## **Annual Meeting of the Swiss Physical Society 2022**



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## [343] Muonic atom spectroscopy with radioactive targets

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MuX, an experiment running at PSI, aims to measure the nuclear charge radii of radioactive isotopes such as  $^{226}\mathrm{Ra}$  and  $^{248}\mathrm{Cm}$  employing muonic atoms. The usage of such targets in the lab is limited to  $\mu g$ -quantities. Therefore, the formation of muonic radioactive atoms cannot be accomplished with standard methods using the direct muon capture in targets of hundreds of mg. A technique to transfer muons to  $\mu g$ -targets developed by the muX collaboration employs muon transfer chain reactions in a high-pressure cell filled with  $D_2/H_2$  gas. Measurements with  $^{248}\mathrm{Cm}$  and  $^{226}\mathrm{Ra}$  were performed in 2019 and are being analyzed. This contribution presents the status and the plans of the muX experiment.

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