



Initial conditioning of the 1.5 GHz prototype couplers for VSR demo

Monday 22 September 2025 14:30 (3 hours)

Two Prototype 1.5 GHz fundamental power couplers for the VSR (Variable pulse length Storage Ring) DEMO project at Helmholtz Zentrum Berlin (HZB), were produced by Research Instruments (RI) and Thales, with the aim to reach 16 KW CW. To allow for conditioning of the couplers in cold a dedicated coupler test stand was designed, installed and commissioned, creating a testing environment that mimics the module conditions. The couplers were initially delivered in March 2023 after substantial reworking, however due to leak tightness issues further reworking was required and were finally installed on the dedicated test stand in June 2024. Such significant levels of rework dictated the more cautious testing plan detailed in this paper. After a 120C baking, an initial short run of conditioning was performed August 2024, followed by a longer conditioning run in May of 2025. Here, we will present the first conditioning results for the VSR Demo prototype fundamental power couplers.

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Yes

Footnotes

Funding Agency

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Session Classification: Monday Poster Session

Track Classification: MC4: SRF Technologies