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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}Ra and ^{248}Cm employing muonic atoms. The usage of such targets in the lab is limited to µg-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 µg-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}Cm and ^{226}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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