SEMINAIRE ISMO

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Aspects of single-photon ionization and implications for high-harmonic generation

High-harmonic generation can be modeled using the quantitative rescattering (QRS) model. One of the essential elements of the QRS are the matrix elements for photo-recombination of an electron scattering from a molecular ion. The photo-recombination elements can be computed using the same computational tools as are used to compute photoionization matrix elements. In particular, the photorecombination matrix elements can be obtained from photoionization matrix elements by time reversal, which in a time-independent formalism is just complex conjugation of the wave function. Thus features found in photoionization, e.g. shape-resonances, autoionization resonances, molecular-frame photoelectron angular distributions, and geometry dependence of the matrix elements, will also affect high-harmonic yields.

A discussion of such features in the photoionization of and high-harmonic generation by N_2 and SF_6 will be given.

Mardi 16 février 2016 à 11h
Bât. 210 – Amphi 1 (2ème étage)
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