

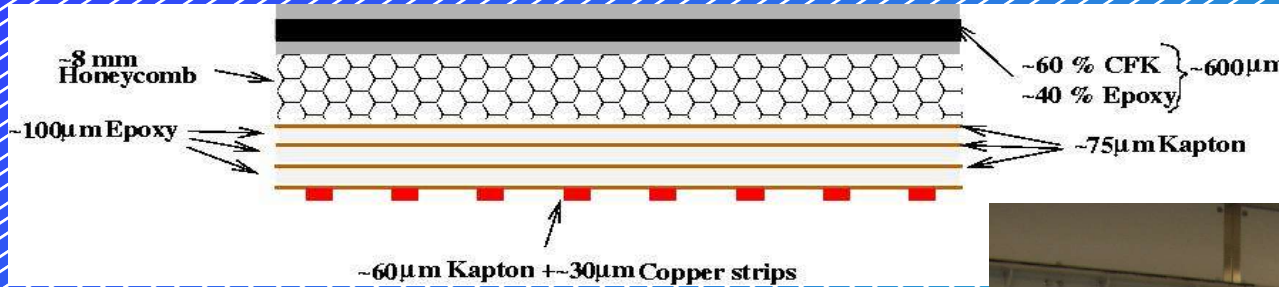
Hot News from Tracking

Sven Lotze, RWTH Aachen

Montpellier ECFA Study 11/2003

Field Cage Design (DESY Hamburg)

NEWIE Röhre

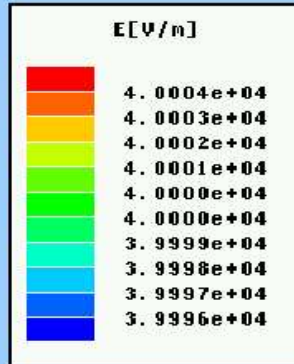


- finally build good
- run in good
- finally test in good
- finally testing



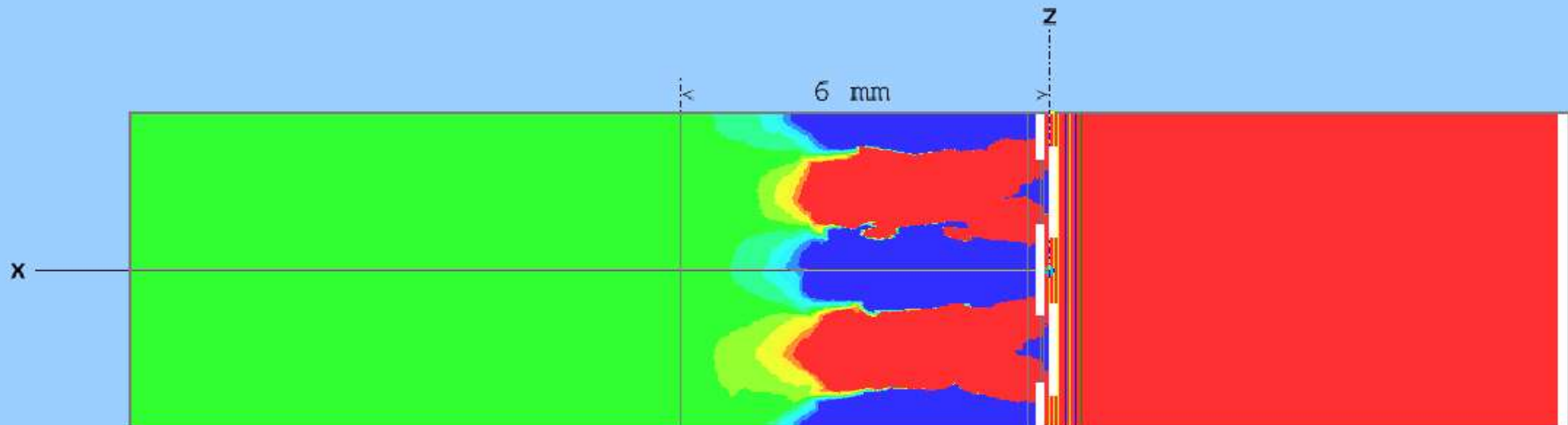
Field Cage Simulation (Aachen)

Simulation of Fieldcage



Double sided strips
Pitch 2.8 mm

1.6 mm copper
1.2 mm kapton

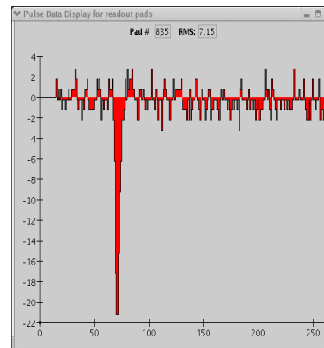
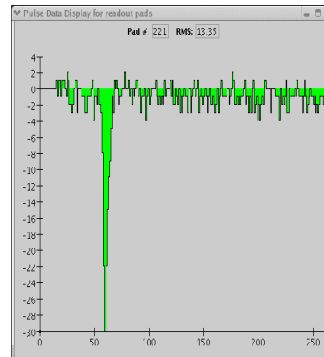
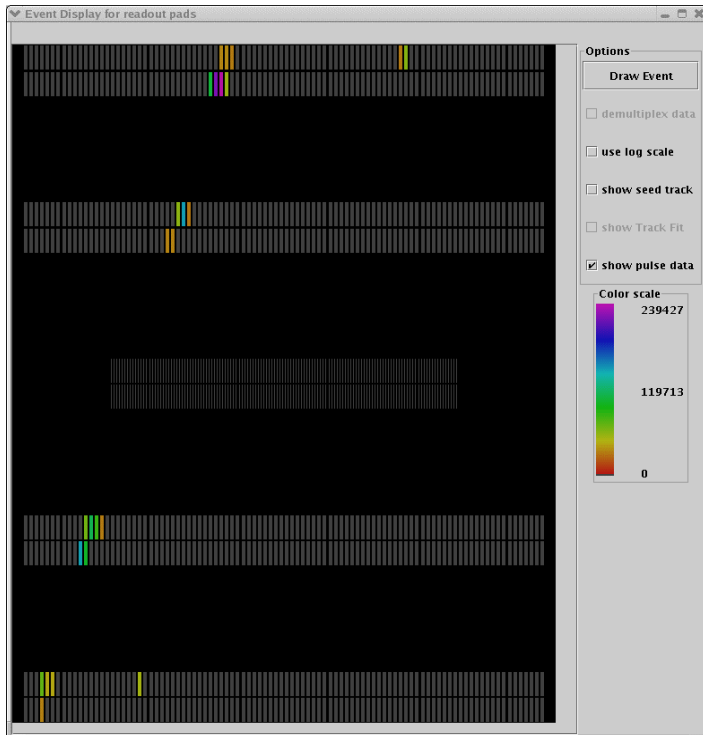
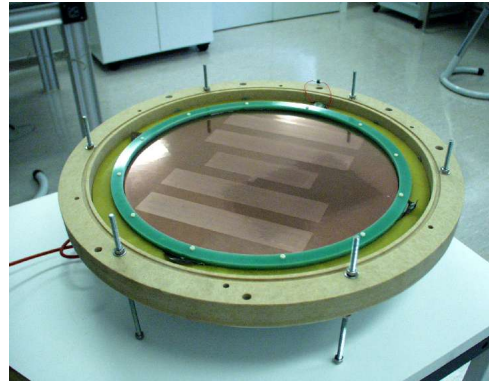


Accuracy better than 10^{-4} in 5 mm distance.

Micromegas TPC Setup

Berkeley - Orsay - Saclay

- Micromegas TPC fully operational
- Cosmic ray data taken with several gases
- Magnetic field data-taking next week



Resolution with Charge Spreading

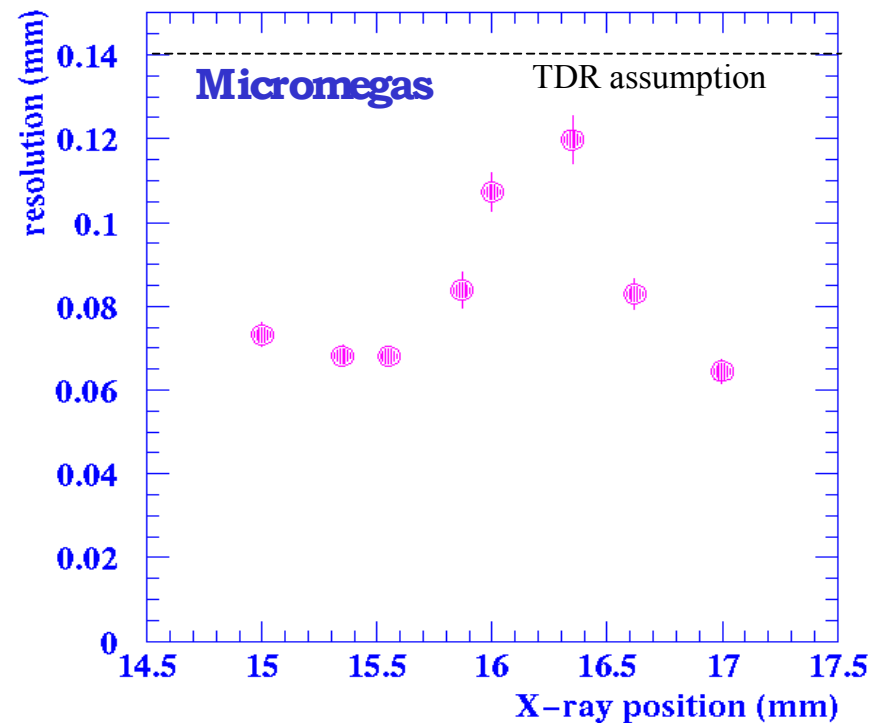
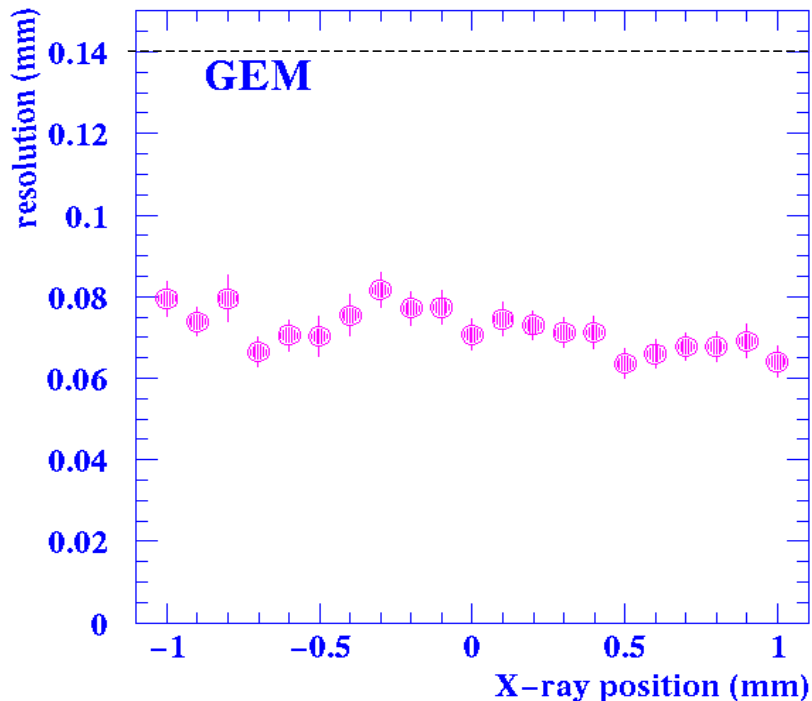
Carleton-Orsay-Saclay : spreading the charge with a resistive foil

-> allows a barycenter determination

-> improves the point resolution of GEMs and Micromegas.

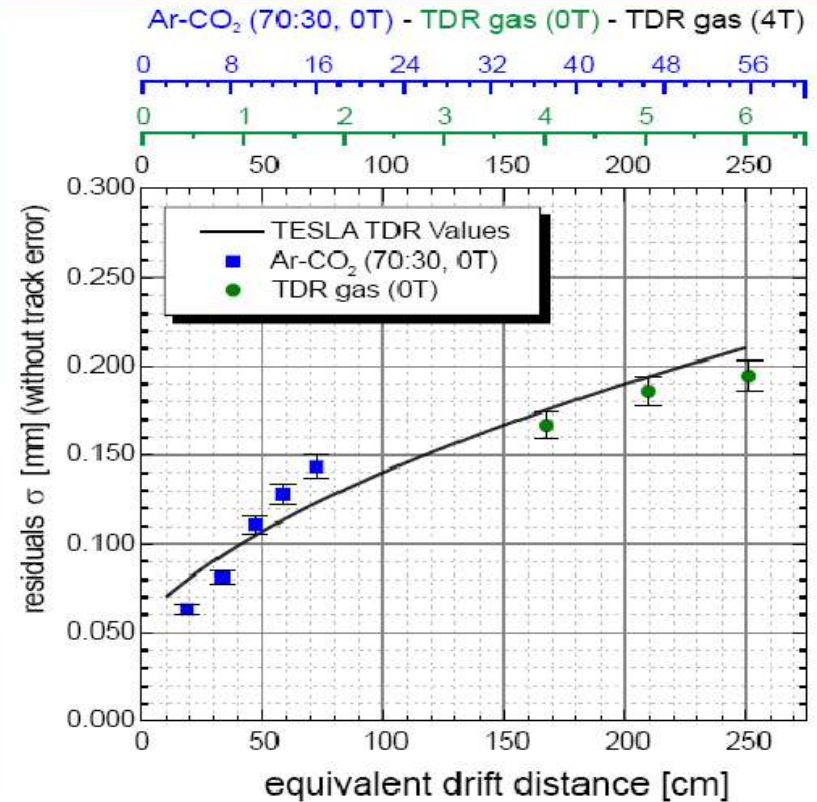
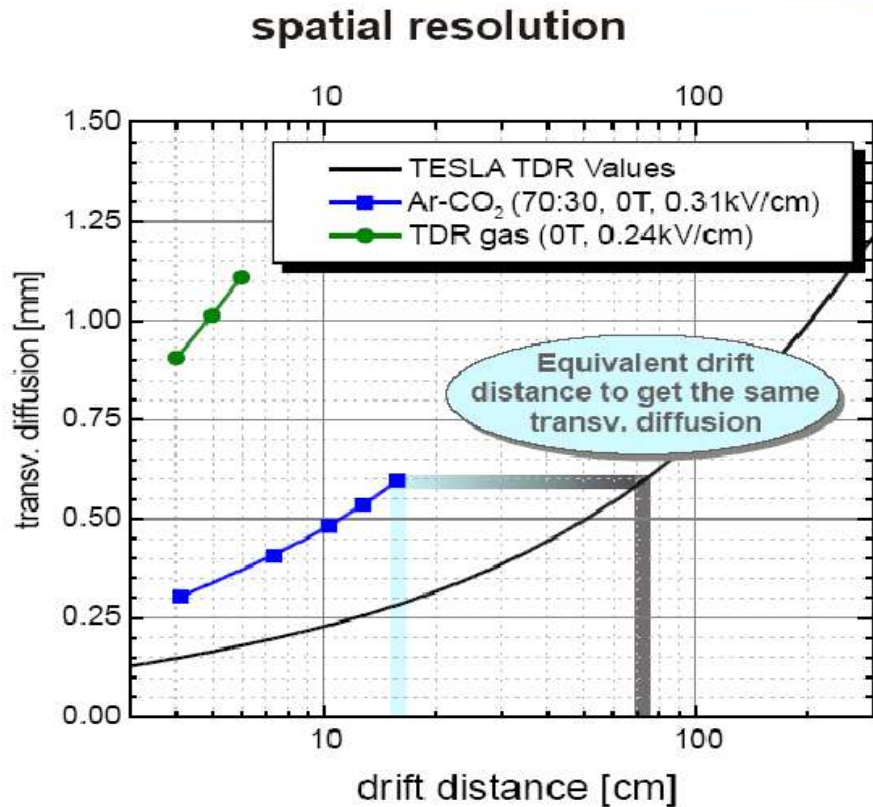
Scan across a 2×6 mm pad

Good resolution (not uniform in the Micromegas case, systematics to be understood)



Test Beam Data (Karlsruhe)

Spatial resolution



$$D_{TDR,4T} \cdot \sqrt{x_{TDR,4T}} = \sigma_{TDR,4T} = \sigma_{gas,0T} = D_{gas,0T} \cdot \sqrt{x_{gas,0T}}$$



Test Magnet (DESY Hamburg)

Stærkfeldes Magnet

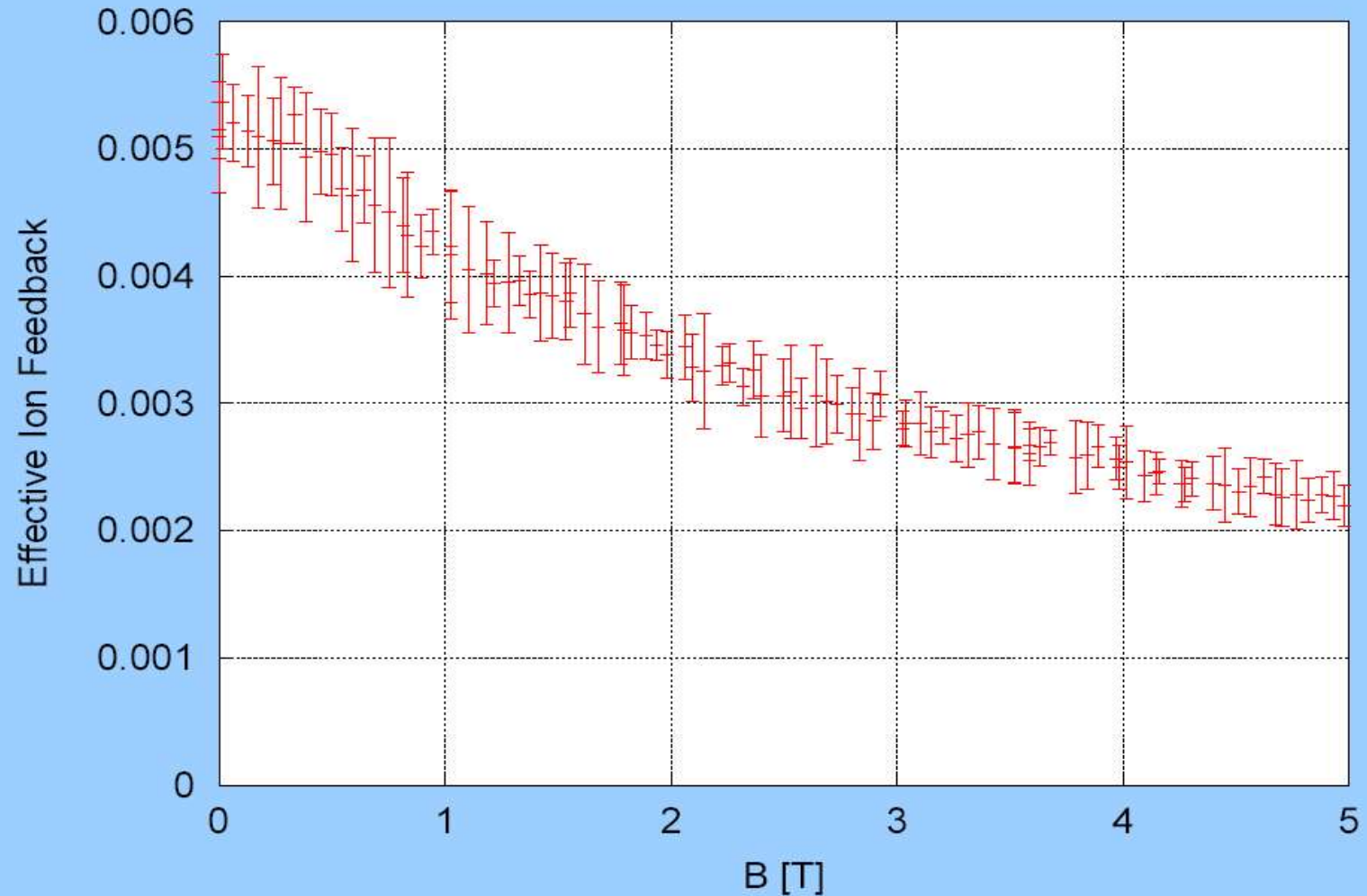
- 15 x 62003 HC (meiri rafur) (axial)
- 72003-02120031 áhlaggur (axial)
- Þinging Khvay HC (meiri rafur) (axial)
- Hát Khvay/Þinging f Khvay/Áhlaggur (meiri rafur) (axial)
- Þinging Vönnugur (axial)

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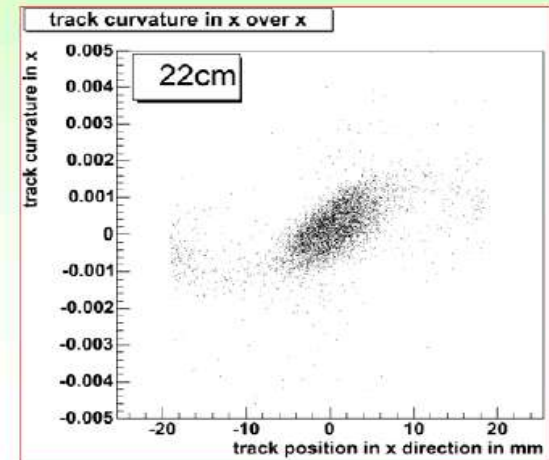
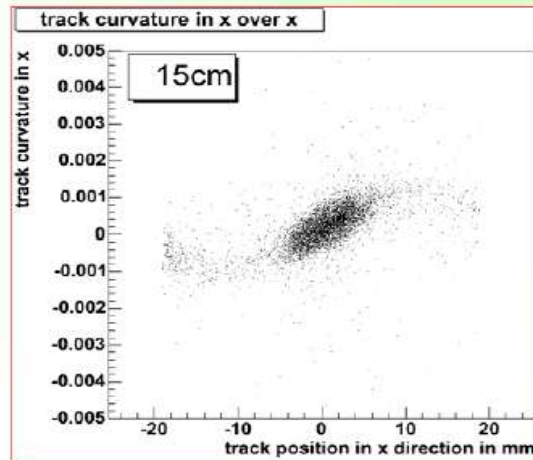
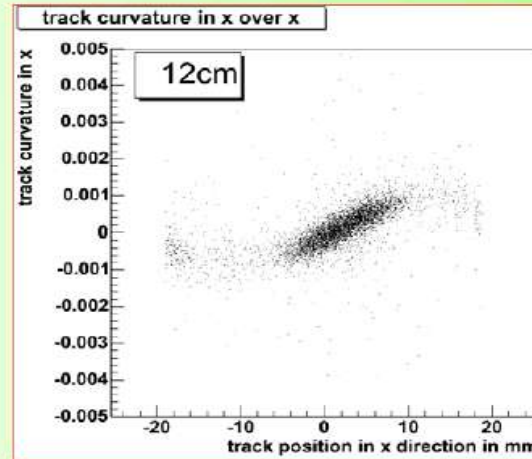
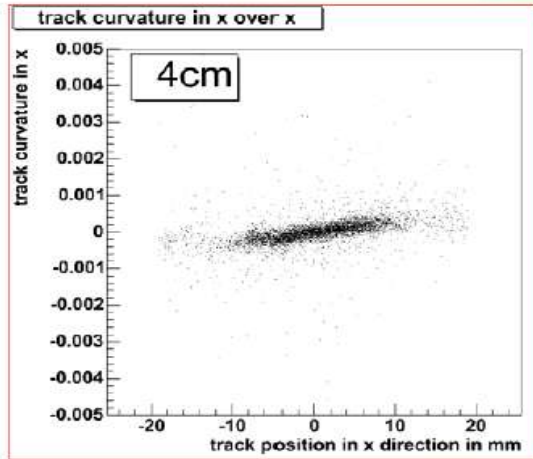
Ion Feedback vs. B (DESY/Aachen)

Influence of B Field



Effects from Ion Feedback (Karlsruhe)

Track distortions (II)



curvature C is plotted over x position of track cluster in top row (= track position)



Silicon Tracking

Report on SiLC: Si-tracking for the Linear Collider

*SilC: International R&D Collaboration to
develop Si-tracking technologies for the LC*

(except μ vertex)

Proposal to PRC-DESY, May 7 and 8, 2003

Addendum to PRC-03-02, on October 31st, 2003

ECFA-LC Workshop, Tracking session, Montpellier November 13th to 16th, 2003

Aurore Savoy-Navarro, LPNHE-Paris/IN2P3-CNRS, France

on behalf of the SiLC Collaboration