

Seminar on
THEORETICAL PARTICLE PHYSICS

on Monday, 13 July 2015, at 4.00 p.m. s. t.
Theresienstraße 39 / I, Lecture Hall B139

Speaker: Nico Wintergerst
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Title: "Hawking Evaporation in the condensate picture
for Black Holes"

Abstract

I will review the mechanism for Hawking evaporation in the picture in which black holes are Bose condensates of gravitons at a quantum critical point. Within a quantum many-body framework, I will show how evaporation of a black hole is due to incoherent scattering of gravitons in which one or more of the gravitons are ejected from the condensate. In a scalar field theory with derivative interactions, I demonstrate the existence of scaling solutions in which the condensate is at a critical point throughout the collapse and that exhibit the kind of instability that was recently conjectured to be responsible for fast scrambling.