



Contribution ID: 85

Type: **Parallel session talk**

Imaging nuclear recoils with light sheet microscopy

Wednesday 8 October 2025 17:30 (20 minutes)

Nuclear recoils can produce stable optically-active color centers in many common materials. Advances in light-sheet microscopy now allow rapid large-volume imaging of these materials with micrometer-scale resolution. We present the development of the mesoSPIM light sheet microscope at Virginia Tech, designed for imaging particle tracks relevant to nuclear and high-energy physics, including neutrino, dark matter, and neutron interactions. We discuss challenges and opportunities of this detection approach, and present commissioning data from the VT mesoSPIM.

Author: HEDGES, Sam (Virginia Tech)

Co-author: HUBER, Patrick

Presenter: HEDGES, Sam (Virginia Tech)

Session Classification: RDC 7 Low-Background Detectors

Track Classification: RDC 7 Low-Background Detectors