

MAR11-2010-001888

Abstract for an Invited Paper
for the MAR11 Meeting of
the American Physical Society

Confirmation of BCS Theory and Its Impact on Applications Past and Future

MALCOLM BEASLEY, Stanford University

The experimental confirmation of BCS theory established it as the correct microscopic theory of superconductivity. It also led to applications of superconductivity distinct from those based on the Josephson effect and the magnetic properties of superconductors. The most prominent of these are SIS mixers for astronomy and high-Q filters for the cellular phone industry. In this talk we trace these historical developments and consider where today's more novel (beyond simple BCS) superconductors might be useful looking forward.