P2" Anode Front End Data

Preliminary Results from Beam Test 99 at CERN

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Introduction

- All P2" anode wire groups (384 channels) equipped
- four AD96D boards (96 ch each)
- JTAG control of thresholds and delays
- test of 16 ch boards (ASIC 8+8 and 16)
- calibration by test pulse thru injection boards and cathode test strip
- data analysis for thresholds, noise, cross-talk and slewing time in progress

Single Plane Efficiency vs HV Scan in muon beam

- online analysis provided
- odd(even) P2" layers as reference
- only beam region
- 1 hit in ref, any - in others
- at Qth = 20 fC plateau starts at 3.35 kV
- 1,6 planes a bit lower due to beam tailes
- small inefficiency rise with HV

GIF Rate

- take data at wide TDC gate (32 μsec)
- all 384 channels measured by DAQ
- rate = occupancy/(Ntr*32 μsec)
- detected rate of 20 kHz at GIF K = 20
(averaged over 64 wire groups for each layer)

Anode Bunch Xing efficiency vs HV (GIF OF)

- require >= 4 planes ON from 6
(ON - at least one hit)
- look for earliest hit in all planes (1-st)
- 2,3,4,5,6 in remaining planes
- no track patterns so far
- time resolution and efficiency
in 25 nsec window relatively
to the beam triggers
- the 2-nd - σ < 3.5 nsec at HV >=3.55 kV
- eff. > 92 % at HV >=3.35 kV for 1-5 hits
- the 2-nd earliest remains the best