

# *Pushing the Limits of RF Superconductivity Workshop*

## Abstract Submission Form for Contributed Talks

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**Affiliation:** Cornell University

**Session:** (choose one)

Ultimate Field Limits, New Materials, New Geometries

High Q, Field Emission, Q-Slopes

Future Research Paths to Ultimate Performance

### **ABSTRACT:**

**Title:** Q-Slope and Related Surface Analysis Results from Cornell

H. Padamsee for Grigori Ereemeev, Ivan Bazarov, John Kaufman, Jerry Shipman and Mathias Liepe

I will summarize recent high field Q-slope results on single cell 1.3 GHz cavities prepared by various methods including BCP + baking at various temperatures between 100 C and 150 C, BCP plus systematic anodization to various depths, EP plus anodization to various depths. Related surface analysis include Auger depth profiles for oxygen and SIMS depth profiles for NbO on Nb samples prepared by similar range of treatments. I will try to interpret these results in terms of oxygen pollution under the oxide layer and oxide breakup.

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