Minutes of the 48th Machine-Time Committee Meeting

Date and time: October 21, 2011; 13:30–14:30

Place: RIBF Bldg., Room 203

Attendees: Sakai[a] (Chair), Fukunishi[a], Haba[a, †], Henning[a, †], Kamigaito[a], Kase[a], Kubo[a], Kubono[b], Motobayashi[a, †], Sakurai[a], Shimoura[b], Suda[c, †], Ueno[a], Uwamino[a], Wakasugi[a]

Absent: Abe[a], En'yo[a, †], Morita[a], Uesaka[a], Yoshida[a, †]

[a] RNC / [b] CNS / [c] RIBF-UEC / [†] Observer

(in random order)

Reports

1. **Change of an observer in the Committee** (Sakai)
   - Professor Suda at Tohoku University was elected as the new RIBF-UEC chair. In response to this change, Suda replaced Teranishi as the observer representing RIBF-UEC starting from this meeting.

2. **RIBF operation** (Kase)
   - Accelerator-related trouble (Kamigaito)

     There was a water leakage of 200L in SRC on October 2. After 8 days of repair work, SRC is now operating normally. The improvement on cooling pipe configuration will take place in January. In addition, there was trouble in the electric-power supply system of AVF on October 14 due to a breaker problem. The problem was probably caused as a result of AVF and RILAC2 being connected to the same power supply system. To solve this problem, their power supply system will be separated. Due to this trouble, the start of the AVF beam time (BT) was delayed by 1 day.
   - Status of the ^{238}U beam delivery (Fukunishi)

     Due to the high performance of the ECR ion source (IS) newly equipped with RILAC2, a ^{238}U beam extracted from IS at the current I = 22 eμA is 10 times more powerful than the beam extracted in 2008 from the former one. RILAC2 is operating stably. A beam delivery to users, however, was delayed for 4 days not only due to the above noted i) water leakage in SRC and ii) trouble with AVF/RILAC electric power supply system, but also technical difficulties in iii) tuning a new first-stage charge-stripper foil system and iv) the cyclotron cascade acceleration incidental for U beam deliveries. In the current beam delivery, the accelerator group has been facing a problem with low beam transmission rates through fRC and IRC caused by low beam quality after passing the first-stage charge stripper. The group is currently trying to improve the situation. The present beam current is $I \leq$ 1pnA.

3. **Status of the Machine Study** (Kubo)

   After a delay of 4 days, the beam delivery to BigRIPS took place on October 19 at 13:00. The beam current is ≤ 1 pnA (goal peak and average currents in this series are 5 and 3 pnA, respectively). The BigRIPS tuning for a secondary beam started on October 21 at 3:00. The tuning is still ongoing as of noon today due to the preparation and the tuning of a PPAC detector.

4. **Status of the PAC meetings** (Ueno)

- NP-PAC: Preparations for the 10th NP-PAC meeting on December 9-10, 2011 are underway.
  - Contact persons in charge of equipment and detector for the PAC meetings
    Starting from the upcoming 10th meeting, Otsu will replace Kubo as the ZDS contact person. At the same time, three device contact persons, Motobayashi (DALI2), Nishimura (EURICA), and Ideguchi (GRAPE) will be newly assigned. They will be in charge of the technical review of proposals.
  - Two issues discussed between CNS and RIKEN on October 19
    In-house technical review: Since a large number of proposals are expected to be submitted this time, a technical review is conducted in parallel with the pre-review by the PAC, although it is usually done prior to the preliminary document screening by the PAC. The technical review report will be sent to the PAC and the spokespersons as soon as the review is completed.
    Follow-up status reports on RIBF BTs: Previously, the spokespersons of the completed BTs were required to submit a status report to be reviewed by the PAC. Now, those who conducted a part of BT will also be requested to do the same starting from the 10th meeting.
  - Status of the proposal submission:
    RIBF Users Office received 30 proposals as of the morning of October 21, including 17 EURICA-related proposals.
- ML-PAC: The PAC report on the 8th meeting was sent to the spokespersons on September 26.
- In-PAC: Atsushi Yoshida was appointed as the new Team Leader of the Industrial Cooperation Team. He will take initiative in planning for the 3rd In-PAC meeting.

5. **BT allocation to the EURICA project in the next fiscal year** (Henning)
   A total days of BT which can be allocated to the EURICA project in the next fiscal year is being discussed under the initiative of the RNC Deputy Director. It was explained that assuming 220 days of SRC operation which would be possible if 8-months operation is realized, and 40% of which is allocated to the EURICA project, 88 days could be provided to the project including the tuning times for primary and secondary beam deliveries. The whole BT plan, which includes EURICA, was also shown. Hearing of opinions of the MT Committee regarding the matter was conducted. Discussions on this issue will continue. It was noted that the EURICA detectors will be installed in RNC for the next 1.5 years.

6. **BT to be approved by the NP-PAC for the next 1.5 years** (Henning)
   A total days of BT including the EURICA project which will be approved as grades S or A by the NP-PAC for the next 1.5 years is being discussed under the initiative of the RNC Deputy Director. The total BT that takes into account the backlog reduced to two years under the assumption of the 8-month operation was presented. Hearing of opinions of the MT Committee on the matter was conducted. Discussions on this issue will continue.

Topics discussed

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

2. BigRIPS tuning time which should be discussed/approved by the NP-PAC

In the current provisional beam-time operation, one unit of BigRIPS tuning time required for the change of a secondary-beam setting is given to each BT. This is because i) some experiments could not be conducted only with an approved BT, since the treatment of the BigRIPS tuning time varies among the PAC meetings, and ii) it is desirable to separate a BT into two parts, one for BigRIPS tuning conducted as a duty of the facility, and another for users' own BT for data run in order to avoid trouble in counting the users' BT already conducted. Moreover, some experiments require frequent changes of secondary-beam settings. If all such tuning times are given as extra time, and only a BT for data runs is deliberated and approved by the PAC, the feasibility of the evaluations by the PAC may be questioned. In the meeting, it was discussed how a BT should be approved for the proposals which require N-time changes of the secondary-beam settings. The following three cases were considered:

1) BT for all N-time changes + data run
2) BT for $N-1$ time changes + data run (current interim BT operation)
3) BT only for data run

Discussions on this issue will continue. It was noted that in the recent PAC meetings, in-house technical reviews have been conducted for the submitted proposals prior to the document screening by the PAC to check whether the requested times for secondary beam tuning and data run are appropriate or not. Hearing of opinions of RIBF-UEC will be conducted.

3. Next meetings

- The next MT Committee meeting will be held on Friday, November 18, 2011, at 13:30.
- The meeting after the next will be held on Friday, December 16, 2011, at 13:30.