Status and next steps in simulations

IFJ PAN Kraków

IPN Lyon (France)

IPHC Strasbourg (France)

BARC and TIFR Mumbai (India):

University of York (UK)

http://paris.ifj.edu.pl/

What we would like

ɣ-ray spectrometer
(≈1Mev)

and/or

(Mi, Ei)

and/or

High energy ɣ-ray
(GDR ≈ 10 MeV)

Detector

LaBr3/LaCl3

GOODϵ, ΛE, ΛT

What we would like

γ-ray spectrometer
(≈1Mev)

and/or

(Mi, Ei)

and/or

High energy γ-ray
(GDR ≈ 10 MeV)

<u>Efficiency</u>
Depth ? Compact ?
One or two layers ?

GOOD ε, ΛE, ΛT
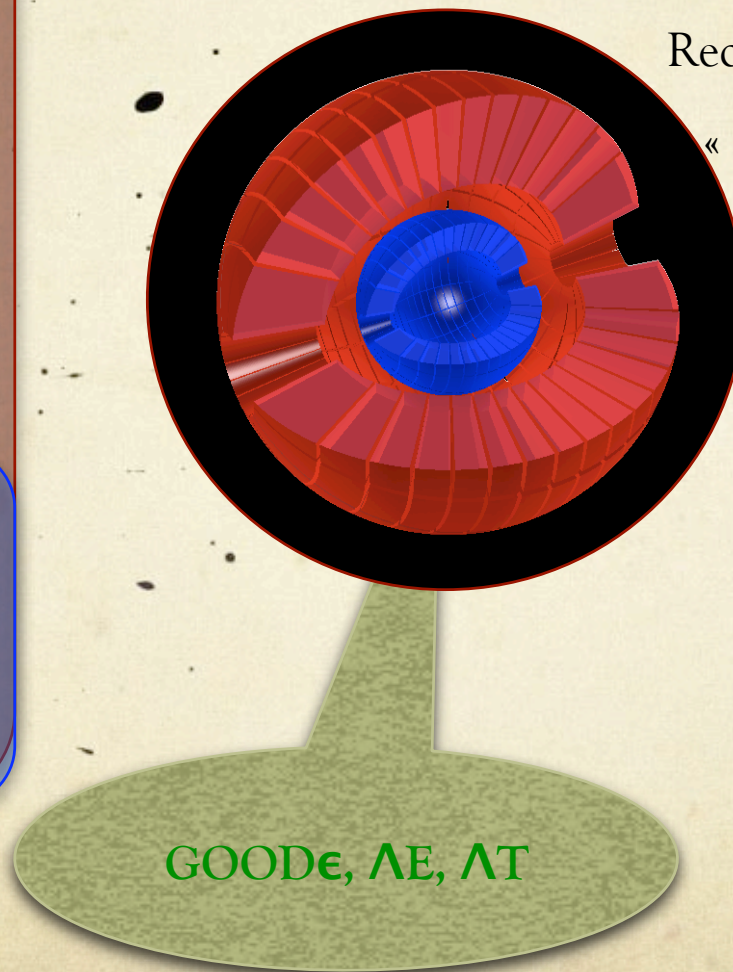
What we would like

Υ-ray spectrometer
(≈1Mev)

and/or

(Mi, Ei)

and/or

High energy Υ-ray
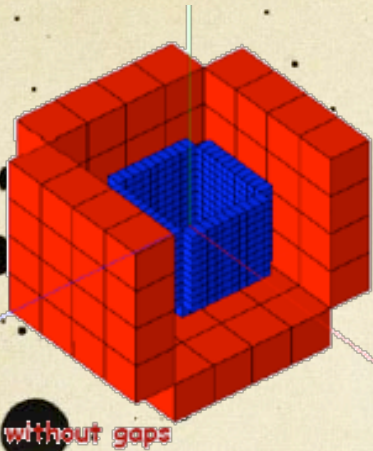(GDR ≈ 10 MeV)

E resolution

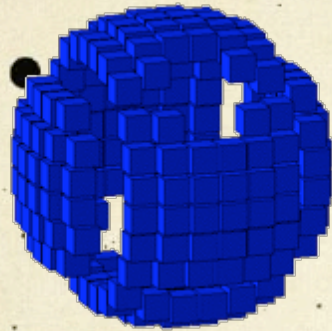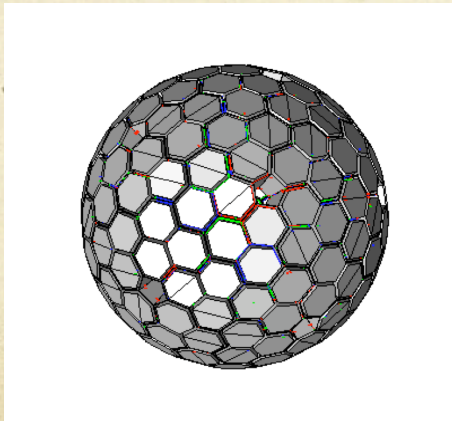segmentation (pileup, Doppler)

Reconstruction

« addback » or clusterisatrion
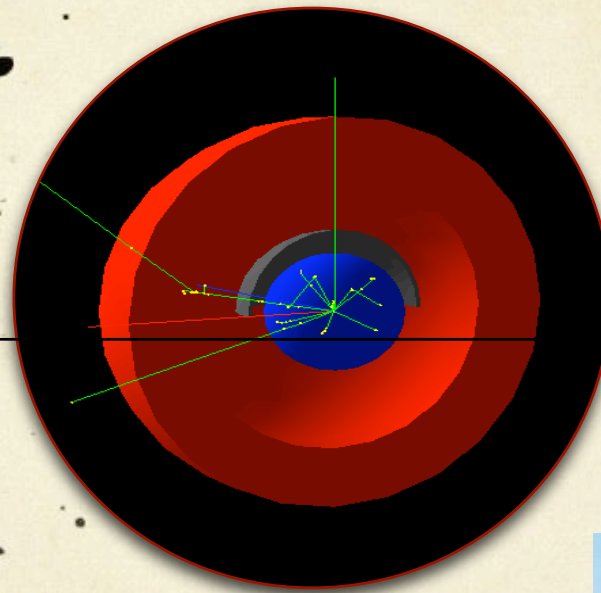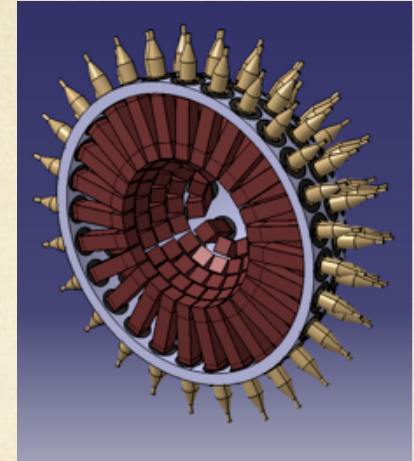
GOODε, ΛE, ΛT

Different configurations

« Cube »

« Wheel »

without gaps

« soccer ball »

Others ??
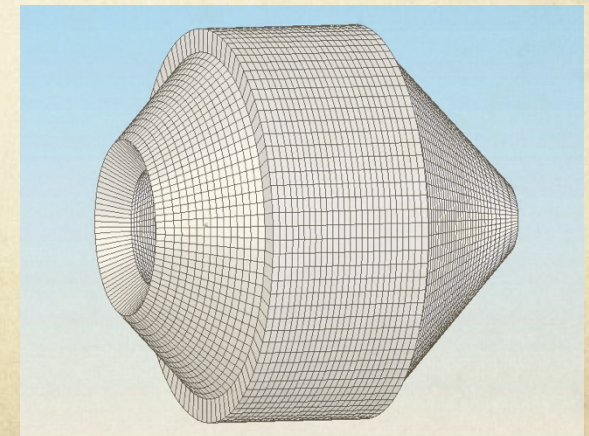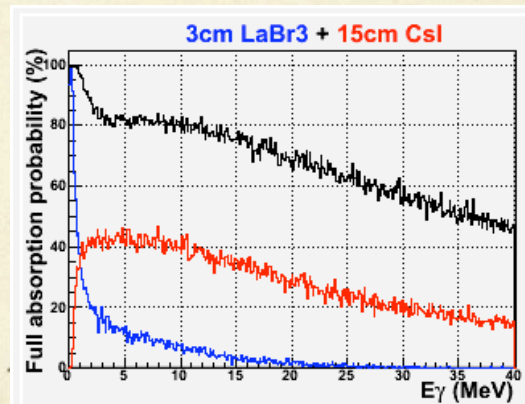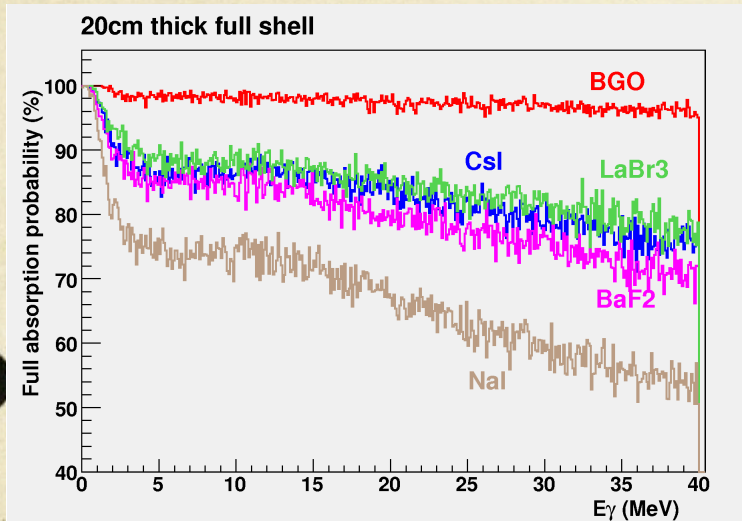
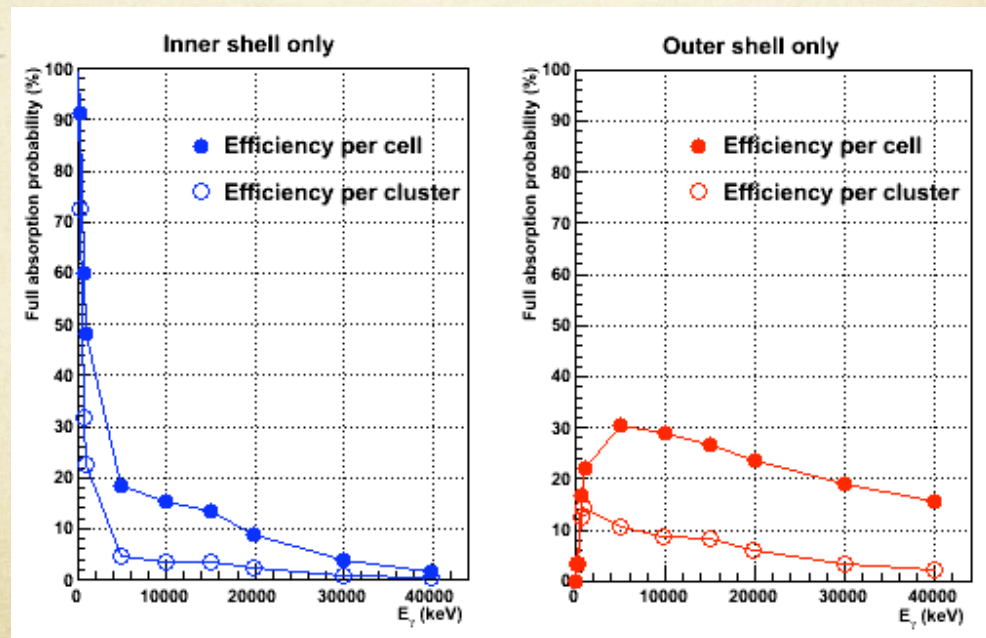# What has been done so far: ϵ (Mγ = 1)

(mainly but not only)
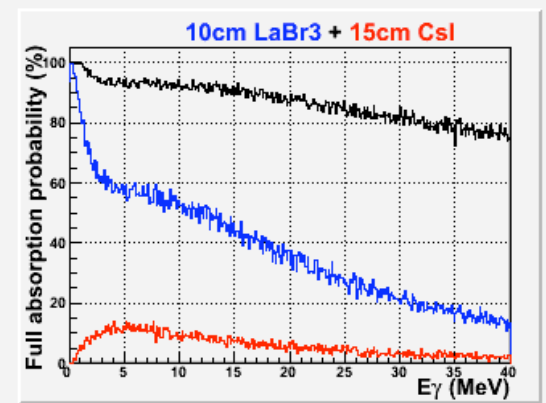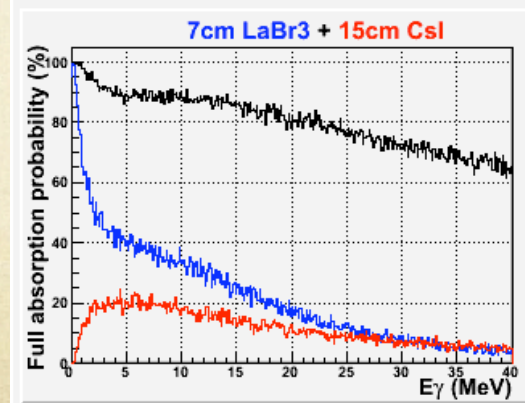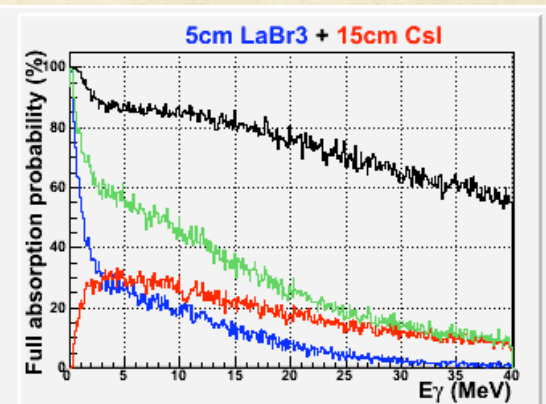
Conclusions on efficiency

Different configurations have been compared :

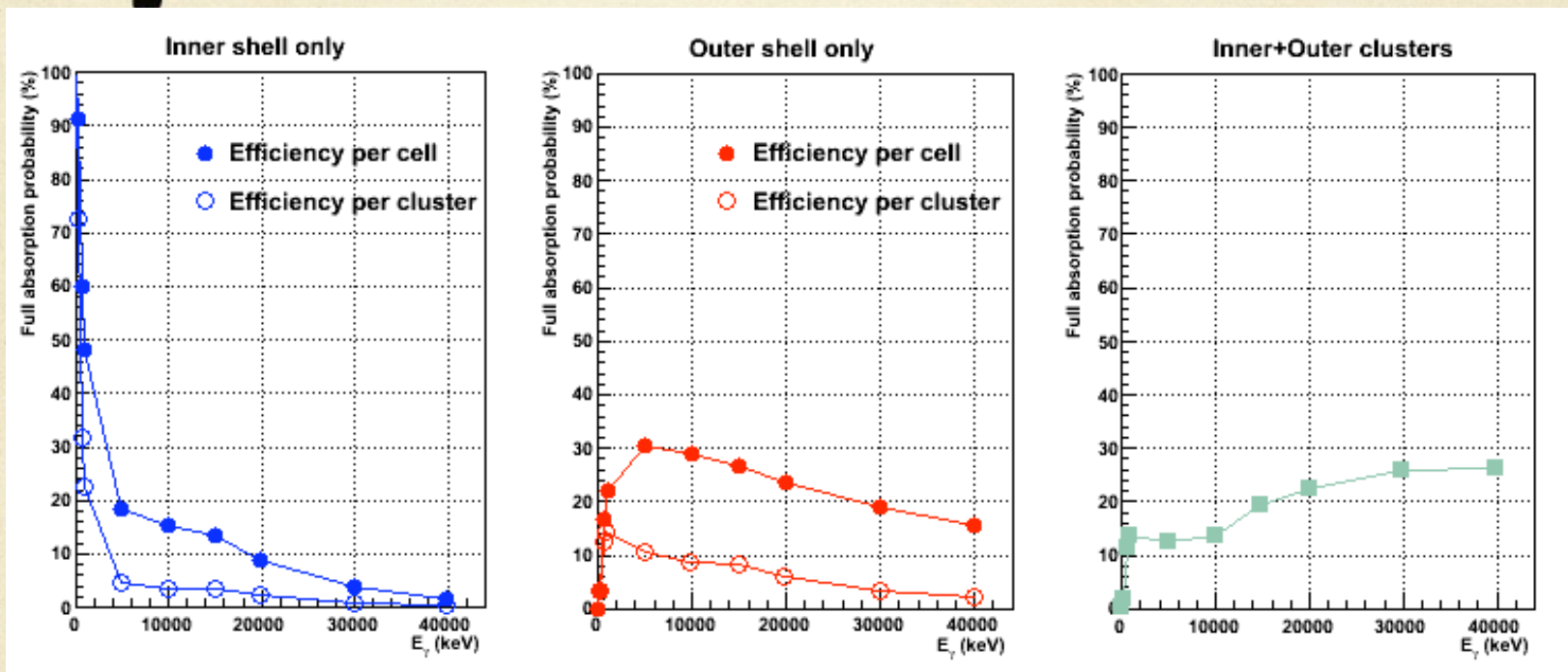synthetize $\varepsilon(e\gamma, M\gamma = 1)$ (Ref: the ideal case)

$\varepsilon(e\gamma, M\gamma = 1)$ with volume normalization
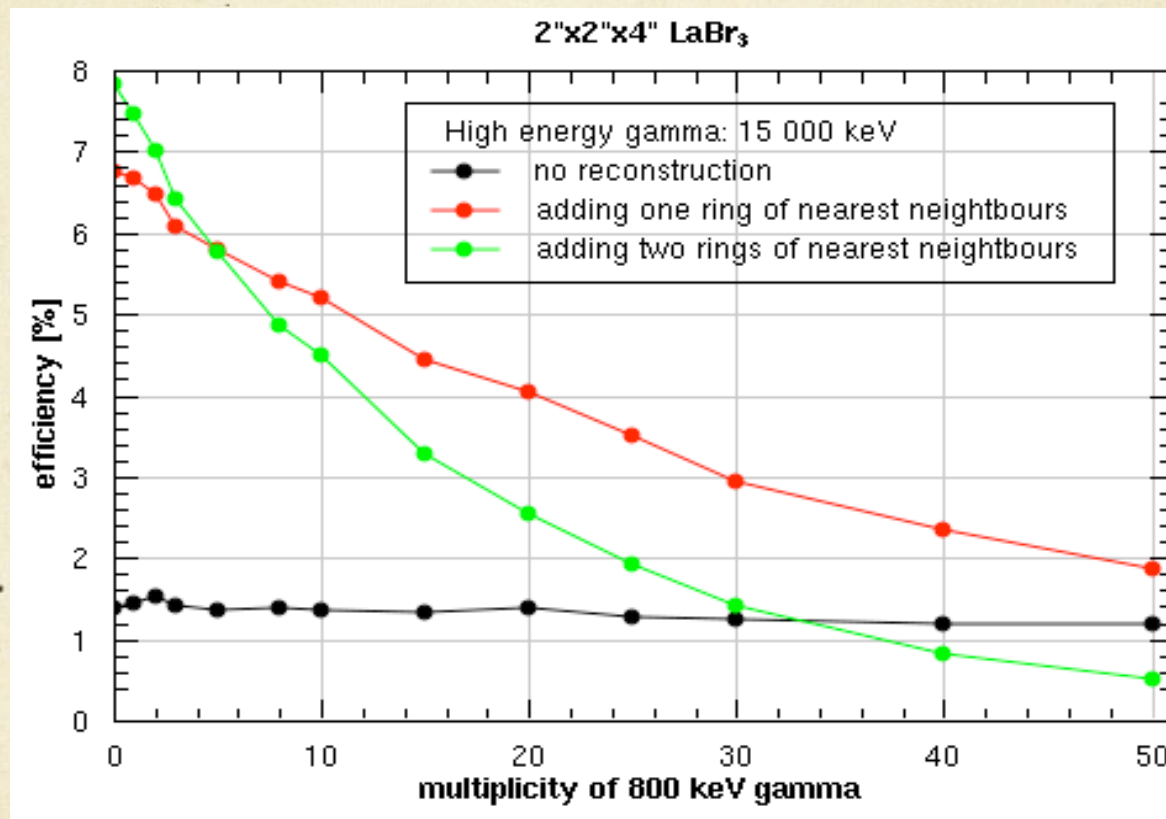
Full addback versus singles

Reconstruction : first studies
(GDR versus filter)

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2"x2"x4" LaBr$_3$

High energy gamma: 15 000 keV
- no reconstruction
- adding one ring of nearest neightbours
- adding two rings of nearest neightbours

Conclusions / discussions

Work to be continued for high multiplicity

Answers in one year ?

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