

Single-shot, time-resolved rocking curves using tilted optical wavefronts

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The aim of this investigation was to develop a method for time-resolved x-ray diffraction experiments taking advantage of the divergence of the laser-produced plasma source. This was implemented in an experiment where the temporal dependence of the x-ray reflectivity was recorded by hitting the sample with a tilted wave front from the laser. As a test case the well-known phenomenon of strain propagation in semi-conductors was used.