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## **C1Or3B-01: LCLS-II Helium Refrigeration System: A comprehensive overview of the project**

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SLAC National Accelerator Laboratory has upgraded to LCLS-II, featuring a 4 GeV superconducting accelerator composed of 37 cryomodules and two large helium refrigeration systems with a cooling capacity of 4 kW at 2.0 K. The cryogenic system at SLAC is the successful outcome of a seven-year partnership between SLAC, FERMI Lab, and Jefferson Lab. This paper highlights the joint efforts between Jefferson Lab and SLAC in the development and implementation of the LCLS-II Cryogenic Plants. While Jefferson Lab led the design and procurement of critical components, SLAC was responsible for the infrastructure, integration, installation, controls, and commissioning. The paper documents the project organization, key milestones achieved, and key lessons learned throughout the process.

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