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A velocity characterized atomic hydrogen beam[1] SAMUEL COOPER, ADAM BRANDT, CORY RASOR, ZAKARY BURKLEY, DYLAN YOST, Department of Physics at Colorado State University — We present a cryogenic and velocity-characterized ground state (1S) and metastable (2S) atomic hydrogen source. We also present possibilities to manipulate the atomic trajectories through the 1S-2S two-photon transition. For example, the two-photon transition can be used for laser cooling, or the trajectories of metastable 2S atoms can be affected with near-resonant visible wavelength lasers.

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