

SLAC Cryoplant Comparison: Evaluating Performance of Identical Systems

Wednesday 24 July 2024 14:00 (2 hours)

SLAC commissioned a continuous-wave superconducting linear accelerator (CW SCRF Linac) in 2023 to support its new Linac Coherent Light Source (LCLS-II). To refrigerate the Linac, SLAC has installed two helium cryoplants, each boasting a cooling capacity of 4 kW at 2.0 K. By 2023, SLAC completed the commissioning of both cryoplants. One cryoplant is currently supporting LCLS-II, while the other is set to be connected to the future upgrade, LCLS-II HE. In this paper, we present a detailed performance comparison of the two identical cryoplants, focusing on the warm compressor and 4.5 K cold box systems.

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Session Classification: Wed-Po-2.5

Track Classification: Tracks ICEC 29 Geneva 2024: ICEC 01: Large scale refrigeration and liquefaction