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**Spectroscopy and quantum quench dynamics of interacting one-dimensional Bose condensates** VLADIMIR GRITSEV, Harvard University, ANATOLI POLKOVNIKOV, Boston University, EUGENE DEMLER, Harvard University — We discuss applications of the exact solution of the quantum sine Gordon model to study non equilibrium dynamics of two coupled interacting one dimensional Bose liquids. In particular, we consider a set up in which a sudden quench of the tunneling amplitude introduces oscillations in the relative phase of the two condensates. We demonstrate that the power spectrum of the interference amplitude oscillations should reveal the non trivial excitation spectrum of the quantum sine Gordon model.

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