Contribution ID: **38** Type: **Oral Presentation**

Commissioning and operation of the upgraded Belle II DAQ system with PCI-express-based high-speed readout

Monday 1 August 2022 13:40 (20 minutes)

The Belle II experiment and SuperKEKB collider is designed to operate under a higher luminosity compared to that of Belle for the improvement on rare B meson decay study and new physics search. A new PCI-express-based high-speed readout board (PCIe40) is adopted for the upgrade of DAQ system in order to break the bottleneck of bandwidth and to improve the stability in operation. The new system including PCIe40 firmware, slow control and readout software has been validated. Readout upgrade is complete for the particle-identification detectors and the neutral kaon and muon detector in Belle II, and the global DAQ has been operating stably with the new system. The commissioning of new PCIe40 system with sub-detectors, and the performance of global DAQ operation will be reported.

Minioral

Yes

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Session Classification: DAQ System & Trigger - I

Track Classification: Data Acquisition System Architectures