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Effects of 3-body resonances in ultracold bose gases ROBERT CHIARAMONTE, SIMON GARDINER, CHRIS GREENE, MURRAY HOLLAND, JILA, University of Colorado — We are investigating the 3–boson system using a model 2–body potential capable of supporting bound states. Of particular interest is the atom–dimer scattering for large two-body scattering lengths (for example, in the vicinity of a Feshbach resonance). We study 3–body effects in the context of a many body field theory accounting for correlations to the appropriate order. We are exploring the possibility of applying this to both homogeneous and optical lattice configurations in ^{85}Rb. We acknowledge support for this project from the NSF.

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