

7th Beam Telescopes and Test Beams Workshop



Contribution ID: 26

Type: **not specified**

Updates on Allpix Squared

Tuesday 15 January 2019 10:00 (20 minutes)

Allpix Squared is a generic open-source simulation framework for pixel detectors. Its goal is to ease the implementation of detailed simulations for both single detectors and more complex setups such as beam telescopes. It has successfully been used for a range of simulations, including test beam data from thin planar silicon sensors as well as monolithic CMOS detectors with a thin high-resistivity epitaxial layer used in the CLIC detector studies.

The simulation chain is arranged with the help of intuitive configuration files and an extensible system of modules, which implement the separate simulation steps. Detailed electric field maps imported from TCAD simulations can be used to precisely model the drift behavior of the charge carriers, bringing a new level of realism to the simulation of particle detectors.

This contribution provides an overview of the framework and its continuous development over the last 1.5 years, with a special focus on newly added features and further extension plans for the future.

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Session Classification: Software Tools