

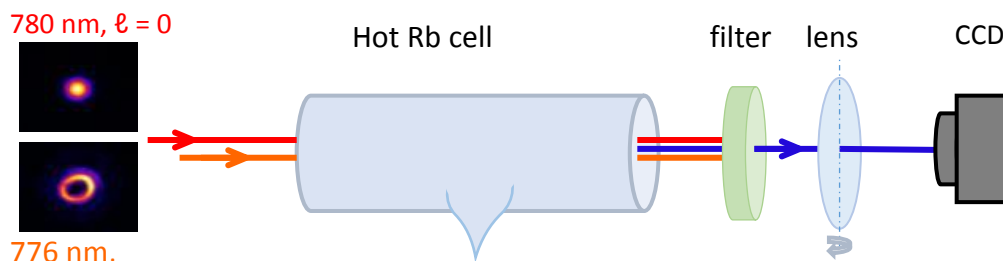
# Non linear spectroscopy with optical vortices on rubidium vapor

Location: Lab A Cotton, Orsay, bat 505

Researcher in charge of the Trainees: Bruno Viaris de Lesegno and Marion Jacquey .

Maximum number of Trainees: 3

Experiment:



The experiment uses a rubidium two photon transition to realize a four wave mixing process generating a blue radiation (@420 nm) as output from an input excitation @780 and 776 nm. The setup uses a hot cell of rubidium vapor illuminated by adequate laser beams, and allows examining the vortex transfer from red laser beam (@776 nm) to blue.

Schedule expected:

The Trainees will learn about the method for vortex beams generation (it uses SLM device), about the detection method to characterize the associated orbital angular momentum. Then they will visualize the blue light generation and characterize the obtained beam and the vortex transfer.

References:

[1] Citlali Cabrea PHD thesis Paris Sud, decembre 2014.