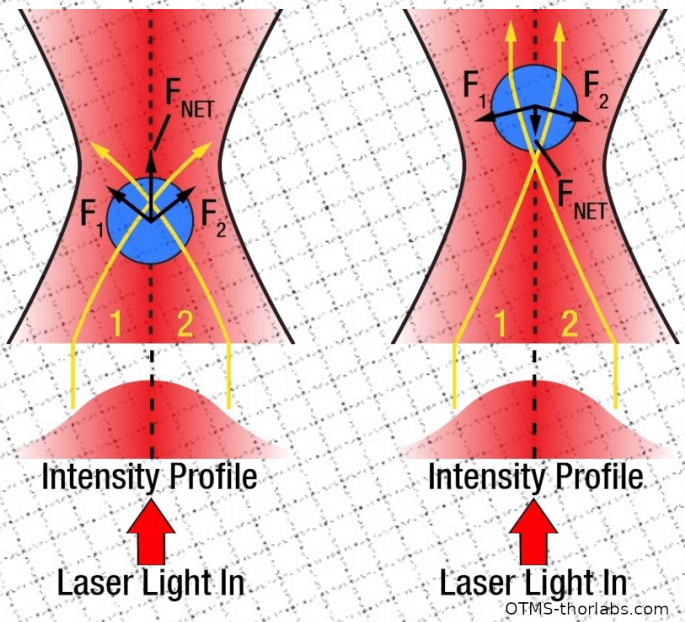
Master-Thesis

Optical Tweezers

The project is about trapping single particle in all 3-dimensions. This allows for complete isolation of the particles from their environment in order to investigate their properties. For the particles of interest which are several magnitudes larger than single atoms the characteristics of interaction or chemical reactions shall be investigated.

Cooling them near their ground state enables us to explore the limits of quantum mechanics. The setup aims to contribute to fundamental tests like collapse models or precision measurements of the absolute mass of a particle.

Target group:
all committed, adventurous explorers with interest in quantum optics, affinity for programming tasks, and ability to work in a team.



Quantum Technology group [qute] @ LUH
kernbach@qute.uni-hannover.de
Prof.A.W.Schell Tel: 14890 // loc. 3701-R:032
M.Kernbach Tel: 14299 // loc. 3701-R:205