Physics/Detector: R&D Prospects And Future Plans

Neutrino hazard:

Conclusions

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- Implementation of neutrino dose simulation in FLUKA started
- Results compatible with literature
- Can easily simulate at other energies

- Most of the risk comes from straight sections
- Wobbling in the ring factor >~10 reduction in "ring"dose.

- Need to implement plausible beam optics, to account for non-parallelism of the beams➔ will reduce the peak dose

Physics/Detector: R&D Prospects And Future Plans

Detector background at short term

- Conclude the 1.5 TeV background studies in the detector
- Use the MAP detector and configuration, characterize detector performances even if "old"
- Study $H \rightarrow b\bar{b}$ including background to get a physics reach

Detector background at not-so-short term

- Produce the 3 TeV background using Fluka with the MAP IR configuration
- Compare detector performances at 1.5 TeV and 3 TeV still using MAP configuration
- Compare physics performances $\left(H \rightarrow b\bar{b}\right)$ including background at 1.5 and 3 TeV

Detector background at long term

- Think and design a new detector, with the most up-to-date technologies
- Start appropriated R&D for specific detectors