



Contribution ID: 40

Type: not specified

Background and detector response modeling in single electron-hole pair sensitive crystal detectors

Thursday 1 August 2019 14:30 (30 minutes)

We have entered the era of single electron-hole pair sensitive crystal detectors with a threshold as low as the indirect band gap. These detectors are excellent devices to search for light dark sector particles with masses well below the threshold of to date typical direct Dark Matter search detectors. But with new opportunities come new challenges. New sources of background govern the accessible energy range and the quantized nature of the detector response becomes a vital part of the response model. Without a profound understanding of both background and detector response searches with these detectors will remain without discovery potential. Their modeling is thus a very active field of research. This talk will discuss the current status and the challenges of background and response modeling for ongoing single electron-hole pair sensitive crystal experiments using silicon detectors.

Primary author: VON KROSIGK, Belina (University of Hamburg)

Presenter: VON KROSIGK, Belina (University of Hamburg)

Session Classification: General