



Contribution ID: 1245 Contribution code: WEPA133

Type: **Poster Presentation**

Test stand for conditioning high power tetrodes at TRIUMF

Wednesday, 10 May 2023 16:30 (2 hours)

A major part of the 520 MeV Cyclotron's RF system is the high-power RF amplifier. The amplifier is based on eight 4CW250,000B tetrodes. A new high-power tetrode or a high-power tetrode that underwent refurbishing could trip the RF system through inner sparks. The likelihood of those sparks should be reduced prior to applying nominal power to the new and refurbished tetrodes. This could be achieved by RF conditioning of these tetrodes on a test stand. The test stand represents a 150 kW RF amplifier loaded by a dummy load. The amplifier is built using common grid schematics. The test stand's output stage incorporates the 4CW250,000B tetrode that is under test. This paper describes the mechanical and electrical designs of the test stand, procedures of testing and conditioning for 4CW250,000B tetrodes, and the results of test stand's commissioning.

Funding Agency

National Research Council of Canada

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary author: AVRELINE, Nikolai (TRIUMF)

Co-authors: GREGOIRE, Devon (TRIUMF); PILETSKIY, Konstantin (TRIUMF); ZVYAGINTSEV, Vladimir (TRIUMF)

Presenter: AVRELINE, Nikolai (TRIUMF)

Session Classification: Wednesday Poster Session

Track Classification: MC7: Accelerator Technology and Sustainability: MC7.T06: Room Temperature RF