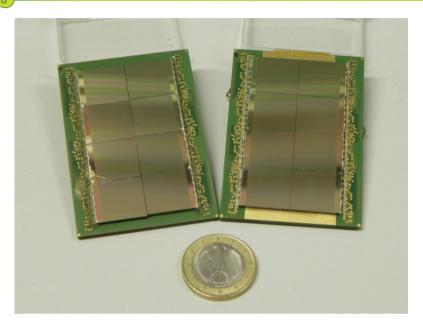


Test beam with Pixel modules

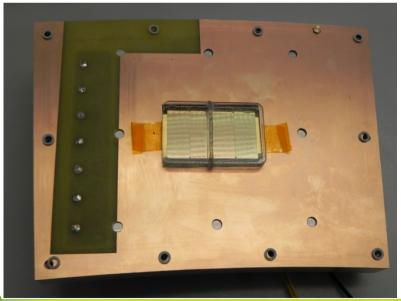


GEM-Module





2 Oktoboards with bare Timepix chips produced and tested Modules is assembled GEMs tested (500 V @ N2 -> 0.7 nA leakage current) 380 V @ Ar:iButane 95:5 stands for ~30 min.



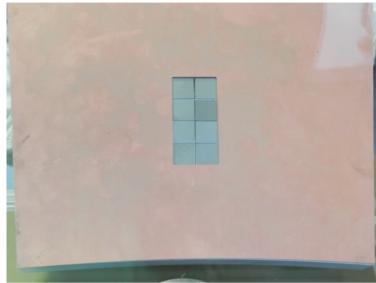




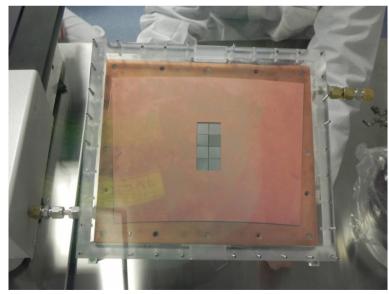
Assembley of InGrid Module













InGrid Data Set



Voltage scan (290 V - 390 V)

Varying voltage on anode (330 V - 410 V, with grid on 350 V)

z-scan with B = 0 T, E = 230 V/cm

z-scan with B = 0 T, E = 130 V/cm

z-scan with B = 1 T, E = 230 V/cm

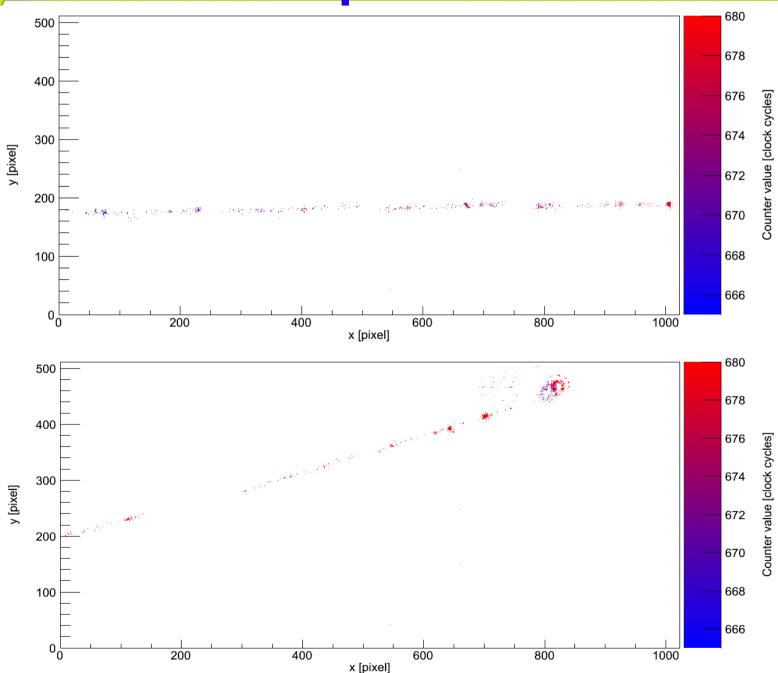
z-scan with B = 1 T, E = 130 V/cm

Momentum scan p = 1 - 6 GeV/c

Theta-scan θ =-10° - 30°



InGrid event pictures





Gas: T2K

E_{drift} =130 V/cm

B = 1 T

 $V_{grid} = 350 V$

 $V_{anode} = 385 V$

Schedule with GEM modules



Voltage scan with B = 0 T

Voltage scan with B = 1 T

z-scan with B = 0 T, E = 240 V/cm

z-scan with B = 1 T, E = 240 V/cm

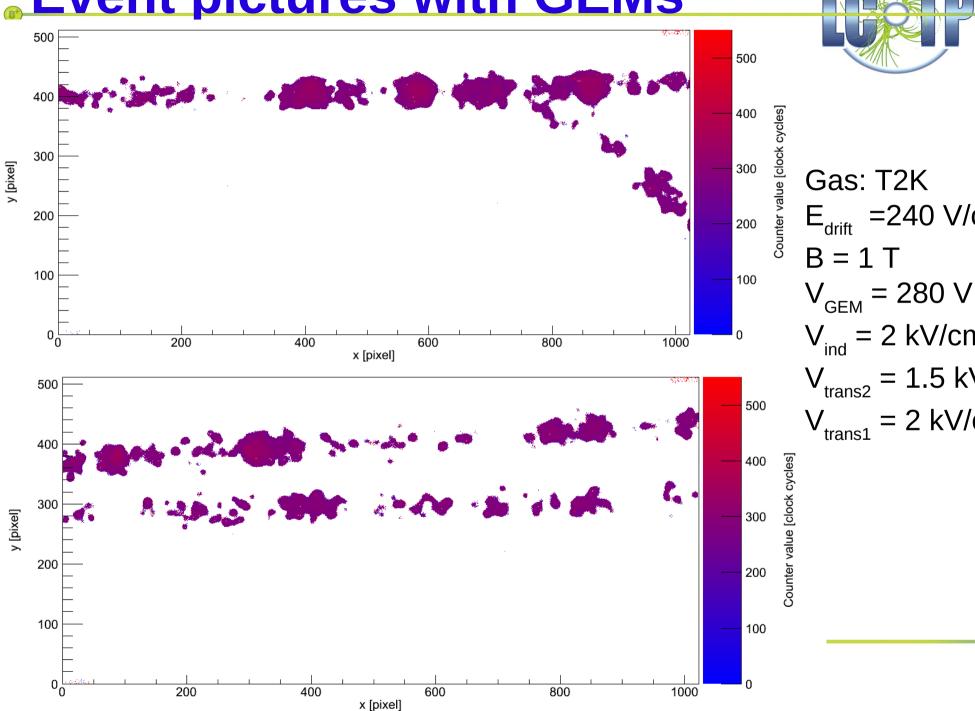
z-scan with B = 1 T, E = 130 V/cm

Momentum-scan p = 1 - 6 GeV/c

phi-scan



Event pictures with GEMs





 $E_{drift} = 240 \text{ V/cm}$

 $V_{ind} = 2 \text{ kV/cm}$

 $V_{trans2} = 1.5 \text{ kV/cm}$

 $V_{trans1} = 2 \text{ kV/cm}$



Thanks to everyone who was helping!

