Lumi Hardware News

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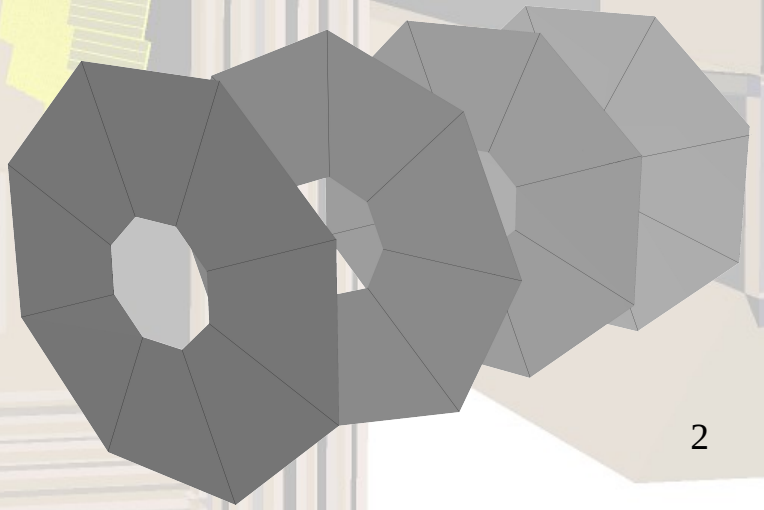
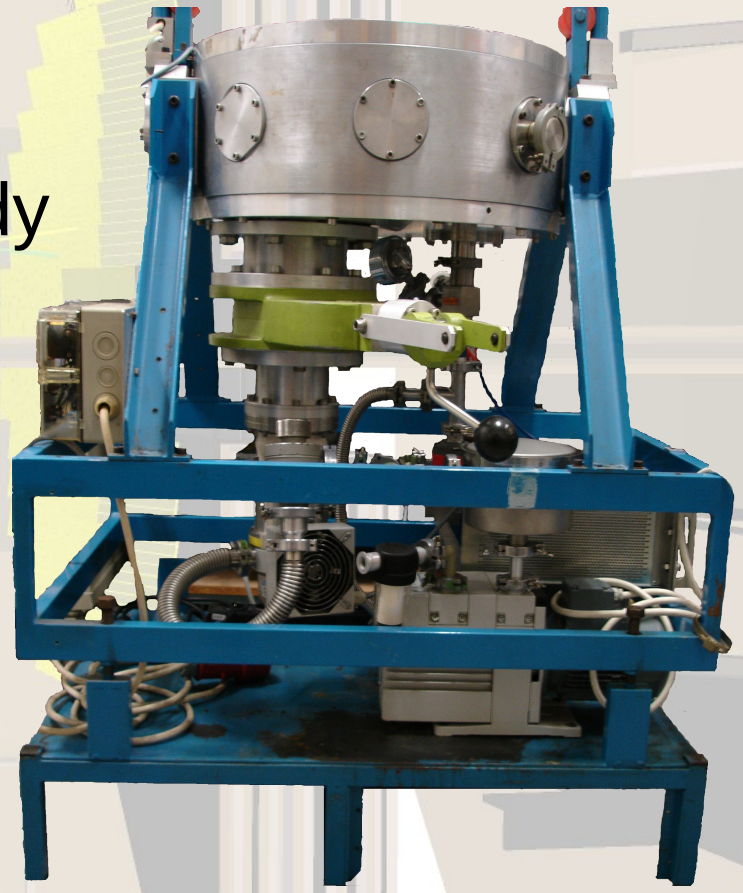
Concept

- position at z =10,5-12,5 m downstream
- 4 planes of Si strip detectors
- rotate planes to reduce ambiguities
- 50 cm between planes
- sensors: 150/ 300 µm thick, double-sided
- strips: 50 µm pitch, stereo angle ~90°
- in vacuum

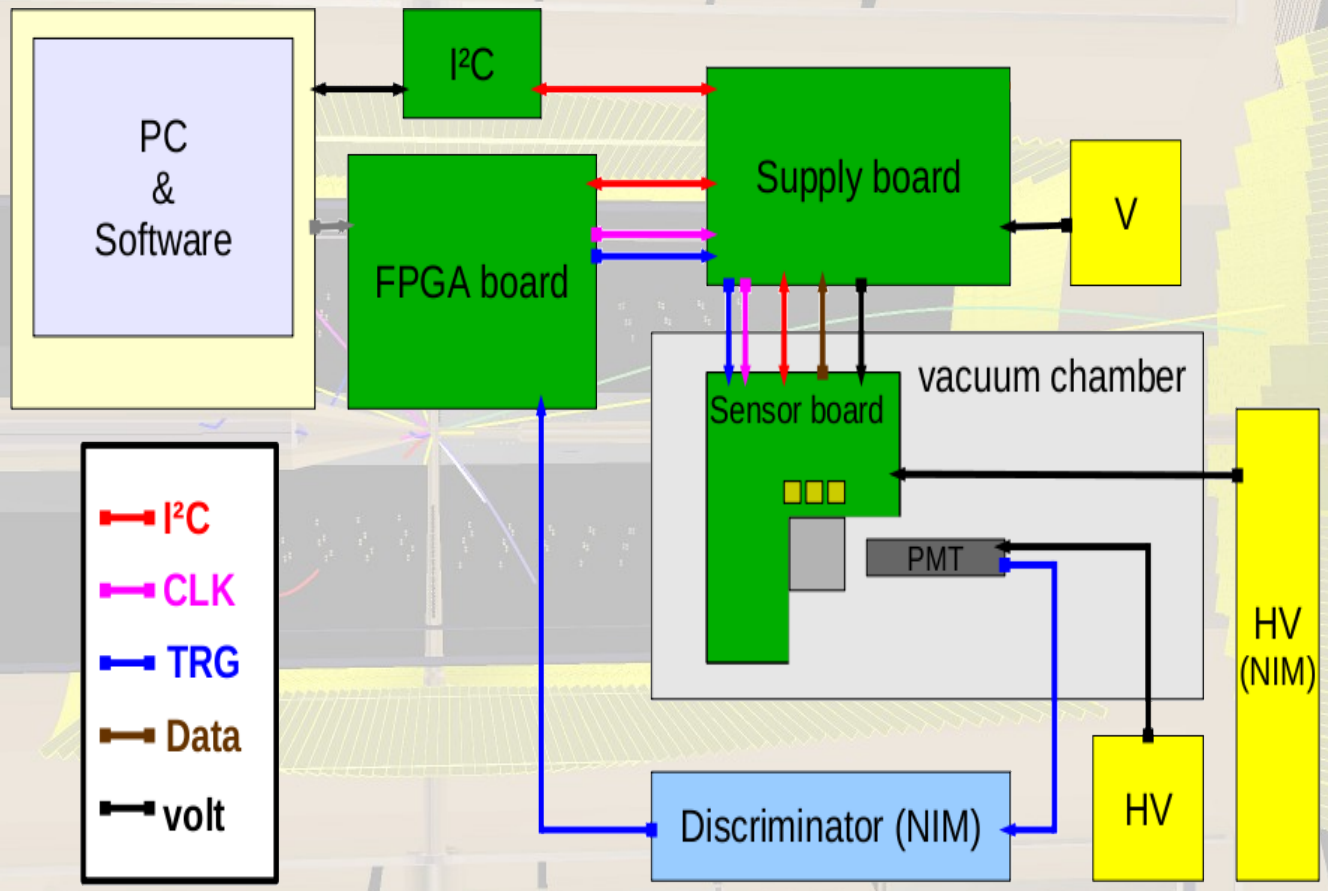


Status

- vacuum chamber from Erlangen
- computer & software
- electronics for 1st setup are ready
- laminar flow box



Electronics

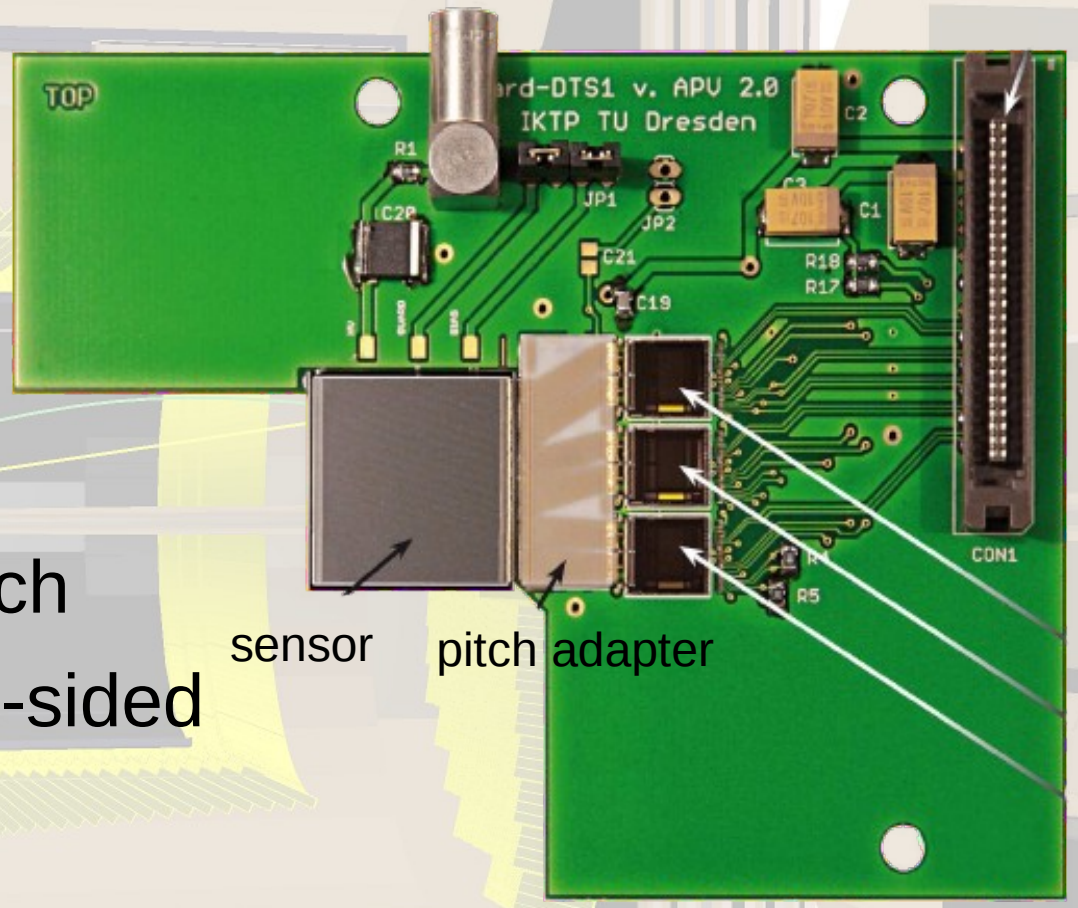


- sensor board
- trigger
- FPGA board
  - ➔ FPGA + ADC
- supply board

First Test Sensors

from ATLAS

- 2x2 cm²
- 300µm, 50µm pitch
- 3x128 strips, one-sided



frontend APV-25

➔ testing of electronics

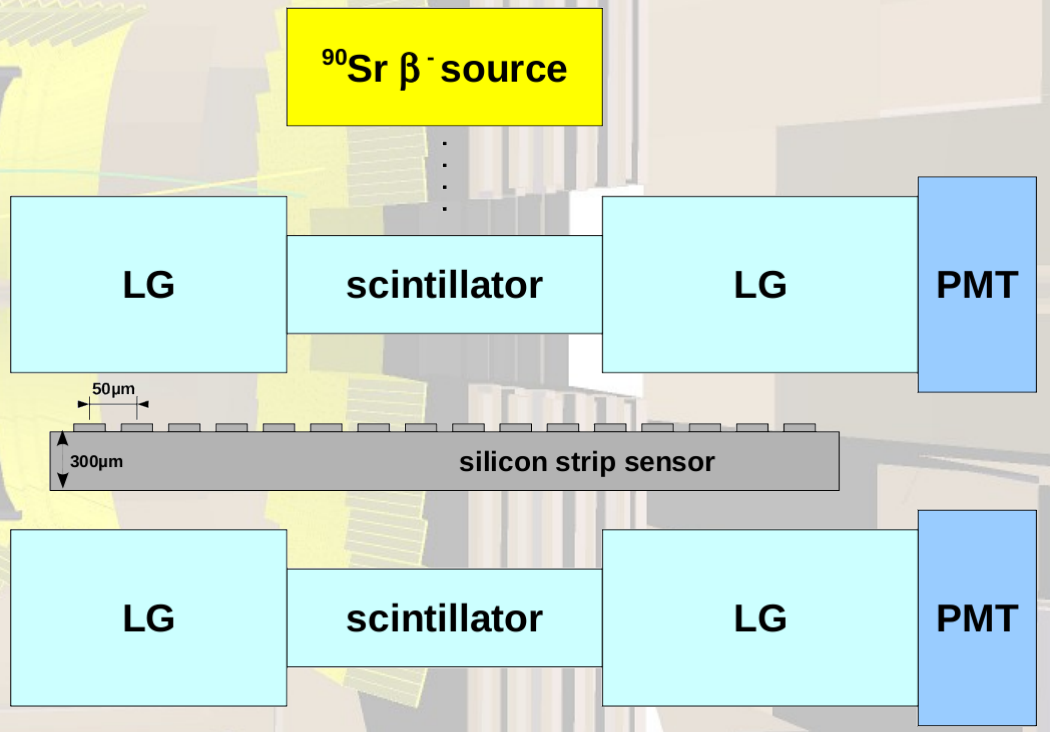
Tests Planned

testing:

- spatial resolution
- SNR
- radiation hardness
- different sensors

test beams:

- Sr 90
- electrons @ MAMI
- protons @ COSY



New Sensors

1) double-sided sensors ordered from

Micron Semiconductors YY2

140µm/ 300µm, 50µm pitch

➔ wedges „D0“

2) test sensors promised from

BEL India

developed for Super-BELLE

50/ 75µm pitch, 512/ 1024 strips

➔ rectangular (3x8 cm²)

Next Steps

- designing PCBs for new sensors
- cooling for frontend electronics
- positioning stage for radiation source