

## **Coherent control in atoms with ultrashort pulses**

B. Girard and B. Chatel

*Lab. Collisions, Agrégats Réactivité, IRSAMC Univ. Paul Sabatier – Toulouse 3, France*

bertrand.girard@irsamc.ups-tlse.fr

Coherent control is based on quantum interferences. These interferences can be created between different quantum paths excited within a single ultrashort laser pulse [1] or by several consecutive mutually coherent laser pulses [2,3]. Chirped or shaped laser pulses can be used to change the relative interference phases between these paths [4]. Strong modulation of the excitation probability results.

Several examples will be presented to illustrate these different possibilities. Applications demonstrated so far or under investigation include for example quantum state holography [3] and pulse shape measurements [5], or development of factorization schemes [6].

### References:

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