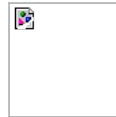


# Electronics

Christof Motzko  
on behalf of the Luminosity Detector Group

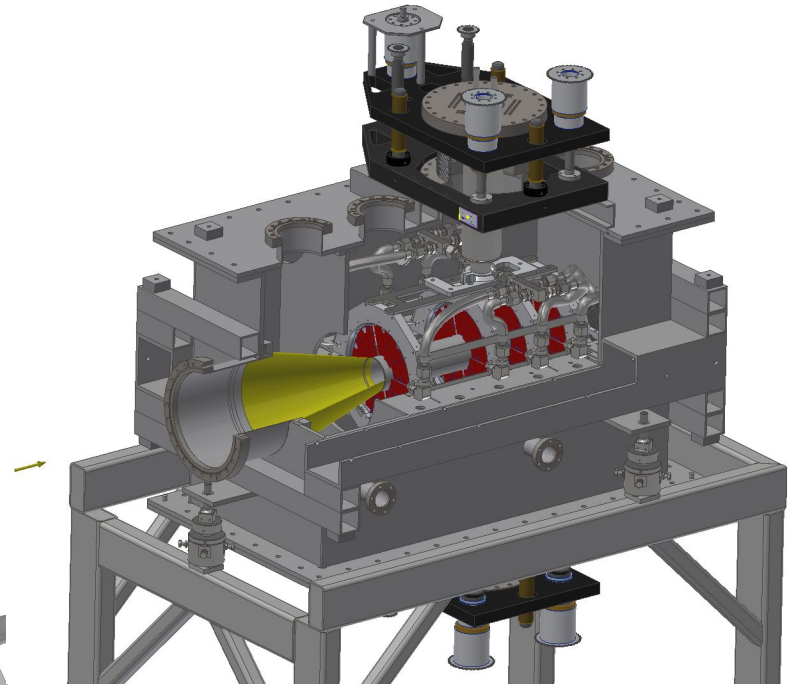
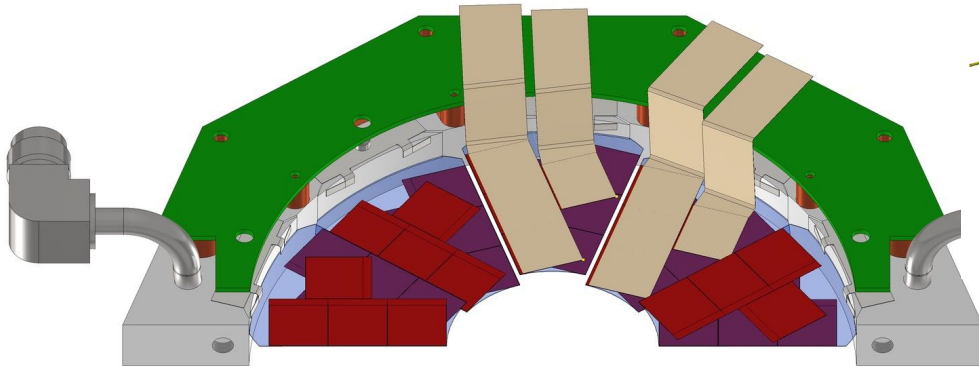
Helmholtz-Institut Mainz  
Johannes Gutenberg-Universität Mainz

PANDA Collaboration Meeting  
October 10, 2022



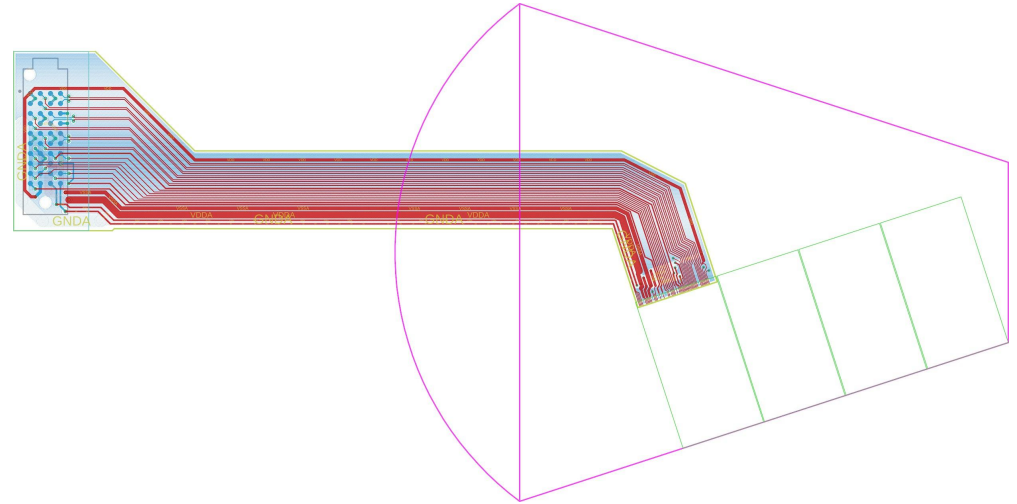
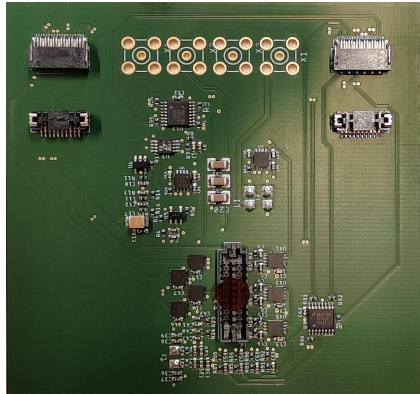
# Signal Routing

- Aluflex cables
- Support PCB
- Rigid flex cables
- Patch panel



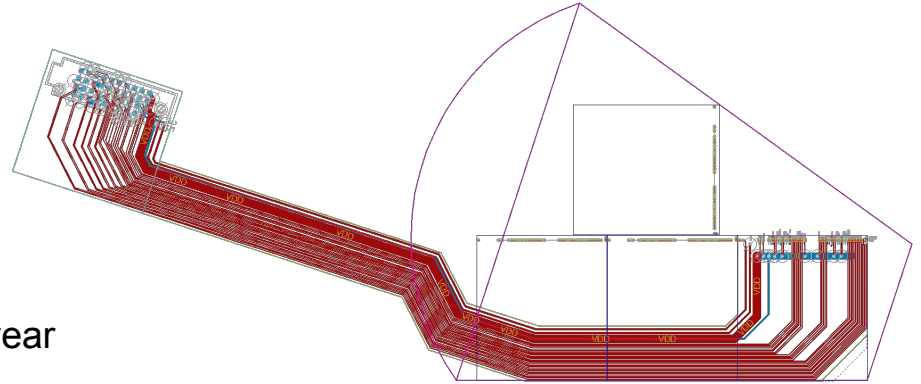
# Aluflex Cable (MuPix8)

- Design for the 4 MuPix8 ready last year
- Produced and delivered last year by LTU
- One cable for every MuPix
  - easier to bond
  - easier to handle
- Flex part of the cable are bonded in Bochum to the PCB



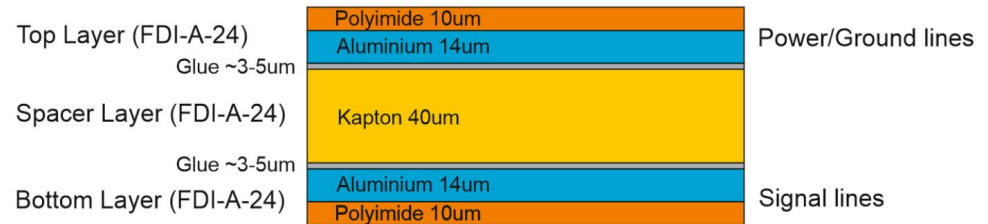
# Aluflex Cable (MuPix10)

- Design of the Aluflex cables for the MuPix10 finished this year
- Simpler design as for the MuPix8
  - Fewer traces
  - Only one VDD and GND
- Production
  - LTU
    - Delivery of the cables end of this year
    - New contract necessary
  - CERN
    - Micro Pattern Technologies workshop
    - Small change of the design
    - Delivery of the cables end of this year
    - Order was sent last week



# Aluflex Cable Coating

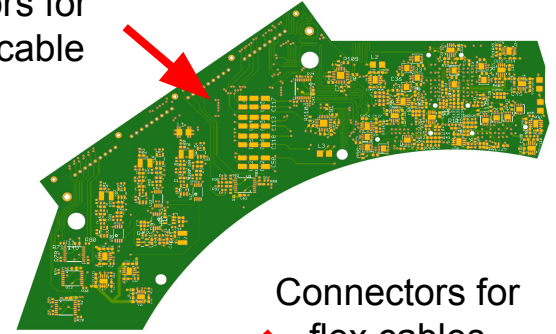
- Parylene Coating does not work
  - Difficult to not cover bond pads
  - Glueing more difficult
- Change of cross-sections of the cable
  - Polyimide foil on top and bottom
  - Small increase in thickness



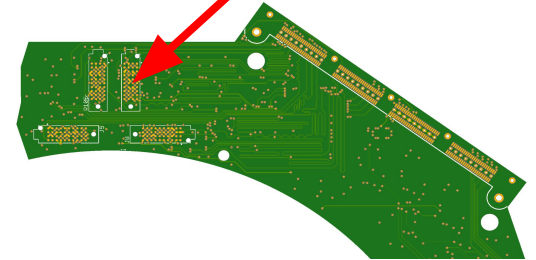
# Electronics

- Single sensor PCB produced and delivered to Bochum
- Prototype PCB (MuPix8) for support electronics on the half plane designed
  - Additional electronics compared to final detector
- Prototype PCB (MuPix10) for support electronics on the half plane in development
  - Simpler design compared to MuPix8 board
- Rigid flex cable delivered last year
  - Useable for all sensors in the prototype
  - Test planned in near future

Connectors for rigid flex cable



Connectors for flex cables



60 cm rigid flex cable