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Atomic Fountain Measurements of Multiple Quantum Transitions in Cesium¹ JASON AMINI², LBNL, HARVEY GOULD, LBNL, CHARLES MUNGER, SLAC and LBNL — An atomic fountain is used to study transitions between the m_F sublevels of the Cs $F = 4 \ 6S_{1/2}$ ground state in magnetic and electric fields. Flop-in and flop-out transitions are induced by coils surrounding the interaction region with which we can apply rf pulses of arbitrary duration, amplitude, shape, phase, and direction. Results from some of these studies will be presented.

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