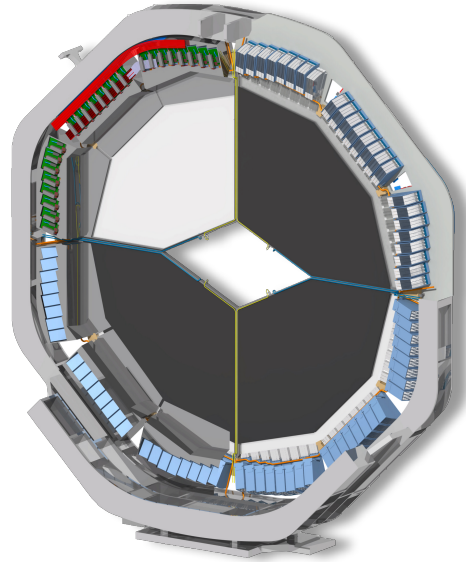


## Endcap Disc DIRC

# Recent studies regarding the Endcap Disc DIRC

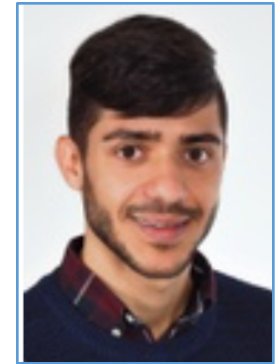
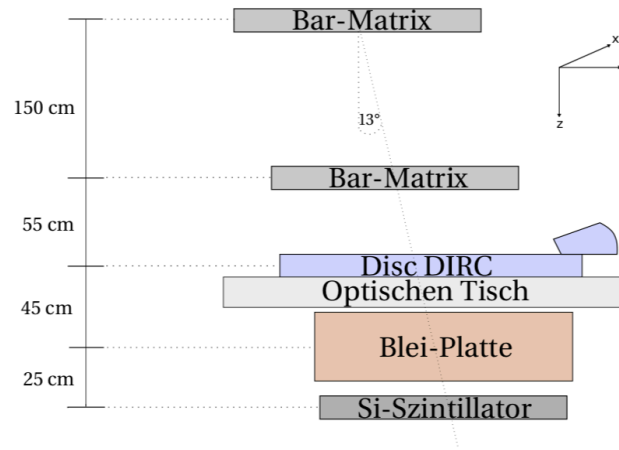
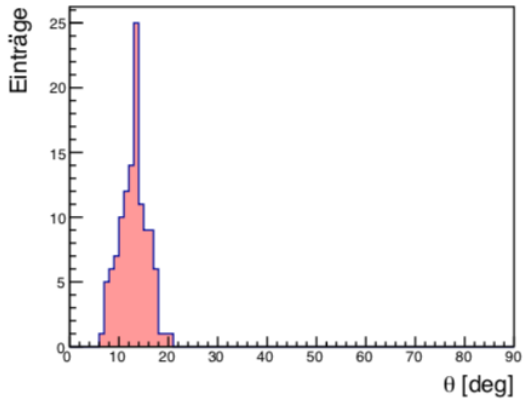


Simon Bodenschatz, Lisa Brück, Michael Düren, Erik Etzelmüller, Klaus Föhl,  
Avetik Hayrapetyan, Jan Hofmann, Sophie Kegel, İlknur Köseoğlu,  
Jhonatan Pereira de Lira, Mustafa Schmidt, Marc Strickert

PANDA CM 18/3 – PID Cherenkov – 2018/11/06

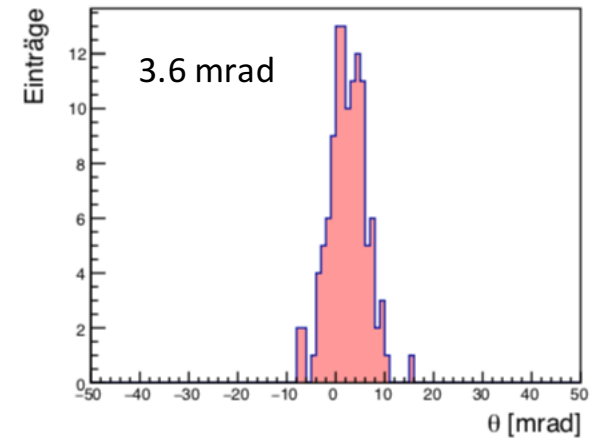
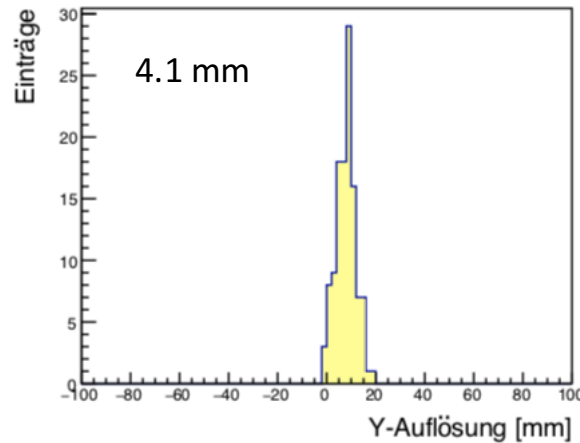
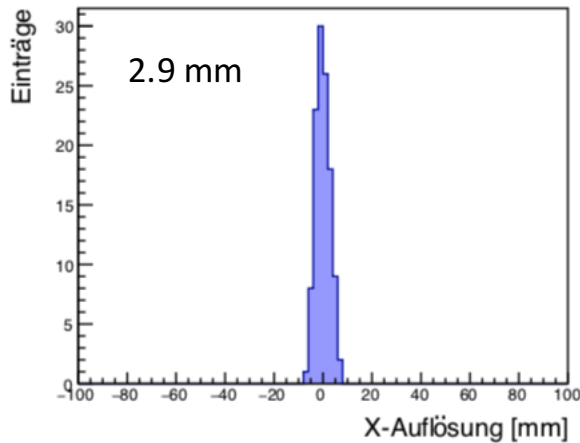
# Giessen Cosmic Station

Simulation studies for the upgrade of the Giessen Cosmic Station with the EDD



Jhonatan

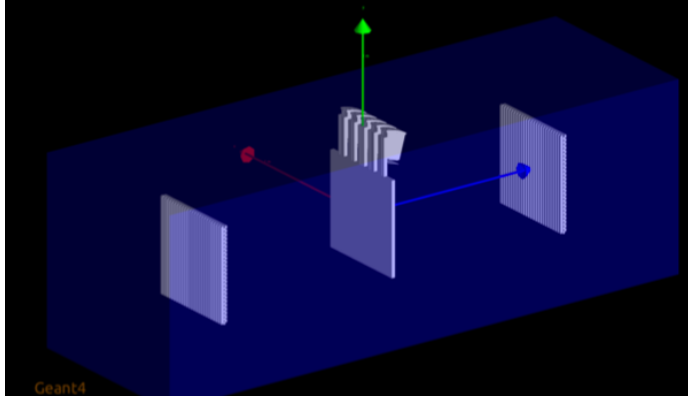
- accepted polar angles



- x, y and theta resolution for the Giessen Cosmic Station

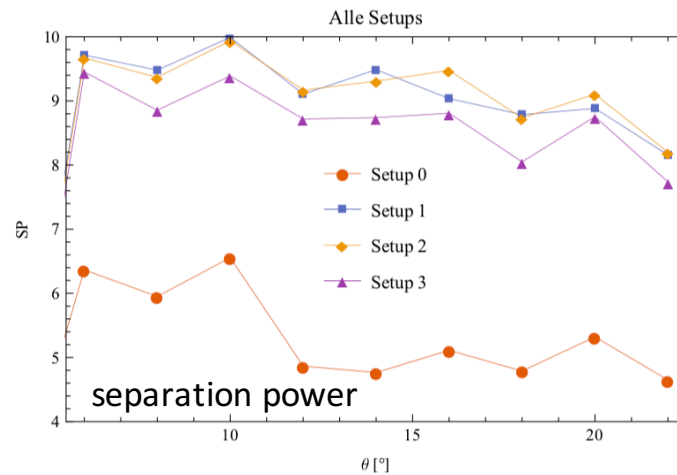
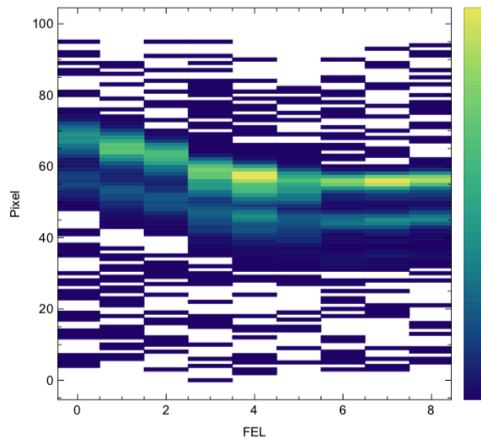
# EDD Prototype Performance Simulations

Simulation studies for the 2018 EDD testbeam campaign at CERN



Jan

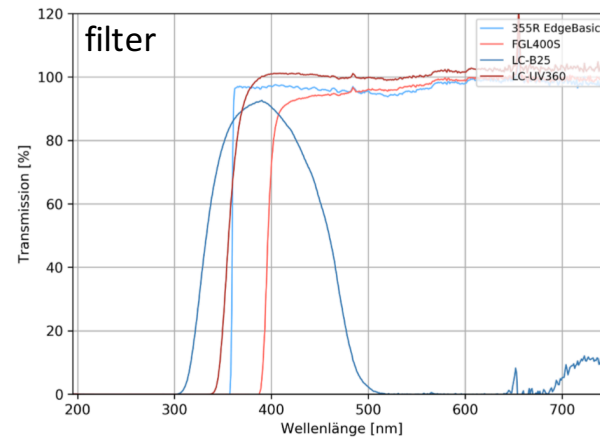
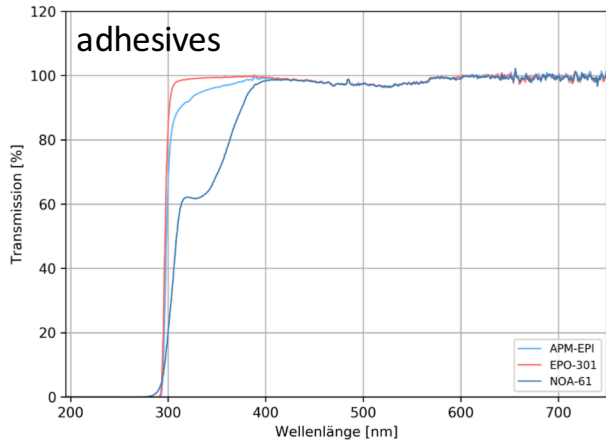
- Geometry inside Geant 4, wrote framework to easily include measured parameters



- Simulated different setups, included recent measurements for QE and transmission

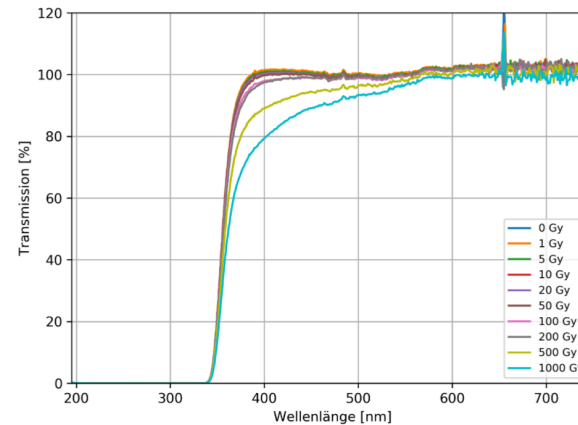
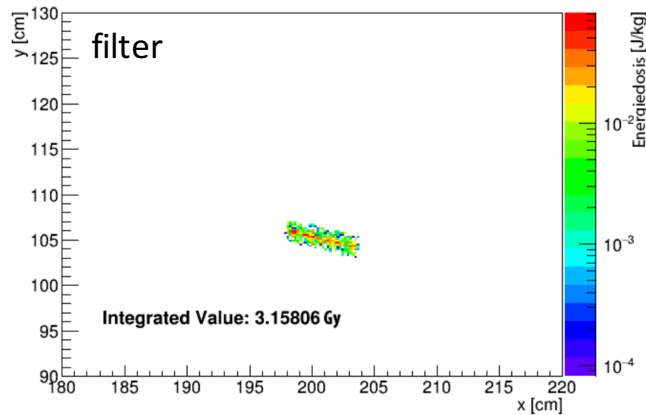
# Optical Filters and Adhesives

## Measurement and qualification of optical filters and adhesives for the EDD



Lisa

- 3 adhesives and 4 filters have been tested

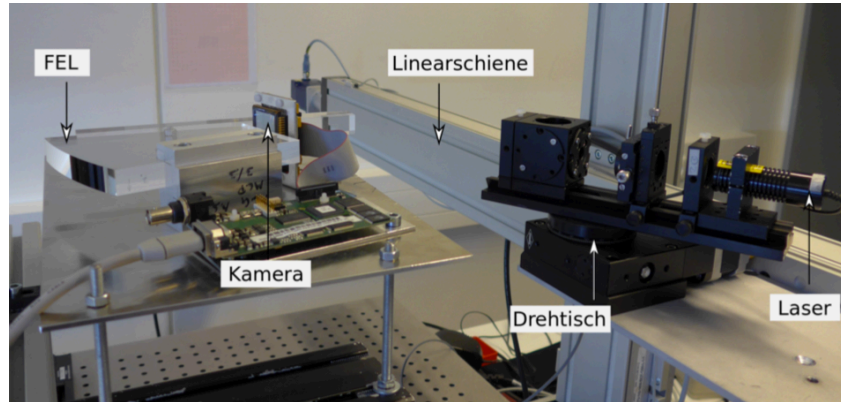


- Few Gy are expected for the filter, UV360 glass filter well suited



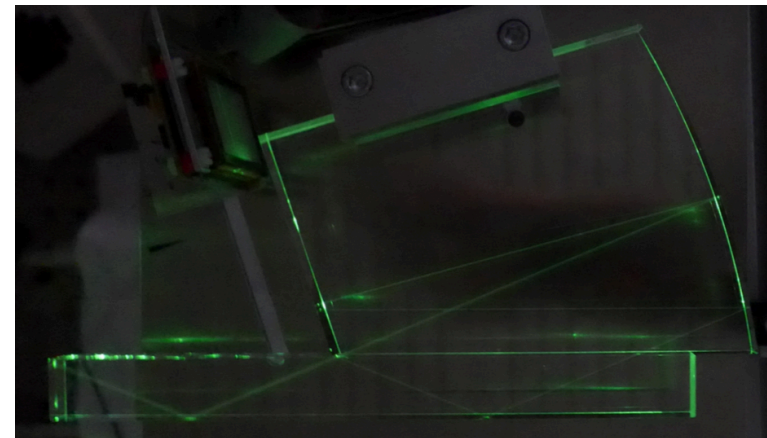
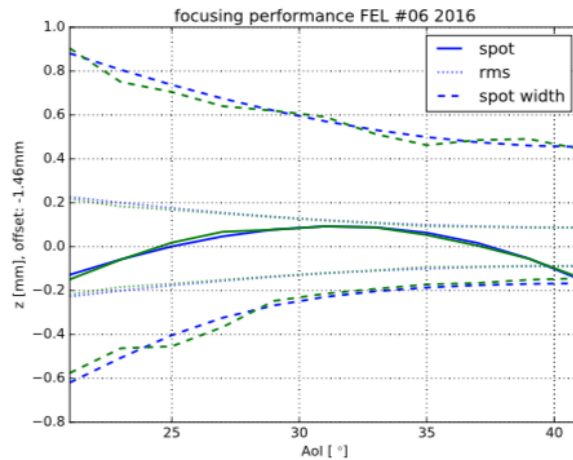
# FEL Qualification

Further development of the FEL qualification setup for an automated measurement



Sophie

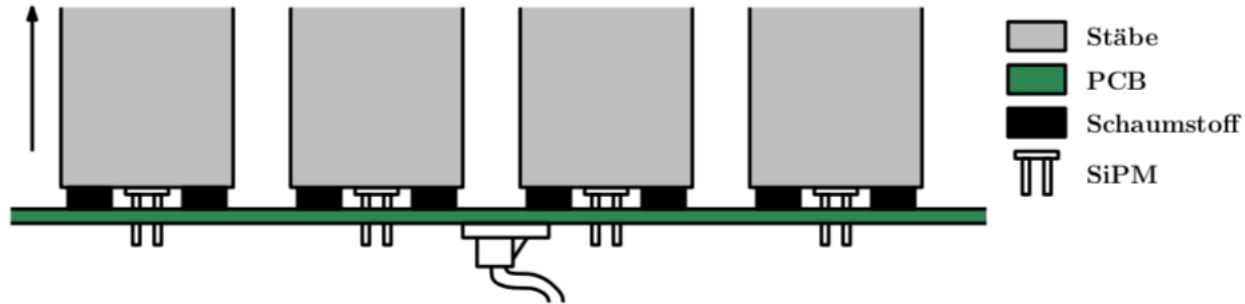
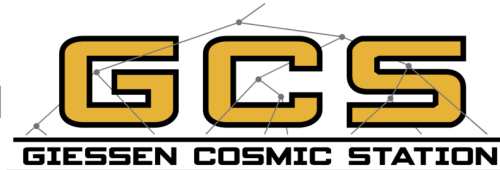
- Use of large linear stages for a 2D scan over a large area



- Relatively fast measurement, very good agreement with simulation

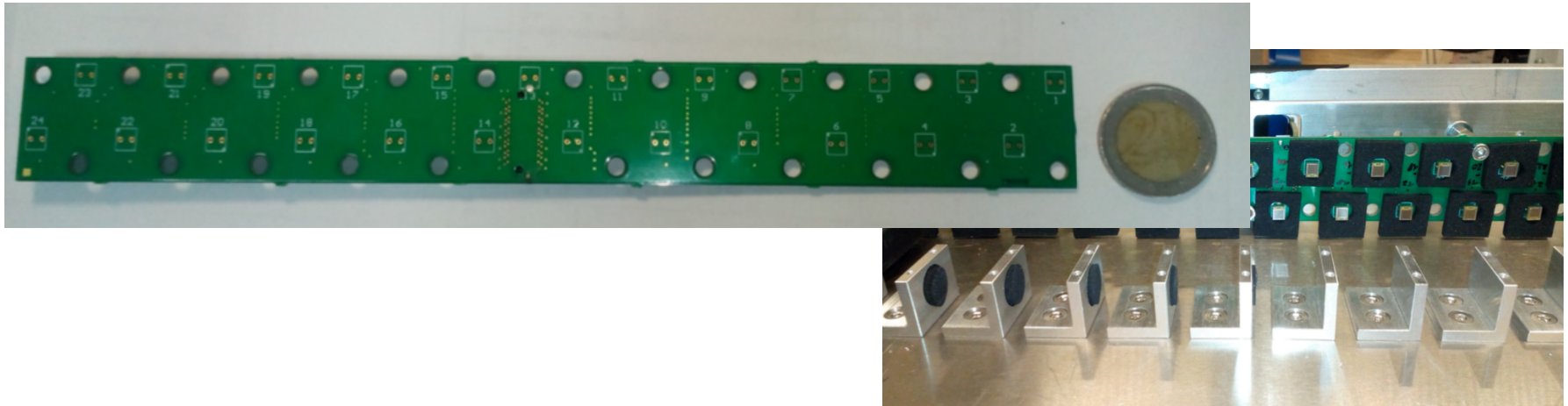
# Cosmic Station PCB and Box Design

PCB design and assembly for tracking boxes has been completed



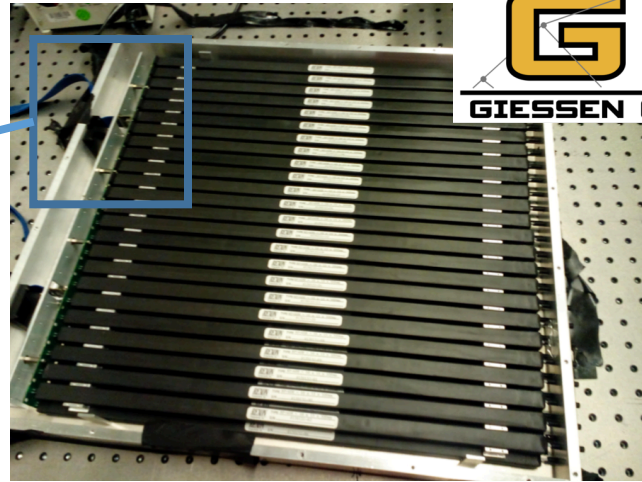
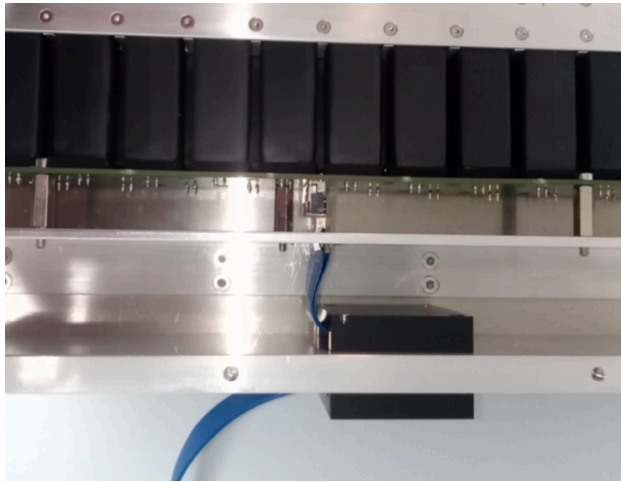
Simon

- SiPMs and connectors are soldered to PCB which

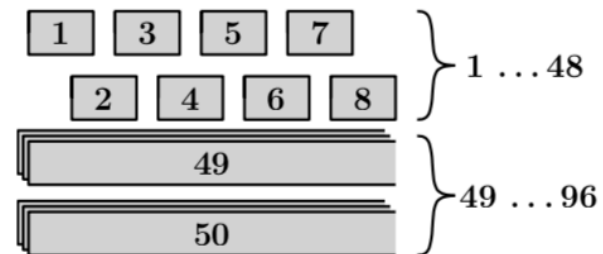
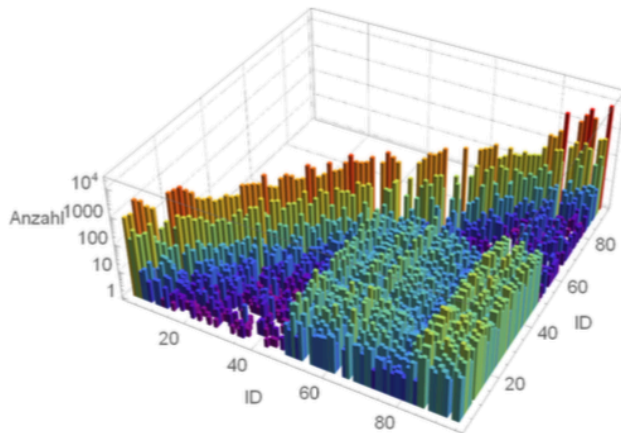


- Size of the PCB and position inside a Cosmic Box

# Cosmic Station Box Design



- Assembly of four boxes has been completed



- Dominant diagonal contains neighboring board, plateau contains coincidences

## Additional Information

- Theses shown are not published but can be made available on request
- All four Cosmic Boxes have been installed in the Giessen Cosmic Station and are currently being commissioned