



PAUL SCHERRER INSTITUT

Invitation

LMU-Seminar

Title: ARPES measurements in the presence of electrical current
Speaker: Mr. Muntaser Naamneh (Technion – Israel Institute of Technology)

Time: Thursday, September 10th 2015, 14:00

Place: WHGA/121

Abstract:

The ability of superconductors to carry current with zero resistance is limited by the depinning critical current, above which the sample enters to the flux flow state. Here we report for the first time the evolution of the electronic structure of Bi2212 in the flux flow state using Angle Resolved Photoemission. We find that the flux flows across narrow channels dividing the sample into several superconducting zones. In each zone, a quasi particle and quasi hole pocket is generated in the electronic spectrum, with a size governed by the current vector in agreement with the predications of theories.