

Séminaire SOLEIL

Vector correlations in atomic photoionization

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Invité par Catalin MIRON

Lundi 29 mars à 14h00
Grand Amphi SOLEIL

Modern bright photon sources allow studying processes with small cross sections, including differential characteristics of photoionization: angular distributions and angular correlations of the products, spin-sensitive reactions, various kinds of dichroism, etc. The talk deals with two phenomena, related to such 'vector correlation' quantities.

- (a) A universal scaling of parameters for autoionizing / Auger resonances. It is shown, with examples, that although the resonances in the ionization continuum appear in the corresponding parameters in different ways, they possess common features related to the Fano resonances in the integral cross section. This opens a way to interrelate different classes of experiments and to more detailed studies of the resonances.
- (b) Angular distributions and angular correlations in sequential two-photon double ionization. This process is now experimentally accessible with free-electron lasers generating in the VUV. Nontrivial angular patterns are predicted and first experimental results analyzed for the noble gas atoms. A dynamic correlation between the first and the second ionization steps is discussed.

Formalités d'entrée : accès libre dans l'amphi du Pavillon d'Accueil. Si la manifestation a lieu dans le Grand Amphi Soleil du Bâtiment Central, merci de vous munir d'une pièce d'identité (à échanger à l'accueil contre un badge d'accès).

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