Differences between odd/even channels

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Introduction

- Electronics calibration now consists of 3 separate stages
  - Normal calibration
  - Offline calibration to remove cross talk
  - Calibration to remove non-linearities at range changes
- Previous cross talk correction introduced gaps between the $\times 1 \times 4$ LUT
- Cross talk correction has been changed over the shutdown (James, Ivo). See if gap has been removed
Crate 7, backward barrel

- Right plots show the residual (1 fixed – auto) average over crate. Odd channels are shown in red.
- Gap of ~1.5 ADC between odd even channels still present
- Upper plot shows Residual vs Channel for fixed DAC range
Crate 3, forward barrel

- Difference between odd even channels removed
- Constant offset of 1 ADC
Crate 8, end cap

- No cross talk correction applied in the end cap
- Gap disappears
Conclusions

- New cross talk correction doesn’t seem to impact gap at $\times 1 \times 4$ range change.
- Correction only changed for $\times 4$. It’s possible the discrepancy occurs because of correction in $\times 1$ range.