

Utilising the 1s-2s transition for a selective detection of hydrogen

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Key elements of the physics program of the Stefan Meyer Institute (SMI) are fundamental symmetries and searches physics beyond the Standard Model. In direct and indirect connection to the goal of hyperfine spectroscopy of antihydrogen at the AD of CERN within the ASACUSA collaboration, parallel experiments with hydrogen and deuterium are performed. Recently a high intensity ultraviolet laser has been acquired to enhance the detection capabilities in those experiments. In this poster the experimental setup will be introduced including the laser system in a laser hut in the basement laboratory of SMI, the ion counting system and the atomic hydrogen beamline. First spectra demonstrating the selective detection of hydrogen will be shown.