

4th SOUTH AFRICA-JINR SYMPOSIUM

Few to Many Body Systems: Models and Methods and Applications

BLTP, JINR Dubna, Moscow region, Russia
September 21-25, 2015

FIRST (AND LAST) CIRCULAR

BACKGROUND: The Republic of South Africa is an associated member of the JINR already for 10 years. Currently, scientists from the RSA participate in different themes of the Topical Plan for JINR Research and International Cooperation including theory of nuclear structure and reactions, experimental elementary particle physics, relativistic nuclear physics, synthesis and properties of nuclei at the stability limits, accelerator complex of ion beams of stable and radioactive nuclides, investigations in the field of nuclear physics with neutrons, investigations of condensed matter by modern neutron scattering methods, networking, computing, computational physics, educational programme etc. On the initiative of the JINR and South Africa institutions three South Africa-JINR Symposiums were already organized, namely the 1st Symposium at Skukuza, Kruger National Park, in February 2007, the 2nd Symposium at JINR Dubna, in September 2010; the 3rd Symposium at Blaauwklippen wine farm, Stellenbosch, in November 2012. These successful scientific meetings have established new and fruitful collaborations between both physical communities.

PRESENT MEETING: The Joint Institute of Nuclear Physics will host the 4th South Africa-JINR Symposium in Dubna in the period September 21-25, 2015, which will be dedicated to the celebration of the 60th anniversary of the JINR and 10th anniversary of signing the Memorandum of Understanding between the Government of the Republic of South Africa and the Joint Institute for Nuclear Research. The Symposium will discuss the scope, success and prospective of experimental, theoretical and applied physics at the JINR and in South Africa institutions and a special attention will be devoted to scientific facilities on both sides. The Symposium will include three days of plenary and discussion sessions, namely September 21-23, 2015. September 24, 2015 is presumed for an excursion to Moscow and September 25, 2015 is planned for visit of the JINR Laboratories. The goal of the meeting is to present main results of the SA-JINR collaboration, extend the scientific and technological cooperation among the JINR and South Africa institutions and to attract young scientists from both sides to running joined research projects. The Symposium program will cover new developments in the field of particle physics, nuclear physics, applied nuclear physics, condensed matter physics, bio-monitoring project and physics of underground laboratories. Speakers of each of 12 sessions will be selected by the coordinators of the session. The main idea is to have speakers from both South Africa and JINR and in particular cases, an expert from the field from other institute. For more information see the meeting web site: <http://theor.jinr.ru/~sajinr15/>. Students from both sides will be given an opportunity to make short presentations on their research during the student session. It is believed that symposium will initiate opportunities to establish new areas scientific cooperation and extend the existing cooperation among physicists from South Africa and the JINR.

TOPICS: The Symposium program will cover new experimental and theoretical developments in the field of nuclear physics. The main topics include:

- Dense matter in heavy ion collisions and astrophysics
- Nuclear reactions, beams and facilities, techniques and applications
- Nuclear structure, clusters, modern microscopical methods
- Reactor neutrons for fundamental and applied research
- Physics of few-body, atomic and molecular systems
- Computational and mathematical methods in many-body physics
- Nonlinear phenomena in condensed matter
- Physics at underground laboratories and particle astrophysics

ORGANIZING COMMITTEE:

V.V. Voronov	Co-chairman (JINR)	e-mail: voronov@theor.jinr.ru
R. Adam	Co-chairman (SKA)	e-mail: rob@ska.ac.za
F. Šimkovic	vice-chairman (JINR)	e-mail: simkovic@theor.jinr.ru
S. Wyngaardt	vice-chairman(Uni-Stellenbosch)	e-mail: shaunmw@sun.ac.za
D.V. Kamanin	(JINR)	e-mail: kamanin@jinr.ru
J. Cleymans	(Uni-Cape Town)	e-mail: jean.cleymans@gmail.com
N. Jacobs	(Uni-Stellenbosch)	e-mail: noel@ma2.sun.ac.za
S. Pakuliak	(JINR)	e-mail: pakuliak@uc.jinr.ru
S.A. Rakityansky	(Uni-Pretoria)	e-mail: rakitsa@science.unisa.ac.za
R.T. Newman	(Uni-Stellenbosch)	e-mail: rnewman@sun.ac.za
E. Kolganova	(JINR)	e-mail: kea@theor.jinr.ru
S. Nedelko	(JINR)	e-mail: nedelko@theor.jinr.ru
O. Matyukhina	secretary (JINR)	e-mail: omatyukhina@jinr.ru

VENUE OF THE MEETING: The symposium will take place at the Bogoliubov Laboratory of Theoretical Physics, which is in a walking distance from the Hotel Dubna. A possibility for taking lunch will be at the territory of the JINR. For more information (map of the town) see the symposium web site.

TRANSPORTATION: Transportation from/to the Moscow airports Sheremetievo or Domodedovo or any Moscow railway station will be provided by the organizers. Information on the arrival date, time and flight/train number should be sent to the Meeting Coordinator - Ms. Olga Matyukhina (rsa@jinr.ru) by **September 7, 2015**.

BOARD and LODGING: The accommodation is organized in Hotel "Dubna". The breakfast is included into accommodation.

LOCATION: Dubna, whose population is almost 70,000, is located on the banks of the Volga River, 120 km away from north of Moscow. No major highways go through Dubna, so it is nicely fitted into beautiful, quiet landscapes made up by the Volga river, the Moscow Reservoir on the Volga

formed by a hydropower plant, the Moscow – Volga shipping canal, the Dubna river (the Volga's tributary), a number of smaller rivers, and, of course, forests and fields. Appealing natural landscapes are within an easy bicycle or skiing trip from any place in Dubna. Dubna is close enough to Moscow for you to be able to leave Dubna early in the morning, spend a whole day in Moscow, and come back to Dubna in the late evening. There is a direct railway and bus communication between Dubna and Moscow. Dubna has no ecologically problematic industry. Rather it is a hi-tech city. Dubna is well-known internationally, first of all, because it is a home to one of the world's largest centers of fundamental science: the Joint Institute for Nuclear Research.

SOCIAL PROGRAM: For visitors of the symposium banquet will be organized at the BLTP on Wednesday evening, September 23, 2015 and one-day excursion to Moscow is planned on Thursday, September 24, 2015. The visit of JINR Laboratories for SA participants will be arranged for Friday, September 25, 2015.

SYMPOSIUM PROCEEDINGS: The Conference Proceedings are planned to be published just after the Symposium by the JINR Publishing Department. The Proceedings will include manuscripts of all talks at the Symposium. The participants are asked to supply organizers with their prepared (latex or doc documents) contributions during the meeting. The detailed information about the preparation of the contribution will be given at the web site of Symposium (**July 1, 2015**).

CONFERENCE FEE: The symposium is organized without conference fee. All expenses connected with this meeting (including a copy of proceedings, transportation from Moscow airports to Dubna and back, hotel accommodation at Dubna, the coffee breaks, and social program) will be covered by the JINR Dubna in the framework of the program for collaboration with South Africa. The travel and local expenses of South African participants are planned to be financed by the SA-JINR grants.

APPLICATION: Contributed talks will be selected based upon application or invitation. Requests to present a talk can be sent with title and a short abstract per email to the conveners or to contact address (see the web site of the Symposium) till **June 1, 2015** (dead-line for application). Conveners of sessions are as follows:

Session: Prospects of JINR and South African basic facilities
Convenor: V. Shvetsov (shv@nf.jinr.ru), R. Adam (rob@ska.ac.za)

Session(s): NICA
Convenors: A. Sorin (sorin@theor.jinr.ru), J. Cleymans (jean.cleymans@gmail.com)

Session(s): Few-Body
Convenors: A. Motovilov (motovilv@theor.jinr.ru), S. Rakityanski (rakitsa@science.unisa.ac.za)

Session(s): Nuclear Structure
Convenors: R. Nazmitdinov (rashid@theor.jinr.ru), W.D. Heiss (dieter@physics.sun.ac.za)

Session(s): Nuclear Reactions
Convenors: D.Kamanin (kamanin@jinr.ru), S.Mullins (smm@tlabs.ac.za)

Session: Physics at Underground Laboratories
Convenors: F. Šimkovic (simkovic@theor.jinr.ru), S. Wyngaardt (shaunmw@sun.ac.za)

Session: Applied Nuclear Physics
Convenors: M.Frontasyeva (mfrontasyeva@yahoo.com), R. Newman (rnewman@sun.ac.za)

Session: Condensed Matter Physics
Convenors: Yu. Shukrinov (shukrinv@theor.jinr.ru), A.E. Botha (bothaae@unisa.ac.za)

Session: Student Session
Convenors: S.Pakuliak (pakuliak@theor.jinr.ru), N. Jacobs (noel@ma2.sun.ac.za)

CORRESPONDENCE: Please, address all mails and questions to the Conference Organizing Committee:

FAX: +7 49621 65891

E-mail: simkovic@theor.jinr.ru for talk applications
rsa@jinr.ru for visa and technical support

Address: Joint Institute for Nuclear Research, Joliot-Curie 6,
141980 Dubna, Moscow region, Russia

The workshop web site <http://theor.jinr.ru/~sajinr15/> will be available starting April 22, 2015. Please, send an e-mail to rsa@jinr.ru for all issues or inquiries not covered in this announcement on the web site.

VISA: Non-residents, who need a Russian Visa, should supply their personal data. To arrange a visa support letter you are kindly requested to send a scanned COPY OF YOUR PASSPORT (the main page with a photo) to the Symposium Coordinator – Ms. Olga Matyukhina by e-mail omatyukhina@jinr.ru (rsa@jinr.ru) before **July 1, 2015**. In case one applies for the visa not in one's native country, a copy of a resident permit should also be sent.

IMPORTANT DATES:

1 st Circular		April 15, 2015
Talk application	deadline	July 1, 2015
Visa application	deadline	July 1, 2015
Arrival information	deadline	September 7, 2015
Participant's arrival		September 20, 2015
Participant's departure		September 25–26, 2015