

GEMC Meeting, Jan. 2012

Updates

Roadmap to 2013

Announcements

New Geant4: 4.9.5

Major changes:

1. geant4 going to CMAKE (much improved installation, but pain to convert). Installation scripts changed.
2. Low energy e.m. processes improvements (should improve our estimate of background rates)

Available TOMORROW.

Announcements

GEMC installation:

RPM binaries not working as well as expected

RPM source compiling (OS agnostic) being investigated

Availability: This spring if it works.

Announcements

New ELOG

<https://clasweb.jlab.org/elog-gemc>

Your JLAB username and Password
(Send me reminder)

USE for progress report

3D PDF HowTO

-EXEC_MACRO=macros/vrml.vis

(will be a button)

3D PDF is a cool, effective way to share detector implementation

In order to **CREATE** the 3D PDF:

Need acrobat 9 commercial edition
(I have it, you can send the vrml file to me)

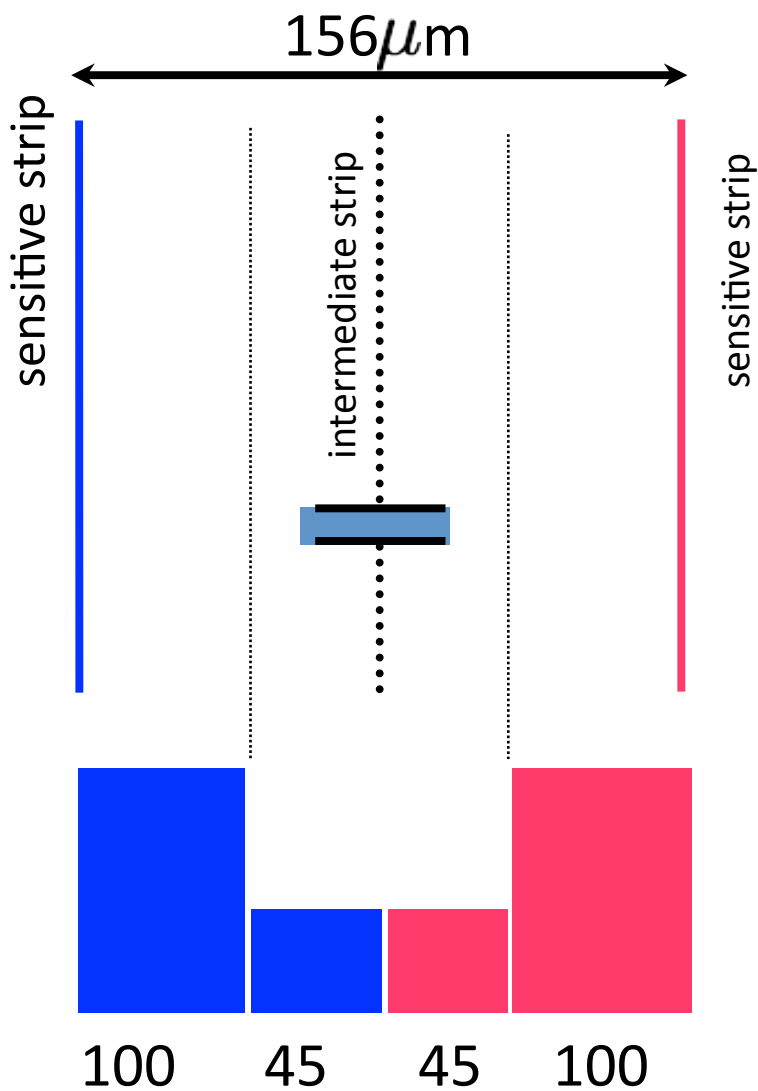
In order to **READ** 3D PDF:

Any acrobat reader

Hit Sharing

Normally, at most, one hit / detector entity
Now: multiple hits are possible / detector entity.

Example:



GEMC Development: Roadmap

Materials in DB

1. “simple materials”
2. optical materials

Digitization: road to an electrical signal $V(t)$

Geometry DB:

1. Common “mother” numbers for geometry and hit process routines and reconstruction.
2. General DB re-structure, including permissions

Materials in DB

Materials for each detector. Perl script INSIDE each detector geometry directory.

Chemical Elements in common, referred to by chemical symbol

Composite:

```
$material{"name"}      = "CCGas";  
$material{"density"}  = "0.01012*g/cm3";  
$material{"elements"} = "2 F 70 C 30";  
$material{"materials"} = "0";
```



This will become:
LTCC/CCGas

Template to come soon

Digitization

We need:

1. ADC, TDC.

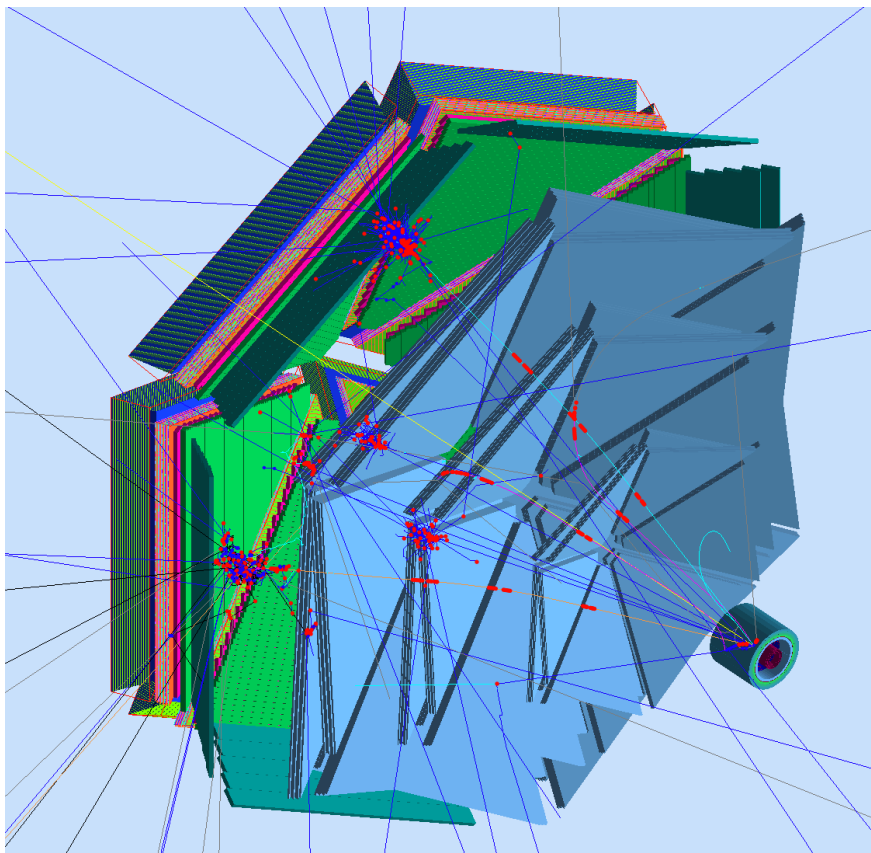
This you know how to do: Hit Process routine.

2. $V(t)$

Will send template soon. Meanwhile start think about detector response.

Notice: 2 will replace 1!

Events Validation



BST, BMT, CTOF, CND,
DC, OTOF, PCAL, EC

GEMC revision 5588
Geant4 9.5

Location:
`/home/gemc/validation/rev_5588`

`100events_nogen.ev`

Events Validation

