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Update on automated RF-conditioning utilizing machine learning

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The conditioning of room temperature cavities is an exhausting process. To prevent damage to the cavity and auxiliary equipment, this potentially long process needs constant supervision or extensive safety precautions. Additionally, the unpredictability of every new conditioning makes the development of effective classical algorithms difficult. 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. To reach this goal, it is planned to train the model on the data of already conducted conditionings of room temperature cavities, a virtual cavity and several more conditionings to be conducted soon. In this paper, the status of development, problems and challenges as well as the planned future progression shall be summarized.

Footnotes

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