

Split-Operator Method for Fabry-Perot Interferometry

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We numerically calculate transmission, reflection and cavity-modes inside a Fabry-Perot interferometer using the split-operator method. Unlike traditional methods, the cavity's eigenmodes are computed from temporal propagation instead of spatial propagation which makes the calculation of cavity scanning more practical. Also the split-operator coexist with master equations of fully quantum mechanics calculation of atom-photon interaction in the Fabry-Perot cavity.

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