

# Minutes of the 45th Machine-Time Committee Meeting

Date and time: June 10, 2011; 10:00–11:50

Place: RIBF Bldg., Room 203

Attendees: Sakai<sup>a</sup> (Chair), En'yo<sup>a,†</sup>, Kamigaito<sup>a</sup>, Kase<sup>a</sup>, Kubo<sup>a</sup>, Kubono<sup>b</sup>, K. Morita<sup>a</sup>, Motobayashi<sup>a,†</sup>, Ueno<sup>a</sup>, Uesaka<sup>a</sup>, Uwamino<sup>a</sup>, Wakasugi<sup>a</sup>

Absent: Abe<sup>a</sup>, Fukunishi<sup>a</sup>, Haba<sup>a,†</sup>, Sakurai<sup>a</sup>, Shimoura<sup>b</sup>, Teranishi<sup>c,†</sup>, Yoshida<sup>a,†</sup>

<sup>a</sup>RNC / <sup>b</sup>CNS / <sup>c</sup>RIBF-UEC / <sup>†</sup>Observer

(in random order)

## Reports

### 1. Beam-time schedule changes (Sakai)

- In response to a request from the representative and CNS director and given the significance for physics of the experiment, the MT Committee chair has added, with the agreement of the relevant departments within RIKEN, 1 extra day to the beam time (BT) of NP1012-SHARAQ05-01 (Yako *et al.*, SHARAQ, Jun/5/9:00 – Jun/11/9:00).
- The other BTs were conducted as scheduled from May 20.
- Relevant to this report, rules on the extension and addition to BTs were discussed. This issue will be discussed again in the next meeting.

### 2. Status of RIBF operation

- Performance check of BigRIPS / ZDS / SHARAQ (Kubo)
  - The performance of BigRIPS / ZDS was checked by transporting primary and secondary beams to the end of BigRIPS / ZDS, where several  $B\rho$  settings were examined.
  - According to the on-line analysis, no significant problem due to the East Japan Earthquake was found in the production, isotope-separation, and particle-identification of RI beams, indicating the integrity of the device. Likewise, no problem was found with the beam-line counters, although an unexpected shift was observed with a PPAC detector in the vertical direction (The origin of the shift will be investigated later).
  - The magnification measured at each focal plane was in good agreement with the calculated value. However, discontinuity of the beam profile between F7 and F8 was reproduced in the vertical direction.
  - The device integrity was also confirmed for the dispersion-matching beam line with respect to the SHARAQ Spectrometer.
- Repair of the RIBF facility
  - The RIPS beam-swinger system was damaged by the earthquake. Since a duct inside the system is also used as a beam transport line to RIPS, experiments cannot be carried out with RIPS even if the beam swinger is not necessary. It will be repaired this summer. (Kase)
  - A layer short was found in the RRC coil. It will be repaired this summer. (Kamigaito)

### 3. Status of the PAC meetings (Ueno)

- 9th NP-PAC: The reports on i) in-house technical reviews and ii) follow-up evaluations of completed BTs were sent to the PAC. Report i) was also sent to the representatives. The PAC is now conducting a preliminary review. Relevant to this report, total BT approvable in the 9th PAC meeting was discussed.
- 8th ML-PAC: The PAC meeting will be held sometime at the end of August, early September, 2011.
- 3rd In-PAC: The PAC meeting will be held after September.

### **Topics discussed**

#### **1. Approval of the minutes of the previous meeting (Sakai)**

#### **2. SHE experiment in July–September (Sakai)**

- In view of the need to conserve on electricity use this summer, the possibilities for BT scheduling of the SHE experiment were discussed. To find a solution, further discussions will take place with relevant departments and administration offices

#### **3. FY2011 second half-year BT schedule (Sakai)**

- The following limitations and constraints to determine the BT schedule for the second half of FY 2011, from Oct. 2011 to Mar. 2012, were discussed.
  - Scheduled power stoppages and maintenance: A power stoppage for the Wako campus is scheduled for Oct. 8–10, and CGS maintenance is scheduled for Jan. 2012 (SRC/BigRIPS cooling will be stopped during this period of time), and alternate dates for electricity stoppage (Mar. 10–11. 2012).
  - External power usage: The restriction on external power use by the Nishina Center, as decided by the RIKEN Emergency Headquarters, is a maximum of 10.5 MW from Oct. to Nov., 8.5 MW from Dec. 1 to 11, 5 MW from Dec. 12 to 31, 3.5 MW in Jan. 2012, and 5 MW from Feb. to Mar. 31, 2012. No BT can be scheduled for Jan. 2012. BTs which need the RIBF cyclotron cascade acceleration including fRC and IRC can be scheduled between Oct. 11 and Dec. 11.
  - Four educational BTs of the University of Tokyo with the AVF cyclotron will be scheduled in Oct.–Nov.
  - A new gas-stripper system will be installed at the exit of the RRC sometime in Jan.
  - Construction work around and upstream from SAMURAI for three weeks in Feb.
  - Installation of STQ sometime in Feb.
  - Improvement work on the fRC scheduled for three weeks in Mar.
- The BT outline of the new RIBF facility was discussed taking the above constraints into account. After the cooling start of SRC/BigRIPS in early September, BT scheduling of  $^{238}\text{U}$  from Oct. 11 (i.e., after the electricity stoppage) to Nov. and  $^{124}\text{Xe}$  in early Dec. are currently under consideration. After the CGS maintenance in Jan., the SRC/BigRIPS cooling will be recovered by the middle of Feb. In terms of external electric power, BTs in the mode of AVF-RRC-SRC can be scheduled for the middle to the end of Feb. In March, a BT series of 18O beams in the same acceleration mode will be scheduled for SAMURAI commissioning and others.

- The outline of the second half-year BT schedule will be discussed further and decided in the next MT Committee meeting.

#### **4. Other issues**

- Partitioning of BigRIPS and ZDS areas into two different radiation controlled areas. (Kubo / Uwamino)
- The partitioning work will be carried out July–September, but the modification of the radiation control system will be delayed until December.

#### **5. Next meeting**

- The next MT Committee meeting will be held on Friday, July 15, 2011, at 13:30.
- The meeting after the next will be held on Thursday, September 22, 2011, at 13:30.