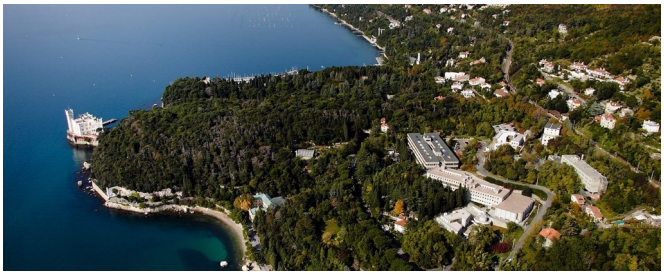

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Dark matter searches with CTA

Wednesday 30 August 2023 11:40 (30 minutes)

The study of dark matter (DM) encompasses a wide range of models that have been extensively investigated using accelerators, underground detectors, and astroparticle physics experiments. While numerous approaches have been employed, high-energy astrophysical observations offer distinct advantages in unravelling the nature of DM candidates that are challenging to explore within laboratory settings. Notably, the detection of annihilation signals from weakly interacting massive particles (WIMPs) with masses below 1 TeV has been subject to stringent constraints through current-generation experiments. The upcoming Cherenkov Telescope Array (CTA) will detect gamma rays with energy between 20 GeV and 300 TeV with unprecedented sensitivity and probe significantly heavier WIMPs, and explore additional DM candidates. This presentation aims to elucidate the search for DM and physics beyond the Standard Model using CTA.

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