



Contribution ID: 33

Type: **not specified**

## OR33 - Operations of cryogenic systems of SuperKEKB final focusing superconducting system

*Tuesday, 12 September 2023 11:30 (30 minutes)*

“SuperKEKB is an accelerator to collide electron and positron particles with a nano-beam collision scheme and is equipped with two cryostats to accommodate 55 superconducting magnets for final focusing. Each cryostat is cooled by an independent cryogenic system employing a refrigerator of 250 W at 4.41 K and a subcooler to supply subcooled liquid helium (LHe). The cryogenic systems are monitored and controlled by a dedicated program for all operation modes: cooldown, steady state, warm-up and emergency (or fault mode) responses, under unattended conditions. In this study, we will present the system monitoring and response strategies for some alarms and failures with actual examples, from which we learned quite a few lessons. As important subsystems of the SuperKEKB

accelerator, the two cryogenic systems have run for about 28 000 hours and experiences of operation and maintenance will be introduced in this presentation.”

**Presenter:** ZONG, Zhanguo (KEK)

**Session Classification:** System Monitoring and Alarm Response