



Losses in superconducting Niobium Films caused by Interface Tunnel Exchange

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(Submitted on 10 Apr 2012 (v1), last revised 26 Jun 2012 (this version, v2))

Identifying the loss mechanisms of niobium film cavities enables an accurate determination of applications for future accelerator projects and points to research topics required to mitigate their limitations. Measurements on samples show that the electric field is a dominant loss mechanism for niobium films, acting through interface tunneling between localized states in surface oxides and delocalized states in the superconducting niobium.

Comments: 3 pages, 2 figures

Subjects: **Accelerator Physics (physics.acc-ph)**; Superconductivity (cond-mat.supr-con)

Cite as: **arXiv:1204.2166 [physics.acc-ph]**
(or **arXiv:1204.2166v2 [physics.acc-ph]** for this version)

Submission history

From: Tobias Junginger [view email]

[v1] Tue, 10 Apr 2012 14:31:20 GMT (170kb)

[v2] Tue, 26 Jun 2012 12:55:51 GMT (148kb)

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