Backgrounds & Geant Simulation

Forward Steps (till Elba)

- Switch from C++ to GDML to describe the detector in Geant 4

- Build the <u>same</u> simple detector from GDML, repeat the <u>same</u> background simulation till the <u>same</u> results are obtained

- Release to the SuperB collaboration the documented code as a seed for a general purposes Geant simulation

E.P. + G.Marchiori

ToDo list (Interaction related)

- Translate the present C++ description of the Interaction Region into GDML (validation)

- Authomatic tool to translate MAD files into a GDML description of the optic (extended schema to describe magnetic field).

E.P. + G.Marchiori

ToDo List (SVT related)

- Geant4 simulation of pair production

- Touschek backgrounds:

  - LER beam scrapers parameters optimization

  - HER rate evaluation

- Assessment of the radiation damage on Detector and readout electronic silicon wafers

G.Calderini,E.P., G.Marchiori, M.Boscolo, Panta.R.

ToDo list (DCH related)

- Bigger radiative Bhabha sample to predict DCH occupancy

- Assessment/remediation of the issues raised by the simulated background sources

- GDML improvement of the DCH description

Matteo Rama? + ??

ToDo list (DIRC & PID related)

- ~~Find~~ Dig out a DIRC & PID expert willing to:
    - Participate to our effort in understanding backgrounds
    - Interpret the result of the simulation
    - Write a GDML description of DIRC & PID

ToDo list (EMC related)

- GDML file to describe the segmentation of the barrel EMC

- Switch the forward calorimeter material from CsI (as in CDR bkg studies) to YLSO

- Assessment/remediation of the issues raised by the simulated background sources

- We have volunteers for that!!

  Claudia Cecchi, Stefano Germani + ?

ToDo list (IFR related)

- Write a GDML description of an haxagon shaped IFR instead of the C++ cylindrical one simulated now

- Assessment/remediation of the issues raised by the simulated background sources

Marcello Rotondo + ?

Conclusions

- Help us removing the qustion marks here and there in the people list:
you are very very welcome.

- Suggestions / comments / questions are very welcome too!

Answer to the Final Question

GDML??
What the #@^% that acronym stand for?

Geometry Description Markup Language