



Contribution ID: 7

Type: **not specified**

Internal bremsstrahlung signatures of Dark Matter annihilations in light of direct detection and collider searches

Tuesday 15 April 2014 15:40 (20 minutes)

If dark matter annihilates into light fermions mediated by colored or charged scalar particles, the effect of internal bremsstrahlung yields a sharp spectral feature in the gamma spectrum. This line-like feature could be detected in the cosmic gamma-ray flux by current and future observatories, while being in agreement with constraints from secondary gamma-rays and antiprotons. We discuss complementary constraints on this class of models from direct detection and collider searches, and the interplay of future indirect and direct searches like CTA and Xenon1T

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Session Classification: Afternoon session