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## C1Po2D-01: Cryogenic infrastructure upgrade for crab cavities validation at TRIUMF

*Monday 10 July 2023 14:00 (2 hours)*

The High Luminosity (HL-LHC) upgrade of the Large Hadron Collider at CERN is an example of large-scale international scientific cooperation which spans multiple international partners. Canada through TRIUMF is making an in-kind contribution to the project with the delivery of 5 crab cavity cryomodules. The cryomodules will be delivered to CERN by 2026 for installation in the LHC. TRIUMF will receive the RF dipole (RFD) crab cavities from a consortium of US labs. In preparation for the assembly of the cryomodules TRIUMF has undergone a number of upgrades. Chief among these is the preparation and commissioning of a new cryogenic insert for the TRIUMF multi-purpose cryostat to allow testing of the jacketed cavities at 2K. The insert consists of a heat exchanger and JT expansion valve. The 2K pumping power has been augmented from 20W to 40W with the addition of a booster sub-atmospheric pump. The details of the upgrade and results from commissioning will be reported .

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