

# Engineering design of 402 MHz normal conducting coaxial window

*Tuesday 27 August 2024 16:00 (2 hours)*

RadiaBeam is fabricating a novel RF vacuum window for use with the Spallation Neutron Source (SNS) at Oak Ridge National Laboratory (ORNL). The window features a coaxial ceramic window between two waveguides, brazed as a single assembly. Unlike traditional pillbox window designs, this approach allows the outer diameter of the ceramic to decrease and the added benefit of water cooling the inner diameter of the ceramic. This paper covers the engineering design including details of key features, the impact of the unique RF design on manufacturability, and mechanical simulations. A status update on the fabrication is also provided with emphasis on the ceramic TiN coating and brazing process.

## Footnotes

## Funding Agency

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