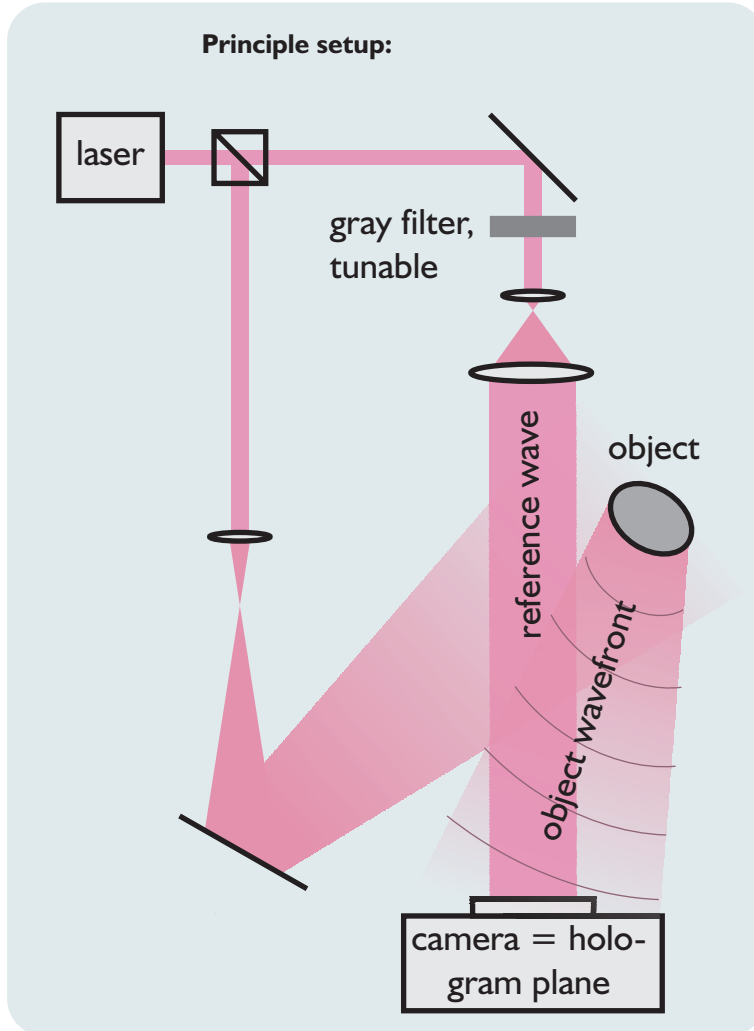


Digital Holography



General information:

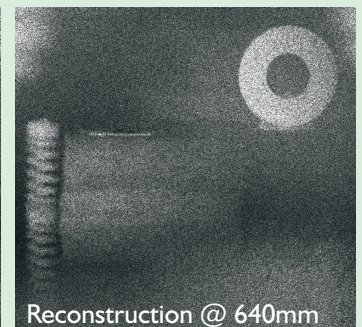
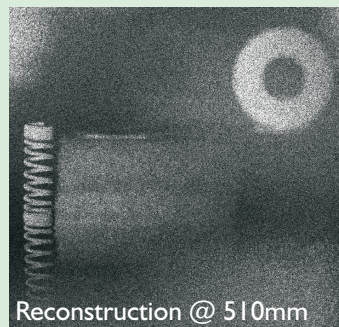
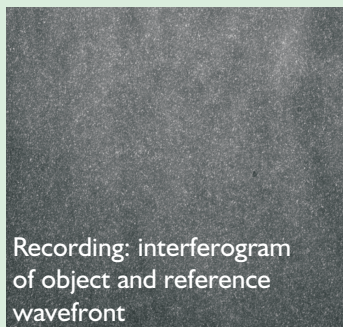
In holography it is possible to record a complex wavefront, i.e. 3D information about the object. To this end an interference pattern between the object wavefront (i.e. the wavefront scattered from the object) and a reference wavefront is recorded.

In classical analog holography the recording material is a high resolution holographic film and reconstruction is performed optically by diffraction of the reference wavefront at the recorded interference pattern.

In digital holography, on the other hand, the recording of the interference pattern is performed digitally, e.g. on a CCD or CMOS camera. Reconstruction can thus be performed numerically by calculation of the propagation of the diffracted wavefront into arbitrary observation planes. This allows one to reconstruct object information in various depths from a single holographic image.

Experiment: record and reconstruction

Due to the recording of the complex wavefront in the interferogram it is possible to reconstruct the object at various distances (depths):



C O N T A C T

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S U P P O R T