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Generation of short and intense isolated Attosecond pulses by field-controlled excited states[1] HOSSEIN Z. JOOYA, University of Kansas, PENG-CHENG LI, SHENG-LUN LIAO, National Taiwan University, SHIH-I CHU, University of Kansas — A new mechanism for the coherent control of the generation of an isolated and ultrashort attosecond laser pulse with enhanced intensity is reported. Frequency and time delay of a weak high harmonics, added to a two color laser, are optimized to produce a 45 attosecond pulse with intensity of more than 70 times bigger than the original one. Resonance excitation and subsequent ionization are analyzed, along with electron trajectory investigation from wavelet time-frequency profile to explain the mechanism of the observed augmentation in this high-harmonic generation.

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