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C2Po3B-01: CRMF Cryogenic System Overview

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The SLAC National Accelerator Laboratory is currently in the design phase for the Cryomodule Repair and Maintenance Facility (CRMF), a new facility scheduled for commissioning in 2028. CRMF will feature a Superconducting Cryomodule Test Bench capable of testing LCLSII cryomodules, with provisions for a future addition of single cavity Vertical Test Stands. The cryogenic infrastructure will provide a cooling capacity of 250 W at 2.0 K for a minimum of 8 hours, enabling comprehensive performance testing of cryomodules. The system will include a stationary dewar, low-pressure helium pumps, and a helium distribution and recovery system, along with all necessary utilities. This paper presents an overview and detailed description of the cryogenic system and the cryomodule test bench at CRMF.

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