

# COHERENT POPULATION PUMPING IN A BRIGHT STATE

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*We demonstrate resonances due to coherent population pumping in a bright state (CBS), using magnetic sublevels of the closed  $F_g = 2 \rightarrow F_e = 3$  hyperfine transition in  $^{87}\text{Rb}$ . The experiments are performed at room temperature in two kinds of vapor cells one that is pure and the second that contains a buffer gas of Ne at 20 torr. We also present the effect of pump power variation on the CBS linewidth, and explain the behavior by using a power-dependent scattering rate. The experimentally observed CBS resonances are supported by a density-matrix analysis of the system.*

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