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Spectroscopy of one photon 5s - 6s electric field induced magnetic dipole transition in Rb MARK LINDSAY, Lindsay Enterprises Inc, CARSON MCLAUGHLIN, SETH ORSON, RANDY KNIZE, US Air Force Academy — We are conducting a measurement of the electric field induced M1 magnetic dipole one photon 5s - 6s transition in Rb in a cell at about 7 mTorr, using a 0.5 W cw single frequency doubled diode laser at 497 nm. We detect cascade fluorescence from the decay of the 6s state at 1367 and 780 nm, and measure the ratios of the strengths of the four hyperfine components. From this, we can obtain the ratio M_{hf}/M of the M1 transition strength, as well as the ratio M/β and $|\alpha/\beta|$of the scalar and tensor components of the Stark transition polarizabilities.

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