Minutes of the 58th Machine-Time Committee Meeting

Date and time: September 21, 2012; 13:30–15:10

Place: RIBF Bldg., Room 203

Attendees: Sakai [a] (Chair), Aoi [d, †, ‡], Abe [a], Fukunishi [a], Kamigaito [a], Kase [a], Kubo [a], Miyatake [c, †], Morita [a], Motobayashi [a, †], Nishimura [a, †], Shimoura [b], Ueno [a], Uesaka [a], Uwamino [a], Wakasugi [a], Yamaguchi [b], Nakagawa [a, †], Ueda [a, †]

Absent: En'yo [a, †], Haba [a, †], Sakurai [a], Suda [d, †], Yoshida [a, †]

[a]RNC / [b]CNS / [c]KEK / [d]RIBF-UEC / [†]Observer / [‡]TV Attendee

(in random order)

Reports

1. Changes of the beam-time schedule (Ueno)

It was reported that the beam-time (BT) schedule from the end of July to the end of September was changed on August 6 due to the trouble of a vacuum pump equipped with the beam injection-extraction system of RRC that occurred on July 27. The modifications are summarized as follows:

Exp.-Prog.-Num.	previous		changed	
AVF-RRC:				
NP0802-RRC53-07 (Matsuo)	Jul 28, 21:00 –	Jul 30, 9:00 →	Sep 12, 21:00 –	Sep 14,9:00
NP0709-RRC39-04 (Nagatomo)	Sep 16, 9:00 –	Sep 20, 9:00 →	Sep 19, 21:00 –	Sep 23, 21:00
IB0702-RRC01-56 (Abe)	Sep 21, 9:00 –	Sep 21, 13:00 →	Sep 25, 9:00 –	Sep 25, 13:00
ML0901-RRC20-19 (Izumi)	Sep 21, 13:00 –	Sep 21, 19:00 →	Sep 25, 13:00 –	Sep 25, 19:00
RI0702-RRC04-09 (Haba)	Sep 24, 9:00 –	Sep 26, 9:00 →	Oct 1, 9:00 –	Oct 2, 21:00
MS10-EXP12-10 (Hirayama)	Sep 28, 21:00 –	Sep 30, 21:00 →	Sep 28, 21:00 –	Sep 30, 9:00

2. RRC repair (Kase)

- The upper main coil of the RRC E-sector magnet

  As continuously reported from January, a layer short has occurred at the upper main coil of the E-sector magnet, which causes the reduction in the magnetic field of 100 ppm and the instability of 20 ppm of RRC. Since the short position was identified inside the coil, and thus a quick fix was impossible, the upper magnet yoke of RRC was dismantled, and the coil was replaced in August. After a magnet excitation test, RRC was put into operation. There was no trouble after the repair.

- The lower main coil of the RRC W-sector magnet

  In addition to the above-mentioned E-sector coil short, another layer short occurred in June in the same place in the W-sector main coil that was damaged and repaired in 1999. After an emergency repair, RRC was put into operation. Since a full repair will take more than one month, no further repair will be done for the near future.

3. Status of the BT scheduling for the FY2012 second half (Ueno)

It was reported that the BT scheduling procedure prior to the approval by the MT Committee had been completed according to the schedule explained in the previous meeting. In this procedure, a BT plan was

discussed by a working group formed under the MT Committee on August 13, and safety aspects of each experiment were reviewed by the In-House Safety Review Committee meeting held on September 11.

4. **Status of PAC meetings** (Ueno)
   - NP-PAC: Despite the previous announcement that the 12th NP-PAC will be held on Dec. 10–11, it was determined by the 124th RNC-CNS Research Collaboration Liaison Meeting to postpone the PAC meeting because the BT of RIBF SRC-use experiments in the second half of FY2012 was reduced, as explained below in Discussion 2.
   - 9th ML-PAC: The PAC meeting was held on September 4–5 as scheduled. A total BT of 51.9 days was proposed for the use the RIBF facility. A PAC report will be submitted to the RNC and RAL directors soon.

Topics discussed

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

2. **BT schedule of FY2012 second half** (Sakai)
   - The RNC director decided on August 7 to limit the RIBF-SRC operation to one month in November, and to suspend the operation of the RIBF low-energy part using AVF, RILAC, and RRC except for the SHE research, due to budgetary constraints. A BT schedule, planned by an MT Committee working group (WG) [*1, 2] on August 13 in accordance with the above-mentioned decision, was discussed. In the plan, BTs in the AVF standalone mode were scheduled, since their energy consumption level is much smaller than that of the RIBF-SRC operation. (Ueno)

     [*1] The WG was temporarily formed under the MT Committee as provided in the Article 6 of RIBF MT Committee Bylaws.

     [*2] The WG members are: Sakai (MT Committee chair), Abe, Fukunishi, Haba, Kase, Kubo, Motobayashi, Nishimura, Sakurai, Shimoura, Ueno, and Wakasugi, from the MT Committee, Okuno Deputy Group Director, Ikezawa Team Leader (TL), Nakagawa TL, and Sakamoto TL.

   - After some modifications such as the cancellation of the SHE research, the BT plan was approved. It was noted that the RIBF-SRC operation will be extended to December–January if the budgetary situation of RNC shows improvement. Furthermore, according to the RNC director's decision as mentioned above, BTs of the RIBF low-energy part, including the newly approved experiments by the 9th ML-PAC for February and March have been suspended, although it had been previously announced to schedule them separately.
   - For the convenience of RIBF users, the almost finalized BT schedule for the second half of the FY2012 has been disclosed prior to the approval by the MT Committee. It was suggested that a BT schedule should be disclosed by supplementing a note that says "to be approved by the MT Committee". It was also suggested to have the NP-PAC meetings one month ahead from June to May so that a BT schedule can be approved and fixed by the MT Committee at the meeting held in July (the meeting is usually adjourned during August). (Fukunishi)

3. **Current status and future prospect of beam development** (Kamigaito)
    - The priority of the kind of heavy ions to be developed is determined by taking into account their feasibilities and necessities in the next two years' time. The feasibilities are discussed not only in terms of technical issues but also the availability of the accelerators (i.e., the BT schedule). Currently, the highest and second priority heavy ions are ^{238}U and ^{48}Ca, respectively, for which the Accelerator Group is developing a new oven system equipped with the ion source for the start of its operation in spring 2013.
    - In the meeting, heavy ion candidates for the third priority were discussed. Based on the discussions, beam development plan will be prepared by the MT Committee, and reported to the RNC director and the deputy director for consultation. Then, the start of their beam deliveries will be determined by taking into account man power for the R&D studies, availability of the ion sources, a strategy of the SHE research, and a possibility of R&D collaboration with other institutes. This will be achieved by investigating the technical issues and the degree of urgency for each beam.
    - It was pointed out that the beams that many potential users hope to make use of might be missing from the list of beam supply discussed above, since the most of the proposed and approved experiments from which the list had been constructed are designed based on the list of available beams open to public. The RIBF User Group will consider conducting the survey and submit the result to RNC as an input for the priority setting. (Aoi)
4. **Next meetings**
    - The next meeting will be held on Friday, October 12, 2012, at 13:30
    - The meeting after the next will be held on Friday, November 16, 2012, at 13:30