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Black Holes in String Theory[1] MADALENA LEMOS, Stony Brook University — We begin by reviewing the basic aspects of classical black holes in General Relativity, focusing on two types of black hole solutions, in $D = 4$ dimensions: the Schwarzschild, and the Reissner-Nordström black holes. The Bekenstein-Hawking entropy of black holes, and the Hawking evaporation process are also discussed. This leads to the issues of the microscopic origin of the black hole entropy, as well as the information loss problem due to black hole evaporation. These issues are addressed in String Theory. After considering the low energy effective action of type IIB String Theory, we consider a particular type of black hole solutions in $D = 5$, namely the BPS black holes. The microstate counting is discussed for these black holes, and the results are compared with the macroscopic entropy of Bekenstein and Hawking.

X	Prefer Oral Session
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Madalena Lemos
madalena.lemos@stonybrook.edu
Stony Brook University

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