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MICROWAVE PROPERTIES OF SUPERCONDUCTORS (FOCUSED SESSION)

Chairman: Clifford M. Krowne—Naval Research Laboratory

Session Abstract: Characterizing high-T_c superconductors in terms of microwave properties is rapidly becoming of interest, as this session demonstrates. Cavity, disk resonator, striplines, dielectric rod, and other methods are currently being employed to determine microwave properties, especially surface impedance, critical power level, and magnetic field behavior. Frequencies examined range from a few hundred MHz to a few hundred GHz. High-T_c materials considered include YBaCuO, BiSrCaCuO, and ThBaSrCuO grown on various substrates such as MgO, $SrTiO_3$, $LaGaO_3$, and $LaAlO_3$. Although most measurements on bulk materials show surface impedance values only comparable or worse than that of Cu, recent epitaxially grown thin films exhibit much lower values suggesting that microwave applications may become feasible in the near future.

8:30 a.m.–10:00 a.m., Wednesday, June 14, 1989
California Room