



FCAL workshop summary

(a personal selection)



26th FCAL Collaboration Workshop

23-24 March 2015

CERN

Europe/Zurich timezone

Overview

Timetable

Registration

List of registrants

Accommodation

Access Cards

Visitor's laptops - rules

How to get to CERN

The regular meetings of the FCAL collaboration (<http://fcal.desy.de/>) bring together, twice a year, the community interested in the physics case, detector design and R&D for the forward region of a future e+e- linear collider.

Please note that there will be a fee of 50 Euros for this workshop.



Starts 23 Mar 2015 09:00

Ends 24 Mar 2015 17:00

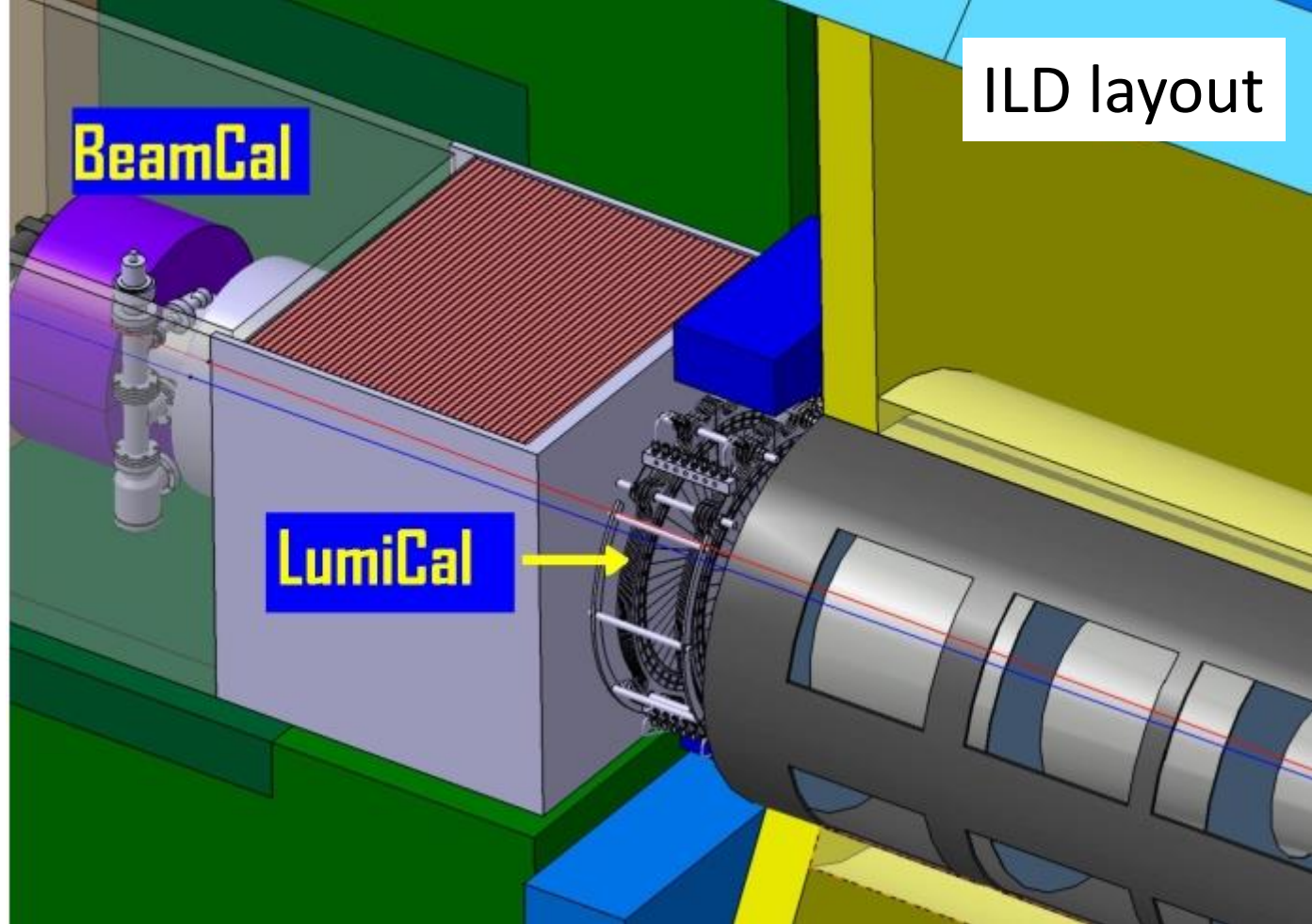
Europe/Zurich



CERN

FCAL workshops “traditionally” take place about every 6 months

(3rd time at CERN)



-> 24 participants (4 “locals”) -- **apologies, no photo**

-> 17 substantive talks

-> 6 summary and other talks

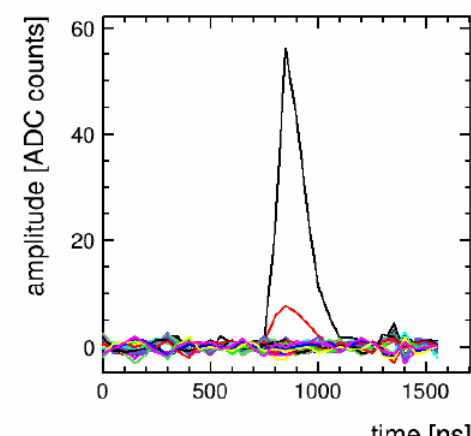
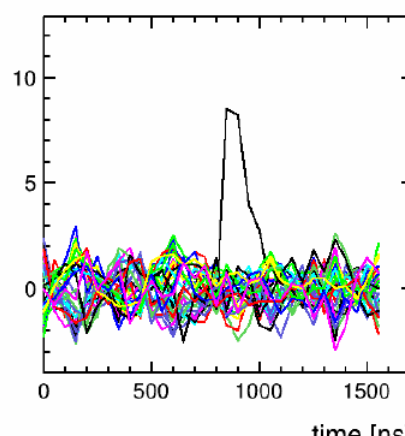
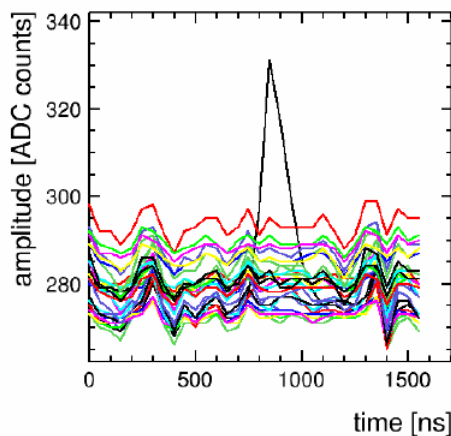
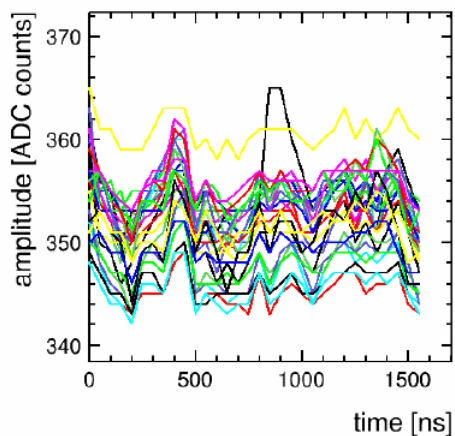
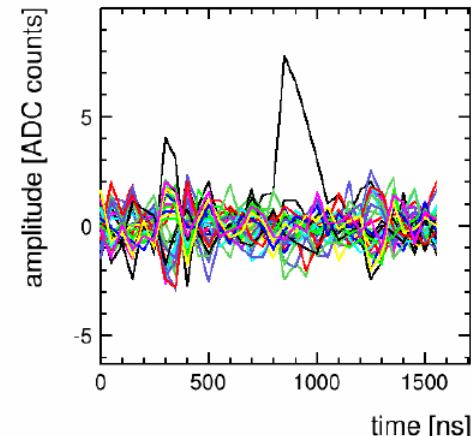
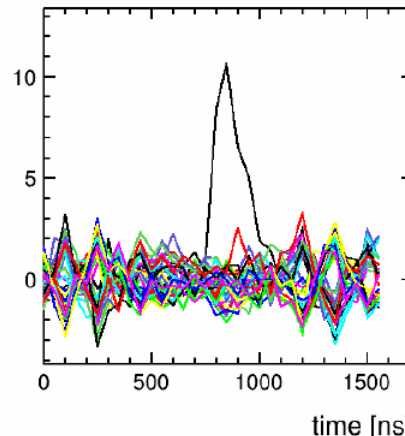
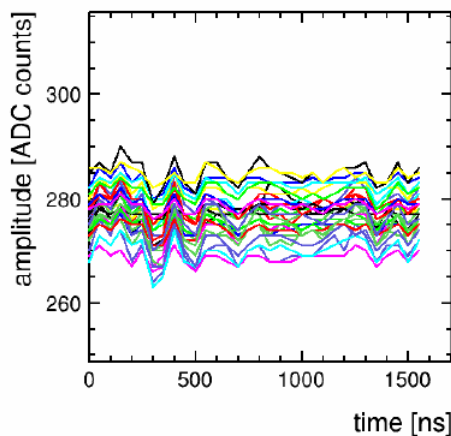
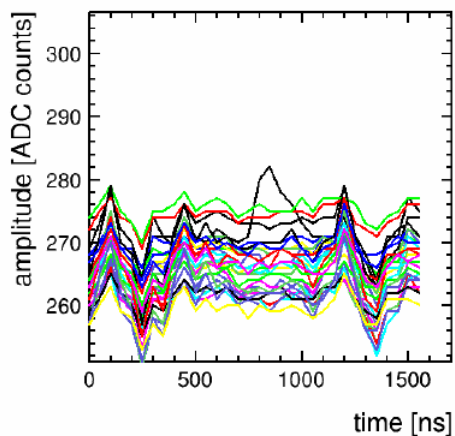
“Main Topic”: Test Beam CERN-PS October 2014



A single event (muon) – 32 pads in all 4 sensor planes

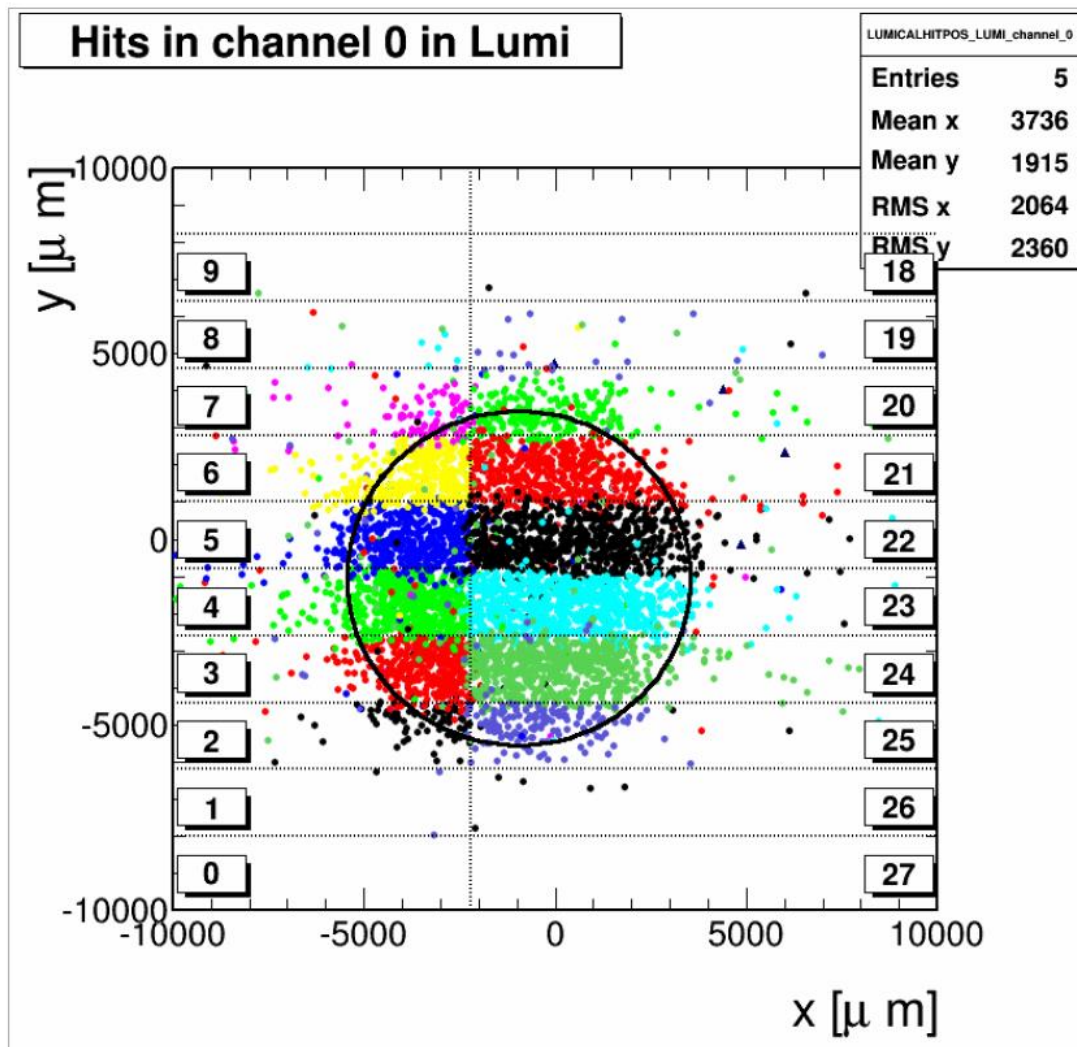
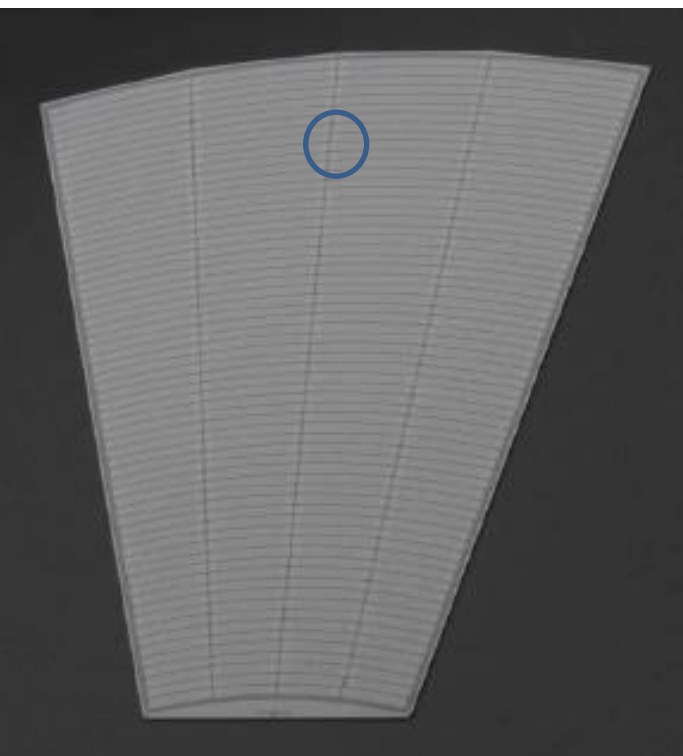
BEFORE CMN subtraction

AFTER CMN subtraction



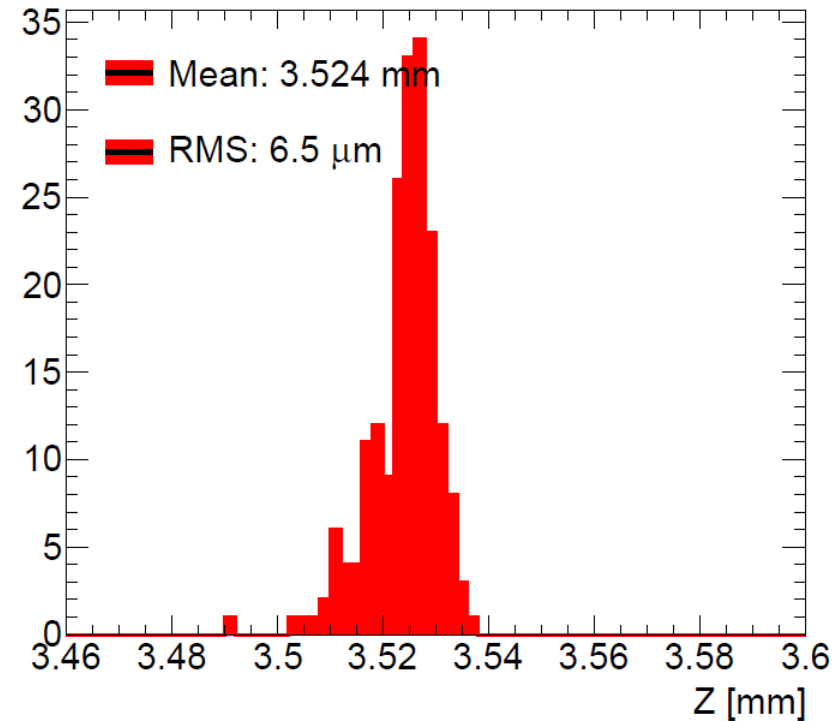
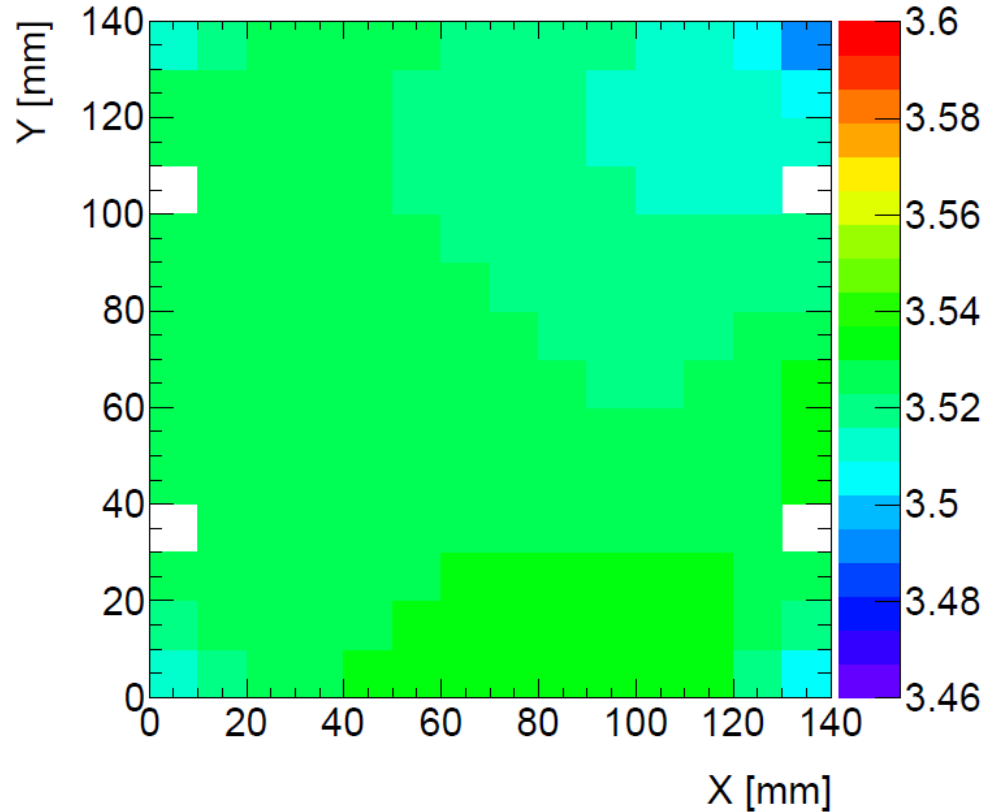
N.B. Channel-by-Channel electronics calibration not yet included

Test Beam CERN-PS October 2014 (3)



News on tungsten plates from Russia

Example: one plate from WOLFRAMOFF, after re-machining



WOLFRAMOFF №2
Mean 3.524mm
RMS 6.5μm

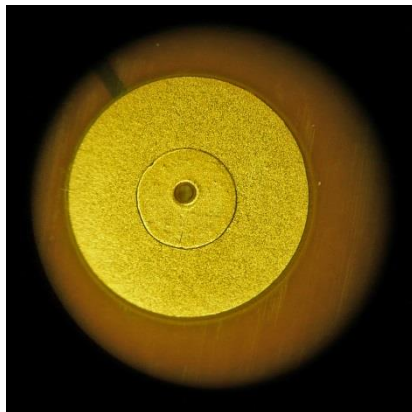
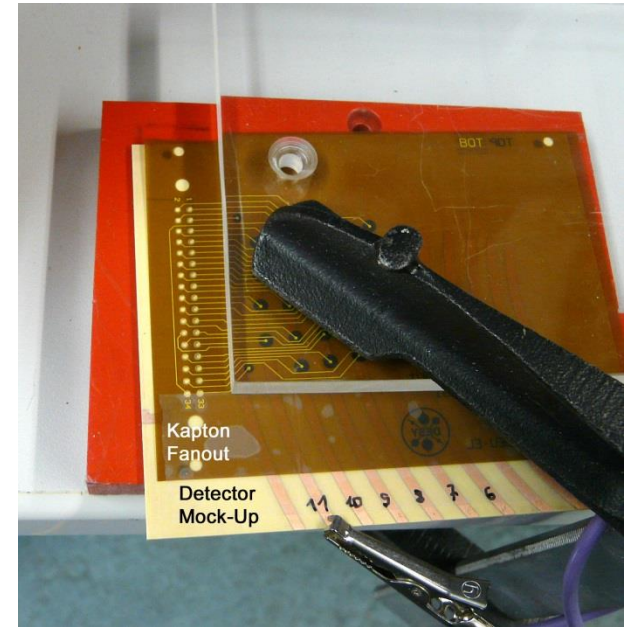
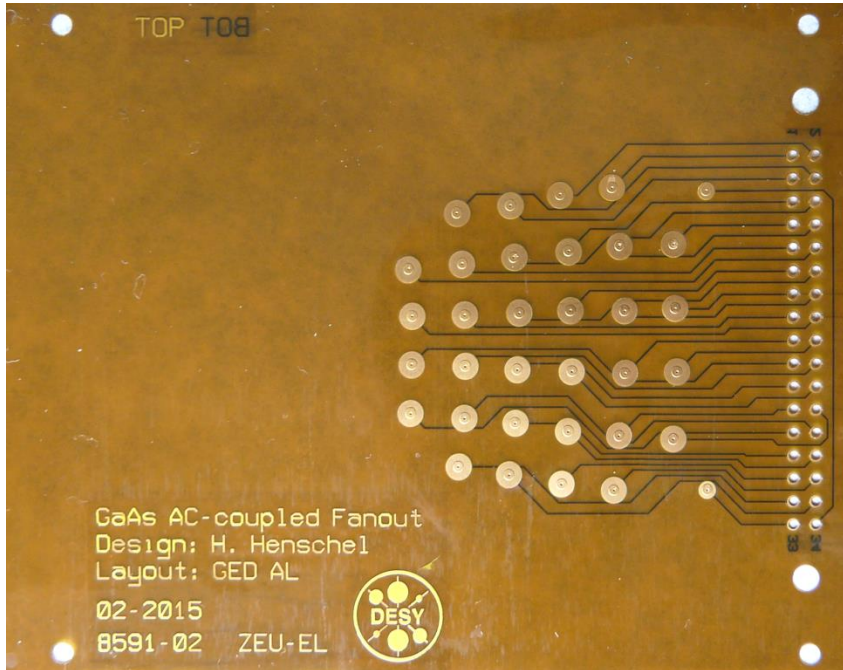
WOLFRAMOFF №2

Progress on very compact assemblies (1)

Hans Henschel, DESY



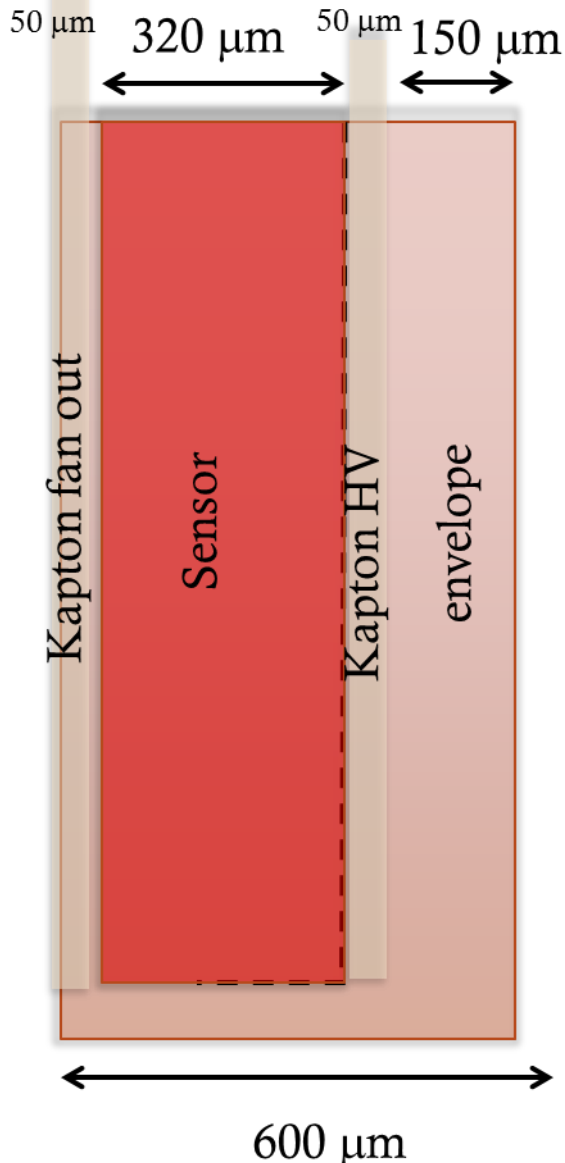
Spring Loaded Contact



	Sector 1	2	3	4	5	6
Ring 11		0.43	0.30	0.23	0.23	
10	0.43	0.40	0.33	0.37	0.27	0.33
9	0.30	0.30	0.27	0.33	0.27	0.27
8	0.77	0.23	0.23	0.53	0.23	0.27
7	0.30	0.27	0.23	0.27	0.20	0.30
6		0.37	0.27	0.23	0.23	

Progress on very compact assemblies (2)

Yan Benhammou, Tel Aviv



Fan-out Kapton (test)



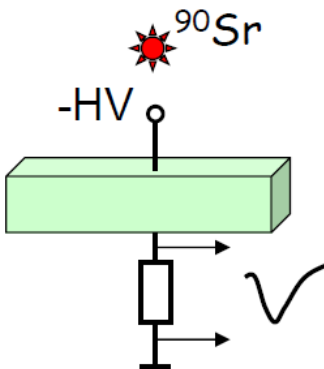
envelopes produced and glued at CERN (fake sensors in steel)

Present assemblies: 750 – 850 microns

to be fixed on W-plate supports with tiny screws (?)

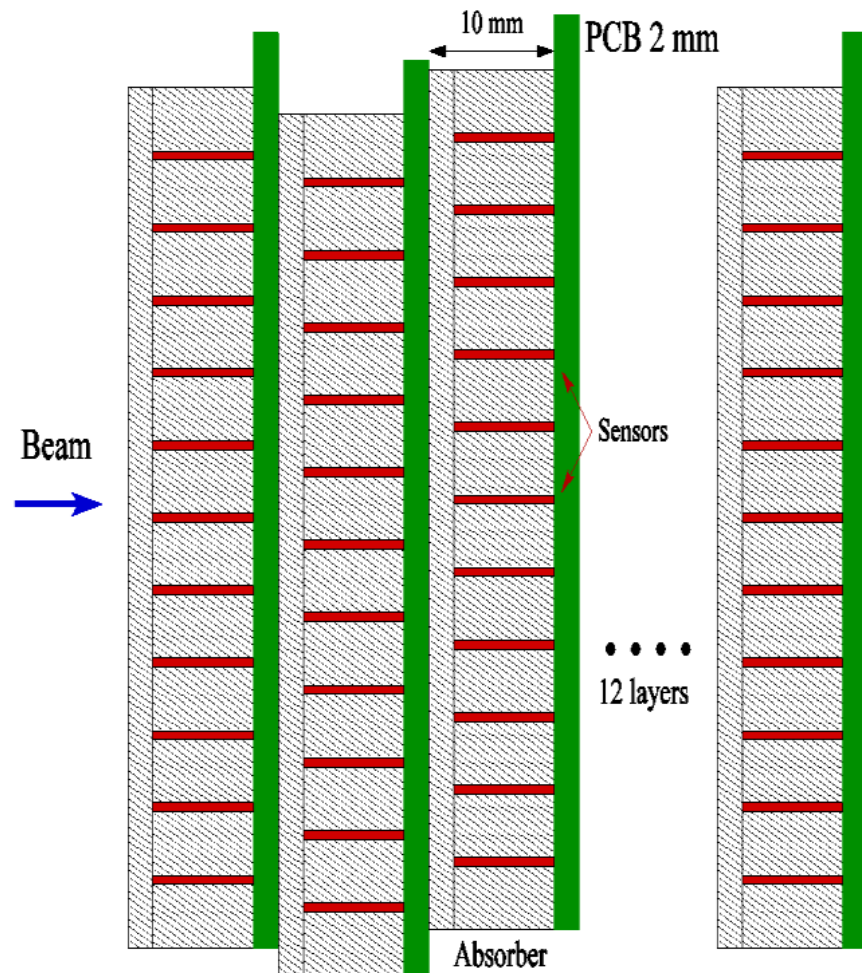
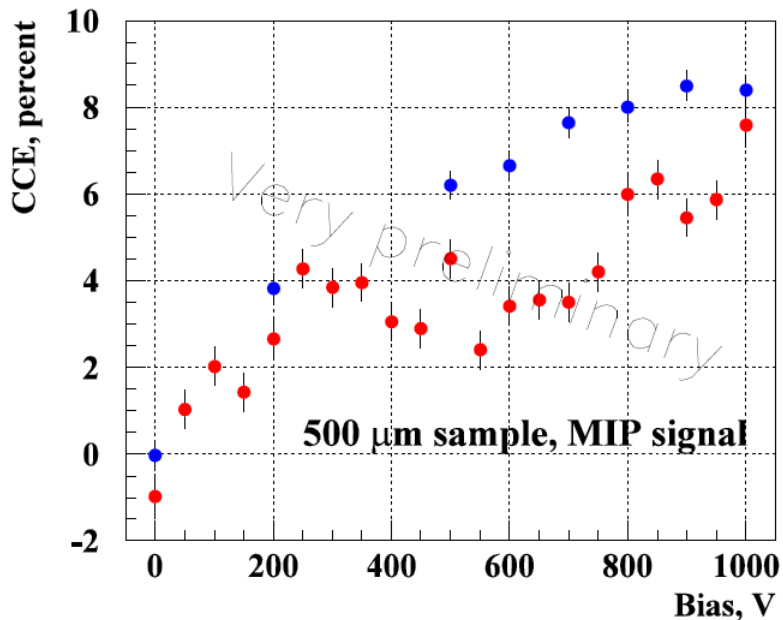
Sapphire (Al_2O_3) sensors and (possibly) a new BeamCal layout

Note: Sapphire as rad-hard as diamond, but MUCH cheaper !



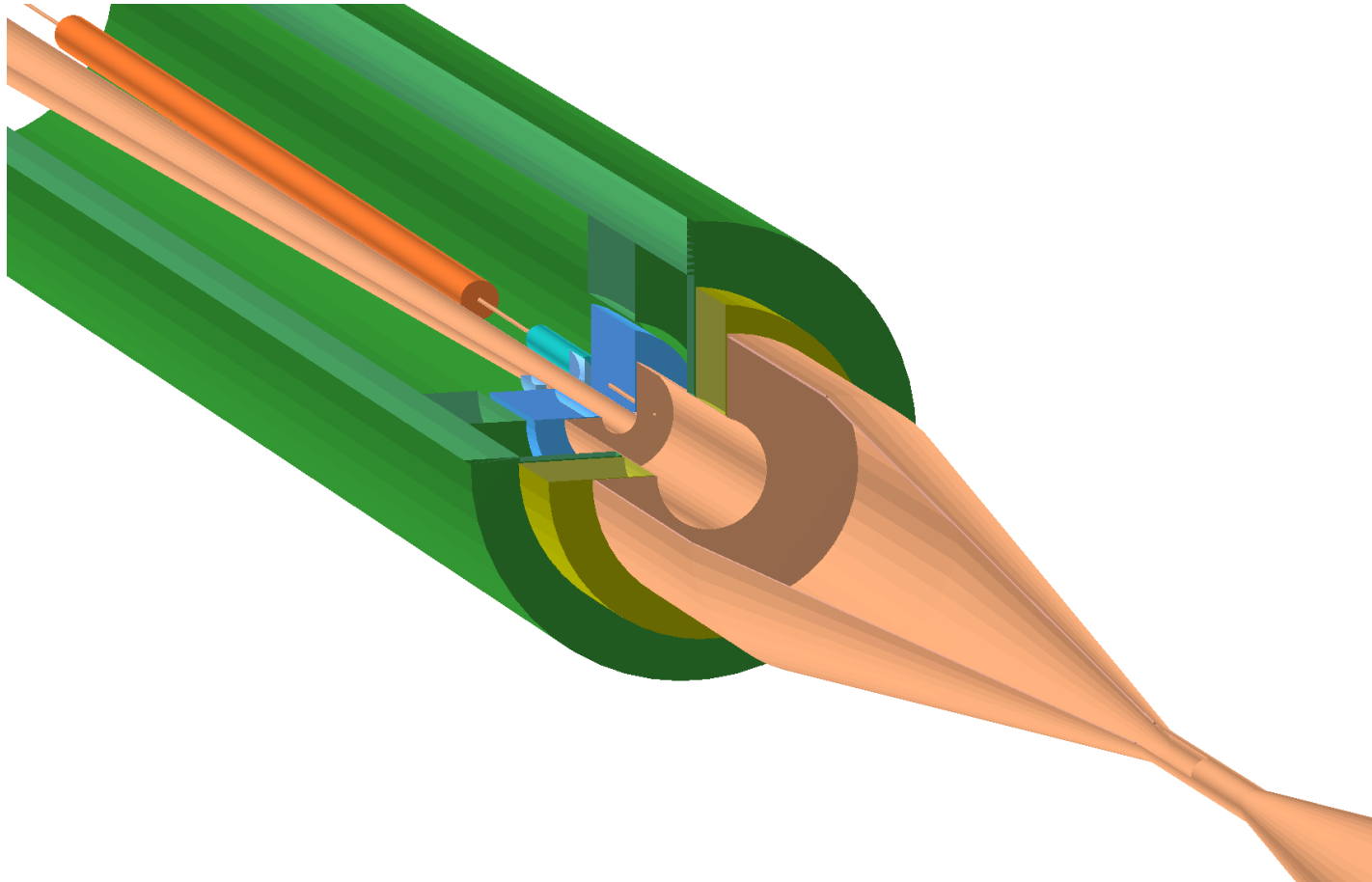
SC Sapphire
10x10x0.5 mm³
Metallization
Al+Ti+Au

Sapphire charge collection efficiency



DD4hep and FCAL

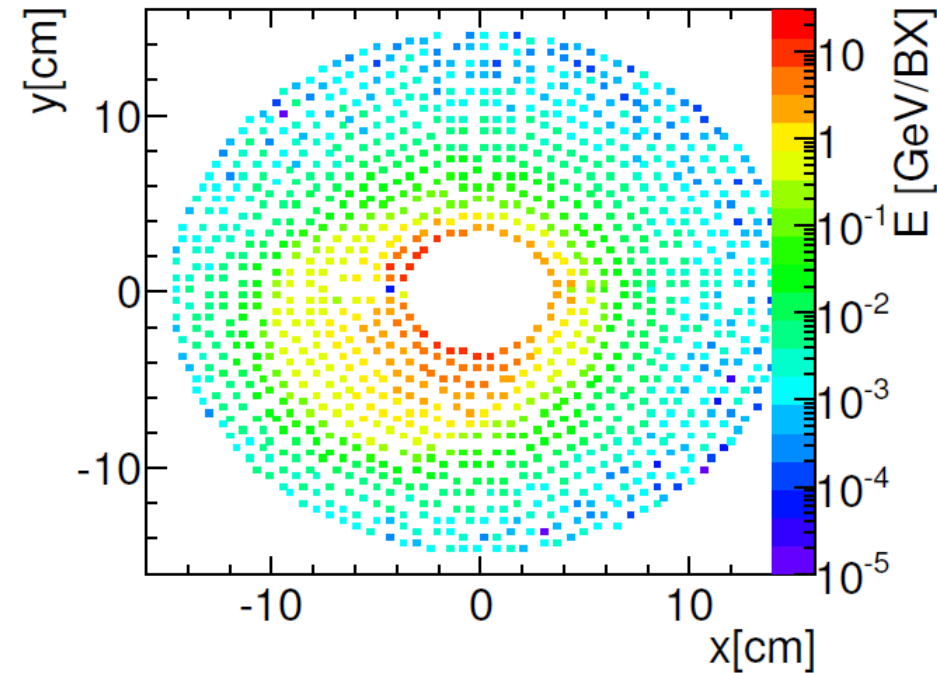
Geometry description of forward region complete (here: CLIC)



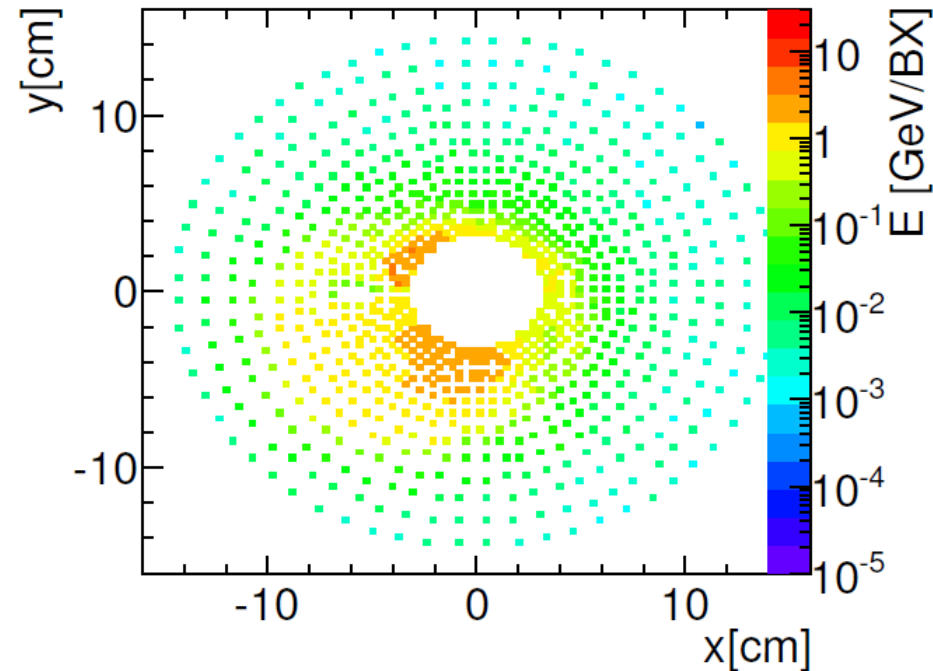
DD4hep and FCAL (2)

Example: BeamCal simulations with different segmentations

“uniform”



“proportional”



- Not showing exact segmentation, just filled into 2D Histogram
- Floating point precision smears out the boundary

FCAL Institute Board and Memorandum of Cooperation

- 12 Institutes out of 13 were represented at the FCAL IB (3 of them by webex)
- The new Memorandum of Cooperation was unanimously accepted
 - “light” MoC, similar to CLICdp (but no host laboratory)
 - Institute Board, Spokesperson and Co-spokesperson
 - Publications & Speakers Committee
 - Documentation on FCAL web-pages (no CDS structure)
- Signatures of the MoC: present institutes until (?) end of April 2015
- Additional Institutes are welcome !

SUMMARY of Summary

- Apologies to all the “other speakers” (slides not shown) !
- As always: many interesting discussions around the formal meeting (coffee breaks, workshop dinner, etc.)
- Next FCAL workshop: possibly mid-October 2015 at DESY (Zeuthen?)

NB. Two **FCAL working groups** are now established and meet regularly
-> hardware WG
-> software/analysis WG
(and they are found to be VERY USEFUL !)