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Evaporating Black Holes in the presence of Dark Sectors

Wednesday 15 May 2024 17:15 (15 minutes)

Hawking radiation emitted by a black hole is typically modified in the presence of new degrees of freedom beyond the Standard Model. In this talk I will discuss the characteristics of a hypothetical observation of a black hole in its final minutes of evaporation by current and upcoming Very/Ultra High Energy Gamma Ray telescopes, such as HAWC, LHAASO, and CTA. I will then discuss the potential for multi-messenger signals by the first and second generations of IceCube, and KM3NET. We typically predict sensitivity to dark sectors with order 10 new Dirac fermions up to mass scales of hundreds of TeV.

Mini Symposia (Invited Talks Only)

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