New Results from

- $\mathcal{CP}$-Odd Observables:
  - OPAL — CERN-PPE/96-184
  - DELPHI — Prelim
- T,N Pol / Azimuthal Asymm's:
  - L3 — Prelim
  - SLD — Prelim

Optimal $\mathcal{CP}$-Odd Observables in
$e^+e^- \to \tau^+\tau^- \to A^+B^-\nu_\tau\bar{\nu}_\tau$ (h=e,μ, π, ρ,3$\pi^\pm$)

- $\langle \mathcal{O}^{\mathcal{T}^-} \rangle_{AB} = \dfrac{|\mathcal{M}^{Re}_{\mathcal{CP}}|^2}{|\mathcal{M}_{\mathrm{SM}}|^2} = \dfrac{m_Z}{e} c_{AB}\, Re(d^w_\tau)$
- $\langle \mathcal{O}^{\mathcal{T}^+} \rangle_{AB} = \dfrac{|\mathcal{M}^{Im}_{\mathcal{CP}}|^2}{|\mathcal{M}_{\mathrm{SM}}|^2} = \dfrac{m_Z}{e} f_{AB}\, Im(d^w_\tau)$
- Require Estimates of
  - τ-Flight Direction
    Reconstruct in 2-body decays to 2-fold Ambig
    Resolve Ambig with μVtx or Average
  - τ-Spin Direction
    $d\Gamma \propto (1 + \vec{h}(\vec{p}_\tau, \vec{p}_{had}, E_{had}) \cdot \vec{S})$
- Crucial to Test $\mathcal{CP}$ Symm. of Detector
  combine τs from diff evts with similar topol

T,N τ Polarization $e^+e^- \to \tau^+\tau^- \to h^+h^-\nu_\tau\bar{\nu}_\tau$ (h=π, ρ)

- a^w_τ d^w_τ from Φ-Asymm of h^- around τ^-
- Require Estimate of τ-Flight Direction

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