INTT Weekly Meeting

Joseph Bertaux

Purdue University

May 8, 2025



Guessed to flip signs in alignment workflow

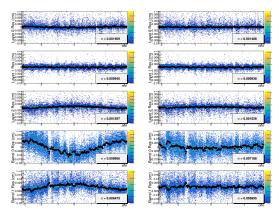


- Noticed a substantial alignment improvement with the past 2 days
- Guessed to exchange the signs of derivatives in alignment workflow
 - (residuals got worse iteration to iteration)
- Guess seems correct (see next slide)

Negating derivatives in MakeMilleFiles (cm)



- X residuals
 - Started with CDB alignment
 - Unfixed layers 3,4 (INTT inner barrel), grouped by layer, fixed z and angles



Corresponding physical shift



- Layer 3 correction is (mm)
 - $0.0073159 \ \hat{x} + 0.12292 \ \hat{y}$
- Layer 4 correction is (mm)
 - $0.00075841 \ \hat{x} + 0.063211 \ \hat{y}$
- \hat{y} correction is relatively large $\mathcal{O}(100\mu\mathrm{m})$
- Is this a reasonable relative shift for INTT with magnet on?
- I have checked the corrections for adjacent layers
 - none produce a dramatic change nor shift