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Study of the Micro Oven for the Linac3 ECR Ion Source at CERN

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The GTS-LHC ECR ion source at CERN provides heavy ion beams for the chain of the accelerators from Linac3 up to the LHC. For the lead runs the solid material is evaporated in internal ovens. The processes within these ovens are not well understood and experiences during the operation suggest there is room for improvement regarding the beam stability and the time between necessary refills.

A dedicated study of the oven at a test stand and with thermal simulations will help to understand the link between the operational parameters and the performance of the oven to provide the basis for a potential oven redesign.

The test stand replicates partially the source environment and allows thermal as well as evaporation rate measurements. This contribution presents the latest results of the study.

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