

# EDS

Electron Detection System

LUXE Steering Board Meeting 26.03.2025 - EDS Working Group Update

# Electron Detection System

## The Working Group

Ivo Schulthess

Ruth Jacobs

Matthew Wing

Jenny List

Louis Helary

Evan Ranken

Antonios Athanassiadis

Luke Hendriks

(1 Postdoc interested)

(1 Phd position open [[link](#)])

# Electron Detection System

## Status

### **Simulations:**

- working on LUXE320 simulation in Ptarmigan and Geant4 implemented by Sasha
  - particle flux for radiation damage
  - Compton spectra comparison with data

### **Screen & Camera:**

- energy calibration of E-320 from dipole magnet scans
- background subtraction from goose-trigger data

### **Cherenkov:**

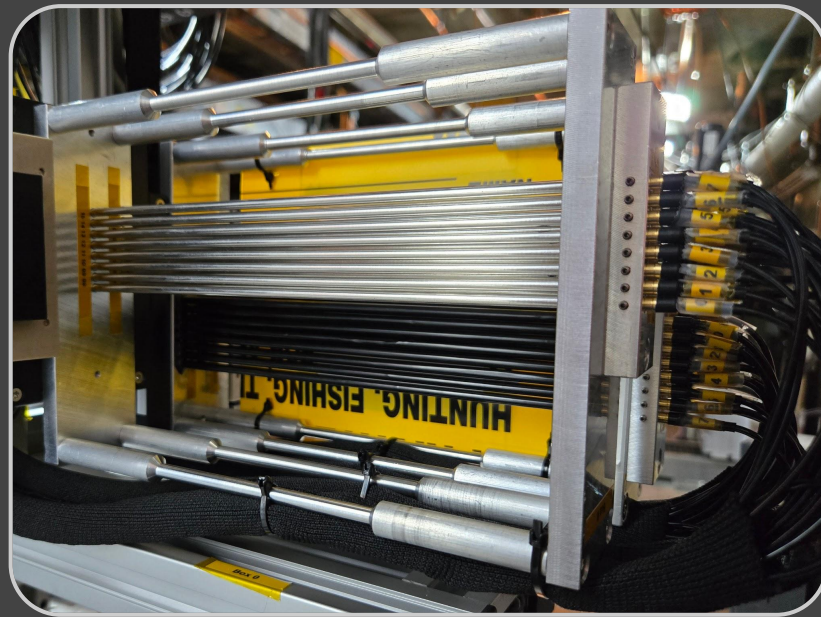
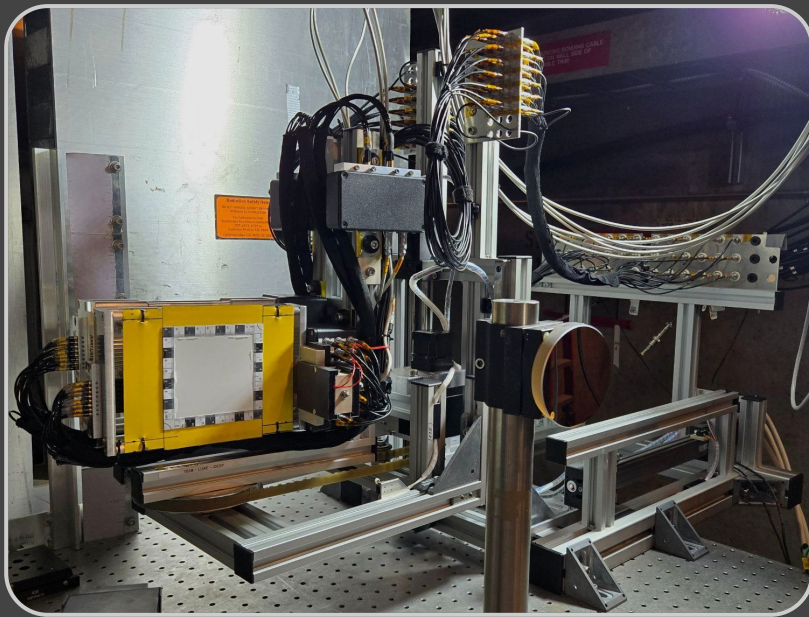
- data preprocessing optimizations
- handling of problems with electronic noise
- background determination and how to account for it

### **EDS:**

- writing library to combine data from both detectors
- finished measurement campaign at FACET-II
- LUXE320 article in the DESY FH annual report

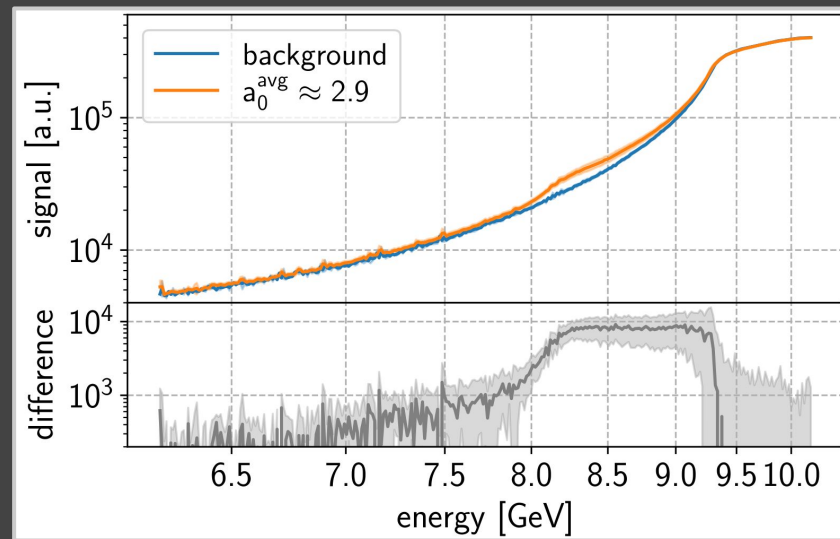
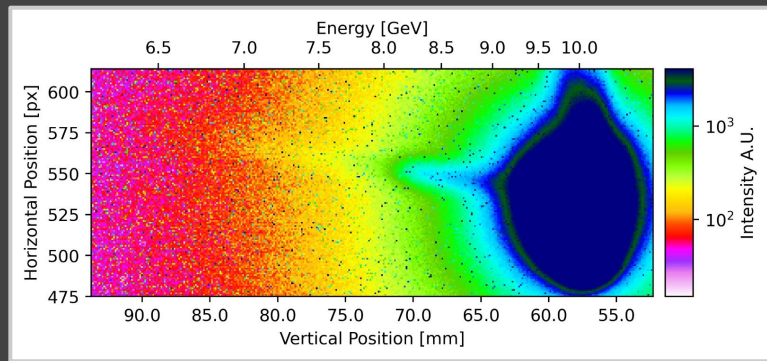
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## LUXE320 Detector



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## E-320 Compton Spectra



# Electron Detection System

# Electronic Noise

