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## **The preparation of the vertical test of the $\beta=0.12$ half-wave resonator at the Rare Isotope Science Project (RISP)**

At Rare Isotope Science Project (RISP) in Korea, the accelerator system based on the superconducting cavities has been developed. The superconducting cavities made of bulk high purity niobium has a superconducting transition temperature around 9K and it needs to be cooled by liquid helium system. Since the operating RF bandwidth is very narrow around 80 Hz and sensitive to the deformation of the cavity, the pressure fluctuations of the LHe within the cryostat must be controlled tightly. The operation temperature ranges from 2K to 4K, which includes the superfluid regime. We report the progress we are making in the preparation of the vertical test of the superconducting cavity, half-wave resonator in terms of the temperature control system, leak check at cryogenic temperature, quench detecting system as well as RF system.

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