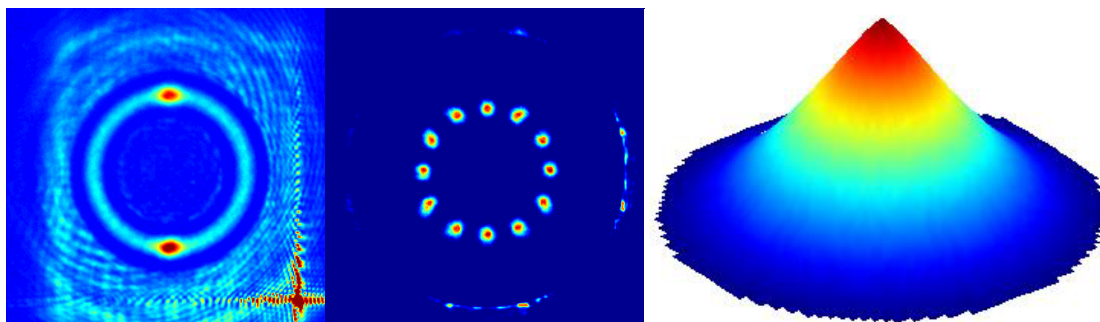


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Novel optical traps for ultracold atoms

The use of a Spatial Light Modulator (SLM) to generate optical traps for ultracold atoms opens the possibility of forming non-periodic and non-trivial patterns of dipole traps to create trapping geometries not achievable using existing techniques. The SLM is an inherently dynamic tool that offers the opportunity to generate smooth, time-varying optical potentials that can in principle be employed to achieve full coherent control over the trapped gas. We outline the work in progress at St Andrews to achieve novel trapping geometries for ultracold atoms using an SLM.



[1] G. D Bruce et al, „Smooth, holographically generated ring trap for the investigation of superfluidity in ultracold atoms“, arXiv: 1008.2140

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