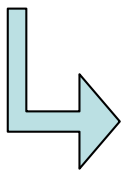


Preliminary planning for SuperIFR simulation

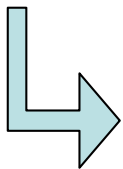
Mirco, Marcello, Gigi

➤ Detector optimization

- ✓ resolution
- ✓ configuration of active layers and absorber
- ✓ ...



For these studies it is necessary to use a full simulation in order to have a detailed simulation of the hadronic shower



A first idea for these studies is to use the babar framework since we need a reconstruction information from other detectors.

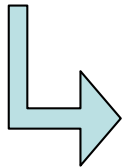
➔ In terms of interaction length, all detectors inside IFR of BaBar are not so different from the superB detectors

➤ From the babar simulation of superIFR

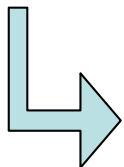
- ✓ detector optimization
- ✓ detailed parametrization of the hadronic shower to use in FAST SIMULATION
- ✓ ...

➤ Background from machine

✓ from the geant4 standalone simulation of the background group (Calderini etc) we can have root files with hit information → extract a distribution of the rates due to the background



We have to evaluate if this rate distribution could be used in the babar simulation (???) for superIFR.



IF this thing is possible → it is possible to evaluate something like an inefficiency due to the background to use in the fast simulation.

➤ Maybe interactive studies on geometry of superIFR and effect of the background could be necessary (???)

➤ Preliminary conclusions

✓ For detector optimization and evaluation of background effects on superIFR it is necessary a full simulation.

✓ To implement a fast simulation of superIFR it is necessary to know a detailed parametrization of the hadronic shower and to have something like an inefficiency due to the background

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