

Abstract Submitted  
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**Entropic derivation of  $F=ma$  for circular motion** MICHAEL DUNCAN, DOUGLAS SINGLETON, RATBAY MYRZAKULOV — We examine the entropic picture of Newton's second law for the case of circular motion. It is shown that one must make modifications to the derivation of  $F = ma$  due to a change in the effective Unruh temperature for circular motion. These modifications present a challenge to the entropic derivation of Newton's second law, but also open up the possibility to experimentally test and constrain this model for large centripetal accelerations. (Phys. Lett. B 703 (2011) 516-518)

Michael Duncan

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