Old Dominion University
Department of Physics
Colloquium

Tuesday, January 23, 2024

"High Performance SRF Technology: Current Understanding and Future Direction"

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Abstract:
SRF cavities based on bulk niobium are the building blocks of modern particle accelerators and the use of superconducting microwave resonators delivers superior performance due to their high-quality factor and therefore longer decay time of the stored energy. Turn-key and conduction-cooled accelerators based on higher temperature superconductors Nb_3Sn are being considered for industrial applications. Recent advances in the cavity processing technique of surface preparation with impurity alloying led to exceptionally high-quality factors resulting in very low rf power dissipation on cavity walls. In the presentation, I will review the R&D towards high performance SRF cavities with material and process optimization at Jefferson Lab.

Presentation: OCNPS 200 @ 3:00 pm
Refreshments: OCNPS Atrium @ 2:30 pm

All interested persons are cordially invited to attend.