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Numerical studies of efficient macroscopic calculations for high-order harmonic generation. SPENCER WALKER, RAN REIFF, ANDREAS BECKER, AGNIESZKA JARON-BECKER, JILA and Department of Physics, University of Colorado, Boulder — High-order harmonic generation occurs when an intense laser pulse illuminates a target. Since the laser interacts with many atoms one must not only consider the microscopic response of individual atoms but solve Maxwell's wave equation in order to describe how radiation propagates through the non-linear medium. We explore various models for both microscopic response and macroscopic propagation.

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