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Implementation of squeezing jump operators ROLAND CRISTOPHER CABALLAR, GENTARO WATANABE, Asia Pacific Center for Theoretical Physics, SEBASTIAN DIEHL, University of Innsbruck, HARRI MÄKELÄ, Aalto University — We present a method to construct phase andnumber squeezed states using dissipation. Our method makes use of a gas of ultracold bosonicatoms trapped in a narrow double well embedded in a wide harmonic oscillator, with the atoms Raman coupled to the first two energyeigenstates of the harmonic oscillator. The whole system is then immersed in a background BEC to allow for dissipation from the harmonicoscillator states back to the double narrow wellstates.

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