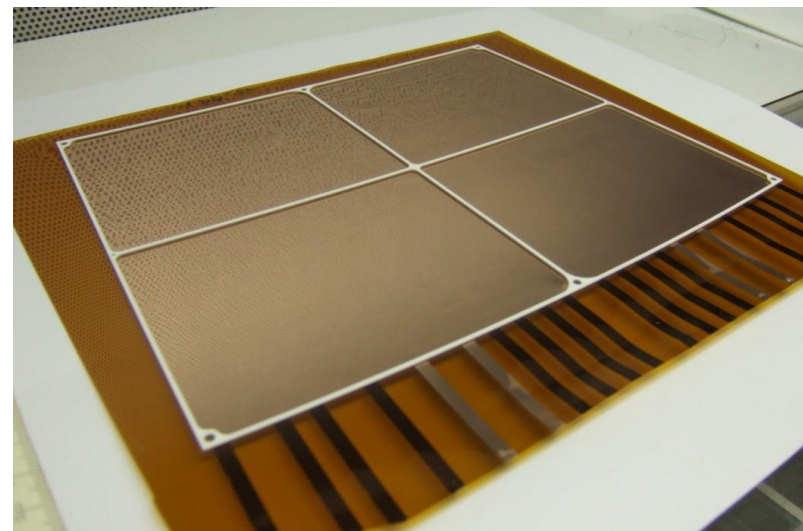
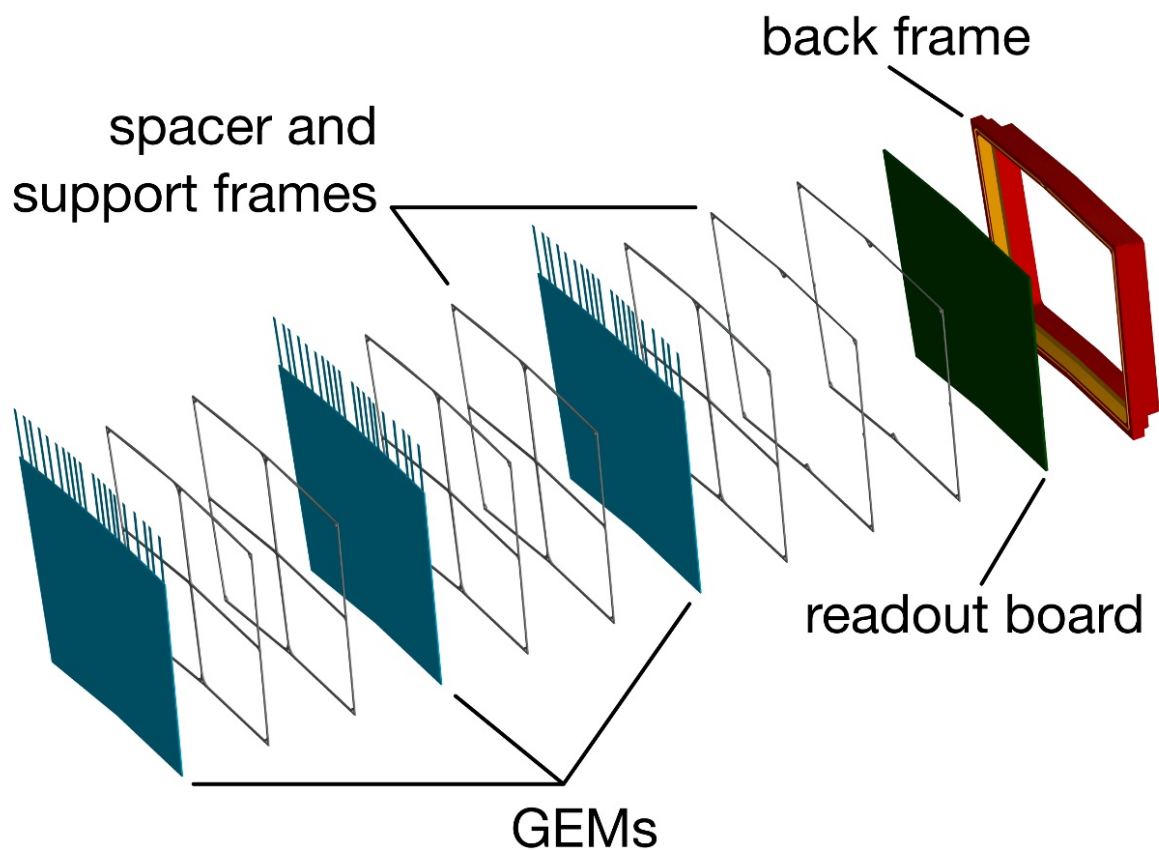


# DESY GEM Module: Gating GEM Integration

LCTPC GEM Gating Workshop  
03.Nov.2016  
Ralf Diener

- Triple GEM Module with GEMs mounted on ceramic frames/grids
- Integration of gating layer foreseen in the design from the beginning:  
“Easy” addition of more layers in the stack, HV supply lines available



- Several points to be tested/developed
  - Material budget  $\rightarrow$  use pillars instead of full frames for distance between amplification GEMs and gate?
    - One frame:  $0.5 \text{ ‰ } X_0$   
 $\rightarrow 5 \text{ ‰ } X_0$  per cm + field shaping (module: 8% without electr./cooling)
  - Field shaping between gate and GEM stack?  
 Wires, strips, potentials?  
 $\rightarrow$  simulation study needed
    - Resistor chain needed for shaping
  - Can GEM gate be produced in our layout? Can it be mounted flat on a ceramic grid?  
 $\rightarrow$  to be tested with sample gate GEMs

