

Minutes of the 40th Machine-Time Committee Meeting

Date and time: January 21, 2011; 13:30–14:40

Place: Nishina Bldg., Room 201

Attendees: Sakai^a (Chair), En'yo^{a,†}, Fukunishi^a, Kambara^{a,†}, Kamigaito^a, Kase^a, Kubo^a, Kubono^b, Morita^a, Sakurai^a, Shimoura^b, Teranishi^{c,†,‡}, Ueno^a, Uwamino^a, Wakasugi^a, Tanaka^{a,†}

Absent: Abe^a, Motobayashi^{a,†}, Yoshida^{a,†}

^aRNC / ^bCNS / ^cRIBF-UEC / [†]observer / [‡]TV attendees
(in no particular order)

Reports

1. Beam-time schedule changes (Ueno)

- The MS10-10 beam time (BT) (Goto *et al.* / AVF room / Jan. 17 at 10:00-24:00) was canceled.
- In response to a request from the CNS director and given the significance for physics of the experiment, the MT Committee chair has extended the NP0906-AVF04-2 (Chun Sik Lee *et al.* / CRIB / Jan/9/21:00 - Jan/15/21:00) BT by 0.5 days. (Sakai).
- The other experiments, all of which are using the former RARF facility, are being carried out as scheduled. The SHE experiment is scheduled to restart on Jan. 22.

2. Status of the PAC meetings (Ueno)

- NP-PAC
 - 8th NP-PAC: The PAC review report on the newly proposed experiments and the re-evaluation of backlogs were sent to the representatives.
 - 9th NP-PAC: Informal consent to be a PAC member was obtained from eight candidates. The 9th NP-PAC meeting will be held June 24-25, 2011. The scheduling is now being confirmed with PAC members, including these new candidates.
- 7th ML-PAC
 - The PAC meeting was held Jan. 11-12, 2011 as scheduled. The PAC is now making a report.

Topics discussed

1. Approval of the minutes of the 39th meeting (Sakai)

2. FY2011 first half-year BT allocation (Sakai)

- BTs with SRC-accelerated beams
 - Machine studies for the delivery of new beams, ¹²⁴Xe (Feb.~Mar. & May), ⁷⁰Zn (Apr.), Kr (Apr.), ²³⁸U (May), and ⁴⁸Ca (Jun.), will be a central subject.
 - PAC-approved BTs will be allocated, if they can use RILAC-injected light ions (Apr.), ⁷⁰Zn (Apr.), ¹²⁴Xe (May), and AVF-injected light ions (Jun.).
- Effect of this BT plan on the radiation work being scheduled in this summer for strengthening BigRIPS against radiations (Tanaka)
 - BigRIPS Team plans to install i) a radiation shield at F0-STQ1 and ii) a pillow-seal system at

STQ1-D1 next summer to strengthen BigRIPS against radiations. For a realistic operation time, the total beam dose must be controlled so that the external radiation rate of the working area will be lower than 1~2 mSv/h and 400 μ Sv/h for cases i) and ii) by next summer (In the following, the stricter conditions required for ii) were discussed).

- An external radiation rate, 150 μ Sv/h, was estimated from a total beam dose of the BigRIPS-based experiments in the last autumn–winter period.
- In the above BT plan, the beam energy and current of ^{18}O (Apr.) is a key for the external radiation rates. BigRIPS Team empirically estimated it as ^{18}O (1500 pnA*day at $E/A = 345$ MeV or 495 pnA*day at $E/A = 280$ MeV) + ^{70}Zn (700) + ^{124}Xe (100) + $d(0)$ + $^{124}\text{Xe}(60)$ + $^{18}\text{O}(600) = 2960$ or 1955 pnA*day. It is impossible to meet the limit of 400 μ Sv/h, if a ^{18}O beam is delivered with 1500 pnA*day at $E/A = 345$ MeV, but possible with 495 pnA*day at $E/A = 280$ MeV.
- After discussions, the MT Committee chair requested the accelerator group to consider the delivery of a ^{18}O beam at $E/A = 300$ MeV.
- BT scheduling (Ueno)
 - Jan 17-29: Call for BT scheduling requests & detector development BT requests
 - Mid Feb: Tentative BT schedule
 - End Feb: Submission deadline of Accelerator Use Planning Sheet
 - Early Mar: In-House Safety Review Committee meeting
 - Mar 18: Approval of BT schedule by MT Committee
- Other issues
 - A Q magnet should be moved from SHARAQ to BigRIPS for ^{18}O BTs in April (Kubo).
 - A new STQ magnet and an STQ switching system between ZD and SAMRAI will be installed just before the SAMURAI commissioning planned for February 2012.
- The next MT Committee meeting will be held on Friday, February 25, 2011, from 13:30 to 15:00.