

# SUPERCONDUCTIVITY WS 15-16

Monday 10:00-11:30

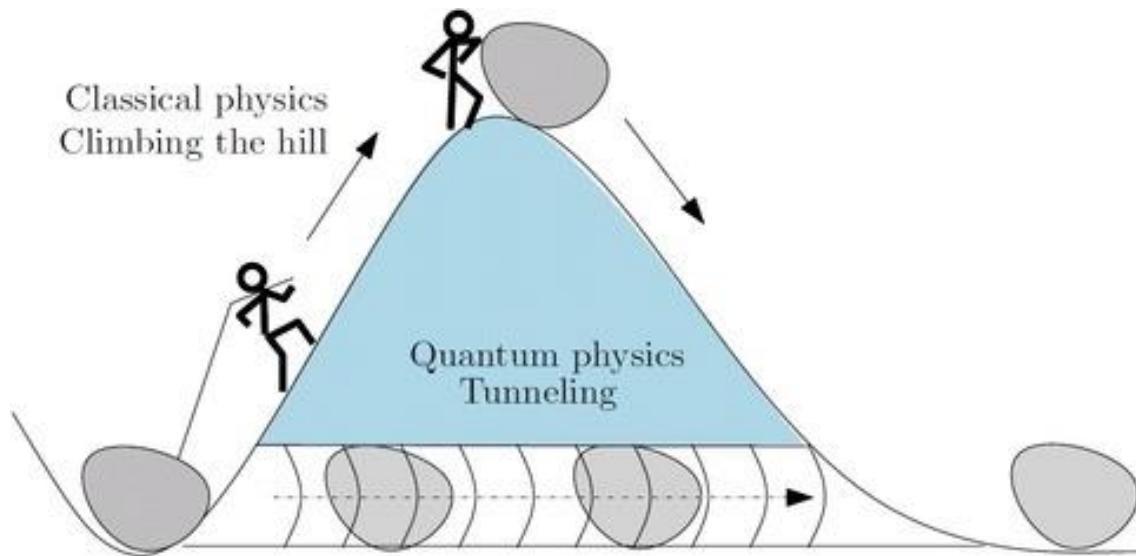
SR Exp. physics II

Prof. Paul H.M. van Loosdrecht

[pvl@ph2.uni-koeln.de](mailto:pvl@ph2.uni-koeln.de)

[www.loosdrecht.net](http://www.loosdrecht.net)

# Quantum Tunneling



[Prakyat Prasad](#)

# Quantum Tunneling

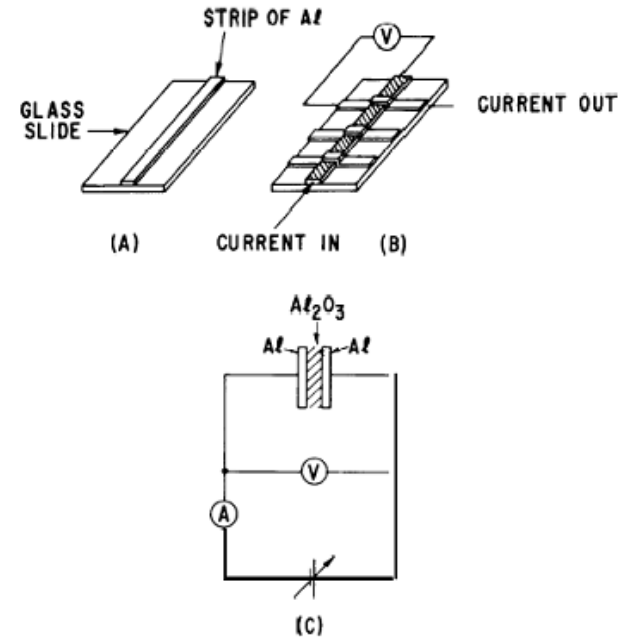
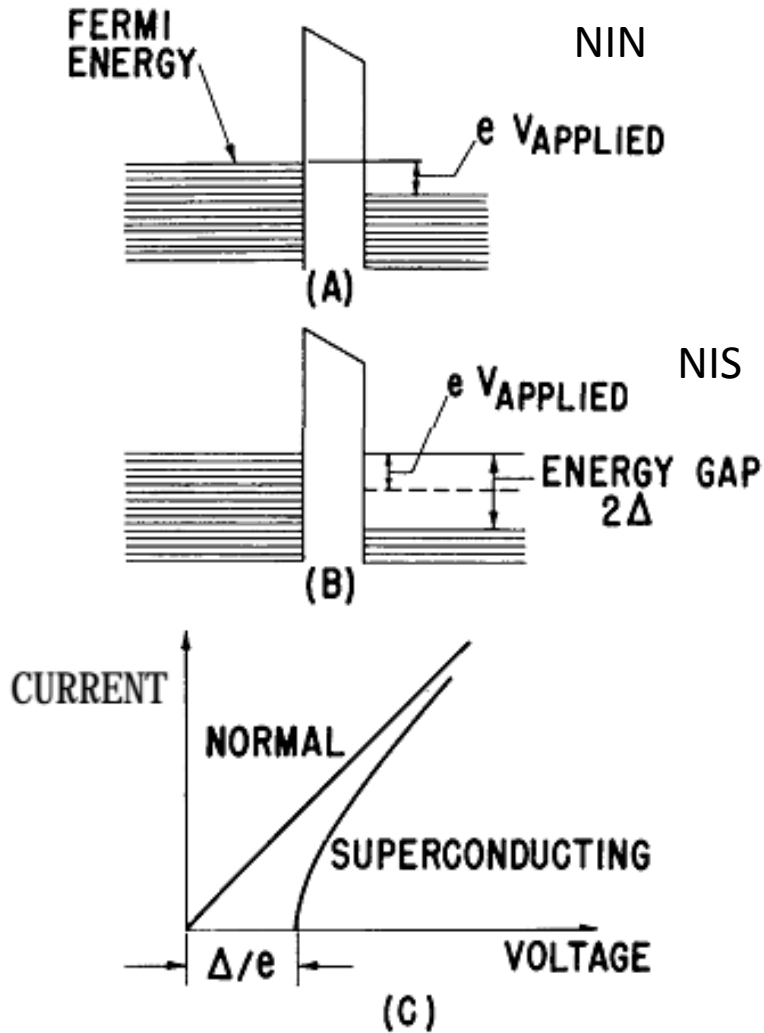


Fig. 3.

# Quantum Tunneling

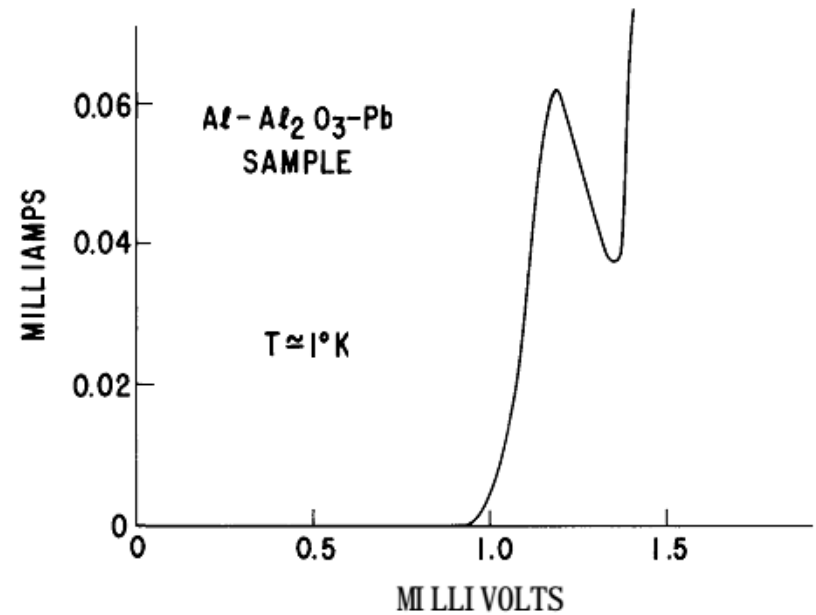
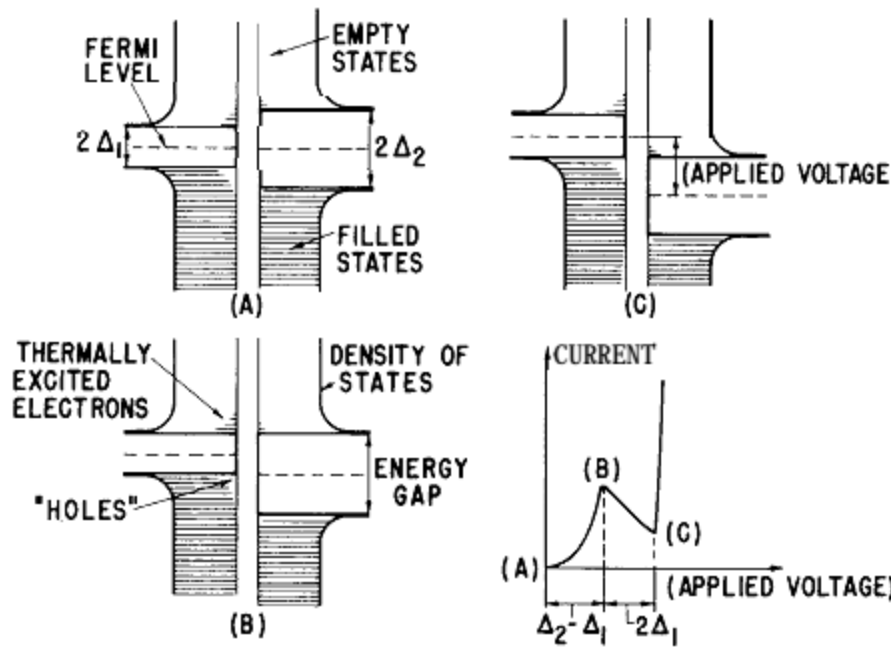
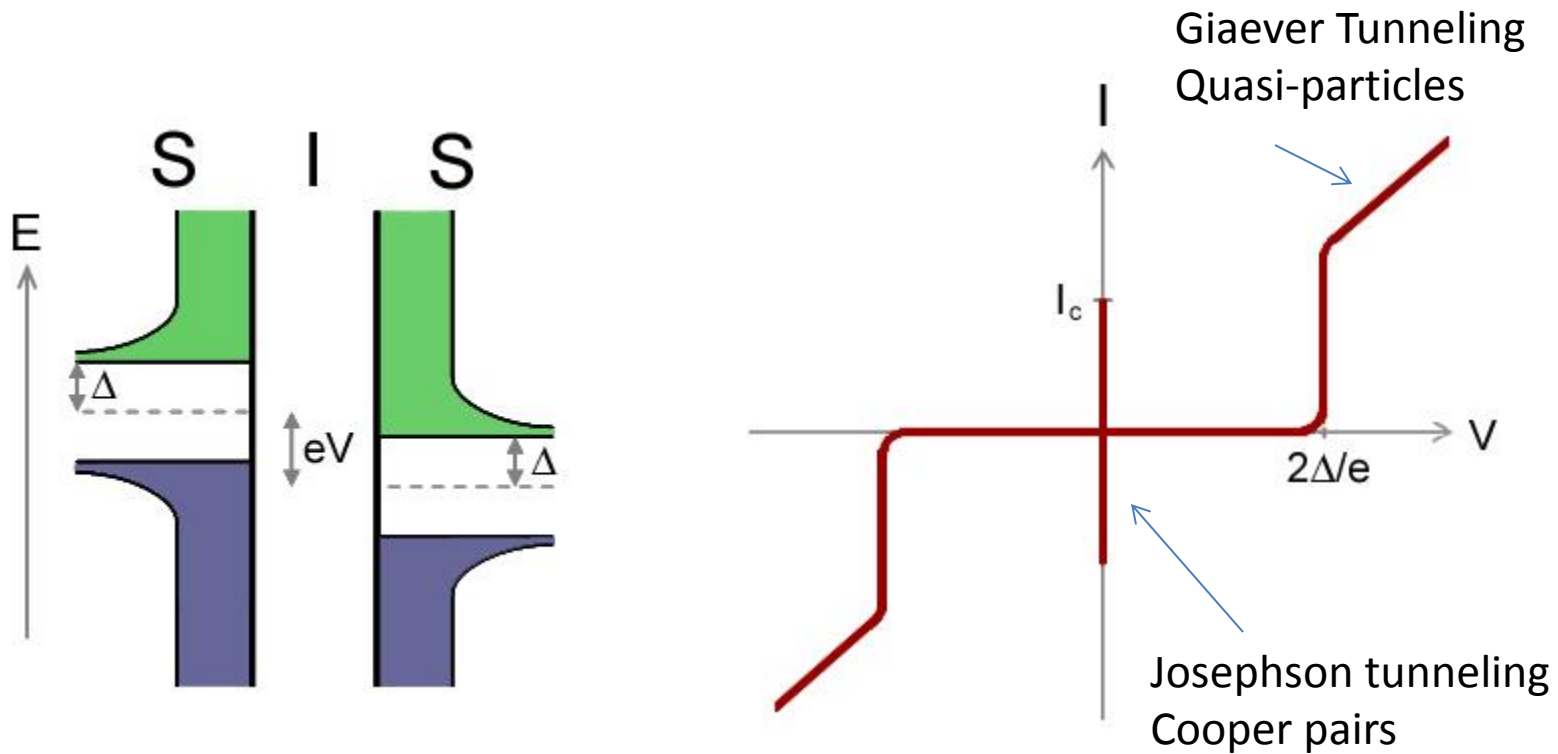


Fig. 11. A negative resistance characteristic obtained experimentally in tunneling between two different superconductors.

# Influence of the phase: Josephson tunneling



## PROBABLE OBSERVATION OF THE JOSEPHSON SUPERCONDUCTING TUNNELING EFFECT

P. W. Anderson and J. M. Rowell  
Bell Telephone Laboratories, Murray Hill, New Jersey  
(Received 11 January 1963)

Josephson  
tunneling current  
up to critical current

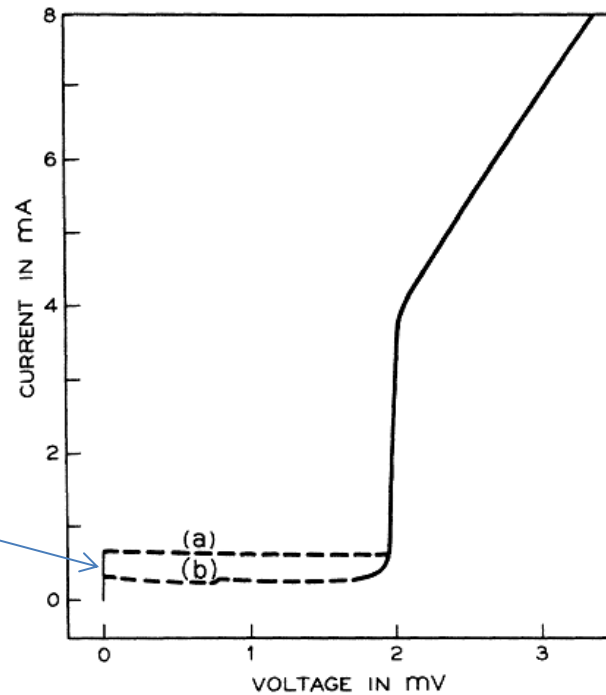


FIG. 1. Current-voltage characteristic for a tin-lead tunnel structure at  $\sim 1.5^\circ\text{K}$ , (a) for a field of  $6 \times 10^{-3}$  gauss and (b) for a field 0.4 gauss.

# THz emission from BSCCO mesa's

