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Measurement of low accelerating gradients in 1.3 GHz cavities at DESY

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During last few years, an extensive efforts for obtaining Q0 vs Eacc characteristic of SRF cavities at very low accelerating gradients have been conducted in several laboratories around the world. In the Accelerator Module Test Facility (AMTF) at DESY, several attempts of such measurements were performed, mainly focused on the comparison between the widely used decay measurements technique and the standard vertical test. To ensure good quality of the signals at very low gradients, several hardware adaptations of the existing test stand were introduced. In this paper, compliance between two measurement ideas is presented, as well as some cross-checking ideas, which could give an overview of the measurement quality at very low RF amplitudes.

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Footnotes

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Author: WIENCEK, Mateusz (Deutsches Elektronen-Synchrotron DESY)

Co-authors: KASPRZAK, Karol (Deutsches Elektronen-Synchrotron DESY); BÜTTNER, Thorsten (Deutsches

Elektronen-Synchrotron DESY)

Presenter: WIENCEK, Mateusz (Deutsches Elektronen-Synchrotron DESY)

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