



PHYSICS AND ASTRONOMY SEMINAR

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“Instabilities and phase transitions of a holographic anisotropic plasma”

Abstract

Black hole solutions of type IIB supergravity have been previously constructed that describe the $N=4$ supersymmetric Yang-Mills plasma with an anisotropic spatial deformation. The zero temperature limit of these black holes approach a Lifshitz-like scaling solution in the infrared. In this talk, I will discuss some of the low temperature instabilities of these black hole solutions, and demonstrate that the solutions undergo phase transitions leading to new branches of black hole solution. These new solutions display interesting features, such as unusual critical exponents, third order phase transitions and retrograde condensation. Finally, I will discuss how these results generalize when a gauge field is included.

Thursday, August 4, 2017

2:00 p.m.

Clearihue Building

Room A202