

ST. PETERSBURG STATE UNIVERSITY
RUSSIAN ACADEMY OF SCIENCES
PETERSBURG NUCLEAR PHYSICS INSTITUTE

FIRST BULLETIN

Dear Colleague,

On behalf of the Organizing Committee I have a pleasure to invite you to participate in the International Conference on Nuclear Physics "Nucleus 2010. Methods of Nuclear Physics for Femto- and Nanotechnologies" (LX Meeting on Nuclear Spectroscopy and Nuclear Structure) to be held at St.Petersburg State University (Petershof, St.Petersburg, Russia) from July 6 until July 9, 2010. Working language is English.

With best regards

K.A.Gridnev,

Chairman of the Organizing Committee

of the International Conference on Nuclear Physics "Nucleus 2010"

ORGANIZING COMMITTEE

K.A.Gridnev (St.Petersburg University)-chairman

L.V.Krasnov (St.Petersburg University), I.A.Mitropolskij (Petersburg Nuclear Physics Institute), A.K.Vlasnikov (St.Petersburg University) - co-chairmen

V.V.Samarin (Cheboksary Politechnic Institute), N.S.Zelenskaya (Moscow University)- vice-chairperson

S.N.Abramovich (Sarov), L.D.Blokhintsev (Moscow), V.E.Bunakov (Gatchina), V.Yu.Denisov (Kiev), S.N.Fadeev (St.Petersburg), E.P.Grigoriev (St.Petersburg), K.Ya.Gromov (Dubna), B.S.Ishkhanov (Moscow), M.G.Itkis (Dubna), V.G.Kalinnikov (Dubna), V.V.Lazarev (St.Petersburg), N.A.Lyutorovich (St.Petersburg), V.M.Mikhajlov (St.Petersburg), Yu.N.Novikov, A.A.Pasternak (St.Petersburg), A.A.Rimskij-Korsakov (St.Petersburg), V.O.Sergeev (St.Petersburg), V.A.Sergienko (St.Petersburg), V.I.Tselyaev (St. Petersburg), M.G.Urin (Moscow), X.Vinias (Barcelona), V.V.Voronov (Dubna)

INTERNATIONAL ADVISORY COMMITTEE

Yu.G.Abov (Moscow), N.Alamanos (Saclay), A.Antonov (Sofia), C.Beck (Strasbourg), S.T.Belyaev (Moscow), M.Brenner (Turku), V.M.Brianson (Orsay), W.Catford (Surrey), A.Duisebaev (Almaty), W.Greiner (Frankfurt), J.Hamilton (Vanderbilt), S.Hofmann (Darmstadt), B.Jonson (Goetheborg), M.Leino (Yuvaskula), M.Levitovich (Caen), V.M.Lobashev (Moscow), G.Muenzenberg (Darmstadt), W. von Oertzen (Berlin), Yu.Ts.Oganessian (Dubna), J.Vaagen (Bergen), M.V.Zhukov (Goetheborg)

SCIENTIFIC PROGRAM

The conference will highlight recent achievements in the following areas of nuclear physics:
Section 1. Experimental study of nuclear properties and fundamental interactions:

- neutron-rich nuclei;
- nuclei far from the stability valley;
- giant resonances;
- multiphonon and multi-quasiparticle states of nuclei;
- high-spin and superdeformed states of nuclei;
- beta decay of nuclei;
- synthesis of superheavy elements;
- nuclear databases.

Section 2. Experimental study of nuclear reactions:

- reaction with polarized particles;
- reaction with electrons and gamma-rays;
- reaction with heavy ions;
- fusion and fission of nuclei;
- multifragmentation of nuclei;
- reactions with neutrons and ultracold neutrons;
- reactions induced by the elementary particles.

Section 3. The theory of atomic nucleus and fundamental interactions:

- nuclear many-body problem;
- microscopic description of nuclear collectivity and its interaction with single-particle motion;
- theory of a few-body systems;
- non-linear nuclear dynamics;
- meson and quark degrees of freedom in nuclei, mesoatoms;
- hypernuclei and other exotic systems;
- nucleus interaction with atomic shell electrons;
- theories of elementary particle interaction and conservation laws;
- application of nuclear and particle physics to the astrophysical objects.
- clusters in nuclei and Bose-Einstein condensation

Section 4. Nuclear reaction theory:

- theory of direct nuclear reactions;
- statistical theory of nuclear reactions;
- theory of reactions with clusters and heavy ions;
- theory of astrophysical nucleosynthesis;
- relativistic theory of nuclear collisions;
- theory of polarization phenomena in nuclear reactions;
- theory of the proton, two-proton and cluster radioactivity and fission of nuclei;
- theory of photonuclear reactions.

Section 5. Investigations with radioactive nuclear beams:

- methods of production of radioactive nuclear beams;
- new facilities for radioactive nuclear beams;
- nuclear reactions in the vicinity of driplines;
- properties of exotic nuclei;
- beyond the neutron and proton driplines;
- investigations of halo nuclei;
- superheavy nuclei researches;
- radioactive nuclear beams and nuclear astrophysics

Section 6. Experimental technique and its applications:

- instruments and methods of nuclear-physics experiment, data processing management;

- radiation detectors;
- accelerator technologies;
- nuclear and radiation safety, radioecology;
- radiation technology in micro- and nanoelectronics for the creation of new materials;
- evolution of beams and particles in the crystal.

The working language is English.

The program includes plenary (talks up to 30 min.) and topical parallel (oral talks 15 min. or poster) sessions. Organizing Committee will publish the working program of the Conference at a later date. Participants are provided with modern hardware for presentation of the report: multimedia projector (Viewer Microsoft Power Point 2003), overhead.

PRELIMINARY LIST OF SPEAKERS

Ya.Abe (Kyoto University, Japan), D.Ackermann (GSI, Germany), G.Alkhazov (PNPI, Russia), V.Bunakov (PNPI, Russia), Yu.Chuvilski (MSU, Russia), V.Goldberg (Kurchatov Institute, Russia), W.Greiner (Frankfurt University, Germany), S.Hofmann (GSI, Germany), V.Karnaukhov (JINR, Russia), V.Lukyanov (JINR, Russia), Yu.Novikov (PNPI, Russia), W. Von Oertzen (Hahn-Meitner-Institut, Germany), Yu.Oganesyan (JINR, Russia), A.Ogloblin (Kurchatov Institute, Russia), Yu.Penionzhkevich (JINR, Dubna), A.Ramayya (Vanderbilt University, USA), S.Shlomo (Texas A&M University, USA), M.Urin (MEPHi, Russia), X.Vinias (Barcelona, Spain).

PUBLICATIONS

The book of abstracts will be published and distributed among participants during the Conference. We kindly ask to submit the abstracts of talks in electronic form by March 1, 2010. The text of abstracts should be uploaded from the conference Web site. The text of abstracts (see the template) should be prepared in English using Times New Roman fonts and should not exceed strictly one page of A4 size (210mm x 297 mm, left margin 30mm, upper margin 20 mm, right margin 20 mm, bottom margin 20 mm) including figures, tables and references. The title font size is 16 pt, bold, centered, line spacing 1. The authors list should be typed using 14 pt fonts, line spacing 1. Names of authors are before surnames and separated by a break from surnames. The list of organizations should be typed in italic, 12 pt fonts, line spacing 1, with semicolons between names of the organizations, each organization in separate line. If the authors work in different organizations these organizations should be enumerated with the numbers given in the superscripts after the author's name in the list of authors and in superscripts before the name of organization in the list of organizations. E-mail addresses of speakers must follow a list of organizations on a single line (font size 12 pt, line spacing 1). The body of a text should be prepared using 14 pt fonts, line spacing 1. The bibliography list (12 pt) should be enumerated and the reference numbers in a body of the abstracts should be in brackets. The author's name in the bibliography should be before surname without any break between them. Only monochrome images of high contrast are allowed. The figures captions should be prepared using 12 pt, italic. The template of the abstracts can be downloaded from the conference site. Permission for publication of abstracts (for authors from Russia) should be sent by fax: Fax: +7-812-4287240 (Prof. K. A. Gridnev). The Proceedings of this Conference will be published by the journals "Bulletin of Russian Academy of Science, Series of Physics" (for talks presented at parallel or poster sessions) and "Physics of Atomic Nuclei" (for talks at plenary sessions). During the conference authors must submit to the Organizing Committee materials processed according to the rules of journals "Bulletin of Russian Academy of Science, Series of Physics" and "Physics of Atomic Nuclei" (see corresponding information on the conference Web site). For authors from the Russian Federation articles must be accompanied by permission for the publication from the

organization, which carried out the work. Articles sent to the Conference by e-mail are not accepted.

VISAS AND INVITATIONS

The participants of the Conference and accompanying persons (who need entry visas to Russian Federation) are kindly asked to fill in the form on the Conference Web site before May 15, 2010. Conference Service Agency Monomax PCO provides participants with the tourist visa support papers (hotel confirmation & voucher).

The participants are asked to acknowledge receipt of the invitation and the visa.

COSTS AND ACCOMMODATION

The full registration fee amounting to 300 euros for participants and 150 euros for accompanying persons should be paid according to the rules published on the Conference Web site. It includes the book of abstracts, the banquet, the welcome reception, coffee breaks and cultural events. The participants from the Commonwealth of Independent States may pay reduced registration fee amounting to 2000 rubles. It includes book of abstracts and welcome reception. The Conference will be held at the Peterhof campus of St.Petersburg State University situated near the famous palaces, fountains and parks of former residence of Russian tsars "Peterhof", during the period of wonderful white nights. The hotel costs are not included in the registration fee. The participants can book hotel rooms on-line from the Conference Web site.

DEADLINES

March 1, 2010 for abstracts;

May 15, 2010 for registration

CONTACTS

Prof. Konstantin Aleksandrovich Gridnev, Conference chairman, tel. +7(812)4284363, fax +7(812)4287240, e-mail: kgridnev@yahoo.com;

Dr. Aleksandr Konstantinovich Vlasnikov, Conference co-chairman (scientific program), e-mail: nucleus2010@mail.ru;

Dr. Tatiana Ryshkevich, project coordinator (visas, invitations, transportation, cultural program, payments and accommodation), tel. +7(812)3352055, fax +7(812)3352039, e-mail: icnp@onlinereg.ru;

postal address: Dr. A.K.Vlasnikov, Institute of Physics, St.-Petersburg State University, Uljanovskaja str., 1, Petrodvorets, St.-Petersburg, Russia, 198504;

Web site: www.onlinereg.ru/icnp2010