

# 1. PUBLICATIONS

## CONDENSED MATTER PHYSICS

### Reviews

1. Aksenov V.L., Shakhmatov V.S. Structural peculiarities in fullerene crystals. Correlations, coherence and order. Plenum Press, London-New-York, 1999, pp.1-28.
2. Balagurov A.M. Structural studies by neutron powder diffraction. State of the Art, Materials Science Forum, 1999, v.321-324, pp.236-245.
3. Balagurov A.M., Sikolenko V.V. Neutron Diffraction Studies in the Frank Laboratory of Neutron Physics of the Joint Institute for Nuclear Research, Surface investigations. X-ray, Synchrotron and Neutron Techniques, 1999, v.10, pp. 3 - 16
4. Nietz V.V. Investigations of crystalline matter magnetism by neutron diffraction using a pulsed field. Particles and nuclei (in press).

### Diffraction

1. Aksenov V.L., Balagurov A.M., Glazkov V.P., Kozlenko D.P., Naumov I.V., Savenko B.N., Sheptyakov D.V., Somenkov V.A., Bulkin A.P., Kudryashev V.A., Trounov V.A. DN-12 time-of-flight high-pressure neutron spectrometer for investigation of microsamples. Physica B, 1999, v.265, pp.258-262.
2. Aksenov V.L., Balagurov A.M., Kozlenko D.P., Savenko B.N., Sheptyakov D.V., Glazkov V.P., Naumov I.V., Somenkov V.A. Neutron investigations of structure and dynamics of condensed matter under high pressure at IBR-2 pulsed reactor. Proceedings of Tula State University, Seria Fizika, 1999, v.2, pp.17-25.
3. Aksenov V.L., Ossipyan Yu.A., Forro L., Khasanov S., Chernyshev V.V., Shakhmatov V.S. Fullerene molecule strain in RbC<sub>60</sub>. Solid State Communications, 1999 (in press).
4. Avdeev M.Yu., Nalbandyan V.B., Beskrovnyi A.I., Balagurov A.M., Volochaev V.A. Refinement of structures of two non-stoichiometric one-dimensional solid electrolytes. J. Inorganic Chemistry, 1999, v.44, pp.480-484.
5. Balagurov A.M., Beskrovnyi A.I., Pomjakushin V.Yu., Simkin V.G., Bagautdinov B.Sh., Shekhtman V.Sh., Zakharov A.A. Twinned La<sub>2</sub>CuO<sub>4</sub> Structure, Crystallography Reports, 1999, v.44, pp.74-82.
6. Balagurov A.M., Kozlenko D.P., Savenko B.N., Glazkov V.P., Somenkov V.A., Hull S. Neutron diffraction study of structural changes in ammonium halides under high pressure. Physica B, 1999, v.265, pp.92-96.
7. Balagurov A.M., Pomjakushin V.Yu., Sheptyakov D.V., Aksenov V.L., Babushkina N.A., Belova L.M., Taldenkov A.H., Inyushkin A.V., Fischer P., Gutmann M., Keller L., Gorbenko O.Yu., Kaul A.R. Changes in the magnetic structure of (La<sub>0.25</sub>Pr<sub>0.75</sub>)<sub>0.7</sub>Ca<sub>0.3</sub>MnO<sub>3</sub> upon the isotopic substitution of <sup>18</sup>O for <sup>16</sup>O. JETP Letters, 1999, v.69, pp.50-56.
8. Balagurov A.M., Sheptyakov D.V., Aksenov V.L., Antipov E.V., Putilin S.N., Radaelli P.G., Marezio M. The structure of HgBa<sub>2</sub>CuO<sub>4+d</sub> at ambient and high pressure at 0.06JdJ0.19. Phys. Rev. B, 1999, v.59, pp.7209-7215.
9. Balagurov A.M., Pomjakushin V.Yu., Sheptyakov D.V., Aksenov V.L., Babushkina N.A., Belova L.M., Taldenkov A.H., Inyushkin A.V., Fischer P., Gutmann M., Keller L., Gorbenko O.Yu., Kaul A.R. Effect of oxygen isotope substitution on the magnetic structure of (La<sub>0.25</sub>Pr<sub>0.75</sub>)<sub>0.7</sub>Ca<sub>0.3</sub>MnO<sub>3</sub>. Phys. Rev. B, 1999, v.60, pp.383-387.
10. Belushkin A.V., Kozlenko D.P., McGreevy R.L., Savenko B.N., Zetterström P. A study of orientational disorder in ND<sub>4</sub>Cl by the reverse Monte Carlo method. Physica B, 1999, v.269, pp.297-303.
11. Beskrovnyi A.I., Danilkin S.A., Fuess H., Jadrowski E.L., Neova-Baeva M., Wieder T. Effect of Cr content on the crystal structure and lattice dynamics of FCC Fe-Cr-Ni-N austenitic alloys. J. of Alloys and Compounds, 1999, v.291, pp.262-268.
12. Danilkin S., Beskrovnyi A., Jadrowski E. Nitrogen effect on lattice dynamics of fcc Fe-Cr-Mn (Ni) austenitic alloys. Materials Science Forum, 1999, v.318-320, pp.19-24.
13. Glazkov V.P., Kozlenko D.P., Savenko B.N., Somenkov V.A., Shil'shtein S.Sh. Neutron diffraction study of structural variations in ND<sub>4</sub>I and ND<sub>4</sub>F ammonium halides under high pressure. Crystallography Reports, 1999, v.44, pp.50-55.
14. Lushnikov S.G., Belushkin A.V., Beskrovnyi A.I., Fedoseev A.I., Gvasaliya S.N., Shuvalov L.A., Schmidt V.H. Isotope effect in Cs<sub>5</sub>H<sub>3</sub>(SO<sub>4</sub>)<sub>40.5</sub>H<sub>2</sub>O crystals. Solid State Ionics, 1999, v.125, pp.119-123.

15. Martinez-Sarion M.L., Mestres L., Beskrovnyi A.I., Natkaniec I., Smirnov L.S., Shelkova I.G. X-ray and neutron powder diffraction study of  $\text{Rb}_{2-x}(\text{NH}_4)_x\text{SO}_4$  system. *Poverhnost'*, 1999, v.2, pp.16-20.
16. Menshikov A.Z., Balagurov A.M., Beskrovney A.I., Vokhmyanin A.P., Morozov D.M. Time of flight neutron diffraction on  $\text{Mn}_5\text{Si}_3$  magnetic structure. *Materials Science Forum*, 1999, v.321-324, pp.659-664.
17. Mestres L., Martinez-Sarrion M.L., Baccali A., Simkin V.G., Smirnov L.S., Balagurov A.M. X-ray and neutron powder diffraction studies of phase transition in  $\text{LiCsSO}_4$ . *Crystallography Reports*, 1999, v.44, pp.83-88.
18. Nietz V.V. Phase diagram of hematite in magnetic field below the Morin temperature. *JINR communication*, P17-99-14, 1999, Dubna, Russia.
19. Nietz V.V. Use of pulsed magnetic fields in neutron scattering studies of crystals. *Journal of the Moscow Physical Society*, 1999, v.8, pp.351-372.
20. Nietz V.V. Magnetic solitons and neutron scattering. *UFN*, 1999 (in press).
21. Nikitin A.N. About a traditional method of training of high-qualification physicists for scientific organizations and universities. *Proceedings of Tula State University, Seria Fizika*, 1999, v.2, pp. 111-123.
22. Zlokazov V.B. Mathematical analysis of data in the experiment on the synthesis of the element 114, *JINR Communication*, E7-99-273, 1999, Dubna, Russia.

## Texture and Stresses

1. Aksenov V.L., Nikitin A.N., Burilichev D.E. Modern texture analysis of materials. *MSU Manual*, 1999, 44 p., Moscow.
2. Bokuchava G.D., Luzin V.V., Schreiber J., Taran Yu.V. Residual stress investigations in austenitic steels samples with different degree of low cycle fatigue. *Textures and Microstructures*, 1999, v.33, pp.279-289.
3. Bokuchava G.D., Schreiber J., Stalder M. Residual stress states of graded Cu/W materials. *Materials Science Forum*, 1999, v.308-311, pp.1018-1023.
4. Bokuchava G.D., Shamsutdinov N.R., Schreiber J., Stalder M. Determination of residual stresses in WCu gradient materials. *Textures and Microstructures*, 1999, v.33, pp.207-217.
5. Bokuchava G.D., Shamsutdinov N.R., Schreiber J. Residual stress states of graded W/Cu material. *Proceedings of Tula State University, Seria Fizika*, 1999, v.2, pp. 82-88.
6. Ivankina T.I., Kirilov A.S., Korobchenko M.L., Nikitin A.N., Roganov A.B., Sirotin A.P., Telepnev A.S., Ullemeyer K., Efimova G.A., Kireenkova S.M., Sobolev G.A., Sukhoparov W.A., Burilichev D.E. Experimental and measuring complex of neutronographic structure and texture analysis's for investigation of transformation processes in rocks under mechanical and thermal influences. *Zavodskaya Laboratoriya*. 1999, v.8, pp.26-34.
7. Ivankina T.I., Klima K., Locajicek T., Nikitin A.N., Pros Z. Study of anisotropy in an olivine xenolith using acoustic waves and neutron diffraction. *Physika Zemli*, 1999, v.35, pp.29-39.
8. Kockelmann H., Bokuchava G.D., Schreiber J., Taran Yu.V. Measurements of residual stresses in a shape welded steel tube by neutron and X-ray diffraction methods. *Textures and Microstructures*, 1999, v.33, pp.231-242.
9. Kockelmann H., Schreiber J., Taran Yu.V., Wright J.S. Investigation of residual stresses in a shape welded steel tube by the time-of-flight neutron diffraction technique. *Materials Science Forum*, 1999, v.321-324, pp.726-731.
10. Leiss B., Ullemeyer K. Texture characterisation of carbonate rocks and some implications for the modeling of physical anisotropies, derived from idealized texture types. *Zeitschrift der Deutschen Geologischen Gesellschaft*, 1999, v.150, pp.259-274.
11. Luzin V.V. Optimization of texture measurements. IV. The influence of the grain-size distribution on the quality of texture measurements. *Textures and Microstructures*, 1999, v.31, pp.177-186.
12. Niffenegger M., Taran Yu.V. Attempt of the  $\sin^{2Y}$ -method application for residual stress measurements in a bimetal pipe by the time-of-flight neutron diffraction technique *Proceedings of Tula State University, Seria Fizika*, 1999, v.2, pp.25-32.
13. Nikitin A.N., Pereligin V.P., Burilichev D.E. An estimation of quick heavy nucleus damages in meteorites by means of neutron diffraction. *Proceedings of Tula State University, Seria Fizika*, 1999, v.2, pp.3-17.
14. Nikolayev D.I., Schaeben H. Calculus of the pole density function. *Textures and Microstructures*, 1999, v.33.
15. Nikolayev D.I., Schaeben H. Characteristics of the ultrahyperbolic differential equation governing pole density functions. *Inverse Problems*, 1999, v.15, pp.1603-1619.
16. Pirogov A.N., Teplyh A.E., Voronin V.I., Balagurov A.M., Pomjakushin V.Yu., Sikolenko V.V. Ferro- and antiferromagnetic structure of  $\text{LaMnO}_{3+x}$ . *Fizika tverdogo tela*, 1999, v.41, pp.103-109.

17. Siegesmund S., Weiss T., Vollbrecht A., Ullemeyer K. Marble as a natural building stone: rock fabrics, physical and mechanical properties. *Zeitschrift der Deutschen Geologischen Gesellschaft*, 1999, v.150, pp.237-257.
18. Taran Yu.V., Albertini G., Bruno G., Cernushi F., Rustichelli F. Residual stress investigations of a ferritic steel welded plate by nondestructive neutron diffraction technique. *Proceedings of SPIE*, 1999, v.3687, pp.350-359.
19. Ullemeyer K., Weber K. Texture analysis of rocks: lattice preferred orientation as an indicator of a complicated deformation history. *Textures and Microstructures*, 1999, v.33, pp.45-60.
20. Weiss T., Leiss B., Oppermann H., Siegesmund S. Quantitative fabric analyses of fresh and weathered marble building stones from the Marmorpalais in Potsdam, Germany. *Zeitschrift der Deutschen Geologischen Gesellschaft*, 1999, v.150, pp.313-332.

## Small-Angle Scattering

1. Aksenov V., Avdeev M., Timchenko A., Serdyk I. General properties of protein surface of t-RNA binding proteins. *Poverhnost'*, 1999, v.3, pp.3-9.
2. Cherezov V., Cheng A., Petit J.-M., Diat O., Caffrey M. Biophysics and synchrotron radiation. Where the marriage fails. X-ray damage of lipid membranes and mesophases. *Molecular and Cellular Biology*, 1999 (in press).
3. Fan L., Svergun D., Volkov V., Aksenov V., Shcherbakova I., Koch M., May R., Serdyk I. Structural studies of the ribosome *Thermus thermophilus* by small-angle neutron and X-ray scattering. *J.Appl.Cryst.*, 1999 (in press).
4. Gordeliy V., Dencher N., Hauss T., Kuklin A., Tougan-Baranovskaya A., Teixeira J., Yaguzhinskiy L., Bueldt G. Light-induced long-living changes of bacteriorhodopsin structure in presence of guanidine hydrochloride. *Biophys. Journal*, 1999(in press).
5. Gorski N., Kalus J., Meier G., Schwahn D. Temperature dependence of the chemical potential of tetradecyldimethylaminoxide micelles in D<sub>2</sub>O - a SANS study. *Langmuir*, 1999, v.10, pp.3476-3482.
6. Gorski N., Kalus J., Schwahn D. Pressure dependence of the chemical potential of tetradecyldimethylaminoxide micelles in D<sub>2</sub>O - a SANS study. *Langmuir*, 1999, v.15, pp.8080-8085.
7. Grabcev B., Balasoiu M., Tarziu A., Kuklin A., Bica D. Application of contrast variation method in SANS experiments with ferrofluids. *Journal of Magnetism and Magnetic Materials*, 1999, v.201, pp.140-143.
8. Kiselev M., Lesieur P., Kiselev A., Grabiell-Madmond C., Ollivon M. DMSO-induced dehydration of DPPC membranes studied by X-ray diffraction, small-angle neutron scattering and calorimetry. *J.Alloys and Compounds*, 1999, v.286, pp.195-202.
9. Kiselev M., Lesieur P., Kisselev A., Olivon M. Ice formation in model biological membranes in the presence of cryoprotectors. *Nucl. Inst&Methods*, 1999 (in press).
10. Lesieur P., Kiselev M., Barsukov L., Lombardo D. Temperature induced micelle to vesicle transition: kinetic effects in the DMPC / NaCl / water system. *J. Appl. Cryst.*, 1999 (in press).
11. Plestil J., Pospisil H., Kadec P., Tuzar Z., Kriz J., Gordeliy V. SANS study of multilayer nanoparticles based on block copolymer micelles. *Macromol. Chem. Phys.*, 1999 (in press).
12. Serdyuk I., Ulitin A., Kolesnikov I., Vasiliev V., Aksenov V., Zaccai G., Svergun D., Kozin M., Willumeit R. Structure of a beheaded 30S ribosomal subunit from *Thermus thermophilus*. *J. Molec. Biol.*, 1999, v.292, pp.633-639.
13. Shashkov S., Kiselev M., Tioutiunnikov S., Kisselev A., Lesieur P. The study of DMSO/water and DPPC/DMSO/water system by means of the IR spectroscopy, X-Ray and neutron small-angle scattering and calorimetry. *Physica B*, 1999 (in press).
14. Timchenko A., Trubeckaja O., Trubeckoi O., Aksenov V., Avdeev M., Obertur R., Kihara X., Serduk I. Analysis of conformation of humic substances by means of neutron and x-ray scattering. *Poverhnost'*, 1999, v.4, pp.23-30.

## Reflectometry, Polarized Neutrons

1. Aksenov V.L., Nikitenko Yu.V., Kozhevnikov S.V., Radu F., Kruijs R., Rekveldt T. Generation of neutron standing waves at total reflection of polarized neutrons. *Poverhnost'*, 2000 (in press).

2. Aksenov V.L., Gundorin N.A., Nikitenko Yu.V., Popov Yu.P, Cser L. Observation of neutron standing waves at total reflection of polarized neutrons registered by precision gamma-spectroscopy methods. *Poverkhnost'*, 2000 (in press).
3. Aksenov V.L., Nikitenko Yu.V. Neutron standing waves investigations with polarized neutrons, *Physica B*, 1999, v.267-268, pp.313-319.
4. Bondarenko I.V., Bodnarchuk V.I., Balashov S.N., Geltenbort P., Klein A.G., Kozlov A.V., Korneev D.A., Masalovich S.V., Nosov V.G., Frank A.I., Hoghoj P., Cimmino A. On the 90th anniversary of Frank's birthday. Neutron interference filter and fundamental experiments with ultracold neutrons. *Physics of Atomic Nuclei*, 1999, v.62, pp.721-737.
5. Deak L., Bayreuther G., Bottyan L., Gerdau E., Korecki J., Kornilov E.I., Lauter H.J., Leupold O., Nagy D.L., Petrenko A.V., Pasyuk-Lauter V.V., Reuther H., Richter E., Rohloberger R., Szilagy E. Pure nuclear bragg reflection of periodic  $^{56}\text{Fe}/^{57}\text{Fe}$  multilayer. *J. Appl. Physics*, 1999, v.85, pp.1-7.
6. Korneev D.A., Bodnarchuk V.I., Peresedov V.F., Zhuravlev V.V., Schebetov A.F. Inelastic mode of neutron reflectometer REFLEX for observation of surfase phonons and magnons. *Physica B*, 2000 (in press).
7. Korneev D.A., Bodnarchuk V.I., Yaradaikin S.P., Peresedov V.F., Ignatovich V.K., Menelle A., Gaehler R. Reflectivity studies of the coherent properties of neutrons. *Physica B*, 2000 (in press).
8. Lauter-Pasyuk V.V., Lauter H.J., Lorenz M., Leiderer P. Magnetic flux distribution inside an  $\text{YBa}_2\text{Cu}_3\text{O}_7$  superconducting thin film in the mixed state. *Physica B*, 1999, v.267-268, pp.149-153.
9. Lauter-Pasyuk V.V., Lauter H.J., Lorenz M., Petrenko A.V., Nikonov O., Aksenov V.L., Leiderer P. Magnetic field distribution around flux-lines in  $\text{YBa}_2\text{Cu}_3\text{O}_7$  superconducting thin films in a parallel field. *Physica B*, 2000 (in press).
10. Lauter-Pasyuk V.V., Lauter H.J., Toperverg B., Nikonov O., Kravtsov E., Milyaev M.A., Romashev L., Ustinov V. Magnetic off-specular neutron scattering from Fe/Cr multilayers. *Physica B*, 2000 (in press).
11. Toperverg B., Lauter-Pasyuk V., Lauter H., Nikonov O., Ausserre D., Gallot Y. Morphology of off-specular neutron scattering pattern from islands on a lamellar film. *Physica B*, 2000 (in press).

## Inelastic Neutron Scattering

1. Beskrovni A., Danilkin S., Fuess H., Jadrowski E., Neova-Baeva M., Wieder T. Effect of Cr content on the crystal structure and lattice dynamics of FCC Fe-Cr-Ni-N austenitic alloys. *J. of Alloys and Compounds*, 2000 (in press).
2. Bobrowicz-Sarga L., Czarnecki P., Lewicki S., Natkaniec I., Wasicki J. Neutron diffraction study of thermal expansion and compressibility of piridinium nitrate and tetrafluoroborate. *Materials Science Forum*, 1999, v.321-324, pp.1107-1112.
3. Danilkin S., Delafosse D., Fuess H., Gavriljuk V., Ivanov A., Magnin T., Wipf H. Hydrogen vibrations in austenitic stainless steels. *ILL Experimental Reports and Theory Activities*, 1999.
4. Glazkov V.P., Kozlenko D.P., Savenko B.N., Somenkov V.A. INS study of vibrational spectra of ammonium halides  $\text{NH}_4\text{I}$  и  $\text{NH}_4\text{F}$  under high pressure. *JINR communication*, P14-99-162, 1999, Dubna, Russia.
5. Goremychkin E.A., Osborn R., Sashin I.L. Crystal field in the heavy fermion compound  $\text{CeAl}_3$ . *Journ. of Applied Physics*, 1999, v.85, pp.6046-6048.
6. Gvasaliya S.N., Lushnikov S.G., Sashin I.L., Siny I.G. Fractons in the vibrational spectra of the relaxor ferroelectric  $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$ . *Crystallography Reports*, 1999, v.44, pp.284-288.
7. Gvasaliya S.N., Lushnikov S.G., Sashin I.L., Siny I.G., Shaplygina T.A., Blinc R. Effect of a disorder degree on the vibrational spectrum of relaxor ferroelectric  $\text{PbSc}_{1/2}\text{Ta}_{1/2}\text{O}_3$ . *Physica B*, 2000 (in press).
8. Holderna-Natkaniec K., Natkaniec I. Molecular dynamics of bicyclo 2.2.1 heptyl substituents by the NMR and neutron scattering methods. *Molecular Physics Reports*, 1999, v.25, pp.78-85.
9. Holderna-Natkaniec K., Natkaniec I., Khavryutchenko V.D. Low frequency internal vibrations of norbornane and its derivatives studied by IINS and quantum chemistry calculations. *Neutrons and Numerical Methods - N<sub>2</sub>M*, AIP Conference proceedings 479, American Institut of Physics, Woodbury, New York , 1999, p.187-190.
10. Kozlenko D.P., Lewicki S., Wasicki J., Nawrocik W., Savenko B.N. NMR study of ammonium reorientation motion in  $\text{NH}_4\text{Br}$  at high pressure. *J. Phys.: Condens. Matter*, 1999, v.11, pp.7175-7183.
11. Lushnikov S.G., Gvasaliya S.N., Siny I.G., Goremychkin E.A., Sashin I.L. Anomalous behaviour of the phonon spectrum of the relaxor ferroelectric PMN at low temperatures. *Ferroelectrics*, 1999, v.226, pp.147 - 157.

12. Malenkov G.G., Averkiev A.A., Bobrowicz-Sarga L., Bragin S.I., Natkaniec I., Smirnov L.S. Neutron scattering by heavy water and ice under hydrostatic pressure of argon. *Crystallography Reports*, 1999, v.44, pp.62-68.
13. Malenkov G.G., Averkiev A.A., Bobrowicz-Sarga L., Bragin S.I., Natkaniec I., Smirnov L.S. Neutron scattering study of heavy water and ice under hydrostatic Ar pressure. *Materials Science Forum*, 1999, v.321-324, pp.872-877.
14. Malenkov G.G., Natkaniec I., Smirnov L.S., Bobrowicz-Sarga L., Bragin S.I. Neutron scattering investigation of ice under hydrostatic helium pressure. *High Pressure Research*, 1999, v.16, pp.201-214.
15. Martinez-Sarrion M.L., Mestres L., Beskrovnyi A.I., Natkaniec I., Smirnov L.S., Shelkova I.G. X-ray and neutron powder diffraction investigations of  $\text{Rb}_{2-x}(\text{NH}_4)_x\text{SO}_4$  system. *Poverhnost'*, 1999, v.2, pp.16-20.
16. Natkaniec I., Holderna-Natkaniec K., Kalus J., Khavryutchenko V.D. Neutron spectrometry and numerical simulations of low-frequency internal vibrations in solid xylenes. *Neutrons and Numerical Methods -N<sub>2</sub>M*, AIP Conference proceedings 479, American Institut of Physics, Woodbury, New York, 1999, p.191-194.
17. Novikov A.G., Rodnikova M.N., Barthel J., Sobolev O.V. Quasielastic neutron scattering of aqueous tetrabutylammonium chloride solutions. *J.of Mol.Liquids*, 1999, v.79, pp.203-212.
18. Novikov A.G., Rodnikova M.N., Savostin V.V., Sobolev O.V. The study of hydration effects in aqueous solutions of LiCl and CsCl by inelastic neutron scattering. *J. of Mol. Liquids*, 1999, v.82, pp.83-104.
19. Novikov A.G., Savostin V.V., Shimkevich A.L., Zaezjev M.V. Oxygen microscopic dynamics in liquid potassium studied by inelastic neutron scattering. *J. of Non-Cryst. Solids*, 1999, v.250-252, pp.120-123.
20. Osborn R., Goremychkin E.A., Sashin I.L., Murani A.P. Inelastic neutron scattering study of the spin dynamics of  $\text{Yb}_{1-x}\text{Lu}_x\text{Al}_3$ . *Journ. of Applied Physics*, 1999, v.85, pp.5344-5346.
21. Pawlukojc A., Natkaniec I., Malarski Z., Leciejewicz J. The dynamical pattern of the 2-aminopyrazine-3-carboxylic acid molecule by inelastic incoherent neutron scattering, Raman spectroscopy and ab-initio calculations. *Journal of Molecular Structure*, 2000, v.516, pp.7-14.
22. Radulescu A., Padureanu I., Rapeanu S.N., Beldiman A., Ion M., Kozlov Zh.A., Semenov V.A. Low-frequency collective modes in the superionic phase of lead fluoride studied by quasielastic cold neutron scattering. *Physical Review B*, 1999, v.59, p.3270.
23. Radulescu A., Padureanu I., Rapeanu S.N., Beldiman A., Kozlov Zh.A., Semenov V.A. Low-frequency excitations in zirconium hydrides. *JINR communications*, E14-99-165, 1999, Dubna, Russia.
24. Shuvalov L.A., Sulyanov S.N., Natkaniec I., Smirnov L.S., Stoletova I.M. X-ray and neutron powder diffraction from  $\text{Rb}_{1-x}(\text{NH}_4)_x\text{SCN}$ . *Poverhnost'*, 1999, v.2, pp.39-43.
25. Smirnov L.S., Ivanov A.N., Kolesnikov A.I., Natkaniec I. "In situ" neutron scattering studies of ice under high pressure. *High Pressure Research*, 1999, v.16, pp.187-199.
26. Sumin V.V., Chimid G., Muzychka A.Yu., Rashev C., Sarivanov L., Fykin L.E. The neutron spectroscopy proof of the strong Cr-N interaction in nitrogen stainless steels. *Fizika metallov i metallovedenie*, 1999, v.87, pp.65-71.
27. Sumin V.V., Chimid G., Muzychka A.Yu. Modelling of complexes of defects in solid solution of transition metals. *Fizika metallov i metallovedenie*, 2000, (in press).
28. Zaezjev M.V., Novikov A.G., Savostin V.V. Isochoric specific heat and anharmonicity for liquid potassuim. *J.of Non-Cryst. Solids*, 1999, v.250-252, pp.124-127.

## Accelerated Ions and SR

1. Kobzev A.P. Element depth profiling in implanted samples. *Nukleonika*, 1999, v.44, pp. 309-315.
2. Kobzev A.P., Nikonov O.A., Peskov B.G., Uljanov V.A., Shchebetov A.F. Investigation of multilayer structures by means of charged-particle scattering. *Yadernaya Fizika*, 1999, v.62, pp.816-823.
3. Pogrebnjak A.D., Kobzev A.P., Gritsenko B.P., Sokolov S., Bazyl E., Sviridenko N.V., Valyaev A., Plotnikov S.V. Effect of Fe and Zr ion implantation and high-current electron beam treatment on chemical and mechanical properties of Ti-V-Al alloy. *Jpn. J. Appl. Phys.*, 1999, v.38, pp.L248-L251.
4. Popov Yu.P., Sedyshev P.V., Kobzev A.P., Parzhitski S.S., Gundorin N.A., Serov D.G., Sedysheva M.V. Measurement of the  $M1$  radiative strength function in Fe resonances by using the shift of the primary gamma line emitted upon the capture of intermediate-energy neutrons. *Yadernaya Fizika*, 1999, v.62, pp.886-891.

## Contribution to the Conferences

1. Aksenov V.L., Gundorin N.A., Nikitenko Yu.V., Kozhevnikov S.V., Radu F. Investigation of the magnetization vector profile in a Fe-Gd bilayer. RSNE-99, May 23-27, 1999, Moscow, Russia.
2. Aksenov V.L., Gundorin N.A., Nikitenko Yu.V., Popov Yu.P., Cser L. Observation of neutron standing waves at total reflection of polarized neutrons by precision gamma-spectroscopy. ECNS'99, September 1-4, 1999, Budapest, Hungary.
3. Aksenov V.L., Kozhevnikov S.V., Nikitenko Yu.V. Refraction of polarized neutrons on boundaries of a magnetic film. ECNS'99, September 1-4, 1999, Budapest, Hungary.
4. Aksenov V.L., Kozhevnikov S.V., Nikitenko Yu.V. Spin-flipped transmission of polarized neutrons through Co film on glass. ECNS'99, September 1-4, 1999, Budapest, Hungary.
5. Aksenov V.L., Kozhevnikov S.V., Nikitenko Yu.V., Lauter H. Reflection and refraction of spin-flip neutrons in a Fe-Gd structure. ECNS'99, September 1-4, 1999, Budapest, Hungary.
6. Aksenov V.L., Nikitenko Yu.V. Neutron standing waves and their application. RSNE-99, May 23-27, 1999, Moscow, Russia.
7. Aksenov V.L., Nikitenko Yu.V., Kozhevnikov S.V. Investigation of the refraction of polarized neutron beams in a magnetic non-collinear medium. RSNE-99, May 23-27, 1999, Moscow, Russia.
8. Aksenov V.L., Nikitenko Yu.V., Kozhevnikov S.V. Investigation of the refraction of polarized neutron beams in a FeAlSi thick magnetic film. RNIKS-99, September 13-17, 1999, Obninsk, Russia.
9. Aksenov V.L., Nikitenko Yu.V., Kozhevnikov S.V. Non-specular reflection of neutrons from a Fe-Gd film. RNIKS-99, September 13-17, 1999, Obninsk, Russia.
10. Aksenov V.L., Nikitenko Yu.V., Radu F., Gledenov Yu.M., Sedyshev P.V. Observation of resonance enhanced neutron standing waves through (n,  $\gamma$ ) reaction. ECNS'99, September 1-4, 1999, Budapest, Hungary.
11. Balagurov A.M., Belushkin A.V., Kozlenko D.P., Savenko B.N., Glazkov V.P., Somenkov V.A., Strykh G.F., Lewicki S., Wasicki J., Nawrocik W., McGreevy R.L., Zetterström P. Dynamics of Ammonium Halides Under High Pressure. 6<sup>th</sup> International Seminar on Neutron Scattering Investigation in Condensed Matter, April 29 - May 1, 1999, Poznan, Poland.
12. Balagurov A.M., Pomjakushin V.Yu., Sheptyakov D.V., Aksenov V.L. Neutron scattering studies of the CMR-materials: new results. RNIKS-99, September 13-17, 1999, Obninsk, Russia.
13. Balagurov A.M., Pomjakushin V.Yu., Sheptyakov D.V., Aksenov V.L., Babushkina N.A., Belova L.M., Gorbenko O.Yu., Kaul A.R. Changes in the atomic and magnetic structure of  $(\text{La}_{0.25}\text{Pr}_{0.75})_{0.7}\text{Ca}_{0.3}\text{MnO}_3$  induced by the isotopic substitution of  $^{18}\text{O}$  for  $^{16}\text{O}$ . RSNE-99, May 23-27, 1999, Moscow, Russia.
14. Balagurov A.M., Pomjakushin V.Yu., Simkin V.G. High-resolution neutron Fourier diffraction for powders and single crystals. IUCr XVIII, August 4-13, 1999, Glasgow, Scotland.
15. Balagurov A.M. Atomic and magnetic structure of manganites. ECNS'99, September 1-4, 1999, Budapest, Hungary.
16. Belushkin A.V., Kozlenko D.P., McGreevy R.L., Savenko B.N., Zetterström P. A. Study of orientational disorder in  $\text{ND}_4\text{Cl}$  by the reverse Monte Carlo method. RNIKS-99, September 13-17, 1999, Obninsk, Russia.
17. Beskrovnyi A., Danilkin S., Fuess H., Jatrovski E., Neova-Baeva M., Wieder T. Crystal structure and lattice dynamics of Fe-Cr-Mn-Ni-N austenitic steels. ECNS'99, September 1-4, 1999, Budapest, Hungary.
18. Bogoyavlenskii I.V., Puchkov A.V., Skomorokhov A. Study of the Phonon-Maxon region of the liquid helium dispersion curve - the latest results. XXII Intern.Conf.on Low Temp.Physics, August 4-11, 1999, Helsinki, Finland.
19. Bogoyavlenskii I.V., Puchkov A.V., Skomorokhov A. The correlation between Bose condensation and helium excitations in neutron scattering study. ECNS-99, September 1-4, 1999, Budapest, Hungary.
20. Bokuchava G., Schreiber J., Shamsutdinov N., Stalder M. Residual stress studies in graded W/Cu materials by neutron diffraction method. ECNS'99, September 1-4, 1999, Budapest, Hungary.
21. Bokuchava G.D. Application of high resolution Fourier diffractometer at IBR-2 reactor for strain measurements. SSNS-99, August 7-13, 1999, Zuzwil, Switzerland.
22. Bruno G., Albertini G., Cernushi F., Taran Yu.V., Rustichelli F. A reverse time-of-flight approach to neutron diffraction residual stress investigations on a UNI-Fe510D steel welded plate. ECNS-99, September 1-4, 1999, Budapest, Hungary.
23. Burilichev D.E., Ivankina T.I., Klima K., Locajicek T., Nikitin A.N., Pros Z. Investigation of rock samples by neutron diffraction and ultrasonic sounding. ECNS-99, September 1-4, 1999, Budapest, Hungary.
24. Burilichev D.E., Ivankina T.I., Klima K., Locajicek T., Nikitin A.N., Pros Z. Investigation of olivine xenoliths by neutron diffraction and ultrasonic sounding at various confining pressures. NSHP, September 29-October 2, 1999, Dubna, Russia.
25. Cser L., Holderna-Natkaniec K., Natkaniec I., Pawlukoje A. Neutron spectroscopy and QC modeling of the low frequency internal vibrations of mesitylene. ECNS-99, September 1-4, 1999, Budapest, Hungary.
26. Danilkin S., Delafosse D., Fuess H., Gavriljuk V., Ivanov A., Magnin T., Wipf H. Hydrogen vibrations in austenitic stainless steels. ECNS-99, September 1-4, 1999, Budapest, Hungary.

27. Frischbutter A., Scheffzuek C., Walther K. Deformation experiments on quartz for strain/stress-analysis by neutron time-of-flight diffraction. Int. Conf. Deformation Mechanisms, Rheology, Microstructures, March 22-24, 1999, Neustadt an der Weinstrasse, Germany.
28. Guberman D.M., Ivankina T.I., Klima K., Locajicek T., Nikitin A.N., Pros Z., Smirnov Yu.P., Ullemeyer K. Textures and elastic anisotropies of amphibolites from the Kola Superdeep Borehole. Meeting on Project No.408 (UNESCO) „Comparison of composition, structure and physical properties of rocks and minerals in the Kola Superdeep Borehole (KSDB-3) and their homologues on the surface, September 1-7, 1999, Apatity-Zapolyarny, Russia.
29. Gutberlet T., Kiselev M., Heerklotz H., Klose G. SANS study of mixed POPC/C12En aggregates. ECNS-99, September 1-4, 1999, Budapest, Hungary.
30. Holderna-Natkaniec K., Natkaniec I., Pawlukoje A., Khavryuthenko V.D. Neutron spectroscopy and QC modeling of methyl dynamics in 1- and 2-methylnaphthalene crystals. ECNS-99, September 1-4, 1999, Budapest, Hungary.
31. Ishmaev S.N., Lisichkin Y.V., Puchkov A.V., Semenov V.A., Svab E., Syrykh G.F. Neutron scattering law study of isotopic Ni-B metallic glasses. ECNS'99, September 1-4, 1999, Budapest, Hungary.
32. Ivankina T.I., Nikitin A.N., Telepnev A.S., Sukhoparov V.A., Ullemeyer K., Efimova G.A., Kireenkova S.M., Sobolev G.A., Walther K. New possibilities for investigation of physical properties and processes in geological materials under thermal deformation and simultaneous ultrasonic and neutron diffraction measurements. RNIKS-99, September 13-17, 1999, Obninsk, Russia.
33. Ivankina T.I., Nikitin A.N., Telepnev A.S., Ullemeyer K., Efimova G.A., Kireenkova S.M., Sobolev G.A., Sukhoparov V.A., Walther K. Texture and physical properties of marble deformed at 20-250°C. NSHPI, September 29 - October 2, 1999, Dubna, Russia.
34. Ivankina T.I., Nikitin A.N. Investigation of anisotropy of deep rocks by neutron diffraction and ultrasonic sounding. The Second Conference "Physical-Chemical and Petrophysical Researches in Earth's Sciences", October 25-26, 1999, Moscow, Russia.
35. Ivankina T.I., Nikitin N.N., Lokajicek T., Pros Z., Klima K., Ullemeyer K. Textures and elastic anisotropies of amphibolites from the Kola borehole. ICOTOM-12, August 9-13, 1999, Montreal, Canada.
36. Ivankina T.I., Nikitin N.N., Sobolev G.A., Sukhoparov V.A., Telepnev A.S., Ullemeyer K., Walther K. Influence of temperature and long-time loading on texture and physical property variations of a calcite marble. Int. Conf. on Textures and Physical Properties of Rocks, October 12-16, 1999, Goettingen, Germany.
37. Kiselev M.A., Kisselev A.M., Borbely S., Lesieur P. The phospholipid vesicles structure in the presence of cryoprotectors. RNIKS-99, September 13-17, 1999, Obninsk, Russia.
38. Kiselev M.A., Lesieur P., Kisselev A.M., Kutuzov S.A., Borbely S., Lombardo D., Ollivon M. Investigations of ternary phospholipid/cryoprotector/water systems. RSNE-99, May 23-27, 1999, Moscow, Russia.
39. Kiselev M.A., Lesieur P. The application of small-angle X-ray scattering to the study of model biological membranes at synchrotron source DCI. NSHP-II, September 29 - October 2, 1999, Dubna, Russia.
40. Klein H., Ullemeyer K., Brokmeier H.-G. Texture determination with X-rays and neutrons - advanced methods. Int. Conf. on Textures and Physical Properties of Rocks, October 12-16, 1999, Goettingen, Germany.
41. Kozhevnikov S.V. Neutron spectrometry and monochromatization using spin-flip and spatial beam-splitting. NOP-99, November 25-27, 1999, Villigen, Switzerland.
42. Kozhevnikov S.V. Spin-flip and beam-splitting of polarized neutrons transmitted through a Co film on glass. NOP-99, November 25-27, 1999, Villigen, Switzerland.
43. Kozlenko D.P., Balagurov A.M., Savenko B.N., Glazkov V.P., Somenkov V.A., Hull S. Neutron scattering study of structure and dynamics of ammonium halides under high pressure. IUCr XVIII, August 4-13, 1999, Glasgow, Scotland.
44. Lauter-Pasyuk V.V. Flux-lines distribution in the H<sub>t</sub>c films. User meeting on neutron scattering, May 25-27, 1999, Potsdam, Germany.
45. Lauter-Pasyuk V.V., Lauter H.J., Lorenz M., Petrenko A.V., Nikonov O., Aksenov V.L., Leiderer P. Magnetic field distribution around flux-lines in YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> superconducting thin films in a parallel field. ECNS'99, September 1-4, 1999, Budapest, Hungary.
46. Lauter-Pasyuk V.V., Lauter H.J., Toperverg B., Nikonov O., Kravtsov E., Milyaev M.A., Romashev L., Ustinov V. Magnetic off-specular neutron scattering from Fe/Cr multilayers. ECRS-5, September 28-30, 1999, Delft-Noordwijkerhout, Netherlands.
47. Lesieur P., Kiselev M.A., Barsukov L. Temperature induced micelle to vesicle transition. Workshop on time resolved evolution of structure in soft condensed matter under flow, January 22-23, 1999, Leuven, Belgium.
48. Lesieur P., Lombardo D., Barsukov L.I., Kiselev M.A.. Temperature-duced micelle to vesicle Transition in the DMPC/sodium cholate system: a synchrotron radiation SAXS study. NATO ASI on soft condensed matter, April 6-16, 1999, Geilo, Norway.

49. Lesieur P., Kiselev M.A., Barsukov L.I. Micelle to vesicle transition in the DMPC/NaC system. XI-th international conference on small-angle scattering, May 17-20, 1999, Brookhaven, USA.
50. Locajicek T., Pros Z., Klima K., Nikitin A.N., Ivankina T.I., Ullemeyer K., Smirnov Y.P., Guberman D.M., Kouznetsov Y. Laboratory investigation of elastic anisotropy and texture of rocks from Kola Super Deep Borehole SG-3. Int. Conf. on Textures and Physical Properties of Rocks, October 12-16, 1999, Goettingen, Germany.
51. Lushnikov G.S., Belushkin A.V., S.N.Gvasaliya S.N., Natkaniec I., Shuvalov L.A., Smirnov L.S., Dolbinina V.V. Inelastic neutron scattering study of the  $\text{Cs}_5\text{H}_3(\text{SO}_4)_4 \cdot 0.5\text{H}_2\text{O}$  crystal and its deuterated analog. ECNS'99, September 1-4, 1999, Budapest, Hungary.
52. Lychagina T., Brokmeier H.-G. Practical aspects of calculating elastic properties of textured hexagonal polycrystals. ICOTOM-12, August 9-13, 1999, Montreal, Canada.
53. Majerz I., Pawlukojc A., Sobczyk L., Dziembowska T., Grech E., Szady-Chelmieniecka A. The infra-red, raman and inelastic neutron scattering studies on 5-Nitro-N- Salicylideneethylamine. XIII<sup>th</sup> Conference-Workshop Horizons in Hydrogen Bond Research, September 2-9, 1999, Swieradow-Zdroj, Poland.
54. Malenkov G.G., Zheligovskaya E.A., Averkiev A.A., Natkaniec I., Smirnov L.S., Bobrowicz-Sarga L., Bragin S.I. Dynamics of hydrogen bonded water frameworks under high pressure: neutron scattering and computer simulation. NSHP-II, September 29 - October 2, 1999, Dubna, Russia.
55. Morozov S.I. Band and local modes of hydrogen in V-O-H interstitial phases. ECNS'99, September 1-4, 1999, Budapest, Hungary.
56. Natkaniec I., Martinez Sarrion M.L., Mestres L., Smirnov L.S. Ammonium dynamics and structural phase transition in  $\text{Rb}_{1-x}(\text{NH}_4)_x\text{I}$  mixed crystals at 20 K. ECNS'99, September 1-4, 1999, Budapest, Hungary.
57. Natkaniec I., Mikuli E., Migdal-Mikuli A. Phase transitions and water dynamics in  $[\text{Mn}(\text{H}_2\text{O})_6(\text{ClO}_4)_2]$ , studied by neutron scattering methods. IUCr XVIII, August 4-13, 1999, Glasgow, Scotland.
58. Natkaniec I., Smirnov L.S., Telepnev A.S., Sukhoparov V.A., Bragin S.I. Neutron investigations of  $\text{D}_2\text{O}$  in the region of the metastable phase of ice IV. RNIKS-99, September 13-17, 1999, Obninsk, Russia.
59. Natkaniec I., Yuzyuk Yu.I., Torgashev V.I., Mestres L., Smirnov L.S. The variations of vibrational spectra of  $\text{b-LiNH}_4\text{SO}_4$  at phase transitions studied by inelastic incoherent neutron and Raman scattering. ECNS'99, September 1-4, 1999, Budapest, Hungary.
60. Neova-Baeva M., Beskrovni A., Danilkin S., Fuess H., Jadrowski E., Wieder T. X-Ray and neutron study of crystal structure and lattice dynamics of Fe-Cr-Mn-and Fe-Cr-Ni-nitrogen steels with different Mn and Cr content. Deutsche Neutronenstreutagung, May 25-27, 1999, Potsdam, Germany.
61. Nikitin A.N. New possibilities for investigation of physical properties of rocks using modern methods of experimental physics. The Seminar of the Scientific Council on using of underground space and underground building (RAN), November 29, 1999, Moscow, Russia.
62. Nikolayev D.I., Luzin V.V., Lychagina T., Dzjuba A.A., Kogan V.A., Te Nijenhuis J. X'Pert texture: overview of a software package for quantitative texture analysis. ICOTOM-12, August 9-13, 1999, Montreal, Quebec, Canada.
63. Novikov A., Padureanu I., Savostin V. Atomic dynamics in liquid gallium. ECNS'99, September 1-4, 1999, Budapest, Hungary.
64. Novikov A.G., Rodnikova M.N., Sobolev O.V. The investigation of hydrophobic hydration effects. ECNS'99, September 1-4, 1999, Budapest, Hungary.
65. Pawlukojc A., Leciejewicz J. Ab-initio and DFT calculation of hydrogen bonds properties in m-amonobenzoic acid dimer. XIII<sup>th</sup> Conference-Workshop Horizons in Hydrogen Bond Research, September 2-9, 1999, Swieradow-Zdroj, Poland.
66. Popov Yu.P., Voinov A.V., Sedyshev P.V., Parzhitski S.S., Kobzev A.P., Gundorin N.A., Serov D.G. Partial radiative capture cross section measurements on  $^{58}\text{Ni}$ . NSHP-II, September 29 - October 2, 1999, Dubna, Russia.
67. Radulescu A., Padureanu I., Beldiman A., Rapeanu S.N., Kozlov Zh.A., Semenov V.A. Observation of low-frequency excitations of hydrogen in zirconium. ECNS'99, September 1-4, 1999, Budapest, Hungary.
68. Savenko B.N., Aksenov V.L., Balagurov A.M., Glazkov V.P., Kozlenko D.P., Sheptyakov D.V., Somenkov V.A. DN-12 - time of flight neutron spectrometer for investigation of structure and dynamics of microsamples. ECNS'99, September 1-4, 1999, Budapest, Hungary.
69. Schaeben H., Nikolayev D.I. Dual forms of texture analysis. ICOTOM-12, August 9-13, 1999, Montreal, Canada.
70. Schaeben H., Nikolayev D.I. Texture analysis of heterogeneous data. Int. Conf. on Textures and Physical Properties of Rocks, October 12-16, 1999, Goettingen, Germany.
71. Scheffzuek C. Texture and microstructure of halite at a halite-basalt contact. ICOTOM-12, August 9-13, 1999, Montreal, Canada.



72. Scheffzuek C., Frischbutter A., Walther K. Neutron diffraction strain investigation of sandstones undergoing applied stresses. ICOTOM-12, August 9-13, 1999, Montreal, Canada.
73. Scheffzuek C., Walther K., Frischbutter A. Applied and residual stress/strain measurements with neutron time-of-flight diffraction: application to sandstones. Int. Conf. on Textures and Physical Properties of Rocks, October 13-16, 1999, Goettingen, Germany.
74. Scheffzuek C., Walther K., Frischbutter, A. Strain measurements on geomaterials by neutron time-of-flight diffraction. ECRS-5, September 28-30, 1999, Delft-Noordwijkerhout, Netherlands.
75. Sheka E.F., Natkaniec I., Nikitina E., Khavryutchenko V., Barthel H. INS study of intermolecular interaction at the silicone-fumed silica interface. ECNS'99, September 1-4, 1999, Budapest, Hungary.
76. Sheptyakov D.V., Balagurov A.M., Pomjakushin V.Yu., Aksenov V.L., Babushkina N.A., Belova L.M., Gorbenko O.Yu., Kaul A.R., Fischer P., Gutmann M., Keller L. Peculiarities of atomic and magnetic structures of  $(La_{1-y}Pr_y)_{0.7}Ca_{0.3}MnO_3$  (0.50 J y J0.75). IUCr XVIII, August 4-13, 1999, Glasgow, Scotland.
77. Smirnov L.S., Natkaniec I., Watanabe J., Kasahara M., Yagi T. Inelastic incoherent neutron and Raman scattering from the  $[K_{1-x}(NH_4)_x]_3H(SO_4)_2$  mixed crystals. ECNS'99, September 1-4, 1999, Budapest, Hungary.
78. Stipp M., Heilbronner R., Leiss B., Stuenitz H., Ullemeyer K. Combined CIP-, X-ray and neutron diffraction texture analysis of mylonitic quartz veins from the Tonale fault. Int. Conf. on Textures and Physical Properties of Rocks, October 12-16, 1999, Goettingen, Germany.
79. Taran Yu.V., Schreiber J. The time-of-flight neutron diffraction measurements of residual stress in a shape welded steel tube. RNIKS-99, September 13-17, 1999, Obninsk, Russia.
80. Taran Yu.V., Schreiber J., Mikula P., Lukas P., Neov D., Vrana M. Neutron diffraction study of fatigue behavior of a low-carbon stainless steel. ECNS'99, September 1-4, 1999, Budapest, Hungary.
81. Taran Yu.V., Schreiber J., Mikula P., Lukas P., Neov D., Vrana M. Neutron diffraction investigation of low and high cycle fatigue austenitic stainless steels. ECRS-5, September 28-30, 1999, Delft-Noordwijkerhout, Netherlands.
82. Taran Yu.V., Schreiber J., Wright J.S. The time-of-flight neutron diffraction measurements of residual stress in a shape welded steel tube. ECRS-5, September 28-30, 1999, Delft-Noordwijkerhout, Netherlands.
83. Taran Yu.V., Wright J.S. Triaxial residual stresses measurements in a shape welded steel tube on the ENGIN stress-diffractometer. ECNS'99, September 1-4, 1999, Budapest, Hungary.
84. Toperverg B., Lauter-Pasyuk V., Lauter H., Nikonov O., Ausserre D., Gallot Y. Morphology of off-specular neutron scattering pattern from islands on a lamellar film. ECRS -5, September 28-30, 1999. Delft-Noordwijkerhout, Netherlands.
85. Toperverg B.P., Lauter-Pasyuk V.V., Lauter H., Nikonov O.A., Aksenov V.L. Non-specular scattering of neutrons on surface inhomogeneity isles of lamellar polymers. RNIKS-99, September 13-17, 1999, Obninsk, Russia.
86. Toperverg B., Lauter-Pasyuk V.V., Lauter H., Nikonov O., Ausserre D., Gallot Y. Off-specular neutron scattering from islands on a lamellar film. ECNS'99, September 1-4, 1999, Budapest, Hungary.
87. Ullemeyer K., Braun G., Dahms M., Kruhl J.H., Olesen N., Siegesmund S. Current methods of texture analysis in geosciences: application to a muscovite-bearing quartzite. Int. Conf. on Textures and Physical Properties of Rocks, October 13-16, 1999, Goettingen, Germany.
88. Ullemeyer K., Spalthoff P., Leiss B., Weber K. TOF texture investigations of geological samples. ECNS'99, September 1-4, 1999, Budapest, Hungary.
89. Walther K, Frischbutter A., Scheffzuek C. Strain-messungen in geologischen proben mittels neutronenflugzeitmethode am diffraktometer „Epsilon“ in Dubna. Deutsche Neutronenstreutagung, May 25 -27, 1999, Potsdam, Germany.
90. Walther K., Frischbutter A., Lieckefett R., Scheffzuek C. A pressure device for strain measurements of geomaterials at the neutron diffractometer EPSILON. ICOTOM-12, August 9-13, 1999, Montreal, Canada.
91. Walther K., Frischbutter A., Scheffzuek C. Inhomogeneous strain distribution in sandstones as an effect of stratification - determined by neutron diffraction. 2nd Euroconference on World Stress Map: Deformation and Stress in the Earth's Crust, September 22-26, 1999, Aespoe-Oskarshamn, Sweden.
92. Walther K., Frischbutter A., Scheffzuek C. Intracrystalline strain measurements on Cretaceous sandstones using the TOF-method. XV. Tektonomechanik-Kolloquim, May 14-15, 1999, Universitaet Graz, Austria.
93. Walther K., Ivankina T.I., Nikitin A.N., Ullemeyer K. The influence of texture on the thermal expansion of calcite. Int. Conf. on Textures and Physical Properties of Rocks, October 12-16, 1999, Goettingen, Germany.
94. Walther K., Scheffzuek C., Frischbutter A. Neutron Time-of-Flight Diffractometer "EPSILON" for Strain Measurements: Layout and First Results. ECNS'99, September 1-4, 1999, Budapest, Hungary.
95. Watanabe J., Natkaniec I., Smirnov L.S., Kasahara M., Yagi T. Influence of pressure on the O-H...O hydrogen bond in  $[K_{1-x}(NH_4)_x]_3H(SO_4)_2$  mixed crystals. NSHP-II, September 29 - October 2, 1999, Dubna, Russia.

96. Zlokazov V.B. Methods for mathematical analysis of the spectral distributions in neutron scattering studies. 6<sup>th</sup> International Seminar on Neutron Scattering Investigation in Condensed Matter, April 29 - May 1, 1999, Poznan, Poland.
97. Zlokazov V.B., Balagurov A.M. Rietveld analysis on the High Resolution Fourier Diffractometer. IUCr XVIII, August 4-13, 1999, Glasgow, Scotland.

## NEUTRON NUCLEAR PHYSICS

### Reviews

1. Bunakov V.E., Pikelner L.B. Parity and Time Reversal Violation in Neutron-Nucleus Reactions. Progress in Particle and Nuclear Physics. Vol.41. Oxford: Pergamon, 1998, p.337-392.
2. Nosov V.G., Frank A.I. Взаимодействие медленных нейтронов с движущимся веществом. Yad. Fiz., 1998, vol.61, No.4, p.686-696 (in Russian).

### Experiments

1. Abov Yu.G., Alfimenkov V.P., Galinskii E.M., Lason L., Mareev Yu.D., Novitsky V.V., Pikelner L.B., Tsulaya V.M., Tsulaya M.I., Chernikov A.N. Спектрометр поляризованных нейтронов. JINR, P13-99-130, Dubna, 1999, p.10 (in Russian).
2. Aksenov V.L., Nikitenko Yu.V., Radu F., Gledenov Yu.M., Sedyshev P.V., Petrenko A.V., Kozhevnikov S.V. Observation of Resonance Enhanced Neutron Standing Waves Using Charged Particle Emission After Neutron Capture. JINR, E3-98-383, Dubna, 1998, p. 6
3. Aksenov V.L., Gundorin N.A., Nikitenko Yu.V., Popov Yu.P., Cser L. Наблюдение стоячих нейтронных волн при полном отражении нейтронов методом прецизионной гамма- спектроскопии. JINR, P3-98-374, Dubna, 1998, p. 8 (in Russian).
4. Alexandrov Yu.A. О знаке и величине среднего квадрата внутреннего зарядового радиуса нейтрона. ЭЧАЯ, 1999, vol.30, issue 1, p.72-122 (in Russian).
5. Alexandrov Yu.A. Учителю. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний, JINR, 97-377, Dubna, 1998, p.176 (in Russian).
6. Alexeev A.A., Belousov Yu.V., Bergman A.A., Volkov A.N., Gledenov Yu.M., Goncharenko O.N., Grachev M.N., Kazarnovsky M.V., Matushko V.L., Mostovoi V.I., Novikov A.V., Novoselov S.A., Parzhitskii S.S., Popov Yu.P., Ryabov Yu.V., Stavisskii Yu.Ya. Третье поколение спектрометров по времени замедления нейтронов в свинце. Первые эксперименты и перспективы. Yad.Fiz., 1999, vol.62, No.5, p.851-854 (in Russian).
7. Alfimenkov V.P. Эксперименты с поляризованными нейтронами и ядрами. VIII School on Neutron Physics, Dubna, August-September, 1998. JINR, P3-98-240, Dubna, 1998, p.31 (in Russian).
8. Alfimenkov V.P., Chernikov A.N., Lason L., Mareev Yu.D., Novitski V.V., Pikelner L.B., Skoy V.R., Tsulaya M.I., Gagarski A.M., et al. Investigations of Parity Violation and Interference Effects in <sup>235</sup>U Fission Induced by Resonance Neutrons. Nucl. Phys.A., 1999, v.645, N.1, p.31-46.
9. Bagryanov B.V., Kartashov D.G., Kuvshinov M.I., Muzychka A.Yu., Nekhaev G.V., Rogov A.D., Smirnov I.G., Stoica A.D., Strelkov A.V., Shvetsov V.N. Экспериментальная проверка метода динамического конвертора ультрахолодных нейтронов на импульсном реакторе БИГР. Yad.Fiz., 1999, vol.62, No.5, p.844-850 (in Russian).
10. Belyaev S.T., Gridnev K.A., Gromov K.Ya., Dzheleпов V.P., Kalinnikov V.G., Listengarten M.A., Lobashev V.M., Mikhailov V.M., Rimski-Korsakov A.A., Soloviev V.G., Kholnov Yu.V., Tchubinskii O.V. Памяти Бориса Сергеевича Дзелепова. Usp. Fiz. Nauk, 1999, vol.169, No.1, p.105-106 (in Russian).
11. Bondarenko I.V., Balashov S.N., Krasnoperov A.V., Frank A.I. и др. Экспериментальная проверка закона дисперсии ультрахолодных нейтронов. JETP Lett., 1998, vol.67, issue 9,10, p.746-775 (in Russian).
12. Bondarenko I.V., Bodnarchuk V.I., Balashov S.N., Geltenbort P., Klein A.G., Kozlov A.V., Korneev D.A., Masalovich S.V., Nosov V.G., Frank A.I., Hoghoi P., Chimmino A. Нейтронные интерференционные фильтры в фундаментальных экспериментах с ультрахолодными нейтронами. Yad. Fiz., 1999, vol.62, No.5, p.775-791 (in Russian).

13. Boneva S.T., Vasilieva E.V., Simonova L.I., Bondarenko V.A., Sukhovoij A.M., Khitrov V.A. Реакция (n, ) в тяжелом ядре. Наблюдаемые эффекты проявления его структуры при возбуждениях до энергии связи нейтрона. *Yad. Fiz.*, 1999, vol.62, No.5, p.892-899 (in Russian).
14. Borzakov S.B., Pokotilovskii Yu.N. Поиск возбужденного уровня дейтрона с помощью резонансного рассеяния -квантов. *JINR*, P15-99-70, Dubna, 1999, p.6 (in Russian).
15. Borzakov S.B. Andreyev A.N., Dermendjiev E., Filip A., Furman W.I., Pantelev Ts., Ruskov I., Zamyatnin Yu.S., Zeinalov Sh. Measurements of Delayed Neutron Yields from Thermal Neutron Induced Fission of  $^{235}\text{U}$ ,  $^{233}\text{U}$ ,  $^{239}\text{Pu}$  and  $^{237}\text{Np}$ . *JINR*, E3-98-145, Dubna, 1998, p. 16.
16. Borzakov S.B., Zamyatnin Yu.S., Pantelev Ts., Pavlov S.S., Ruskov I. Изучение кривых распада запаздывающих нейтронов при делении  $^{235}\text{U}$  и  $^{239}\text{Pu}$  тепловыми нейтронами. *JINR*, P3-99-208, Dubna, 1999, p.14 (in Russian).
17. Borzakov S.B., Goverdovskii A.A., Dermendjiev E., Zamyatnin Yu.S., Kalinin A.I., Kononov V.Yu., Ruskov I., Soloviev S.M. Параметры резонансов и сечение деления  $^{237}\text{Np}$  нейтронами с энергиями ниже 1000 эВ. *Yad. Fiz.*, 1999, vol.62, No.5., p.933-940 (in Russian).
18. Bunakov V.E., Novikov I.S., Skoy V.R. Анализ новых предложений по измерению СР-нарушения с помощью поляризованных резонансных нейтронов. *Izv. RAN, ser. fiz.*, 1999, vol.63, No.1, p.20-25 (in Russian).
19. Bunakov V.E., Novikov I.S., Skoy B.P. Сравнительный анализ экспериментов по проверке Т- и Р-инвариантности в нейтронных ядерных реакциях. *Yad. Fiz.*, 1999, vol.62, No.5., p.855-871 (in Russian).
20. Bystritskii V.M., Grebenyuk V.M., Parzhitskii S.S., Pen'kov F.M., Stolupin V.A., и др. Астрофизический S-фактор в dd-взаимодействиях при ультранизких энергиях. *JINR*, Д15-99-163, Dubna, 1999, p.14.
21. Enik T.L., Mitsyna L.V., Samosvat G.S., Kharyuzov R.V. Спектрометр УГПА для измерения электрической поляризуемости нейтрона. *JINR*, P13-98-317, Dubna, 1998, p. 6 (in Russian).
22. Frank A.I. Учителю. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. ОИЯИ, 97-377, Dubna, 1998, p.152-155 (in Russian).
23. Furman W.I. Воспоминания о И.М. Франке. Илья Михайлович Франк: К 90-летию со дня рождения. *JINR*, 98-164, Dubna, 1998, p.178-179 (in Russian).
24. Furman W.I. Учителю. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. *JINR*, 97-377, Dubna, 1998, p.190-195 (in Russian).
25. Geltenbort P., Kartashov D.G., Lychagin E.V., Muzychka A.Yu., Nesvizhevskii V.V., Nekhaev G.V., Serebrov A.P., Strelkov A.V., Tal'daev P.P., Kharitonov A.G., Shvetsov V.H. Исследование малых передач энергии при хранении ультрахолодных нейтронов (УХН) в вещественных ловушках. *JINR*, P3-99-71, Dubna, 1999, p.24 (in Russian).
26. Gledenov Yu.M., Machrafi R., Oprea A., Salatski V.I., Sedyshev P.V., Szalanski P.I., Vesna V.A., Okunev I.S.. A Search for P-odd and P-even Correlation in the  $^{35}\text{Cl}(n,p)^{35}\text{S}$  Reaction. *Nucl. Phys. A654* (1999), p. 943-948.
27. Gledenov Yu.M., Machrafi R., Oprea A., Salatski V.I., Sedyshev P.V., Szalanski P.I., Vesna V.A., Okunev I.S. A Search for P-odd and P-even Correlation in the  $^{35}\text{Cl}(n,p)^{35}\text{S}$  Reaction. *Nucl. Phys. A654* (1999), p. 943-948.
28. Gledenov Yu.M., Machrafi R., Salatski V.I., Sedyshev P.V., Andrzejewski J., Szalanski P.I.. Testing an Ionization Chamber with Gaseous Samples and Measurements of the (n,a) Reaction Cross Section. *Nucl. Inst. and Meth.*, A431 (1999), p. 201-207.
29. Gledenov Yu.M., Sedysheva M., Khuukhenkhoo G., Tang Guoyou, Zhang Guohui, Chen Zemin, Zhang Xuemei, Chen Yingtang. Cross Section and Angular Distribution Measurements of the Fast Neutron Induced (n,a) Reaction for Medium-Mass Nuclei. *JINR Communication E3-98-375*. Dubna, 1998.
30. Gledenov Yu.M., Sedysheva M.V., Khuukhenkhoo G., Tang Guoyou, Zhang Guohui, Zemin Chen, Zhang Xuemei, Chen Yingtang. Cross Section and Angular Distribution Measurements of the Fast Neutron Induced (n, a) Reaction for Medium-Mass Nuclei. *JINR*, E3-98-375, Dubna, 1998, p. 8.
31. Gledenov Yu.M., Mashrafi R., Sedyshev P.V., Salatskii V.I., Andrzejewski Yu., Shalanski P.I. Испытание ионизационной камеры на резонансных нейтронах для исследования газовых мишеней. *JINR*, P15-99-211, Dubna, 1999, p.6 (in Russian).
32. Gledenov Yu.M., Salatskii V.I., Sedyshev P.V., Stempinski M., Shalanski P.I. Измерение сечения реакции  $^{35}\text{Cl}(n,p)^{35}\text{S}$  для тепловых нейтронов и параметры резонансов при энергиях 398 и 4249 эВ. *Yad. Fiz.*, 1999, vol.62, No.5, p.877-885 (in Russian).
33. Grigoriev E.P., Khitrov V.A., Sukhovoij A.M., Vasilieva E.V. A Search for the  $\beta$ -Decay of the  $^{168}\text{Er}$  Compound Nucleus in the (n,2) Reaction. *JINR*, E3-99-146, Dubna, 1999, p.23.
34. Gromov K.Ya., Dzhabbber D.K., Malikov Sh.R., Fominykh V.I., Kholnov Yu.V., Tsupko-Sitnikov V.V., Chumin V.G. Схема уровней ядра  $^{217}\text{At}$  при -распаде  $^{221}\text{Fr}$ . *JINR*, P6-99-17, Dubna, 1999, p.14 (in Russian).

35. Gromov K.Ya., Dzhabber D.K., Malikov Sh.R., Fominykh V.I., Kholnov Yu.V., Tsupko-Sitnikov V.V., Chumin V.G. Схема уровней ядер  $^{217}\text{At}$  при -распаде  $^{221}\text{Fr}$ . *Izv. RAN, ser. fiz.*, 1999, vol.63, No.5, p.860-870 (in Russian).
36. Gundorin N.A. Прецизионная гамма-спектроскопия осколков деления ядер. VIII School on Neutron Physica, Dubna, August-September 1998. *JINR*, P3-98-240, Dubna, 1998, p.34 (in Russian).
37. Ignatovich V.K. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. *JINR* 97-377, Dubna, 1998, p.112-118 (in Russian).
38. Kharyuzov R.V. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. *JINR*, 97-377, Dubna, 1998, p.132 (in Russian).
39. Kholnov Yu.V., Voinov A.V. Метод увеличения разрешения в спектрах совпадений различных излучений. *Izv. RAN, ser. fiz.*, 1998, vol.62, No.11, p.2115-2118 (in Russian).
40. Kopach Yu.N., Popov A.B., Furman W.I., Gonin N.N., Kozlovsky L.K., Tambovtsev D.I., Kliman J. Исследование угловой анизотропии осколков деления выстроенных ядер  $^{235}\text{U}$  резонансными нейтронами и роль JK-каналов. *Yad. Fiz.*, 1999, vol.62, No.5, p.900-914 (in Russian).
41. Kopach Yu.N., Singer P., Mutterer M., Klemens M., et al. Angular Anisotropy of Prompt Rays and Fragment Spin Alignment in Binary and Light-Charged-Particle-Accompanied Spontaneous Fission of  $^{252}\text{Cf}$ . *Phys. Rev. Lett.*, 1999, N.2, p.303-306.
42. Lowie L.Y., Bowman J.D., Corvi F., Sharapov E.I., et al. Parity Violation in Neutron Resonances in  $^{107,109}\text{Ag}$ . *Phys. Rev.C.*, 1999.- v.59, N.2., p.1119-1130.
43. Mohr P., Beer H., Oberhammer H., Rochow W., Sedyshev P.V., Volz S., Ziges A.. Neutron Capture of  $^{26}\text{Mg}$  at  $kT=52$  keV and the Resonance at  $E_n=68.7$  keV. Preprint IKDA 99/09 (1999) Institut fuer Kernphysik, Technische Universitaet Darmstadt.
44. Mohr P., Beer H., Oberhammer H., Rochow W., Sedyshev P.V., Volz S., Ziges A.. Neutron Capture of  $^{26}\text{Mg}$  at  $kT=52$  keV and the Resonance at  $E_n=68.7$  keV. *Phys. Rev. C*60 (1999) 017603.
45. Mohr P., Beer H., Oberhammer H., Rochow W., Sedyshev P.V., Volz S., Ziges A.. Neutron Capture of  $^{26}\text{Mg}$  at  $kT=52$  keV and the Resonance at  $E_n=68.7$  keV. Preprint IKDA 99/09 (1999) Institut fuer Kernphysik, Technische Universitaet Darmstadt.
46. Mohr P., Sedyshev P.V., Beer H., Stadler W., Oberhammer H., Popov Yu.P., Rochow W. Neutron Capture of  $^{46}\text{Ca}$  at Thermonuclear Energies. *Phys.Rev.C*59, (1999) 3410-3417.
47. Muzychka A.Yu., Pokotilovski Yu.N., Geltenbort P. Search for Low-Energy Upscattering of Ultracold Neutrons from a Beryllium Surface. *JINR*, E3-98-41, Dubna, 1998, p. 14.
48. Nesvizhevsky V.V., Strelkov A.V., Geltenbort P., Yaidzhiev P.S. Наблюдение нового механизма потерь УХН в ловушках. *JINR*, P3-98-79, Dubna, 1998, p. 34 (in Russian).
49. Nesvizhevsky V.V., Strelkov A.V., Geltenbort P., Yaidzhiev P.S. Наблюдение нового механизма потерь УХН в ловушках. *Yad. Fiz.*, 1999, vol.62, No.5., p.832-843.
50. Nikolenko V.G. Учителю. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. *JINR*, 97-377, Dubna, 1998, p.168 (in Russian).
51. Nosov V.G., Frank A.I. Квантовая структура нейтронных пучков и возможности ее экспериментального установления. *Yad. Fiz.*, 1999, vol.62, No.5, p.807-815 (in Russian).
52. Parzhitskii S.S. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний, *JINR*, 97-377, Dubna, 1998, p.125-126 (in Russian).
53. Pikelner Л.Б. Воспоминания о И.М. Франке. Илья Михайлович Франк: К 90-летию со дня рождения. ОИЯИ, 98-164, Дубна, 1998, с.157-160 (in Russian).
54. Pokotilovski Yu.N. Interaction of Ultracold Neutrons with Liquid Surface Modes as a Possible Reason for Neutron Energy Spread During Long Storage in Fluid Wall Traps. *JINR*, E17-98-288, Dubna, 1998, p. 11.
55. Pokotilovski Yu.N. On the Question of Possible Experimental Observation of Anderson Localization of the Neutron. *Europ. Phys.J.*, B, v.3, N.1, 1998, p. 105-107.
56. Pokotilovski Yu.N. Quasielastic Neutron Scattering by Diffusive Adsorbed Hydrogen as a Possible Reason for Ultracold Neutrons Energy Spread During Long Storage in Closed Traps. *JINR*, E3-98-310, Dubna, 1998, p. 14.
57. Pokotilovskii Yu.N. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний, *JINR*, 97-377, Dubna, 1998, p.105-106 (in Russian).
58. Popov A.B. Воспоминания о И.М. Франке. Илья Михайлович Франк: К 90-летию со дня рождения. *JINR*, 98-164, Dubna, 1998, p.147-152 (in Russian).
59. Popov A.B. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. *JINR*, 97-377, Dubna, 1998, p.110-111 (in Russian).
60. Popov Yu.P. Воспоминания о И.М. Франке. Илья Михайлович Франк: К 90-летию со дня рождения. *JINR*, 98-164, Dubna, 1998, p.153-156 (in Russian).

61. Popov Yu.P. Учителю. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. JINR, 97-377, Dubna, 1998, p.160-163 (in Russian).
62. Popov Yu.P., Furman W.I. Илья Михайлович Франк. (23.10.1908-22.06.1990). Yad. Fiz., 1999, vol.62, No.5, p.773-774 (in Russian).
63. Popov Yu.P., Sedyshev P.V., Gundorin N.A., Sedysheva M.V., Kobzev A.P., Parzhitskii S.S. Анализ спектров нейтронов в области энергии 2-100 кэВ с использованием g- спектрометрии высокого разрешения. Izv. RAN, ser. fiz., 1998, vol.62, No.5, p.882-886 (in Russian).
64. Popov Yu.P., Sedyshev P.V., Kobzev A.P., Parzhitskii S.S., Gundorin N.A., Serov D.G., Sedysheva M.V. Измерение радиационной силовой функции M1-переходов в резонансах Fe с использованием смещения -линии при захвате нейтронов промежуточных энергий. Yad. Fiz., 1999, vol.62, No.5, p.886-891 (in Russian).
65. Pospisil S., Telezhnikov S.A. et. al. Secondary g-Rays of  $^{159}\text{Gd}$  After Resonance Neutron Capture. Acta Polytechnica, v.38, N.3, 1998, p.37-38.
66. Samosvat G.S. Воспоминания о И.М. Франке. Илья Михайлович Франк: К 90-летию со дня рождения. JINR, 98-164, Dubna, 1998, p.164-167 (in Russian).
67. Samosvat G.S. Учителю. Воспоминания сотрудника Лаборатории нейтронной физики Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. JINR, 97-377, Dubna, 1998, p.180 (in Russian).
68. Sedyshev P.V., Mohr P., Beer H., Oberhammer H., Popov Yu.P., Rochow W. Measurement of Neutron Capture on  $^{50}\text{Ti}$  at Thermonuclear Energies. Phys. Rev. C60 (1999) 054613.
69. Shapiro S.M., Strelkov A.V. Федор Львович Шапиро. Страницы биографии. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. JINR, 97-377, Dubna, 1998, p.5-20 (in Russian).
70. Sharapov E.I. Воспоминания о И.М. Франке. Илья Михайлович Франк: К 90-летию со дня рождения. JINR, 98-164, Dubna, 1998, p.185-187 (in Russian).
71. Sharapov E.I. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. JINR, 97-377, Dubna, 1998, p.119-120 (in Russian).
72. Sharapov E.I., Bowman J.D., Crawford B.E., Delheij P.P.J., et al. Parity Nonconservation in Neutron Resonances in  $^{133}\text{Cs}$ . Phys. Rev.C., 1999, v.59, N.3, p.1772-79.
73. Sharapov E.I., Bowman J.D., Crawford B.E., Delheij P.P.J., et al. Search for Parity Violation in  $^{93}\text{Nb}$  Neutron Resonances. Phys. Rev.C., 1999, v.59, N.2, p.1131-1135.
74. Shevchenko N.V., Rakityansky S.A., Sofianos S.A., Belyaev V.B. Non-Radiative Synthesis of  $^7\text{Be}$  in Solar Plasma. J.Phys.G: Nucl. Part. Phys., 1999, v.25, N.1, p.95-106.
75. Smith D.A., Bowman J.D., Crawford B.E., Sharapov E.I., et al. Neutron Resonance Spectroscopy of  $^{117}\text{Sn}$  from 1 eV to 1.5 keV. Phys. Rev.C., 1999, v.59, p.2836-2843.
76. Strelkov A.V. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. JINR, 97-377, Dubna, 1998, p.144-148 (in Russian).
77. Strelkov A.V. Федор Львович и история открытия ультрахолодных нейтронов. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний. JINR, 97-377, Dubna, 1998, p.196-217 (in Russian).
78. Sukhovoј A.M., Khitrov V.A. Экспериментальная оценка плотности уровней тяжелого ядра, реально возбуждаемых в реакции (n, ) при  $E_{\text{возб}} < 3-4$  МэВ. Yad. Fiz., 1999, vol.62, No.1, p.24-36 (in Russian).
79. Utsuro M., Ignatovich V.K. Experimental Test of the de Broglie Wave-Packet Description of the Neutron. Phys. Lett. A., 1998. v.246, N.1,2. p.7-15.
80. Varlamov V.E., Panteleev Ts.Ts., Strelkov A.V., Shvetsov V.N. Исследование нагрева ультрахолодных нейтронов на поверхности бериллия. ЖЭТФ, 1998, vol.114, issue 3, p.786-797 (in Russian).
81. Vasilieva E.V., Sukhovoј A.M., Khitrov V.A. Экспериментальная оценка параметров, определяющих каскадный -распад компаунд-состояний тяжелых ядер. Наиболее вероятная энергетическая зависимость суммы радиационных силовых функций дипольных переходов для  $0,52\text{МэВ} < E < B_n$ . JINR, P3-99-203, Dubna, 1999, p.16 (in Russian).
82. Vasilieva E.V., Sukhovoј A.M., Khitrov V.A. Экспериментальная оценка параметров, определяющих каскадный -распад компаунд- состояний тяжелых ядер. Наиболее вероятная плотность возбужденных состояний в интервале от 1-2 МэВ до  $B_n$ . JINR, P3-99-202, Dubna, 1999, p.22 (in Russian).
83. Vesna V.A., Gledenov Yu.M., Lebedev-Stepanov P.V., Okunev I.S., Sinyakov A.V., Tchuvilskii Yu.M., Shul'gina E.V. Поиск эффектов нарушения пространственной четности в g-переходе  $^7\text{Li}^* @ g(M1) @ ^7\text{Li}$  ( $E_g=0.478$  МэВ). Yad. Fiz., 1999, vol.62, p.565-576 (in Russian).
84. Zamyatnin Yu.S. Воспоминания о И.М. Франке. Илья Михайлович Франк: К 90-летию со дня рождения. JINR, 98-164, Dubna, 1998, p.126-127 (in Russian).
85. Zamyatnin Yu.S. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний, JINR 97-377, Dubna, 1998, p.142-143 (in Russian).

86. Zeinalov Sh.S., Zeinalova O.V., Smirnov V.I. Приложение корреляционного метода к измерениям запаздывающих нейтронов при индуцированном тепловыми нейтронами делении  $^{237}\text{Np}$ . JINR, P3-98-17, Dubna, 1998, p.19 (in Russian).
87. Zhang Guohui, Tang Guoyou, Chen Jinxiang, Shi Zhaomin, Gledenov Yu.M., Khuukhenkhuu G., Sedysheva M., Chen Zemin, Chen Yingtang, Zhang Xuemei. Measurements of Double Differential Cross Sections for  $^{40}\text{Ca}(n,a)^{37}\text{Ar}$  Reaction at 5.0 and 6.0 MeV. Communication of Nuclear Data Progress N19 (1998) (China Nuclear Information Centre, Atomic Energy Press, Beijing 1998) p. 4-6.
88. Zhang Guohui, Tang Guoyou, Chen Jinxiang, Shi Zhaomin, Liu Guangzhi, Zhang Xuemei, Chen Zemin, Gledenov Yu.M., Sedysheva M., Khuukhenkhuu G. Differential Cross Section Measurements for the  $^6\text{Li}(n,t)^4\text{He}$  Reaction at 3.67 and 4.42 MeV. In Communication of Nuclear Data Progress N21 (1999), China Nuclear Information Centre, Atomic Energy Press, Beijing 1999.
89. Пикельнер Л.Б. Воспоминания сотрудника Лаборатории нейтронной физики. Ф.Л. Шапиро: Человек и ученый: Книга воспоминаний, ОИЯИ, 97-377, Дубна, 1998, с.107-109 (in Russian).

## Theory

1. Bunatian G. Inquiry for the  $p^+ - p^-$  Bound State Conversion into Two  $p^0$  as Being due to the Weinberg  $p^+ - p^-$  Interaction. Hadronic Atoms and Positronium in the Standard Model: Proc. of the Intern. Workshop, Dubna, Russia, May 1998. JINR, E2-98-254, Dubna, 1998, p.85-90.
2. Bunatian G.G. Inquiry for the  $(p^+ - p^-)$  Bound State Conversion into Two  $p^0$  as Being due to the Weinberg  $p - p$  Interaction. Nucl. Phys.A., 1999, v.645, N.2, p.314-328.
3. Bunatian G.G. Inquiry for the Conversion on the  $(p^+ - p^-)$  Bound State into Two  $p^0$ . JINR, E4-98-177, Dubna, 1998, p. 16.
4. Bunatian G.G. Inquiry Into Antineutrino Angular Distribution in the Experiments on Polarized Neutron - Decay. JINR, E4-99-62, Dubna, 1999, p.23.
5. Bunatian G.G. On Radiative Corrections to the Strangeness-Conserving -Decay of Free Baryons. ЯФ, 1999, т.62, N.4, p.697-714.
6. Ignatovich V.K., Masahiko Utsuro, Ignatovich Ph.V. Neutron-Electron Interaction: Transmission and Scattering Amplitudes and Interference Corrections. Phys. Rev.C., 1999, v.59, N.2, p.1136-1148.
7. Ignatovich V.K., Radu F., Generalized Matrix Method for the Transmission of Neutrons Through Multilayer Magnetic Systems with Noncollinear Magnetization. PNCMI'98: Proc.of the Second Intern.Workshop on Polarised Neutrons for Condensed Matter Investigations, Grenoble, Sept.1998. Physica B., 1999, Vol.267-268)
8. Ignatovich V.K., Utsuro M. Review of Inelastic Losses of UCN and Quantum Mechanics of the de Broglie Wave Packet. JINR, E4-98-327, Dubna, 1998, p. 10.
9. Ignatovich V.K. Принцип инвариантности, или расслоения, в нейтронной оптике и фундаментальные свойства нейтрона. Yad. Fiz., 1999, vol.62, No.5, p.792-806 (in Russian).
10. Lyuboshitz V.V., Lyuboshitz V.L. Замечания о Т-инвариантности и поляризационных эффектах при упругом рассеянии частицы со спином 1/2 на неполяризованной мишени. JINR, P4-98-88, Dubna, 1998, p. 10 (in Russian).

## Applied Research

1. Cherkintsev V.D., Frontasyeva M.V., Lyapuniv S.M., Smirnov L.I. Biomonitoring air pollution in Chelyabinsk region (Ural mountains, Russia) through trace-elements and radionuclides: temporal and spatial trends, IAEA Report, NAHRES-43, Vienna, 1999, p. 136-154.
2. Frontasyeva M.V. Atmospheric Deposition of Heavy Metals in Some Areas of Russia, Poland and Romania (Project REGATA). In the Book of Abstracts: Workshop «Monitoring of Natural and Man-Made Radionuclides and Heavy Metal Waste in Environment» (2-5 November, 1999, Dubna, Russia), p.23.
3. Frontasyeva M.V., Gorbunov A.V., Gundorina S.F., Lyapunov S.M. and Oprea C., Nuclear and Related Analytical Techniques Used for Workplace Monitoring and Occupational Health Studies. (Part 2). Preprint JINR, E14-99-68, Dubna, 1999.
4. Frontasyeva M.V., Gorbunov A.V., Lyapunov S.M., Oprea C.D. Workplace Monitoring and Occupational Health Studies at the Center for Production of Phosphorus Mineral Fertilizers, Voskresensk (Moscow Region, Russia), Using Nuclear and Related Analytical Techniques. Part I. JINR, E14-98-392, Dubna, 1998, p. 14.
5. Frontasyeva M.V., Grodzinska K., Steinnes E.. Atmospheric deposition of heavy metals in two of the most polluted areas in the world: the copper basin in Poland and the South Ural mountains in Russia. In Proceedings, Int. Conf. Modern Trends in Activation Analysis, MTAA-10, 19-23 April, 1999, Bethesda, Maryland, USA, p. 117.

6. Frontasyeva M.V., Pavlov S.S. Regata Experimental Setup for Air Pollution Studies. Юбилейный сборник СГУ, Дубна, Д-99-123, с.185-193.
7. Frontasyeva M.V., Smirnov L.I., Steinnes E., Cherkintsev V.D., Lyapuniv S.M.. Heavy metal atmospheric deposition study in Chelyabinsk region (South Ural Mountains , Russia) using moss biomonitoring technique and applying ENAA and AAS. Preprint JINR, E14-899-257, Dubna, 1999 (Submitted to the Journal of Radioanalytical and Nuclear Chemistry).
8. Frontasyeva M.V., Steinnes E., Lyapunov S.M., Cherkintsev V.D., Smirnov L.I. Биомониторинг загрязнения промышленных зон Южного Урала тяжелыми металлами с использованием ядерно-физических методов анализа. В Сб. «Экология промышленных регионов на рубеже XXI века», Magninogorsk, 1999, p. 7-13 (in Russian).
9. Lavdansky P.A., Engovatov I.A., Frontasyeva M.V. Activation of Shielding and Construction Materials in the Problem of Nuclear Power Plant Decommissioning. In the Book of Abstracts: Workshop «Monitoring of Natural and Man-Made Radionuclides and Heavy Metal Waste in Environment» (2-5 November, 1999, Dubna, Russia), p. 64.

## Contribution to the Conferences & Schools

1. Beer H., Sedyshev P.V., Popov Yu.P., Mohr P., Stadler W., Oberhammer H., Rochow W. Neutron Capture of  $^{22}\text{Ne}$ ,  $^{30}\text{Si}$ , and  $^{40}\text{Ar}$  at Thermonuclear Energies. 10th Int. Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, Santa Fe, New Mexcio, USA, 30. 8.-3. 9. 1999 (Abstracts).
2. Boneva S.T., Vasilieva E.V., Sukhovoј A.M., Khitrov V.A. Двухквантовые гамма- каскады после захвата тепловых нейтронов в  $^{187}\text{Os}$ . Международное совещание по физике атомного ядра: Тезисы докладов 48 совещания по ядерной спектроскопии и структуре атомного ядра, Moscow, June 1998. St-Petersburg, 1998, p.72.
3. Boneva S.T., Vasilieva E.V., Sukhovoј A.M., Khitrov V.A. Каскадный гамма-распад компаунд-состояния  $^{190}\text{Os}$ . Международное совещание по физике атомного ядра: Тезисы докладов 48 совещания по ядерной спектроскопии и структуре атомного ядра, Moscow, June 1998. St-Petersburg, 1998, p.73.
4. Bunatian G.G. Inquiry for the ( $p^+$ -  $p^-$ ) Bound State Conversion into Two  $p^0$  as Being due to the Weinberg  $p$ - $p$  Interaction. Mesons and Light Nuclei '98: Proc. of the 7th Conf., Prague-Pruhonicе, Czech Republic, Aug. - Sept. 1998., Singapore etc.: World Sci., 1999, p.56-61.
5. Ермакова E.V., Frontasyeva M.V., Pavlov S.S. Эпитепловой нейтронный активационный анализ мхов биомониторов, используемых для определения атмосферных выпадений тяжелых металлов в районе Ясной Поляны (Тульская область). Тезисы в Трудах «Третья открытая научная конференция молодых ученых и специалистов ОИЯИ», Dubna, 15-19 February 1999, Д-99-94, p. 59.
6. Furman W.I. Ядерное деление резонансными нейтронами. VIII School on Neutron Physics, Dubna, August- September 1998. JINR, P3-98-240, Dubna,1998, p.39 (in Russian).
7. Galinskaya T.E., Frontasyeva M.V., Ramadan A.B. Изучение недельных циклов элементов-загрязнителей в Великой Каирской долине Египта. Тезисы в Трудах , «Третья открытая научная конференция молодых ученых и специалистов. JINR, Dubna, 15-19 February 1999», Д-99-44, с. 27.
8. Gledenov Yu.M., Machrafi R., Oprea A., Salatski V.I., Sedyshev P.V., Szalanski P.I.. Determination of the Forward Backward Asymmetry Coefficient in the  $^{35}\text{Cl}(n,p)^{35}\text{S}$  Reaction. In: E3-99-212, ISINN-7, p. 229-232.
9. Gledenov Yu.M., Machrafi R., Oprea A.I., Sedyshev P.V., Salatski V.I., Andrzejewski J., Szalanski P.I.. Characteristics of an Ionization Chamber for (n,p) and (n,a) Reaction on Gaseous Targets. In:E3-99-212, ISINN-7, p.303-307.
10. Gledenov Yu.M., Mashrafi R., Oprea A., Popov Yu.P., Sedyshev P.V.. A Study of Angular Correlation in (n,p) Reaction. In:E3-99-212, ISINN-7, p.295-302.
11. Gledenov Yu.M., Oprea A., Salatski V.I., Sedyshev P.V., Szalanski P.I., Vesna V.A., Okunev I.S.. A Search for P-odd and P-even Correlation in the  $^{35}\text{Cl}(n,p)^{35}\text{S}$  Reaction. In: Intern.Nucl.Phys.Conf., August 24-28, Paris, France, 1998, Abstracts of contributed papers, p.716.
12. Gledenov Yu.M., Salatski V.I., Sedyshev P.V., Szalanski P.I., Andrzejewski J., Zak A.. Test of GIC with Gaseous Samples and Measurements of (n,a) Cross Sections. In: Intern. Nucl. Phys. Conf., August 24-28, Paris, France, 1998, Abstracts of Contributed Papers, p.769.
13. Gledenov Yu.M. et al. Нейтронные исследования для ядерной астрофизики. Международное совещание по физике атомного ядра: Тезисы докл. 48 совещ. по яд. спектроскопии и структуре ат. ядра, Moscow, June 1998. St-Petersburg, 1998, p.202 (in Russian).
14. Gledenov Yu.M. Нейтронные реакции с вылетом заряженных частиц. VIII Shool on Neutron Physics, Dubna, August-September 1998. JINR, P3-98-240, Dubna, 1998, p.32 (in Russian).

15. Gledenov Yu.M., Sedyshev P.V., Keler P., Bar N. Коэффициенты асимметрии в реакции  $^{35}\text{Cl}(n,p)^{35}\text{S}$ . 2-я Открытая научная конференция молодых ученых и специалистов ОИЯИ, Dubna, March 1998. Труды конференции, JINR Д-98-224, Dubna, 1998, p.12-14.
16. Kuharska A., Grodzinska R., Frontasyeva M.V., Gundorina S.F., Ostovnaya T.M. Изучение атмосферных выпадений тяжелых металлов в Центральной Европе (Медный бассейн в Польше) с помощью мхов-биомониторов и ядерно-физических методов (нейтронный активационный анализ и атомная абсорбция). Тезисы в Трудах: «Третья открытая научная конференция молодых ученых и специалистов. JINR, Dubna, 15-19 February 1999», Д-99-44, p. 62 (in Russian).

**Nikonov V.V., Lukina N.V., Frontasyeva M.V., Steinnes E. Trace Elements in Al-Fe Humus Podzols of Boreal Forests. In the Book of Abstracts: Workshop «Monitoring of Natural and Man-Made Radionuclides and Heavy Metal Waste in Environment» (2-5 November, 1999, Dubna, Russia), p. 55.**

1. Oprea C., Shorenkova O. and Komkova L., GIS -gestuzte Datenpräsentation für Umweltdaten. Okosystemare Ansätze in der Okotoxikologie, 18-19 May 1998, Zittau, Germany, p.176.
2. Oprea C., Timofte L., Cozma F., Frontasyeva M.V., Steinnes E., et.al. Heavy Metal Atmospheric Deposition in Transilvania Studied by Moss Biomonitoring Technique Using ENAA and AAS. In the Book of Abstracts: Workshop «Monitoring of Natural and Man-Made Radionuclides and Heavy Metal Waste in Environment» (2-5 November, 1999, Dubna, Russia), p. 54.
3. Oprea K., Frontasyeva M.V., Gundorina S.F., Gorbunov A.V., Lyapunov S.M. Ядерно-физические методы, используемые в решении задач мониторинга на рабочих местах и здоровья человека. Тезисы в Трудах , «Третья открытая научная конференция молодых ученых и специалистов ОИЯИ, Dubna, 15-19 February 1999», Д-99-44, p. 65.
4. Oprea K.D. GIS-представление данных для изучения окружающей среды. 2-я Открытая научная конференция молодых ученых и специалистов ОИЯИ, Dubna, March 1998. Труды конференции, JINR, Д-98-224, Dubna, 1998, p.146-147.
5. Oprea K.D. Подвижность и доступность  $^{137}\text{Cs}$  и его отношение к стабильному Cs в дельте Дуная: озеро Надежды. 2-я Открытая научная конференция молодых ученых и специалистов JINR, Dubna, March 1998. Труды конференции, JINR, Д-98-224, Dubna, 1998, p.146.
6. Protopopescu D. Deformation of Nuclei Near the Top of Potential Barrier. 2-я Открытая научная конференция молодых ученых и специалистов ОИЯИ, Дубна, март 1998. Труды конференции, ОИЯИ, Д-98-224, Дубна, 1998, с.61-63.
7. Samosvat G.S. Рассеяние нейтронов ядрами и фундаментальные свойства нейтрона. VIII School on Neutron Physics, Dubna, August-September 1998. JINR, P3-98-240, Dubna, 1998, p.36 (in Russian).
8. Serov D.G. Многопараметрический анализ данных при гамма- спектроскопии осколков деления на импульсном источнике нейтронов. 2-я Открытая научная конференция молодых ученых и специалистов ОИЯИ, Dubna, March 1998. Труды конференции, JINR, Д-98-224, Dubna, 1998, p.38.
9. Shvetsov V.N. Ультрахолодные нейтроны и фундаментальные проблемы физики. VIII School on Neutron Physics, Dubna, August-September 1998. JINR, P3-98-240, Dubna, 1998, p.20 (in Russian).
10. Smirnov L.I. ЭНАА мхов-биомониторов для определения атмосферных выпадений тяжелых металлов (район магнитогорского металлургического комбината, Челябинская область). 2-я Открытая научная конференция молодых ученых и специалистов ОИЯИ, Dubna, March 1998. Труды конференции, JINR, Д-98-224, Dubna, 1998, p.147.
11. Strelkov A.V. Эксперименты с УХН. VIII School on Neutron Physics, Dubna, August-September 1998. JINR, P3-98-240, Dubna, 1998, p.37 (in Russian).
12. Sukhovoј A.M. Каскады гамма- лучей радиационного захвата нейтронов. VIII School on Neutron Physics, Dubna, August-September 1998. JINR, P3-98-240, Dubna, 1998, p.38 (in Russian).
13. Tretyakova T.Yu., Lanskoj D.E. L Binding Energy in Neutron-Rich Hypernuclei. Heavy Ion Physics: Proc. VI Intern. School Seminar, Dubna, Sept. 1997. Singapore etc.: World Sci., 1998, p. 187-189.
14. Vasilieva E.V., Sukhovoј A.M., Khitrov V.A., Honzatko J., Tomandl I., Bondarenko V.A., Simonova L.I. Спектроскопия состояний деформированных ядер до энергии возбуждения  $E_{ex} \sim 3-4$  МэВ. Международное совещание по физике атомного ядра: Тезисы докладов 48 совещания по ядерной спектроскопии и структуре атомного ядра, Moscow, June 1998. St-Petersburg, 1998, p.44.
15. Vesna V.A., Okunev I.S., Shul'gina E.V., Gledenov Yu.M., Popov Yu.P., Lebedev-Stepanov P.V., Sinyakov A.V., Tchuvil'sky Yu.M.. Parity Violation in B and Li Nuclei in Reactions with Polarized Thermal Neutrons. In: Intern.Nucl.Phys.Conf., August 24-28, Paris, France, 1998, Abstracts of Contributed Papers, p.717.
16. Zeinalov Sh.S. Регистрация и идентификация заряженных частиц при делении атомных ядер. VIII School on Neutron Physics, Dubna, August-September. 1998. JINR, P3-98-240, Dubna, 1998, p.33 (in Russian).



17. Zhang Guohui, Tang Guoyou, Chen Jinxiang, Shi Zhaomin, Liu Guangzhi, Zhang Xuemei, Chen Zemin, Gledenov Yu.M., Sedysheva M., Khuukhenkhuu G.. Differential Cross Section Measurements for the  ${}^6\text{Li}(n,t){}^4\text{He}$  Reaction at 3.67 and 4.42 MeV. In: ISINN-7 (Dubna 1999), 1999, p.219-224.
18. Пикельнер Л.В. Нейтронная спектроскопия. VIII School on Neutron Physics, Dubna, August-September 1998. JINR, P3-98-240, Dubna, 1998, p.35 (in Russian).

## **THE IBR-2 SPECTROMETER COMPLEX AND COMPUTATION INFRASTRUCTURE**

1. Chkhalo N., Gebauer B., Levchanovsky F. et al. Development of Large-Area Hybrid Low-Pressure 2D-MSGC Detectors for Neutron Imaging. Proc. of Intern. Workshop on Micro-Pattern Gas Detectors, Orsay, France, June 28-30, 1999.
2. Fromme M., Hoffman-Schulz G., Litvinenko E., Zeim R. «BEAN - A New Standard Program for Data Analysis at BER-II». Proc. of Intern. Conf. RT'99 (June 1999, Santa Fe, USA).
3. Ivankina T.I., Kirilov A.S. et al. An Experimental and Measuring Complex of Neutronography Structure and Texture Analysis to Investigate the Transitional Processes and Physical Properties of Geomagnetic Materials under the Action of Mechanical and Thermal Effects. «Zavodskaya Laboratoriya, Diagnostica Materialov (Industrial laboratory, Diagnostics of materials)», 1999, No. 8, v.65, p. 26-33 (in Russian).
4. Kirilov A.S. et al. A VME-Based Accumulation, Control and Supervising System for Neutron Texture Measurements. Textures and Microstructures, 1999, vol. 33, p. 329-336.
5. Litvinenko E.I., Zhidkov E.P. "Some Methods of Neutron Scattering Data Analysis". Computer Physics Communications, 1999 (in press).
6. Litvinenko E.I. Methods and Programs for Express-Analysis of Neutron Scattering Data. JINR, 10-99-219, Dubna, 1999.