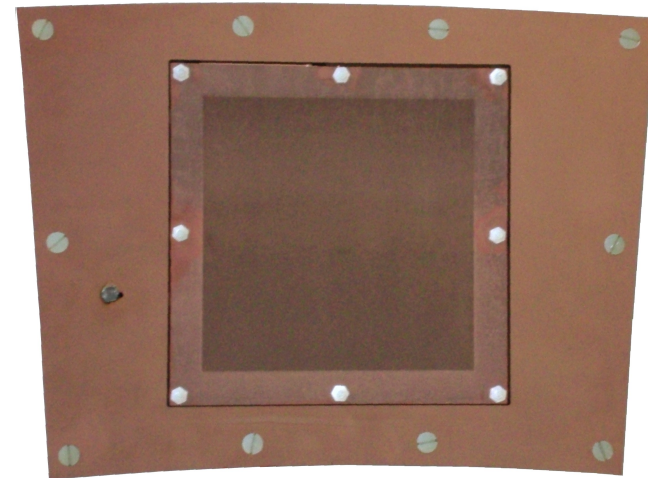
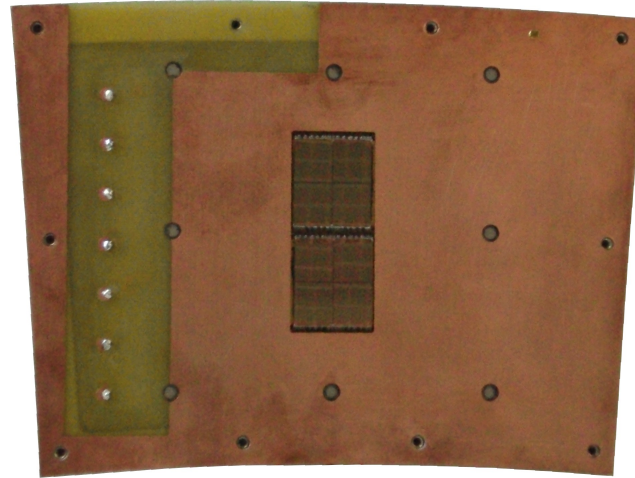
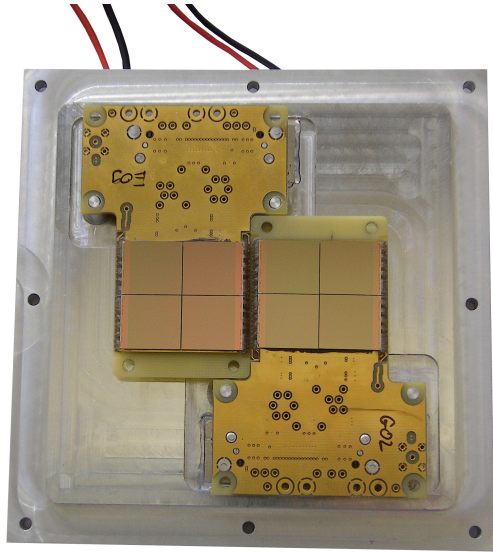


# Testbeam measurements with GEM + Timepix Module

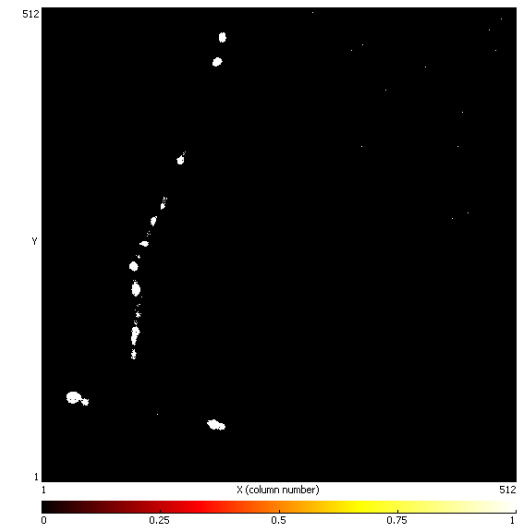
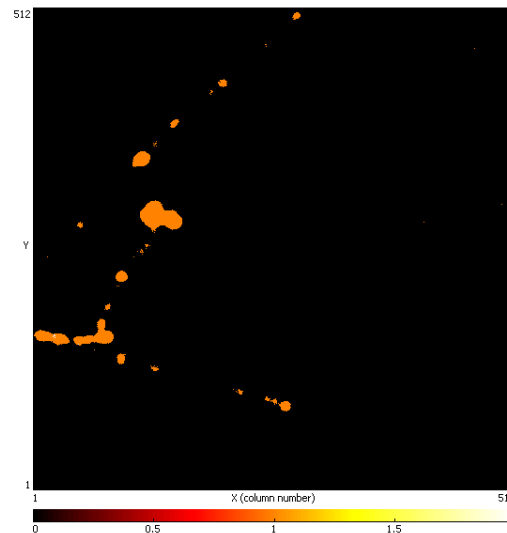
Christoph Brezina, Klaus Desch, Jochen Kaminski,  
Martin Killenberg, Frederik Klöckner, Thorsten Krautscheid,  
Walter Ockenfels

LP workpackage #84' phone meeting  
June 3rd, 2009

# Module with GEMs & Timepix



Module with 2 Quadboards is finished, first cosmic tracks have been observed in test detector

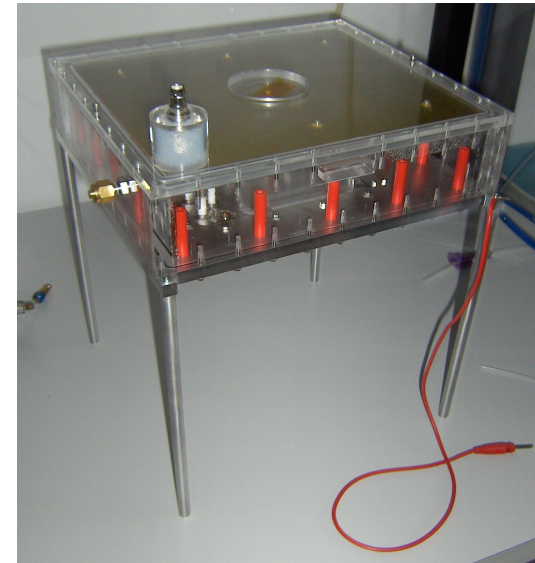
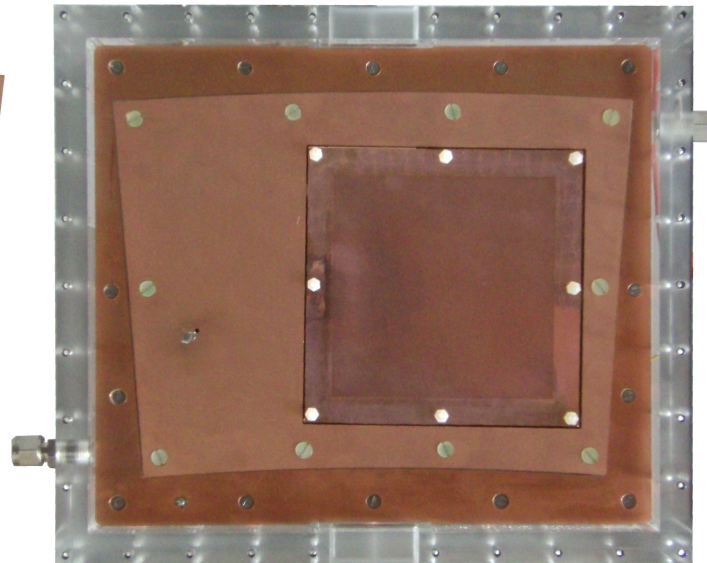
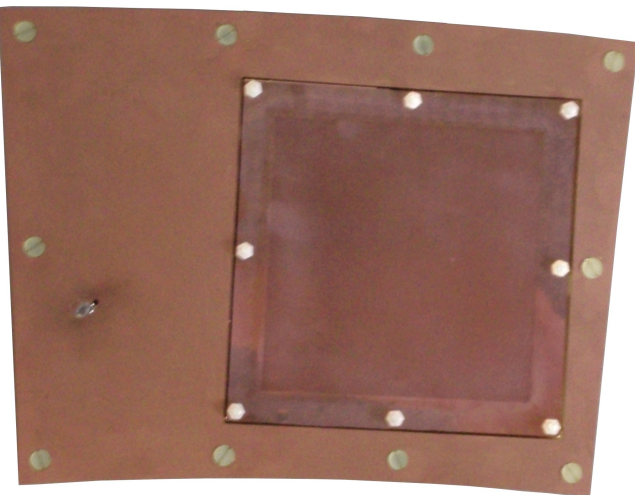
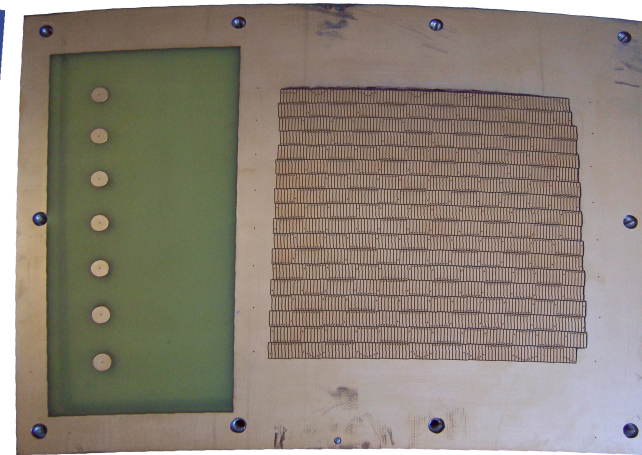
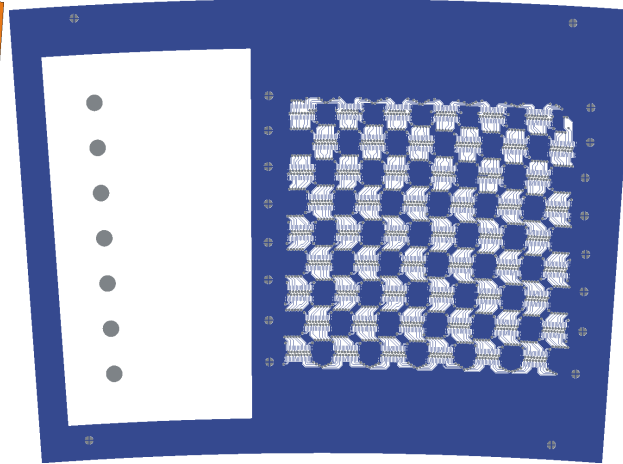
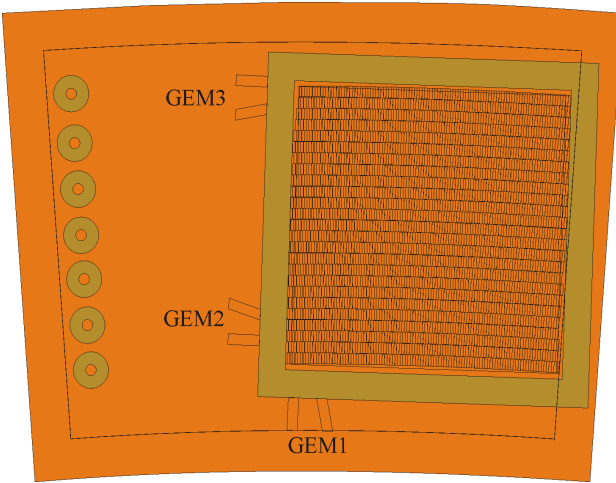


# Module with GEM + Pads



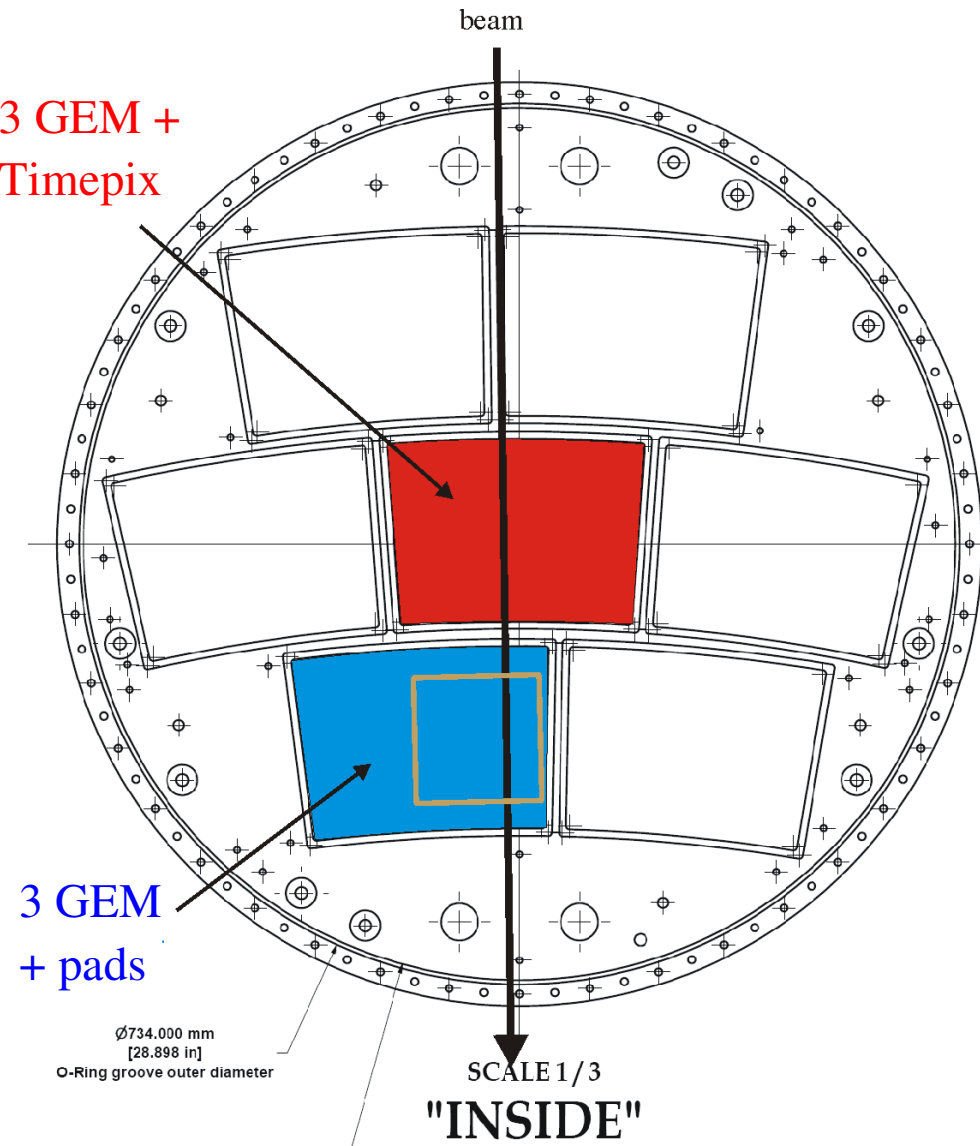
1728 pads of  $1.1 \times 5.6 \text{ mm}^2$

gas amplification by 3 standard CERN GEMs





# Operation in parallel?



Both modules could be operated in parallel:

**3 GEM + Timepix** module in the center

**3 GEM + pads** below  
voltages have to be adapted:

In 'pad'-module the transfer fields and induction field has to be  $\frac{1}{2}$  of the 'Timepix'-module's.

Parallel operation planned for the 2<sup>nd</sup> week (15.-22.6.).

Using 3 different gases:

He:CO<sub>2</sub> 70:30

T2K or Ar:CO<sub>2</sub> 70:30

TDR or P5

This week we are busy with installing.

Beginning with test beam and exciting the magnet on Monday.

Taking data at different drift distances, possibly also with photodots (?)