1st School for Particle Detectors and Applications at KNU (SPDAK 2019)

Sunday, 13 January 2019 - Thursday, 17 January 2019

Department of Physics, Kyungpook National University

Scientific Programme

This detector school is designed to maximize the students' experience on the particle detectors during the school.
The programs are focus on experiments with real particle detectors.

The topics for the detector school are:
Particle interactions with materials and detection mechanism
Optics for light propagation and detection
Introduction to fast electronics for detectors
Level 1 pixel track trigger simulation
Introduction to Radiation Detection
Introduction to silicon detectors
Radiation detection with HPGe, Liquid Scintillation Counting and Ion Chamber
Design and simulation of silicon detector
Silicon module production and bonding
Measurements of I-V characteristic and radiation
Introduction to scintillation and scintillating materials
Measurements of light output, energy resolution, decay time of crystal and plastic scintillator
X-ray luminescence
Introduction to GEANT4
Simulation of a crystal detector (energy resolution and linearity)
Measurement of longitudinal electromagnetic shower profile
Measurement of muon flux