

Abstract Submitted  
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**Quantum beat spectroscopy: Stimulated emission probe of hyperfine quantum beats in the atomic cesium<sup>1</sup>** JACOB MCFARLAND, PHILL ARNDT, BURCIN BAYRAM, Miami University — Measurements of hyperfine polarization quantum beats are used to determine the magnetic dipole ( $A$ ) and electric quadrupole ( $B$ ) coupling constants in the excited atomic Cs  $8p^2P_{3/2}$  level. The experimental approach is a combination of pulsed optical pumping and time-delayed stimulated-emission probing of the excited level. From the measured evolution of the atomic linear polarization degree as a function of probe delay time, we determine the hyperfine coupling constants  $A = 7.42(6)$  MHz and  $B = 0.14(29)$  MHz.

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