Work Done at CDF During the March 15 Shutdown

- **CDF Crews**
  - Opened CDF detector and removed several wire planes from the COT.
  - Performed a variety of maintenance work on the detector.

- **AD Crews**
  - Worked on 12hz oscillations of low beta quad magnets.
  - Increased the tension in the horizontal invar bars on the A-side only.
  - Realigned low beta quad magnets in the horizontal plane:
    - A side once
    - B side twice
Low Beta Alignment Work

X Position

• Horizontal
  • A side Q3 and Q4 have offsets as large as 0.5mm

Y Position

• Vertical
  • Looks fine
More on Low Beta’s

- Mike McGee spent a substantial amount of time characterizing the 12hz oscillation seen in the CDF collision hall.
- Accelerometers mounted on the invar bars of the low beta quad cradle see this motion.
- Trucks driving by CDF on inner ring road exacerbate this problem.
- A side horizontal invar bars were tightened to increase their tension. Helped in building motion but not little impact on truck traffic.
CDF Beam Position

**X, Y Position**

**dX, dY Position**

X position moved by -1.2mm, Y moved by 0.4mm by design
Note stability of beam in periods w/o orbit smoothing
This is an example of one of many triggers which show a consistent XS before and after the shutdown.
We did not do any explicit work on this system.
We did not flush or change the gas.
We measured the phototube response after the shutdown and it looks very close to pre March 15\textsuperscript{th} numbers.
At this moment, we do not see a smoking gun at CDF wrt our measured luminosity

We are not 100% self consistent so we need to keep looking

We need to look at our reconstructed data. This is just now becoming available to us

We still have work to do....