Effects of Conformally Invariant Quantum Fields on Future Singularities - Part III[1] JOHN R. EINHORN, ANDREW J. LUNDEEN, ERIC D. CARLSON, PAUL R. ANDERSON, Wake Forest University — The effects of conformally invariant quantum fields on universes with future singularities are numerically investigated. It is assumed that these singularities are caused by dark energy in the form of a perfect fluid with a known equation of state. Numerical results for type III, type II, and type IV singularities are presented. It is found that for one sign of the coefficient of $\Box R$ term in the trace of the semi-classical backreaction equations, the future singularity may or may not be reached, depending on the initial conditions, while for the other sign, the singularity is always reached. However, in every case where the singularity is reached, quantum effects apparently cancel or partially cancel the divergences caused by the classical dark energy.

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