



Contribution ID: 551

Type: Oral presentation

Lessons learned from commissioning and first colliding beam data of the Belle II imaging Time Of Propagation Detector

Thursday 14 June 2018 08:30 (30 minutes)

While the imaging Time Of Propagation (iTOP) subdetector of the Belle II experiment was installed in May, 2016, the commissioning and operation of this complex detector has been a challenge. This novel readout consists of 64 independent “board stacks”, each of which contains 128 channels of precision single-photon timing readout. To accomplish this sixteen 8-channel IRSX ASICs and mounted on 4 carrier cards along with a Zynq-7 FPGA. These 4 FPGAs communicate of dedicated gigabit links to a master Zynq-7 FPGA mounted on a so-called SCROD, or master control card, along with a large DDR RAM for holding calibration constants. Both the logic and processor cores are used to provide on-the-fly pedestal subtraction and precision timing feature extraction. Timing, trigger and data are provided by Belle II standard fiber optic link (Belle2link) and custom programming and trigger/timing distribution (FTSW). Performance results from final global cosmic ray running and first collision data will be presented. Particular emphasis will be placed on problems encountered and lessons learned.

Minioral

No

Description

Lesson Learned

Speaker

Gary Varner

Institute

University of Hawaii at Manoa

Country

USA

Author: Prof. VARNER, Gary (University of Hawaii at Manoa)

Presenter: Prof. VARNER, Gary (University of Hawaii at Manoa)

Session Classification: DAQ 2