Abstract #125
Parallel sessions: 7
Plenary sessions: 6,15

Measurement of A_c with reconstructed D^{*+} and D^+ mesons

The SLD Collaboration

We present a measurement of the parity-violating parameter A_c in $e^+e^- \to Z^0 \to c\bar{c}$ events with the SLD detector at the SLC. We use 50,000 Z^0's produced with a mean electron-beam polarization of $|P_e| = 63\%$ and 150,000 Z^0's produced with $|P_e| = 77\%$. In this measurement, charm quarks are tagged by exclusively reconstructed D^{*+} and D^+ mesons. For identification of the D^{*+} and D^+ mesons, we use the decay $D^{*+} \to D^0\pi_s^+$, where D^0 decays via $D^0 \to K^-\pi^+$, $D^0 \to K^-\pi^+\pi^0$, or $D^0 \to K^-\pi^+\pi^-\pi^+$, as well as $D^+ \to K^-\pi^+\pi^+$. Reconstruction of the D^{*+} and D^+ mesons is performed using both decay kinematics and decay vertex topology. The expected statistical precision for this measurement is $\delta A_c \sim \pm 0.08$.