



PHYSICS AND ASTRONOMY 601396 Tf - 1

COLLOQUIUM

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“Non-linear physics opportunity in superconducting RF cavities”

Abstract

Superconducting Radio Frequency (SRF) is one of the core technologies of the 21st century and has several interesting applications. Especially, an application for accelerator is very unique because of requirement for a very high field. This colloquium starts from a general review of the history of superconductivity and BCS theory. Although this was one of the biggest challenges in the 20th century, its theory in equilibrium states was finally well understood. SRF physics requires to extend the theory to non-equilibrium response against a very strong (even comparable to the critical field) oscillating magnetic field. The Web site is <http://www.cern.ch/accelerator/te3196TfE00>