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LANSCCE Klystron Replacement

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The Los Alamos Neutron Science Center (LANSCCE) recently completed major upgrades to its RF systems. The focus of the project was to return LANSCCE to its historical operating capability and sustain facility operations for the next several decades. The LANSCCE accelerator provides pulsed protons and spallation neutrons for defense and civilian applications. This project involved replacing all the existing 201 MHz RF stations, the low level RF controls, selected electronics chassis and all 805 MHz klystrons. The paper will focus on the klystron replacement. LANSCCE was historically supported by two types of 1.25 MW peak power klystrons operating at 805 MHz. Designed and delivered in the early 70s, the reliability of the LANSCCE klystrons has been amazing. We are still operating some of the klystrons that were purchased over 40 years ago. This paper will discuss how the basis for our new purchases preserved the demonstrated reliability of the existing design. It will share the measured performance and consistency of the 45 new klystrons and present the current experience with these new klystrons.

Summary

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