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Population of Rydberg states in short intense laser pulses[1] JOEL VENZKE, BRYNN REIFF, ZETONG XUE, JILA and Department of Physics, CU Boulder, EREZ SHANI, JILA and Department of Mathematics, CU Boulder, AGNIESZKA JARON-BECKER, ANDREAS BECKER, JILA and Department of Physics, CU Boulder — Recently, the role of highly excited states in atoms for processes such as ionization and high harmonic generation in intense laser fields has been discussed. By solving the Time Dependent Schrodinger Equation, we are able to resolve Rydberg state populations with respect to the principal and the orbital angular quantum number at the end of the pulse. We will present results for the dependence of the angular momentum distribution in various Rydberg states on the laser parameters and the potential impact on HHG spectra and time dependent susceptibility.

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Joel Venzke
JILA and Department of Physics, CU Boulder

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