Study of translations along z (w) straight/curved tracks (runs 5784+5772)

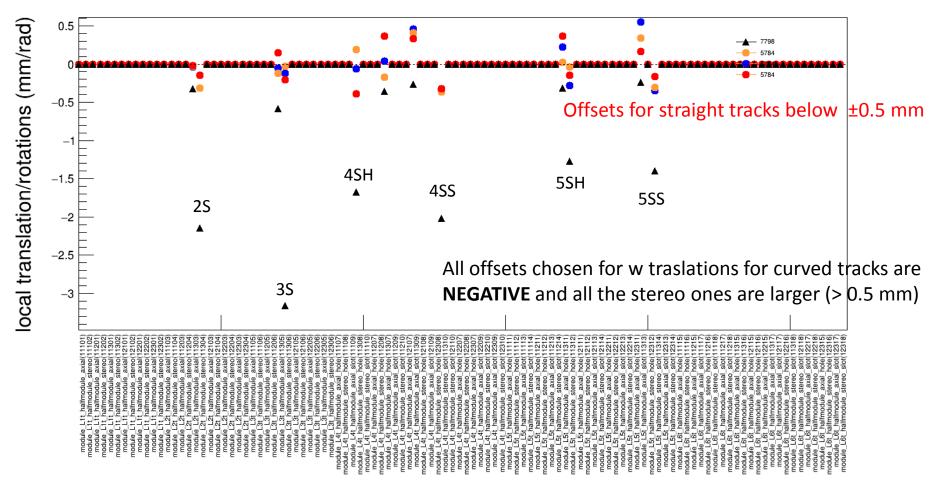
> Alessandra Filippi Oct 4, 2016

Test of w translations

- Leave all w traslations (axial+stereo sensors) floating for sensors 3-4-5
- Sensors 1-6 fixed
- Starting geometry:
 - Curved tracks: best geometry (4.4), u traslations already floated + tweaks
 - Straight tracks: several trials
 - W translations only starting from "plain" v1
 - W translations mixed with U translations, after U rotations as first step (all layers):
 - U rotations + U translations + W translations
 - U rotations + W translations + U translations
- In all cases the final results are good, difficult to choose the best one

Comparison of MP offsets: TOP

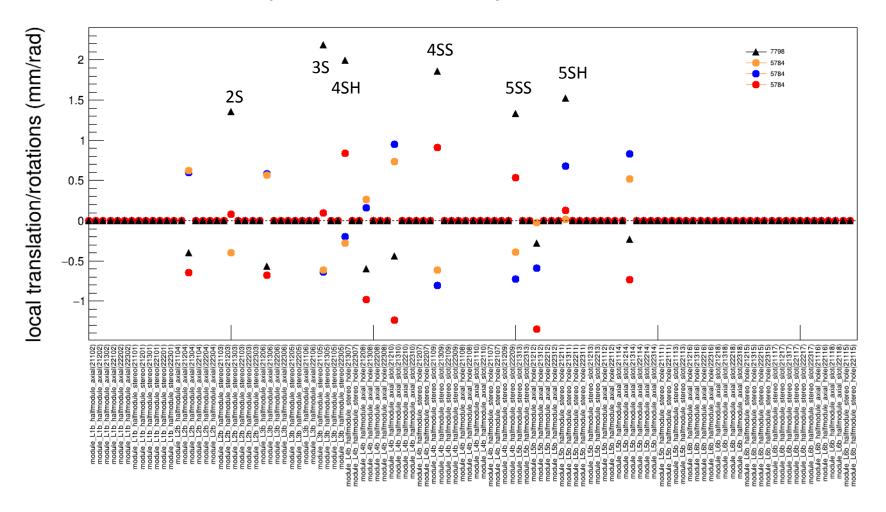
translations only Millepede corrections per sensor, top



• Comparison of geometries as MP outputs starting with the same floating degrees of freedom (all w translations for axial+stereo sensors)

Comparison of MP offsets: BOT

translations only Millepede corrections per sensor, bottom



w traslations for curved tracks: **negative offsets for axial sensors**, **positive for stereo** ones Larger offsets for stereo sensors, smaller as compared to top (<= 2mm)

z misalignments on MC data: work in progress

• Use MC data to check the effect on the residuals of a single sensor misplacement in z

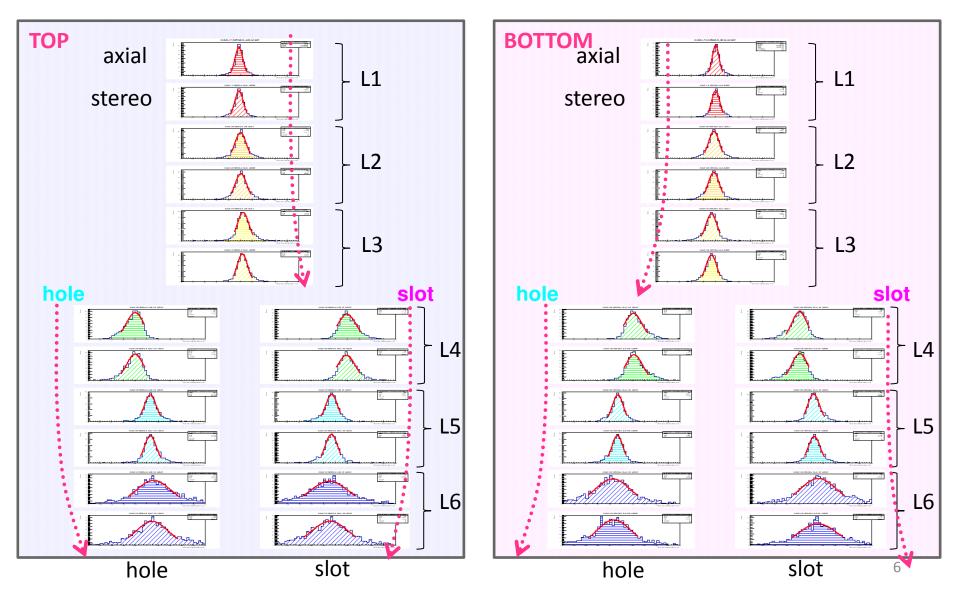
First study on straight tracks
Use 2.075 GeV and 1.05 GeV data

• Sensors 2-3-4-5, +1 mm offset in z

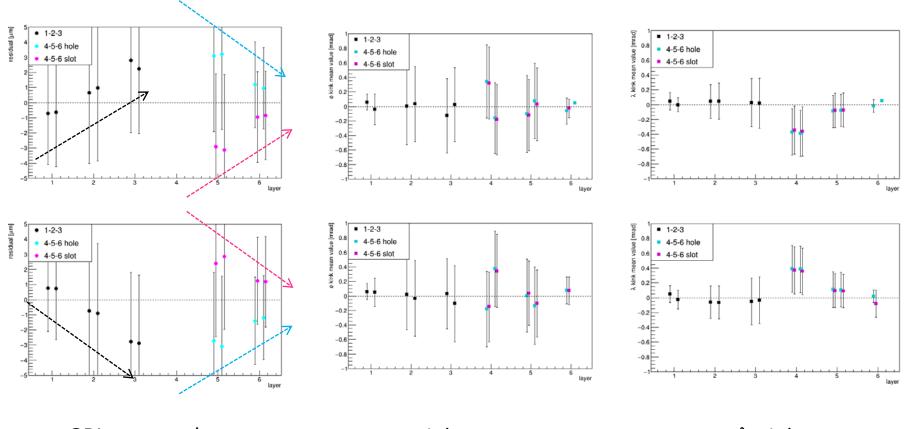
- First results for layer 4

Straight tracks, layer 4 z displacement +1mm, axial & stereo

The displacement has a drift effect on the central values of residual distributions for all layers



Straight tracks, layer 4 z displacement +1mm, axial & stereo



GBL mean values

 ϕ Kinks

 λ Kinks