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Extending Double Optical Gating to the Midinfrared TIMOTHY GORMAN, ANTOINE CAMPER, PIERRE AGOSTINI, LOUIS DIMAURO, Ohio State Univ - Columbus — In the past decade there has been great interest in creating broadband isolated attosecond pulses (IAPs). Primarily these IAPs have been generated using Ti:Sapphire 800nm short pulses, namely through spatiotemporal gating with the attosecond lighthouse technique, amplitude gating, polarization gating, and double optical gating (DOG). Here we present theoretical calculations and experimental investigations into extending DOG to using a 2um driving wavelength, the benefits of which include extended harmonic cutoff and longer input driving pulse durations. It is proposed that broadband IAPs with cutoffs extending up to 250 eV can be generated in Argon by using >30 fs pulses from the passively-CEP stabilized 2um idler out of an optical parametric amplifier combined with a collinear DOG experimental setup.

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