

"Dipole Traps and Evanescent Wave Traps"

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There are three common traps for neutral atoms: resonant optical traps, magnetic traps, and dipole traps. Dipole traps rely on the electric dipole interaction with far-detuned light, which is weaker than the other two trapping methods. Dipole traps will be discussed and in particular evanescent wave traps. Cold atoms can be dropped onto, and trapped by, a blue detuned evanescent wave created via total internal reflection of a laser beam from a dielectric-vacuum interface.