

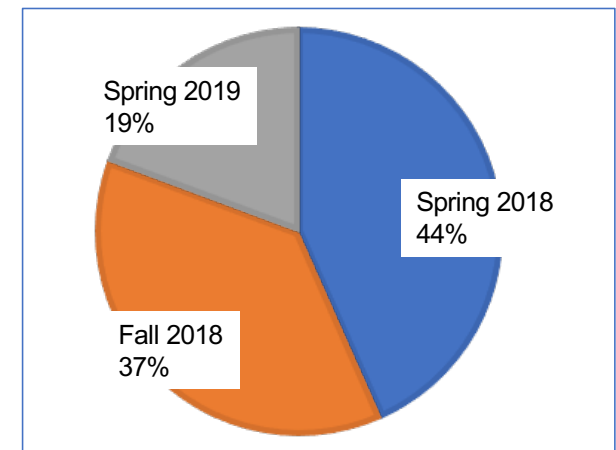
RGA Fall 2018 Cooking Status

- RGA Fall 2018 pass-2 cooking began on October 1st. On track for completion sometime mid-to-late November. Status can be tracked on [clas12mon](#).
- Around 80 completed outbending trains can be found at `/cache/clas12/rg-a/production/recon/fall2018/torus+1/pass2/dst/train/` for analysis testing purposes.
- All of Spring 2019 inbending is available at `/cache/clas12/rg-a/production/recon/spring2019/torus-1/pass2/dst/train/`.

workflow_name	jobs	success	dispatched	pending	preparing	running	reaping	problems	update_date	succeeded
rga-ra-fa18_pass2-5569x37	2836	0 (0.00%)	2572	2572	0	0	0	0	Oct 17,2023 15:31	0
rga-ra-fa18_pass2-5525x37	4058	4052 (99.85%)	3	0	0	0	0	3	Oct 16,2023 17:35	4052
rga-ra-fa18_pass2-5423x37	3344	3344 (100.00%)	0	0	0	0	0	0	Oct 14,2023 12:31	3344
rga-ra-fa18_pass2-5467x37	3575	3575 (100.00%)	0	0	0	0	0	0	Oct 9,2023 12:32	3575
rga-ra-fa18_pass2-5347x45	3811	0 (0.00%)	0	0	0	0	0	0	Oct 2,2023 20:04	0
rga-ra-fa18_pass2-5233x48	3566	0 (0.00%)	0	0	0	0	0	0	Oct 2,2023 19:54	0
rga-ra-fa18_pass2-5139x48	4121	0 (0.00%)	0	0	0	0	0	0	Oct 2,2023 19:48	0
rga-ra-fa18_pass2-5032x30	2218	0 (0.00%)	0	0	0	0	0	0	Oct 2,2023 19:43	0
rga-ra-fa18_pass2-4961x17	2017	0 (0.00%)	0	0	0	0	0	0	Oct 2,2023 19:36	0
rga-ra-fa18_pass2-4763x48	3141	0 (0.00%)	0	0	0	0	0	0	Oct 2,2023 19:31	0
rga-ra-fa18_pass2-5624x33	3372	0 (0.00%)	0	0	0	0	0	0	Oct 2,2023 10:49	0

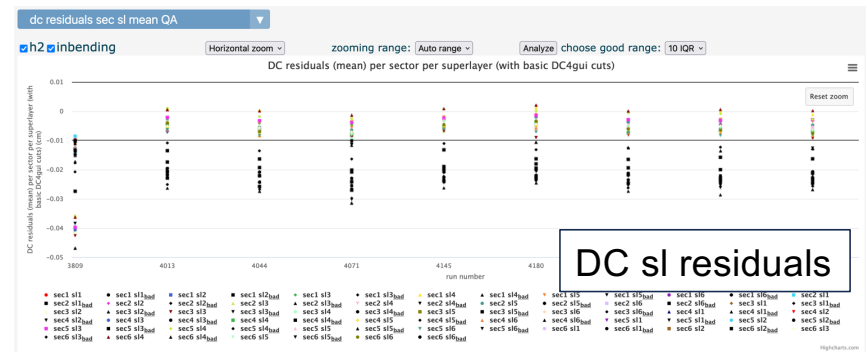
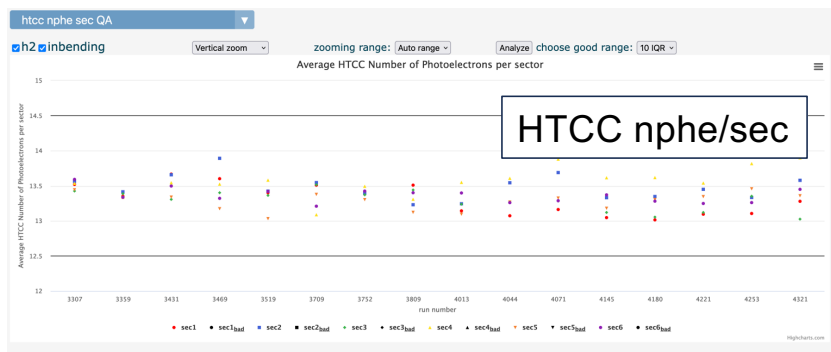
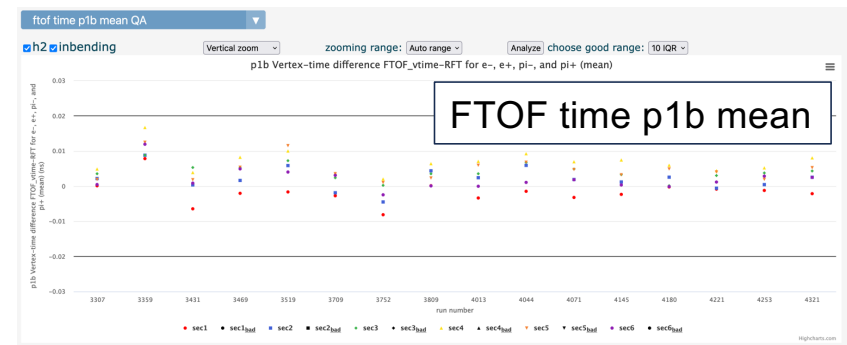
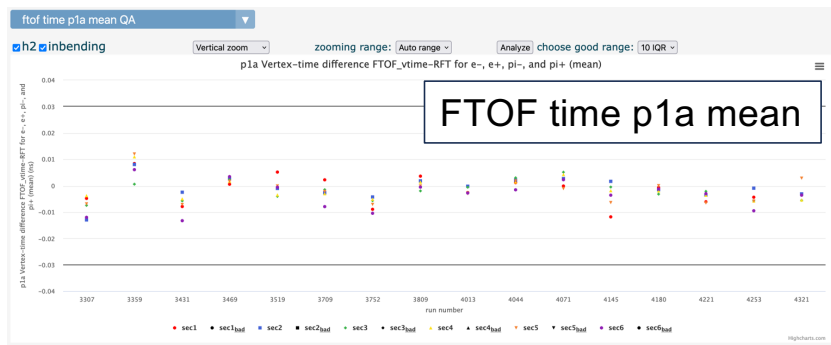
RGA Spring 2018 Data Set

- Archeology: combined the spreadsheets for the [engineering run list](#) and the [RGA Sp18 run list](#) into single document. Removed all junk runs, trigger tests, DAQ errors, extremely short runs, etc. and arrived at:
 - 69 2.2 GeV runs, *undecoded*: /mss/clas12/er-a/data/
 - 46 6.4 GeV runs, *undecoded*: /mss/clas12/rg-a/data/
 - 450* 10.6 GeV runs, *decoded*: /mss/clas12/rg-a/production/decoded/6b.0.0/ (*note*: Fa18 and Sp19 done with 6b.2.0)
 - * runs typically much shorter than later run periods and do not include DC Roads, number of runs may be misleading
- Created initial mini timeline of 10.6 GeV data, [sp18_v0.03](#) after Florian converted time2dist tables for runs 3862-4326 based on the calibration of run 4013 in April 2021.
- Significant work was already focused on Spring 2018 calibrations during the initial pass-1 phase a few years ago.
- Work on alignment (2 GeV engineering run); requires “good residuals” i.e. reasonably symmetric and not double peaked. Calibration on full field runs do not necessarily work well on zero-field runs.



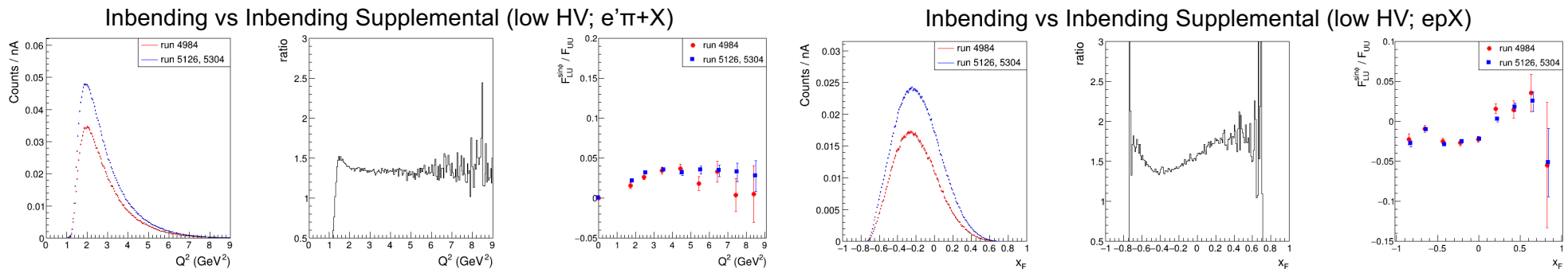
Pass-1 Calibration Effort

- Forward detector subsystems received significant calibration effort during pass-1 before decision was made to focus on the Fall 2018 data.
- No work on the 3 and 5-pass 3000 run range.



RGA Spring 2018 Low Voltage

- RGA Spring 2018 was taken at lower DC HV settings than later periods of CLAS12 data taking. If fully calibrated it would have more similar performance to the RGA Fall 2018 “inbending supplemental” (< run 5000).
- This will make it much more difficult to extract anything except for possibly spin asymmetries in specific channels.
- Comparison from RGA Fall 2018 pass-2 review for SIDIS single hadron asymmetries:

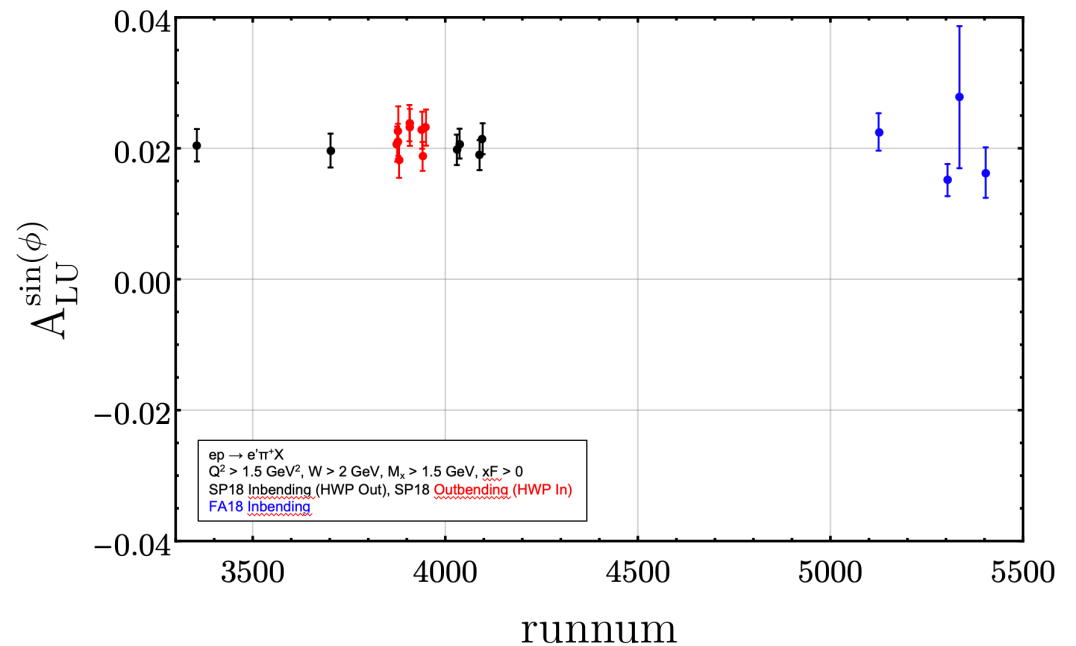


- A comparison of the pass-2 cooking for the inbending and “inbending supplemental” (with lower HV settings) shows good agreement between extracted physics observables for both data sets straight out of the box. **The early inbending period is useful (with a little work)!**

RGA Spring 2018 Helicity

- Delayed helicity reporting (to account for HWP status) only introduced in the summer of 2018. “helicity” variable = 0 in RGA Spring18 data

```
p1pListCuts = Table | p1pHistogram
[Choose (n=next,p=previous, q=qu
position for [REC::Event] == 3
* NODE * group = (MatE 300, item =
category : style → Directiv 0 Black
topology : 0
beamCharge : 0.0000
liveTime : -1.0000
startTime : 177.4440
RFTime : 53.4604
helicity : 0
helicityRaw : 1
procTime : 0.0000
```



- HWP information can be retrieved from the cddb [/runcontrol/hwp](#). Multiply the “helicityRaw” variable, accessible from REC::Event, by the value given for HWP in the cddb (-1 indicates HWP in, i.e. helicity should be flipped)
- Don’t forget the overall flip for RGA!

Spring 2018 Plans

- The Spring 2018 data set represents a large fraction of collected RGA data and it would be, despite the comparably lower quality, a big disappointment to abandon it.
- Finalizing RGB, ongoing calibrations of RGC and real-time calibration efforts of RGD take CALCOM priority.
- If RGA agrees:
 1. Multistep calibration of the engineering runs/alignment runs to avoid double peaks and poorly calibrated data before beginning the updated realignment procedure.
 2. Finalize archeology and present calibration time-line to CALCOM.
 3. Begin beam-spot calibrations, CVT alignments and other prep work.
 4. Continue through regular calibration procedure.