

# Imaging the First Few Femtoseconds of Freedom in Strong-Field Laser Ionization

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Strong-field laser ionization of the electrons bound in small molecules is not instantaneous but typically evolves over one to a few cycles of the driving laser field. The complex underlying quantum dynamics is revealed in many ways, through the timing and sequence of multiple ionizations, the angular correlations in dissociation fragments, elaborate electron momentum patterns, and radiation of high harmonics. Each of these data is a type of image of the strong-field ionization process. Taken together, they help create a more complete picture of the first few femtoseconds of freedom for the electron.