b and c semileptonic decays in OPAL

Pauline Gagnon

CERN and CRPP
OPAL Collaboration

May 15, 1998

Abstract

For several years, experimental results for BR(b $\rightarrow \ell$) obtained near the Υ(4S) and Z^0 resonance have disagreed at a few sigma level. A new OPAL result for BR(b $\rightarrow \ell$) based on the full data sample collected near the Z^0 resonance will be presented. The result is extracted using muon momentum and jet shape information in b-tagged events. The inclusive charm hadron semileptonic branching ratio is measured in a charm enriched sample of hadronic Z^0 decays. These new analysis methods used by OPAL to extract (b $\rightarrow \ell$) and (c $\rightarrow \ell$) will be discussed in more details. The OPAL results will be compared to those from other experiments at LEP and at lower centre-of-mass energy, and to theoretical predictions.