Abstract Submitted
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Precision measurement of carrier-envelope phase dependence of ATI spectra for the noble gases using phase-tagging[1] A.M. SAYLER, T. RATHJE, S. FASOLD, D. ADOLPH, W. MÜLLER, D. HOFF, G. PAULUS, Institut fur Optik und Quantenelektronik and Helmholtz Institut Jena, Max-Wien-Platz 1, 07743 Jena, Germany — Presented are the carrier-envelope phase (CEP) and energy dependent few-cycle above-threshold ionization (ATI) spectra for Xenon, Argon, Krypton and atomic Hydrogen. This data was obtained by a phase tagging technique which is based on a novel robust, real-time, every-single-shot technique for determining the CEP via a stereographic ATI setup. The CEP is calculated and output in real-time and this information is then used to tag ATI spectra to investigate their dependence on the relative CEP. This technique along with calculations of the CEP dependence of atomic Hydrogen allow for the determination of the absolute CEP and energy dependent ATI spectra of all gasses measured.

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