

Study of Magnetic Traps and Radio Frequency Dressed State Potentials

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Abstract

In this thesis a theoretical study of Magnetic traps and Radio Frequency dressed state is presented. RF-Dressed state can produce a double well, a ring trap and in general polarisation dependent potentials. RF-dressed state potentials are controlled by RF amplitudes, RF detuning and Rf polarisation state. This thesis presents detailed calculations of RF dressed state potential for a Bose Einstein Condensate trapped in a Magnetic trap.