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## Dear RIBF users

We are here sending you the first RIBF Quarterly. As the name, Quarterly, implies, this news letter will be issued seasonally with the most up-to-minutes information on the RIKEN RI Beam Factory. Requests and comments on the RIBF Quarterly are always welcome.

## Greetings from the chair of User Executive Committee (UEC)

It is my pleasure to introduce you the first issue of an RIBF Quarterly which is finally being published in response to the UEC request. I hope it will provide you with useful information for preparing new experiments using RIBF.

I would like to take this opportunity to announce that the second international RIBF user meeting will be held just after the next RIBF PAC scheduled in either October or November. I encourage you to set up a collaboration meeting of ongoing or future experimental project during the user meeting.

Enjoy the Quarterly.  
Tetsuya MURAKAMI

## Present status of the RIBF

Nearly one year has passed since we successfully accelerated the U-beam, and made commissioning of both the new accelerators and the BigRIPS. These achievements, including a discovery of new isotope,  $^{125}\text{Pd}$ , were announced at INPC2007 (<http://www.inpc2007.jp>) as a flash report from RIBF.

Since then, continuous efforts have been made to improve the accelerator performances. Primary beam intensities achieved so far, and expected beam intensities as results of the improvement can be found in our web site; <http://www.nishina.riken.jp/UsersGuide/Nuclear/accelerator/tecinfo.html>.

The constructions of experimental installations were taking place in parallel. The Zero Degree has been completed, and it is now ready to be commissioned in coming June. The construction of the SHARAQ spectrometer and its beam line designed to achieve dispersion matching is on schedule, and the commissioning is scheduled at the end of this fiscal year.

One of the other important on-going efforts is the construction of a superconducting 28-GHz ECR ion source (prototype), which is expected to provide much intense U beam. It will be installed in this fiscal year, and be in operation in the FY2009.

Very recently, a carry-over of oil was found in the refrigerator of the SRC and BigRIPS cryogenic plant. Detailed investigations of the oil removal unit of the compressor took place, and we are

cleaning now the cold box. Our efforts to minimize the negative impact this problem may have on the commissioning schedule are underway.

As written in the following "Operation Schedule", the ZeroDegree commissioning and the BigRIPS experiment using the U beam will start in June as scheduled.

## Operation Schedule

Following is the RIBF operation schedule currently planned for this fiscal year, FY2008:

1. U-beam development: the middle of April - the beginning of May
2. The ZeroDegree commissioning and a BigRIPS experiment (NP0702-RUBF020,Kubo) : June
3. Ca or Kr beam commissioning and experiments will be scheduled in October and November
4. The SHARAQ commissioning : March

In addition to these activities at the new facilities, we will, of course, schedule the PAC-approved experiments at the other facilities, such as GARIS, CRIB and RIPS, as much as possible.

Long-term shutdown is scheduled this summer from July to September as usual. In addition, three-month shutdown is scheduled in the winter period, from December to February, to construct the new beam line for the SHARAQ spectrometer.



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➡ We have already called for the beam-time requests for the experiments ready to run in the first half of the FY2008, (April - September), and the beam time schedule has been fixed. Except for the BigRIPS experiments, all the experiments, whose beam-time requests have been submitted, are scheduled in the coming half year. The schedule is available in our web page, <http://www.rarf.riken.go.jp/rarfmt/pc.html>.

The beam-time requests for the second half of this FY year, October-March, will be called in June.

## Budgetary situation

The budgetary situation was quite severe in FY2007. Fortunately, the situation, especially budget for the RIBF operation, is slightly improved for this year. The construction budget for the beam line to the SHARAQ spectrometer is approved. The operational schedule mentioned above reflects these.

In addition, the construction of the SAMURAI spectrometer has been approved by the government. After a four-year construction, the SAMURAI spectrometer will be in operation.

## PACs

The 3rd Nuclear Physics (NP) PAC meeting was held in Feb. 18 and 19, during which 18 proposals have been reviewed. In March 27 and 28, the 3rd Materials and Life science (ML) PAC was held, during which 19 proposals, 16 for RIKEN RAL Muon Facility and 3 for RIBF, were reviewed. <http://www.nishina.riken.jp/UsersGuide/>

### Important notice on PAC

In order to synchronize the PAC meeting with the call for beam-time requests for the PAC approved experiments in January and July, the NP-PAC meeting will be held regularly in June and December from 2009.

This year, as a transition, the next 4th NP-PAC meeting will be held around October, instead of June or December. To all users who plan to submit proposals, please keep in mind that the 5th NP-PAC meeting will be scheduled in June, 2009.

The RIBF users will be notified by email on the latest information on the NP-PAC meeting.

## Recent hot news from RIBF

A paper on development of a new RI trap for electron scattering, SCRIT (Self-Confining RI Target), was accepted for publication in Phys. Rev. Lett., and will appear in the May 2, 2008 issue.

SCRIT is a novel RI trap to realize never-performed electron scattering experiments from short-lived nuclei. The SCRIT collaboration have been developing this new trap technology at an existing electron storage ring, KSR, of Kyoto University. Electron energy is 120 MeV, and the typical stored beam current is 80 mA. Recently they have successfully trapped  $\sim 7 \times 10^6$  Cs ions injected from an external ion source, and observed elastically scattered electrons from the trapped Cs ions. The SCRIT scheme is demonstrated to be surely a way for eRI scattering experiments.

## User Group Activities

The town meeting of RIBF Users Group was held in March 24 at Kinki University during the JPS annual meetings. The minutes will be pasted in [http://ribfwww.riken.go.jp/exp/RIBF\\_uec\\_eng](http://ribfwww.riken.go.jp/exp/RIBF_uec_eng).

## Workshops

The workshop schedules at RIBF are available in the web site : <http://www.nishina.riken.jp/Eng/seminar.html>

Recent workshops:

1. SAKURA workshop  
International Workshop on Material and Life Science using nuclear probes from high-energy accelerators,  
April 1-3, 2008  
<http://www.nishina.riken.jp/newcontents/contents/oshirase/sakuraworkshop.pdf>
2. Gamma08 (CNS-RIKEN joint symposium)  
"Frontier of gamma-ray spectroscopy and Perspectives for Nuclear Structure Studies (gamma08)"  
April 3-5, 2008  
<http://www.cns.s.u-tokyo.ac.jp/gamma08/>