



Contribution ID: 242

Type: **Poster Presentation**

## Preliminary Design of Helium Refrigeration System for RAON

*Tuesday, 30 June 2015 09:00 (2 hours)*

A large-scale helium refrigeration system is under designing by Rare Isotope Science Project for a new superconducting Linac, RAON. Heat loads of cryogenic components including cryomodules for superconducting, LTS magnets for IF (In-flight) Separator, and helium distribution system are predicted. The coldbox will supply 4.5 K supercritical helium and 40 K gas helium to each cryomodule through the distribution system. The cavities will be cooled at sub-atmospheric temperature, 2.1 K which is generated by recuperating systems in each cryomodule. 40 K helium is also used for the cooling of HTS magnets which will be installed at the front section. This paper presents current status of the helium refrigeration system for RAON.

**Primary author:** Dr CHOI, Chul Jin (Institute for Basic Science)

**Co-authors:** Dr JEON, Dong-O (Institute for Basic Science); Dr JANG, Hyun Man (Institute for Basic Science); Mr SHIN, Jaehee (Institute for Basic Science); LEE, Ki Woong (Institution for Basic Science); YOON, Sungwoon (Institute for basic science); KIM, Youngkwon (IBS/RISP)

**Presenter:** YOON, Sungwoon (Institute for basic science)

**Session Classification:** C2PoA - Cryogenic Systems I

**Track Classification:** CEC-02 - Large-Scale Systems, Facilities, and Testing