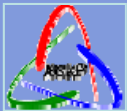


# $\bar{P}$ ANDA Luminosity Monitoring

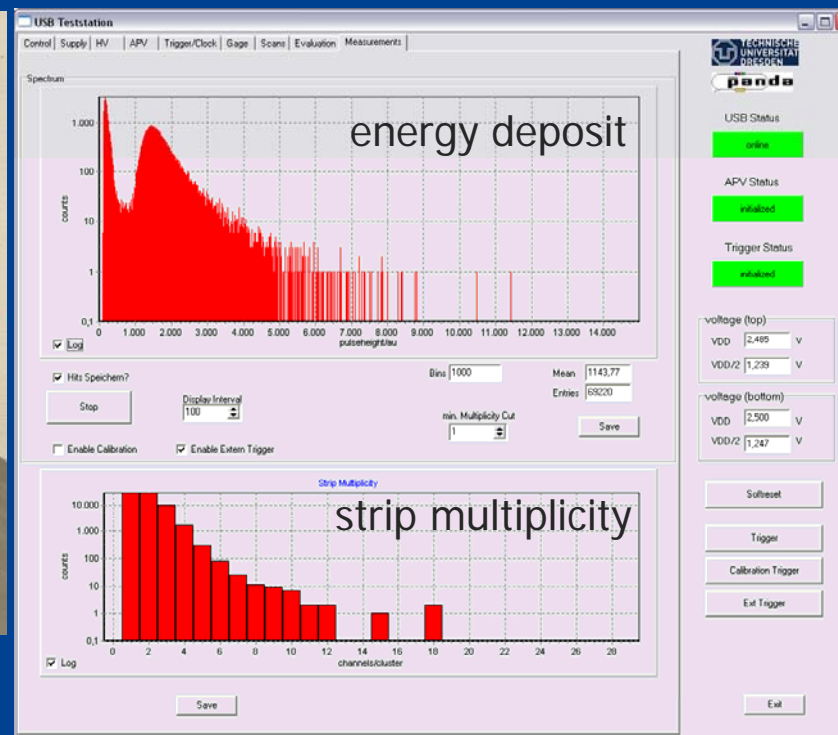
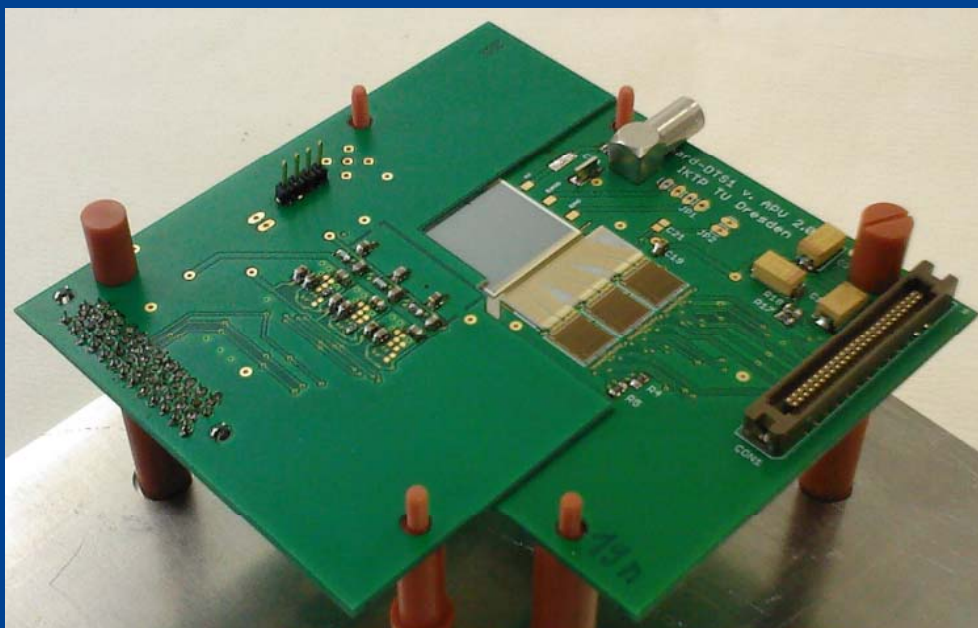
- **Research towards MVD strips as input to luminosity monitoring**
- **Possibly coincident detection of large-angle partners to forward-going  $\bar{p}$ 's**



# Tracking station



- Hardware Test Station for sensor tests, readout and electronics development DTS-1

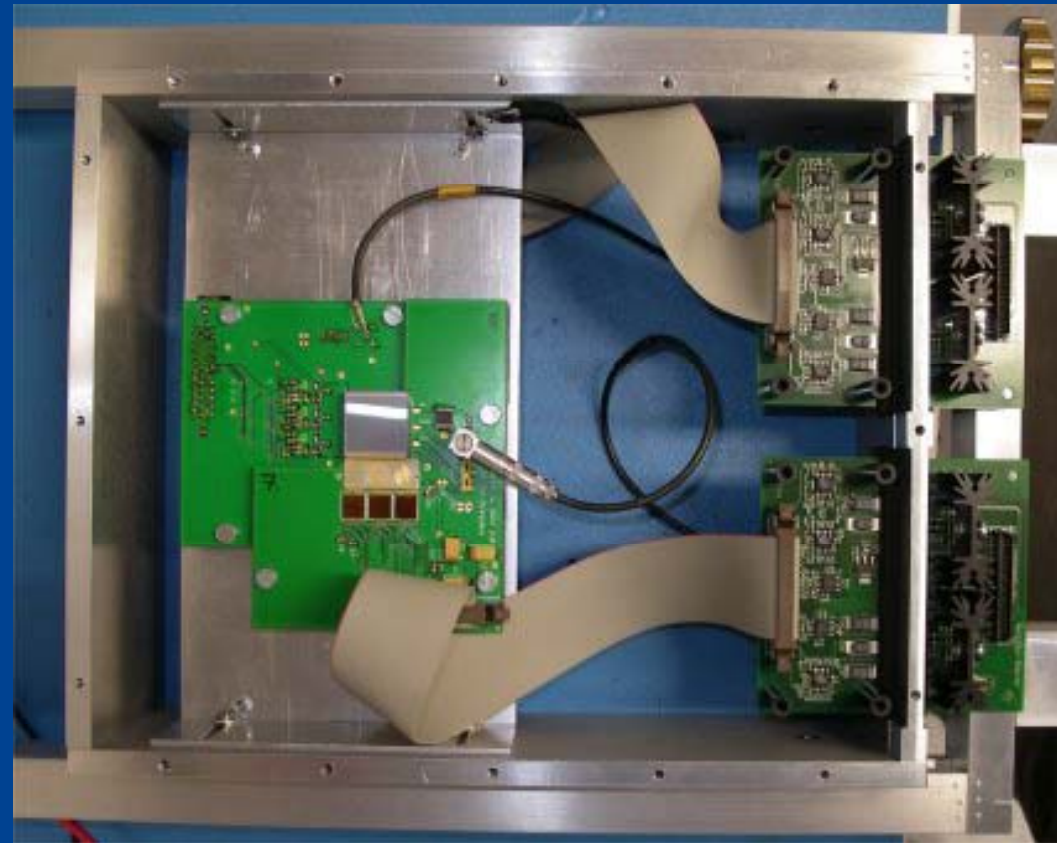


$^{90}\text{Sr}$ ,  
scintillator trigger

# Tracking station



- Hardware    Operation at ELSA-Bonn



# Tracking station



- Hardware    Extension to four x/y layers



# Scattering



- Hardware Selection of pitch

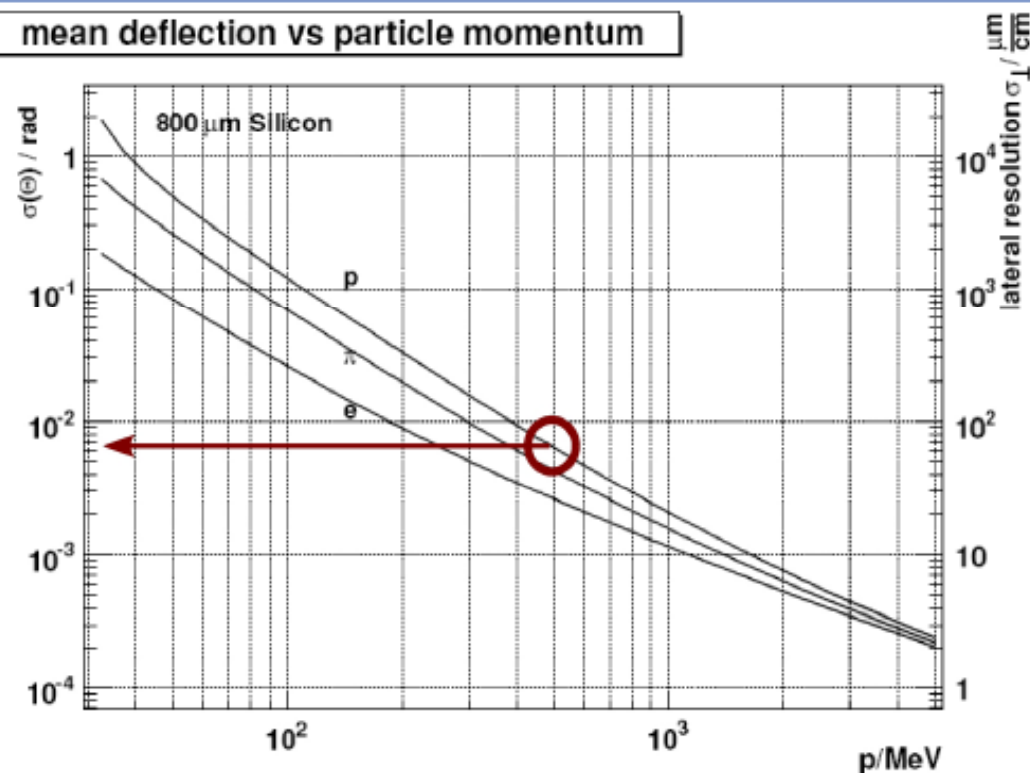
Scattering Estimate

## Scattering Estimate

plot by H.G.  
Zaunick

500 MeV/c  
proton:  
 $\approx 6.5 \text{ mrad}$   
mean  
deflection

mean deflection vs particle momentum



- strong dependence on momentum
- after a stack of two pixel layers (silicon only)  
→ 0.6 mm mean deflection after 10 cm flight length

# Scattering

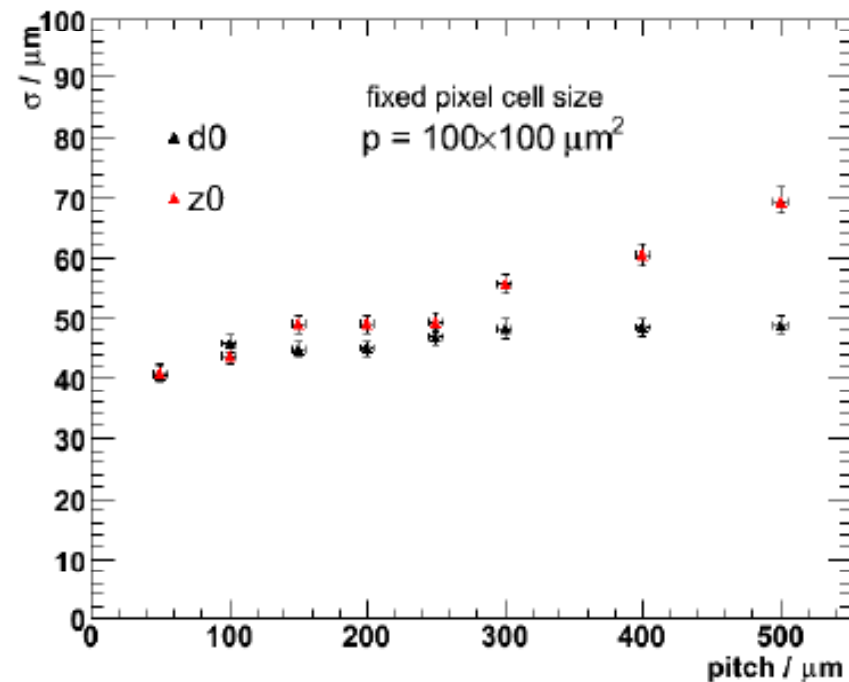


- Hardware Selection of pitch

## Single Track Vertex Resolutions

### Influence on Strip Resolution

- vary dimension of readout strip
- using full reconstruction and full track fitting (target+forward spectrometer)
- vertex parameters for default pixel size



- single tracks:  $\pi$  3GeV/c between  $\Theta = 0 \dots 160$

# Tracking station



- up to eight layers + probe planned
- current sensors (small  $2 \times 2 \text{ cm}^2$ , not rad-hard) will be replaced
- measure scattering in sensors and other material
- study reco of trajectories:
  - electrons at ELSA
  - protons above  $3 \text{ GeV}/c$  (COSY)
- study different sensor designs (trapezoidal with small stereo angle)