

1145-82-1540

Houssam Abdul-Rahman* (houssam@math.arizona.edu), 617 N. Santa Rita Ave., Tucson, AZ 85721. *Dynamical Entanglement of disordered harmonic oscillators*. Preliminary report.

We consider the dynamics of quantum harmonic oscillator systems with disorder under the general assumption of eigen-correlator localization of the associated one-particle Hamiltonian. We show that starting from products of gaussian states (thermal and/or ground states) of local oscillators Hamiltonians, the averaged entanglement of the time-evolved states follows an area law with a pre-factor that grows linearly in time. (Received September 23, 2018)