



Venerdì 27 Maggio
Aula Wataghin, ore 14:30

Sergio Cacciatori
(Università dell'Insubria)

Hawking radiation in dielectric black holes

After discussing the Hawking effect for astrophysical black holes and the related problem in providing a direct detection of the Hawking radiation, we will show how one can try to solve the problem of measurability of the Hawking radiation by realizing a condition analogue to an horizon in simpler physical system that can permit a measure in laboratory. In particular, I will describe the experiment recently realized in the laboratory of the Como University by employing non linear effects in a homogeneous dielectric medium. We will see the analogy arising between the optical system and the gravitational one, but also how the presence of a dispersion law in the dielectric introduce important differences and, at the same time, is relevant for measurability.