









ELECTRON DIFFUSION

SLIDE 6









SLIDE 10

HIGH MAGNETIC FIELD: ION FEEDBACK REDUCION

Aachen-DESY GEM TPC:



HIGH MAGNETIC FIELD: REDUCED TRANSVERSE DIFFUSION ---> INCREASED ELECTRON TRANSMISSION













GEM GATE

SLIDE 16









TOTEM SLIDE 20 TOTEM TRIPLE GEM CHAMBERS FIRST PRODUCTION CHAMBER (30 cm Ø): **4-SECTORS GEM:** STRIPS-AND-PADS READOUT BOARD: **50 CHAMBERS IN CONSTRUCTION IN HELSINKI** 256 RADIAL STRIPS (400 µm PITCH) 1560 PADS (3x3 TO 7x7 mm²)





מודת סודתוו SLIDE 23 STANDARD DOUBLE-CONICAL GEM **MANUFACTURING:** TWO-MASK PROCESS Produced by Rui De Oliveira (CERN-TS-DM) METAL ETCHING 204 POLYMER ETCHING **OFFSET HOLES: CHARGING UP** REQUIRES ~ ± 2 µm ACCURACY IN THE ALIGNMENT OF THE TWO MASKS A REPORT OF **POSSIBLE WITH PLASTIC MASKS UP TO** ~40x40 cm² 10400-0801 0.001946 FOR LARGER SIZES: GLASS MASKS







