

アト秒量子ダイナミクスセミナー

「高強度レーザー場と静電場中の 原子の光電子ホログラフィー」

"PHOTOELECTRON HOLOGRAPHY

IN STRONG OPTICAL AND DC ELECTRIC FIELDS"

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The application of velocity map imaging for the detection of photoelectrons resulting from atomic ionization allows the observation of interferometric, and in some cases holographic structures that contain detailed information on the atomic target from which the photoelectrons are extracted.

In my talk I will present three recent examples of the use of photoelectron velocity map imaging in experiments where atoms are exposed to strong optical and dc electric fields. I will discuss (i) observations of the nodal structure of Stark states of hydrogen measured in a dc electric field, (ii) mid-infrared strong-field ionization of metastable Xe atoms and (iii) the reconstruction of helium electronic wavepackets in an attosecond pump-probe experiment.

In each case, the interference between direct and indirect electron trajectories reminiscent of the reference and signal waves in holography is seen to play an important role.

日時：2014年5月29日（木）16:30-18:00

場所：東6号館8階803会議室

お問合せ：森下亨（5458）