

Abstract Submitted  
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**Keldysh-Rutherford model for attoclock**<sup>1</sup> ALEXANDER BRAY, Australian National University, SEBASTIAN ECKART, Goethe University, ANATOLI KHEIFETS, Australian National University — We demonstrate a clear similarity between attoclock offset angles and Rutherford scattering angles taking the Keldysh tunnelling width as the impact parameter and the vector potential of the driving pulse as the asymptotic velocity. This simple model is tested against the solution of the time-dependent Schrödinger equation using hydrogenic and screened (Yukawa) potentials of equal binding energy. We observe a smooth transition from a hydrogenic to hard-zero intensity dependence of the offset angle with variation of the Yukawa screening parameter. Additionally we make comparison with the attoclock offset angles for various noble gases obtained with the classical-trajectory Monte Carlo method. In all cases we find a close correspondence between the model predictions and numerical calculations. This suggests a largely Coulombic origin of the attoclock offset angle and casts further doubt on its interpretation in terms of a finite tunnelling time.

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