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Conditioning of rod-style RFQ in support of LANSCE front-end upgrade

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The Los Alamos Neutron Science Center (LANSCE) front-end injection scheme requires an upgrade to a Radio-Frequency Quadrupole (RFQ) in order to replace the obsolete Cockroft-Waltons used in present operation. A test stand using a rod-style RFQ is under development in support of this upgrade, and conditioning of the RFQ to the expected peak and average power levels was completed to ensure its feasibility. The RFQ conditioning also revealed thermal issues with the RF power coupler and issues in managing the power reflected from the RFQ. These issues and their mitigation will be discussed in light of the capability of the test stand, and future plans will also be discussed.

Footnotes

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Primary author: HALL, Wesley (Los Alamos National Laboratory)

Co-authors: LYLES, John (Los Alamos National Laboratory); SANCHEZ BARRUETA, Maria (Los Alamos

National Laboratory); THORNTON, Remington (Los Alamos National Laboratory)

Presenter: HALL, Wesley (Los Alamos National Laboratory)

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