

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Dynamic Compressibility and aging in Wigner crystals and quantum glasses¹ THIERRY GIAMARCHI, University of Geneva, DPMC, 24 Quai Ernest Ansermet, CH-1211 Geneva 4, Switzerland, LETICIA CUGLIANDOLO, Laboratoire de Physique Theorique et Hautes Energies, 4 Place Jussieu, 75252 Paris Cedex 05, France, PIERRE LE DOUSSAL, LPTENS CNRS UMR 8549 24, Rue Lhomond 75231 Paris Cedex 05, France — We study the non-equilibrium linear response of quantum elastic systems pinned by quenched disorder with Schwinger-Keldysh real-time techniques complemented by a mean-field variational approach. We find (i) a quasi-equilibrium regime in which the analytic continuation from the imaginary-time replica results holds provided the marginality condition is enforced; (ii) an aging regime. The conductivity and compressibility are computed. The latter is found to cross over from its dynamic to static value on a scale set by the waiting time after a quench, an effect which can be probed in experiments in e.g. Wigner glasses.

¹Supported by Swiss Science Foundation, ACI-France grant and IUF

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Date submitted: 30 Nov 2005

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