

# Photoelectron holograms of atoms and molecules induced by ultrashort laser pulses

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If a laser pulse ionizes an atom or molecule, the ejected electron may be rescattered by the target, and this signal electron wave in combination with the direct wave results in a hologram observable in momentum space [1]. We have studied theoretically the formation of this hologram for the hydrogen atom [2] and noble gases [3]. Now we have investigated the ionization of  $H_2^+$  by a two-cycle laser pulse. The hologram is strongly influenced by the scattering potential of the target, but the characteristics of a two-center interference are barely observable.

## References

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