1046-83-1833 **Deborah A. Konkowski*** (dak@usna.edu), Department of Mathematics, U.S. Naval Academy, Annapolis, MD 21402, and **Thomas M. Helliwell** (helliwell@HMC.edu), Department of Physics, Harvey Mudd College, CLaremont, CA 91711. *Quantum Non-Singularity of Spacetimes with Higher Order Diverging Differential Curvature Invariants.*

The classical singularity structure of general relativistic spacetimes is determined by incomplete geodesics and the divergence of scalar polynomials in the curvature. The quantum singularity structure is determined by the essential self-adjointness of scalar wave operators evaluated for test fields in the spacetimes. Here we show that spacetimes with higher order divergence in the scalar polynomials are quantum mechanically non-singular and we discuss the possible implications for the cosmic censorship hypothesis. (Received September 16, 2008)