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Automated conditioning utilizing machine learning: first experimental results

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The conditioning of room temperature cavities is a long process. Additionally, since the cavity or auxiliary equipment can be damaged, constant supervision or extensive safety precautions are required. To reduce the workload for everyone involved and to increase the efficiency of the conditioning process, it was decided to develop a machine learning algorithm with the goal of fully automated conditioning in mind.
The initial model was trained on available data of the low energy-domain (up to 500 W). Since it was possible to expand the data to higher power levels during conditionings in 2024, the algorithm is now trained for power levels up to 30 kW. In this paper, the challenges of training with different power scales, as well as the first experimental results shall be discussed.

Footnotes

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