

## Minutes of the 96th Machine-Time Committee Meeting

Date and time: February 23, 2016; 15:00–15:55

Place: RIBF Bldg., Room 203

Attendees: Sakai<sup>a</sup>(Chair), Abe<sup>a</sup>, Fukunishi<sup>a</sup>, Kamigaito<sup>a</sup>, Kase<sup>a</sup>, Morimoto<sup>a</sup>, Sakurai<sup>a</sup>, Shimoura<sup>b</sup>, Ueno<sup>a</sup>, Uesaka<sup>a</sup>, Uwamino<sup>a</sup>, Wakasugi<sup>a</sup>, Imai<sup>d,†</sup>, Motobayashi<sup>a,†</sup>, Otsu<sup>a,†</sup>, Tanaka<sup>a,†</sup>, A. Yoshida<sup>a,†</sup>, Inabe<sup>a</sup> (in lieu of Kubo), Wada<sup>c</sup> (in lieu of Miyatake), Ohnishi<sup>a,†</sup>, Ota<sup>b,†</sup>, Yoneda<sup>a</sup>

Absent: En'yo<sup>a,†</sup>, Kubo<sup>a</sup>, Miyatake<sup>c</sup>, Okuno<sup>a</sup>, Yamaguchi<sup>b</sup>, Haba<sup>a,†</sup>, Morita<sup>a,†</sup>, K. Yoshida<sup>a,†</sup>, Kishimoto<sup>a,†</sup>

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

(in random order)

### Reports

#### 1. Current Status of the Machine Time Operation (Yoneda)

The current status of the machine time operation was reported. Since the last MT committee meeting, experiments have been performed at the old facility. From now to mid-March there will be no experiments running. Beam time will resume starting with biology experiments from March 17 (the date has been changed to March 24 later).

#### 2. Report on the Change of the Machine Time Schedule (Yoneda)

The changes of the MT schedule were reported. NP1312-LINAC17-05 (Kaji, <sup>48</sup>Ca@4-6MeV/u, GARIS2) was extended by two days until 9am, February 17, to compensate for the delay in its starting date due to an accelerator trouble. CD15-01(Yamaguchi & Tamii, <sup>7</sup>Li@5.6MeV/u, CRIB) originally scheduled to run from March 22 to 24 was cancelled due to a change in circumstances of the experimental group (the group planned to make a target with unstable nuclei implanted at CRIB and to bring it to JAEA for an experiment, but the experiment was postponed due to an accelerator trouble at JAEA), and will be rescheduled in the first half of the next fiscal year. The biology experiments originally scheduled for March 31 with <sup>12</sup>C was canceled and instead will be conducted on the day of RIKEN's open campus in April.

#### 3. Report on Accelerator Machine Study (Ohnishi)

A report was made on the accelerator machine study. The <sup>40</sup>Ar beam at 66MeV/u was used for 1.5 days at E5A to examine the radiation tolerance of the epoxy bonding agent used in the SRC superconducting trim coils. Two aluminum plates were epoxied and the epoxied part was irradiated with the beam. The irradiation was made uniformly in the area of 71mm x 56mm by using a wobbler magnet. The beam energy at the epoxied part was 25MeV/u, and 45 samples in total were made with 5 steps of total radiation from 0.1MGy to 10MGy. The change of the bonding strength will be measured hereafter in the Nishina Center using a pulling tension controller machine.

#### 4. Status of PAC Meetings (Yoneda)

- 17th NP-PAC: (12/1 - 3)

The call for proposals will be issued in June, and the deadline of proposal submission will be in early October. The proposal cannot be replaced after the deadline.

- 12th ML-PAC: held on February 16 and 17.
- 4th In-PAC: held on January 13.

## **Topics discussed**

### **1. Approval of Minutes of Previous Meeting (Sakai)**

### **2. Simultaneous Use of the Beam for NP1312-RIBF113-01(Ota) and NP1512-RIBF79R1-01(Zenihiro)**

A request was given by two experiments, NP1312-RIBF113-01, which will go in April, and NP1512-RIBF79R1-01, which will go in May. They requested to place their detector setup in the beamline at the same time during both experiments are running. In the experiment NP1312-RIBF113-01, a  $^{132}\text{Sn}$  secondary beam with 120MeV/u will irradiate an active target CAT at F8, and during this experiment the detector setup for NP1512-RIBF79R1-01, ESPRI, will be placed at F12 and the detector startup will be made with the beam coming downstream. In the experiment NP1512-RIBF79R1-01, a  $^{132}\text{Sn}$  beam with 210MeV/u will irradiate EPSRI at F12, and during this experiment CAT will be placed at F8 and the data of the detector response for the (p,p') reaction will be obtained, which is going to be used to eliminate background events in the main experiment caused by the deuteron breakup. It is possible to build and disassemble the setup within the preparation time and beam tuning time, and there will be no influence on the other experiments.

As a result of review, it was approved to run the experiments with the two setup placed at the same time.

### **3. MT Schedule in the 1<sup>st</sup> half of FY2016 (Sakai)**

A Mt schedule plan in the first half of Fiscal Year 2016 was proposed by ULIC, and opinions were collected. The SRC-BigRIPS experiments in spring will start on April 1, and will be terminated at the end of June. The MT in April will start with  $^{238}\text{U}$ , and after the open campus on April 23 the beam will be switched to  $^{124}\text{Xe}$ . On May 6 the beam will be switched again to  $^{238}\text{U}$  and run until middle of June, and the last experiments will be done with  $^{18}\text{O}$ . The experiments using SAMURAI-TPC are supposed to go with  $^{238}\text{U}$  and  $^{124}\text{Xe}$ , and the  $^{238}\text{U}$  MT is placed later than the  $^{124}\text{Xe}$  MT in order to keep the time to change the experimental setup at SAMURAI. Concerning the RILAC experiments, the experiments other than the superheavy element (SHE) search experiments will be completed until summer, and the detector setup will be changed during the summer break so that the next SHE-related experiments can go in autumn. The other old facility experiments have also been scheduled to go, mainly in June and September, as requested. As a result of discussion, it was accepted to go with the schedule plan proposed by ULIC. The MT schedule will be finally approved in March, as the operation budget in the next fiscal year will be fixed at the end of February.

### **4. MT Committee Members in FY2016 (Sakai)**

A MT committee member plan in the next fiscal year was proposed by ULIC, and opinions were collected. Professor Shimoura, who will become the Director of CNS from the next fiscal year, and Professor Miyatake, who is the Director of WNSC, will become observers, and Dr. Kentaro Yako (Associate Professor in CNS) and Dr. Michiharu Wada (Professor in KEK) will become regular members from outside of RNC. Dr. Tadaaki Isobe (Research Scientist in RI Physics Laboratory) will be an observer as a chair of RIBF-UEC. The regular member as the Group Director of Research Instruments Group will be Dr. Hideki Ueno who is also a member as the chief scientist. Dr. Koichi Yoshida, who is the Team Leader of the BigRIPS Team, will be a regular member. The members from outside of RNC will be Dr. Yako,, Dr. Yamaguchi (Lecturer in CNS), and Professor Wada.

As a result of discussion, it was decided to propose the members to the Nishina Center Steering Committee as ULIC proposed.

#### **5. FY2016 Yearly MT Schedule (Sakai)**

A MT Schedule plan of the next fiscal year was shown by ULIC, and opinions were collected. The spring SRC-BigRIPS experiments will be scheduled to go for three months from April 1 to June 30, and the autumn campaign is supposed to go from October to December, which will be decided based on the operation budget that is to be fixed at the end of February. Concerning the budget of the next fiscal year, the amount of the operation budget will be fixed at the end of February, and therefore the amount of beam time that can be operated in the next fiscal year will be fixed. There was no particular opinion raised by the committee members.

#### **6. Next Meetings**

- The next meeting will be held on Friday, March 18, 2016, at 10:30am.
- The meeting after the next will be held on Tuesday, April 19, 2016, at 3pm.
- The meeting after May will be held on May 17, June 14, July 12, and September 8, at 3pm.