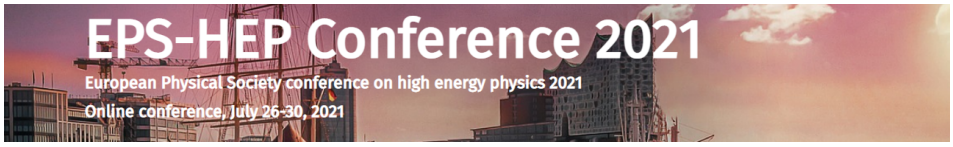

Contribution ID: **424** Type: **Parallel session talk**

Probing new physics at the LUXE experiment

Friday 30 July 2021 11:15 (15 minutes)

The proposed LUXE experiment at the DESY aims to probe QED at the nonperturbative regime in collisions between high-intensity laser pulses and high-energy electron or photon beams. This setup also provides a unique opportunity to search for physics beyond the standard model. In this talk we show that by leveraging the large photon flux generated at LUXE, one can probe axion-like-particles (ALPs) up to a mass of 350 MeV and with photon coupling of 3x10^-6 GeV^-1. This reach is comparable to FASER2 and NA62. In addition, we will discuss other probes of new physics such as the ALP-electron coupling.

Collaboration / Activity

LUXE

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