

# IEEE NPSS School of Application of Radiation Instrumentation Dakar -Senegal



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## Particle Physics Instrumentation (part 1)

*Monday 14 November 2022 11:00 (45 minutes)*

A brief introduction with the basics of the design of the ATLAS detector at CERN where the need for statistics is emphasized. After this, the path of the ATLAS upgrades, following the CERN accelerator upgrades, is presented, highlighting the problems of verifying sufficient radiation tolerance. This part is then compared to the different strategies chosen by the CMS detector collaboration. If time allows other experiments (e.g. neutrino experiments) will be discussed as well.

During 2021 there was an ECFA process leading to a Detector Research and Development Roadmap for the next ?? years. The last part of the lectures will give an overview of this.

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