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The status of the FAMU experiment

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The goal of the FAMU experiment is the measurement of the hyperfine splitting of the muonic hydrogen ground state. This measurement gives an accurate insight of the proton's magnetic structure, plays a key role in verifying the most accurate QED calculations and tests the interaction between proton and muon. The hyperfine splitting transition is detected by exciting muonic hydrogen using a unique high energy mid-infrared laser developed on purpose by our collaboration. The FAMU experiment is installed at the Rutherford Appleton Laboratory in the United Kingdom. It has been taking data since October 2023 at the pulsed muon beam line of the proton synchrotron accelerator. In this contribution, the status of the experiment, its capabilities, and its future development are presented.

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