

Under-the-Barrier Electron Recollisions in Strong Laser Field Tunneling

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The concept of recollisions under the tunneling barrier in strong-field physics is introduced and the corresponding phase shift is associated with the notion of tunneling time [1,2]. The experimental demonstration is then presented in the situation of a Freeman resonance. Here, the experimental data can be explained with combined under-the-barrier tunneling recollisions and multi-photon ionization while not via the pure multi-photon pathway [3].

References

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- [3] T Khurelbaatar, M Klaiber, S Sukiasyan, K Z Hatsagortsyan, C H Keitel and D E Kim, Phys. Rev. Lett., in press