

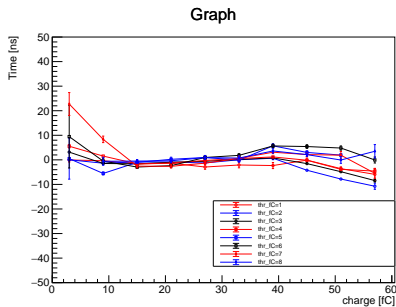
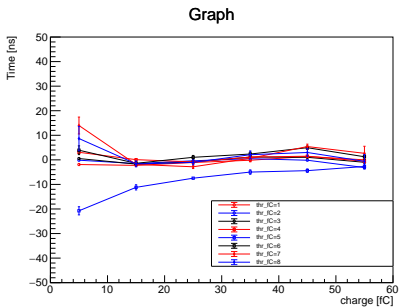
# Time Calibration Updates

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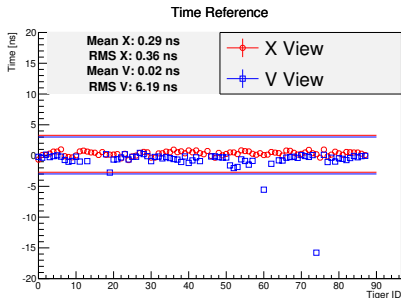
# Intro

- ▶ Our package CgemTimeCalibration allows us to calculate corrections iteratively
- ▶ Time walk had simple plots to monitor the quality and whether the corrections converge
- ▶ Created new summary plots for the time reference to check for convergence



Left is run 11-16, right is run 17

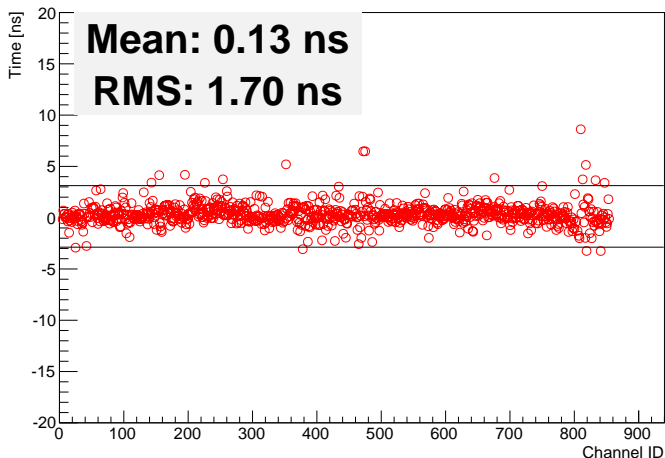
# Tiger Correction Final Iteration



$$\text{Tiger ID} = \text{GemROC} * 8 + \text{Tiger}$$

# Channel Correction Final Iteration

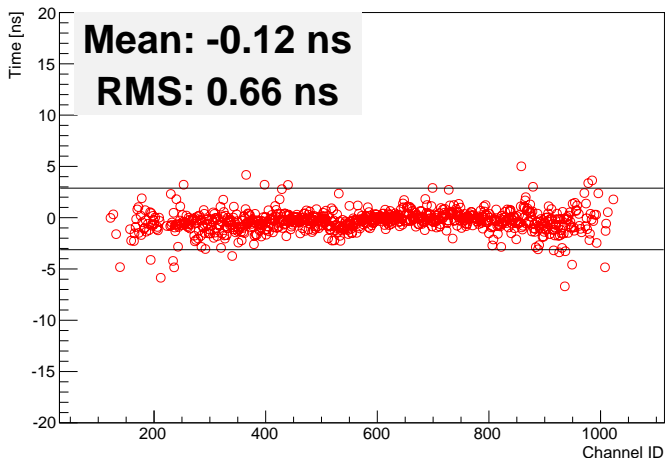
Time Reference Layer 0 Sheet 0 View 0



Tiger ID = GemROC\*8+Tiger

# Channel Correction Final Iteration

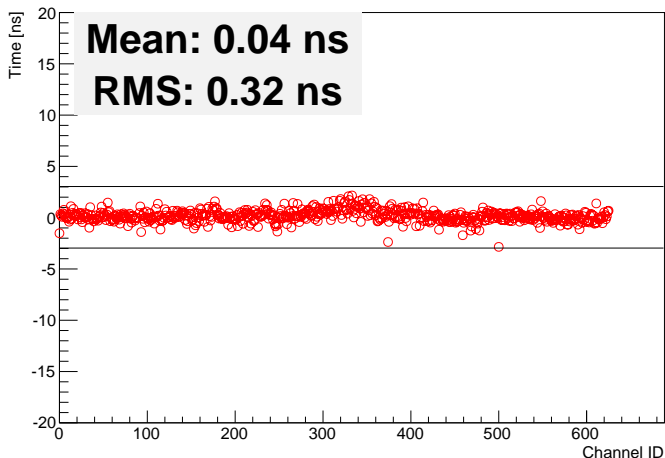
Time Reference Layer 0 Sheet 0 View 1



$$\text{Tiger ID} = \text{GemROC} * 8 + \text{Tiger}$$

# Channel Correction Final Iteration

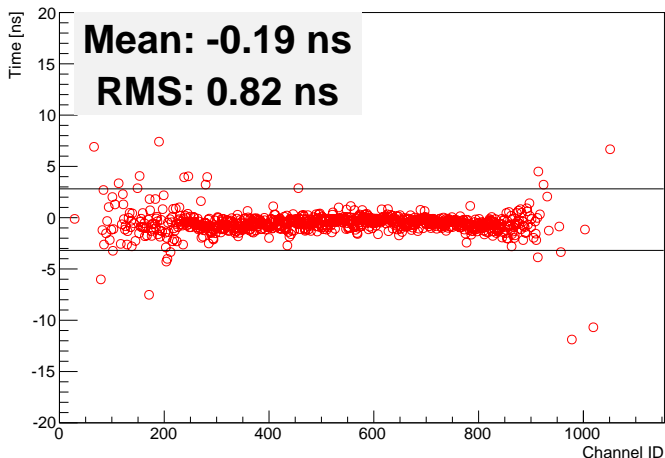
Time Reference Layer 1 Sheet 0 View 0



Tiger ID = GemROC\*8+Tiger

# Channel Correction Final Iteration

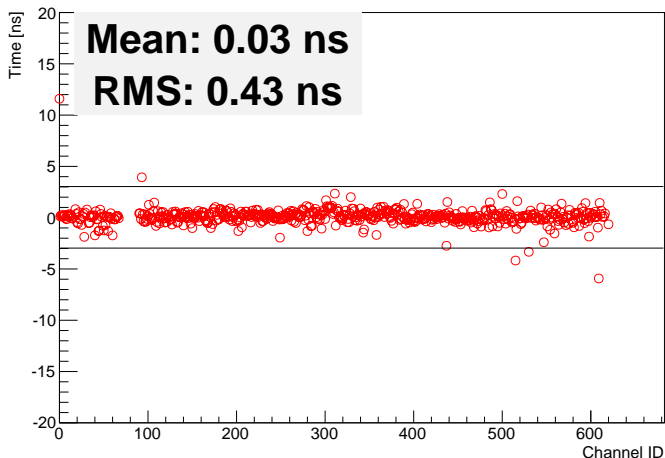
Time Reference Layer 1 Sheet 0 View 1



$$\text{Tiger ID} = \text{GemROC} * 8 + \text{Tiger}$$

# Channel Correction Final Iteration

Time Reference Layer 1 Sheet 1 View 0

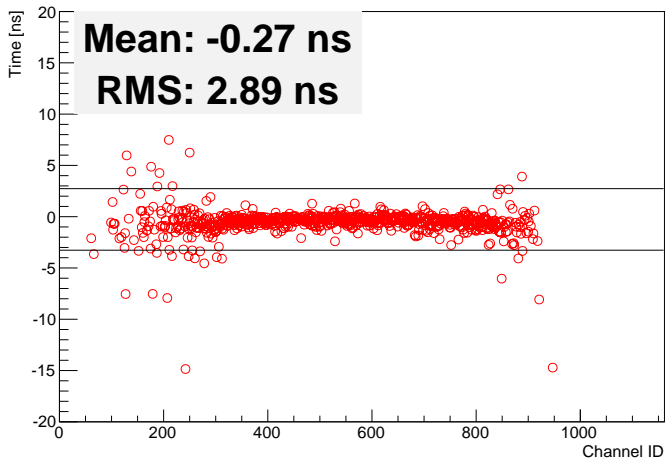


$$\text{Tiger ID} = \text{GemROC} * 8 + \text{Tiger}$$



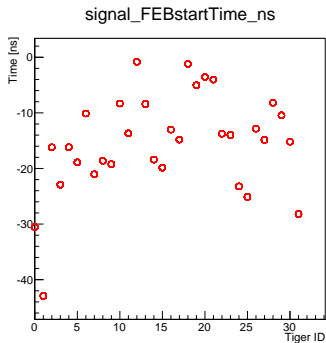
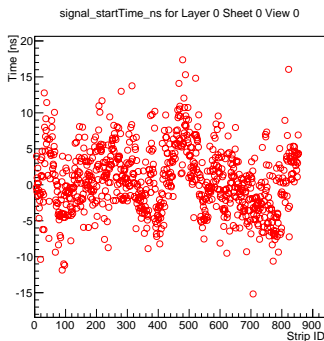
# Channel Correction Final Iteration

Time Reference Layer 1 Sheet 1 View 1



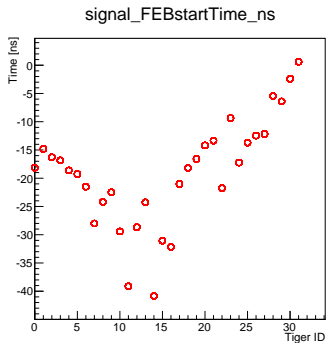
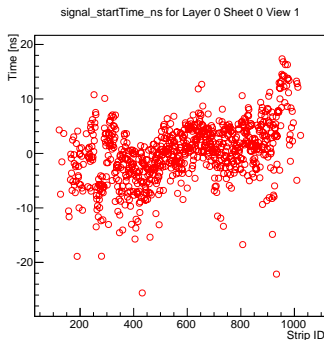
$$\text{Tiger ID} = \text{GemROC} * 8 + \text{Tiger}$$

# Total Correction by Channel



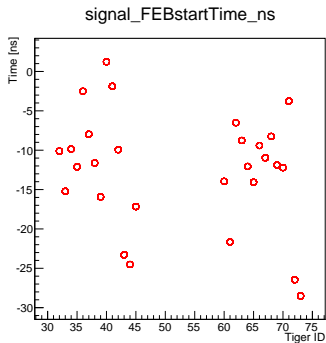
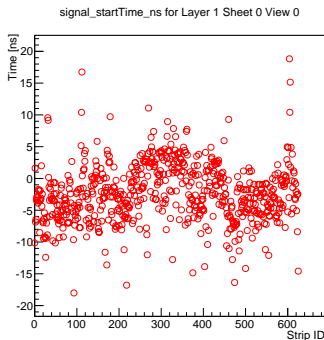
$$\text{Tiger ID} = \text{GemROC} * 8 + \text{Tiger}$$

# Total Correction by Channel



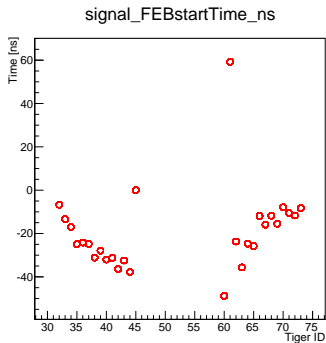
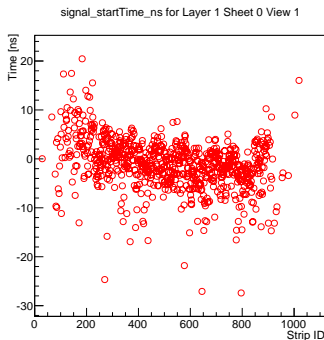
$$\text{Tiger ID} = \text{GemROC} * 8 + \text{Tiger}$$

# Total Correction by Channel



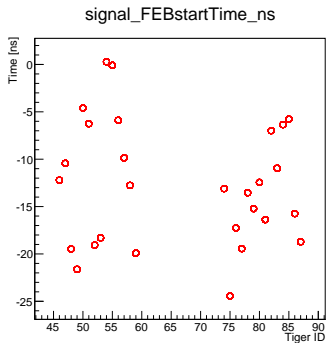
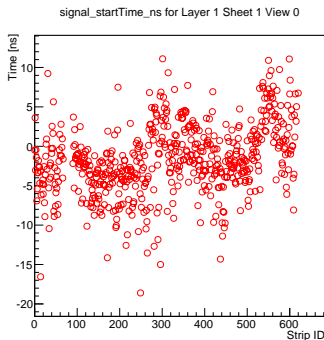
$$\text{Tiger ID} = \text{GemROC} * 8 + \text{Tiger}$$

# Total Correction by Channel



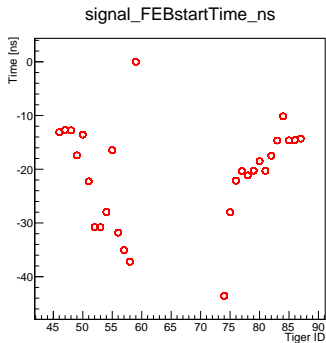
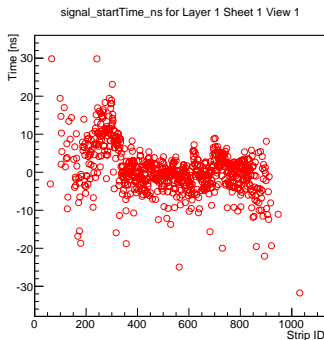
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# Summary

- ▶ New plots make it easier to see convergence
- ▶ Next steps
  - ▶ Perform corrections for run 17
  - ▶ Test run 11-16 corrections on run 17
  - ▶ Can updated propagation study after run 17 is calibrated