98. Title: Terahertz Spectroscopy of Quantum Phase Transitions and the Temperature-Frequency Scaling

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Abstract: In the last few decades, significant progress has been achieved in the development of generators and detectors of terahertz radiation (at frequencies in the range from approximate to 300 GHz to approximate to 3 THz). Different terahertz spectroscopic techniques have been widely used now in investigating semiconductors, superconductors, molecular magnets, multiferroics, metamaterials, and other promising objects. It has been demonstrated that terahertz spectroscopy offers wide but not completely realized possibilities for studying quantum phase transitions in electron-correlated systems.