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Type: **Poster**

Quantum Fluids of light in atomic vapors

Since its discovery in 1995, Bose-Einstein Condensation (BEC) is a powerful object for quantum experiments. Its coherence offers a lot of possibilities for measuring quantum phenomena. Even though BEC is well studied with ultracold atoms cloud, an analogy for classical waves propagating in a non-linear medium can be established and condensation of classical waves has been predicted.

Our experiment is based on the use of an atomic vapor as a non linear medium. By heating a Rubidium cell, we create a nonlinear medium with adjustable non linearity. By modifying the properties of the incident laser beam (shape, size, frequency, etc) we are able to study a wide range of phenomena.

After the observation of precondensation of classical waves in this system, we turned to a study of shock wave creation in this system. We will present first result on this investigation, including numerical and experimental comparisons.

Choix de session parallèle

2.3 Fluides quantiques et lumière

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