Abstract Submitted
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Statistics of excitations in the electron glass model MATTEO PALASSINI, University of Barcelona — We study the statistics of elementary excitations in the classical electron glass model of localized electrons interacting via the unscreened Coulomb interaction in the presence of disorder. We reconsider the long-standing puzzle of the exponential suppression of the single-particle density of states near the Fermi level, by measuring accurately the density of states of charged and electron-hole pair excitations via finite temperature Monte Carlo simulation and zero-temperature relaxation. We also investigate the statistics of large charge rearrangements after a perturbation of the system, which may shed some light on the slow relaxation and glassy phenomena recently observed in a variety of Anderson insulators. In collaboration with Martin Goethe.

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