Black Hole Constraints on Varying Fundamental Constants JANE MACGIBBON, University of North Florida — We apply the Generalized Second Law of Thermodynamics and derive upper limits on the variation in the fundamental constants. Intriguingly, the maximum variation in the electronic charge permitted by the GSL for black holes accreting and emitting in the present cosmic microwave background matches the variation in the fine structure constant measured by Webb et al. using absorption lines in the spectra of distant quasars.