

## RILAC operation

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For the upgrade of RILAC, the following works have been in progress at the LINAC building during the reporting period. The details are described elsewhere in this progress report.

- (1) The new 28 GHz superconducting electron cyclotron resonance ion source and the low energy beam transport (LEBT) were installed. The necessary preparation for the test was conducted.
- (2) The section after the A2 cavity reconstituted. The necessary preparation for the installation of a superconducting RILAC (sRILAC), middle energy beam transport (MEBT), high energy beam transport (HEBT), and helium refrigerator was conducted.
- (3) The GARIS3 was installed in the e2 beam courses in target room no. 1.
- (4) The air cooling fan coil units in the radiation-controlled area were replaced.

We performed the following maintenances during the reporting period.

- (1) In the radio frequency systems, DC high-voltage power supplies were subjected to annual inspection. The major components with mechanical parts were subjected to simple inspection.

- (2) The water pumps were subjected to simple inspection. All cooling towers were subjected to monthly inspection.
- (3) All turbomolecular pumps were subjected to simple inspection. Cryogenic pumps used for the No. 5 cavity, A1 cavity, and standby units were overhauled.

We performed the following repairs during the reporting period. The details are described elsewhere in this progress report.

- (1) The No. 5 cavity had a serious vacuum leak due to a deteriorated vacuum gasket of the center conductor in the cavity. The external dimensions of the gasket are  $10 \pm 0.1$  mm height,  $8 \pm 0.1$  mm width, and  $4273 \pm 13.5$  mm length in the radial direction. We replaced it with a new one. In addition, silver plates for the electrical contact of the center conductor were replaced with new ones.
- (2) The bottom plate of the A1 cavity had a vacuum leak. We repaired the plate with a repair material.

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