

Abstract Submitted  
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**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.

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