## 1070-83-300 **James A Isenberg\*** (isenberg@uoregon.edu), Department of Math, University of Oregon, Eugene, OR 97403, and **Xianghui Luo**. Stability of a Class of Expanding Solutions of the Einstein-Maxwell-Scalar Field Equations.

We generalize Ringstrom's global future causal stability results for certain expanding cosmological solutions of the Einstein-scalar field equations to solutions of the Einstein-Maxwell-scalar field system. In particular, we show that if we perturb (nonlinearly) the initial data for one of these model solutions, including electromagnetic as well as gravitational and scalar field perturbations, the maximal spacetime developments which evolve from such perturbed data retain the global (future complete) structure of the unperturbed model solutions. (Received February 15, 2011)