

October 24th, 2012 - 11:00 am

Seminar Room IV, CFEL (Bldg. 99, 01.111)

Max Planck Research Department for Structural Dynamics



UHI

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New deformable mirror technologies

Nowadays adaptive optics (AO) is a very powerful technique for several scientific and technological experiments. Successful applications of deformable mirrors were achieved in our laboratory in fields such as: ultrabroadband parametric amplifiers compression and shaping in the NIR and mid-IR, high order harmonics generation, microscopy, high peak power lasers and adaptive time preserving monochromators. Although many researchers have been working in the last decade to the realization of new DMs, the universal component has not been found yet. Therefore each of those applications require an ad-hoc deformable mirror. The properties and design rules of each DM will be described together with the experimental methods and results. The resistive electrodes deformable mirror and the photocontrolled DM recently developed in our laboratory will be described in detail.