

HECA Seminar

(High Energy, Cosmology and Astro-particle physics)

[HECA web-page](#)

Tuesday 25.05.2021, h 11:15

join at

<https://meet.google.com/cgk-onvf-iuk>

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Looking forward to new physics and neutrinos at the LHC and beyond

Abstract

New physics has traditionally been expected in the high- p_T region at high-energy collider experiments. If new particles are light and weakly-coupled, however, this focus may be misguided: light particles are typically highly concentrated within a few mrad of the beam line. This opens up a novel direction in the LHC searches focusing on sub-GeV new particles and neutrino physics, which will be initiated by the FASER experiment during Run 3. In the talk, we will discuss the prospects of these and other related efforts that can extend towards the High-Luminosity phase of the LHC or even future proposed colliders. The focus of the talk will be on presenting the fields in both the Standard Model (SM) of particle physics and beyond the SM that could benefit from this research agenda.