

ALPS2019 - Fourth Alpine LHC Physics Summit

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Type: Afternoon Session

Above-ground direct searches for WIMPs

Wednesday, 24 April 2019 17:55 (15 minutes)

Most direct WIMP searches have located their experimental setup under a large rock overburden in order to drastically reduce the backgrounds caused by cosmic-ray interactions. The absence of signal in current searches had led to revisit of the assumption that the WIMP-nucleon cross section is necessarily low enough to justify to neglect a possible attenuation of the WIMP flux as it passes through the rock overburden. I will review recent experiments devoted to the direct search for WIMPs having cross-section large enough to escape detection in an underground site, while still being compatible with cosmological and astrophysical constraints.

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