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Initial results of the ESS cavities parameters identification at the TS2 towards future LLRF operation

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A dedicated series of tests on the superconducting Medium-Beta and High-Beta cavities has been proposed to determine various parameters critical for future LINAC and LLRF system operation. These studies include measurement of the cavity stiffness coefficient (expressed as the Lorentz Force Detuning factor), evaluation of piezo tuner range and polarity, investigation of piezo capacitance as a function of temperature, and identification of resonator pi-mode frequencies. Additionally, the detection of the main mechanical longitudinal mode and assessment of field regulation performance are also of interest.

This contribution presents the results from several measurement campaigns conducted at the ESS Test Stand 2 (TS2). The development and evaluation of the testing tools, along with the obtained characterization results and plans for future implementation in the ESS LINAC environment, are also discussed.

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Yes

Footnotes

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