

Abstract Submitted  
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**Intermediate state of strongly disordered superconductors** IVAN SADOVSKYY, LEV IOFFE, Rutgers University — We study theoretically the superconductor-insulator transition in disordered Josephson junction arrays. Our numerical simulations suggest the existence of the intermediate state between superconducting and insulating states across the SIT that appears in a relatively narrow range of Josephson couplings. In this state the long range order parameter is absent but the excitations have a significant decay rate. We discuss the relation this finding to the experimental data that show the existence of the “bad metal” state characterized by a large temperature-independent resistance (J. Paramanandam, M.T. Bell, L.B. Ioffe, and M.E. Gershenson).

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