Abstract Submitted
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How a new paradigm for quasi one dimensional transport problems overlaps with Schwinger's electron-positron nucleation results as generalized by Lin[1] ANDREW BECKWITH, Department of Physics and Texas Center for Superconductivity and Advanced Materials at the University of Houston — I present how to apply a wavefunctional formulation of tunneling Hamiltonians to a driven sine Gordon system. Specifically, I apply a generalization of the tunneling Hamiltonian to charge density wave (CDW) transport problems in which I consider tunneling between states that are wavefunctionals of a scalar quantum field ϕ. I present previously derived ***I-E*** curves that match Zenier curves used to fit data experimentally with wavefunctionals congruent with the false vacuum hypothesis. Additionally, I observe a very strong convergence with a generalization of Lin's expansion of Schwinger's work in electron- positron pair production, finding that the similarities argue in favor of the new pinning gap paradigm proposed for quasi-one-dimensional metallic transport problems.

[1]1st of two abstracts for consideration/TcSAM staff help appreciated

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