The Beams and Applications Seminar Series

Surface Impedence of Superconducting Radio Frequency Materials

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Bldg. 401, Room B-4100
Tuesday Oct 25, 2:00 pm

Host: Ali Nassiri

Abstract:

Superconducting radio frequency (SRF) technology has been widely and increasingly adopted for use in particle accelerators. The RF surface impedance of superconductors, especially its real part, the RF surface resistance R_s, is of great importance for the performance of SRF cavities. In this seminar, the origin of surface impedance will be discussed, and a surface impedance characterization (SIC) system that can accurately measure the SRF properties of small flat samples in a range of 2~40 K temperature and with surface resistances down to the BCS limit will be presented. At the end, results on BCP etched polycrystalline/large grain niobium and thin film niobium samples will be reported.

For more information visit

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Visitors from off-site please contact Carmen Nolasco (mnolasco@aps.anl.gov, 630-252-6159) to arrange for a gate pass.