Si Studies

- GOAL: Final push to commission the low level optimization/reconstruction of the Si detector. Results documented in CDF note(s).

- Silicon experts have identified studies to be done and developed a plan to finish them by end of March 2002

- Si Studies Group: Gino Bolla, Auke-Pieter Colijn, Aaron Dominguez, Maurice Garcia-Sciveres, Doug Glenzinski, Matt Herndon, Chris Hill, Lester Miller, Jason Nielsen, David Stuart, Igor Volobouev, and others.

  Meets every Wed at 10am

  `http://www-cdf/internal/silicon/SiStudies`

Progress on The Plan

Put a Few Wedges in Special Configuration

- Verify peds & noise stable
  - History plots $\surd$
  - Compare d-mode, x-mode, collisions
  - Verify DPS calculation of chips $\surd$
  - vs BW $\surd$
  - vs BE state
  - X-Check bad channel DB with data, masks
  - Special treatment of L00 $\surd$
- Understand Q-Collection
  - vs BW $\surd$
  - Gain measurement (chg inj) $\surd$
  - n/p-side $\surd$
  - SAS, axial, 90-deg
  - Depletion voltage
  - Extract S/N $\surd$
- Measure occupancies
  - What are they? $\surd$
  - Are they stable, vary with Thresh as expected?

Progress on The Plan

- Measure efficiency & resolution
  - vs BW $\surd$
  - n/p-side $\surd$
  - SAS, axial, 90-deg

- X-Check geometry (ISL, L00) $\surd$

- Chip errors
  - Systematically catalog $\surd$
  - Recover as much as possible in offline
  - How does it affect tracking eff?

- Clustering
  - How does it effect eff, resolution, Q-collection? $\surd$
  - How important is sharing in inner layers?

Most studies require special runs, sometimes with collisions. Good news is that $\sim$all of these runs have been taken since Jan 2002.