**title : simulation of the effect of the wavefront distortion on the Atomic interferometers**

Atom interferometry is a technology that allows measurements to be performed with extreme precision and accuracy. It has been applied to the measurement of several physical quantities such as gravity acceleration at SYRTE and the fine-structure constant α at the LKB. Despite its accuracy, experiments face limitations due to systematic effects. Notably, the measurement of α highlighted wavefront distortion and intensity fluctuations as major factors affecting precision of the interferometer. To calculate these effects, we employ a Monte Carlo approach based on random trajectory distributions. I will present simulation of the effect of the wavefront distortion in the two experiments conducted at the LKB and Syrte.