Comparison of TOF Reconstruction in Data Separated by 1 Year

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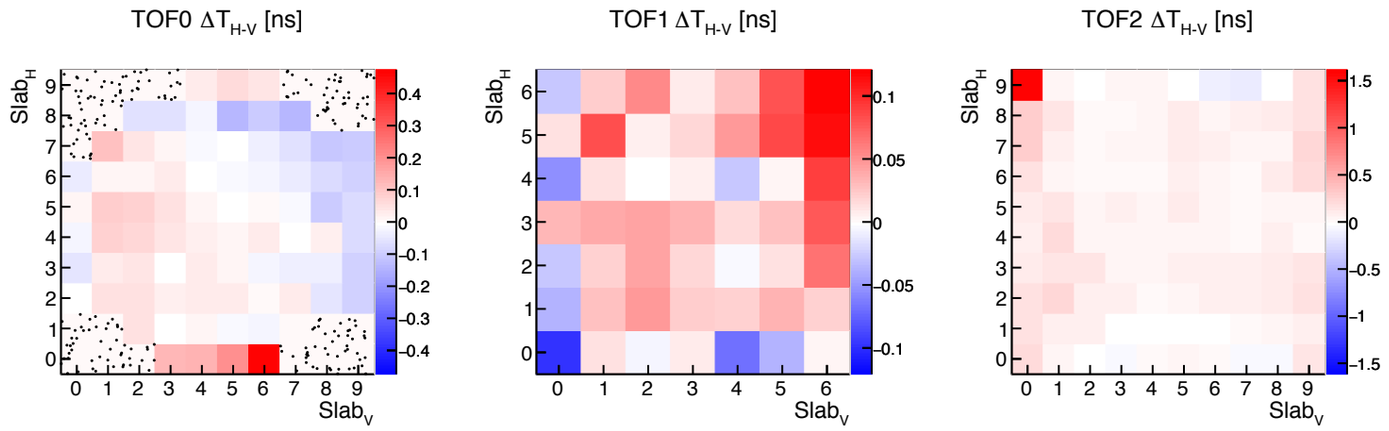
TOF Calibration

- Created calibration constants based on calibration runs from late September 2016
- Goal: see if the performance changes over time
- Used to reconstruct part of dataset:
  - older: **Dec 2016** (08676 - 08689)
  - latest: **Nov 2017** (10204 - 10260)
- http://reco.mice.rl.ac.uk/MAUS-v3.2.0/tof/newcalib/

TOF slab DT offset

086xx



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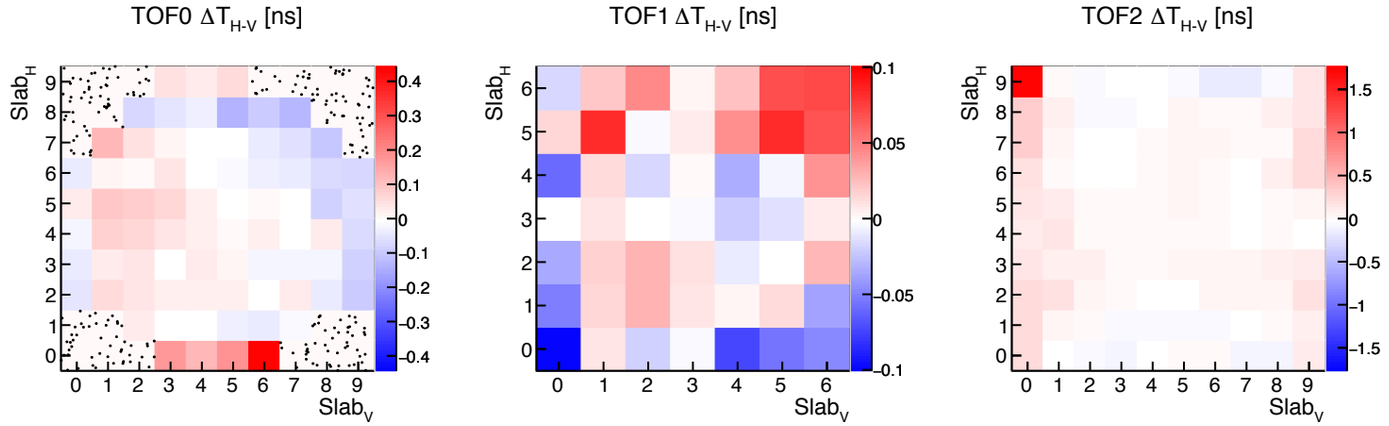

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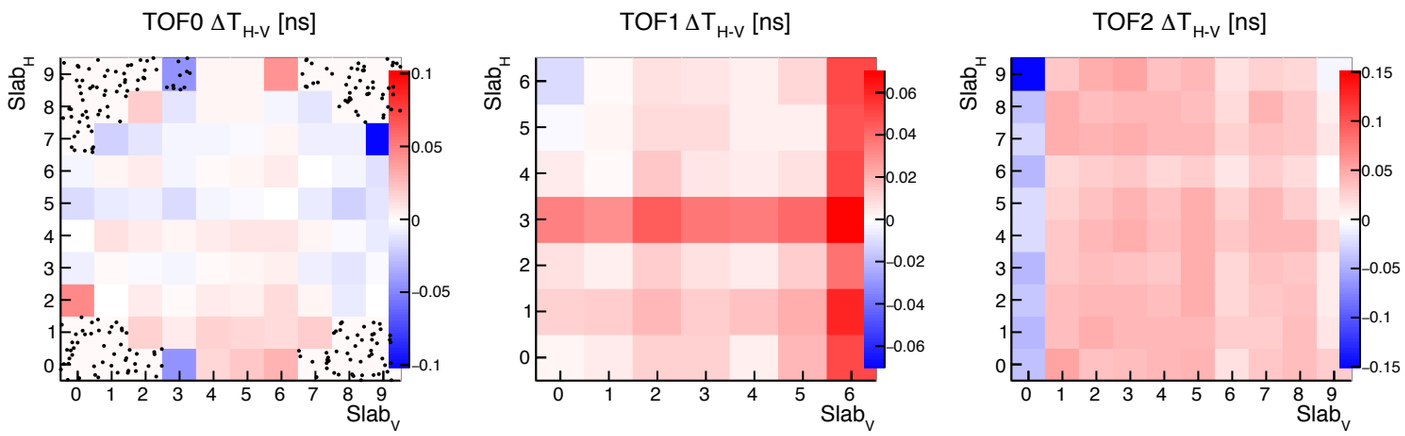

TOF slab DT offset

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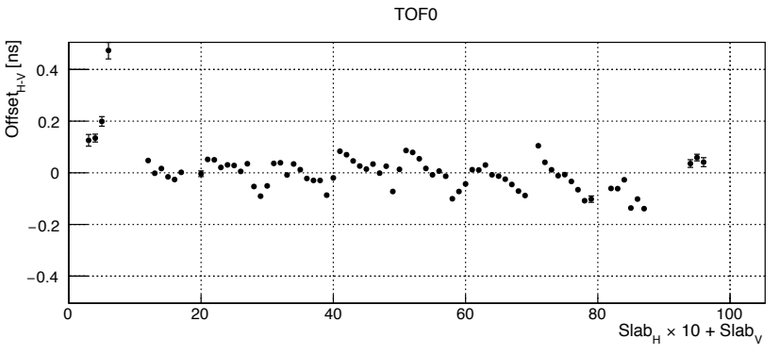

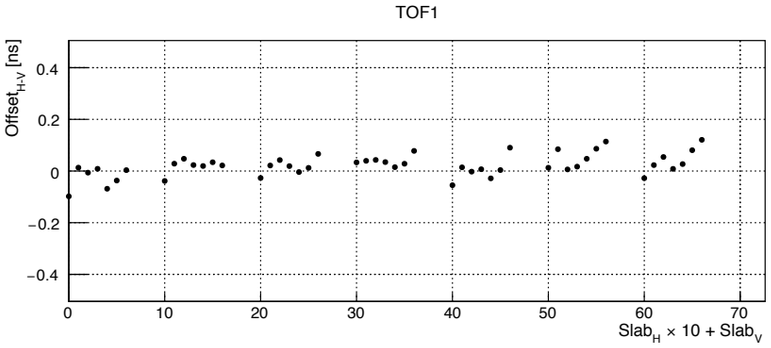

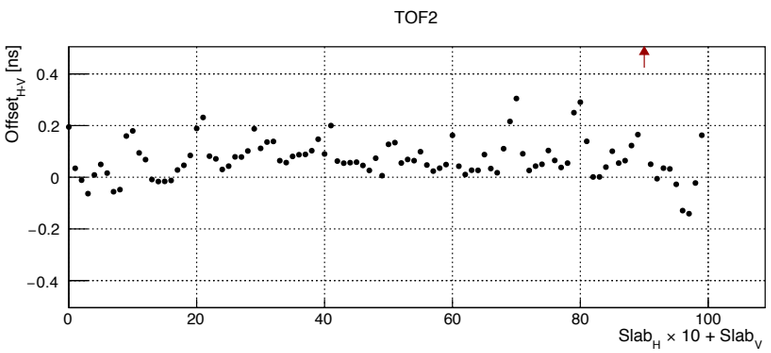

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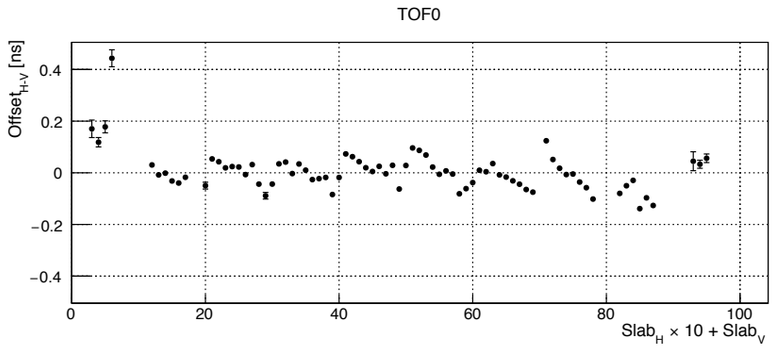

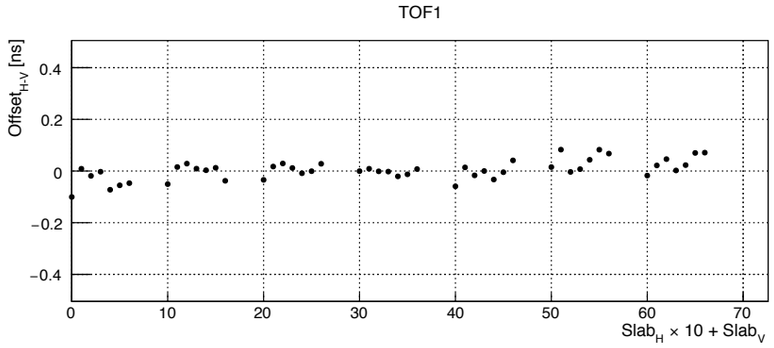

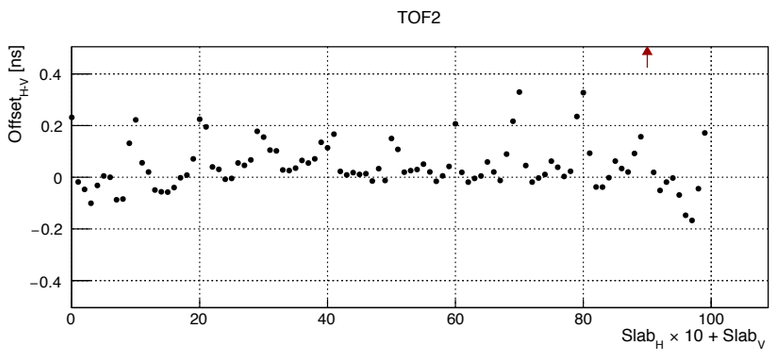

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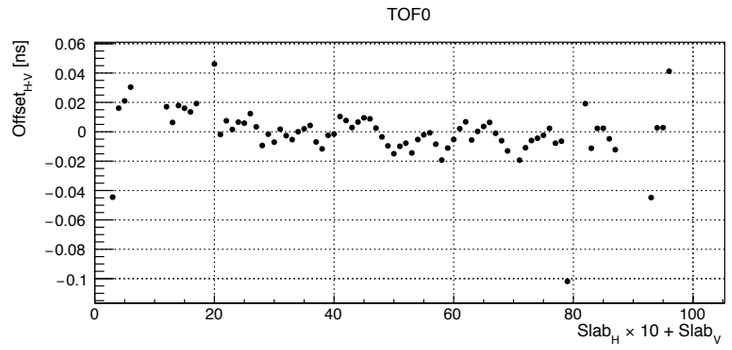

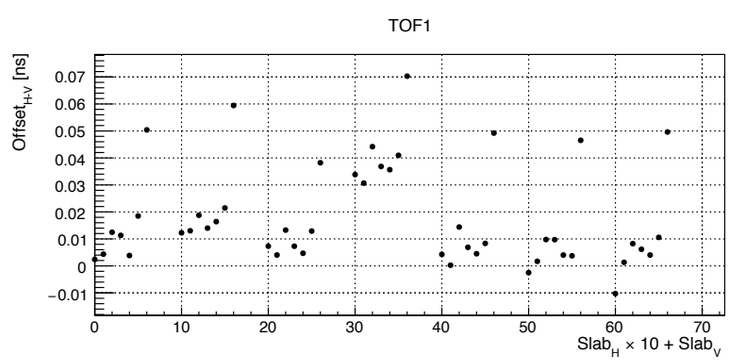

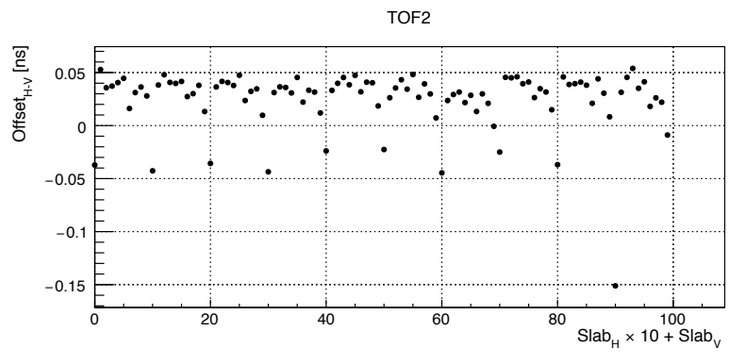

TOF slab DT resolution

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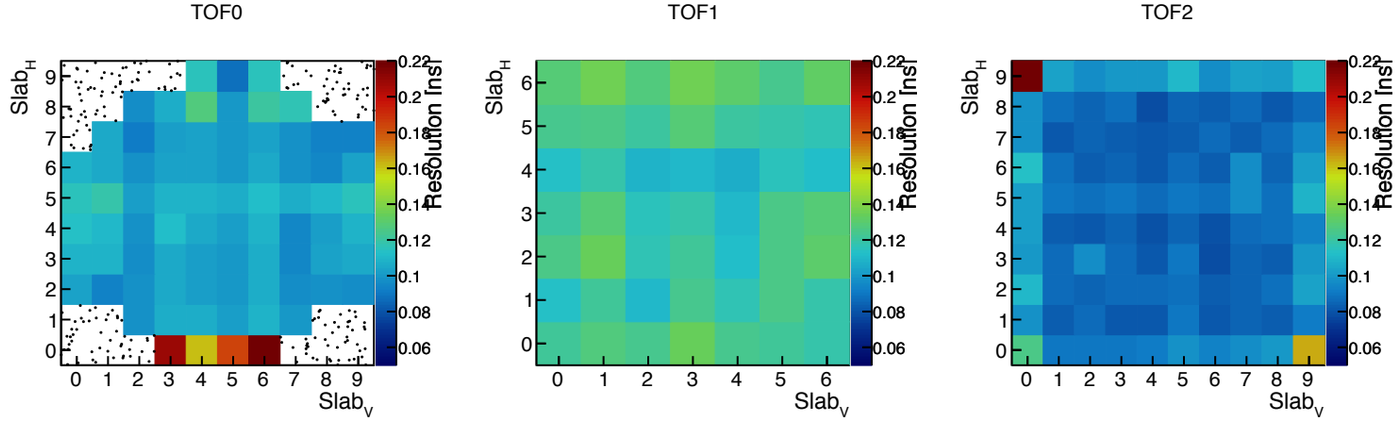

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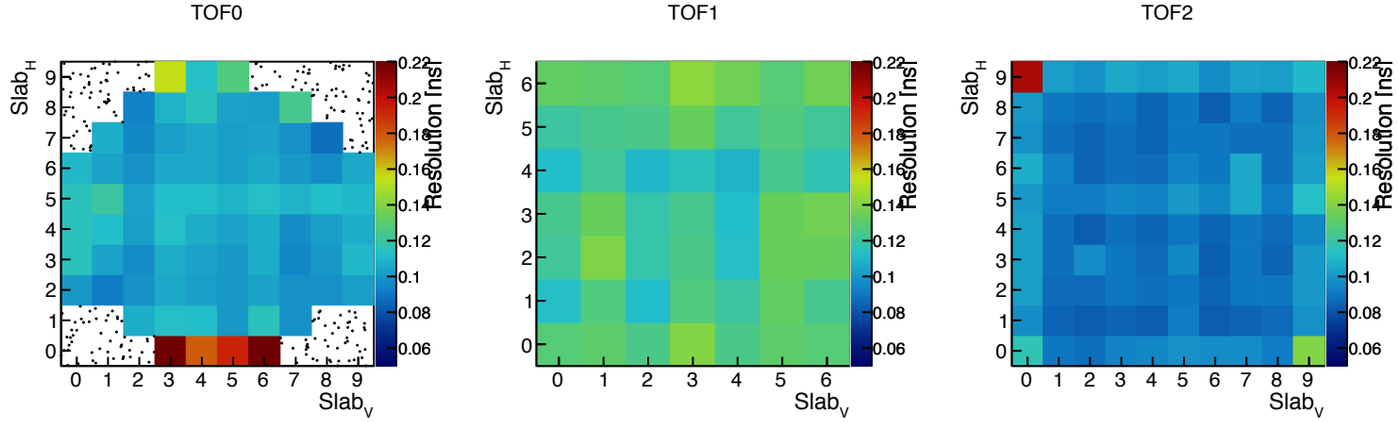

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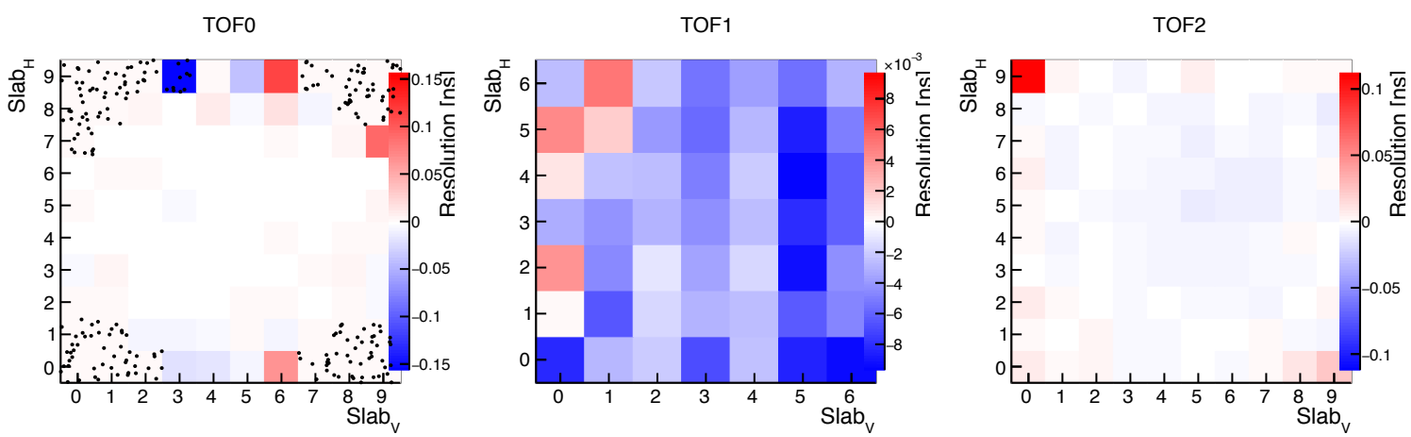

TOF slab DT resolution

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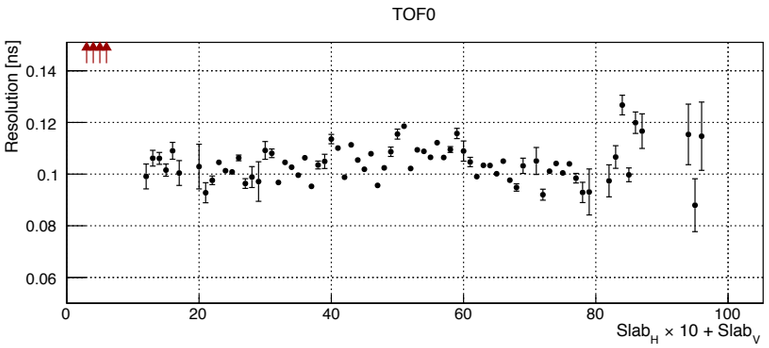

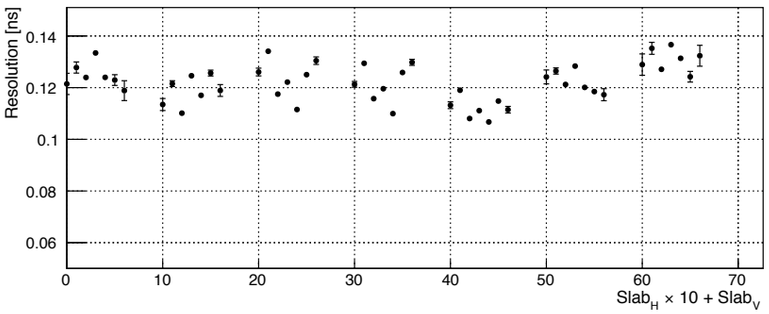

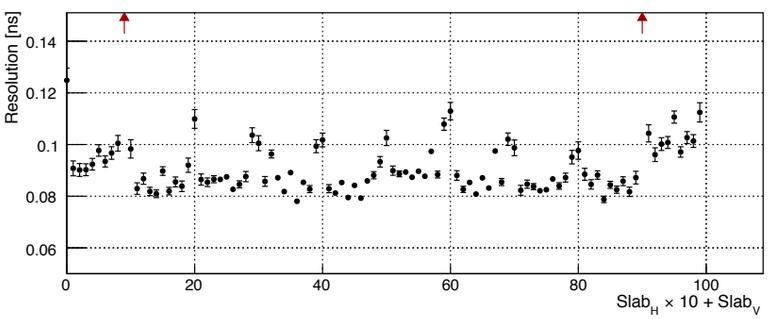

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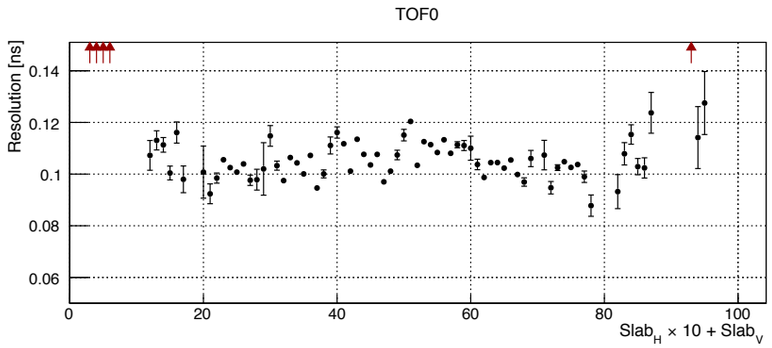

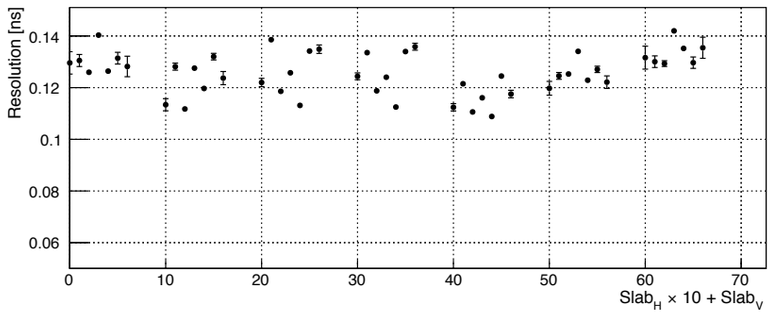

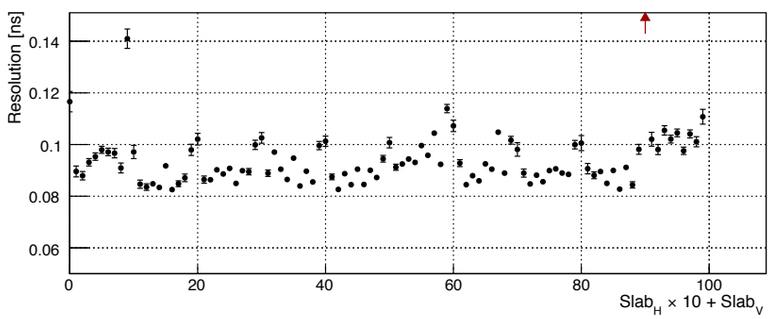

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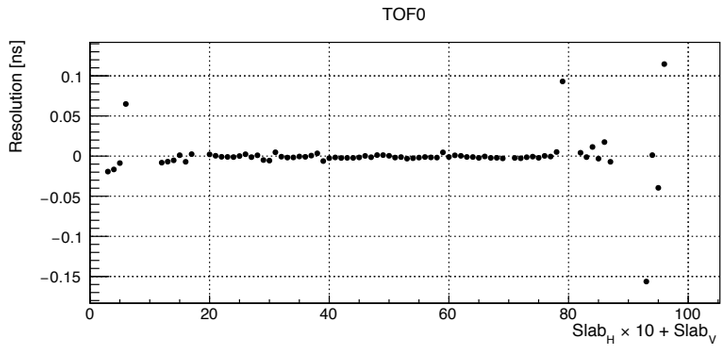

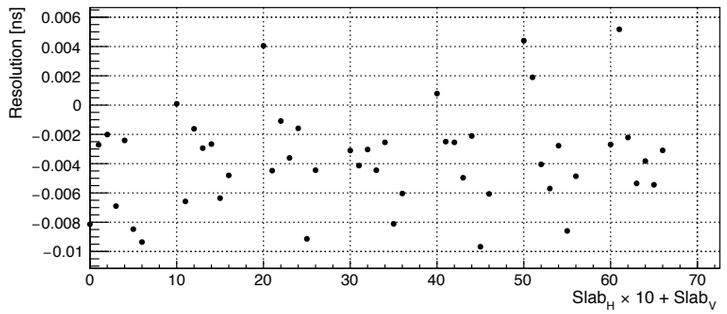

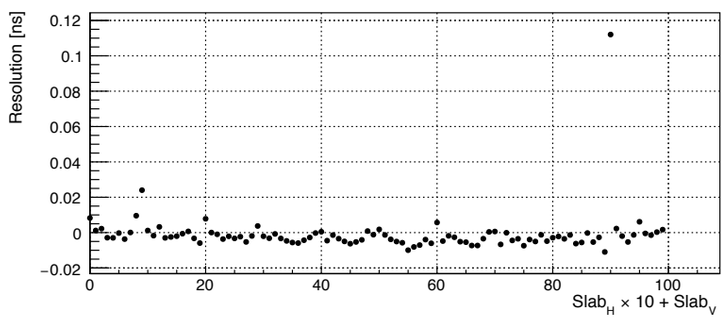

TOF space point creation efficiency

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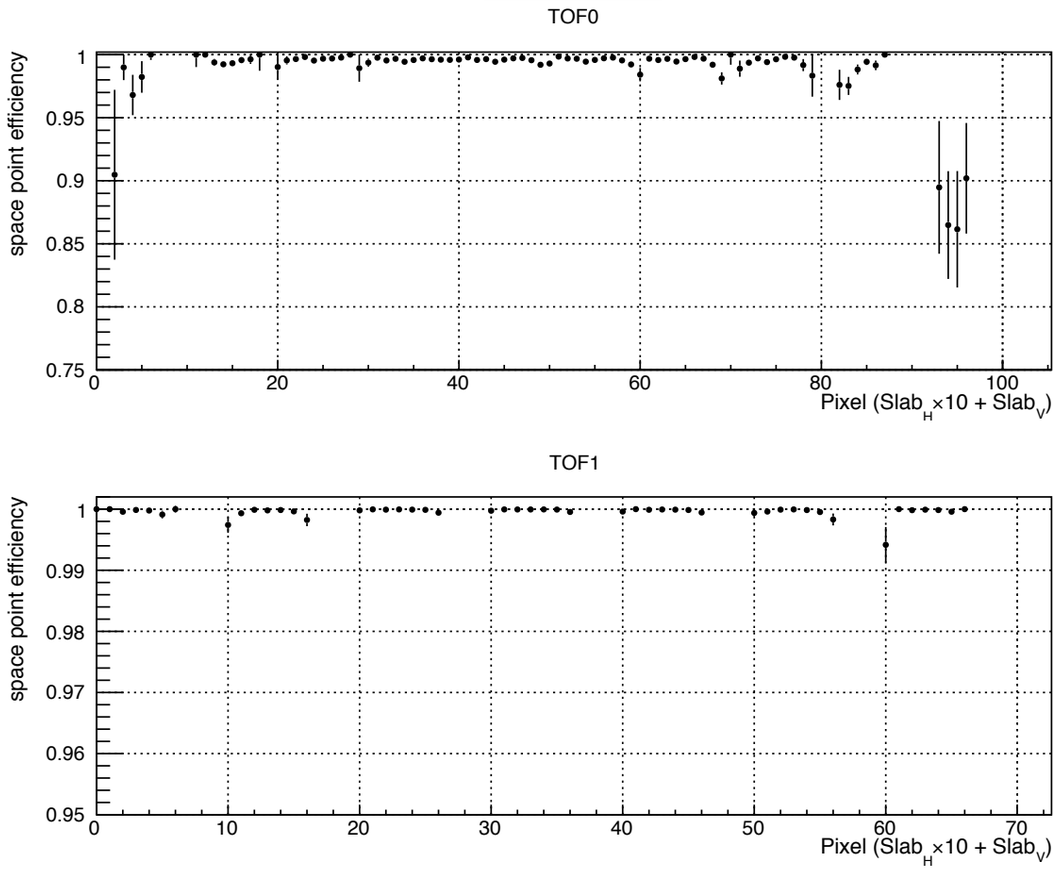

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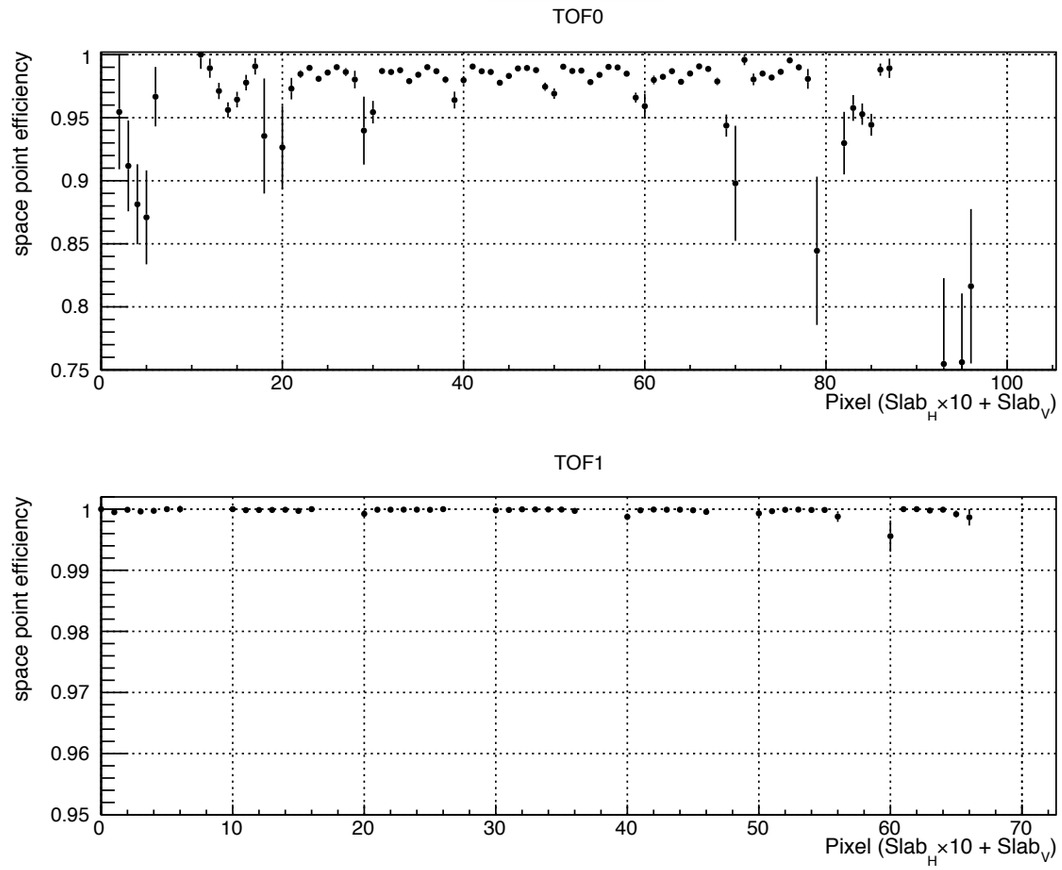

Conclusion

- No striking difference in reconstructions of data separated by 1 year
- Slab DT offsets stay within about 60 ps
- Slab DT resolution well within 10 ps
- Outliers observed - peripheral slabs, difficult to calibrate properly
- Currently our best calibration constants