

Minutes of the 110th Machine-Time Committee Meeting

Date and time: May 16, 2017; 15:00–17:00

Place: RIBF Bldg., Room 203

Attendees: Sakai^a(Chair), En'yo^{a,†}, Shimoura^{b,†}, Abe^a, Fukunishi^a, Kamigaito^a, Kase^a, Wada^c, Morimoto^a, Yako^b, Ueno^a, Uesaka^a, Uwamino^a, Wakasugi^a, K. Yoshida^a, Yamaguchi^b, Isobe^{d,†}, Haba^{a,†}, Motobayashi^{a,†}, A. Yoshida^{a,†}, Otsu^{a,†}, Tanaka^{a,†}, Imai^{b,†}, Yoneda^a

Absent: Miyatake^{c,†}, Sakurai^a, Okuno^a, Morita^{a,†}, Mabuchi^{a,†}

^aRNC / ^bCNS / ^cKEK / ^dRIBF-UEC / [†]Observer
(in random order)

Reports

1. Current Status of Machine Time Operation (Yoneda)

The current status of the machine time operation was reported. After the last MT committee meeting, a SRC-BigRIPS experiment was not conducted until the open campus day, April 22. After the open campus SRC-BigRIPS experiments resumed with the ⁷⁰Zn beam. Two PAC-approved experiment and a Director discretionary beam time were conducted until May 15 as scheduled. After that, it was found that a repair work was necessary in fRC, and the start of ²³⁸U experiments was postponed by a week.

2. Report on Machine Time Schedule Change (Yoneda)

The change of the machine time schedule was reported. A SAMURAI experiment NP1312-SAMURAI9R1 scheduled in April was extended until the days after the open campus to complete the data taking what was suspended due to accelerator troubles.

(before) (after)

NP1312-SAMURAI9R1 9am08Apr-9am14Apr 9pm11Apr-2:29am15Apr

(Kobayashi, Togano)

9am25Apr-1:30pm26Apr

The following SRC-BigRIPS experiment schedule was changed to postpone the uranium acceleration in May by a week.

(before) (after)

BRIKEN

9am25May-9am08Jun 9am01Jun-9am15Jun

(Nishimura, Rykaczewski, Estrade, Kiss)

MS-EXP17-02(Fukuda) 9am08Jun-9am09Jun (cancelled)

NP1306-RIBF102(Henning)9am09Jun-9am14Jun (cancelled)

MS-EXP17-03(Sonoda) 9am14Jun-9am15Jun (cancelled)

The RI production experiment RI0702-AVF4-69 in April was conducted half a day earlier than the original schedule, in order to keep the period to cool down the cooling water used in fRC.

(before) (after)

RI0702-AVF4-69(Haba) 9am10Apr-9am11Apr 9pm09Apr-9pm10Apr

The schedule of long runs in RILAC standalone was decided to be from 9am, April 27 to 9am, June 12.

DA13-02-11(Morita)

9am27Apr-9am12Jun

3. Report on the RIBF Accelerator Operation (Fukunishi)

A status report was made concerning the accelerator operation. The ^{70}Zn beam was provided from 9pm, April 25 to to 9am, May 15. The beam delivery was smooth, although there happened some troubles including power outage due to a breakdown in TEPCO, RRC EBM water leakage. The availability was 100.7%, as the beam delivery started earlier than the schedule. Presently a repair work of RF resonator in fRC and replacment of damaged fRC-EDC are ongoing. After these works are done, the beam tuning for the next ^{238}U beam will get started.

4. Report on BigRIPS Operation (K. Yoshida)

A report was made concerning the BigRIPS operation. Secondary beams from the ^{70}Zn primary beam were provided to four experiments. Neutron-rich Ca isotopes were provided to NP1312-SAMURAI9R1 (spokesperson: Kobayashi, Togano) neutron-rich S-Ca isotopes NP1406-RIBF44R1 (spokesperson: Tarasov), and neutron-rich K-V isotopes to NP-38R1&39R2 (spokesperson: Doornenbal, Obertelli, Lee), DA17-01 (spokesperson: Uesaka). The operation was mostly smooth, although there happened some troubles including a power outage caused by TEPCO and STQ hangups.

5. Report on Superheavy Element Search Plan (Morimoto)

A report was made concerning the experiment plan for the next superheavy element search. The barrier distribution measurements with beams in the Ne-Ar region were finished, and a long run for the next superheavy element was started. The measurement lasts as long as RILAC is available. The next plan on which reactions and beams are used after GARIS2 moves to E6 is still under consideration in the experiment group. The decision is awaited, as the ion source development is necessary when ^{50}Ti beam from RILAC2+RRC is used.

6. Report on RILAC Construction Work Plan (Kase)

A report was made concerning the plan of the RILAC construction work. GARIS2 will move to E6, and CMS which changes beam energies will move to the D-room. The on-site dismount work will start on June 19. The building construction work will start later than July 1. Many things have to be decided, including the required electric power, cabling, pipes, and so on. Preparation and construction will be made so that everything will get ready for the start of experiments in December.

7. Report on CRIB Machie Study (H.Yamaguchi)

A report was made concerning the CRIB machine study. A ^7Be beam development at CRIB was made for two days from April 29. In the experiment NP1512-AVF27, ^7Be implantation into a target was made for two days, but the statistics was not sufficient, and so improvement was attempted. The beam optics in CRIB was tuned through watching the beam profile with a PPAC, and eventually $6.8 \times 10^6 \text{ pps/mm}^2$ of implantation density was achieved, which exceeded a goal density $5 \times 10^6 \text{ pps/mm}^2$. It was confirmed that

CRIB can provide the ^7Be beam which fulfills requirements for the implantation experiment.

8. Report on Plan for ImPACT Experiments in Autumn (Imai)

A report was made concerning the plan of the ImPACT experiments in autumn. So far in the ImPACT project, the reactions of LLFP isotope beams with protons and deuterons were measured at the beam energies of 200MeV/u, 100MeV/u, and 50MeV/u. In order to decide the excitation functions experimentally down to the lower energy region, reaction measurements will be conducted with low energy beams produced by OEDO. 6.5 days of knock-out measurements with H2 and D2 target, and after more than 3 days of setup change 5 days of (d,p) reaction measurements will be performed.

9. Status of PAC Meetings (Yoneda)

- 18th NP-PAC: (12/7 - 9)

From the next NP-PAC,

The number of pages is limited up to 10 pages (appendices can be attached).

The presentation time is 10 minutes, and no extension is allowed

(documents for responses to the PAC comments are accepted).

- 14th ML-PAC: To be held on July 3 and 4.
- 6th In-PAC: Held on January 13. The next will be a mail review late in June.

Topics discussed

1. Approval of Minutes of Previous Meeting (Sakai)

1.

2. FY2017 MT Schedule (Yoneda)

A summary of the MT schedule that is supposed to be in fiscal year 2017 was shown by the user liaison, and opinions were collected. The spring SRC-BigRIPS campaign will be arranged with ^{48}Ca , ^{70}Zn , ^{238}U , ^{18}O beams until mid-July. With the ImPACT experiment with ^{238}U and one more beam, the total operation will reach 5 months roughly. The ImPACT experiment plan is to perform 6.5-day experiment, and after 3-4 days of break another 5-day experiment is performed. The 3-4 days of break may fit the BRIKEN experiment, concerning the availability of the beam species and beam port. The call for the beam time allocation requests will be issued in June. It is requested to explain in the MT committee meeting the contents of machine studies which are planned in the latter half of this fiscal year. The situation that the operation dates may be limited with the operation budget does not change, and there was a request from the committee members for the outlook of the operation budget in this fiscal year. It was pointed out that, the days available for the SRC-BigRIPS experiments are limited and will be occupied with the experiments cancelled in spring and urgent experiments that have to be done for the circumstances of the facility. A plan will be made for the beam time call, e.g. the call will be made for the AVF standalone experiments only.

1. Next Meetings

- The next meeting will be held on Tuesday, June 20, 2017, at 3pm.
- The meeting after the next will be held on Tuesday, July 25, 2017, at 3pm.