

Abstract Submitted
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Coupled square well model and Fano-phase correspondence BIN YAN, CHRIS GREENE, Department of Physics and Astronomy, Purdue University — This work investigates the Fano-Feshbach resonance with a two-channel coupled-square-well model in both the frequency and time domains. This systems is shown to exhibit Fano lineshape profiles in the energy absorption spectrum. The associated time-dependent dipole response has a phase shift that has recently been understood to be related to the Fano lineshape asymmetric q parameter by $\varphi = 2 \arg(q - i)$. The present study demonstrates that the phase- q correspondence is general for any Fano resonance in the weak coupling regime, independent of the transition mechanism.

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