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Hands-On: Silicon Detector Monte-Carlo Simulations with Allpix Squared - Beginners

Wednesday, 10 February 2021 09:30 (2h 30m)

Scope of the Tutorial

The goal of this tutorial is to understand the usage of basic functionalities of the Allpix Squared simulation framework and methods to extract some of the relevant quantities for sensor studies. The participants will be provided with a task and instructions, covering the basic concepts of configuring a simulation and a detector geometry, and extracting and interpreting histograms. Some prior knowledge on the framework is helpful, but not required.

Preparation

Please make sure you have access to a working version of Allpix Squared before attending the tutorial, which could be either an online version an installation of the latest release version of Allpix Squared on your computer. In addition, we provide a Virtual Box to be set up before the tutorial containing both Allpix Squared and *Corryvreckan*.

If you want to give Allpix Squared (or *Corryvreckan*) a quick try without installing it on your system, we recommend using the Virtual Box. Please follow the description provided here to download and set up a virtual machine with all required dependencies:

https://gitlab.cern.ch/jekroege/bttb9_tutorial_corryvreckan/-/blob/master/SetupVirtualMachine.md

Please find the corresponding Virtual Box here (10 GB, please download before the tutorial):

https://cern.ch/corryvreckan/VMs/AllpixSquared_Corry_Ubuntu_Minimal.ova

Due to the download size of about 10 GB this may take a while, so please do so before the hands-on.

Detailed instructions on access to Allpix Squared can be found in the manual or on the website (https://cern.ch/allpix-squared).
Other recommended options for this tutorial are to install the Docker image prior to the tutorial or to use a CVMFS installation, if access to LXPLUS or NAF is available.

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