

Second cool-down result of SCL3 cryogenic plant for Korean heavy ion accelerator, RAON

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Korean heavy ion accelerator (RAON) consists of two superconducting linear accelerators of which names are SCL3 and SCL2, respectively. We finished the first cool-down and the first beam commissioning of whole SCL3 section in 2023. In 2024, we conducted second cool-down of the SCL3. We successfully finished the second cool-down from ambient temperature to 4.5 K and 2.05 K for whole SCL3 section. At this time, we was able to reduce total cooling time based on our experience during the first cool-down. In this paper, our cool-down result and cool-down strategy to reduce the cooling time would be introduced in terms of cryogenic plant's view. Also, several lesson learns and occurred issues on the cryogenic plant during preparation of the second cool-down and in the middle of the second cool-down would be discussed.

Submitters Country

South Korea

Author: YOO, Junghyun (Institute for Basic Science)

Co-authors: Mr SHIN, Jae Hee (Institute for Basic Science); Dr JO, Hyun Chul (Institute for Basic Science); Dr PARK, Inmyung (Institute for Basic Science); Dr LEE, Min Ki (Institute for Basic Science); Dr KIM, Seojeong (Institute for Basic Science)

Presenter: YOO, Junghyun (Institute for Basic Science)

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