

Concentric-Ring Atom Interferometer

Thursday 21 May 2015 08:45 (15 minutes)

We investigate applicability of a novel atom interferometer consisting of two concentric rings for precision measurements. The investigation is carried out with a computer simulation of Gross-Pitaevskii equations which monitors low energy vibrational modes inside of the interferometer under various ring geometries. From each eigenmodes, the fringe visibility between thermal ensemble and degenerate Bose gas are compared.

Author: SRAKOWL, Kritsana (Department of Physics and Materials Science, Faculty of Science, Chiang Mai University, Chiang Mai 50200, Thailand)

Co-authors: Dr CHATTRAPIBAN, Narupon (Department of Physics and Materials Science, Faculty of Science, Chiang Mai University, Chiang Mai 50200, Thailand); Dr ANUKOOL, Waranont (Department of Physics and Materials Science, Faculty of Science, Chiang Mai University, Chiang Mai 50200, Thailand)

Presenter: SRAKOWL, Kritsana (Department of Physics and Materials Science, Faculty of Science, Chiang Mai University, Chiang Mai 50200, Thailand)

Session Classification: Atomic Physics, Quantum Physics, Molecular and Chemical Physics

Track Classification: Atomic Physics, Quantum Physics, Molecular and Chemical Physics