Validity of the Semiclassical Approximation for Quantum Electrodynamics in 1+1 Dimensions. II[1] SILVIA PLA GARCA, JOSE NAVARRO SALAS, Univ de Valencia, PAUL R. ANDERSON, IAN NEWSOME, ROBERT S. LINK, Wake Forest Univ — Numerical techniques will be discussed that were used to solve the semiclassical backreaction equations for a quantized scalar field and a quantized fermion field interacting with a homogeneous classical electric field in 1+1 dimensions. These include using adiabatic regularization to renormalize the expectation value of the current, $\langle j_\mu \rangle$, and initial conditions for the backreaction and mode equations. Results of numerical calculations will be shown and their implications for the validity of the semiclassical approximation will be discussed.

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