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C2Or4A-03: New Helium Refrigerator for Institute of High Energy Physics

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Institute of High Energy Physics (IHEP) and Air Liquide Cryogenic China Science (ALCCS) have started a new Helium refrigeration plant to provide 1kW of cold power at 4.5K to cool-down the superconducting cavity to accelerate electrons. The cold box delivering this power was manufactured by ALCCS in China and connected to a KAESER compressor. The Helium expanders manufactured by Air Liquide Advanced Technologies (France) are based on the static gas bearing technologies. This paper presents the performance results of this new refrigerator in the context of the global cryogenic systems of the Institute of High Energy Physics.

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