

Announcement of
International Workshop on "Nuclear Physics with RIBF"
March 13-17, 2006, RIKEN, Japan

We are pleased to inform you that an international workshop on "Nuclear Physics with RIBF" will be held at RIKEN, Japan on 13-17 March 2006.

****RIBF Facility****

The RI Beam Factory (RIBF) is a next generation facility to expand further scientific opportunities with intense rare-isotope beams (RIBs), which are achieved by combining a super-conducting ring cyclotron (SRC) and a large acceptance fragment separator (BigRIPS). Phase-I construction program of the SRC and BigRIPS will be completed in 2006, and will start with delivering fast RIBs in 2007. In this year, a multi-function BT line called Zero-degree forward spectrometer will also be constructed. PAC for proposals with RIBs from the BigRIPS will be held in autumn of 2006.

One can obtain the technical information on the BigRIPS as a pdf file (http://rarfaxp.riken.go.jp/RIBF-TAC05/8_BigRIPS.pdf). Primary beams available at the commissioning stage of RIBF will be ^{48}Ca (>100pnA), Kr (~100pnA), Xe (under estimation) and ^{238}U (~10pnA).

To exploit the potential of this forefront facility, RIKEN is proceeding to Phase-II program where the construction of major experimental installations is planned. This includes a large acceptance superconducting spectrometer (SAMURAI), a facility utilizing very slow RIBs provided via an rf ion guide system (SLOWRI), a high-resolution RIB spectrometer (SHARAQ), a rare RI precision mass measurement apparatus consisting of an isochronous storage ring (Rare RI ring), and an electron-scattering experimental apparatus consisting of a self-confining RI-ion target (SCRIT). Phase-II program will also expand opportunities by upgrading the present facility. The RIPS will be strengthened by primary beams accelerated at the intermediate stage ring cyclotron (IRC), and be used as a facility for low-to-medium energy polarized RIBs as well as purified proton-rich RIBs. The construction of a new additional injector linac to the RRC is also planned, which brings out the independent operation of GARIS to make it possible to promote further super-heavy element science. In-flight low energy RIBs are available at the CRIB utilizing the AVF cyclotron, which will not be used as an injector for the RIBF.

****Aim of this Workshop****

On this occasion of the forthcoming RIBs from the BigRIPS and further promotion of Phase-II program, this workshop is aiming to discuss, by exchanging ideas and interests, various research programs and to point out problems to be solved. This workshop will also give a trigger to form collaborations and networks for both coming experimental and theoretical works. We cordially invite everyone, both theorists and experimentalists, to join this workshop.

**** Program ****

Topics to be discussed at the workshop include:

- Introduction of the present and new RIBF facility as well as scientific opportunities,
- Experimental programs and instrumentations for Phase-I and -II,
- Future directions of theories to construct new frameworks.

On the first two days, plenary sessions will be allocated to the introduction of the facility of RIBF and the review of present research activities. The next two days will be dedicated to discussions in parallel sessions. The parallel sessions will be arranged in terms of the subjects under discussion (see below). All participants will have the opportunities to present their own interests and ideas. Each parallel session will be moderated by one convener. On the last day, all conveners will be requested to summarize the contents of parallel sessions and the participants will discuss future directions together.

Subjects to be discussed at the workshop include

- Shell, deformation and effective interaction in isospin asymmetry system
- Pair and cluster correlation in weakly bound system
- Exotic modes of excitation originated from isospin asymmetry and weak binding
- Moments, radii and masses as probes of exotic structure
- Production of SHEs and their properties
- Interplay between nuclear reactions and nuclear structure
- Exotic dynamics of nuclear reactions originated from isospin asymmetry
- Equation of state and new aspects for asymmetric nuclear matter
- Nuclear reactions and nuclear properties for explosive nucleosynthesis
- New theoretical methods for expanded nuclear chart
- Unique programs utilizing primary beams
- New techniques/methods for study of nuclear structure and reactions
- New instrumentations for the next generation

Kindly circulate the present announcement to potentially interested colleagues, in particular the

young members of our community, who may not yet be included in our mailing list. We would like to particularly encourage students and post-docs to participate in the workshop.

**** Facility Tour ****

Tour for the RIKEN facility will be arranged in the afternoon of 16th March.

**** Workshop Site ****

The conference halls at the Wako campus of RIKEN can accommodate up to 150 people. Therefore we are reserving a 300-seat conference hall near the Wako-city Hall for plenary sessions. It is located at 10min. walk distance from the RIKEN Wako campus or 15min.walk from the Wako-shi station. The parallel sessions on 15 and 16th March will be held at the conference halls or meeting rooms inside RIKEN. Details will be announced later.

**** Presentation and Compilation****

All of ideas and interests will be compiled as an electronic report. Therefore all presentations should be prepared in Power-Point or pdf files. CD-ROM containing all of the presentations will be distributed to all participants after the workshop.

**** Registration ****

Please fill in the registration form attached to this announcement and send it to ribf2006@rarf.riken.jp. The dead-line is 20th Feb. 2006.

**** Pre- and post-symposia and workshops ****

Before and after this workshop, symposia and workshops initiated by theorists are planned as follows:

March 9 - 12 th at University of Tokyo,

Symposium on "Structure of Exotic Nuclei and Nuclear Force"

(<http://www.phys.s.u-tokyo.ac.jp/senuf06/>)

March 20 - 24th at RIKEN

Symposium and Workshop on "Methods of many-body systems: mean field theories and beyond"

(contact E-mail address: dang@riken.jp)

**** Lodging ****

Participants will stay at Toyoko Inn "Wakoshi Ekimae", a new hotel in Wako city. The website of this hotel is:

http://www.toyoko-inn.com/e_hotel/00090/

The participants are required to make the room reservation by themselves using the on-line reservation service or by fax, which can be found at the hotel website. The reservation should be made preferably two months before the check-in date.

Other hotels along Tobu-tojyo-line are

Daily hotels in Asaka-city, Niiza-city, Shiki-city

<http://www.dailyhotel.net> (in Japanese only)

**** Visa request ****

Participants who need the entry visa to Japan should send a request to ribf2006@rarf.riken.jp in 6th-Feb. We will send you a form necessary for the visa application.

**** Second (final) circular****

The second (and also final) circular will be sent to all participants at the end of Feb., which will include the program and other details.

**** Organization ****

RIKEN

Nuclear Physics R&D group, Frontier Research System

Radioactive Isotope Physics Laboratory

Heavy Ion Nuclear Physics Laboratory

Applied Nuclear Physics Laboratory

Center for Nuclear Study, University of Tokyo

Registration Form

Name: (First name) (Last name)

Institution:

Address:

Phone:

Fax:

E-mail:

Arrival date:

Departure date:

Number of nights of stay:

Additional information if any (accompanying persons, etc.):

Your interests or subjects:

Title of your talk:

Abstract:(free format)
