Contribution ID: **39** Type: **Poster**

C2Po1B-06: Introduction to the protection system for RAON cryogenic system

Tuesday 20 May 2025 09:15 (1h 45m)

The cryogenic system for accelerator complex for ON-line experiments (RAON), is designed to maintain extremely low temperatures to support superconducting equipment, such as superconducting linear accelerators and low-temperature superconducting magnets. Proper operation of this system is essential for ensuring high efficiency, stability, and safety in the experimental processes. A robust protection system is crucial to safeguard the cryogenic equipment and infrastructure from potential failures or hazards. By integrating advanced monitoring, control, and emergency management technologies, it ensures the smooth functioning of RAON's sophisticated experimental setup while mitigating risks associated with cryogenic operations. This paper introduces the structure of the cryogenic system's protection system and discusses improvements made to the system, as well as insights into designing effective protection logic.

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Session Classification: C2Po1B - Large Scale Cryogenic Systems III: Operation & Design III