Contribution ID: **174** Type: **oral**

Molecular Orbital Imprint in Laser-driven Electron Recollision

Monday 1 July 2019 15:00 (15 minutes)

One of the commonly used assumptions underlying the analysis of attosecond strong-field spectroscopies is that in the propagation step any information on the initial state of the ionized electron is lost. For example, it is commonly assumed that any information on the orbital from which the electron originates is "washed out" during the propagation step, and no longer influences the recollision process. Here we have tested this central assumption experimentally and theoretically by studying molecular-frame elastic laser-induced electron rescattering associated with two different ionization continua in the same polyatomic molecule.

Authors: Dr MIKOSCH, Jochen (Max Born Institute); SCHELL, Felix (Max Born Institute); Dr BREDTMANN, Timm (Max Born Institute); Dr SCHULZ, Claus Peter (Max Born Institute); Dr PATCHKOVSKII, Serguei (Max Born Institute); Prof. VRAKKING, Marc J.J. (Max Born Institute)

Presenter: Dr MIKOSCH, Jochen (Max Born Institute)

Session Classification: Ultrafast quantum dynamics in laser fields