Contribution ID: **73**   Type: **not specified**

Hands-On: The Allpix Squared Simulation Framework

Tuesday, 15 January 2019 16:30 (2h 30m)

Scope of the Tutorial

This tutorial will provide an insight into different functionalities of the Allpix Squared simulation framework. We will not start from zero, and some prior knowledge is required, i.e. the participants should be familiar with the very basic concepts of the framework (how to configure a simulation, how to set up the detector geometry…).
We will look into how electric fields from finite element simulations can help in improving the detector description, and explore some other not-so-obvious features.

Preparation

Please install the latest release version of Allpix Squared on your computer or make sure you have access to a working version online before attending the tutorial.

Detailed instructions can be found in the manual or on the website (https://cern.ch/allpix-squared)

There are four options:

1. Compile and install Allpix Squared locally, with local ROOT and Geant4 versions - please follow the installation instructions in the user manual

2. Use the Docker images - please refer to the user manual

3. Use Allpix Squared on LXPLUS using the centrally provided version on CVMFS. For this, you only need to source the appropriate script and you are ready to go:

   For CERN CentOS7:

   source /cvmfs/clicdp.cern.ch/software/allpix-squared/<VERSION>/x86_64-centos7-gcc7-opt/setup.sh

   For CERN Scientific Linux 6:

   source /cvmfs/clicdp.cern.ch/software/allpix-squared/<VERSION>/x86_64-slc6-gcc7-opt/setup.sh

4. Compile and install Allpix Squared locally or on LXPLUS, while using CVMFS versions of ROOT and Geant4 - this works only for SLC6 and CentOS7 systems - install the CERN CVMFS daemon and source appropriate ROOT and Geant4 versions using their .sh-scripts. Then compile Allpix Squared.

For all options including dependencies from CVMFS: It might take a while until the CVMFS cache is populated with the necessary libraries when starting the program for the first time.

Primary author: SPANNAGEL, Simon (CERN)

Presenter: SPANNAGEL, Simon (CERN)

Session Classification: Hands-On Tutorials