institute of Nuclear Physics, Mainz University, Mainz, Germany, 08.09.2008–29.09.2008.
5. E. A. Kolganova, Physics Institute, Bonn University, Bonn, Germany, 16.03.2008–17.04.2008.
6. E. A. Kolganova, Physics Institute, Bonn University, Bonn, Germany, 11.06.2008–18.06.2008.
7. E. A. Kolganova, Physics Institute, Bonn University, Bonn, Germany, 6.11.2008–12.11.2008.
8. A.V. Malykh, Physics Department, UNISA, Pretoria, South Africa, 02.06.08–01.07.08.
9. A. V. Matveenko, Institute of Physics, Mainz University, Mainz, Germany, 14.11.2008–28.11.2008.
10. V. S. Melezhik, Institute of Physics, Heidelberg University, Heidelberg, Germany, 14.01.2008–03.02.2008.
11. V. S. Melezhik, Institute of Physics, Heidelberg University, Heidelberg, Germany, 04.07.2008–01.09.2008.
12. A. K. Motovilov, Physics Institute, Bonn University, Bonn, Germany, 17.05.2008–16.07.2008.
13. A. K. Motovilov, Institute for Applied Mathematics, Bonn University, Bonn, Germany, 02.10.2008–01.11.2008.
14. A. K. Motovilov, Mathematics Institute, Berne University, Berne, Switzerland, 01.11.2008–30.11.2008.
15. I. I. Shlyk, Physics Institute, Bonn University, Bonn, Germany, 25.11.2008–07.12.2008.
16. E. A. Soloviev, Albert-Ludwigs-Universität, Freiburg, Germany, 11.07.2008-15.07.2008.
17. E. A. Soloviev, Max Born Institute, Berlin, Germany, 15.07.2008-18.07.2008.

4 Visitors

1. [V. S. Buslaev](#), Faculty of Physics, St. Petersburg State University, St. Petersburg, Russia, 28.02.2008–01.03.2008.
2. [S. B. Levin](#), Faculty of Physics, St. Petersburg State University, St. Petersburg, Russia, 28.02.2008–01.03.2008.
3. [W. Sandhas](#), Physics Institute, Bonn University, Bonn, Germany, 29.09.2008–11.10.2008.
4. [S. L. Yakovlev](#), Faculty of Physics, St. Petersburg State University, St. Petersburg, Russia, 18.02.2008–20.02.2008.
5. A. Zampini, Max-Planck Institute for Mathematics, Bonn, Germany, 04.08.2008–13.08.2008.
6. [A. Yu. Zakharov](#), Veliky Novgorod State University, Veliky Novgorod, Russia, 06.10.2008–08.10.2008.

5 Teaching

1. V. B. Belyaev: Ph. D. Thesis adviser of I. I. Shlyk, Ph. D. student at UNC, JINR, Dubna.
2. V. B. Belyaev: Diploma adviser of A. Naumkin, student of Moscow State University, Moscow.
3. V. B. Belyaev: Lecture course “Nuclear Astrophysics” (39 hours) at Dubna University, Dubna.
4. G. S. Bisnovatyi-Kogan: Ph. D. Thesis Adviser of M. Y. Tsupko, graduate student of Moscow Physics Engineering Institute, Moscow.
5. G. S. Bisnovatyi-Kogan: Ph. D. Thesis Adviser of Y. M. Krivosheev, graduate student of Moscow Physics Engineering Institute, Moscow
6. G. S. Bisnovatyi-Kogan: Professor of Moscow Physics Engineering Institute, Moscow, lecture course “Relativistic astrophysics and cosmology”.
7. M. Kh. Khankhasayev: Visiting Professor at Florida A&M University, Spring, Summer and Fall Semesters of 2008.
8. E. A. Kolganova: Diploma adviser of V. Kolontsov, student of Dubna University, Dubna.
9. E. A. Kolganova: Diploma adviser of E. Kaneva, student of Dubna University, Dubna.
10. E. A. Kolganova: Dozent of the Dubna University, lecture course “Mathematical modeling and numerical methods” (September–December 2008).

11. V. S. Melezhik: Professor of the Dubna University, lecture course “General physics” (all the academic year), lecture course “History and methodology of physics” (September–December 2008), lecture course “Modern problems of quantum physics” (February–June 2008).
12. V. S. Melezhik: Ph. D. Thesis co-adviser of Shahpoor Saeidian, Ph. D. student at the Institute of Physics, Heidelberg University, Heidelberg, Germany.
13. V. S. Melezhik: Ph. D. Thesis co-adviser of Panos Yannakeas, Ph. D. student at the Institute of Physics, Heidelberg University, Heidelberg, Germany.
14. V. S. Melezhik: Diploma adviser of V. Zaitzeva, student of Dubna University, Dubna.
15. V. S. Melezhik: Diploma adviser of A. Samoilova, student of Dubna University, Dubna.
16. V. S. Melezhik: Diploma adviser of Y. Loginova, student of Dubna University, Dubna.

6 Organizational activity

1. V. B. Belyaev: Member of the BLTP Scientific Council.
2. V. B. Belyaev: Member of the BLTP NTS.
3. V. B. Belyaev: Chairman of the Council for conferring of bachelor and magister degrees at the Faculty of Physics, Veliky Novgorod State University, Veliky Novgorod.
4. V. B. Belyaev: Member of Advisory Committee of the [19th International IUPAP Conference on Few-Body Problems in Physics](#) (31.08–05.09.2009, Bonn, Germany)
5. G. S. Bisnovatyi-Kogan: Member of the D. Sc. Panel of IKI RAN.
6. G. S. Bisnovatyi-Kogan: Member of the D. Sc. Panel of GAISH MGU.
7. G. S. Bisnovatyi-Kogan: Member of the Scientific Council of IKI RAN.
8. G. S. Bisnovatyi-Kogan: Member of the Editorial Board of the “Astrophysics” journal (Armenian Academy of Sciences).
9. G.S. Bisnovatyi-Kogan: Member of the Editorial Board of the journal “Gravitation and Cosmology” (Russian Gravitational Society).
10. E. A. Kolganova: Member of Organizing Committee, [International Conference “Symmetries in Physics”](#) (27 – 29 March 2008, Dubna, Russia).
11. E. A. Kolganova: Member of Organizing Committee, [XIIIth International Conference on “Selected Problems of Modern Theoretical Physics”](#) (23 – 27 June 2008, Dubna, Russia).
12. E. A. Kolganova: Member of Organizing Committee, [Advanced Studies Institute on Symmetries and Spin](#) (20 – 26 July, 2008, Prague, Czech Republic).

13. E. A. Kolganova: Member of Organizing Committee, [The XXVII International Colloquium on Group Theoretical Methods in Physics](#) (13 – 19 August 2008, Yerevan, Armenia).
14. E. A. Kolganova: Member of Organizing Committee, [International Summer School on Modern Mathematical Physics](#) (7 – 17 September 2008, Dubna, Russia).
15. E. A. Kolganova: Scientific Secretary, [The International Bogolyubov Conference “Problems of Theoretical and Mathematical Physics”](#) (21 – 27 August 2009, Moscow – Dubna, Russia).
16. E. A. Kolganova: Support of the [BLTP website](#).
17. A. V. Malykh: Secretary of the [Sector 11 seminar](#).
18. V. S. Melezhik: Member of the D. Sc. Panel of LIT JINR.
19. V. S. Melezhik: Member of the BLTP Expert commission.
20. A. K. Motovilov: Member of the BLTP NTS.
21. V. V. Pupyshev: Secretary of the BLTP Commission for Ph.D. (C.Sc) examinations.



Seminars of Few-Body Community in BLTP

The list of seminars in 2008

2008

Feb 19

Few Body Systems
Seminar of BLTP sector 11

the II Floor Auditorium, 11.00

[S.L. Yakovlev](#)

Three-body multichannel scattering with absorption

[abstract](#)

Feb 26

Few Body Systems
Seminar of BLTP sector 11

the II Floor Auditorium, 11.00

[V.V. Pupyshev](#)

Generalizations of Fock and Kato expansions for three-body quantum systems

[abstract](#)

Feb 29

Few Body Systems
Seminar of BLTP sector 11

Blokhintsev"s Hall, IV Floor, 14.30

V.S.Buslaev, [S.B.Levin](#) (St.Petersburg State University)

Uniform asymptotics of eigenfunctions for the three-body Schroedinger operator in one-dimensional case

[abstract](#)

Mar 28

Few-Body Systems

11:00, II Floor Auditorium

G. S. Bisnovatyi-Kogan

Gamma ray bursts and soft gamma repeaters: New results in the old problem

[abstract](#)

Apr 01

Few Body Systems

the II Floor Auditorium, 11.00

Tsogbayar Tsednee

Some asymptotic formulae for one-electron two-center problem

[abstract](#)

May 13

Few Body Systems
Seminar of BLTP sector 11

the II Floor Auditorium, 11.00

G. M. Ter-Akopian (FLNR)

Energy spectrum of heavy isotopes of Helium

[abstract](#)

Sep 30

Few Body Systems
Seminar of BLTP sector 11

the II Floor Auditorium, 11.00

O.A. Rubtsova (Institute of Nuclear Physics, MSU)

Momentum lattice approximation in the quantum scattering theory and its application to three-body systems

[abstract](#)

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