

# **The “Shashlik” e.m. calorimeter**

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## Some history

CALEIDO collaboration has tested 2 solutions to give Shashlik longitudinal segmentation:

- 1) vacuum photodiodes inserted laterally in the front.
- 2) use of slow scintillator in the front.

We could also consider :

- 1) insert 3/4 layers of silicon pads ( $1 \times 1 \text{ cm}^2$ )
- 2) reduce the total depth by W instead of Pb

The results will go in the LC note.

# Module of the calorimeter

The technique described in the TDR is  
slow + fast scintillator

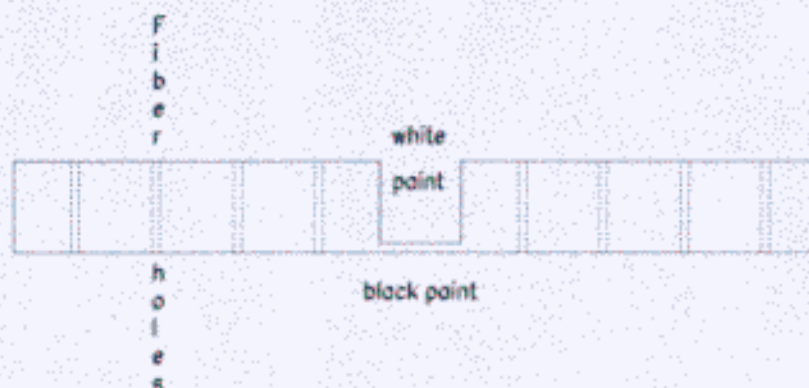
6 x 3 cells ( $3 \times 3 \text{ cm}^2$ )  
=  $19 \times 10 \text{ cm}^2$

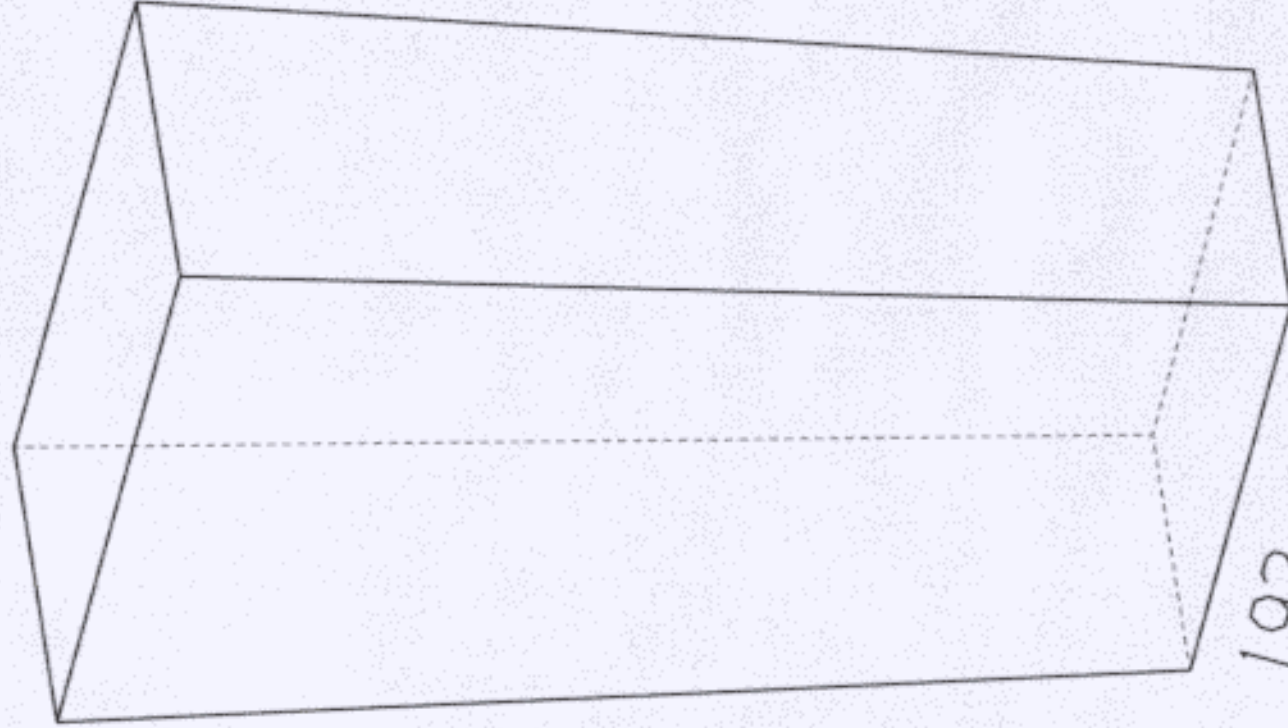
140 layers for  $25 X_0$   
(1 mm lead + 1 mm scintillator)

21 (z) x 56 ( $\phi$ ) for 1/2 calorimeter

Each cell is read out by a bundle of  
WLS fiber + optical fiber and PM

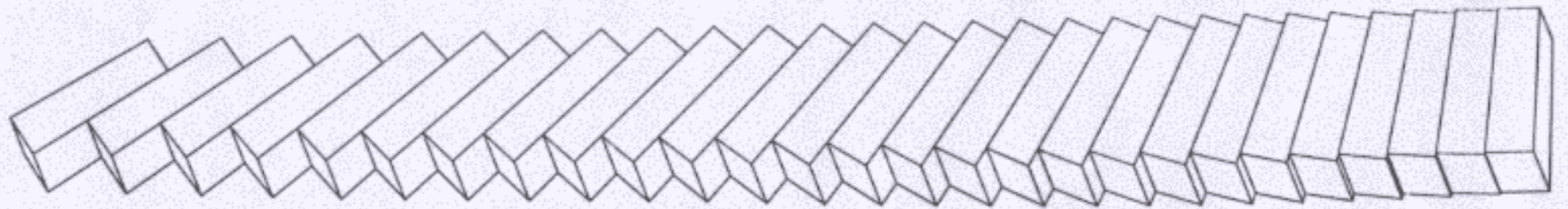
SCINTILLATOR TILE SEPARATION

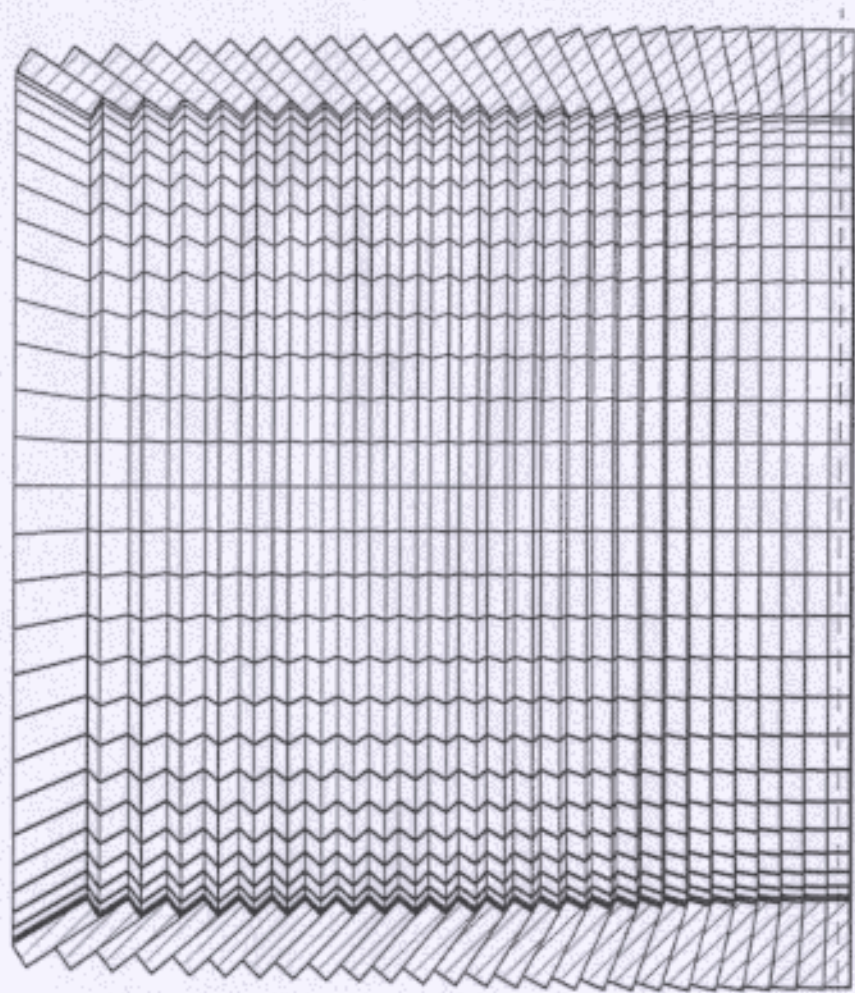
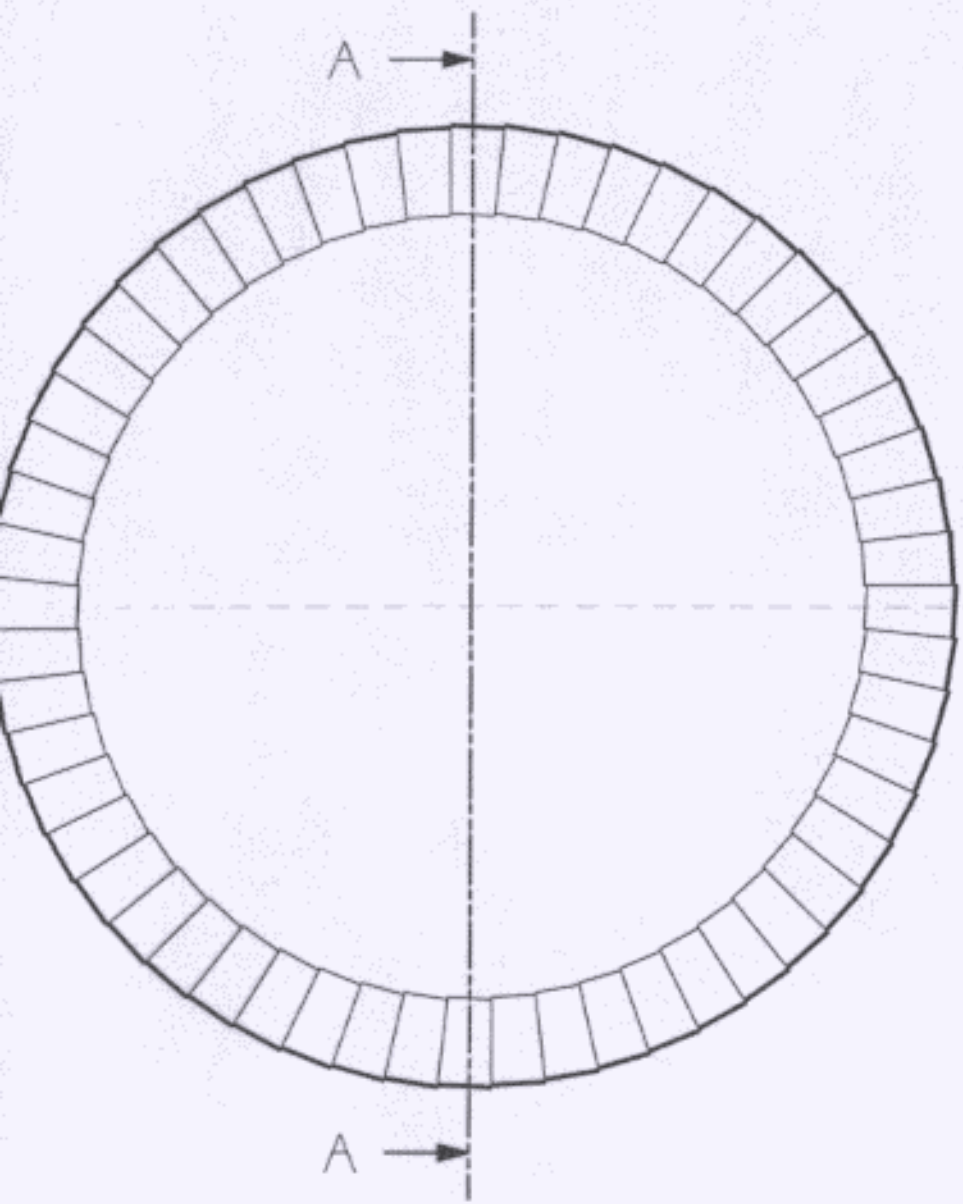




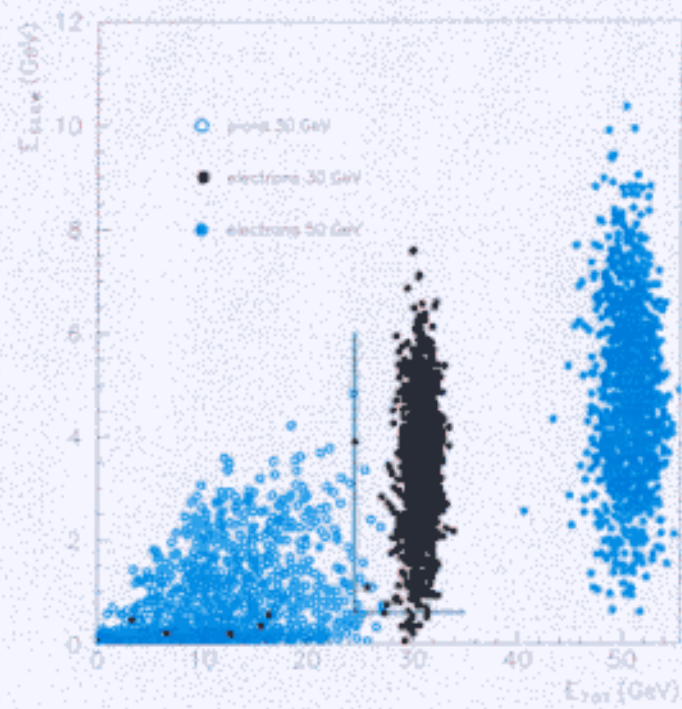
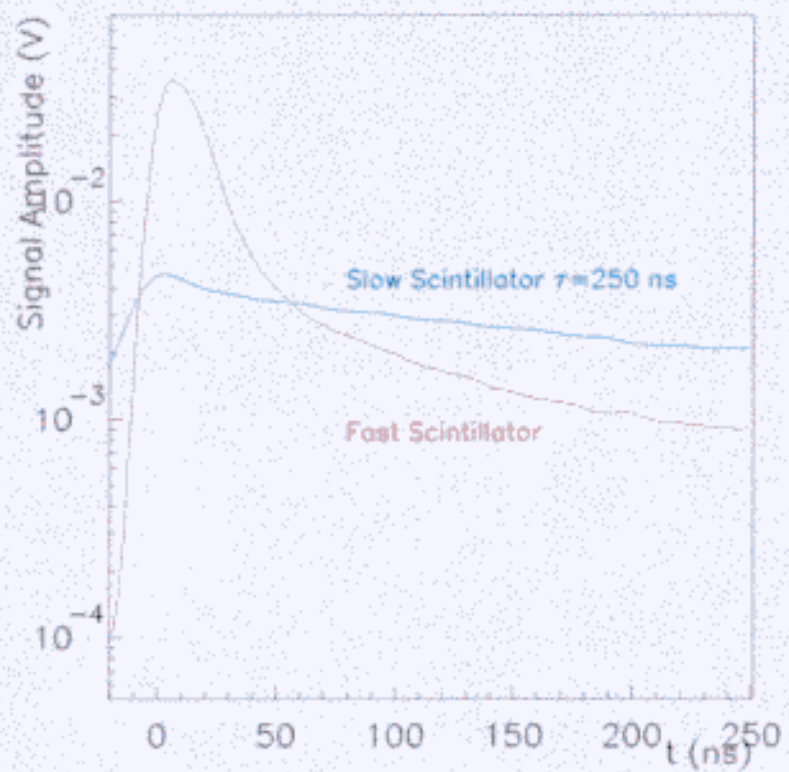
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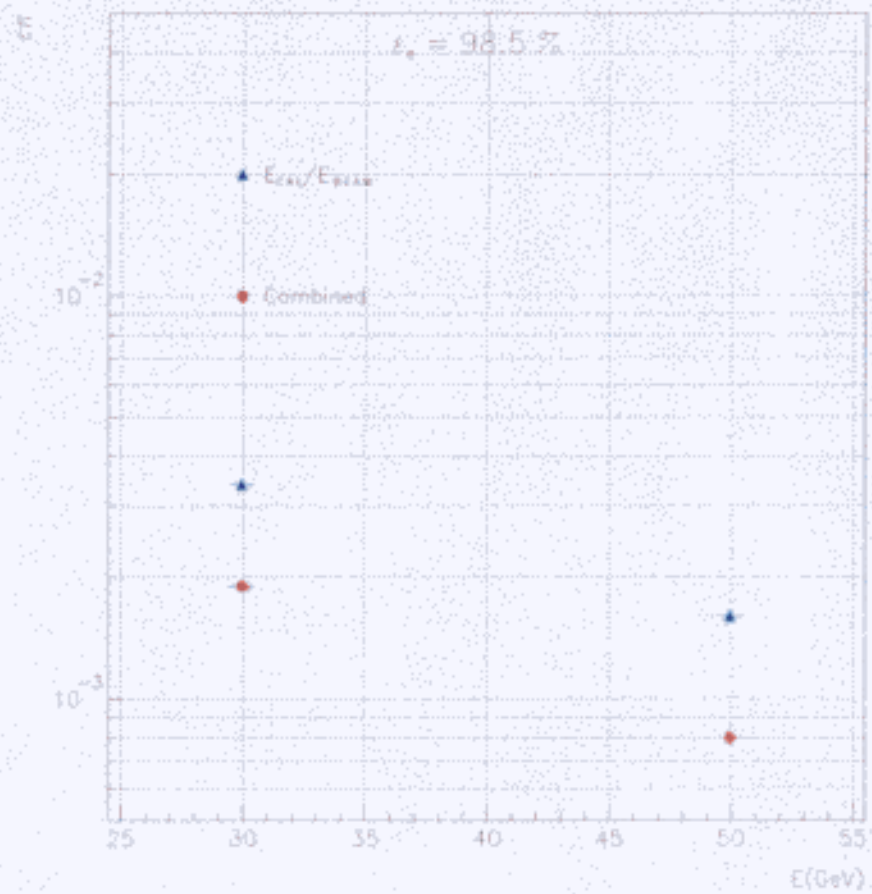
- 192.47 - - 100 -





SECTION A - A







# Costs

	euro/module	Meuro (total)
Module construction	3089	7.4
Fibers	170	0.4
	euro/cell	Meuro (total)
Photomultiplier	100	4.3
Electronics	50	2.2
<b>Total</b>		<b>14.3</b>

# Conclusions

... writing the TDR ...  
and LC note ....